
Measurement Protocol

Measurement Object	LTE Band 25_20M_QPSK_100RB_0Offset_EVS NB 24.4Kbps_Ch26340_2N
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Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/20 17:53

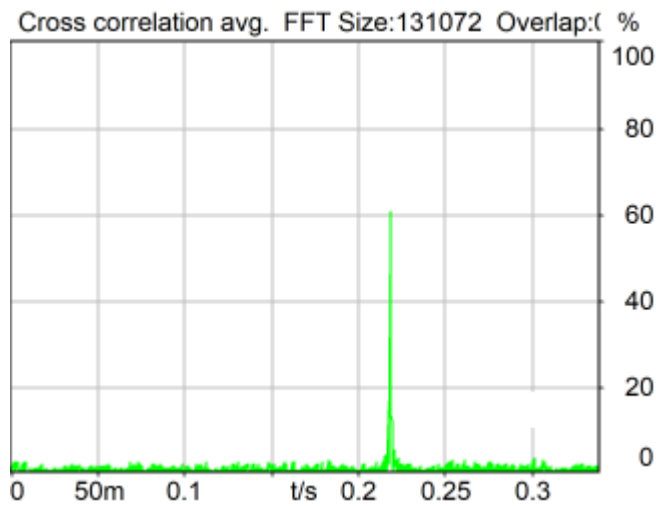
Status Overview

SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay NB	Done	Delay (Cross) [ms]	218.9	LTE Band 25_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch26340_2N
5.1b Receive Volume Control Performance 2N NB	Ok	Speech Level [dB[SPL]]	86.23	LTE Band 25_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch26340_2N
5.2 RCV Distortion and Noise - 400 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	24.88	LTE Band 25_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch26340_2N
5.2 RCV Distortion and Noise - 500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	27.40	LTE Band 25_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch26340_2N
5.2 RCV Distortion and Noise - 630 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	28.41	LTE Band 25_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch26340_2N
5.2 RCV Distortion and Noise - 800 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	25.58	LTE Band 25_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch26340_2N
5.2 RCV Distortion and Noise - 1000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	27.97	LTE Band 25_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch26340_2N
5.2 RCV Distortion and Noise - 1250 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	29.78	LTE Band 25_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch26340_2N
5.2 RCV Distortion and Noise - 1600 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	38.48	LTE Band 25_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch26340_2N
5.2 RCV Distortion and Noise - 2000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	38.57	LTE Band 25_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch26340_2N
5.2 RCV Distortion and Noise - 2500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	40.78	LTE Band 25_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch26340_2N
5.2 RCV Distortion and Noise - 3150 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	37.42	LTE Band 25_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch26340_2N
5.3 Frequency Response 2N FF HANB	Ok	Min. dist. to tolerance scheme [dB], 1447.5 Hz	0.30	LTE Band 25_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch26340_2N
5.3 Frequency Response 2N DF HANB	Not Ok	Min. dist. to tolerance scheme [dB], 2177.4 Hz	-0.28	LTE Band 25_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch26340_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



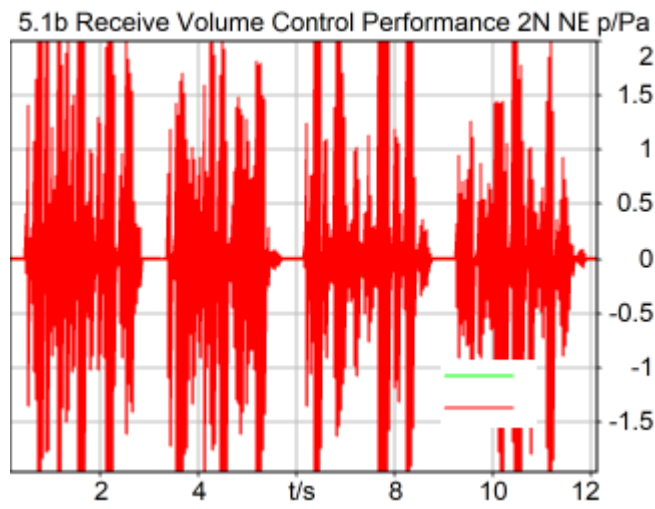
Delay (Cross): 218.9 ms

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Unmodified HEAD acoustics Measurement Descriptor

5.1b Receive Volume Control Performance 2N NB

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



Speech Level RCV: 86.23 dB[SPL], Act.: 82.30% Ok

Ok

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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

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



Distortion (Noise) RCV (packed): 24.88 dB (5.70%) Ok

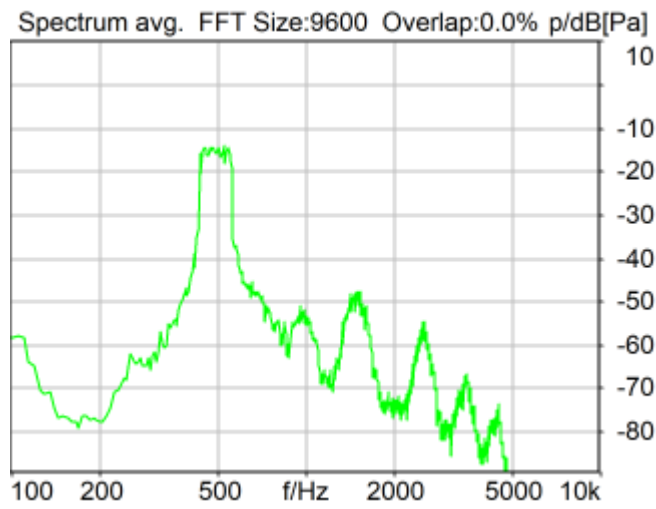
Ok

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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): 27.40 dB (4.27%) Ok

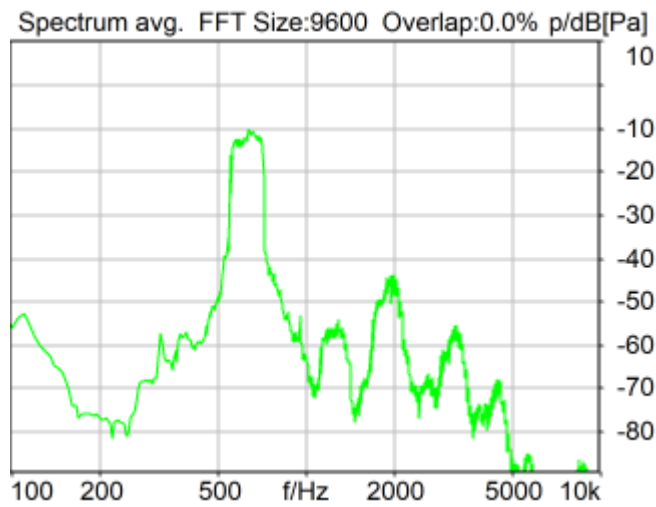
Ok

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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): 28.41 dB (3.80%) Ok

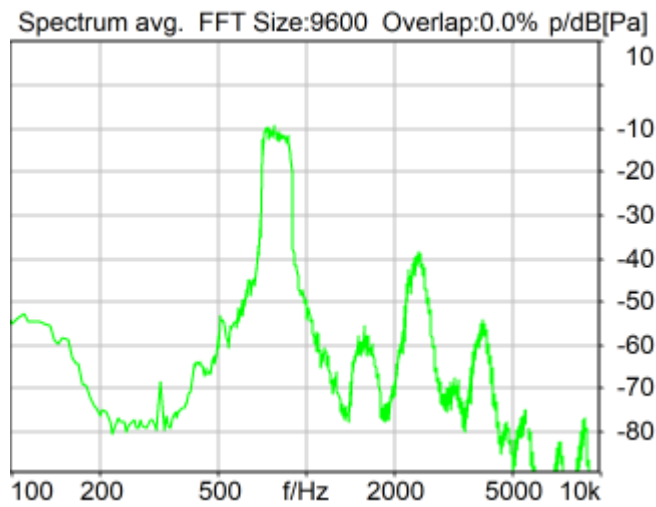
Ok

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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): 25.58 dB (5.26%) Ok

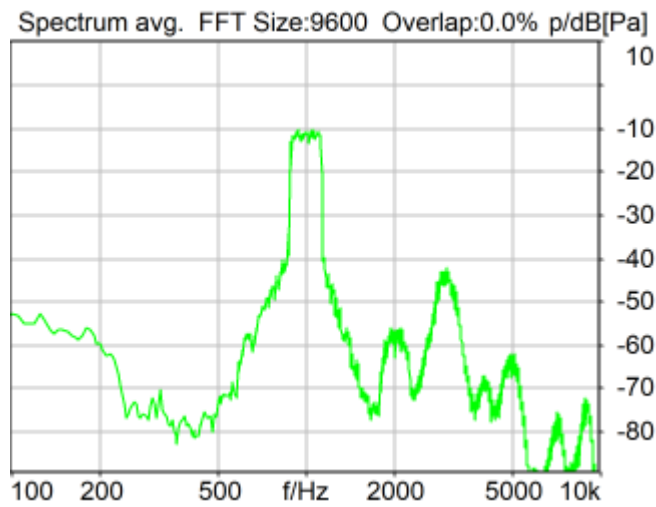
Ok

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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): 27.97 dB (3.99%) Ok

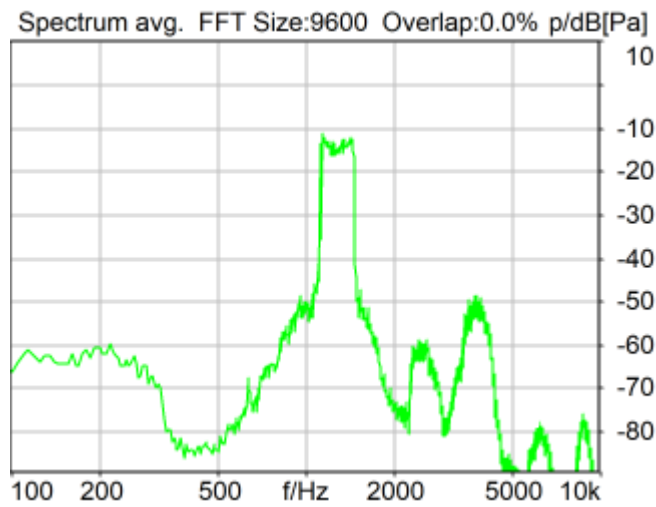
Ok

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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): 29.78 dB (3.24%) Ok

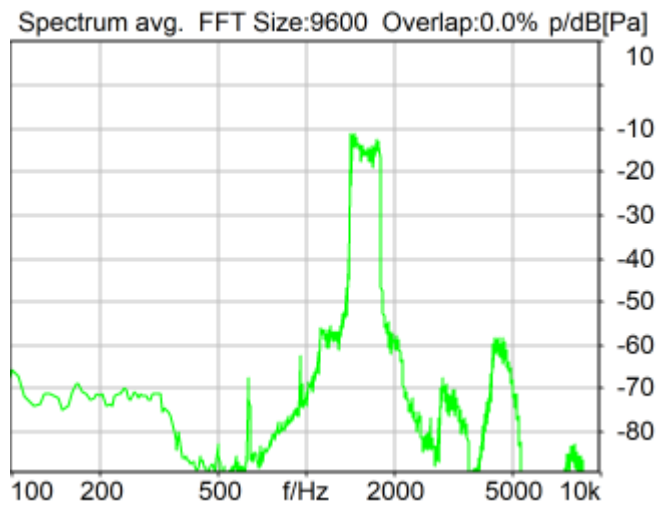
Ok

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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): 38.48 dB (1.19%) Ok

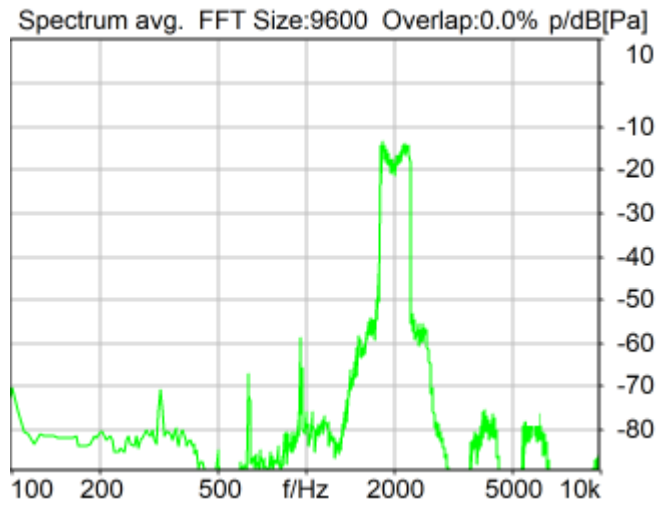
Ok

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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): 38.57 dB (1.18%) Ok

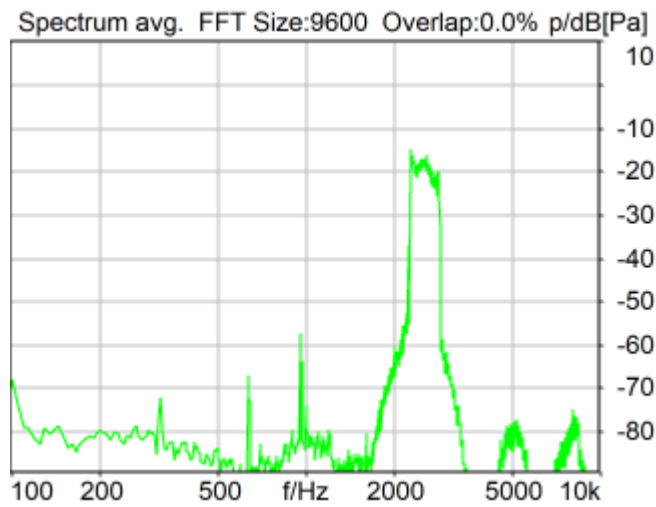
Ok

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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): 40.78 dB (0.91%) Ok

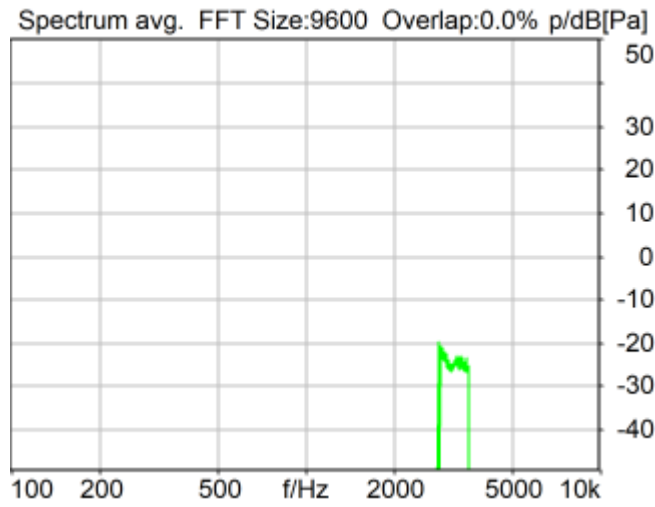
Ok

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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): 37.42 dB (1.35%) Ok

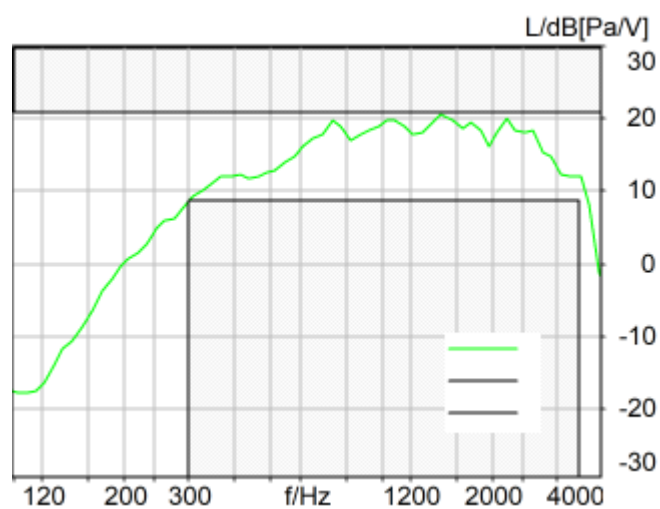
Ok

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Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N FF HANB

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



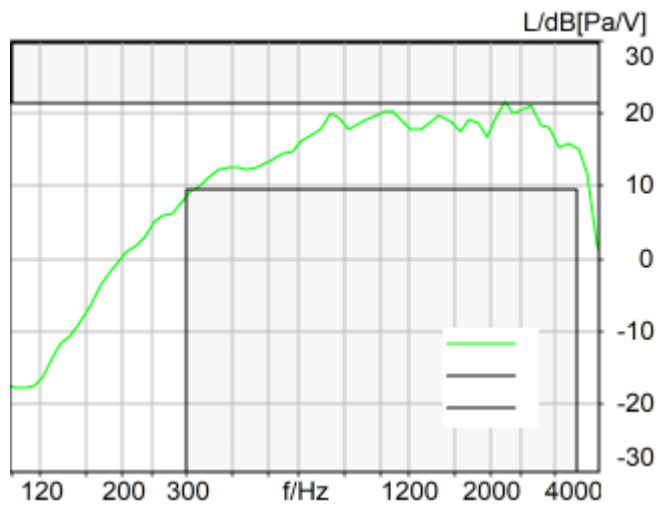
Absolute minimal distance
0.30 dB at 1447.5 Hz Ok

Ok

2023/11/10 15:57 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
-0.28 dB at 2177.4 Hz Not Ok

Not Ok

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Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	LTE Band 25_20M_QPSK_100RB_0Offset_EVS NB 24.4Kbps_Ch26340_8N
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Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/20 17:51

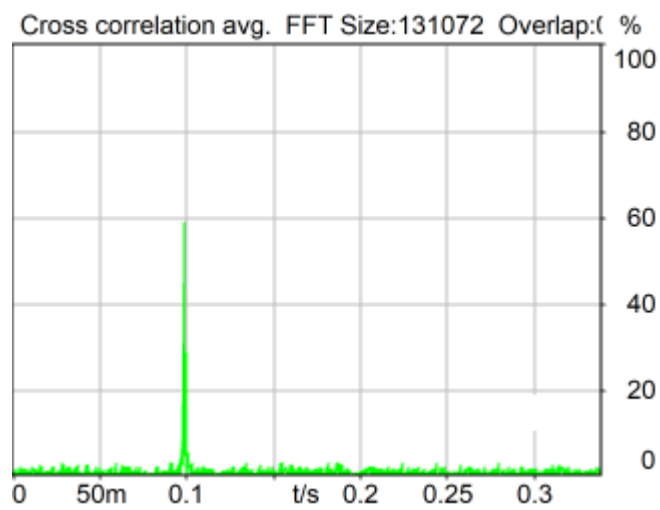
Status Overview

SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay NB	Done	Delay (Cross) [ms]	99.2	LTE Band 25_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch26340_8N
5.1a Receive Volume Control Performance 8N NB	Ok	Speech Level [dB[SPL]]	90.53	LTE Band 25_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch26340_8N
5.2 RCV Distortion and Noise - 400 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	26.07	LTE Band 25_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch26340_8N
5.2 RCV Distortion and Noise - 500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	27.19	LTE Band 25_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch26340_8N
5.2 RCV Distortion and Noise - 630 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	28.59	LTE Band 25_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch26340_8N
5.2 RCV Distortion and Noise - 800 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	27.04	LTE Band 25_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch26340_8N
5.2 RCV Distortion and Noise - 1000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	29.23	LTE Band 25_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch26340_8N
5.2 RCV Distortion and Noise - 1250 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	30.15	LTE Band 25_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch26340_8N
5.2 RCV Distortion and Noise - 1600 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	38.74	LTE Band 25_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch26340_8N
5.2 RCV Distortion and Noise - 2000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	37.67	LTE Band 25_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch26340_8N
5.2 RCV Distortion and Noise - 2500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	31.07	LTE Band 25_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch26340_8N
5.2 RCV Distortion and Noise - 3150 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	35.56	LTE Band 25_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch26340_8N
5.3 Frequency Response 8N FF HANB	Ok	Min. dist. to tolerance scheme [dB], 305.9 Hz	0.37	LTE Band 25_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch26340_8N
5.3 Frequency Response 8N DF HANB	Ok	Min. dist. to tolerance scheme [dB], 2177.4 Hz	0.07	LTE Band 25_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch26340_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
5.3 Frequency Response 8N FF HANB	17
5.3 Frequency Response 8N DF HANB	18

Overall Receive Delay NB

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



Delay (Cross): 99.2 ms

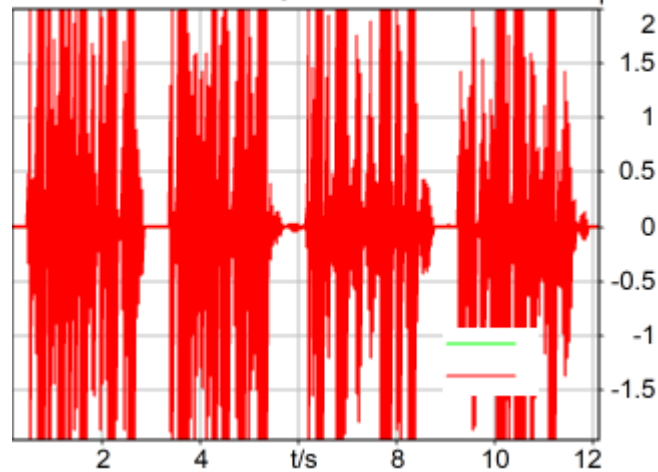
2023/11/10 15:38 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.1a Receive Volume Control Performance 8N NB

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

5.1a Receive Volume Control Performance 8N NE p/Pa



Speech Level RCV: 90.53 dB[SPL], Act.: 81.01% Ok

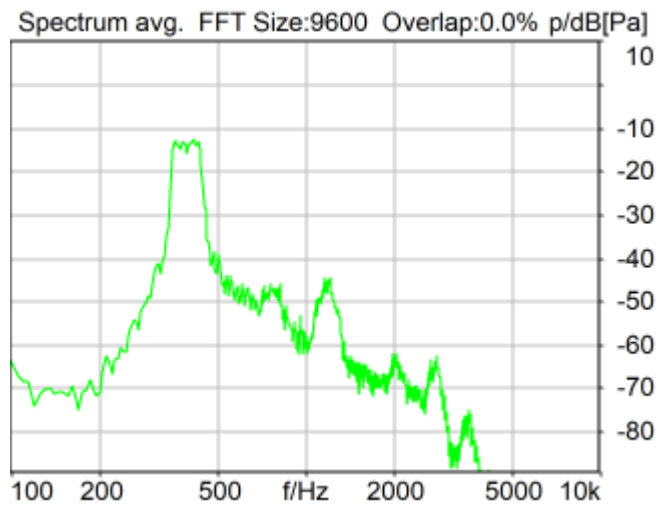
Ok

2023/11/10 15:39 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): 26.07 dB (4.97%) Ok

Ok

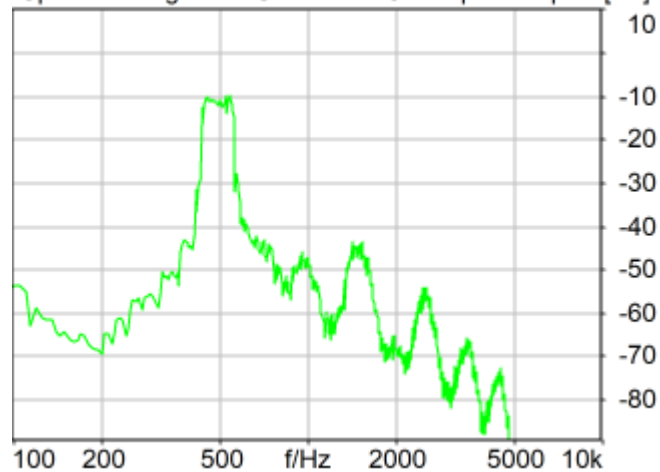
2023/11/10 15:39 ACQUA 5.1.200

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): 27.19 dB (4.37%) Ok

Ok

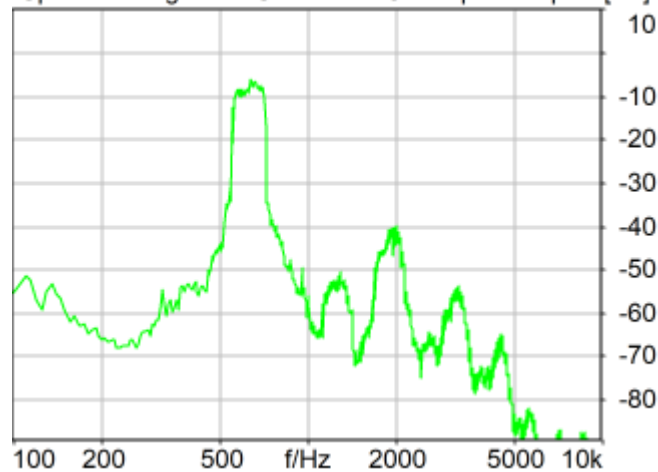
2023/11/10 15:39 ACQUA 5.1.200

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

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



Distortion (Noise) RCV (packed): 28.59 dB (3.72%) Ok

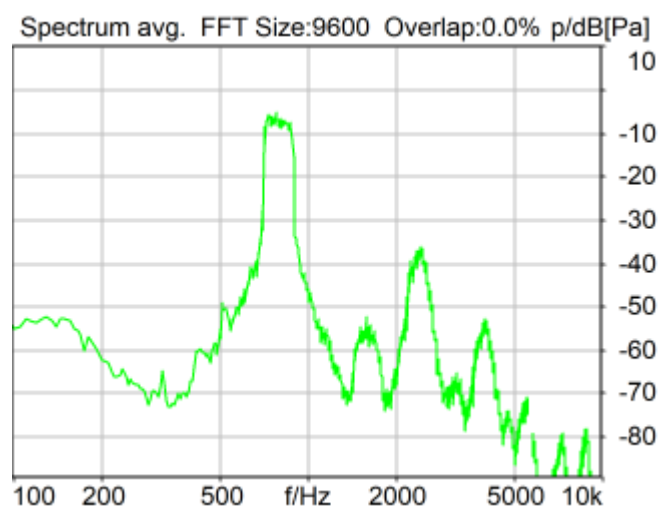
Ok

2023/11/10 15:40 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): 27.04 dB (4.45%) Ok

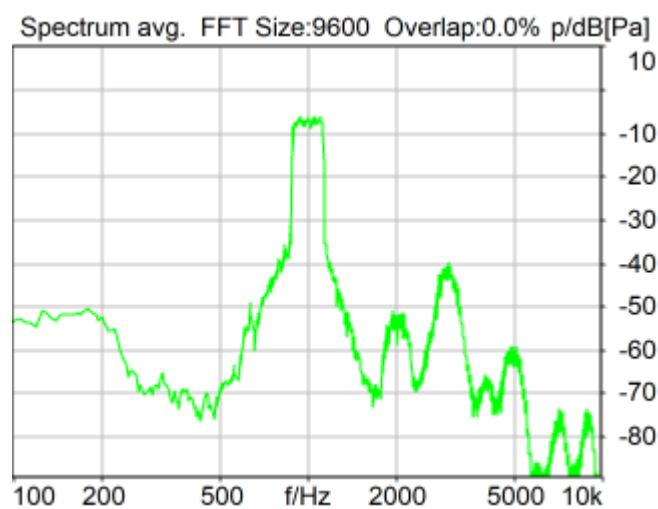
Ok

2023/11/10 15:40 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): 29.23 dB (3.46%) Ok

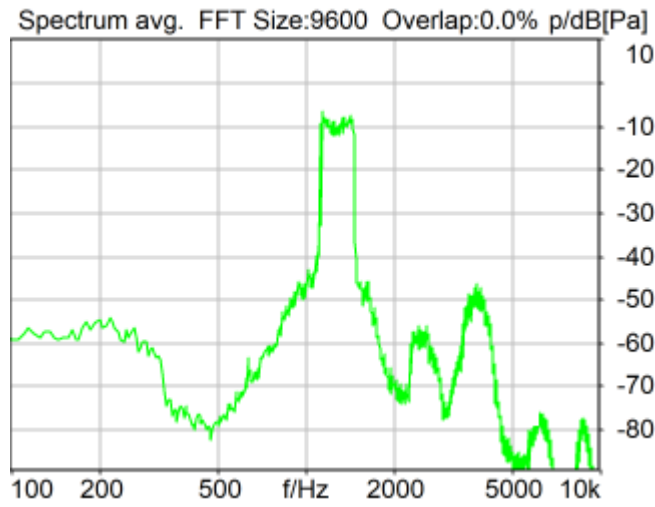
Ok

2023/11/10 15:41 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): 30.15 dB (3.11%) Ok

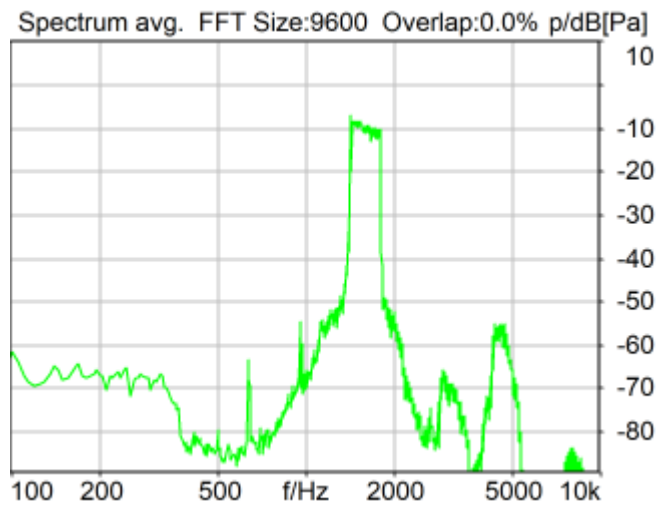
Ok

2023/11/10 15:41 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): 38.74 dB (1.16%) Ok

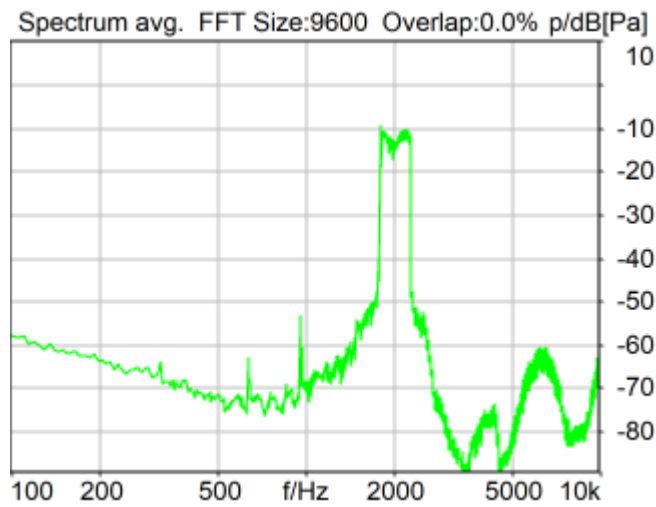
Ok

2023/11/10 15:41 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): 37.67 dB (1.31%) Ok

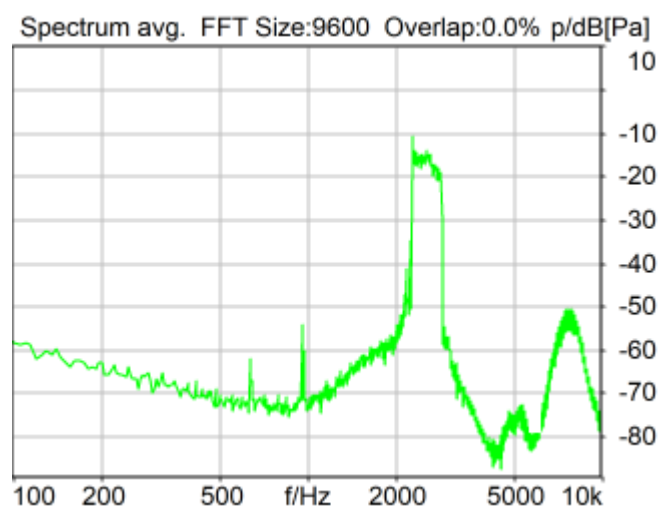
Ok

2023/11/10 15:42 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): 31.07 dB (2.79%) Ok

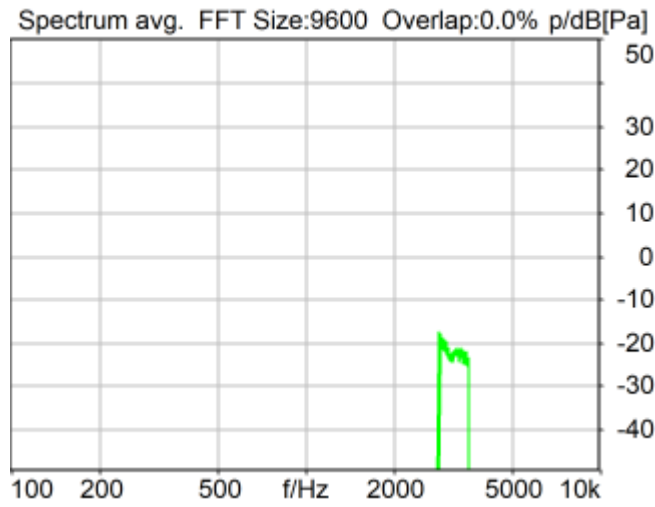
Ok

2023/11/10 15:42 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): 35.56 dB (1.67%) Ok

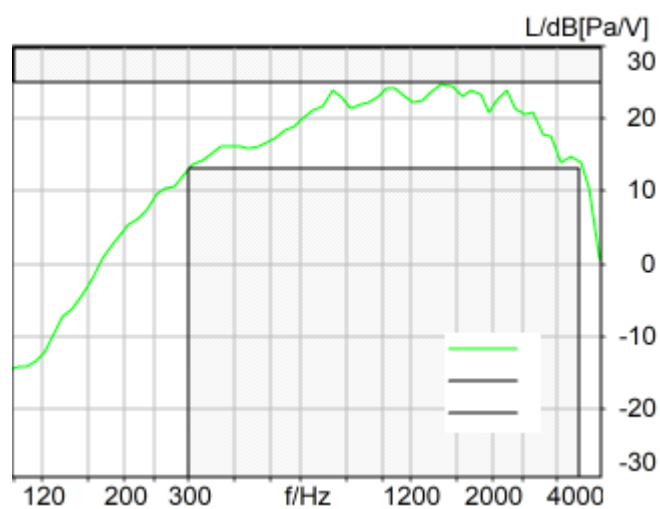
Ok

2023/11/10 15:43 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 8N FF HANB

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



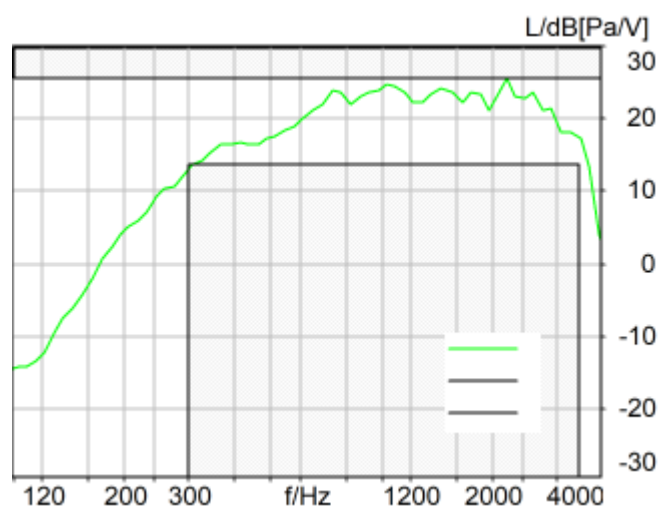
Absolute minimal distance
0.37 dB at 305.9 Hz Ok

Ok

2023/11/10 15:43 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
0.07 dB at 2177.4 Hz Ok

Ok

2023/11/10 15:43 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-2N-1
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Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/12 19:05

Status Overview

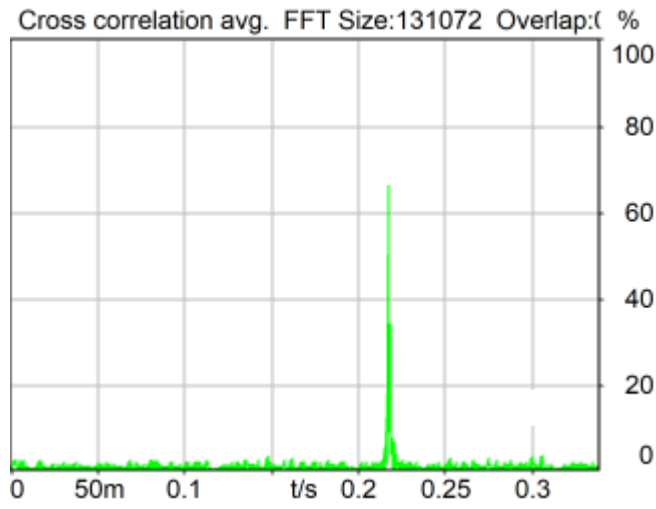
SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay WB	Done	Delay (Cross) [ms]	218.1	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-2N-1
5.1b Receive Volume Control Performance 2N WB	Ok	Speech Level [dB[SPL]]	84.59	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-2N-1
5.2 RCV Distortion and Noise - 250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	22.05	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-2N-1
5.2 RCV Distortion and Noise - 315 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	25.16	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-2N-1
5.2 RCV Distortion and Noise - 400 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	26.88	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-2N-1
5.2 RCV Distortion and Noise - 500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	28.69	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-2N-1
5.2 RCV Distortion and Noise - 630 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	29.98	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-2N-1
5.2 RCV Distortion and Noise - 800 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	28.68	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-2N-1
5.2 RCV Distortion and Noise - 1000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	31.57	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-2N-1
5.2 RCV Distortion and Noise - 1250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	33.81	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-2N-1
5.2 RCV Distortion and Noise - 1600 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	44.70	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-2N-1
5.2 RCV Distortion and Noise - 2000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	42.38	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-2N-1
5.2 RCV Distortion and Noise - 2500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	45.48	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-2N-1
5.2 RCV Distortion and Noise - 3150 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	40.76	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-2N-1
5.2 RCV Distortion and Noise - 4000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	45.80	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-2N-1
5.2 RCV Distortion and Noise - 5000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	40.66	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-2N-1
Report - Receive Distortion	Ok	Minimum SDNR	22.05	LTE Band

and Noise (Conversational Gain)		[dB], (occured at 250Hz)		25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-2N-1
5.3 Frequency Response 2N FF	Ok	Min. dist. to tolerance scheme [dB], 1285.9 Hz	1.43	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-2N-1
5.3 Frequency Response 2N DF	Ok	Min. dist. to tolerance scheme [dB], 217.7 Hz	1.11	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-2N-1

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



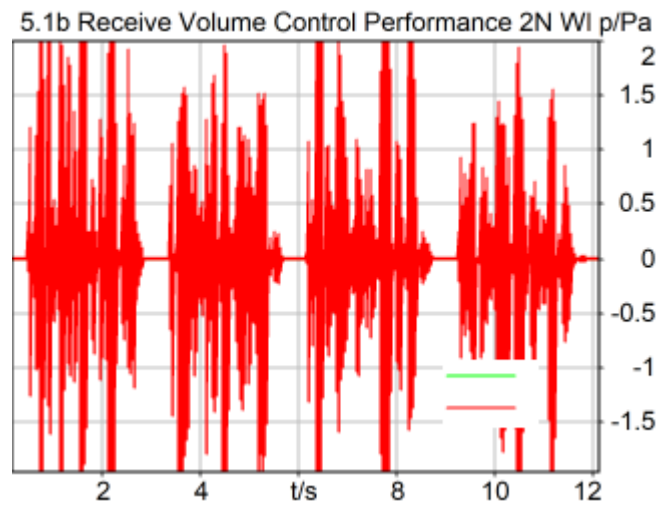
Delay (Cross): 218.1 ms

2023/11/12 11:37 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: 84.59 dB[SPL], Act.: 80.75% Ok

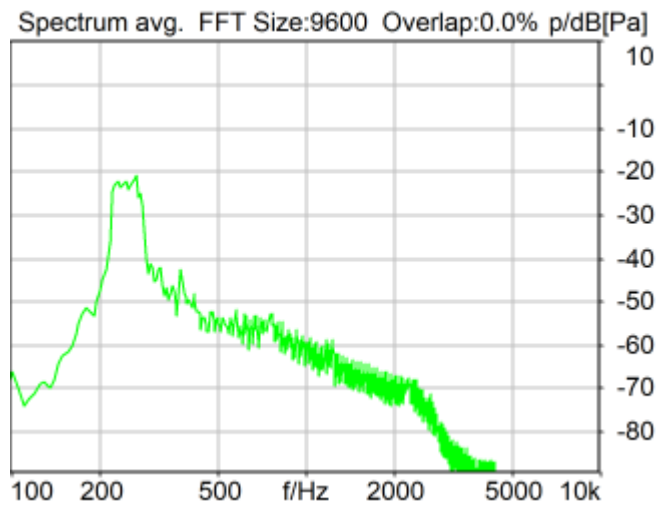
Ok

2023/11/12 11:37 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): 22.05 dB (7.90%) Ok

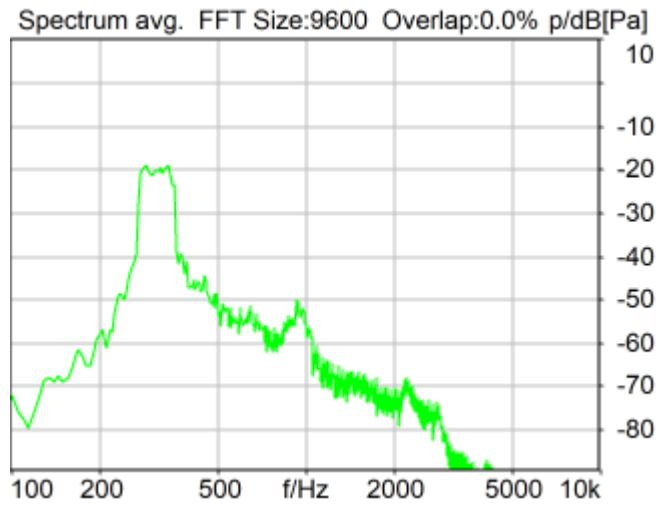
Ok

2023/11/12 11:37 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): 25.16 dB (5.52%) Ok

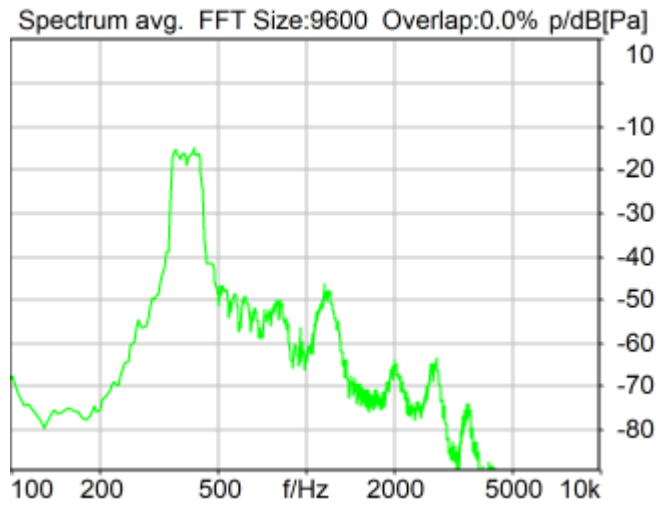
Ok

2023/11/12 11:38 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): 26.88 dB (4.53%) Ok

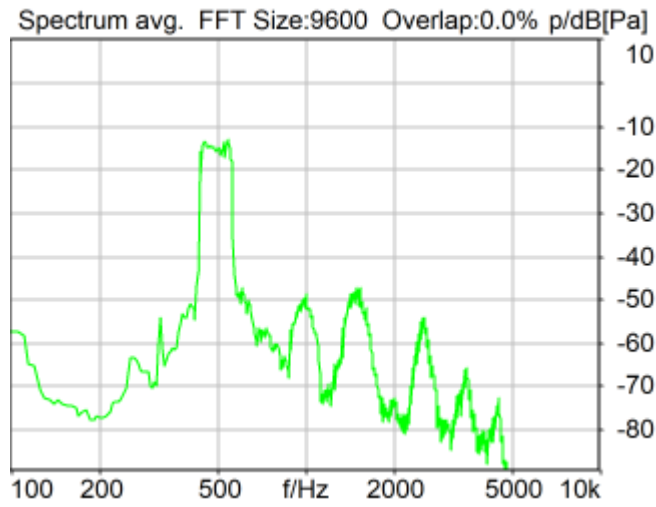
Ok

2023/11/12 11:38 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): 28.69 dB (3.68%) Ok

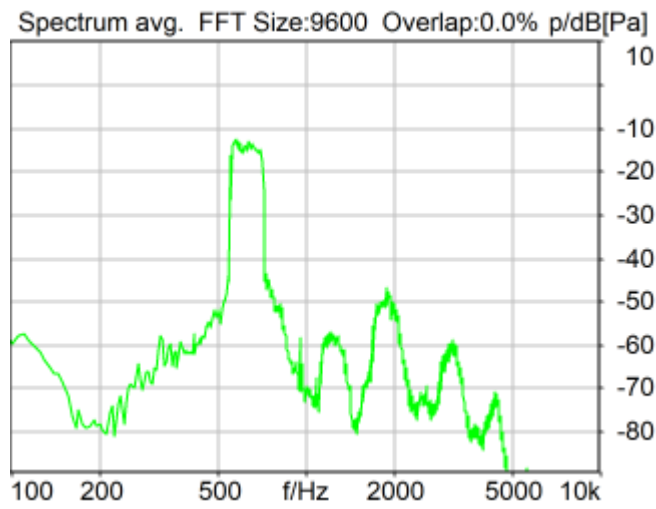
Ok

2023/11/12 11:39 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): 29.98 dB (3.17%) Ok

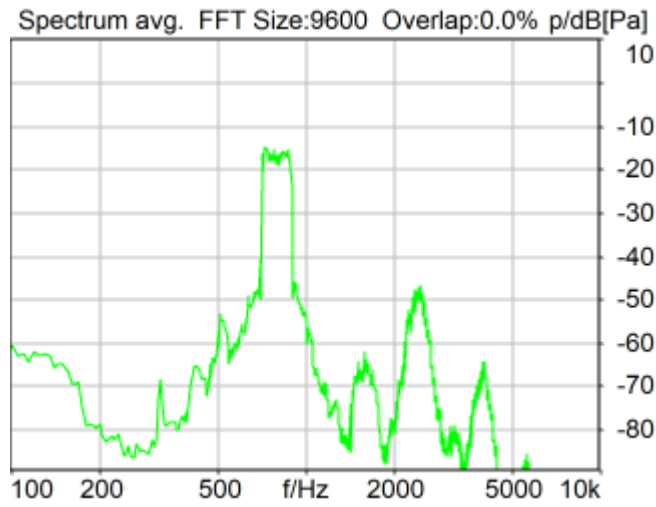
Ok

2023/11/12 11:39 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): 28.68 dB (3.68%) Ok

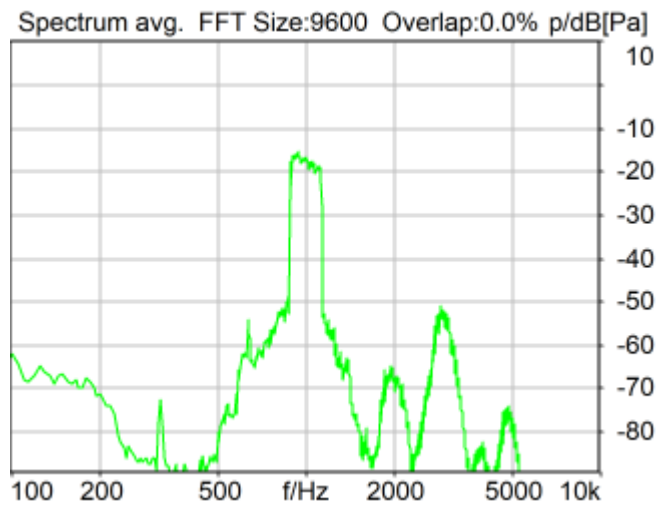
Ok

2023/11/12 11:39 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): 31.57 dB (2.64%) Ok

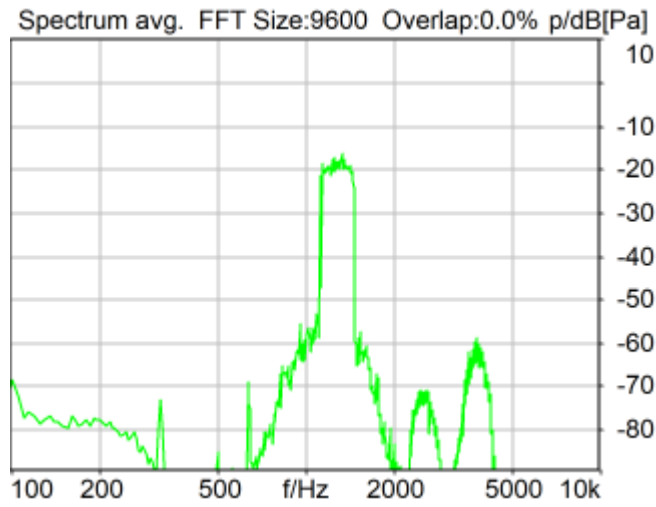
Ok

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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): 33.81 dB (2.04%) Ok

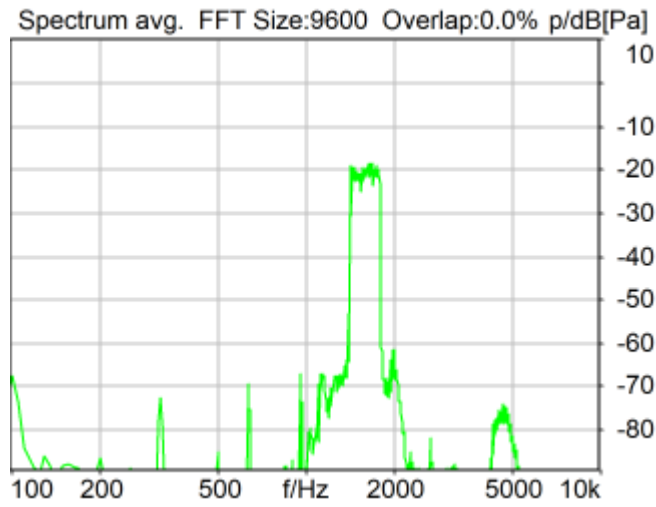
Ok

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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): 44.70 dB (0.58%) Ok

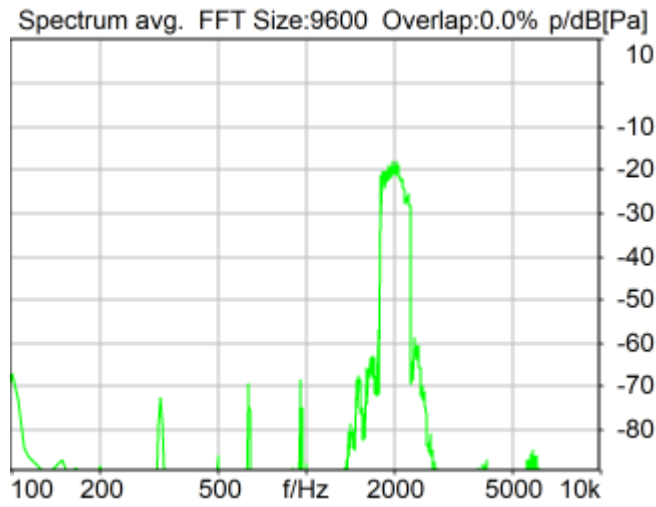
Ok

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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): 42.38 dB (0.76%) Ok

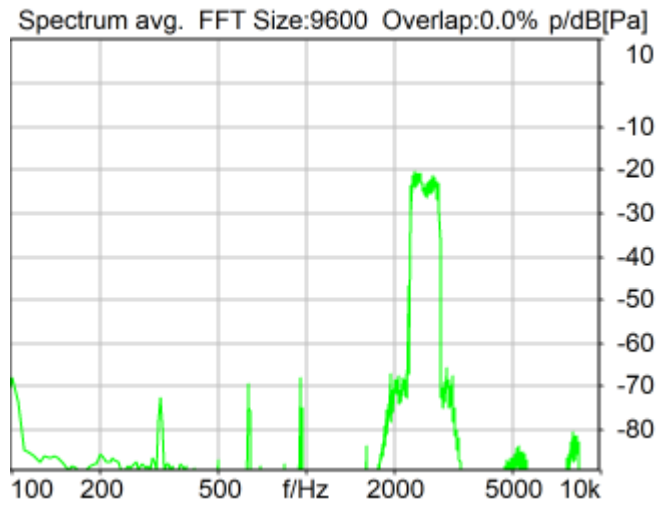
Ok

2023/11/12 11:41 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): 45.48 dB (0.53%) Ok

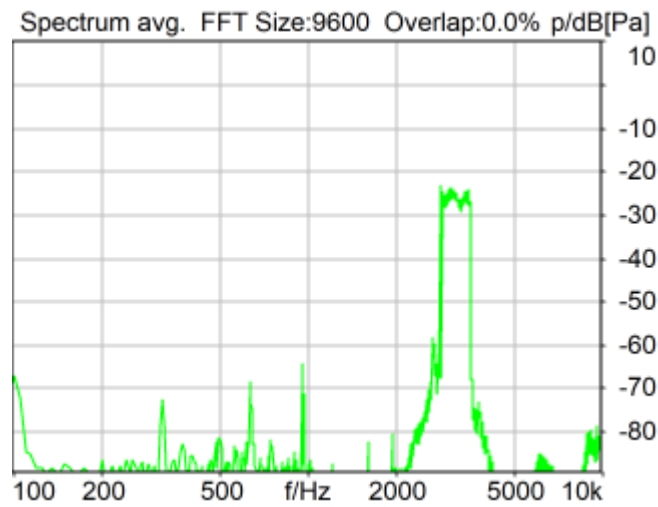
Ok

2023/11/12 11:41 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): 40.76 dB (0.92%) Ok

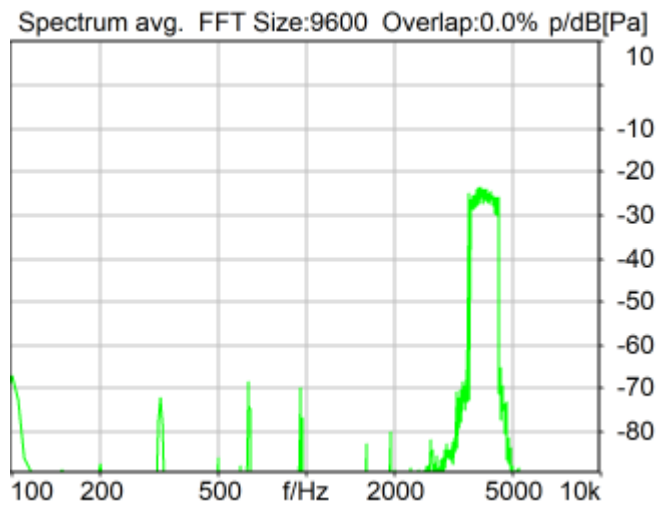
Ok

2023/11/12 11:42 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): 45.80 dB (0.51%) Ok

Ok

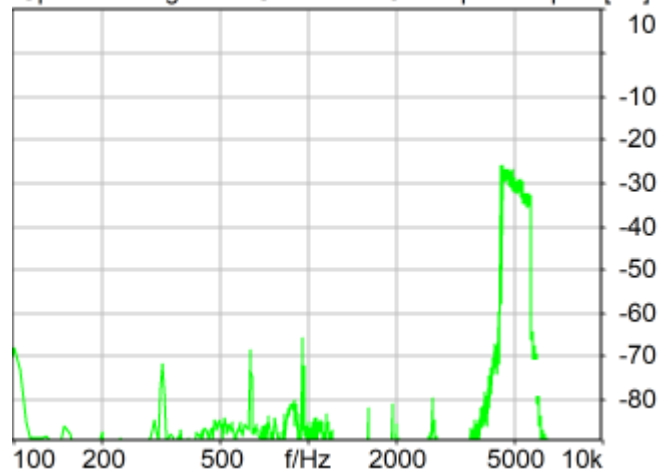
2023/11/12 11:42 ACQUA 5.1.200

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

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



Distortion (Noise) RCV (packed): 40.66 dB (0.93%) Ok

Ok

2023/11/12 11:42 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	22.05 dB
2	315Hz	25.16 dB
3	400Hz	26.88 dB
4	500Hz	28.69 dB
5	630Hz	29.98 dB
6	800Hz	28.68 dB
7	1000Hz	31.57 dB
8	1250Hz	33.81 dB
9	1600Hz	44.70 dB
10	2000Hz	42.38 dB
11	2500Hz	45.48 dB
12	3150Hz	40.76 dB
13	4000Hz	45.80 dB
14	5000Hz	40.66 dB

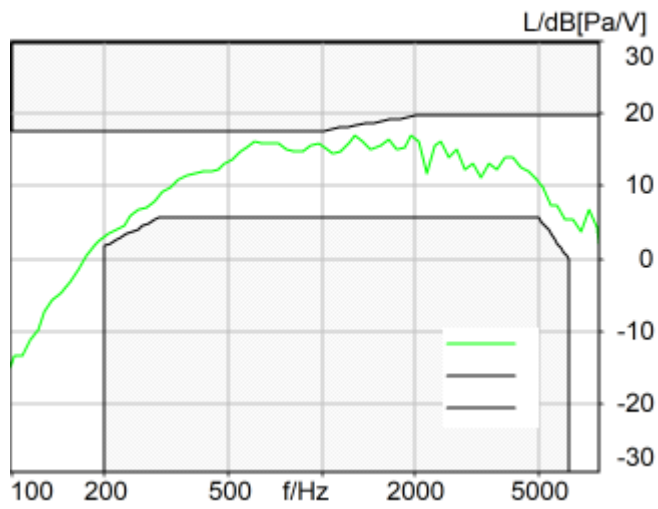
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 22.05dB at 250Hz.

2023/11/12 11:43 ACQUA

5.3 Frequency Response 2N FF

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



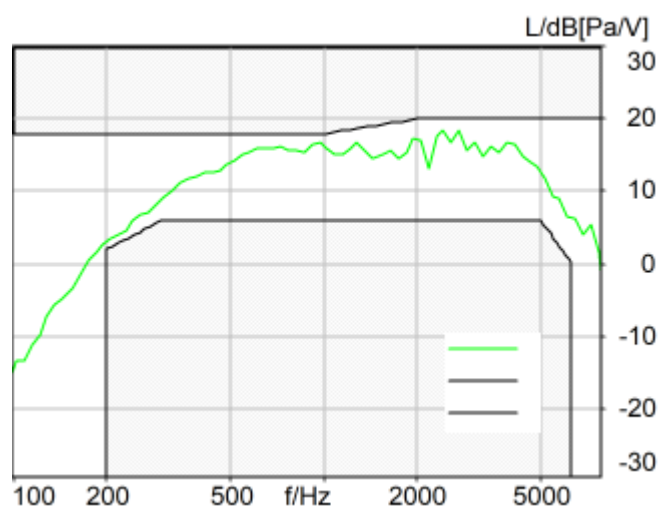
Absolute minimal distance
1.43 dB at 1285.9 Hz Ok

Ok

2023/11/12 11:43 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N DF

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



Absolute minimal distance
1.11 dB at 217.7 Hz Ok

Ok

2023/11/12 11:43 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-8N-1
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Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/12 19:07

Status Overview

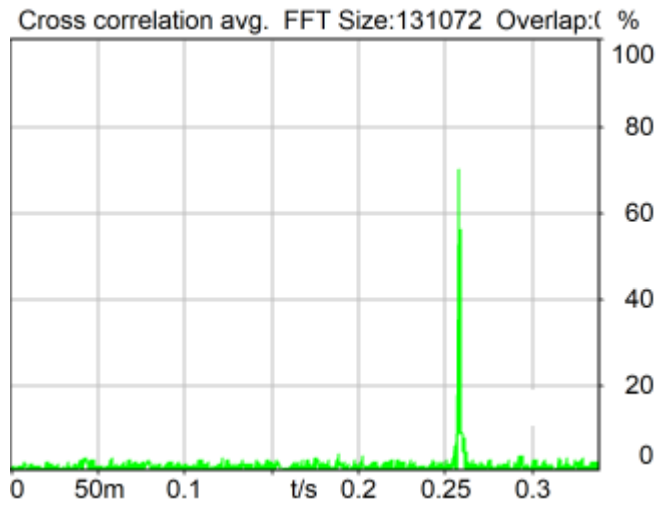
SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay WB	Done	Delay (Cross) [ms]	258.7	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-8N-1
5.1a Receive Volume Control Performance 8N WB	Ok	Speech Level [dB[SPL]]	88.99	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-8N-1
5.2 RCV Distortion and Noise - 250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	22.47	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-8N-1
5.2 RCV Distortion and Noise - 315 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	24.47	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-8N-1
5.2 RCV Distortion and Noise - 400 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	26.28	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-8N-1
5.2 RCV Distortion and Noise - 500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	28.68	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-8N-1
5.2 RCV Distortion and Noise - 630 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	30.02	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-8N-1
5.2 RCV Distortion and Noise - 800 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	30.45	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-8N-1
5.2 RCV Distortion and Noise - 1000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	33.04	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-8N-1
5.2 RCV Distortion and Noise - 1250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	34.37	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-8N-1
5.2 RCV Distortion and Noise - 1600 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	43.37	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-8N-1
5.2 RCV Distortion and Noise - 2000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	42.18	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-8N-1
5.2 RCV Distortion and Noise - 2500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	44.51	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-8N-1
5.2 RCV Distortion and Noise - 3150 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	41.54	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-8N-1
5.2 RCV Distortion and Noise - 4000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	44.57	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-8N-1
5.2 RCV Distortion and Noise - 5000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	40.28	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-8N-1
Report - Receive Distortion	Ok	Minimum SDNR	22.47	LTE Band

and Noise (Conversational Gain)		[dB], (occured at 250Hz)		25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-8N-1
5.3 Frequency Response 8N FF	Ok	Min. dist. to tolerance scheme [dB], 1285.9 Hz	1.48	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-8N-1
5.3 Frequency Response 8N DF	Ok	Min. dist. to tolerance scheme [dB], 217.7 Hz	1.22	LTE Band 25_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch26340-8N-1

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



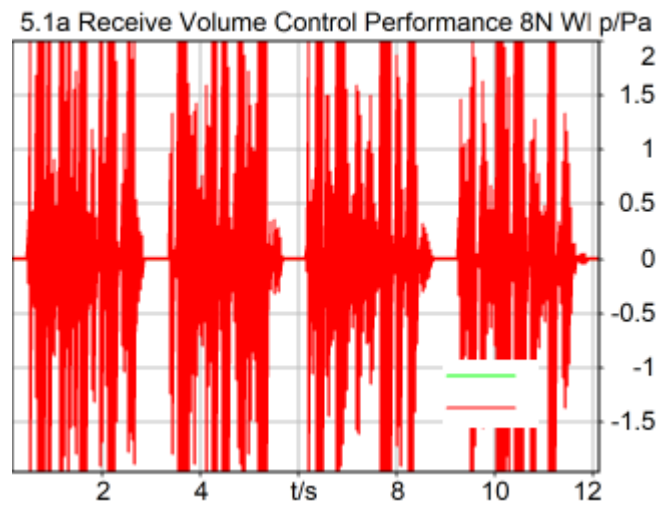
Delay (Cross): 258.7 ms

2023/11/12 11:46 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: 88.99 dB[SPL], Act.: 80.76% Ok

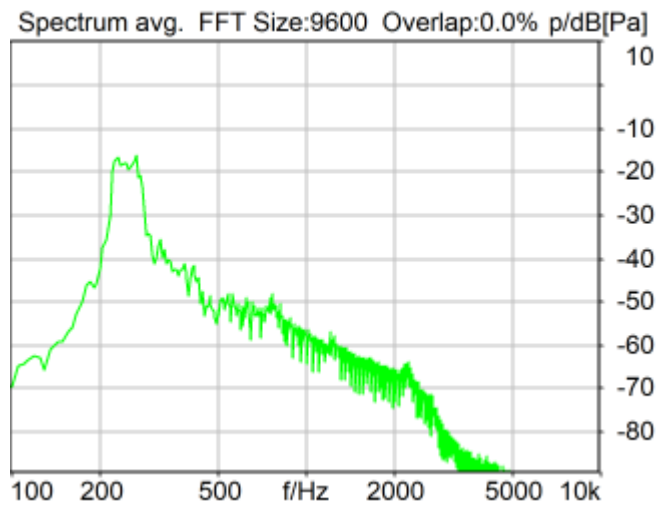
Ok

2023/11/12 11:46 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): 22.47 dB (7.52%) Ok

Ok

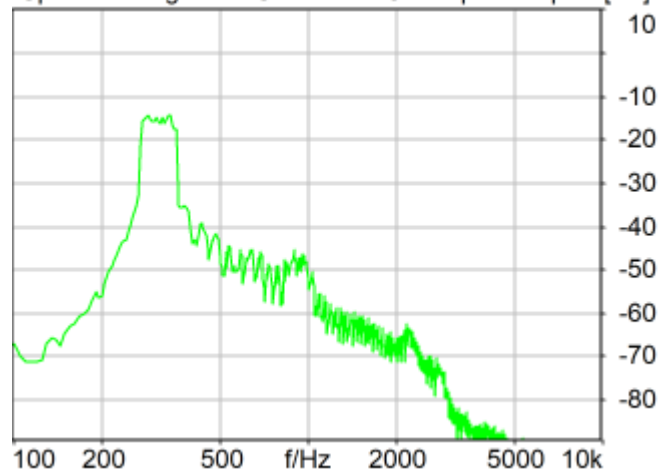
2023/11/12 11:46 ACQUA 5.1.200

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 8N

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



Distortion (Noise) RCV (packed): 24.47 dB (5.97%) Ok

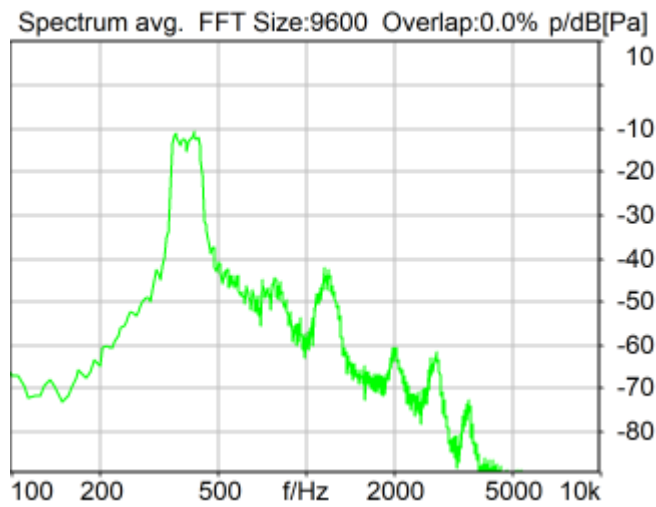
Ok

2023/11/12 11:47 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): 26.28 dB (4.85%) Ok

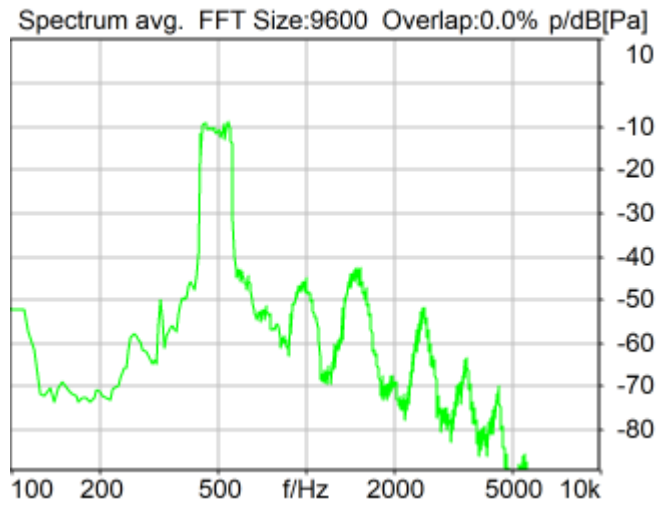
Ok

2023/11/12 11:47 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 8N



Distortion (Noise) RCV (packed): 28.68 dB (3.68%) Ok

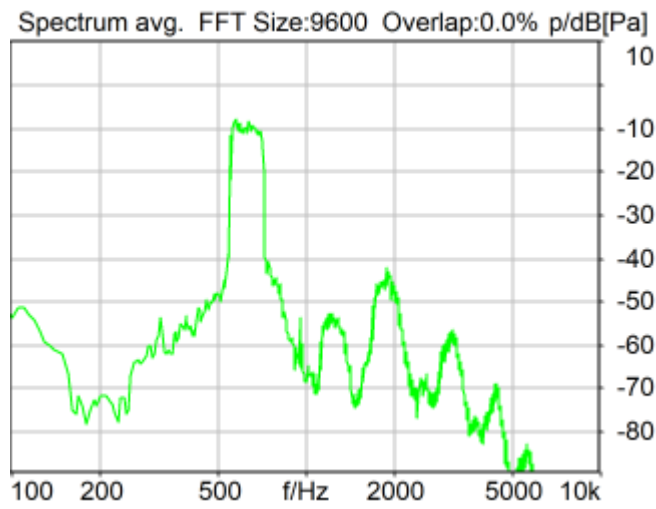
Ok

2023/11/12 11:47 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): 30.02 dB (3.15%) Ok

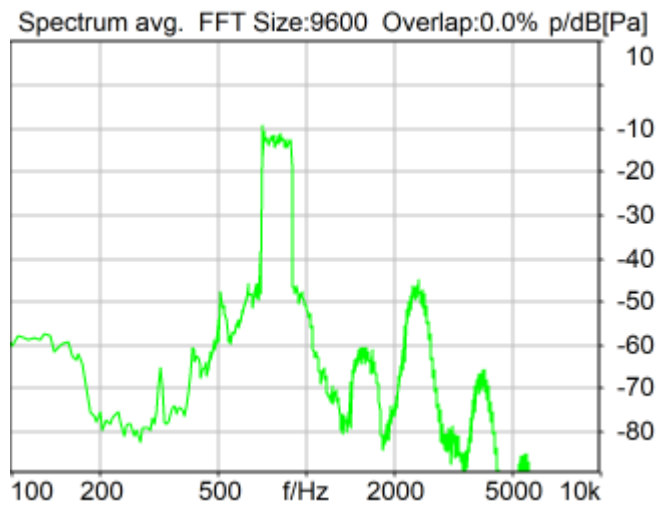
Ok

2023/11/12 11:48 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): 30.45 dB (3.00%) Ok

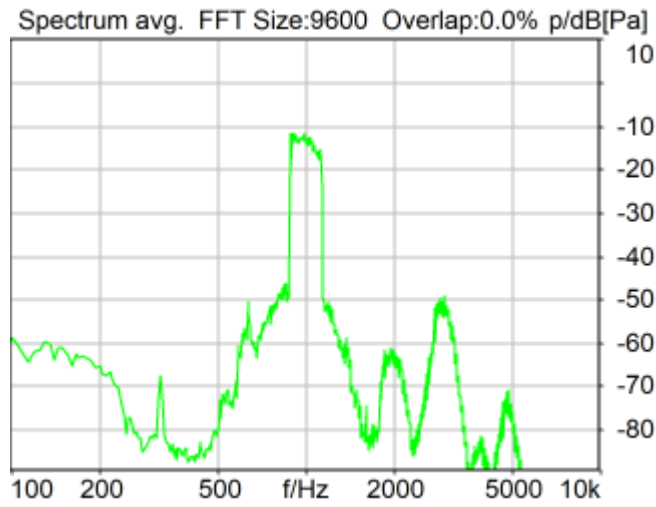
Ok

2023/11/12 11:48 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 8N



Distortion (Noise) RCV (packed): 33.04 dB (2.23%) Ok

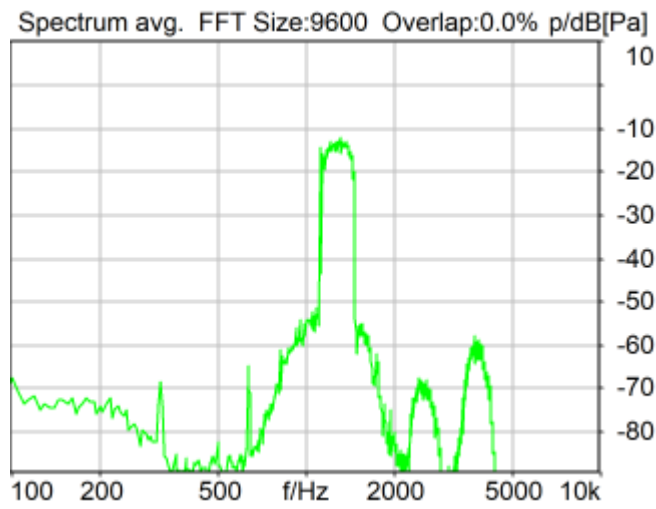
Ok

2023/11/12 11:49 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): 34.37 dB (1.91%) Ok

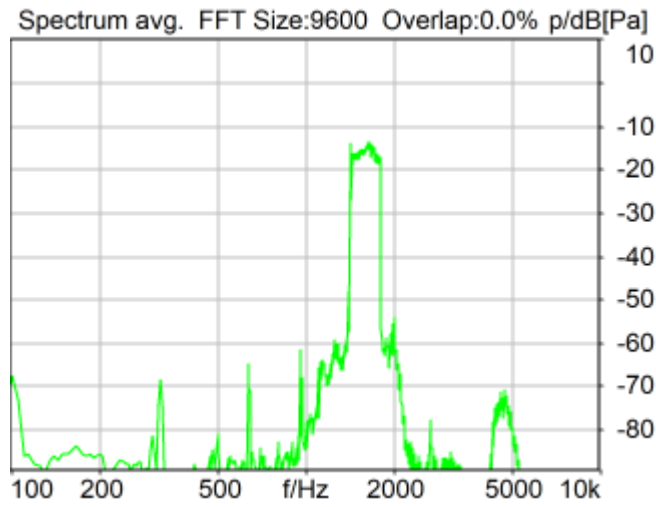
Ok

2023/11/12 11:49 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 8N



Distortion (Noise) RCV (packed): 43.37 dB (0.68%) Ok

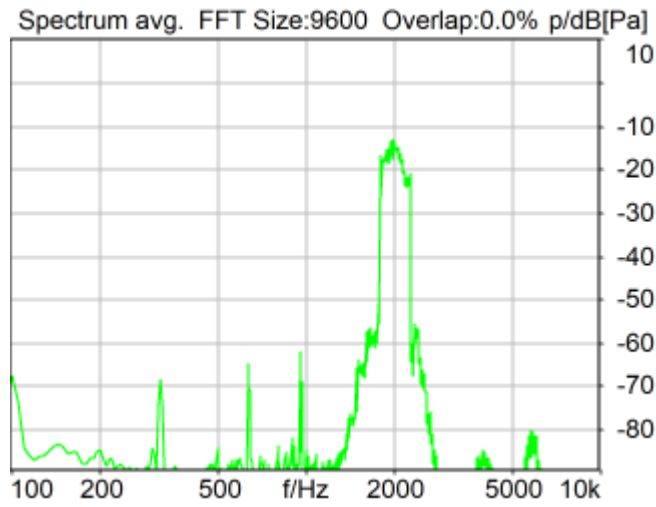
Ok

2023/11/12 11:49 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): 42.18 dB (0.78%) Ok

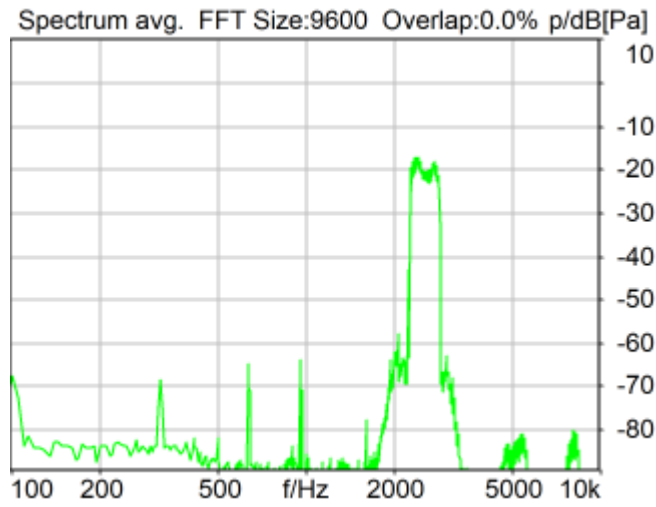
Ok

2023/11/12 11:50 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): 44.51 dB (0.60%) Ok

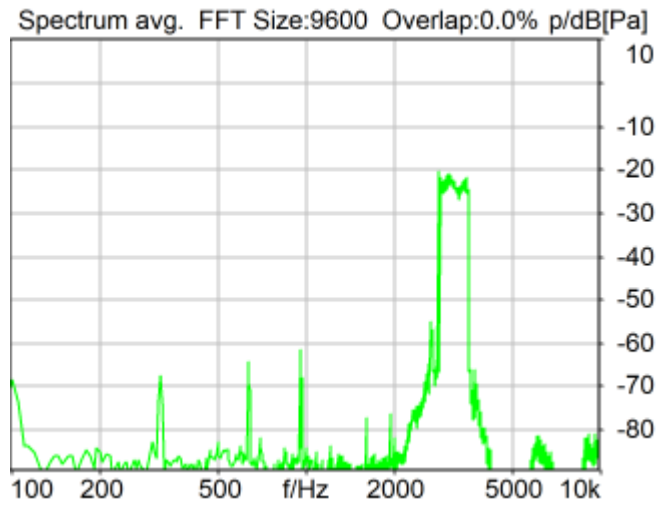
Ok

2023/11/12 11:50 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 8N



Distortion (Noise) RCV (packed): 41.54 dB (0.84%) Ok

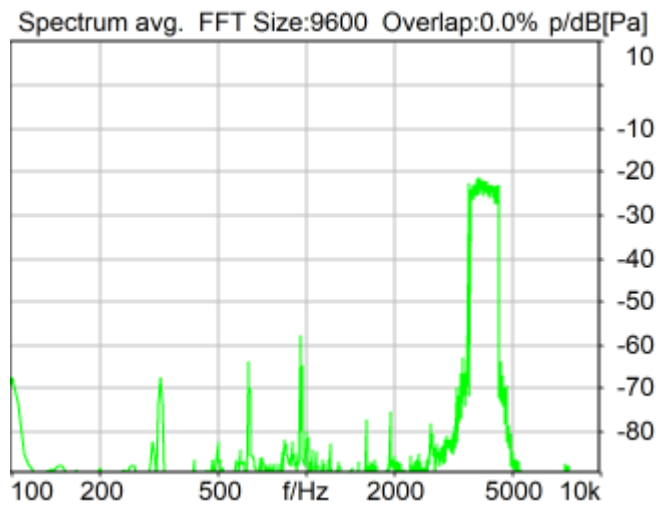
Ok

2023/11/12 11:51 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): 44.57 dB (0.59%) Ok

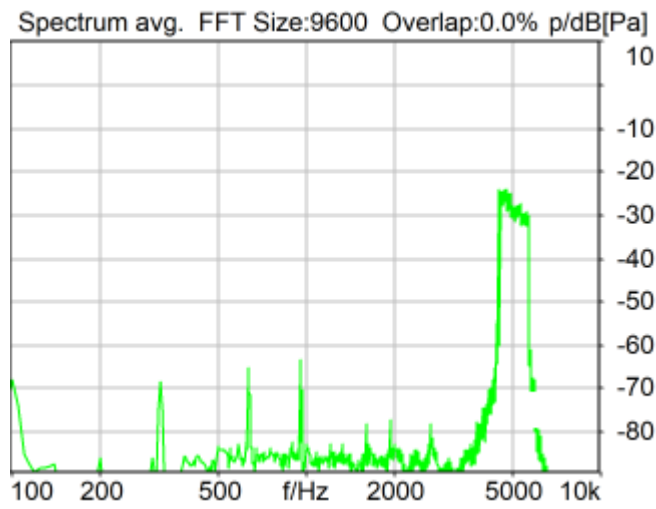
Ok

2023/11/12 11:51 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 8N



Distortion (Noise) RCV (packed): 40.28 dB (0.97%) Ok

Ok

2023/11/12 11:51 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 8N

Region	Frequency	SDNR
1	250Hz	22.47 dB
2	315Hz	24.47 dB
3	400Hz	26.28 dB
4	500Hz	28.68 dB
5	630Hz	30.02 dB
6	800Hz	30.45 dB
7	1000Hz	33.04 dB
8	1250Hz	34.37 dB
9	1600Hz	43.37 dB
10	2000Hz	42.18 dB
11	2500Hz	44.51 dB
12	3150Hz	41.54 dB
13	4000Hz	44.57 dB
14	5000Hz	40.28 dB

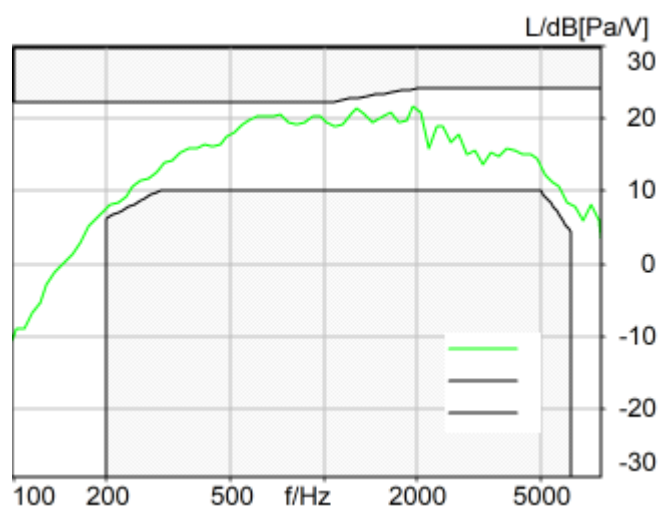
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 22.47dB at 250Hz.

2023/11/12 11:52 ACQUA

5.3 Frequency Response 8N FF

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



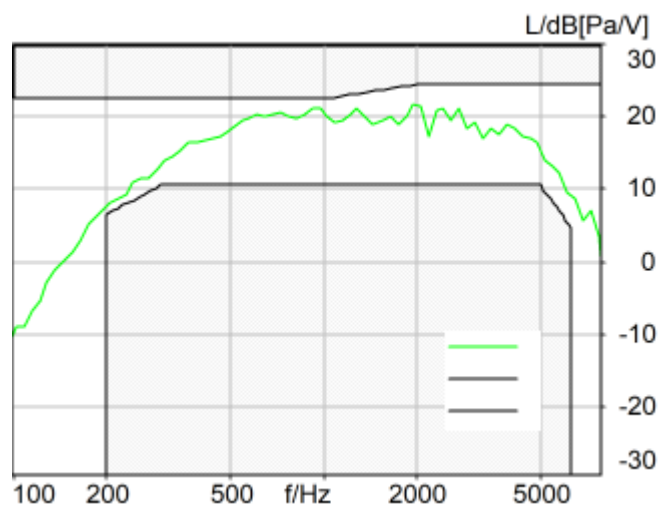
Absolute minimal distance
1.48 dB at 1285.9 Hz Ok

Ok

2023/11/12 11:52 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 8N DF

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



Absolute minimal distance
1.22 dB at 217.7 Hz Ok

Ok

2023/11/12 11:52 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	LTE Band 71_20M_QPSK_100RB_0Offset_EVS NB 24.4Kbps_Ch133322_2N
--------------------	--

Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/20 17:55

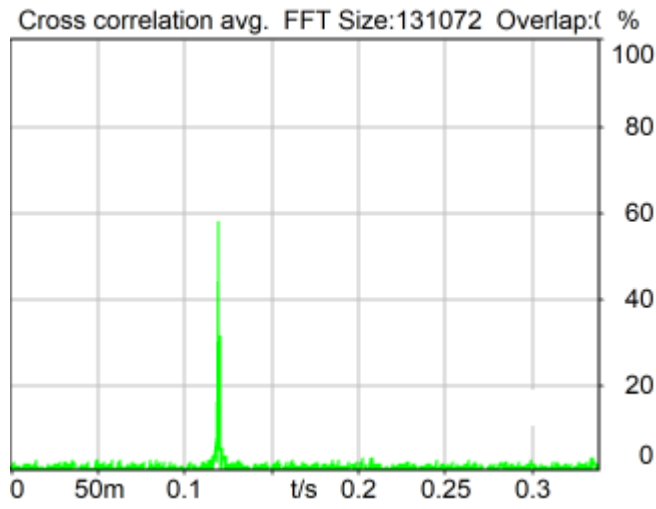
Status Overview

SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay NB	Done	Delay (Cross) [ms]	119.5	LTE Band 71_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch133322_2N
5.1b Receive Volume Control Performance 2N NB	Ok	Speech Level [dB[SPL]]	86.20	LTE Band 71_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch133322_2N
5.2 RCV Distortion and Noise - 400 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	25.87	LTE Band 71_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch133322_2N
5.2 RCV Distortion and Noise - 500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	26.95	LTE Band 71_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch133322_2N
5.2 RCV Distortion and Noise - 630 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	28.44	LTE Band 71_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch133322_2N
5.2 RCV Distortion and Noise - 800 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	25.04	LTE Band 71_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch133322_2N
5.2 RCV Distortion and Noise - 1000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	27.46	LTE Band 71_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch133322_2N
5.2 RCV Distortion and Noise - 1250 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	29.22	LTE Band 71_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch133322_2N
5.2 RCV Distortion and Noise - 1600 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	37.79	LTE Band 71_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch133322_2N
5.2 RCV Distortion and Noise - 2000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	39.07	LTE Band 71_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch133322_2N
5.2 RCV Distortion and Noise - 2500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	40.14	LTE Band 71_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch133322_2N
5.2 RCV Distortion and Noise - 3150 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	37.46	LTE Band 71_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch133322_2N
5.3 Frequency Response 2N FF HANB	Ok	Min. dist. to tolerance scheme [dB], 2177.4 Hz	0.30	LTE Band 71_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch133322_2N
5.3 Frequency Response 2N DF HANB	Not Ok	Min. dist. to tolerance scheme [dB], 2177.4 Hz	-0.21	LTE Band 71_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch133322_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



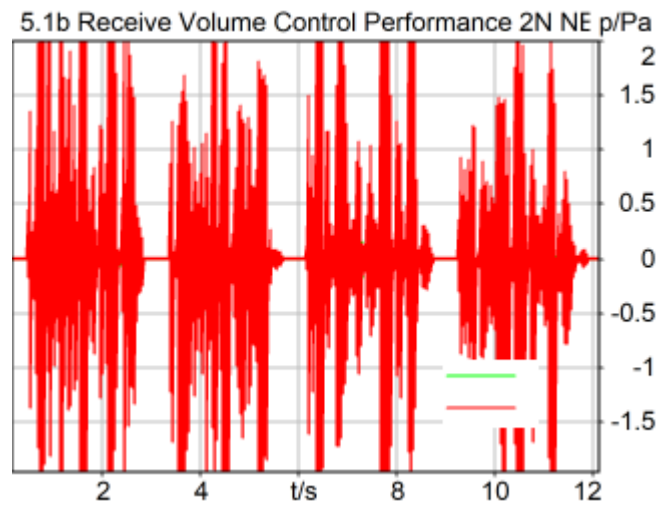
Delay (Cross): 119.5 ms

2023/11/10 16:46 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: 86.20 dB[SPL], Act.: 80.81% Ok

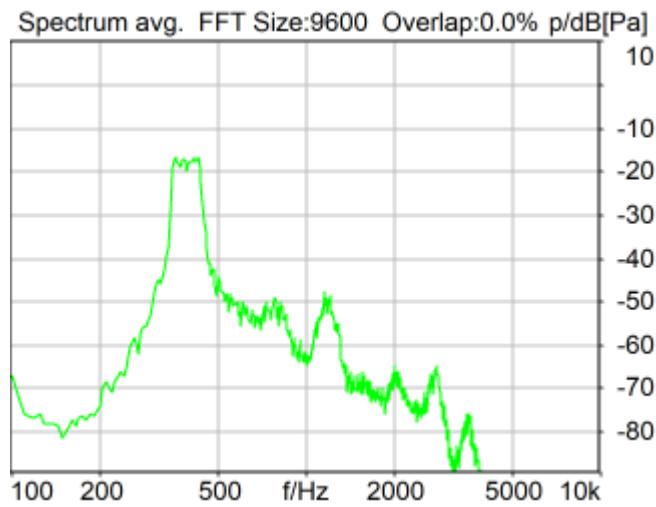
Ok

2023/11/10 16:46 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): 25.87 dB (5.09%) Ok

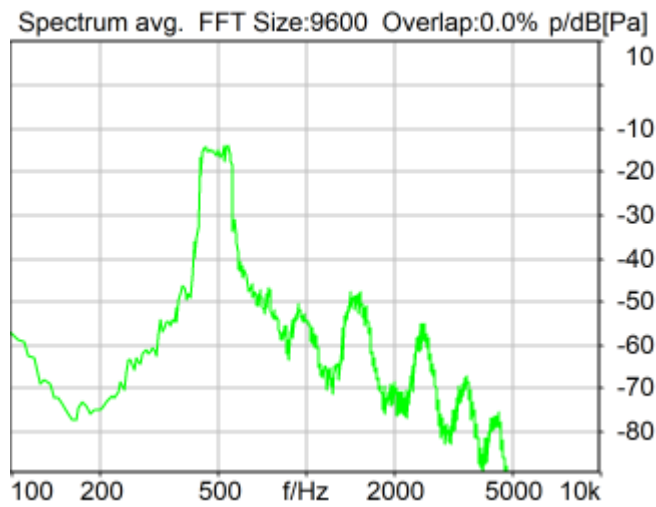
Ok

2023/11/10 16:47 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): 26.95 dB (4.49%) Ok

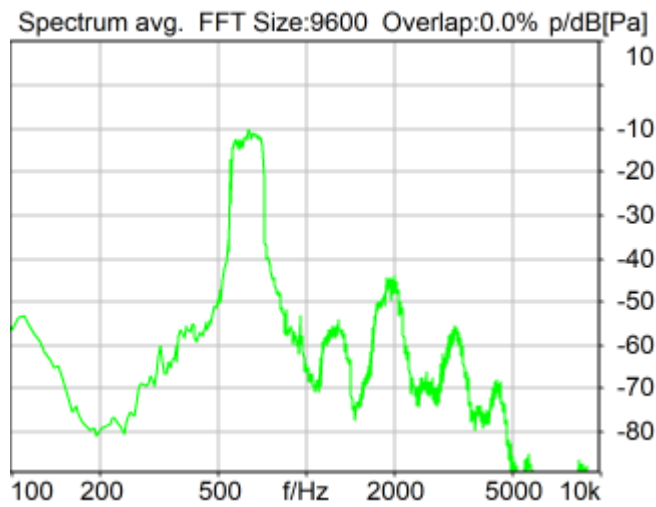
Ok

2023/11/10 16:47 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): 28.44 dB (3.78%) Ok

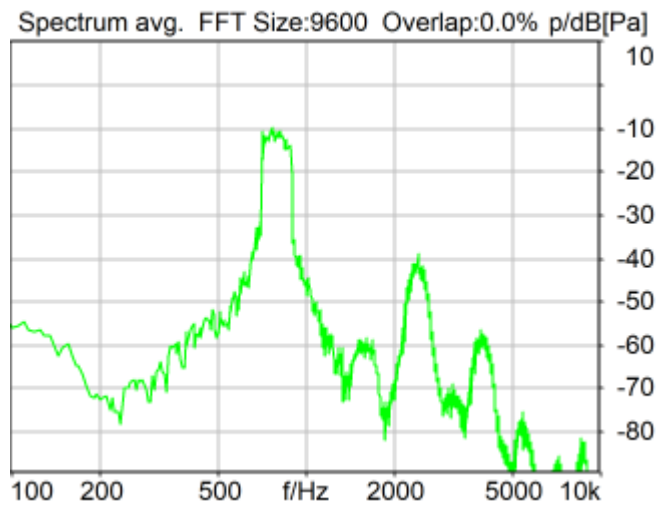
Ok

2023/11/10 16:47 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): 25.04 dB (5.59%) Ok

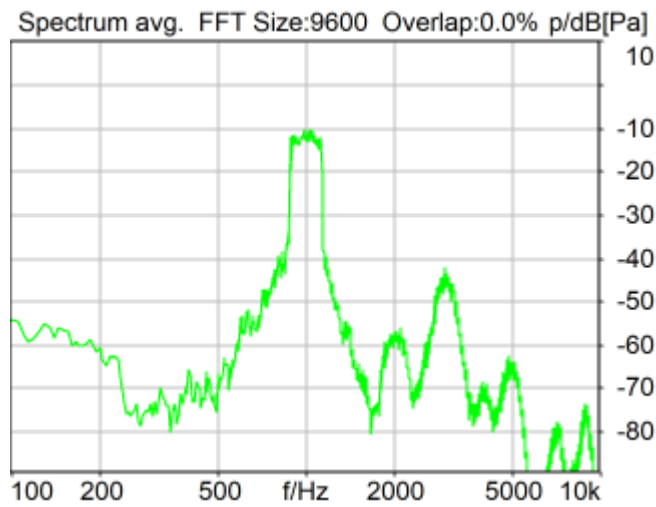
Ok

2023/11/10 16:48 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): 27.46 dB (4.23%) Ok

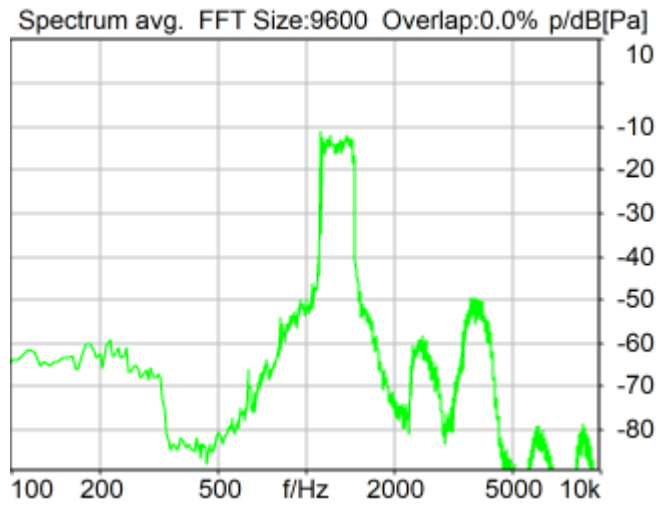
Ok

2023/11/10 16:48 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): 29.22 dB (3.46%) Ok

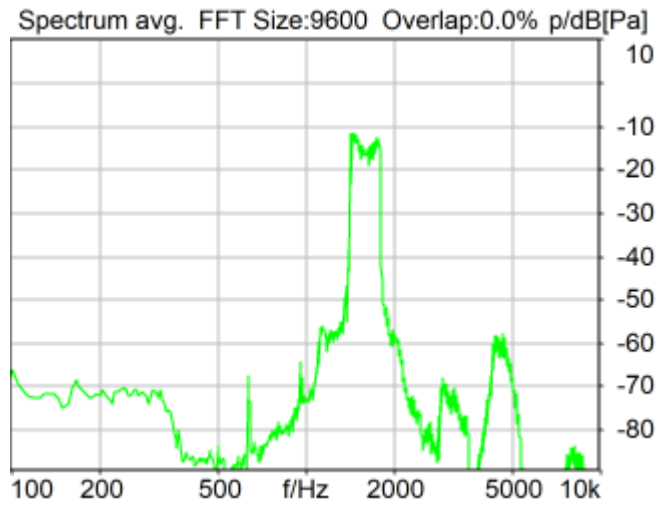
Ok

2023/11/10 16:49 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): 37.79 dB (1.29%) Ok

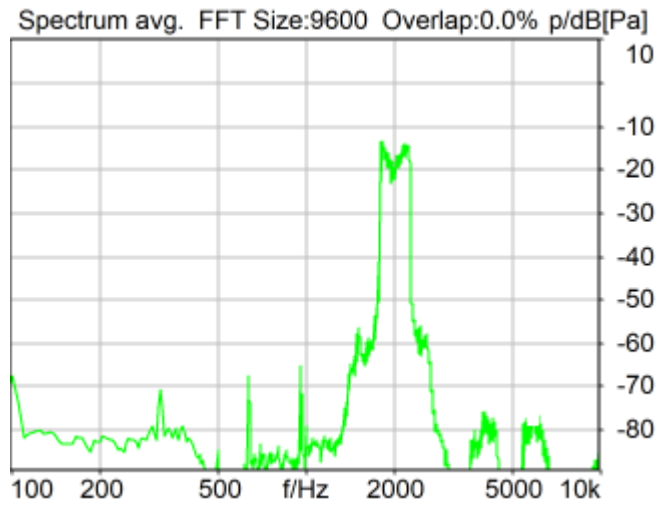
Ok

2023/11/10 16:49 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): 39.07 dB (1.11%) Ok

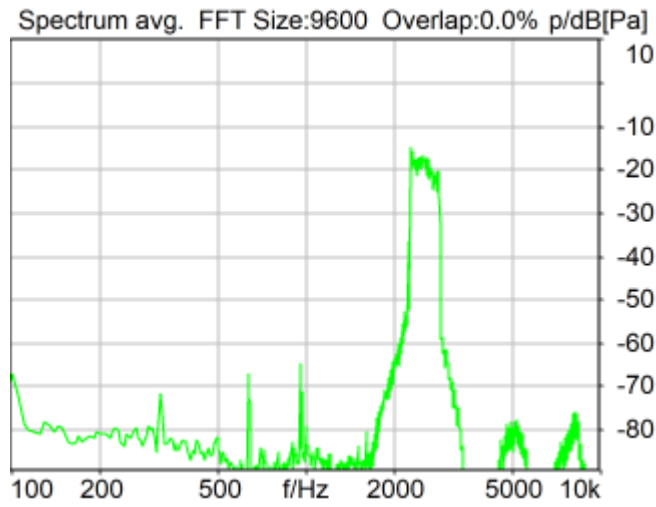
Ok

2023/11/10 16:49 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): 40.14 dB (0.98%) Ok

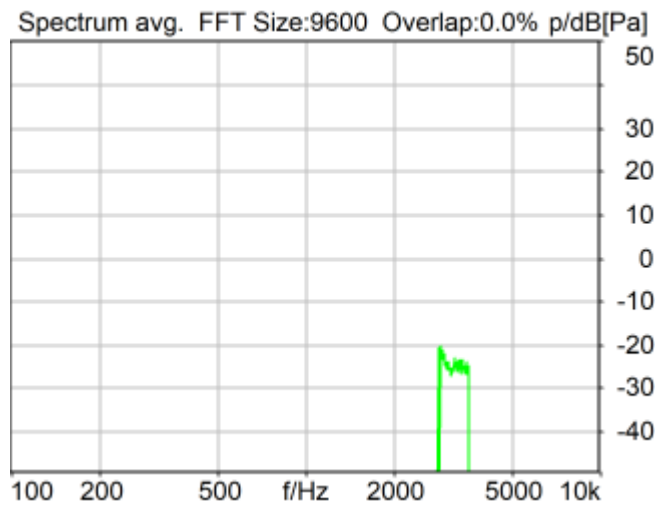
Ok

2023/11/10 16:50 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): 37.46 dB (1.34%) Ok

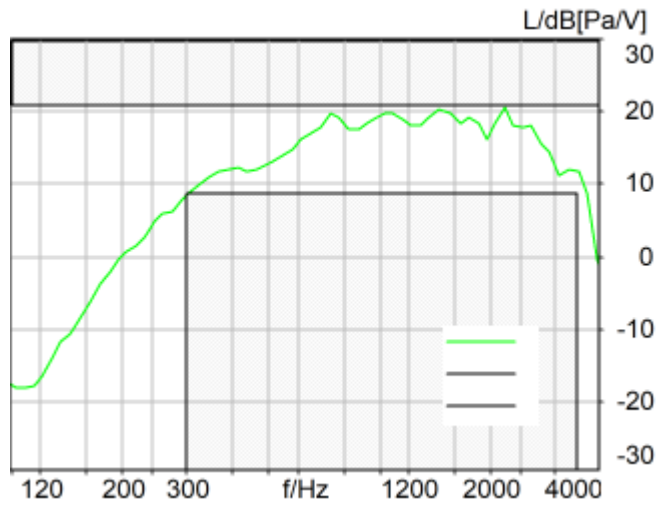
Ok

2023/11/10 16:50 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N FF HANB

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



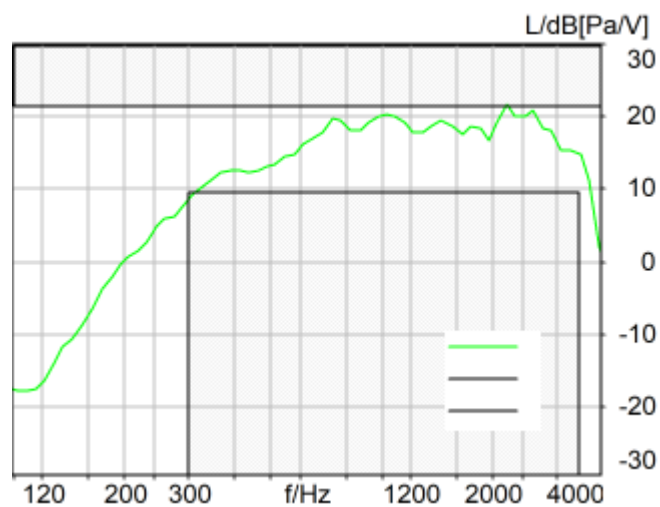
Absolute minimal distance
0.30 dB at 2177.4 Hz Ok

Ok

2023/11/10 16:51 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
-0.21 dB at 2177.4 Hz Not Ok

Not Ok

2023/11/10 16:51 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	LTE Band 71_20M_QPSK_100RB_0Offset_EVS NB 24.4Kbps_Ch133322_8N
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Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/20 17:56

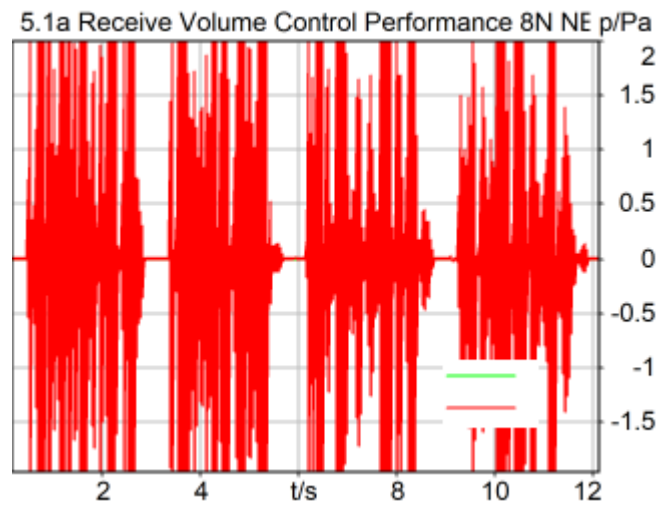
Status Overview

SMD	Status	Single Value Description	Single Value	Object
5.1a Receive Volume Control Performance 8N NB	Ok	Speech Level [dB[SPL]]	90.42	LTE Band 71_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch133322_8N
5.2 RCV Distortion and Noise - 400 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	25.26	LTE Band 71_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch133322_8N
5.2 RCV Distortion and Noise - 500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	27.10	LTE Band 71_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch133322_8N
5.2 RCV Distortion and Noise - 630 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	28.43	LTE Band 71_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch133322_8N
5.2 RCV Distortion and Noise - 800 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	26.97	LTE Band 71_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch133322_8N
5.2 RCV Distortion and Noise - 1000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	29.02	LTE Band 71_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch133322_8N
5.2 RCV Distortion and Noise - 1250 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	27.26	LTE Band 71_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch133322_8N
5.2 RCV Distortion and Noise - 1600 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	35.86	LTE Band 71_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch133322_8N
5.2 RCV Distortion and Noise - 2000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	34.02	LTE Band 71_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch133322_8N
5.2 RCV Distortion and Noise - 2500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	26.06	LTE Band 71_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch133322_8N
5.2 RCV Distortion and Noise - 3150 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	36.61	LTE Band 71_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch133322_8N
5.3 Frequency Response 8N FF HANB	Ok	Min. dist. to tolerance scheme [dB], 1447.5 Hz	0.41	LTE Band 71_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch133322_8N
5.3 Frequency Response 8N DF HANB	Not Ok	Min. dist. to tolerance scheme [dB], 2177.4 Hz	-0.15	LTE Band 71_20M_QPSK_100RB_0Offset_EV S NB 24.4Kbps_Ch133322_8N

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

5.1a Receive Volume Control Performance 8N NB

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



Speech Level RCV: 90.42 dB[SPL], Act.: 82.14% Ok

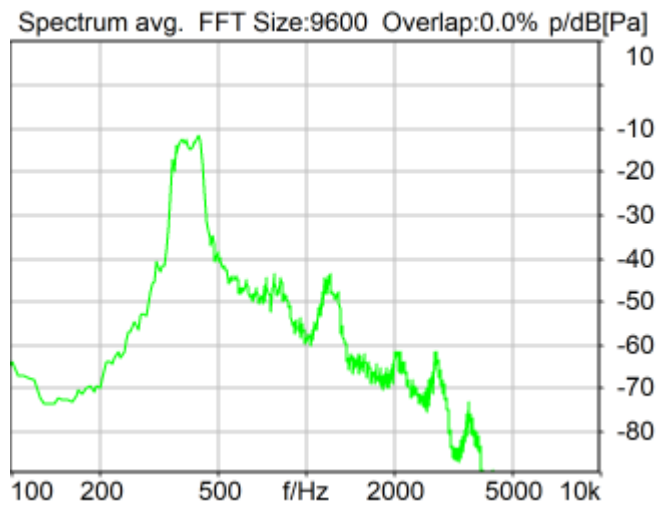
Ok

2023/11/10 16:56 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): 25.26 dB (5.46%) Ok

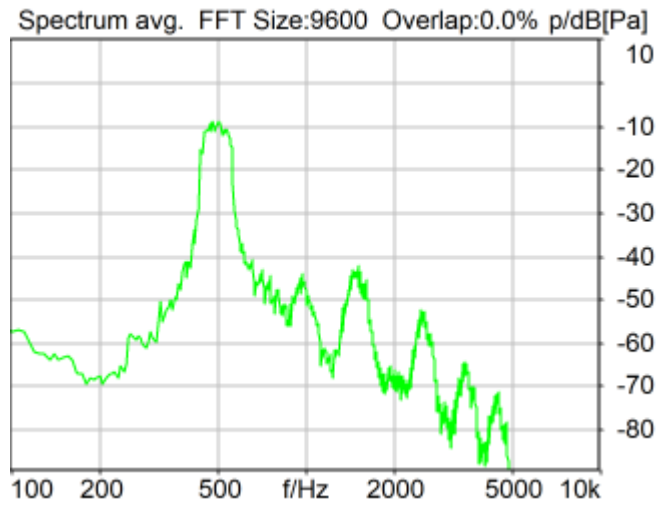
Ok

2023/11/10 16:56 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): 27.10 dB (4.41%) Ok

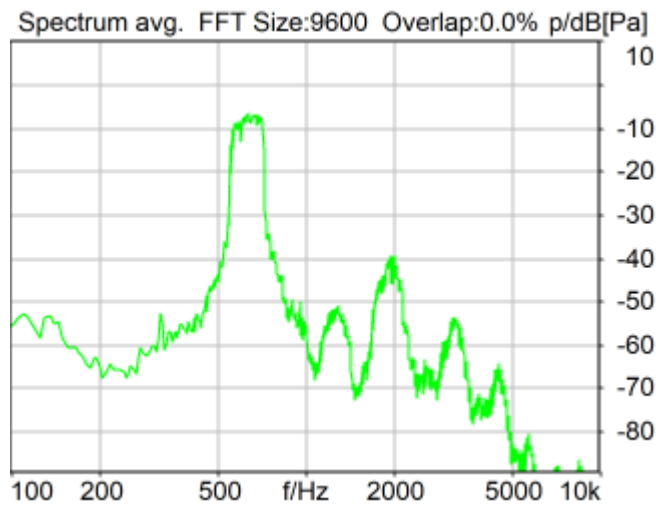
Ok

2023/11/10 16:56 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): 28.43 dB (3.79%) Ok

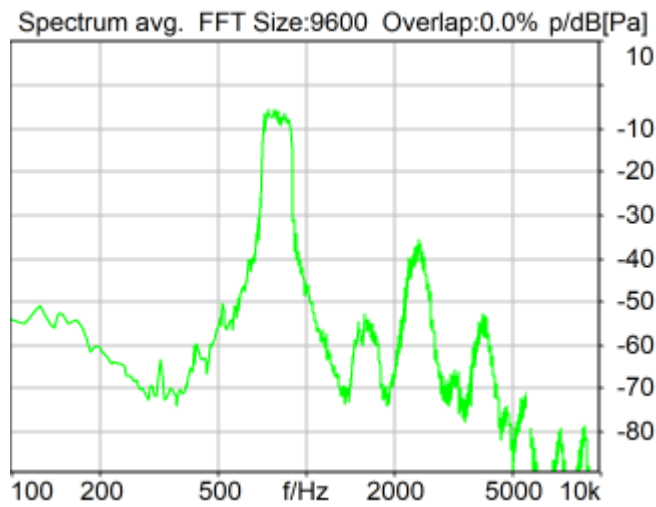
Ok

2023/11/10 16:57 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 8N



Distortion (Noise) RCV (packed): 26.97 dB (4.48%) Ok

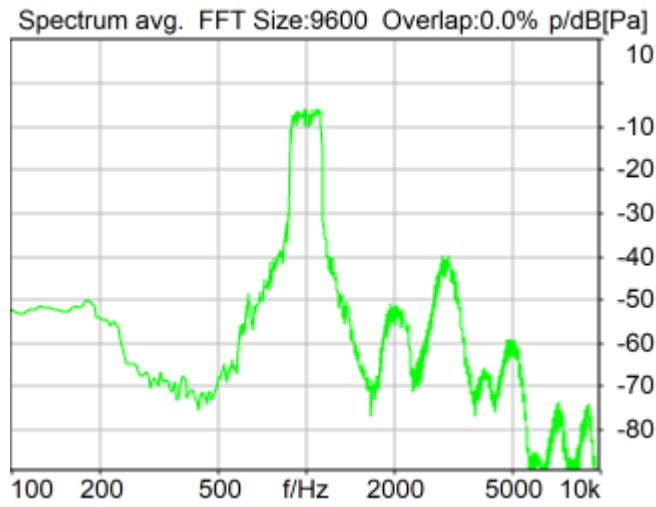
Ok

2023/11/10 16:57 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): 29.02 dB (3.54%) Ok

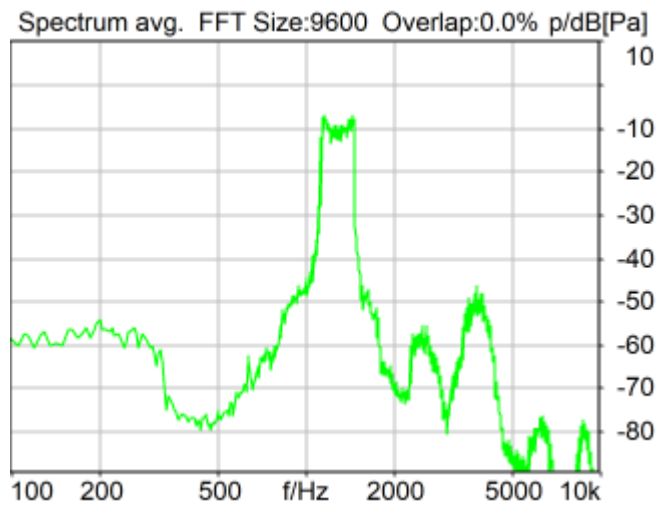
Ok

2023/11/10 16:58 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): 27.26 dB (4.33%) Ok

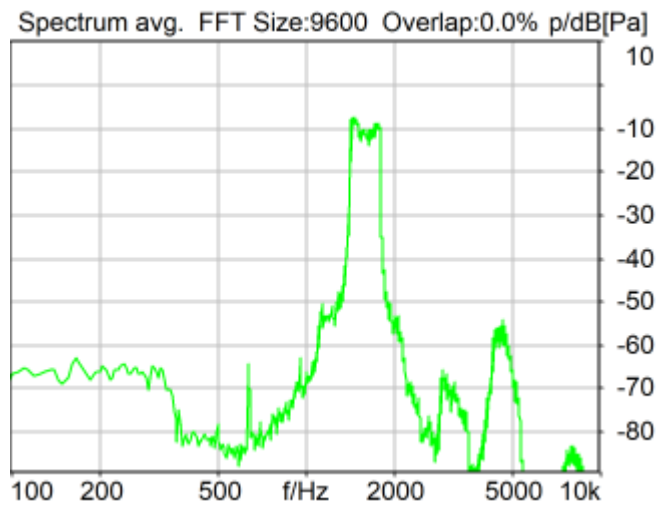
Ok

2023/11/10 16:58 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): 35.86 dB (1.61%) Ok

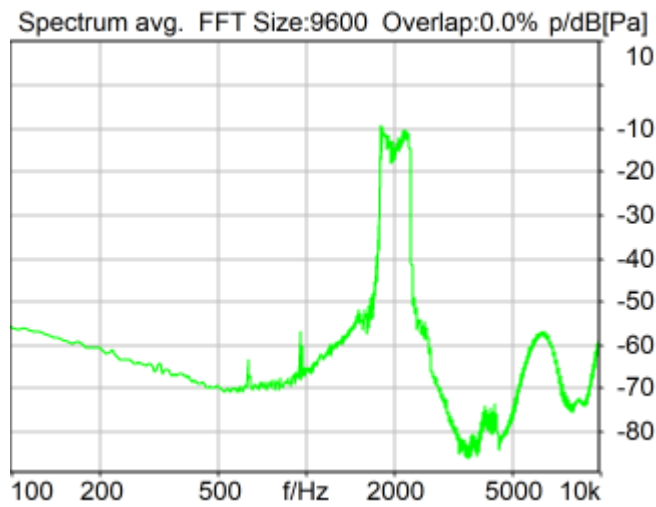
Ok

2023/11/10 16:58 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): 34.02 dB (1.99%) Ok

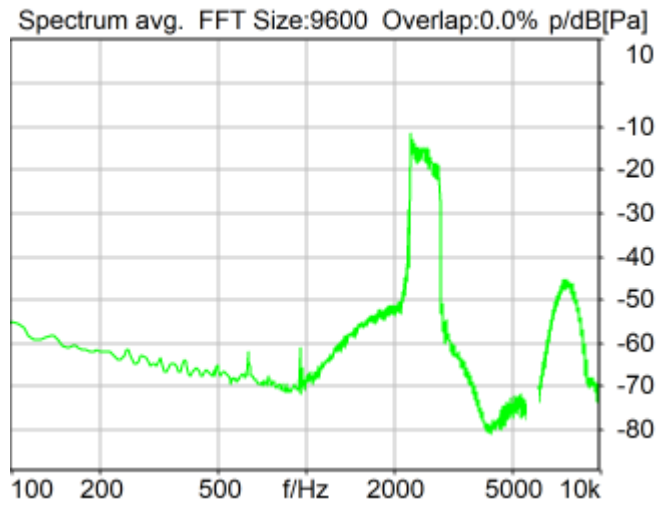
Ok

2023/11/10 16:59 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): 26.06 dB (4.98%) Ok

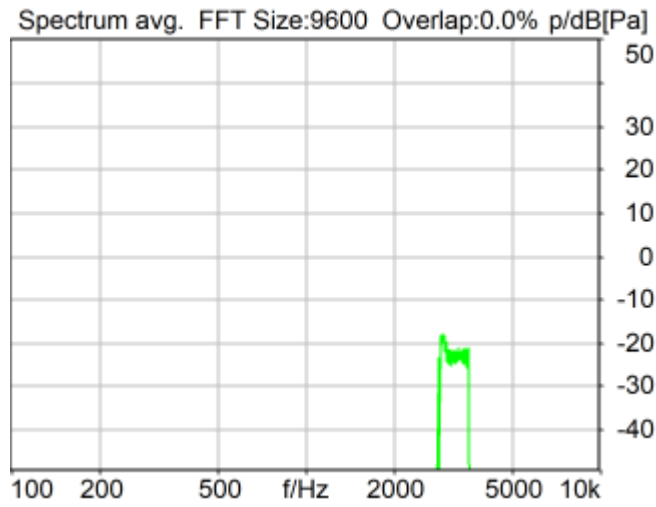
Ok

2023/11/10 16:59 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): 36.61 dB (1.48%) Ok

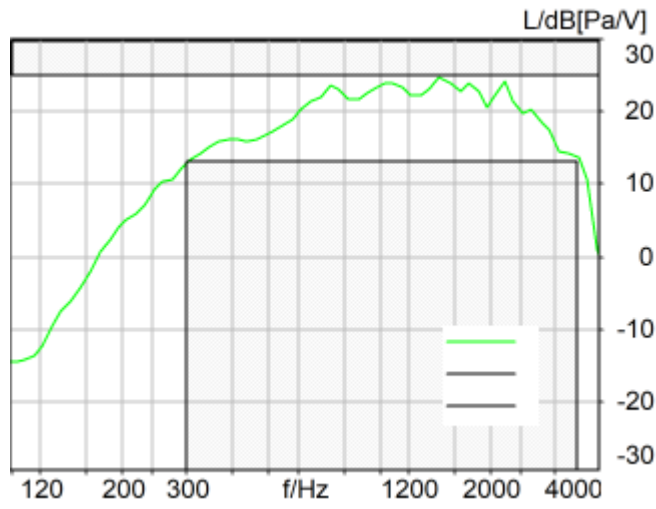
Ok

2023/11/10 17:00 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 8N FF HANB

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



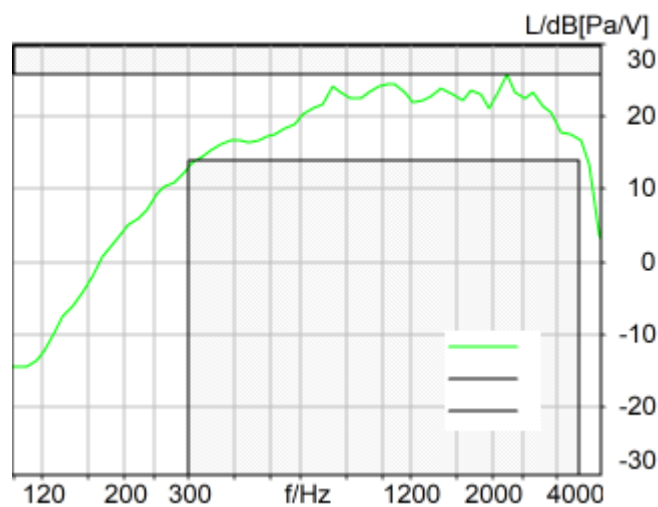
Absolute minimal distance
0.41 dB at 1447.5 Hz Ok

Ok

2023/11/10 17:00 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
-0.15 dB at 2177.4 Hz Not Ok

Not Ok

2023/11/10 17:00 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_2N
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Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/12 12:14

Status Overview

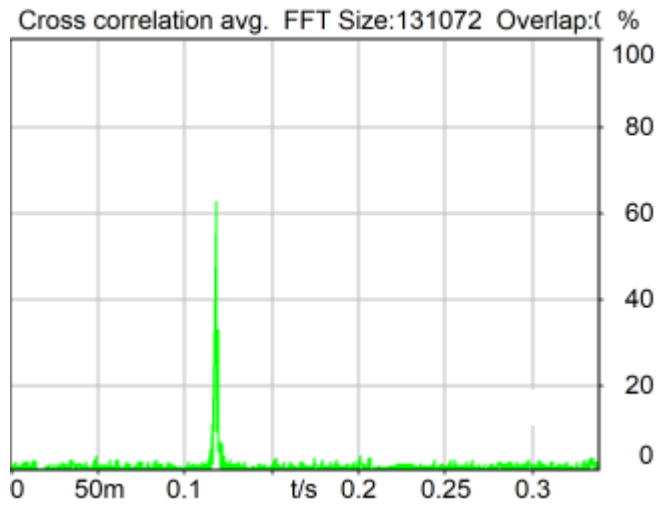
SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay WB	Done	Delay (Cross) [ms]	118.4	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_2N
5.1b Receive Volume Control Performance 2N WB	Ok	Speech Level [dB[SPL]]	84.71	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_2N
5.2 RCV Distortion and Noise - 250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	22.37	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_2N
5.2 RCV Distortion and Noise - 315 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	25.13	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_2N
5.2 RCV Distortion and Noise - 400 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	26.68	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_2N
5.2 RCV Distortion and Noise - 500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	28.34	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_2N
5.2 RCV Distortion and Noise - 630 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	29.86	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_2N
5.2 RCV Distortion and Noise - 800 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	28.85	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_2N
5.2 RCV Distortion and Noise - 1000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	31.95	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_2N
5.2 RCV Distortion and Noise - 1250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	34.08	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_2N
5.2 RCV Distortion and Noise - 1600 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	45.16	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_2N
5.2 RCV Distortion and Noise - 2000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	42.77	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_2N
5.2 RCV Distortion and Noise - 2500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	41.41	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_2N
5.2 RCV Distortion and Noise - 3150 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	42.00	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_2N
5.2 RCV Distortion and Noise - 4000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	45.58	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_2N
5.2 RCV Distortion and Noise - 5000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	37.85	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_2N
Report - Receive Distortion	Ok	Minimum SDNR	22.37	LTE Band

and Noise (Conversational Gain)		[dB], (occured at 250Hz)		71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_2N
5.3 Frequency Response 2N FF	Ok	Min. dist. to tolerance scheme [dB], 649.1 Hz	1.53	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_2N
5.3 Frequency Response 2N DF	Ok	Min. dist. to tolerance scheme [dB], 974.0 Hz	1.21	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_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



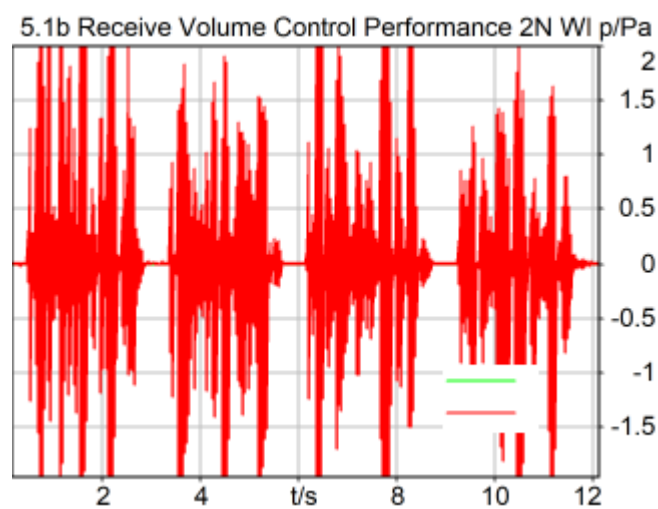
Delay (Cross): 118.4 ms

2023/11/12 12:04 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: 84.71 dB[SPL], Act.: 80.86% Ok

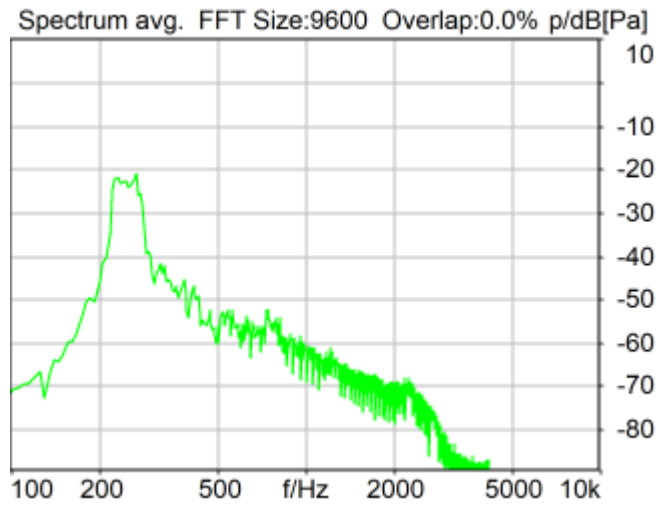
Ok

2023/11/12 12:05 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): 22.37 dB (7.61%) Ok

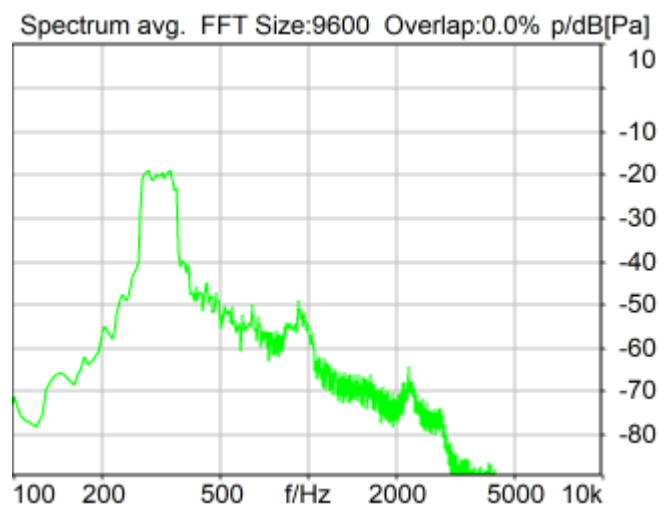
Ok

2023/11/12 12:05 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): 25.13 dB (5.54%) Ok

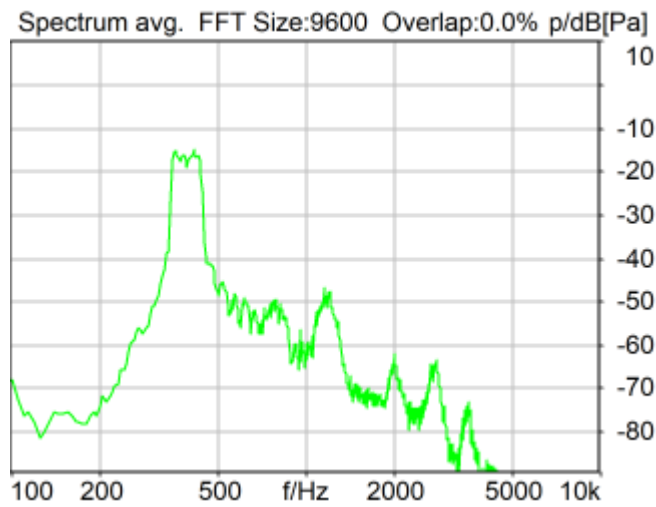
Ok

2023/11/12 12:06 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): 26.68 dB (4.63%) Ok

Ok

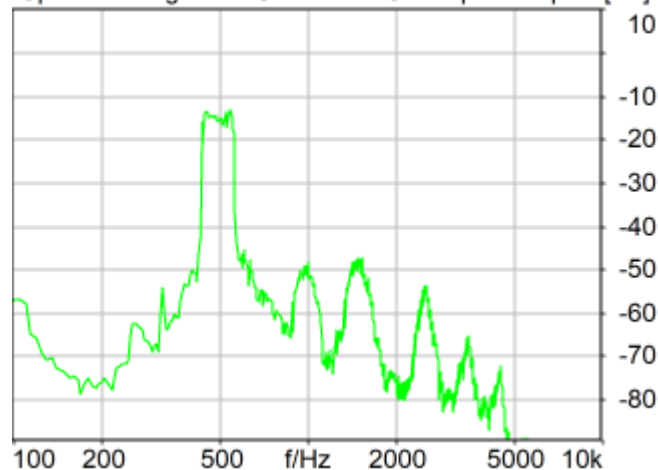
2023/11/12 12:06 ACQUA 5.1.200

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

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



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

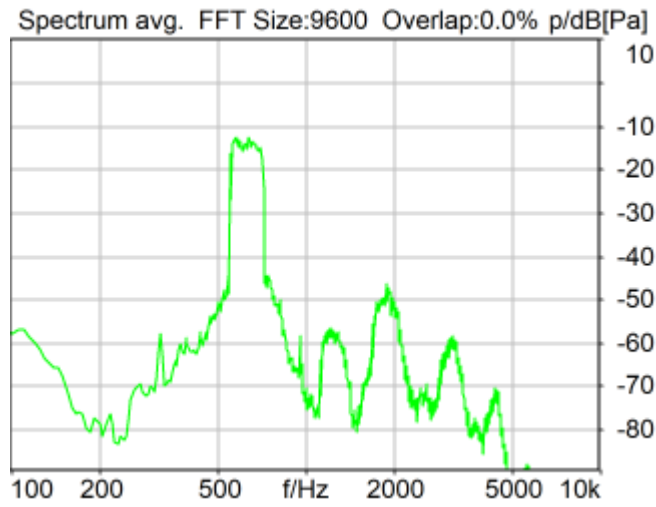
Ok

2023/11/12 12:07 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): 29.86 dB (3.21%) Ok

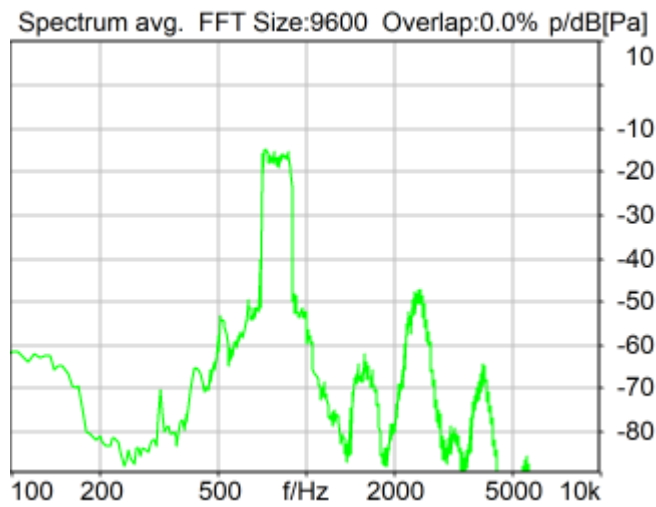
Ok

2023/11/12 12:07 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): 28.85 dB (3.61%) Ok

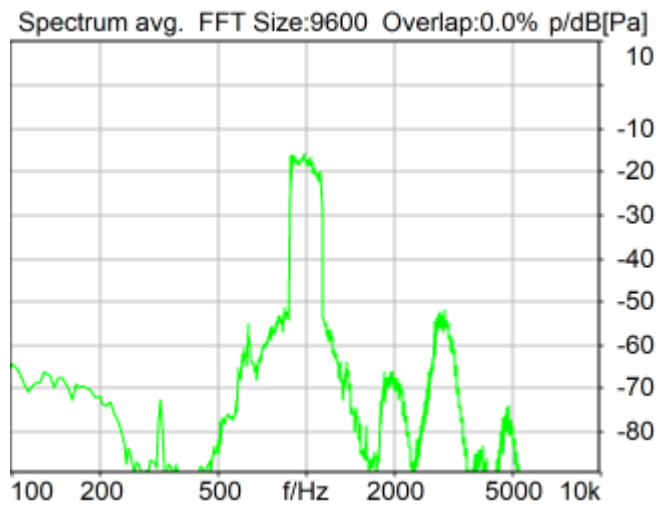
Ok

2023/11/12 12:07 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): 31.95 dB (2.53%) Ok

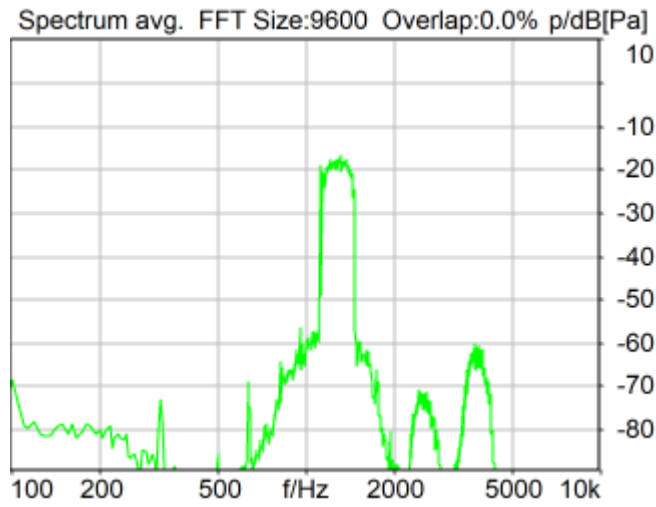
Ok

2023/11/12 12:08 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): 34.08 dB (1.98%) Ok

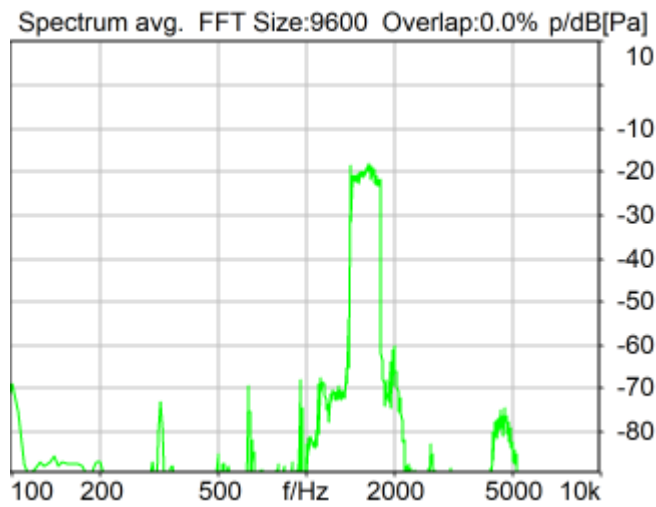
Ok

2023/11/12 12:08 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): 45.16 dB (0.55%) Ok

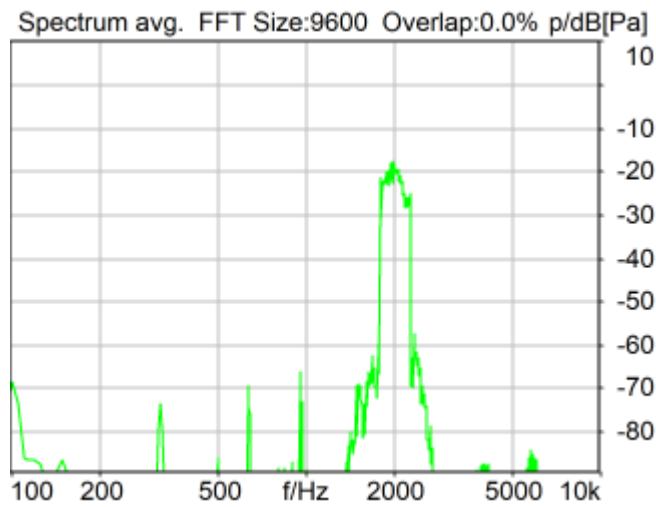
Ok

2023/11/12 12:09 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): 42.77 dB (0.73%) Ok

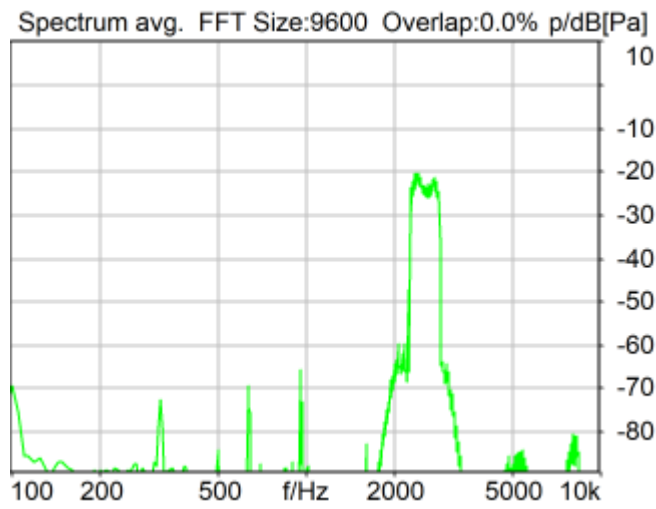
Ok

2023/11/12 12:09 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): 41.41 dB (0.85%) Ok

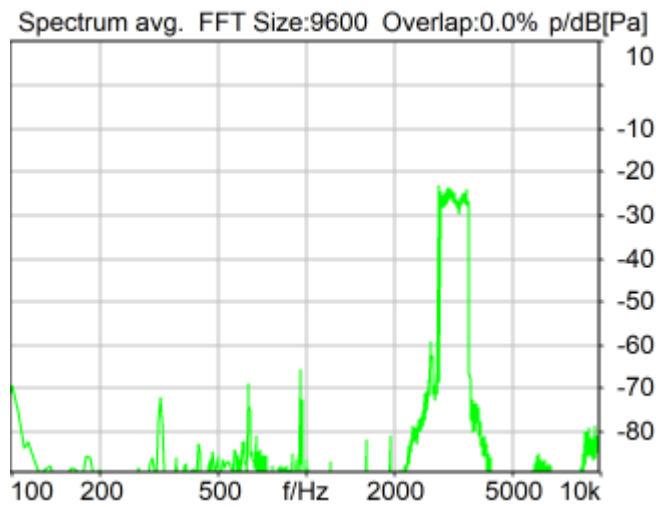
Ok

2023/11/12 12:09 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): 42.00 dB (0.79%) Ok

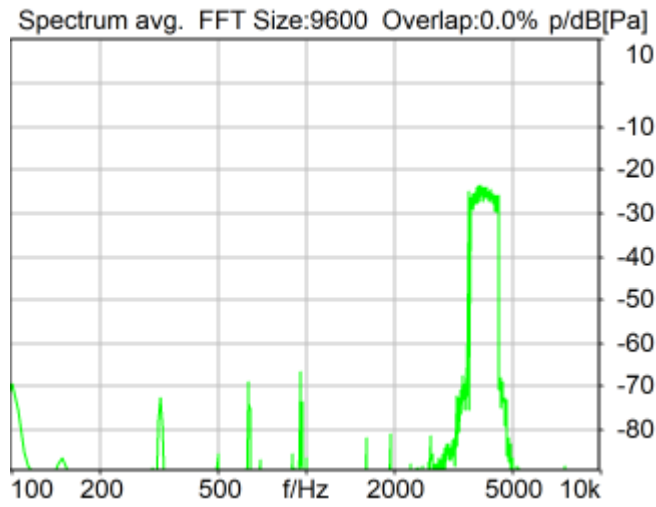
Ok

2023/11/12 12:10 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): 45.58 dB (0.53%) Ok

Ok

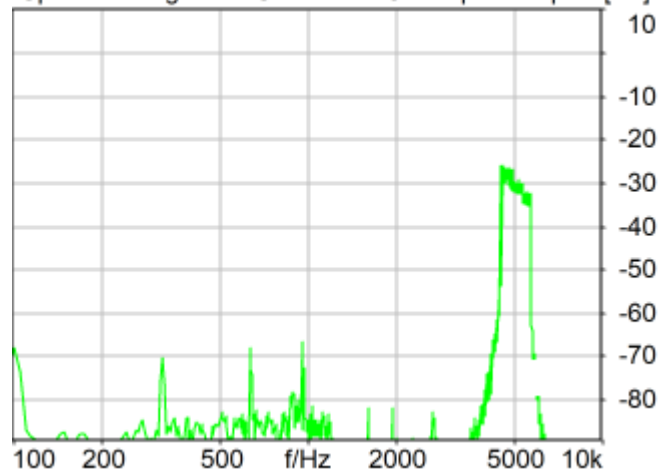
2023/11/12 12:10 ACQUA 5.1.200

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): 37.85 dB (1.28%) Ok

Ok

2023/11/12 12:11 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	22.37 dB
2	315Hz	25.13 dB
3	400Hz	26.68 dB
4	500Hz	28.34 dB
5	630Hz	29.86 dB
6	800Hz	28.85 dB
7	1000Hz	31.95 dB
8	1250Hz	34.08 dB
9	1600Hz	45.16 dB
10	2000Hz	42.77 dB
11	2500Hz	41.41 dB
12	3150Hz	42.00 dB
13	4000Hz	45.58 dB
14	5000Hz	37.85 dB

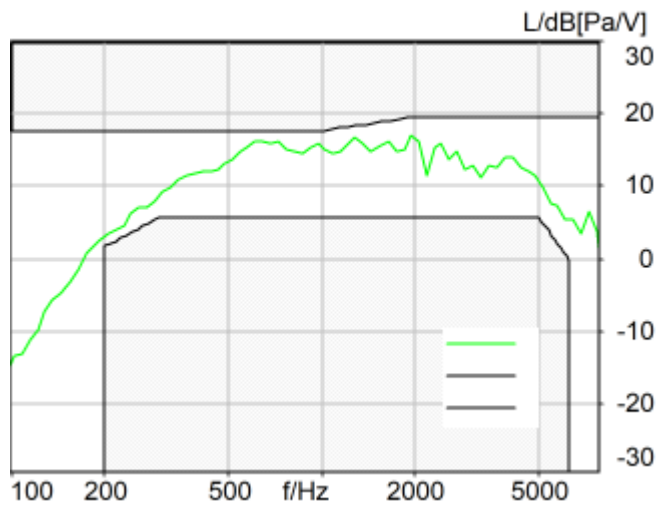
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 22.37dB at 250Hz.

2023/11/12 12:13 ACQUA

5.3 Frequency Response 2N FF

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



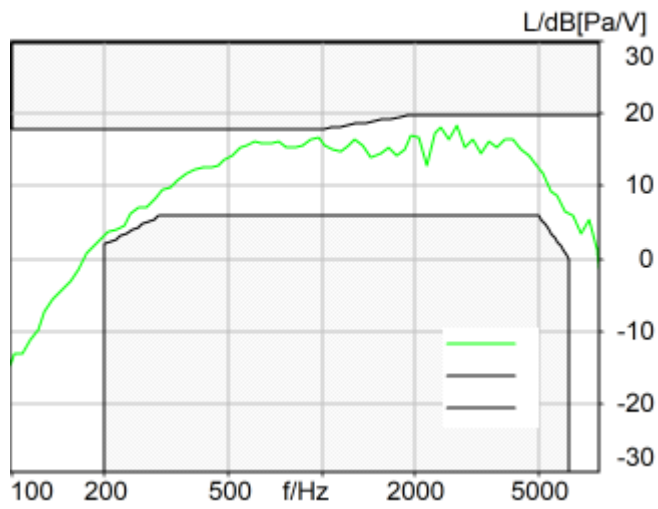
Absolute minimal distance
1.53 dB at 649.1 Hz Ok

Ok

2023/11/12 12:13 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N DF

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



Absolute minimal distance
1.21 dB at 974.0 Hz Ok

Ok

2023/11/12 12:13 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_8N
--------------------	--

Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/12 12:25

Status Overview

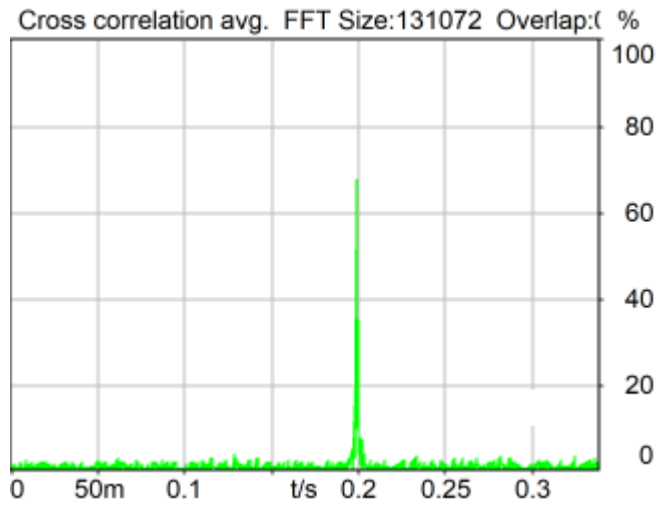
SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay WB	Done	Delay (Cross) [ms]	199.0	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_8N
5.1a Receive Volume Control Performance 8N WB	Ok	Speech Level [dB[SPL]]	89.10	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_8N
5.2 RCV Distortion and Noise - 250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	22.82	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_8N
5.2 RCV Distortion and Noise - 315 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	24.17	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_8N
5.2 RCV Distortion and Noise - 400 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	25.01	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_8N
5.2 RCV Distortion and Noise - 500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	28.84	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_8N
5.2 RCV Distortion and Noise - 630 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	30.15	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_8N
5.2 RCV Distortion and Noise - 800 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	30.43	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_8N
5.2 RCV Distortion and Noise - 1000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	33.12	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_8N
5.2 RCV Distortion and Noise - 1250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	34.51	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_8N
5.2 RCV Distortion and Noise - 1600 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	45.56	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_8N
5.2 RCV Distortion and Noise - 2000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	44.29	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_8N
5.2 RCV Distortion and Noise - 2500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	42.58	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_8N
5.2 RCV Distortion and Noise - 3150 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	37.44	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_8N
5.2 RCV Distortion and Noise - 4000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	44.79	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_8N
5.2 RCV Distortion and Noise - 5000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	35.58	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_8N
Report - Receive Distortion	Ok	Minimum SDNR	22.82	LTE Band

and Noise (Conversational Gain)		[dB], (occured at 250Hz)		71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_8N
5.3 Frequency Response 8N FF	Ok	Min. dist. to tolerance scheme [dB], 217.7 Hz	1.54	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_8N
5.3 Frequency Response 8N DF	Ok	Min. dist. to tolerance scheme [dB], 974.0 Hz	1.30	LTE Band 71_20M_QPSK_100RB_0Offset_EVS WB 64Kbps_Ch133322_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



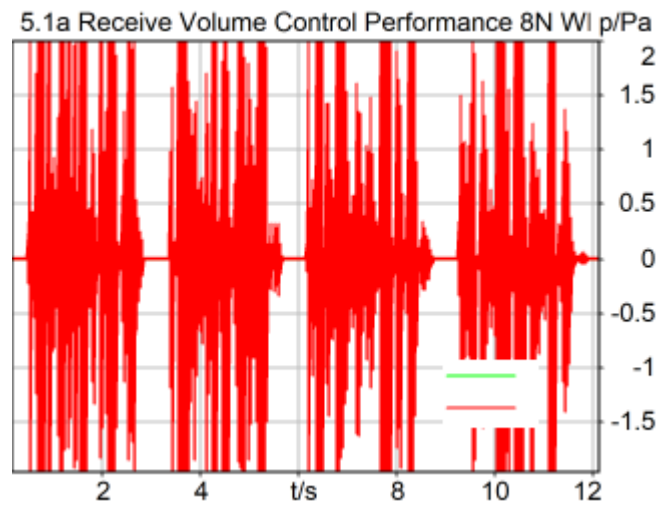
Delay (Cross): 199.0 ms

2023/11/12 12:15 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: 89.10 dB[SPL], Act.: 80.72% Ok

Ok

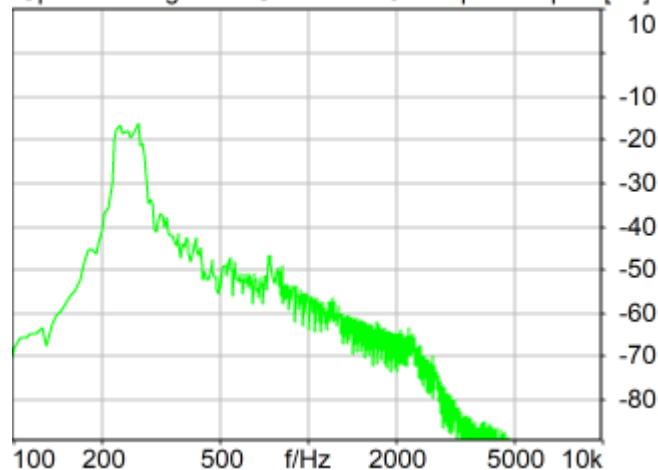
2023/11/12 12:16 ACQUA 5.1.200

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

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



Distortion (Noise) RCV (packed): 22.82 dB (7.23%) Ok

Ok

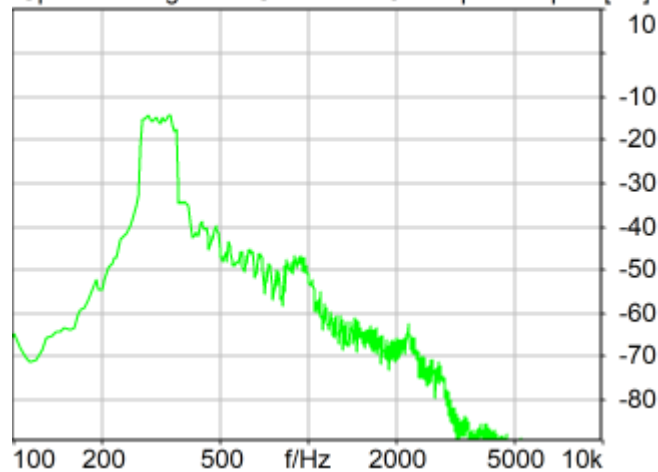
2023/11/12 12:16 ACQUA 5.1.200

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

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



Distortion (Noise) RCV (packed): 24.17 dB (6.19%) Ok

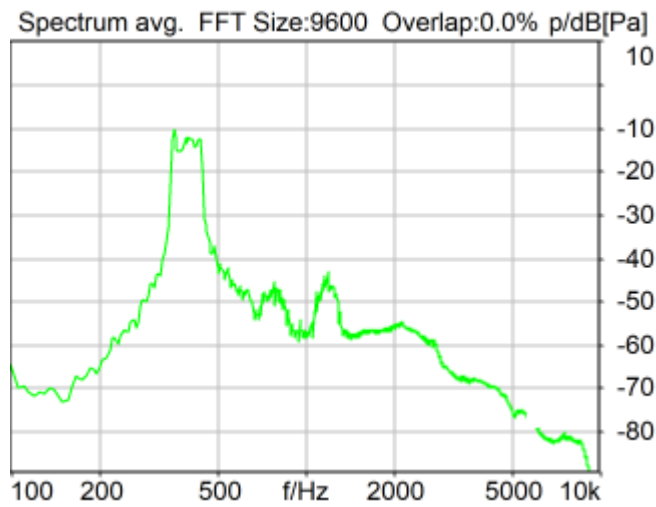
Ok

2023/11/12 12:16 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): 25.01 dB (5.62%) Ok

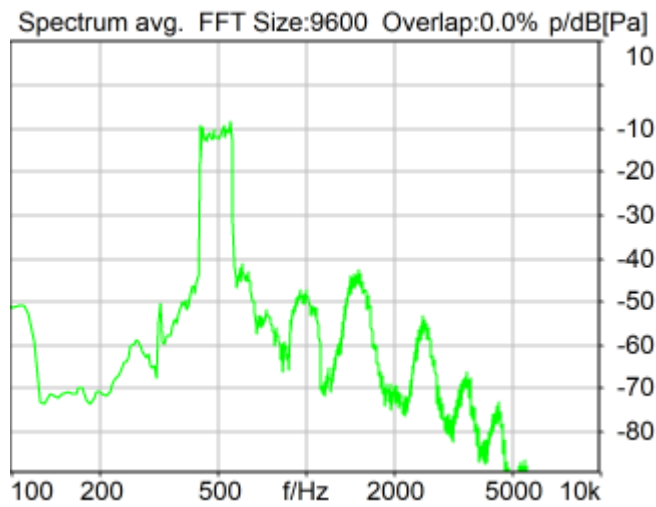
Ok

2023/11/12 12:17 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): 28.84 dB (3.61%) Ok

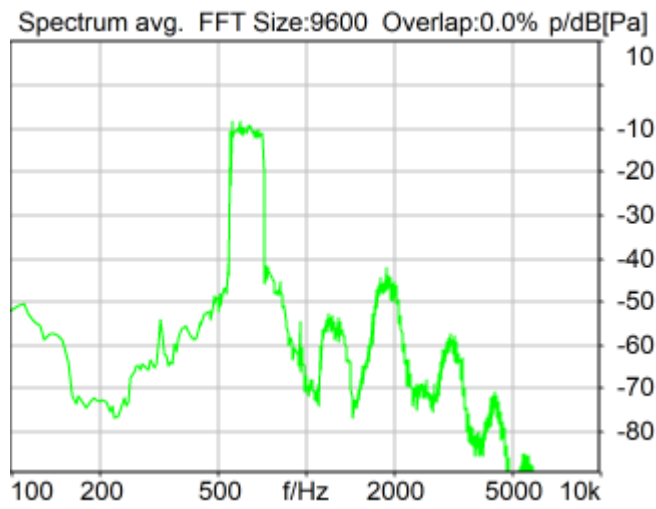
Ok

2023/11/12 12:17 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): 30.15 dB (3.11%) Ok

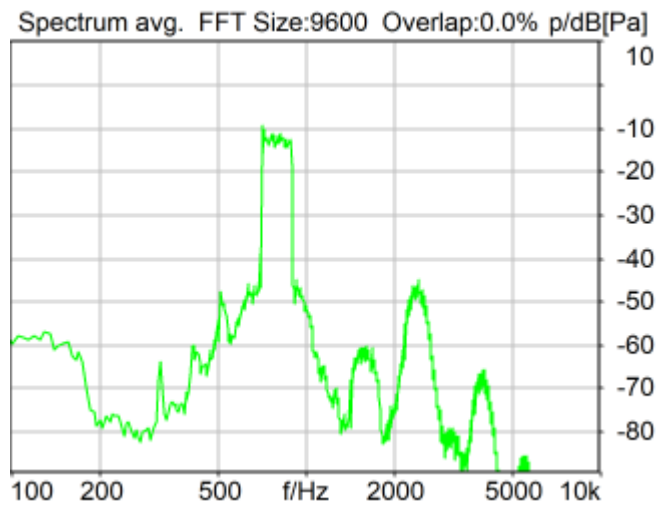
Ok

2023/11/12 12:18 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): 30.43 dB (3.01%) Ok

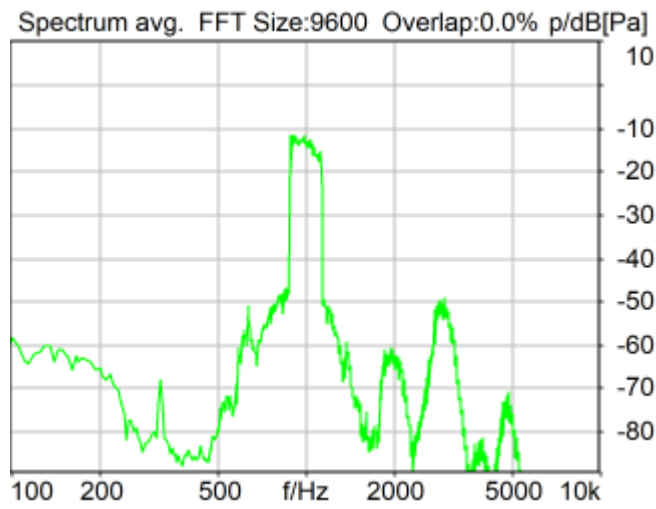
Ok

2023/11/12 12:18 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): 33.12 dB (2.21%) Ok

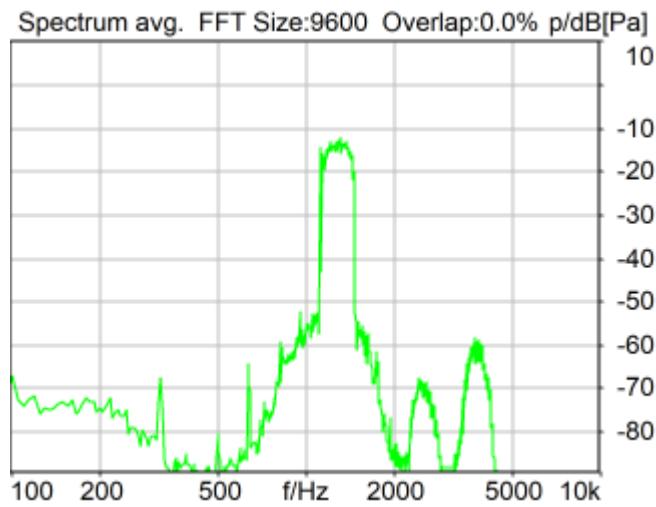
Ok

2023/11/12 12:18 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): 34.51 dB (1.88%) Ok

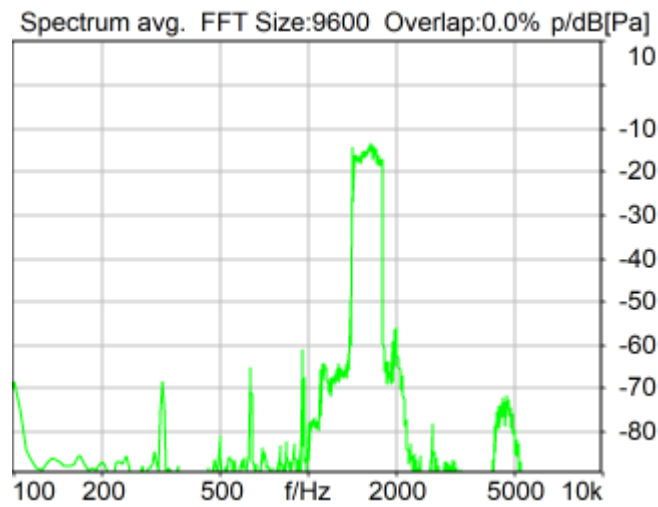
Ok

2023/11/12 12:19 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): 45.56 dB (0.53%) Ok

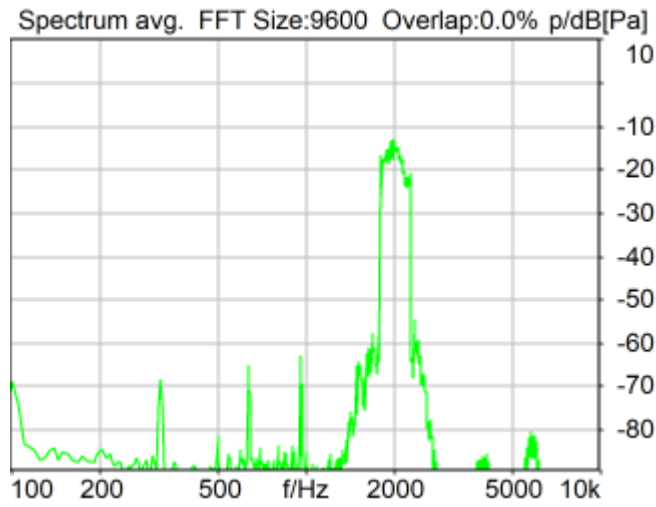
Ok

2023/11/12 12:19 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): 44.29 dB (0.61%) Ok

Ok

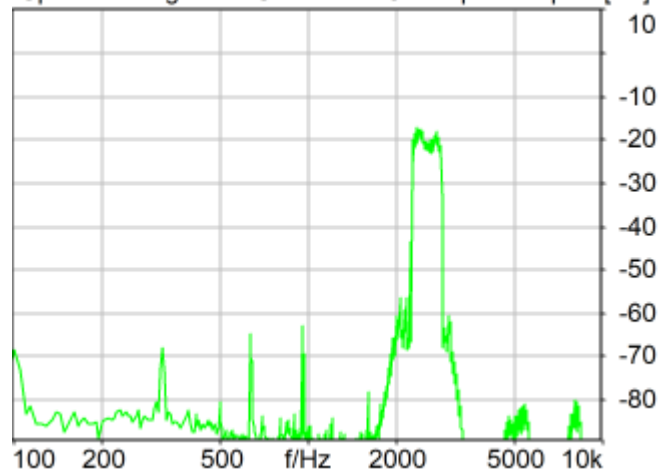
2023/11/12 12:20 ACQUA 5.1.200

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

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



Distortion (Noise) RCV (packed): 42.58 dB (0.74%) Ok

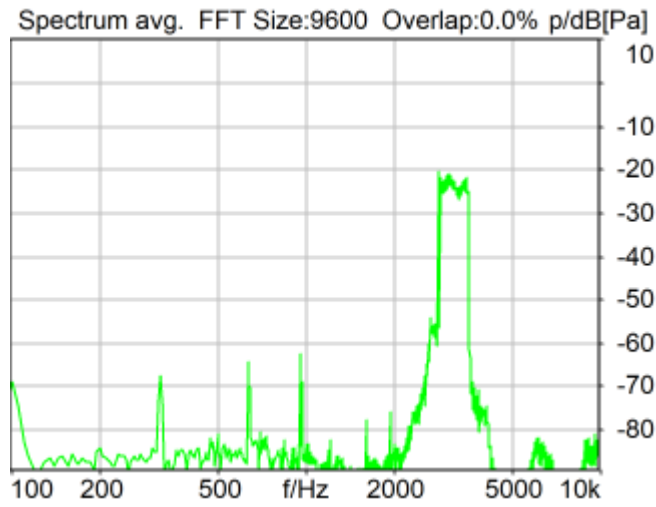
Ok

2023/11/12 12:20 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): 37.44 dB (1.34%) Ok

Ok

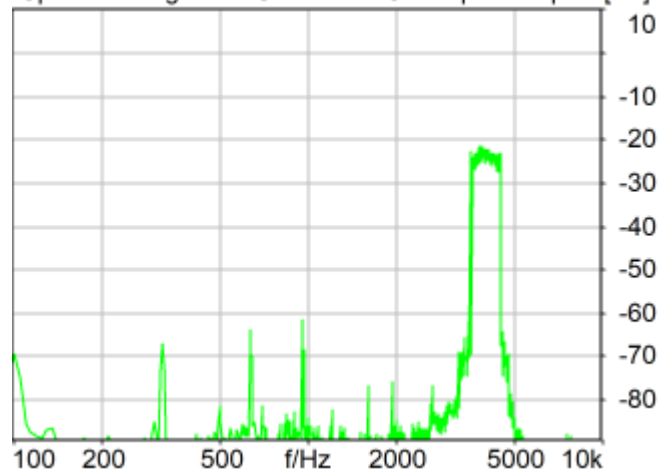
2023/11/12 12:20 ACQUA 5.1.200

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

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



Distortion (Noise) RCV (packed): 44.79 dB (0.58%) Ok

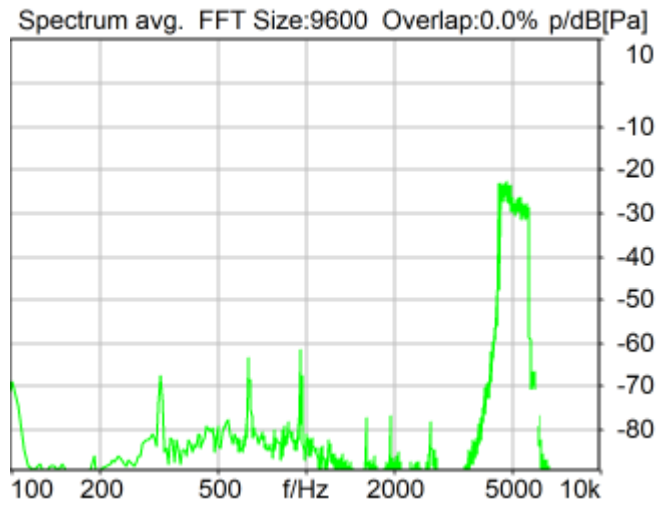
Ok

2023/11/12 12:21 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): 35.58 dB (1.66%) Ok

Ok

2023/11/12 12:21 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	22.82 dB
2	315Hz	24.17 dB
3	400Hz	25.01 dB
4	500Hz	28.84 dB
5	630Hz	30.15 dB
6	800Hz	30.43 dB
7	1000Hz	33.12 dB
8	1250Hz	34.51 dB
9	1600Hz	45.56 dB
10	2000Hz	44.29 dB
11	2500Hz	42.58 dB
12	3150Hz	37.44 dB
13	4000Hz	44.79 dB
14	5000Hz	35.58 dB

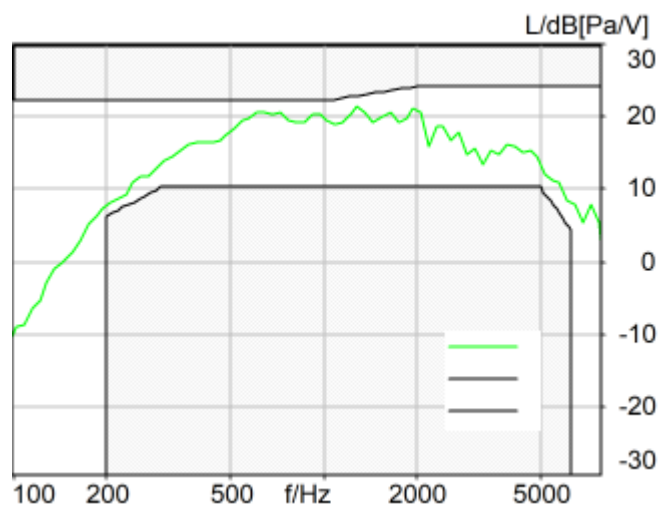
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 22.82dB at 250Hz.

2023/11/12 12:24 ACQUA

5.3 Frequency Response 8N FF

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



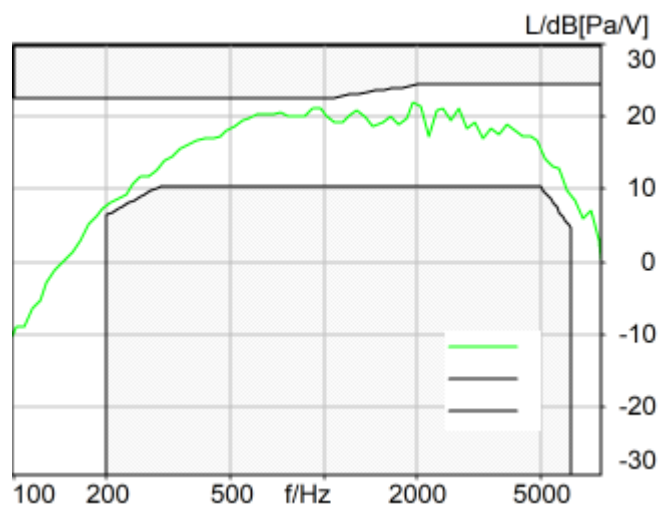
Absolute minimal distance
1.54 dB at 217.7 Hz Ok

Ok

2023/11/12 12:25 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 8N DF

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



Absolute minimal distance
1.30 dB at 974.0 Hz Ok

Ok

2023/11/12 12:25 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	LTE Band 12_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23095_2N
--------------------	--

Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/21 20:33

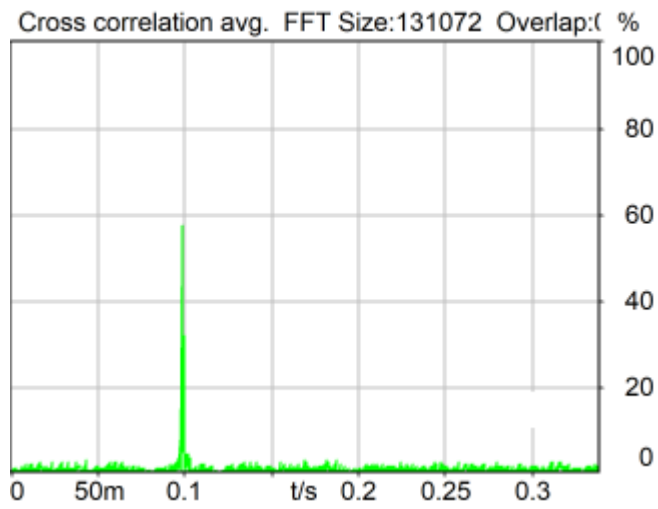
Status Overview

SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay NB	Done	Delay (Cross) [ms]	99.6	LTE Band 12_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23095_2N
5.1b Receive Volume Control Performance 2N NB	Ok	Speech Level [dB[SPL]]	86.37	LTE Band 12_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23095_2N
5.2 RCV Distortion and Noise - 400 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	25.28	LTE Band 12_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23095_2N
5.2 RCV Distortion and Noise - 500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	27.12	LTE Band 12_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23095_2N
5.2 RCV Distortion and Noise - 630 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	28.44	LTE Band 12_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23095_2N
5.2 RCV Distortion and Noise - 800 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	25.62	LTE Band 12_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23095_2N
5.2 RCV Distortion and Noise - 1000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	26.75	LTE Band 12_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23095_2N
5.2 RCV Distortion and Noise - 1250 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	29.87	LTE Band 12_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23095_2N
5.2 RCV Distortion and Noise - 1600 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	32.71	LTE Band 12_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23095_2N
5.2 RCV Distortion and Noise - 2000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	33.11	LTE Band 12_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23095_2N
5.2 RCV Distortion and Noise - 2500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	41.30	LTE Band 12_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23095_2N
5.2 RCV Distortion and Noise - 3150 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	35.25	LTE Band 12_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23095_2N
5.3 Frequency Response 2N FF HANB	Ok	Min. dist. to tolerance scheme [dB], 2177.4 Hz	0.30	LTE Band 12_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23095_2N
5.3 Frequency Response 2N DF HANB	Not Ok	Min. dist. to tolerance scheme [dB], 2177.4 Hz	-0.07	LTE Band 12_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23095_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



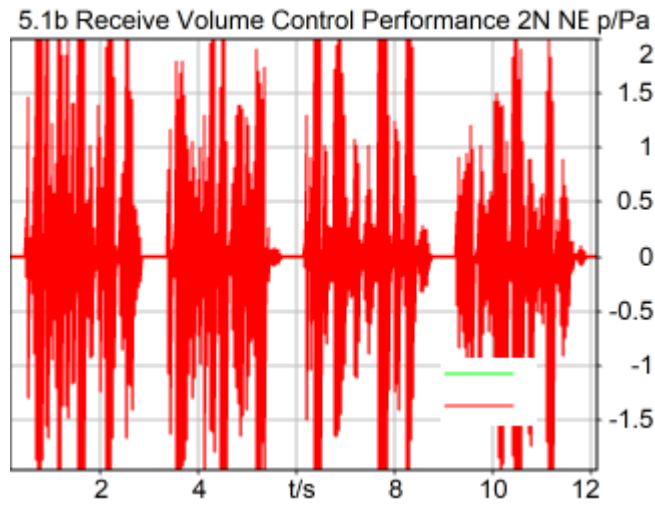
Delay (Cross): 99.6 ms

2023/11/10 17:09 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: 86.37 dB[SPL], Act.: 80.69% Ok

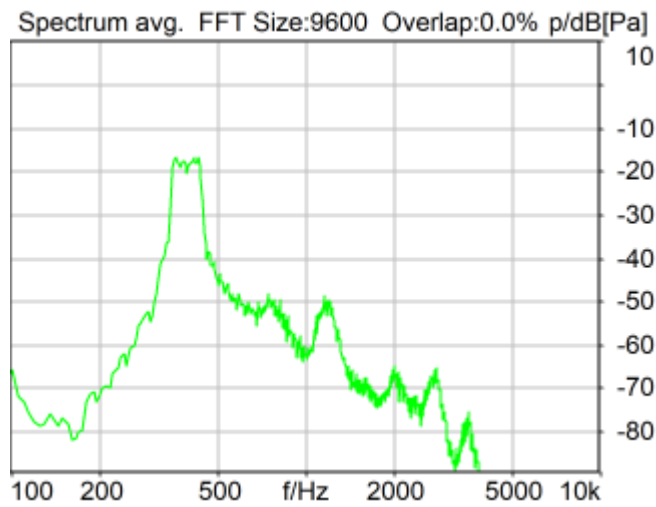
Ok

2023/11/10 17:09 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): 25.28 dB (5.45%) Ok

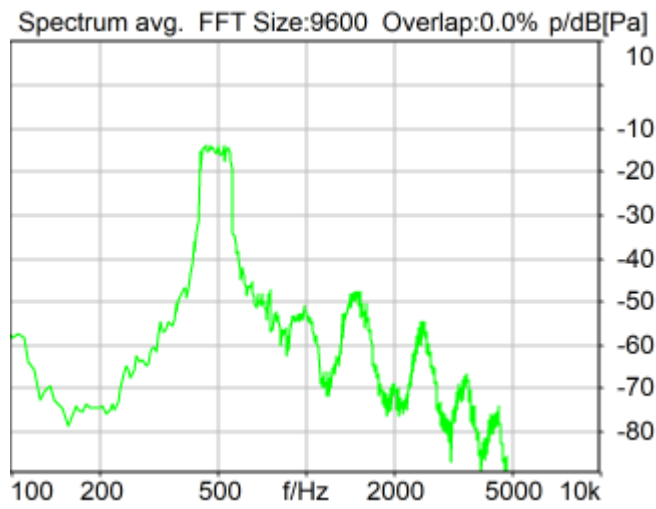
Ok

2023/11/10 17:09 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): 27.12 dB (4.41%) Ok

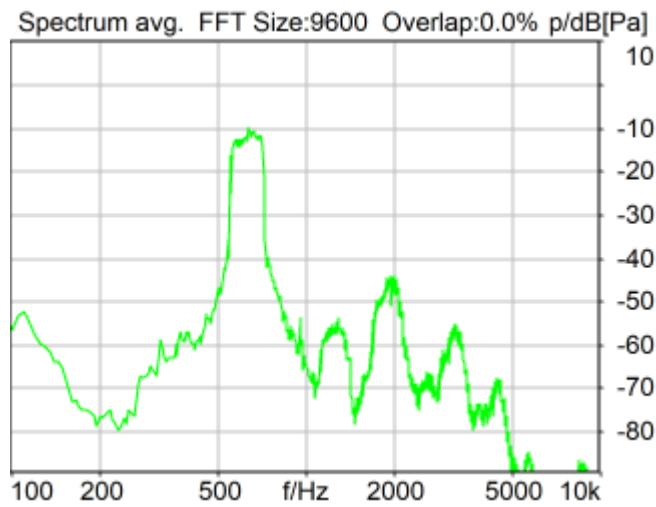
Ok

2023/11/10 17:10 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 2N



Distortion (Noise) RCV (packed): 28.44 dB (3.78%) Ok

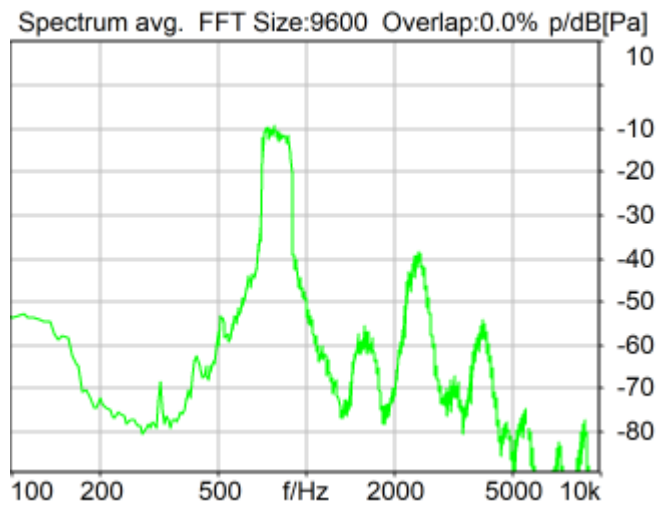
Ok

2023/11/10 17:10 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): 25.62 dB (5.24%) Ok

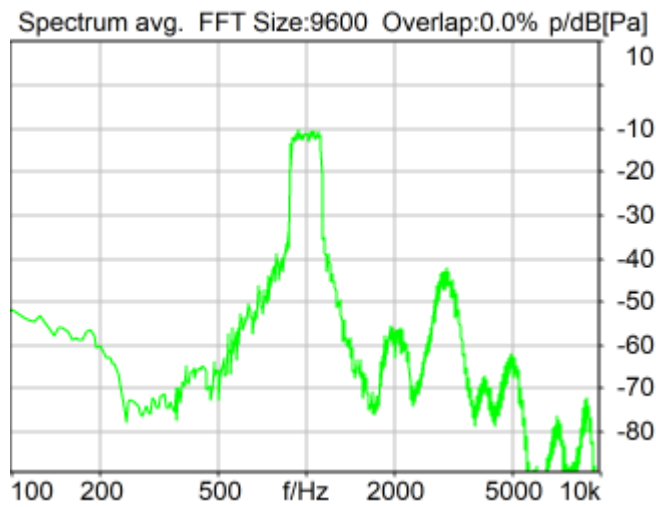
Ok

2023/11/10 17:11 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 2N



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

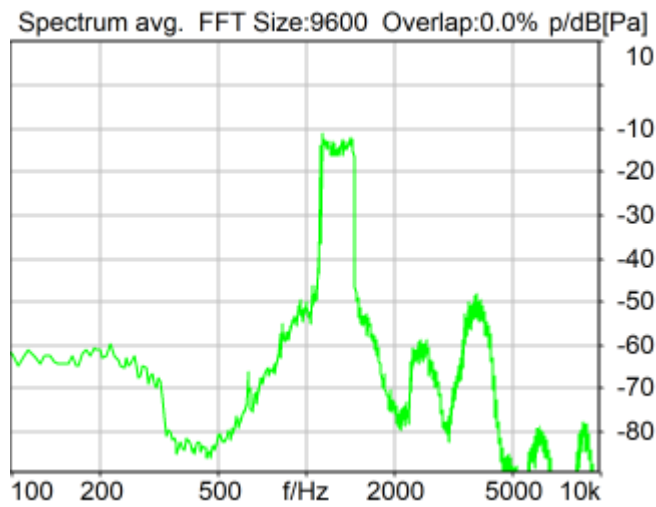
Ok

2023/11/10 17:11 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): 29.87 dB (3.21%) Ok

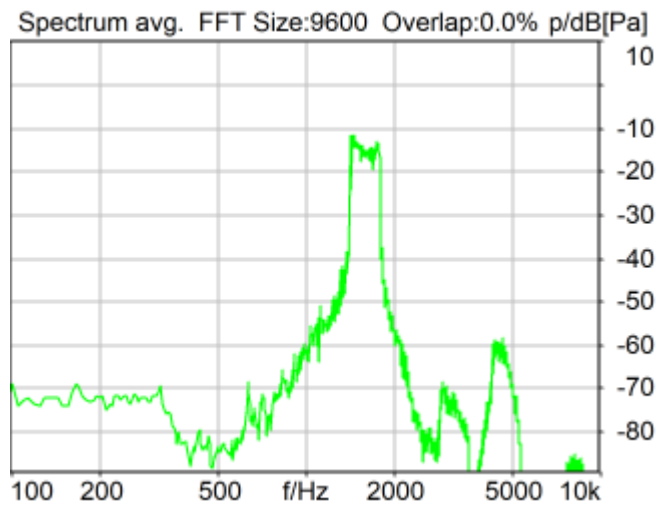
Ok

2023/11/10 17:12 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): 32.71 dB (2.31%) Ok

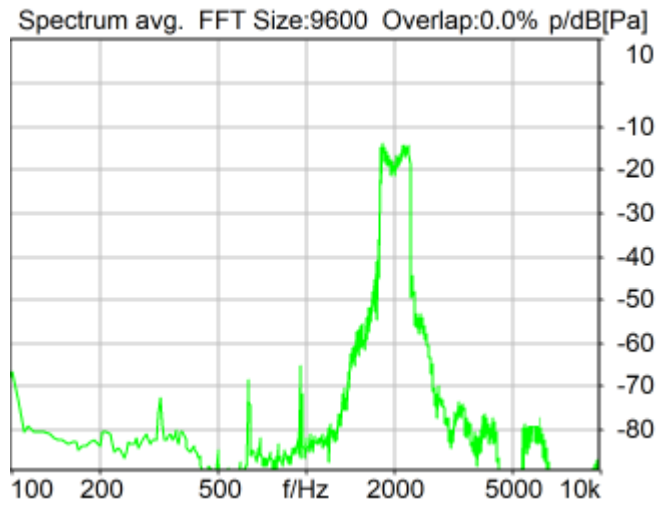
Ok

2023/11/10 17:12 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): 33.11 dB (2.21%) Ok

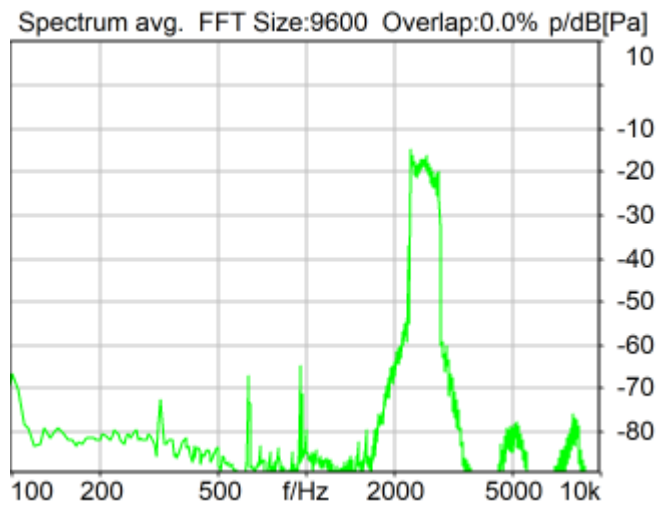
Ok

2023/11/10 17:12 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): 41.30 dB (0.86%) Ok

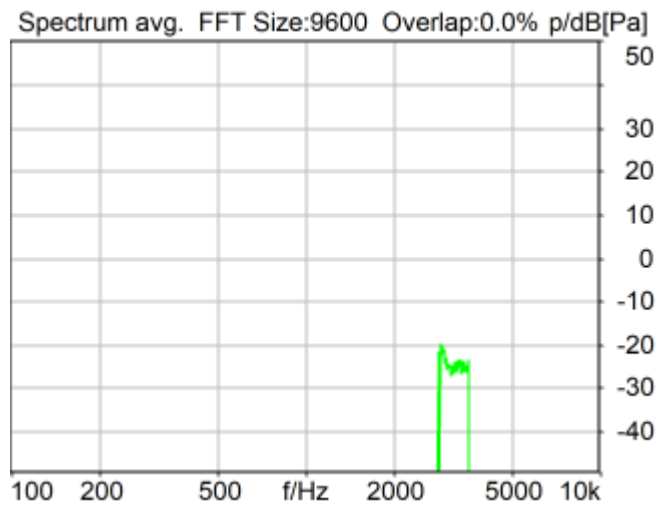
Ok

2023/11/10 17:13 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): 35.25 dB (1.73%) Ok

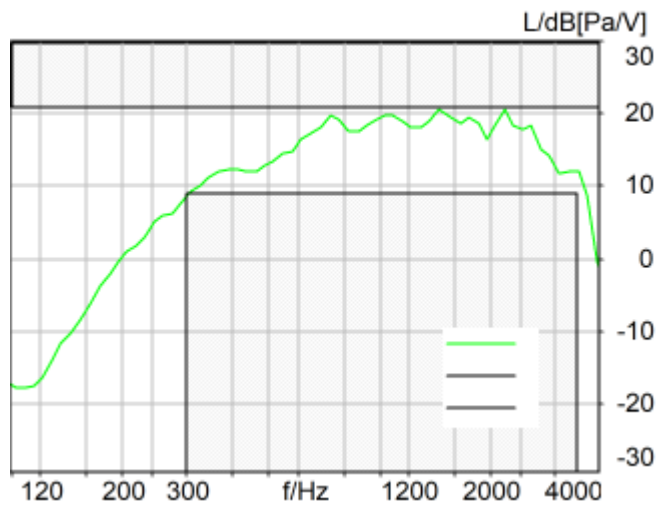
Ok

2023/11/10 17:13 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N FF HANB

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



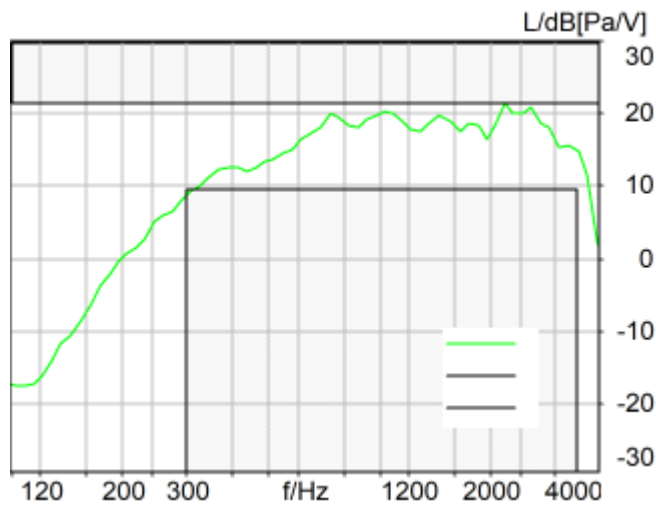
Absolute minimal distance
0.30 dB at 2177.4 Hz Ok

Ok

2023/11/10 17:13 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
-0.07 dB at 2177.4 Hz Not Ok

Not Ok

2023/11/10 17:14 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	LTE Band 12_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23095_8N
--------------------	--

Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/21 20:35

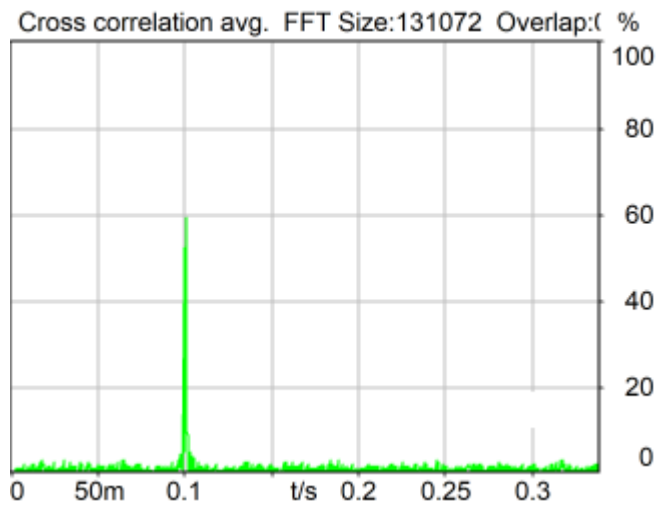
Status Overview

SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay NB	Done	Delay (Cross) [ms]	101.0	LTE Band 12_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23095_8N
5.1a Receive Volume Control Performance 8N NB	Ok	Speech Level [dB[SPL]]	90.52	LTE Band 12_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23095_8N
5.2 RCV Distortion and Noise - 400 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	25.72	LTE Band 12_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23095_8N
5.2 RCV Distortion and Noise - 500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	27.30	LTE Band 12_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23095_8N
5.2 RCV Distortion and Noise - 630 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	28.64	LTE Band 12_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23095_8N
5.2 RCV Distortion and Noise - 800 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	26.87	LTE Band 12_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23095_8N
5.2 RCV Distortion and Noise - 1000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	29.32	LTE Band 12_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23095_8N
5.2 RCV Distortion and Noise - 1250 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	30.75	LTE Band 12_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23095_8N
5.2 RCV Distortion and Noise - 1600 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	37.85	LTE Band 12_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23095_8N
5.2 RCV Distortion and Noise - 2000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	35.80	LTE Band 12_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23095_8N
5.2 RCV Distortion and Noise - 2500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	25.63	LTE Band 12_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23095_8N
5.2 RCV Distortion and Noise - 3150 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	35.77	LTE Band 12_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23095_8N
5.3 Frequency Response 8N FF HANB	Ok	Min. dist. to tolerance scheme [dB], 305.9 Hz	0.34	LTE Band 12_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23095_8N
5.3 Frequency Response 8N DF HANB	Ok	Min. dist. to tolerance scheme [dB], 2177.4 Hz	0.11	LTE Band 12_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23095_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
5.3 Frequency Response 8N FF HANB	17
5.3 Frequency Response 8N DF HANB	18

Overall Receive Delay NB

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



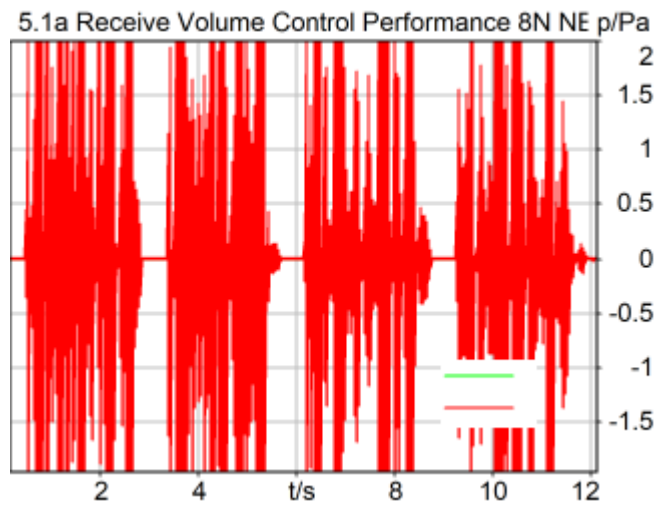
Delay (Cross): 101.0 ms

2023/11/10 17:18 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: 90.52 dB[SPL], Act.: 81.00% Ok

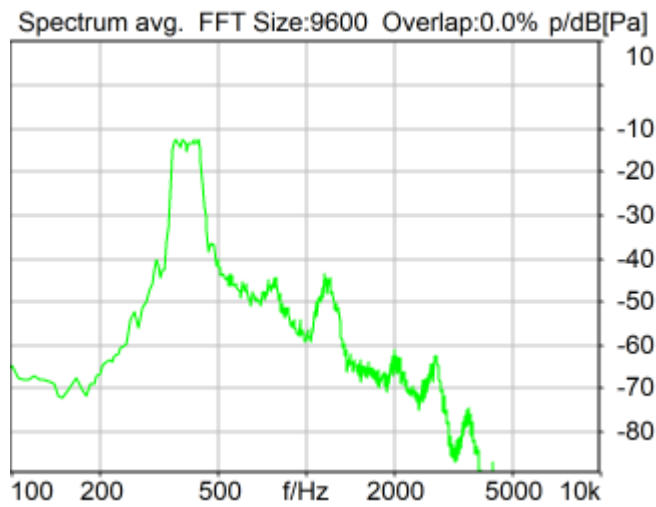
Ok

2023/11/10 17:18 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 8N



Distortion (Noise) RCV (packed): 25.72 dB (5.17%) Ok

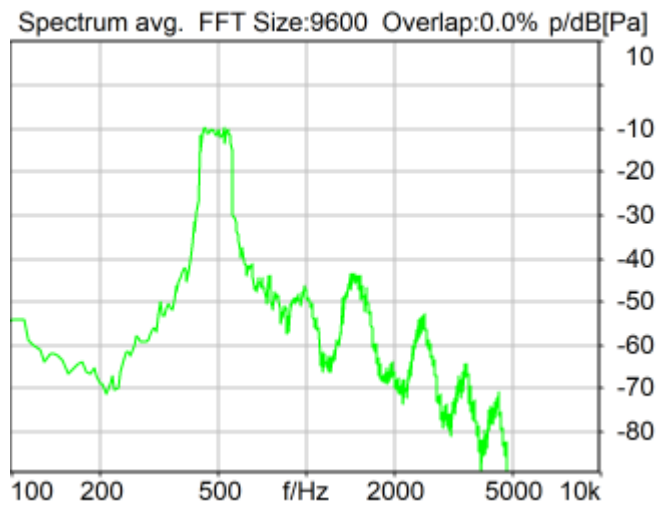
Ok

2023/11/10 17:18 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 8N



Distortion (Noise) RCV (packed): 27.30 dB (4.32%) Ok

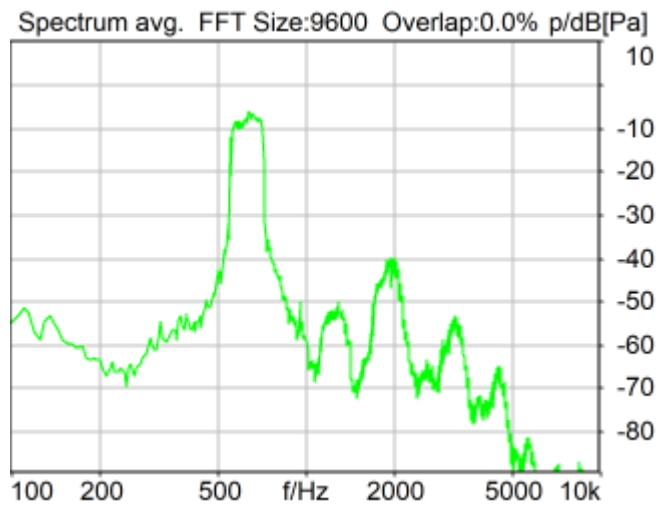
Ok

2023/11/10 17:19 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 8N



Distortion (Noise) RCV (packed): 28.64 dB (3.70%) Ok

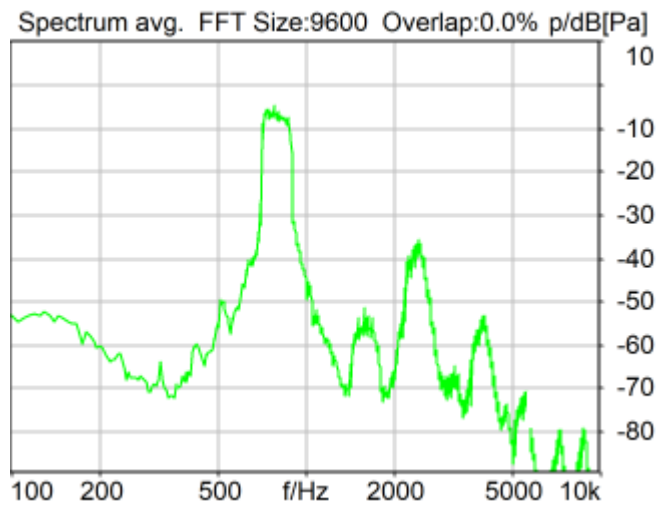
Ok

2023/11/10 17:19 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 8N



Distortion (Noise) RCV (packed): 26.87 dB (4.53%) Ok

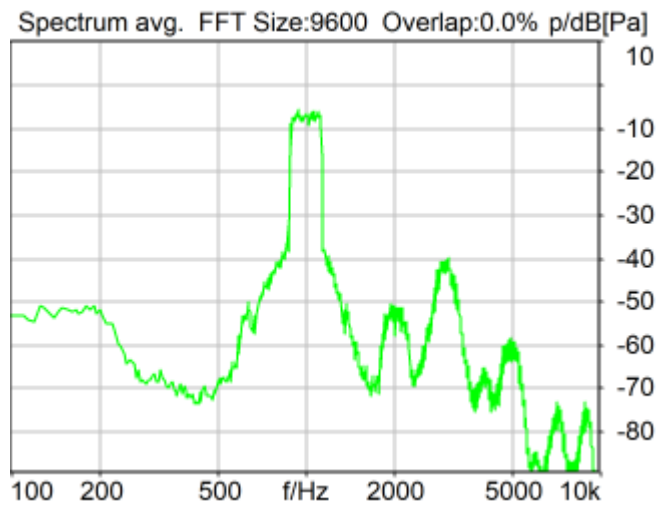
Ok

2023/11/10 17:19 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): 29.32 dB (3.42%) Ok

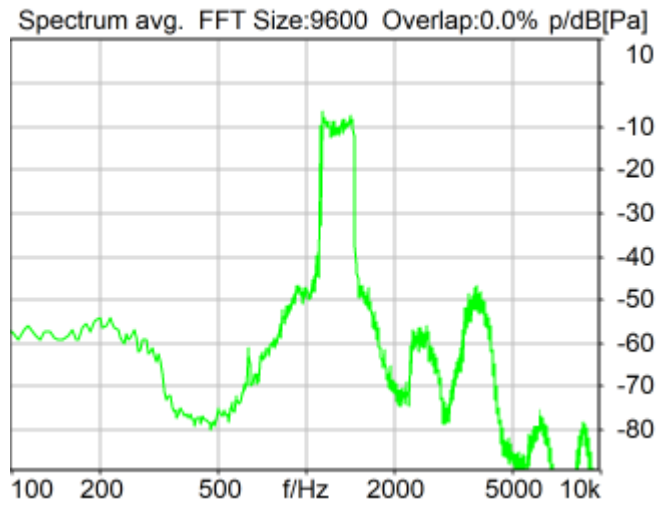
Ok

2023/11/10 17:20 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 8N



Distortion (Noise) RCV (packed): 30.75 dB (2.90%) Ok

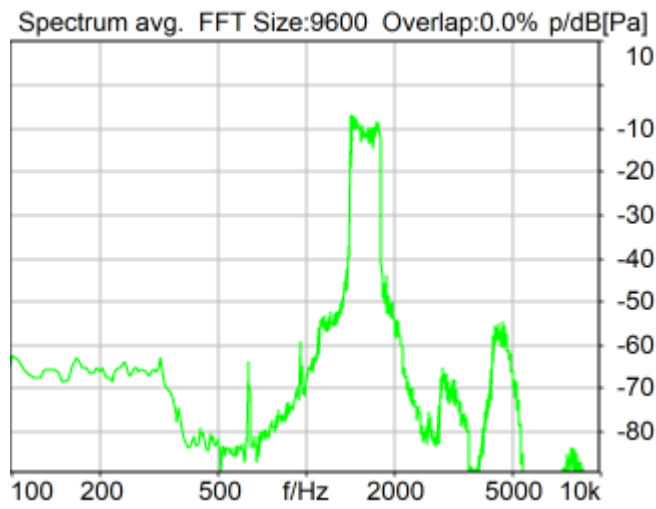
Ok

2023/11/10 17:20 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 8N



Distortion (Noise) RCV (packed): 37.85 dB (1.28%) Ok

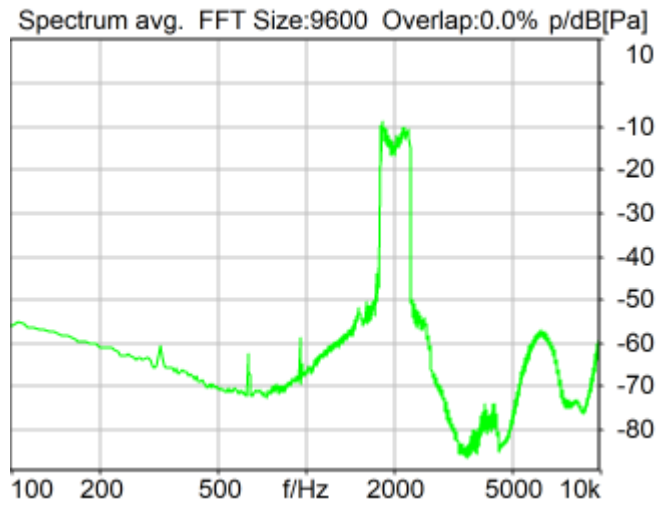
Ok

2023/11/10 17:21 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 8N



Distortion (Noise) RCV (packed): 35.80 dB (1.62%) Ok

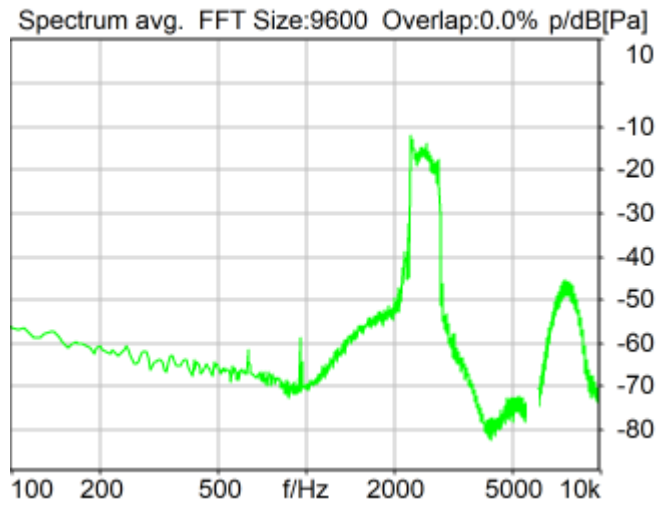
Ok

2023/11/10 17:21 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 8N



Distortion (Noise) RCV (packed): 25.63 dB (5.23%) Ok

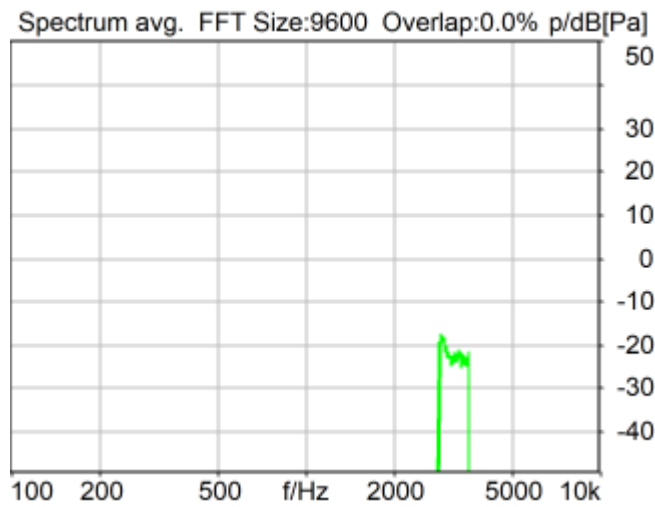
Ok

2023/11/10 17:21 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): 35.77 dB (1.63%) Ok

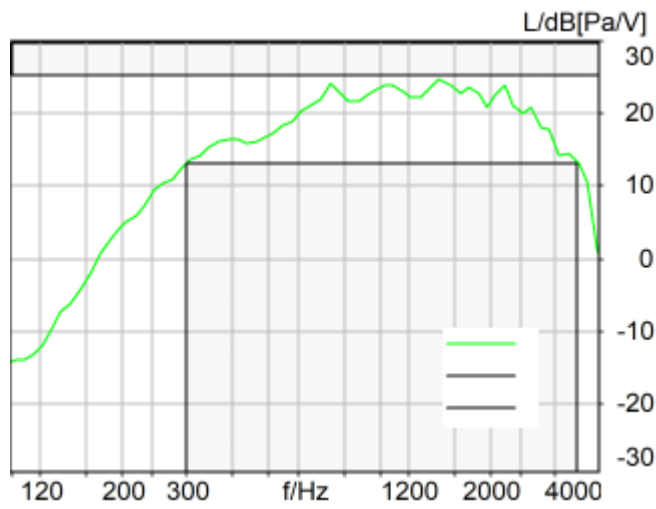
Ok

2023/11/10 17:22 ACQUA 5.1.200

Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 8N FF HANB

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



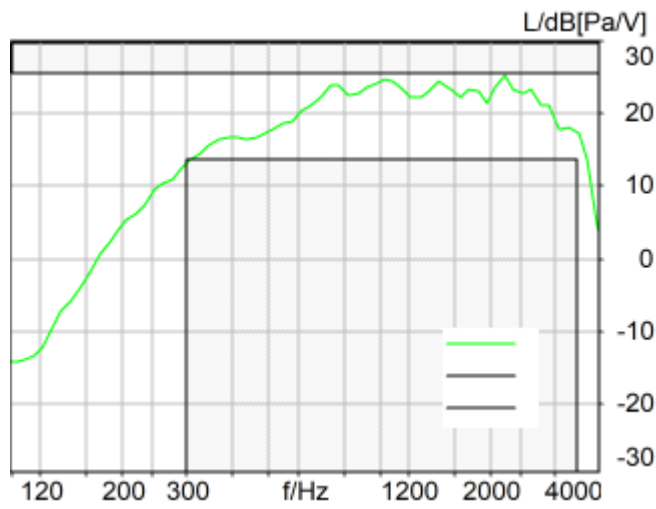
Absolute minimal distance
0.34 dB at 305.9 Hz Ok

Ok

2023/11/10 17:22 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
0.11 dB at 2177.4 Hz Ok

Ok

2023/11/10 17:22 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	LTE Band 12_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23095_2N
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Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/21 20:37

Status Overview

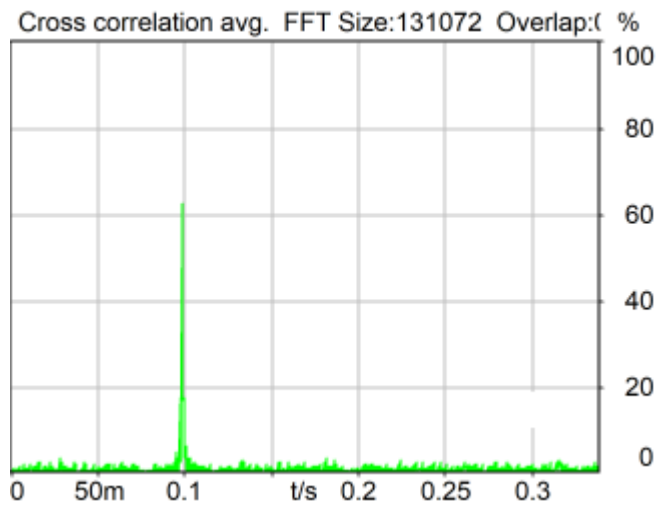
SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay WB	Done	Delay (Cross) [ms]	98.9	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_2N
5.1b Receive Volume Control Performance 2N WB	Ok	Speech Level [dB[SPL]]	84.81	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_2N
5.2 RCV Distortion and Noise - 250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	23.19	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_2N
5.2 RCV Distortion and Noise - 315 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	24.89	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_2N
5.2 RCV Distortion and Noise - 400 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	27.72	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_2N
5.2 RCV Distortion and Noise - 500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	28.79	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_2N
5.2 RCV Distortion and Noise - 630 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	30.12	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_2N
5.2 RCV Distortion and Noise - 800 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	29.38	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_2N
5.2 RCV Distortion and Noise - 1000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	31.97	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_2N
5.2 RCV Distortion and Noise - 1250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	34.10	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_2N
5.2 RCV Distortion and Noise - 1600 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	45.22	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_2N
5.2 RCV Distortion and Noise - 2000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	40.34	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_2N
5.2 RCV Distortion and Noise - 2500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	42.97	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_2N
5.2 RCV Distortion and Noise - 3150 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	40.54	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_2N
5.2 RCV Distortion and Noise - 4000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	45.51	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_2N
5.2 RCV Distortion and Noise - 5000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	40.29	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_2N
Report - Receive Distortion	Ok	Minimum SDNR	23.19	LTE Band

and Noise (Conversational Gain)		[dB], (occured at 250Hz)		12_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23095_2N
5.3 Frequency Response 2N FF	Ok	Min. dist. to tolerance scheme [dB], 611.7 Hz	1.48	LTE Band 12_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23095_2N
5.3 Frequency Response 2N DF	Ok	Min. dist. to tolerance scheme [dB], 974.0 Hz	1.20	LTE Band 12_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23095_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



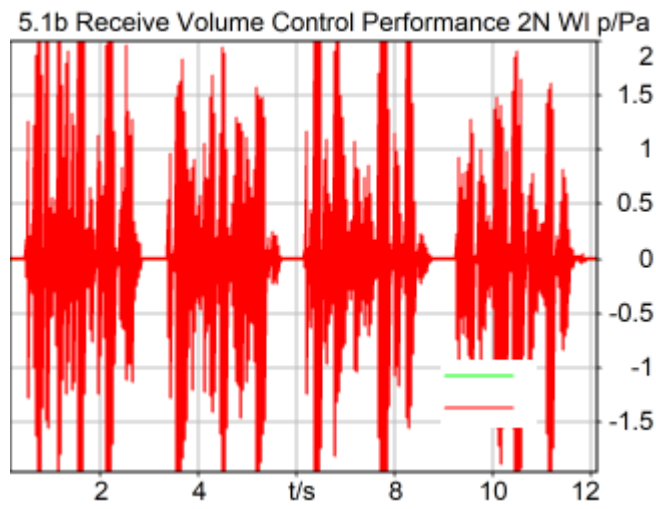
Delay (Cross): 98.9 ms

2023/11/12 12:28 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: 84.81 dB[SPL], Act.: 80.54% Ok

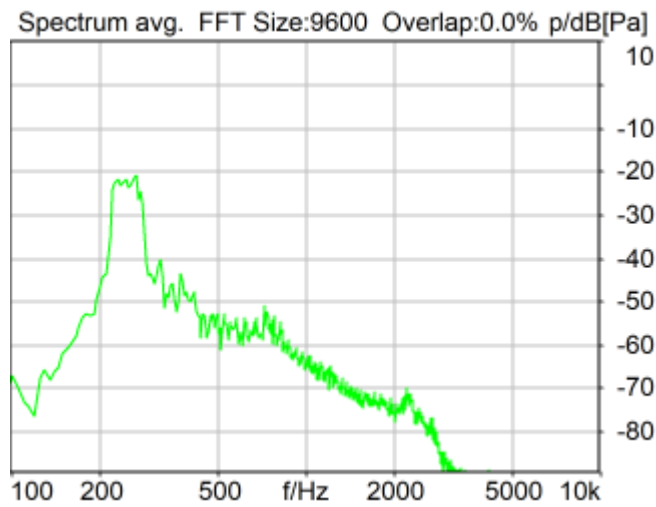
Ok

2023/11/12 12:29 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): 23.19 dB (6.93%) Ok

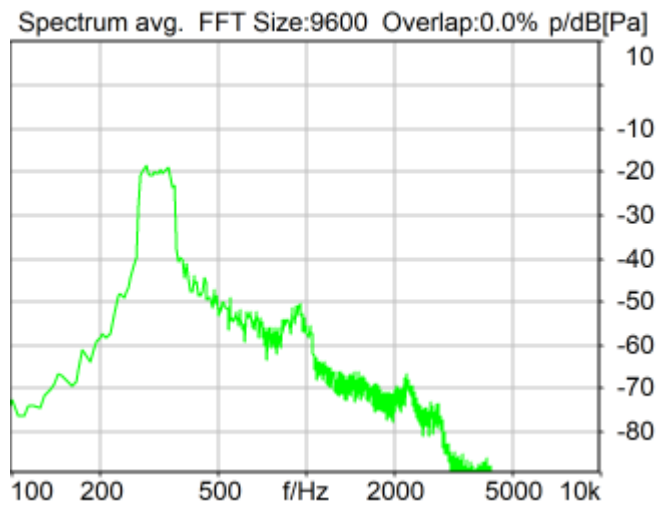
Ok

2023/11/12 12:29 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): 24.89 dB (5.70%) Ok

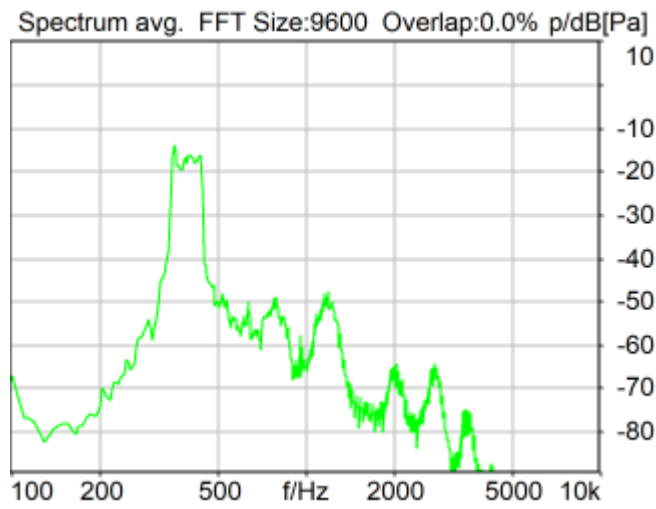
Ok

2023/11/12 12:29 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): 27.72 dB (4.11%) Ok

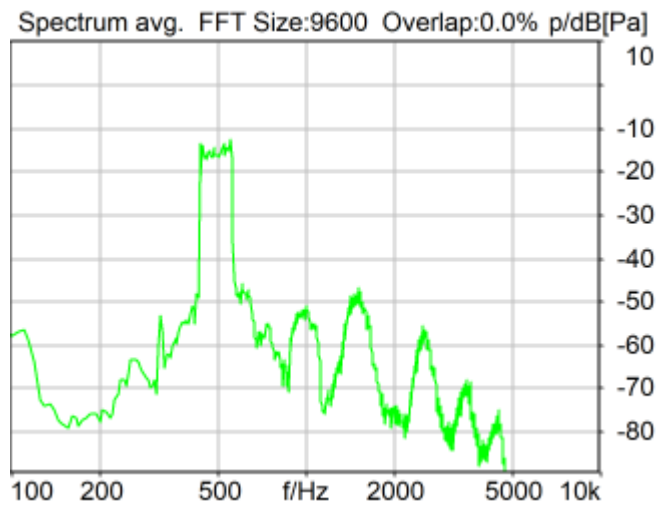
Ok

2023/11/12 12:30 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): 28.79 dB (3.63%) Ok

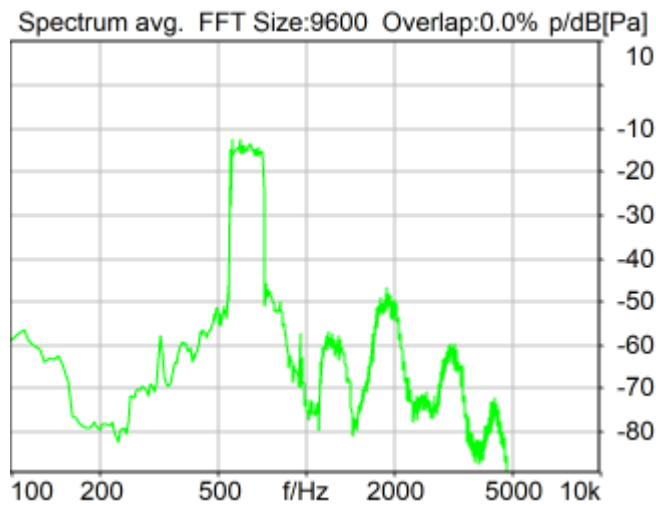
Ok

2023/11/12 12:30 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): 30.12 dB (3.12%) Ok

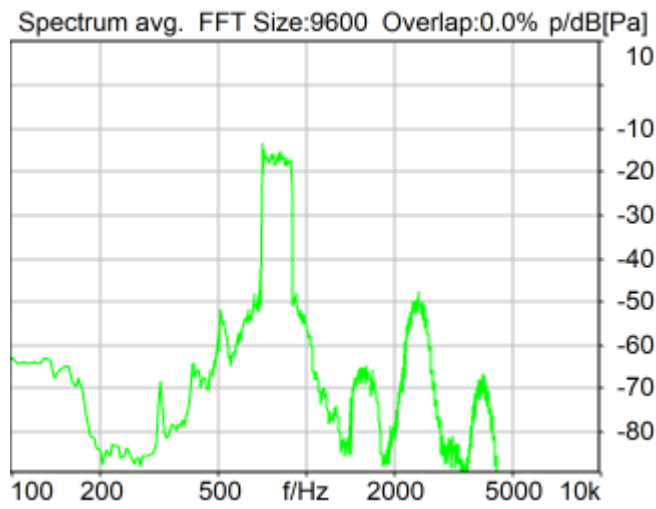
Ok

2023/11/12 12:31 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



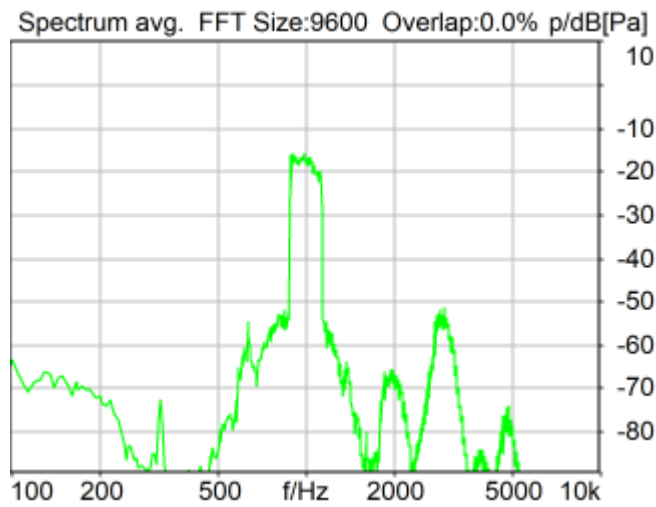
Distortion (Noise) RCV (packed): 29.38 dB (3.40%) Ok

Ok

2023/11/12 12:31 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): 31.97 dB (2.52%) Ok

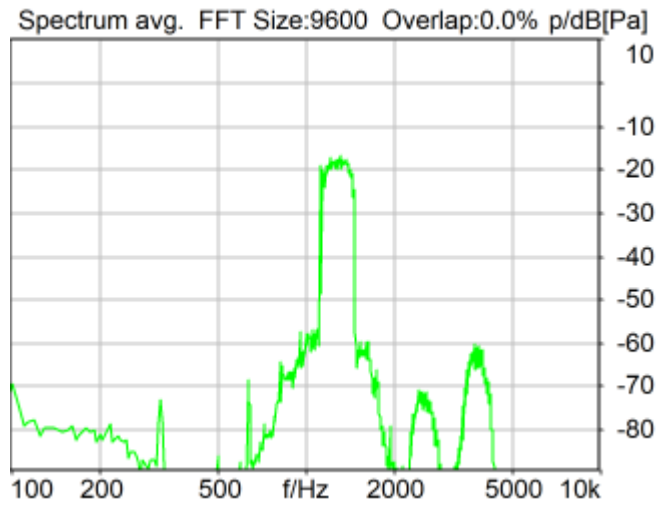
Ok

2023/11/12 12:31 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): 34.10 dB (1.97%) Ok

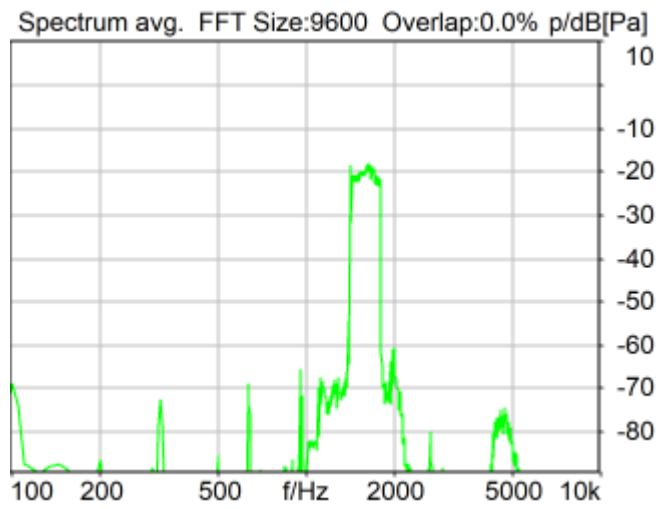
Ok

2023/11/12 12:32 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): 45.22 dB (0.55%) Ok

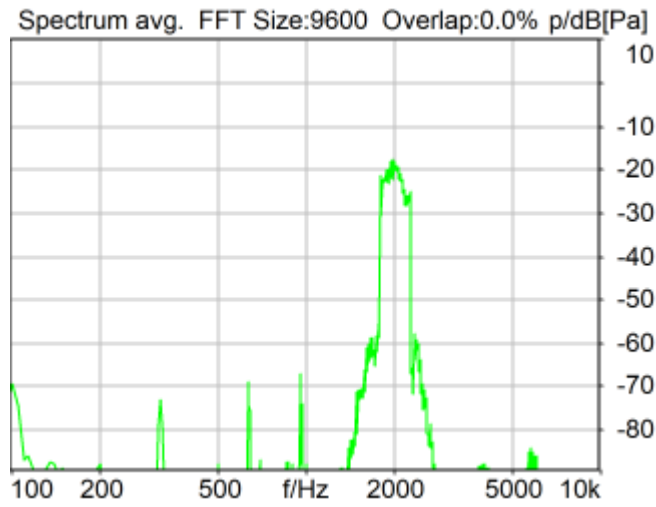
Ok

2023/11/12 12:32 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): 40.34 dB (0.96%) Ok

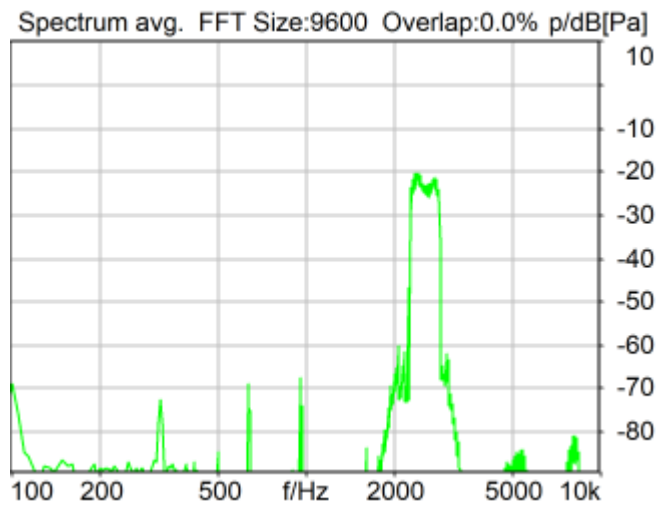
Ok

2023/11/12 12:33 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): 42.97 dB (0.71%) Ok

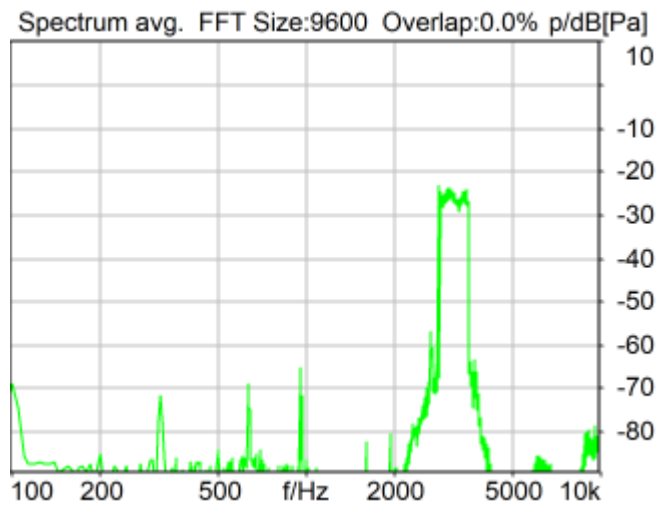
Ok

2023/11/12 12:33 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): 40.54 dB (0.94%) Ok

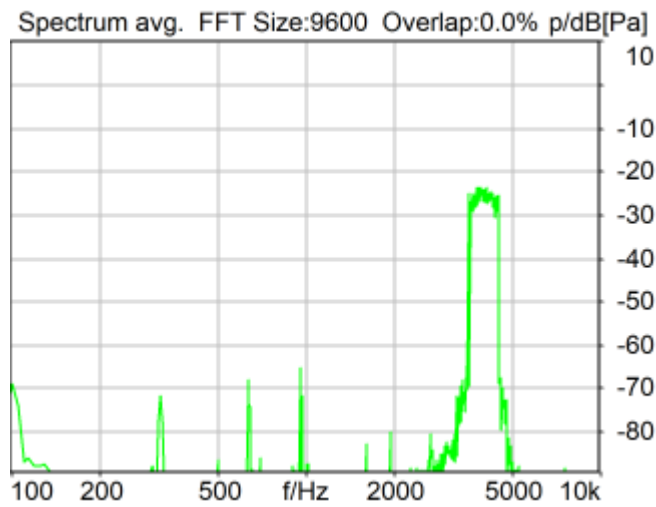
Ok

2023/11/12 12:33 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



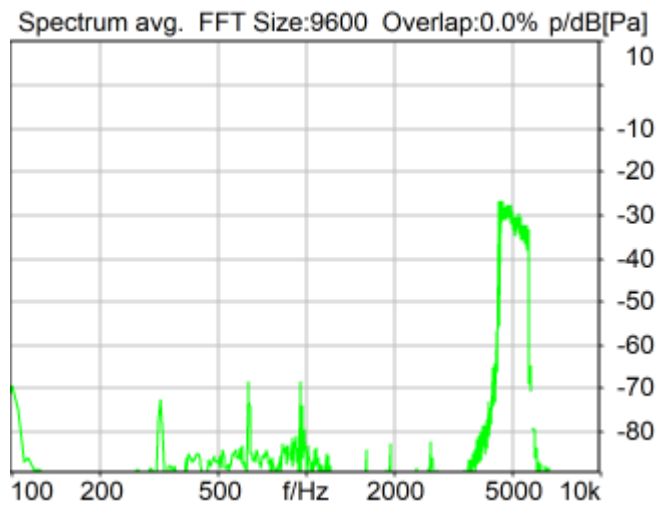
Distortion (Noise) RCV (packed): 45.51 dB (0.53%) Ok

Ok

2023/11/12 12:34 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): 40.29 dB (0.97%) Ok

Ok

2023/11/12 12:34 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	23.19 dB
2	315Hz	24.89 dB
3	400Hz	27.72 dB
4	500Hz	28.79 dB
5	630Hz	30.12 dB
6	800Hz	29.38 dB
7	1000Hz	31.97 dB
8	1250Hz	34.10 dB
9	1600Hz	45.22 dB
10	2000Hz	40.34 dB
11	2500Hz	42.97 dB
12	3150Hz	40.54 dB
13	4000Hz	45.51 dB
14	5000Hz	40.29 dB

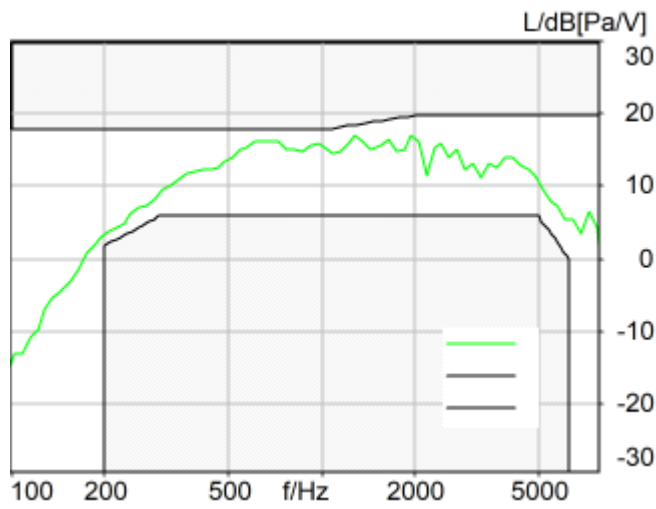
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 23.19dB at 250Hz.

2023/11/12 12:38 ACQUA

5.3 Frequency Response 2N FF

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



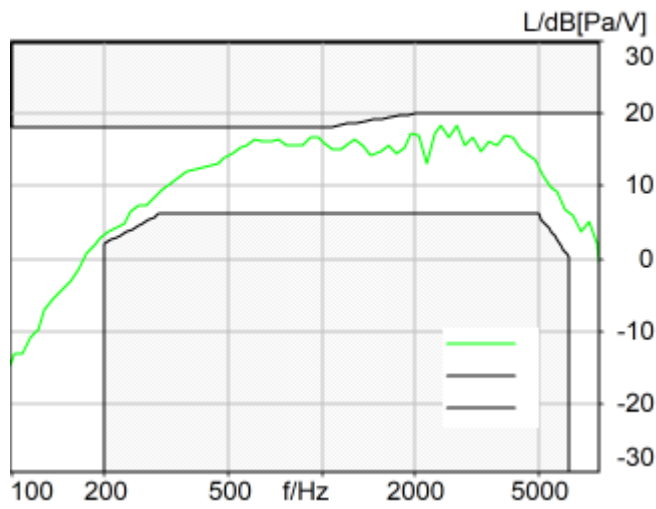
Absolute minimal distance
1.48 dB at 611.7 Hz Ok

Ok

2023/11/12 12:38 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N DF

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



Absolute minimal distance
1.20 dB at 974.0 Hz Ok

Ok

2023/11/12 12:38 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	LTE Band 12_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23095_8N
--------------------	--

Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/21 20:38

Status Overview

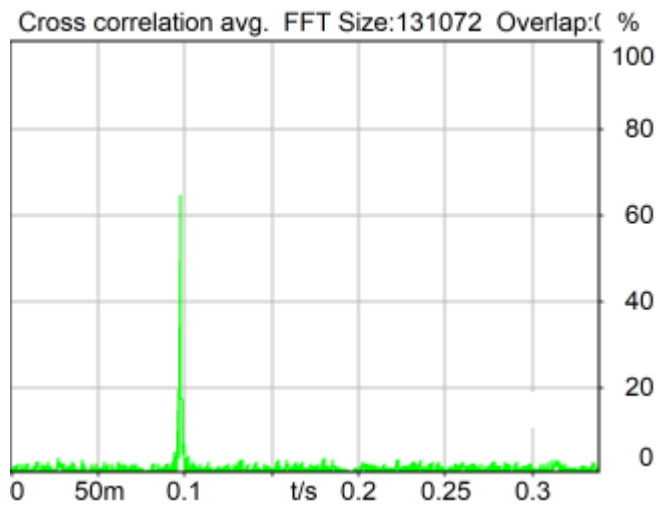
SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay WB	Done	Delay (Cross) [ms]	97.7	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_8N
5.1a Receive Volume Control Performance 8N WB	Ok	Speech Level [dB[SPL]]	89.15	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_8N
5.2 RCV Distortion and Noise - 250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	22.64	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_8N
5.2 RCV Distortion and Noise - 315 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	24.65	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_8N
5.2 RCV Distortion and Noise - 400 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	27.71	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_8N
5.2 RCV Distortion and Noise - 500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	28.89	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_8N
5.2 RCV Distortion and Noise - 630 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	30.17	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_8N
5.2 RCV Distortion and Noise - 800 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	30.41	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_8N
5.2 RCV Distortion and Noise - 1000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	33.11	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_8N
5.2 RCV Distortion and Noise - 1250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	34.41	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_8N
5.2 RCV Distortion and Noise - 1600 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	44.79	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_8N
5.2 RCV Distortion and Noise - 2000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	43.04	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_8N
5.2 RCV Distortion and Noise - 2500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	45.35	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_8N
5.2 RCV Distortion and Noise - 3150 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	40.71	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_8N
5.2 RCV Distortion and Noise - 4000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	44.26	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_8N
5.2 RCV Distortion and Noise - 5000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	43.29	LTE Band 12_10M_QPSK_50RB_0Offset_E VS WB 64Kbps_Ch23095_8N
Report - Receive Distortion	Ok	Minimum SDNR	22.64	LTE Band

and Noise (Conversational Gain)		[dB], (occured at 250Hz)		12_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23095_8N
5.3 Frequency Response 8N FF	Ok	Min. dist. to tolerance scheme [dB], 731.5 Hz	1.50	LTE Band 12_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23095_8N
5.3 Frequency Response 8N DF	Ok	Min. dist. to tolerance scheme [dB], 974.0 Hz	1.21	LTE Band 12_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23095_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



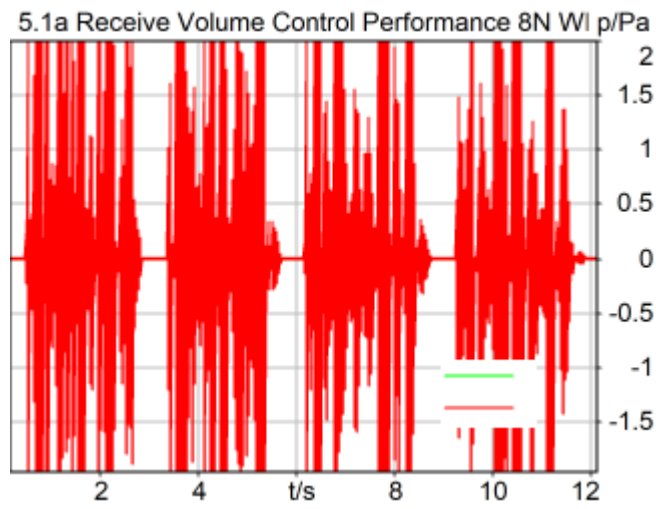
Delay (Cross): 97.7 ms

2023/11/12 16:22 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: 89.15 dB[SPL], Act.: 80.77% Ok

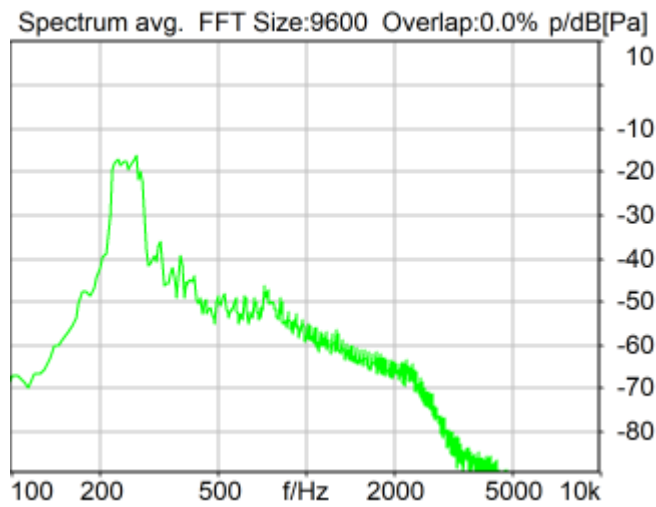
Ok

2023/11/12 16:23 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): 22.64 dB (7.38%) Ok

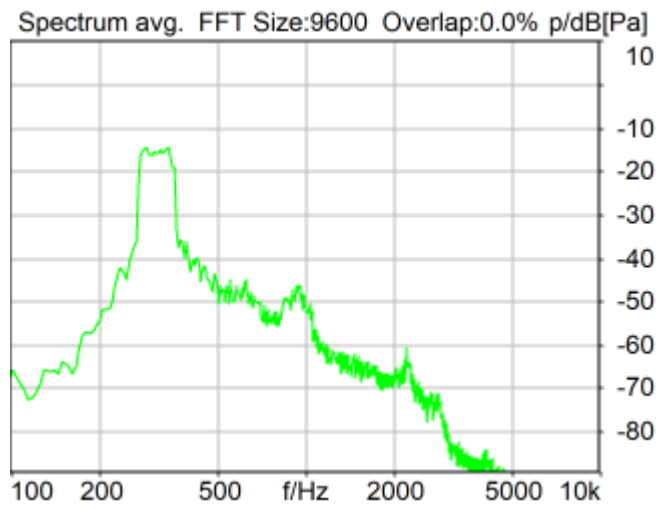
Ok

2023/11/12 16:23 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): 24.65 dB (5.85%) Ok

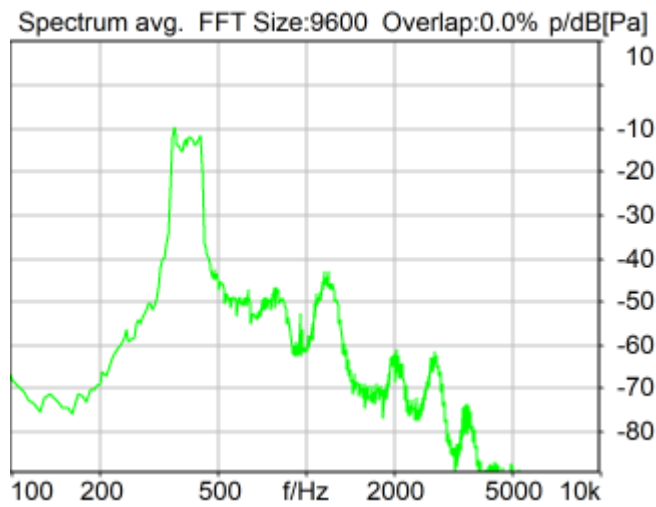
Ok

2023/11/12 16:23 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): 27.71 dB (4.12%) Ok

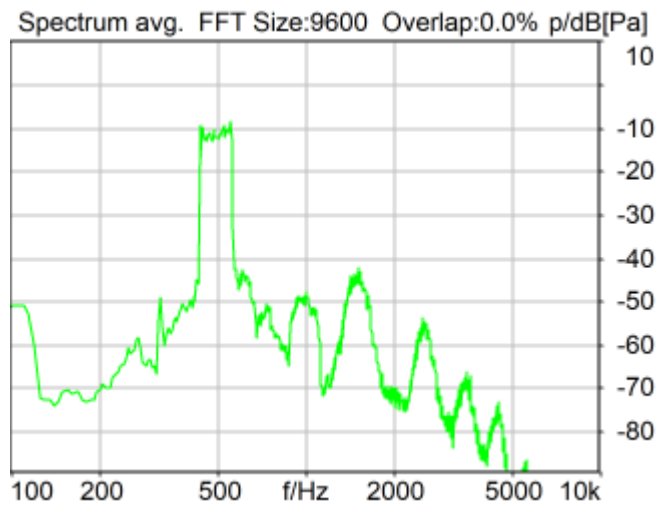
Ok

2023/11/12 16:24 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): 28.89 dB (3.59%) Ok

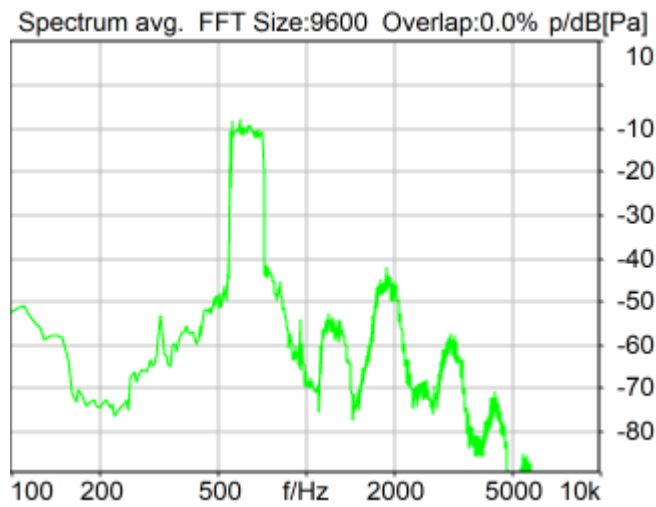
Ok

2023/11/12 16:24 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): 30.17 dB (3.10%) Ok

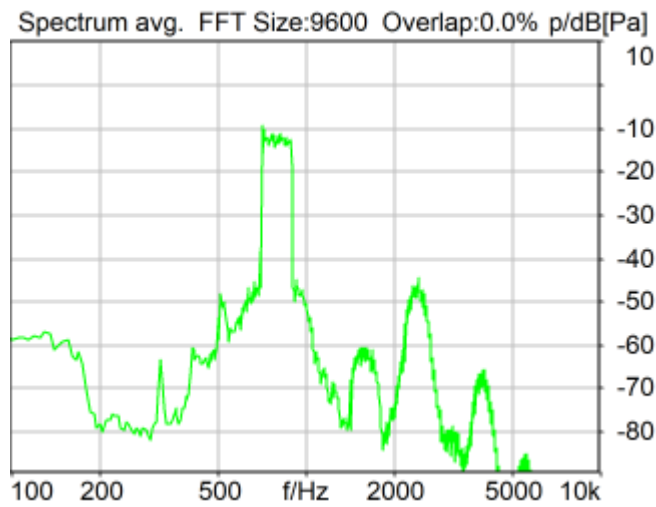
Ok

2023/11/12 16:25 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): 30.41 dB (3.02%) Ok

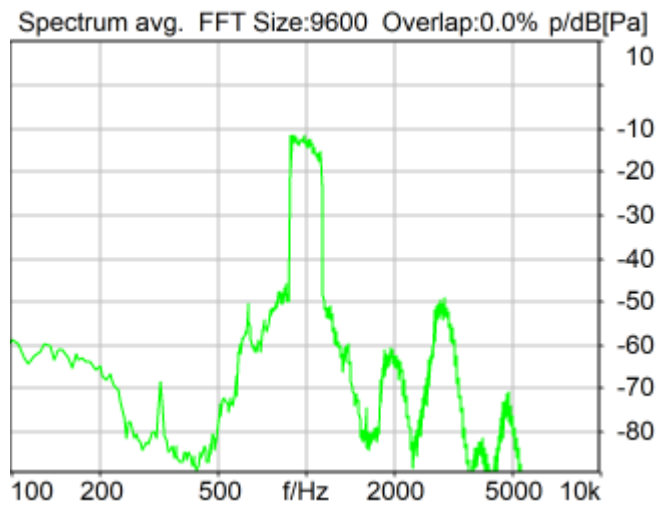
Ok

2023/11/12 16:25 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): 33.11 dB (2.21%) Ok

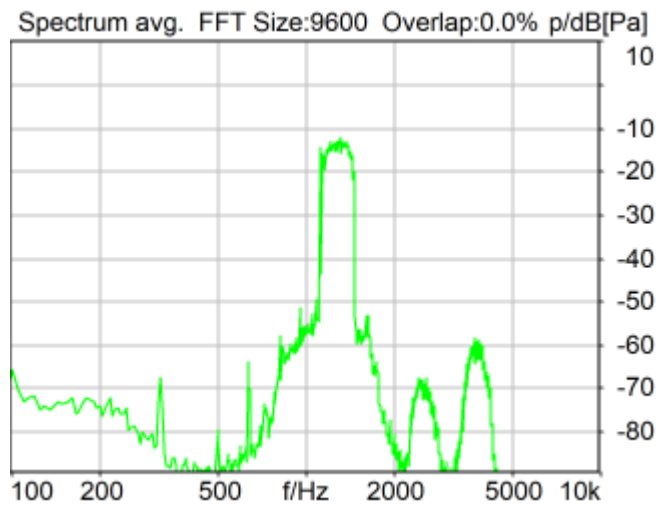
Ok

2023/11/12 16:25 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): 34.41 dB (1.90%) Ok

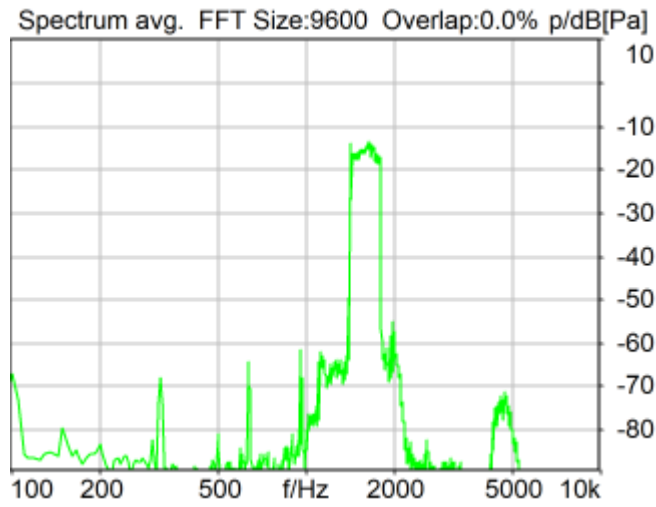
Ok

2023/11/12 16:26 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): 44.79 dB (0.58%) Ok

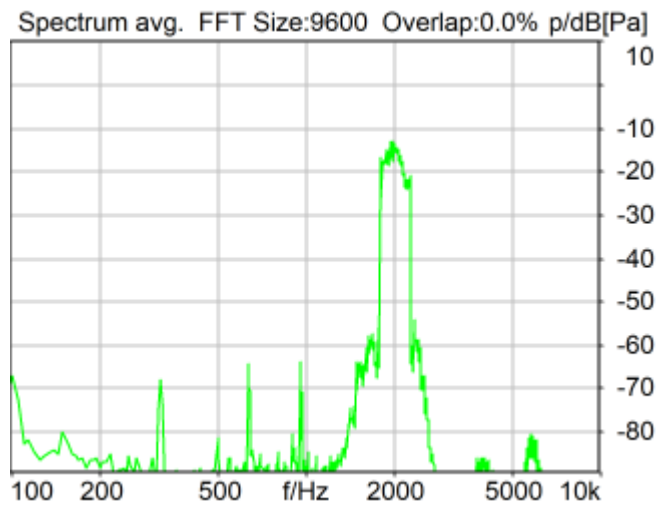
Ok

2023/11/12 16:26 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): 43.04 dB (0.70%) Ok

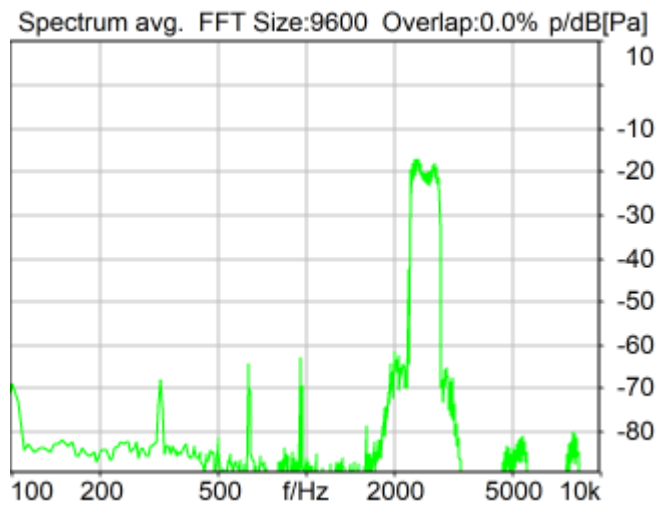
Ok

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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): 45.35 dB (0.54%) Ok

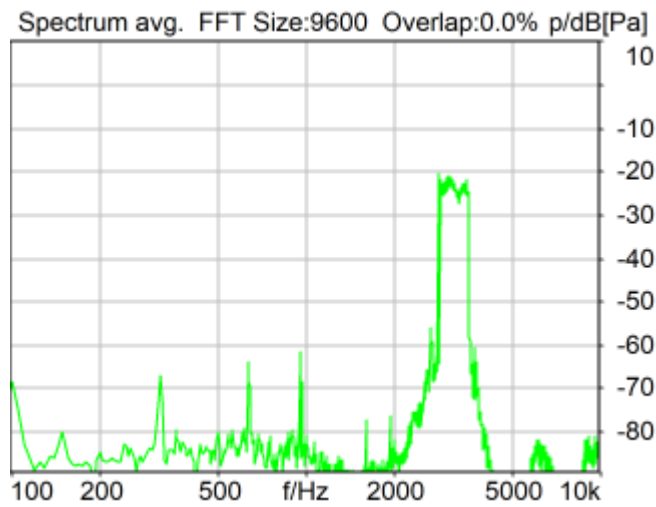
Ok

2023/11/12 16:27 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



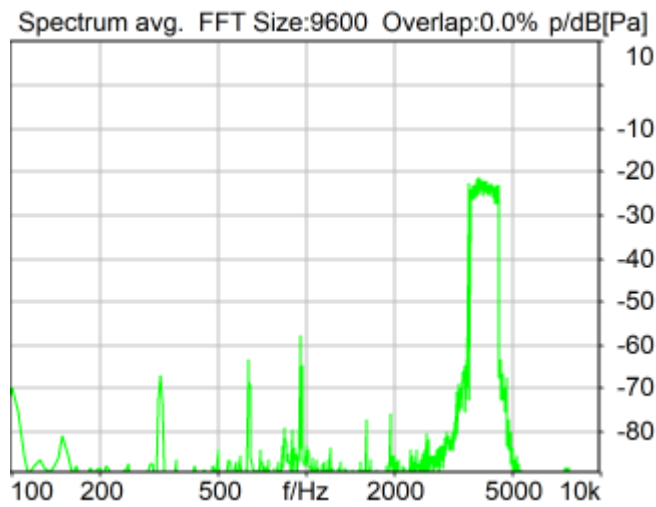
Distortion (Noise) RCV (packed): 40.71 dB (0.92%) Ok

Ok

2023/11/12 16:27 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): 44.26 dB (0.61%) Ok

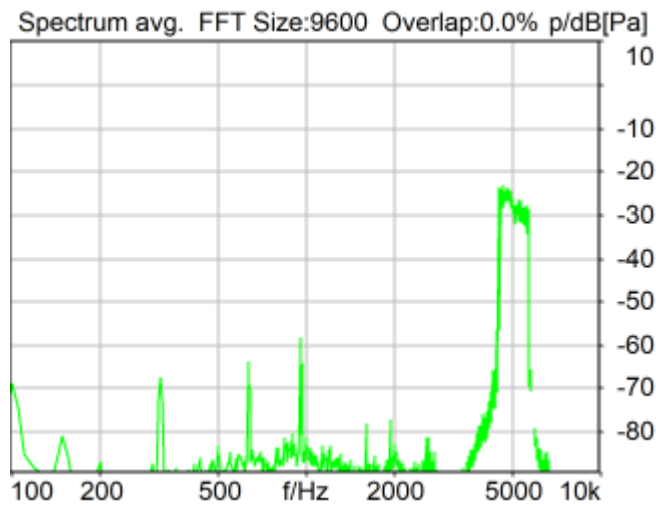
Ok

2023/11/12 16:28 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): 43.29 dB (0.68%) Ok

Ok

2023/11/12 16:28 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	22.64 dB
2	315Hz	24.65 dB
3	400Hz	27.71 dB
4	500Hz	28.89 dB
5	630Hz	30.17 dB
6	800Hz	30.41 dB
7	1000Hz	33.11 dB
8	1250Hz	34.41 dB
9	1600Hz	44.79 dB
10	2000Hz	43.04 dB
11	2500Hz	45.35 dB
12	3150Hz	40.71 dB
13	4000Hz	44.26 dB
14	5000Hz	43.29 dB

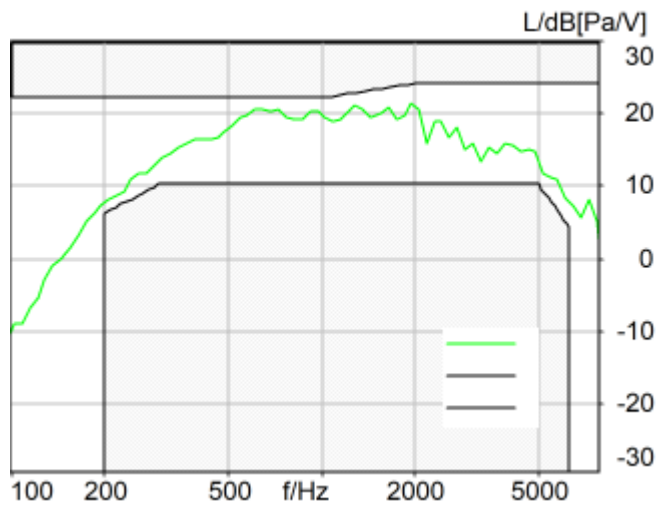
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 22.64dB at 250Hz.

2023/11/12 16:33 ACQUA

5.3 Frequency Response 8N FF

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



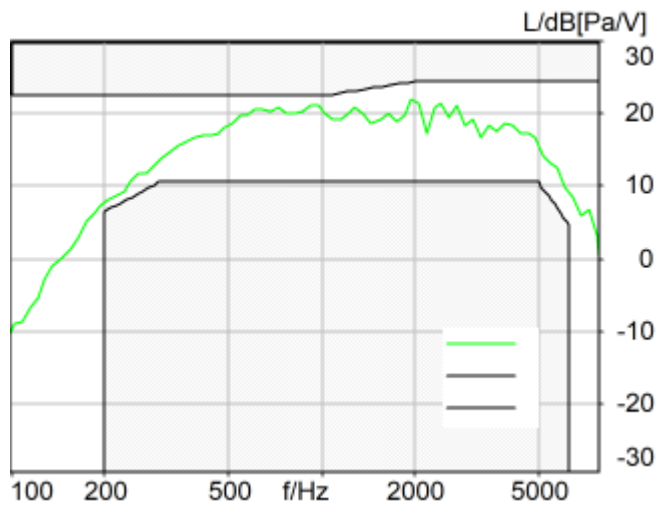
Absolute minimal distance
1.50 dB at 731.5 Hz Ok

Ok

2023/11/12 16:34 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 8N DF

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



Absolute minimal distance
1.21 dB at 974.0 Hz Ok

Ok

2023/11/12 16:34 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	LTE Band 13_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23230_2N
--------------------	--

Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/21 20:39

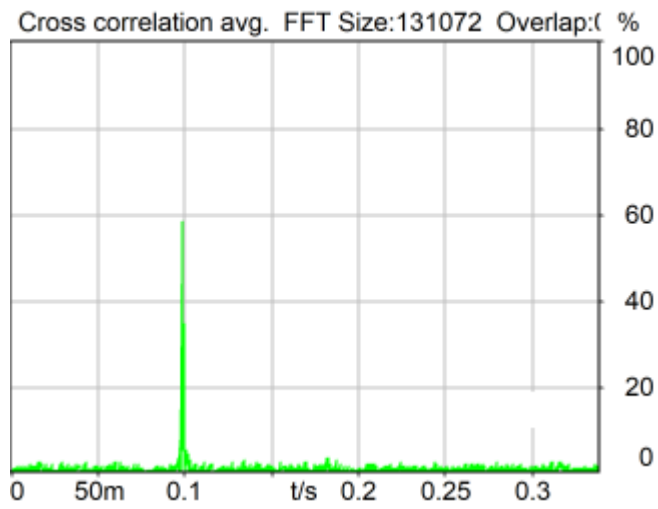
Status Overview

SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay NB	Done	Delay (Cross) [ms]	99.6	LTE Band 13_10M_QPSK_50RB_0Offset_E VS NB 24.4Kbps_Ch23230_2N
5.1b Receive Volume Control Performance 2N NB	Ok	Speech Level [dB[SPL]]	86.51	LTE Band 13_10M_QPSK_50RB_0Offset_E VS NB 24.4Kbps_Ch23230_2N
5.2 RCV Distortion and Noise - 400 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	25.08	LTE Band 13_10M_QPSK_50RB_0Offset_E VS NB 24.4Kbps_Ch23230_2N
5.2 RCV Distortion and Noise - 500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	27.81	LTE Band 13_10M_QPSK_50RB_0Offset_E VS NB 24.4Kbps_Ch23230_2N
5.2 RCV Distortion and Noise - 630 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	29.18	LTE Band 13_10M_QPSK_50RB_0Offset_E VS NB 24.4Kbps_Ch23230_2N
5.2 RCV Distortion and Noise - 800 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	26.53	LTE Band 13_10M_QPSK_50RB_0Offset_E VS NB 24.4Kbps_Ch23230_2N
5.2 RCV Distortion and Noise - 1000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	28.44	LTE Band 13_10M_QPSK_50RB_0Offset_E VS NB 24.4Kbps_Ch23230_2N
5.2 RCV Distortion and Noise - 1250 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	30.02	LTE Band 13_10M_QPSK_50RB_0Offset_E VS NB 24.4Kbps_Ch23230_2N
5.2 RCV Distortion and Noise - 1600 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	38.62	LTE Band 13_10M_QPSK_50RB_0Offset_E VS NB 24.4Kbps_Ch23230_2N
5.2 RCV Distortion and Noise - 2000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	40.31	LTE Band 13_10M_QPSK_50RB_0Offset_E VS NB 24.4Kbps_Ch23230_2N
5.2 RCV Distortion and Noise - 2500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	40.83	LTE Band 13_10M_QPSK_50RB_0Offset_E VS NB 24.4Kbps_Ch23230_2N
5.2 RCV Distortion and Noise - 3150 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	38.14	LTE Band 13_10M_QPSK_50RB_0Offset_E VS NB 24.4Kbps_Ch23230_2N
Report - Receive Distortion and Noise (Conversational Gain)	Ok	Minimum SDNR [dB], (occured at 400Hz)	25.08	LTE Band 13_10M_QPSK_50RB_0Offset_E VS NB 24.4Kbps_Ch23230_2N
5.3 Frequency Response 2N FF HANB	Ok	Min. dist. to tolerance scheme [dB], 1028.7 Hz	0.81	LTE Band 13_10M_QPSK_50RB_0Offset_E VS NB 24.4Kbps_Ch23230_2N
5.3 Frequency Response 2N DF HANB	Ok	Min. dist. to tolerance scheme [dB], 1028.7 Hz	0.49	LTE Band 13_10M_QPSK_50RB_0Offset_E VS NB 24.4Kbps_Ch23230_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



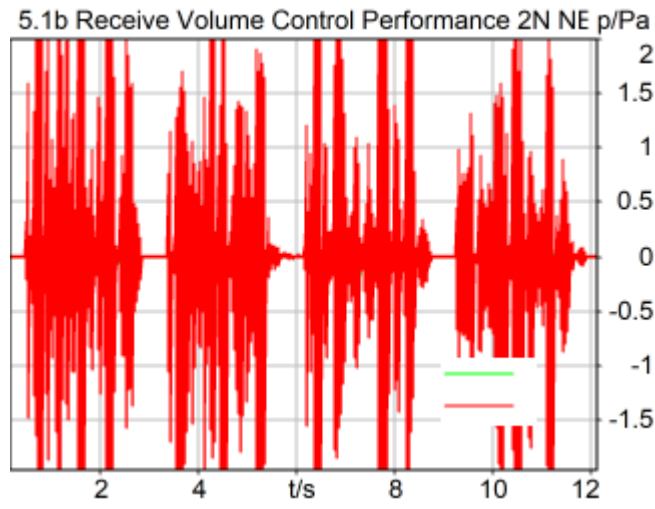
Delay (Cross): 99.6 ms

2023/11/12 20:16 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: 86.51 dB[SPL], Act.: 80.92% Ok

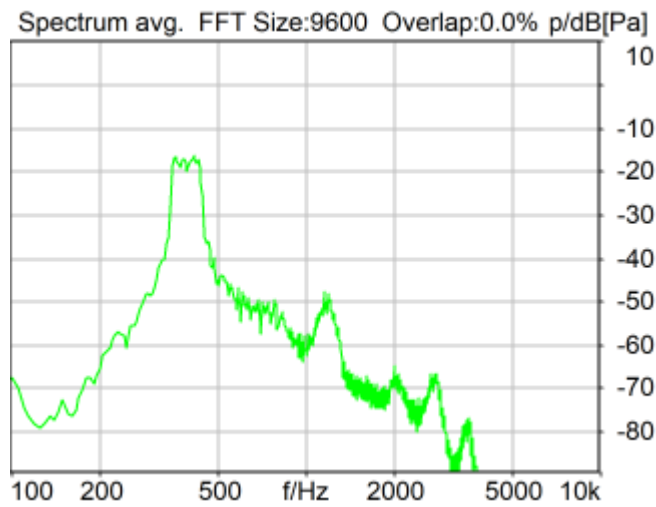
Ok

2023/11/12 20:16 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): 25.08 dB (5.57%) Ok

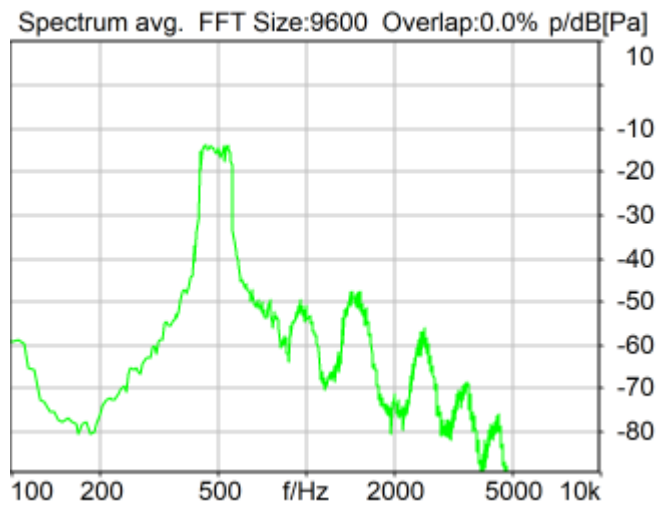
Ok

2023/11/12 20:16 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): 27.81 dB (4.07%) Ok

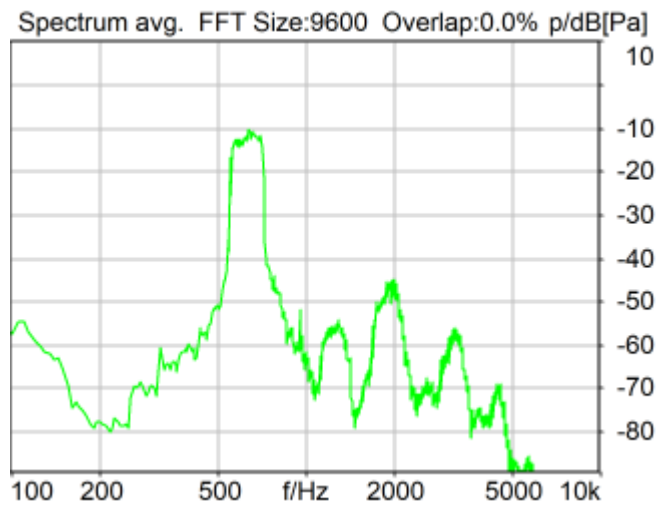
Ok

2023/11/12 20:17 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): 29.18 dB (3.48%) Ok

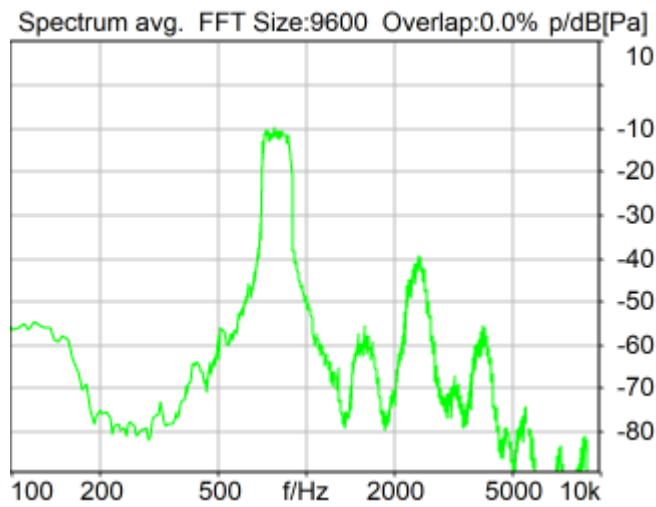
Ok

2023/11/12 20:17 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): 26.53 dB (4.71%) Ok

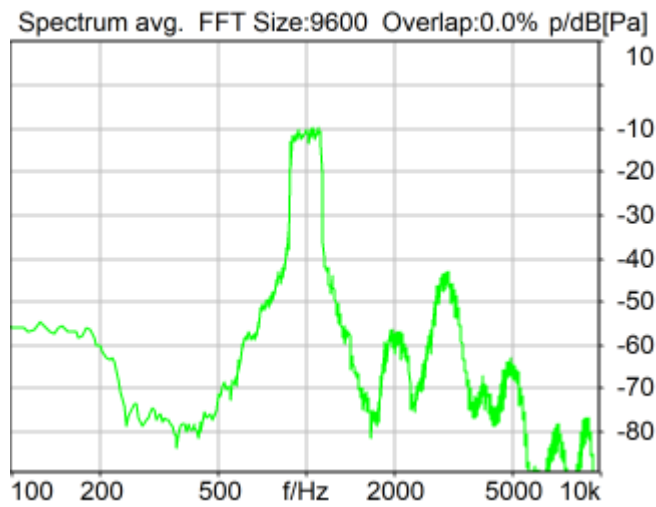
Ok

2023/11/12 20:18 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): 28.44 dB (3.78%) Ok

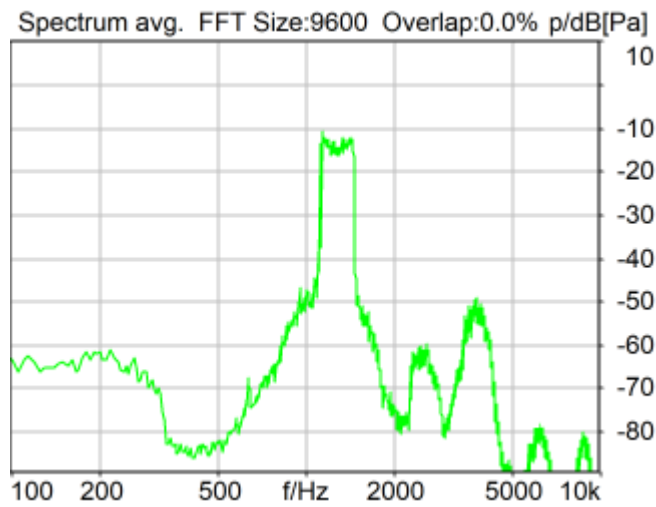
Ok

2023/11/12 20:18 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): 30.02 dB (3.16%) Ok

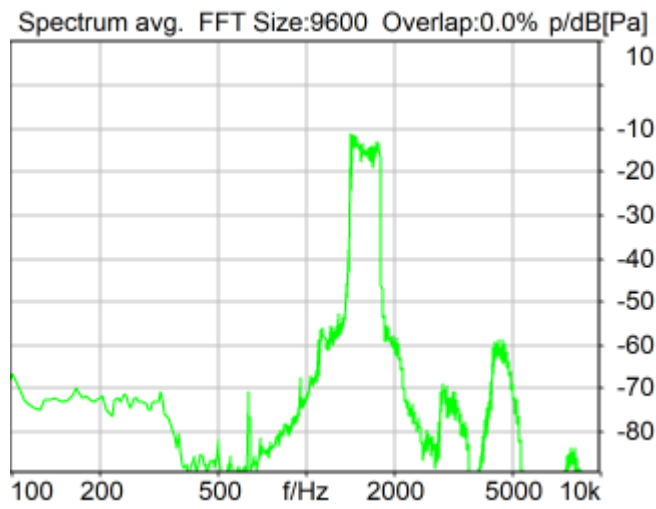
Ok

2023/11/12 20:18 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): 38.62 dB (1.17%) Ok

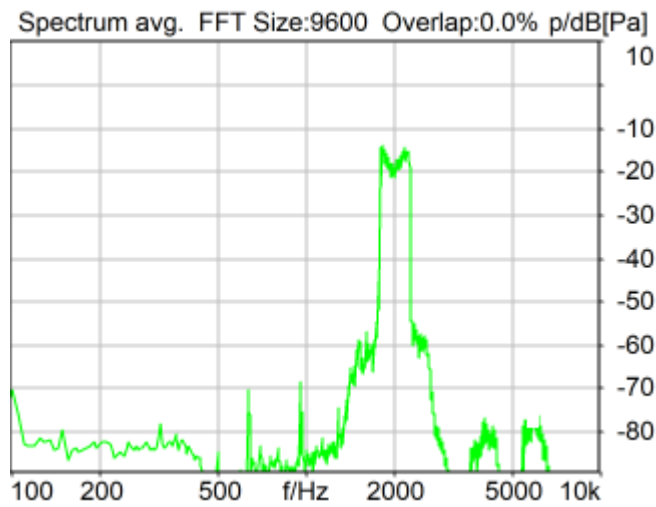
Ok

2023/11/12 20:19 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): 40.31 dB (0.96%) Ok

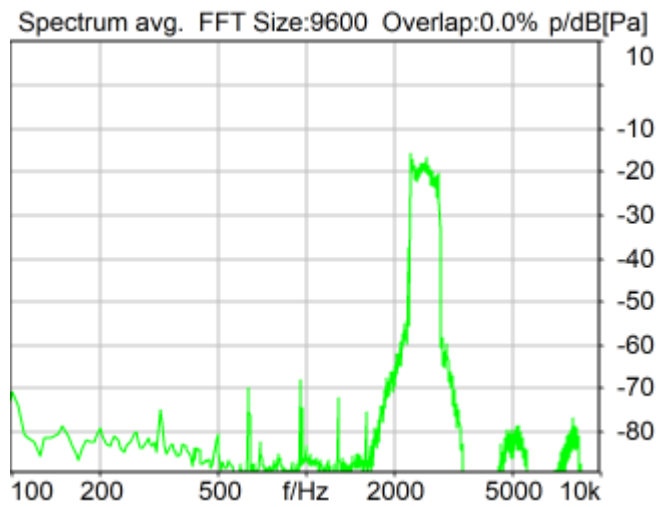
Ok

2023/11/12 20:19 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): 40.83 dB (0.91%) Ok

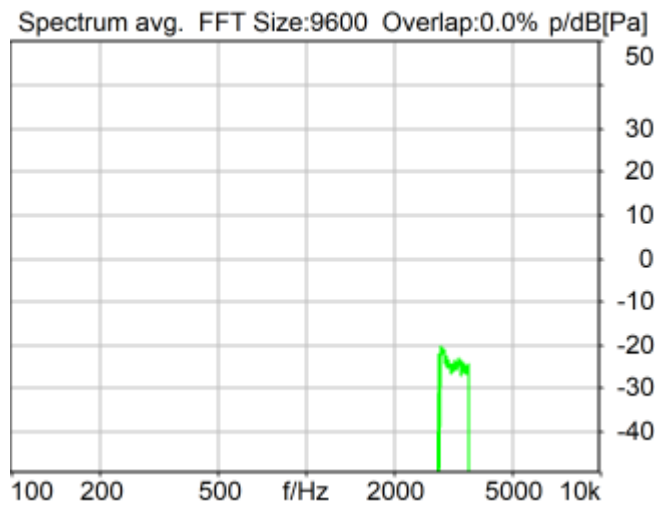
Ok

2023/11/12 20:20 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): 38.14 dB (1.24%) Ok

Ok

2023/11/12 20:20 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

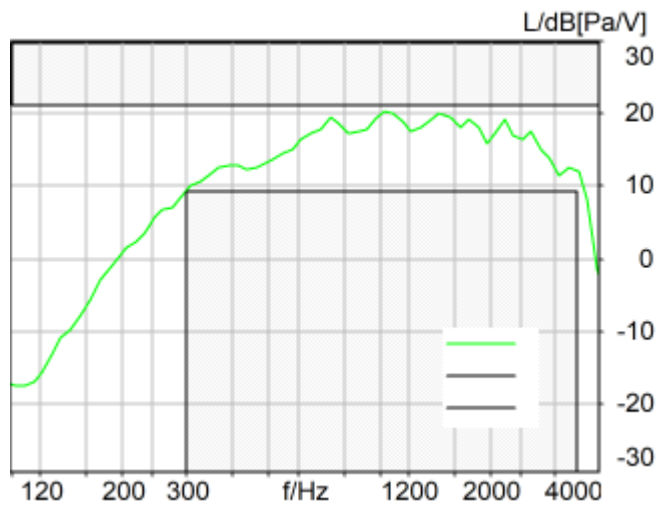
Region	Frequency	SDNR
1	400Hz	25.08 dB
2	500Hz	27.81 dB
3	630Hz	29.18 dB
4	800Hz	26.53 dB
5	1000Hz	28.44 dB
6	1250Hz	30.02 dB
7	1600Hz	38.62 dB
8	2000Hz	40.31 dB
9	2500Hz	40.83 dB
10	3150Hz	38.14 dB

All SDNRs were greater than 20.0 dB, requirement was met.
Smallest SDNR was 25.08dB at 400Hz.

2023/11/12 20:36 ACQUA

5.3 Frequency Response 2N FF HANB

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



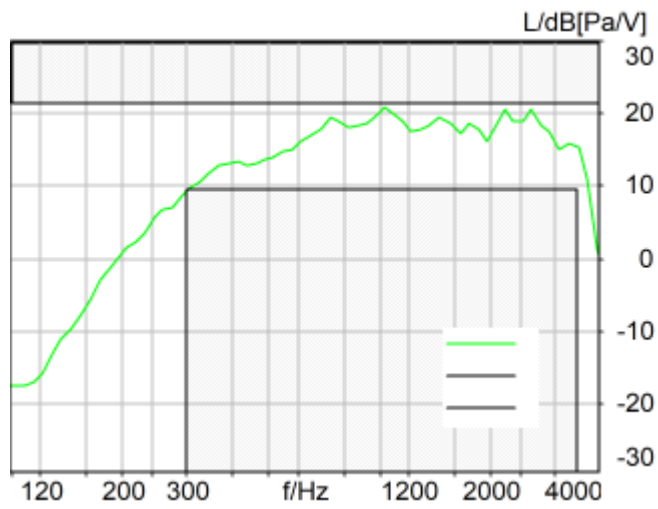
Absolute minimal distance
0.81 dB at 1028.7 Hz Ok

Ok

2023/11/12 20:37 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
0.49 dB at 1028.7 Hz Ok

Ok

2023/11/12 20:37 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	LTE Band 13_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23230_8N
--------------------	--

Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/21 20:40

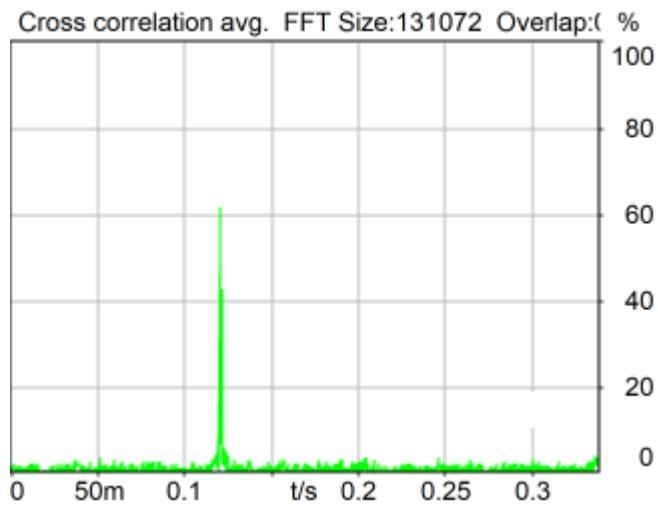
Status Overview

SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay NB	Done	Delay (Cross) [ms]	121.0	LTE Band 13_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23230_8N
5.1a Receive Volume Control Performance 8N NB	Ok	Speech Level [dB[SPL]]	90.76	LTE Band 13_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23230_8N
5.2 RCV Distortion and Noise - 400 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	24.64	LTE Band 13_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23230_8N
5.2 RCV Distortion and Noise - 500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	27.97	LTE Band 13_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23230_8N
5.2 RCV Distortion and Noise - 630 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	29.01	LTE Band 13_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23230_8N
5.2 RCV Distortion and Noise - 800 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	27.68	LTE Band 13_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23230_8N
5.2 RCV Distortion and Noise - 1000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	29.57	LTE Band 13_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23230_8N
5.2 RCV Distortion and Noise - 1250 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	29.21	LTE Band 13_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23230_8N
5.2 RCV Distortion and Noise - 1600 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	37.86	LTE Band 13_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23230_8N
5.2 RCV Distortion and Noise - 2000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	38.49	LTE Band 13_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23230_8N
5.2 RCV Distortion and Noise - 2500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	28.69	LTE Band 13_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23230_8N
5.2 RCV Distortion and Noise - 3150 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	38.09	LTE Band 13_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23230_8N
Report - Receive Distortion and Noise (Conversational Gain)	Ok	Minimum SDNR [dB], (occured at 400Hz)	24.64	LTE Band 13_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23230_8N
5.3 Frequency Response 8N FF HANB	Ok	Min. dist. to tolerance scheme [dB], 1447.5 Hz	0.86	LTE Band 13_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23230_8N
5.3 Frequency Response 8N DF HANB	Ok	Min. dist. to tolerance scheme [dB], 1028.7 Hz	0.71	LTE Band 13_10M_QPSK_50RB_0Offset_EVS NB 24.4Kbps_Ch23230_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



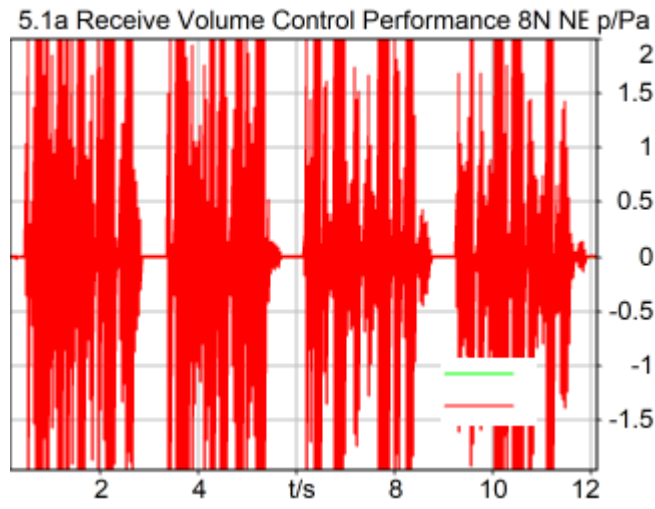
Delay (Cross): 121.0 ms

2023/11/12 20:39 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: 90.76 dB[SPL], Act.: 80.80% Ok

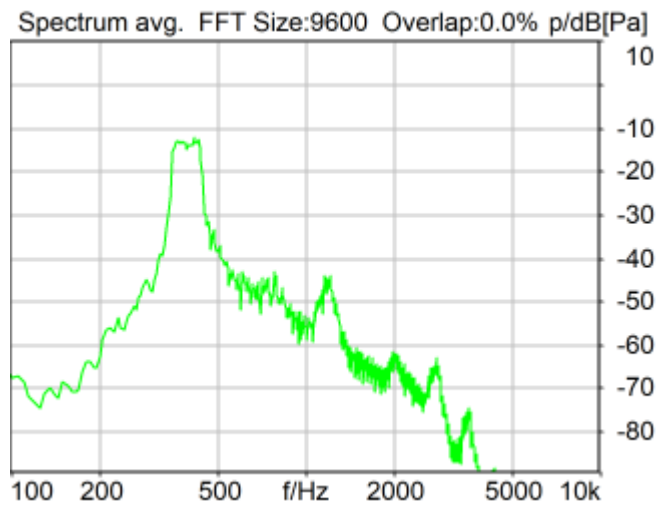
Ok

2023/11/12 20:39 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): 24.64 dB (5.86%) Ok

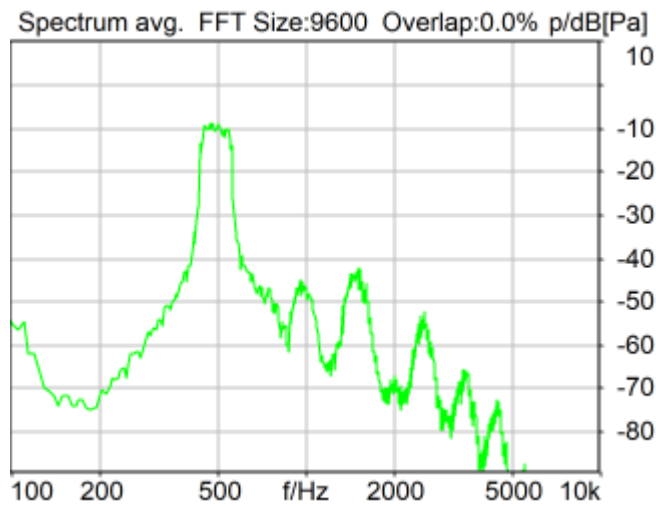
Ok

2023/11/12 20:39 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): 27.97 dB (3.99%) Ok

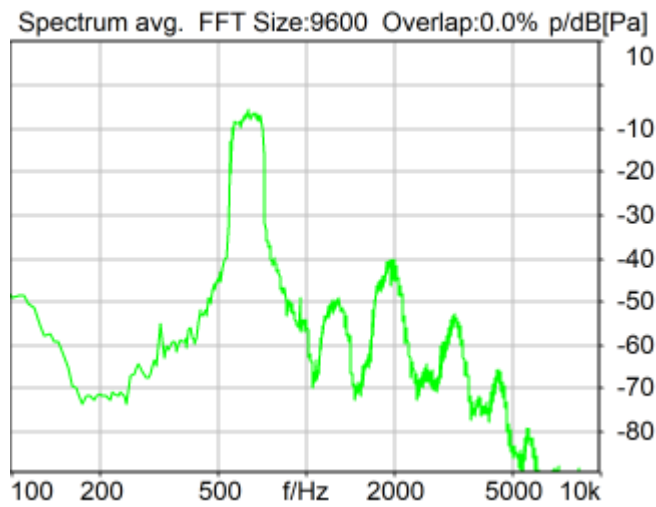
Ok

2023/11/12 20:40 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): 29.01 dB (3.55%) Ok

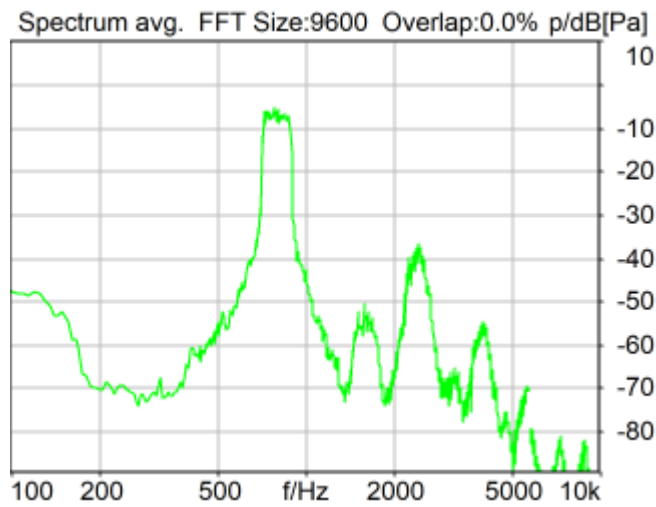
Ok

2023/11/12 20:40 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): 27.68 dB (4.13%) Ok

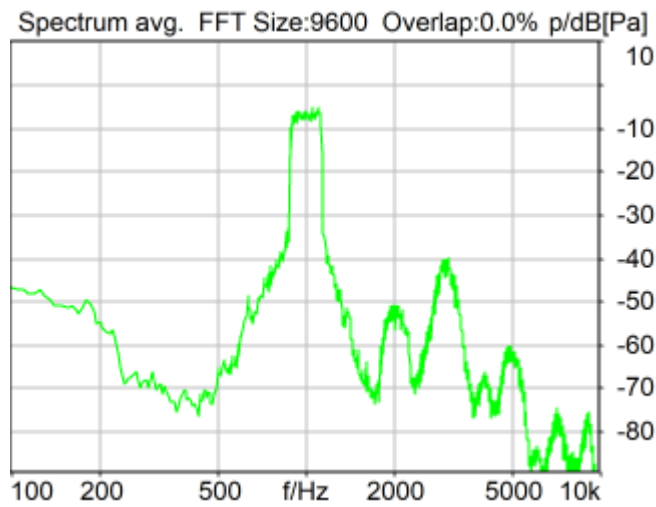
Ok

2023/11/12 20:41 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): 29.57 dB (3.32%) Ok

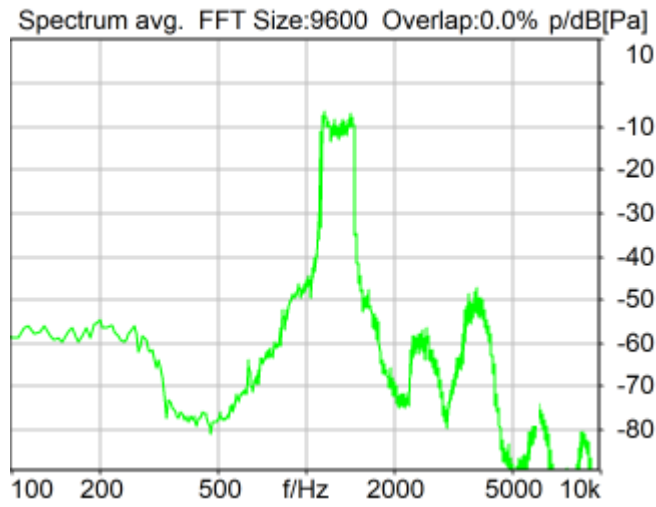
Ok

2023/11/12 20:41 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): 29.21 dB (3.46%) Ok

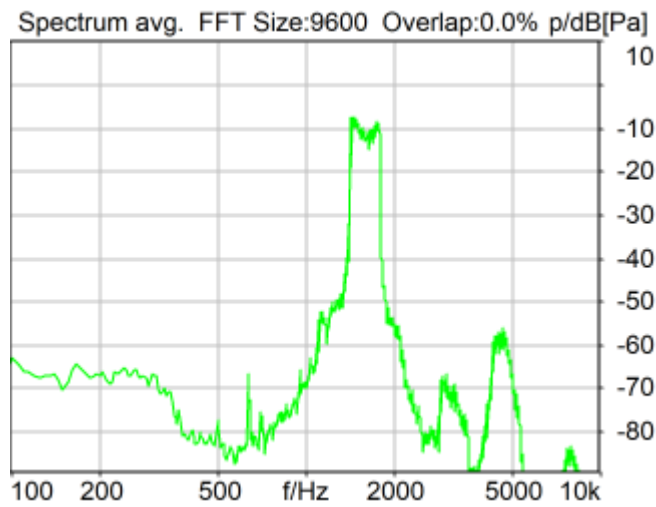
Ok

2023/11/12 20:41 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): 37.86 dB (1.28%) Ok

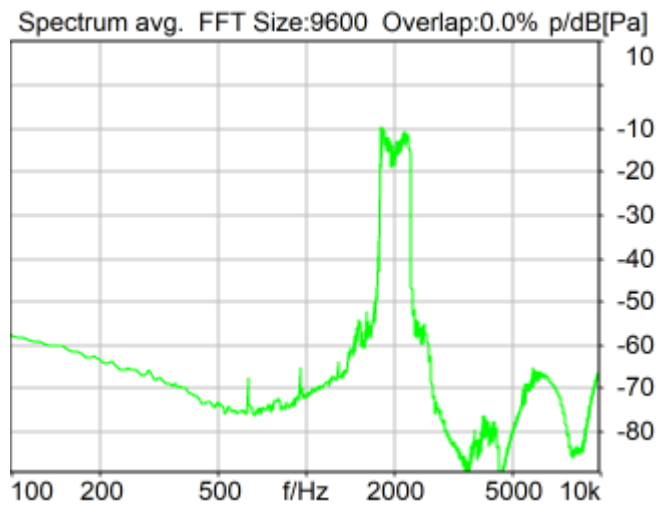
Ok

2023/11/12 20:42 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): 38.49 dB (1.19%) Ok

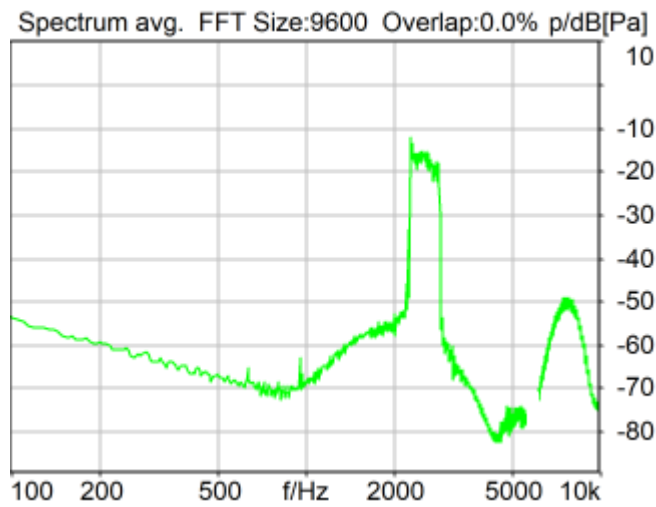
Ok

2023/11/12 20:42 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): 28.69 dB (3.68%) Ok

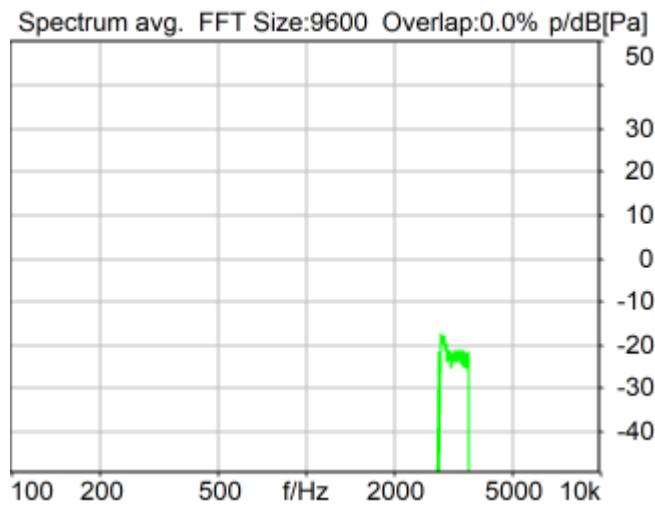
Ok

2023/11/12 20:43 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): 38.09 dB (1.25%) Ok

Ok

2023/11/12 20:43 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

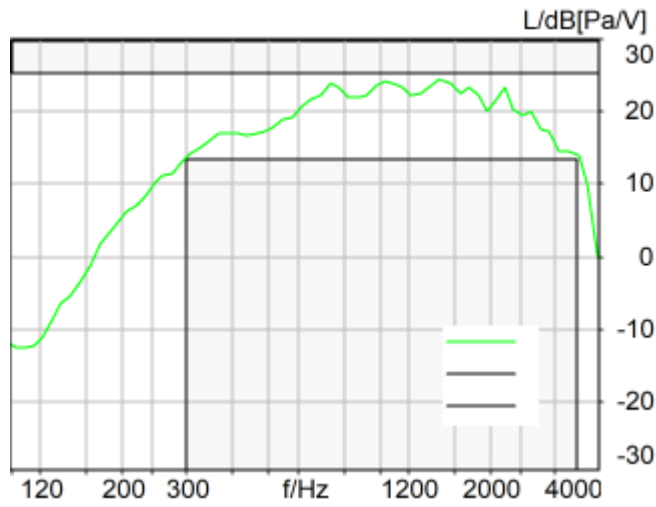
Region	Frequency	SDNR
1	400Hz	24.64 dB
2	500Hz	27.97 dB
3	630Hz	29.01 dB
4	800Hz	27.68 dB
5	1000Hz	29.57 dB
6	1250Hz	29.21 dB
7	1600Hz	37.86 dB
8	2000Hz	38.49 dB
9	2500Hz	28.69 dB
10	3150Hz	38.09 dB

All SDNRs were greater than 20.0 dB, requirement was met.
Smallest SDNR was 24.64dB at 400Hz.

2023/11/12 20:47 ACQUA

5.3 Frequency Response 8N FF HANB

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



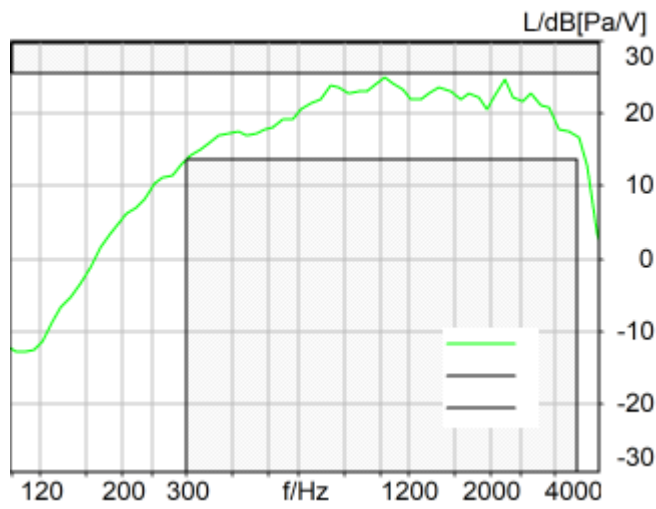
Absolute minimal distance
0.86 dB at 1447.5 Hz Ok

Ok

2023/11/12 20:48 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
0.71 dB at 1028.7 Hz Ok

Ok

2023/11/12 20:48 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_2N
--------------------	--

Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/21 20:41

Status Overview

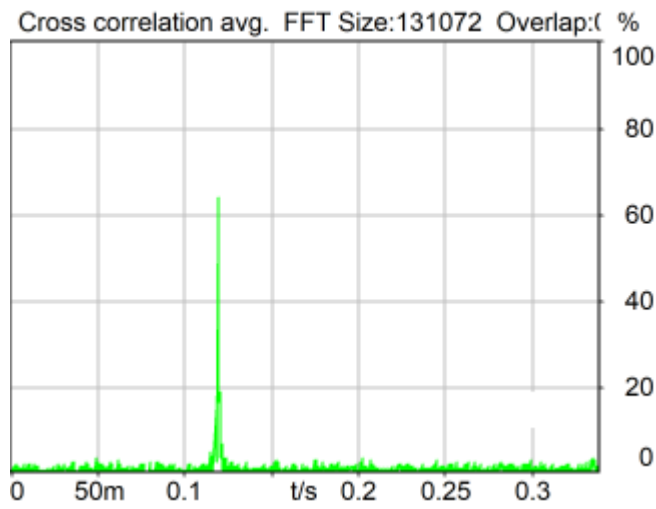
SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay WB	Done	Delay (Cross) [ms]	119.1	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_2N
5.1b Receive Volume Control Performance 2N WB	Ok	Speech Level [dB[SPL]]	84.53	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_2N
5.2 RCV Distortion and Noise - 250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	23.73	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_2N
5.2 RCV Distortion and Noise - 315 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	24.06	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_2N
5.2 RCV Distortion and Noise - 400 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	27.61	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_2N
5.2 RCV Distortion and Noise - 500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	28.68	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_2N
5.2 RCV Distortion and Noise - 630 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	29.94	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_2N
5.2 RCV Distortion and Noise - 800 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	29.50	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_2N
5.2 RCV Distortion and Noise - 1000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	31.52	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_2N
5.2 RCV Distortion and Noise - 1250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	34.23	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_2N
5.2 RCV Distortion and Noise - 1600 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	44.82	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_2N
5.2 RCV Distortion and Noise - 2000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	43.16	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_2N
5.2 RCV Distortion and Noise - 2500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	45.73	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_2N
5.2 RCV Distortion and Noise - 3150 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	41.97	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_2N
5.2 RCV Distortion and Noise - 4000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	45.19	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_2N
5.2 RCV Distortion and Noise - 5000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	38.06	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_2N
Report - Receive Distortion	Ok	Minimum SDNR	23.73	LTE Band

and Noise (Conversational Gain)		[dB], (occured at 250Hz)		13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_2N
5.3 Frequency Response 2N FF	Ok	Min. dist. to tolerance scheme [dB], 611.7 Hz	1.37	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_2N
5.3 Frequency Response 2N DF	Ok	Min. dist. to tolerance scheme [dB], 974.0 Hz	1.25	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_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



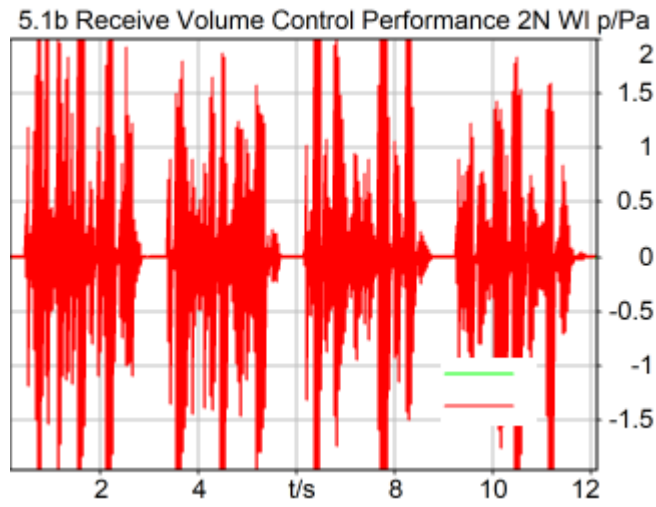
Delay (Cross): 119.1 ms

2023/11/12 20:53 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: 84.53 dB[SPL], Act.: 80.74% Ok

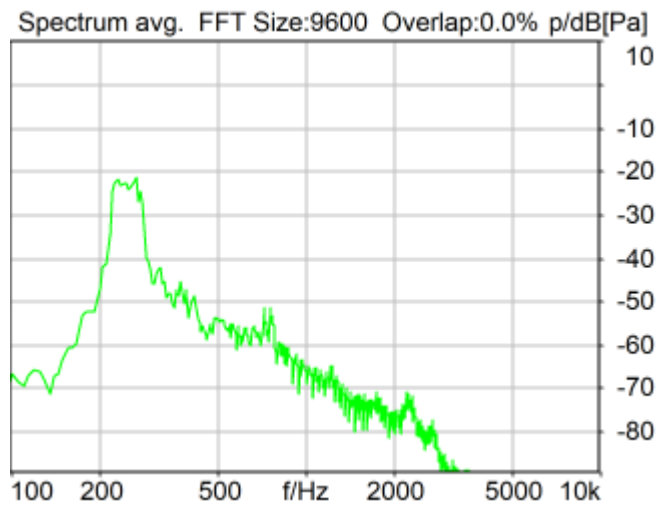
Ok

2023/11/12 20:53 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): 23.73 dB (6.51%) Ok

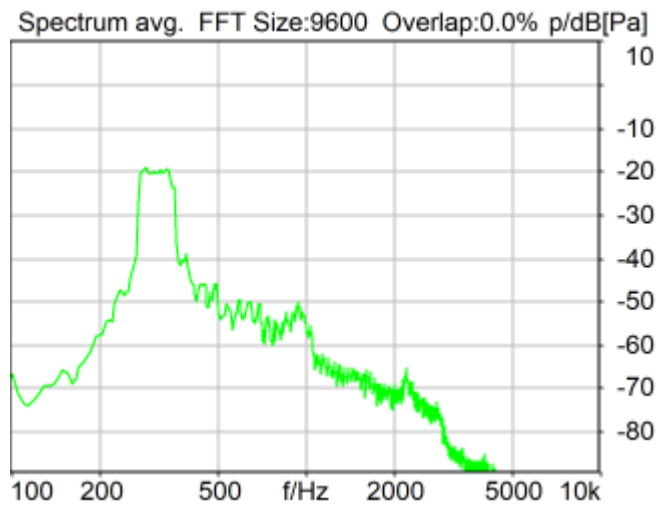
Ok

2023/11/12 20:54 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): 24.06 dB (6.27%) Ok

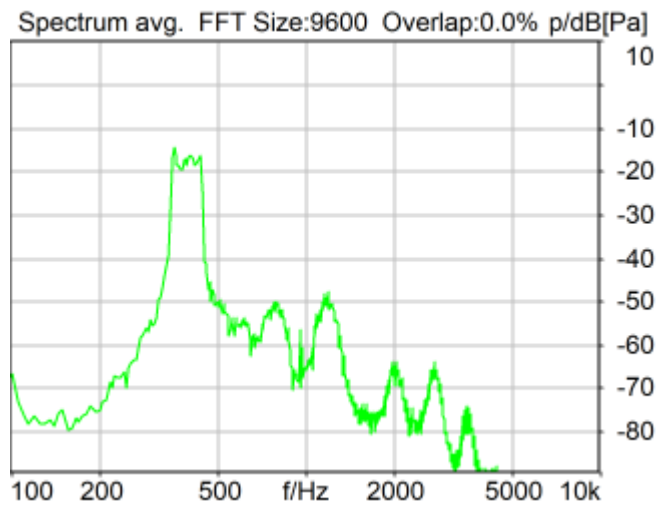
Ok

2023/11/12 20:54 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): 27.61 dB (4.16%) Ok

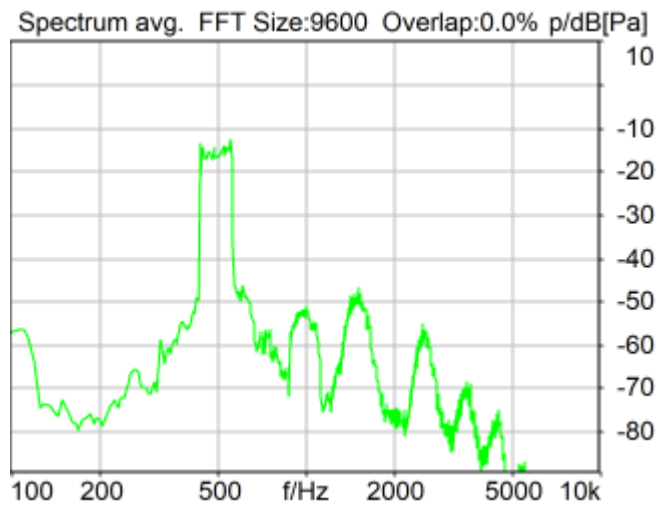
Ok

2023/11/12 20:55 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): 28.68 dB (3.68%) Ok

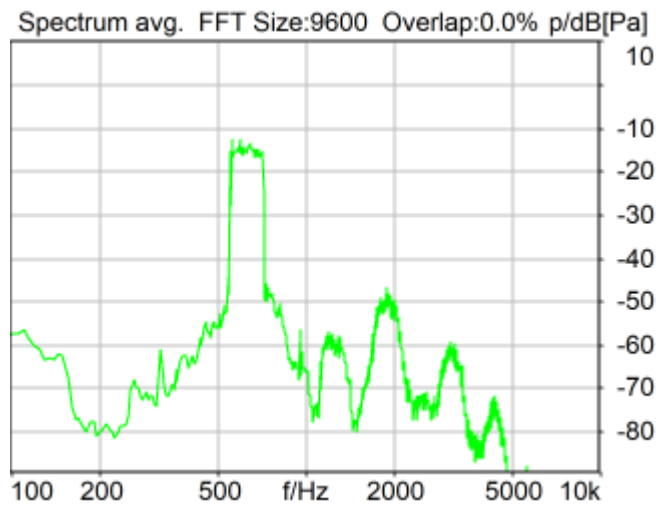
Ok

2023/11/12 20:55 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): 29.94 dB (3.18%) Ok

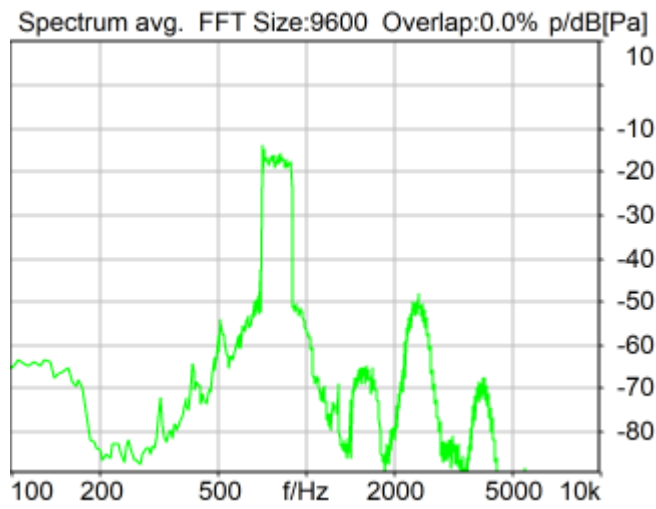
Ok

2023/11/12 20:55 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): 29.50 dB (3.35%) Ok

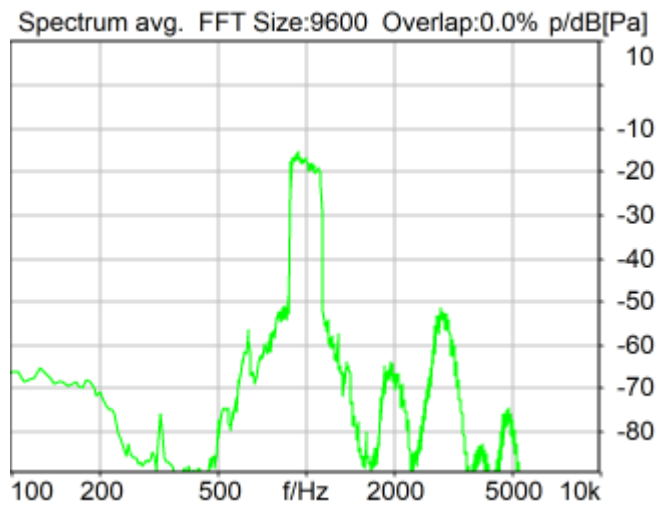
Ok

2023/11/12 20:56 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): 31.52 dB (2.66%) Ok

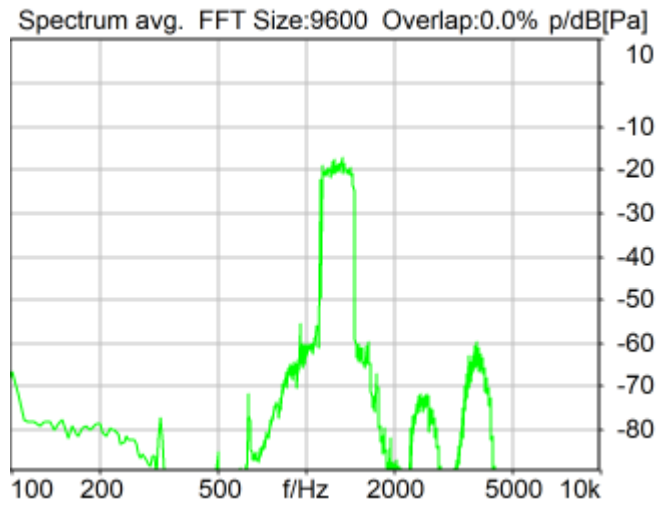
Ok

2023/11/12 20:56 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): 34.23 dB (1.94%) Ok

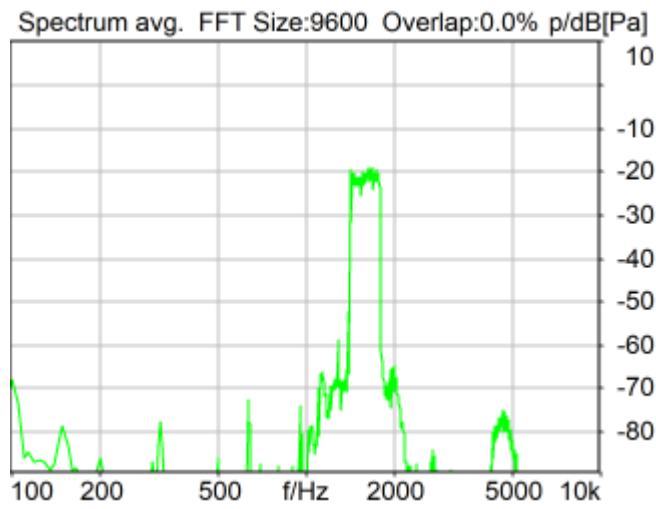
Ok

2023/11/12 20:57 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): 44.82 dB (0.57%) Ok

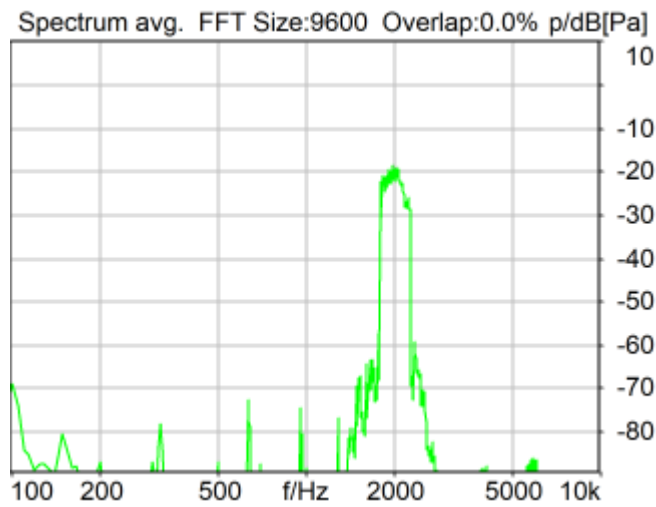
Ok

2023/11/12 20:57 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): 43.16 dB (0.70%) Ok

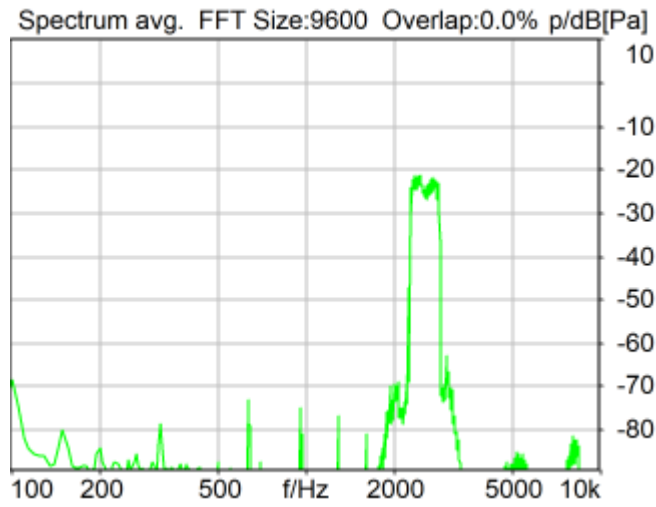
Ok

2023/11/12 20:57 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): 45.73 dB (0.52%) Ok

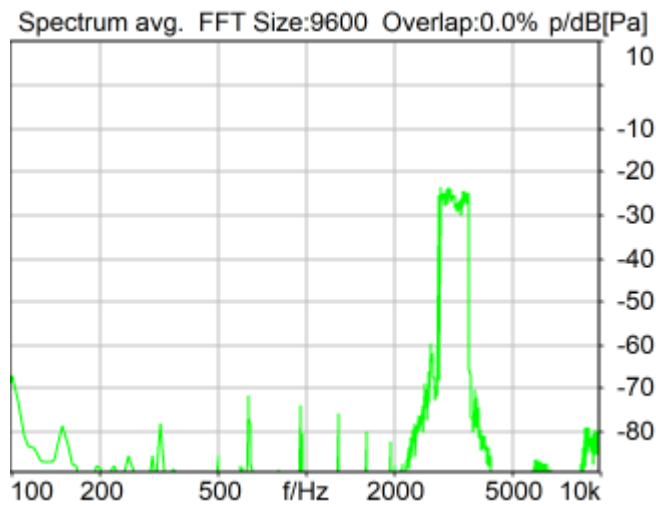
Ok

2023/11/12 20:58 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): 41.97 dB (0.80%) Ok

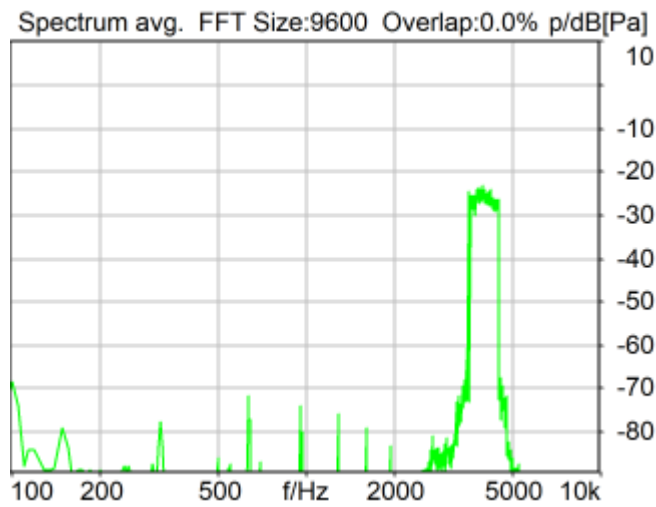
Ok

2023/11/12 20:58 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): 45.19 dB (0.55%) Ok

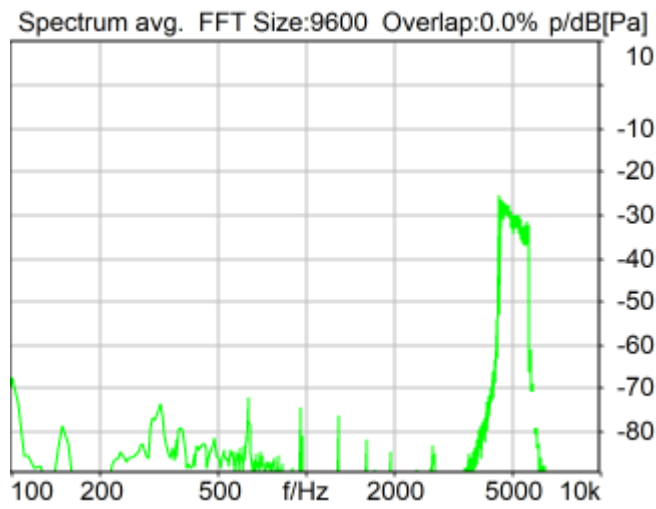
Ok

2023/11/12 20:58 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): 38.06 dB (1.25%) Ok

Ok

2023/11/12 20:59 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	23.73 dB
2	315Hz	24.06 dB
3	400Hz	27.61 dB
4	500Hz	28.68 dB
5	630Hz	29.94 dB
6	800Hz	29.50 dB
7	1000Hz	31.52 dB
8	1250Hz	34.23 dB
9	1600Hz	44.82 dB
10	2000Hz	43.16 dB
11	2500Hz	45.73 dB
12	3150Hz	41.97 dB
13	4000Hz	45.19 dB
14	5000Hz	38.06 dB

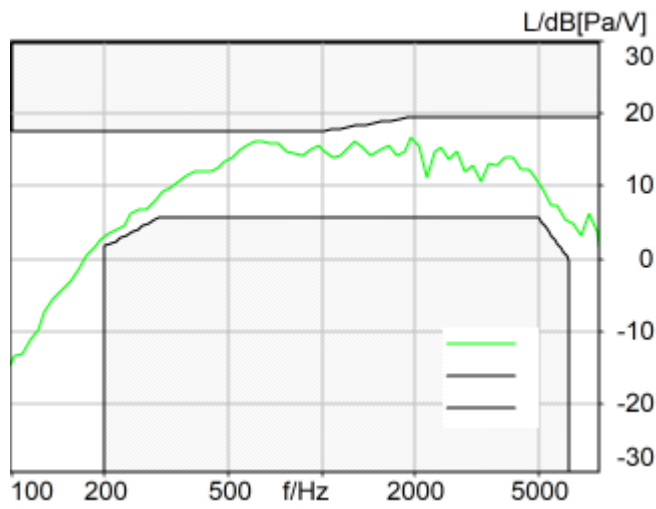
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 23.73dB at 250Hz.

2023/11/12 21:02 ACQUA

5.3 Frequency Response 2N FF

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



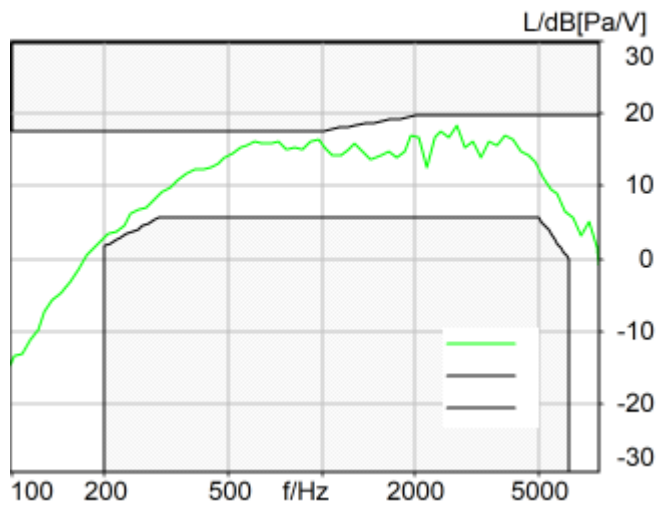
Absolute minimal distance
1.37 dB at 611.7 Hz Ok

Ok

2023/11/12 21:02 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 2N DF

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



Absolute minimal distance
1.25 dB at 974.0 Hz Ok

Ok

2023/11/12 21:03 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_8N
--------------------	--

Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/21 20:42

Status Overview

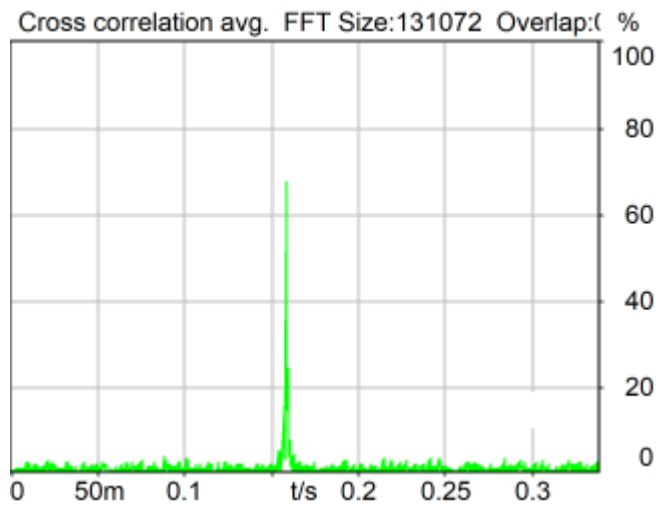
SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay WB	Done	Delay (Cross) [ms]	158.4	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_8N
5.1a Receive Volume Control Performance 8N WB	Ok	Speech Level [dB[SPL]]	89.03	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_8N
5.2 RCV Distortion and Noise - 250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	22.68	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_8N
5.2 RCV Distortion and Noise - 315 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	24.66	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_8N
5.2 RCV Distortion and Noise - 400 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	25.61	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_8N
5.2 RCV Distortion and Noise - 500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	27.68	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_8N
5.2 RCV Distortion and Noise - 630 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	28.79	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_8N
5.2 RCV Distortion and Noise - 800 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	28.53	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_8N
5.2 RCV Distortion and Noise - 1000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	30.49	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_8N
5.2 RCV Distortion and Noise - 1250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	27.01	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_8N
5.2 RCV Distortion and Noise - 1600 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	34.08	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_8N
5.2 RCV Distortion and Noise - 2000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	34.09	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_8N
5.2 RCV Distortion and Noise - 2500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	38.66	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_8N
5.2 RCV Distortion and Noise - 3150 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	35.16	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_8N
5.2 RCV Distortion and Noise - 4000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	37.88	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_8N
5.2 RCV Distortion and Noise - 5000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	35.37	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_8N
Report - Receive Distortion	Ok	Minimum SDNR	22.68	LTE Band

and Noise (Conversational Gain)		[dB], (occured at 250Hz)		13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_8N
5.3 Frequency Response 8N FF	Ok	Min. dist. to tolerance scheme [dB], 217.7 Hz	1.46	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_8N
5.3 Frequency Response 8N DF	Ok	Min. dist. to tolerance scheme [dB], 974.0 Hz	1.43	LTE Band 13_10M_QPSK_50RB_0Offset_EVS WB 64Kbps_Ch23230_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



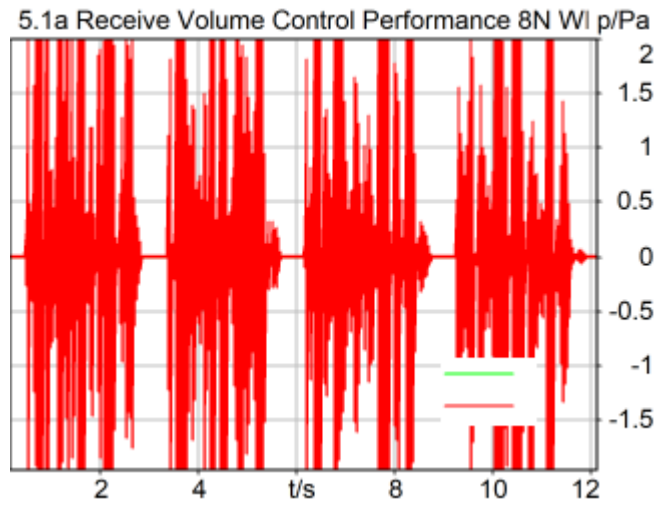
Delay (Cross): 158.4 ms

2023/11/12 21:08 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: 89.03 dB[SPL], Act.: 80.88% Ok

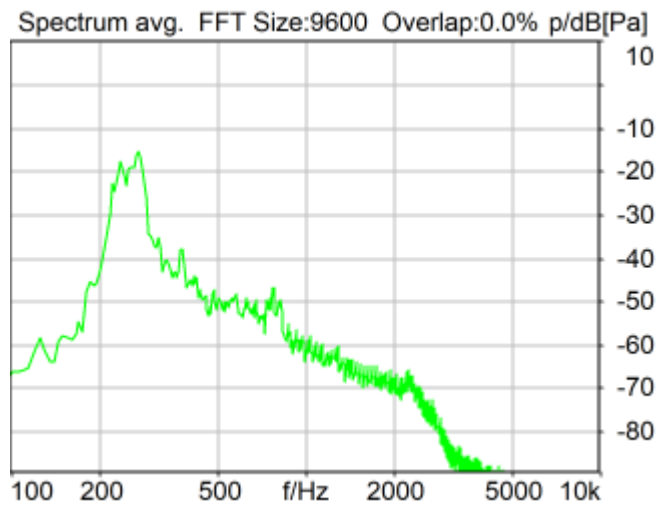
Ok

2023/11/12 21:08 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): 22.68 dB (7.35%) Ok

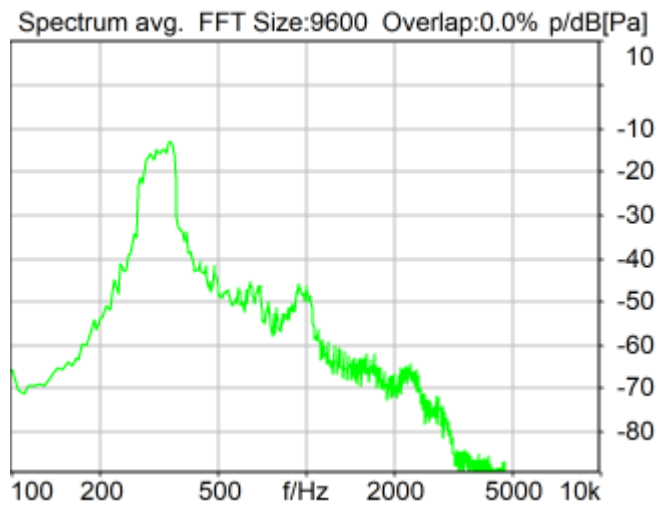
Ok

2023/11/12 21:09 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): 24.66 dB (5.85%) Ok

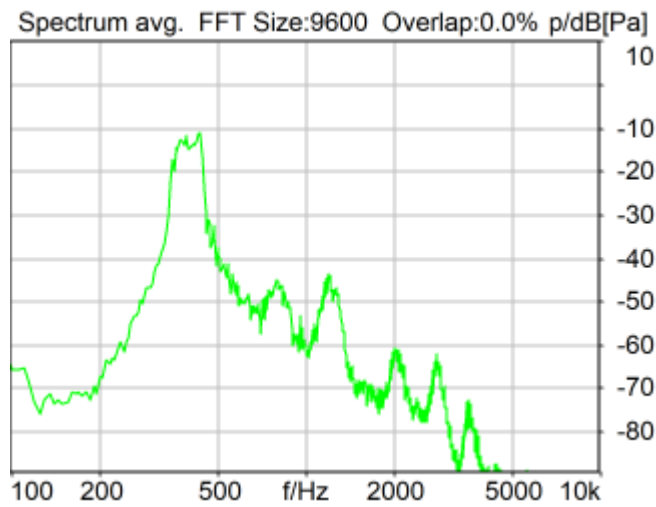
Ok

2023/11/12 21:09 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): 25.61 dB (5.24%) Ok

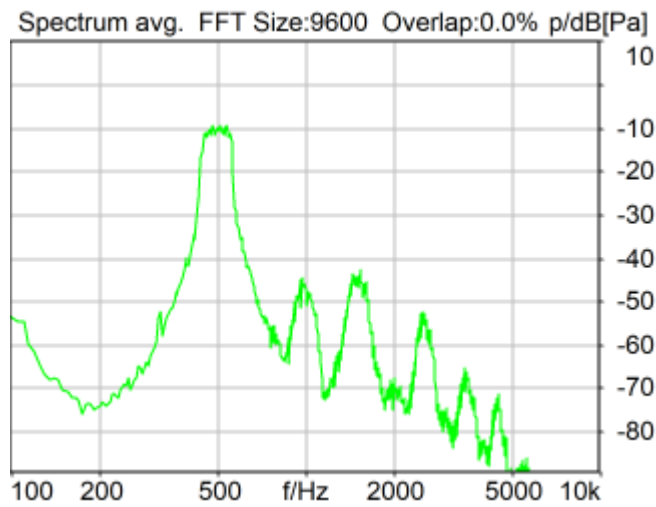
Ok

2023/11/12 21:10 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): 27.68 dB (4.13%) Ok

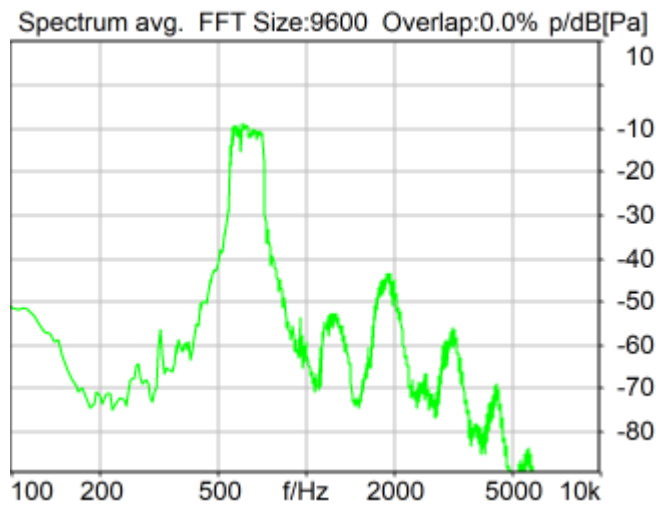
Ok

2023/11/12 21:10 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): 28.79 dB (3.63%) Ok

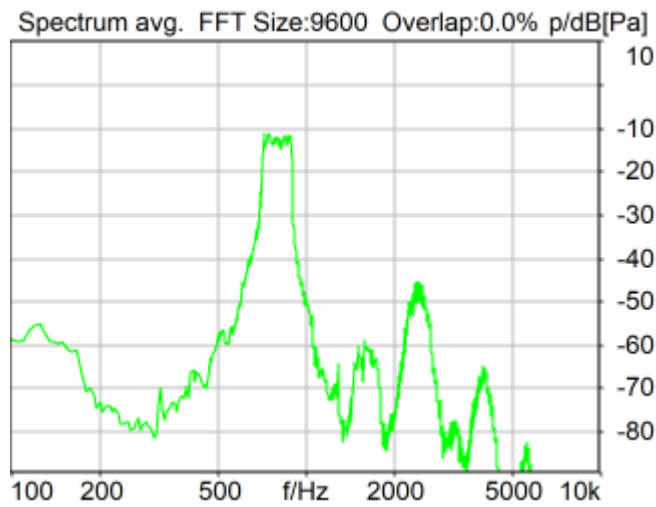
Ok

2023/11/12 21:11 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): 28.53 dB (3.75%) Ok

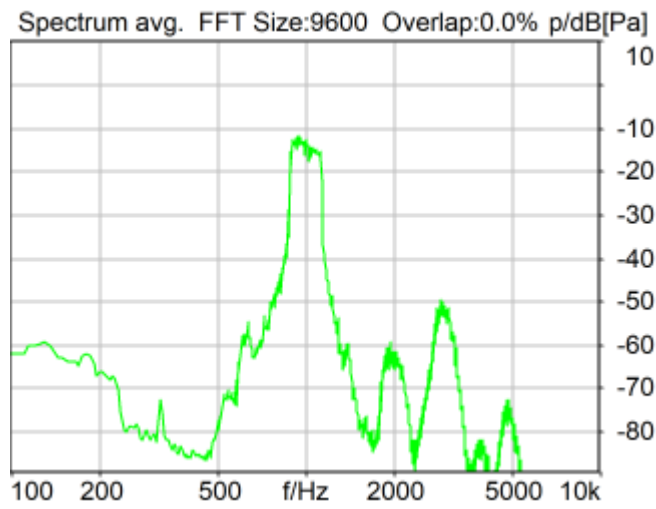
Ok

2023/11/12 21:11 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): 30.49 dB (2.99%) Ok

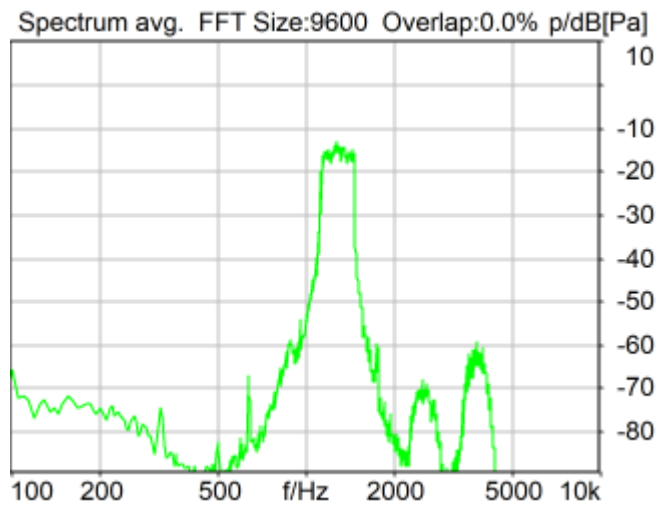
Ok

2023/11/12 21:11 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): 27.01 dB (4.46%) Ok

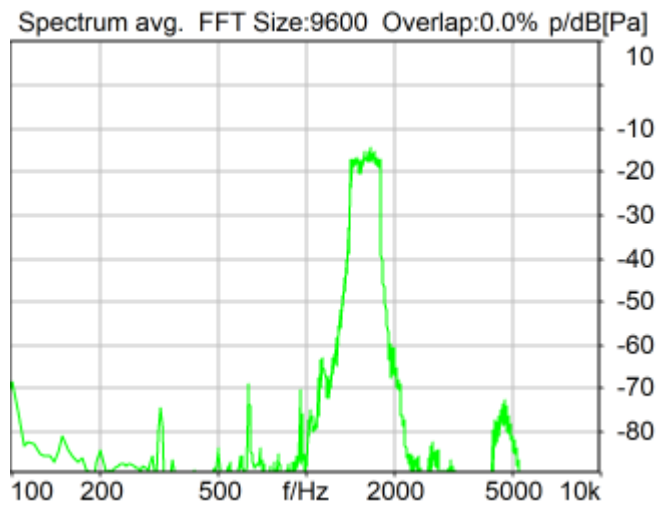
Ok

2023/11/12 21:12 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



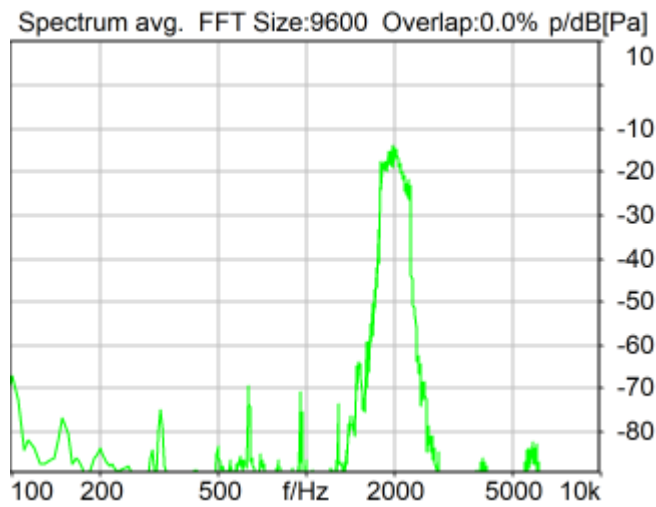
Distortion (Noise) RCV (packed): 34.08 dB (1.98%) Ok

Ok

2023/11/12 21:12 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): 34.09 dB (1.97%) Ok

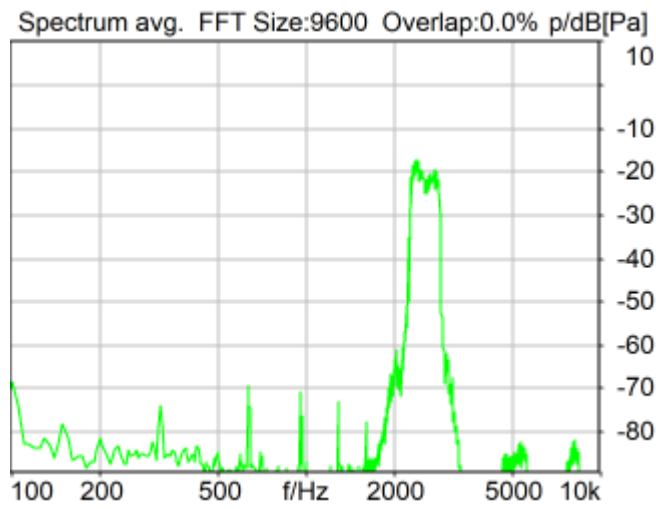
Ok

2023/11/12 21:13 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): 38.66 dB (1.17%) Ok

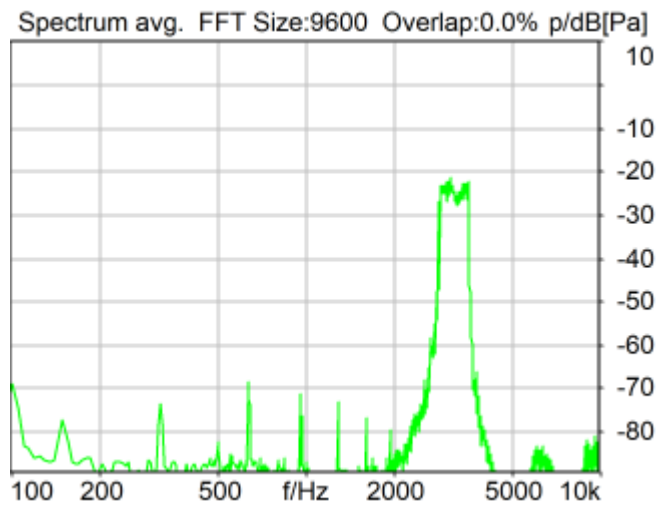
Ok

2023/11/12 21:13 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): 35.16 dB (1.75%) Ok

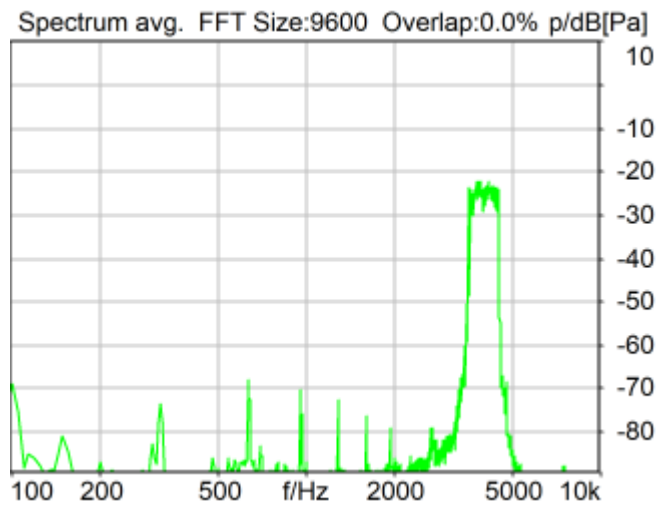
Ok

2023/11/12 21:13 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): 37.88 dB (1.28%) Ok

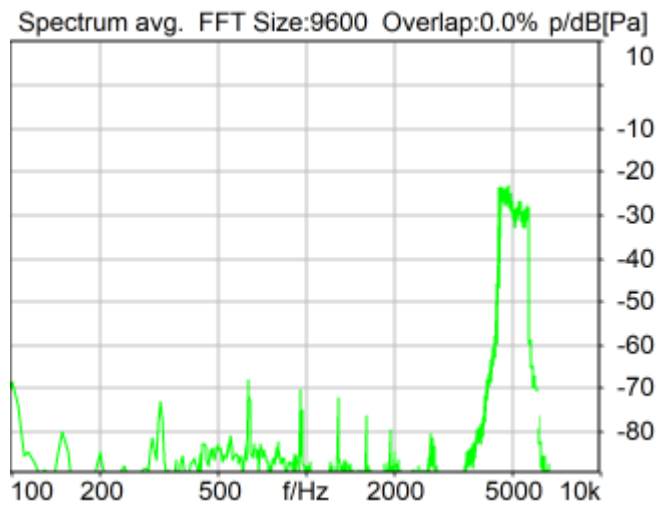
Ok

2023/11/12 21:14 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): 35.37 dB (1.70%) Ok

Ok

2023/11/12 21:14 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	22.68 dB
2	315Hz	24.66 dB
3	400Hz	25.61 dB
4	500Hz	27.68 dB
5	630Hz	28.79 dB
6	800Hz	28.53 dB
7	1000Hz	30.49 dB
8	1250Hz	27.01 dB
9	1600Hz	34.08 dB
10	2000Hz	34.09 dB
11	2500Hz	38.66 dB
12	3150Hz	35.16 dB
13	4000Hz	37.88 dB
14	5000Hz	35.37 dB

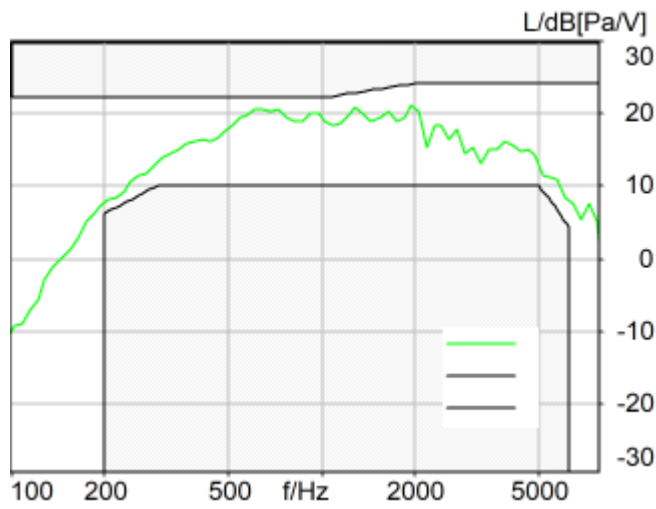
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 22.68dB at 250Hz.

2023/11/12 21:14 ACQUA

5.3 Frequency Response 8N FF

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



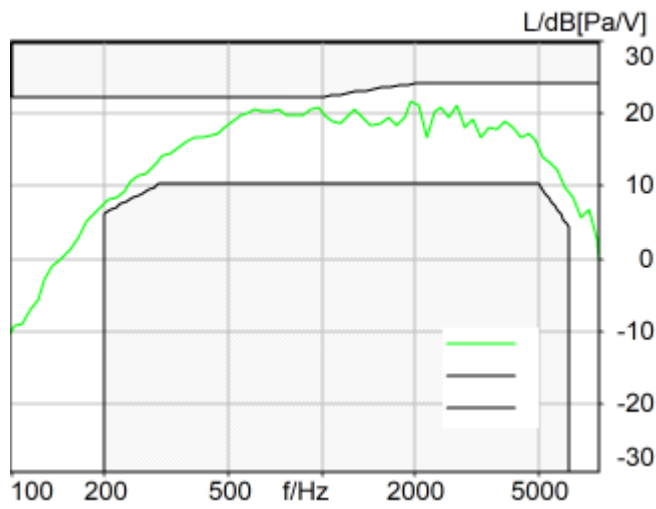
Absolute minimal distance
1.46 dB at 217.7 Hz Ok

Ok

2023/11/12 21:15 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 8N DF

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



Absolute minimal distance
1.43 dB at 974.0 Hz Ok

Ok

2023/11/12 21:15 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_2N
--------------------	--

Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/21 20:44

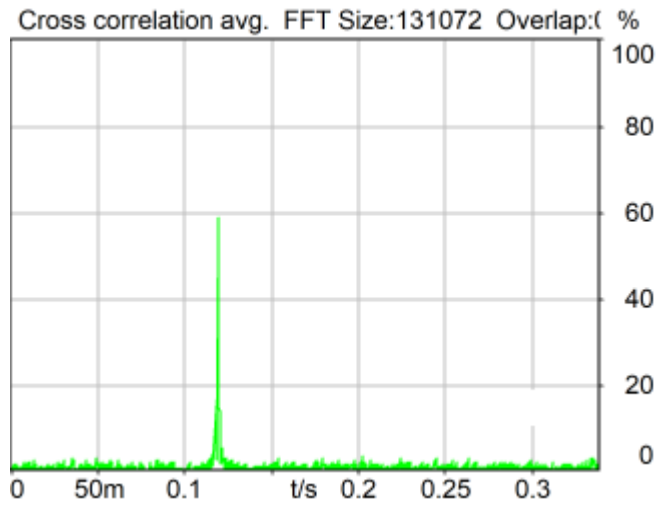
Status Overview

SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay NB	Done	Delay (Cross) [ms]	119.1	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_2N
5.1b Receive Volume Control Performance 2N NB	Ok	Speech Level [dB[SPL]]	86.06	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_2N
5.2 RCV Distortion and Noise - 400 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	25.39	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_2N
5.2 RCV Distortion and Noise - 500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	27.81	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_2N
5.2 RCV Distortion and Noise - 630 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	29.07	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_2N
5.2 RCV Distortion and Noise - 800 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	26.88	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_2N
5.2 RCV Distortion and Noise - 1000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	28.31	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_2N
5.2 RCV Distortion and Noise - 1250 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	29.77	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_2N
5.2 RCV Distortion and Noise - 1600 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	38.77	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_2N
5.2 RCV Distortion and Noise - 2000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	40.66	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_2N
5.2 RCV Distortion and Noise - 2500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	40.75	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_2N
5.2 RCV Distortion and Noise - 3150 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	38.56	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_2N
Report - Receive Distortion and Noise (Conversational Gain)	Ok	Minimum SDNR [dB], (occured at 400Hz)	25.39	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_2N
5.3 Frequency Response 2N FF HANB	Ok	Min. dist. to tolerance scheme [dB], 1028.7 Hz	0.71	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_2N
5.3 Frequency Response 2N DF HANB	Ok	Min. dist. to tolerance scheme [dB], 2177.4 Hz	0.46	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_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): 119.1 ms

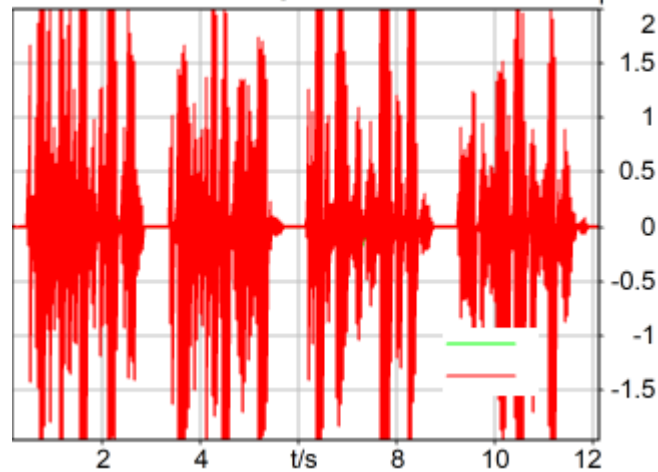
2023/11/12 21:47 ACQUA 5.1.200

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: 86.06 dB[SPL], Act.: 82.02% Ok

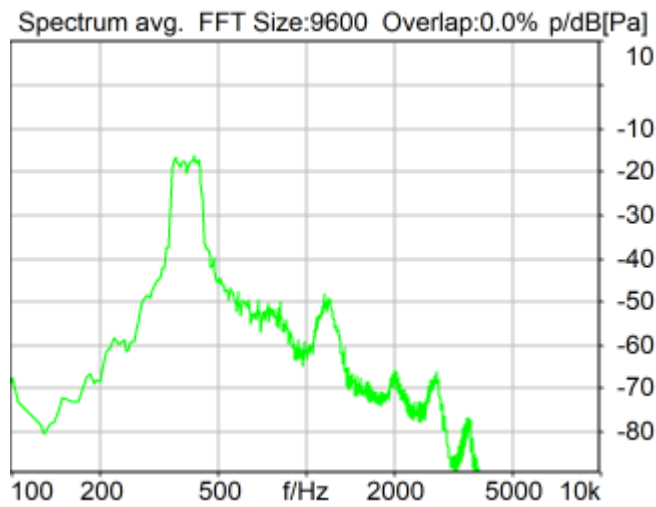
Ok

2023/11/12 21:47 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): 25.39 dB (5.37%) Ok

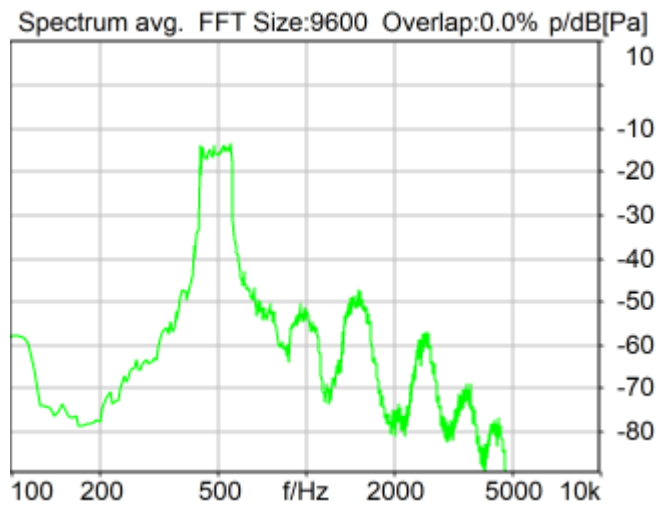
Ok

2023/11/12 21:47 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): 27.81 dB (4.07%) Ok

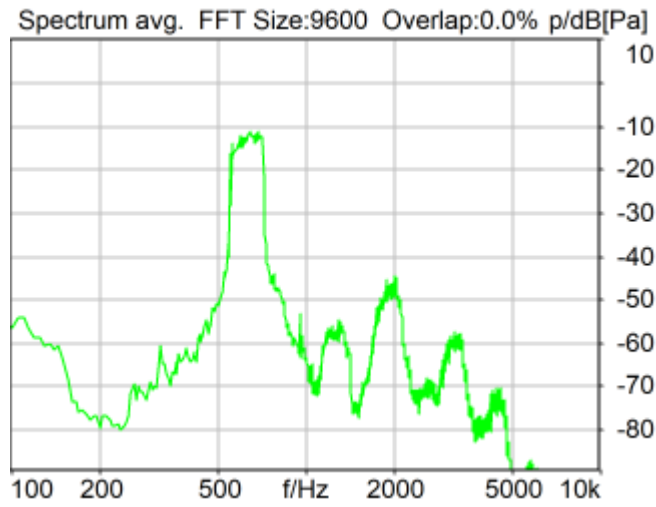
Ok

2023/11/12 21:48 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): 29.07 dB (3.52%) Ok

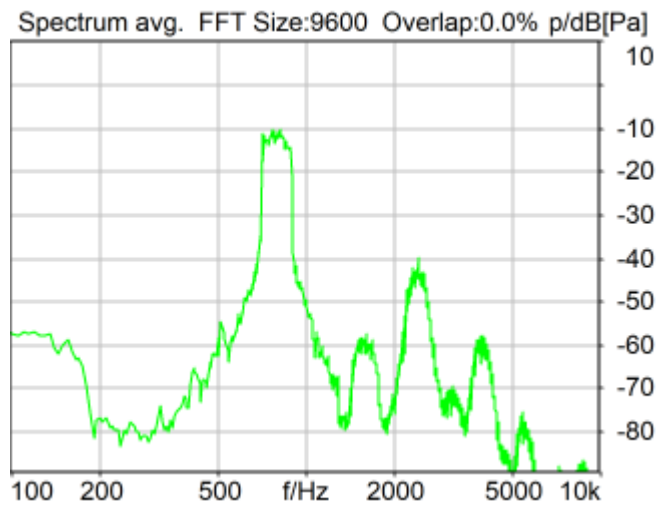
Ok

2023/11/12 21:48 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): 26.88 dB (4.53%) Ok

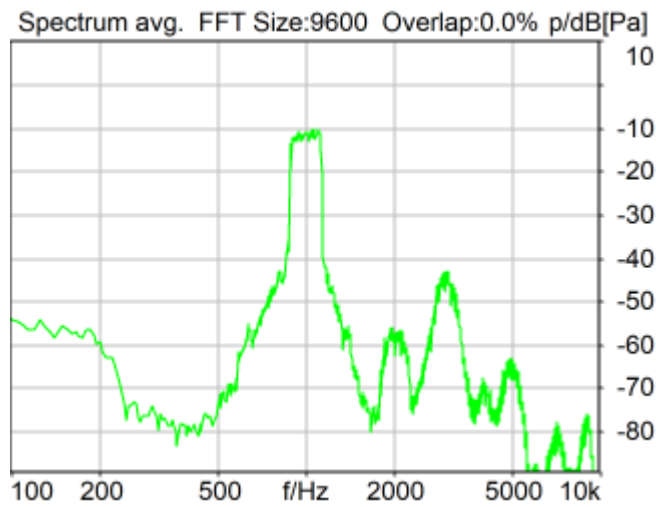
Ok

2023/11/12 21:48 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): 28.31 dB (3.84%) Ok

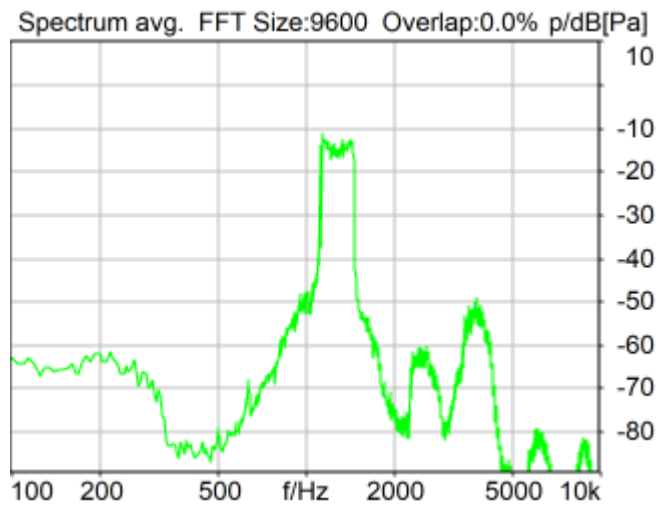
Ok

2023/11/12 21:49 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): 29.77 dB (3.25%) Ok

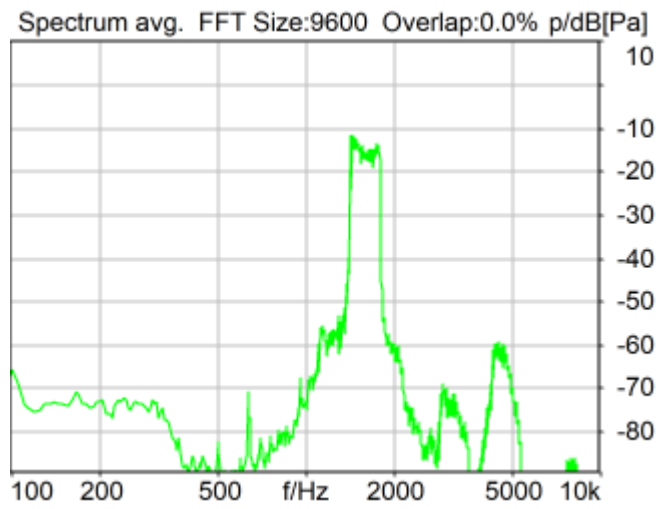
Ok

2023/11/12 21:49 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): 38.77 dB (1.15%) Ok

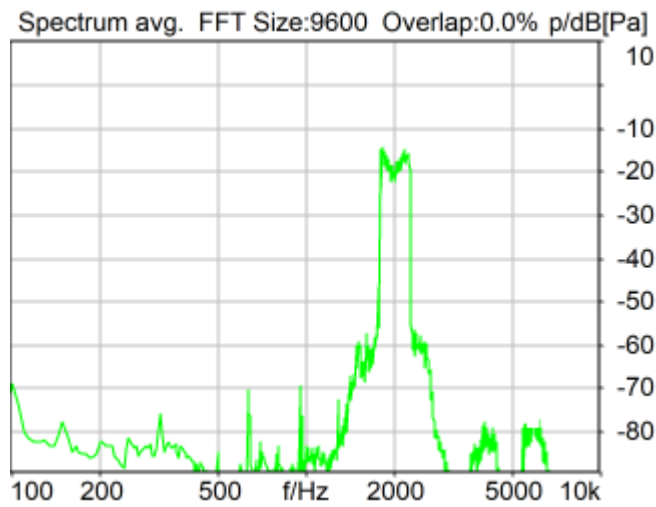
Ok

2023/11/12 21:50 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): 40.66 dB (0.93%) Ok

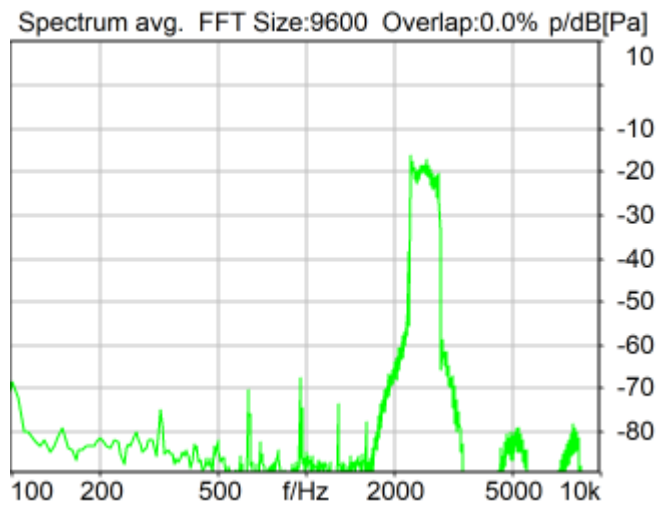
Ok

2023/11/12 21:50 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): 40.75 dB (0.92%) Ok

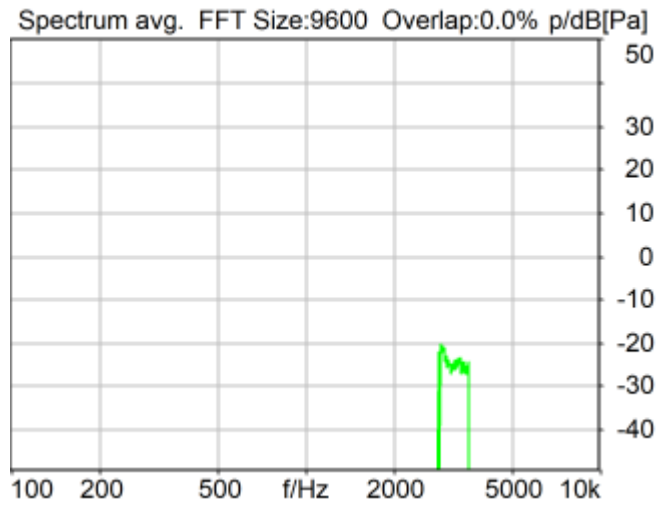
Ok

2023/11/12 21:50 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): 38.56 dB (1.18%) Ok

Ok

2023/11/12 21:51 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

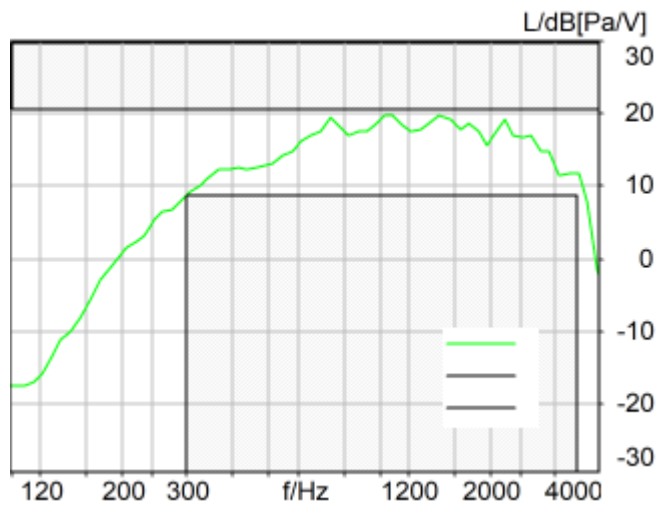
Region	Frequency	SDNR
1	400Hz	25.39 dB
2	500Hz	27.81 dB
3	630Hz	29.07 dB
4	800Hz	26.88 dB
5	1000Hz	28.31 dB
6	1250Hz	29.77 dB
7	1600Hz	38.77 dB
8	2000Hz	40.66 dB
9	2500Hz	40.75 dB
10	3150Hz	38.56 dB

All SDNRs were greater than 20.0 dB, requirement was met.
Smallest SDNR was 25.39dB at 400Hz.

2023/11/12 21:58 ACQUA

5.3 Frequency Response 2N FF HANB

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



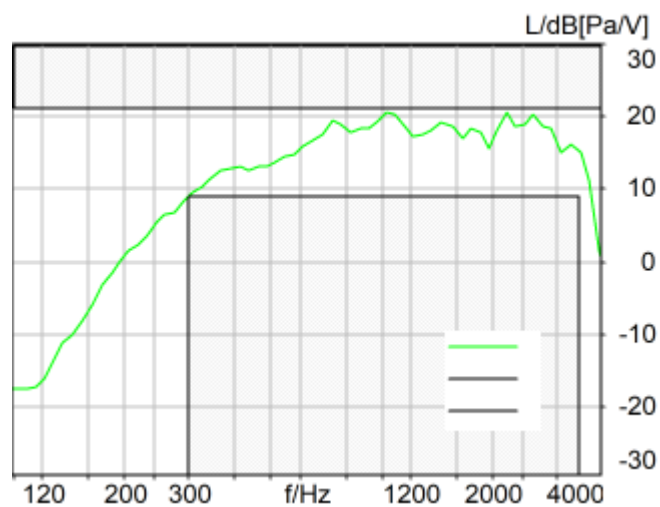
Absolute minimal distance
0.71 dB at 1028.7 Hz Ok

Ok

2023/11/12 21:58 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
0.46 dB at 2177.4 Hz Ok

Ok

2023/11/12 21:58 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor

Measurement Protocol

Measurement Object	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_8N
--------------------	--

Project	3O1004 of TIA-5050 (2018-01)
Report Generation Date	2023/11/21 20:45

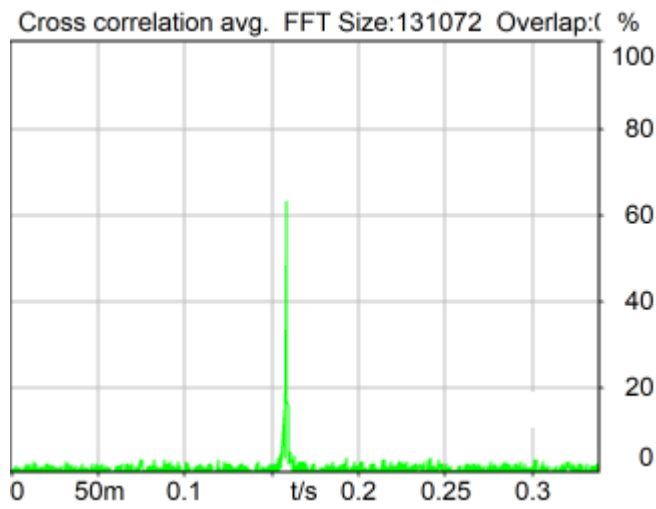
Status Overview

SMD	Status	Single Value Description	Single Value	Object
Overall Receive Delay NB	Done	Delay (Cross) [ms]	158.4	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_8N
5.1a Receive Volume Control Performance 8N NB	Ok	Speech Level [dB[SPL]]	90.74	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_8N
5.2 RCV Distortion and Noise - 400 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	25.37	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_8N
5.2 RCV Distortion and Noise - 500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	27.57	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_8N
5.2 RCV Distortion and Noise - 630 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	28.66	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_8N
5.2 RCV Distortion and Noise - 800 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	27.45	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_8N
5.2 RCV Distortion and Noise - 1000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	29.12	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_8N
5.2 RCV Distortion and Noise - 1250 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	27.56	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_8N
5.2 RCV Distortion and Noise - 1600 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	37.09	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_8N
5.2 RCV Distortion and Noise - 2000 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	32.89	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_8N
5.2 RCV Distortion and Noise - 2500 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	28.20	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_8N
5.2 RCV Distortion and Noise - 3150 Hz NB	Ok	Distortion (Noise) [dB], 0.0 dB	37.09	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_8N
Report - Receive Distortion and Noise (Conversational Gain)	Ok	Minimum SDNR [dB], (occured at 400Hz)	25.37	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_8N
5.3 Frequency Response 8N FF HANB	Ok	Min. dist. to tolerance scheme [dB], 305.9 Hz	0.46	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_8N
5.3 Frequency Response 8N DF HANB	Ok	Min. dist. to tolerance scheme [dB], 305.9 Hz	0.19	LTE Band 26_15M_QPSK_75RB_0Offset_EVS NB 24.4Kbps_Ch26865_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



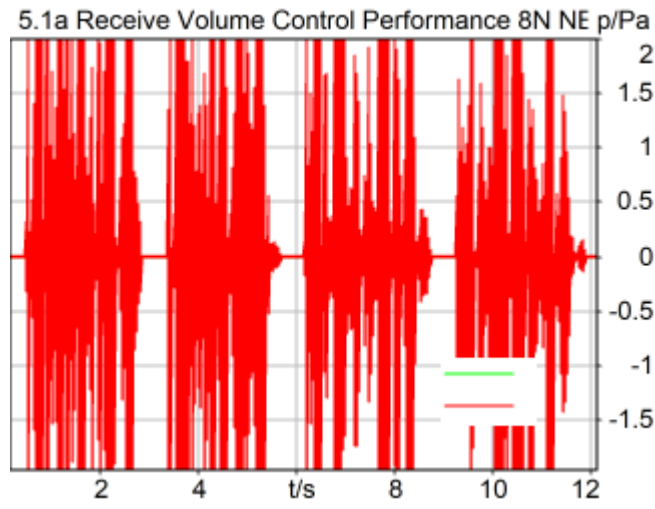
Delay (Cross): 158.4 ms

2023/11/12 22:02 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: 90.74 dB[SPL], Act.: 80.82% Ok

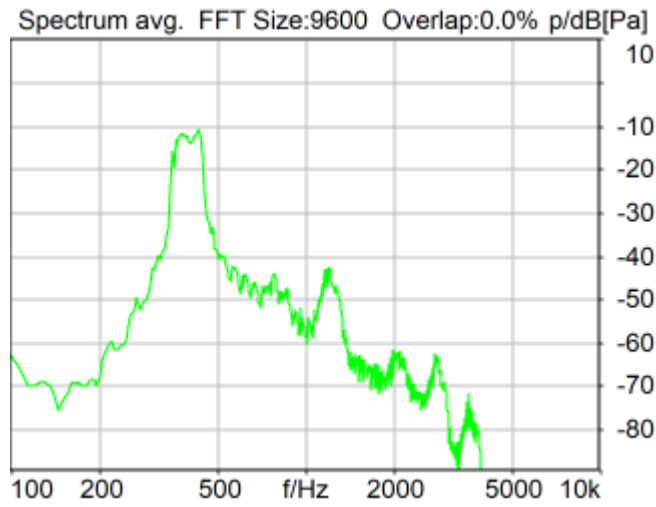
Ok

2023/11/12 22:02 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): 25.37 dB (5.39%) Ok

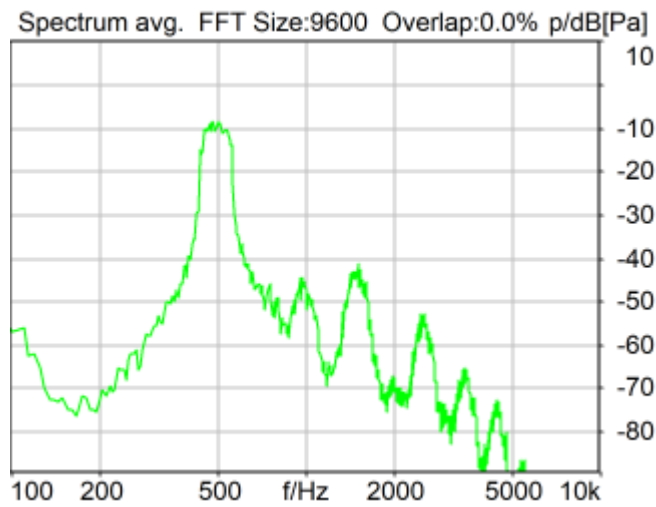
Ok

2023/11/12 22:02 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): 27.57 dB (4.18%) Ok

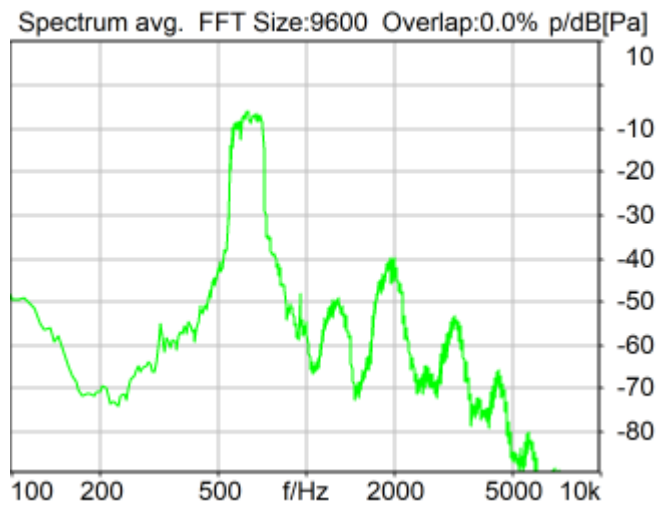
Ok

2023/11/12 22:03 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): 28.66 dB (3.69%) Ok

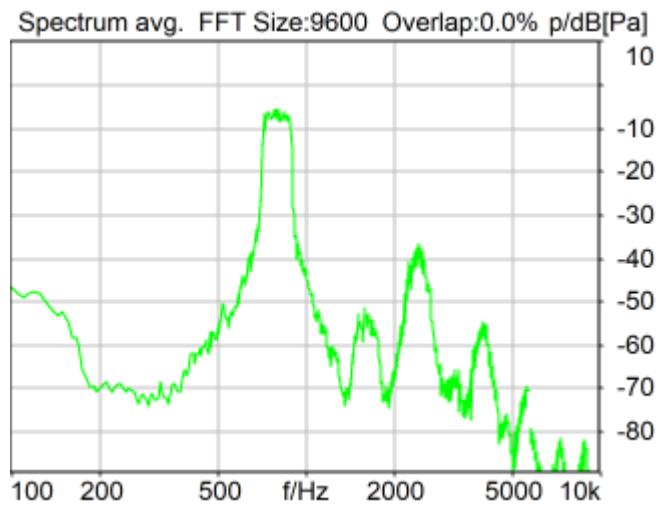
Ok

2023/11/12 22:03 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): 27.45 dB (4.24%) Ok

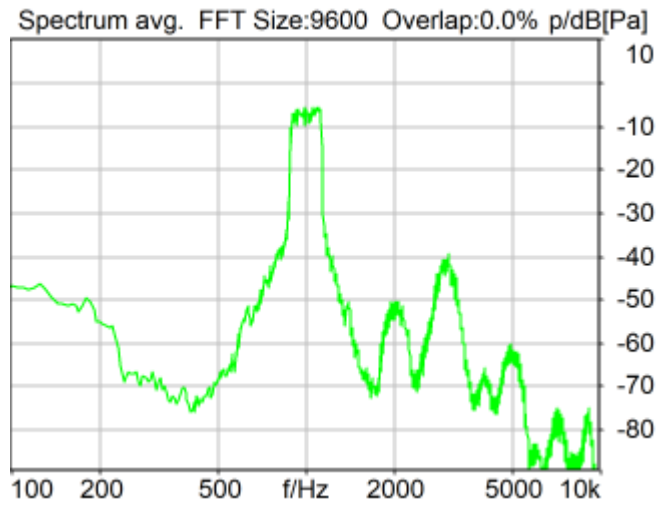
Ok

2023/11/12 22:04 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): 29.12 dB (3.50%) Ok

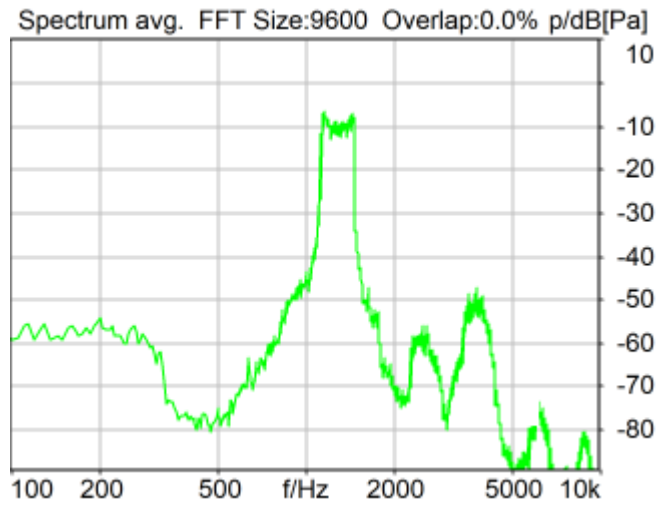
Ok

2023/11/12 22:04 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): 27.56 dB (4.19%) Ok

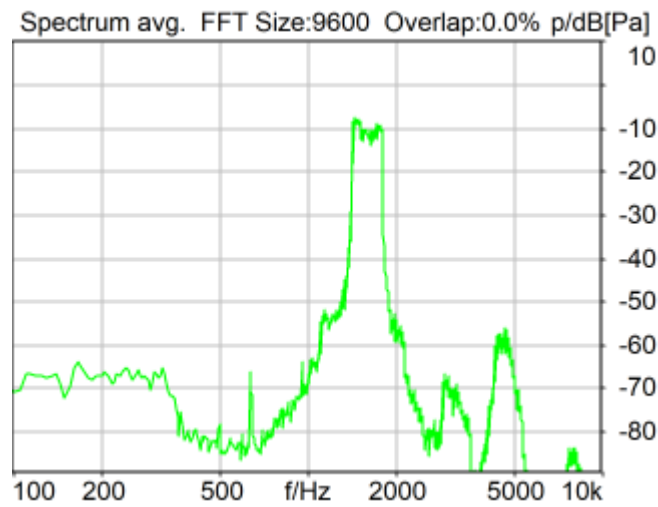
Ok

2023/11/12 22:04 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): 37.09 dB (1.40%) Ok

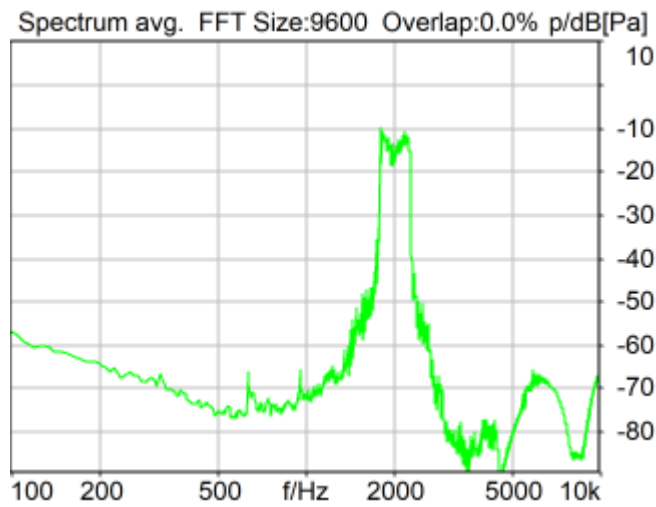
Ok

2023/11/12 22:05 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): 32.89 dB (2.27%) Ok

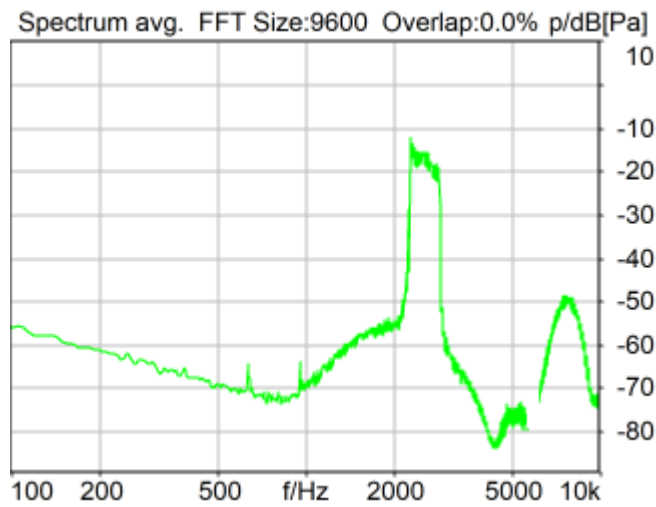
Ok

2023/11/12 22:05 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): 28.20 dB (3.89%) Ok

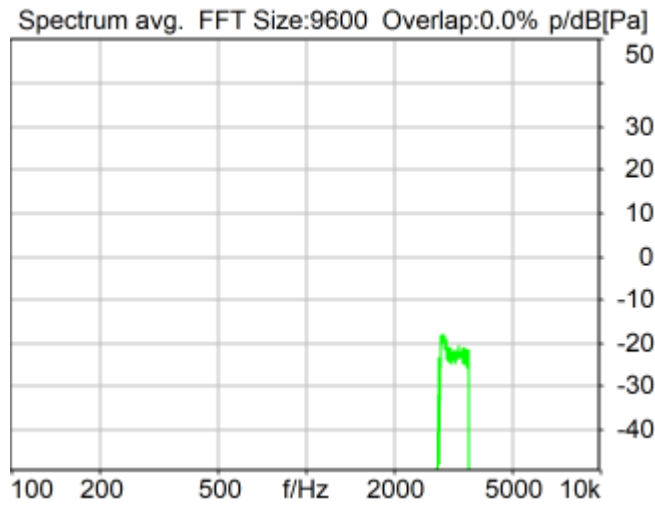
Ok

2023/11/12 22:06 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): 37.09 dB (1.40%) Ok

Ok

2023/11/12 22:06 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

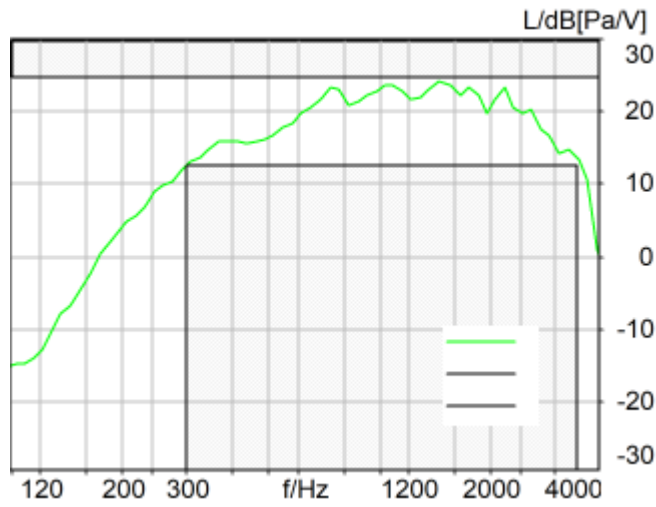
Region	Frequency	SDNR
1	400Hz	25.37 dB
2	500Hz	27.57 dB
3	630Hz	28.66 dB
4	800Hz	27.45 dB
5	1000Hz	29.12 dB
6	1250Hz	27.56 dB
7	1600Hz	37.09 dB
8	2000Hz	32.89 dB
9	2500Hz	28.20 dB
10	3150Hz	37.09 dB

All SDNRs were greater than 20.0 dB, requirement was met.
Smallest SDNR was 25.37dB at 400Hz.

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5.3 Frequency Response 8N FF HANB

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



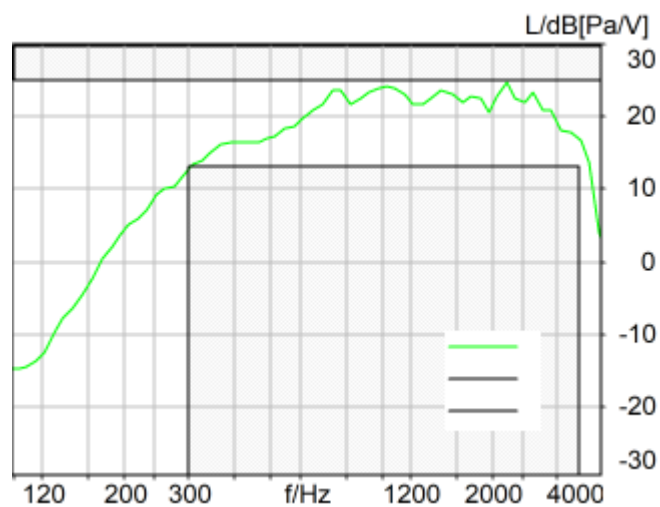
Absolute minimal distance
0.46 dB at 305.9 Hz Ok

Ok

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Unmodified HEAD acoustics Measurement Descriptor

5.3 Frequency Response 8N DF HANB

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



Absolute minimal distance
0.19 dB at 305.9 Hz Ok

Ok

2023/11/13 1:22 ACQUA 5.1.200
Unmodified HEAD acoustics Measurement Descriptor