

Measurement Protocol

Measurement Object	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N
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Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/13 21:26

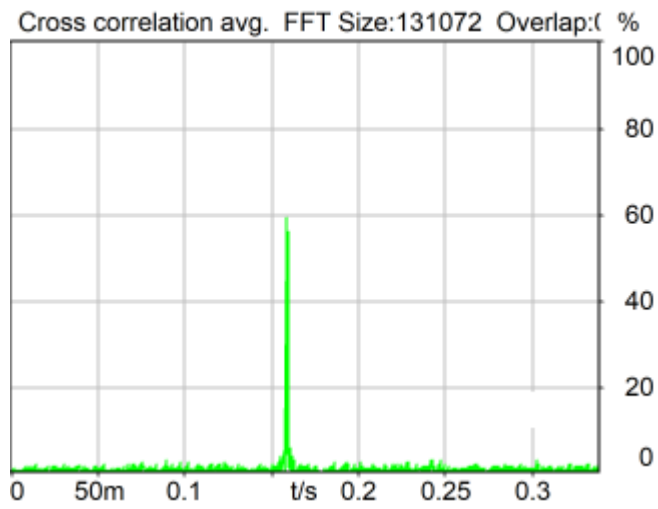
Status Overview

SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay NB	Done	Delay (Cross) [ms]	159.1	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N
5.1b Receive Volume Control Performance 2N NB	Ok	Speech Level [dB[SPL]]	84.36	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N
5.2 RCV Distortion and Noise - 400 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	24.44	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N
5.2 RCV Distortion and Noise - 500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	25.74	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N
5.2 RCV Distortion and Noise - 630 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	27.94	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N
5.2 RCV Distortion and Noise - 800 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	25.47	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N
5.2 RCV Distortion and Noise - 1000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	27.57	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N
5.2 RCV Distortion and Noise - 1250 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	23.99	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N
5.2 RCV Distortion and Noise - 1600 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	34.65	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N
5.2 RCV Distortion and Noise - 2000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	33.57	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N
5.2 RCV Distortion and Noise - 2500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	33.26	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N
5.2 RCV Distortion and Noise - 3150 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	36.26	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N
Report - Receive Distortion and Noise (Conversational Gain)	Ok	Minimum SDNR [dB], (occured at 1250Hz)	23.99	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N
5.3 Frequency Response 2N FF HANB	Ok	Min. dist. to tolerance scheme [dB], 1447.5 Hz	0.09	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N
5.3 Frequency Response 2N DF HANB	Not Ok	Min. dist. to tolerance scheme [dB], 305.9 Hz	-0.35	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N

Overall Receive Delay NB	5
5.1b Receive Volume Control Performance 2N NB	6
5.2 RCV Distortion and Noise - 400 Hz NB	7
5.2 RCV Distortion and Noise - 500 Hz NB	8
5.2 RCV Distortion and Noise - 630 Hz NB	9
5.2 RCV Distortion and Noise - 800 Hz NB	10
5.2 RCV Distortion and Noise - 1000 Hz NB	11
5.2 RCV Distortion and Noise - 1250 Hz NB	12
5.2 RCV Distortion and Noise - 1600 Hz NB	13
5.2 RCV Distortion and Noise - 2000 Hz NB	14
5.2 RCV Distortion and Noise - 2500 Hz NB	15
5.2 RCV Distortion and Noise - 3150 Hz NB	16
Report - Receive Distortion and Noise (Conversational Gain)	17
5.3 Frequency Response 2N FF HANB	18
5.3 Frequency Response 2N DF HANB	19

Overall Receive Delay NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ Preparation - Delay measurement



Delay (Cross): 159.1 ms

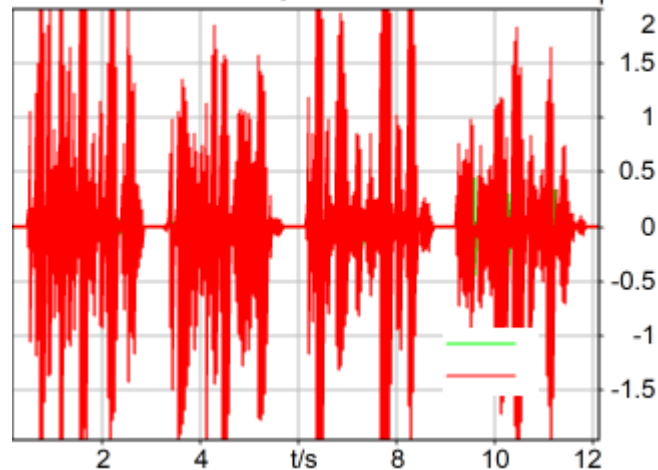
2023/11/13 21:11 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.1b Receive Volume Control Performance 2N NB

TIA-5050 (2018-01) \ Measurements \ Narrowband

5.1b Receive Volume Control Performance 2N NE p/Pa



Speech Level RCV: 84.36 dB[SPL], Act.: 82.31% Ok

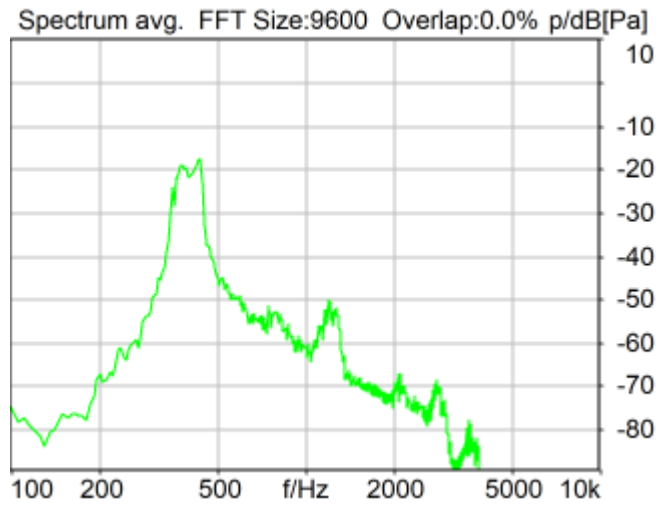
Ok

2023/11/13 21:11 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 400 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 24.44 dB (6.00%) Ok

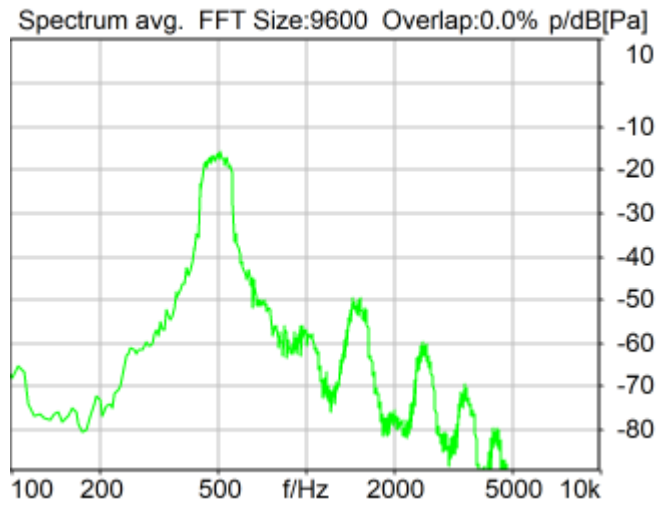
Ok

2023/11/13 21:11 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 25.74 dB (5.17%) Ok

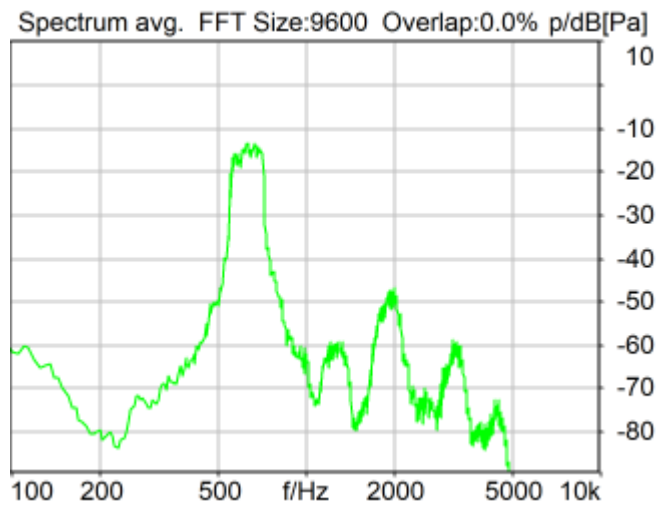
Ok

2023/11/13 21:12 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 27.94 dB (4.01%) Ok

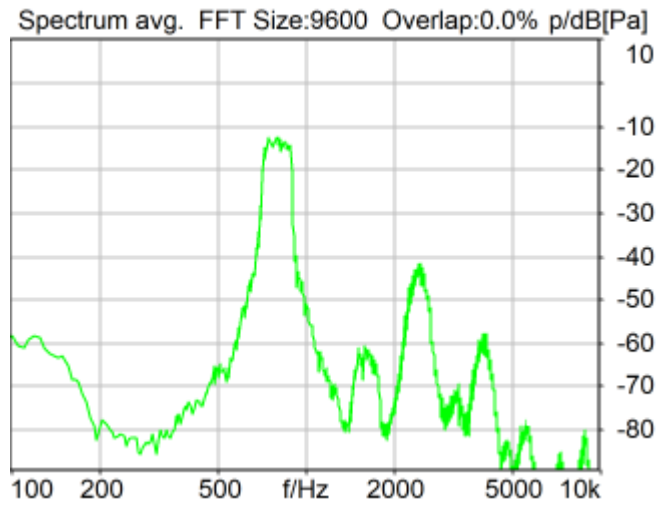
Ok

2023/11/13 21:12 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 25.47 dB (5.33%) Ok

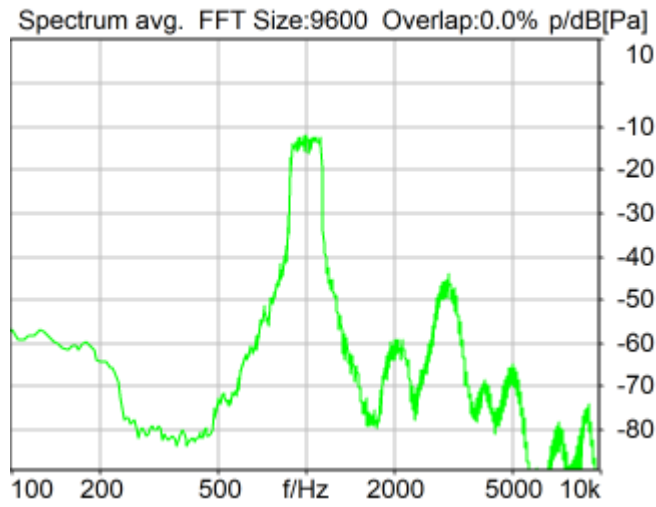
Ok

2023/11/13 21:12 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 27.57 dB (4.18%) Ok

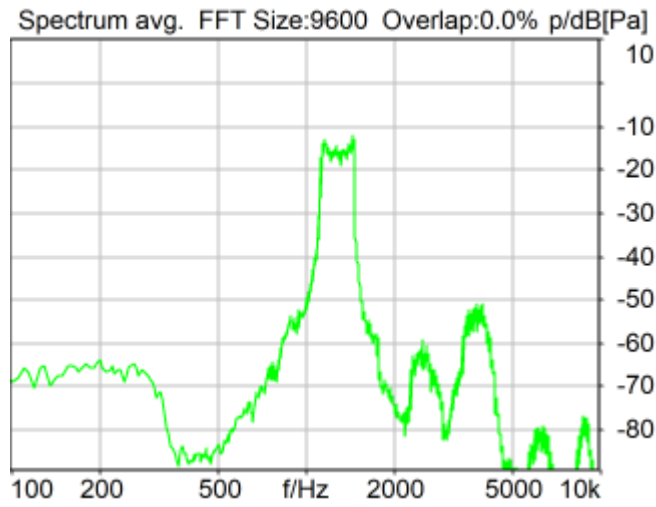
Ok

2023/11/13 21:13 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 23.99 dB (6.32%) Ok

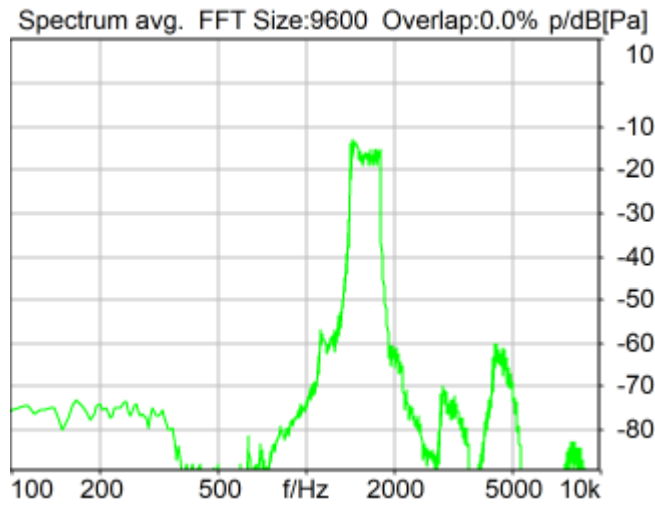
Ok

2023/11/13 21:13 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 34.65 dB (1.85%) Ok

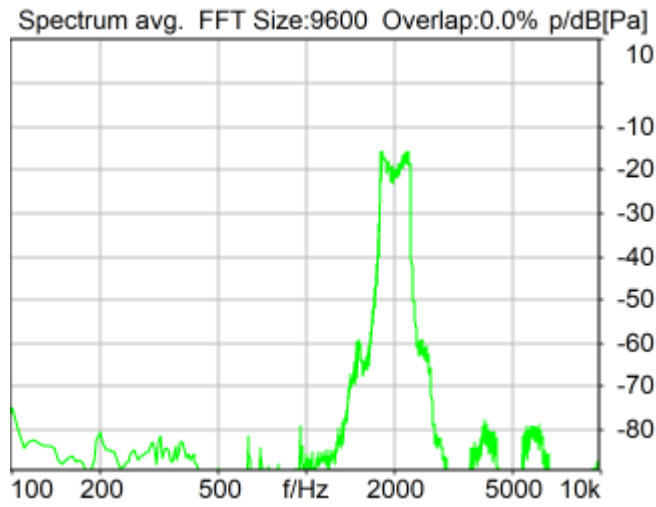
Ok

2023/11/13 21:13 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 33.57 dB (2.10%) Ok

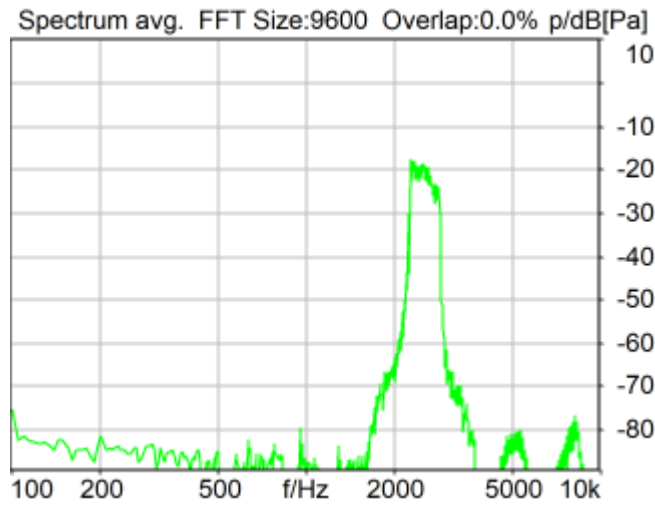
Ok

2023/11/13 21:14 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 33.26 dB (2.17%) Ok

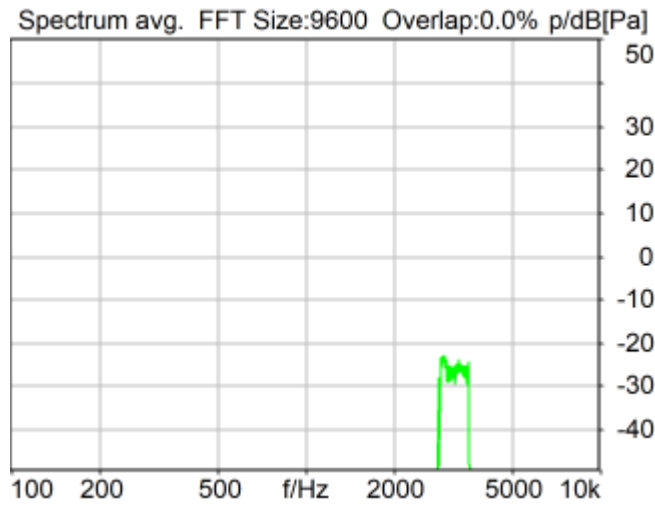
Ok

2023/11/13 21:14 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 36.26 dB (1.54%) Ok

Ok

2023/11/13 21:15 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain)

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N

Region	Frequency	SDNR
1	400Hz	24.44 dB
2	500Hz	25.74 dB
3	630Hz	27.94 dB
4	800Hz	25.47 dB
5	1000Hz	27.57 dB
6	1250Hz	23.99 dB
7	1600Hz	34.65 dB
8	2000Hz	33.57 dB
9	2500Hz	33.26 dB
10	3150Hz	36.26 dB

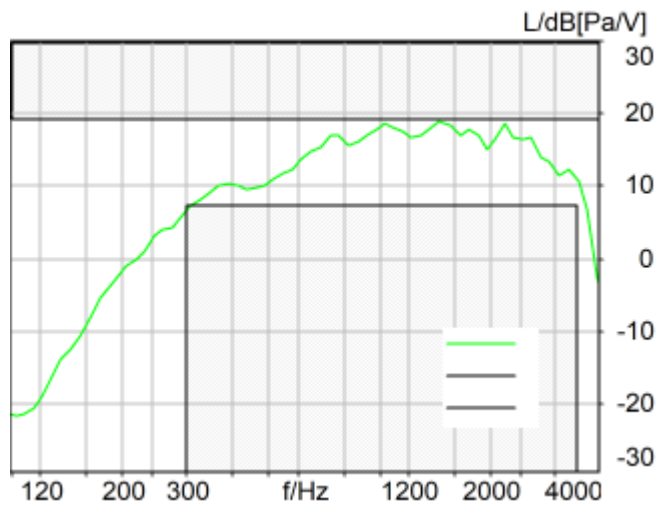
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 23.99dB at 1250Hz.

2023/11/13 21:24 ACQUA

5.3 Frequency Response 2N FF HANB

TIA-5050 (2018-01) \ Measurements \ Narrowband



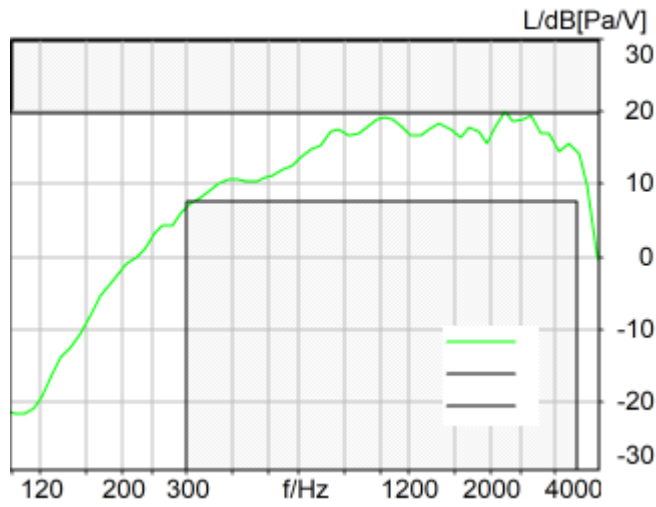
Absolute minimal distance
0.09 dB at 1447.5 Hz Ok

Ok

2023/11/13 21:25 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N DF HANB

TIA-5050 (2018-01) \ Measurements \ Narrowband



Absolute minimal distance
-0.35 dB at 305.9 Hz Not Ok

Not Ok

2023/11/13 21:25 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_8N
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Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/14 11:24

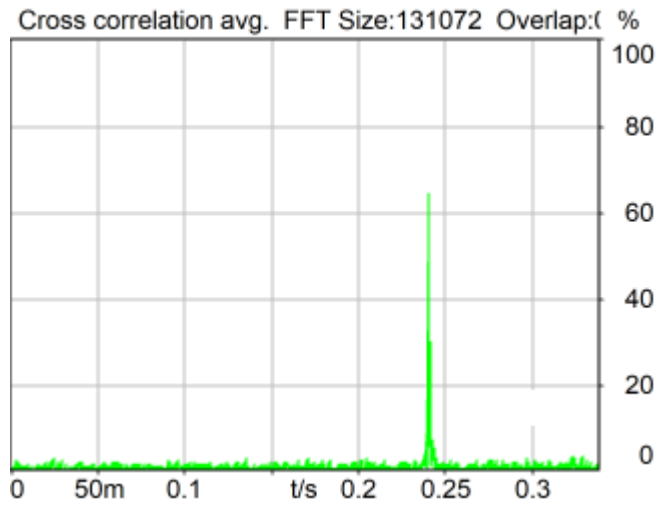
Status Overview

SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay NB	Done	Delay (Cross) [ms]	240.8	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_8N
5.1a Receive Volume Control Performance 8N NB	Ok	Speech Level [dB[SPL]]	90.69	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_8N
5.2 RCV Distortion and Noise - 400 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	24.53	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_8N
5.2 RCV Distortion and Noise - 500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	25.42	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_8N
5.2 RCV Distortion and Noise - 630 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	29.03	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_8N
5.2 RCV Distortion and Noise - 800 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	25.68	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_8N
5.2 RCV Distortion and Noise - 1000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	28.65	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_8N
5.2 RCV Distortion and Noise - 1250 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	28.99	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_8N
5.2 RCV Distortion and Noise - 1600 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	27.18	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_8N
5.2 RCV Distortion and Noise - 2000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	27.48	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_8N
5.2 RCV Distortion and Noise - 2500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	24.75	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_8N
5.2 RCV Distortion and Noise - 3150 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	32.45	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_8N
Report - Receive Distortion and Noise (Conversational Gain)	Ok	Minimum SDNR [dB], (occured at 400Hz)	24.53	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_8N
5.3 Frequency Response 8N FF HANB	Ok	Min. dist. to tolerance scheme [dB], 1447.5 Hz	0.25	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_8N
5.3 Frequency Response 8N DF HANB	Ok	Min. dist. to tolerance scheme [dB], 305.9 Hz	0.08	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_8N

Overall Receive Delay NB	5
5.1a Receive Volume Control Performance 8N NB	6
5.2 RCV Distortion and Noise - 400 Hz NB	7
5.2 RCV Distortion and Noise - 500 Hz NB	8
5.2 RCV Distortion and Noise - 630 Hz NB	9
5.2 RCV Distortion and Noise - 800 Hz NB	10
5.2 RCV Distortion and Noise - 1000 Hz NB	11
5.2 RCV Distortion and Noise - 1250 Hz NB	12
5.2 RCV Distortion and Noise - 1600 Hz NB	13
5.2 RCV Distortion and Noise - 2000 Hz NB	14
5.2 RCV Distortion and Noise - 2500 Hz NB	15
5.2 RCV Distortion and Noise - 3150 Hz NB	16
Report - Receive Distortion and Noise (Conversational Gain)	17
5.3 Frequency Response 8N FF HANB	18
5.3 Frequency Response 8N DF HANB	19

Overall Receive Delay NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ Preparation - Delay measurement



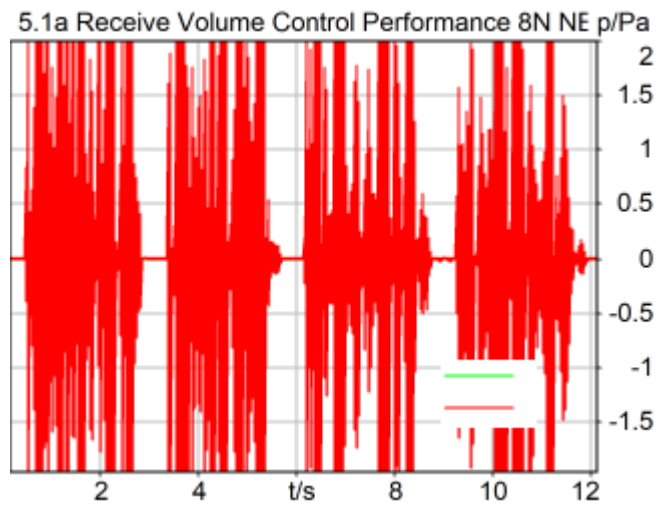
Delay (Cross): 240.8 ms

2023/11/14 11:17 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.1a Receive Volume Control Performance 8N NB

TIA-5050 (2018-01) \ Measurements \ Narrowband



Speech Level RCV: 90.69 dB[SPL], Act.: 82.49% Ok

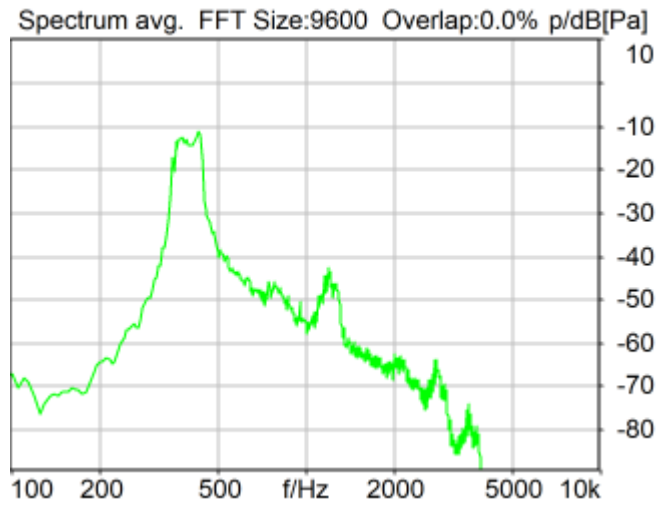
Ok

2023/11/14 11:17 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 400 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 24.53 dB (5.94%) Ok

Ok

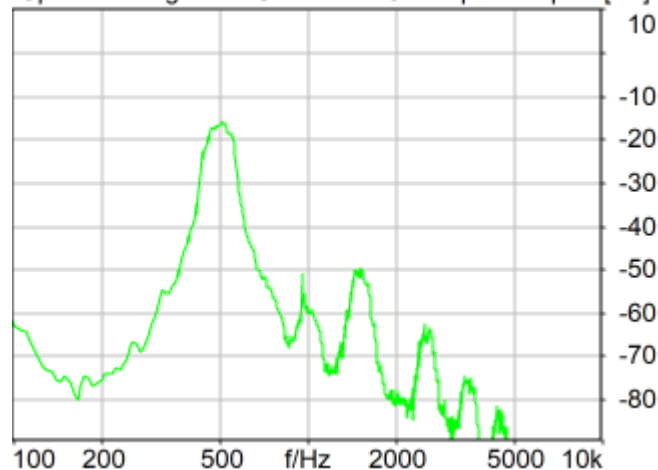
2023/11/14 11:17 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N

Spectrum avg. FFT Size:9600 Overlap:0.0% p/dB[Pa]



Distortion (Noise) RCV (packed): 25.42 dB (5.36%) Ok

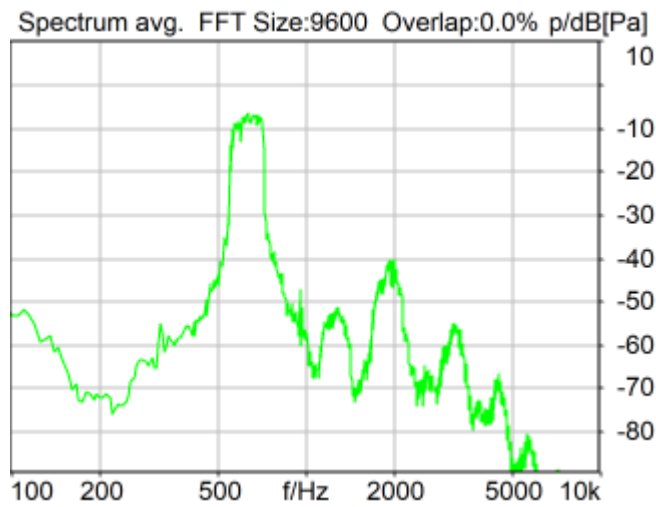
Ok

2023/11/14 11:18 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 29.03 dB (3.53%) Ok

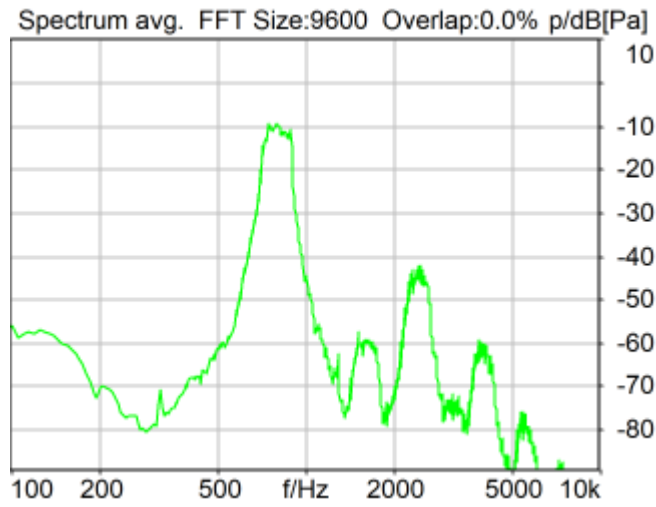
Ok

2023/11/14 11:18 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 25.68 dB (5.20%) Ok

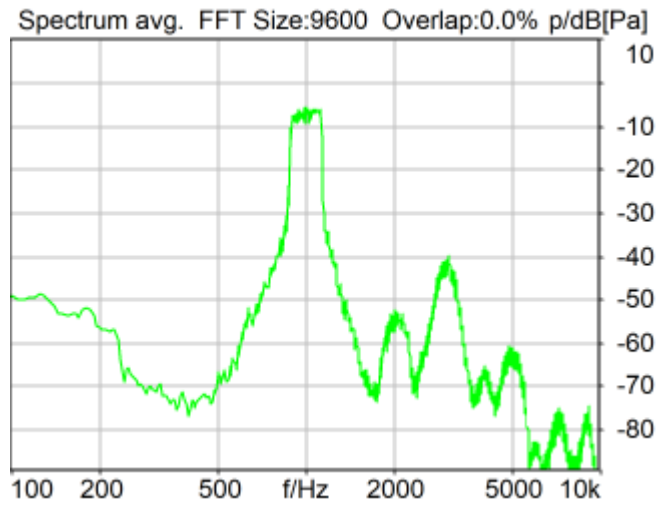
Ok

2023/11/14 11:19 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 28.65 dB (3.69%) Ok

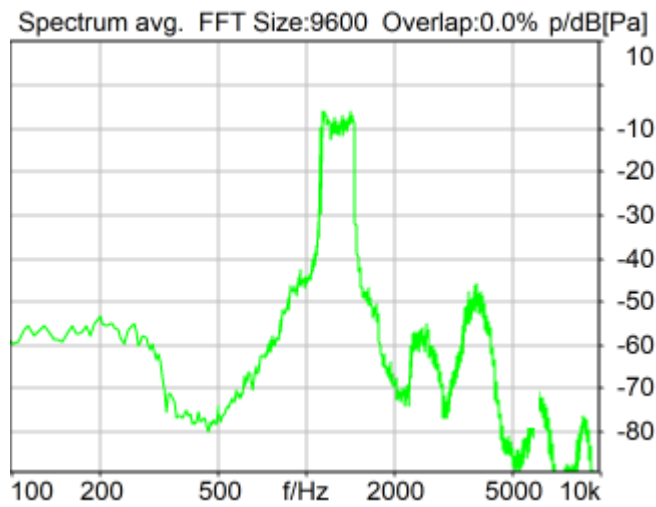
Ok

2023/11/14 11:19 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 28.99 dB (3.55%) Ok

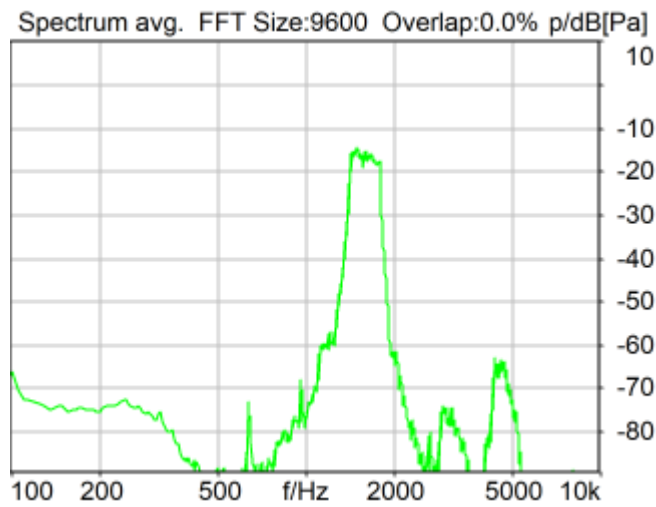
Ok

2023/11/14 11:19 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 27.18 dB (4.37%) Ok

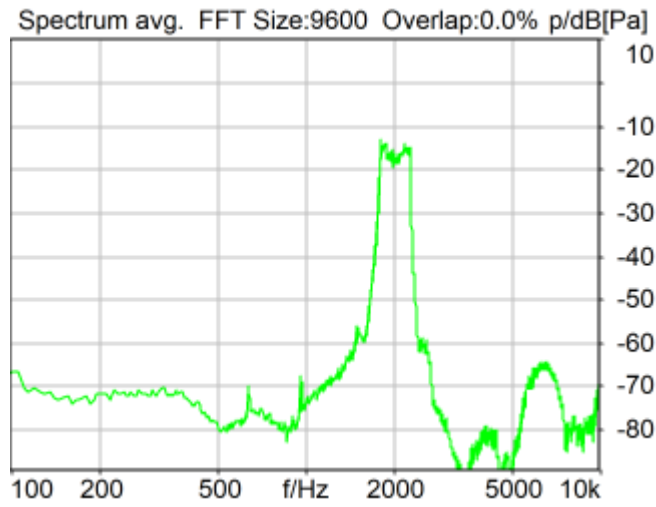
Ok

2023/11/14 11:20 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 27.48 dB (4.23%) Ok

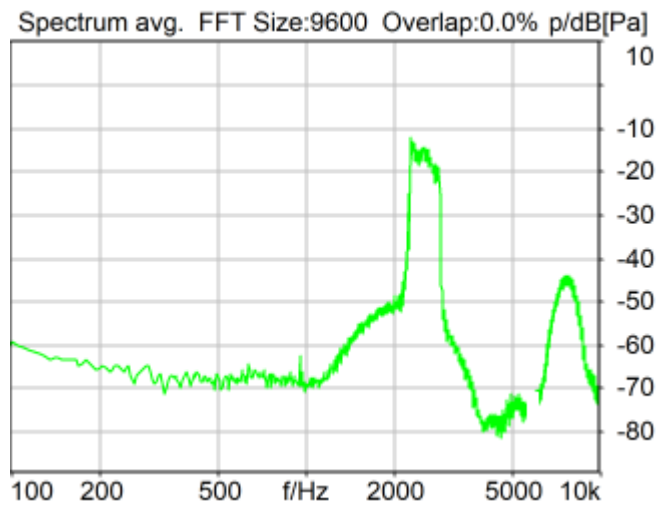
Ok

2023/11/14 11:20 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 24.75 dB (5.79%) Ok

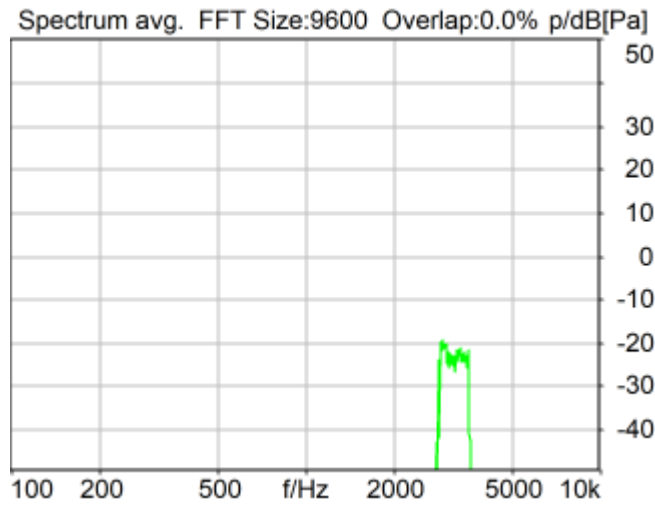
Ok

2023/11/14 11:21 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 32.45 dB (2.39%) Ok

Ok

2023/11/14 11:21 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain)

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N

Region	Frequency	SDNR
1	400Hz	24.53 dB
2	500Hz	25.42 dB
3	630Hz	29.03 dB
4	800Hz	25.68 dB
5	1000Hz	28.65 dB
6	1250Hz	28.99 dB
7	1600Hz	27.18 dB
8	2000Hz	27.48 dB
9	2500Hz	24.75 dB
10	3150Hz	32.45 dB

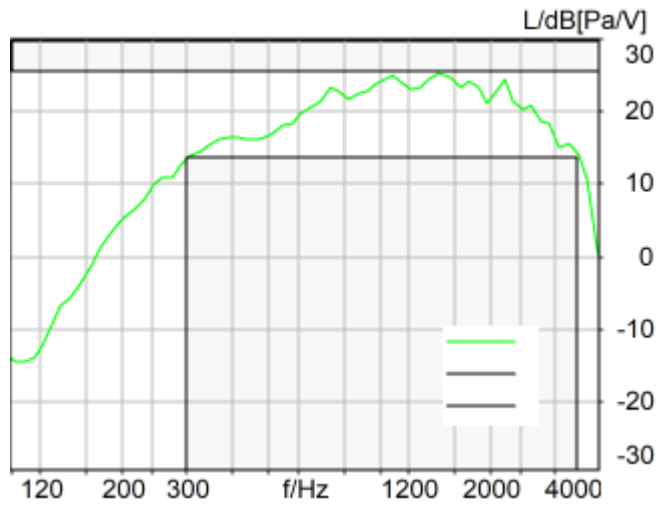
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 24.53dB at 400Hz.

2023/11/14 11:22 ACQUA

5.3 Frequency Response 8N FF HANB

TIA-5050 (2018-01) \ Measurements \ Narrowband



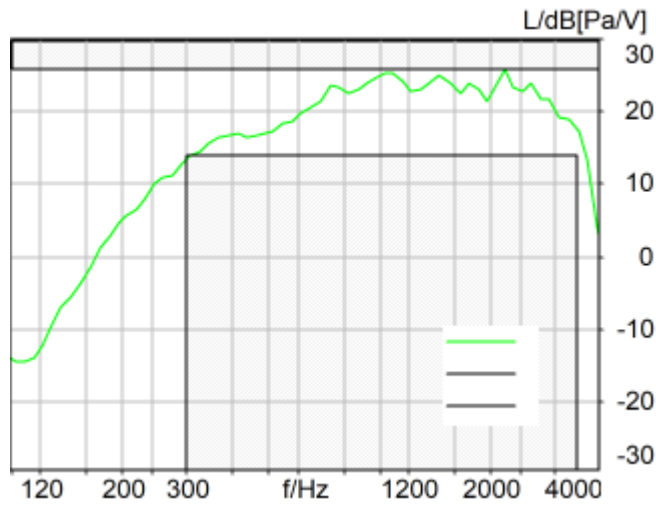
Absolute minimal distance
0.25 dB at 1447.5 Hz Ok

Ok

2023/11/14 11:23 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 8N DF HANB

TIA-5050 (2018-01) \ Measurements \ Narrowband



Absolute minimal distance
0.08 dB at 305.9 Hz Ok

Ok

2023/11/14 11:23 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_2N
--------------------	--

Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/14 16:19

Status Overview

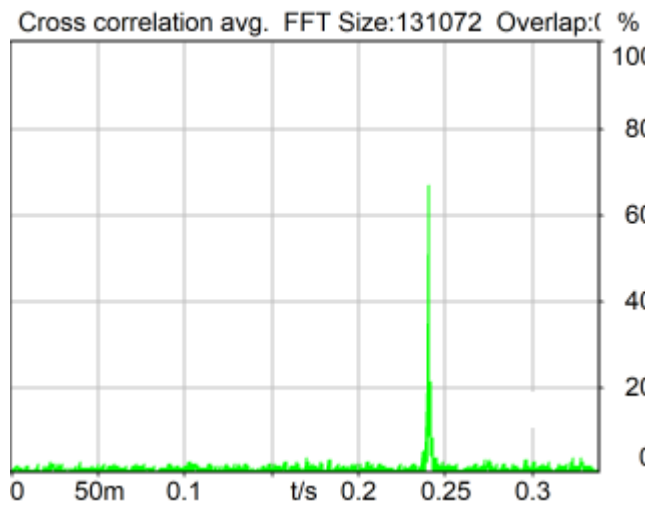
SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay WB	Done	Delay (Cross) [ms]	240.4	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_2N
5.1b Receive Volume Control Performance 2N WB	Ok	Speech Level [dB[SPL]]	84.87	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_2N
5.2 RCV Distortion and Noise - 250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	22.63	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_2N
5.2 RCV Distortion and Noise - 315 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	26.33	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_2N
5.2 RCV Distortion and Noise - 400 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	25.60	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_2N
5.2 RCV Distortion and Noise - 500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	29.12	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_2N
5.2 RCV Distortion and Noise - 630 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	28.95	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_2N
5.2 RCV Distortion and Noise - 800 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	26.03	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_2N
5.2 RCV Distortion and Noise - 1000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	26.13	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_2N
5.2 RCV Distortion and Noise - 1250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	25.33	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_2N
5.2 RCV Distortion and Noise - 1600 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	28.77	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_2N
5.2 RCV Distortion and Noise - 2000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	34.17	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_2N
5.2 RCV Distortion and Noise - 2500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	42.76	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_2N
5.2 RCV Distortion and Noise - 3150 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	36.05	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_2N
5.2 RCV Distortion and Noise - 4000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	34.61	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_2N
5.2 RCV Distortion and Noise - 5000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	34.74	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_2N
Report - Receive Distortion	Ok	Minimum SDNR [dB],	22.63	WLAN5G_Voice_802.11n-HT40

and Noise (Conversational Gain)		(occured at 250Hz)		MCS0_EVS WB 64kbps_Ch38_2N
5.3 Frequency Response 2N FF	Ok	Min. dist. to tolerance scheme [dB], 217.7 Hz	1.04	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_2N
5.3 Frequency Response 2N DF	Ok	Min. dist. to tolerance scheme [dB], 974.0 Hz	0.87	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_2N

Overall Receive Delay WB	6
5.1b Receive Volume Control Performance 2N WB	7
5.2 RCV Distortion and Noise - 250 Hz WB	8
5.2 RCV Distortion and Noise - 315 Hz WB	9
5.2 RCV Distortion and Noise - 400 Hz WB	10
5.2 RCV Distortion and Noise - 500 Hz WB	11
5.2 RCV Distortion and Noise - 630 Hz WB	12
5.2 RCV Distortion and Noise - 800 Hz WB	13
5.2 RCV Distortion and Noise - 1000 Hz WB	14
5.2 RCV Distortion and Noise - 1250 Hz WB	15
5.2 RCV Distortion and Noise - 1600 Hz WB	16
5.2 RCV Distortion and Noise - 2000 Hz WB	17
5.2 RCV Distortion and Noise - 2500 Hz WB	18
5.2 RCV Distortion and Noise - 3150 Hz WB	19
5.2 RCV Distortion and Noise - 4000 Hz WB	20
5.2 RCV Distortion and Noise - 5000 Hz WB	21
Report - Receive Distortion and Noise (Conversational Gain)	22
5.3 Frequency Response 2N FF	23
5.3 Frequency Response 2N DF	24

Overall Receive Delay WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ Preparation - Delay measurement



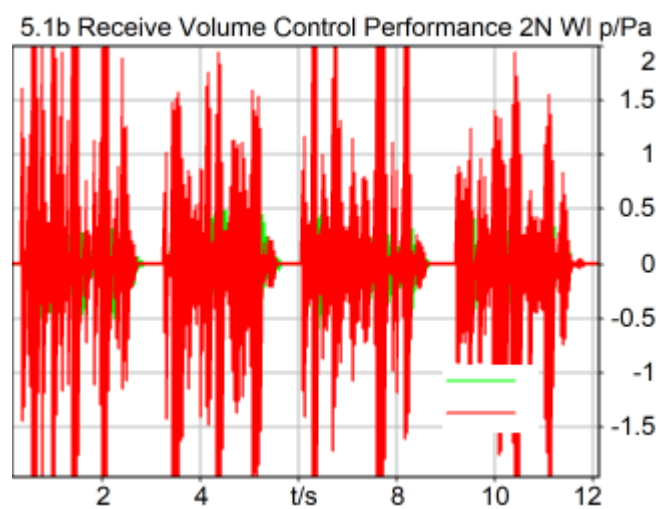
Delay (Cross): 240.4 ms

2023/11/14 11:32 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.1b Receive Volume Control Performance 2N WB

TIA-5050 (2018-01) \ Measurements \ Wideband



Speech Level RCV: 84.87 dB[SPL], Act.: 80.42% Ok

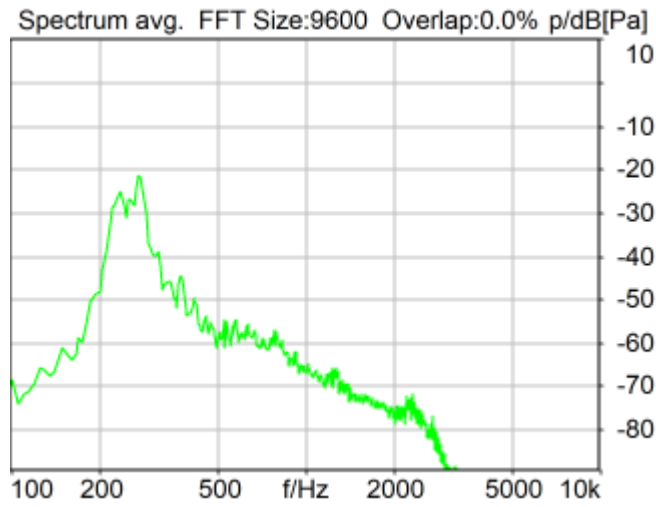
Ok

2023/11/14 11:32 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 250 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 22.63 dB (7.39%) Ok

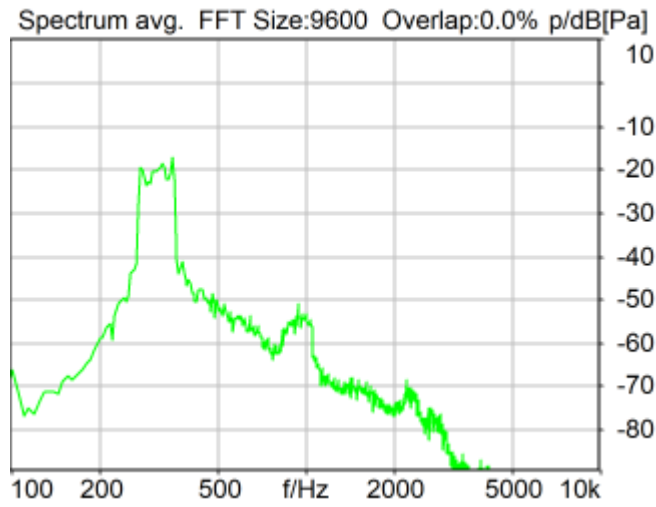
Ok

2023/11/14 11:33 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 315 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 26.33 dB (4.83%) Ok

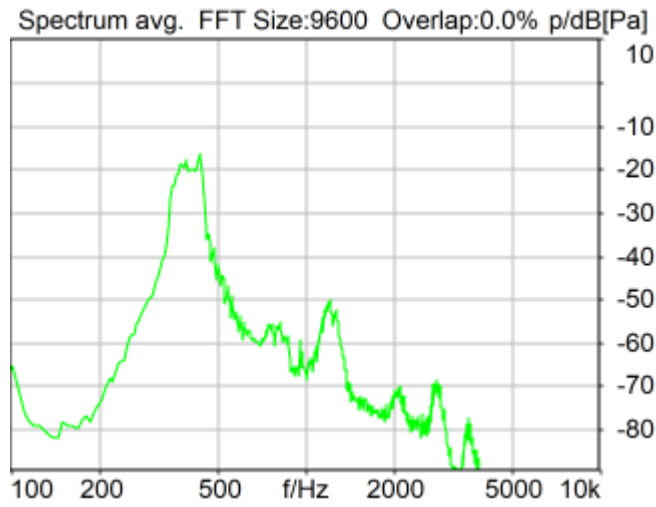
Ok

2023/11/14 11:33 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 400 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 25.60 dB (5.25%) Ok

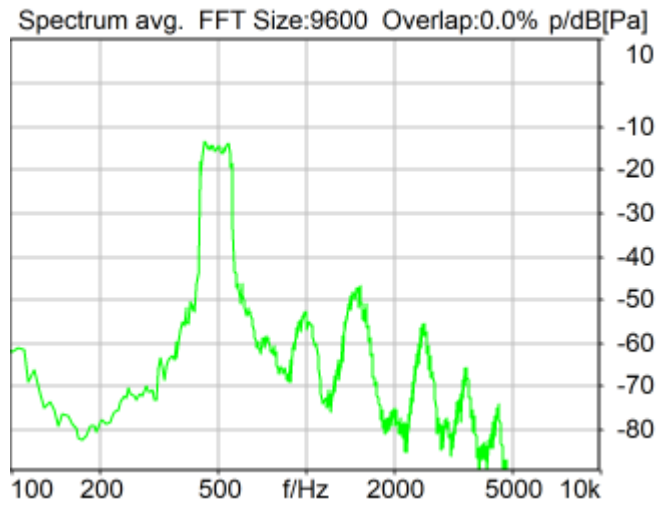
Ok

2023/11/14 11:33 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 29.12 dB (3.50%) Ok

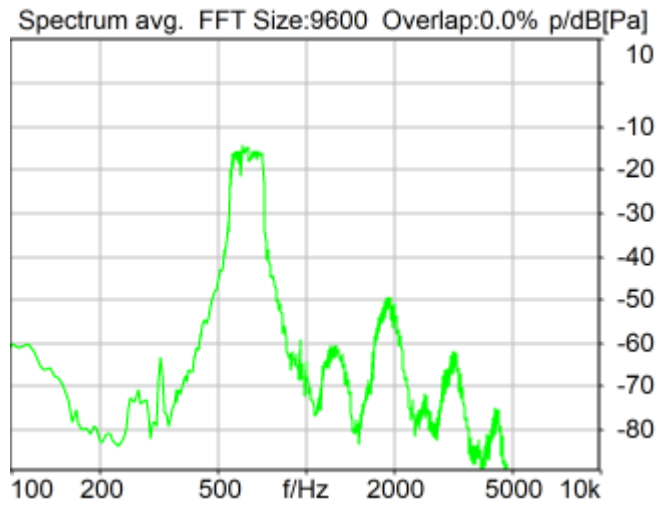
Ok

2023/11/14 11:34 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 28.95 dB (3.57%) Ok

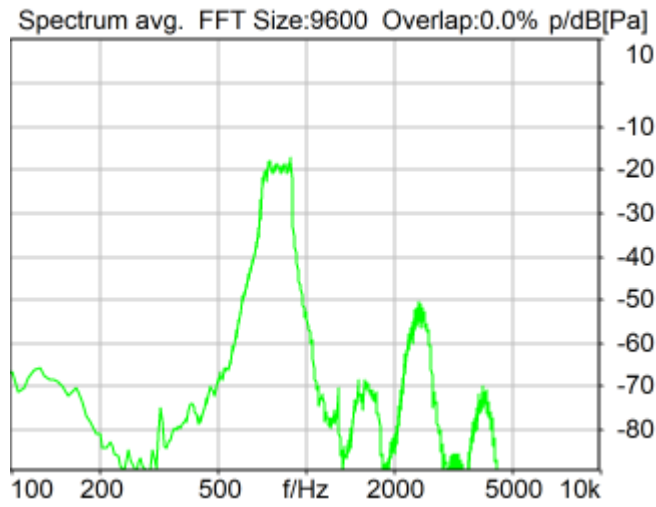
Ok

2023/11/14 11:34 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 26.03 dB (4.99%) Ok

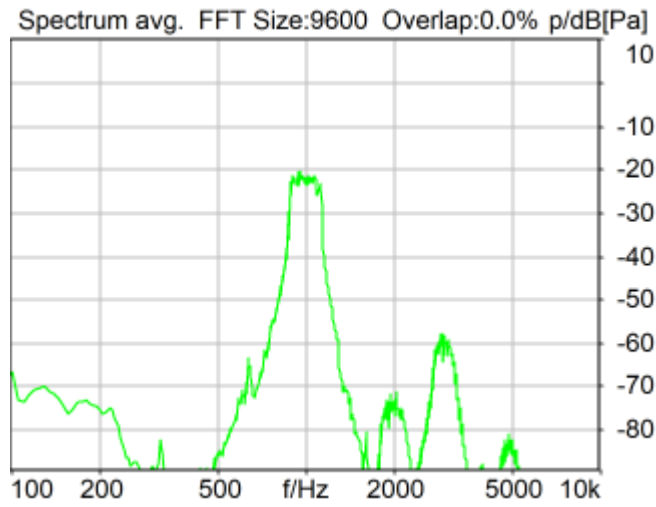
Ok

2023/11/14 11:35 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 26.13 dB (4.94%) Ok

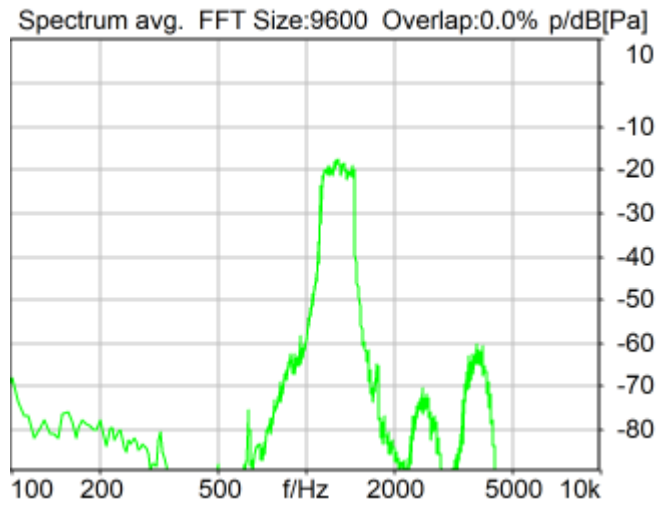
Ok

2023/11/14 11:35 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 25.33 dB (5.42%) Ok

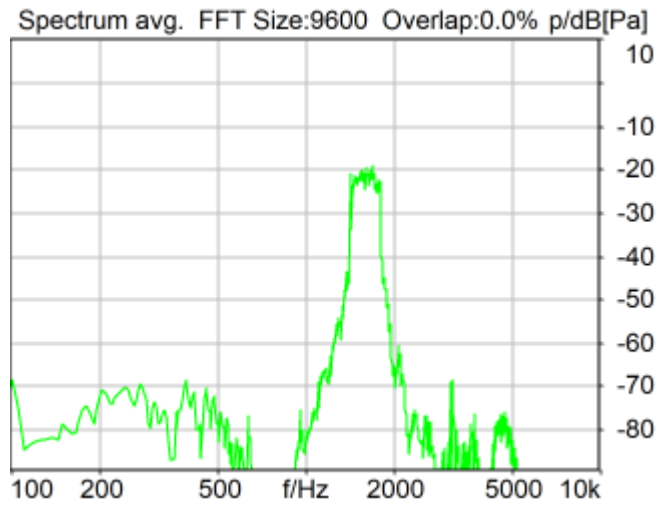
Ok

2023/11/14 11:35 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 28.77 dB (3.64%) Ok

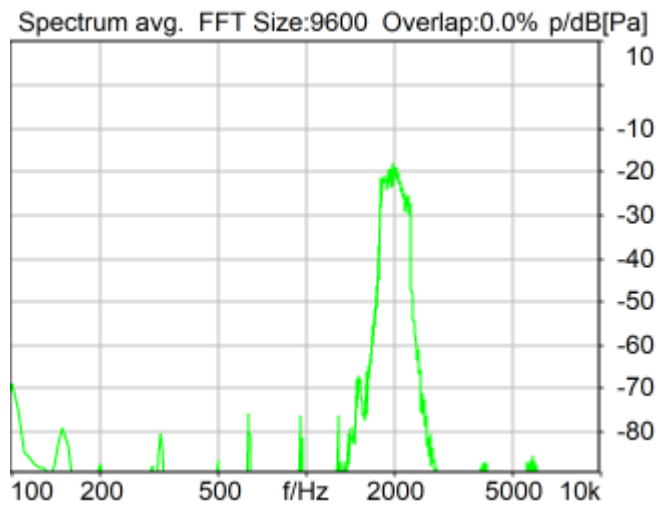
Ok

2023/11/14 11:36 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 34.17 dB (1.96%) Ok

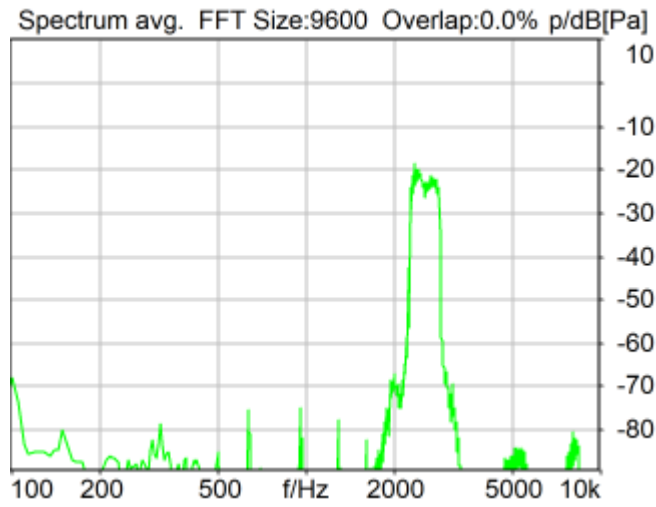
Ok

2023/11/14 11:36 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 42.76 dB (0.73%) Ok

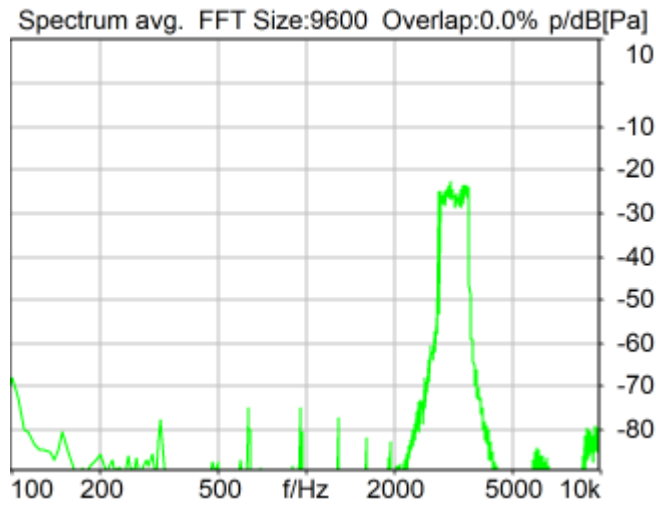
Ok

2023/11/14 11:37 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 36.05 dB (1.58%) Ok

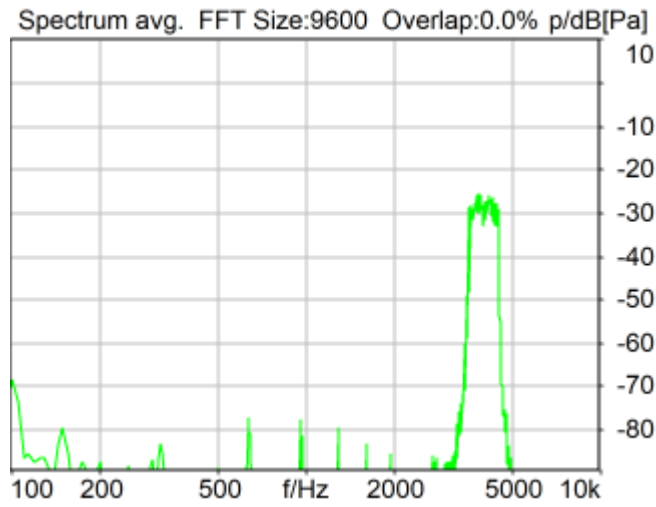
Ok

2023/11/14 11:37 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 4000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 34.61 dB (1.86%) Ok

Ok

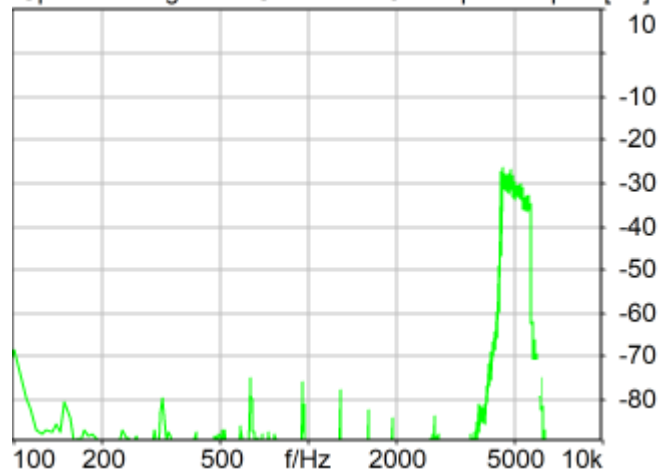
2023/11/14 11:37 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 5000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N

Spectrum avg. FFT Size:9600 Overlap:0.0% p/dB[Pa]



Distortion (Noise) RCV (packed): 34.74 dB (1.83%) Ok

Ok

2023/11/14 11:38 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain)

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N

Region	Frequency	SDNR
1	250Hz	22.63 dB
2	315Hz	26.33 dB
3	400Hz	25.60 dB
4	500Hz	29.12 dB
5	630Hz	28.95 dB
6	800Hz	26.03 dB
7	1000Hz	26.13 dB
8	1250Hz	25.33 dB
9	1600Hz	28.77 dB
10	2000Hz	34.17 dB
11	2500Hz	42.76 dB
12	3150Hz	36.05 dB
13	4000Hz	34.61 dB
14	5000Hz	34.74 dB

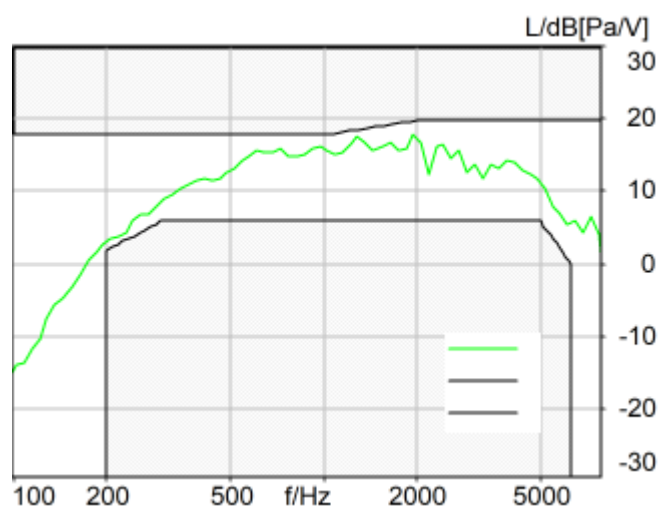
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 22.63dB at 250Hz.

2023/11/14 11:38 ACQUA

5.3 Frequency Response 2N FF

TIA-5050 (2018-01) \ Measurements \ Wideband



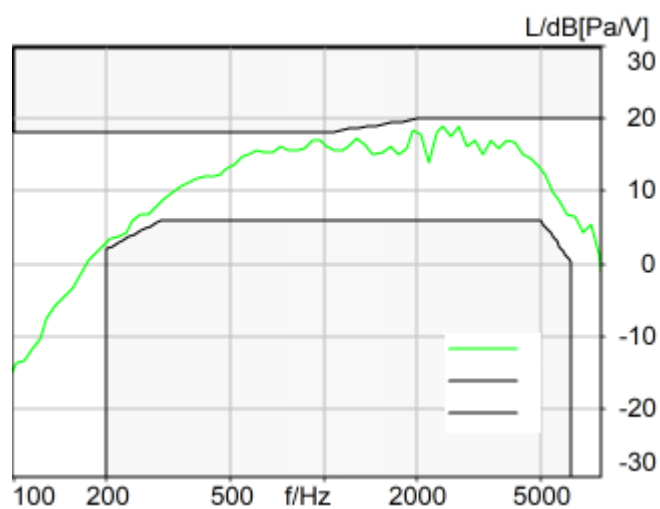
Absolute minimal distance
1.04 dB at 217.7 Hz Ok

Ok

2023/11/14 11:38 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N DF

TIA-5050 (2018-01) \ Measurements \ Wideband



Absolute minimal distance
0.87 dB at 974.0 Hz Ok

Ok

2023/11/14 11:39 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_8N
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Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/14 12:37

Status Overview

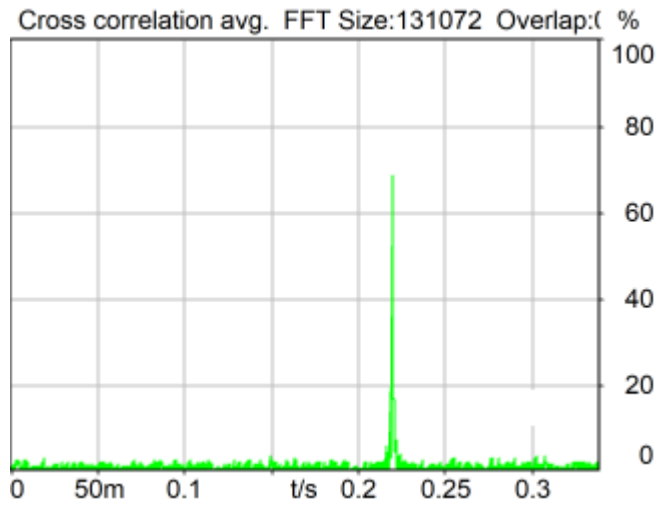
SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay WB	Done	Delay (Cross) [ms]	220.0	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_8N
5.1a Receive Volume Control Performance 8N WB	Ok	Speech Level [dB[SPL]]	88.78	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_8N
5.2 RCV Distortion and Noise - 250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	23.36	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_8N
5.2 RCV Distortion and Noise - 315 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	26.45	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_8N
5.2 RCV Distortion and Noise - 400 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	25.33	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_8N
5.2 RCV Distortion and Noise - 500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	29.11	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_8N
5.2 RCV Distortion and Noise - 630 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	29.75	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_8N
5.2 RCV Distortion and Noise - 800 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	29.34	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_8N
5.2 RCV Distortion and Noise - 1000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	31.67	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_8N
5.2 RCV Distortion and Noise - 1250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	20.46	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_8N
5.2 RCV Distortion and Noise - 1600 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	26.92	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_8N
5.2 RCV Distortion and Noise - 2000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	32.54	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_8N
5.2 RCV Distortion and Noise - 2500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	40.81	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_8N
5.2 RCV Distortion and Noise - 3150 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	29.41	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_8N
5.2 RCV Distortion and Noise - 4000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	35.85	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_8N
5.2 RCV Distortion and Noise - 5000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	33.25	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_8N
Report - Receive Distortion	Ok	Minimum SDNR [dB],	20.46	WLAN5G_Voice_802.11n-HT40

and Noise (Conversational Gain)		(occured at 1250Hz)		MCS0_EVS WB 64kbps_Ch38_8N
5.3 Frequency Response 8N FF	Ok	Min. dist. to tolerance scheme [dB], 1285.9 Hz	1.02	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_8N
5.3 Frequency Response 8N DF	Ok	Min. dist. to tolerance scheme [dB], 1948.0 Hz	1.06	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch38_8N

Overall Receive Delay WB	6
5.1a Receive Volume Control Performance 8N WB	7
5.2 RCV Distortion and Noise - 250 Hz WB	8
5.2 RCV Distortion and Noise - 315 Hz WB	9
5.2 RCV Distortion and Noise - 400 Hz WB	10
5.2 RCV Distortion and Noise - 500 Hz WB	11
5.2 RCV Distortion and Noise - 630 Hz WB	12
5.2 RCV Distortion and Noise - 800 Hz WB	13
5.2 RCV Distortion and Noise - 1000 Hz WB	14
5.2 RCV Distortion and Noise - 1250 Hz WB	15
5.2 RCV Distortion and Noise - 1600 Hz WB	16
5.2 RCV Distortion and Noise - 2000 Hz WB	17
5.2 RCV Distortion and Noise - 2500 Hz WB	18
5.2 RCV Distortion and Noise - 3150 Hz WB	19
5.2 RCV Distortion and Noise - 4000 Hz WB	20
5.2 RCV Distortion and Noise - 5000 Hz WB	21
Report - Receive Distortion and Noise (Conversational Gain)	22
5.3 Frequency Response 8N FF	23
5.3 Frequency Response 8N DF	24

Overall Receive Delay WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ Preparation - Delay measurement



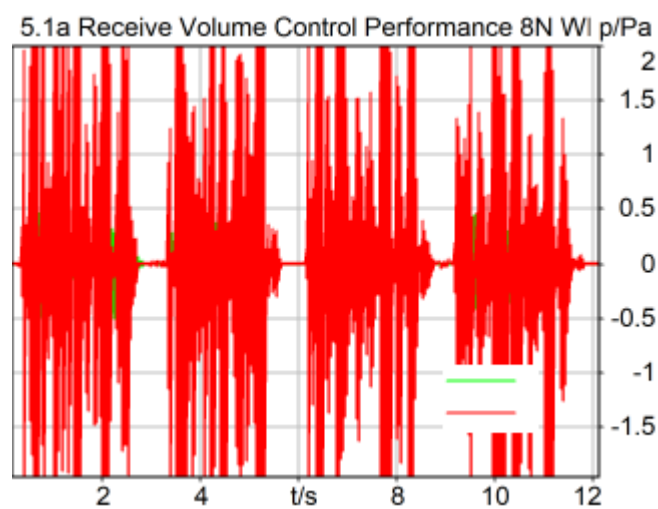
Delay (Cross): 220.0 ms

2023/11/14 11:47 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.1a Receive Volume Control Performance 8N WB

TIA-5050 (2018-01) \ Measurements \ Wideband



Speech Level RCV: 88.78 dB[SPL], Act.: 80.69% Ok

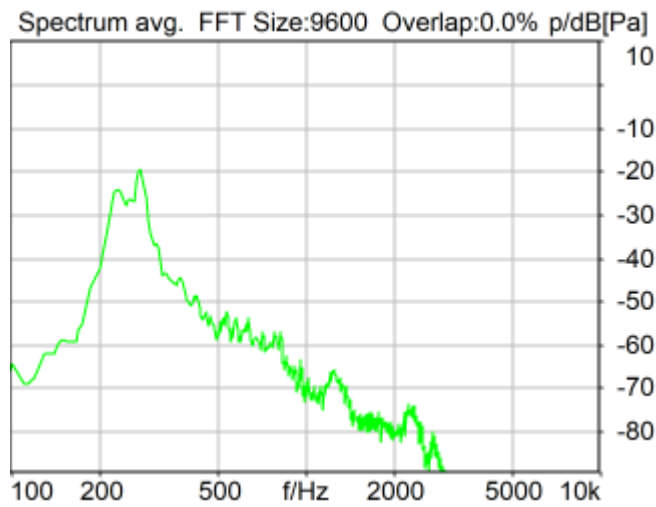
Ok

2023/11/14 11:47 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 250 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 23.36 dB (6.79%) Ok

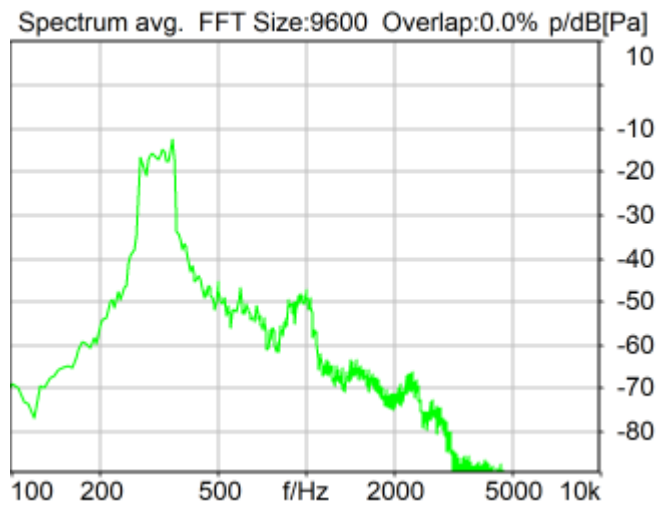
Ok

2023/11/14 12:04 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 315 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 26.45 dB (4.76%) Ok

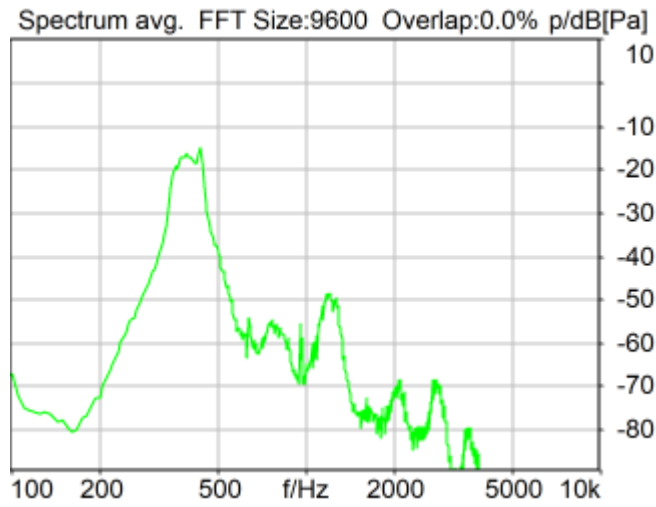
Ok

2023/11/14 11:48 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 400 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 25.33 dB (5.42%) Ok

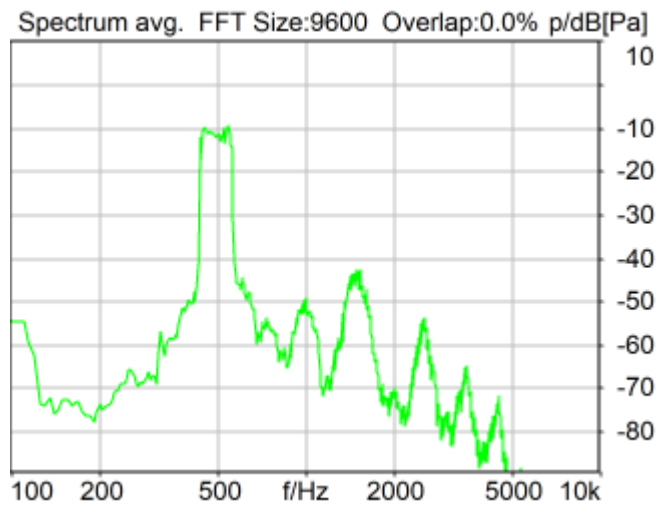
Ok

2023/11/14 11:49 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 29.11 dB (3.50%) Ok

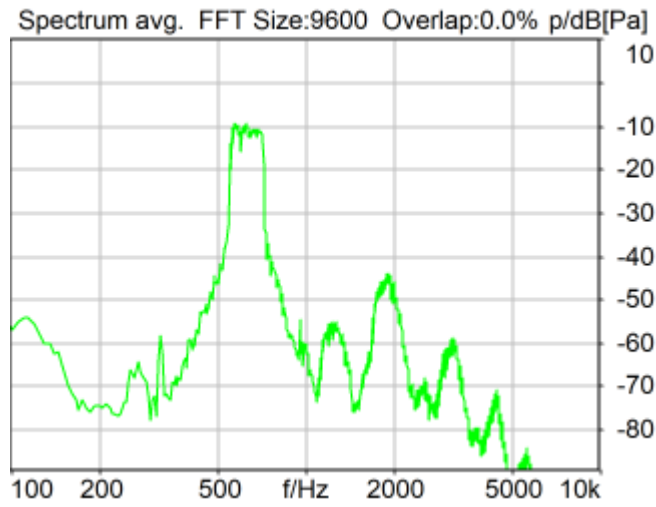
Ok

2023/11/14 11:49 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 29.75 dB (3.25%) Ok

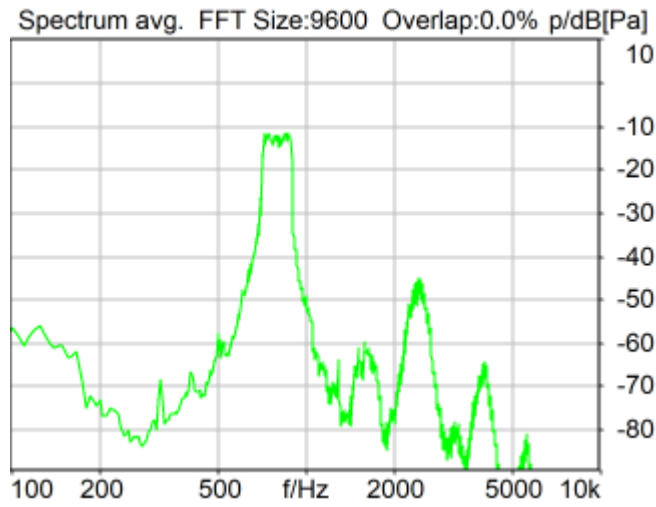
Ok

2023/11/14 11:49 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 29.34 dB (3.41%) Ok

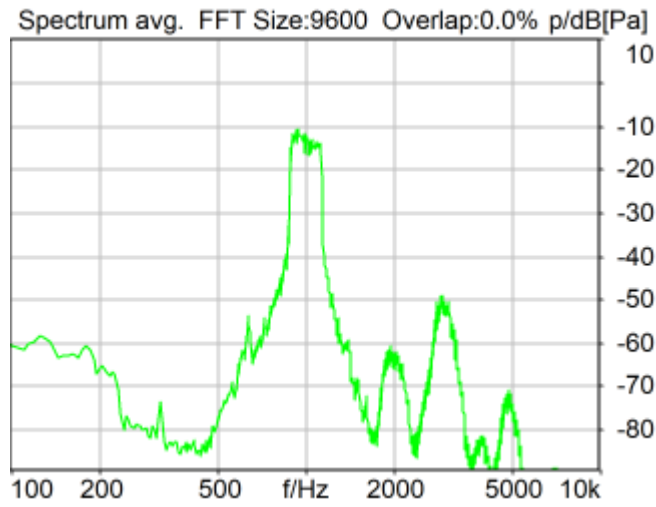
Ok

2023/11/14 11:50 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 31.67 dB (2.61%) Ok

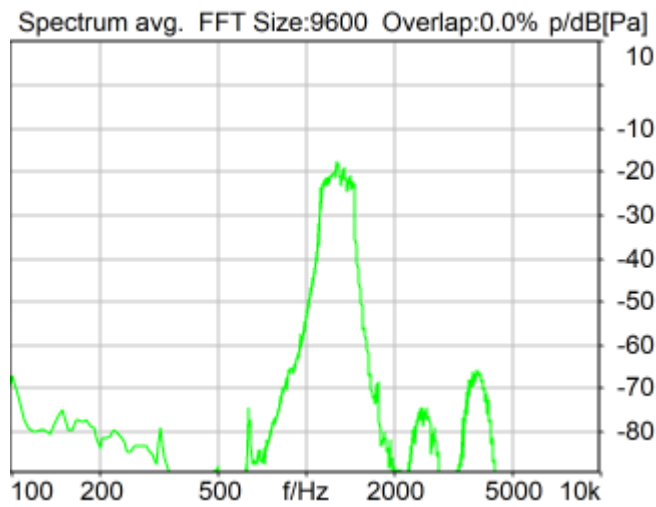
Ok

2023/11/14 11:50 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 20.46 dB (9.49%) Ok

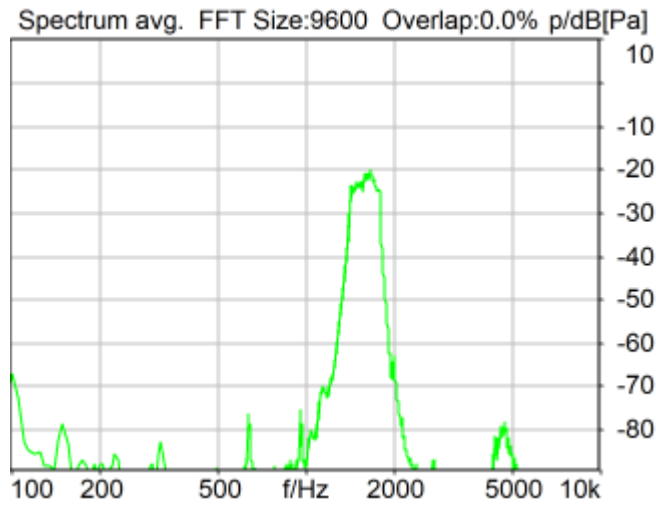
Ok

2023/11/14 11:51 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 26.92 dB (4.51%) Ok

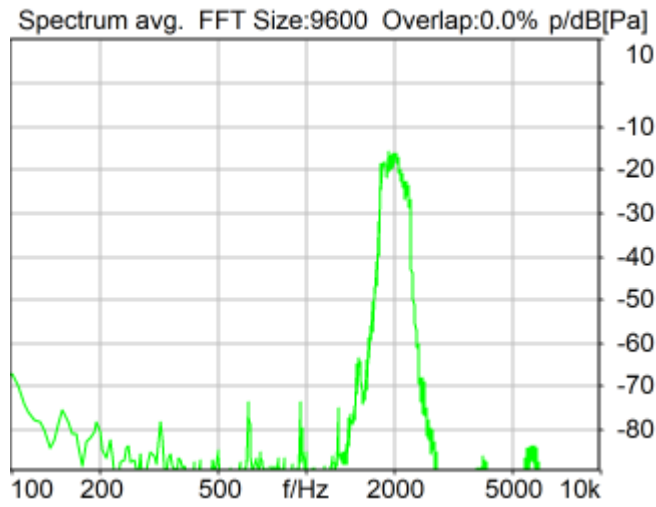
Ok

2023/11/14 11:51 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 32.54 dB (2.36%) Ok

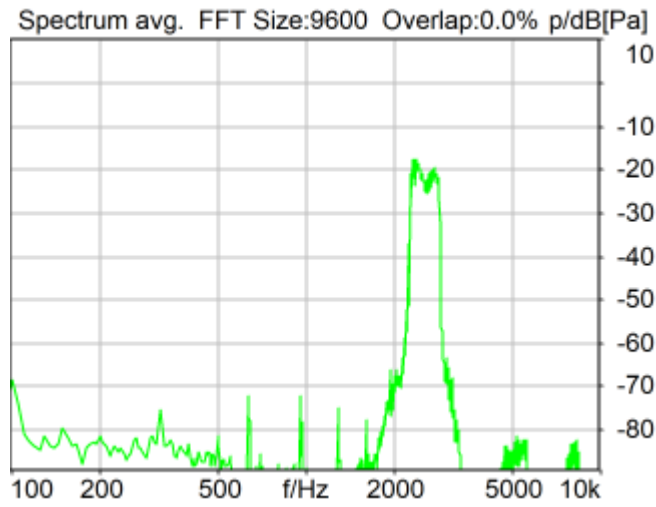
Ok

2023/11/14 11:52 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 40.81 dB (0.91%) Ok

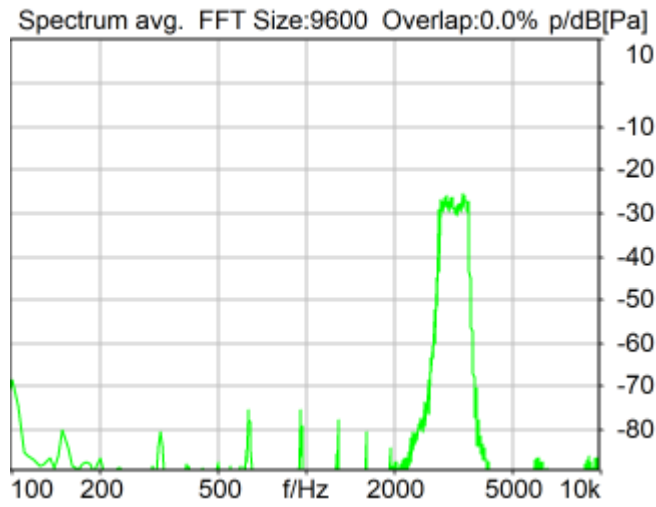
Ok

2023/11/14 11:52 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 29.41 dB (3.39%) Ok

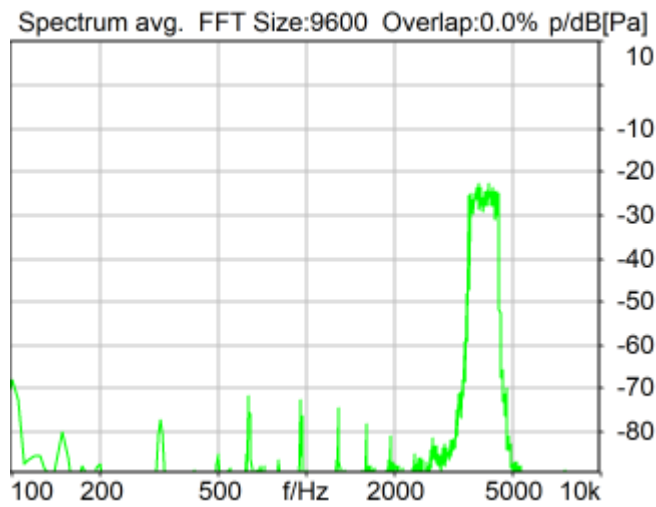
Ok

2023/11/14 11:52 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 4000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 35.85 dB (1.61%) Ok

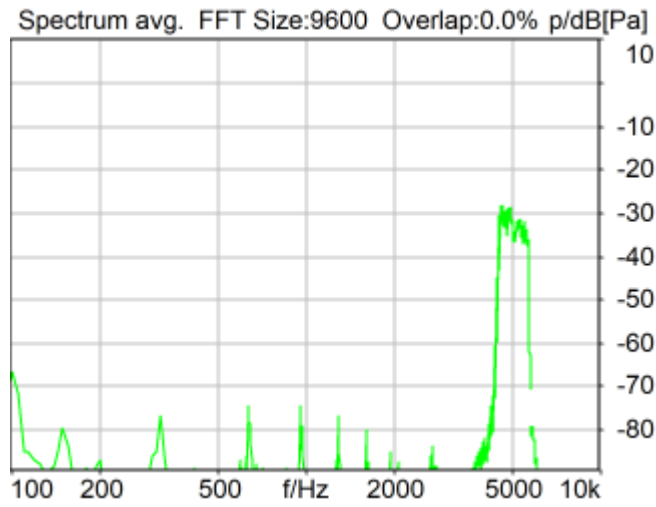
Ok

2023/11/14 11:53 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 5000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 33.25 dB (2.18%) Ok

Ok

2023/11/14 11:53 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain)

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N

Region	Frequency	SDNR
1	315Hz	26.45 dB
2	400Hz	25.33 dB
3	500Hz	29.11 dB
4	630Hz	29.75 dB
5	800Hz	29.34 dB
6	1000Hz	31.67 dB
7	1250Hz	20.46 dB
8	1600Hz	26.92 dB
9	2000Hz	32.54 dB
10	2500Hz	40.81 dB
11	3150Hz	29.41 dB
12	4000Hz	35.85 dB
13	5000Hz	33.25 dB
14	250Hz	23.36 dB

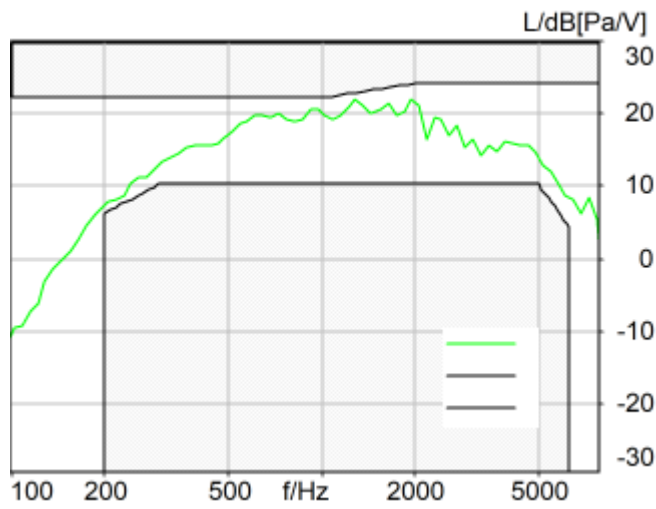
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 20.46dB at 1250Hz.

2023/11/14 12:04 ACQUA

5.3 Frequency Response 8N FF

TIA-5050 (2018-01) \ Measurements \ Wideband



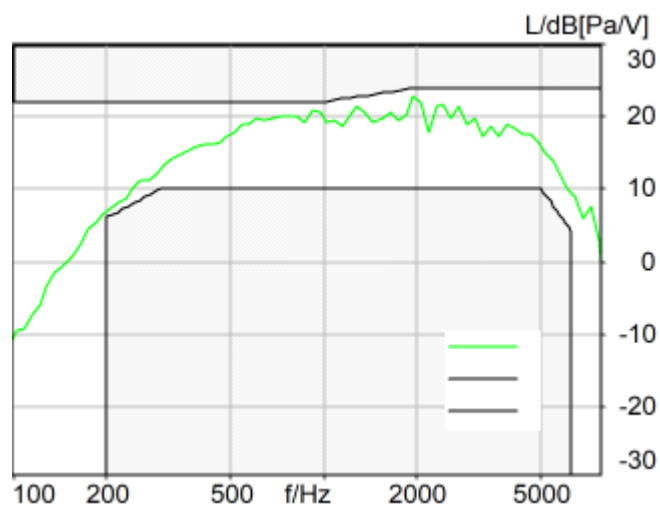
Absolute minimal distance
1.02 dB at 1285.9 Hz Ok

Ok

2023/11/14 11:55 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 8N DF

TIA-5050 (2018-01) \ Measurements \ Wideband



Absolute minimal distance
1.06 dB at 1948.0 Hz Ok

Ok

2023/11/14 11:55 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_2N
--------------------	--

Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/14 13:31

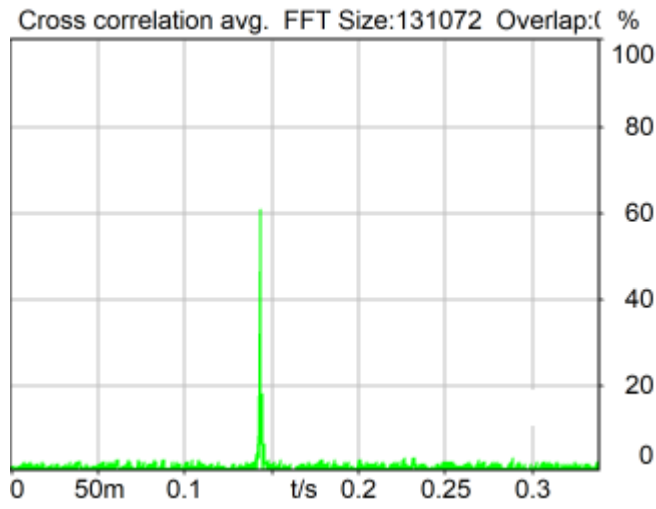
Status Overview

SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay NB	Done	Delay (Cross) [ms]	144.2	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_2N
5.1b Receive Volume Control Performance 2N NB	Ok	Speech Level [dB[SPL]]	86.48	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_2N
5.2 RCV Distortion and Noise - 400 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	26.41	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_2N
5.2 RCV Distortion and Noise - 500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	28.12	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_2N
5.2 RCV Distortion and Noise - 630 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	29.74	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_2N
5.2 RCV Distortion and Noise - 800 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	26.34	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_2N
5.2 RCV Distortion and Noise - 1000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	22.86	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_2N
5.2 RCV Distortion and Noise - 1250 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	28.87	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_2N
5.2 RCV Distortion and Noise - 1600 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	37.56	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_2N
5.2 RCV Distortion and Noise - 2000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	37.32	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_2N
5.2 RCV Distortion and Noise - 2500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	40.81	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_2N
5.2 RCV Distortion and Noise - 3150 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	37.64	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_2N
Report - Receive Distortion and Noise (Conversational Gain)	Ok	Minimum SDNR [dB], (occured at 1000Hz)	22.86	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_2N
5.3 Frequency Response 2N FF HANB	Ok	Min. dist. to tolerance scheme [dB], 1447.5 Hz	0.17	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_2N
5.3 Frequency Response 2N DF HANB	Ok	Min. dist. to tolerance scheme [dB], 2177.4 Hz	0.25	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_2N

Overall Receive Delay NB	5
5.1b Receive Volume Control Performance 2N NB	6
5.2 RCV Distortion and Noise - 400 Hz NB	7
5.2 RCV Distortion and Noise - 500 Hz NB	8
5.2 RCV Distortion and Noise - 630 Hz NB	9
5.2 RCV Distortion and Noise - 800 Hz NB	10
5.2 RCV Distortion and Noise - 1000 Hz NB	11
5.2 RCV Distortion and Noise - 1250 Hz NB	12
5.2 RCV Distortion and Noise - 1600 Hz NB	13
5.2 RCV Distortion and Noise - 2000 Hz NB	14
5.2 RCV Distortion and Noise - 2500 Hz NB	15
5.2 RCV Distortion and Noise - 3150 Hz NB	16
Report - Receive Distortion and Noise (Conversational Gain)	17
5.3 Frequency Response 2N FF HANB	18
5.3 Frequency Response 2N DF HANB	19

Overall Receive Delay NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ Preparation - Delay measurement



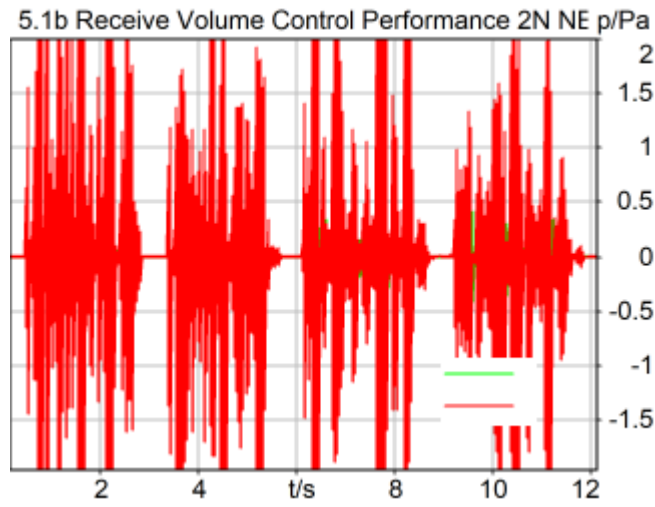
Delay (Cross): 144.2 ms

2023/11/14 13:18 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.1b Receive Volume Control Performance 2N NB

TIA-5050 (2018-01) \ Measurements \ Narrowband



Speech Level RCV: 86.48 dB[SPL], Act.: 82.49% Ok

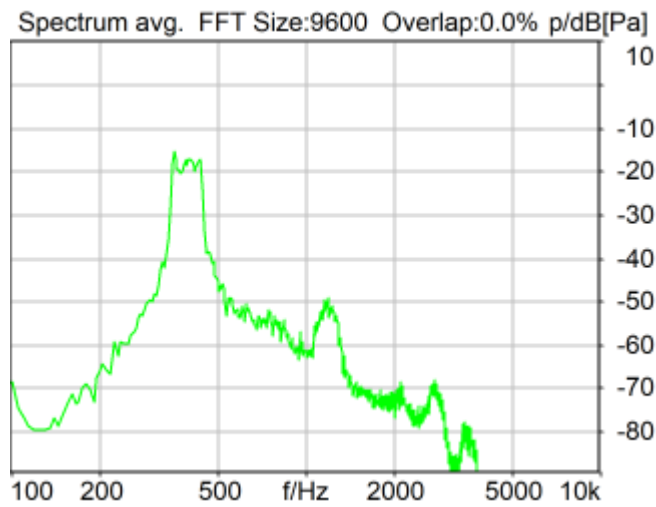
Ok

2023/11/14 13:18 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 400 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 26.41 dB (4.78%) Ok

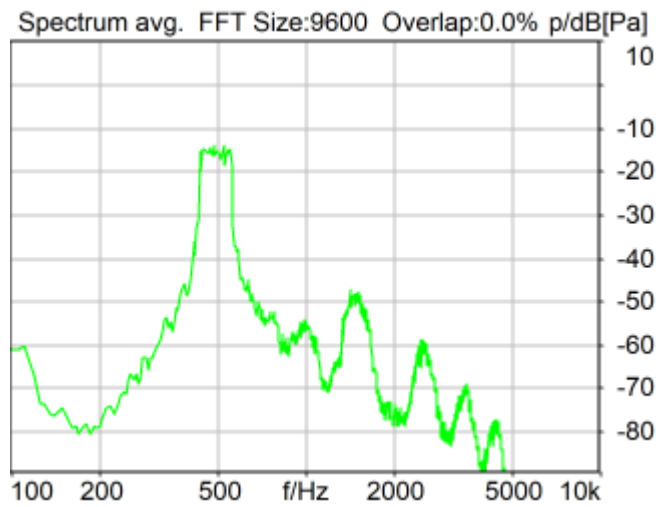
Ok

2023/11/14 13:18 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 28.12 dB (3.93%) Ok

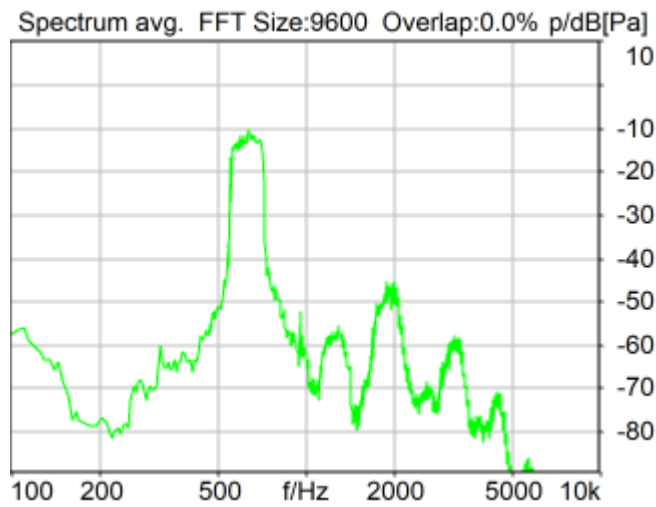
Ok

2023/11/14 13:19 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 29.74 dB (3.26%) Ok

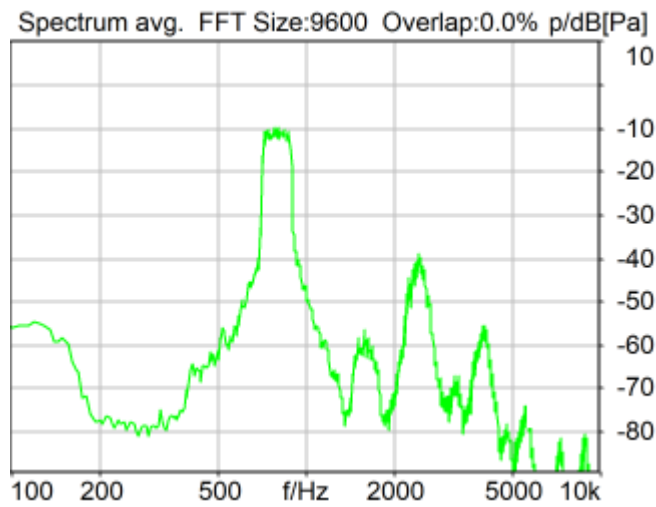
Ok

2023/11/14 13:19 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 26.34 dB (4.82%) Ok

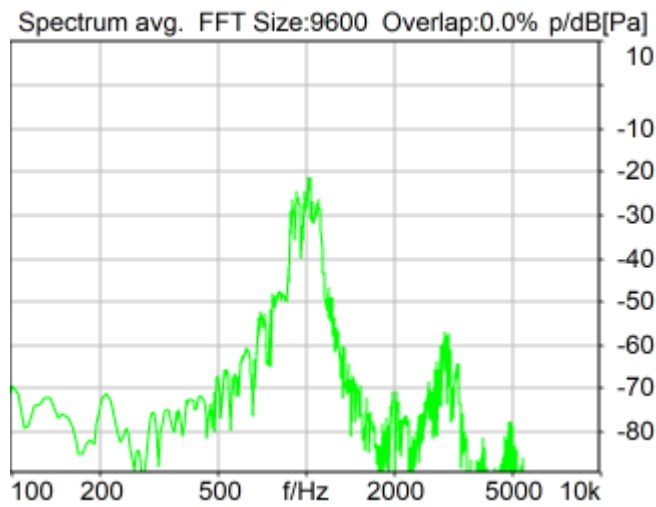
Ok

2023/11/14 13:20 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 22.86 dB (7.19%) Ok

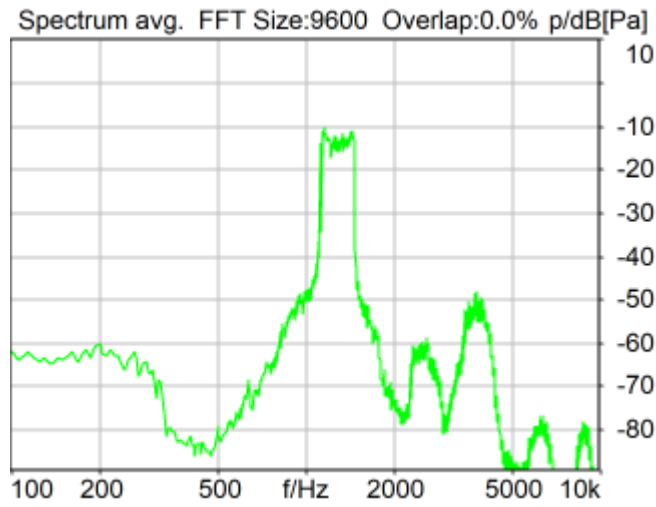
Ok

2023/11/14 13:20 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 28.87 dB (3.60%) Ok

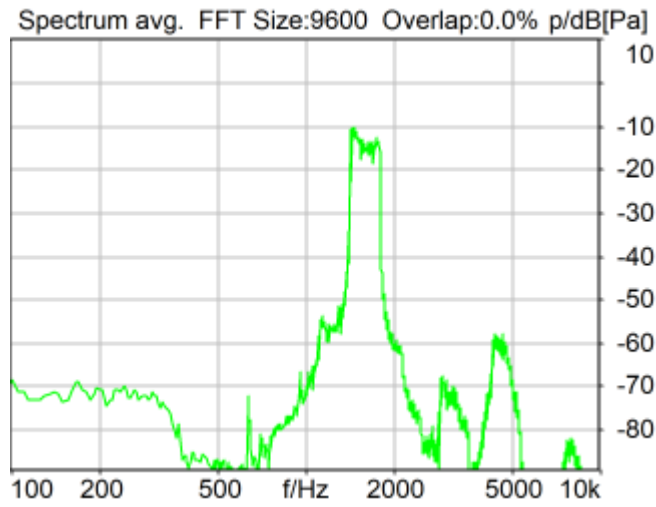
Ok

2023/11/14 13:20 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 37.56 dB (1.32%) Ok

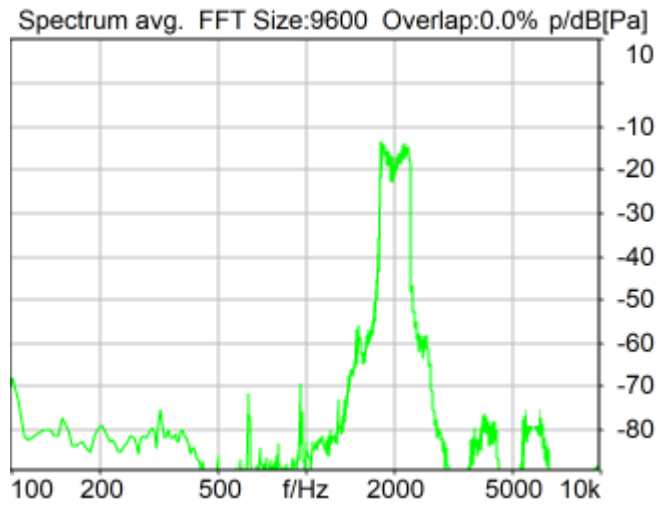
Ok

2023/11/14 13:21 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 37.32 dB (1.36%) Ok

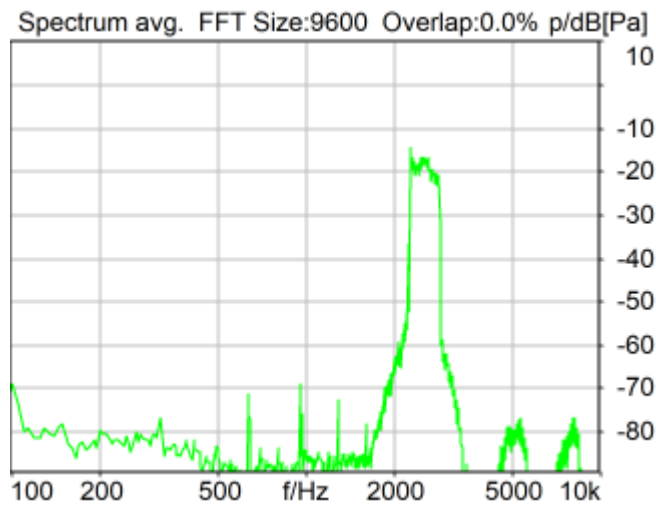
Ok

2023/11/14 13:21 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 40.81 dB (0.91%) Ok

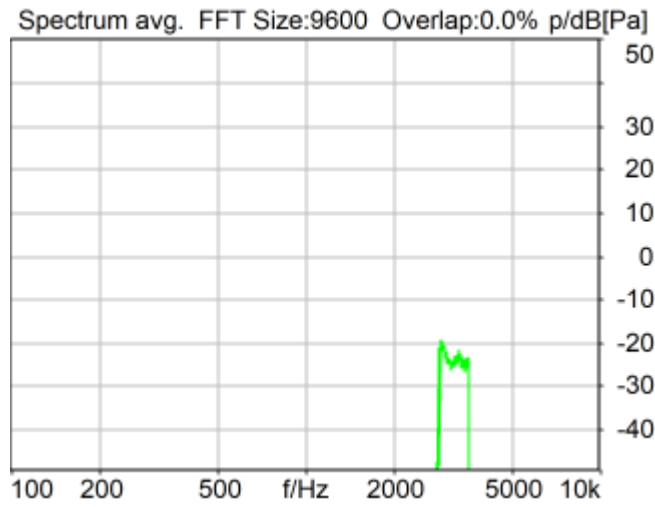
Ok

2023/11/14 13:22 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 37.64 dB (1.31%) Ok

Ok

2023/11/14 13:22 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain)

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N

Region	Frequency	SDNR
1	400Hz	26.41 dB
2	500Hz	28.12 dB
3	630Hz	29.74 dB
4	800Hz	26.34 dB
5	1000Hz	22.86 dB
6	1250Hz	28.87 dB
7	1600Hz	37.56 dB
8	2000Hz	37.32 dB
9	2500Hz	40.81 dB
10	3150Hz	37.64 dB

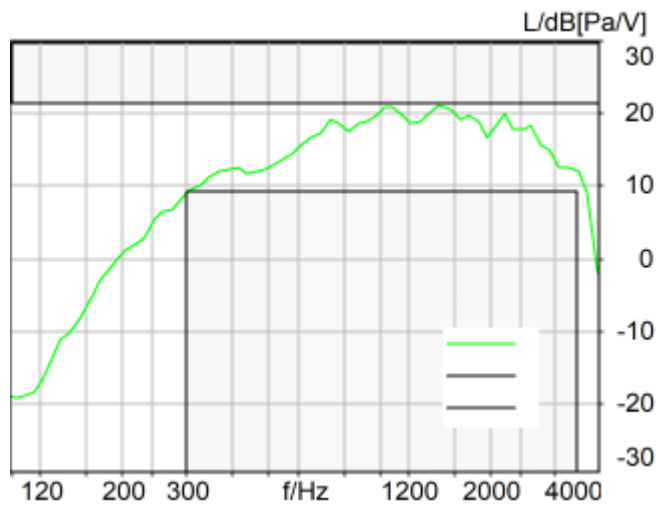
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 22.86dB at 1000Hz.

2023/11/14 13:28 ACQUA

5.3 Frequency Response 2N FF HANB

TIA-5050 (2018-01) \ Measurements \ Narrowband



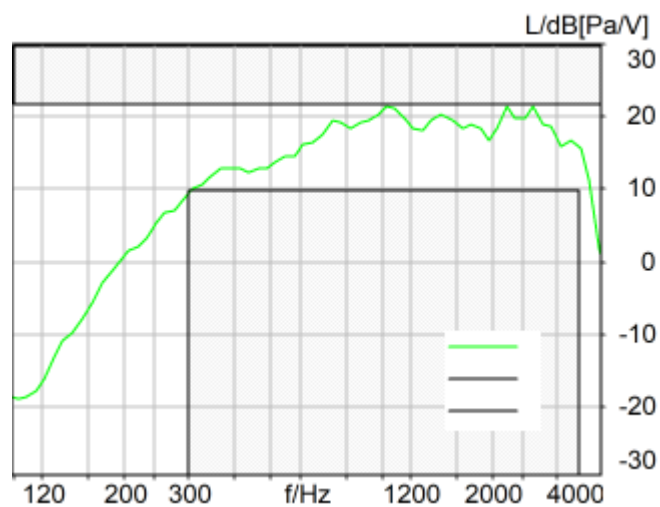
Absolute minimal distance
0.17 dB at 1447.5 Hz Ok

Ok

2023/11/14 13:29 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N DF HANB

TIA-5050 (2018-01) \ Measurements \ Narrowband



Absolute minimal distance
0.25 dB at 2177.4 Hz Ok

Ok

2023/11/14 13:28 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_8N
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Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/14 13:59

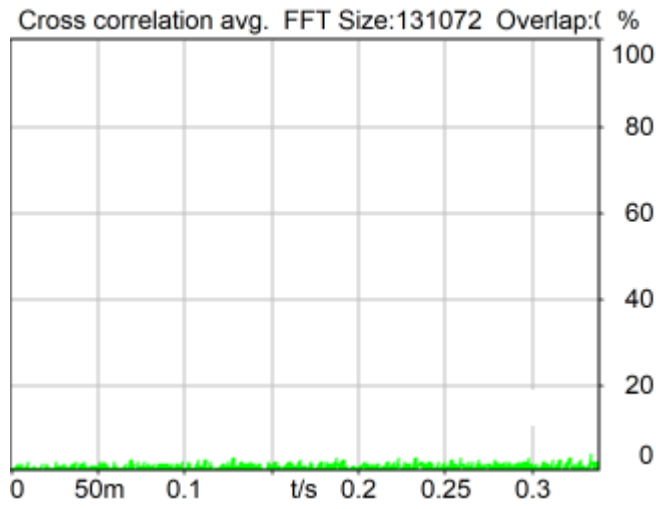
Status Overview

SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay NB	Done	Delay (Cross) [ms]	403.9	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_8N
5.1b Receive Volume Control Performance 2N NB	Ok	Speech Level [dB[SPL]]	90.76	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_8N
5.2 RCV Distortion and Noise - 400 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	25.51	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_8N
5.2 RCV Distortion and Noise - 500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	20.22	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_8N
5.2 RCV Distortion and Noise - 630 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	23.32	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_8N
5.2 RCV Distortion and Noise - 800 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	22.29	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_8N
5.2 RCV Distortion and Noise - 1000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	26.99	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_8N
5.2 RCV Distortion and Noise - 1250 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	23.84	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_8N
5.2 RCV Distortion and Noise - 1600 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	27.76	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_8N
5.2 RCV Distortion and Noise - 2000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	26.73	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_8N
5.2 RCV Distortion and Noise - 2500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	28.54	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_8N
5.2 RCV Distortion and Noise - 3150 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	30.74	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_8N
Report - Receive Distortion and Noise (Conversational Gain)	Ok	Minimum SDNR [dB], (occured at 500Hz)	20.22	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_8N
5.3 Frequency Response 2N FF HANB	Ok	Min. dist. to tolerance scheme [dB], 1447.5 Hz	0.21	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_8N
5.3 Frequency Response 2N DF HANB	Ok	Min. dist. to tolerance scheme [dB], 305.9 Hz	0.19	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch54_8N

Overall Receive Delay NB	5
5.1b Receive Volume Control Performance 2N NB	6
5.2 RCV Distortion and Noise - 400 Hz NB	7
5.2 RCV Distortion and Noise - 500 Hz NB	8
5.2 RCV Distortion and Noise - 630 Hz NB	9
5.2 RCV Distortion and Noise - 800 Hz NB	10
5.2 RCV Distortion and Noise - 1000 Hz NB	11
5.2 RCV Distortion and Noise - 1250 Hz NB	12
5.2 RCV Distortion and Noise - 1600 Hz NB	13
5.2 RCV Distortion and Noise - 2000 Hz NB	14
5.2 RCV Distortion and Noise - 2500 Hz NB	15
5.2 RCV Distortion and Noise - 3150 Hz NB	16
Report - Receive Distortion and Noise (Conversational Gain)	17
5.3 Frequency Response 2N FF HANB	18
5.3 Frequency Response 2N DF HANB	19

Overall Receive Delay NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ Preparation - Delay measurement



Delay (Cross): 403.9 ms

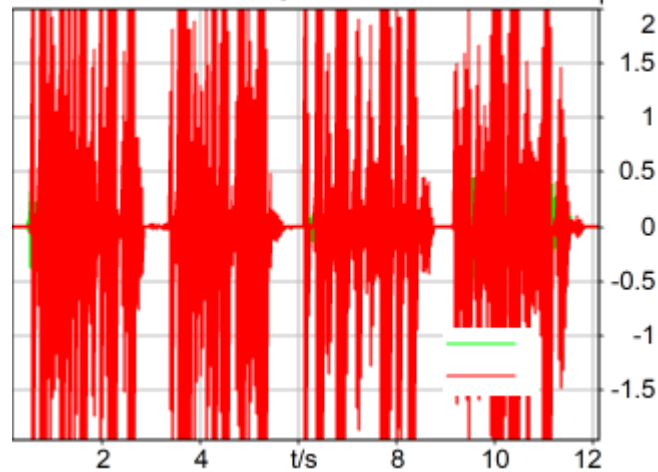
2023/11/14 13:56 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.1b Receive Volume Control Performance 2N NB

TIA-5050 (2018-01) \ Measurements \ Narrowband

5.1b Receive Volume Control Performance 2N NE p/Pa



Speech Level RCV: 90.76 dB[SPL], Act.: 80.81% Ok

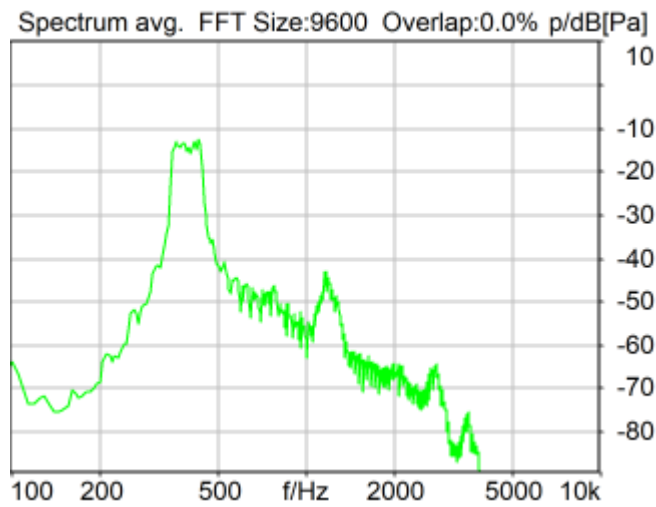
Ok

2023/11/14 13:32 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 400 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 25.51 dB (5.30%) Ok

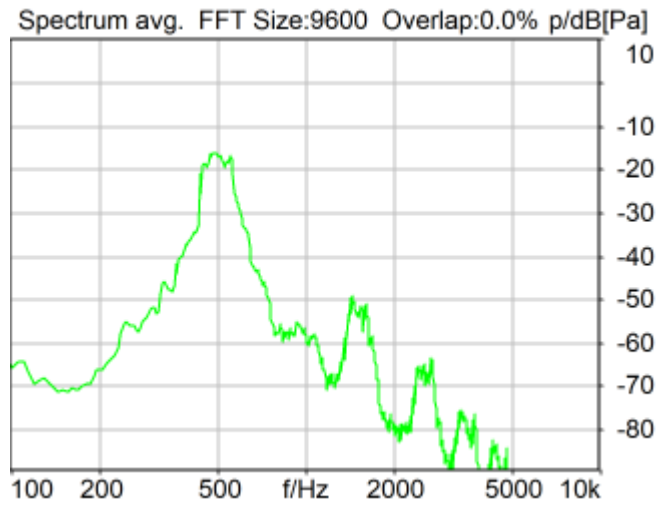
Ok

2023/11/14 13:33 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 20.22 dB (9.75%) Ok

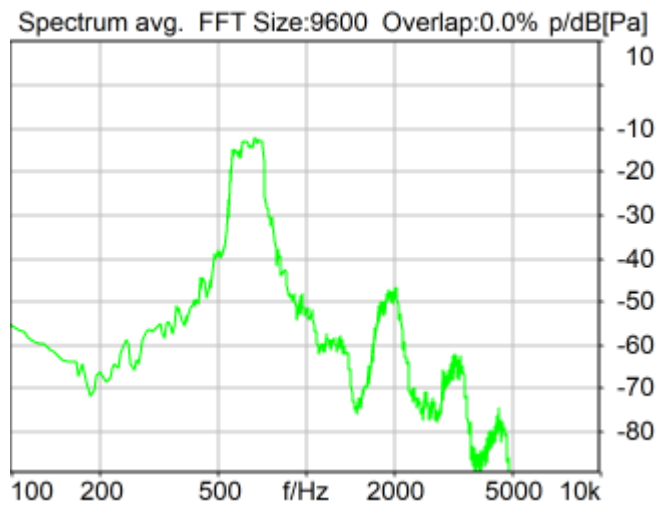
Ok

2023/11/14 13:33 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 23.32 dB (6.83%) Ok

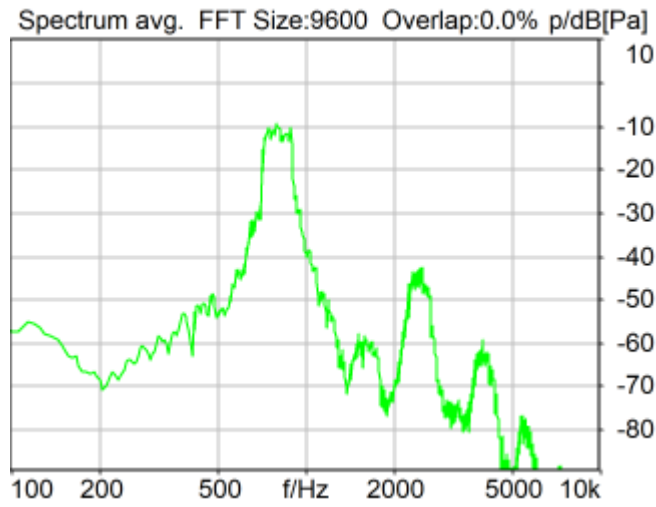
Ok

2023/11/14 13:57 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 22.29 dB (7.68%) Ok

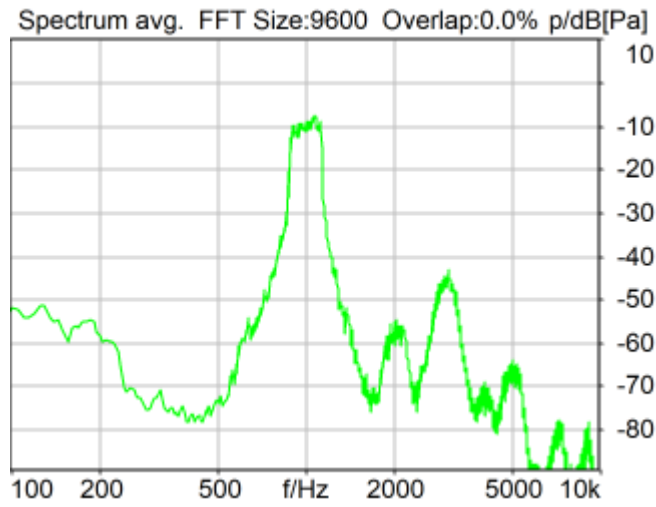
Ok

2023/11/14 13:34 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 26.99 dB (4.47%) Ok

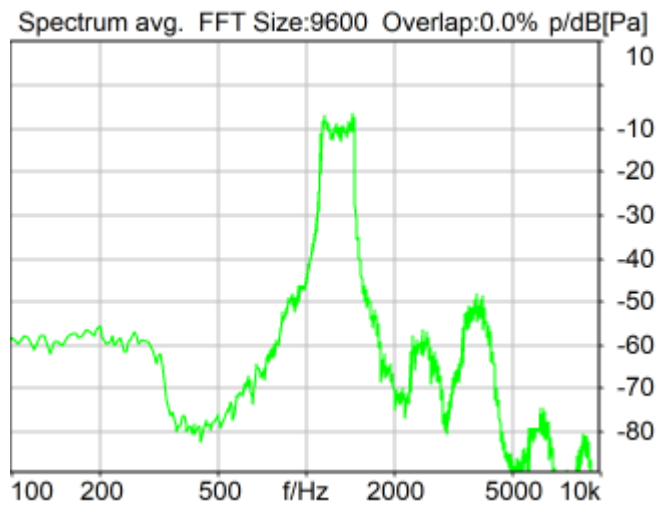
Ok

2023/11/14 13:34 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 23.84 dB (6.43%) Ok

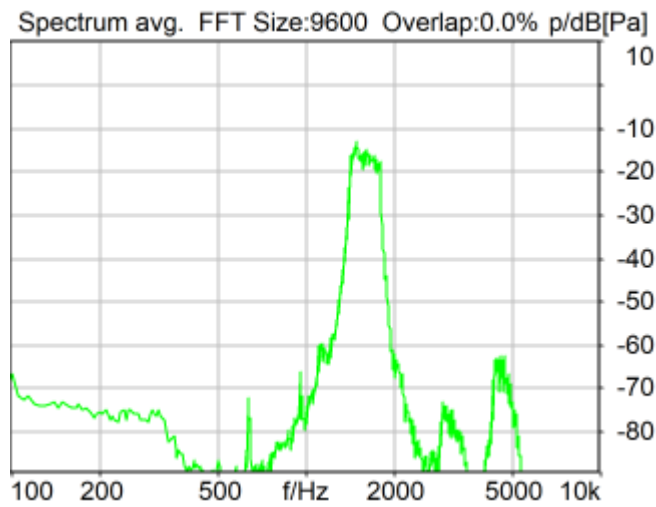
Ok

2023/11/14 13:35 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 27.76 dB (4.09%) Ok

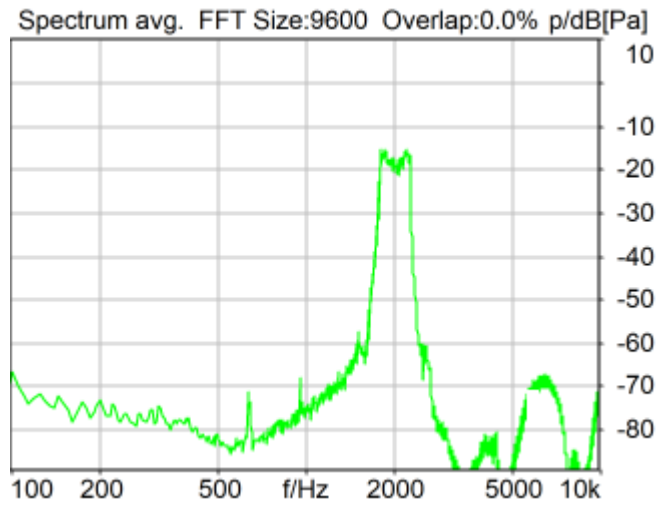
Ok

2023/11/14 13:35 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 26.73 dB (4.61%) Ok

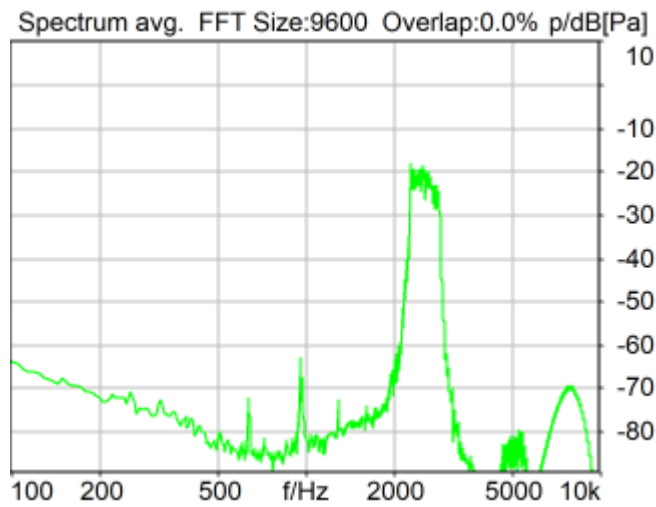
Ok

2023/11/14 13:36 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 28.54 dB (3.74%) Ok

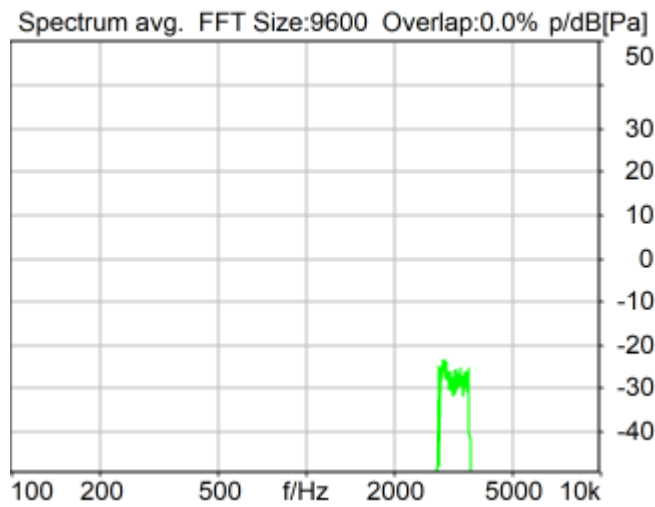
Ok

2023/11/14 13:36 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 30.74 dB (2.90%) Ok

Ok

2023/11/14 13:36 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain)

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N

Region	Frequency	SDNR
1	400Hz	25.51 dB
2	500Hz	20.22 dB
3	800Hz	22.29 dB
4	1000Hz	26.99 dB
5	1250Hz	23.84 dB
6	1600Hz	27.76 dB
7	2000Hz	26.73 dB
8	2500Hz	28.54 dB
9	3150Hz	30.74 dB
10	630Hz	23.32 dB

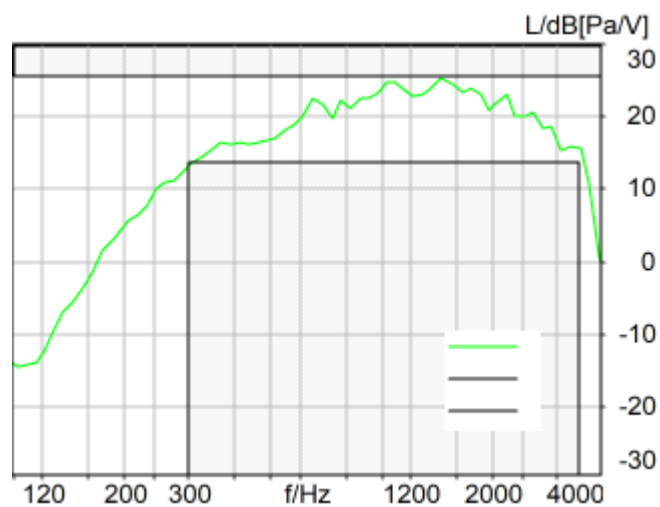
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 20.22dB at 500Hz.

2023/11/14 13:58 ACQUA

5.3 Frequency Response 2N FF HANB

TIA-5050 (2018-01) \ Measurements \ Narrowband



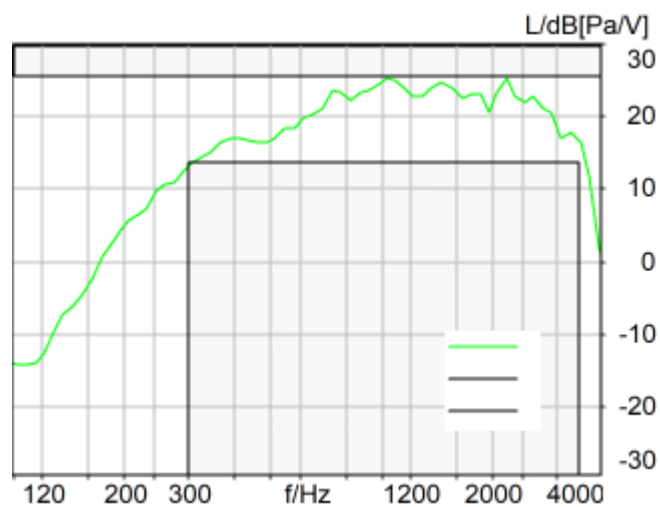
Absolute minimal distance
0.21 dB at 1447.5 Hz Ok

Ok

2023/11/14 13:37 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N DF HANB

TIA-5050 (2018-01) \ Measurements \ Narrowband



Absolute minimal distance
0.19 dB at 305.9 Hz Ok

Ok

2023/11/14 13:37 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_2N
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Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/14 12:49
Responsible Person	AC

Status Overview

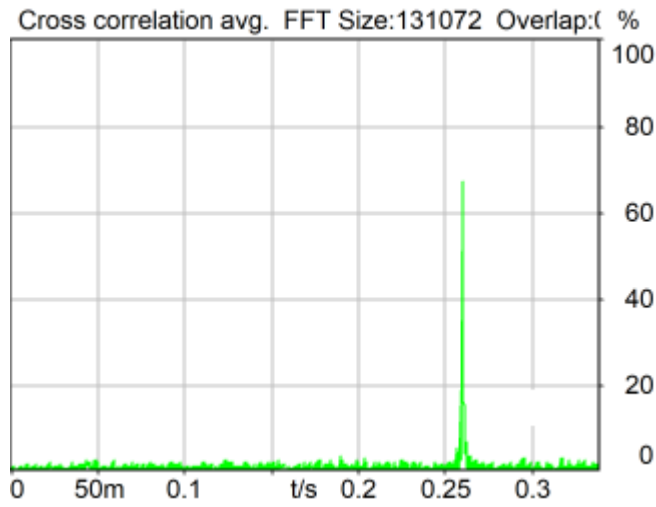
SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay WB	Done	Delay (Cross) [ms]	260.4	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_2N
5.1b Receive Volume Control Performance 2N WB	Ok	Speech Level [dB[SPL]]	84.63	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_2N
5.2 RCV Distortion and Noise - 250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	21.08	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_2N
5.2 RCV Distortion and Noise - 315 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	20.94	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_2N
5.2 RCV Distortion and Noise - 400 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	22.31	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_2N
5.2 RCV Distortion and Noise - 500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	22.14	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_2N
5.2 RCV Distortion and Noise - 630 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	26.46	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_2N
5.2 RCV Distortion and Noise - 800 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	29.20	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_2N
5.2 RCV Distortion and Noise - 1000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	29.93	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_2N
5.2 RCV Distortion and Noise - 1250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	22.19	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_2N
5.2 RCV Distortion and Noise - 1600 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	29.63	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_2N
5.2 RCV Distortion and Noise - 2000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	23.02	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_2N
5.2 RCV Distortion and Noise - 2500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	34.53	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_2N
5.2 RCV Distortion and Noise - 3150 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	30.82	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_2N
5.2 RCV Distortion and Noise - 4000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	29.11	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_2N
5.2 RCV Distortion and Noise - 5000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	33.02	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_2N
Report - Receive Distortion	Ok	Minimum SDNR [dB],	20.94	WLAN5G_Voice_802.11n-HT40

and Noise (Conversational Gain)		(occured at 315Hz)		MCS0_EVS WB 64kbps_Ch54_2N
5.3 Frequency Response 2N FF	Ok	Min. dist. to tolerance scheme [dB], 217.7 Hz	1.08	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_2N
5.3 Frequency Response 2N DF	Ok	Min. dist. to tolerance scheme [dB], 974.0 Hz	0.77	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_2N

Overall Receive Delay WB	6
5.1b Receive Volume Control Performance 2N WB	7
5.2 RCV Distortion and Noise - 250 Hz WB	8
5.2 RCV Distortion and Noise - 315 Hz WB	9
5.2 RCV Distortion and Noise - 400 Hz WB	10
5.2 RCV Distortion and Noise - 500 Hz WB	11
5.2 RCV Distortion and Noise - 630 Hz WB	12
5.2 RCV Distortion and Noise - 800 Hz WB	13
5.2 RCV Distortion and Noise - 1000 Hz WB	14
5.2 RCV Distortion and Noise - 1250 Hz WB	15
5.2 RCV Distortion and Noise - 1600 Hz WB	16
5.2 RCV Distortion and Noise - 2000 Hz WB	17
5.2 RCV Distortion and Noise - 2500 Hz WB	18
5.2 RCV Distortion and Noise - 3150 Hz WB	19
5.2 RCV Distortion and Noise - 4000 Hz WB	20
5.2 RCV Distortion and Noise - 5000 Hz WB	21
Report - Receive Distortion and Noise (Conversational Gain)	22
5.3 Frequency Response 2N FF	23
5.3 Frequency Response 2N DF	24

Overall Receive Delay WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ Preparation - Delay measurement



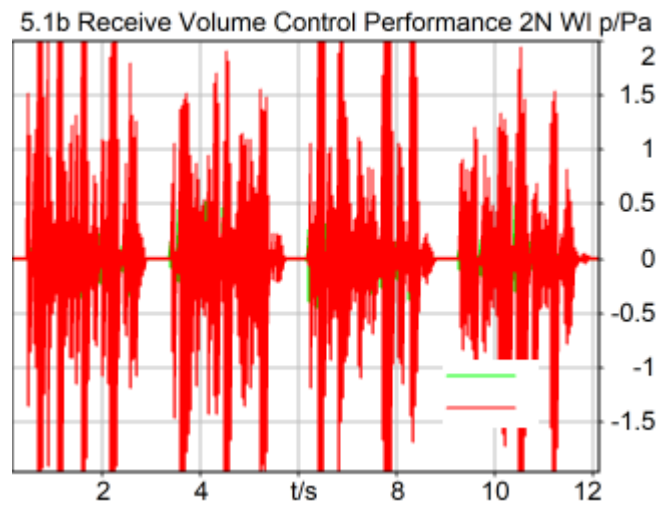
Delay (Cross): 260.4 ms

2023/11/14 12:39 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.1b Receive Volume Control Performance 2N WB

TIA-5050 (2018-01) \ Measurements \ Wideband



Speech Level RCV: 84.63 dB[SPL], Act.: 81.23% Ok

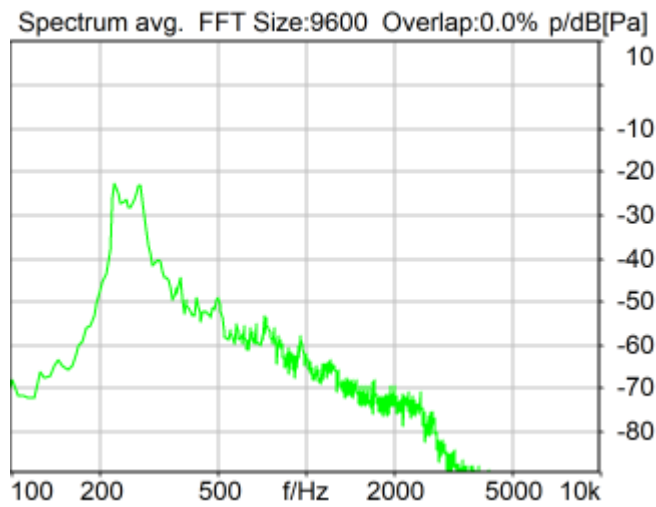
Ok

2023/11/14 12:39 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 250 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 21.08 dB (8.83%) Ok

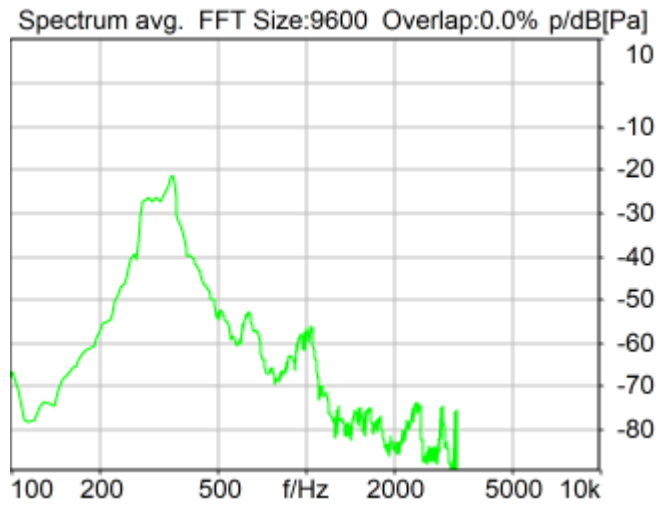
Ok

2023/11/14 12:40 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 315 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 20.94 dB (8.97%) Ok

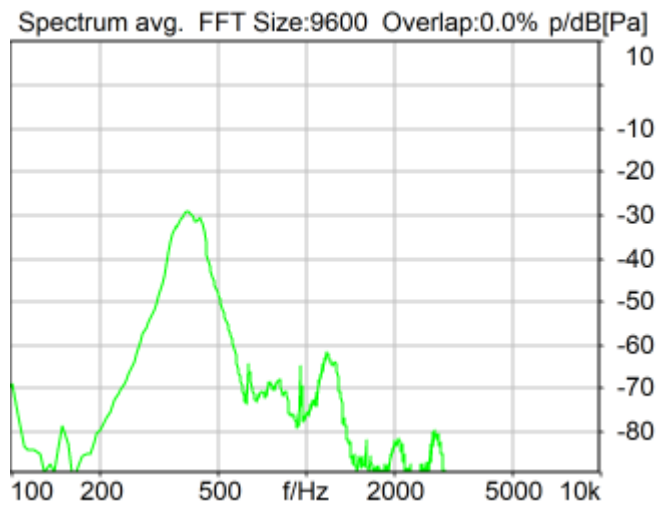
Ok

2023/11/14 12:40 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 400 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 22.31 dB (7.67%) Ok

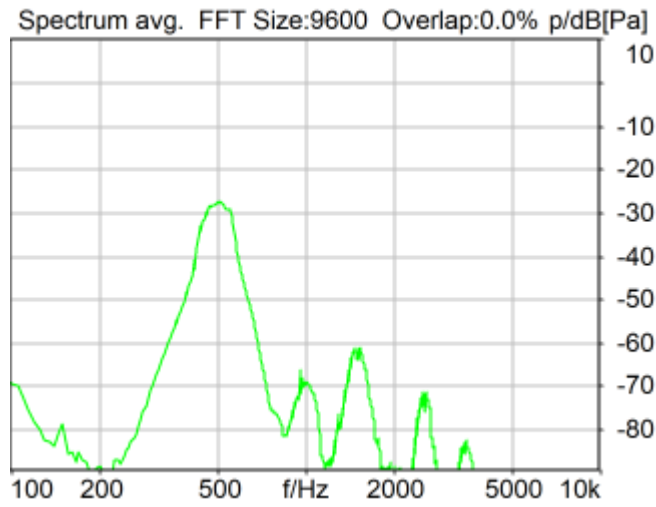
Ok

2023/11/14 12:40 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 22.14 dB (7.82%) Ok

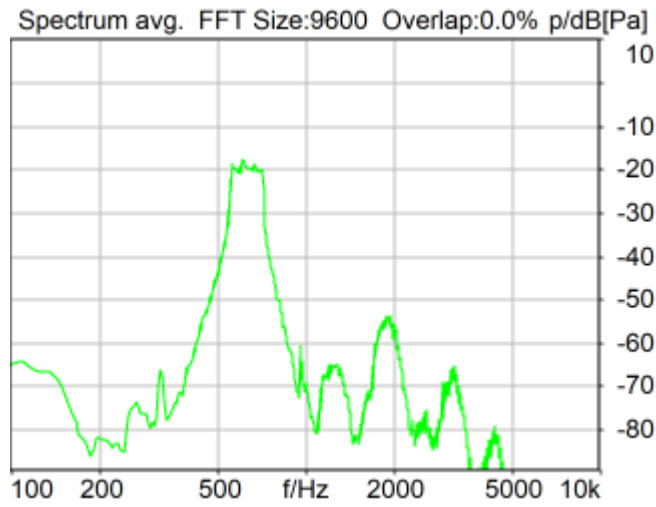
Ok

2023/11/14 12:41 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 26.46 dB (4.75%) Ok

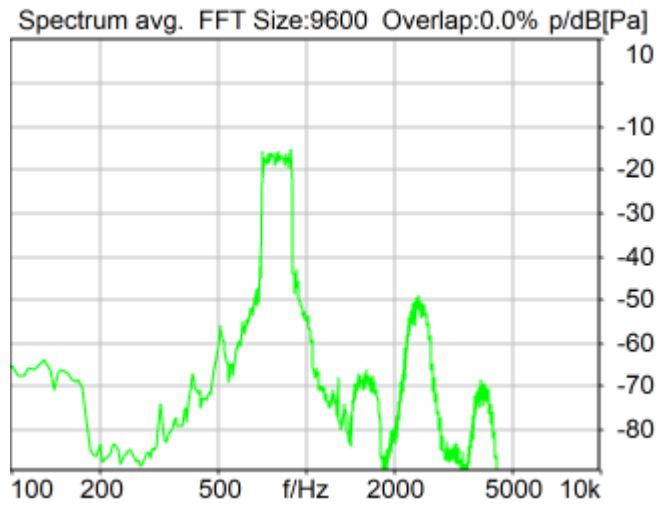
Ok

2023/11/14 12:41 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 29.20 dB (3.47%) Ok

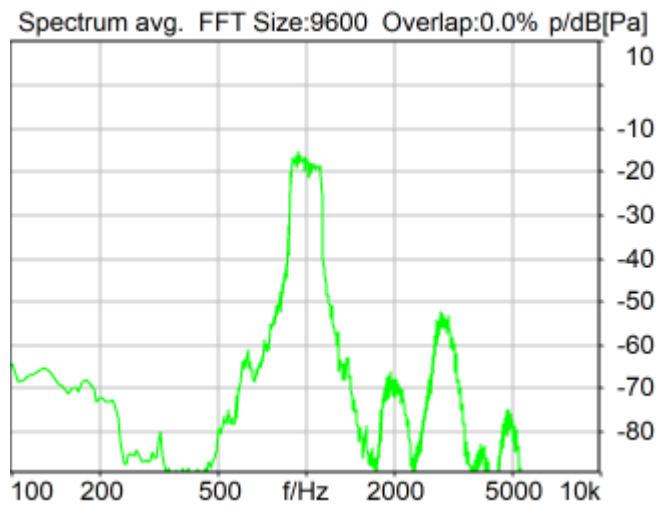
Ok

2023/11/14 12:42 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 29.93 dB (3.19%) Ok

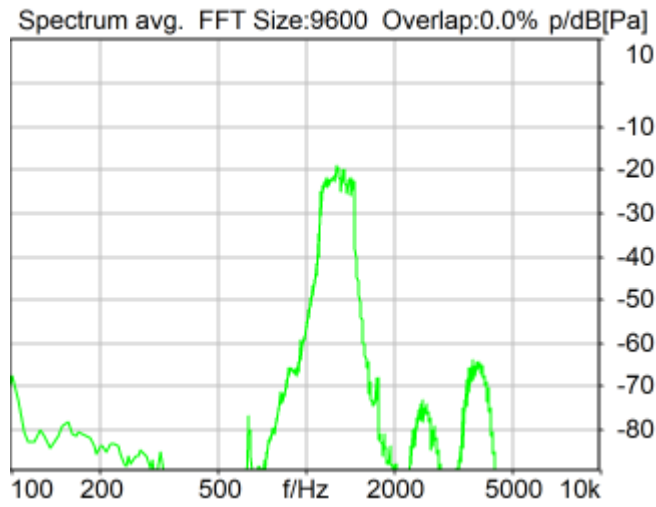
Ok

2023/11/14 12:42 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 22.19 dB (7.77%) Ok

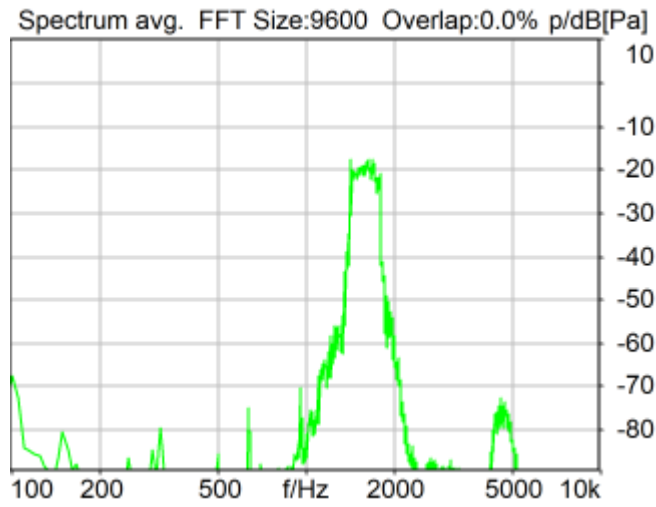
Ok

2023/11/14 12:42 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 29.63 dB (3.30%) Ok

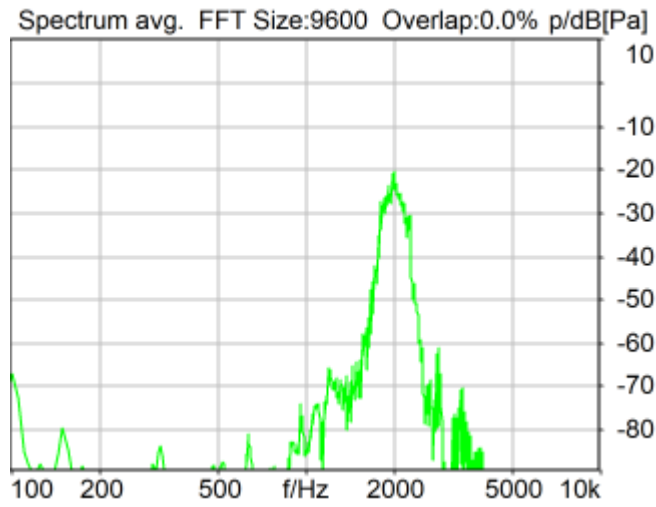
Ok

2023/11/14 12:43 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 23.02 dB (7.07%) Ok

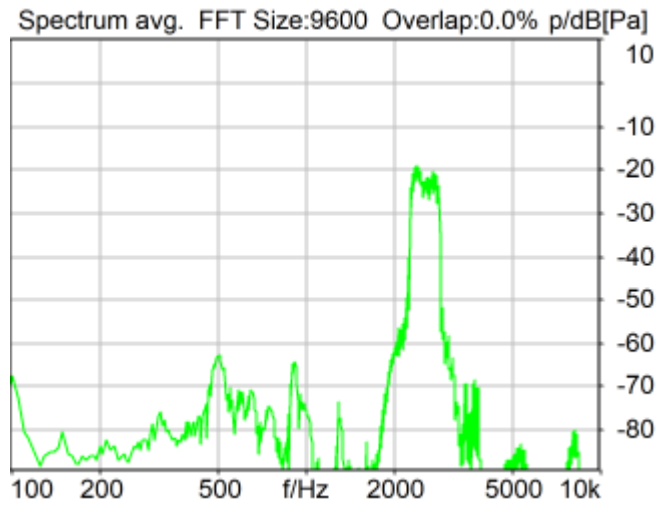
Ok

2023/11/14 12:43 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 34.53 dB (1.88%) Ok

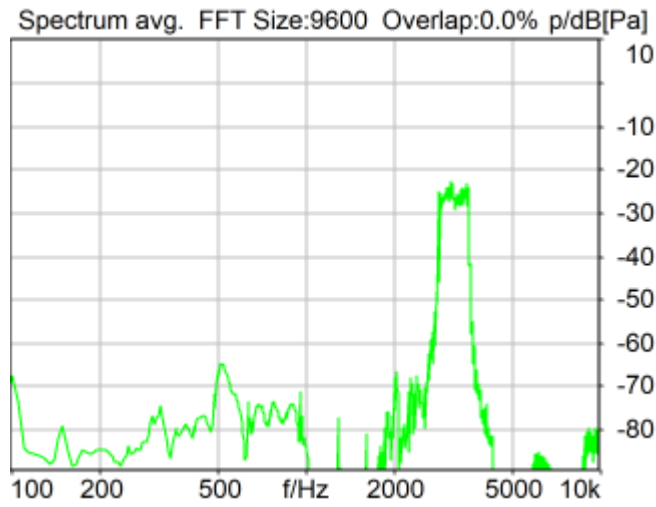
Ok

2023/11/14 12:44 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 30.82 dB (2.88%) Ok

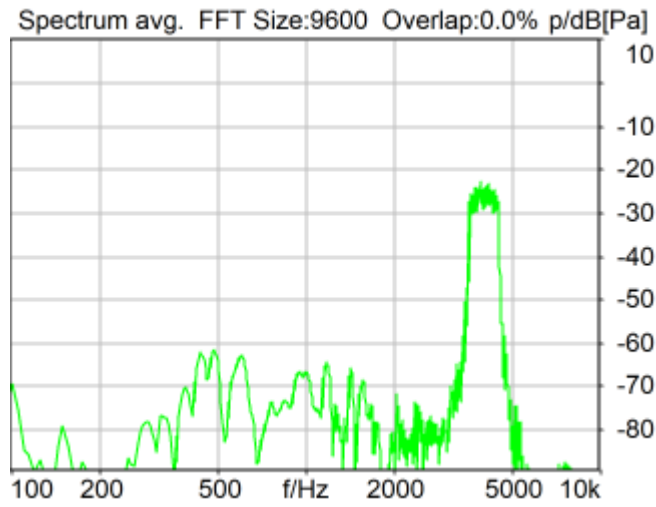
Ok

2023/11/14 12:44 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 4000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 29.11 dB (3.50%) Ok

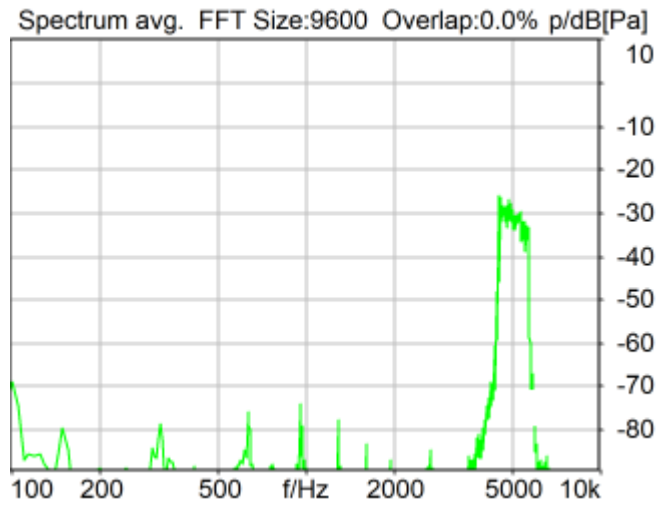
Ok

2023/11/14 12:44 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 5000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 33.02 dB (2.23%) Ok

Ok

2023/11/14 12:45 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain)

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N

Region	Frequency	SDNR
1	250Hz	21.08 dB
2	315Hz	20.94 dB
3	400Hz	22.31 dB
4	500Hz	22.14 dB
5	630Hz	26.46 dB
6	800Hz	29.20 dB
7	1000Hz	29.93 dB
8	1250Hz	22.19 dB
9	1600Hz	29.63 dB
10	2000Hz	23.02 dB
11	2500Hz	34.53 dB
12	3150Hz	30.82 dB
13	4000Hz	29.11 dB
14	5000Hz	33.02 dB

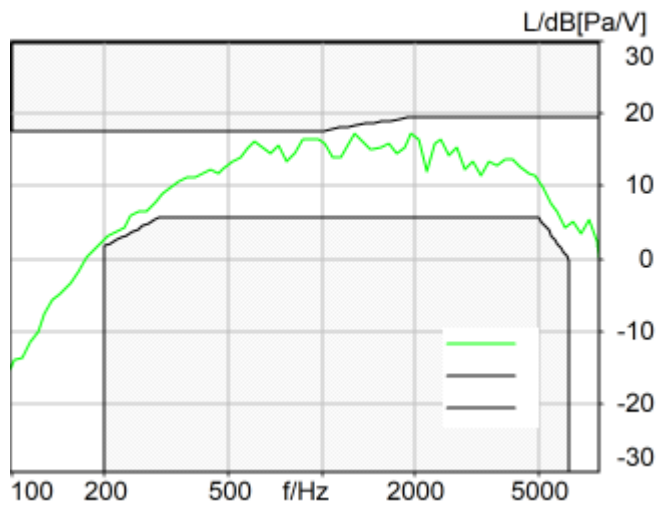
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 20.94dB at 315Hz.

2023/11/14 12:45 ACQUA

5.3 Frequency Response 2N FF

TIA-5050 (2018-01) \ Measurements \ Wideband



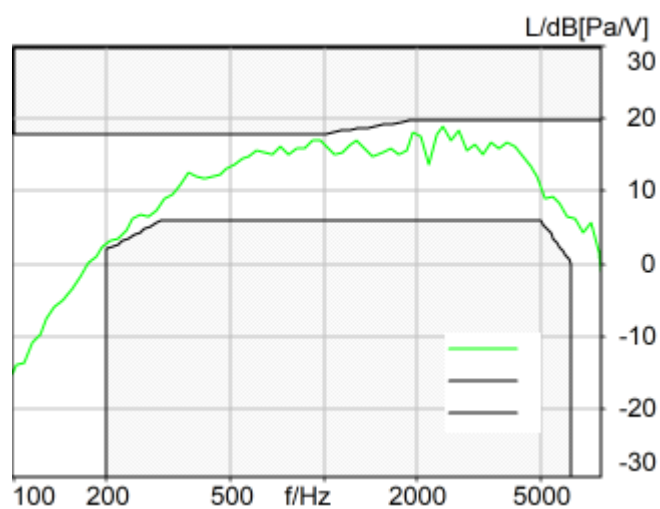
Absolute minimal distance
1.08 dB at 217.7 Hz Ok

Ok

2023/11/14 12:45 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N DF

TIA-5050 (2018-01) \ Measurements \ Wideband



Absolute minimal distance
0.77 dB at 974.0 Hz Ok

Ok

2023/11/14 12:46 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_8N
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Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/14 13:03
Responsible Person	AC

Status Overview

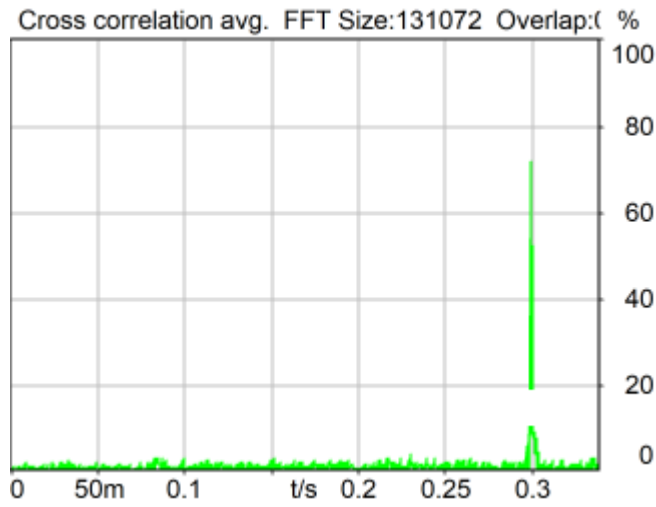
SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay WB	Done	Delay (Cross) [ms]	300.3	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_8N
5.1a Receive Volume Control Performance 8N WB	Ok	Speech Level [dB[SPL]]	88.54	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_8N
5.2 RCV Distortion and Noise - 250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	22.26	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_8N
5.2 RCV Distortion and Noise - 315 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	24.91	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_8N
5.2 RCV Distortion and Noise - 400 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	24.59	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_8N
5.2 RCV Distortion and Noise - 500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	28.12	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_8N
5.2 RCV Distortion and Noise - 630 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	28.40	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_8N
5.2 RCV Distortion and Noise - 800 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	27.72	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_8N
5.2 RCV Distortion and Noise - 1000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	31.84	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_8N
5.2 RCV Distortion and Noise - 1250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	29.86	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_8N
5.2 RCV Distortion and Noise - 1600 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	30.56	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_8N
5.2 RCV Distortion and Noise - 2000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	30.58	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_8N
5.2 RCV Distortion and Noise - 2500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	43.76	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_8N
5.2 RCV Distortion and Noise - 3150 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	34.92	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_8N
5.2 RCV Distortion and Noise - 4000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	33.03	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_8N
5.2 RCV Distortion and Noise - 5000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	37.24	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_8N
Report - Receive Distortion	Ok	Minimum SDNR [dB],	22.26	WLAN5G_Voice_802.11n-HT40

and Noise (Conversational Gain)		(occured at 250Hz)		MCS0_EVS WB 64kbps_Ch54_8N
5.3 Frequency Response 8N FF	Ok	Min. dist. to tolerance scheme [dB], 1285.9 Hz	1.05	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_8N
5.3 Frequency Response 8N DF	Ok	Min. dist. to tolerance scheme [dB], 974.0 Hz	1.10	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch54_8N

Overall Receive Delay WB	6
5.1a Receive Volume Control Performance 8N WB	7
5.2 RCV Distortion and Noise - 250 Hz WB	8
5.2 RCV Distortion and Noise - 315 Hz WB	9
5.2 RCV Distortion and Noise - 400 Hz WB	10
5.2 RCV Distortion and Noise - 500 Hz WB	11
5.2 RCV Distortion and Noise - 630 Hz WB	12
5.2 RCV Distortion and Noise - 800 Hz WB	13
5.2 RCV Distortion and Noise - 1000 Hz WB	14
5.2 RCV Distortion and Noise - 1250 Hz WB	15
5.2 RCV Distortion and Noise - 1600 Hz WB	16
5.2 RCV Distortion and Noise - 2000 Hz WB	17
5.2 RCV Distortion and Noise - 2500 Hz WB	18
5.2 RCV Distortion and Noise - 3150 Hz WB	19
5.2 RCV Distortion and Noise - 4000 Hz WB	20
5.2 RCV Distortion and Noise - 5000 Hz WB	21
Report - Receive Distortion and Noise (Conversational Gain)	22
5.3 Frequency Response 8N FF	23
5.3 Frequency Response 8N DF	24

Overall Receive Delay WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ Preparation - Delay measurement



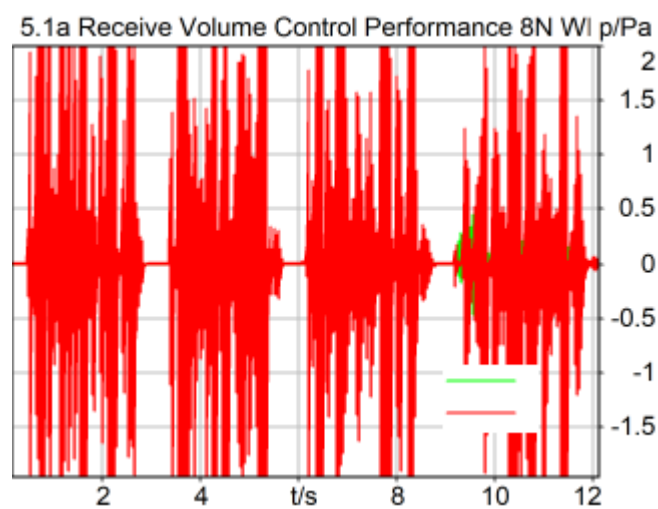
Delay (Cross): 300.3 ms

2023/11/14 12:51 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.1a Receive Volume Control Performance 8N WB

TIA-5050 (2018-01) \ Measurements \ Wideband



Speech Level RCV: 88.54 dB[SPL], Act.: 82.18% Ok

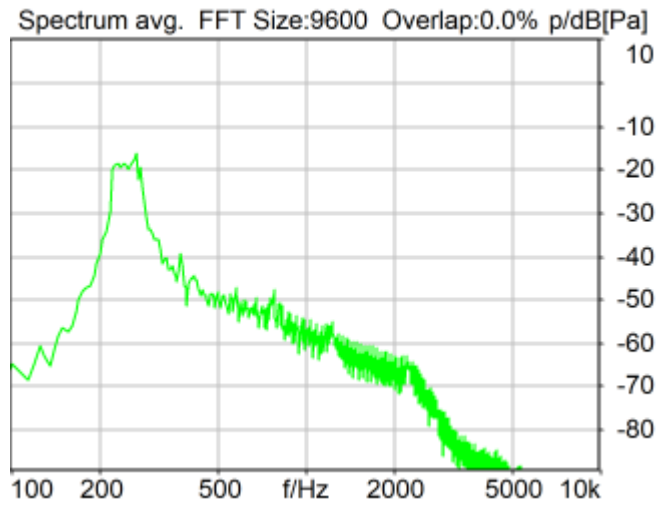
Ok

2023/11/14 12:52 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 250 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 22.26 dB (7.71%) Ok

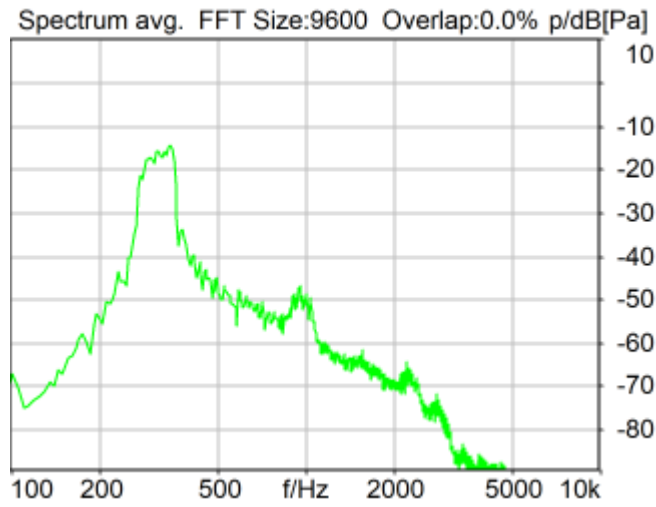
Ok

2023/11/14 12:52 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 315 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 24.91 dB (5.68%) Ok

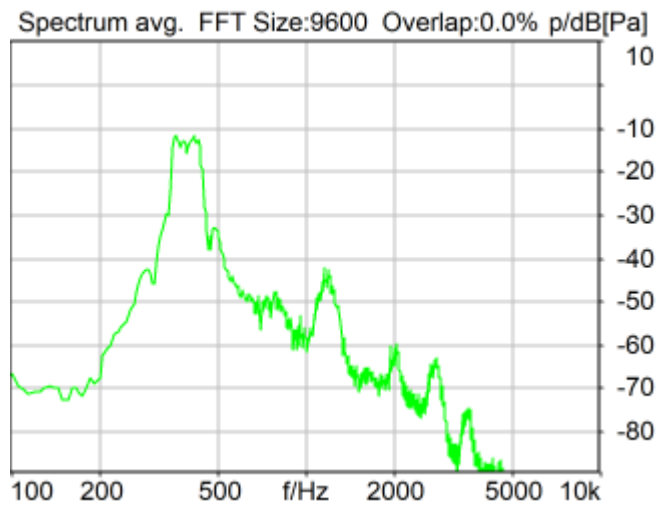
Ok

2023/11/14 12:53 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 400 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 24.59 dB (5.89%) Ok

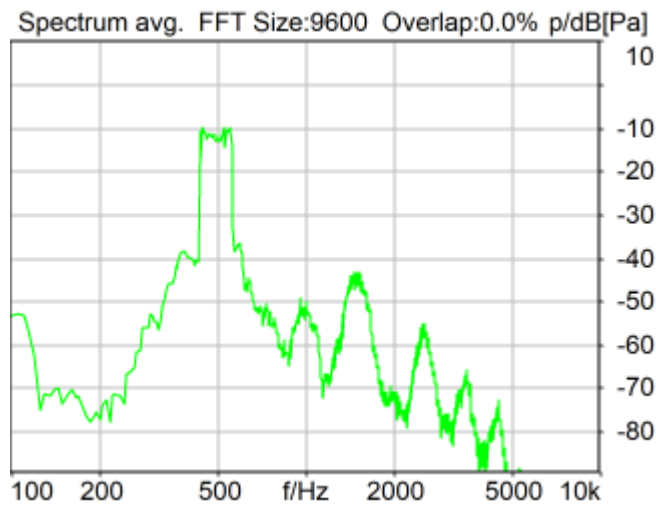
Ok

2023/11/14 12:53 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 28.12 dB (3.93%) Ok

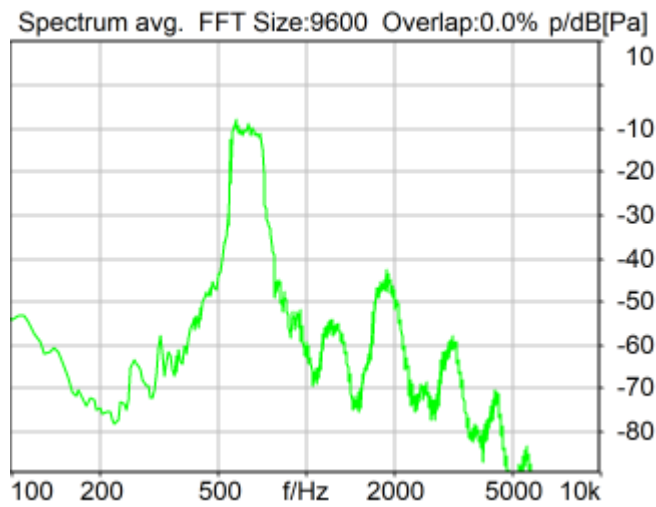
Ok

2023/11/14 12:53 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 28.40 dB (3.80%) Ok

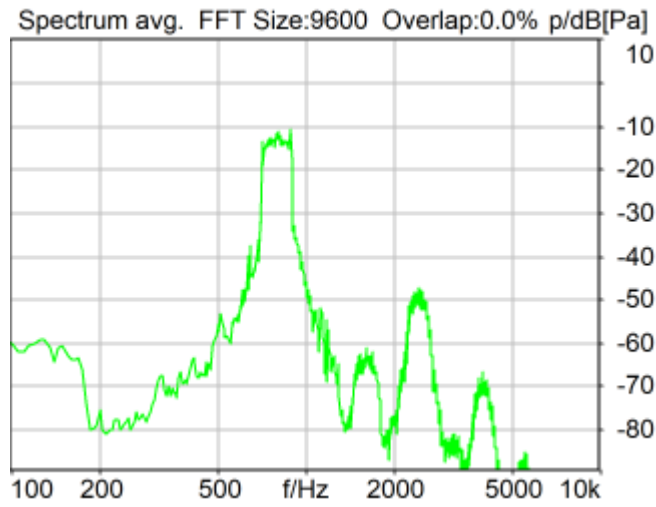
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2023/11/14 12:54 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 27.72 dB (4.11%) Ok

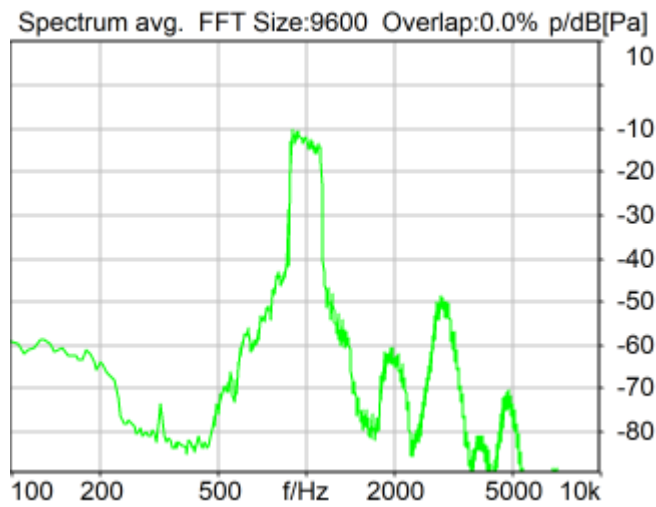
Ok

2023/11/14 12:54 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 31.84 dB (2.56%) Ok

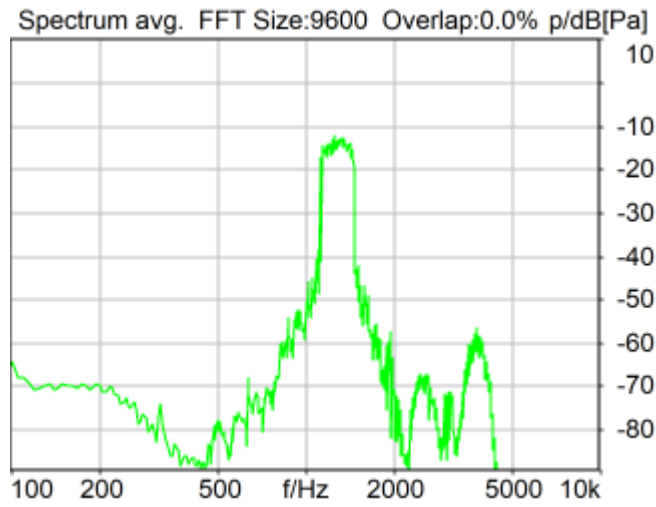
Ok

2023/11/14 12:55 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 29.86 dB (3.21%) Ok

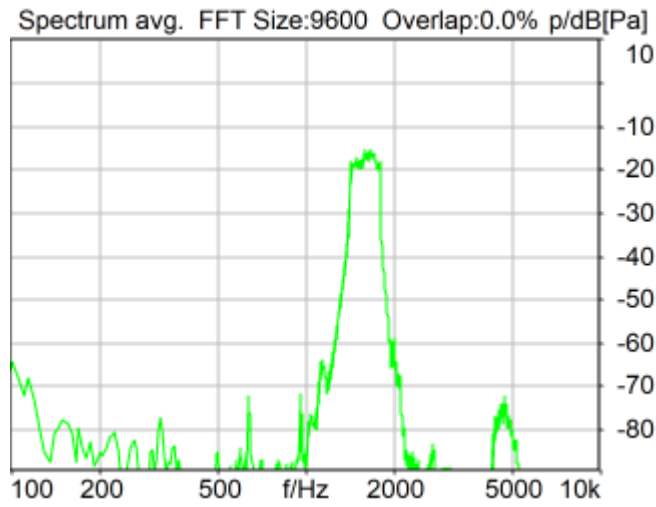
Ok

2023/11/14 12:55 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 30.56 dB (2.96%) Ok

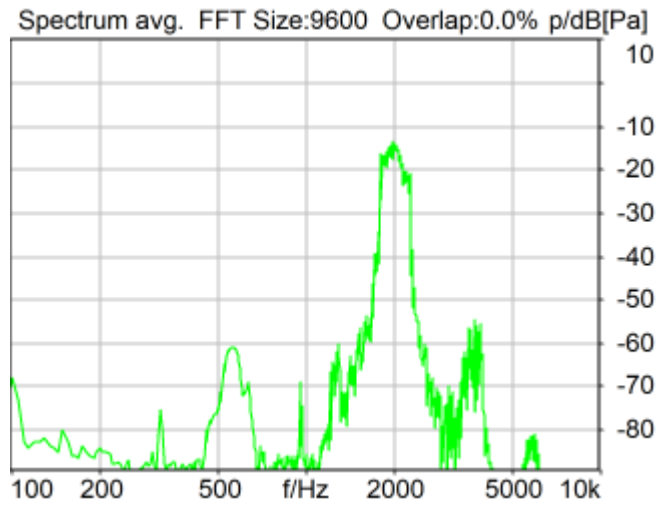
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2023/11/14 12:55 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 30.58 dB (2.96%) Ok

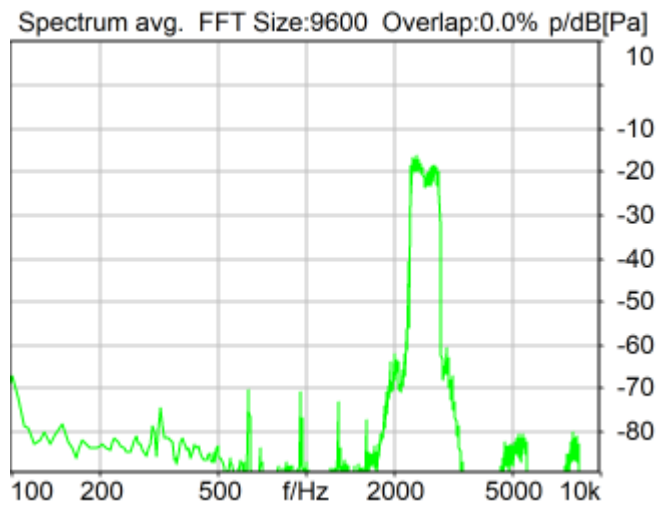
Ok

2023/11/14 12:56 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 43.76 dB (0.65%) Ok

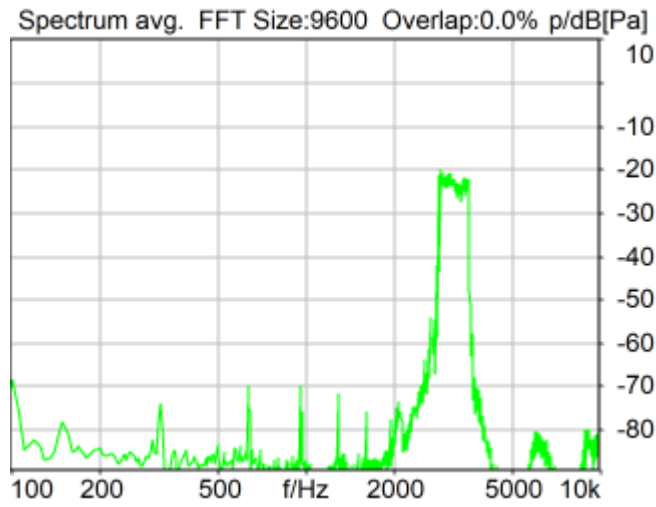
Ok

2023/11/14 12:56 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 34.92 dB (1.79%) Ok

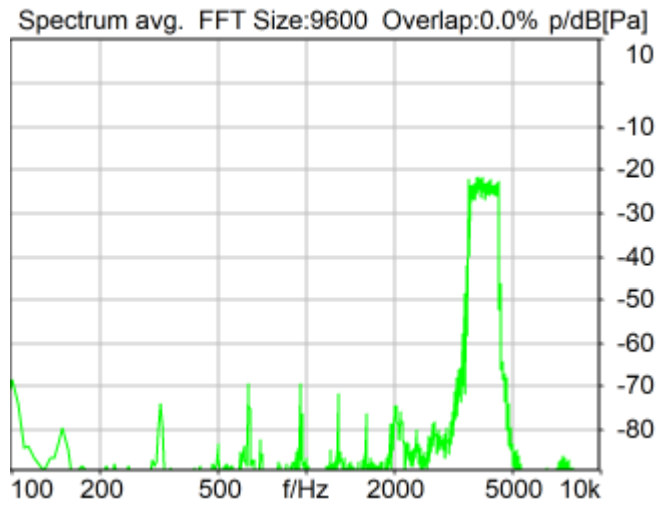
Ok

2023/11/14 12:57 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 4000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 33.03 dB (2.23%) Ok

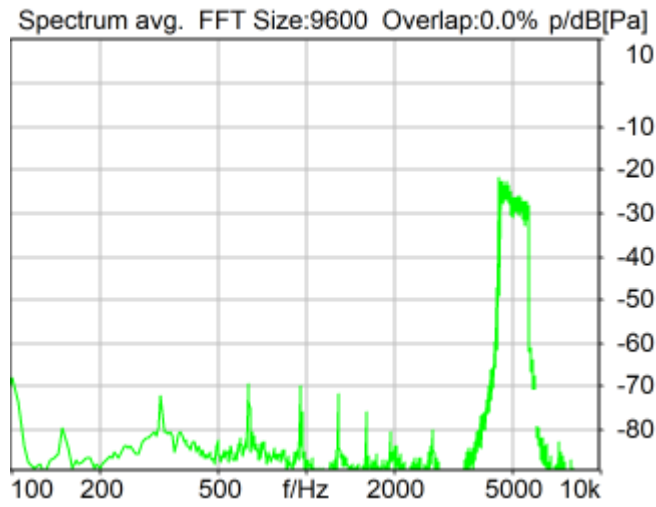
Ok

2023/11/14 12:57 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 5000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 37.24 dB (1.37%) Ok

Ok

2023/11/14 12:57 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain)

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N

Region	Frequency	SDNR
1	250Hz	22.26 dB
2	315Hz	24.91 dB
3	400Hz	24.59 dB
4	500Hz	28.12 dB
5	630Hz	28.40 dB
6	800Hz	27.72 dB
7	1000Hz	31.84 dB
8	1250Hz	29.86 dB
9	1600Hz	30.56 dB
10	2000Hz	30.58 dB
11	2500Hz	43.76 dB
12	3150Hz	34.92 dB
13	4000Hz	33.03 dB
14	5000Hz	37.24 dB

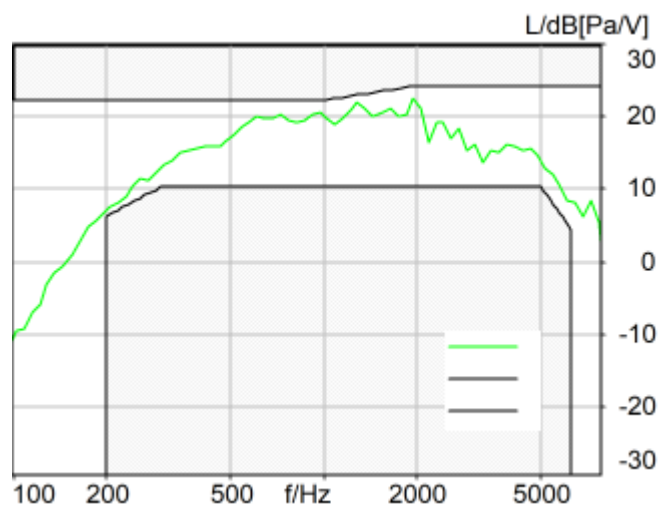
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 22.26dB at 250Hz.

2023/11/14 13:01 ACQUA

5.3 Frequency Response 8N FF

TIA-5050 (2018-01) \ Measurements \ Wideband



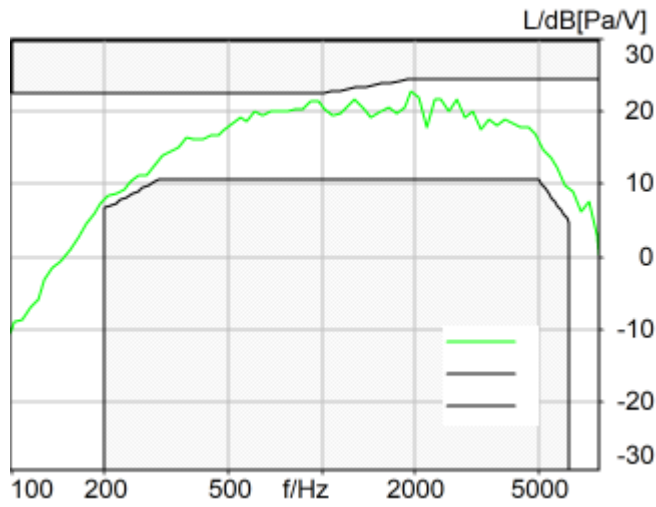
Absolute minimal distance
1.05 dB at 1285.9 Hz Ok

Ok

2023/11/14 13:01 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 8N DF

TIA-5050 (2018-01) \ Measurements \ Wideband



Absolute minimal distance
1.10 dB at 974.0 Hz Ok

Ok

2023/11/14 13:01 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch126_2N
--------------------	---

Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/14 14:39

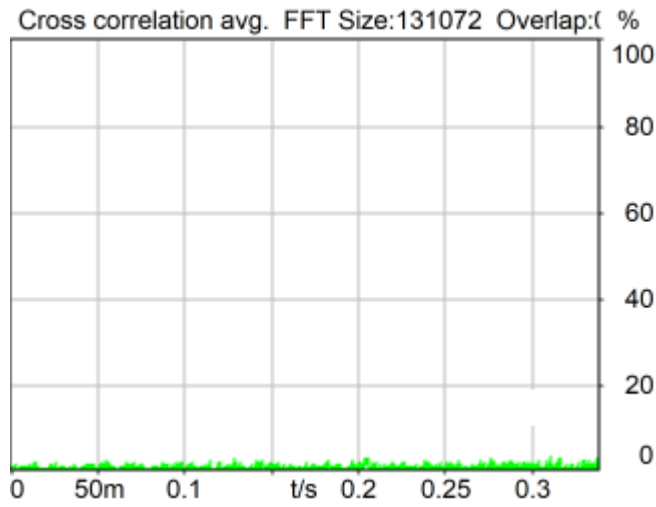
Status Overview

SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay NB	Done	Delay (Cross) [ms]	420.9	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch126_2N
5.1b Receive Volume Control Performance 2N NB	Ok	Speech Level [dB[SPL]]	86.34	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch126_2N
5.2 RCV Distortion and Noise - 400 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	25.66	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch126_2N
5.2 RCV Distortion and Noise - 500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	27.26	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch126_2N
5.2 RCV Distortion and Noise - 630 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	27.53	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch126_2N
5.2 RCV Distortion and Noise - 800 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	25.75	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch126_2N
5.2 RCV Distortion and Noise - 1000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	23.13	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch126_2N
5.2 RCV Distortion and Noise - 1250 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	29.71	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch126_2N
5.2 RCV Distortion and Noise - 1600 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	24.08	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch126_2N
5.2 RCV Distortion and Noise - 2000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	25.45	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch126_2N
5.2 RCV Distortion and Noise - 2500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	31.87	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch126_2N
5.2 RCV Distortion and Noise - 3150 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	27.86	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch126_2N
5.3 Frequency Response 2N FF HANB	Ok	Min. dist. to tolerance scheme [dB], 1447.5 Hz	0.23	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch126_2N
5.3 Frequency Response 2N DF HANB	Ok	Min. dist. to tolerance scheme [dB], 2177.4 Hz	0.06	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch126_2N

Overall Receive Delay NB	5
5.1b Receive Volume Control Performance 2N NB	6
5.2 RCV Distortion and Noise - 400 Hz NB	7
5.2 RCV Distortion and Noise - 500 Hz NB	8
5.2 RCV Distortion and Noise - 630 Hz NB	9
5.2 RCV Distortion and Noise - 800 Hz NB	10
5.2 RCV Distortion and Noise - 1000 Hz NB	11
5.2 RCV Distortion and Noise - 1250 Hz NB	12
5.2 RCV Distortion and Noise - 1600 Hz NB	13
5.2 RCV Distortion and Noise - 2000 Hz NB	14
5.2 RCV Distortion and Noise - 2500 Hz NB	15
5.2 RCV Distortion and Noise - 3150 Hz NB	16
5.3 Frequency Response 2N FF HANB	17
5.3 Frequency Response 2N DF HANB	18

Overall Receive Delay NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ Preparation - Delay measurement



Delay (Cross): 420.9 ms

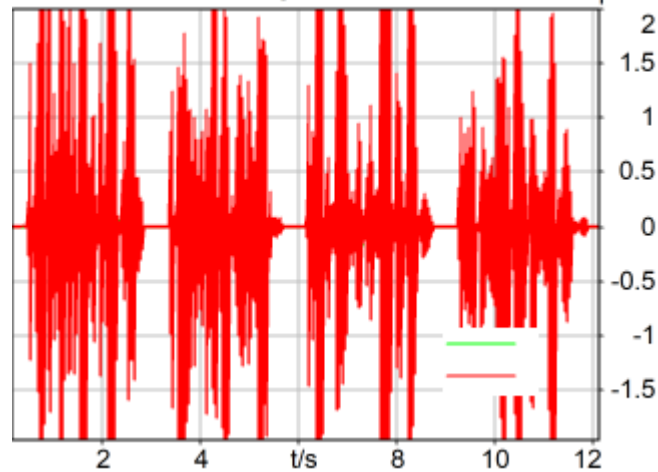
2023/11/14 14:30 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.1b Receive Volume Control Performance 2N NB

TIA-5050 (2018-01) \ Measurements \ Narrowband

5.1b Receive Volume Control Performance 2N NE p/Pa



Speech Level RCV: 86.34 dB[SPL], Act.: 80.81% Ok

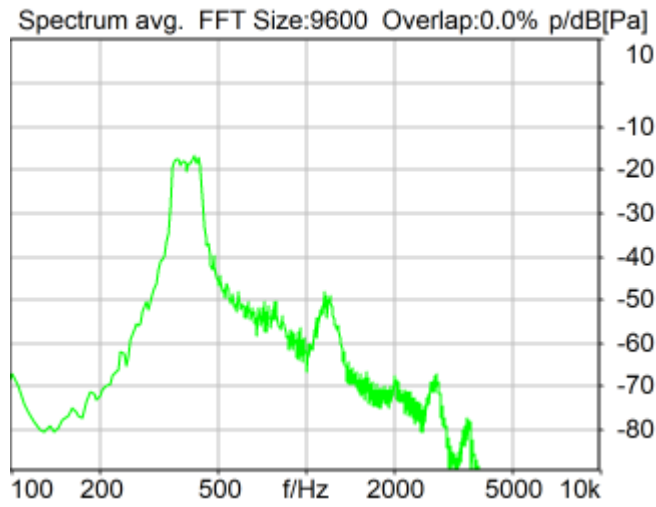
Ok

2023/11/14 14:30 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 400 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 25.66 dB (5.21%) Ok

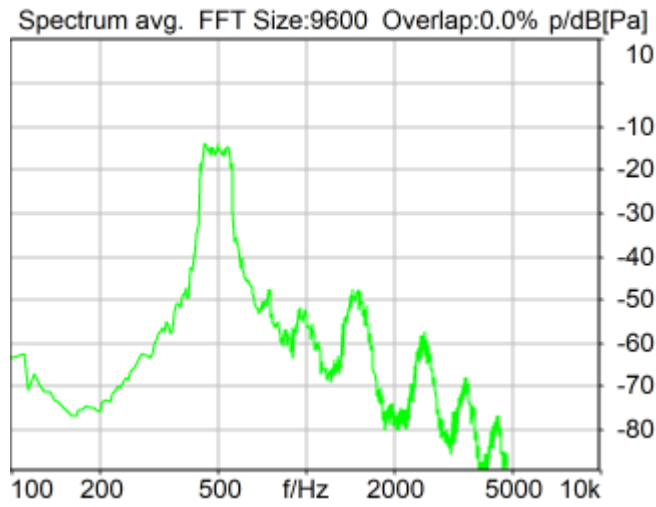
Ok

2023/11/14 14:31 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 27.26 dB (4.34%) Ok

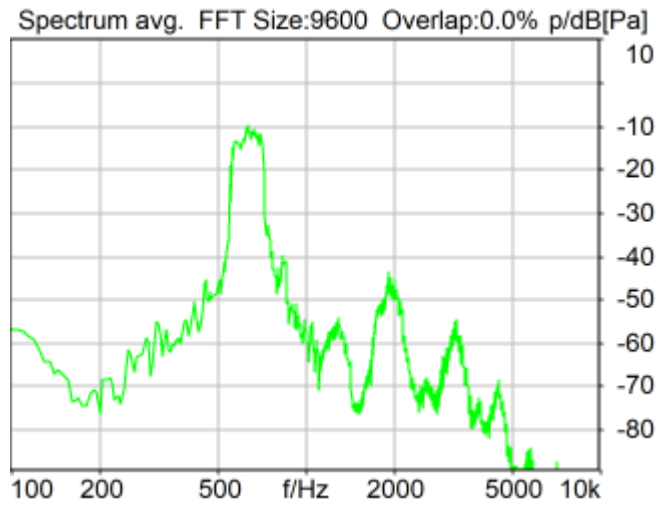
Ok

2023/11/14 14:31 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 27.53 dB (4.20%) Ok

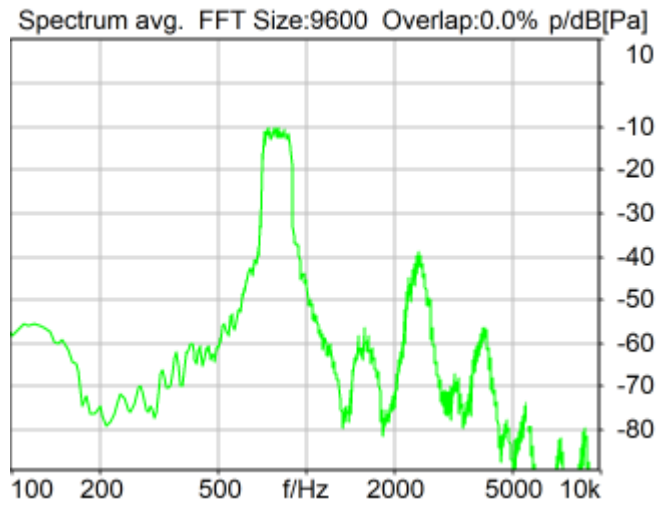
Ok

2023/11/14 14:31 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 25.75 dB (5.16%) Ok

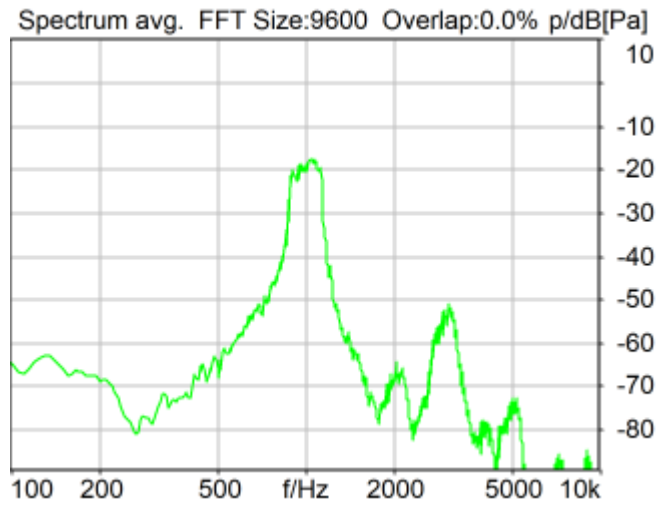
Ok

2023/11/14 14:32 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 23.13 dB (6.98%) Ok

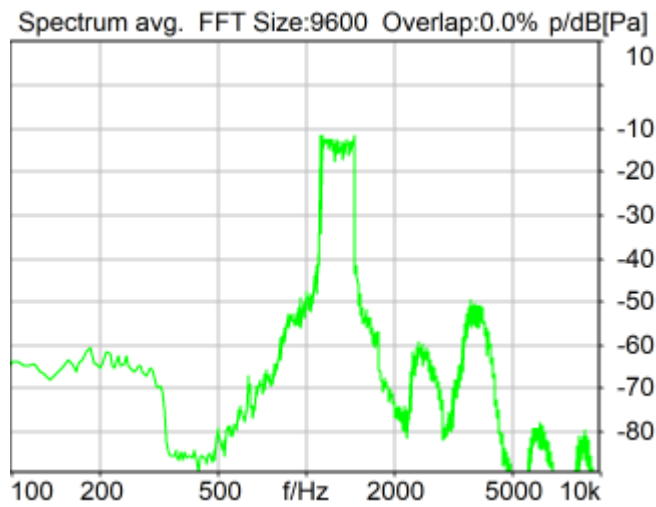
Ok

2023/11/14 14:32 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 29.71 dB (3.27%) Ok

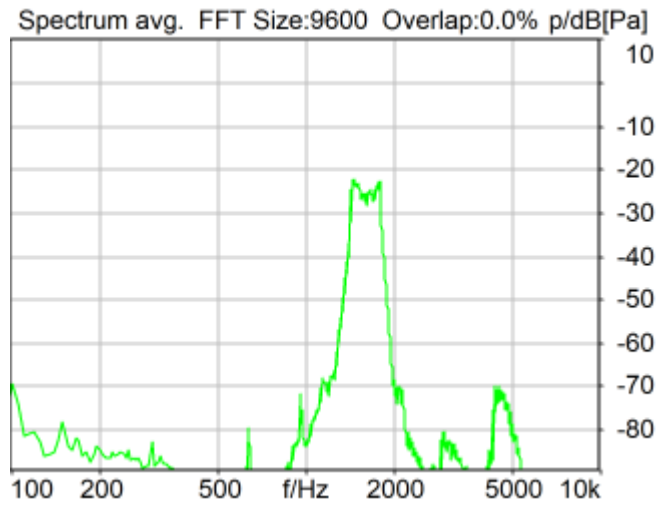
Ok

2023/11/14 14:35 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 24.08 dB (6.25%) Ok

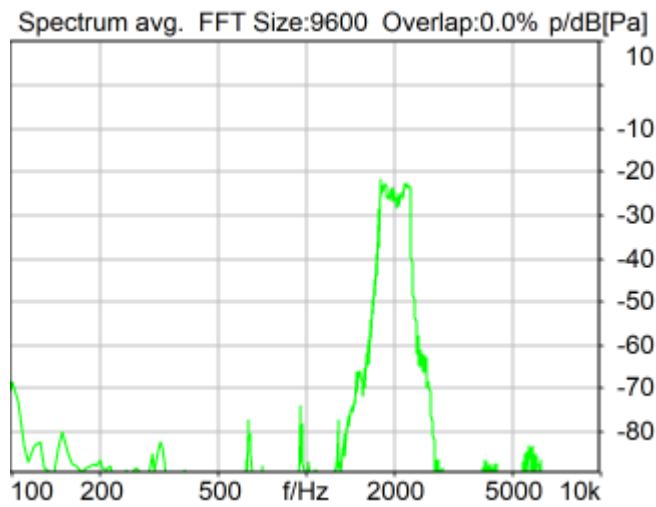
Ok

2023/11/14 14:33 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 25.45 dB (5.34%) Ok

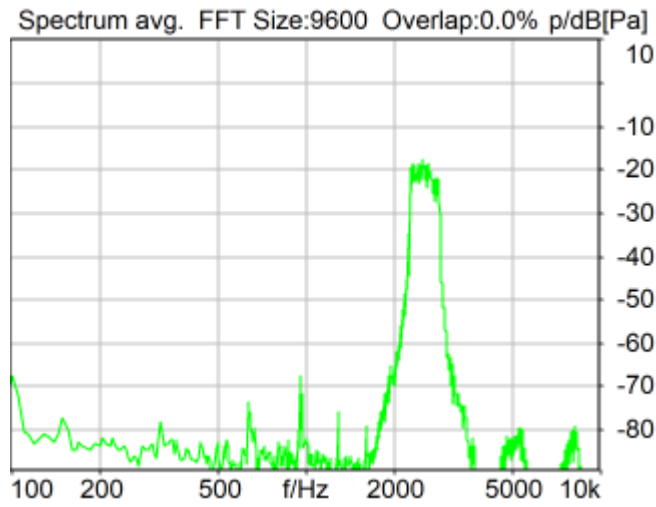
Ok

2023/11/14 14:33 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 31.87 dB (2.55%) Ok

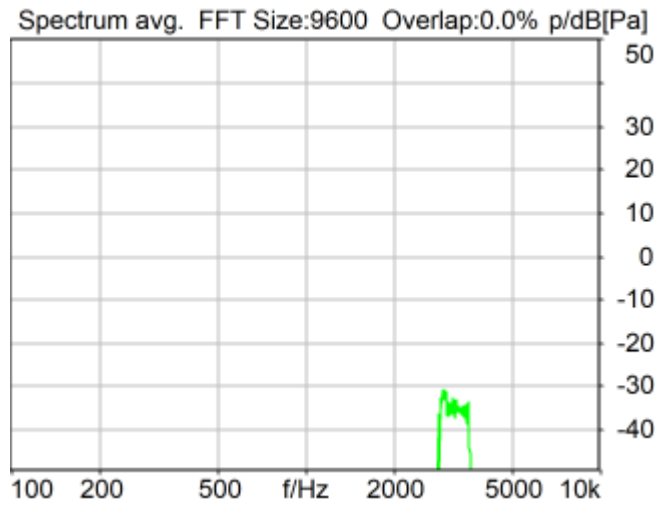
Ok

2023/11/14 14:34 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 27.86 dB (4.04%) Ok

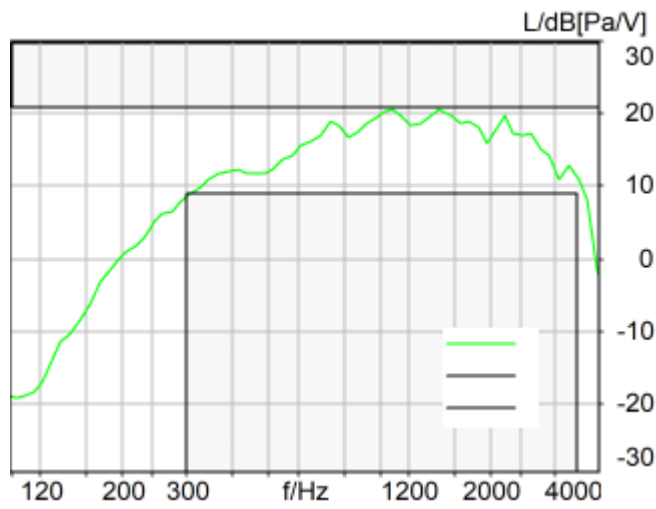
Ok

2023/11/14 14:34 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N FF HANB

TIA-5050 (2018-01) \ Measurements \ Narrowband



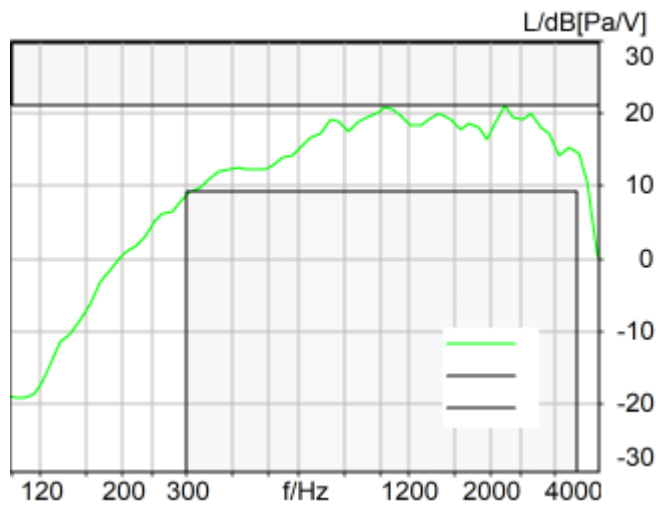
Absolute minimal distance
0.23 dB at 1447.5 Hz Ok

Ok

2023/11/14 14:35 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N DF HANB

TIA-5050 (2018-01) \ Measurements \ Narrowband



Absolute minimal distance
0.06 dB at 2177.4 Hz Ok

Ok

2023/11/14 14:36 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch126_8N
--------------------	---

Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/14 15:01

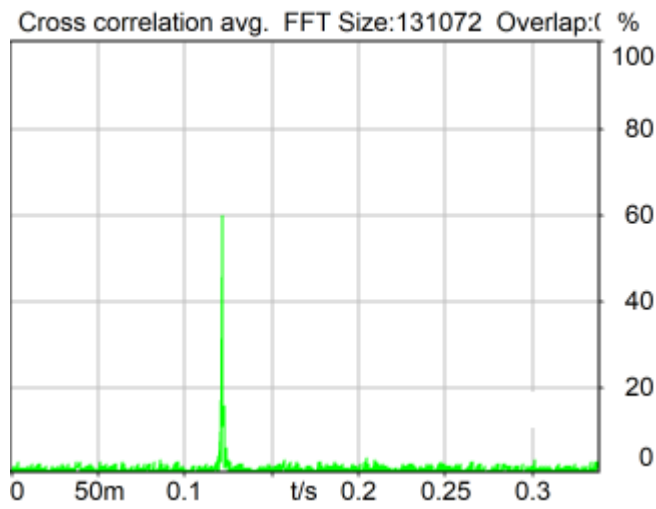
Status Overview

SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay NB	Done	Delay (Cross) [ms]	121.6	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch126_8N
5.1a Receive Volume Control Performance 8N NB	Ok	Speech Level [dB[SPL]]	90.67	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch126_8N
5.2 RCV Distortion and Noise - 400 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	26.25	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch126_8N
5.2 RCV Distortion and Noise - 500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	27.74	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch126_8N
5.2 RCV Distortion and Noise - 630 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	29.67	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch126_8N
5.2 RCV Distortion and Noise - 800 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	27.53	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch126_8N
5.2 RCV Distortion and Noise - 1000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	28.61	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch126_8N
5.2 RCV Distortion and Noise - 1250 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	30.70	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch126_8N
5.2 RCV Distortion and Noise - 1600 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	33.81	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch126_8N
5.2 RCV Distortion and Noise - 2000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	24.99	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch126_8N
5.2 RCV Distortion and Noise - 2500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	35.11	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch126_8N
5.2 RCV Distortion and Noise - 3150 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	38.47	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch126_8N
Report - Receive Distortion and Noise (Conversational Gain)	Ok	Minimum SDNR [dB], (occured at 2000Hz)	24.99	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch126_8N
5.3 Frequency Response 8N FF HANB	Ok	Min. dist. to tolerance scheme [dB], 1447.5 Hz	0.23	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch126_8N
5.3 Frequency Response 8N DF HANB	Ok	Min. dist. to tolerance scheme [dB], 1028.7 Hz	0.35	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch126_8N

Overall Receive Delay NB	5
5.1a Receive Volume Control Performance 8N NB	6
5.2 RCV Distortion and Noise - 400 Hz NB	7
5.2 RCV Distortion and Noise - 500 Hz NB	8
5.2 RCV Distortion and Noise - 630 Hz NB	9
5.2 RCV Distortion and Noise - 800 Hz NB	10
5.2 RCV Distortion and Noise - 1000 Hz NB	11
5.2 RCV Distortion and Noise - 1250 Hz NB	12
5.2 RCV Distortion and Noise - 1600 Hz NB	13
5.2 RCV Distortion and Noise - 2000 Hz NB	14
5.2 RCV Distortion and Noise - 2500 Hz NB	15
5.2 RCV Distortion and Noise - 3150 Hz NB	16
Report - Receive Distortion and Noise (Conversational Gain)	17
5.3 Frequency Response 8N FF HANB	18
5.3 Frequency Response 8N DF HANB	19

Overall Receive Delay NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ Preparation - Delay measurement



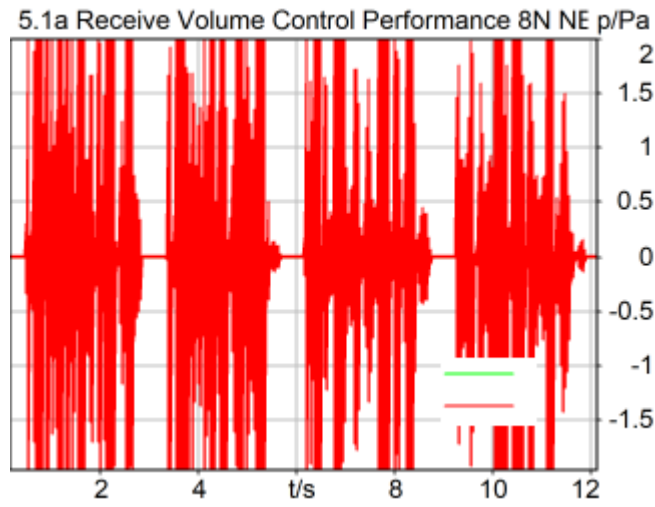
Delay (Cross): 121.6 ms

2023/11/14 14:53 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.1a Receive Volume Control Performance 8N NB

TIA-5050 (2018-01) \ Measurements \ Narrowband



Speech Level RCV: 90.67 dB[SPL], Act.: 81.02% Ok

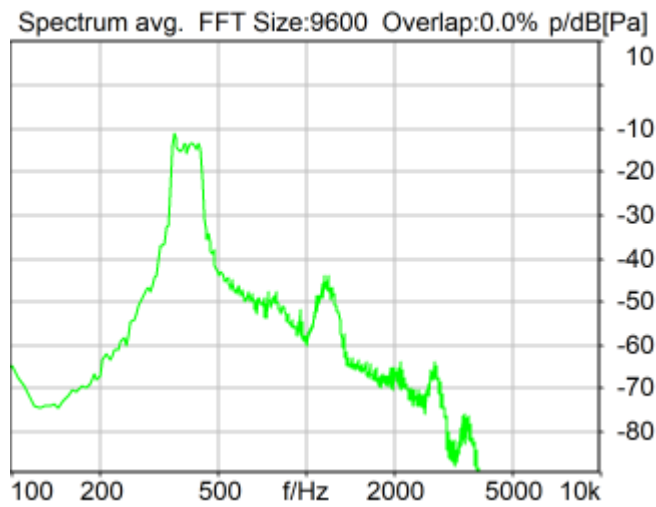
Ok

2023/11/14 14:41 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 400 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 26.25 dB (4.87%) Ok

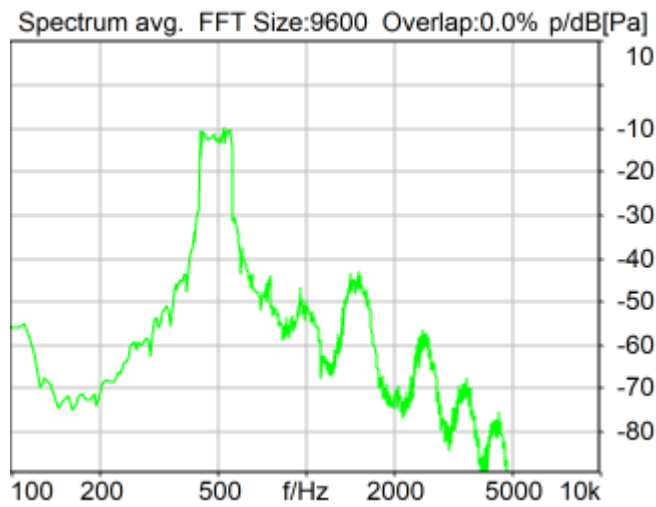
Ok

2023/11/14 14:54 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 27.74 dB (4.10%) Ok

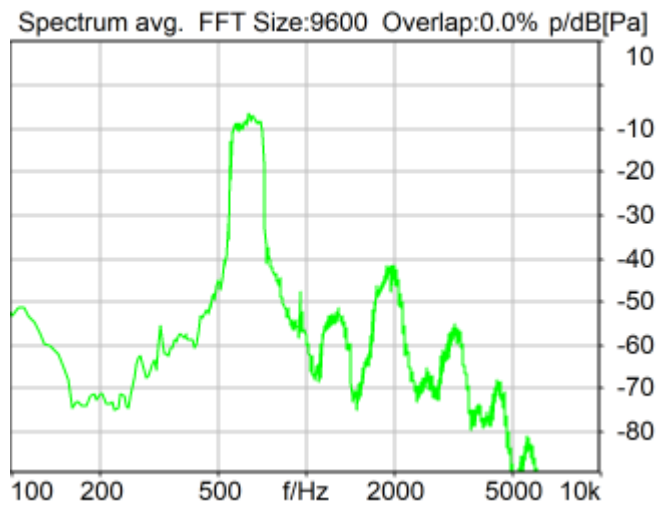
Ok

2023/11/14 14:54 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 29.67 dB (3.29%) Ok

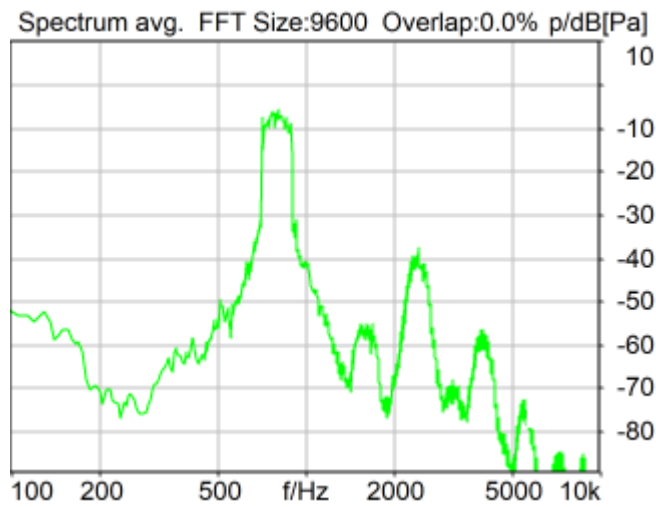
Ok

2023/11/14 14:55 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 27.53 dB (4.20%) Ok

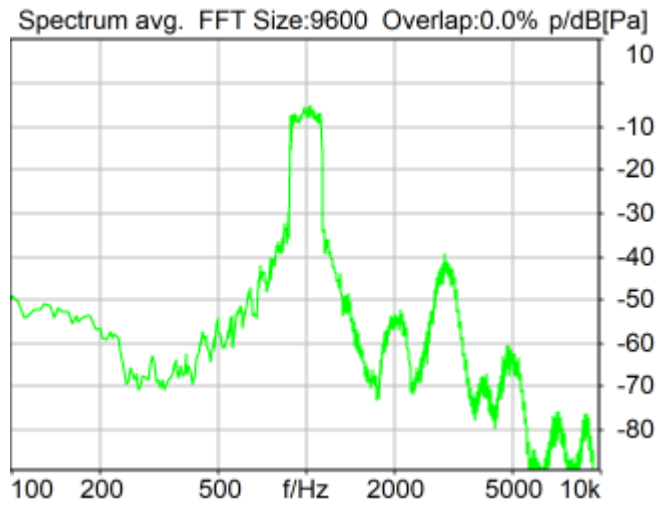
Ok

2023/11/14 14:55 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 28.61 dB (3.71%) Ok

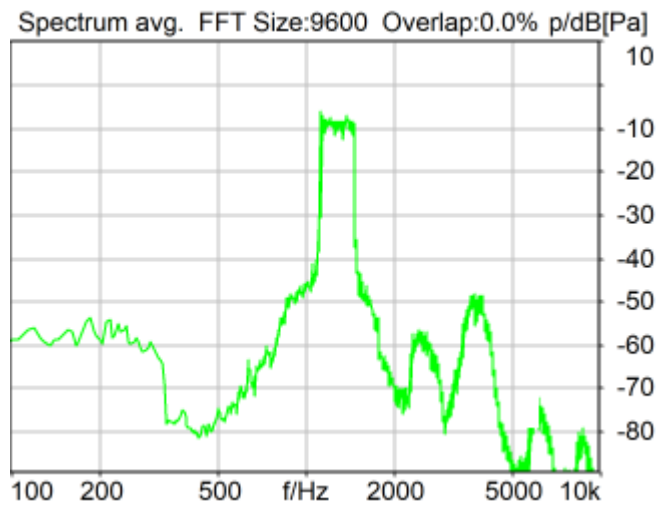
Ok

2023/11/14 14:56 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 30.70 dB (2.92%) Ok

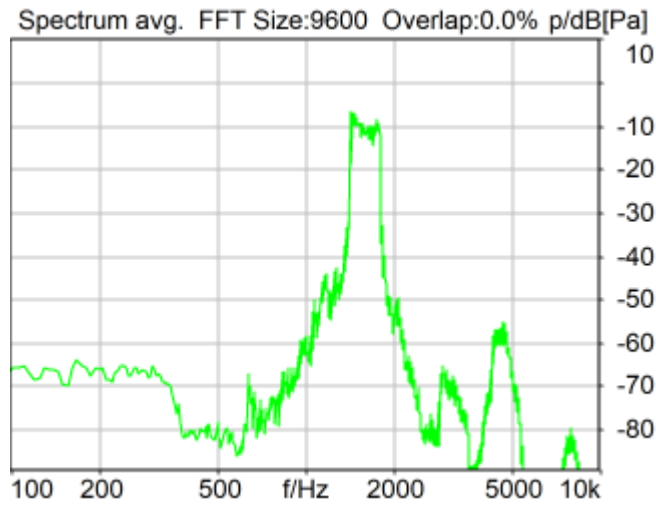
Ok

2023/11/14 14:56 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 33.81 dB (2.04%) Ok

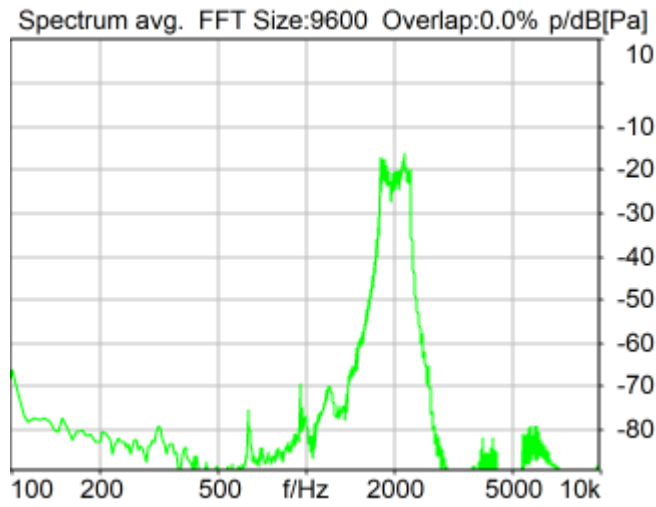
Ok

2023/11/14 14:56 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 24.99 dB (5.63%) Ok

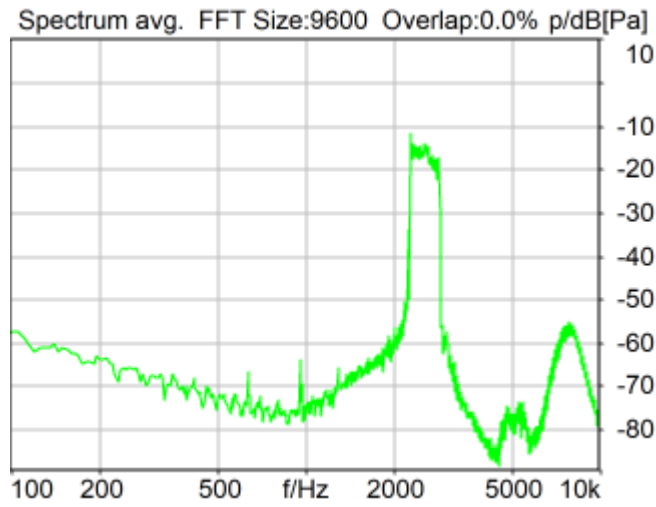
Ok

2023/11/14 14:57 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 35.11 dB (1.76%) Ok

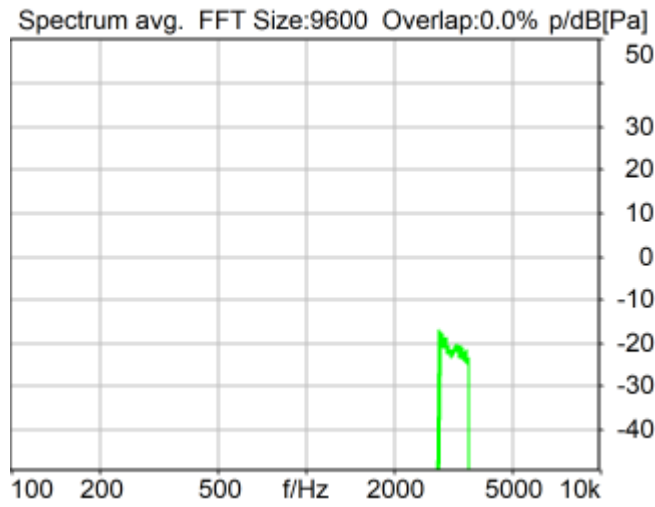
Ok

2023/11/14 14:57 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 38.47 dB (1.19%) Ok

Ok

2023/11/14 14:58 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain)

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N

Region	Frequency	SDNR
1	400Hz	26.25 dB
2	500Hz	27.74 dB
3	630Hz	29.67 dB
4	800Hz	27.53 dB
5	1000Hz	28.61 dB
6	1250Hz	30.70 dB
7	1600Hz	33.81 dB
8	2000Hz	24.99 dB
9	2500Hz	35.11 dB
10	3150Hz	38.47 dB

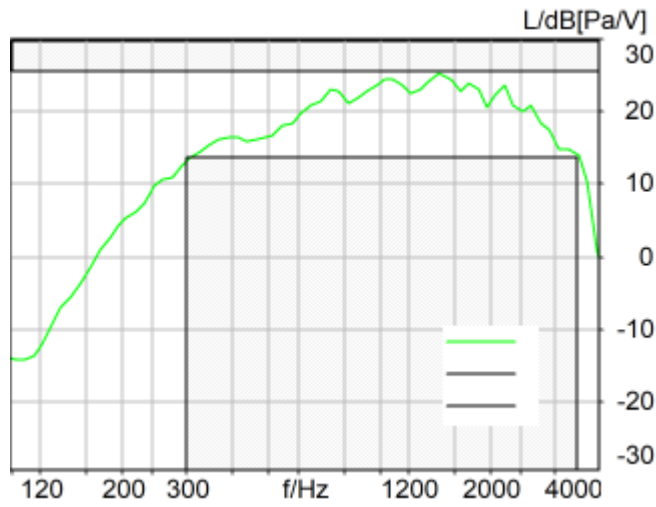
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 24.99dB at 2000Hz.

2023/11/14 14:59 ACQUA

5.3 Frequency Response 8N FF HANB

TIA-5050 (2018-01) \ Measurements \ Narrowband



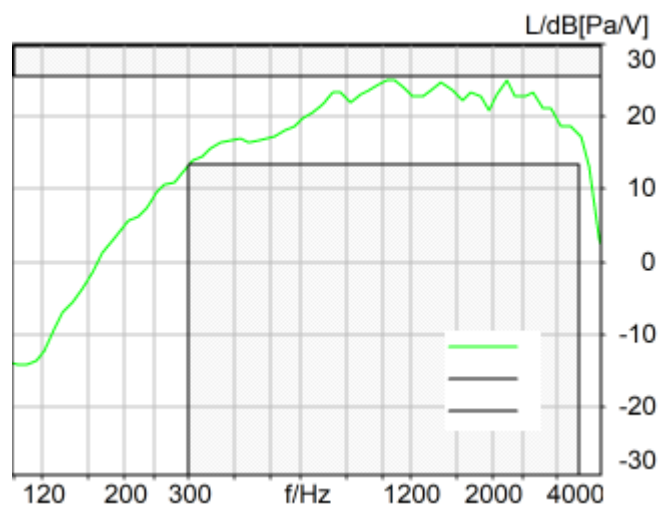
Absolute minimal distance
0.23 dB at 1447.5 Hz Ok

Ok

2023/11/14 14:59 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 8N DF HANB

TIA-5050 (2018-01) \ Measurements \ Narrowband



Absolute minimal distance
0.35 dB at 1028.7 Hz Ok

Ok

2023/11/14 14:59 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_2N
--------------------	---

Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/14 15:13
Responsible Person	AC

Status Overview

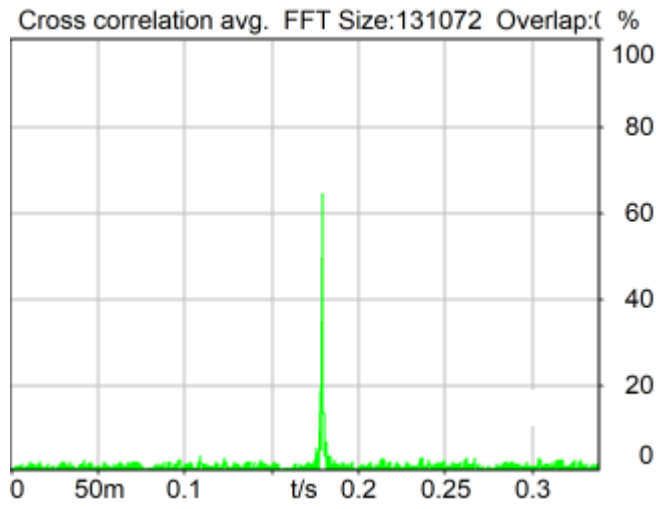
SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay WB	Done	Delay (Cross) [ms]	179.5	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_2N
5.1b Receive Volume Control Performance 2N WB	Ok	Speech Level [dB[SPL]]	84.45	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_2N
5.2 RCV Distortion and Noise - 250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	24.23	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_2N
5.2 RCV Distortion and Noise - 315 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	24.87	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_2N
5.2 RCV Distortion and Noise - 400 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	26.81	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_2N
5.2 RCV Distortion and Noise - 500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	29.07	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_2N
5.2 RCV Distortion and Noise - 630 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	30.59	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_2N
5.2 RCV Distortion and Noise - 800 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	28.91	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_2N
5.2 RCV Distortion and Noise - 1000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	32.01	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_2N
5.2 RCV Distortion and Noise - 1250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	27.01	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_2N
5.2 RCV Distortion and Noise - 1600 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	34.08	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_2N
5.2 RCV Distortion and Noise - 2000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	43.29	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_2N
5.2 RCV Distortion and Noise - 2500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	39.65	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_2N
5.2 RCV Distortion and Noise - 3150 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	42.21	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_2N
5.2 RCV Distortion and Noise - 4000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	44.03	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_2N
5.2 RCV Distortion and Noise - 5000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	41.40	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_2N
Report - Receive Distortion	Ok	Minimum SDNR [dB],	24.23	WLAN5G_Voice_802.11n-HT40

and Noise (Conversational Gain)		(occured at 250Hz)		MCS0_EVS WB 64kbps_Ch126_2N
5.3 Frequency Response 2N FF	Ok	Min. dist. to tolerance scheme [dB], 1285.9 Hz	1.08	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_2N
5.3 Frequency Response 2N DF	Ok	Min. dist. to tolerance scheme [dB], 974.0 Hz	0.93	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_2N

Overall Receive Delay WB	6
5.1b Receive Volume Control Performance 2N WB	7
5.2 RCV Distortion and Noise - 250 Hz WB	8
5.2 RCV Distortion and Noise - 315 Hz WB	9
5.2 RCV Distortion and Noise - 400 Hz WB	10
5.2 RCV Distortion and Noise - 500 Hz WB	11
5.2 RCV Distortion and Noise - 630 Hz WB	12
5.2 RCV Distortion and Noise - 800 Hz WB	13
5.2 RCV Distortion and Noise - 1000 Hz WB	14
5.2 RCV Distortion and Noise - 1250 Hz WB	15
5.2 RCV Distortion and Noise - 1600 Hz WB	16
5.2 RCV Distortion and Noise - 2000 Hz WB	17
5.2 RCV Distortion and Noise - 2500 Hz WB	18
5.2 RCV Distortion and Noise - 3150 Hz WB	19
5.2 RCV Distortion and Noise - 4000 Hz WB	20
5.2 RCV Distortion and Noise - 5000 Hz WB	21
Report - Receive Distortion and Noise (Conversational Gain)	22
5.3 Frequency Response 2N FF	23
5.3 Frequency Response 2N DF	24

Overall Receive Delay WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ Preparation - Delay measurement



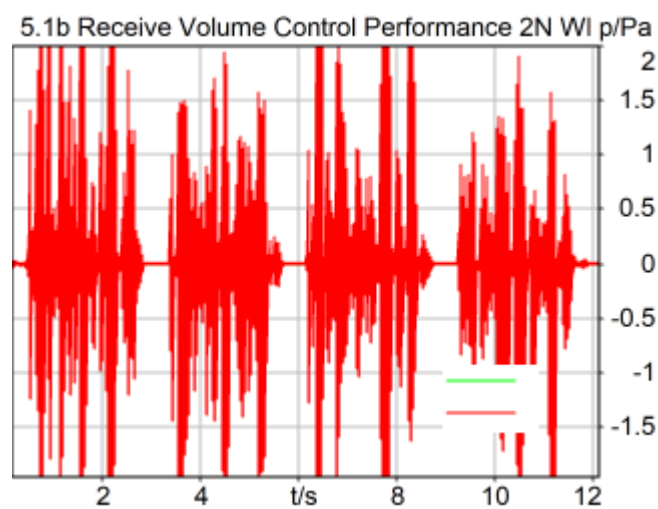
Delay (Cross): 179.5 ms

2023/11/14 15:03 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.1b Receive Volume Control Performance 2N WB

TIA-5050 (2018-01) \ Measurements \ Wideband



Speech Level RCV: 84.45 dB[SPL], Act.: 80.80% Ok

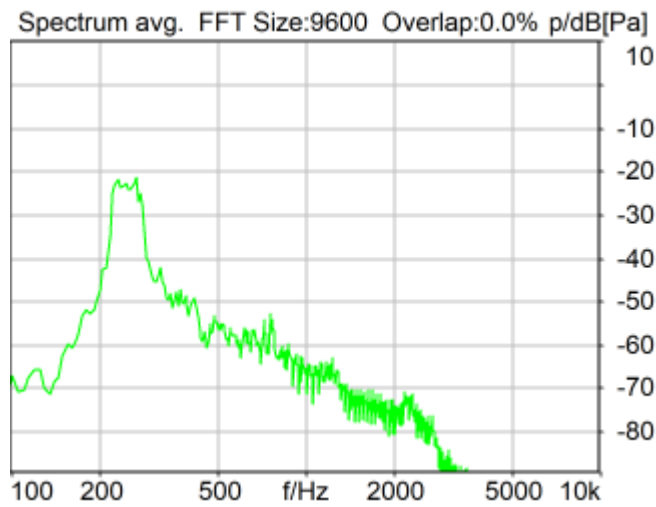
Ok

2023/11/14 15:03 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 250 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 24.23 dB (6.14%) Ok

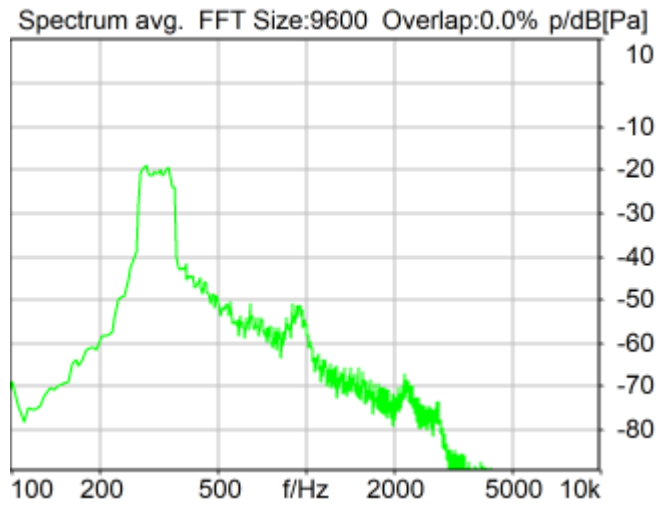
Ok

2023/11/14 15:04 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 315 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 24.87 dB (5.71%) Ok

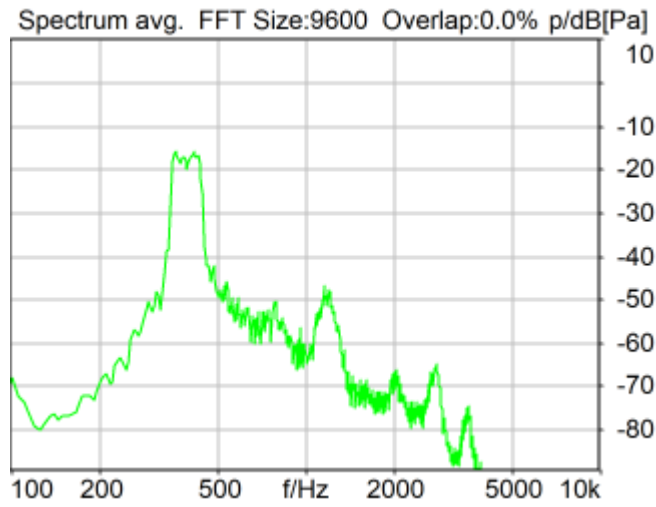
Ok

2023/11/14 15:04 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 400 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 26.81 dB (4.57%) Ok

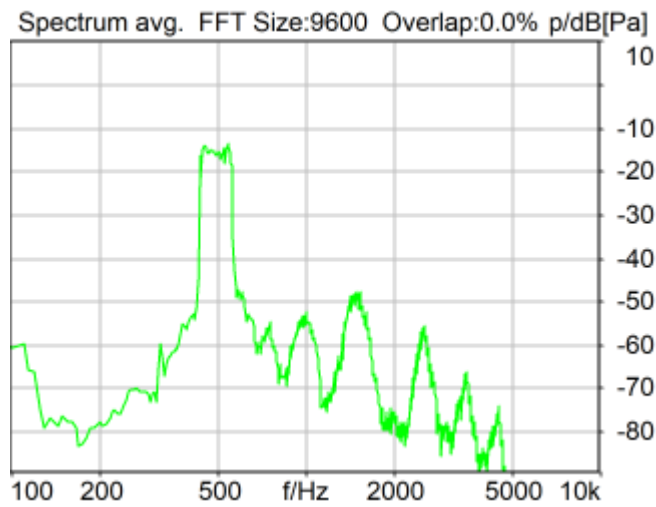
Ok

2023/11/14 15:04 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 29.07 dB (3.52%) Ok

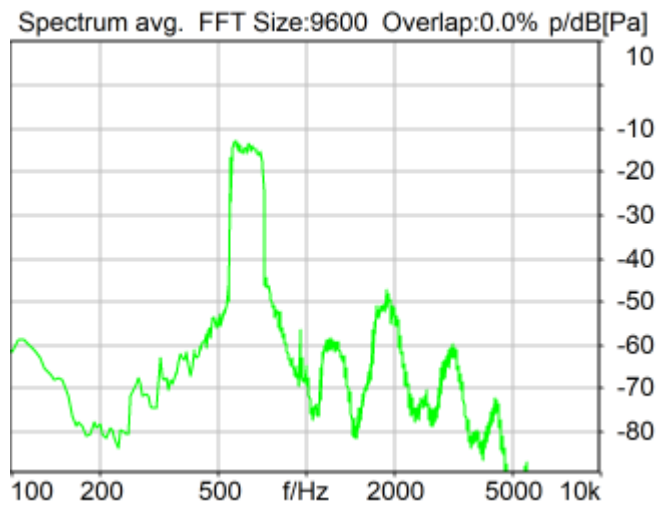
Ok

2023/11/14 15:05 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 30.59 dB (2.95%) Ok

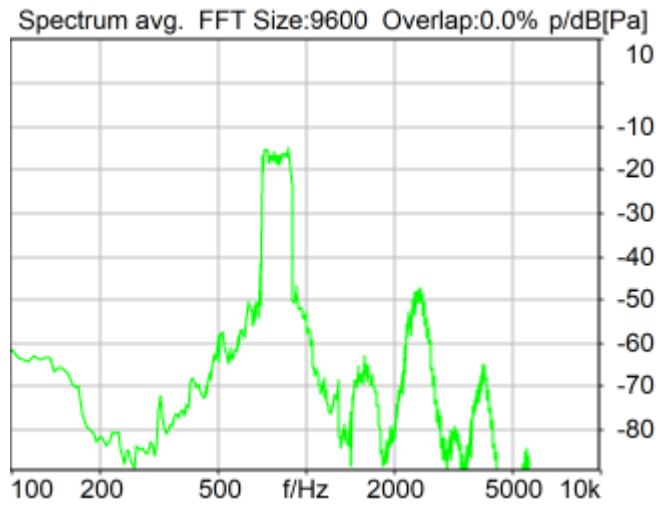
Ok

2023/11/14 15:05 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 28.91 dB (3.58%) Ok

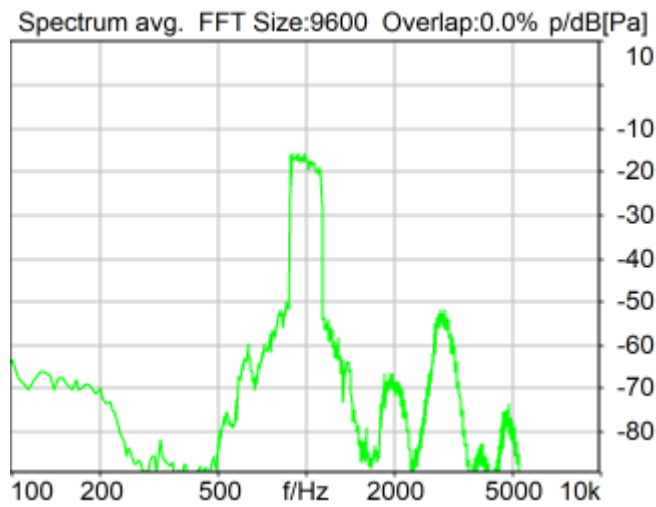
Ok

2023/11/14 15:06 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 32.01 dB (2.51%) Ok

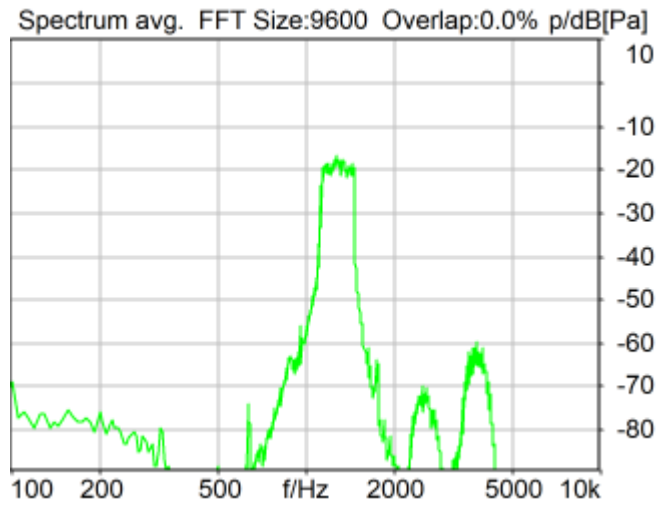
Ok

2023/11/14 15:06 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 27.01 dB (4.46%) Ok

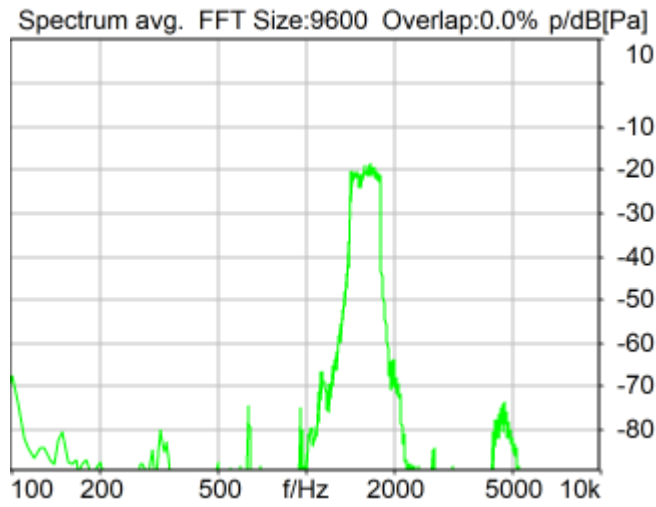
Ok

2023/11/14 15:06 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 34.08 dB (1.98%) Ok

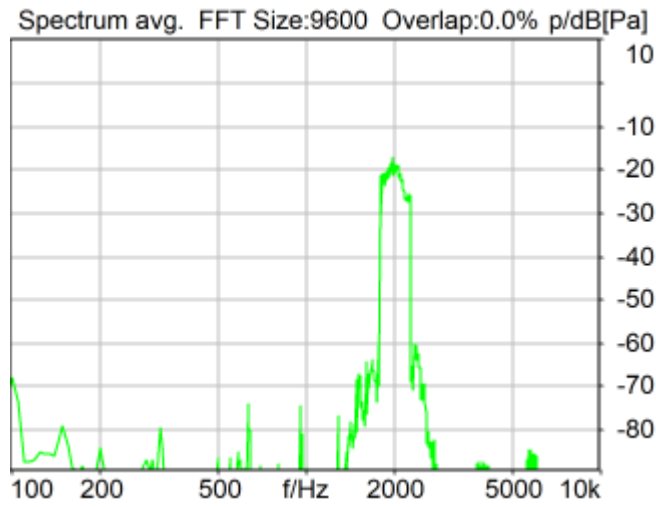
Ok

2023/11/14 15:07 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 43.29 dB (0.68%) Ok

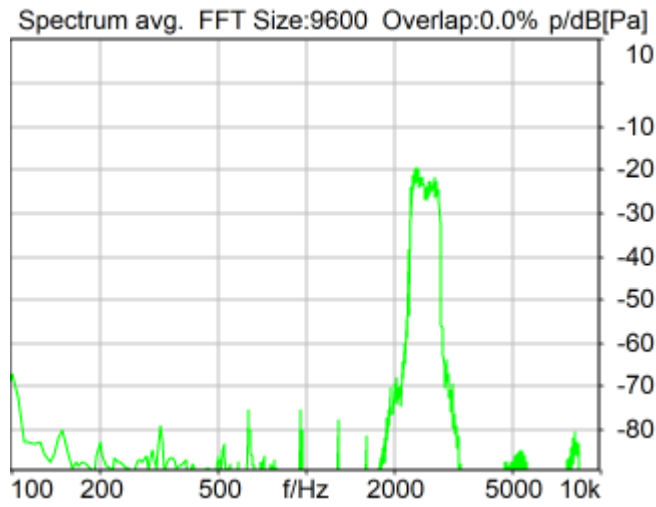
Ok

2023/11/14 15:07 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 39.65 dB (1.04%) Ok

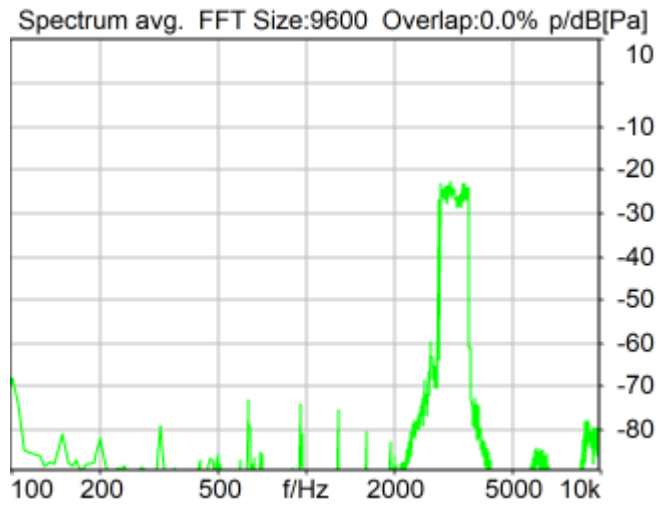
Ok

2023/11/14 15:08 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 42.21 dB (0.78%) Ok

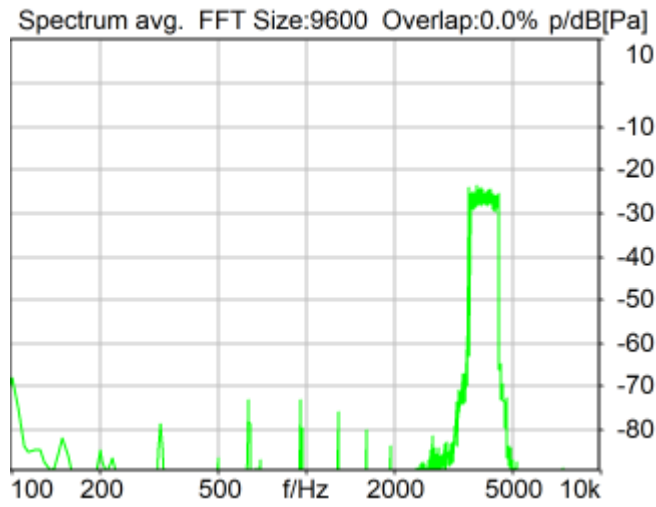
Ok

2023/11/14 15:08 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 4000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 44.03 dB (0.63%) Ok

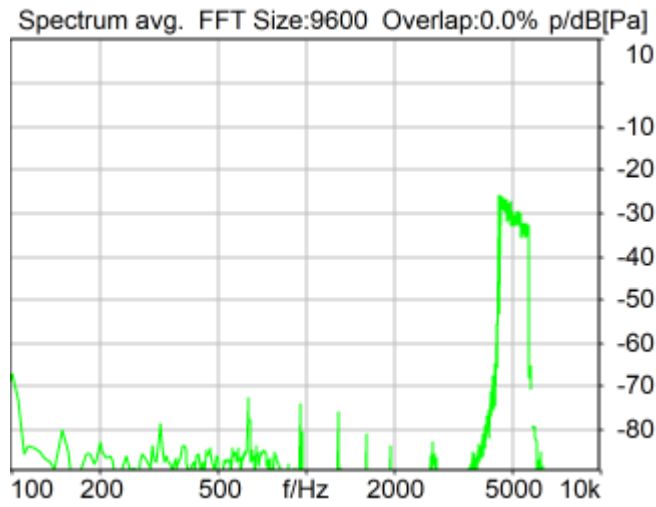
Ok

2023/11/14 15:08 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 5000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 41.40 dB (0.85%) Ok

Ok

2023/11/14 15:09 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain)

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N

Region	Frequency	SDNR
1	250Hz	24.23 dB
2	315Hz	24.87 dB
3	400Hz	26.81 dB
4	500Hz	29.07 dB
5	630Hz	30.59 dB
6	800Hz	28.91 dB
7	1000Hz	32.01 dB
8	1250Hz	27.01 dB
9	1600Hz	34.08 dB
10	2000Hz	43.29 dB
11	2500Hz	39.65 dB
12	3150Hz	42.21 dB
13	4000Hz	44.03 dB
14	5000Hz	41.40 dB

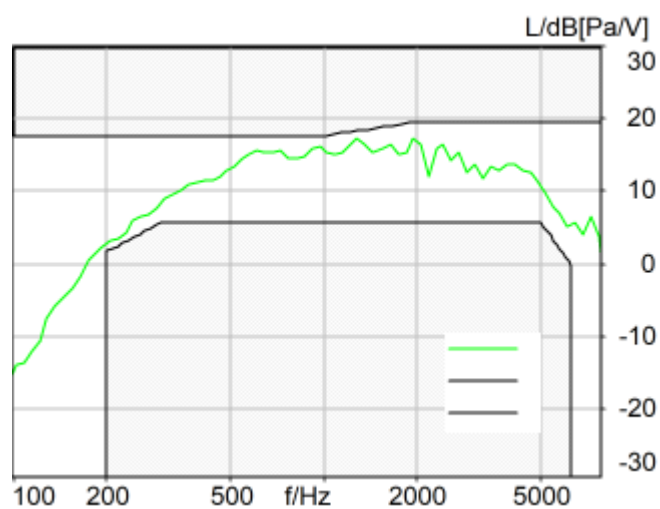
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 24.23dB at 250Hz.

2023/11/14 15:11 ACQUA

5.3 Frequency Response 2N FF

TIA-5050 (2018-01) \ Measurements \ Wideband



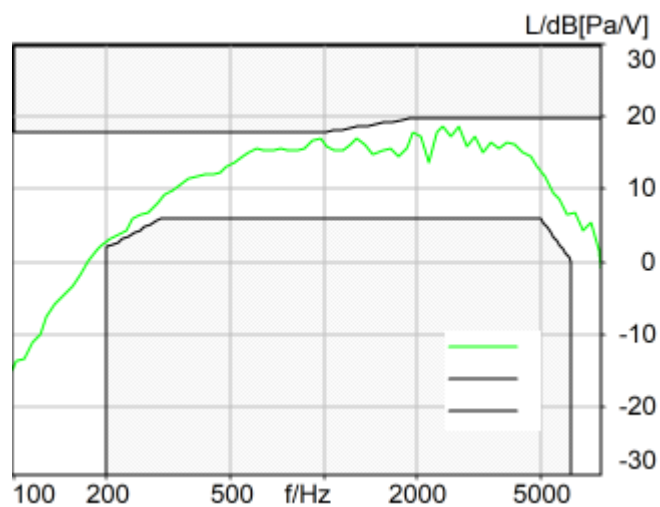
Absolute minimal distance
1.08 dB at 1285.9 Hz Ok

Ok

2023/11/14 15:12 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N DF

TIA-5050 (2018-01) \ Measurements \ Wideband



Absolute minimal distance
0.93 dB at 974.0 Hz Ok

Ok

2023/11/14 15:12 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_8N
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Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/14 15:24
Responsible Person	AC

Status Overview

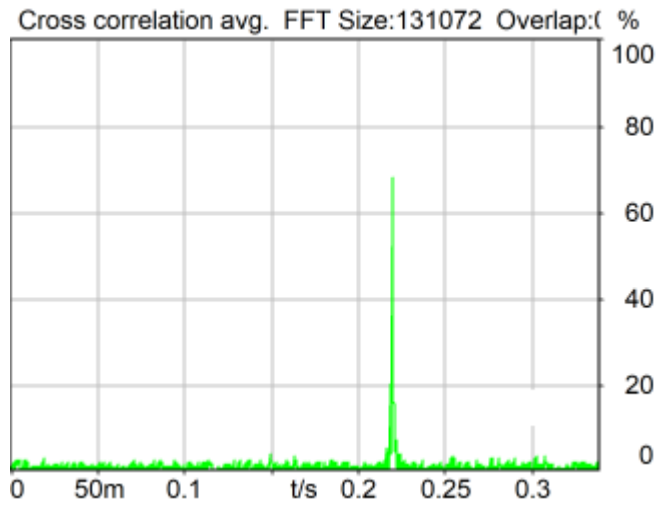
SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay WB	Done	Delay (Cross) [ms]	220.0	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_8N
5.1a Receive Volume Control Performance 8N WB	Ok	Speech Level [dB[SPL]]	88.71	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_8N
5.2 RCV Distortion and Noise - 250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	22.72	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_8N
5.2 RCV Distortion and Noise - 315 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	24.46	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_8N
5.2 RCV Distortion and Noise - 400 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	27.11	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_8N
5.2 RCV Distortion and Noise - 500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	27.85	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_8N
5.2 RCV Distortion and Noise - 630 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	27.89	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_8N
5.2 RCV Distortion and Noise - 800 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	27.11	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_8N
5.2 RCV Distortion and Noise - 1000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	24.63	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_8N
5.2 RCV Distortion and Noise - 1250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	22.20	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_8N
5.2 RCV Distortion and Noise - 1600 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	38.46	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_8N
5.2 RCV Distortion and Noise - 2000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	42.02	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_8N
5.2 RCV Distortion and Noise - 2500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	38.79	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_8N
5.2 RCV Distortion and Noise - 3150 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	35.20	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_8N
5.2 RCV Distortion and Noise - 4000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	32.51	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_8N
5.2 RCV Distortion and Noise - 5000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	41.64	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_8N
Report - Receive Distortion	Ok	Minimum SDNR [dB],	22.20	WLAN5G_Voice_802.11n-HT40

and Noise (Conversational Gain)		(occured at 1250Hz)		MCS0_EVS WB 64kbps_Ch126_8N
5.3 Frequency Response 8N FF	Ok	Min. dist. to tolerance scheme [dB], 217.7 Hz	1.15	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_8N
5.3 Frequency Response 8N DF	Ok	Min. dist. to tolerance scheme [dB], 924.0 Hz	0.90	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch126_8N

Overall Receive Delay WB	6
5.1a Receive Volume Control Performance 8N WB	7
5.2 RCV Distortion and Noise - 250 Hz WB	8
5.2 RCV Distortion and Noise - 315 Hz WB	9
5.2 RCV Distortion and Noise - 400 Hz WB	10
5.2 RCV Distortion and Noise - 500 Hz WB	11
5.2 RCV Distortion and Noise - 630 Hz WB	12
5.2 RCV Distortion and Noise - 800 Hz WB	13
5.2 RCV Distortion and Noise - 1000 Hz WB	14
5.2 RCV Distortion and Noise - 1250 Hz WB	15
5.2 RCV Distortion and Noise - 1600 Hz WB	16
5.2 RCV Distortion and Noise - 2000 Hz WB	17
5.2 RCV Distortion and Noise - 2500 Hz WB	18
5.2 RCV Distortion and Noise - 3150 Hz WB	19
5.2 RCV Distortion and Noise - 4000 Hz WB	20
5.2 RCV Distortion and Noise - 5000 Hz WB	21
Report - Receive Distortion and Noise (Conversational Gain)	22
5.3 Frequency Response 8N FF	23
5.3 Frequency Response 8N DF	24

Overall Receive Delay WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ Preparation - Delay measurement



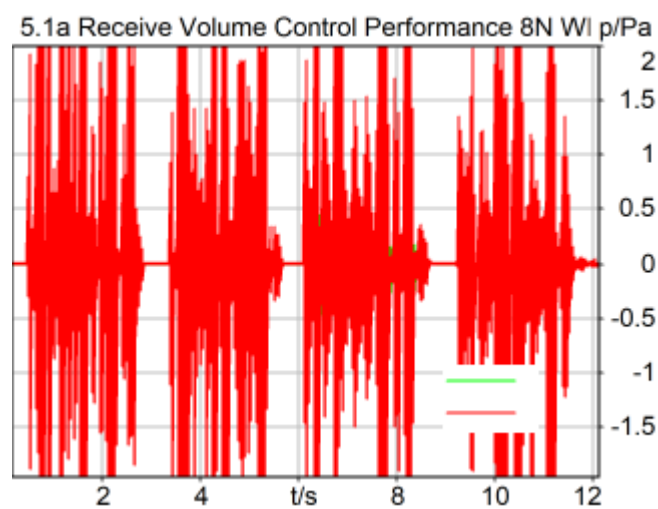
Delay (Cross): 220.0 ms

2023/11/14 15:16 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.1a Receive Volume Control Performance 8N WB

TIA-5050 (2018-01) \ Measurements \ Wideband



Speech Level RCV: 88.71 dB[SPL], Act.: 80.90% Ok

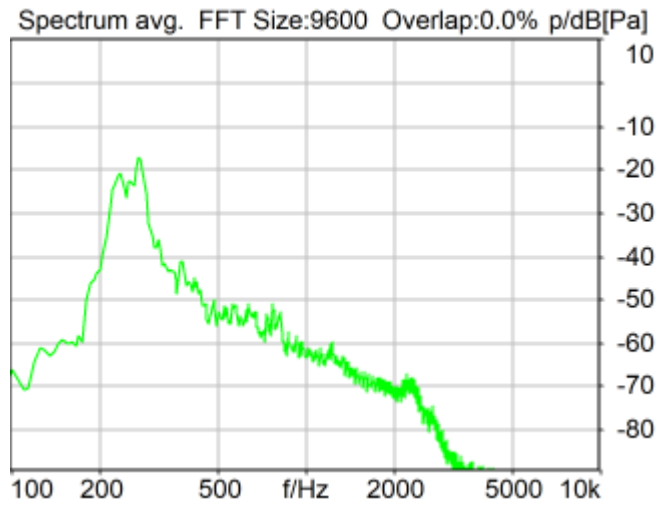
Ok

2023/11/14 15:17 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 250 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 22.72 dB (7.31%) Ok

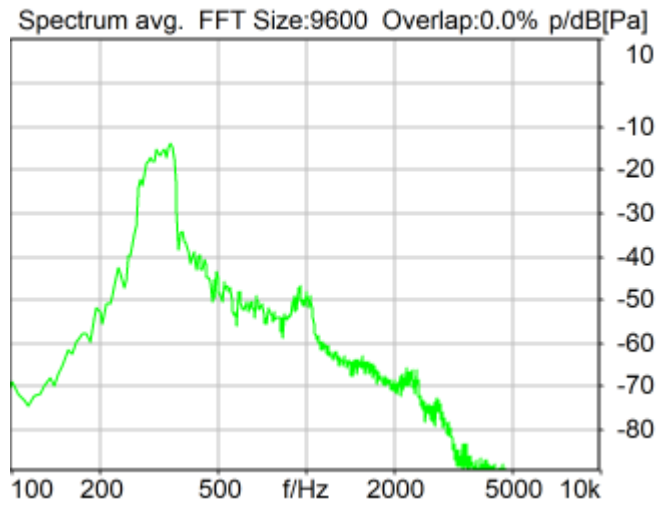
Ok

2023/11/14 15:17 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 315 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 24.46 dB (5.99%) Ok

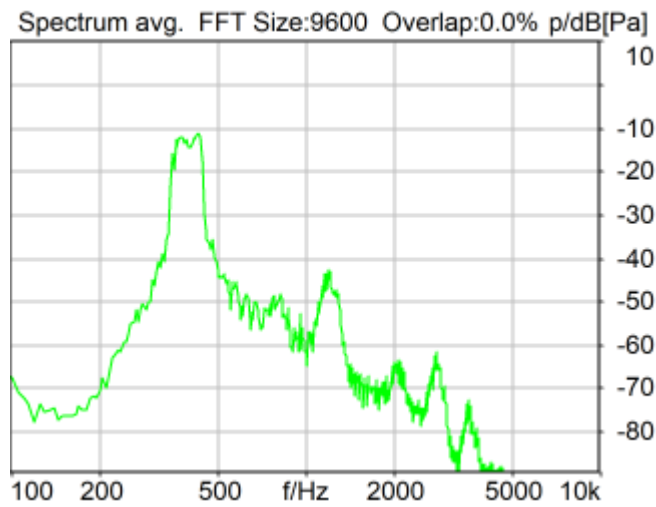
Ok

2023/11/14 15:18 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 400 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 27.11 dB (4.41%) Ok

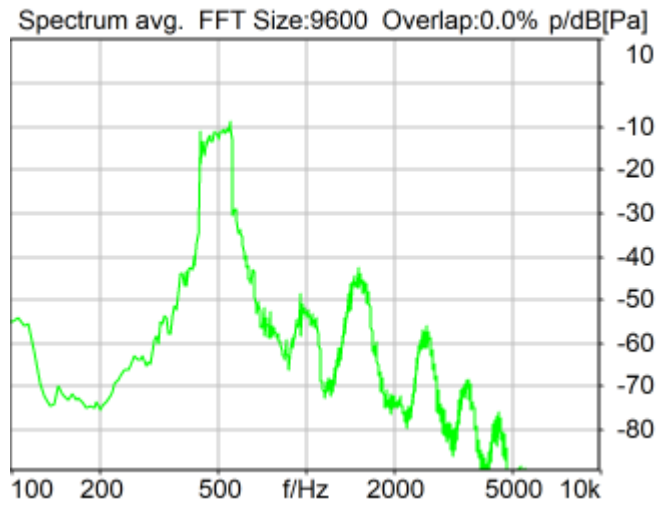
Ok

2023/11/14 15:18 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 27.85 dB (4.05%) Ok

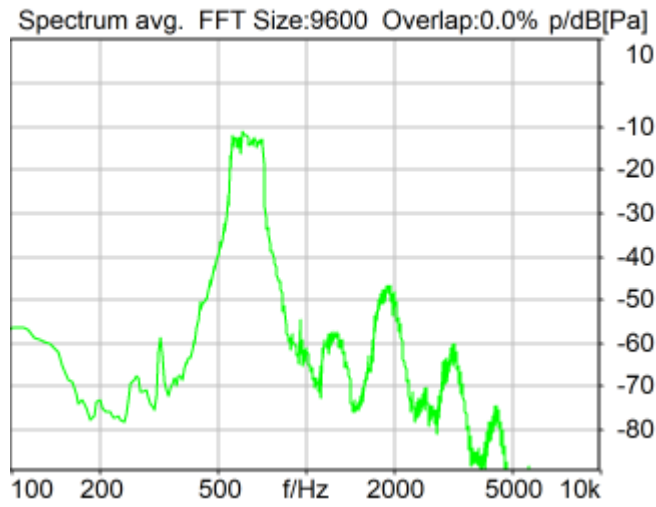
Ok

2023/11/14 15:18 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 27.89 dB (4.03%) Ok

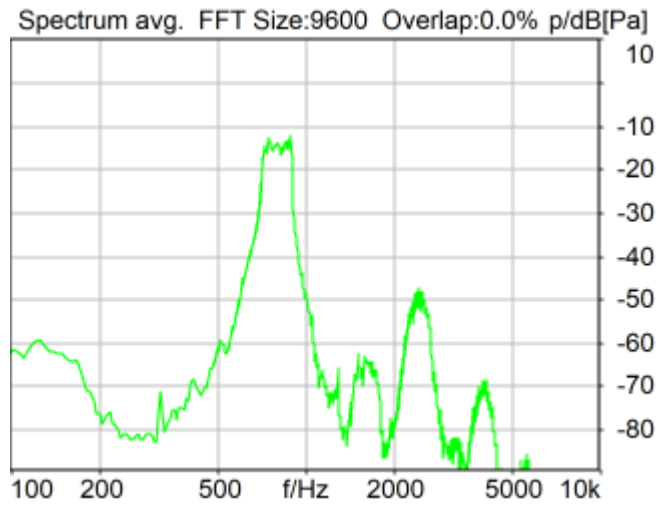
Ok

2023/11/14 15:19 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 27.11 dB (4.41%) Ok

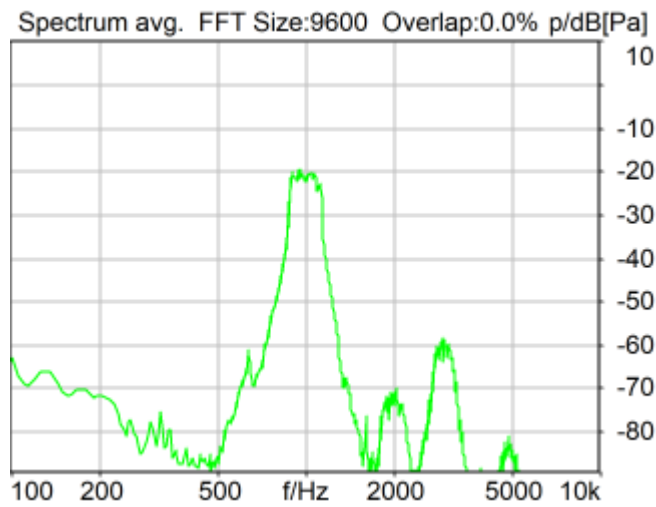
Ok

2023/11/14 15:19 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 24.63 dB (5.87%) Ok

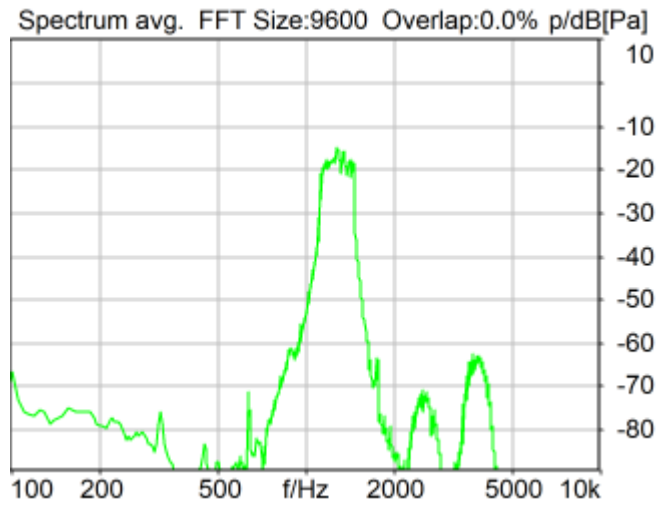
Ok

2023/11/14 15:20 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 22.20 dB (7.76%) Ok

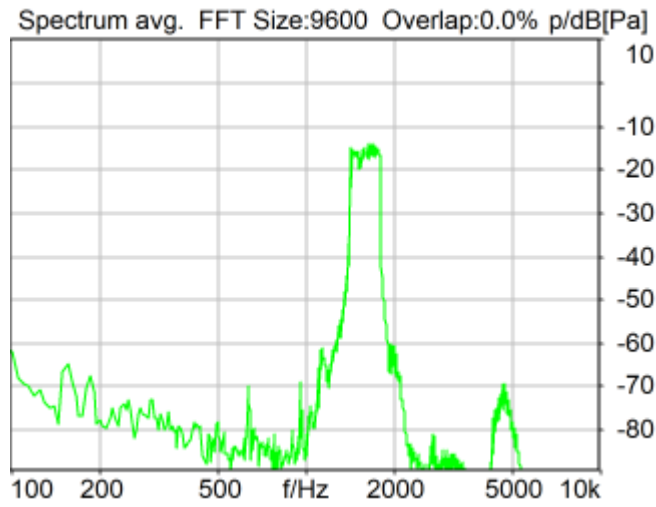
Ok

2023/11/14 15:20 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 38.46 dB (1.19%) Ok

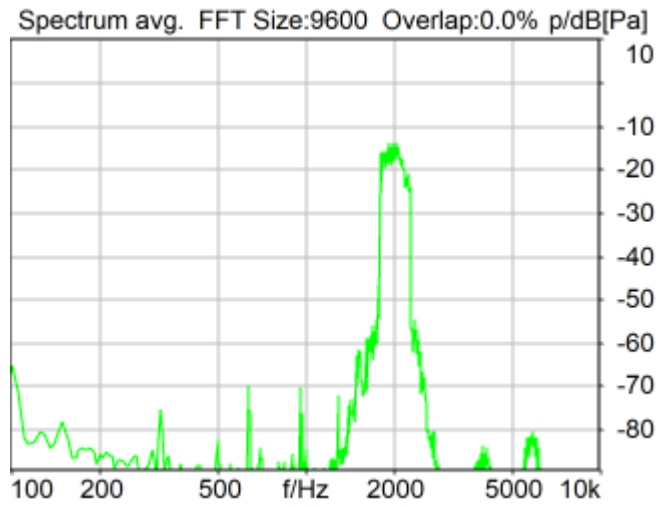
Ok

2023/11/14 15:20 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 42.02 dB (0.79%) Ok

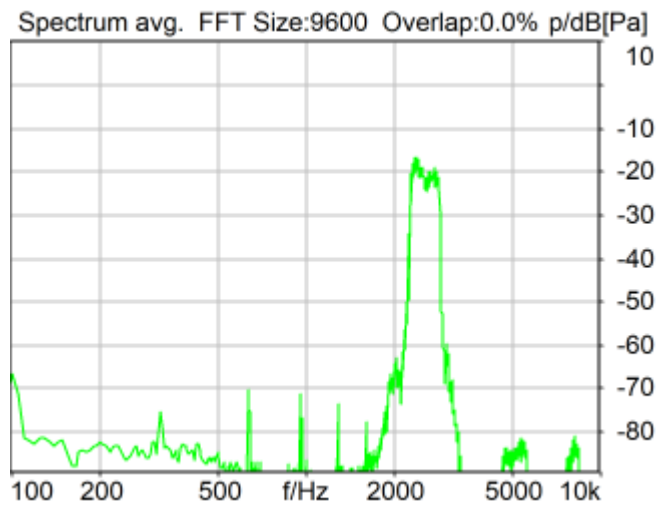
Ok

2023/11/14 15:21 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 38.79 dB (1.15%) Ok

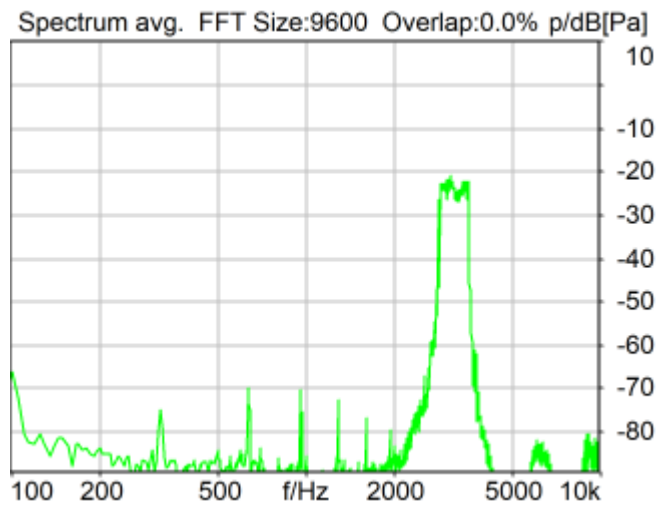
Ok

2023/11/14 15:21 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 35.20 dB (1.74%) Ok

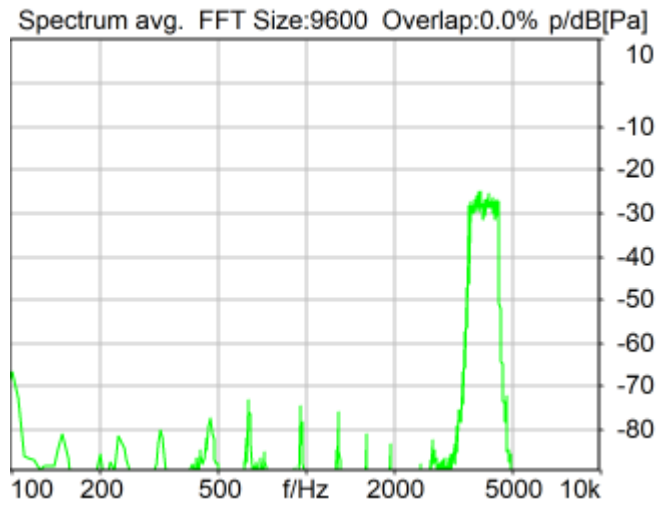
Ok

2023/11/14 15:22 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 4000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 32.51 dB (2.37%) Ok

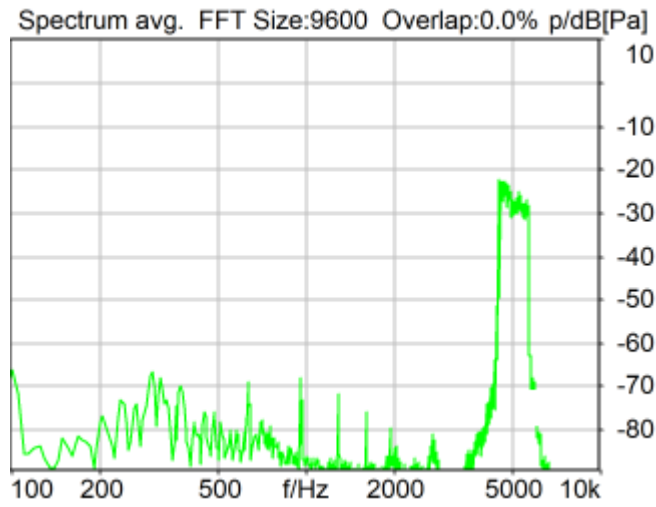
Ok

2023/11/14 15:22 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 5000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 41.64 dB (0.83%) Ok

Ok

2023/11/14 15:22 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain)

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 8N

Region	Frequency	SDNR
1	250Hz	22.72 dB
2	315Hz	24.46 dB
3	400Hz	27.11 dB
4	500Hz	27.85 dB
5	630Hz	27.89 dB
6	800Hz	27.11 dB
7	1000Hz	24.63 dB
8	1250Hz	22.20 dB
9	1600Hz	38.46 dB
10	2000Hz	42.02 dB
11	2500Hz	38.79 dB
12	3150Hz	35.20 dB
13	4000Hz	32.51 dB
14	5000Hz	41.64 dB

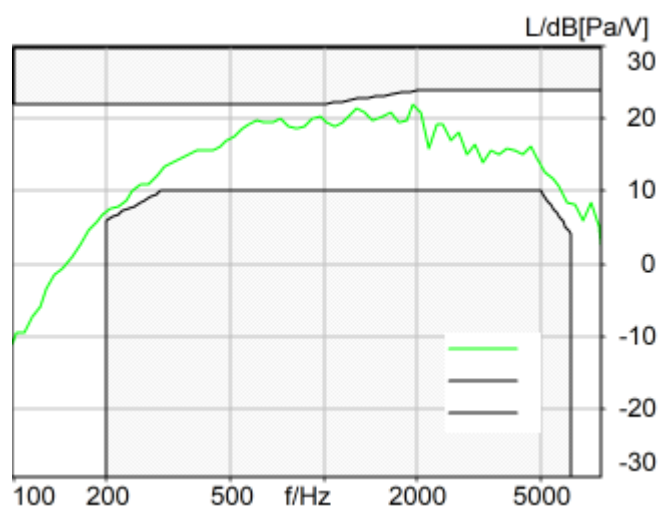
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 22.20dB at 1250Hz.

2023/11/14 15:22 ACQUA

5.3 Frequency Response 8N FF

TIA-5050 (2018-01) \ Measurements \ Wideband



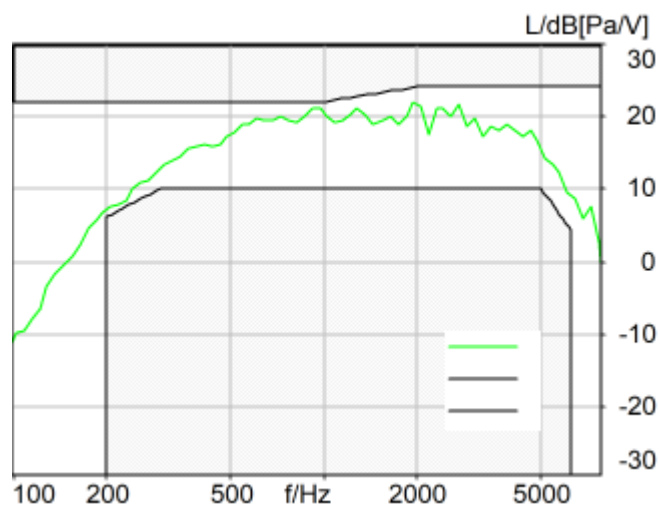
Absolute minimal distance
1.15 dB at 217.7 Hz Ok

Ok

2023/11/14 15:23 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 8N DF

TIA-5050 (2018-01) \ Measurements \ Wideband



Absolute minimal distance
0.90 dB at 924.0 Hz Ok

Ok

2023/11/14 15:23 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_2N
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Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/14 16:04

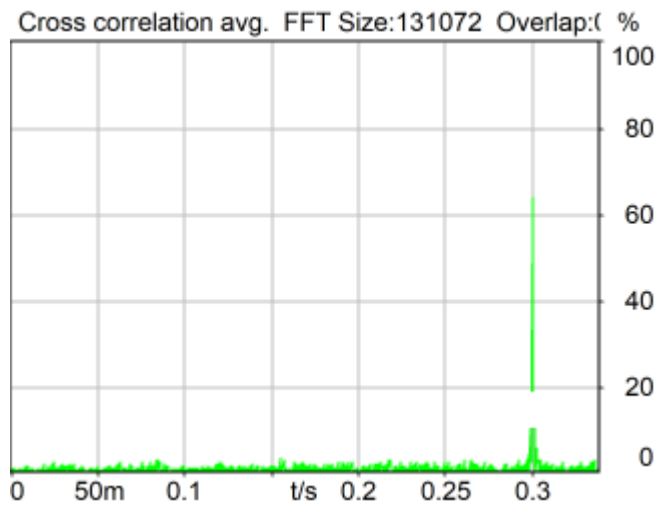
Status Overview

SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay NB	Done	Delay (Cross) [ms]	300.9	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_2N
5.1b Receive Volume Control Performance 2N NB	Ok	Speech Level [dB[SPL]]	86.56	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_2N
5.2 RCV Distortion and Noise - 400 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	25.53	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_2N
5.2 RCV Distortion and Noise - 500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	26.55	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_2N
5.2 RCV Distortion and Noise - 630 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	28.54	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_2N
5.2 RCV Distortion and Noise - 800 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	26.50	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_2N
5.2 RCV Distortion and Noise - 1000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	28.60	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_2N
5.2 RCV Distortion and Noise - 1250 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	25.40	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_2N
5.2 RCV Distortion and Noise - 1600 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	37.78	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_2N
5.2 RCV Distortion and Noise - 2000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	26.91	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_2N
5.2 RCV Distortion and Noise - 2500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	37.93	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_2N
5.2 RCV Distortion and Noise - 3150 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	31.44	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_2N
Report - Receive Distortion and Noise (Conversational Gain)	Ok	Minimum SDNR [dB], (occured at 1250Hz)	25.40	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_2N
5.3 Frequency Response 2N FF HANB	Ok	Min. dist. to tolerance scheme [dB], 1447.5 Hz	0.25	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_2N
5.3 Frequency Response 2N DF HANB	Ok	Min. dist. to tolerance scheme [dB], 2571.8 Hz	0.14	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_2N

Overall Receive Delay NB	5
5.1b Receive Volume Control Performance 2N NB	6
5.2 RCV Distortion and Noise - 400 Hz NB	7
5.2 RCV Distortion and Noise - 500 Hz NB	8
5.2 RCV Distortion and Noise - 630 Hz NB	9
5.2 RCV Distortion and Noise - 800 Hz NB	10
5.2 RCV Distortion and Noise - 1000 Hz NB	11
5.2 RCV Distortion and Noise - 1250 Hz NB	12
5.2 RCV Distortion and Noise - 1600 Hz NB	13
5.2 RCV Distortion and Noise - 2000 Hz NB	14
5.2 RCV Distortion and Noise - 2500 Hz NB	15
5.2 RCV Distortion and Noise - 3150 Hz NB	16
Report - Receive Distortion and Noise (Conversational Gain)	17
5.3 Frequency Response 2N FF HANB	18
5.3 Frequency Response 2N DF HANB	19

Overall Receive Delay NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ Preparation - Delay measurement



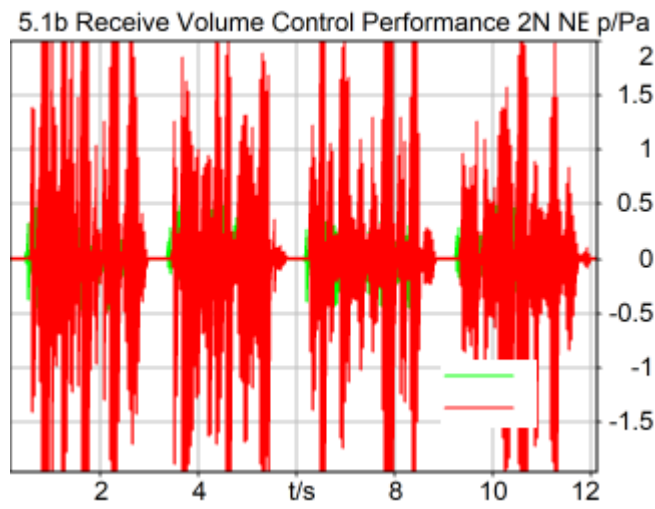
Delay (Cross): 300.9 ms

2023/11/14 15:58 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.1b Receive Volume Control Performance 2N NB

TIA-5050 (2018-01) \ Measurements \ Narrowband



Speech Level RCV: 86.56 dB[SPL], Act.: 81.04% Ok

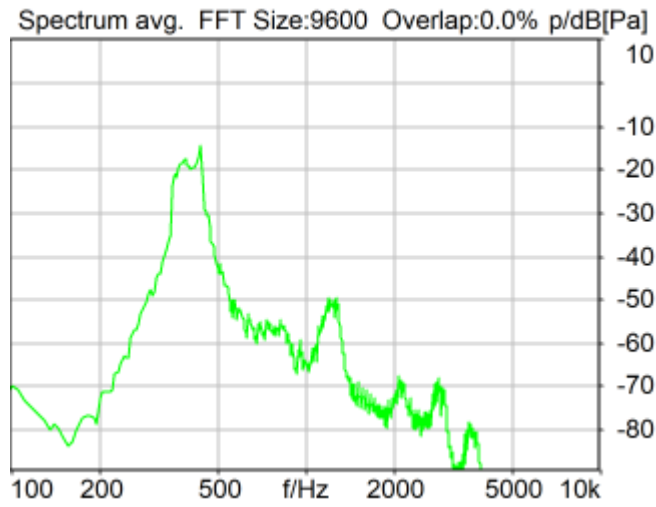
Ok

2023/11/14 15:58 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 400 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 25.53 dB (5.29%) Ok

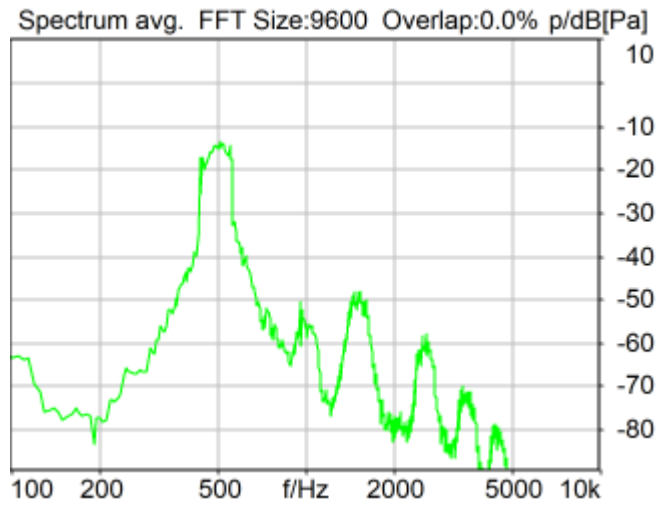
Ok

2023/11/14 15:58 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 26.55 dB (4.71%) Ok

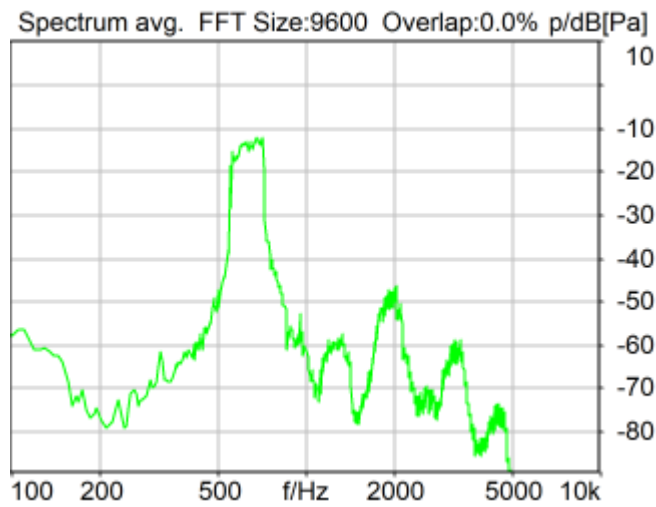
Ok

2023/11/14 15:59 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 28.54 dB (3.74%) Ok

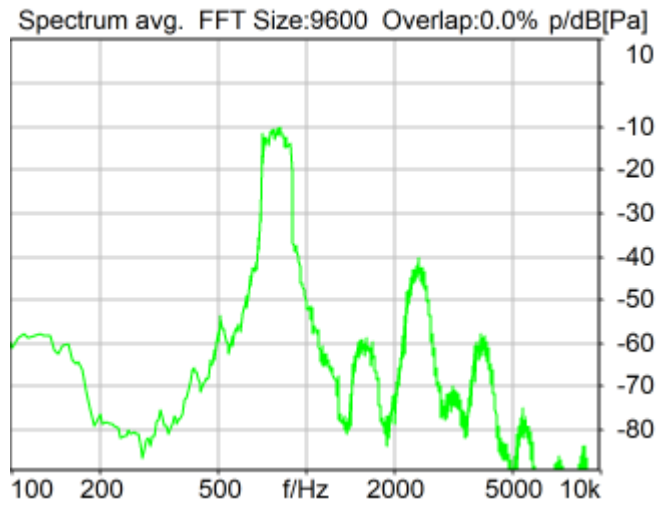
Ok

2023/11/14 15:59 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 26.50 dB (4.73%) Ok

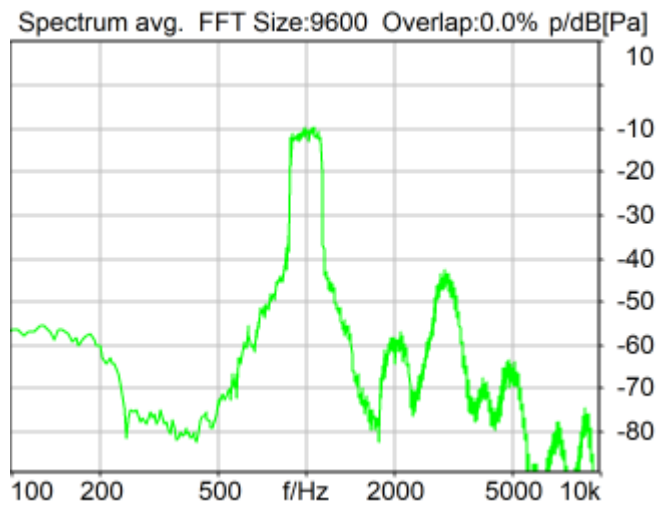
Ok

2023/11/14 15:59 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 28.60 dB (3.71%) Ok

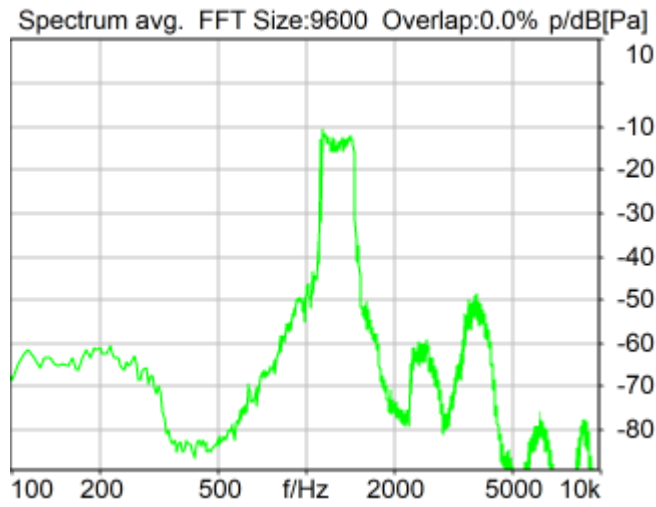
Ok

2023/11/14 16:00 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 25.40 dB (5.37%) Ok

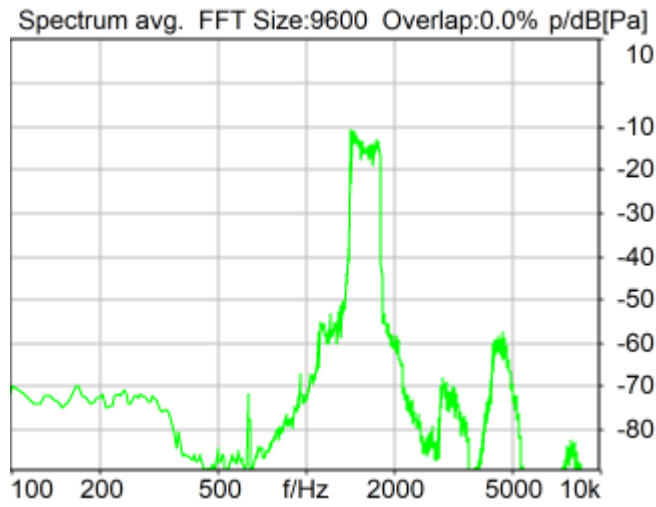
Ok

2023/11/14 16:00 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 37.78 dB (1.29%) Ok

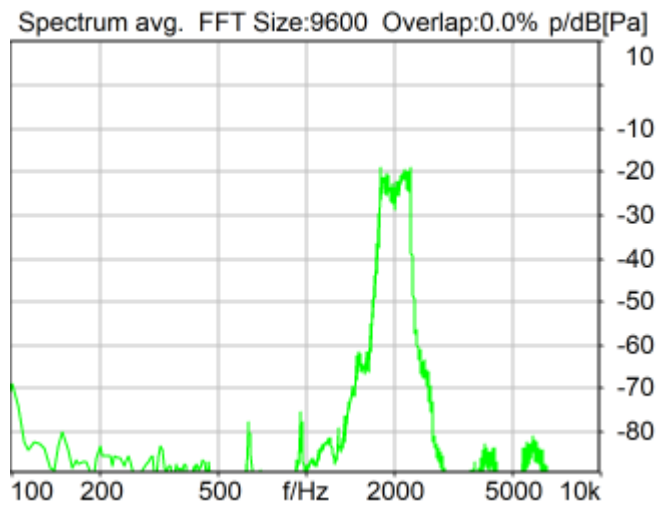
Ok

2023/11/14 16:01 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 26.91 dB (4.51%) Ok

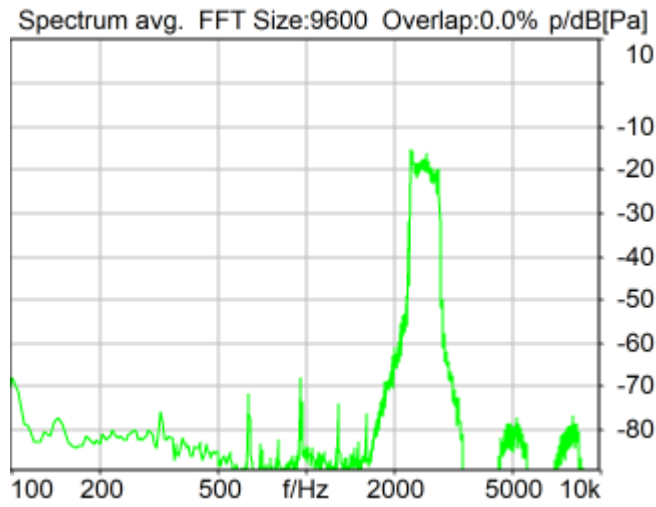
Ok

2023/11/14 16:01 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 37.93 dB (1.27%) Ok

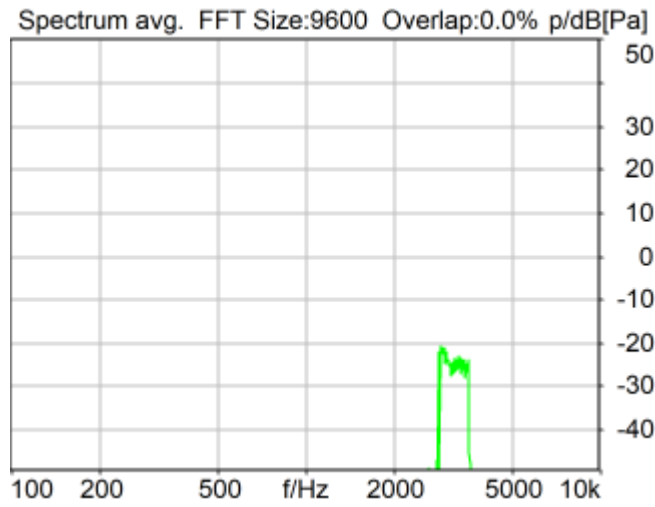
Ok

2023/11/14 16:02 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 31.44 dB (2.68%) Ok

Ok

2023/11/14 16:02 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain)

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N

Region	Frequency	SDNR
1	400Hz	25.53 dB
2	500Hz	26.55 dB
3	630Hz	28.54 dB
4	800Hz	26.50 dB
5	1000Hz	28.60 dB
6	1250Hz	25.40 dB
7	1600Hz	37.78 dB
8	2000Hz	26.91 dB
9	2500Hz	37.93 dB
10	3150Hz	31.44 dB

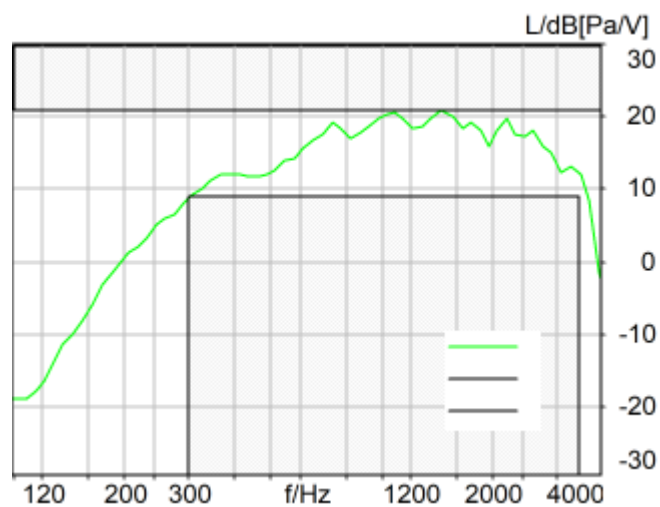
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 25.40dB at 1250Hz.

2023/11/14 16:02 ACQUA

5.3 Frequency Response 2N FF HANB

TIA-5050 (2018-01) \ Measurements \ Narrowband



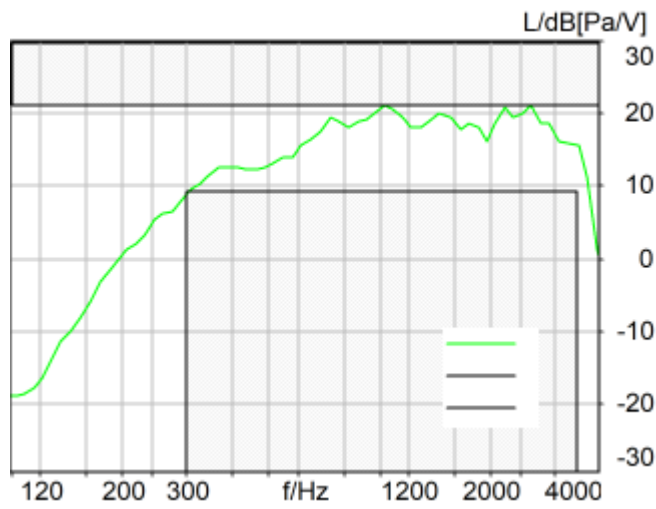
Absolute minimal distance
0.25 dB at 1447.5 Hz Ok

Ok

2023/11/14 16:03 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N DF HANB

TIA-5050 (2018-01) \ Measurements \ Narrowband



Absolute minimal distance
0.14 dB at 2571.8 Hz Ok

Ok

2023/11/14 16:03 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_8N
--------------------	---

Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/14 16:16

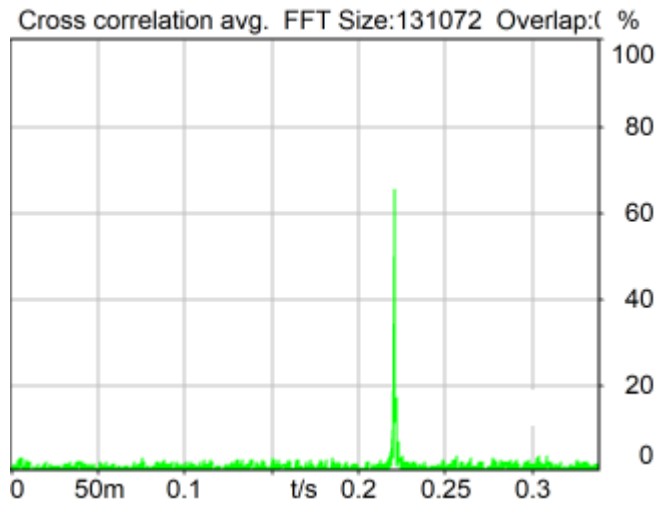
Status Overview

SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay NB	Done	Delay (Cross) [ms]	221.4	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_8N
5.1a Receive Volume Control Performance 8N NB	Ok	Speech Level [dB[SPL]]	90.61	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_8N
5.2 RCV Distortion and Noise - 400 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	25.49	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_8N
5.2 RCV Distortion and Noise - 500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	24.52	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_8N
5.2 RCV Distortion and Noise - 630 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	29.14	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_8N
5.2 RCV Distortion and Noise - 800 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	25.27	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_8N
5.2 RCV Distortion and Noise - 1000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	28.65	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_8N
5.2 RCV Distortion and Noise - 1250 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	28.38	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_8N
5.2 RCV Distortion and Noise - 1600 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	34.07	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_8N
5.2 RCV Distortion and Noise - 2000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	37.52	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_8N
5.2 RCV Distortion and Noise - 2500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	27.00	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_8N
5.2 RCV Distortion and Noise - 3150 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	37.80	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_8N
Report - Receive Distortion and Noise (Conversational Gain)	Ok	Minimum SDNR [dB], (occured at 500Hz)	24.52	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_8N
5.3 Frequency Response 8N FF HANB	Ok	Min. dist. to tolerance scheme [dB], 1447.5 Hz	0.18	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_8N
5.3 Frequency Response 8N DF HANB	Ok	Min. dist. to tolerance scheme [dB], 1028.7 Hz	0.33	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch151_8N

Overall Receive Delay NB	5
5.1a Receive Volume Control Performance 8N NB	6
5.2 RCV Distortion and Noise - 400 Hz NB	7
5.2 RCV Distortion and Noise - 500 Hz NB	8
5.2 RCV Distortion and Noise - 630 Hz NB	9
5.2 RCV Distortion and Noise - 800 Hz NB	10
5.2 RCV Distortion and Noise - 1000 Hz NB	11
5.2 RCV Distortion and Noise - 1250 Hz NB	12
5.2 RCV Distortion and Noise - 1600 Hz NB	13
5.2 RCV Distortion and Noise - 2000 Hz NB	14
5.2 RCV Distortion and Noise - 2500 Hz NB	15
5.2 RCV Distortion and Noise - 3150 Hz NB	16
Report - Receive Distortion and Noise (Conversational Gain)	17
5.3 Frequency Response 8N FF HANB	18
5.3 Frequency Response 8N DF HANB	19

Overall Receive Delay NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ Preparation - Delay measurement



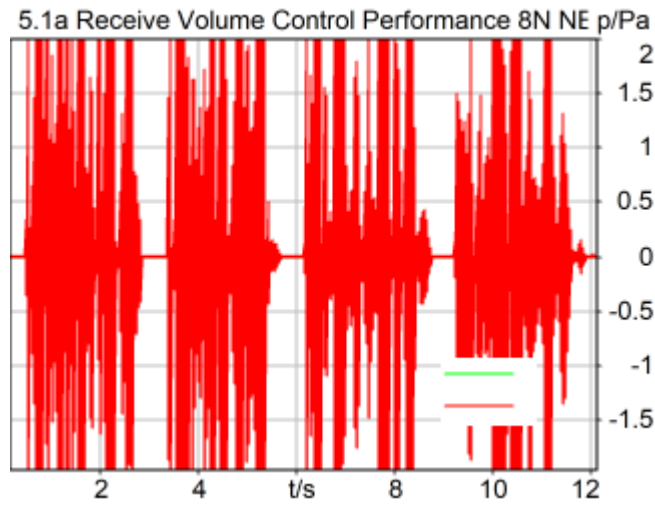
Delay (Cross): 221.4 ms

2023/11/14 16:09 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.1a Receive Volume Control Performance 8N NB

TIA-5050 (2018-01) \ Measurements \ Narrowband



Speech Level RCV: 90.61 dB[SPL], Act.: 81.12% Ok

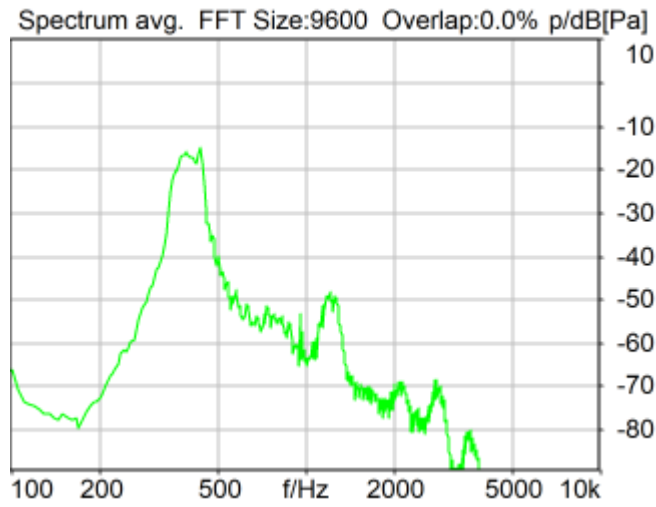
Ok

2023/11/14 16:05 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 400 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 25.49 dB (5.32%) Ok

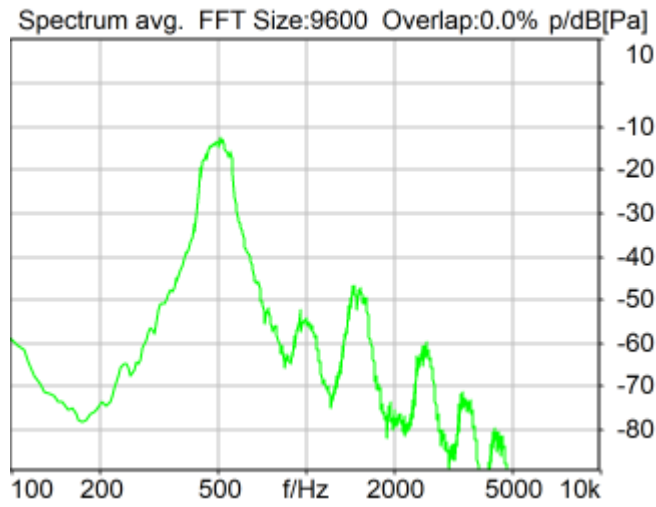
Ok

2023/11/14 16:10 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 24.52 dB (5.94%) Ok

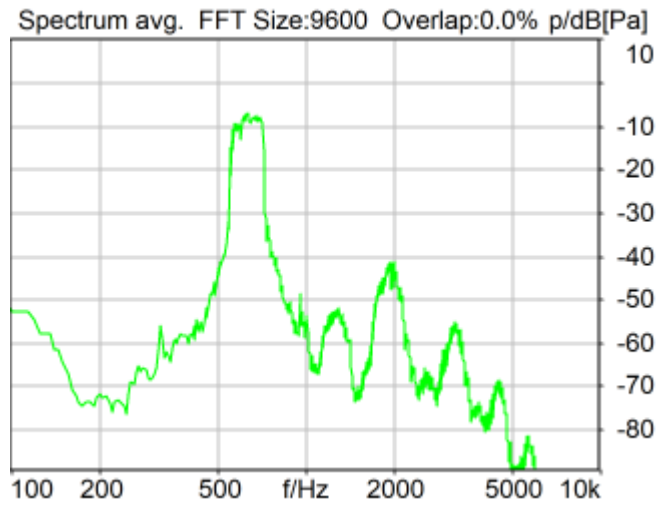
Ok

2023/11/14 16:10 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 29.14 dB (3.49%) Ok

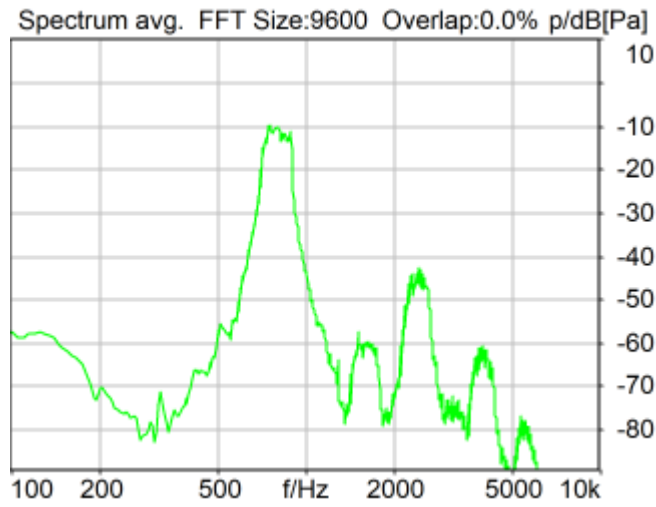
Ok

2023/11/14 16:11 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 25.27 dB (5.45%) Ok

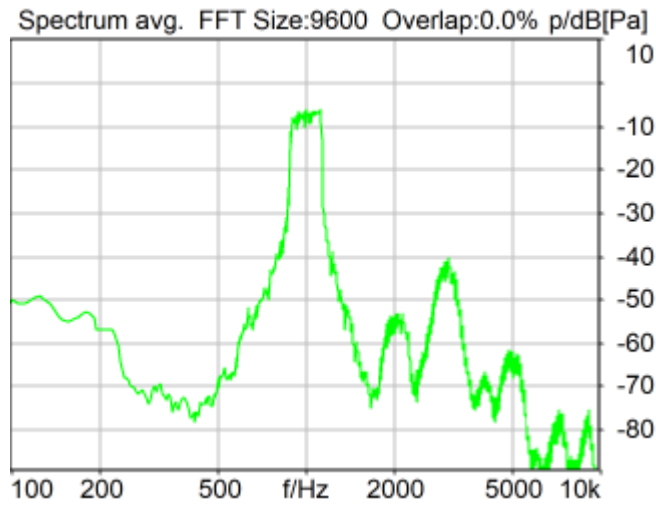
Ok

2023/11/14 16:11 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 28.65 dB (3.69%) Ok

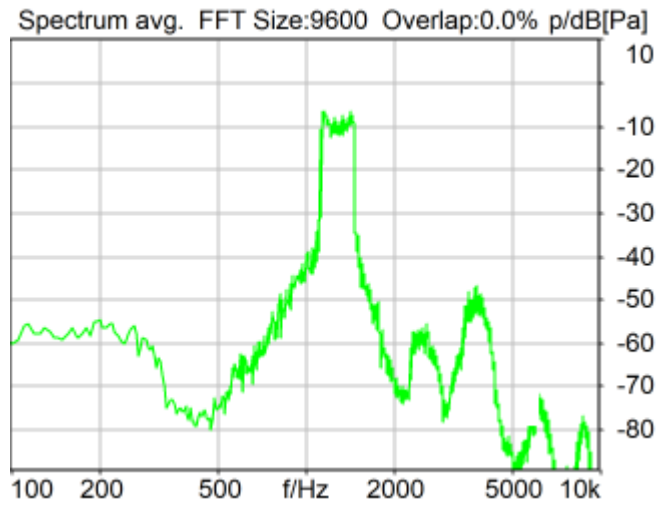
Ok

2023/11/14 16:12 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 28.38 dB (3.81%) Ok

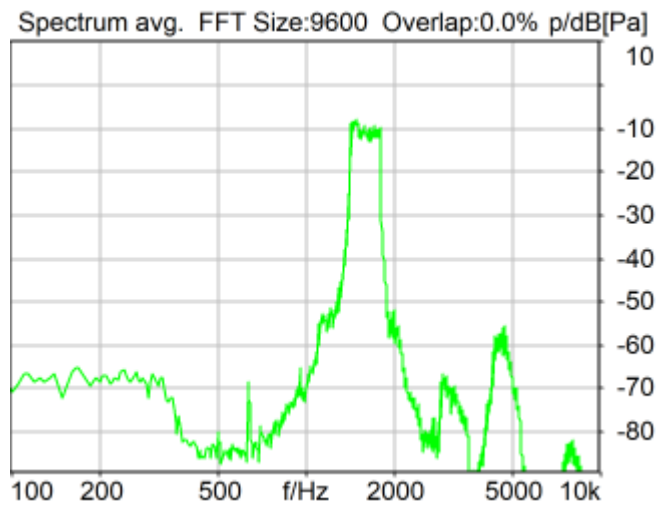
Ok

2023/11/14 16:13 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 34.07 dB (1.98%) Ok

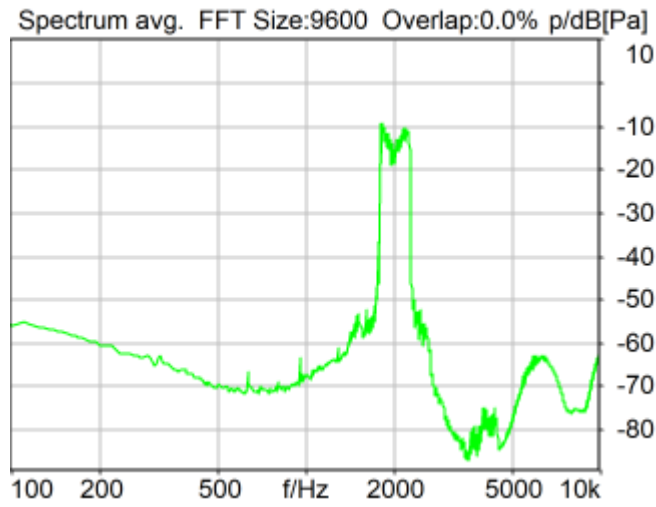
Ok

2023/11/14 16:13 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 37.52 dB (1.33%) Ok

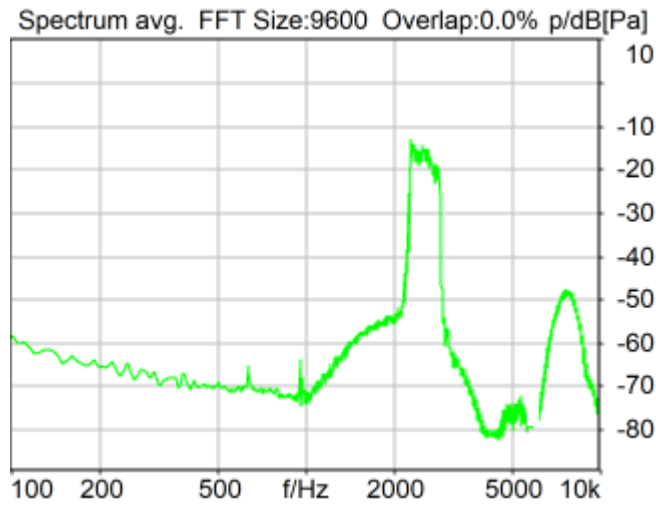
Ok

2023/11/14 16:13 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 27.00 dB (4.47%) Ok

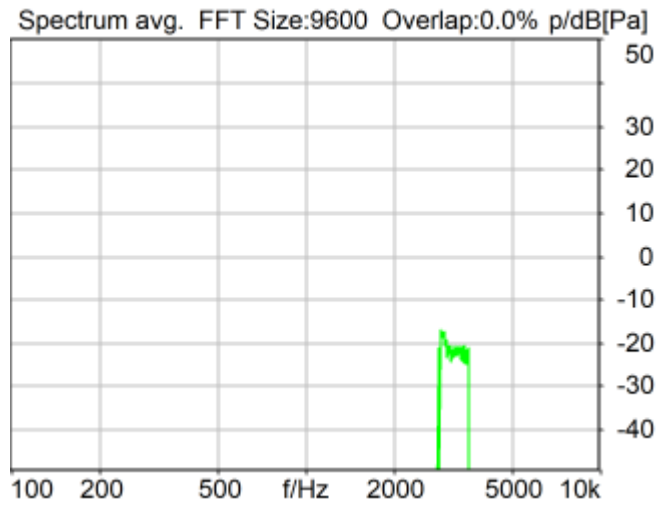
Ok

2023/11/14 16:14 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N



Distortion (Noise) RCV (packed): 37.80 dB (1.29%) Ok

Ok

2023/11/14 16:14 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain)

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 8N

Region	Frequency	SDNR
1	400Hz	25.49 dB
2	500Hz	24.52 dB
3	630Hz	29.14 dB
4	800Hz	25.27 dB
5	1000Hz	28.65 dB
6	1250Hz	28.38 dB
7	1600Hz	34.07 dB
8	2000Hz	37.52 dB
9	2500Hz	27.00 dB
10	3150Hz	37.80 dB

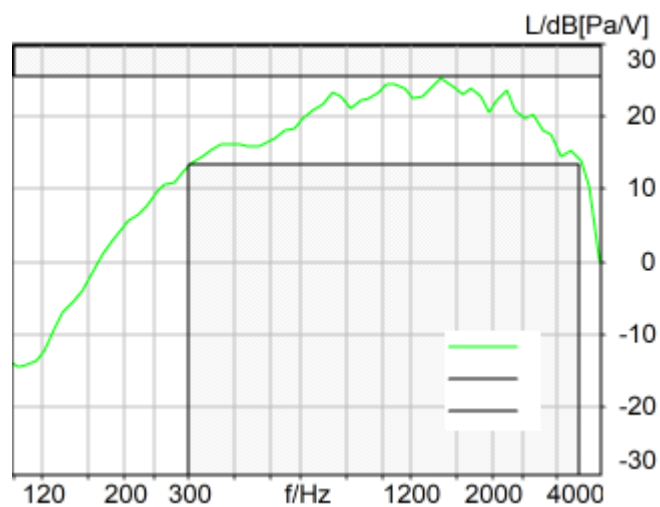
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 24.52dB at 500Hz.

2023/11/14 16:14 ACQUA

5.3 Frequency Response 8N FF HANB

TIA-5050 (2018-01) \ Measurements \ Narrowband



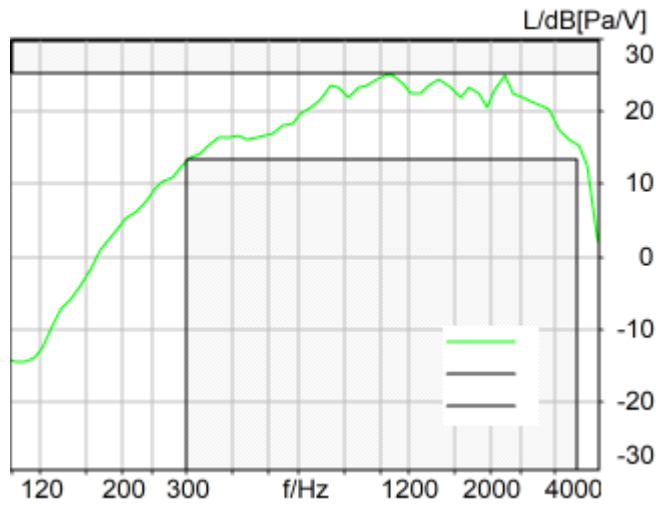
Absolute minimal distance
0.18 dB at 1447.5 Hz Ok

Ok

2023/11/14 16:15 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 8N DF HANB

TIA-5050 (2018-01) \ Measurements \ Narrowband



Absolute minimal distance
0.33 dB at 1028.7 Hz Ok

Ok

2023/11/14 16:15 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_2N
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Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/14 15:44
Responsible Person	AC

Status Overview

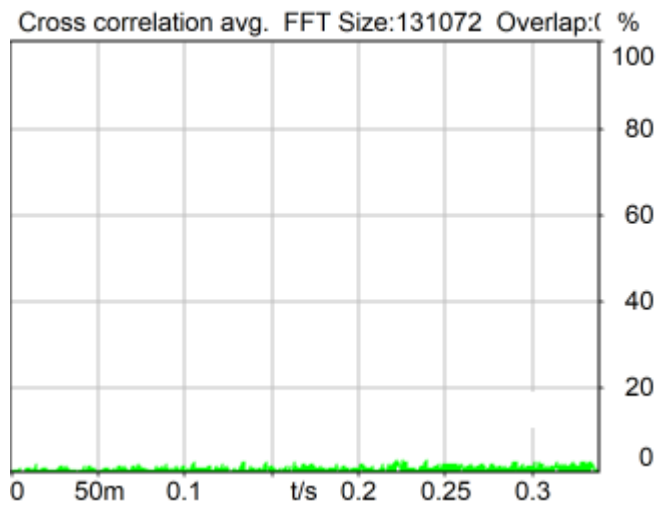
SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay WB	Done	Delay (Cross) [ms]	439.2	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_2N
5.1b Receive Volume Control Performance 2N WB	Ok	Speech Level [dB[SPL]]	84.44	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_2N
5.2 RCV Distortion and Noise - 250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	22.51	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_2N
5.2 RCV Distortion and Noise - 315 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	25.12	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_2N
5.2 RCV Distortion and Noise - 400 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	26.43	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_2N
5.2 RCV Distortion and Noise - 500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	28.34	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_2N
5.2 RCV Distortion and Noise - 630 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	20.70	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_2N
5.2 RCV Distortion and Noise - 800 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	27.71	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_2N
5.2 RCV Distortion and Noise - 1000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	23.54	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_2N
5.2 RCV Distortion and Noise - 1250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	34.47	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_2N
5.2 RCV Distortion and Noise - 1600 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	44.68	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_2N
5.2 RCV Distortion and Noise - 2000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	28.58	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_2N
5.2 RCV Distortion and Noise - 2500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	46.27	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_2N
5.2 RCV Distortion and Noise - 3150 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	26.75	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_2N
5.2 RCV Distortion and Noise - 4000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	44.81	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_2N
5.2 RCV Distortion and Noise - 5000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	33.58	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_2N
Report - Receive Distortion	Ok	Minimum SDNR [dB],	20.70	WLAN5G_Voice_802.11n-HT40

and Noise (Conversational Gain)		(occured at 630Hz)		MCS0_EVS WB 64kbps_Ch151_2N
5.3 Frequency Response 2N FF	Ok	Min. dist. to tolerance scheme [dB], 1285.9 Hz	1.17	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_2N
5.3 Frequency Response 2N DF	Ok	Min. dist. to tolerance scheme [dB], 217.7 Hz	0.81	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_2N

Overall Receive Delay WB	6
5.1b Receive Volume Control Performance 2N WB	7
5.2 RCV Distortion and Noise - 250 Hz WB	8
5.2 RCV Distortion and Noise - 315 Hz WB	9
5.2 RCV Distortion and Noise - 400 Hz WB	10
5.2 RCV Distortion and Noise - 500 Hz WB	11
5.2 RCV Distortion and Noise - 630 Hz WB	12
5.2 RCV Distortion and Noise - 800 Hz WB	13
5.2 RCV Distortion and Noise - 1000 Hz WB	14
5.2 RCV Distortion and Noise - 1250 Hz WB	15
5.2 RCV Distortion and Noise - 1600 Hz WB	16
5.2 RCV Distortion and Noise - 2000 Hz WB	17
5.2 RCV Distortion and Noise - 2500 Hz WB	18
5.2 RCV Distortion and Noise - 3150 Hz WB	19
5.2 RCV Distortion and Noise - 4000 Hz WB	20
5.2 RCV Distortion and Noise - 5000 Hz WB	21
Report - Receive Distortion and Noise (Conversational Gain)	22
5.3 Frequency Response 2N FF	23
5.3 Frequency Response 2N DF	24

Overall Receive Delay WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ Preparation - Delay measurement



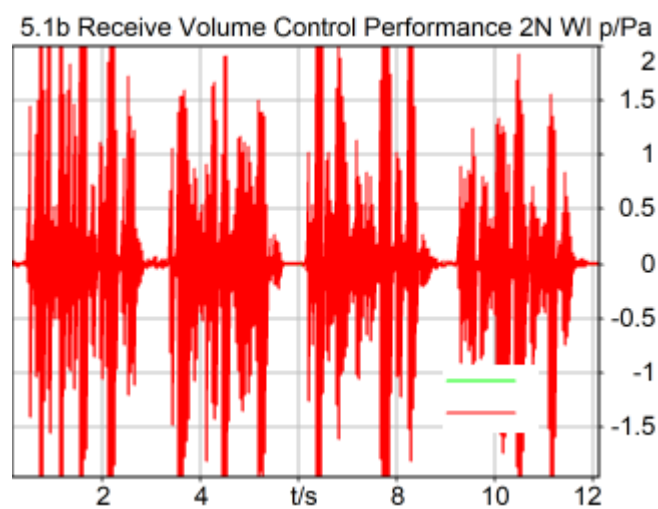
Delay (Cross): 439.2 ms

2023/11/14 15:36 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.1b Receive Volume Control Performance 2N WB

TIA-5050 (2018-01) \ Measurements \ Wideband



Speech Level RCV: 84.44 dB[SPL], Act.: 80.71% Ok

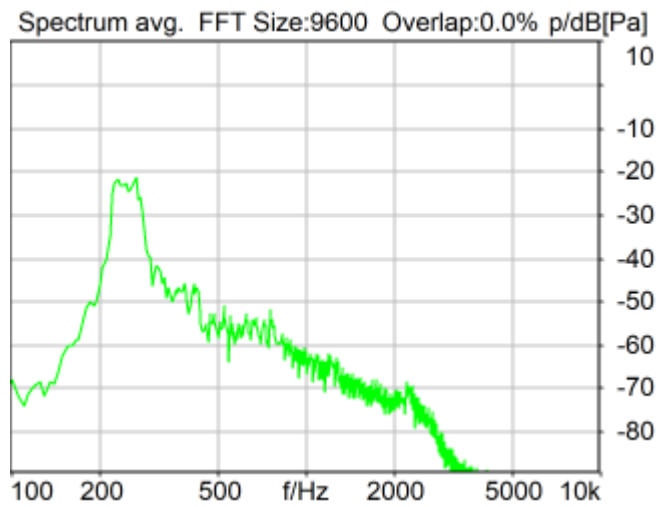
Ok

2023/11/14 15:37 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 250 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 22.51 dB (7.49%) Ok

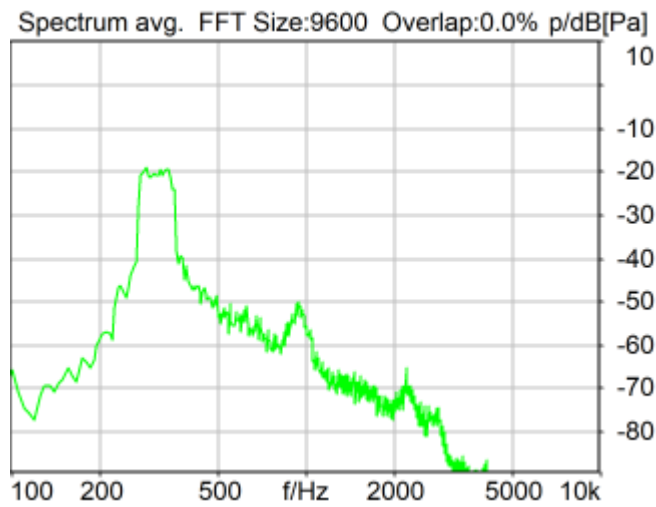
Ok

2023/11/14 15:37 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 315 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 25.12 dB (5.55%) Ok

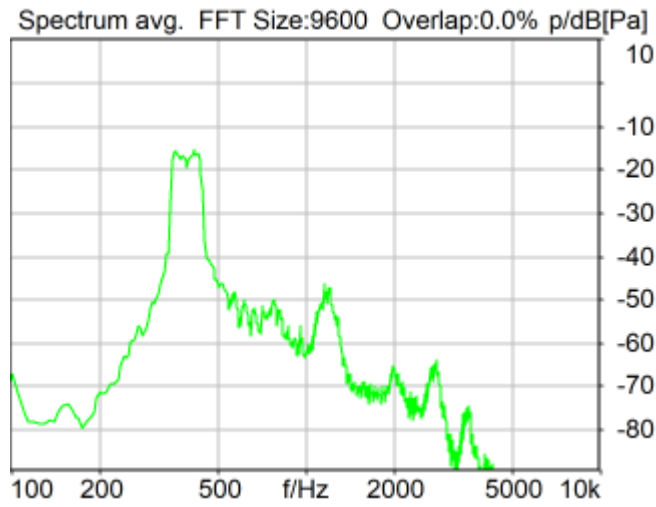
Ok

2023/11/14 15:37 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 400 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 26.43 dB (4.77%) Ok

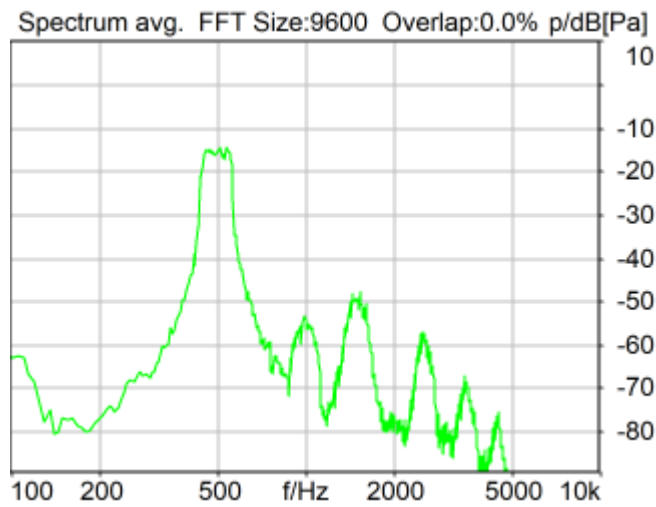
Ok

2023/11/14 15:38 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 28.34 dB (3.83%) Ok

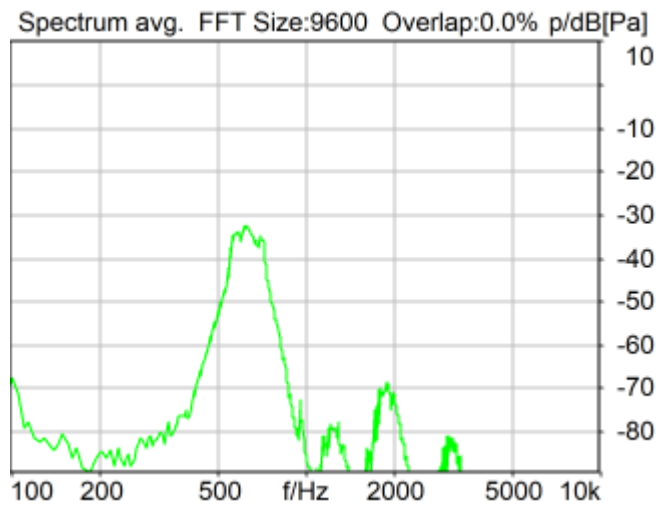
Ok

2023/11/14 15:38 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 20.70 dB (9.23%) Ok

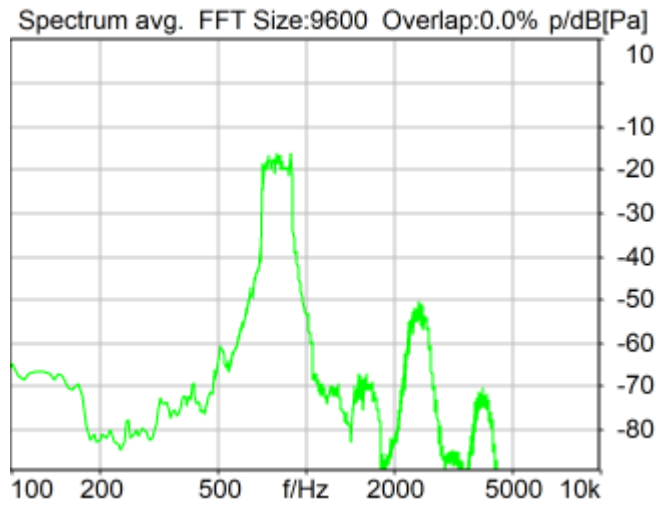
Ok

2023/11/14 15:39 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 27.71 dB (4.12%) Ok

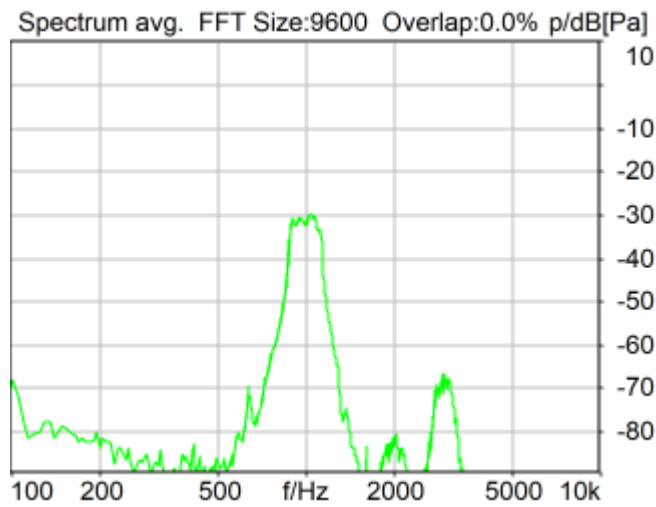
Ok

2023/11/14 15:39 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 23.54 dB (6.65%) Ok

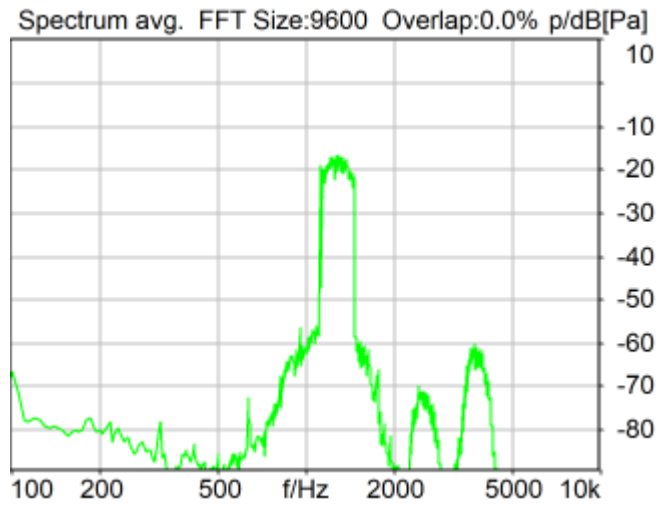
Ok

2023/11/14 15:39 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 34.47 dB (1.89%) Ok

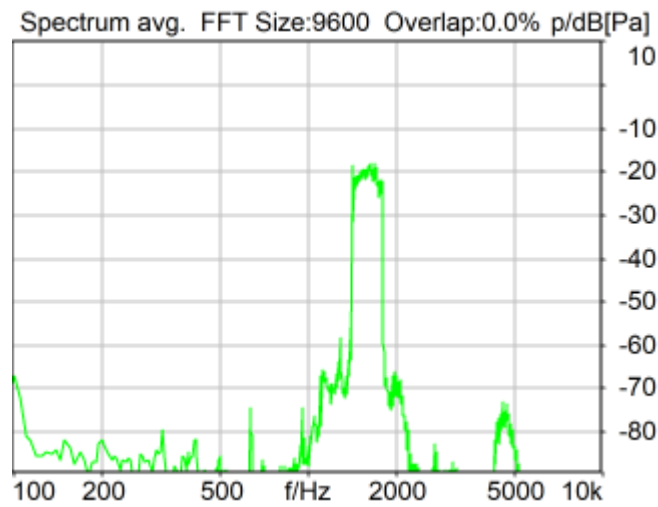
Ok

2023/11/14 15:40 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 44.68 dB (0.58%) Ok

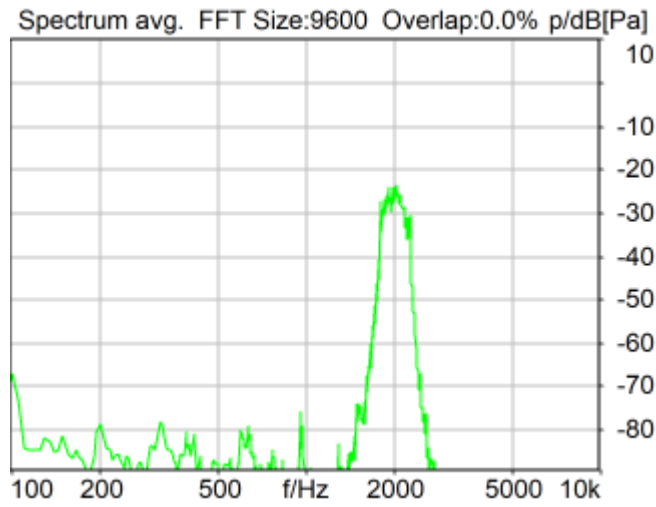
Ok

2023/11/14 15:40 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 28.58 dB (3.72%) Ok

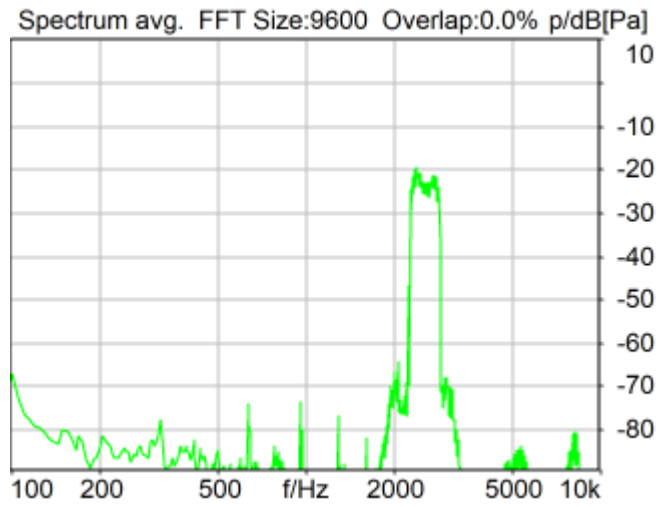
Ok

2023/11/14 15:41 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 46.27 dB (0.49%) Ok

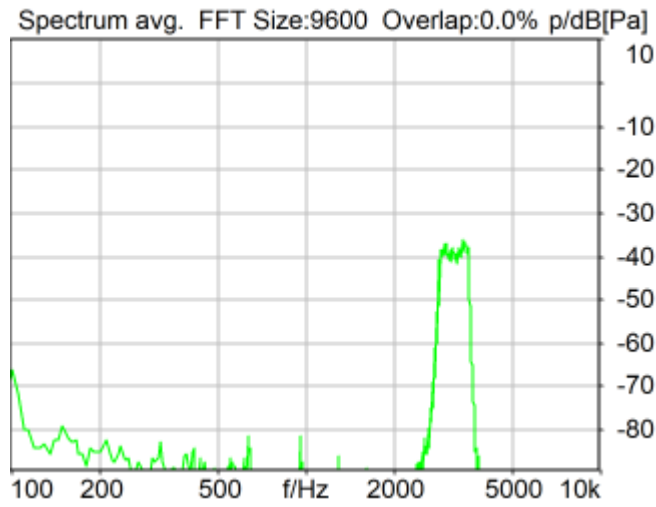
Ok

2023/11/14 15:41 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 26.75 dB (4.60%) Ok

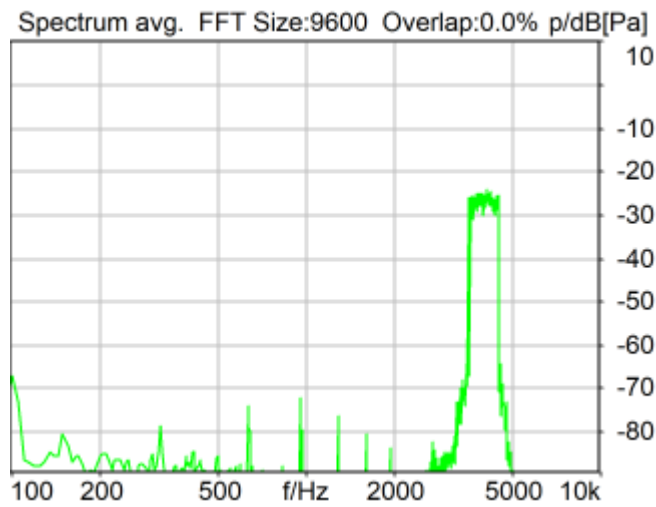
Ok

2023/11/14 15:41 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 4000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 44.81 dB (0.58%) Ok

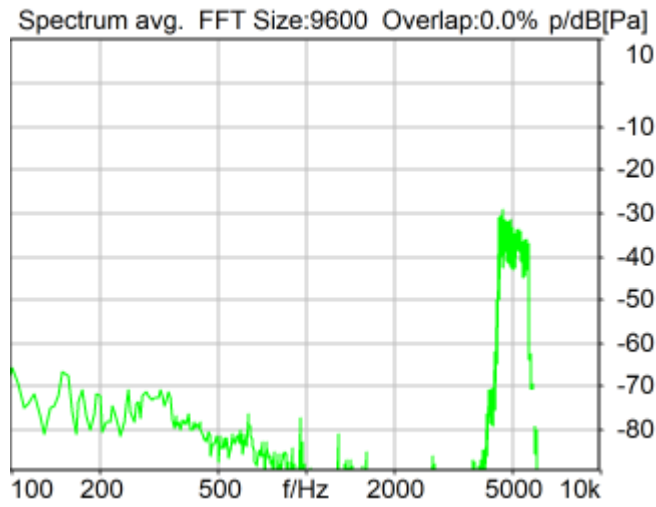
Ok

2023/11/14 15:42 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 5000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 33.58 dB (2.09%) Ok

Ok

2023/11/14 15:42 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain)

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N

Region	Frequency	SDNR
1	250Hz	22.51 dB
2	315Hz	25.12 dB
3	400Hz	26.43 dB
4	500Hz	28.34 dB
5	630Hz	20.70 dB
6	800Hz	27.71 dB
7	1000Hz	23.54 dB
8	1250Hz	34.47 dB
9	1600Hz	44.68 dB
10	2000Hz	28.58 dB
11	2500Hz	46.27 dB
12	3150Hz	26.75 dB
13	4000Hz	44.81 dB
14	5000Hz	33.58 dB

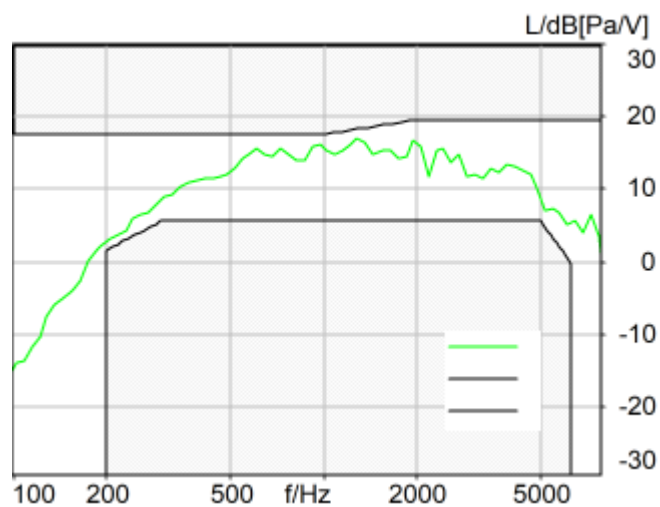
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 20.70dB at 630Hz.

2023/11/14 15:42 ACQUA

5.3 Frequency Response 2N FF

TIA-5050 (2018-01) \ Measurements \ Wideband



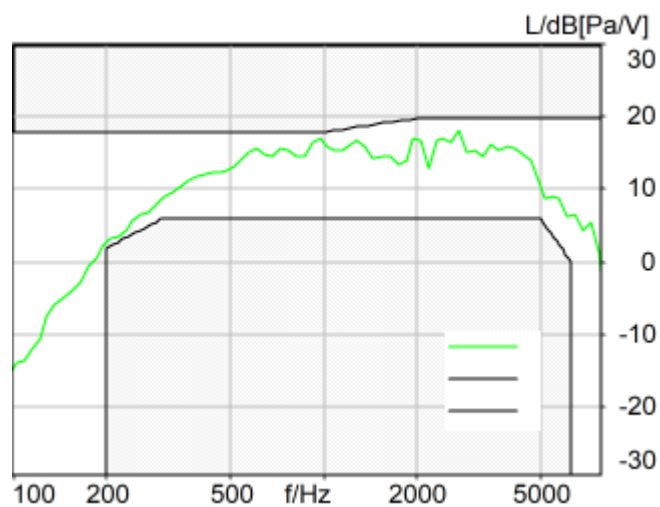
Absolute minimal distance
1.17 dB at 1285.9 Hz Ok

Ok

2023/11/14 15:43 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N DF

TIA-5050 (2018-01) \ Measurements \ Wideband



Absolute minimal distance
0.81 dB at 217.7 Hz Ok

Ok

2023/11/14 15:43 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_8N
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Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/14 15:55
Responsible Person	AC

Status Overview

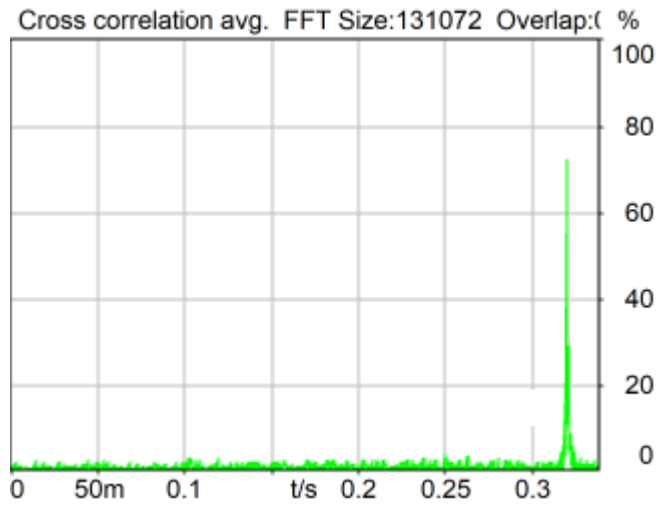
SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay WB	Done	Delay (Cross) [ms]	320.0	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_8N
5.1b Receive Volume Control Performance 2N WB	Ok	Speech Level [dB[SPL]]	88.53	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_8N
5.2 RCV Distortion and Noise - 250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	20.92	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_8N
5.2 RCV Distortion and Noise - 315 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	21.77	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_8N
5.2 RCV Distortion and Noise - 400 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	22.78	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_8N
5.2 RCV Distortion and Noise - 500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	27.71	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_8N
5.2 RCV Distortion and Noise - 630 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	29.18	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_8N
5.2 RCV Distortion and Noise - 800 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	28.37	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_8N
5.2 RCV Distortion and Noise - 1000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	20.20	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_8N
5.2 RCV Distortion and Noise - 1250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	32.45	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_8N
5.2 RCV Distortion and Noise - 1600 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	45.00	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_8N
5.2 RCV Distortion and Noise - 2000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	27.03	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_8N
5.2 RCV Distortion and Noise - 2500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	23.45	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_8N
5.2 RCV Distortion and Noise - 3150 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	23.90	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_8N
5.2 RCV Distortion and Noise - 4000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	28.72	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_8N
5.2 RCV Distortion and Noise - 5000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	31.46	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_8N
Report - Receive Distortion	Ok	Minimum SDNR [dB],	20.20	WLAN5G_Voice_802.11n-HT40

and Noise (Conversational Gain)		(occured at 1000Hz)		MCS0_EVS WB 64kbps_Ch151_8N
5.3 Frequency Response 2N FF	Ok	Min. dist. to tolerance scheme [dB], 1285.9 Hz	1.15	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_8N
5.3 Frequency Response 2N DF	Ok	Min. dist. to tolerance scheme [dB], 974.0 Hz	0.85	WLAN5G_Voice_802.11n-HT40 MCS0_EVS WB 64kbps_Ch151_8N

Overall Receive Delay WB	6
5.1b Receive Volume Control Performance 2N WB	7
5.2 RCV Distortion and Noise - 250 Hz WB	8
5.2 RCV Distortion and Noise - 315 Hz WB	9
5.2 RCV Distortion and Noise - 400 Hz WB	10
5.2 RCV Distortion and Noise - 500 Hz WB	11
5.2 RCV Distortion and Noise - 630 Hz WB	12
5.2 RCV Distortion and Noise - 800 Hz WB	13
5.2 RCV Distortion and Noise - 1000 Hz WB	14
5.2 RCV Distortion and Noise - 1250 Hz WB	15
5.2 RCV Distortion and Noise - 1600 Hz WB	16
5.2 RCV Distortion and Noise - 2000 Hz WB	17
5.2 RCV Distortion and Noise - 2500 Hz WB	18
5.2 RCV Distortion and Noise - 3150 Hz WB	19
5.2 RCV Distortion and Noise - 4000 Hz WB	20
5.2 RCV Distortion and Noise - 5000 Hz WB	21
Report - Receive Distortion and Noise (Conversational Gain)	22
5.3 Frequency Response 2N FF	23
5.3 Frequency Response 2N DF	24

Overall Receive Delay WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ Preparation - Delay measurement



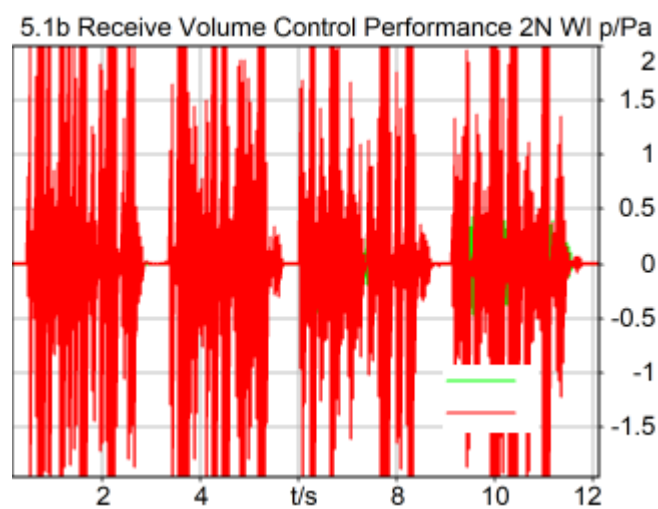
Delay (Cross): 320.0 ms

2023/11/14 15:45 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.1b Receive Volume Control Performance 2N WB

TIA-5050 (2018-01) \ Measurements \ Wideband



Speech Level RCV: 88.53 dB[SPL], Act.: 81.98% Ok

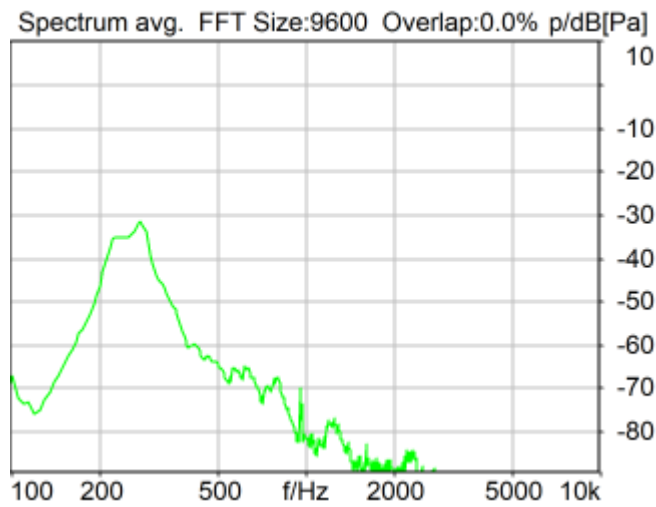
Ok

2023/11/14 15:45 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 250 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 20.92 dB (8.99%) Ok

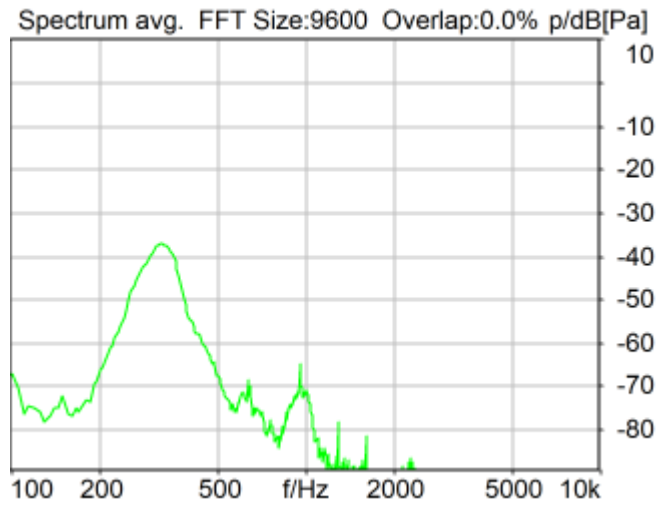
Ok

2023/11/14 15:46 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 315 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 21.77 dB (8.16%) Ok

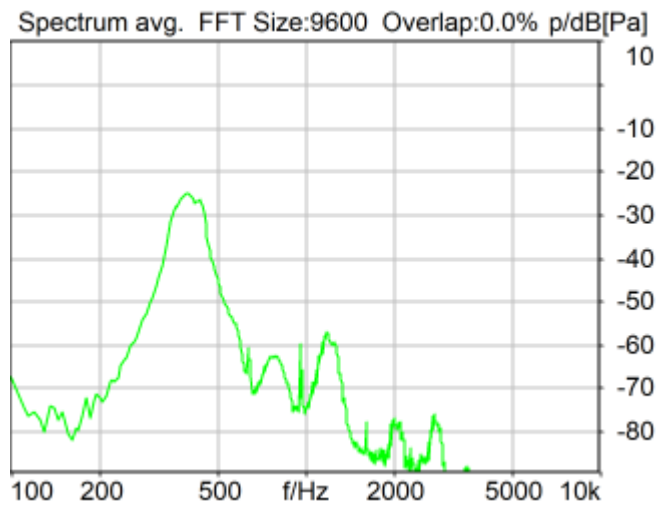
Ok

2023/11/14 15:46 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 400 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 22.78 dB (7.26%) Ok

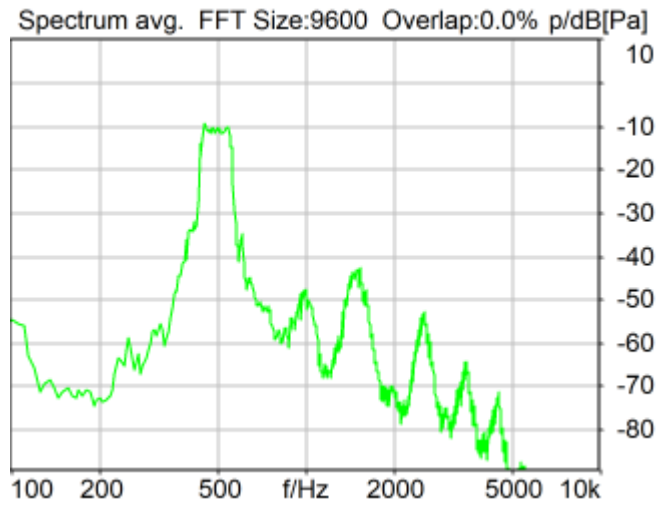
Ok

2023/11/14 15:47 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 27.71 dB (4.12%) Ok

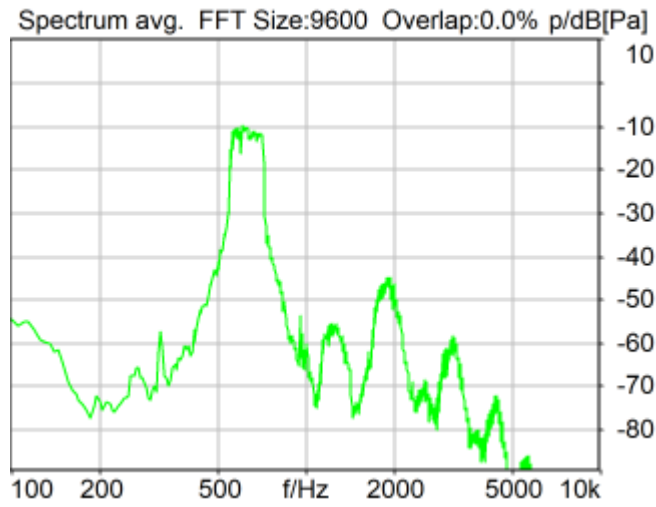
Ok

2023/11/14 15:52 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 29.18 dB (3.47%) Ok

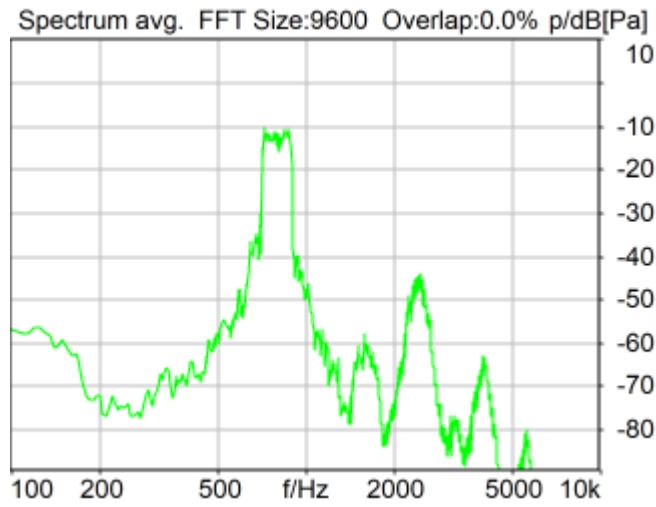
Ok

2023/11/14 15:52 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 28.37 dB (3.82%) Ok

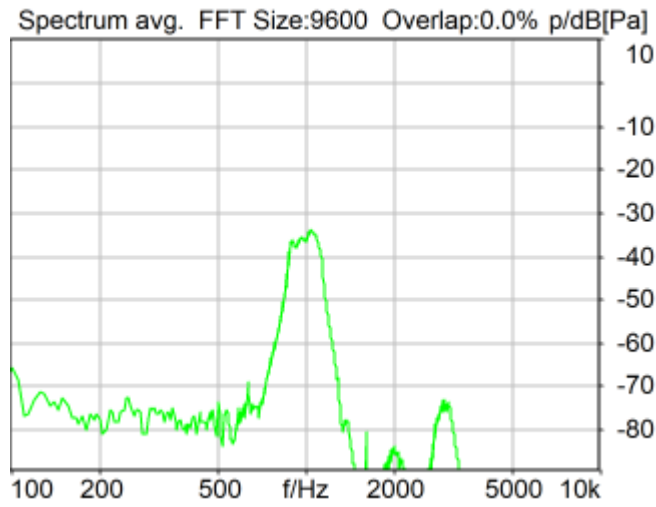
Ok

2023/11/14 15:48 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 20.20 dB (9.77%) Ok

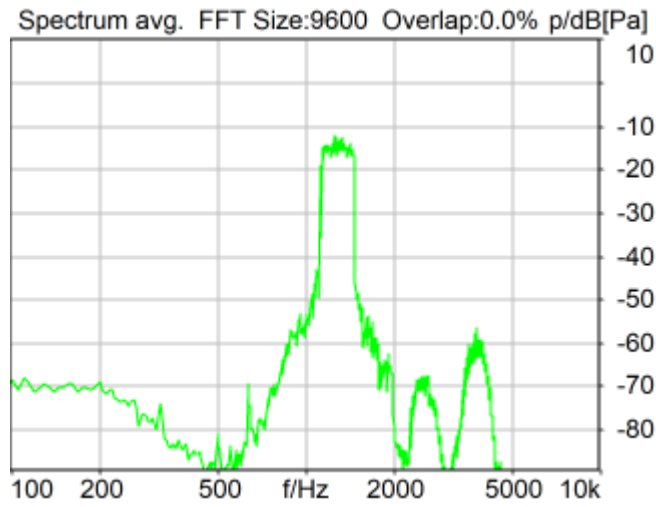
Ok

2023/11/14 15:48 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 32.45 dB (2.39%) Ok

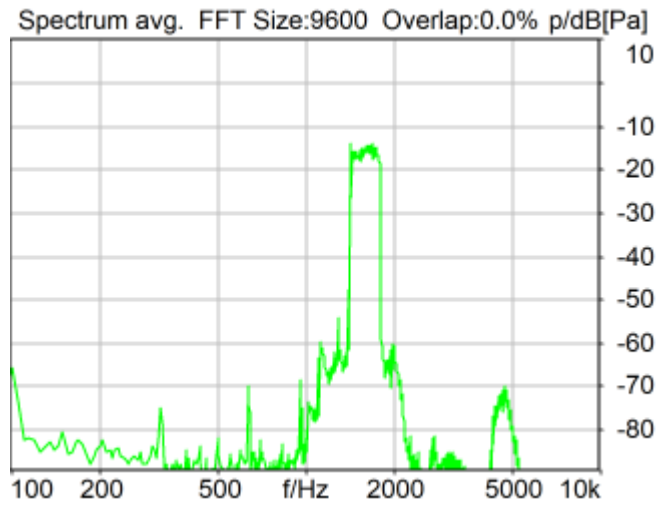
Ok

2023/11/14 15:49 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 45.00 dB (0.56%) Ok

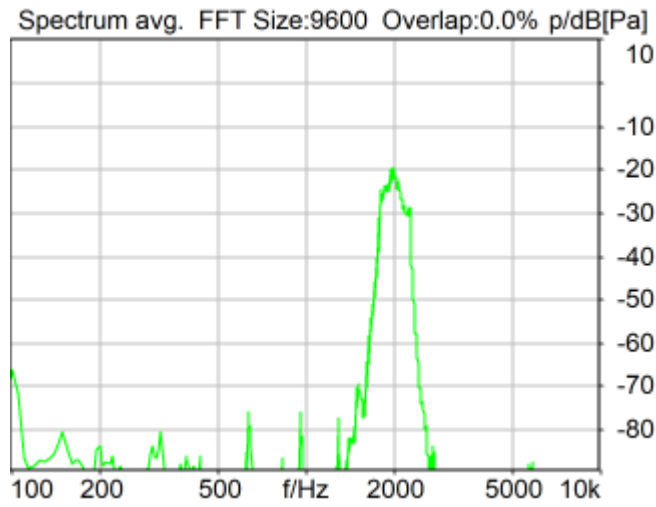
Ok

2023/11/14 15:53 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 27.03 dB (4.45%) Ok

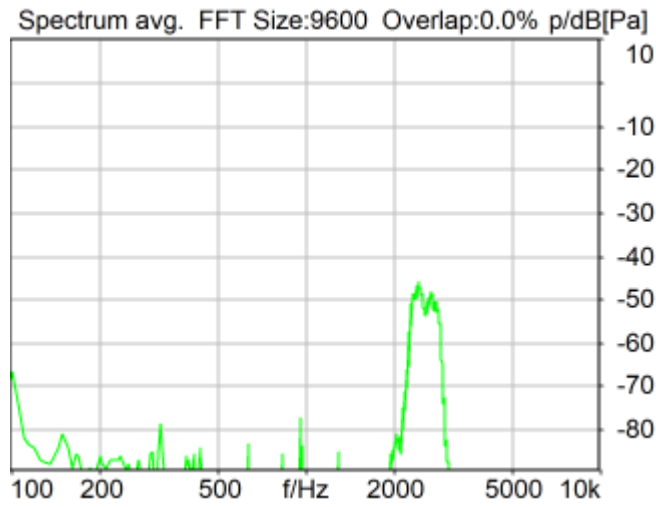
Ok

2023/11/14 15:54 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 23.45 dB (6.72%) Ok

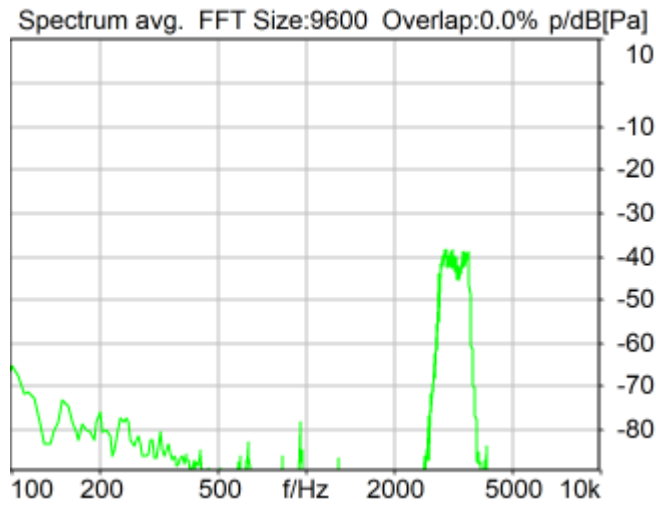
Ok

2023/11/14 15:50 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 23.90 dB (6.38%) Ok

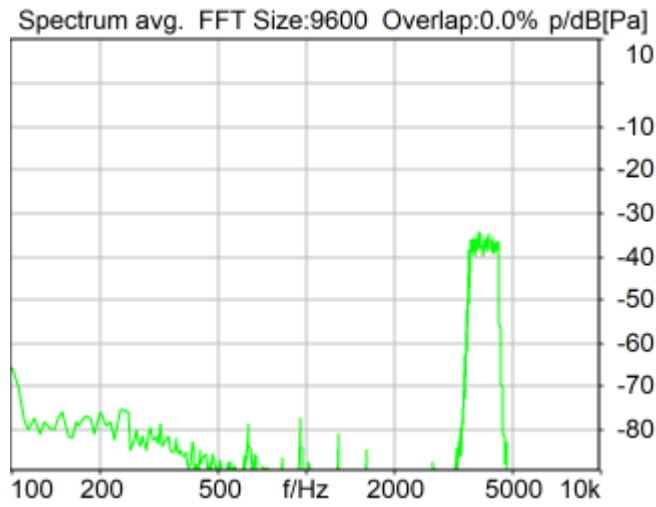
Ok

2023/11/14 15:50 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 4000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 28.72 dB (3.67%) Ok

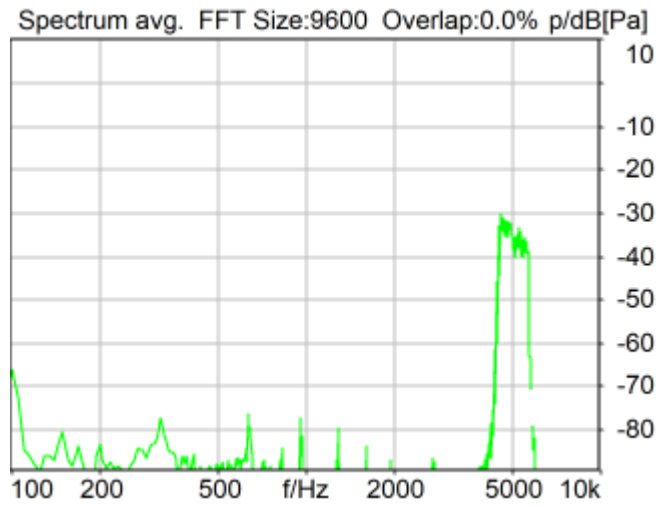
Ok

2023/11/14 15:51 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 5000 Hz WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 31.46 dB (2.67%) Ok

Ok

2023/11/14 15:51 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain)

TIA-5050 (2018-01) \ Measurements \ Wideband \ 5.2 Receive Distortion and Noise 2N

Region	Frequency	SDNR
1	250Hz	20.92 dB
2	315Hz	21.77 dB
3	400Hz	22.78 dB
4	800Hz	28.37 dB
5	1000Hz	20.20 dB
6	1250Hz	32.45 dB
7	2500Hz	23.45 dB
8	3150Hz	23.90 dB
9	4000Hz	28.72 dB
10	5000Hz	31.46 dB
11	500Hz	27.71 dB
12	630Hz	29.18 dB
13	1600Hz	45.00 dB
14	2000Hz	27.03 dB

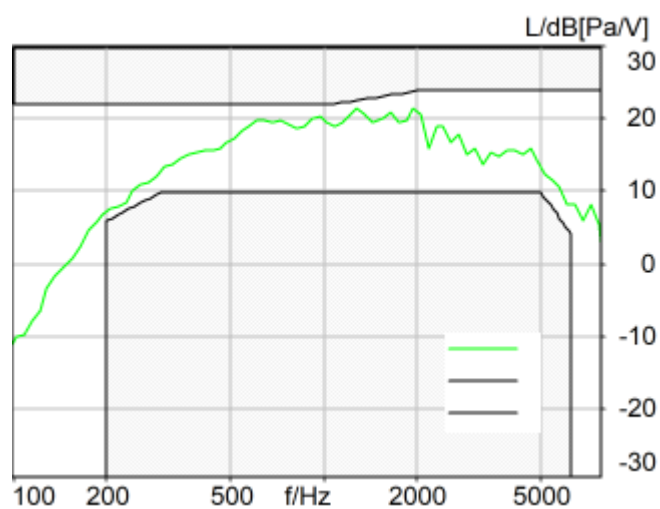
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 20.20dB at 1000Hz.

2023/11/14 15:54 ACQUA

5.3 Frequency Response 2N FF

TIA-5050 (2018-01) \ Measurements \ Wideband



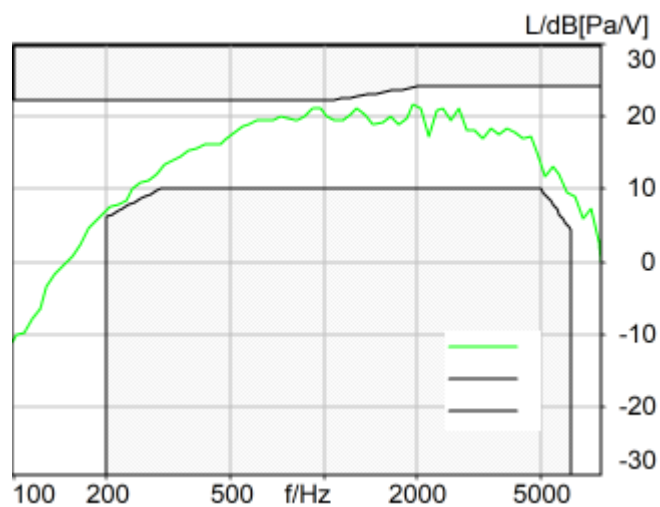
Absolute minimal distance
1.15 dB at 1285.9 Hz Ok

Ok

2023/11/14 15:54 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N DF

TIA-5050 (2018-01) \ Measurements \ Wideband



Absolute minimal distance
0.85 dB at 974.0 Hz Ok

Ok

2023/11/14 15:55 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	GSM850_Voice_AMR WB FR_Ch189_2N
--------------------	---------------------------------

Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/21 20:56
Responsible Person	AC

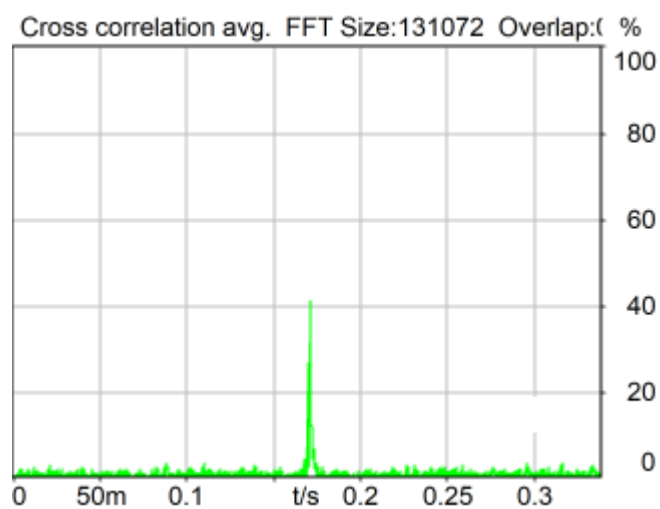
Status Overview

SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay NB	Done	Delay (Cross) [ms]	171.2	GSM850_Voice_AMR WB FR_Ch189_2N
5.1b Receive Volume Control Performance 2N NB	Ok	Speech Level [dB[SPL]]	84.65	GSM850_Voice_AMR WB FR_Ch189_2N

Overall Receive Delay NB	5
5.1b Receive Volume Control Performance 2N NB	6

Overall Receive Delay NB

TIA-5050 (2018-01) \ Measurements \ Wideband \ Preparation - Delay measurement



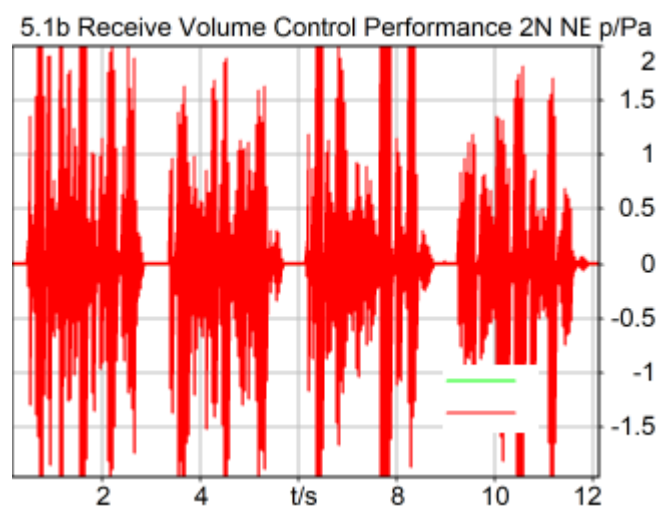
Delay (Cross): 171.2 ms

2023/11/17 8:17 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.1b Receive Volume Control Performance 2N NB

TIA-5050 (2018-01) \ Measurements \ Wideband



Speech Level RCV: 84.65 dB[SPL], Act.: 84.03% Ok

Ok

2023/11/17 8:20 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	WCDMA V_AMR NB 4.75Kbps_Ch4182_2N
--------------------	-----------------------------------

Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/21 20:59
Responsible Person	AC

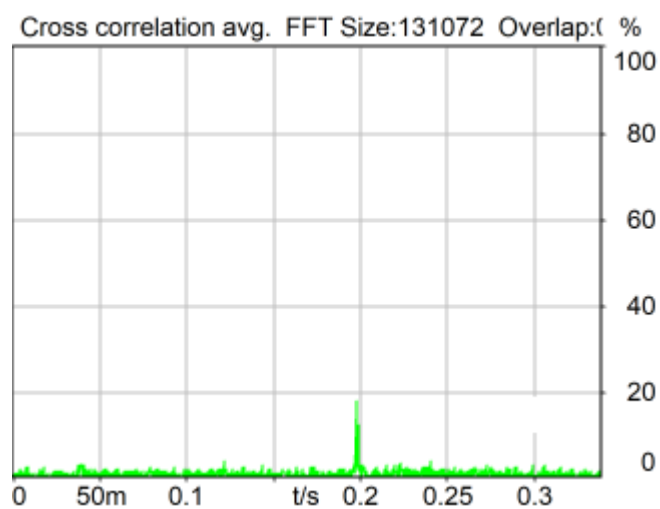
Status Overview

SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay NB	Done	Delay (Cross) [ms]	197.9	WCDMA V_AMR NB 4.75Kbps_Ch4182_2N
5.1b Receive Volume Control Performance 2N NB	Ok	Speech Level [dB[SPL]]	84.94	WCDMA V_AMR NB 4.75Kbps_Ch4182_2N

Overall Receive Delay NB	5
5.1b Receive Volume Control Performance 2N NB	6

Overall Receive Delay NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ Preparation - Delay measurement



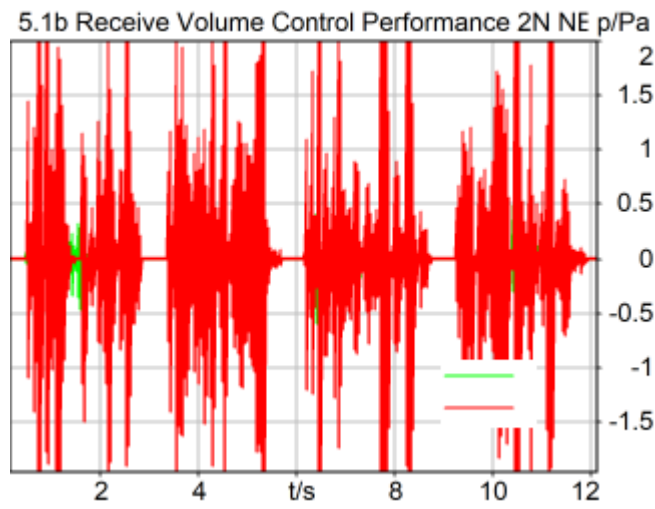
Delay (Cross): 197.9 ms

2023/11/17 13:26 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.1b Receive Volume Control Performance 2N NB

TIA-5050 (2018-01) \ Measurements \ Narrowband



Speech Level RCV: 84.94 dB[SPL], Act.: 81.51% Ok

Ok

2023/11/17 13:26 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	LTE Band 12_10M_QPSK_50RB_0Offset_AMR WB 6.6Kbps_Ch23095_2N
--------------------	---

Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/21 21:02
Responsible Person	AC

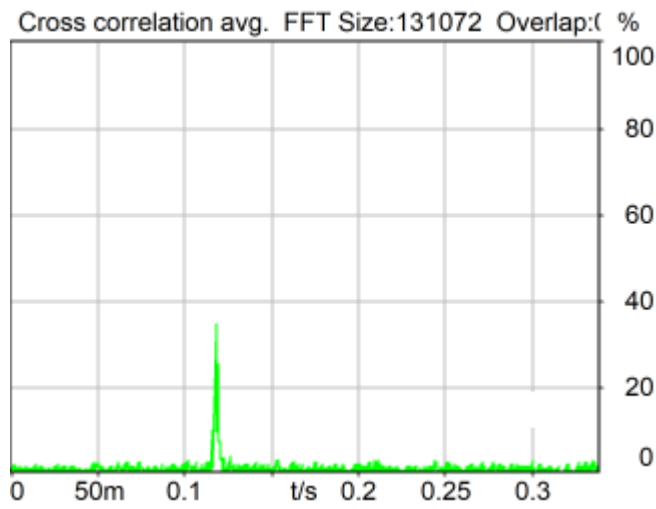
Status Overview

SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay WB	Done	Delay (Cross) [ms]	118.5	LTE Band 12_10M_QPSK_50RB_0Offset_AMR WB 6.6Kbps_Ch23095_2N
5.1b Receive Volume Control Performance 2N WB	Ok	Speech Level [dB[SPL]]	83.95	LTE Band 12_10M_QPSK_50RB_0Offset_AMR WB 6.6Kbps_Ch23095_2N

Overall Receive Delay WB	5
5.1b Receive Volume Control Performance 2N WB	6

Overall Receive Delay WB

TIA-5050 (2018-01) \ Measurements \ Wideband \ Preparation - Delay measurement



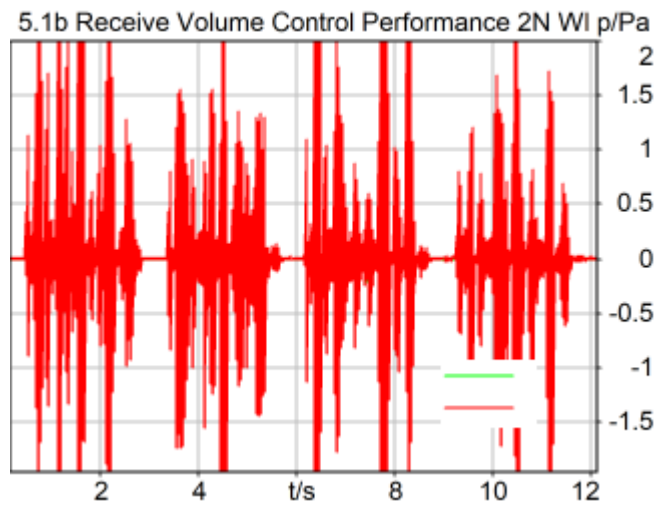
Delay (Cross): 118.5 ms

2023/11/17 20:38 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.1b Receive Volume Control Performance 2N WB

TIA-5050 (2018-01) \ Measurements \ Wideband



Speech Level RCV: 83.95 dB[SPL], Act.: 80.12% Ok

Ok

2023/11/17 20:39 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N
--------------------	--

Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/13 21:26

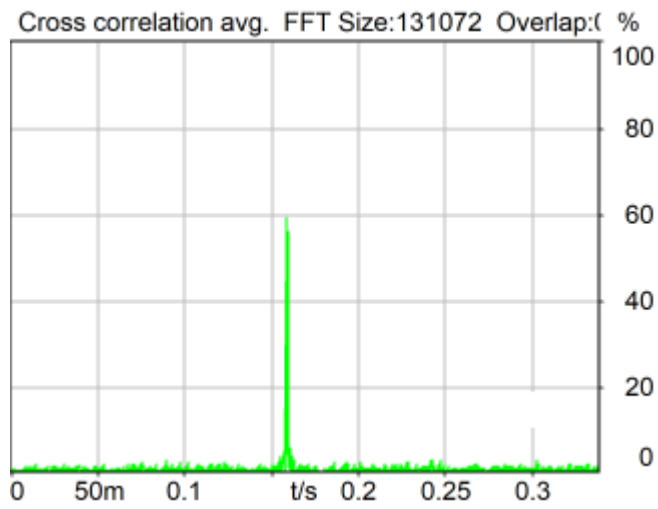
Status Overview

SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay NB	Done	Delay (Cross) [ms]	159.1	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N
5.1b Receive Volume Control Performance 2N NB	Ok	Speech Level [dB[SPL]]	84.36	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N
5.2 RCV Distortion and Noise - 400 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	24.44	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N
5.2 RCV Distortion and Noise - 500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	25.74	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N
5.2 RCV Distortion and Noise - 630 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	27.94	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N
5.2 RCV Distortion and Noise - 800 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	25.47	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N
5.2 RCV Distortion and Noise - 1000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	27.57	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N
5.2 RCV Distortion and Noise - 1250 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	23.99	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N
5.2 RCV Distortion and Noise - 1600 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	34.65	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N
5.2 RCV Distortion and Noise - 2000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	33.57	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N
5.2 RCV Distortion and Noise - 2500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	33.26	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N
5.2 RCV Distortion and Noise - 3150 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	36.26	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N
Report - Receive Distortion and Noise (Conversational Gain)	Ok	Minimum SDNR [dB], (occured at 1250Hz)	23.99	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N
5.3 Frequency Response 2N FF HANB	Ok	Min. dist. to tolerance scheme [dB], 1447.5 Hz	0.09	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N
5.3 Frequency Response 2N DF HANB	Not Ok	Min. dist. to tolerance scheme [dB], 305.9 Hz	-0.35	WLAN5G_Voice_802.11n-HT40 MCS0_EVS NB 24.4kbps_Ch38_2N

Overall Receive Delay NB	5
5.1b Receive Volume Control Performance 2N NB	6
5.2 RCV Distortion and Noise - 400 Hz NB	7
5.2 RCV Distortion and Noise - 500 Hz NB	8
5.2 RCV Distortion and Noise - 630 Hz NB	9
5.2 RCV Distortion and Noise - 800 Hz NB	10
5.2 RCV Distortion and Noise - 1000 Hz NB	11
5.2 RCV Distortion and Noise - 1250 Hz NB	12
5.2 RCV Distortion and Noise - 1600 Hz NB	13
5.2 RCV Distortion and Noise - 2000 Hz NB	14
5.2 RCV Distortion and Noise - 2500 Hz NB	15
5.2 RCV Distortion and Noise - 3150 Hz NB	16
Report - Receive Distortion and Noise (Conversational Gain)	17
5.3 Frequency Response 2N FF HANB	18
5.3 Frequency Response 2N DF HANB	19

Overall Receive Delay NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ Preparation - Delay measurement



Delay (Cross): 159.1 ms

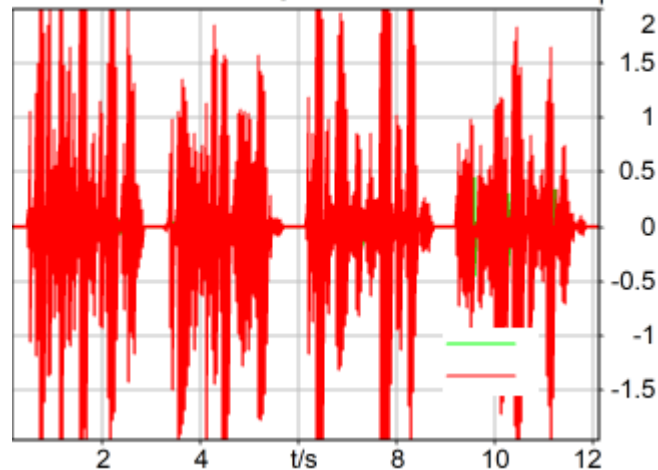
2023/11/13 21:11 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.1b Receive Volume Control Performance 2N NB

TIA-5050 (2018-01) \ Measurements \ Narrowband

5.1b Receive Volume Control Performance 2N NE p/Pa



Speech Level RCV: 84.36 dB[SPL], Act.: 82.31% Ok

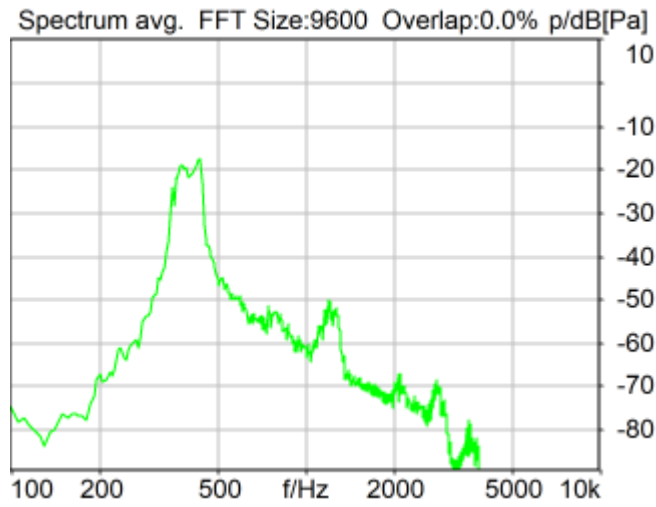
Ok

2023/11/13 21:11 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 400 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 24.44 dB (6.00%) Ok

Ok

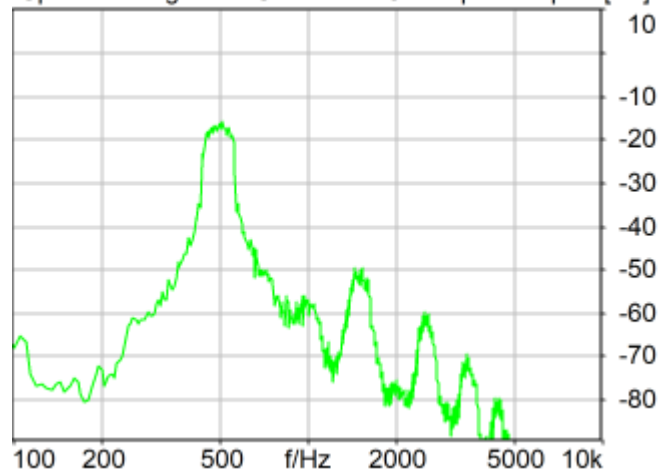
2023/11/13 21:11 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 500 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N

Spectrum avg. FFT Size:9600 Overlap:0.0% p/dB[Pa]



Distortion (Noise) RCV (packed): 25.74 dB (5.17%) Ok

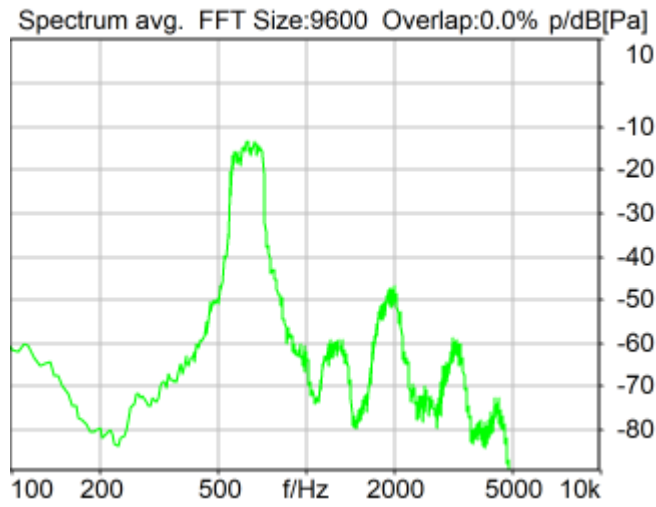
Ok

2023/11/13 21:12 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 630 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 27.94 dB (4.01%) Ok

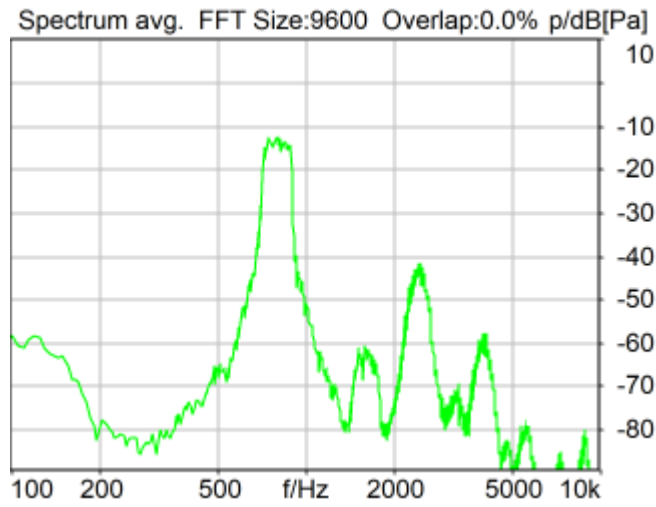
Ok

2023/11/13 21:12 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 800 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 25.47 dB (5.33%) Ok

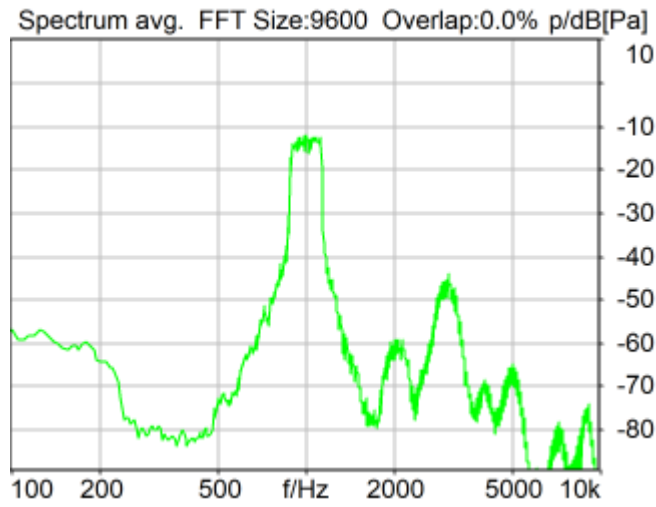
Ok

2023/11/13 21:12 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1000 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 27.57 dB (4.18%) Ok

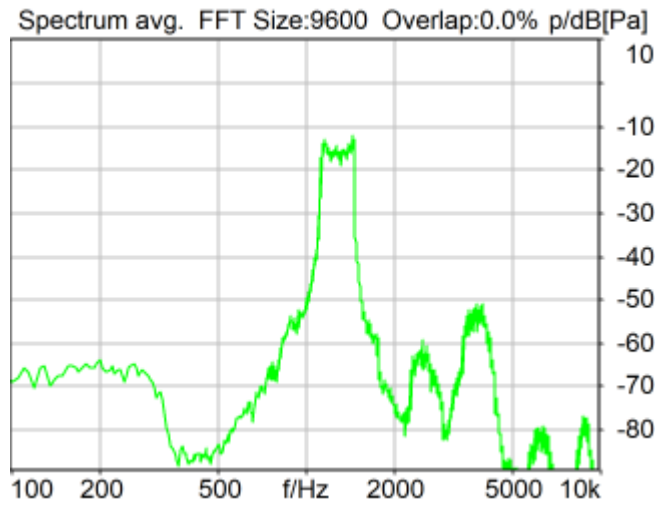
Ok

2023/11/13 21:13 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1250 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 23.99 dB (6.32%) Ok

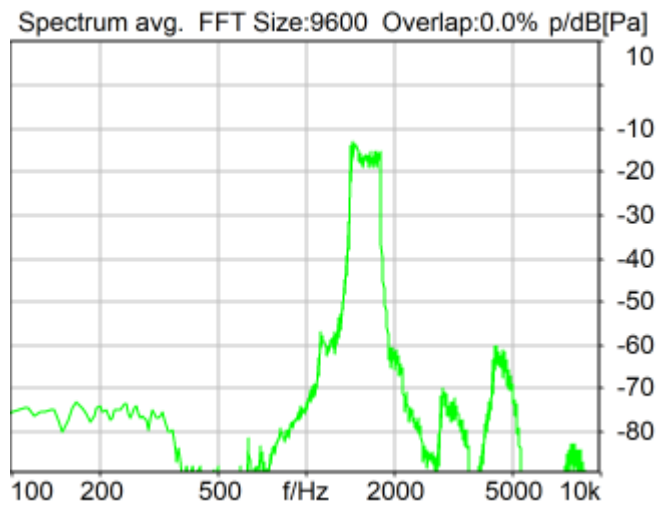
Ok

2023/11/13 21:13 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 1600 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 34.65 dB (1.85%) Ok

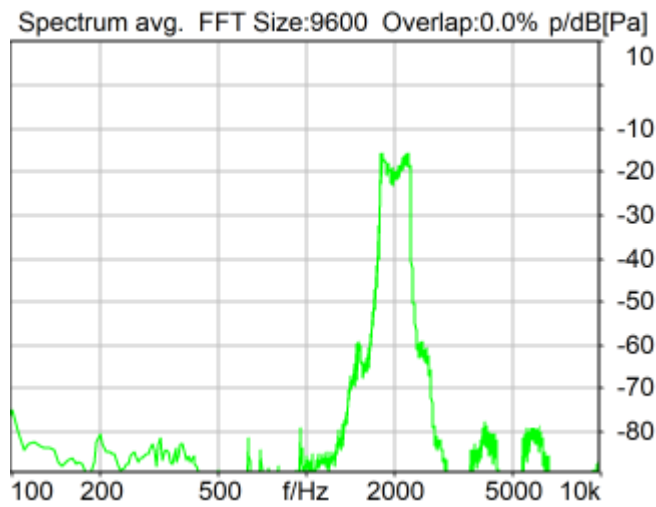
Ok

2023/11/13 21:13 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2000 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 33.57 dB (2.10%) Ok

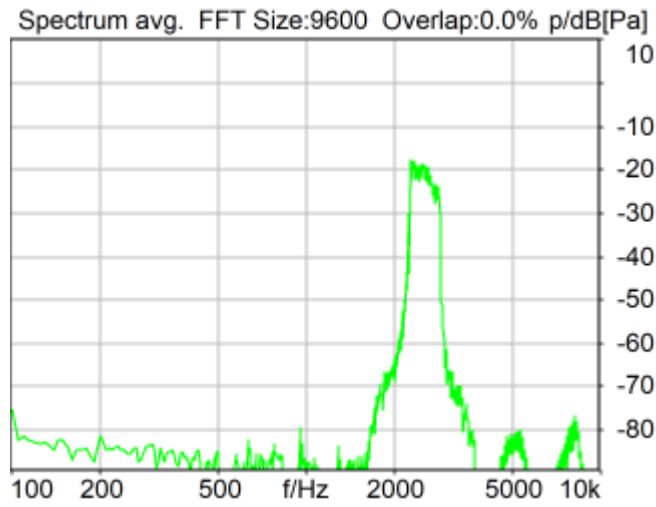
Ok

2023/11/13 21:14 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 2500 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 33.26 dB (2.17%) Ok

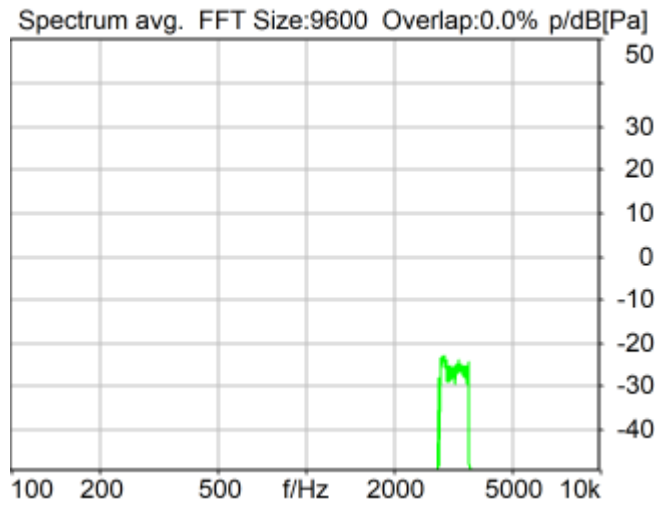
Ok

2023/11/13 21:14 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.2 RCV Distortion and Noise - 3150 Hz NB

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N



Distortion (Noise) RCV (packed): 36.26 dB (1.54%) Ok

Ok

2023/11/13 21:15 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

Report - Receive Distortion and Noise (Conversational Gain)

TIA-5050 (2018-01) \ Measurements \ Narrowband \ 5.2 Receive Distortion and Noise 2N

Region	Frequency	SDNR
1	400Hz	24.44 dB
2	500Hz	25.74 dB
3	630Hz	27.94 dB
4	800Hz	25.47 dB
5	1000Hz	27.57 dB
6	1250Hz	23.99 dB
7	1600Hz	34.65 dB
8	2000Hz	33.57 dB
9	2500Hz	33.26 dB
10	3150Hz	36.26 dB

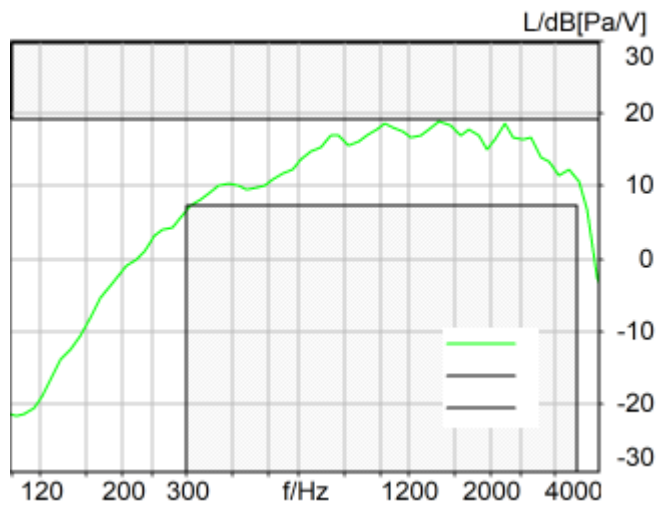
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 23.99dB at 1250Hz.

2023/11/13 21:24 ACQUA

5.3 Frequency Response 2N FF HANB

TIA-5050 (2018-01) \ Measurements \ Narrowband



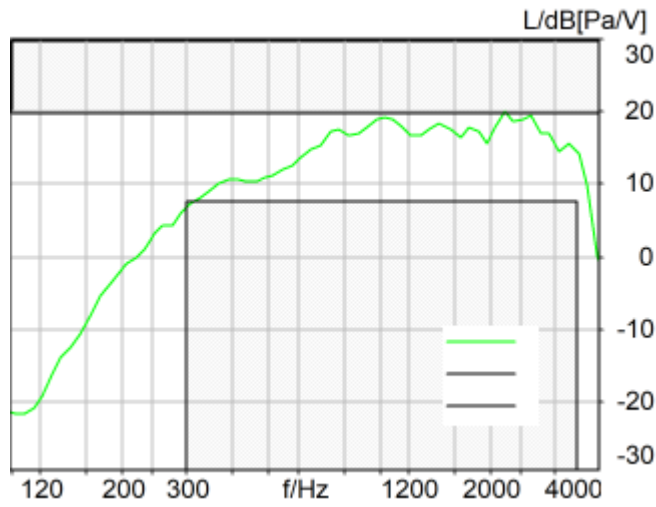
Absolute minimal distance
0.09 dB at 1447.5 Hz Ok

Ok

2023/11/13 21:25 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N DF HANB

TIA-5050 (2018-01) \ Measurements \ Narrowband



Absolute minimal distance
-0.35 dB at 305.9 Hz Not Ok

Not Ok

2023/11/13 21:25 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor