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## **Measurement Protocol**

|                    |                                                             |
|--------------------|-------------------------------------------------------------|
| Measurement Object | LTE Band 12_10M_QPSK_1RB_0Offset_EVS NB 13.2kbps_Ch23095_2N |
|--------------------|-------------------------------------------------------------|

|                        |                  |
|------------------------|------------------|
| Project                | 420424           |
| Report Generation Date | 4/6/2024 4:38 AM |
| Responsible Person     | AC01-KS          |

## Status Overview

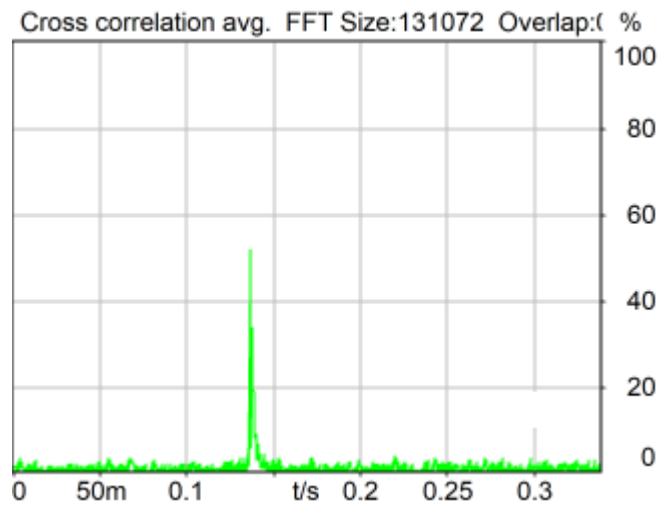
| SMD                                                         | Status | Single Value Description                       | Single Value | Object                                                             |
|-------------------------------------------------------------|--------|------------------------------------------------|--------------|--------------------------------------------------------------------|
| Overall Receive Delay NB                                    | Done   | Delay (Cross) [ms]                             | 137.5        | LTE Band<br>12_10M_QPSK_1RB_0Offset_EV<br>S NB 13.2kbps_Ch23095_2N |
| 5.1b Receive Volume Control Performance 2N NB               | Ok     | Speech Level [dB[SPL]]                         | 80.11        | LTE Band<br>12_10M_QPSK_1RB_0Offset_EV<br>S NB 13.2kbps_Ch23095_2N |
| 5.2 RCV Distortion and Noise - 400 Hz NB                    | Ok     | Distortion (Noise) [dB], 0.0 dB                | 26.29        | LTE Band<br>12_10M_QPSK_1RB_0Offset_EV<br>S NB 13.2kbps_Ch23095_2N |
| 5.2 RCV Distortion and Noise - 500 Hz NB                    | Ok     | Distortion (Noise) [dB], 0.0 dB                | 27.08        | LTE Band<br>12_10M_QPSK_1RB_0Offset_EV<br>S NB 13.2kbps_Ch23095_2N |
| 5.2 RCV Distortion and Noise - 630 Hz NB                    | Ok     | Distortion (Noise) [dB], 0.0 dB                | 22.85        | LTE Band<br>12_10M_QPSK_1RB_0Offset_EV<br>S NB 13.2kbps_Ch23095_2N |
| 5.2 RCV Distortion and Noise - 800 Hz NB                    | Ok     | Distortion (Noise) [dB], 0.0 dB                | 23.12        | LTE Band<br>12_10M_QPSK_1RB_0Offset_EV<br>S NB 13.2kbps_Ch23095_2N |
| 5.2 RCV Distortion and Noise - 1000 Hz NB                   | Ok     | Distortion (Noise) [dB], 0.0 dB                | 34.65        | LTE Band<br>12_10M_QPSK_1RB_0Offset_EV<br>S NB 13.2kbps_Ch23095_2N |
| 5.2 RCV Distortion and Noise - 1250 Hz NB                   | Ok     | Distortion (Noise) [dB], 0.0 dB                | 30.28        | LTE Band<br>12_10M_QPSK_1RB_0Offset_EV<br>S NB 13.2kbps_Ch23095_2N |
| 5.2 RCV Distortion and Noise - 1600 Hz NB                   | Ok     | Distortion (Noise) [dB], 0.0 dB                | 36.79        | LTE Band<br>12_10M_QPSK_1RB_0Offset_EV<br>S NB 13.2kbps_Ch23095_2N |
| 5.2 RCV Distortion and Noise - 2000 Hz NB                   | Ok     | Distortion (Noise) [dB], 0.0 dB                | 33.79        | LTE Band<br>12_10M_QPSK_1RB_0Offset_EV<br>S NB 13.2kbps_Ch23095_2N |
| 5.2 RCV Distortion and Noise - 2500 Hz NB                   | Ok     | Distortion (Noise) [dB], 0.0 dB                | 33.58        | LTE Band<br>12_10M_QPSK_1RB_0Offset_EV<br>S NB 13.2kbps_Ch23095_2N |
| 5.2 RCV Distortion and Noise - 3150 Hz NB                   | Ok     | Distortion (Noise) [dB], 0.0 dB                | 29.51        | LTE Band<br>12_10M_QPSK_1RB_0Offset_EV<br>S NB 13.2kbps_Ch23095_2N |
| Report - Receive Distortion and Noise (Conversational Gain) | Ok     | Minimum SDNR [dB], (occured at 630Hz)          | 22.85        | LTE Band<br>12_10M_QPSK_1RB_0Offset_EV<br>S NB 13.2kbps_Ch23095_2N |
| 5.3 Frequency Response 2N FF HANB                           | Ok     | Min. dist. to tolerance scheme [dB], 305.9 Hz  | 3.09         | LTE Band<br>12_10M_QPSK_1RB_0Offset_EV<br>S NB 13.2kbps_Ch23095_2N |
| 5.3 Frequency Response 2N DF HANB                           | Ok     | Min. dist. to tolerance scheme [dB], 3245.6 Hz | 2.72         | LTE Band<br>12_10M_QPSK_1RB_0Offset_EV<br>S NB 13.2kbps_Ch23095_2N |

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|                                                             |    |
|-------------------------------------------------------------|----|
| 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

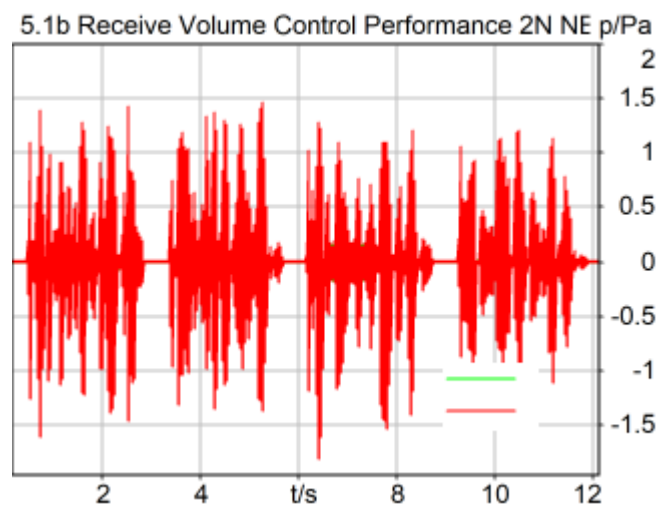


Delay (Cross): 137.5 ms

4/6/2024 4:31 AM ACQUA 5.1.200

## **5.1b Receive Volume Control Performance 2N NB**

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



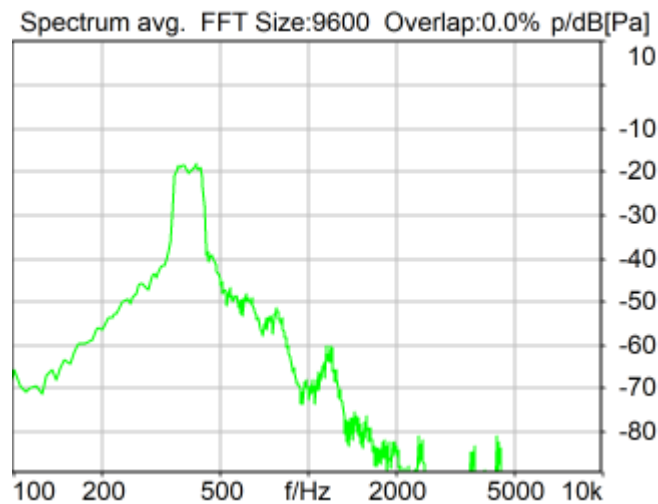
Speech Level RCV: 80.11 dB[SPL], Act.: 83.30% Ok

**Ok**

4/6/2024 4:32 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 400 Hz NB**

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



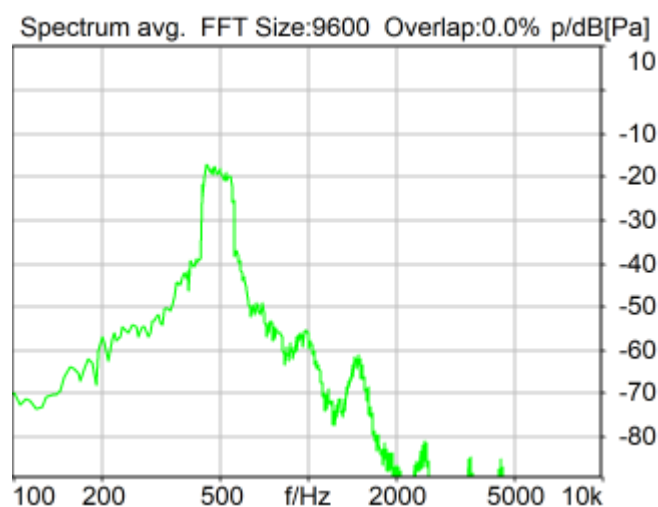
Distortion (Noise) RCV (packed): 26.29 dB (4.85%) Ok

**Ok**

4/6/2024 4:32 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 500 Hz NB**

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



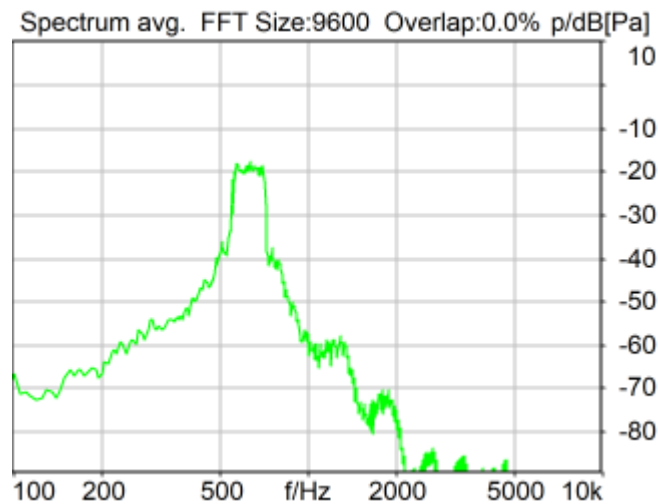
Distortion (Noise) RCV (packed): 27.08 dB (4.43%) Ok

**Ok**

4/6/2024 4:33 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 630 Hz NB**

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



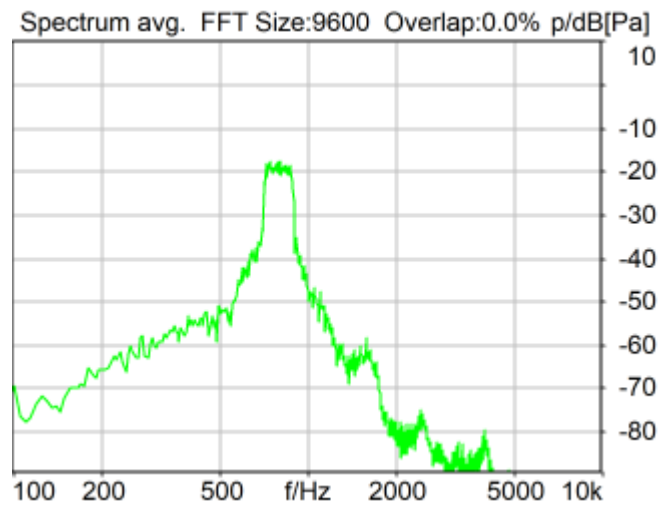
Distortion (Noise) RCV (packed): 22.85 dB (7.20%) Ok

**Ok**

4/6/2024 4:33 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 800 Hz NB**

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



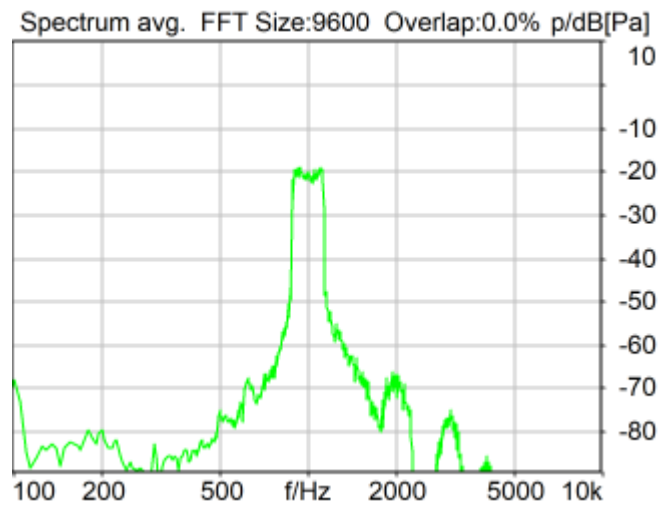
Distortion (Noise) RCV (packed): 23.12 dB (6.98%) Ok

**Ok**

4/6/2024 4:34 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 1000 Hz NB**

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



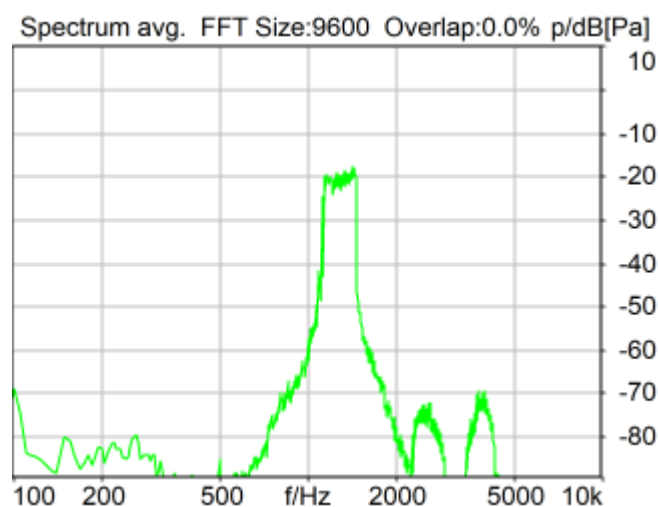
Distortion (Noise) RCV (packed): 34.65 dB (1.85%) Ok

**Ok**

4/6/2024 4:34 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 1250 Hz NB**

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



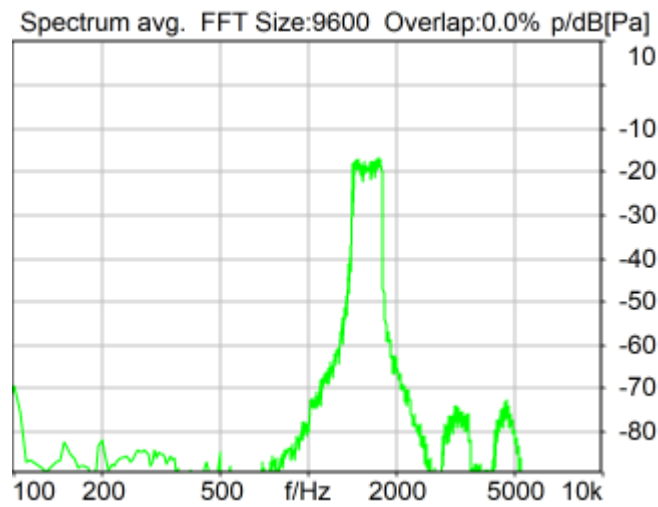
Distortion (Noise) RCV (packed): 30.28 dB (3.06%) Ok

**Ok**

4/6/2024 4:34 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 1600 Hz NB**

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



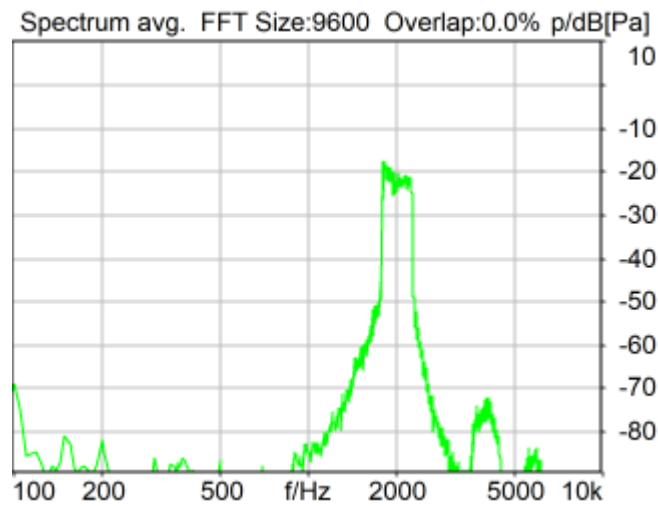
Distortion (Noise) RCV (packed): 36.79 dB (1.45%) Ok

**Ok**

4/6/2024 4:35 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 2000 Hz NB**

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



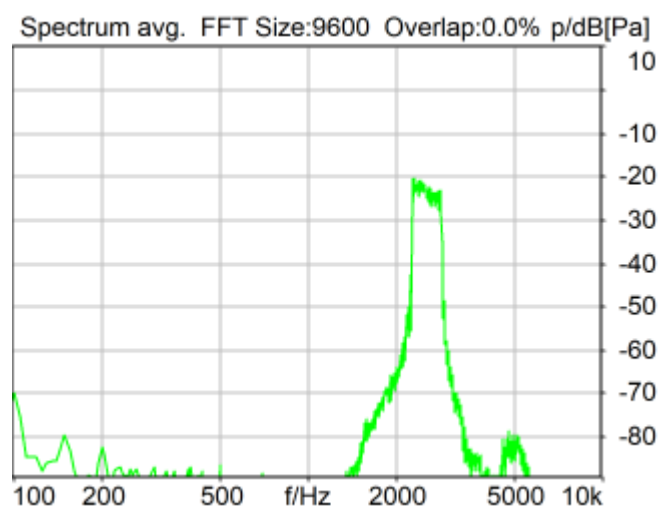
Distortion (Noise) RCV (packed): 33.79 dB (2.04%) Ok

**Ok**

4/6/2024 4:35 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 2500 Hz NB**

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



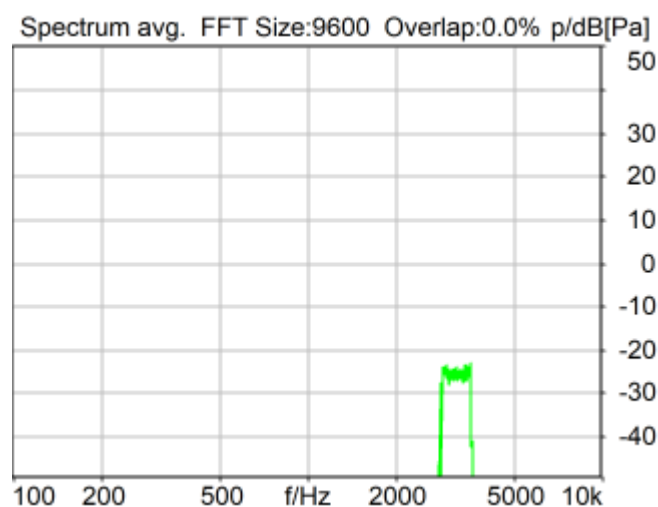
Distortion (Noise) RCV (packed): 33.58 dB (2.09%) Ok

**Ok**

4/6/2024 4:36 AM ACQUA 5.1.200

## **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): 29.51 dB (3.35%) Ok

**Ok**

4/6/2024 4:36 AM ACQUA 5.1.200

## **Report - Receive Distortion and Noise (Conversational Gain)**

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

| Region | Frequency | SDNR     |
|--------|-----------|----------|
| 1      | 400Hz     | 26.29 dB |
| 2      | 500Hz     | 27.08 dB |
| 3      | 630Hz     | 22.85 dB |
| 4      | 800Hz     | 23.12 dB |
| 5      | 1000Hz    | 34.65 dB |
| 6      | 1250Hz    | 30.28 dB |
| 7      | 1600Hz    | 36.79 dB |
| 8      | 2000Hz    | 33.79 dB |
| 9      | 2500Hz    | 33.58 dB |
| 10     | 3150Hz    | 29.51 dB |

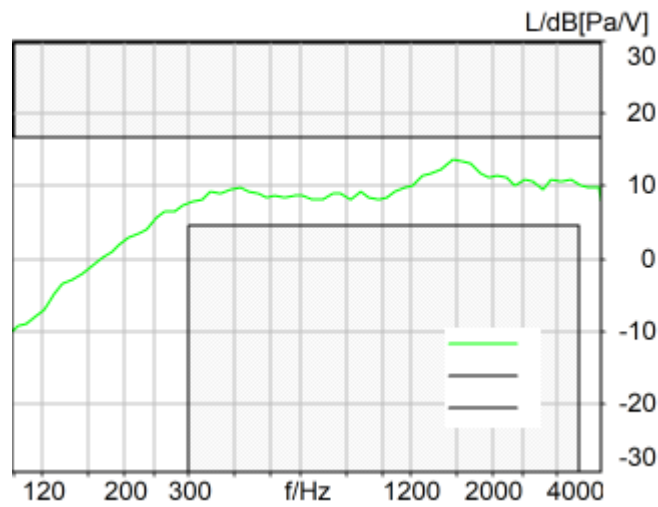
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 22.85dB at 630Hz.

4/6/2024 4:36 AM ACQUA

## 5.3 Frequency Response 2N FF HANB

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



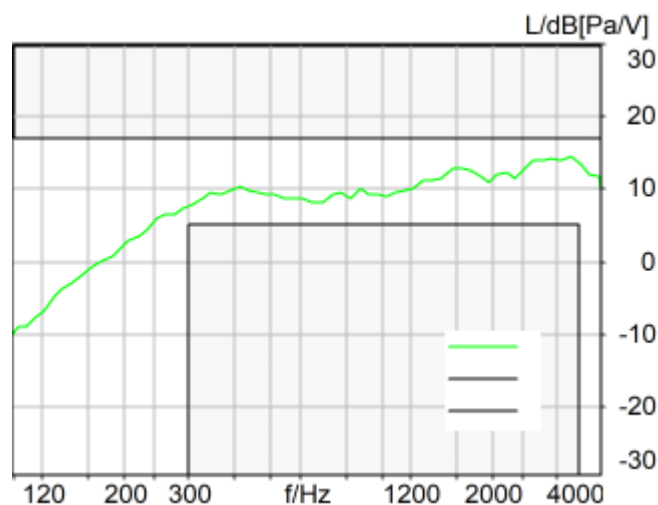
Absolute minimal distance  
3.09 dB at 305.9 Hz Ok

Ok

4/6/2024 4:37 AM ACQUA 5.1.200

## 5.3 Frequency Response 2N DF HANB

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



Absolute minimal distance  
2.72 dB at 3245.6 Hz Ok

Ok

4/6/2024 4:37 AM ACQUA 5.1.200

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## **Measurement Protocol**

|                    |                                                 |
|--------------------|-------------------------------------------------|
| Measurement Object | WLAN2.4GHz_802.11b 1Mbps_EVS WB 13.2kbps_Ch6_8N |
|--------------------|-------------------------------------------------|

|                        |                   |
|------------------------|-------------------|
| Project                | 420424            |
| Report Generation Date | 4/13/2024 1:25 AM |
| Responsible Person     | AC01-KS           |

## Status Overview

| SMD                                           | Status | Single Value Description           | Single Value | Object                                                 |
|-----------------------------------------------|--------|------------------------------------|--------------|--------------------------------------------------------|
| Overall Receive Delay WB                      | Done   | Delay (Cross) [ms]                 | 213.8        | WLAN2.4GHz_802.11b<br>1Mbps_EVS WB 13.<br>2kbps_Ch6_8N |
| 5.1a Receive Volume Control Performance 8N WB | Ok     | Speech Level [dB[SPL]<br>]         | 84.66        | WLAN2.4GHz_802.11b<br>1Mbps_EVS WB 13.<br>2kbps_Ch6_8N |
| 5.2 RCV Distortion and Noise - 250 Hz WB      | Ok     | Distortion (Noise) [dB],<br>0.0 dB | 24.63        | WLAN2.4GHz_802.11b<br>1Mbps_EVS WB 13.<br>2kbps_Ch6_8N |
| 5.2 RCV Distortion and Noise - 315 Hz WB      | Ok     | Distortion (Noise) [dB],<br>0.0 dB | 27.32        | WLAN2.4GHz_802.11b<br>1Mbps_EVS WB 13.<br>2kbps_Ch6_8N |
| 5.2 RCV Distortion and Noise - 400 Hz WB      | Ok     | Distortion (Noise) [dB],<br>0.0 dB | 31.04        | WLAN2.4GHz_802.11b<br>1Mbps_EVS WB 13.<br>2kbps_Ch6_8N |
| 5.2 RCV Distortion and Noise - 500 Hz WB      | Ok     | Distortion (Noise) [dB],<br>0.0 dB | 28.12        | WLAN2.4GHz_802.11b<br>1Mbps_EVS WB 13.<br>2kbps_Ch6_8N |
| 5.2 RCV Distortion and Noise - 630 Hz WB      | Ok     | Distortion (Noise) [dB],<br>0.0 dB | 32.33        | WLAN2.4GHz_802.11b<br>1Mbps_EVS WB 13.<br>2kbps_Ch6_8N |
| 5.2 RCV Distortion and Noise - 800 Hz WB      | Ok     | Distortion (Noise) [dB],<br>0.0 dB | 32.10        | WLAN2.4GHz_802.11b<br>1Mbps_EVS WB 13.<br>2kbps_Ch6_8N |
| 5.2 RCV Distortion and Noise - 1000 Hz WB     | Ok     | Distortion (Noise) [dB],<br>0.0 dB | 29.05        | WLAN2.4GHz_802.11b<br>1Mbps_EVS WB 13.<br>2kbps_Ch6_8N |
| 5.2 RCV Distortion and Noise - 1250 Hz WB     | Ok     | Distortion (Noise) [dB],<br>0.0 dB | 21.88        | WLAN2.4GHz_802.11b<br>1Mbps_EVS WB 13.<br>2kbps_Ch6_8N |
| 5.2 RCV Distortion and Noise - 1600 Hz WB     | Ok     | Distortion (Noise) [dB],<br>0.0 dB | 31.84        | WLAN2.4GHz_802.11b<br>1Mbps_EVS WB 13.<br>2kbps_Ch6_8N |
| 5.2 RCV Distortion and Noise - 2000 Hz WB     | Ok     | Distortion (Noise) [dB],<br>0.0 dB | 32.09        | WLAN2.4GHz_802.11b<br>1Mbps_EVS WB 13.<br>2kbps_Ch6_8N |
| 5.2 RCV Distortion and Noise - 2500 Hz WB     | Ok     | Distortion (Noise) [dB],<br>0.0 dB | 29.77        | WLAN2.4GHz_802.11b<br>1Mbps_EVS WB 13.<br>2kbps_Ch6_8N |
| 5.2 RCV Distortion and Noise - 3150 Hz WB     | Ok     | Distortion (Noise) [dB],<br>0.0 dB | 30.44        | WLAN2.4GHz_802.11b<br>1Mbps_EVS WB 13.<br>2kbps_Ch6_8N |
| 5.2 RCV Distortion and Noise - 4000 Hz WB     | Ok     | Distortion (Noise) [dB],<br>0.0 dB | 32.77        | WLAN2.4GHz_802.11b<br>1Mbps_EVS WB 13.<br>2kbps_Ch6_8N |
| 5.2 RCV Distortion and Noise - 5000 Hz WB     | Ok     | Distortion (Noise) [dB],<br>0.0 dB | 33.69        | WLAN2.4GHz_802.11b<br>1Mbps_EVS WB 13.<br>2kbps_Ch6_8N |
| Report - Receive Distortion                   | Ok     | Minimum SDNR [dB],                 | 21.88        | WLAN2.4GHz_802.11b                                     |

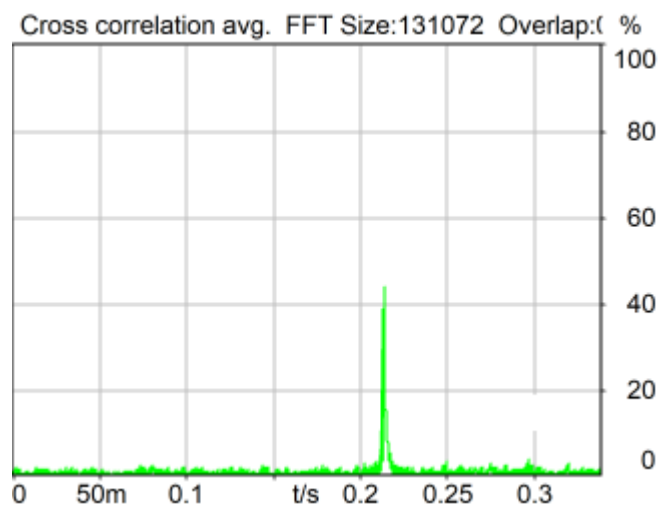
|                                 |    |                                                      |      |                                                        |
|---------------------------------|----|------------------------------------------------------|------|--------------------------------------------------------|
| and Noise (Conversational Gain) |    | (occured at 1250Hz)                                  |      | 1Mbps_EVS WB 13.<br>2kbps_Ch6_8N                       |
| 5.3 Frequency Response 8N<br>FF | Ok | Min. dist. to tolerance<br>scheme [dB], 4620.1<br>Hz | 1.36 | WLAN2.4GHz_802.11b<br>1Mbps_EVS WB 13.<br>2kbps_Ch6_8N |
| 5.3 Frequency Response 8N<br>DF | Ok | Min. dist. to tolerance<br>scheme [dB], 4369.4<br>Hz | 1.27 | WLAN2.4GHz_802.11b<br>1Mbps_EVS WB 13.<br>2kbps_Ch6_8N |

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|                                                             |    |
|-------------------------------------------------------------|----|
| 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

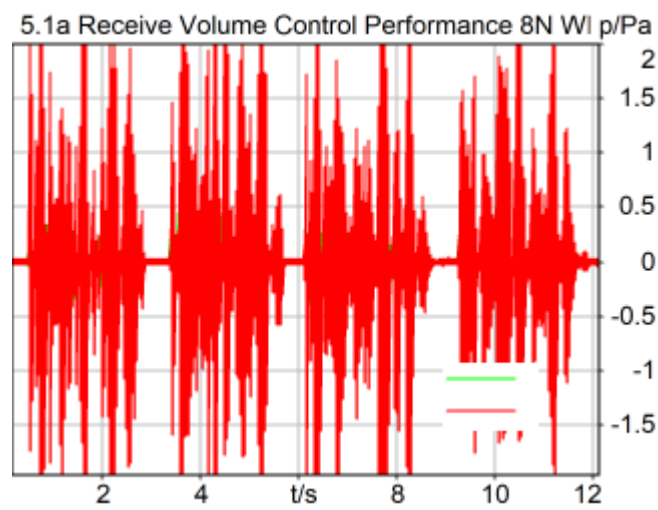


Delay (Cross): 213.8 ms

4/13/2024 1:14 AM ACQUA 5.1.200

## **5.1a Receive Volume Control Performance 8N WB**

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



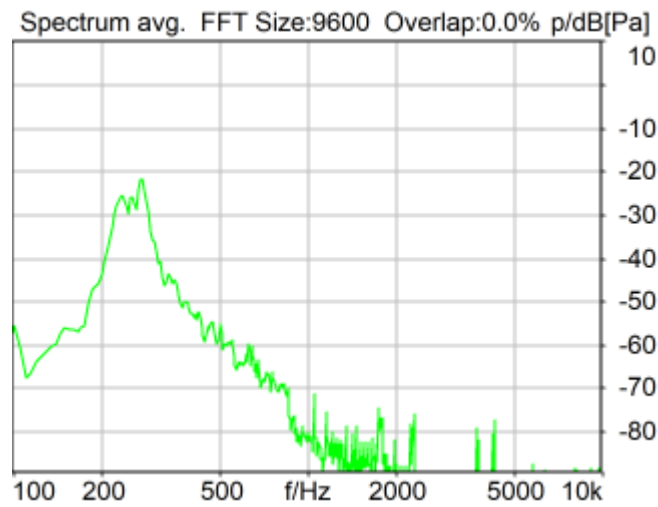
Speech Level RCV: 84.66 dB[SPL], Act.: 85.69% Ok

**Ok**

4/13/2024 1:14 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 250 Hz WB**

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



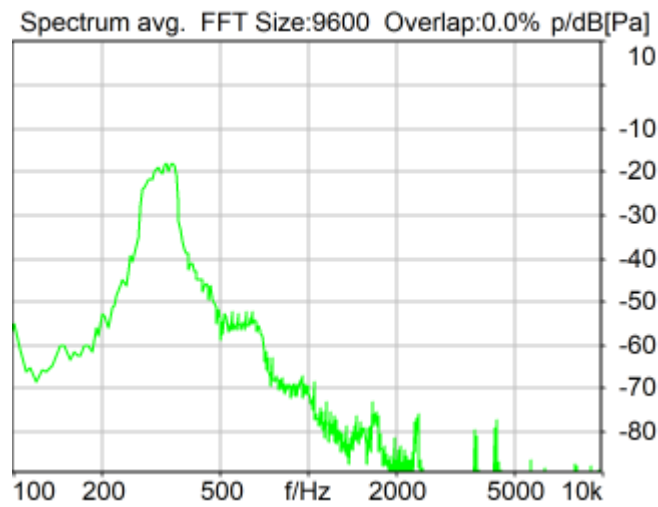
Distortion (Noise) RCV (packed): 24.63 dB (5.87%) Ok

**Ok**

4/13/2024 1:15 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 315 Hz WB**

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



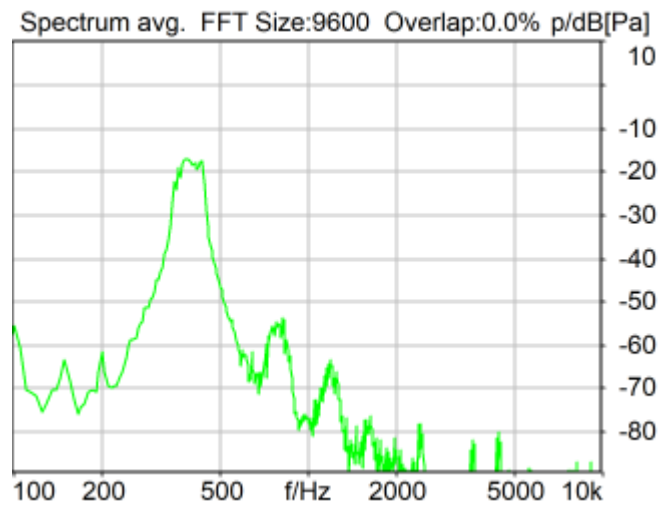
Distortion (Noise) RCV (packed): 27.32 dB (4.30%) Ok

**Ok**

4/13/2024 1:15 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 400 Hz WB**

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



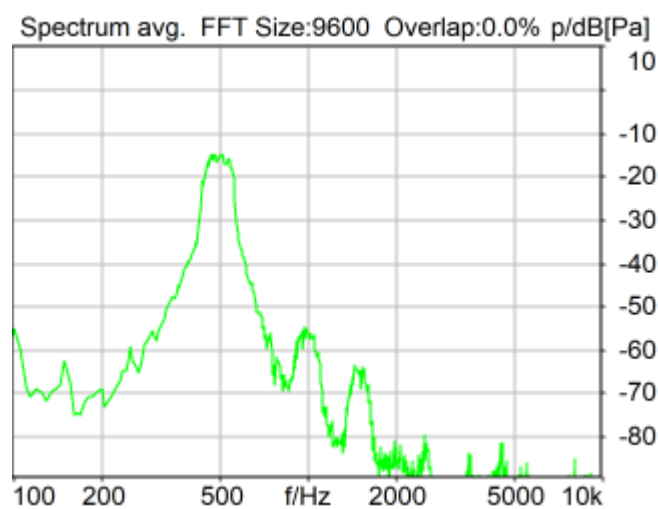
Distortion (Noise) RCV (packed): 31.04 dB (2.81%) Ok

**Ok**

4/13/2024 1:16 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 500 Hz WB**

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



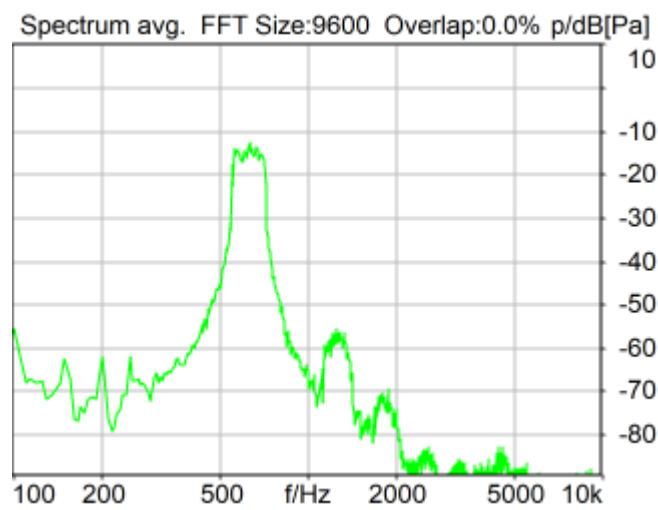
Distortion (Noise) RCV (packed): 28.12 dB (3.92%) Ok

**Ok**

4/13/2024 1:16 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 630 Hz WB**

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



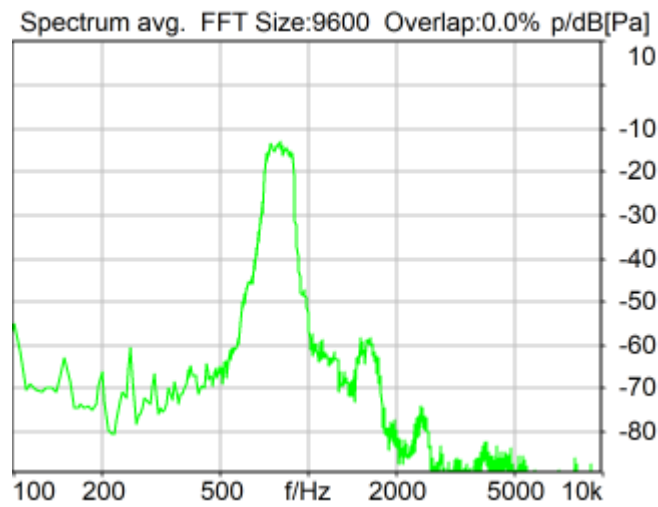
Distortion (Noise) RCV (packed): 32.33 dB (2.42%) Ok

**Ok**

4/13/2024 1:17 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 800 Hz WB**

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



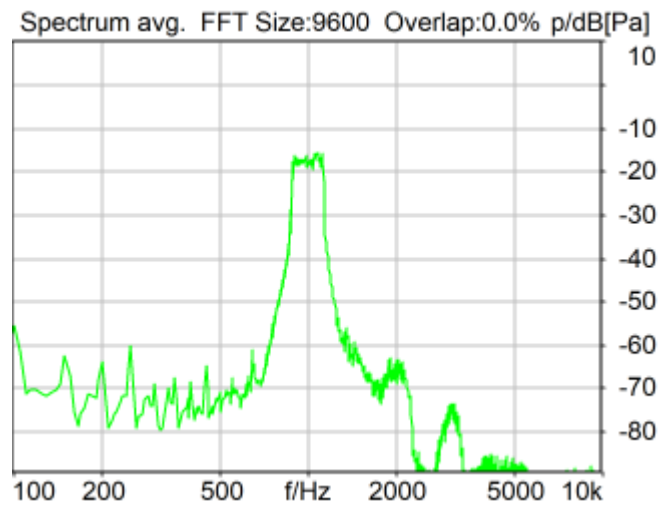
Distortion (Noise) RCV (packed): 32.10 dB (2.48%) Ok

**Ok**

4/13/2024 1:17 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 1000 Hz WB**

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



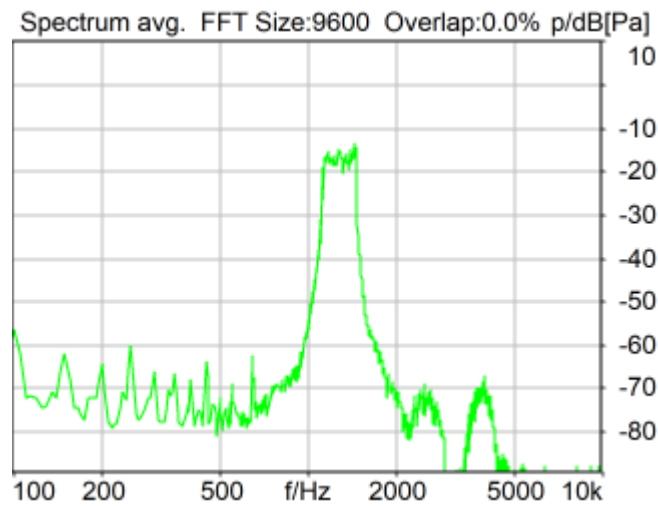
Distortion (Noise) RCV (packed): 29.05 dB (3.53%) Ok

**Ok**

4/13/2024 1:18 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 1250 Hz WB**

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



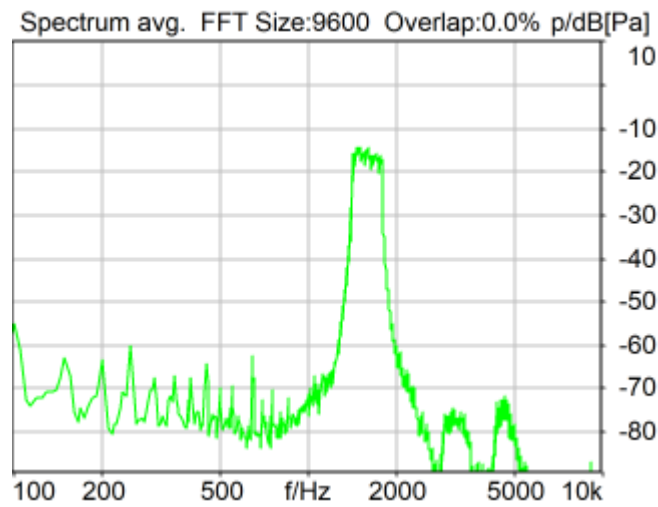
Distortion (Noise) RCV (packed): 21.88 dB (8.06%) Ok

**Ok**

4/13/2024 1:18 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 1600 Hz WB**

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



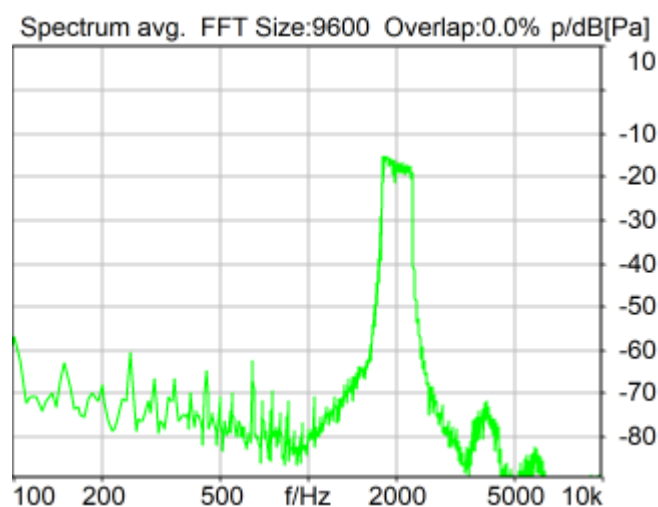
Distortion (Noise) RCV (packed): 31.84 dB (2.56%) Ok

**Ok**

4/13/2024 1:18 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 2000 Hz WB**

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



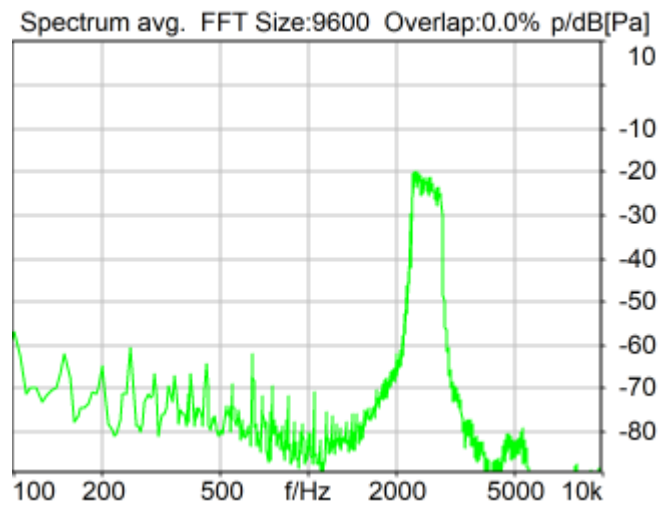
Distortion (Noise) RCV (packed): 32.09 dB (2.49%) Ok

**Ok**

4/13/2024 1:19 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 2500 Hz WB**

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



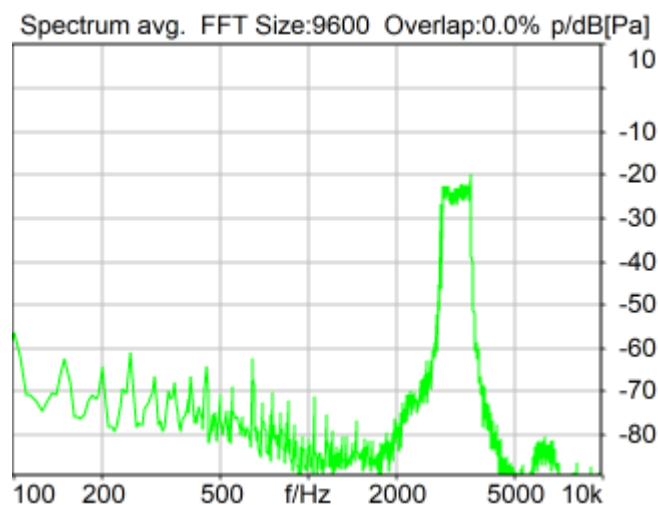
Distortion (Noise) RCV (packed): 29.77 dB (3.25%) Ok

**Ok**

4/13/2024 1:19 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 3150 Hz WB**

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



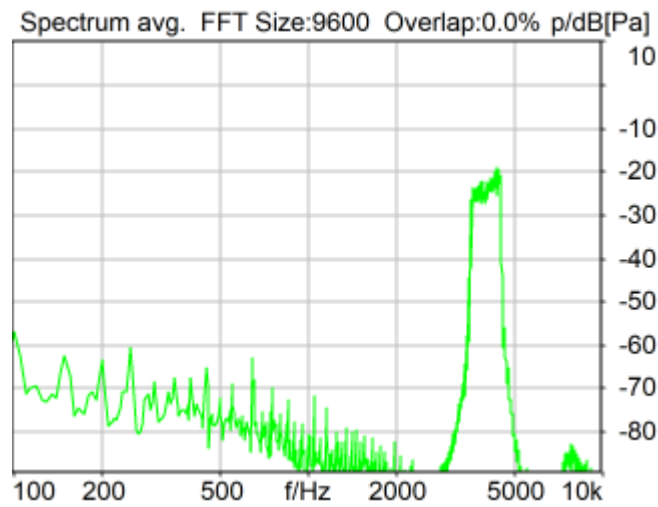
Distortion (Noise) RCV (packed): 30.44 dB (3.01%) Ok

**Ok**

4/13/2024 1:20 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 4000 Hz WB**

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



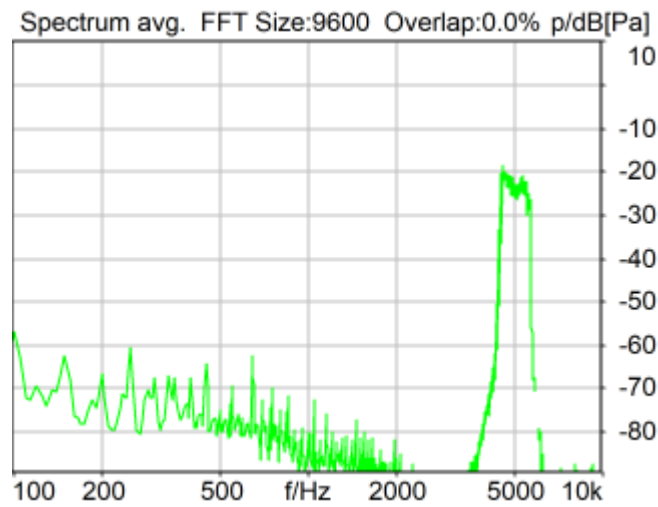
Distortion (Noise) RCV (packed): 32.77 dB (2.30%) Ok

**Ok**

4/13/2024 1:20 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 5000 Hz WB**

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



Distortion (Noise) RCV (packed): 33.69 dB (2.07%) Ok

**Ok**

4/13/2024 1:21 AM ACQUA 5.1.200

## **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     | 24.63 dB |
| 2      | 315Hz     | 27.32 dB |
| 3      | 400Hz     | 31.04 dB |
| 4      | 500Hz     | 28.12 dB |
| 5      | 630Hz     | 32.33 dB |
| 6      | 800Hz     | 32.10 dB |
| 7      | 1000Hz    | 29.05 dB |
| 8      | 1250Hz    | 21.88 dB |
| 9      | 1600Hz    | 31.84 dB |
| 10     | 2000Hz    | 32.09 dB |
| 11     | 2500Hz    | 29.77 dB |
| 12     | 3150Hz    | 30.44 dB |
| 13     | 4000Hz    | 32.77 dB |
| 14     | 5000Hz    | 33.69 dB |

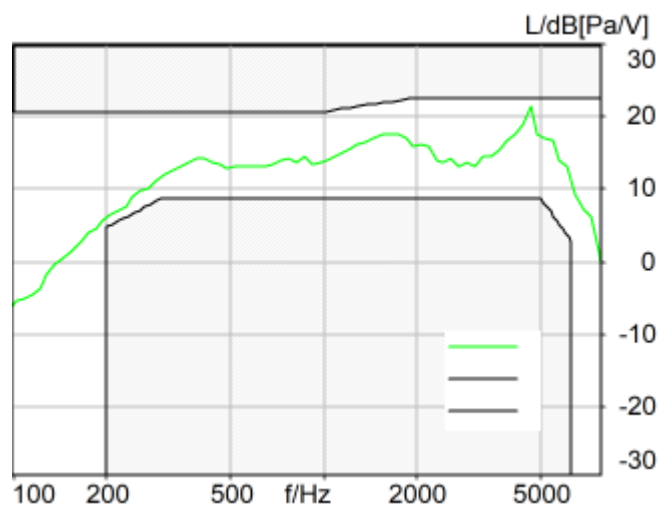
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 21.88dB at 1250Hz.

4/13/2024 1:21 AM ACQUA

## 5.3 Frequency Response 8N FF

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



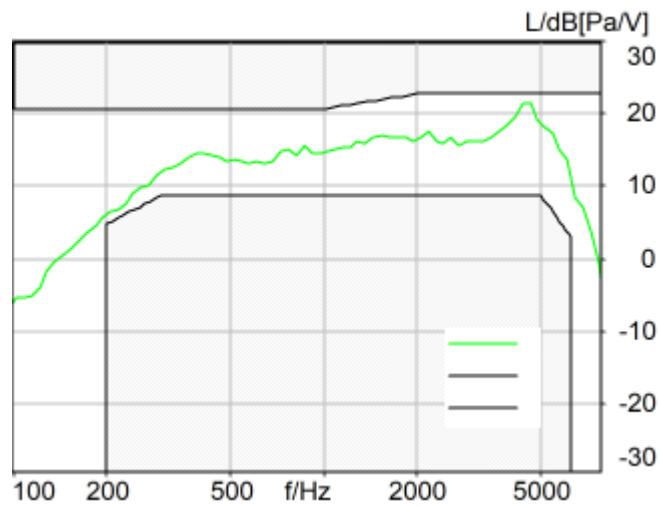
Absolute minimal distance  
1.36 dB at 4620.1 Hz Ok

Ok

4/13/2024 1:21 AM ACQUA 5.1.200

### **5.3 Frequency Response 8N DF**

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



Absolute minimal distance  
1.27 dB at 4369.4 Hz Ok

**Ok**

4/13/2024 1:22 AM ACQUA 5.1.200

---

## **Measurement Protocol**

|                    |                                                |
|--------------------|------------------------------------------------|
| Measurement Object | WLAN5GHz_802.11a 6Mbps_EVS NB 13.2kbps_Ch40_2N |
|--------------------|------------------------------------------------|

|                        |                    |
|------------------------|--------------------|
| Project                | 420424             |
| Report Generation Date | 4/12/2024 10:56 PM |
| Responsible Person     | AC01-KS            |

## Status Overview

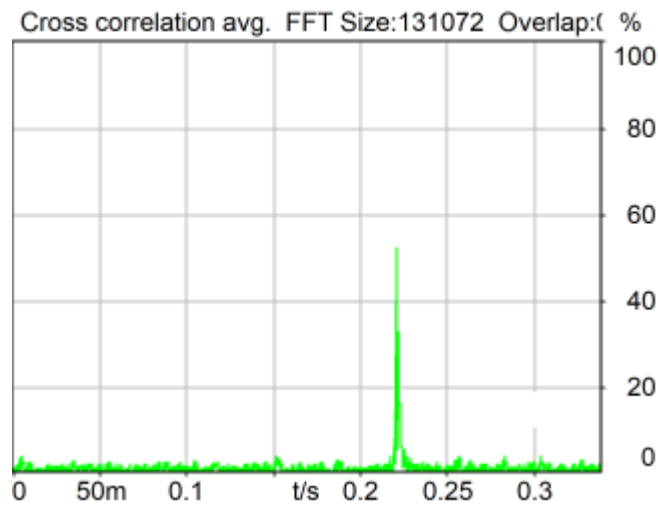
| SMD                                                         | Status | Single Value Description                          | Single Value | Object                                                |
|-------------------------------------------------------------|--------|---------------------------------------------------|--------------|-------------------------------------------------------|
| Overall Receive Delay NB                                    | Done   | Delay (Cross) [ms]                                | 221.6        | WLAN5GHz_802.11a<br>6Mbps_EVS NB 13.<br>2kbps_Ch40_2N |
| 5.1b Receive Volume Control Performance 2N NB               | Ok     | Speech Level [dB[SPL]]                            | 80.36        | WLAN5GHz_802.11a<br>6Mbps_EVS NB 13.<br>2kbps_Ch40_2N |
| 5.2 RCV Distortion and Noise - 400 Hz NB                    | Ok     | Distortion (Noise) [dB],<br>0.0 dB                | 28.16        | WLAN5GHz_802.11a<br>6Mbps_EVS NB 13.<br>2kbps_Ch40_2N |
| 5.2 RCV Distortion and Noise - 500 Hz NB                    | Ok     | Distortion (Noise) [dB],<br>0.0 dB                | 26.96        | WLAN5GHz_802.11a<br>6Mbps_EVS NB 13.<br>2kbps_Ch40_2N |
| 5.2 RCV Distortion and Noise - 630 Hz NB                    | Ok     | Distortion (Noise) [dB],<br>0.0 dB                | 22.18        | WLAN5GHz_802.11a<br>6Mbps_EVS NB 13.<br>2kbps_Ch40_2N |
| 5.2 RCV Distortion and Noise - 800 Hz NB                    | Ok     | Distortion (Noise) [dB],<br>0.0 dB                | 21.84        | WLAN5GHz_802.11a<br>6Mbps_EVS NB 13.<br>2kbps_Ch40_2N |
| 5.2 RCV Distortion and Noise - 1000 Hz NB                   | Ok     | Distortion (Noise) [dB],<br>0.0 dB                | 32.08        | WLAN5GHz_802.11a<br>6Mbps_EVS NB 13.<br>2kbps_Ch40_2N |
| 5.2 RCV Distortion and Noise - 1250 Hz NB                   | Ok     | Distortion (Noise) [dB],<br>0.0 dB                | 20.67        | WLAN5GHz_802.11a<br>6Mbps_EVS NB 13.<br>2kbps_Ch40_2N |
| 5.2 RCV Distortion and Noise - 1600 Hz NB                   | Ok     | Distortion (Noise) [dB],<br>0.0 dB                | 34.00        | WLAN5GHz_802.11a<br>6Mbps_EVS NB 13.<br>2kbps_Ch40_2N |
| 5.2 RCV Distortion and Noise - 2000 Hz NB                   | Ok     | Distortion (Noise) [dB],<br>0.0 dB                | 29.34        | WLAN5GHz_802.11a<br>6Mbps_EVS NB 13.<br>2kbps_Ch40_2N |
| 5.2 RCV Distortion and Noise - 2500 Hz NB                   | Ok     | Distortion (Noise) [dB],<br>0.0 dB                | 32.04        | WLAN5GHz_802.11a<br>6Mbps_EVS NB 13.<br>2kbps_Ch40_2N |
| 5.2 RCV Distortion and Noise - 3150 Hz NB                   | Ok     | Distortion (Noise) [dB],<br>0.0 dB                | 28.84        | WLAN5GHz_802.11a<br>6Mbps_EVS NB 13.<br>2kbps_Ch40_2N |
| Report - Receive Distortion and Noise (Conversational Gain) | Ok     | Minimum SDNR [dB],<br>(occured at 1250Hz)         | 20.67        | WLAN5GHz_802.11a<br>6Mbps_EVS NB 13.<br>2kbps_Ch40_2N |
| 5.3 Frequency Response 2N FF HANB                           | Ok     | Min. dist. to tolerance<br>scheme [dB], 305.9 Hz  | 2.52         | WLAN5GHz_802.11a<br>6Mbps_EVS NB 13.<br>2kbps_Ch40_2N |
| 5.3 Frequency Response 2N DF HANB                           | Ok     | Min. dist. to tolerance<br>scheme [dB], 2571.8 Hz | 1.90         | WLAN5GHz_802.11a<br>6Mbps_EVS NB 13.<br>2kbps_Ch40_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

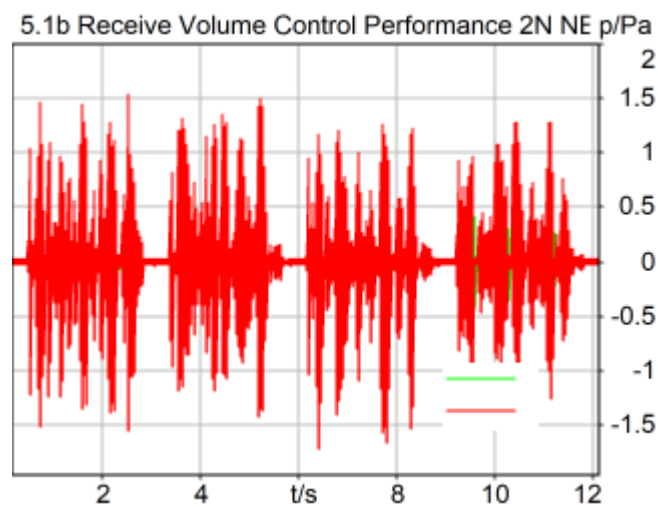


Delay (Cross): 221.6 ms

4/12/2024 10:50 PM ACQUA 5.1.200

## **5.1b Receive Volume Control Performance 2N NB**

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



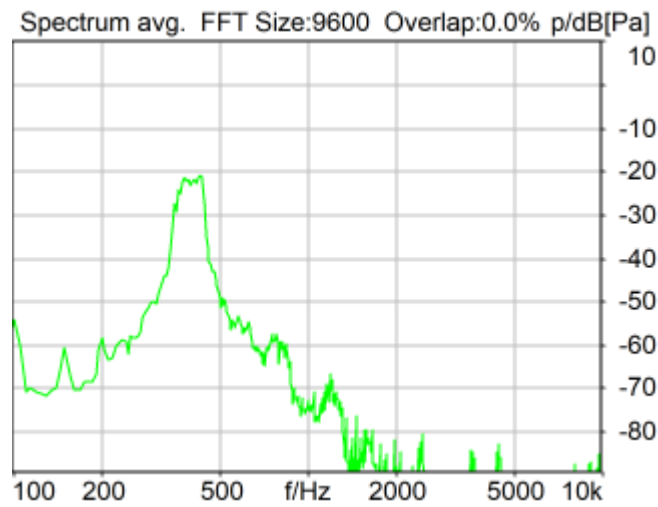
Speech Level RCV: 80.36 dB[SPL], Act.: 81.61% Ok

**Ok**

4/12/2024 10:51 PM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 400 Hz NB**

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



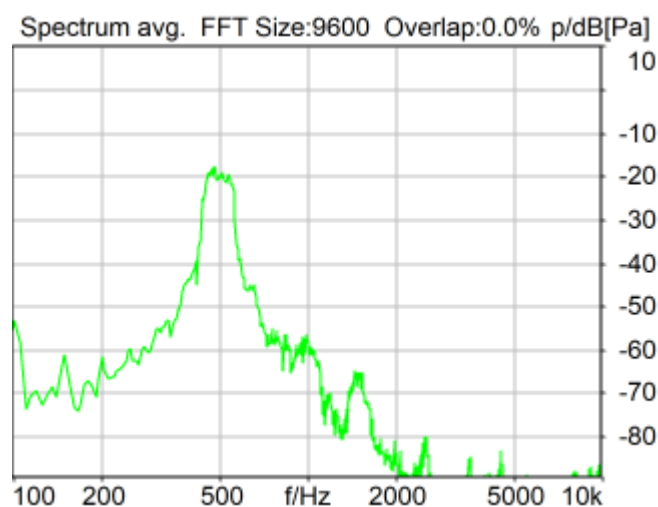
Distortion (Noise) RCV (packed): 28.16 dB (3.91%) Ok

**Ok**

4/12/2024 10:51 PM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 500 Hz NB**

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



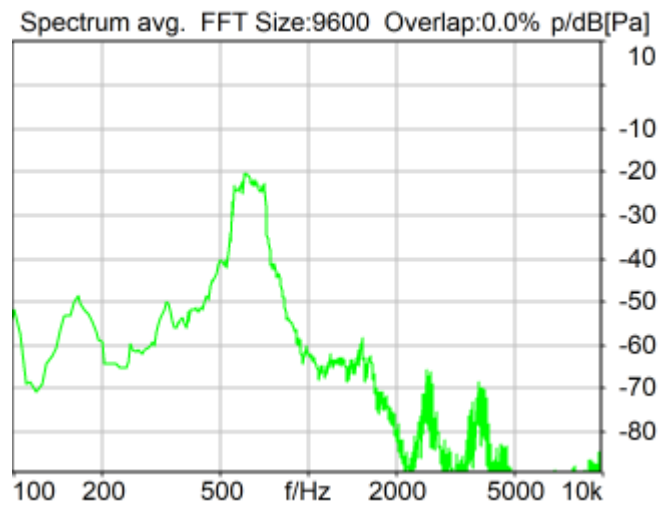
Distortion (Noise) RCV (packed): 26.96 dB (4.49%) Ok

**Ok**

4/12/2024 10:51 PM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 630 Hz NB**

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



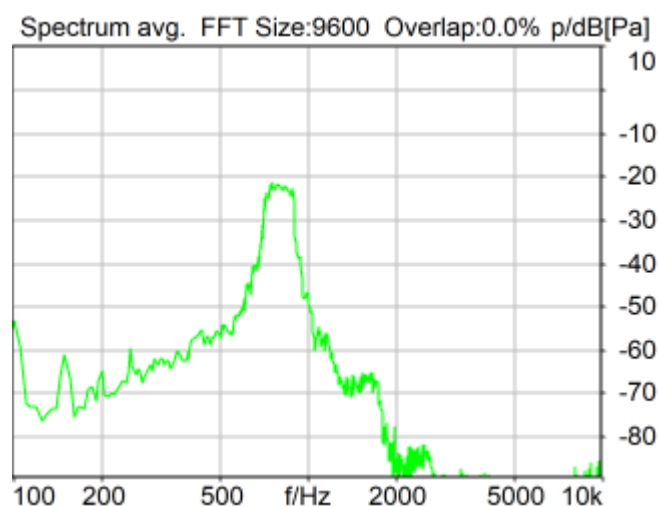
Distortion (Noise) RCV (packed): 22.18 dB (7.78%) Ok

**Ok**

4/12/2024 10:52 PM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 800 Hz NB**

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



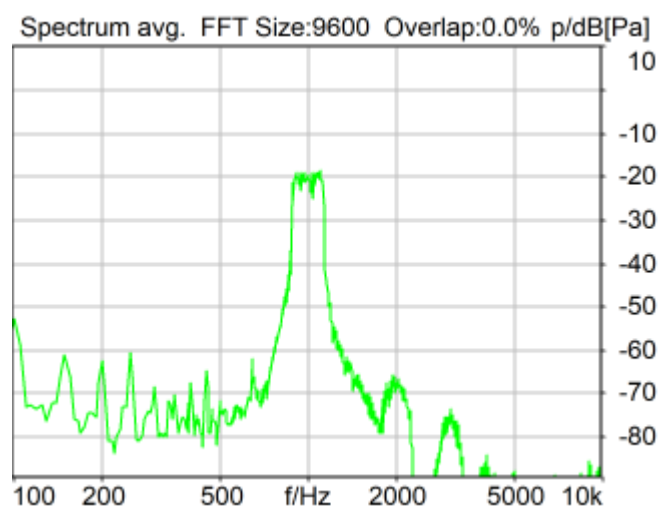
Distortion (Noise) RCV (packed): 21.84 dB (8.09%) Ok

**Ok**

4/12/2024 10:52 PM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 1000 Hz NB**

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



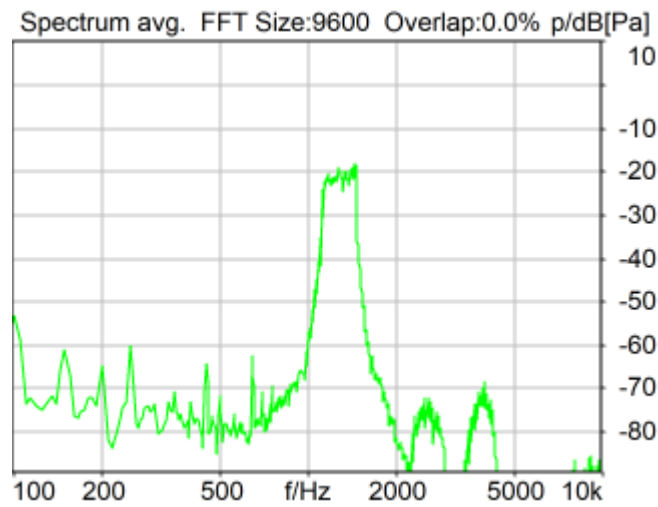
Distortion (Noise) RCV (packed): 32.08 dB (2.49%) Ok

**Ok**

4/12/2024 10:53 PM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 1250 Hz NB**

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



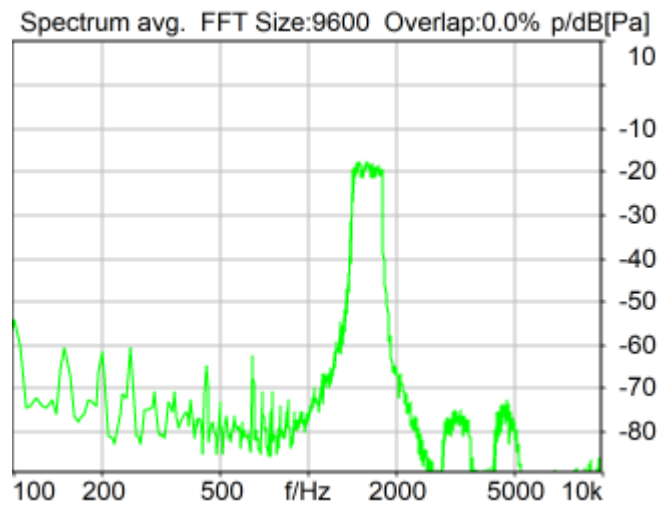
Distortion (Noise) RCV (packed): 20.67 dB (9.26%) Ok

**Ok**

4/12/2024 10:53 PM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 1600 Hz NB**

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



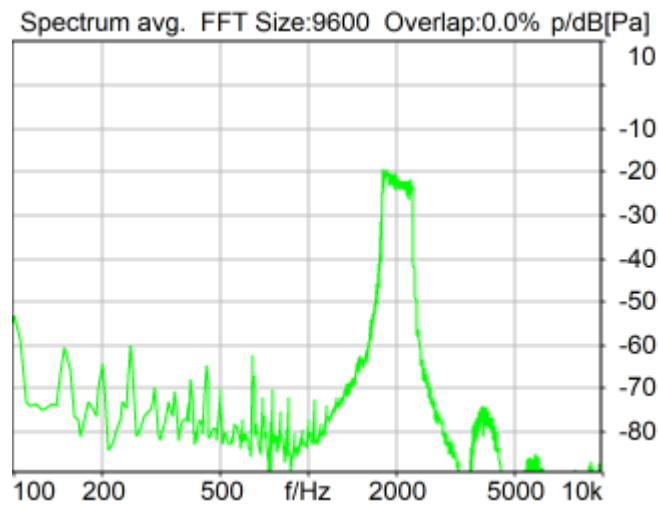
Distortion (Noise) RCV (packed): 34.00 dB (2.00%) Ok

**Ok**

4/12/2024 10:54 PM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 2000 Hz NB**

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



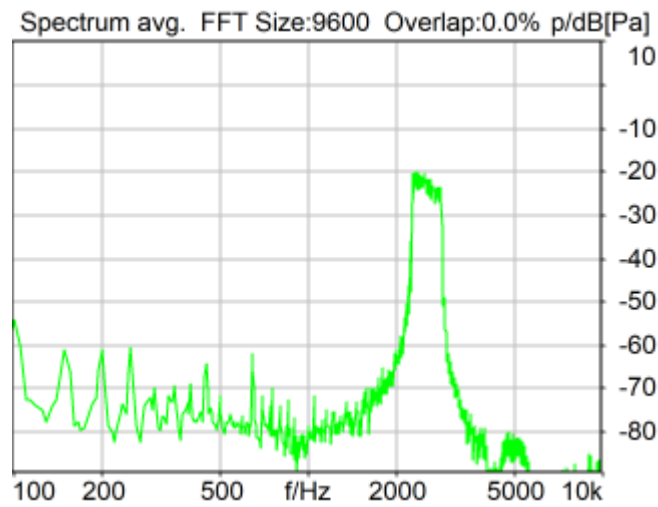
Distortion (Noise) RCV (packed): 29.34 dB (3.41%) Ok

**Ok**

4/12/2024 10:54 PM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 2500 Hz NB**

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



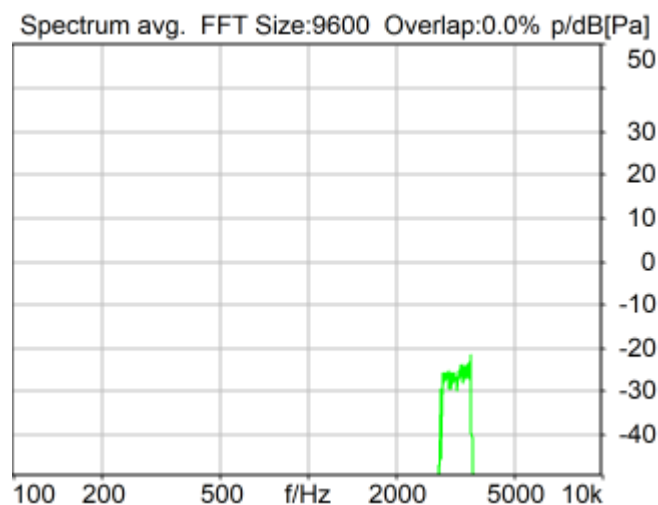
Distortion (Noise) RCV (packed): 32.04 dB (2.50%) Ok

**Ok**

4/12/2024 10:55 PM ACQUA 5.1.200

## **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): 28.84 dB (3.62%) Ok

**Ok**

4/12/2024 10:55 PM ACQUA 5.1.200

---

## **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     | 28.16 dB |
| 2      | 500Hz     | 26.96 dB |
| 3      | 630Hz     | 22.18 dB |
| 4      | 800Hz     | 21.84 dB |
| 5      | 1000Hz    | 32.08 dB |
| 6      | 1250Hz    | 20.67 dB |
| 7      | 1600Hz    | 34.00 dB |
| 8      | 2000Hz    | 29.34 dB |
| 9      | 2500Hz    | 32.04 dB |
| 10     | 3150Hz    | 28.84 dB |

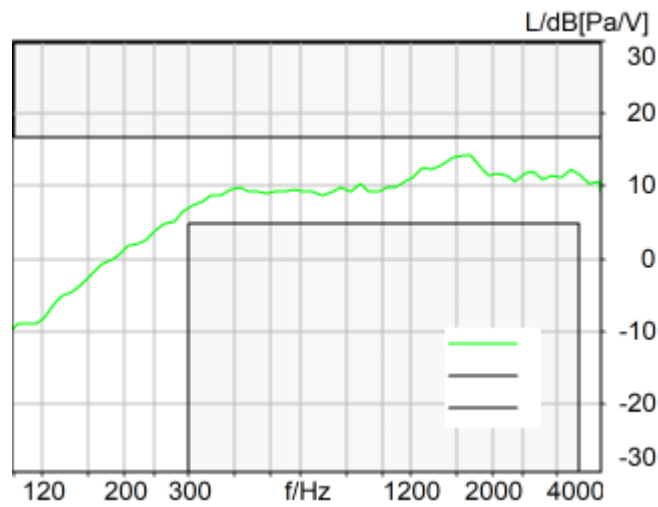
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 20.67dB at 1250Hz.

4/12/2024 10:55 PM ACQUA

### **5.3 Frequency Response 2N FF HANB**

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



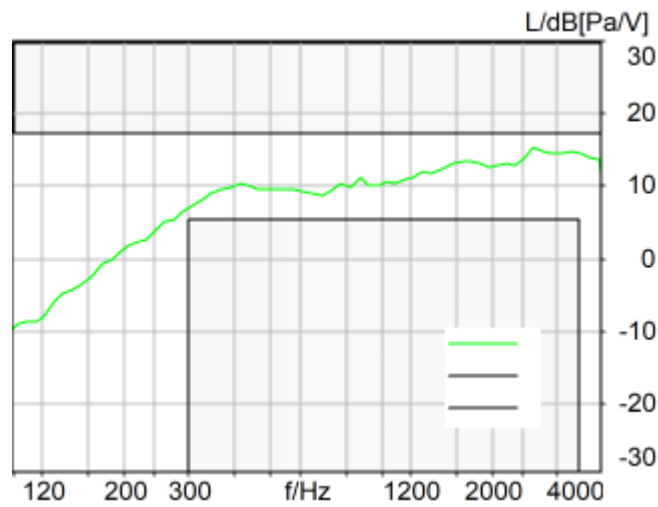
Absolute minimal distance  
2.52 dB at 305.9 Hz Ok

**Ok**

4/12/2024 10:55 PM ACQUA 5.1.200

### 5.3 Frequency Response 2N DF HANB

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



Absolute minimal distance  
1.90 dB at 2571.8 Hz Ok

Ok

4/12/2024 10:56 PM ACQUA 5.1.200

---

## **Measurement Protocol**

|                    |                                           |
|--------------------|-------------------------------------------|
| Measurement Object | GSM850_GSM Voice_AMR WB 6.60kbps_Ch189_2N |
|--------------------|-------------------------------------------|

|                        |                  |
|------------------------|------------------|
| Project                | 420424           |
| Report Generation Date | 4/6/2024 6:01 AM |
| Responsible Person     | AC01-KS          |

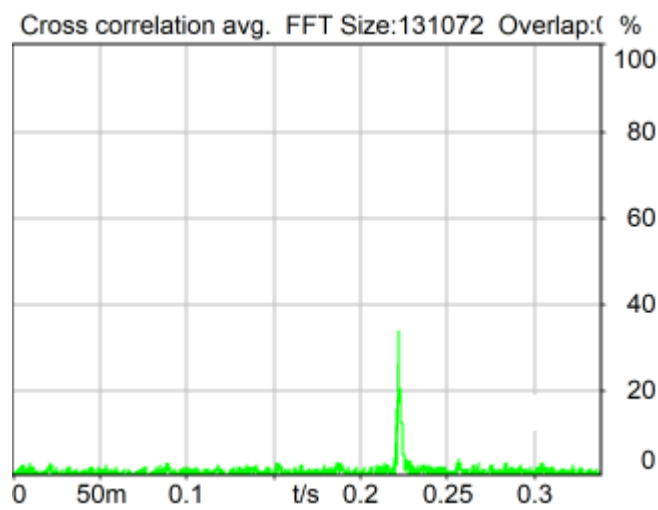
---

## **Status Overview**

| SMD                                              | Status | Single Value<br>Description | Single<br>Value | Object                                        |
|--------------------------------------------------|--------|-----------------------------|-----------------|-----------------------------------------------|
| Overall Receive Delay WB                         | Done   | Delay (Cross)<br>[ms]       | 222.3           | GSM850_GSM Voice_AMR WB 6.<br>60kbps_Ch189_2N |
| 5.1b Receive Volume Control<br>Performance 2N WB | Ok     | Speech Level<br>[dB[SPL]]   | 79.81           | GSM850_GSM Voice_AMR WB 6.<br>60kbps_Ch189_2N |

## Overall Receive Delay WB

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

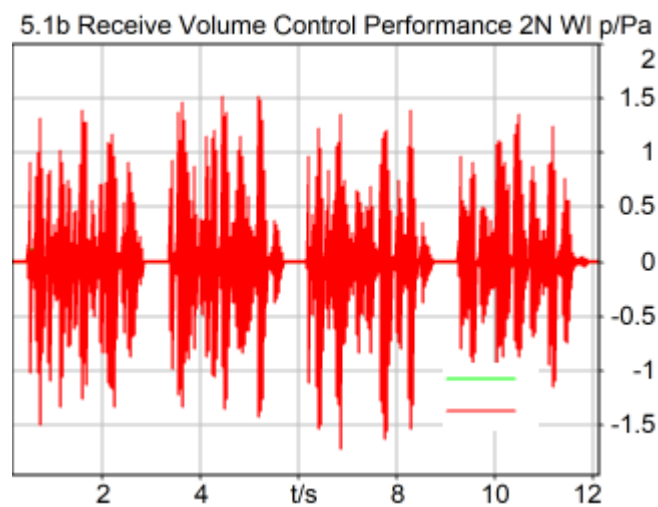


Delay (Cross): 222.3 ms

4/6/2024 6:00 AM ACQUA 5.1.200

## **5.1b Receive Volume Control Performance 2N WB**

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



Speech Level RCV: 79.81 dB[SPL], Act.: 84.88% Ok

**Ok**

4/6/2024 6:01 AM ACQUA 5.1.200

---

## **Measurement Protocol**

|                    |                                          |
|--------------------|------------------------------------------|
| Measurement Object | WCDMA II_Voice_AMR WB 6.60kbps_Ch9400_2N |
|--------------------|------------------------------------------|

|                        |                  |
|------------------------|------------------|
| Project                | 420424           |
| Report Generation Date | 4/6/2024 7:46 AM |
| Responsible Person     | AC01-KS          |

---

## **Status Overview**

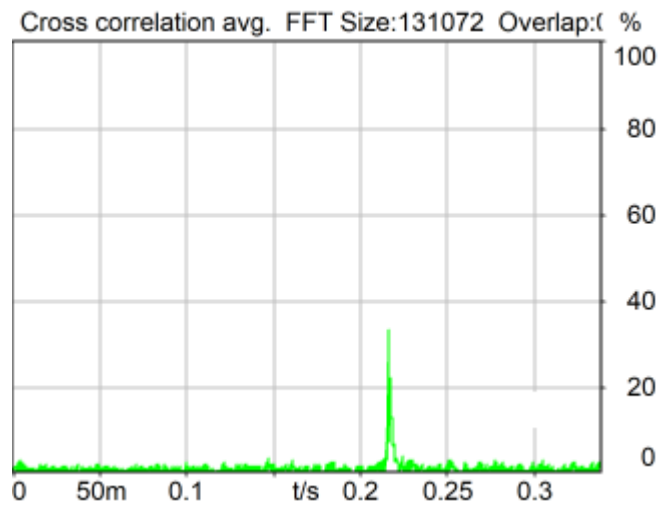
| SMD                                              | Status | Single Value<br>Description | Single<br>Value | Object                                       |
|--------------------------------------------------|--------|-----------------------------|-----------------|----------------------------------------------|
| Overall Receive Delay WB                         | Done   | Delay (Cross)<br>[ms]       | 216.7           | WCDMA II_Voice_AMR WB 6.<br>60kbps_Ch9400_2N |
| 5.1b Receive Volume Control<br>Performance 2N WB | Ok     | Speech Level<br>[dB[SPL]]   | 79.94           | WCDMA II_Voice_AMR WB 6.<br>60kbps_Ch9400_2N |

---

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

## Overall Receive Delay WB

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

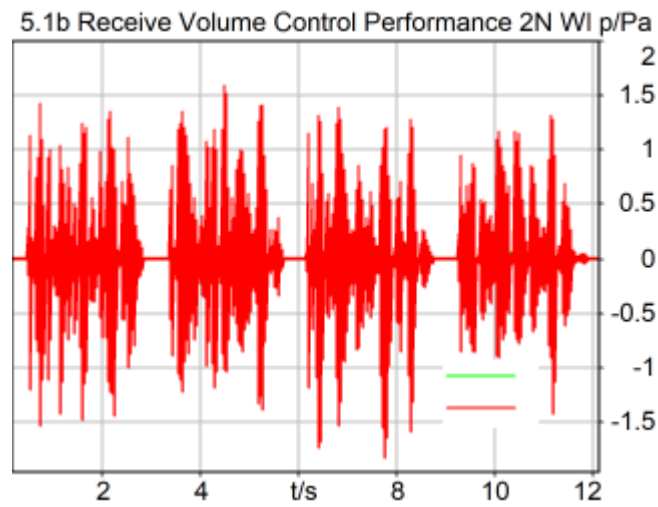


Delay (Cross): 216.7 ms

4/6/2024 7:45 AM ACQUA 5.1.200

## **5.1b Receive Volume Control Performance 2N WB**

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



Speech Level RCV: 79.94 dB[SPL], Act.: 84.63% Ok

**Ok**

4/6/2024 7:46 AM ACQUA 5.1.200

---

## **Measurement Protocol**

|                    |                                                             |
|--------------------|-------------------------------------------------------------|
| Measurement Object | LTE Band 13_10M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch23230_2N |
|--------------------|-------------------------------------------------------------|

|                        |                  |
|------------------------|------------------|
| Project                | 420424           |
| Report Generation Date | 4/6/2024 4:18 AM |
| Responsible Person     | AC01-KS          |

## Status Overview

| SMD                                           | Status | Single Value Description        | Single Value | Object                                                         |
|-----------------------------------------------|--------|---------------------------------|--------------|----------------------------------------------------------------|
| Overall Receive Delay WB                      | Done   | Delay (Cross) [ms]              | 138.0        | LTE Band<br>13_10M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch23230_2N |
| 5.1b Receive Volume Control Performance 2N WB | Ok     | Speech Level [dB[SPL]]          | 79.78        | LTE Band<br>13_10M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch23230_2N |
| 5.2 RCV Distortion and Noise - 250 Hz WB      | Ok     | Distortion (Noise) [dB], 0.0 dB | 27.18        | LTE Band<br>13_10M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch23230_2N |
| 5.2 RCV Distortion and Noise - 315 Hz WB      | Ok     | Distortion (Noise) [dB], 0.0 dB | 29.53        | LTE Band<br>13_10M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch23230_2N |
| 5.2 RCV Distortion and Noise - 400 Hz WB      | Ok     | Distortion (Noise) [dB], 0.0 dB | 30.63        | LTE Band<br>13_10M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch23230_2N |
| 5.2 RCV Distortion and Noise - 500 Hz WB      | Ok     | Distortion (Noise) [dB], 0.0 dB | 32.63        | LTE Band<br>13_10M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch23230_2N |
| 5.2 RCV Distortion and Noise - 630 Hz WB      | Ok     | Distortion (Noise) [dB], 0.0 dB | 35.83        | LTE Band<br>13_10M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch23230_2N |
| 5.2 RCV Distortion and Noise - 800 Hz WB      | Ok     | Distortion (Noise) [dB], 0.0 dB | 38.21        | LTE Band<br>13_10M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch23230_2N |
| 5.2 RCV Distortion and Noise - 1000 Hz WB     | Ok     | Distortion (Noise) [dB], 0.0 dB | 36.73        | LTE Band<br>13_10M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch23230_2N |
| 5.2 RCV Distortion and Noise - 1250 Hz WB     | Ok     | Distortion (Noise) [dB], 0.0 dB | 31.14        | LTE Band<br>13_10M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch23230_2N |
| 5.2 RCV Distortion and Noise - 1600 Hz WB     | Ok     | Distortion (Noise) [dB], 0.0 dB | 38.15        | LTE Band<br>13_10M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch23230_2N |
| 5.2 RCV Distortion and Noise - 2000 Hz WB     | Ok     | Distortion (Noise) [dB], 0.0 dB | 37.55        | LTE Band<br>13_10M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch23230_2N |
| 5.2 RCV Distortion and Noise - 2500 Hz WB     | Ok     | Distortion (Noise) [dB], 0.0 dB | 34.90        | LTE Band<br>13_10M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch23230_2N |
| 5.2 RCV Distortion and Noise - 3150 Hz WB     | Ok     | Distortion (Noise) [dB], 0.0 dB | 32.04        | LTE Band<br>13_10M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch23230_2N |
| 5.2 RCV Distortion and Noise - 4000 Hz WB     | Ok     | Distortion (Noise) [dB], 0.0 dB | 31.85        | LTE Band<br>13_10M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch23230_2N |
| 5.2 RCV Distortion and Noise - 5000 Hz WB     | Ok     | Distortion (Noise) [dB], 0.0 dB | 33.97        | LTE Band<br>13_10M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch23230_2N |
| Report - Receive Distortion                   | Ok     | Minimum SDNR [dB]               | 27.18        | LTE Band                                                       |

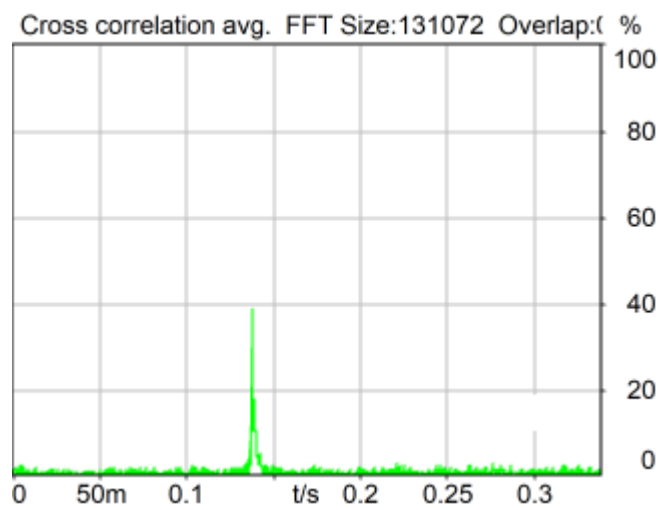
|                                 |    |                                                |      |                                                                |
|---------------------------------|----|------------------------------------------------|------|----------------------------------------------------------------|
| and Noise (Conversational Gain) |    | , (occured at 250Hz)                           |      | 13_10M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch23230_2N             |
| 5.3 Frequency Response 2N FF    | Ok | Min. dist. to tolerance scheme [dB], 205.7 Hz  | 2.36 | LTE Band<br>13_10M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch23230_2N |
| 5.3 Frequency Response 2N DF    | Ok | Min. dist. to tolerance scheme [dB], 4620.1 Hz | 1.34 | LTE Band<br>13_10M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch23230_2N |

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|                                                             |    |
|-------------------------------------------------------------|----|
| 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

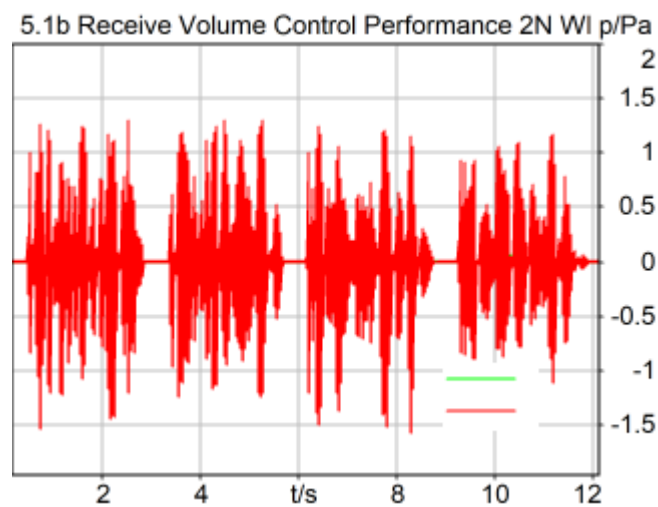


Delay (Cross): 138.0 ms

4/6/2024 4:10 AM ACQUA 5.1.200

## **5.1b Receive Volume Control Performance 2N WB**

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



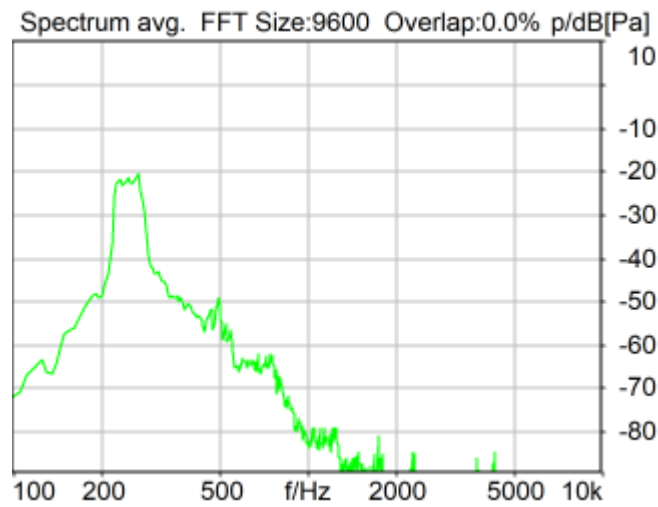
Speech Level RCV: 79.78 dB[SPL], Act.: 85.33% Ok

**Ok**

4/6/2024 4:10 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 250 Hz WB**

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



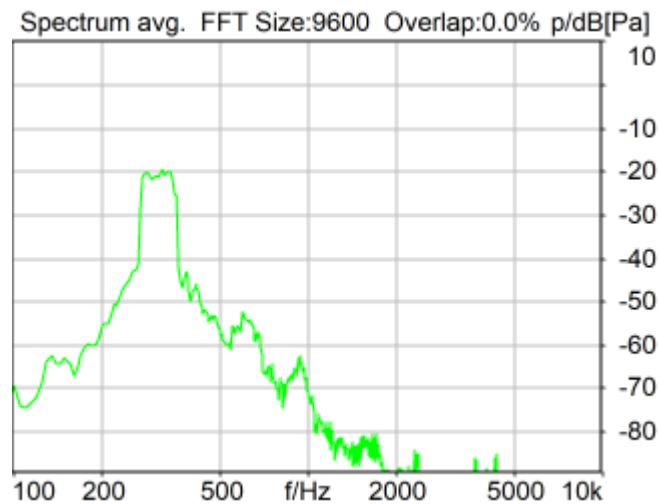
Distortion (Noise) RCV (packed): 27.18 dB (4.38%) Ok

**Ok**

4/6/2024 4:11 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 315 Hz WB**

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



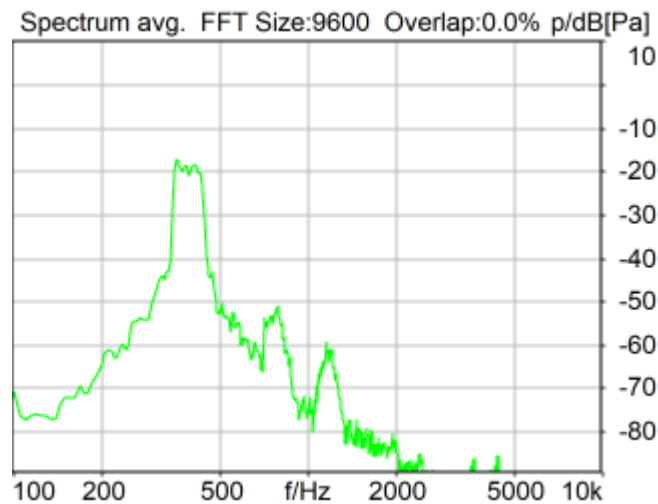
Distortion (Noise) RCV (packed): 29.53 dB (3.34%) Ok

**Ok**

4/6/2024 4:11 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 400 Hz WB**

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



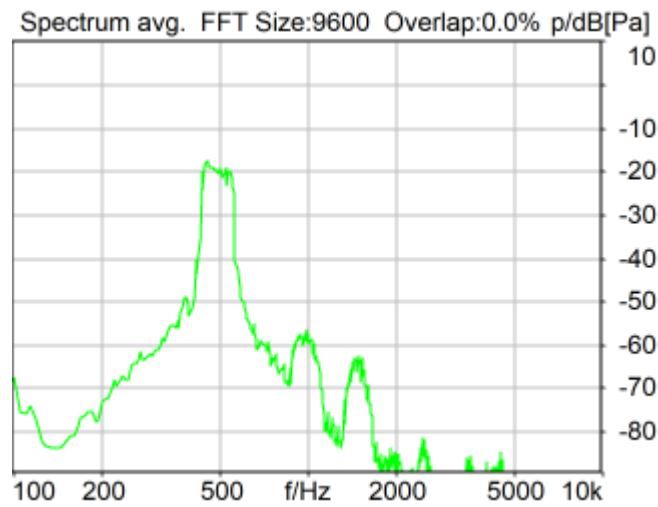
Distortion (Noise) RCV (packed): 30.63 dB (2.94%) Ok

**Ok**

4/6/2024 4:11 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 500 Hz WB**

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



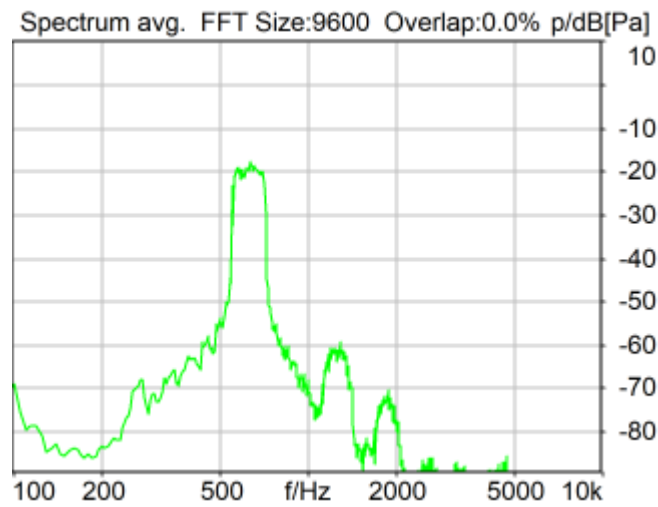
Distortion (Noise) RCV (packed): 32.63 dB (2.34%) Ok

**Ok**

4/6/2024 4:12 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 630 Hz WB**

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



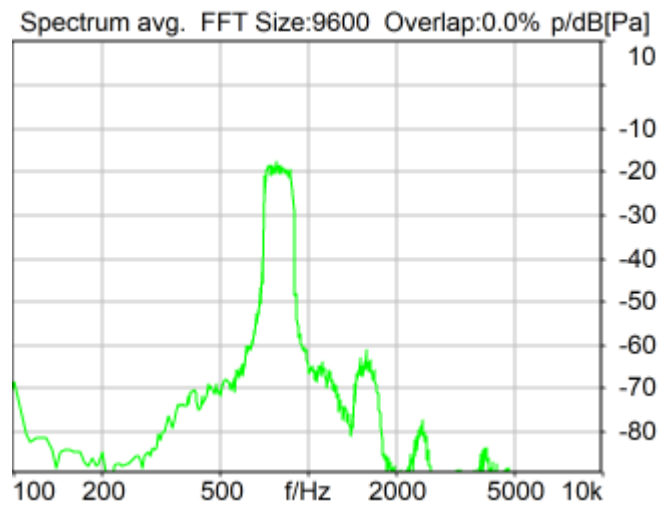
Distortion (Noise) RCV (packed): 35.83 dB (1.62%) Ok

**Ok**

4/6/2024 4:12 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 800 Hz WB**

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



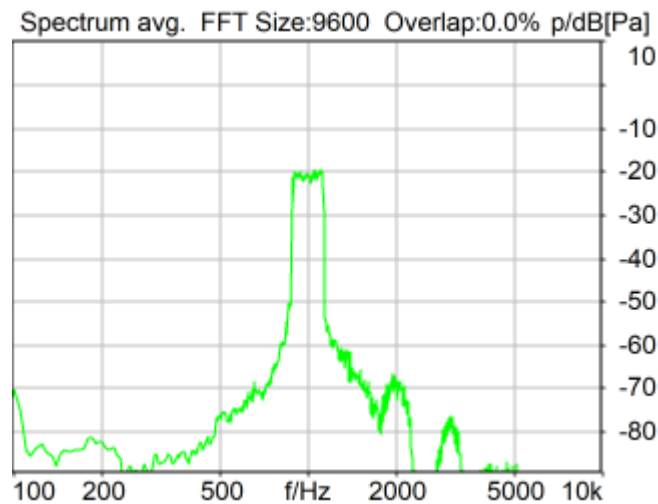
Distortion (Noise) RCV (packed): 38.21 dB (1.23%) Ok

**Ok**

4/6/2024 4:13 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 1000 Hz WB**

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



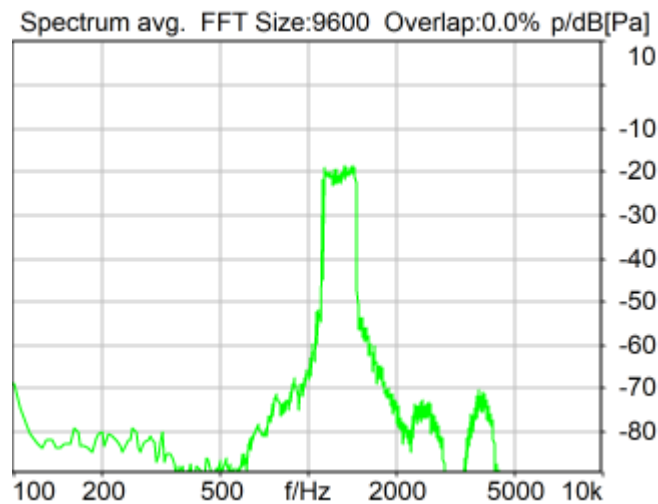
Distortion (Noise) RCV (packed): 36.73 dB (1.46%) Ok

**Ok**

4/6/2024 4:13 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 1250 Hz WB**

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



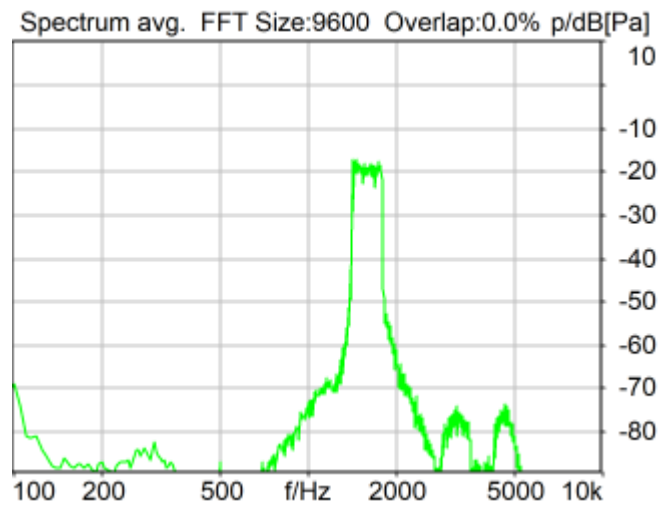
Distortion (Noise) RCV (packed): 31.14 dB (2.77%) Ok

**Ok**

4/6/2024 4:14 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 1600 Hz WB**

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



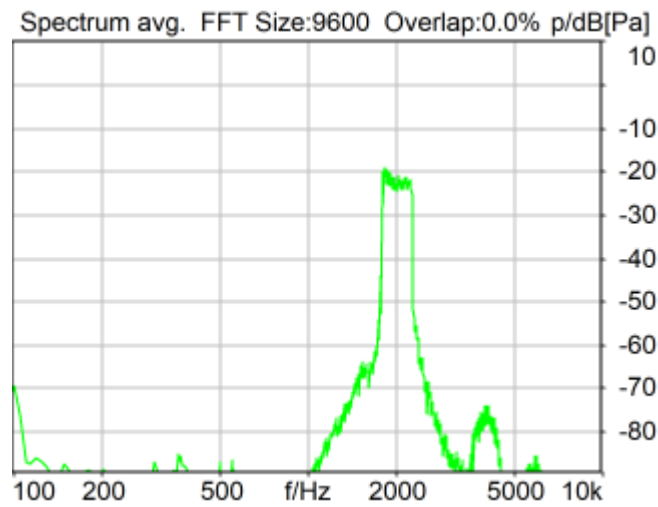
Distortion (Noise) RCV (packed): 38.15 dB (1.24%) Ok

**Ok**

4/6/2024 4:14 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 2000 Hz WB**

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



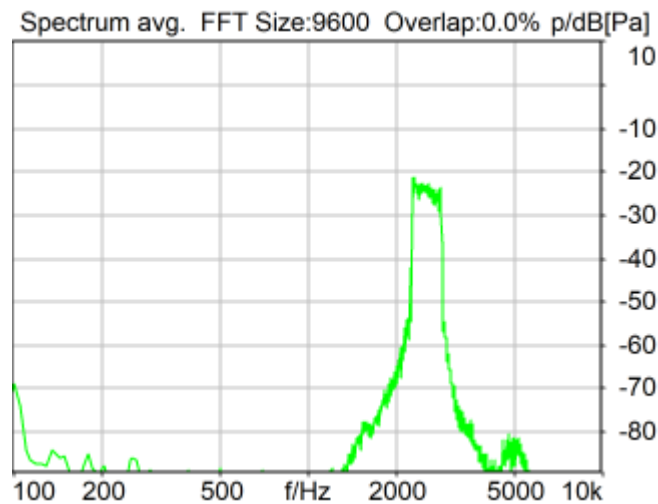
Distortion (Noise) RCV (packed): 37.55 dB (1.33%) Ok

**Ok**

4/6/2024 4:15 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 2500 Hz WB**

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



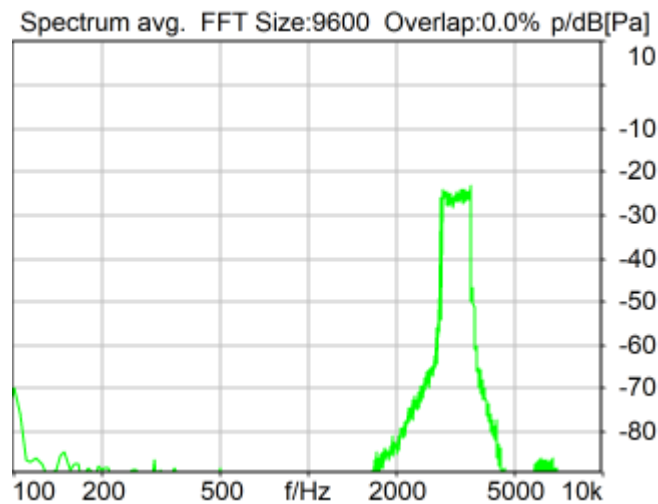
Distortion (Noise) RCV (packed): 34.90 dB (1.80%) Ok

**Ok**

4/6/2024 4:15 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 3150 Hz WB**

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



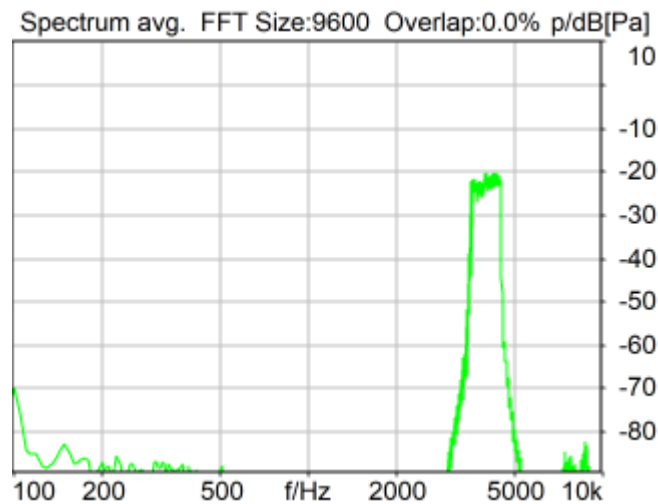
Distortion (Noise) RCV (packed): 32.04 dB (2.50%) Ok

**Ok**

4/6/2024 4:15 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 4000 Hz WB**

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



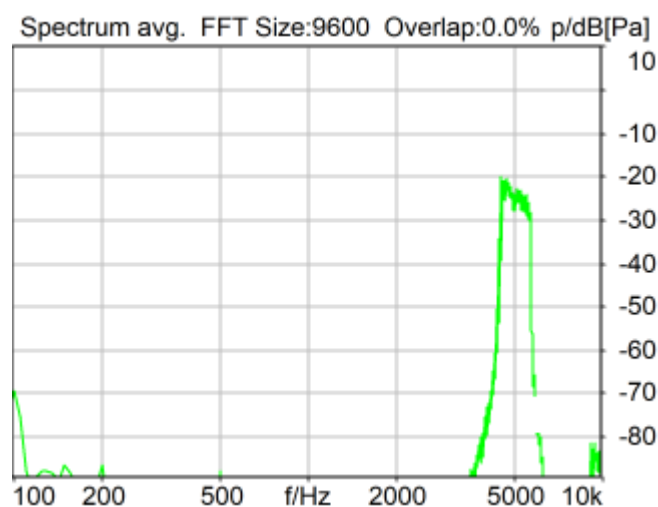
Distortion (Noise) RCV (packed): 31.85 dB (2.56%) Ok

**Ok**

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## **5.2 RCV Distortion and Noise - 5000 Hz WB**

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



Distortion (Noise) RCV (packed): 33.97 dB (2.00%) Ok

**Ok**

4/6/2024 4:16 AM ACQUA 5.1.200

## **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     | 27.18 dB |
| 2      | 315Hz     | 29.53 dB |
| 3      | 400Hz     | 30.63 dB |
| 4      | 500Hz     | 32.63 dB |
| 5      | 630Hz     | 35.83 dB |
| 6      | 800Hz     | 38.21 dB |
| 7      | 1000Hz    | 36.73 dB |
| 8      | 1250Hz    | 31.14 dB |
| 9      | 1600Hz    | 38.15 dB |
| 10     | 2000Hz    | 37.55 dB |
| 11     | 2500Hz    | 34.90 dB |
| 12     | 3150Hz    | 32.04 dB |
| 13     | 4000Hz    | 31.85 dB |
| 14     | 5000Hz    | 33.97 dB |

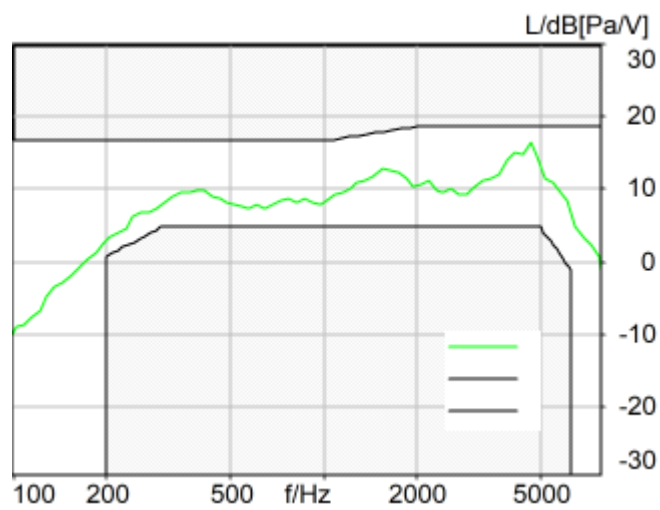
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 27.18dB at 250Hz.

4/6/2024 4:16 AM ACQUA

## 5.3 Frequency Response 2N FF

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



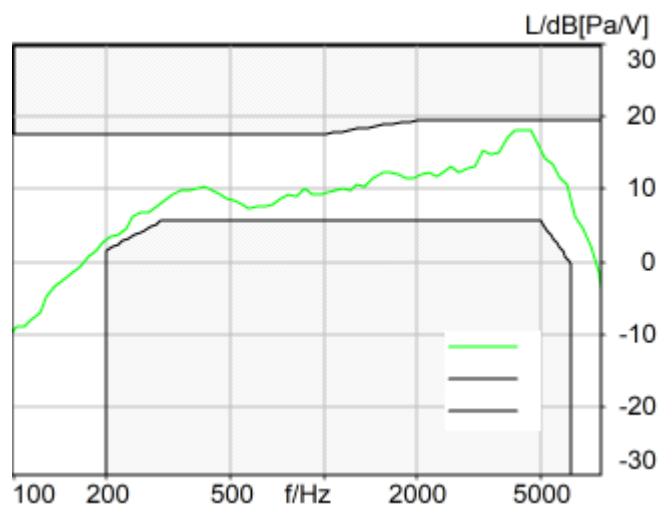
Absolute minimal distance  
2.36 dB at 205.7 Hz Ok

Ok

4/6/2024 4:17 AM ACQUA 5.1.200

## 5.3 Frequency Response 2N DF

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



Absolute minimal distance  
1.34 dB at 4620.1 Hz Ok

Ok

4/6/2024 4:17 AM ACQUA 5.1.200

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## **Measurement Protocol**

|                    |                                                             |
|--------------------|-------------------------------------------------------------|
| Measurement Object | LTE Band 41_20M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch40620_8N |
|--------------------|-------------------------------------------------------------|

|                        |                   |
|------------------------|-------------------|
| Project                | 420424            |
| Report Generation Date | 4/6/2024 12:30 AM |
| Responsible Person     | AC01-KS           |

## Status Overview

| SMD                                           | Status | Single Value Description        | Single Value | Object                                                         |
|-----------------------------------------------|--------|---------------------------------|--------------|----------------------------------------------------------------|
| Overall Receive Delay WB                      | Done   | Delay (Cross) [ms]              | 118.8        | LTE Band<br>41_20M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch40620_8N |
| 5.1a Receive Volume Control Performance 8N WB | Ok     | Speech Level [dB[SPL]]          | 84.45        | LTE Band<br>41_20M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch40620_8N |
| 5.2 RCV Distortion and Noise - 250 Hz WB      | Ok     | Distortion (Noise) [dB], 0.0 dB | 25.89        | LTE Band<br>41_20M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch40620_8N |
| 5.2 RCV Distortion and Noise - 315 Hz WB      | Ok     | Distortion (Noise) [dB], 0.0 dB | 27.10        | LTE Band<br>41_20M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch40620_8N |
| 5.2 RCV Distortion and Noise - 400 Hz WB      | Ok     | Distortion (Noise) [dB], 0.0 dB | 32.82        | LTE Band<br>41_20M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch40620_8N |
| 5.2 RCV Distortion and Noise - 500 Hz WB      | Ok     | Distortion (Noise) [dB], 0.0 dB | 32.91        | LTE Band<br>41_20M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch40620_8N |
| 5.2 RCV Distortion and Noise - 630 Hz WB      | Ok     | Distortion (Noise) [dB], 0.0 dB | 36.37        | LTE Band<br>41_20M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch40620_8N |
| 5.2 RCV Distortion and Noise - 800 Hz WB      | Ok     | Distortion (Noise) [dB], 0.0 dB | 37.53        | LTE Band<br>41_20M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch40620_8N |
| 5.2 RCV Distortion and Noise - 1000 Hz WB     | Ok     | Distortion (Noise) [dB], 0.0 dB | 35.10        | LTE Band<br>41_20M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch40620_8N |
| 5.2 RCV Distortion and Noise - 1250 Hz WB     | Ok     | Distortion (Noise) [dB], 0.0 dB | 31.39        | LTE Band<br>41_20M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch40620_8N |
| 5.2 RCV Distortion and Noise - 1600 Hz WB     | Ok     | Distortion (Noise) [dB], 0.0 dB | 37.94        | LTE Band<br>41_20M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch40620_8N |
| 5.2 RCV Distortion and Noise - 2000 Hz WB     | Ok     | Distortion (Noise) [dB], 0.0 dB | 38.56        | LTE Band<br>41_20M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch40620_8N |
| 5.2 RCV Distortion and Noise - 2500 Hz WB     | Ok     | Distortion (Noise) [dB], 0.0 dB | 34.54        | LTE Band<br>41_20M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch40620_8N |
| 5.2 RCV Distortion and Noise - 3150 Hz WB     | Ok     | Distortion (Noise) [dB], 0.0 dB | 33.28        | LTE Band<br>41_20M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch40620_8N |
| 5.2 RCV Distortion and Noise - 4000 Hz WB     | Ok     | Distortion (Noise) [dB], 0.0 dB | 32.77        | LTE Band<br>41_20M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch40620_8N |
| 5.2 RCV Distortion and Noise - 5000 Hz WB     | Ok     | Distortion (Noise) [dB], 0.0 dB | 33.50        | LTE Band<br>41_20M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch40620_8N |
| Report - Receive Distortion                   | Ok     | Minimum SDNR [dB]               | 25.89        | LTE Band                                                       |

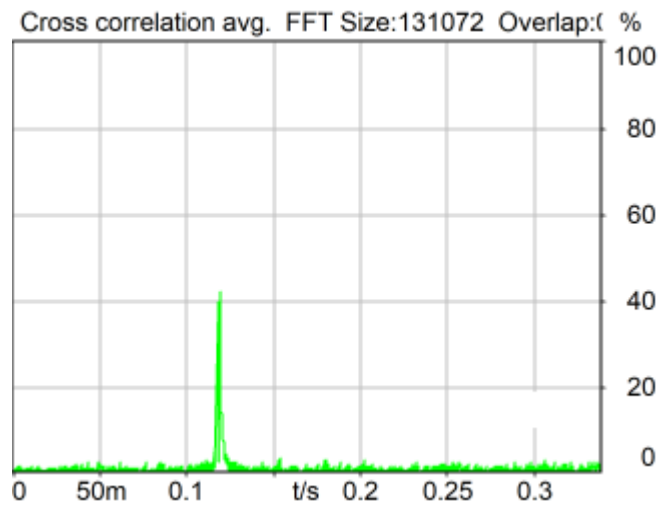
|                                 |    |                                                |      |                                                                |
|---------------------------------|----|------------------------------------------------|------|----------------------------------------------------------------|
| and Noise (Conversational Gain) |    | , (occured at 250Hz)                           |      | 41_20M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch40620_8N             |
| 5.3 Frequency Response 8N FF    | Ok | Min. dist. to tolerance scheme [dB], 4369.4 Hz | 2.26 | LTE Band<br>41_20M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch40620_8N |
| 5.3 Frequency Response 8N DF    | Ok | Min. dist. to tolerance scheme [dB], 4369.4 Hz | 1.55 | LTE Band<br>41_20M_QPSK_1RB_0Offset_EVS WB 13.2kbps_Ch40620_8N |

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|                                                             |    |
|-------------------------------------------------------------|----|
| 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

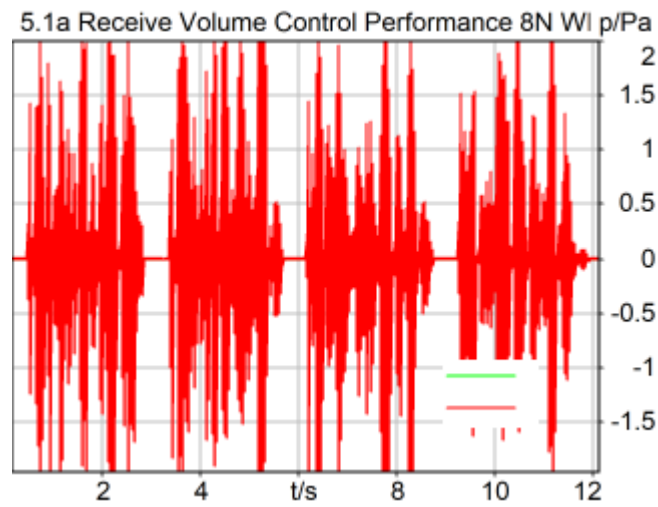


Delay (Cross): 118.8 ms

4/6/2024 12:22 AM ACQUA 5.1.200

## **5.1a Receive Volume Control Performance 8N WB**

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



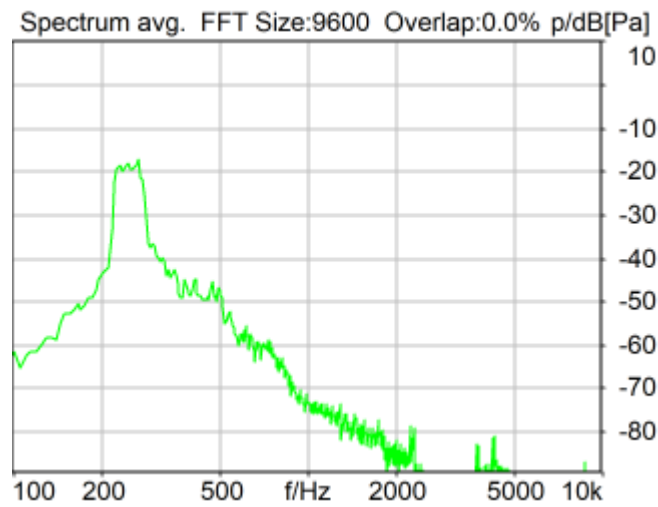
Speech Level RCV: 84.45 dB[SPL], Act.: 85.51% Ok

**Ok**

4/6/2024 12:23 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 250 Hz WB**

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



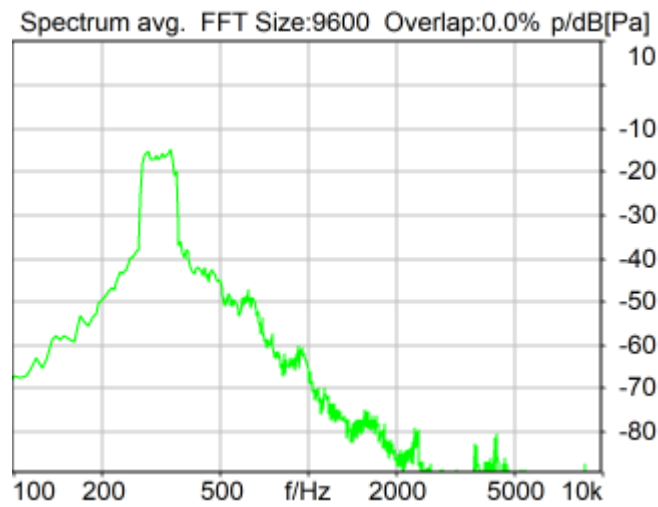
Distortion (Noise) RCV (packed): 25.89 dB (5.08%) Ok

**Ok**

4/6/2024 12:23 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 315 Hz WB**

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



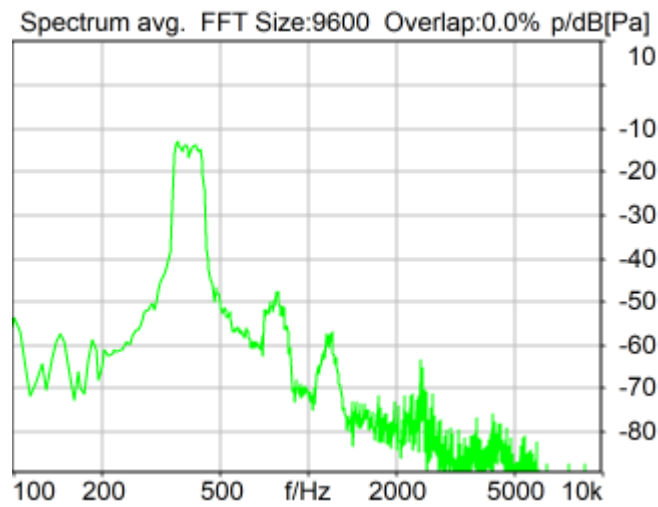
Distortion (Noise) RCV (packed): 27.10 dB (4.41%) Ok

**Ok**

4/6/2024 12:23 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 400 Hz WB**

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



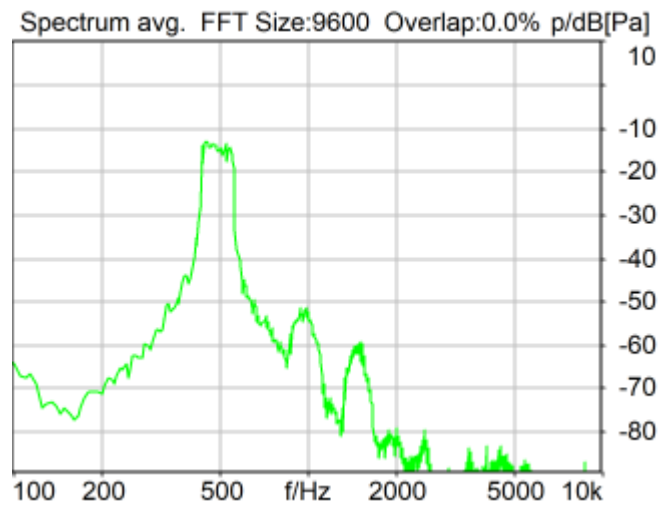
Distortion (Noise) RCV (packed): 32.82 dB (2.29%) Ok

**Ok**

4/6/2024 12:24 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 500 Hz WB**

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



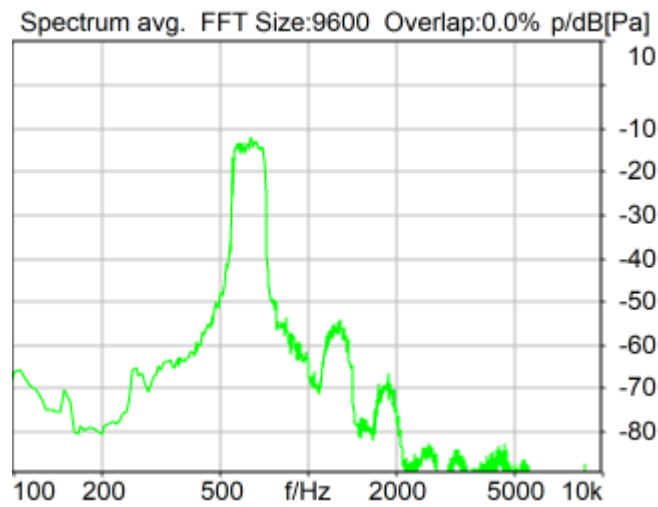
Distortion (Noise) RCV (packed): 32.91 dB (2.26%) Ok

**Ok**

4/6/2024 12:24 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 630 Hz WB**

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



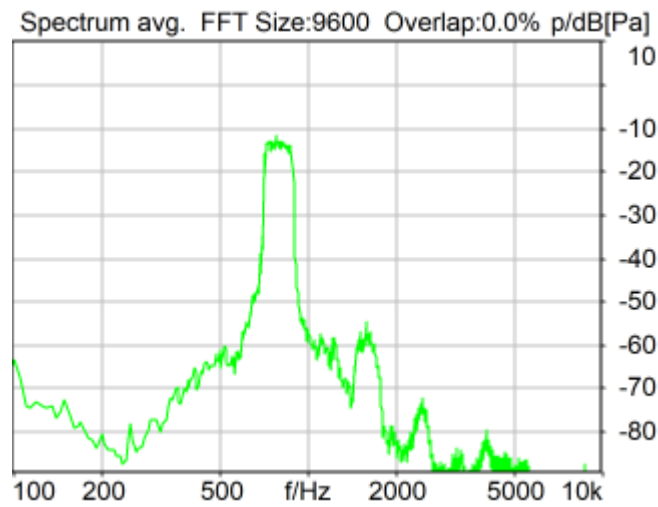
Distortion (Noise) RCV (packed): 36.37 dB (1.52%) Ok

**Ok**

4/6/2024 12:25 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 800 Hz WB**

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



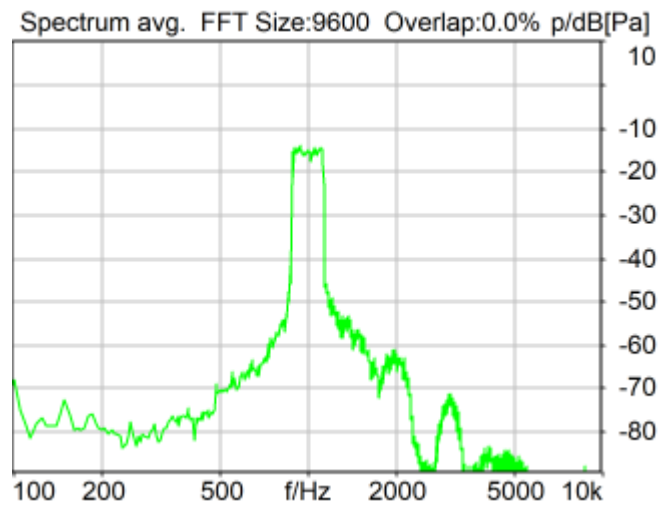
Distortion (Noise) RCV (packed): 37.53 dB (1.33%) Ok

**Ok**

4/6/2024 12:25 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 1000 Hz WB**

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



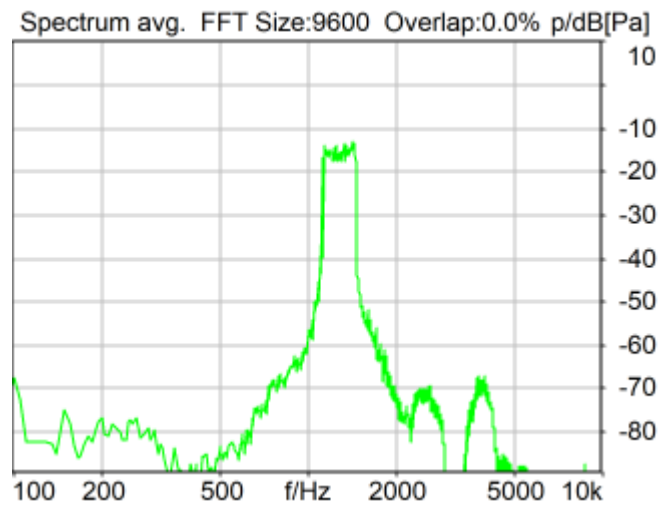
Distortion (Noise) RCV (packed): 35.10 dB (1.76%) Ok

**Ok**

4/6/2024 12:26 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 1250 Hz WB**

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



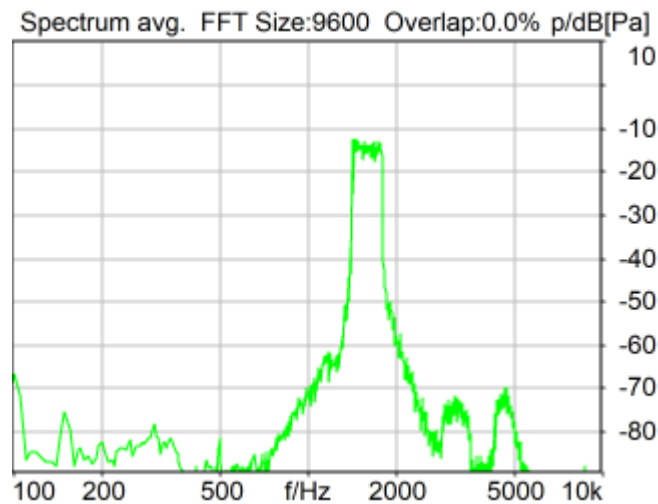
Distortion (Noise) RCV (packed): 31.39 dB (2.70%) Ok

**Ok**

4/6/2024 12:26 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 1600 Hz WB**

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



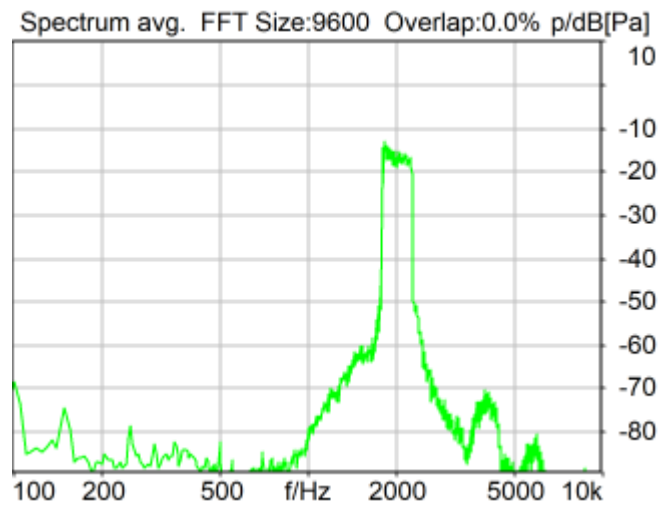
Distortion (Noise) RCV (packed): 37.94 dB (1.27%) Ok

**Ok**

4/6/2024 12:27 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 2000 Hz WB**

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



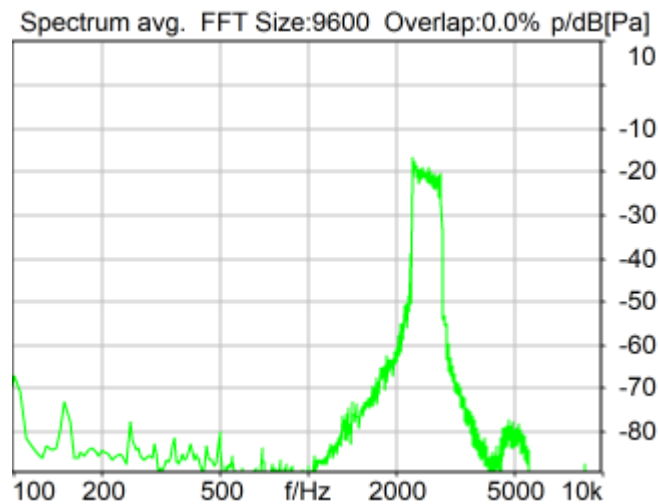
Distortion (Noise) RCV (packed): 38.56 dB (1.18%) Ok

**Ok**

4/6/2024 12:27 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 2500 Hz WB**

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



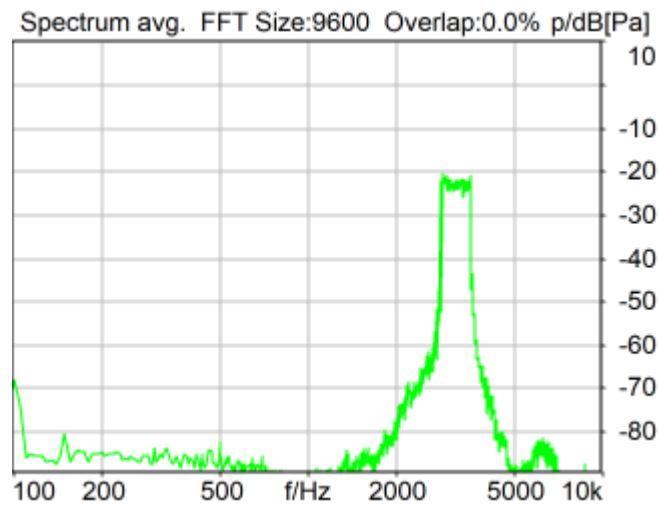
Distortion (Noise) RCV (packed): 34.54 dB (1.87%) Ok

**Ok**

4/6/2024 12:27 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 3150 Hz WB**

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



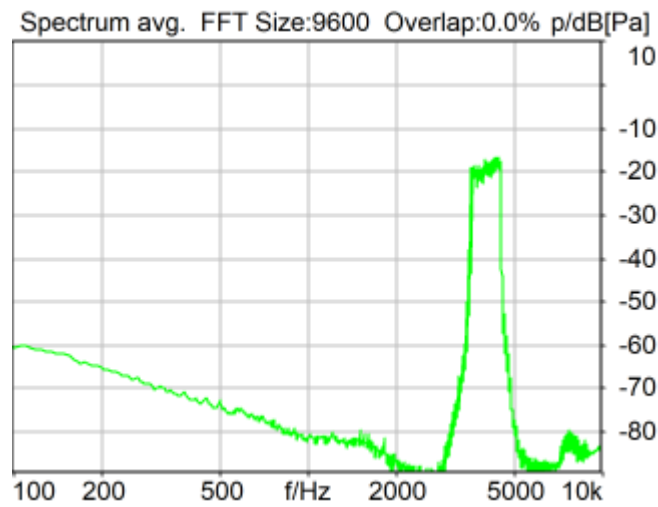
Distortion (Noise) RCV (packed): 33.28 dB (2.17%) Ok

**Ok**

4/6/2024 12:28 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 4000 Hz WB**

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



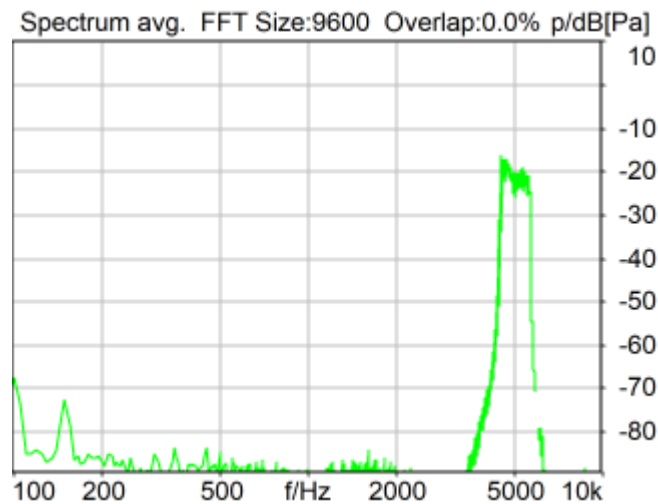
Distortion (Noise) RCV (packed): 32.77 dB (2.30%) Ok

**Ok**

4/6/2024 12:28 AM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 5000 Hz WB**

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



Distortion (Noise) RCV (packed): 33.50 dB (2.11%) Ok

**Ok**

4/6/2024 12:29 AM ACQUA 5.1.200

## **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     | 25.89 dB |
| 2      | 315Hz     | 27.10 dB |
| 3      | 400Hz     | 32.82 dB |
| 4      | 500Hz     | 32.91 dB |
| 5      | 630Hz     | 36.37 dB |
| 6      | 800Hz     | 37.53 dB |
| 7      | 1000Hz    | 35.10 dB |
| 8      | 1250Hz    | 31.39 dB |
| 9      | 1600Hz    | 37.94 dB |
| 10     | 2000Hz    | 38.56 dB |
| 11     | 2500Hz    | 34.54 dB |
| 12     | 3150Hz    | 33.28 dB |
| 13     | 4000Hz    | 32.77 dB |
| 14     | 5000Hz    | 33.50 dB |

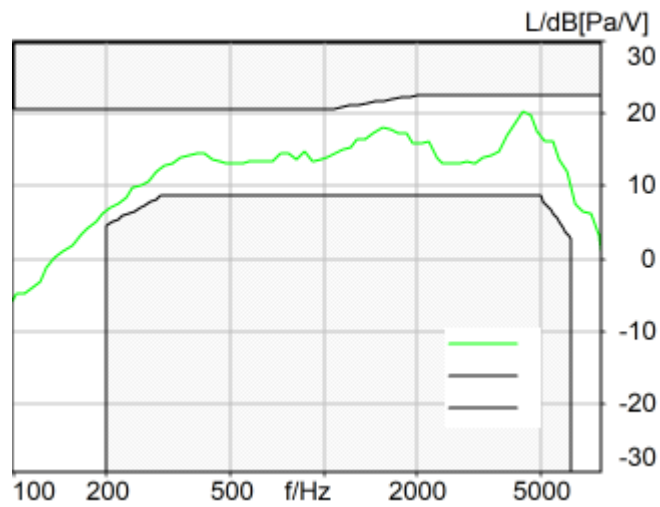
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 25.89dB at 250Hz.

4/6/2024 12:29 AM ACQUA

### 5.3 Frequency Response 8N FF

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



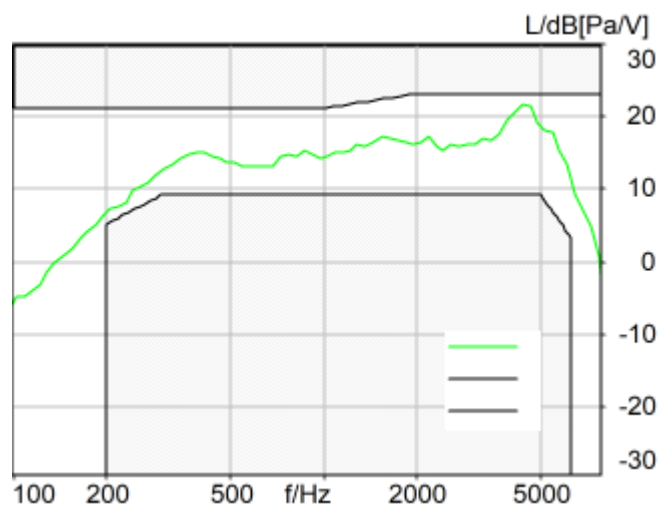
Absolute minimal distance  
2.26 dB at 4369.4 Hz Ok

Ok

4/6/2024 12:29 AM ACQUA 5.1.200

## 5.3 Frequency Response 8N DF

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



Absolute minimal distance  
1.55 dB at 4369.4 Hz Ok

Ok

4/6/2024 12:29 AM ACQUA 5.1.200

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## **Measurement Protocol**

|                    |                                                |
|--------------------|------------------------------------------------|
| Measurement Object | WLAN5GHz_802.11a 6Mbps_EVS WB 13.2kbps_Ch60_2N |
|--------------------|------------------------------------------------|

|                        |                    |
|------------------------|--------------------|
| Project                | 420424             |
| Report Generation Date | 4/15/2024 10:59 PM |
| Responsible Person     | AC01-KS            |

## Status Overview

| SMD                                           | Status | Single Value Description           | Single Value | Object                                                |
|-----------------------------------------------|--------|------------------------------------|--------------|-------------------------------------------------------|
| Overall Receive Delay WB                      | Done   | Delay (Cross) [ms]                 | 222.1        | WLAN5GHz_802.11a<br>6Mbps_EVS WB 13.<br>2kbps_Ch60_2N |
| 5.1b Receive Volume Control Performance 2N WB | Ok     | Speech Level [dB[SPL]]             | 79.92        | WLAN5GHz_802.11a<br>6Mbps_EVS WB 13.<br>2kbps_Ch60_2N |
| 5.2 RCV Distortion and Noise - 250 Hz WB      | Ok     | Distortion (Noise) [dB],<br>0.0 dB | 27.03        | WLAN5GHz_802.11a<br>6Mbps_EVS WB 13.<br>2kbps_Ch60_2N |
| 5.2 RCV Distortion and Noise - 315 Hz WB      | Ok     | Distortion (Noise) [dB],<br>0.0 dB | 27.95        | WLAN5GHz_802.11a<br>6Mbps_EVS WB 13.<br>2kbps_Ch60_2N |
| 5.2 RCV Distortion and Noise - 400 Hz WB      | Ok     | Distortion (Noise) [dB],<br>0.0 dB | 31.70        | WLAN5GHz_802.11a<br>6Mbps_EVS WB 13.<br>2kbps_Ch60_2N |
| 5.2 RCV Distortion and Noise - 500 Hz WB      | Ok     | Distortion (Noise) [dB],<br>0.0 dB | 29.34        | WLAN5GHz_802.11a<br>6Mbps_EVS WB 13.<br>2kbps_Ch60_2N |
| 5.2 RCV Distortion and Noise - 630 Hz WB      | Ok     | Distortion (Noise) [dB],<br>0.0 dB | 29.56        | WLAN5GHz_802.11a<br>6Mbps_EVS WB 13.<br>2kbps_Ch60_2N |
| 5.2 RCV Distortion and Noise - 800 Hz WB      | Ok     | Distortion (Noise) [dB],<br>0.0 dB | 28.55        | WLAN5GHz_802.11a<br>6Mbps_EVS WB 13.<br>2kbps_Ch60_2N |
| 5.2 RCV Distortion and Noise - 1000 Hz WB     | Ok     | Distortion (Noise) [dB],<br>0.0 dB | 25.64        | WLAN5GHz_802.11a<br>6Mbps_EVS WB 13.<br>2kbps_Ch60_2N |
| 5.2 RCV Distortion and Noise - 1250 Hz WB     | Ok     | Distortion (Noise) [dB],<br>0.0 dB | 21.63        | WLAN5GHz_802.11a<br>6Mbps_EVS WB 13.<br>2kbps_Ch60_2N |
| 5.2 RCV Distortion and Noise - 1600 Hz WB     | Ok     | Distortion (Noise) [dB],<br>0.0 dB | 31.75        | WLAN5GHz_802.11a<br>6Mbps_EVS WB 13.<br>2kbps_Ch60_2N |
| 5.2 RCV Distortion and Noise - 2000 Hz WB     | Ok     | Distortion (Noise) [dB],<br>0.0 dB | 30.95        | WLAN5GHz_802.11a<br>6Mbps_EVS WB 13.<br>2kbps_Ch60_2N |
| 5.2 RCV Distortion and Noise - 2500 Hz WB     | Ok     | Distortion (Noise) [dB],<br>0.0 dB | 31.91        | WLAN5GHz_802.11a<br>6Mbps_EVS WB 13.<br>2kbps_Ch60_2N |
| 5.2 RCV Distortion and Noise - 3150 Hz WB     | Ok     | Distortion (Noise) [dB],<br>0.0 dB | 30.79        | WLAN5GHz_802.11a<br>6Mbps_EVS WB 13.<br>2kbps_Ch60_2N |
| 5.2 RCV Distortion and Noise - 4000 Hz WB     | Ok     | Distortion (Noise) [dB],<br>0.0 dB | 31.84        | WLAN5GHz_802.11a<br>6Mbps_EVS WB 13.<br>2kbps_Ch60_2N |
| 5.2 RCV Distortion and Noise - 5000 Hz WB     | Ok     | Distortion (Noise) [dB],<br>0.0 dB | 34.27        | WLAN5GHz_802.11a<br>6Mbps_EVS WB 13.<br>2kbps_Ch60_2N |
| Report - Receive Distortion                   | Ok     | Minimum SDNR [dB],                 | 21.63        | WLAN5GHz_802.11a                                      |

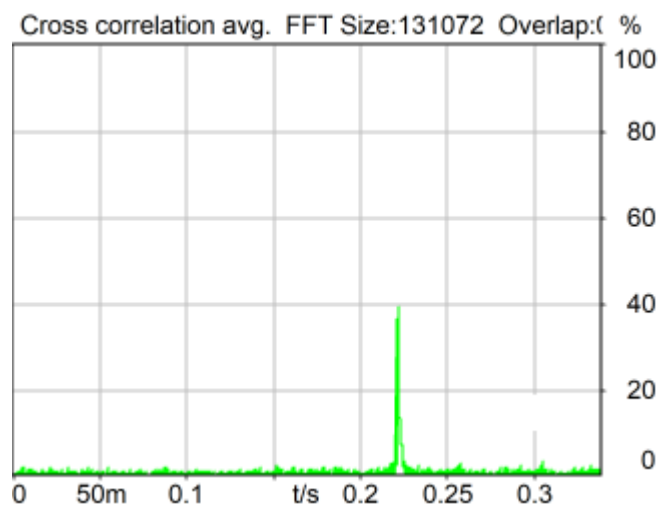
|                                 |        |                                                      |       |                                                       |
|---------------------------------|--------|------------------------------------------------------|-------|-------------------------------------------------------|
| and Noise (Conversational Gain) |        | (occured at 1250Hz)                                  |       | 6Mbps_EVS WB 13.<br>2kbps_Ch60_2N                     |
| 5.3 Frequency Response 2N<br>FF | Ok     | Min. dist. to tolerance<br>scheme [dB], 4369.4<br>Hz | 1.43  | WLAN5GHz_802.11a<br>6Mbps_EVS WB 13.<br>2kbps_Ch60_2N |
| 5.3 Frequency Response 2N<br>DF | Not Ok | Min. dist. to tolerance<br>scheme [dB], 4369.4<br>Hz | -0.51 | WLAN5GHz_802.11a<br>6Mbps_EVS WB 13.<br>2kbps_Ch60_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

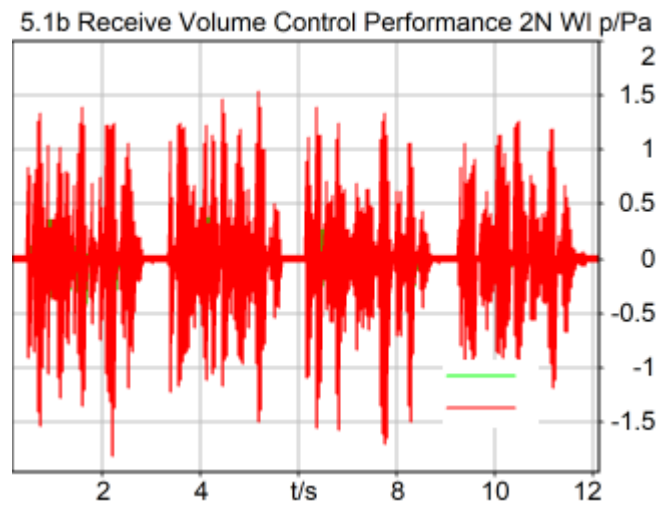


Delay (Cross): 222.1 ms

4/15/2024 10:52 PM ACQUA 5.1.200

## **5.1b Receive Volume Control Performance 2N WB**

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



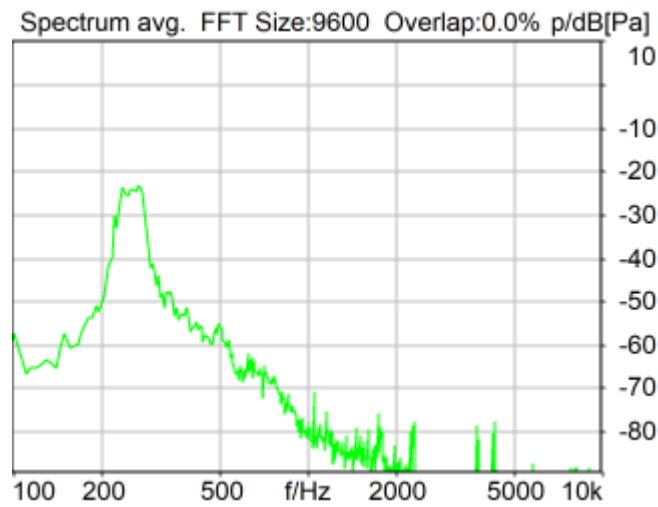
Speech Level RCV: 79.92 dB[SPL], Act.: 85.30% Ok

**Ok**

4/15/2024 10:52 PM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 250 Hz WB**

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



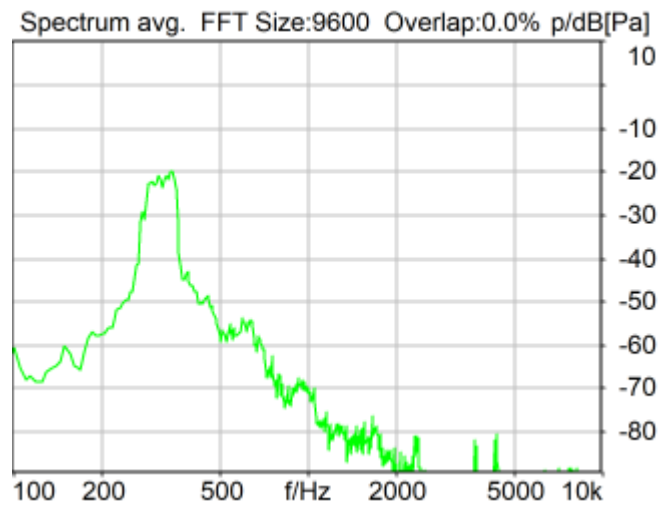
Distortion (Noise) RCV (packed): 27.03 dB (4.45%) Ok

**Ok**

4/15/2024 10:53 PM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 315 Hz WB**

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



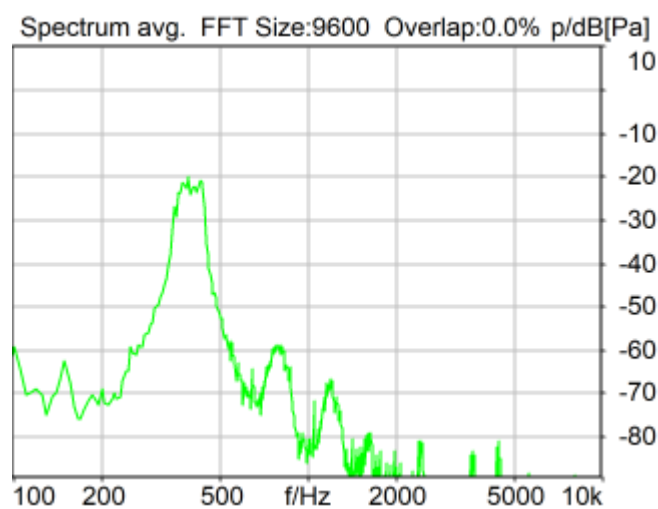
Distortion (Noise) RCV (packed): 27.95 dB (4.01%) Ok

**Ok**

4/15/2024 10:53 PM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 400 Hz WB**

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



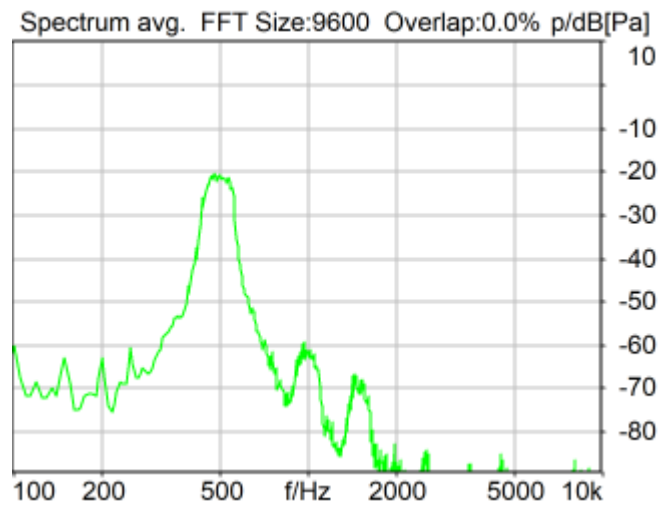
Distortion (Noise) RCV (packed): 31.70 dB (2.60%) Ok

**Ok**

4/15/2024 10:53 PM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 500 Hz WB**

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



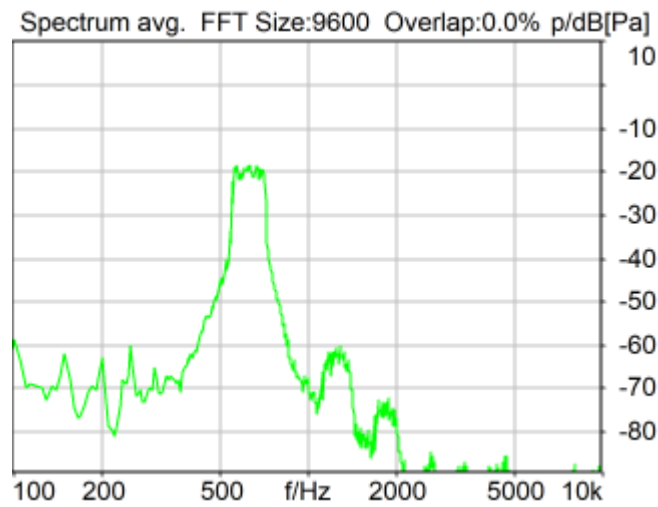
Distortion (Noise) RCV (packed): 29.34 dB (3.41%) Ok

**Ok**

4/15/2024 10:54 PM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 630 Hz WB**

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



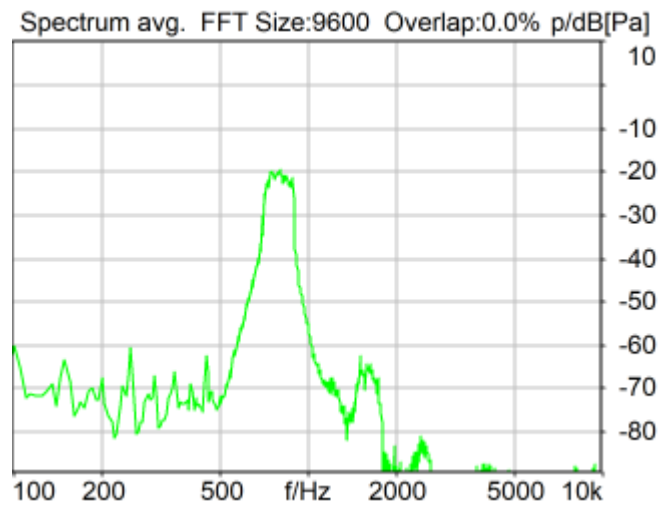
Distortion (Noise) RCV (packed): 29.56 dB (3.33%) Ok

**Ok**

4/15/2024 10:54 PM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 800 Hz WB**

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



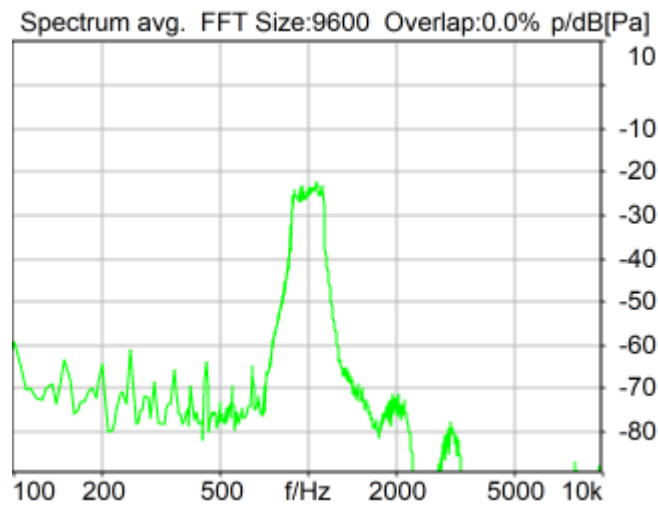
Distortion (Noise) RCV (packed): 28.55 dB (3.74%) Ok

**Ok**

4/15/2024 10:55 PM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 1000 Hz WB**

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



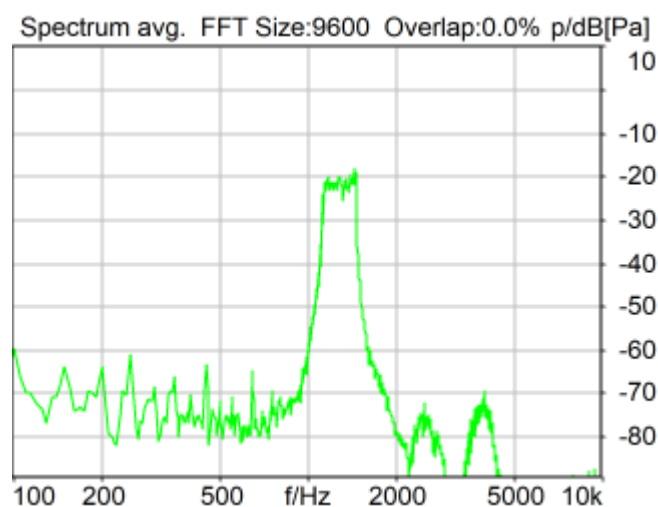
Distortion (Noise) RCV (packed): 25.64 dB (5.23%) Ok

**Ok**

4/15/2024 10:55 PM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 1250 Hz WB**

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



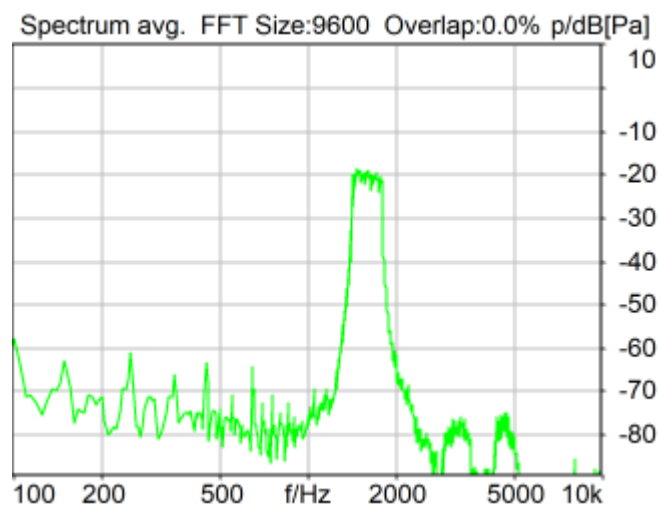
Distortion (Noise) RCV (packed): 21.63 dB (8.29%) Ok

**Ok**

4/15/2024 10:56 PM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 1600 Hz WB**

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



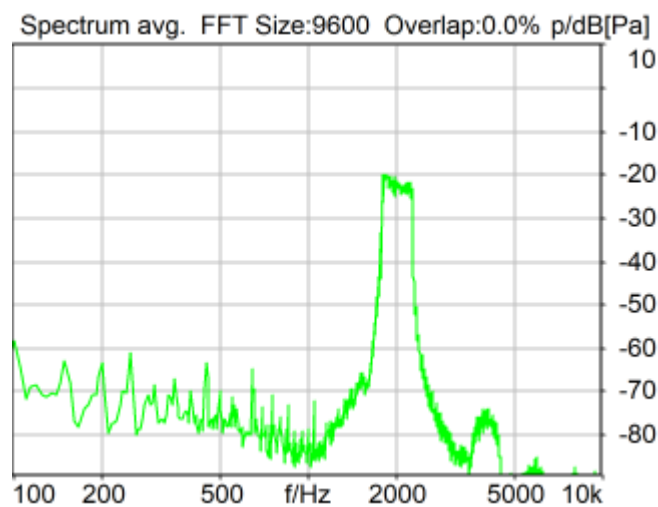
Distortion (Noise) RCV (packed): 31.75 dB (2.59%) Ok

**Ok**

4/15/2024 10:56 PM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 2000 Hz WB**

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



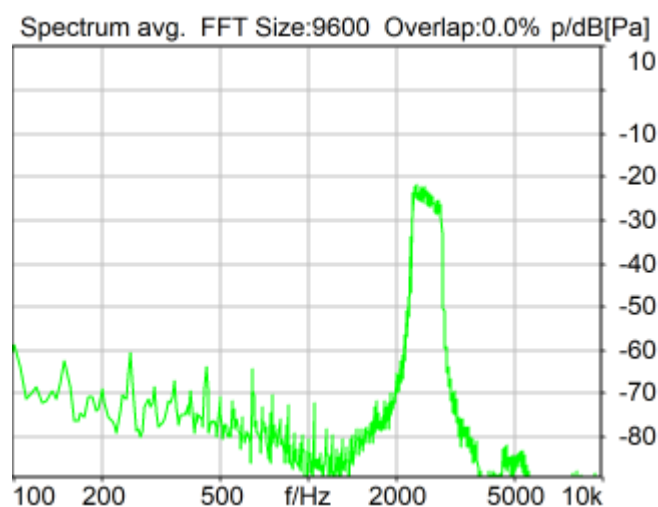
Distortion (Noise) RCV (packed): 30.95 dB (2.83%) Ok

**Ok**

4/15/2024 10:56 PM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 2500 Hz WB**

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



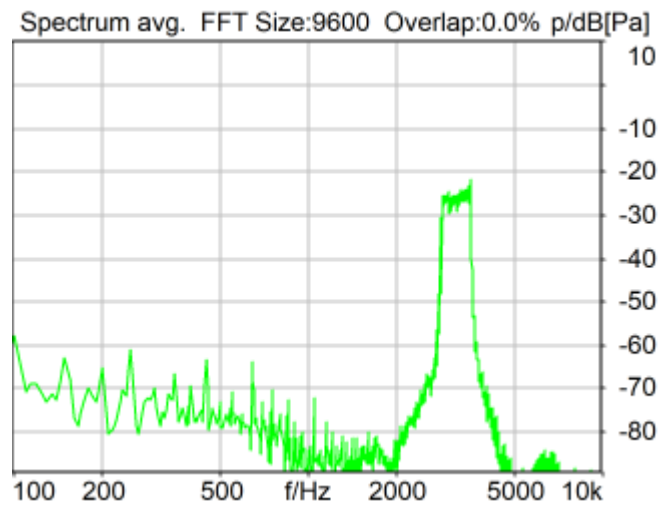
Distortion (Noise) RCV (packed): 31.91 dB (2.54%) Ok

**Ok**

4/15/2024 10:57 PM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 3150 Hz WB**

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



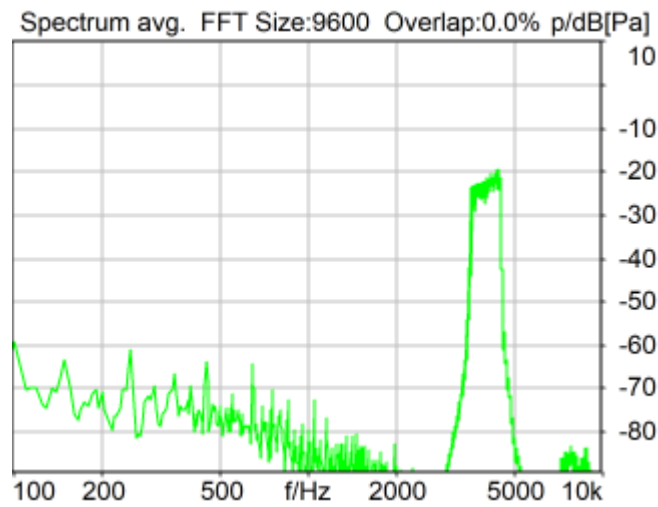
Distortion (Noise) RCV (packed): 30.79 dB (2.89%) Ok

**Ok**

4/15/2024 10:57 PM ACQUA 5.1.200

## **5.2 RCV Distortion and Noise - 4000 Hz WB**

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



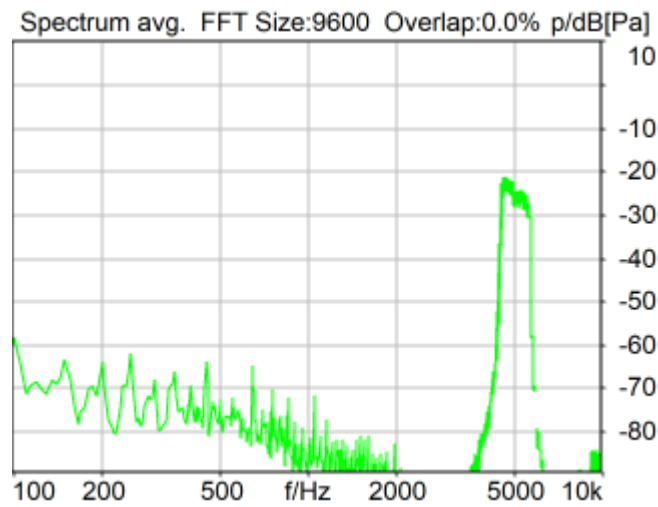
Distortion (Noise) RCV (packed): 31.84 dB (2.56%) Ok

**Ok**

4/15/2024 10:58 PM ACQUA 5.1.200

## **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): 34.27 dB (1.93%) Ok

**Ok**

4/15/2024 10:58 PM ACQUA 5.1.200

## **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     | 27.03 dB |
| 2      | 315Hz     | 27.95 dB |
| 3      | 400Hz     | 31.70 dB |
| 4      | 500Hz     | 29.34 dB |
| 5      | 630Hz     | 29.56 dB |
| 6      | 800Hz     | 28.55 dB |
| 7      | 1000Hz    | 25.64 dB |
| 8      | 1250Hz    | 21.63 dB |
| 9      | 1600Hz    | 31.75 dB |
| 10     | 2000Hz    | 30.95 dB |
| 11     | 2500Hz    | 31.91 dB |
| 12     | 3150Hz    | 30.79 dB |
| 13     | 4000Hz    | 31.84 dB |
| 14     | 5000Hz    | 34.27 dB |

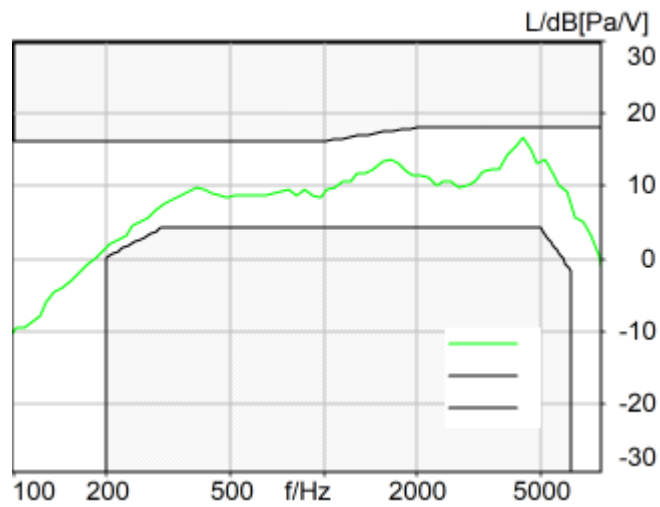
All SDNRs were greater than 20.0 dB, requirement was met.

Smallest SDNR was 21.63dB at 1250Hz.

4/15/2024 10:58 PM ACQUA

## 5.3 Frequency Response 2N FF

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



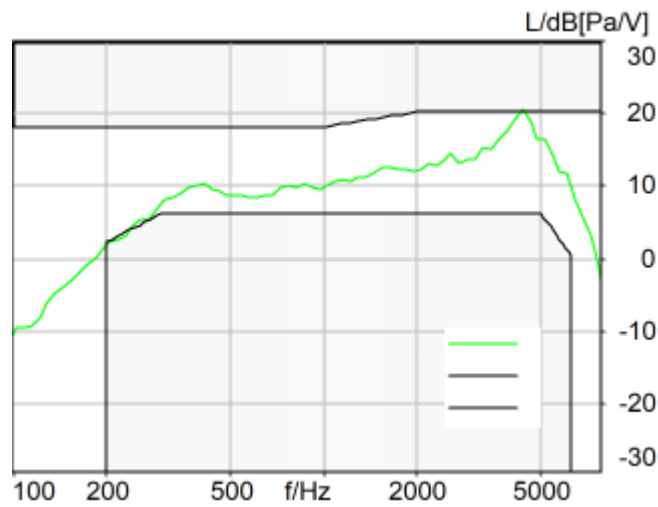
Absolute minimal distance  
1.43 dB at 4369.4 Hz Ok

Ok

4/15/2024 10:59 PM ACQUA 5.1.200

## 5.3 Frequency Response 2N DF

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



Absolute minimal distance  
-0.51 dB at 4369.4 Hz Not Ok

**Not Ok**

4/15/2024 10:59 PM ACQUA 5.1.200