TIA-5050 Receive Volume Control Measurements - 8N
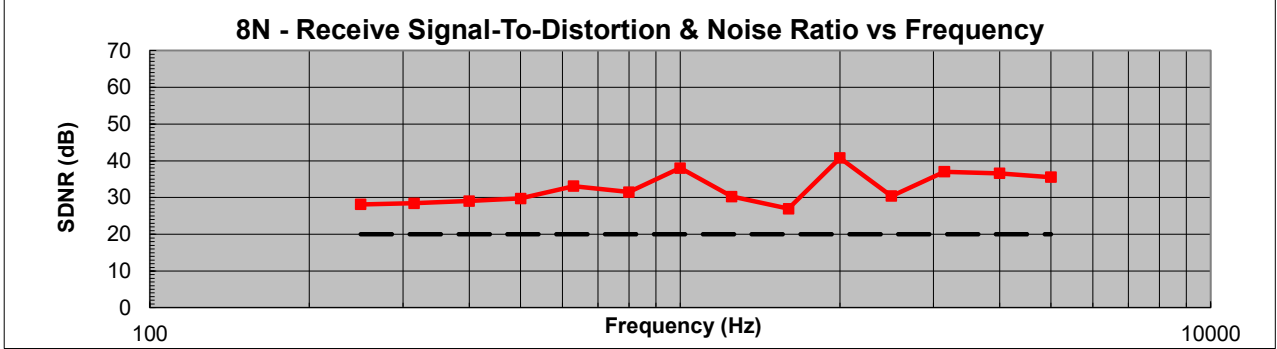
Device Under Test:	20240930_N25_WB_40MHz_DFTS_QPSK_RB1-1_ch376500

Bandwidth	Wideband

Test Date:	2024-10-01

Receive Volume Control Performance

TIA-5050	Test	Measured	Limits	Result	Reference
Clause 5.1	Recv output level dBSPL 8N	86.92 dB	info only		
	Recv conversational gain 8N	16.92 dB	6.00	PASS	

Receive Distortion and Noise Performance

TIA-5050	Test	Margin	Limits	Result	Reference
Clause 5.2	Recv PN-SDNR 8N	7 dB	Absolute Limits	PASS	

Note: SDNR includes noise and distortion products.
Stimulus level   -20 dBPa
Sentence conditioning   -20 dBPa
Short conditioning   -20 dBPa

8N - Receive Signal-To-Distortion & Noise Ratio vs Frequency

Receive Acoustic Frequency Response Performance

TIA-5050	Test	Margin	Limits	Result	Reference
Clause 5.3	Recv resp FF 8N	3.54 dB	Floating Limits	PASS	
	Recv resp DF 8N	3.3 dB	Floating Limits	PASS	

Receive Response FF 8N

Receive Response DF 8N
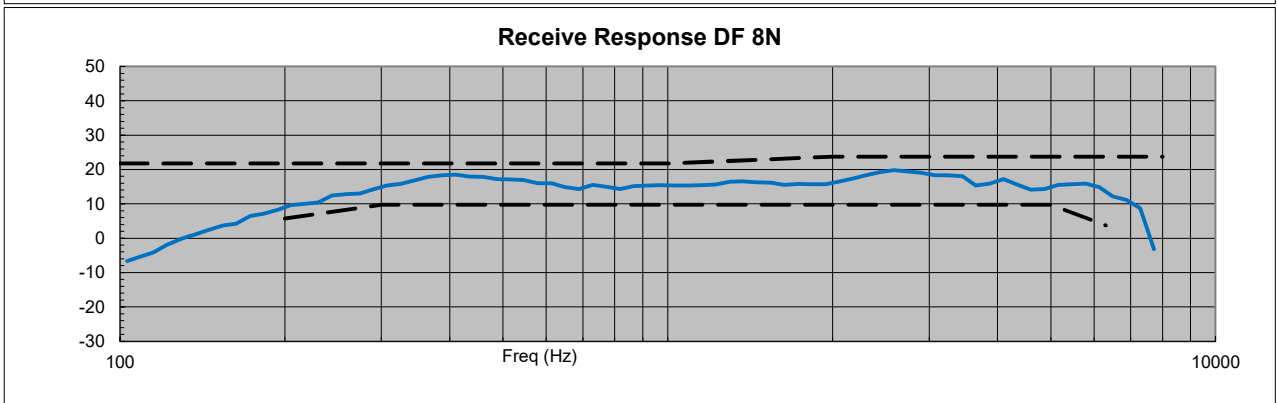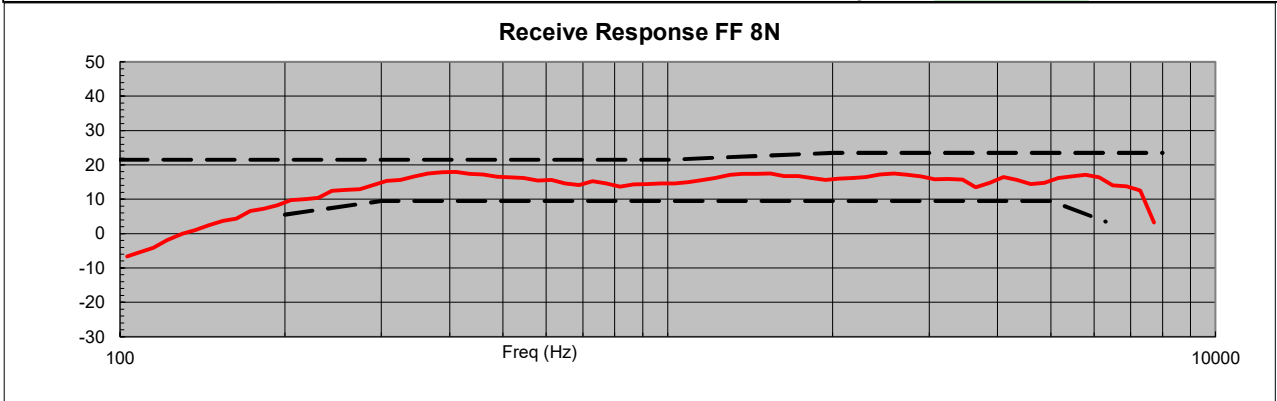
TIA-5050 Receive Volume Control Measurements - 8N

Device Under Test:	20240930_N30_WB_10MHz_DFTS_QPSK_RB1-1_ch462000

Bandwidth	Wideband

Test Date:	2024-10-01

Receive Volume Control Performance

TIA-5050	Test	Measured	Limits	Result	Reference
Clause 5.1	Recv output level dBSPL 8N	86.92 dB	info only		
	Recv conversational gain 8N	16.92 dB	6.00	PASS	

Receive Distortion and Noise Performance

TIA-5050	Test	Margin	Limits	Result	Reference
Clause 5.2	Recv PN-SDNR 8N	8.2 dB	Absolute Limits	PASS	
Note: SDNR includes noise and distortion products.					
Stimulus level				-20 dBPa	
Sentence conditioning				-20 dBPa	
Short conditioning				-20 dBPa	

8N - Receive Signal-To-Distortion & Noise Ratio vs Frequency

Receive Acoustic Frequency Response Performance

TIA-5050	Test	Margin	Limits	Result	Reference
Clause 5.3	Recv resp FF 8N	3.6 dB	Floating Limits	PASS	
	Recv resp DF 8N	3.3 dB	Floating Limits	PASS	

Receive Response FF 8N

Receive Response DF 8N

UL Solutions
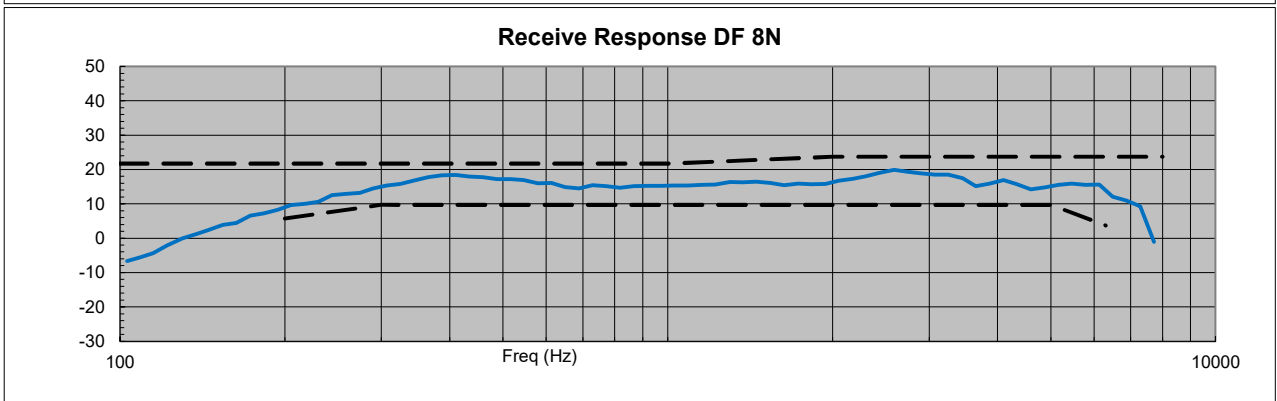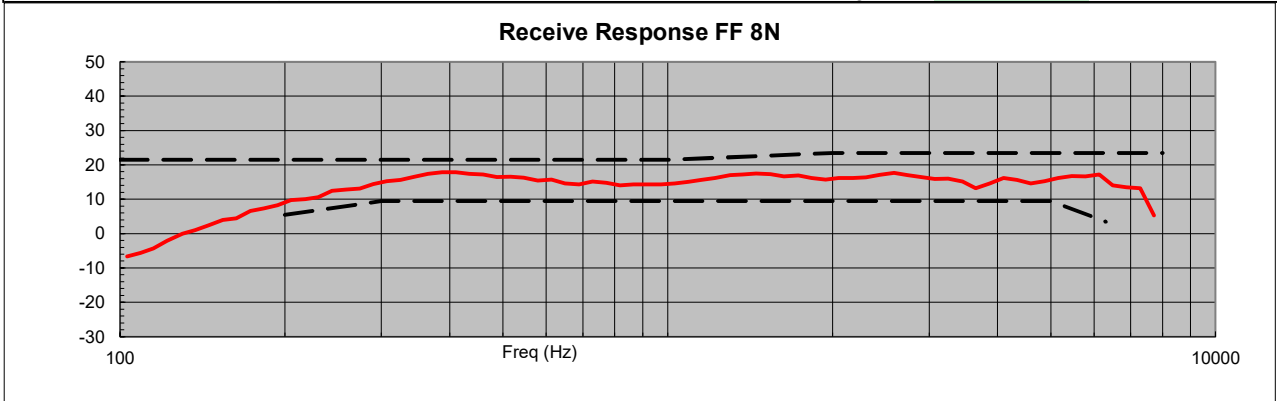
TIA-5050 Receive Volume Control Measurements - 8N

Device Under Test:	20240930_N66_40MHz

Bandwidth	Wideband

Test Date:	2024-09-30

Receive Volume Control Performance

TIA-5050	Test	Measured	Limits	Result	Reference
Clause 5.1	Recv output level dBSPL 8N	86.88 dB	info only		
	Recv conversational gain 8N	16.88 dB	6.00	PASS	

Receive Distortion and Noise Performance

TIA-5050	Test	Margin	Limits	Result	Reference
Clause 5.2	Recv PN-SDNR 8N	6.2 dB	Absolute Limits	PASS	

Note: SDNR includes noise and distortion products.	
Stimulus level	-20 dBPa
Sentence conditioning	-20 dBPa
Short conditioning	-20 dBPa

8N - Receive Signal-To-Distortion & Noise Ratio vs Frequency
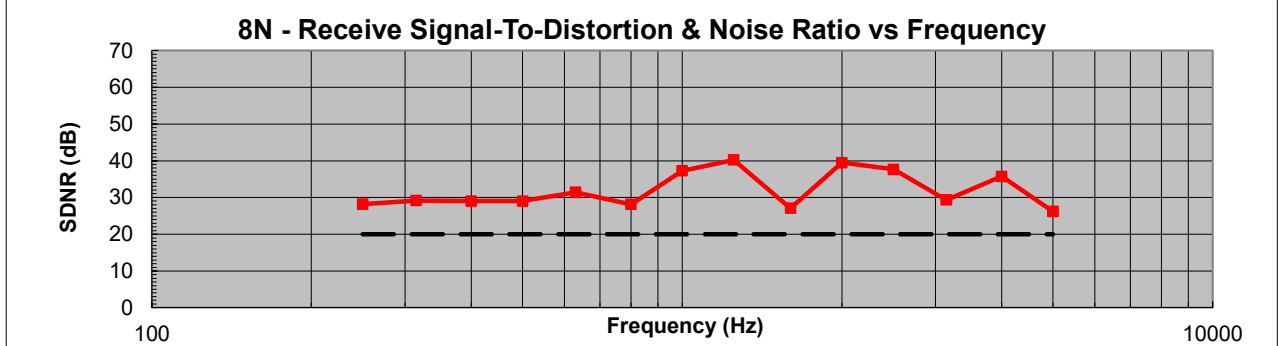
Receive Acoustic Frequency Response Performance

TIA-5050	Test	Margin	Limits	Result	Reference
Clause 5.3	Recv resp FF 8N	3.48 dB	Floating Limits	PASS	
	Recv resp DF 8N	2.9 dB	Floating Limits	PASS	

Receive Response FF 8N

Receive Response DF 8N
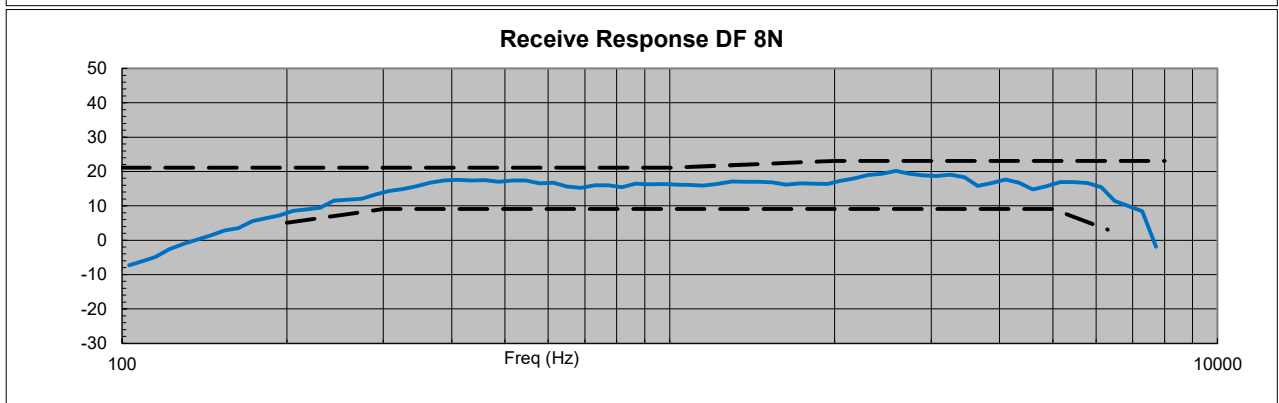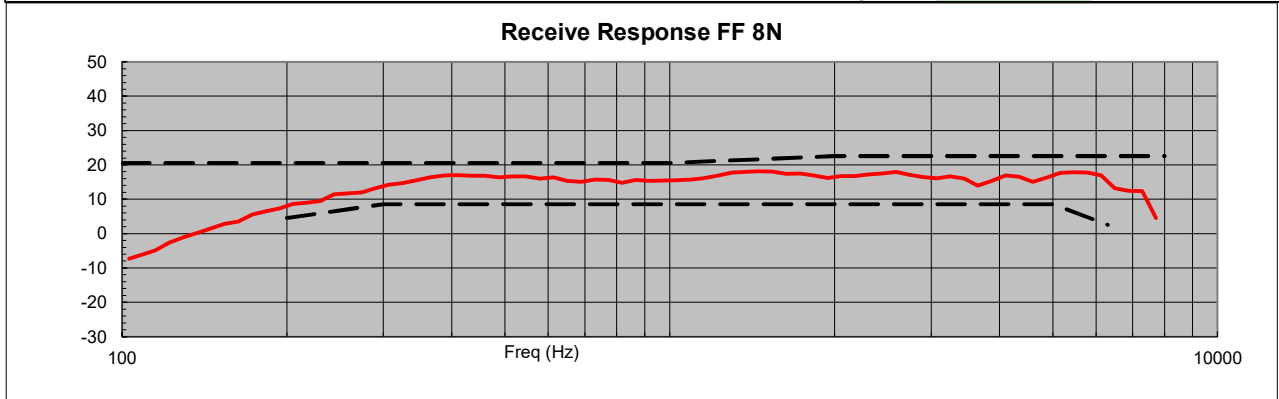
TIA-5050 Receive Volume Control Measurements - 8N

Device Under Test:	20240930_N70_WB_15MHz_DFTS_QPSK_RB1-1_ch340500

Bandwidth	Wideband

Test Date:	2024-10-01

Receive Volume Control Performance

TIA-5050	Test	Measured	Limits	Result	Reference
Clause 5.1	Recv output level dBSPL 8N	86.93 dB	info only		
	Recv conversational gain 8N	16.93 dB	6.00	PASS	

Receive Distortion and Noise Performance

TIA-5050	Test	Margin	Limits	Result	Reference
Clause 5.2	Recv PN-SDNR 8N	8.4 dB	Absolute Limits	PASS	
Note: SDNR includes noise and distortion products.					
Stimulus level				-20 dBPa	
Sentence conditioning				-20 dBPa	
Short conditioning				-20 dBPa	

8N - Receive Signal-To-Distortion & Noise Ratio vs Frequency

Receive Acoustic Frequency Response Performance
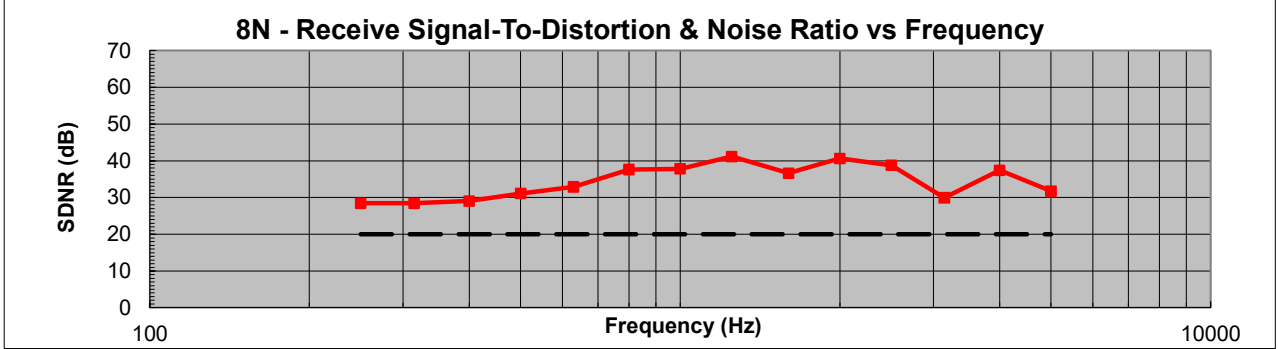
TIA-5050	Test	Margin	Limits	Result	Reference
Clause 5.3	Recv resp FF 8N	3.51 dB	Floating Limits	PASS	
	Recv resp DF 8N	3.2 dB	Floating Limits	PASS	

Receive Response FF 8N

Receive Response DF 8N

TIA-5050 Receive Volume Control Measurements - 8N

Device Under Test:	20240930_N71_WB_20MHz_DFTS_QPSK_RB1-1_ch136100

Bandwidth	Wideband

Test Date:	2024-10-01

Receive Volume Control Performance

TIA-5050	Test	Measured	Limits	Result	Reference
Clause 5.1	Recv output level dBSPL 8N	86.91 dB	info only		
	Recv conversational gain 8N	16.91 dB	6.00	PASS	

Receive Distortion and Noise Performance

TIA-5050	Test	Margin	Limits	Result	Reference
Clause 5.2	Recv PN-SDNR 8N	8.5 dB	Absolute Limits	PASS	
Note: SDNR includes noise and distortion products.					
Stimulus level				-20 dBPa	
Sentence conditioning				-20 dBPa	
Short conditioning				-20 dBPa	

8N - Receive Signal-To-Distortion & Noise Ratio vs Frequency

Receive Acoustic Frequency Response Performance
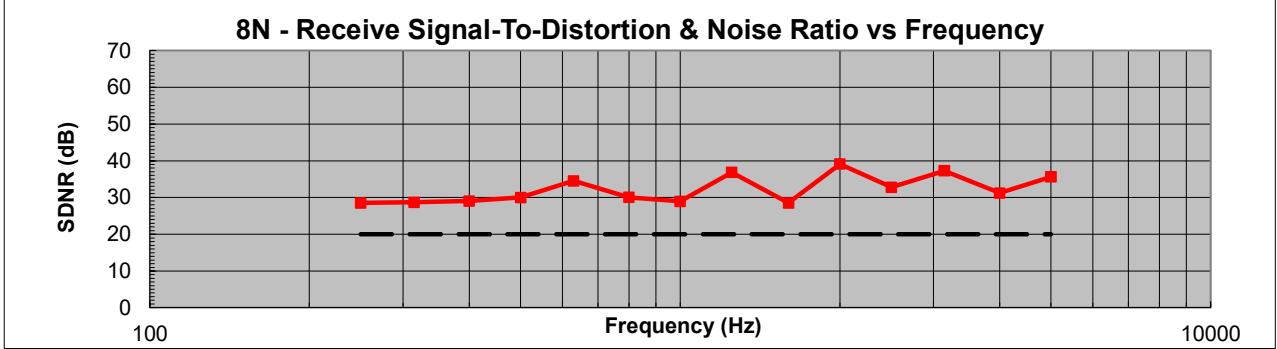
TIA-5050	Test	Margin	Limits	Result	Reference
Clause 5.3	Recv resp FF 8N	3.52 dB	Floating Limits	PASS	
	Recv resp DF 8N	3.3 dB	Floating Limits	PASS	

Receive Response FF 8N

Receive Response DF 8N
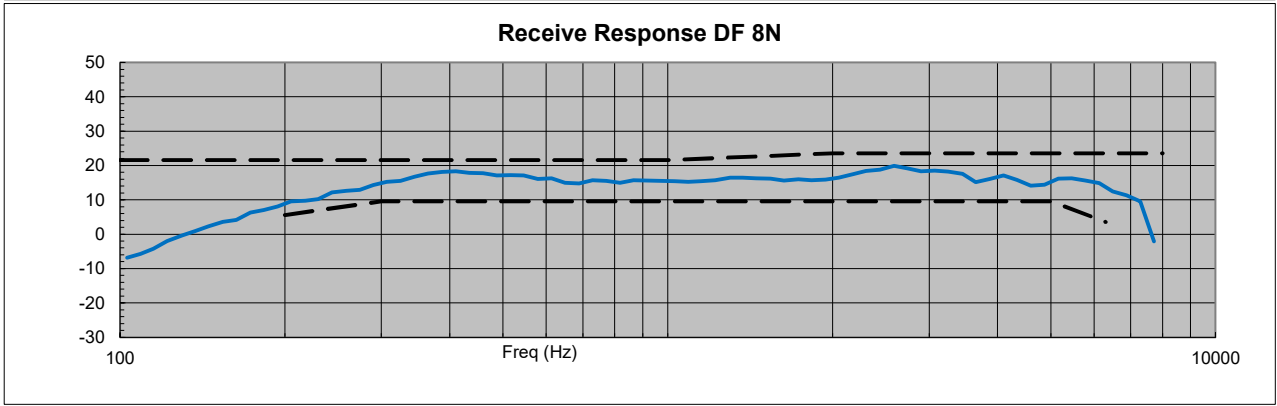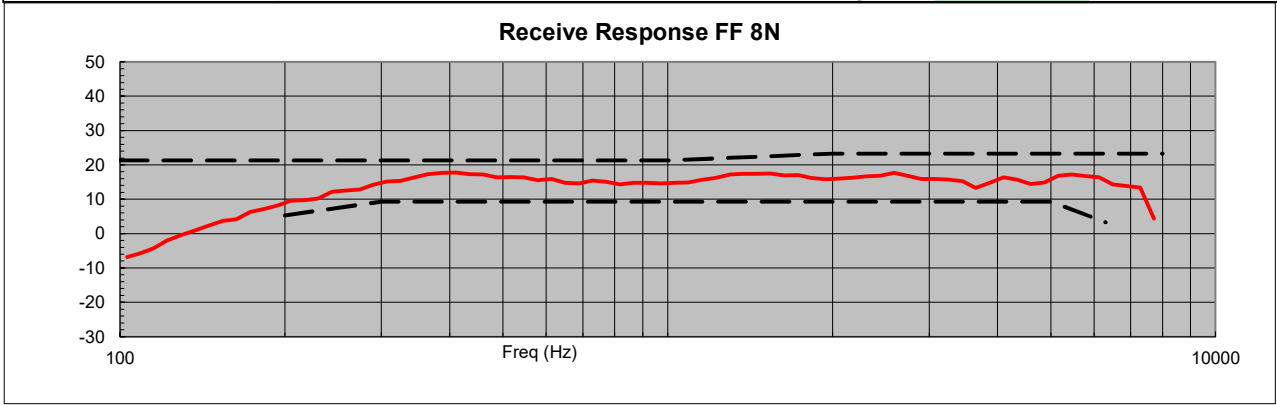
TIA-5050 Receive Volume Control Measurements - 8N

Device Under Test:	20240927_N41_WB_100MHz_DFTS_QPSK_RB1_1_ch518598

Bandwidth	Wideband

Test Date:	2024-09-27

Receive Volume Control Performance

TIA-5050	Test	Measured	Limits	Result	Reference
Clause 5.1	Recv output level dBSPL 8N	86.88 dB	info only		
	Recv conversational gain 8N	16.88 dB	6.00	PASS	

Receive Distortion and Noise Performance

TIA-5050	Test	Margin	Limits	Result	Reference
Clause 5.2	Recv PN-SDNR 8N	8.2 dB	Absolute Limits	PASS	

Note: SDNR includes noise and distortion products.	
Stimulus level	-20 dBPa
Sentence conditioning	-20 dBPa
Short conditioning	-20 dBPa

8N - Receive Signal-To-Distortion & Noise Ratio vs Frequency

Receive Acoustic Frequency Response Performance

TIA-5050	Test	Margin	Limits	Result	Reference
Clause 5.3	Recv resp FF 8N	3.51 dB	Floating Limits	PASS	
	Recv resp DF 8N	3.2 dB	Floating Limits	PASS	

Receive Response FF 8N

Receive Response DF 8N

TIA-5050 Receive Volume Control Measurements - 8N

Device Under Test:	20240927_N48_WB_40MHz_DFTS_QPSK_RB1_1_ch641666

Bandwidth	Wideband

Test Date:	2024-09-27

Receive Volume Control Performance

TIA-5050	Test	Measured	Limits	Result	Reference
Clause 5.1	Recv output level dBSPL 8N	86.89 dB	info only		
	Recv conversational gain 8N	16.89 dB	6.00	PASS	

Receive Distortion and Noise Performance

TIA-5050	Test	Margin	Limits	Result	Reference
Clause 5.2	Recv PN-SDNR 8N	6.7 dB	Absolute Limits	PASS	
Note: SDNR includes noise and distortion products.					
Stimulus level				-20 dBPa	
Sentence conditioning				-20 dBPa	
Short conditioning				-20 dBPa	

8N - Receive Signal-To-Distortion & Noise Ratio vs Frequency
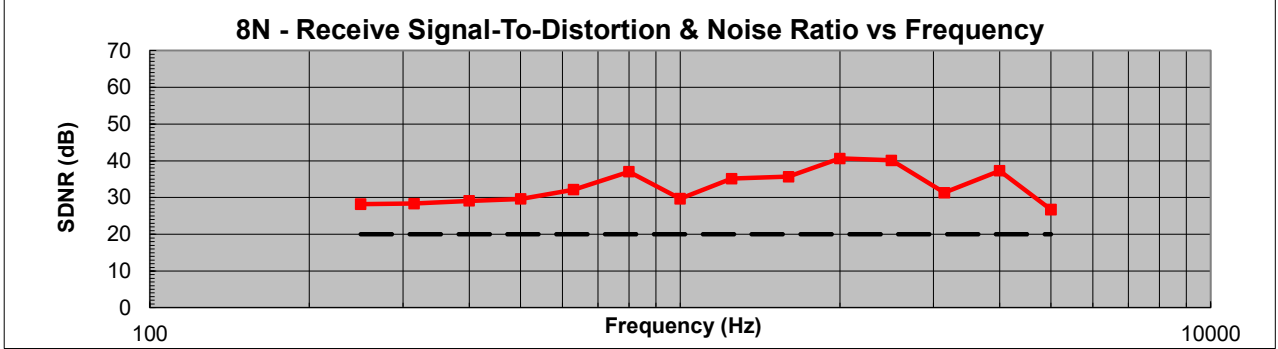
Receive Acoustic Frequency Response Performance

TIA-5050	Test	Margin	Limits	Result	Reference
Clause 5.3	Recv resp FF 8N	3.58 dB	Floating Limits	PASS	
	Recv resp DF 8N	3.1 dB	Floating Limits	PASS	

Receive Response FF 8N

Receive Response DF 8N
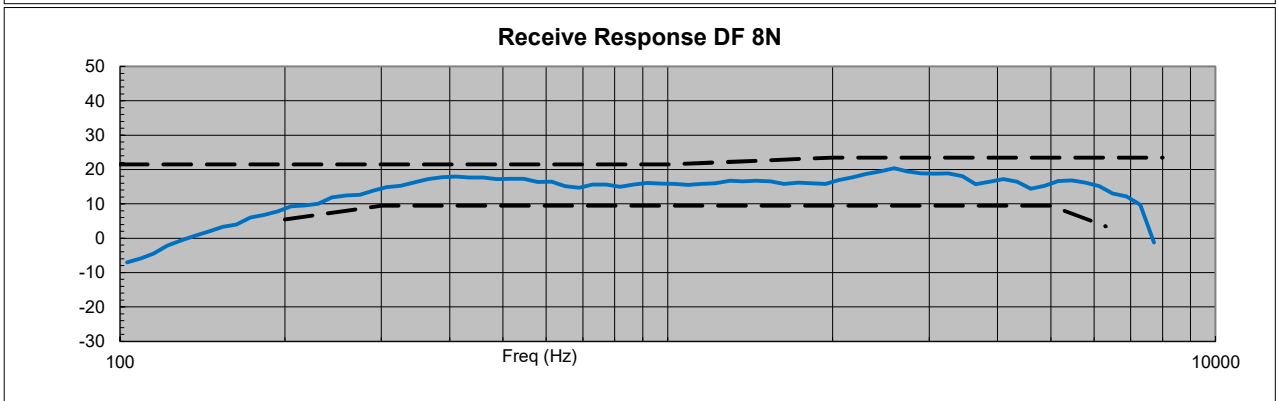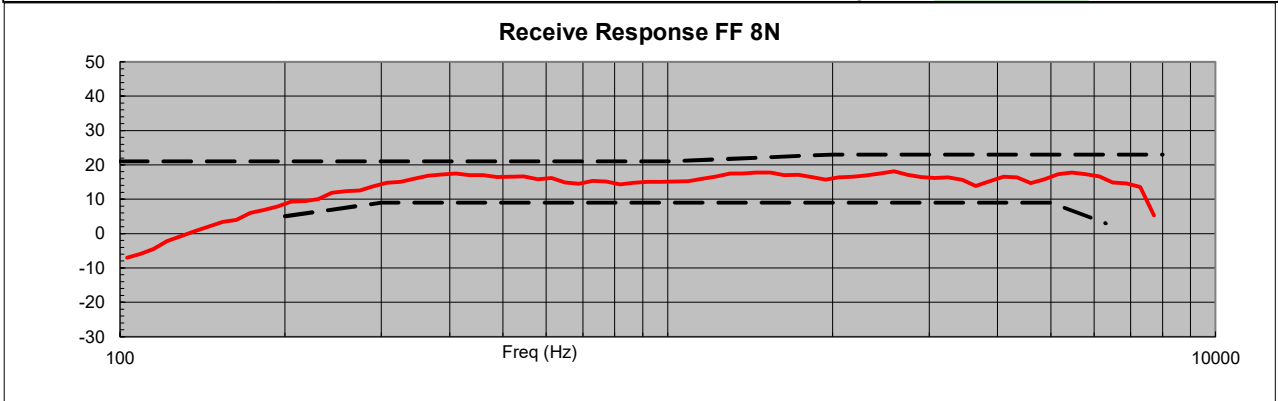
TIA-5050 Receive Volume Control Measurements - 8N

Device Under Test:	20240927_N77_WB_100MHz_DFTS_QPSK_RB1_1_ch650000

Bandwidth	Wideband

Test Date:	2024-09-27

Receive Volume Control Performance

TIA-5050	Test	Measured	Limits	Result	Reference
Clause 5.1	Recv output level dBSPL 8N	86.85 dB	info only		
	Recv conversational gain 8N	16.85 dB	6.00	PASS	

Receive Distortion and Noise Performance

TIA-5050	Test	Margin	Limits	Result	Reference
Clause 5.2	Recv PN-SDNR 8N	8.1 dB	Absolute Limits	PASS	
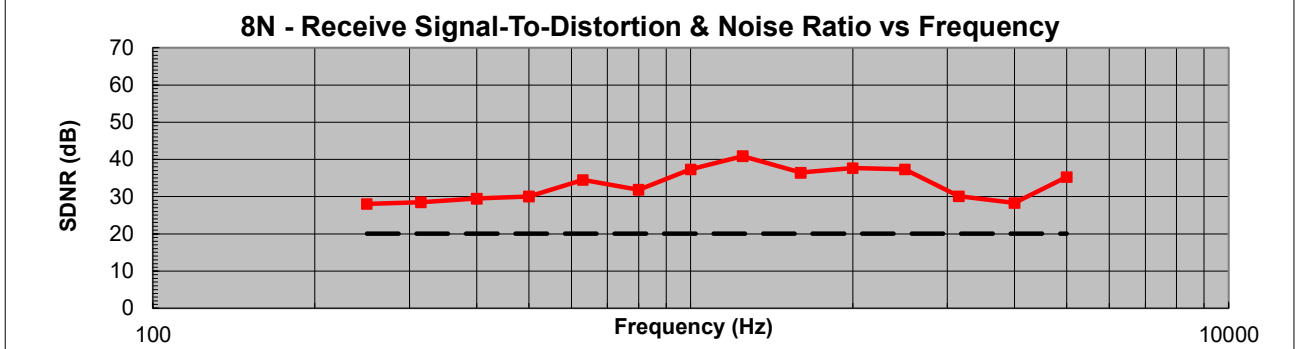
Note: SDNR includes noise and distortion products.

8N - Receive Signal-To-Distortion & Noise Ratio vs Frequency

Receive Acoustic Frequency Response Performance

TIA-5050	Test	Margin	Limits	Result	Reference
Clause 5.3	Recv resp FF 8N	3.47 dB	Floating Limits	PASS	
	Recv resp DF 8N	3.1 dB	Floating Limits	PASS	

Receive Response FF 8N

Receive Response DF 8N

![UL Solutions logo]
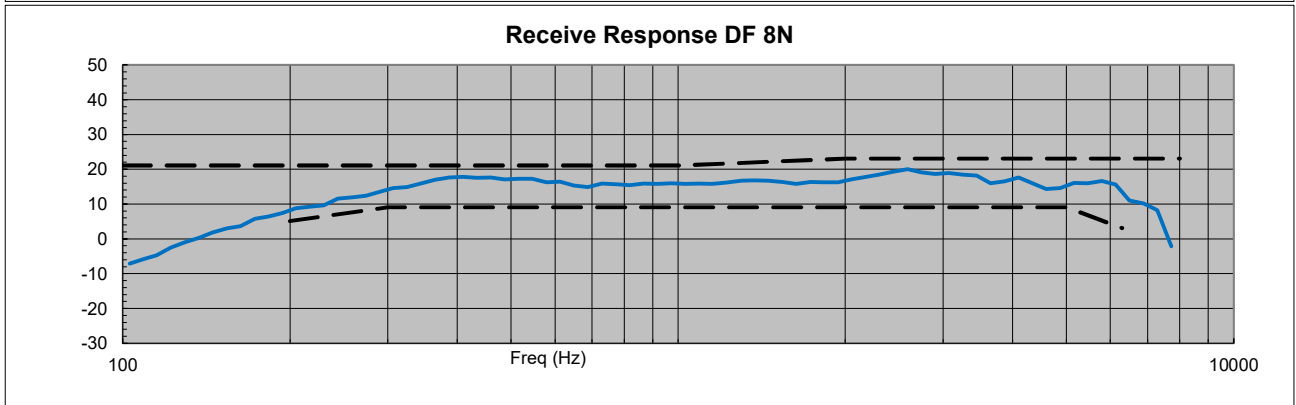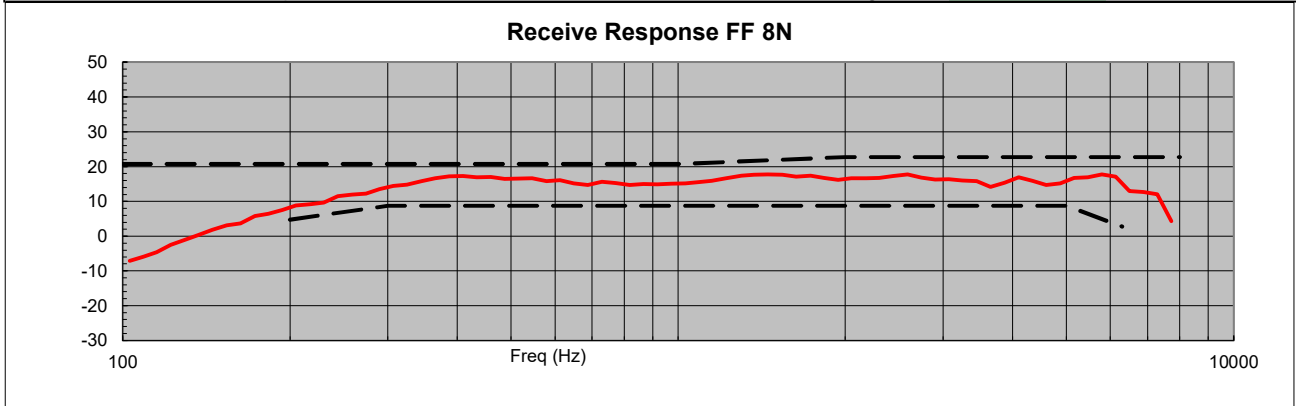
TIA-5050 Receive Volume Control Measurements - 8N

Device Under Test:	20240927_N78_WB_100MHz_DFTS_QPSK_RB1_1_ch650000

Bandwidth	Wideband

Test Date:	2024-09-27

Receive Volume Control Performance

TIA-5050	Test	Measured	Limits	Result	Reference
Clause 5.1	Recv output level dBSPL 8N	86.94 dB	info only		
	Recv conversational gain 8N	16.94 dB	6.00	PASS	

Receive Distortion and Noise Performance

TIA-5050	Test	Margin	Limits	Result	Reference
Clause 5.2	Recv PN-SDNR 8N	8.3 dB	Absolute Limits	PASS	
Note: SDNR includes noise and distortion products.					
Stimulus level				-20 dBPa	
Sentence conditioning				-20 dBPa	
Short conditioning				-20 dBPa	

8N - Receive Signal-To-Distortion & Noise Ratio vs Frequency

Receive Acoustic Frequency Response Performance
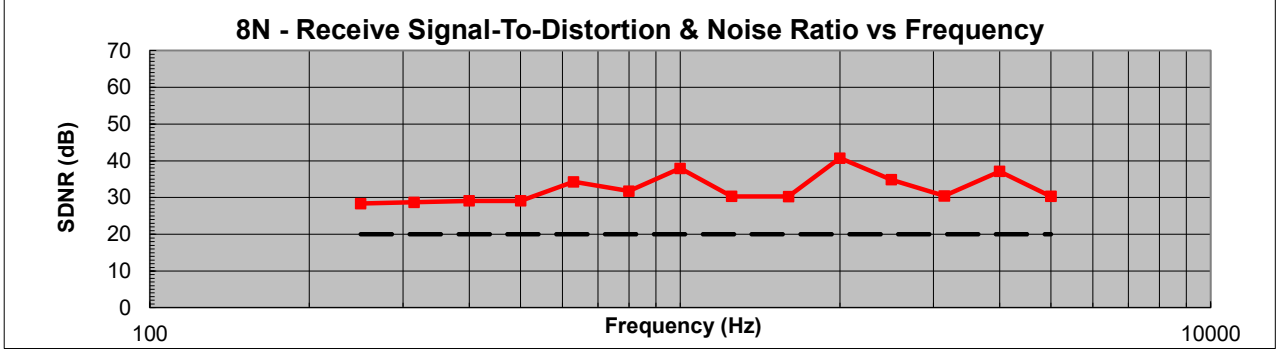
TIA-5050	Test	Margin	Limits	Result	Reference
Clause 5.3	Recv resp FF 8N	3.52 dB	Floating Limits	PASS	
	Recv resp DF 8N	3.2 dB	Floating Limits	PASS	

Receive Response FF 8N

Receive Response DF 8N

TIA-5050 Receive Volume Control Measurements - 8N

Device Under Test:	20240927_WB_11b_ch6_1Mbps

Bandwidth	Wideband

Test Date:	2024-09-27

Receive Volume Control Performance

TIA-5050	Test	Measured	Limits	Result	Reference
Clause 5.1	Recv output level dBSPL 8N	86.7 dB	info only		
	Recv conversational gain 8N	16.7 dB	6.00	PASS	

Receive Distortion and Noise Performance

TIA-5050	Test	Margin	Limits	Result	Reference
Clause 5.2	Recv PN-SDNR 8N	8 dB	Absolute Limits	PASS	
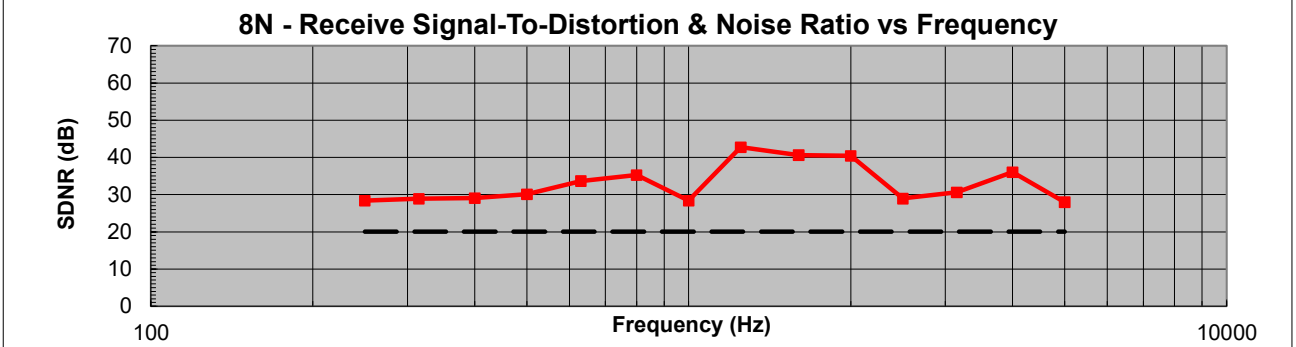
Note: SDNR includes noise and distortion products.

8N - Receive Signal-To-Distortion & Noise Ratio vs Frequency

Receive Acoustic Frequency Response Performance

TIA-5050	Test	Margin	Limits	Result	Reference
Clause 5.3	Recv resp FF 8N	2.95 dB	Floating Limits	PASS	
	Recv resp DF 8N	2.4 dB	Floating Limits	PASS	

Receive Response FF 8N

Receive Response DF 8N
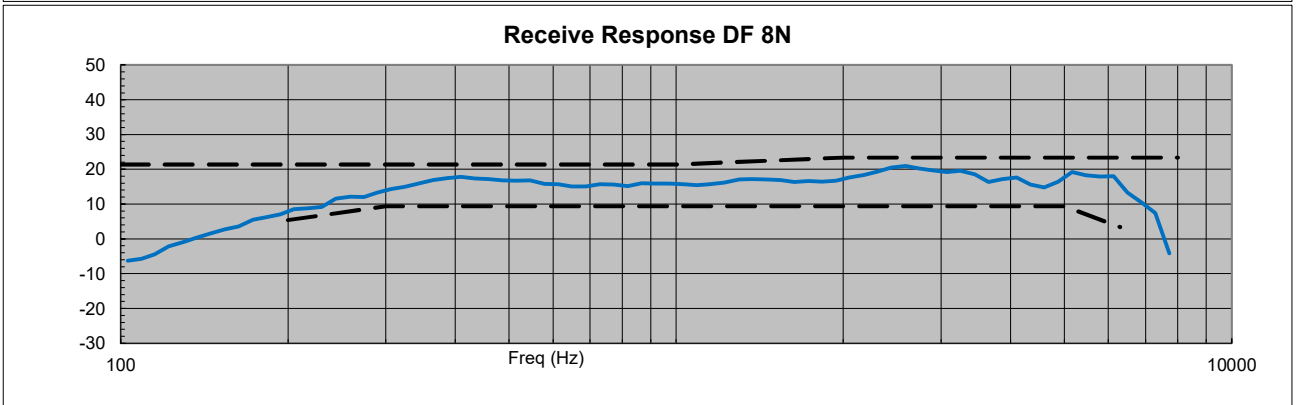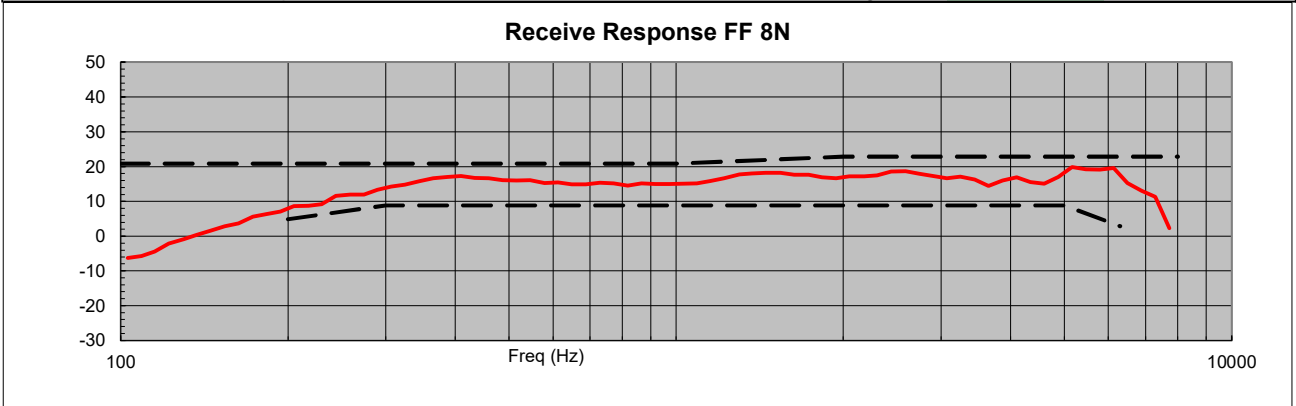
TIA-5050 Receive Volume Control Measurements - 8N

Device Under Test:	20240926_WB_11ac_VHT20_ch40_MCS0

Bandwidth	Wideband

Test Date:	2024-09-26

Receive Volume Control Performance

TIA-5050	Test	Measured	Limits	Result	Reference
Clause 5.1	Recv output level dBSPL 8N	86.78 dB	info only		
	Recv conversational gain 8N	16.78 dB	6.00	PASS	

Receive Distortion and Noise Performance

TIA-5050	Test	Margin	Limits	Result	Reference
Clause 5.2	Recv PN-SDNR 8N	7.4 dB	Absolute Limits	PASS	
Note: SDNR includes noise and distortion products.					
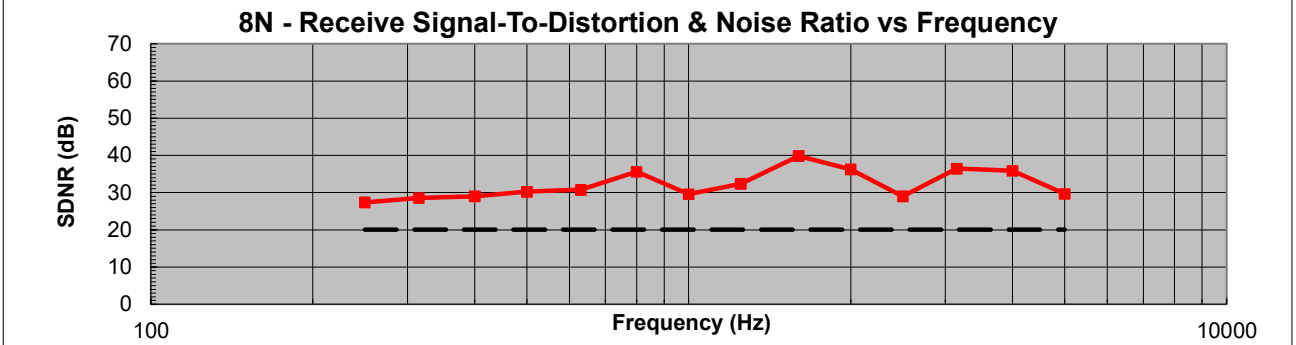
8N - Receive Signal-To-Distortion & Noise Ratio vs Frequency

Receive Acoustic Frequency Response Performance

TIA-5050	Test	Margin	Limits	Result	Reference
Clause 5.3	Recv resp FF 8N	2.95 dB	Floating Limits	PASS	
	Recv resp DF 8N	2.3 dB	Floating Limits	PASS	

Receive Response FF 8N

Receive Response DF 8N
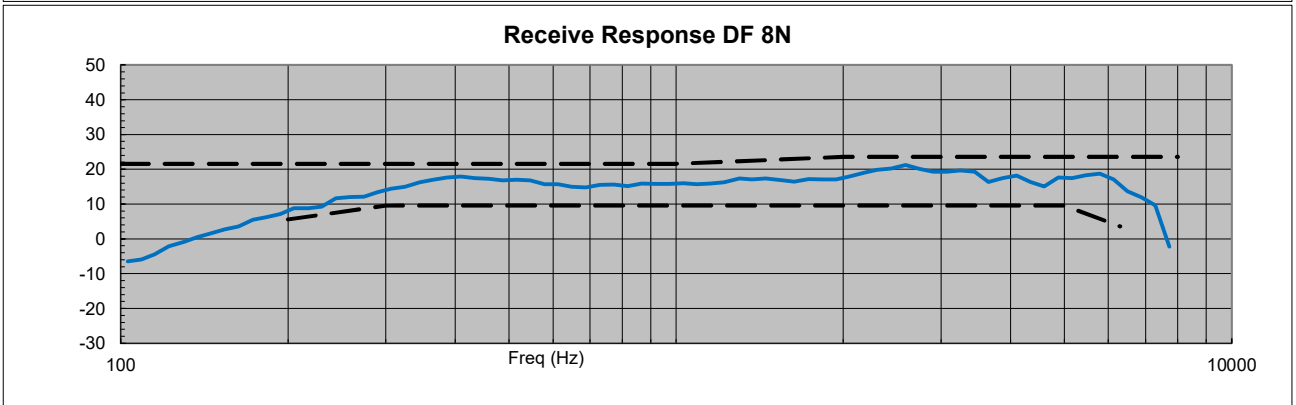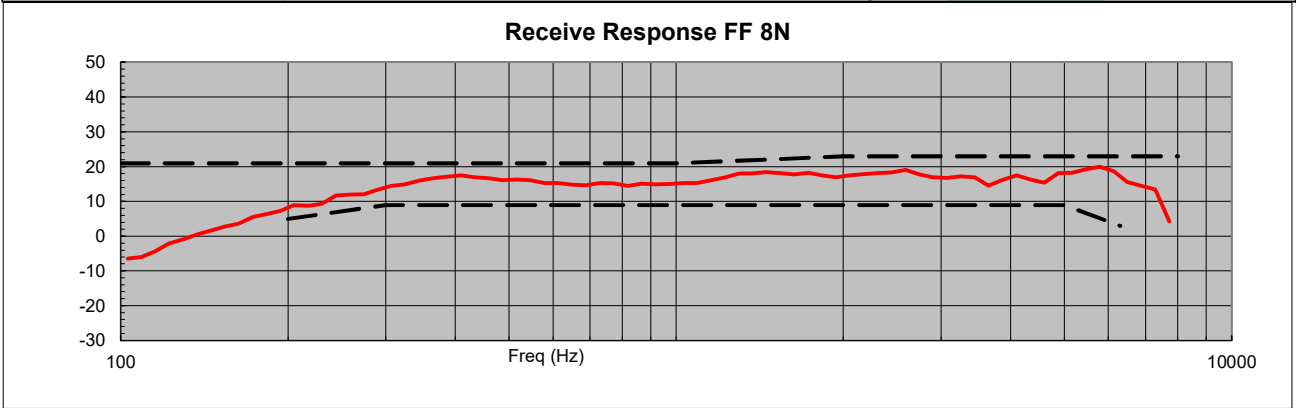
TIA-5050 Receive Volume Control Measurements - 8N

Device Under Test:	20240926_WB_11ac_VHT20_ch56_MCS0

Bandwidth	Wideband

Test Date:	2024-09-26

Receive Volume Control Performance

TIA-5050	Test	Measured	Limits	Result	Reference
Clause 5.1	Recv output level dBSPL 8N	86.8 dB	info only		
	Recv conversational gain 8N	16.8 dB	6.00	PASS	

Receive Distortion and Noise Performance

TIA-5050	Test	Margin	Limits	Result	Reference
Clause 5.2	Recv PN-SDNR 8N	7.2 dB	Absolute Limits	PASS	
Note: SDNR includes noise and distortion products.					
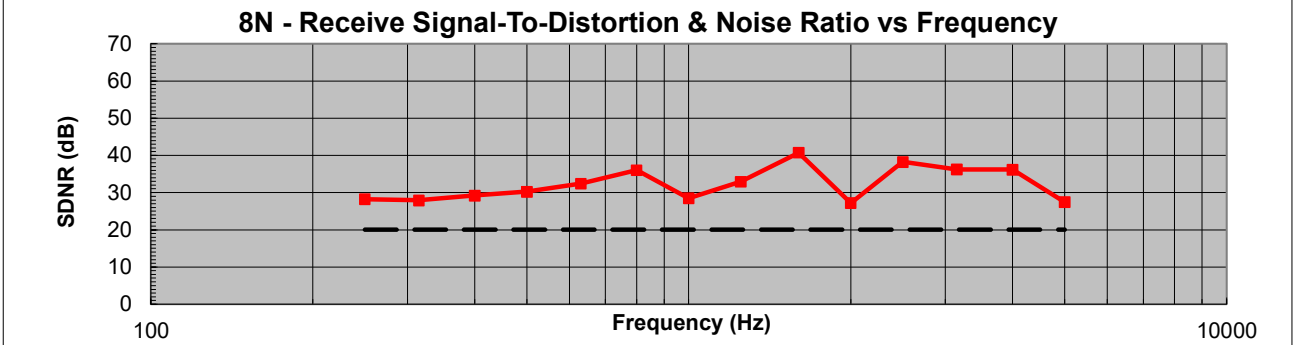
8N - Receive Signal-To-Distortion & Noise Ratio vs Frequency

Receive Acoustic Frequency Response Performance

TIA-5050	Test	Margin	Limits	Result	Reference
Clause 5.3	Recv resp FF 8N	2.86 dB	Floating Limits	PASS	
	Recv resp DF 8N	2.3 dB	Floating Limits	PASS	
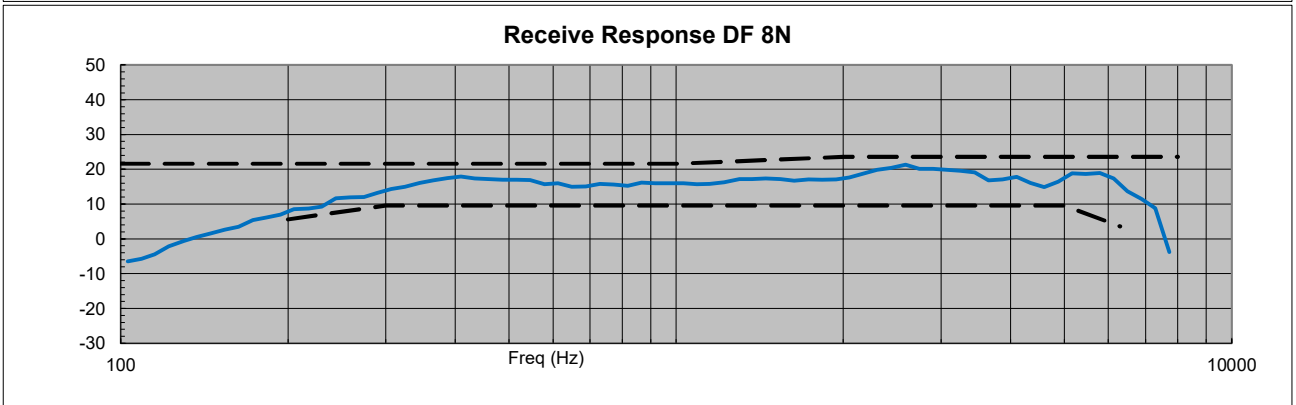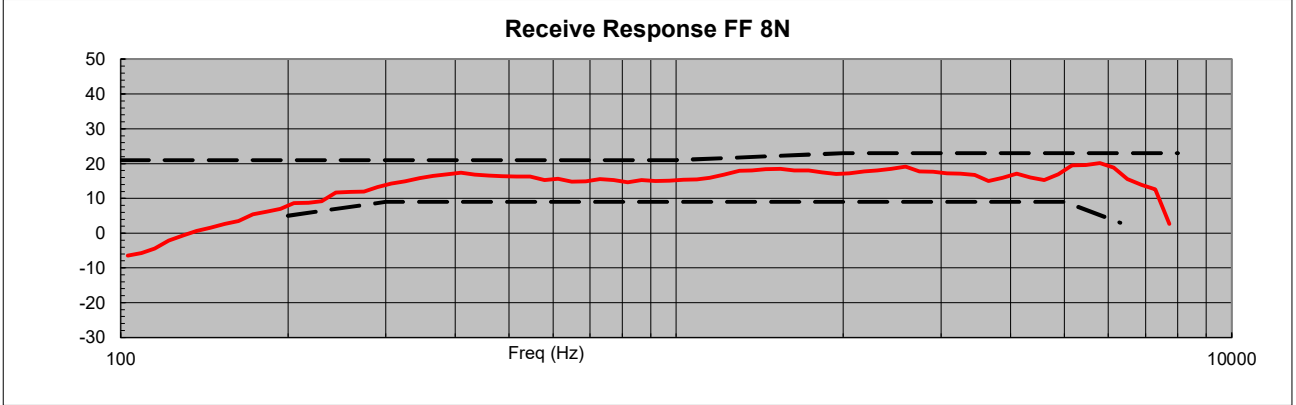
Receive Response FF 8N

Receive Response DF 8N

TIA-5050 Receive Volume Control Measurements - 8N

Device Under Test:	20240926_WB_11ac_VHT20_ch120_MCS0

Bandwidth	Wideband

Test Date:	2024-09-26

Receive Volume Control Performance

TIA-5050	Test	Measured	Limits	Result	Reference
Clause 5.1	Recv output level dBSPL 8N	86.82 dB	info only		
	Recv conversational gain 8N	16.82 dB	6.00	PASS	

Receive Distortion and Noise Performance

TIA-5050	Test	Margin	Limits	Result	Reference
Clause 5.2	Recv PN-SDNR 8N	7.9 dB	Absolute Limits	PASS	
Note: SDNR includes noise and distortion products.					
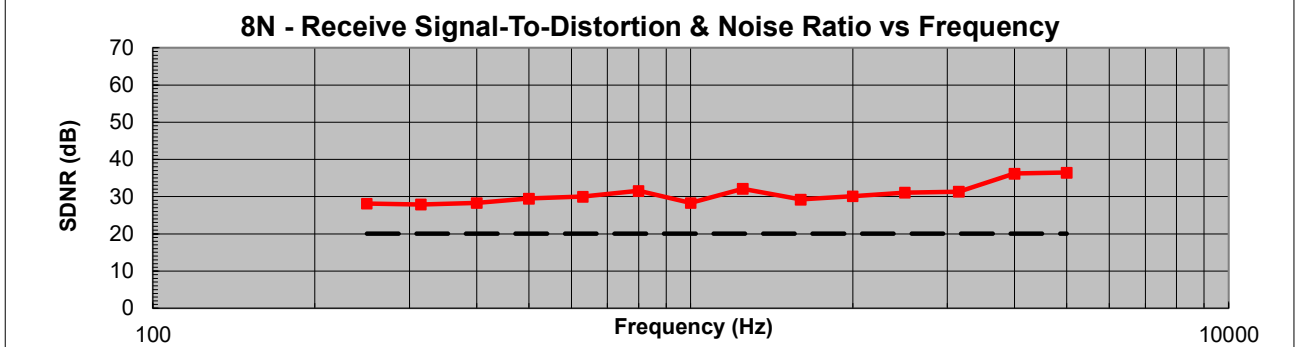
8N - Receive Signal-To-Distortion & Noise Ratio vs Frequency

Receive Acoustic Frequency Response Performance

TIA-5050	Test	Margin	Limits	Result	Reference
Clause 5.3	Recv resp FF 8N	2.97 dB	Floating Limits	PASS	
	Recv resp DF 8N	2.4 dB	Floating Limits	PASS	
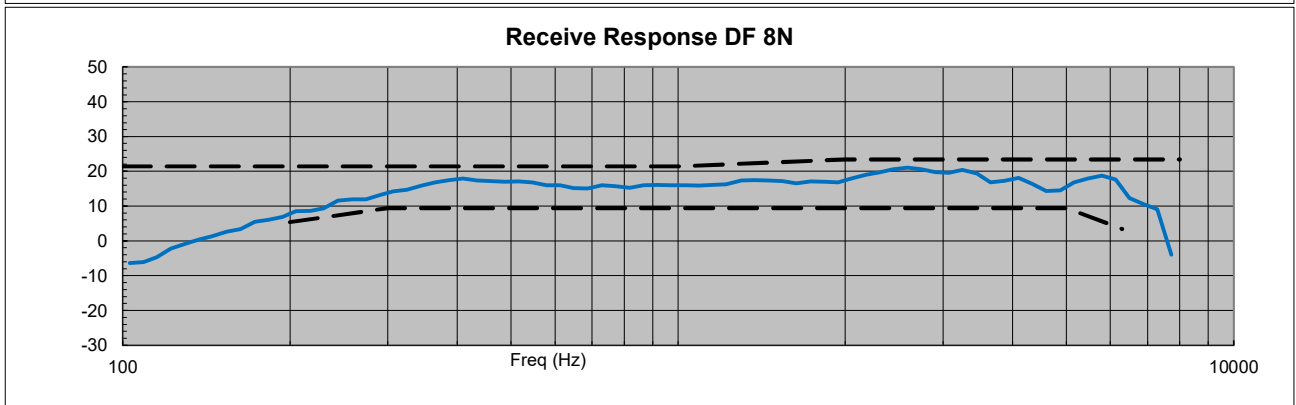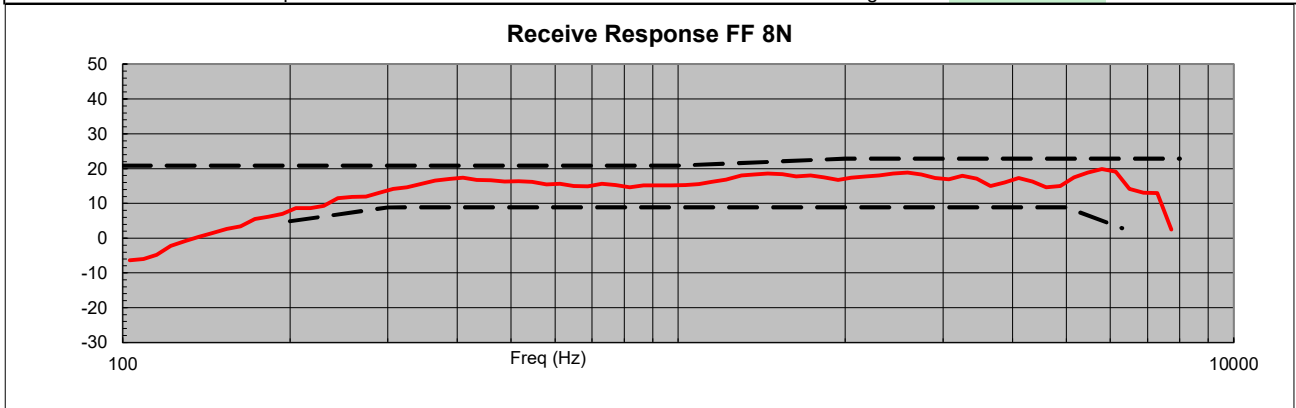
Receive Response FF 8N

Receive Response DF 8N

TIA-5050 Receive Volume Control Measurements - 8N

Device Under Test:	20240926_WB_11ac_VHT20_ch157_MCS0

Bandwidth	Wideband

Test Date:	2024-09-26

Receive Volume Control Performance

TIA-5050	Test	Measured	Limits	Result	Reference
Clause 5.1	Recv output level dBSPL 8N	86.81 dB	info only		
	Recv conversational gain 8N	16.81 dB	6.00	PASS	

Receive Distortion and Noise Performance

TIA-5050	Test	Margin	Limits	Result	Reference
Clause 5.2	Recv PN-SDNR 8N	7.5 dB	Absolute Limits	PASS	
Note: SDNR includes noise and distortion products.					
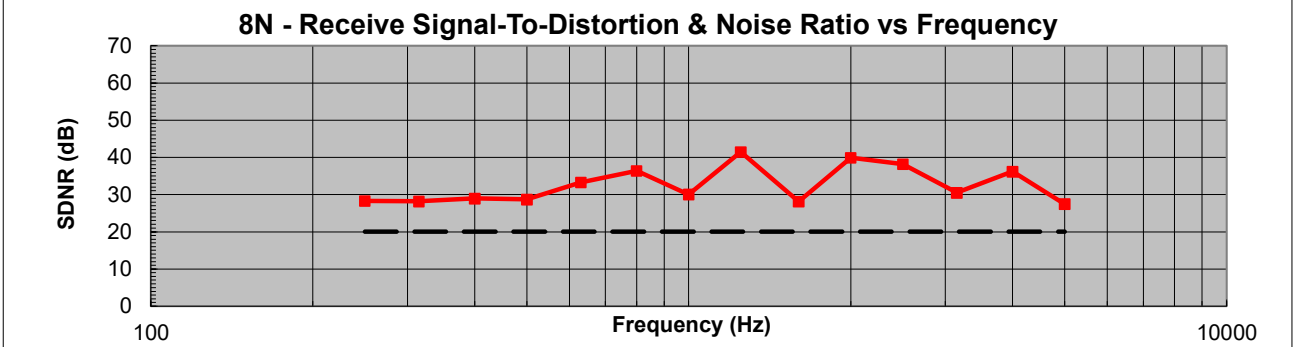
8N - Receive Signal-To-Distortion & Noise Ratio vs Frequency

Receive Acoustic Frequency Response Performance

TIA-5050	Test	Margin	Limits	Result	Reference
Clause 5.3	Recv resp FF 8N	3.03 dB	Floating Limits	PASS	
	Recv resp DF 8N	2.5 dB	Floating Limits	PASS	

Receive Response FF 8N

Receive Response DF 8N