# Appendix A. Volume Control Evaluation Results

<Evaluation results for KDB 285076 D05 2.a>

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# SPORTON LAB. Volume Control Evaluation Report

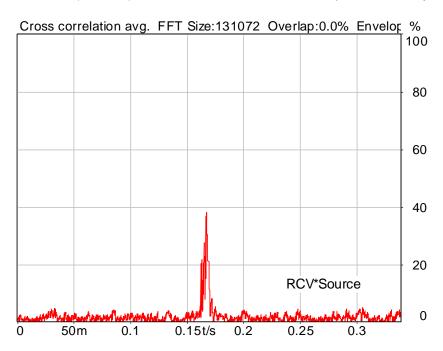
# #1 LTE B71 EVS WB 24.4Kbps

SMD	Status	Single Value Description	Single Value
Overall Receive Delay WB	Done	Delay (Cross) [ms]	167.6
5.1a Receive Volume Control Performance 8N WB	Ok	Speech Level [dB[SPL]]	89.90
5.1b Receive Volume Control Performance 2N WB	Ok	Speech Level [dB[SPL]]	93.02
5.2 RCV Distortion and Noise - 250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	21.31
5.2 RCV Distortion and Noise - 315 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	23.72
5.2 RCV Distortion and Noise - 400 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	30.06
5.2 RCV Distortion and Noise - 500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	29.53
5.2 RCV Distortion and Noise - 630 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	35.82
5.2 RCV Distortion and Noise - 800 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	40.03
5.2 RCV Distortion and Noise - 1000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	40.06
5.2 RCV Distortion and Noise - 1250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	30.18
5.2 RCV Distortion and Noise - 1600 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	40.65
5.2 RCV Distortion and Noise - 2000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	39.42
5.2 RCV Distortion and Noise - 2500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	39.24
5.2 RCV Distortion and Noise - 3150 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	40.16
5.2 RCV Distortion and Noise - 4000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	40.89
5.2 RCV Distortion and Noise - 5000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	36.90
5.2 RCV Distortion and Noise - 250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	20.98
5.2 RCV Distortion and Noise - 315 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	22.83
5.2 RCV Distortion and Noise - 400 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	27.40
5.2 RCV Distortion and Noise - 500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	23.92
5.2 RCV Distortion and Noise - 630 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	34.85
5.2 RCV Distortion and Noise - 800 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	37.99
5.2 RCV Distortion and Noise - 1000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	39.90
5.2 RCV Distortion and Noise - 1250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	30.49
5.2 RCV Distortion and Noise - 1600 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	39.67
5.2 RCV Distortion and Noise - 2000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	39.63
5.2 RCV Distortion and Noise - 2500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	41.97
5.2 RCV Distortion and Noise - 3150 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	38.77
5.2 RCV Distortion and Noise - 4000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	41.88
5.2 RCV Distortion and Noise - 5000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	33.29
5.3 Frequency Response 8N FF	Ok	Min. dist. to tolerance scheme [dB], 3058.6 Hz	2.31
5.3 Frequency Response 2N FF	Ok	Min. dist. to tolerance scheme [dB], 6117.2 Hz	3.22



## **Overall Receive Delay WB**

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



Channel	Delay
RCV*Source	167.6 ms

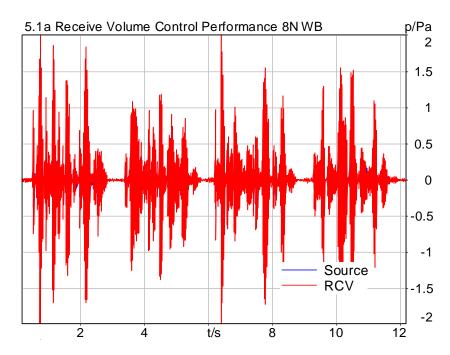
2024/4/22 上午 10:46 ACQUA 6.0.200



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

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

new SW



Channel	Speech level	Activity	
RCV	89.90 dB[SPL]	11.49%	Ok

#### Ok

2024/4/15 下午 10:57 ACQUA 6.0.200

#### Limits

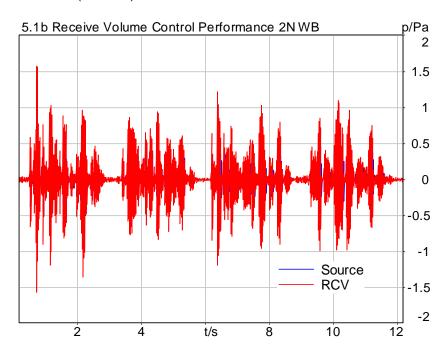
	lower
Run 1	76.00 dB20uPa

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# 5.1b Receive Volume Control Performance 2N WB

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



Channel	Speech level	Activity	
RCV	93.02 dB[SPL]	2.94%	Ok

#### Ok

2024/4/22 上午 10:46 ACQUA 6.0.200

#### Limits

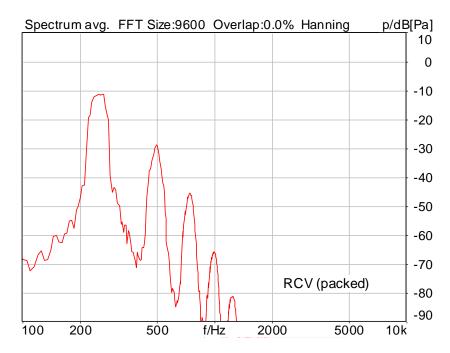
	lower
Run 1	76.00 dB20uPa

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

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



Distortion (Noise) RCV (packed): 21.31 dB (8.60%) Ok

#### Ok

2024/4/22 上午 10:53 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

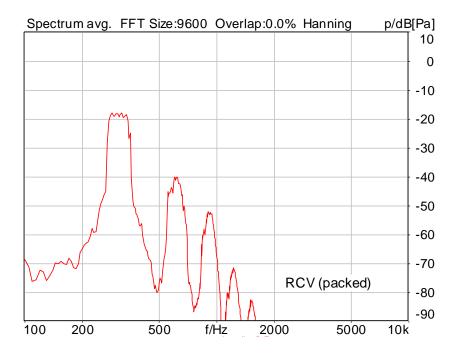
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### 5.2 RCV Distortion and Noise - 315 Hz WB

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

new SW



Distortion (Noise) RCV (packed): 23.72 dB (6.52%) Ok

#### Ok

2024/4/15 下午 11:09 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

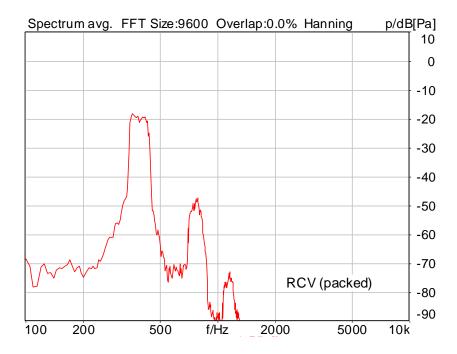
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### 5.2 RCV Distortion and Noise - 400 Hz WB

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

new SW



Distortion (Noise) RCV (packed): 30.06 dB (3.14%) Ok

#### Ok

2024/4/15 下午 10:59 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

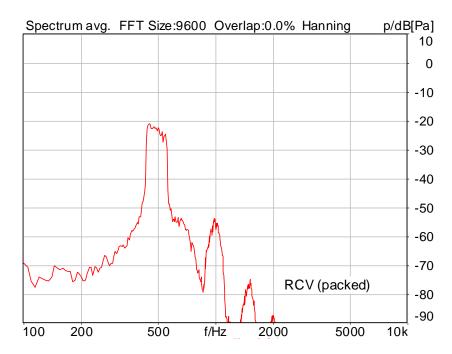
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### 5.2 RCV Distortion and Noise - 500 Hz WB

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

new SW



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

#### Ok

2024/4/15 下午 10:59 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

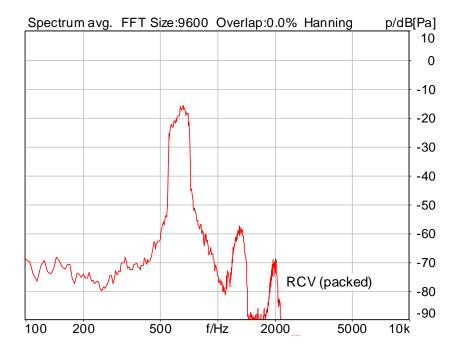
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### 5.2 RCV Distortion and Noise - 630 Hz WB

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

new SW



Distortion (Noise) RCV (packed): 35.82 dB (1.62%) Ok

#### Ok

2024/4/15 下午 11:00 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

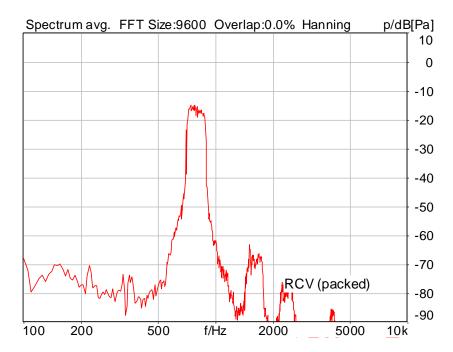
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### 5.2 RCV Distortion and Noise - 800 Hz WB

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

new SW



Distortion (Noise) RCV (packed): 40.03 dB (1.00%) Ok

#### Ok

2024/4/15 下午 11:00 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

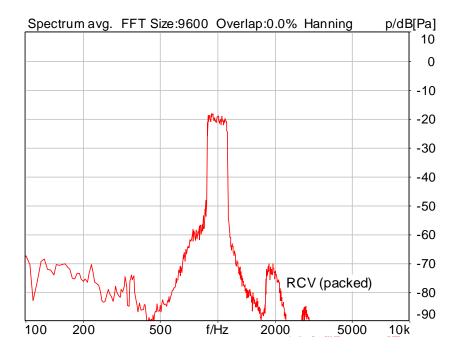
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### 5.2 RCV Distortion and Noise - 1000 Hz WB

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

new SW



Distortion (Noise) RCV (packed): 40.06 dB (0.99%) Ok

#### Ok

2024/4/15 下午 11:01 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

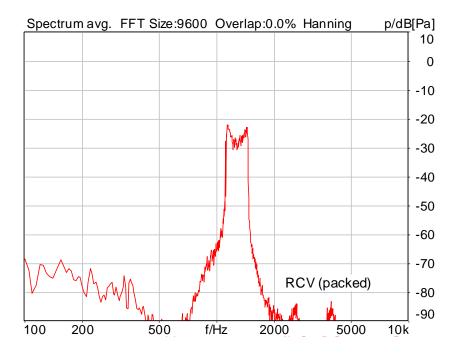
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5.2 RCV Distortion and Noise - 1250 Hz WB

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

new SW



Distortion (Noise) RCV (packed): 30.18 dB (3.10%) Ok

#### Ok

2024/4/15 下午 11:01 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

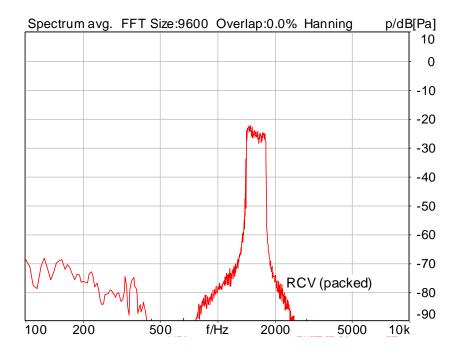
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### 5.2 RCV Distortion and Noise - 1600 Hz WB

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

new SW



Distortion (Noise) RCV (packed): 40.65 dB (0.93%) Ok

#### Ok

2024/4/15 下午 11:02 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

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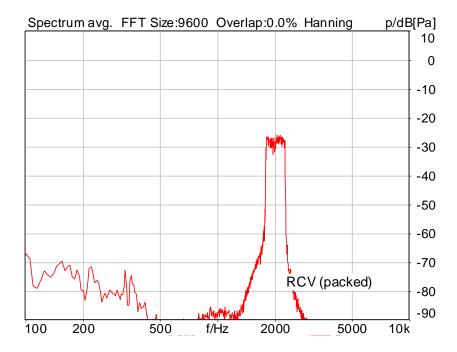


2 DCV Distortion and Naise 2000 H- WD

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

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

new SW



Distortion (Noise) RCV (packed): 39.42 dB (1.07%) Ok

Ok

2024/4/15 下午 11:02 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

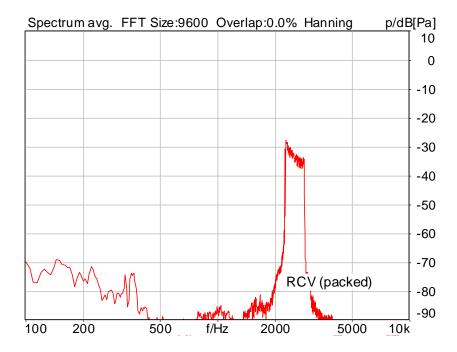
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### 5.2 RCV Distortion and Noise - 2500 Hz WB

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

new SW



Distortion (Noise) RCV (packed): 39.24 dB (1.09%) Ok

#### Ok

2024/4/15 下午 11:03 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

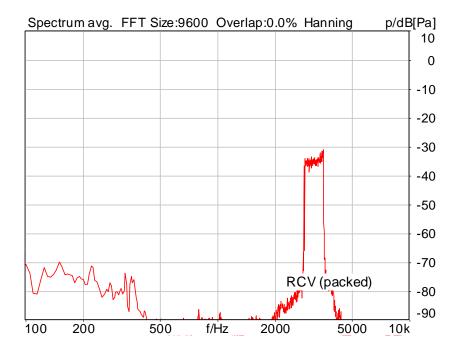
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### 5.2 RCV Distortion and Noise - 3150 Hz WB

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

new SW



Distortion (Noise) RCV (packed): 40.16 dB (0.98%) Ok

#### Ok

2024/4/15 下午 11:03 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

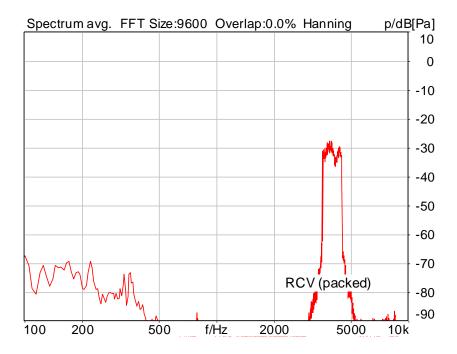
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5.2 RCV Distortion and Noise - 4000 Hz WB

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

new SW



Distortion (Noise) RCV (packed): 40.89 dB (0.90%) Ok

#### Ok

2024/4/15 下午 11:04 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

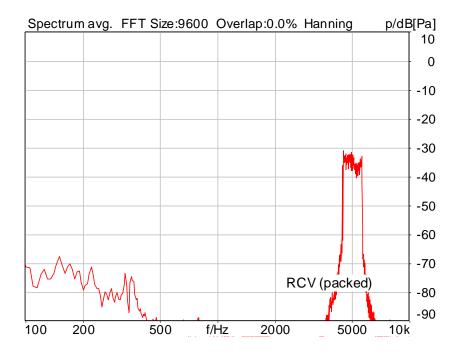
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### 5.2 RCV Distortion and Noise - 5000 Hz WB

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

new SW



Distortion (Noise) RCV (packed): 36.90 dB (1.43%) Ok

#### Ok

2024/4/15 下午 11:04 ACQUA 6.0.200

#### Limits

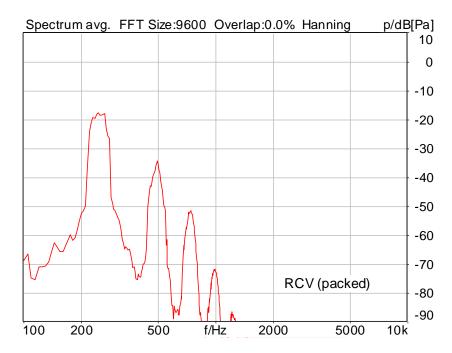
	lower
Run 1	20.00 dB

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# 5.2 RCV Distortion and Noise - 250 Hz WB

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



Distortion (Noise) RCV (packed): 20.98 dB (8.93%) Ok

#### Ok

2024/4/22 上午 10:47 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

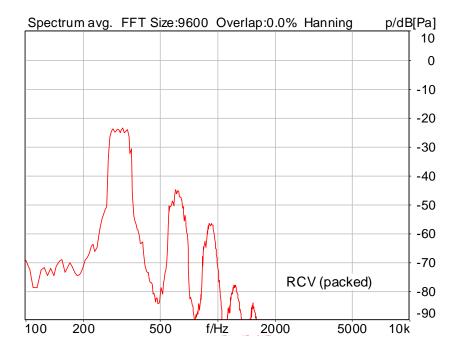
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### 5.2 RCV Distortion and Noise - 315 Hz WB

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

new SW



Distortion (Noise) RCV (packed): 22.83 dB (7.22%) Ok

#### Ok

2024/4/15 下午 11:13 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

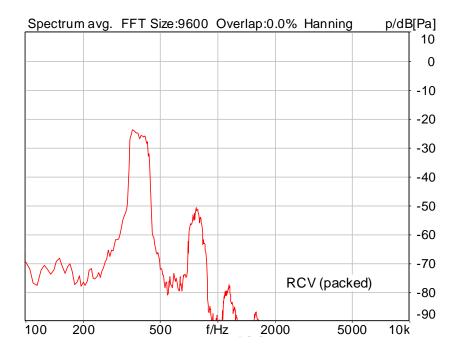
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### 5.2 RCV Distortion and Noise - 400 Hz WB

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

new SW



Distortion (Noise) RCV (packed): 27.40 dB (4.26%) Ok

#### Ok

2024/4/15 下午 11:13 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

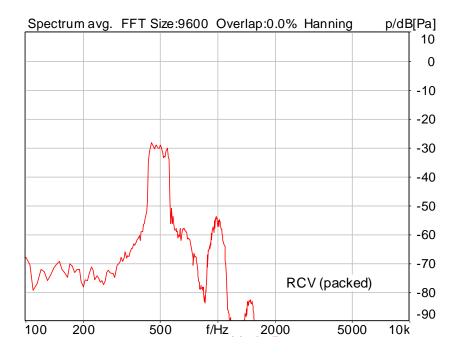
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### 5.2 RCV Distortion and Noise - 500 Hz WB

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

new SW



Distortion (Noise) RCV (packed): 23.92 dB (6.37%) Ok

#### Ok

2024/4/15 下午 11:14 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

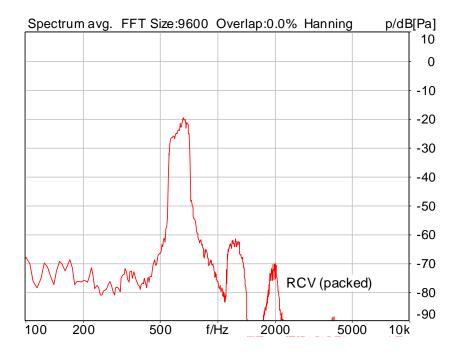
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### 5.2 RCV Distortion and Noise - 630 Hz WB

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

new SW



Distortion (Noise) RCV (packed): 34.85 dB (1.81%) Ok

#### Ok

2024/4/15 下午 11:14 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

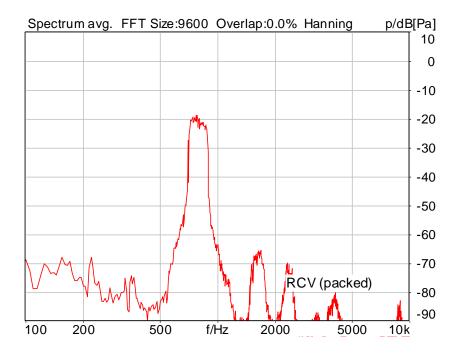
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### 5.2 RCV Distortion and Noise - 800 Hz WB

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

new SW



Distortion (Noise) RCV (packed): 37.99 dB (1.26%) Ok

#### Ok

2024/4/15 下午 11:14 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

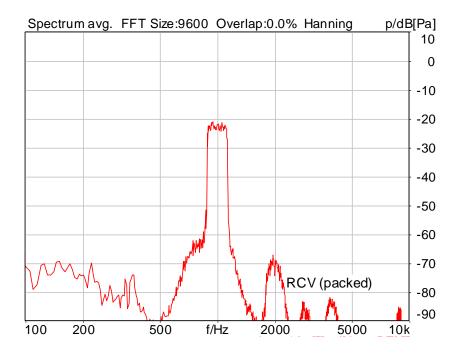
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### 5.2 RCV Distortion and Noise - 1000 Hz WB

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

new SW



Distortion (Noise) RCV (packed): 39.90 dB (1.01%) Ok

#### Ok

2024/4/15 下午 11:15 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

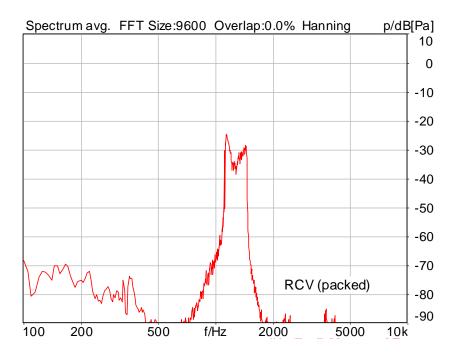
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5.2 RCV Distortion and Noise - 1250 Hz WB

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

new SW



Distortion (Noise) RCV (packed): 30.49 dB (2.99%) Ok

#### Ok

2024/4/15 下午 11:15 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

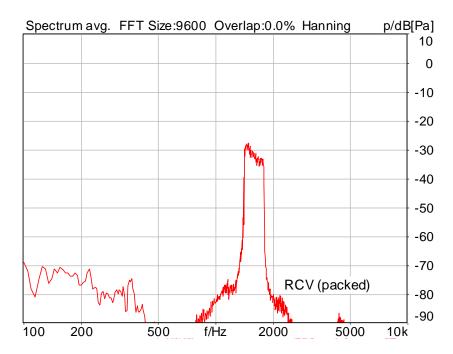
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### 5.2 RCV Distortion and Noise - 1600 Hz WB

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

new SW



Distortion (Noise) RCV (packed): 39.67 dB (1.04%) Ok

#### Ok

2024/4/15 下午 11:16 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

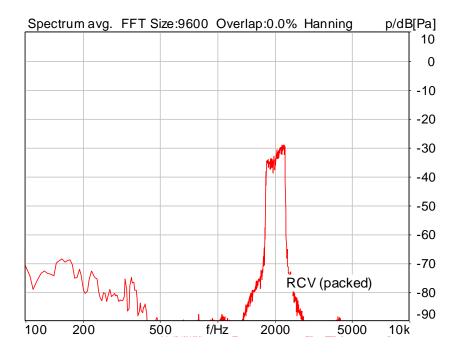
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### 5.2 RCV Distortion and Noise - 2000 Hz WB

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

new SW



Distortion (Noise) RCV (packed): 39.63 dB (1.04%) Ok

#### Ok

2024/4/15 下午 11:16 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

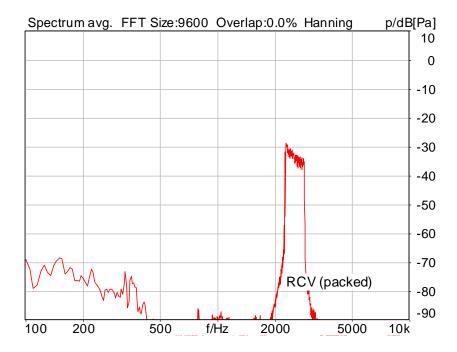
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### 5.2 RCV Distortion and Noise - 2500 Hz WB

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

new SW



Distortion (Noise) RCV (packed): 41.97 dB (0.80%) Ok

#### Ok

2024/4/15 下午 11:17 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

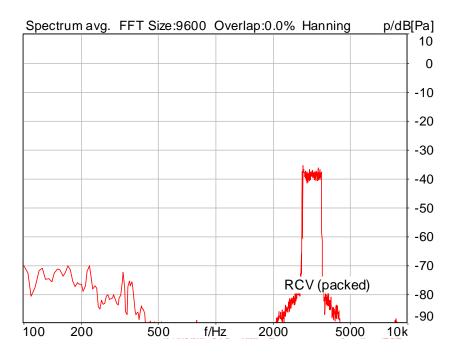
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### 5.2 RCV Distortion and Noise - 3150 Hz WB

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

new SW



Distortion (Noise) RCV (packed): 38.77 dB (1.15%) Ok

#### Ok

2024/4/15 下午 11:17 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

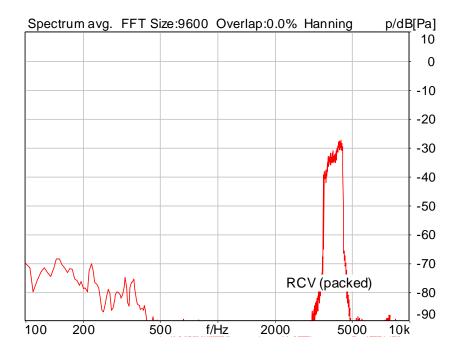
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### 5.2 RCV Distortion and Noise - 4000 Hz WB

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

new SW



Distortion (Noise) RCV (packed): 41.88 dB (0.81%) Ok

#### Ok

2024/4/15 下午 11:18 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

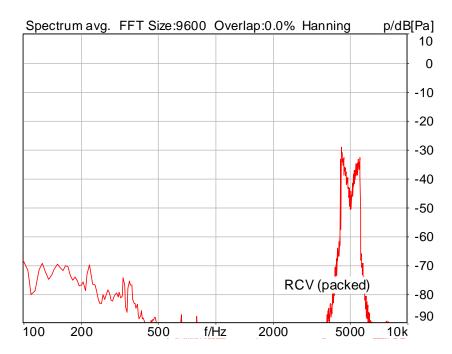
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### 5.2 RCV Distortion and Noise - 5000 Hz WB

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

new SW



Distortion (Noise) RCV (packed): 33.29 dB (2.16%) Ok

#### Ok

2024/4/15 下午 11:18 ACQUA 6.0.200

#### Limits

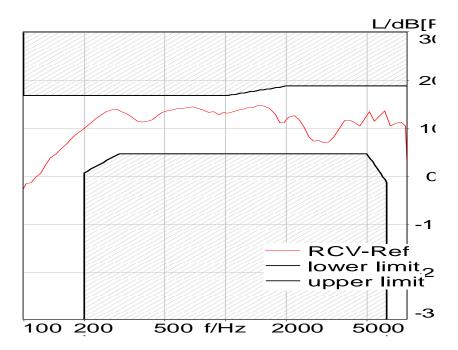
	lower
Run 1	20.00 dB

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### 5.3 Frequency Response 8N FF

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



Absolute minimal distance

2.31 dB at 3058.6 Hz Ok

#### Ok

2024/4/22 上午 10:54 ACQUA 6.0.200

#### Limits

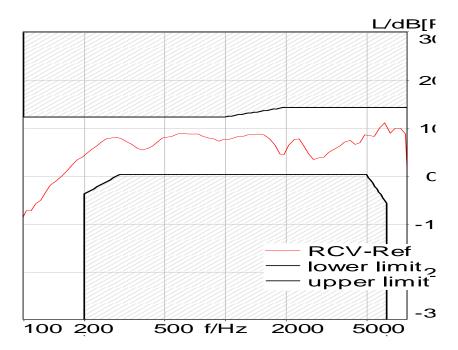
	lower
Run 1	Fit into tolerance

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### 5.3 Frequency Response 2N FF

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



Absolute minimal distance

3.22 dB at 6117.2 Hz Ok

#### Ok

2024/4/22 上午 10:52 ACQUA 6.0.200

#### Limits

	lower
Run 1	Fit into tolerance

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# SPORTON LAB. Volume Control Evaluation Report

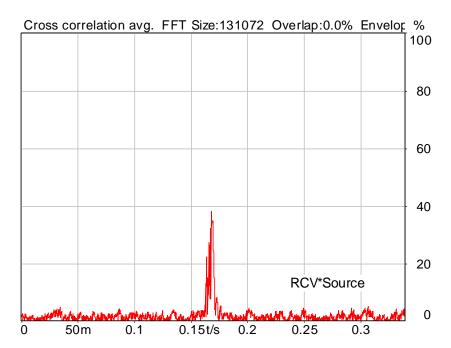
# #2 NR n12 EVS WB 24.4Kbps

SMD	Status	Single Value Description	Single Value
Overall Receive Delay WB	Done	Delay (Cross) [ms]	168.6
5.1a Receive Volume Control Performance 8N WB	Ok	Speech Level [dB[SPL]]	88.75
5.1b Receive Volume Control Performance 2N WB	Ok	Speech Level [dB[SPL]]	94.11
5.2 RCV Distortion and Noise - 250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	22.31
5.2 RCV Distortion and Noise - 315 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	27.93
5.2 RCV Distortion and Noise - 400 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	34.74
5.2 RCV Distortion and Noise - 500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	36.35
5.2 RCV Distortion and Noise - 630 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	38.95
5.2 RCV Distortion and Noise - 800 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	37.16
5.2 RCV Distortion and Noise - 1000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	34.72
5.2 RCV Distortion and Noise - 1250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	28.17
5.2 RCV Distortion and Noise - 1600 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	34.02
5.2 RCV Distortion and Noise - 2000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	32.85
5.2 RCV Distortion and Noise - 2500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	34.45
5.2 RCV Distortion and Noise - 3150 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	37.21
5.2 RCV Distortion and Noise - 4000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	35.12
5.2 RCV Distortion and Noise - 5000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	34.06
5.2 RCV Distortion and Noise - 250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	21.53
5.2 RCV Distortion and Noise - 315 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	28.06
5.2 RCV Distortion and Noise - 400 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	34.43
5.2 RCV Distortion and Noise - 500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	34.36
5.2 RCV Distortion and Noise - 630 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	35.47
5.2 RCV Distortion and Noise - 800 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	35.42
5.2 RCV Distortion and Noise - 1000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	31.94
5.2 RCV Distortion and Noise - 1250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	26.60
5.2 RCV Distortion and Noise - 1600 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	31.72
5.2 RCV Distortion and Noise - 2000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	30.76
5.2 RCV Distortion and Noise - 2500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	32.61
5.2 RCV Distortion and Noise - 3150 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	36.23
5.2 RCV Distortion and Noise - 4000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	32.61
5.2 RCV Distortion and Noise - 5000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	32.63
5.3 Frequency Response 8N FF	Ok	Min. dist. to tolerance scheme [dB], 649.1 Hz	1.74
5.3 Frequency Response 2N FF	Ok	Min. dist. to tolerance scheme [dB], 689.1 Hz	2.78



### **Overall Receive Delay WB**

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



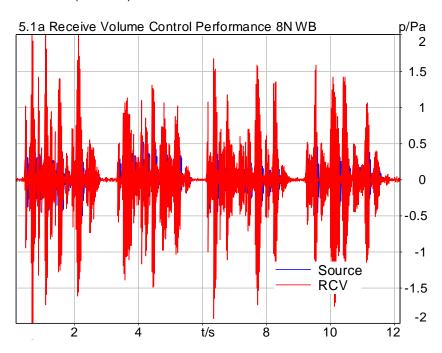
Channel	Delay
RCV*Source	168.6 ms

2024/4/20 上午 02:31 ACQUA 6.0.200



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

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



Channel	Speech level	Activity	
RCV	88.75 dB[SPL]	19.64%	Ok

#### Ok

2024/4/6 下午 07:17 ACQUA 6.0.200

#### Limits

	lower
Run 1	76.00 dB20uPa

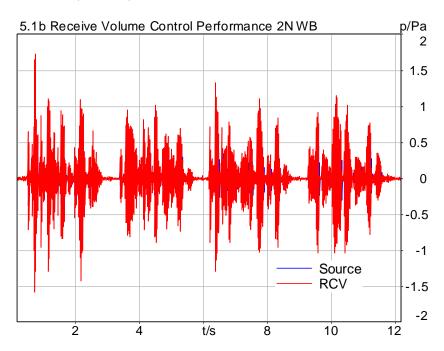
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Report No. :HA411111C

# 5.1b Receive Volume Control Performance 2N WB

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



Channel	Speech level	Activity	
RCV	94.11 dB[SPL]	2.63%	Ok

#### Ok

2024/4/20 上午 02:32 ACQUA 6.0.200

#### Limits

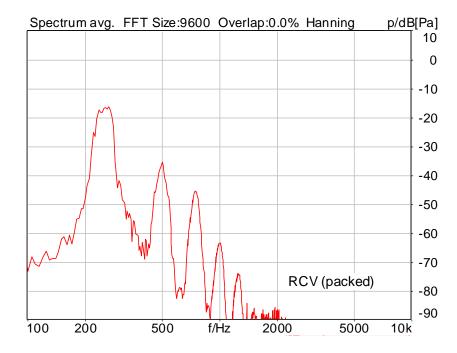
	lower
Run 1	76.00 dB20uPa

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# Report No. :HA411111C 5.2 RCV Distortion and Noise - 250 Hz WB

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



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

#### Ok

2024/4/6 下午 07:16 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

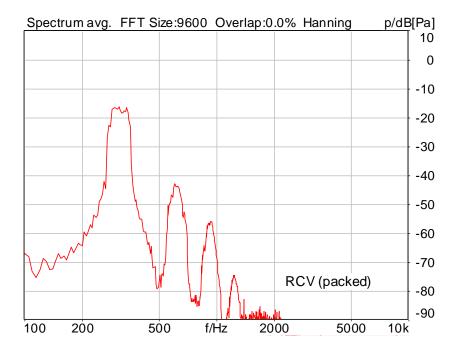
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Report No. :HA411111C

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

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



Distortion (Noise) RCV (packed): 27.93 dB (4.01%) Ok

#### Ok

2024/4/6 下午 07:12 ACQUA 6.0.200

#### Limits

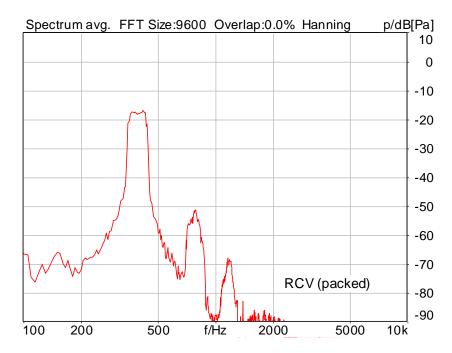
	lower
Run 1	20.00 dB

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

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



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

#### Ok

2024/4/6 下午 07:01 ACQUA 6.0.200

#### Limits

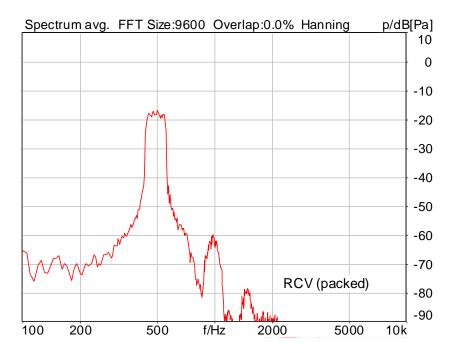
	lower
Run 1	20.00 dB

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

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



Distortion (Noise) RCV (packed): 36.35 dB (1.52%) Ok

#### Ok

2024/4/6 下午 07:02 ACQUA 6.0.200

#### Limits

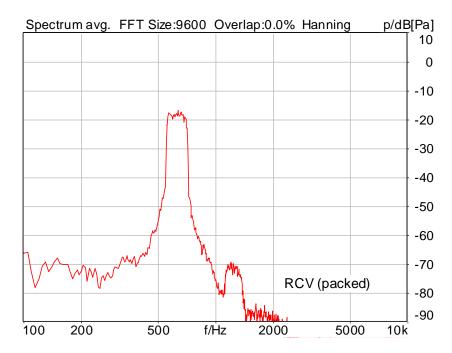
	lower
Run 1	20.00 dB

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

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



Distortion (Noise) RCV (packed): 38.95 dB (1.13%) Ok

#### Ok

2024/4/6 下午 07:02 ACQUA 6.0.200

#### Limits

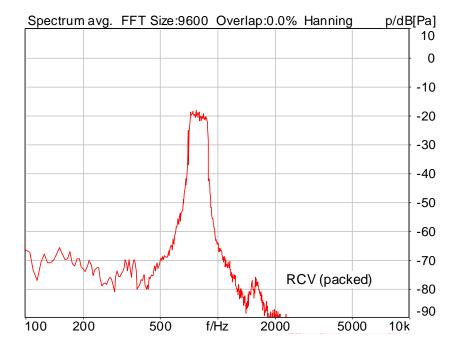
	lower
Run 1	20.00 dB

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

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



Distortion (Noise) RCV (packed): 37.16 dB (1.39%) Ok

#### Ok

2024/4/6 下午 07:03 ACQUA 6.0.200

#### Limits

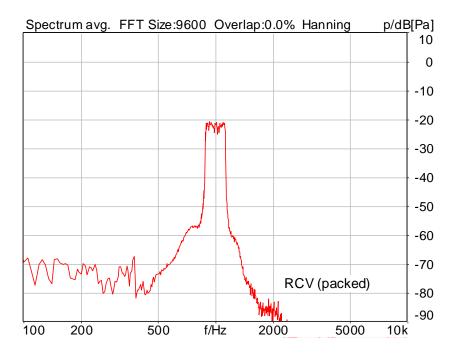
	lower
Run 1	20.00 dB

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

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



Distortion (Noise) RCV (packed): 34.72 dB (1.84%) Ok

#### Ok

2024/4/6 下午 07:03 ACQUA 6.0.200

#### Limits

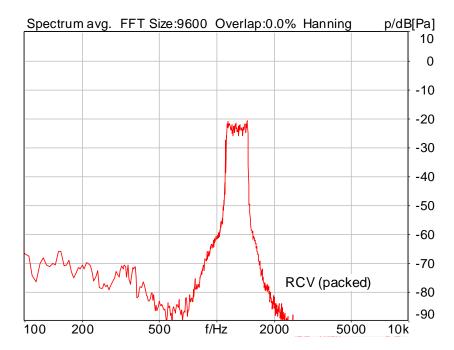
	lower
Run 1	20.00 dB

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

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



Distortion (Noise) RCV (packed): 28.17 dB (3.90%) Ok

#### Ok

2024/4/6 下午 07:04 ACQUA 6.0.200

#### Limits

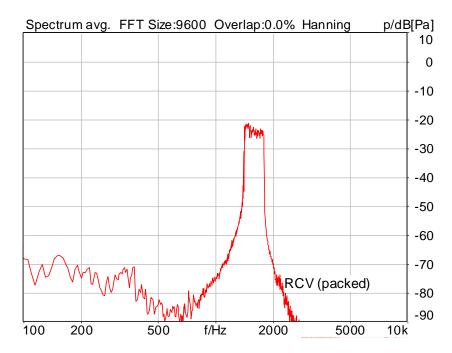
	lower
Run 1	20.00 dB

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

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



Distortion (Noise) RCV (packed): 34.02 dB (1.99%) Ok

#### Ok

2024/4/6 下午 07:04 ACQUA 6.0.200

#### Limits

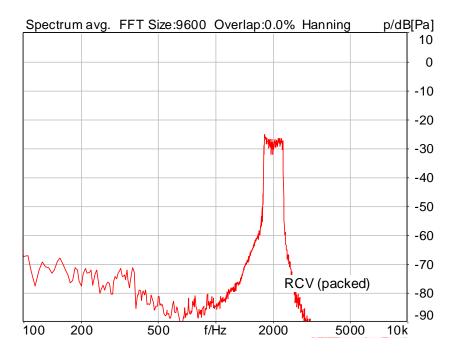
	lower
Run 1	20.00 dB

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

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



Distortion (Noise) RCV (packed): 32.85 dB (2.28%) Ok

#### Ok

2024/4/6 下午 07:05 ACQUA 6.0.200

#### Limits

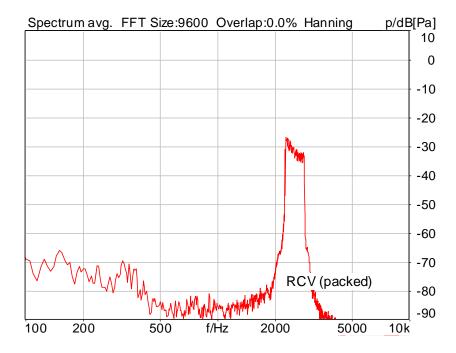
	lower
Run 1	20.00 dB

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

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



Distortion (Noise) RCV (packed): 34.45 dB (1.89%) Ok

#### Ok

2024/4/6 下午 07:05 ACQUA 6.0.200

#### Limits

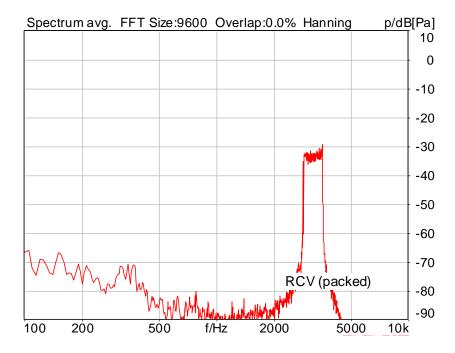
	lower
Run 1	20.00 dB

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

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



Distortion (Noise) RCV (packed): 37.21 dB (1.38%) Ok

#### Ok

2024/4/6 下午 07:06 ACQUA 6.0.200

#### Limits

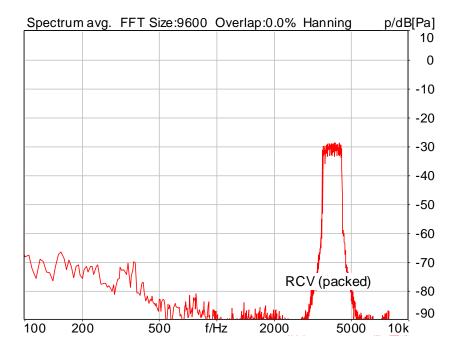
	lower
Run 1	20.00 dB

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

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



Distortion (Noise) RCV (packed): 35.12 dB (1.75%) Ok

#### Ok

2024/4/6 下午 07:06 ACQUA 6.0.200

#### Limits

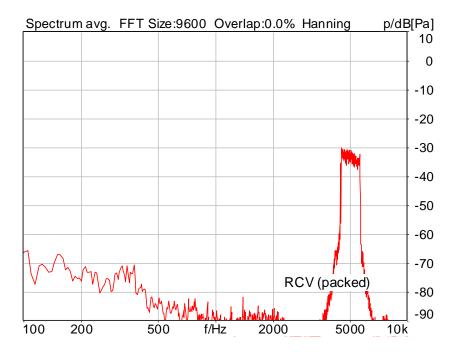
	lower
Run 1	20.00 dB

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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 8N change frequency range



Distortion (Noise) RCV (packed): 34.06 dB (1.98%) Ok

#### Ok

2024/4/6 下午 07:07 ACQUA 6.0.200

#### Limits

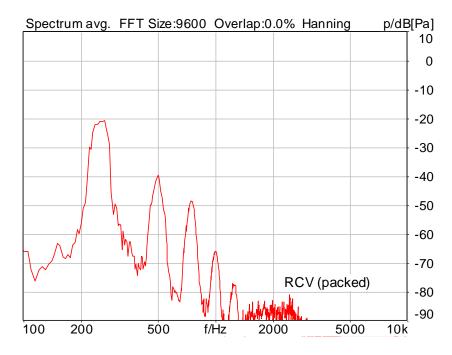
	lower
Run 1	20.00 dB

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

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



Distortion (Noise) RCV (packed): 21.53 dB (8.39%) Ok

#### Ok

2024/4/6 下午 07:42 ACQUA 6.0.200

#### Limits

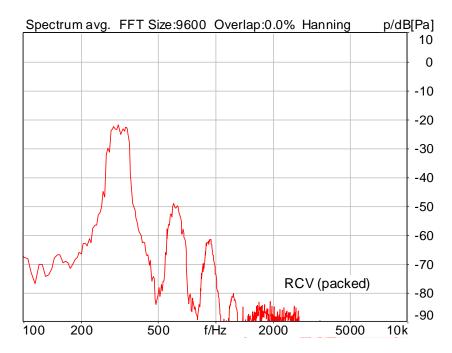
	lower
Run 1	20.00 dB

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

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



Distortion (Noise) RCV (packed): 28.06 dB (3.95%) Ok

#### Ok

2024/4/6 下午 07:19 ACQUA 6.0.200

#### Limits

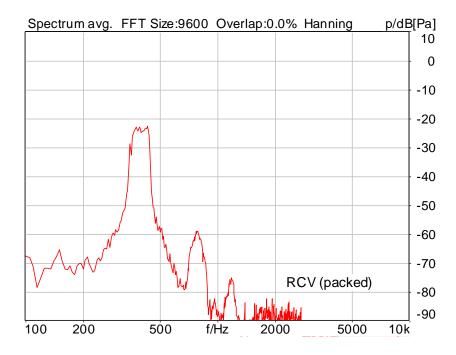
	lower
Run 1	20.00 dB

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# Report No. :HA411111C 5.2 RCV Distortion and Noise - 400 Hz WB

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



Distortion (Noise) RCV (packed): 34.43 dB (1.90%) Ok

#### Ok

2024/4/6 下午 07:19 ACQUA 6.0.200

#### Limits

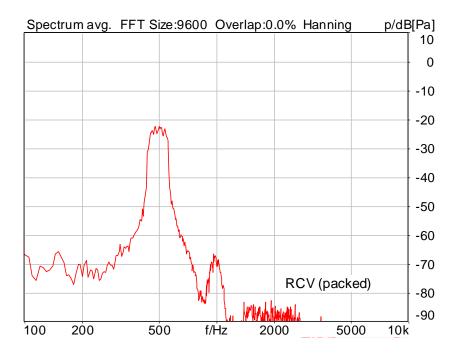
	lower
Run 1	20.00 dB

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

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



Distortion (Noise) RCV (packed): 34.36 dB (1.91%) Ok

#### Ok

2024/4/6 下午 07:20 ACQUA 6.0.200

#### Limits

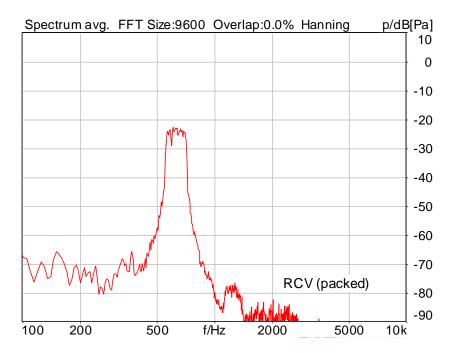
	lower
Run 1	20.00 dB

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

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



Distortion (Noise) RCV (packed): 35.47 dB (1.68%) Ok

#### Ok

2024/4/6 下午 07:20 ACQUA 6.0.200

#### Limits

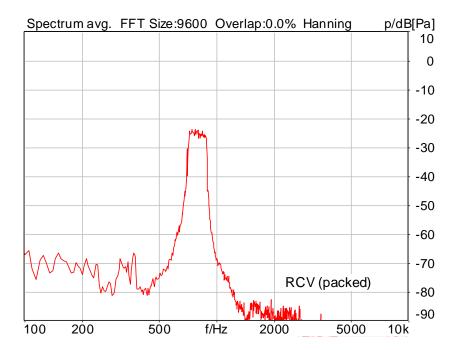
	lower
Run 1	20.00 dB

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

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



Distortion (Noise) RCV (packed): 35.42 dB (1.69%) Ok

#### Ok

2024/4/6 下午 07:21 ACQUA 6.0.200

#### Limits

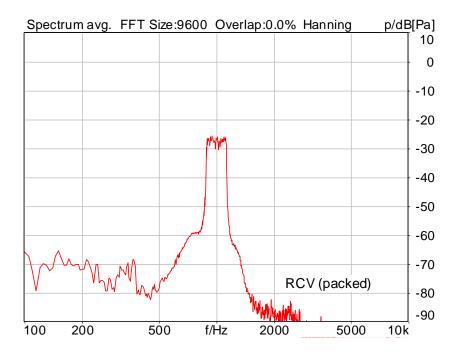
	lower
Run 1	20.00 dB

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# 5.2 RCV Distortion and Noise - 1000 Hz WB

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



Distortion (Noise) RCV (packed): 31.94 dB (2.53%) Ok

#### Ok

2024/4/6 下午 07:21 ACQUA 6.0.200

#### Limits

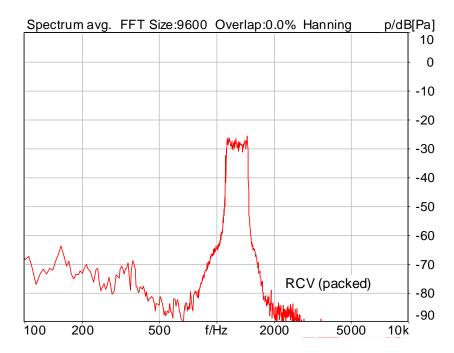
	lower
Run 1	20.00 dB

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# 5.2 RCV Distortion and Noise - 1250 Hz WB

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



Distortion (Noise) RCV (packed): 26.60 dB (4.68%) Ok

#### Ok

2024/4/6 下午 07:22 ACQUA 6.0.200

#### Limits

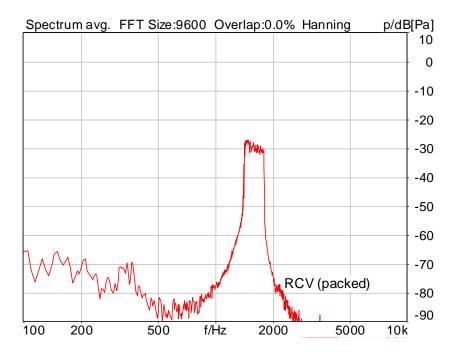
	lower
Run 1	20.00 dB

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

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



Distortion (Noise) RCV (packed): 31.72 dB (2.60%) Ok

#### Ok

2024/4/6 下午 07:22 ACQUA 6.0.200

#### Limits

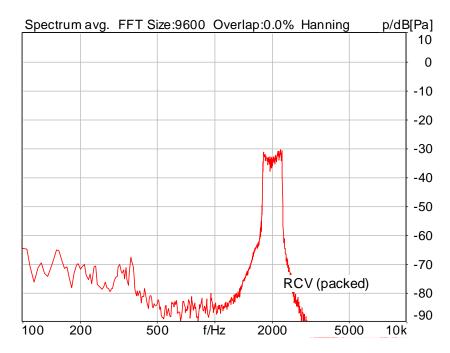
	lower
Run 1	20.00 dB

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

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



Distortion (Noise) RCV (packed): 30.76 dB (2.90%) Ok

#### Ok

2024/4/6 下午 07:23 ACQUA 6.0.200

#### Limits

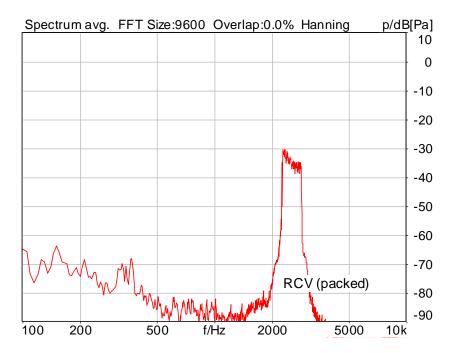
	lower
Run 1	20.00 dB

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

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



Distortion (Noise) RCV (packed): 32.61 dB (2.34%) Ok

#### Ok

2024/4/6 下午 07:23 ACQUA 6.0.200

#### Limits

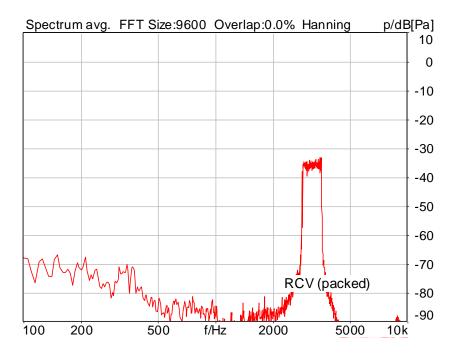
	lower
Run 1	20.00 dB

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

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



Distortion (Noise) RCV (packed): 36.23 dB (1.54%) Ok

#### Ok

2024/4/6 下午 07:24 ACQUA 6.0.200

#### Limits

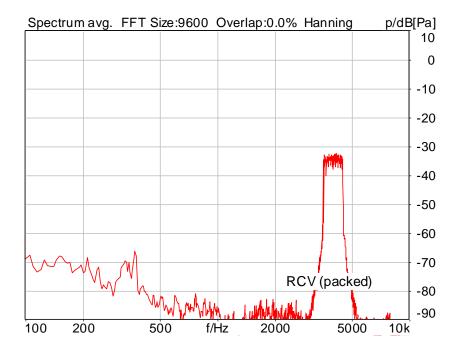
	lower
Run 1	20.00 dB

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

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



Distortion (Noise) RCV (packed): 32.61 dB (2.34%) Ok

#### Ok

2024/4/6 下午 07:24 ACQUA 6.0.200

#### Limits

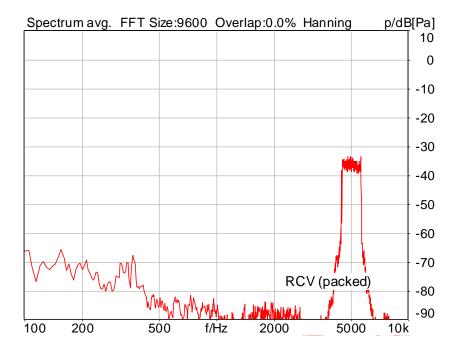
	lower
Run 1	20.00 dB

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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 change frequency range



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

#### Ok

2024/4/6 下午 07:25 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

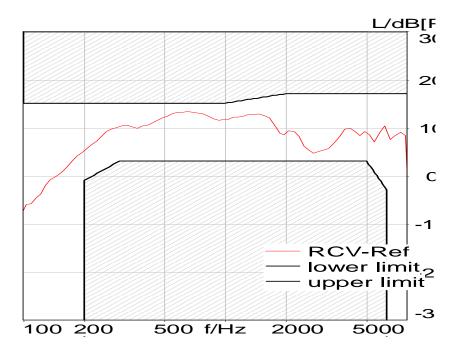
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### Report No. :HA411111C

### 5.3 Frequency Response 8N FF

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



Absolute minimal distance

1.74 dB at 649.1 Hz Ok

#### Ok

2024/4/6 下午 07:07 ACQUA 6.0.200

#### Limits

	lower
Run 1	Fit into tolerance

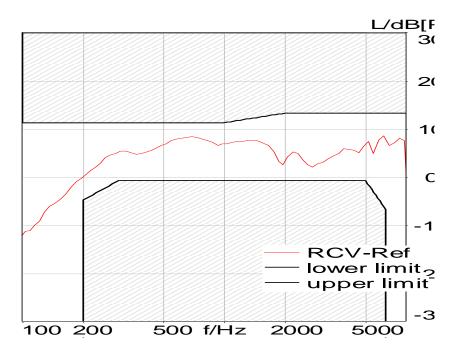
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### Report No. :HA411111C

### 5.3 Frequency Response 2N FF

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



Absolute minimal distance

2.78 dB at 689.1 Hz Ok

#### Ok

2024/4/6 下午 07:25 ACQUA 6.0.200

#### Limits

	lower
Run 1	Fit into tolerance

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### SPORTON LAB. Volume Control Evaluation Report

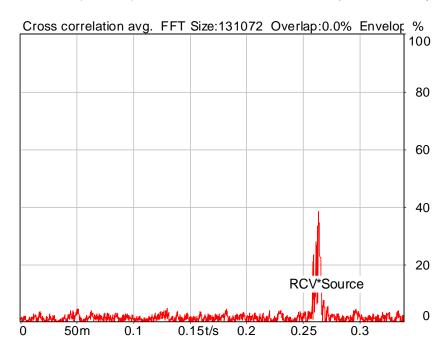
# #3 WiFi 6GHz EVS WB 24.4Kbps

SMD	Status	Single Value Description	Single Value
Overall Receive Delay WB	Done	Delay (Cross) [ms]	263.9
5.1a Receive Volume Control Performance 8N WB	Ok	Speech Level [dB[SPL]]	88.98
5.1b Receive Volume Control Performance 2N WB	Ok	Speech Level [dB[SPL]]	94.30
5.2 RCV Distortion and Noise - 250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	21.32
5.2 RCV Distortion and Noise - 315 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	27.24
5.2 RCV Distortion and Noise - 400 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	35.33
5.2 RCV Distortion and Noise - 500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	32.80
5.2 RCV Distortion and Noise - 630 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	39.72
5.2 RCV Distortion and Noise - 800 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	38.29
5.2 RCV Distortion and Noise - 1000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	40.08
5.2 RCV Distortion and Noise - 1250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	34.80
5.2 RCV Distortion and Noise - 1600 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	37.55
5.2 RCV Distortion and Noise - 2000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	42.71
5.2 RCV Distortion and Noise - 2500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	34.43
5.2 RCV Distortion and Noise - 3150 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	37.46
5.2 RCV Distortion and Noise - 4000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	37.62
5.2 RCV Distortion and Noise - 5000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	39.73
5.2 RCV Distortion and Noise - 250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	21.39
5.2 RCV Distortion and Noise - 315 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	27.47
5.2 RCV Distortion and Noise - 400 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	35.00
5.2 RCV Distortion and Noise - 500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	35.08
5.2 RCV Distortion and Noise - 630 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	39.22
5.2 RCV Distortion and Noise - 800 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	39.57
5.2 RCV Distortion and Noise - 1000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	32.55
5.2 RCV Distortion and Noise - 1250 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	31.48
5.2 RCV Distortion and Noise - 1600 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	33.75
5.2 RCV Distortion and Noise - 2000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	41.44
5.2 RCV Distortion and Noise - 2500 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	43.87
5.2 RCV Distortion and Noise - 3150 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	37.48
5.2 RCV Distortion and Noise - 4000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	36.25
5.2 RCV Distortion and Noise - 5000 Hz WB	Ok	Distortion (Noise) [dB], 0.0 dB	37.57
5.3 Frequency Response 8N FF	Ok	Min. dist. to tolerance scheme [dB], 305.9 Hz	2.04
5.3 Frequency Response 2N FF	Ok	Min. dist. to tolerance scheme [dB], 7764.8 Hz	3.18



## **Overall Receive Delay WB**

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



Channel	Delay
RCV*Source	263.9 ms

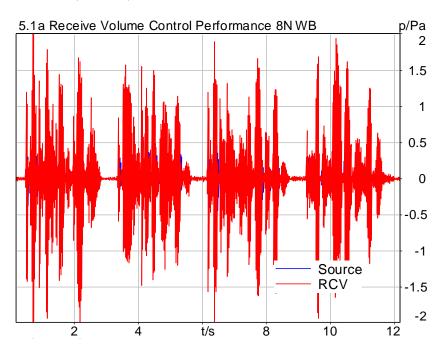
2024/4/20 上午 01:19 ACQUA 6.0.200



Report No. :HA411111C

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

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



Channel	Speech level	Activity	
RCV	88.98 dB[SPL]	23.76%	Ok

#### Ok

2024/4/11 上午 12:50 ACQUA 6.0.200

#### Limits

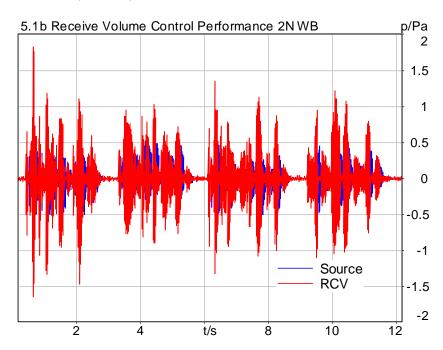
	lower
Run 1	76.00 dB20uPa

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# 5.1b Receive Volume Control Performance 2N WB

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



Channel	Speech level	Activity	
RCV	94.30 dB[SPL]	2.63%	Ok

#### Ok

2024/4/20 上午 01:20 ACQUA 6.0.200

#### Limits

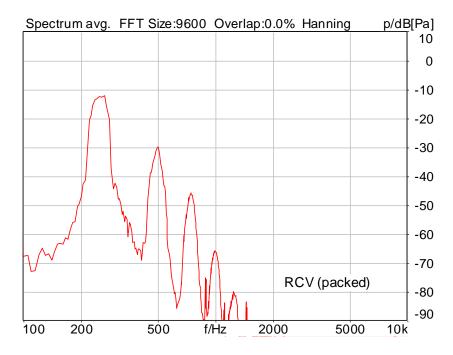
	lower
Run 1	76.00 dB20uPa

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# Report No. :HA411111C 5.2 RCV Distortion and Noise - 250 Hz WB

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



Distortion (Noise) RCV (packed): 21.32 dB (8.59%) Ok

#### Ok

2024/4/11 上午 12:42 ACQUA 6.0.200

#### Limits

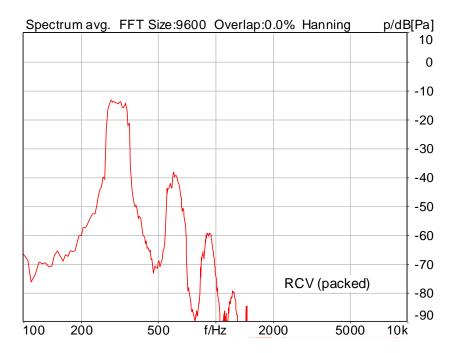
	lower
Run 1	20.00 dB

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# 5.2 RCV Distortion and Noise - 315 Hz WB

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



Distortion (Noise) RCV (packed): 27.24 dB (4.34%) Ok

#### Ok

2024/4/11 上午 12:43 ACQUA 6.0.200

#### Limits

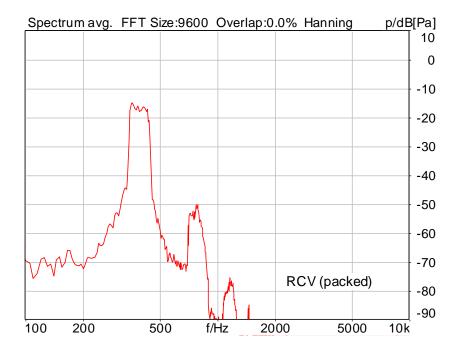
	lower
Run 1	20.00 dB

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# 5.2 RCV Distortion and Noise - 400 Hz WB

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



Distortion (Noise) RCV (packed): 35.33 dB (1.71%) Ok

#### Ok

2024/4/11 上午 12:43 ACQUA 6.0.200

#### Limits

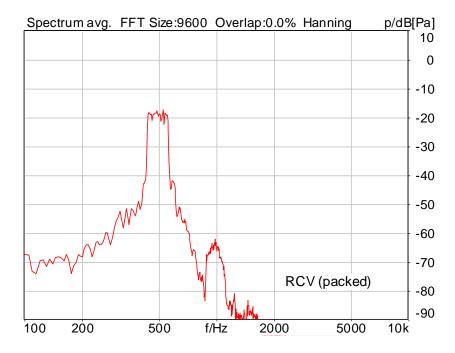
	lower
Run 1	20.00 dB

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# 5.2 RCV Distortion and Noise - 500 Hz WB

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



Distortion (Noise) RCV (packed): 32.80 dB (2.29%) Ok

#### Ok

2024/4/11 上午 12:44 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

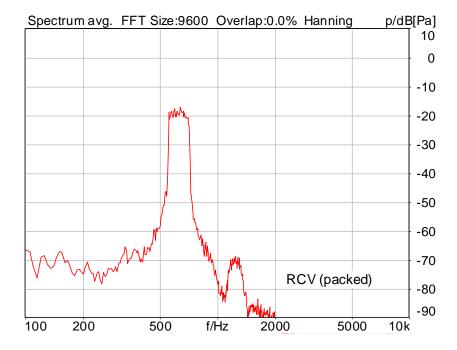
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#### Report No. :HA411111C

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

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



Distortion (Noise) RCV (packed): 39.72 dB (1.03%) Ok

#### Ok

2024/4/11 上午 12:44 ACQUA 6.0.200

#### Limits

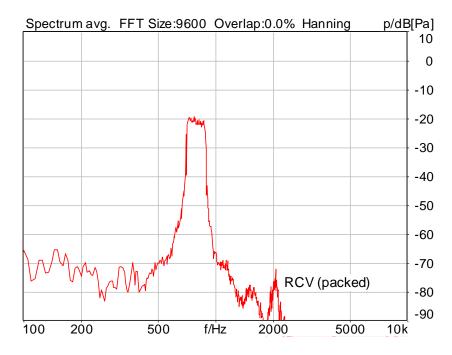
	lower
Run 1	20.00 dB

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# 5.2 RCV Distortion and Noise - 800 Hz WB

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



Distortion (Noise) RCV (packed): 38.29 dB (1.22%) Ok

#### Ok

2024/4/11 上午 12:45 ACQUA 6.0.200

#### Limits

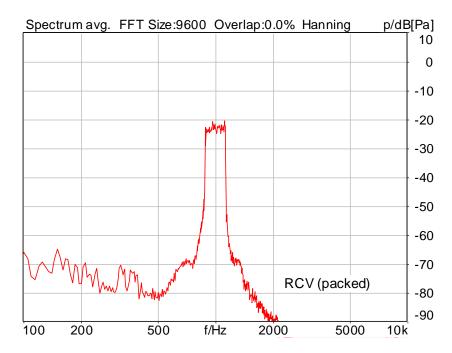
	lower
Run 1	20.00 dB

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# Report No. :HA411111C 5.2 RCV Distortion and Noise - 1000 Hz WB

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



Distortion (Noise) RCV (packed): 40.08 dB (0.99%) Ok

#### Ok

2024/4/11 上午 12:45 ACQUA 6.0.200

#### Limits

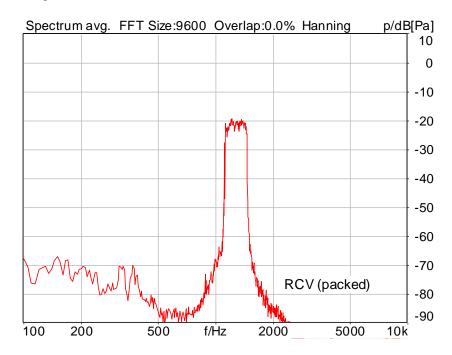
	lower
Run 1	20.00 dB

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# Report No. :HA411111C 5.2 RCV Distortion and Noise - 1250 Hz WB

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



Distortion (Noise) RCV (packed): 34.80 dB (1.82%) Ok

#### Ok

2024/4/11 上午 12:46 ACQUA 6.0.200

#### Limits

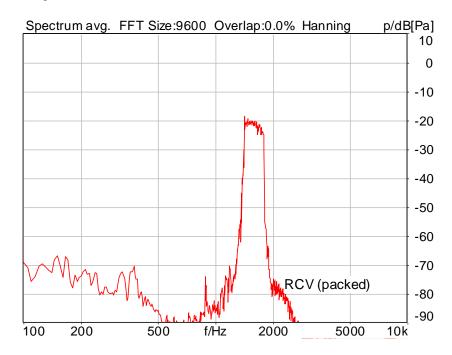
	lower
Run 1	20.00 dB

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# Report No. :HA411111C 5.2 RCV Distortion and Noise - 1600 Hz WB

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



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

#### Ok

2024/4/11 上午 12:46 ACQUA 6.0.200

#### Limits

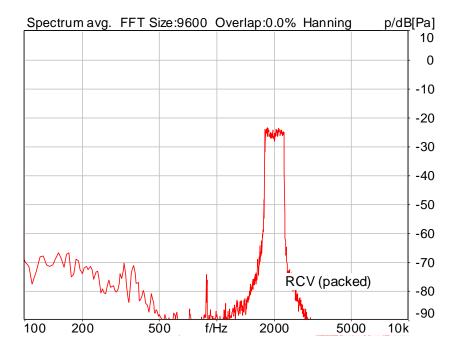
	lower
Run 1	20.00 dB

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

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



Distortion (Noise) RCV (packed): 42.71 dB (0.73%) Ok

#### Ok

2024/4/11 上午 12:47 ACQUA 6.0.200

#### Limits

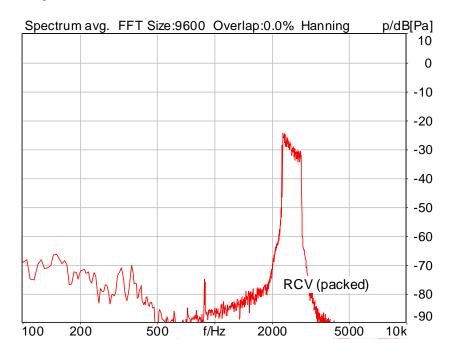
	lower
Run 1	20.00 dB

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

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



Distortion (Noise) RCV (packed): 34.43 dB (1.90%) Ok

#### Ok

2024/4/11 上午 12:47 ACQUA 6.0.200

#### Limits

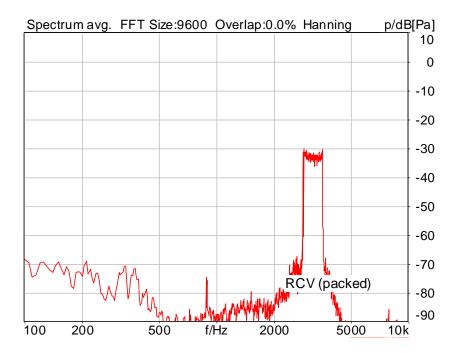
	lower
Run 1	20.00 dB

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# 5.2 RCV Distortion and Noise - 3150 Hz WB

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



Distortion (Noise) RCV (packed): 37.46 dB (1.34%) Ok

#### Ok

2024/4/11 上午 12:48 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

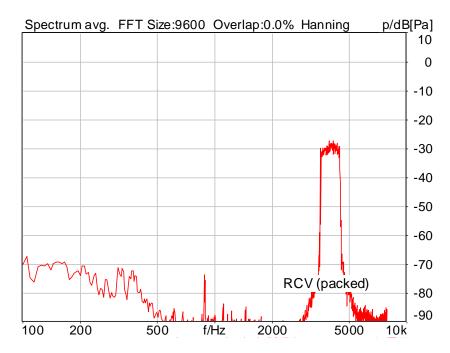
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Report No. :HA411111C

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

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



Distortion (Noise) RCV (packed): 37.62 dB (1.31%) Ok

#### Ok

2024/4/11 上午 12:48 ACQUA 6.0.200

#### Limits

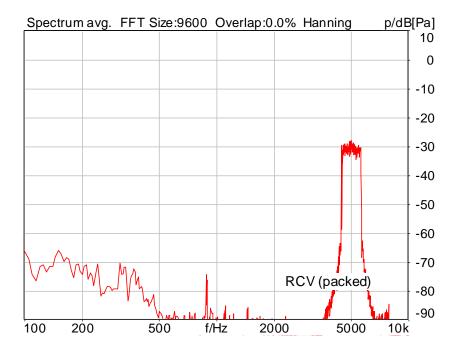
	lower
Run 1	20.00 dB

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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 8N change frequency range



Distortion (Noise) RCV (packed): 39.73 dB (1.03%) Ok

#### Ok

2024/4/11 上午 12:48 ACQUA 6.0.200

#### Limits

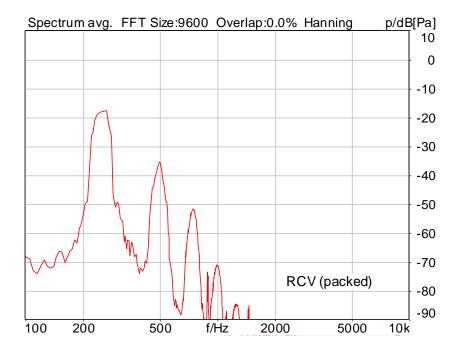
	lower
Run 1	20.00 dB

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# 5.2 RCV Distortion and Noise - 250 Hz WB

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



Distortion (Noise) RCV (packed): 21.39 dB (8.52%) Ok

#### Ok

2024/4/11 上午 12:55 ACQUA 6.0.200

#### Limits

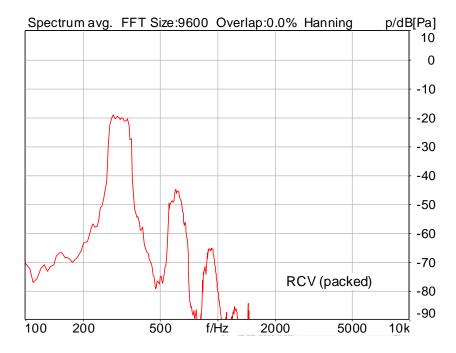
	lower
Run 1	20.00 dB

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# 5.2 RCV Distortion and Noise - 315 Hz WB

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



Distortion (Noise) RCV (packed): 27.47 dB (4.23%) Ok

#### Ok

2024/4/11 上午 12:55 ACQUA 6.0.200

#### Limits

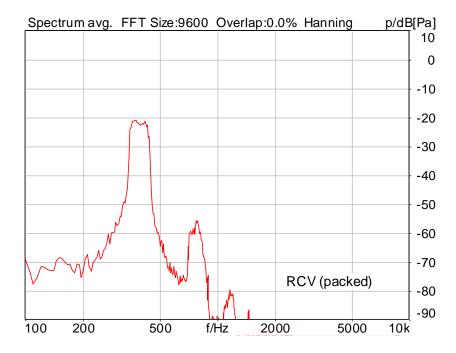
	lower
Run 1	20.00 dB

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

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



Distortion (Noise) RCV (packed): 35.00 dB (1.78%) Ok

#### Ok

2024/4/11 上午 12:56 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

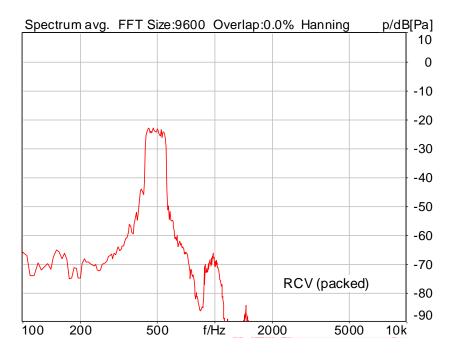
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Report No. :HA411111C

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

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



Distortion (Noise) RCV (packed): 35.08 dB (1.76%) Ok

#### Ok

2024/4/11 上午 12:56 ACQUA 6.0.200

#### Limits

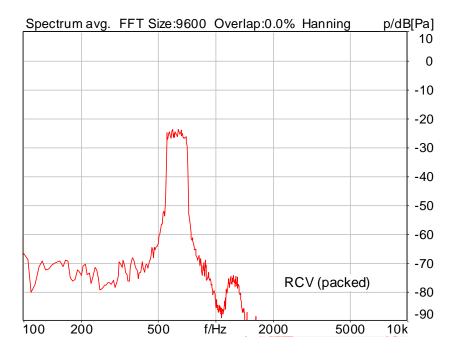
	lower
Run 1	20.00 dB

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5.2 RCV Distortion and Noise - 630 Hz WB

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



Distortion (Noise) RCV (packed): 39.22 dB (1.09%) Ok

#### Ok

2024/4/11 上午 12:57 ACQUA 6.0.200

#### Limits

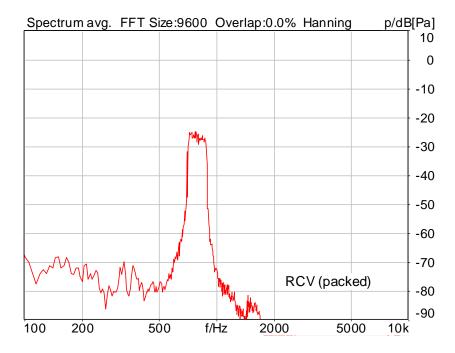
	lower
Run 1	20.00 dB

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# 5.2 RCV Distortion and Noise - 800 Hz WB

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



Distortion (Noise) RCV (packed): 39.57 dB (1.05%) Ok

#### Ok

2024/4/11 上午 12:57 ACQUA 6.0.200

#### Limits

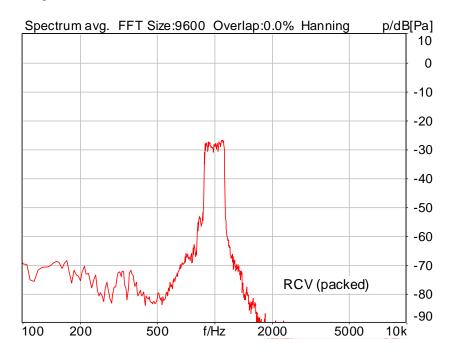
	lower
Run 1	20.00 dB

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# 5.2 RCV Distortion and Noise - 1000 Hz WB

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



Distortion (Noise) RCV (packed): 32.55 dB (2.36%) Ok

#### Ok

2024/4/11 上午 12:58 ACQUA 6.0.200

#### Limits

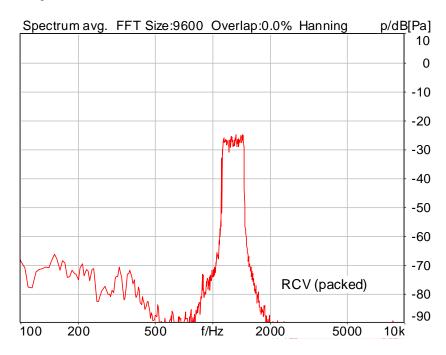
	lower
Run 1	20.00 dB

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

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



Distortion (Noise) RCV (packed): 31.48 dB (2.67%) Ok

#### Ok

2024/4/11 上午 01:03 ACQUA 6.0.200

#### Limits

	lower
Run 1	20.00 dB

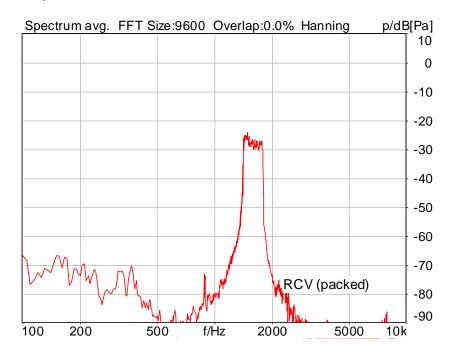
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Report No. :HA411111C

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

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



Distortion (Noise) RCV (packed): 33.75 dB (2.05%) Ok

#### Ok

2024/4/11 上午 12:59 ACQUA 6.0.200

#### Limits

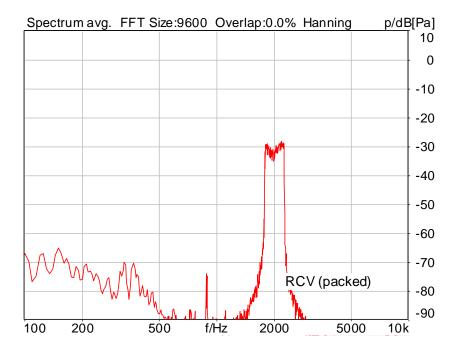
	lower
Run 1	20.00 dB

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# 5.2 RCV Distortion and Noise - 2000 Hz WB

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



Distortion (Noise) RCV (packed): 41.44 dB (0.85%) Ok

#### Ok

2024/4/11 上午 12:59 ACQUA 6.0.200

#### Limits

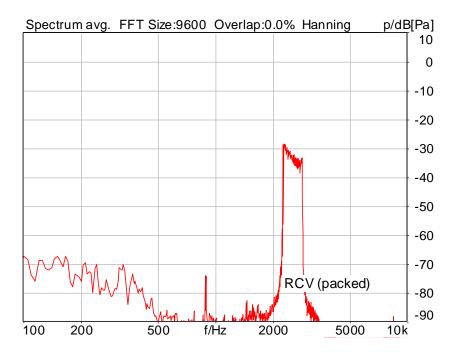
	lower
Run 1	20.00 dB

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# 5.2 RCV Distortion and Noise - 2500 Hz WB

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



Distortion (Noise) RCV (packed): 43.87 dB (0.64%) Ok

#### Ok

2024/4/11 上午 01:00 ACQUA 6.0.200

#### Limits

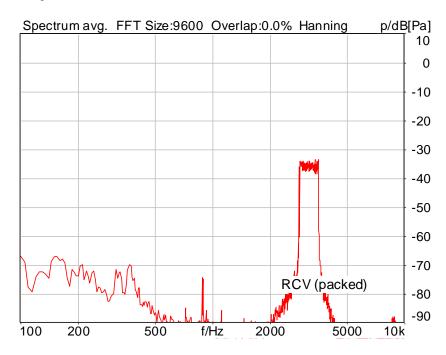
	lower
Run 1	20.00 dB

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

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



Distortion (Noise) RCV (packed): 37.48 dB (1.34%) Ok

#### Ok

2024/4/11 上午 01:00 ACQUA 6.0.200

#### Limits

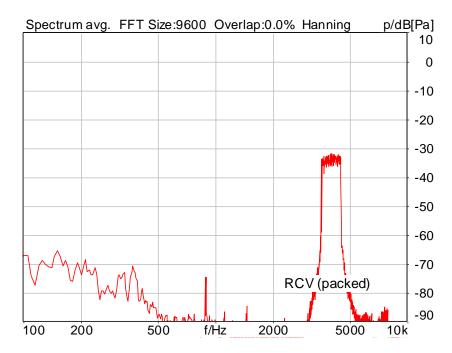
	lower
Run 1	20.00 dB

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# 5.2 RCV Distortion and Noise - 4000 Hz WB

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



Distortion (Noise) RCV (packed): 36.25 dB (1.54%) Ok

#### Ok

2024/4/11 上午 01:00 ACQUA 6.0.200

#### Limits

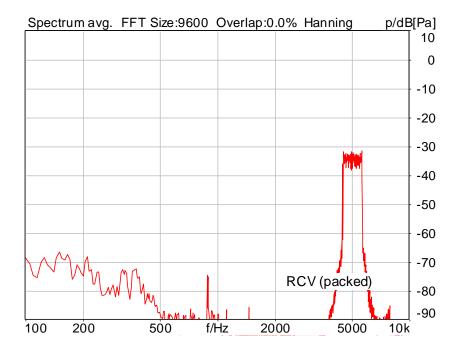
	lower
Run 1	20.00 dB

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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 change frequency range



Distortion (Noise) RCV (packed): 37.57 dB (1.32%) Ok

#### Ok

2024/4/11 上午 01:01 ACQUA 6.0.200

#### Limits

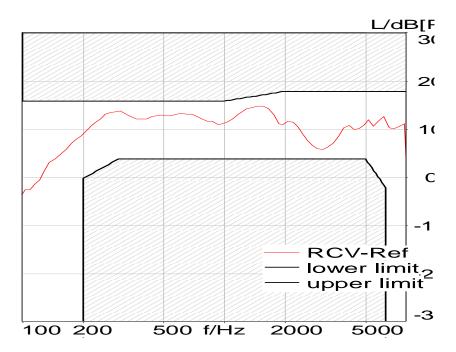
	lower
Run 1	20.00 dB

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# 5.3 Frequency Response 8N FF

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



Absolute minimal distance

2.04 dB at 305.9 Hz Ok

#### Ok

2024/4/11 上午 12:49 ACQUA 6.0.200

#### Limits

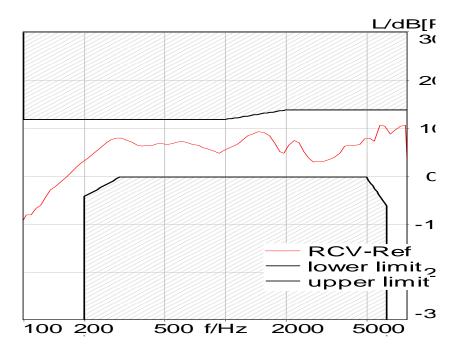
	lower
Run 1	Fit into tolerance

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# 5.3 Frequency Response 2N FF

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



Absolute minimal distance

3.18 dB at 7764.8 Hz Ok

#### Ok

2024/4/11 上午 01:01 ACQUA 6.0.200

#### Limits

	lower
Run 1	Fit into tolerance

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# Appendix A. Volume Control Evaluation Report Appendix A. Volume Control Evaluation Results

<Evaluation results for KDB 285076 D05 2.b>

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# SPORTON LAB. Volume Control Evaluation Report

# #4 WCDMA IV AMR WB 12.2kbps

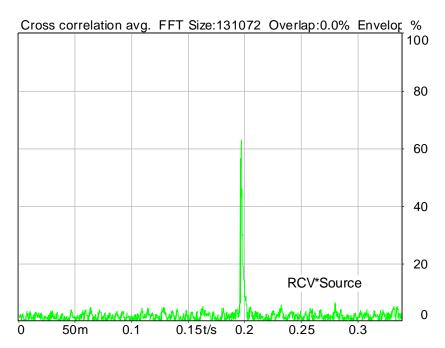
SMD	Status	Single Value Description	Single Value
Overall Receive Delay NB	Done	Delay (Cross) [ms]	196.8
5.1a Receive Volume Control Performance 8N NB	Ok	Speech Level [dB[SPL]]	88.04
5.1b Receive Volume Control Performance 2N NB	Ok	Speech Level [dB[SPL]]	94.54

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# **Overall Receive Delay NB**

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



Channel	Delay
RCV*Source	196.8 ms

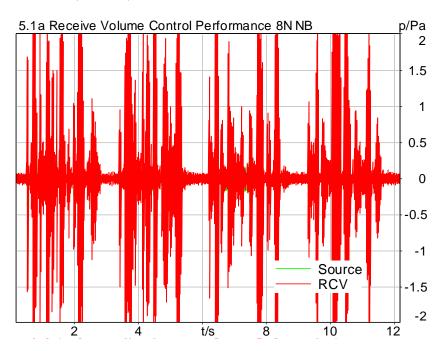
2024/3/29 下午 01:56 ACQUA 6.0.200



### Report No. :HA411111C

# 5.1a Receive Volume Control Performance 8N NB

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



Channel	Speech level	Activity	
RCV	88.04 dB[SPL]	47.38%	Ok

#### Ok

2024/3/29 下午 01:56 ACQUA 6.0.200

#### Limits

	lower
Run 1	88.00 dB20uPa

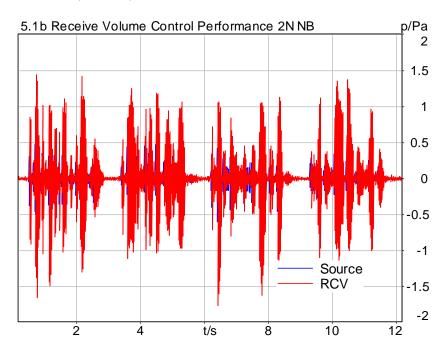
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Report No. :HA411111C

# 5.1b Receive Volume Control Performance 2N NB

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



Channel	Speech level	Activity	
RCV	94.54 dB[SPL]	2.51%	Ok

#### Ok

2024/4/7 下午 12:16 ACQUA 6.0.200

#### Limits

	lower
Run 1	76.00 dB20uPa

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# #5 LTE Band 66 EVS NB 24.4kbps

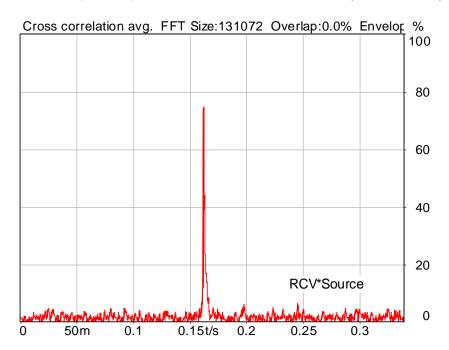
SMD	Status	Single Value Description	Single Value
Overall Receive Delay NB	Done	Delay (Cross) [ms]	162.2
5.1a Receive Volume Control Performance 8N NB	Ok	Speech Level [dB[SPL]]	88.00
5.1b Receive Volume Control Performance 2N NB	Ok	Speech Level [dB[SPL]]	94.10

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## **Overall Receive Delay NB**

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



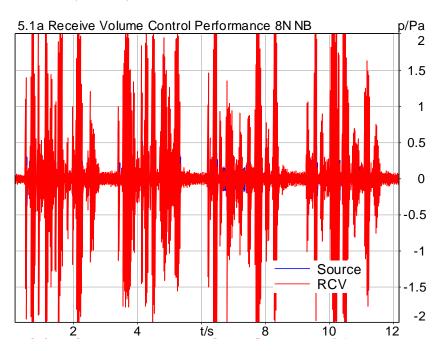
Channel	Delay
RCV*Source	162.2 ms

2024/3/29 下午 11:36 ACQUA 6.0.200



## 5.1a Receive Volume Control Performance 8N NB

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



Channel	Speech level	Activity	
RCV	88.00 dB[SPL]	42.67%	Ok

### Ok

2024/3/29 下午 11:43 ACQUA 6.0.200

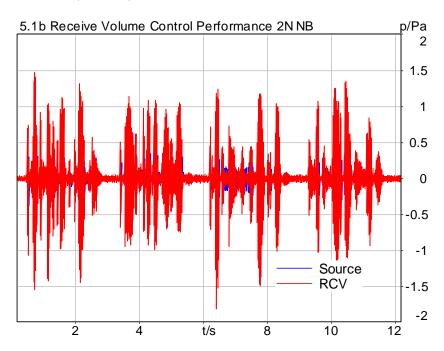
#### Limits

	lower
Run 1	88.00 dB20uPa



# 5.1b Receive Volume Control Performance 2N NB

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



Channel	Speech level	Activity	
RCV	94.10 dB[SPL]	2.58%	Ok

### Ok

2024/3/29 下午 11:45 ACQUA 6.0.200

#### Limits

	lower
Run 1	76.00 dB20uPa

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# #6 FR1 n26 EVS NB 24.4kbps

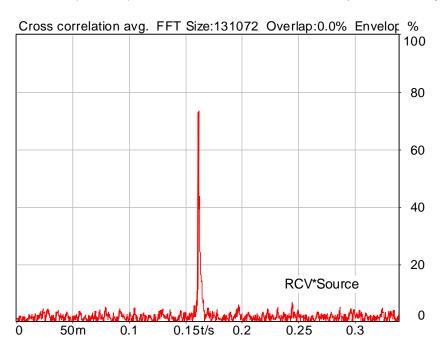
SMD	Status	Single Value Description	Single Value
Overall Receive Delay NB	Done	Delay (Cross) [ms]	161.4
5.1a Receive Volume Control Performance 8N NB	Ok	Speech Level [dB[SPL]]	88.03
5.1b Receive Volume Control Performance 2N NB	Ok	Speech Level [dB[SPL]]	94.40

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## **Overall Receive Delay NB**

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



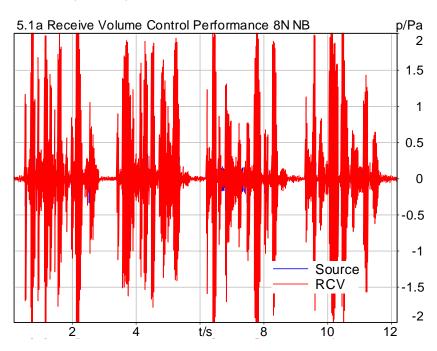
Channel	Delay
RCV*Source	161.4 ms

2024/4/6 下午 10:28 ACQUA 6.0.200



## 5.1a Receive Volume Control Performance 8N NB

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



Channel	Speech level	Activity	
RCV	88.03 dB[SPL]	34.88%	Ok

### Ok

2024/4/6 下午 10:30 ACQUA 6.0.200

#### Limits

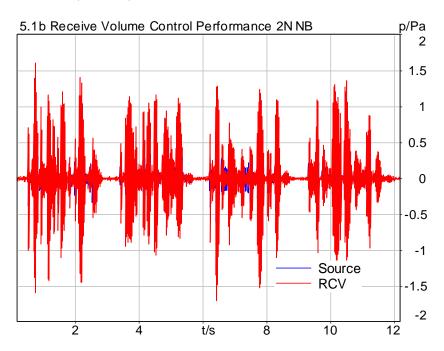
	lower
Run 1	88.00 dB20uPa

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# 5.1b Receive Volume Control Performance 2N NB

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



Channel	Speech level	Activity	
RCV	94.40 dB[SPL]	2.49%	Ok

### Ok

2024/4/6 下午 10:33 ACQUA 6.0.200

#### Limits

	lower
Run 1	76.00 dB20uPa

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# #7 WiFi 5GHz EVS NB 24.4kbps

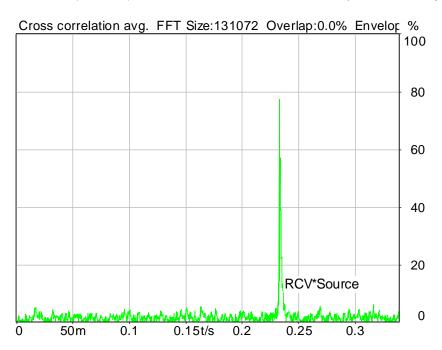
SMD	Status	Single Value Description	Single Value
Overall Receive Delay NB	Done	Delay (Cross) [ms]	233.4
5.1a Receive Volume Control Performance 8N NB	Ok	Speech Level [dB[SPL]]	88.02
5.1b Receive Volume Control Performance 2N NB	Ok	Speech Level [dB[SPL]]	95.37

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## **Overall Receive Delay NB**

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



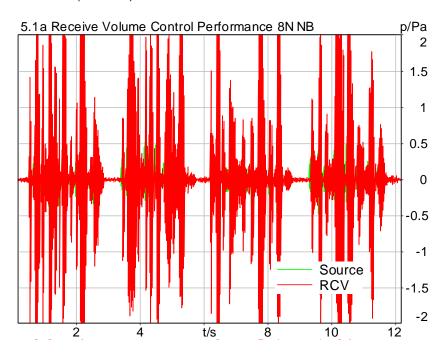
Channel	Delay
RCV*Source	233.4 ms

2024/4/5 上午 05:18 ACQUA 6.0.200



## 5.1a Receive Volume Control Performance 8N NB

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



Channel	Speech level	Activity	
RCV	88.02 dB[SPL]	47.18%	Ok

### Ok

2024/4/5 上午 05:19 ACQUA 6.0.200

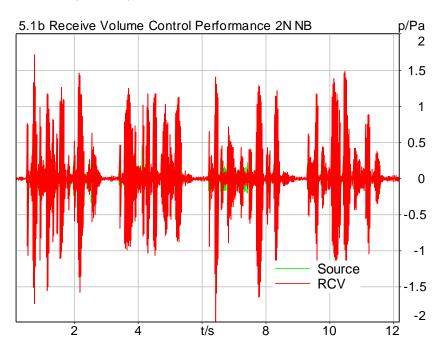
#### Limits

	lower
Run 1	88.00 dB20uPa



# 5.1b Receive Volume Control Performance 2N NB

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



Channel	Speech level	Activity	
RCV	95.37 dB[SPL]	2.37%	Ok

### Ok

2024/4/5 上午 05:27 ACQUA 6.0.200

#### Limits

	lower
Run 1	76.00 dB20uPa

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