



No.24B01N001531-003-Audio



TEST REPORT

No.24B01N001531-003-Audio

For

DIALN PRODUCTS INC

Smart Phone

Model Name: X68

With

Hardware Version: YK310-MB-V6.0

Software Version: Dialn_X68_Generic_V4.0_20240829_1900

FCC ID: 2BAHU2024021

Issued Date: 2024-09-18

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of SAICT.

Test Laboratory:

SAICT, Shenzhen Academy of Information and Communications Technology

Building G, Shenzhen International Innovation Center, No.1006 Shennan Road, Futian District, Shenzhen, Guangdong, P. R. China 518000.

Tel:+86(0)755-33322000, Fax:+86(0)755-33322001

Email: yewu@saict.ac.cn. www.saict.ac.cn



Revision Version

Report Number	Revision	Description	Issued Date
24B01N001531-003-Audio	Rev.0	1st edition	2024-09-18

NOTE: The previous version of the report is invalid for this revised edition.

CONTENTS

1. Summary of Test Report	5
1.1. Test Items	5
1.2. Test Standards	5
1.3. Test Result	5
1.4. Testing Location	5
1.5. Project Data	5
1.6. Signature	5
2. Client Information	6
2.1. Applicant Information	6
2.2. Manufacturer Information	6
3. Equipment Under Test (EUT) and Ancillary Equipment (AE)	7
3.1. About EUT	7
3.2. Internal Identification of EUT	7
3.3. Internal Identification of AE Used During The Test	7
3.4. General Description	7
4. Reference Documents for Testing	8
5. Test Results	9
5.1. Testing Environment	9
5.2. Summary of Test Results	9
5.3. Statement	9
6. Test Equipments Utilized	10
6.1. Test Equipments	10
6.2. GSM and WCDMA Test Connection Diagrams	10
6.3. LTE Test Connection Diagrams	11
6.4. WiFi Test Connection Diagrams	12
ANNEX A EUT photograph	13
ANNEX B Test Method and requirements	14
B.1 RECEIVE VOLUME CONTROL PERFORMANCE	14
B.2 RECEIVE DISTORTION AND NOISE PERFORMANCE	15
B.3 RECEIVE ACOUSTIC FREQUENCY RESPONSE PERFORMANCE	16



ANNEX C Detailed Test Results	18
C.1. GSM TEST RESULTS	18
C.2. WCDMA TEST RESULTS	19
C.3. LTE TEST RESULTS.....	21
C.4. WiFi TEST RESULTS.....	24
ANNEX D Test Setup Diagrams.....	26

1. Summary of Test Report

1.1. Test Items

Description	Smart Phone
Model Name	X68
Applicant's name	DIALN PRODUCTS INC
Manufacturer's Name	DIALN PRODUCTS INC

1.2. Test Standards

ANSI C63.19	2019
ANSI/TIA-5050	2018

1.3. Test Result

All test items are passed. Please refer to "5.2 Summary of Test Results" for detail.

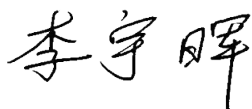
1.4. Testing Location

Address: Building G, Shenzhen International Innovation Center, No.1006 Shennan Road, Futian District, Shenzhen, Guangdong, P. R. China518000

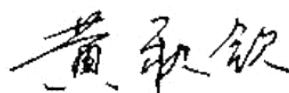
1.5. Project Data

Project Leader	Liang Shuzhen
Testing Start Date:	2024-07-29
Testing End Date:	2024-08-20

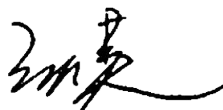
1.6. Signature



Li Yuhui
(Prepared this test report)



Huang Qiuqin
(Reviewed this test report)



Zhang Hao
(Approved this test report)



2. Client Information

2.1. Applicant Information

Company Name: DIALN PRODUCTS INC
Address/Post: 2000 Walton Road, Saint Louis, Missouri 63114, United States
Contact: /
Email: /
Telephone: /
Fax: /

2.2. Manufacturer Information

Company Name: DIALN PRODUCTS INC
Address/Post: 2000 Walton Road, Saint Louis, Missouri 63114, United States
Contact: /
Email: /
Telephone: /
Fax: /

3. Equipment Under Test (EUT) and Ancillary Equipment (AE)

3.1. About EUT

Description	Smart Phone
Model Name	X68
Brand Name	DIALN
Frequency Bands:	GSM 850/1900, WCDMA Band 2/4/5, LTE Band 2/4/5/12/13/17/41/66/71, Bluetooth, WLAN 2.4GHz/5GHz
Condition of EUT as received	No abnormality in appearance

Note: Photographs of EUT are shown in ANNEX A of this test report. Components list, please refer to documents of the manufacturer; it is also included in the original test record of Shenzhen Academy of Information and Communications Technology.

3.2. Internal Identification of EUT

EUT ID*	SN or IMEI	HW Version	SW Version	Sample Arrival Date
UT01aa	55451200030126	YK310-MB V6.0	Dialn_X68_Generi c_V4.0_20240829 _1900	2024-08-07
UT02aa	112222223333316	YK310-MB V6.0	Dialn_X68_Generi c_V4.0_20240829 _1900	2024-07-16

*EUT ID: is used to identify the test sample in the lab internally.

3.3. Internal Identification of AE Used During The Test

AE:

AEID*	/
Description	/
Type	/
Manufacturer	/

*AE ID: is used to identify the test sample in the lab internally.

3.4. General Description

Equipment undertest (EUT) is a Smart Phone with integrated antenna.
Manual and specifications of the EUT were provided to fulfil the test.
Samples undergoing test were selected by the Client.

4. Reference Documents for Testing

The following documents listed in this section are referred for testing.

Reference	Title	Version
ANSI C63.19	American National Standard Methods of Measurement of Compatibility between Wireless Communications Devices and Hearing Aids Telecommunications	2019
ANSI/TIA-5050	Communications Products Receive Volume Control Requirements for Wireless (Mobile) Devices	2018
KDB 285076 D05v01	HAC COMPLIANCE UNDER WAIVER DA 23-914	2023

5. Test Results

Abbreviations used in this clause:

P Passed

F Failed

NA not applicable

NM not measured

5.1. Testing Environment

Normal Temperature: 15-35°C

Relative Humidity: 20-75%

Local Bottom noise: 12.5dB

5.2. Summary of Test Results

See **ANNEX C** for detail

Summary of Test Results	VERDICT			
	NA	P	F	NM
Receive Volume Control Performance		P		
Receive Distortion and Noise Performance		P		
Receive Acoustic Frequency Response Performance		P		

5.3. Statement

Since the information of samples in this report is provided by the client, the laboratory is not responsible for the authenticity of sample information.

This report takes measured values as criterion of test conclusion. The test conclusion meets the limit requirements.

6.1. Test Equipments

6.2. GSM and WCDMA Test Connection Diagrams

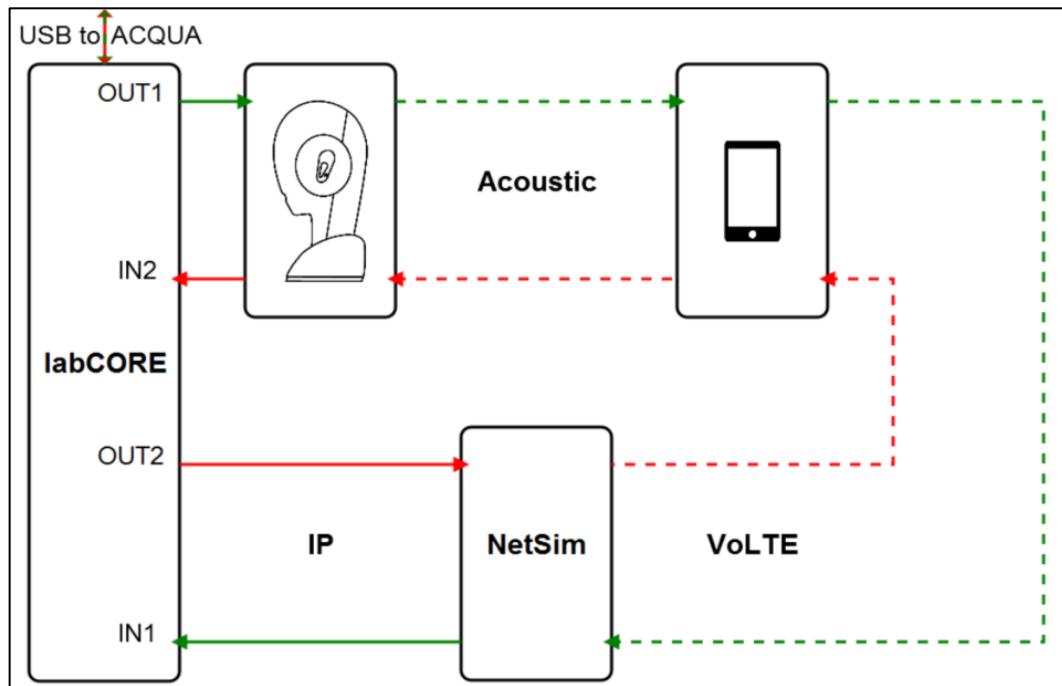
The diagram illustrates the labCORE system architecture. It shows a central labCORE unit with four ports: OUT1, IN2, OUT2, and IN1. A USB to ACQUA interface is connected to OUT1. The labCORE unit is connected to a NetSim block via an 'Electric' interface (OUT2 to IN2). The NetSim block is connected to a smartphone via a 'GSM/UMTS' interface. The smartphone is connected to an acoustic sensor (represented by a speaker icon) via an 'Acoustic' interface. The acoustic sensor is connected back to the labCORE unit via a green line labeled 'SND' (OUT1 to IN1). A red line labeled 'RCV' (IN2 to OUT2) represents the received signal path.

The diagram illustrates the architecture of the labCORE In/Out system. A central vertical block labeled "labCORE In/Out" has 8 ports on each side. On the left, a "Connected labCORE" block with the ACQUA logo is connected to the top 4 ports (1-4) via a "USB I/O" interface. On the right, the system is connected to various components:

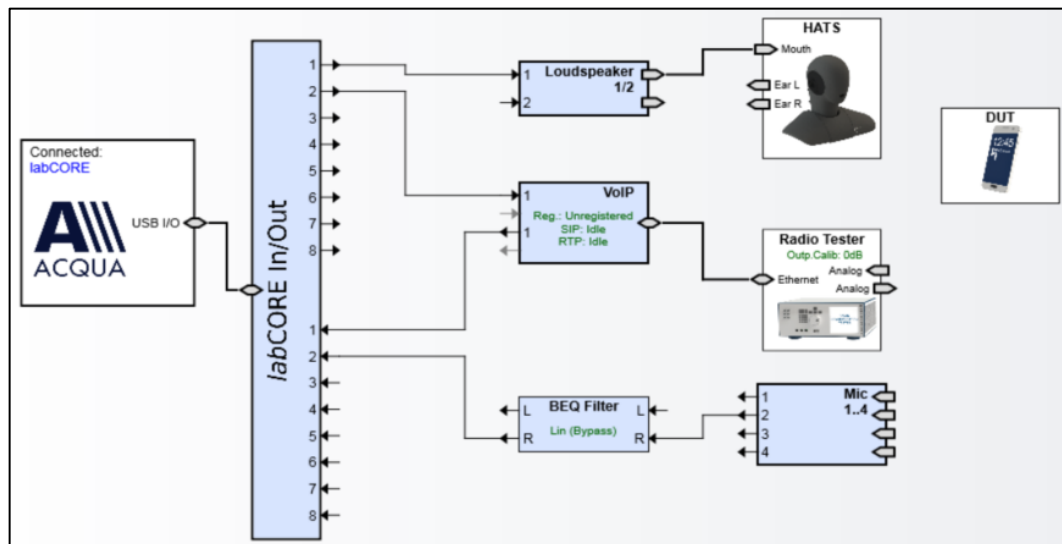
- Loudspeaker 1/2**: Connected to ports 1 and 2.
- Analog Out 1/2**: Connected to ports 3 and 4.
- Radio Tester**: A block with "Analog" and "Ethernet" inputs, connected to ports 5 and 6.
- DU1**: A mobile phone icon connected to the "Radio Tester".
- HATS**: A head-mounted display icon connected to ports 7 and 8 via "Mic", "Ear L", and "Ear R" inputs.
- Analog In 1/2**: Connected to ports 1 and 2.
- BEQ Filter**: A block with "L" and "R" inputs, connected to ports 3 and 4.
- Mic 1..4**: A microphone array connected to ports 5 and 6.

6.3. LTE Test Connection Diagrams

Test signal connection:

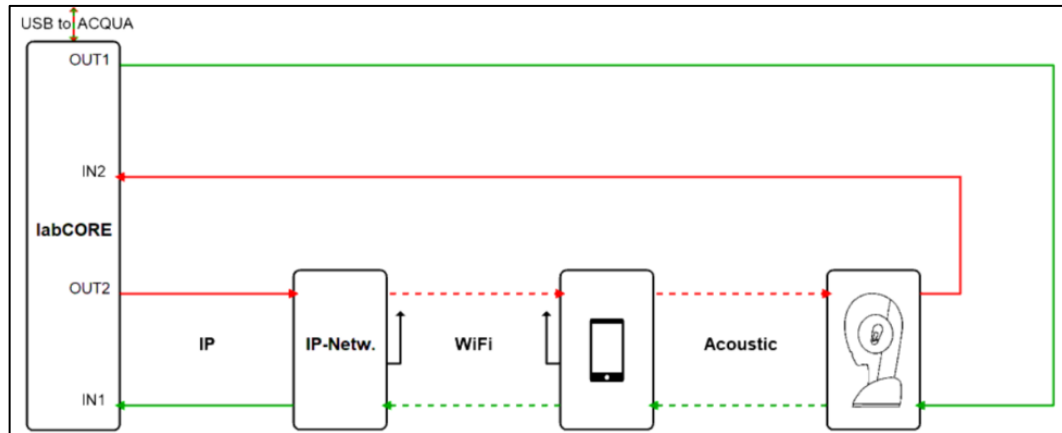


Hardware Configuration connection:

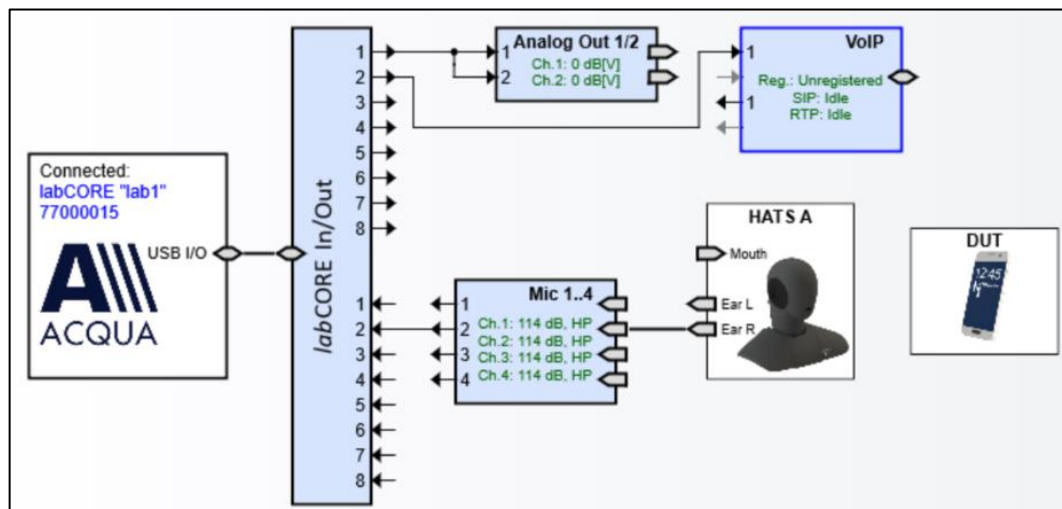


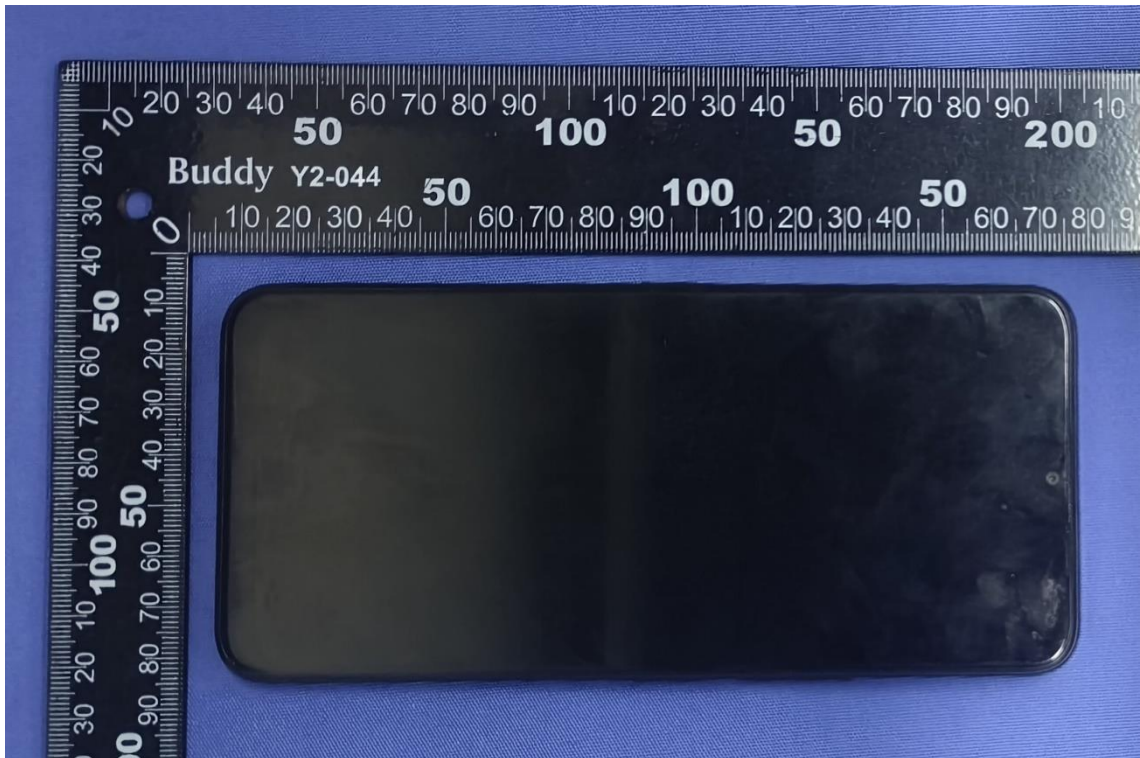
6.4. WiFi Test Connection Diagrams

Test signal connection:



Hardware Configuration connection:



ANNEX A EUT photograph**Pic A-1 EUT (Front Side)****Pic A-2 EUT (Rear Side)**

ANNEX B Test Method and requirements

B.1 Receive Volume Control Performance

Test Method:

1. Configure the DUT with a mounting force of 8N and test equipment in an active call state with the applicable codec for the transmission mode under test.
2. Set the DUT volume control to the maximum setting.
3. Apply the real speech test signal at a level of -20 dBm0 at the RETP and measure the acoustic output at the Drum Reference Point (DRP) over one complete sequence of the test signal.
4. Over the applicable frequency band, determine the ASL in dBSPL for the resulting sound pressure level in accordance with Method B of ITU-T Recommendation P.56:
 - a. Narrowband 100 Hz through 4000 Hz.
 - b. Wideband 100 Hz through 7720 Hz.
5. Calculate the Conversational Gain by subtracting 70 dB from the measured dBSPL
[Conversational Gain=(Measured dBSPL Level -70 dBSPL) dB]
6. Repeat steps 2-5 with a mounting force of 2N.

Test requirement:

According to KDB 285076 D05v01, only CMRS narrowband and CMRS wideband voice codecs are required to comply with the volume control requirements of the TIA 5050-2018 Volume Control Standard as amended as follows:

1. For the 2N mounting force test, one narrowband and one wideband voice codec embedded with the handset must pass with at least one volume control setting with a conversational gain of ≥ 6 dB for all voice services, bands of operation and air interfaces over which it operates using one codec bit rate of the applicant's choosing.
2. For the 8N mounting force test, one narrowband and one wideband voice codec embedded with the handset must pass with at least one volume control setting with a conversational gain of ≥ 6 dB for all voice services, bands of operation and air interfaces over which they operate but is not required to meet or exceed the full 18 dB of conversational gain specified in section 5.1.1 of the TIA 5050 Volume Control Standard using one codec bit rate of the applicant's choosing.

B.2 Receive Distortion and Noise Performance

Test Method:

1. Configure the DUT with a mounting force of 8N and test equipment in an active call state with the applicable codec for the transmission mode under test with the volume control at the setting determined in B.1.
2. Receive distortion and noise is measured using the PN-SDNR procedure.
3. To ensure DUT activation, apply the real speech test signal at a level of -20 dBm0 followed immediately by the initial 1/3 octave center frequency PN test signal in TIA 5050 Table A.1 based on the narrowband or wideband operating mode. Measure the acoustic output at the DRP over the complete sequence of the PN test signal.
4. Translate the measurement made at the DRP to the FF using the translation data in TIA 5050 Annex B.
5. Calculate the acoustic output unweighted total signal power of the stimulus measurement band as described in TIA 5050 A.2.
6. Calculate the notched A-weighting distortion and noise components as described in A.3.
7. Calculate the ratio of the signal power to the total A-weighted distortion and noise power using Eq TIA 5050 A-1.
8. Repeat for each of the remaining 1/3 octave center frequencies in TIA 5050 Table A.1 based on the narrowband or wideband operating mode.
9. Repeat steps 2-8 with a mounting force of 2N.

Test requirement:

With a mounting force of 8N and 2N, the ratio of the stimulus signal power to the 100 Hz to 8000 Hz total A-weighted distortion and noise power shall be ≥ 20 dB when tested over the range of 1/3 octave band center frequencies:

- a. Narrowband transmission mode: Each 1/3 octave band center frequency from 400 Hz to 3150 Hz
- b. Wideband transmission mode: Each 1/3 octave band center frequency from 250 Hz to 5000 Hz.

B.3 Receive Acoustic Frequency Response Performance

Test Method:

1. Configure the DUT with a mounting force of 8N and test equipment in an active call state with the applicable codec for the transmission mode under test with the volume control at the setting determined in B.1.
2. Apply the real speech test signal with a level of -20 dBm0 at the RETP.
3. Capture the frequency spectrum at the DRP of the HATS using real-time analysis with 1/12 octave bands over the frequency range from 100 Hz to 4000 Hz for narrowband measurements, or over the frequency range from 100 Hz to 8000 Hz for wideband measurements, averaged over the entire duration of the test signal.
4. Transform the DRP frequency spectrum measurement to the FF or DF (see TIA 5050 Annex B).
5. Divide the 1/12 octave measurement data by the 1/12 octave frequency spectrum of the test signal at the RETP and present the measurement in terms of dB(Pa/V).
6. Apply the applicable frequency response limits to determine compliance.
7. Repeat with a mounting force of 2N.

Test requirement:

For the volume control settings determined in B.1 with a mounting force of 8N and 2N, the receive frequency response shall be measured at the DRP in 1/12 octave bands. After translation to the FF or DF, it shall fall between the applicable upper and lower limits.

- a. Narrowband: The 1/12 octave band frequency response after translation to the FF or DF shall fall between the upper and lower limits given in Table B.3-1 and shown in Figure 1

Table B.3-1 – Narrowband Receive Frequency Response Limits

Lower Limit Frequency (Hz)	Lower Limit (dB)	Upper Limit Frequency (Hz)	Upper Limit (dB)
300	-6	100	+6
3400	-6	4000	+6

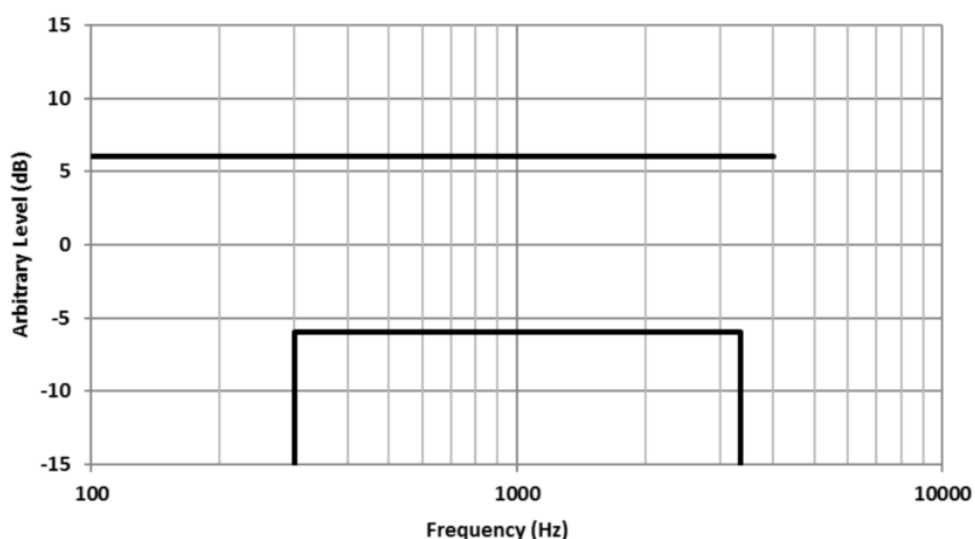


Figure 1 – Narrowband Receive Frequency Response Limits

- b. Wideband: The 1/12 octave band frequency response after translation to the FF or DF shall fall between the upper and lower limits given in Table B.3-2 and shown in Figure 2.

Table B.3-2 – Wideband Receive Frequency Response Limits

Lower Limit Frequency (Hz)	Lower Limit (dB)	Upper Limit Frequency (Hz)	Upper Limit (dB)
300	-10	100	+6
300	-6	1000	+6
5000	-6	2000	+8
6300	-12	8000	+8

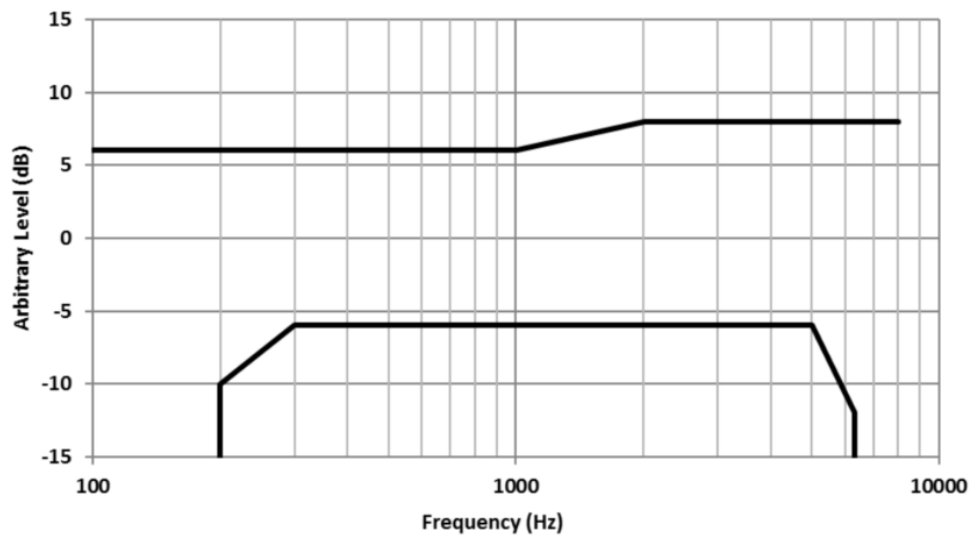


Figure 2 – Wideband Receive Frequency Response Limits

ANNEX C Detailed Test Results

C.1. GSM Test Results

<EUT Supported Codec>

GSM (AMR Codec)	AMR-NB Bit Rate
	4.75 Kbps
	5.15 Kbps
	5.90 Kbps
	6.60 Kbps
	7.40 Kbps
	7.95 Kbps
	10.20 Kbps
	12.20 Kbps

<Summary Tests Results>

GSM Band	Channel	Volune Level	Codec	Voice Bandwith	2N/8N	Receive Volume Control [dBSPL]	Conversational Gain [dB]	Receive Distrotion	Receive Acoustic Frequence Response
GSM850	162	Max	AMR	NB	2N	80.31	10.31	Pass	Pass
GSM850	162	Max	AMR	NB	8N	83.38	13.38	Pass	Pass
GSM1900	600	Max	AMR	NB	2N	80.15	10.15	Pass	Pass
GSM1900	600	Max	AMR	NB	8N	83.99	13.99	Pass	Pass



C.2. WCDMA Test Results

<EUT Supported Codec>

WCDMA (AMR Codec)	AMR-NB Bit Rate	AMR-WB Bit Rate
	4.75 Kbps	6.60 Kbps
	5.15 Kbps	8.85 Kbps
	5.90 Kbps	12.65 Kbps
	6.60 Kbps	14.25 Kbps
	7.40 Kbps	15.85 Kbps
	7.95 Kbps	18.25 Kbps
	10.20 Kbps	19.85 Kbps
	12.20 Kbps	23.05 Kbps
	/	23.85 Kbps

<Summary Tests Results>

WCDMA Band	Channel	Volune Level	Codec	Voice Bandwith	Bit Rate [kbps]	2N/8 N	Receive Volume Control [dBSPL]	Conversational Gain [dB]	Receive Distrotion	Receive Acoustic Frequence Response
Band 2	9262	Max	AMR	NB	12. 2	2N	78. 80	8. 80	Pass	Pass
Band 2	9262	Max	AMR	NB	12. 2	8N	82. 99	12. 99	Pass	Pass
Band 2	9262	Max	AMR	WB	23. 85	2N	84. 74	14. 74	Pass	Pass
Band 2	9262	Max	AMR	WB	23. 85	8N	88. 37	18. 37	Pass	Pass
Band 4	1312	Max	AMR	NB	12. 2	2N	80. 01	10. 01	Pass	Pass
Band 4	1312	Max	AMR	NB	12. 2	8N	82. 72	12. 72	Pass	Pass
Band 4	1312	Max	AMR	WB	23. 85	2N	85. 04	15. 04	Pass	Pass
Band 4	1312	Max	AMR	WB	23. 85	8N	87. 73	17. 73	Pass	Pass
Band 5	4132	Max	AMR	NB	12. 2	2N	80. 03	10. 03	Pass	Pass



WCDMA Band	Channel	Volume Level	Codec	Voice Bandwith	Bit Rate [kbps]	2N/8 N	Receive Volume Control [dBSPL]	Conversational Gain [dB]	Receive Distortion	Receive Acoustic Frequence Response
Band 5	4132	Max	AMR	NB	12.2	8N	83.10	13.10	Pass	Pass
Band 5	4132	Max	AMR	WB	23.85	2N	84.96	14.96	Pass	Pass
Band 5	4132	Max	AMR	WB	23.85	8N	87.95	17.95	Pass	Pass

C.3. LTE Test Results

<EUT Supported Codec>

VoLTE (AMR Codec)	AMR-NB Bit Rate	AMR-WB Bit Rate
	4.75 Kbps	6.60 Kbps
	5.15 Kbps	8.85 Kbps
	5.90 Kbps	12.65 Kbps
	6.60 Kbps	14.25 Kbps
	7.40 Kbps	15.85 Kbps
	7.95 Kbps	18.25 Kbps
	10.20 Kbps	19.85 Kbps
	12.20 Kbps	23.05 Kbps
	/	23.85 Kbps

An investigation was performed to determine the modulation, the bandwidth configuration and RB configuration to be used for testing. For LTE bands, 10MHz BW, QPSK, 1RB, ORB offset was used for the testing as the worst-case configuration for the handset. See below table for comparisons between different radios configurations:

< Radio Configuration Investigation>

LTE Band	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Off Size	Volume Level	Codec	NB/WB	Bit Rate [kbps]	2N/8N	Minimum Distortion	
											[Hz]	[dB]
Band 2	18900	20	QPSK	1	0	Max	AMR	WB	23.85	8N	250	20.95
Band 2	18900	20	QPSK	50	0	Max	AMR	WB	23.85	8N	250	21.04
Band 2	18900	20	QPSK	100	0	Max	AMR	WB	23.85	8N	250	21.14
Band 2	18900	20	16QAM	1	0	Max	AMR	WB	23.85	8N	250	21.13
Band 2	18900	15	QPSK	1	0	Max	AMR	WB	23.85	8N	250	20.96
Band 2	18900	10	QPSK	1	0	Max	AMR	WB	23.85	8N	250	20.92



LTE Band	Channel	Bandwidth [MHz]	Modulation	RB Size	RB Off Size	Volume Level	Codec	NB/WB	Bit Rate [kbps]	2N/8N	Minimum Distortion	
											[Hz]	[dB]
Band 2	18900	5	QPSK	1	0	Max	AMR	WB	23.85	8N	250	20.99
Band 2	18900	3	QPSK	1	0	Max	AMR	WB	23.85	8N	250	21.05
Band 2	18900	1.4	QPSK	1	0	Max	AMR	WB	23.85	8N	250	20.96

<Summary Tests Results>

LTE Band	Channel	Volume Level	Codec	Voice Bandwidth	Bit Rate [kbps]	2N/8N	Receive Volume Control [dBSPL]	Conversational Gain [dB]	Receive Distortion	Receive Acoustic Frequency Response
Band 2	18900	Max	AMR	NB	12.2	2N	78.68	8.68	Pass	Pass
Band 2	18900	Max	AMR	NB	12.2	8N	83.05	13.05	Pass	Pass
Band 2	18900	Max	AMR	WB	23.85	2N	85.48	15.48	Pass	Pass
Band 2	18900	Max	AMR	WB	23.85	8N	88.42	18.42	Pass	Pass
Band 4	20175	Max	AMR	NB	12.2	2N	78.22	8.22	Pass	Pass
Band 4	20175	Max	AMR	NB	12.2	8N	81.59	11.59	Pass	Pass
Band 4	20175	Max	AMR	WB	23.85	2N	85.15	15.15	Pass	Pass
Band 4	20175	Max	AMR	WB	23.85	8N	88.34	18.34	Pass	Pass
Band 5	20525	Max	AMR	NB	12.2	2N	78.47	8.47	Pass	Pass
Band 5	20525	Max	AMR	NB	12.2	8N	81.17	11.17	Pass	Pass
Band 5	20525	Max	AMR	WB	23.85	2N	84.90	14.90	Pass	Pass
Band 5	20525	Max	AMR	WB	23.85	8N	86.72	16.72	Pass	Pass
Band 12	23095	Max	AMR	NB	12.2	2N	79.41	9.41	Pass	Pass
Band 12	23095	Max	AMR	NB	12.2	8N	80.97	10.97	Pass	Pass
Band 12	23095	Max	AMR	WB	23.85	2N	84.65	14.65	Pass	Pass
Band 12	23095	Max	AMR	WB	23.85	8N	86.69	16.69	Pass	Pass



LTE Band	Channel	Volune Level	Codec	Voice Bandwith	Bit Rate [kbps]	2N/8N	Receive Volume Control [dBSPL]	Conversational Gain [dB]	Receive Distrotion	Receive Acoustic Frequence Response
Band 13	23230	Max	AMR	NB	12.2	2N	79.03	9.03	Pass	Pass
Band 13	23230	Max	AMR	NB	12.2	8N	81.15	11.15	Pass	Pass
Band 13	23230	Max	AMR	WB	23.85	2N	84.94	14.94	Pass	Pass
Band 13	23230	Max	AMR	WB	23.85	8N	86.78	16.78	Pass	Pass
Band 17	23790	Max	AMR	NB	12.2	2N	79.49	9.49	Pass	Pass
Band 17	23790	Max	AMR	NB	12.2	8N	81.20	11.2	Pass	Pass
Band 17	23790	Max	AMR	WB	23.85	2N	84.86	14.86	Pass	Pass
Band 17	23790	Max	AMR	WB	23.85	8N	86.75	16.75	Pass	Pass
Band 41	41140	Max	AMR	NB	12.2	2N	80.07	10.07	Pass	Pass
Band 41	41140	Max	AMR	NB	12.2	8N	83.03	13.03	Pass	Pass
Band 41	41140	Max	AMR	WB	23.85	2N	85.73	15.73	Pass	Pass
Band 41	41140	Max	AMR	WB	23.85	8N	88.28	18.28	Pass	Pass
Band 66	132322	Max	AMR	NB	12.2	2N	78.93	8.93	Pass	Pass
Band 66	132322	Max	AMR	NB	12.2	8N	82.55	12.55	Pass	Pass
Band 66	132322	Max	AMR	WB	23.85	2N	85.64	15.64	Pass	Pass
Band 66	132322	Max	AMR	WB	23.85	8N	88.14	18.14	Pass	Pass
Band 71	133297	Max	AMR	NB	12.2	2N	79.56	9.56	Pass	Pass
Band 71	133297	Max	AMR	NB	12.2	8N	82.66	12.66	Pass	Pass
Band 71	133297	Max	AMR	WB	23.85	2N	85.73	15.73	Pass	Pass
Band 71	133297	Max	AMR	WB	23.85	8N	88.15	18.15	Pass	Pass



C.4. WiFi Test Results

<EUT Supported Codec>

VoWiFi (AMR Codec)	AMR-NB Bit Rate	AMR-WB Bit Rate
	4.75 Kbps	6.60 Kbps
	5.15 Kbps	8.85 Kbps
	5.90 Kbps	12.65 Kbps
	6.60 Kbps	14.25 Kbps
	7.40 Kbps	15.85 Kbps
	7.95 Kbps	18.25 Kbps
	10.20 Kbps	19.85 Kbps
	12.20 Kbps	23.05 Kbps
	/	23.85 Kbps

<Summary Tests Results>

WLAN Band	WLAN Standard	Channel	Volume Level	Codec	Voice Bandwidth	Bit Rate [kbps]	2N/8N	Receive Volume Control [dBSPL]	Conversational Gain [dB]	Receive Distortion	Receive Acoustic Frequency Response
2.4GHz	IEEE 802.11b	7	Max	AMR	NB	12.2	2N	78.73	8.73	Pass	Pass
2.4GHz	IEEE 802.11b	7	Max	AMR	NB	12.2	8N	81.30	11.3	Pass	Pass
2.4GHz	IEEE 802.11b	7	Max	AMR	WB	23.85	2N	84.58	14.58	Pass	Pass
2.4GHz	IEEE 802.11b	7	Max	AMR	WB	23.85	8N	86.62	16.62	Pass	Pass
UNII-1	IEEE 802.11a	40	Max	AMR	NB	12.2	2N	78.79	8.79	Pass	Pass
UNII-1	IEEE 802.11a	40	Max	AMR	NB	12.2	8N	82.40	12.4	Pass	Pass
UNII-1	IEEE 802.11a	40	Max	AMR	WB	23.85	2N	82.86	12.86	Pass	Pass
UNII-1	IEEE 802.11a	40	Max	AMR	WB	23.85	8N	86.93	16.93	Pass	Pass



No.24B01N001531-003-Audio

WLAN Band	WLAN Standard	Channel	Volume Level	Codec	Voice Bandwidth	Bit Rate [kbps]	2N/8N	Receive Volume Control [dBSPL]	Conversational Gain [dB]	Receive Distortion	Receive Acoustic Frequency Response
UNII-2A	IEEE 802.11a	64	Max	AMR	NB	12.2	2N	76.59	6.59	Pass	Pass
UNII-2A	IEEE 802.11a	64	Max	AMR	NB	12.2	8N	81.71	11.71	Pass	Pass
UNII-2A	IEEE 802.11a	64	Max	AMR	WB	23.85	2N	82.78	12.78	Pass	Pass
UNII-2A	IEEE 802.11a	64	Max	AMR	WB	23.85	8N	87.29	17.29	Pass	Pass
UNII-2C	IEEE 802.11a	120	Max	AMR	NB	12.2	2N	78.61	8.61	Pass	Pass
UNII-2C	IEEE 802.11a	120	Max	AMR	NB	12.2	8N	82.26	12.26	Pass	Pass
UNII-2C	IEEE 802.11a	120	Max	AMR	WB	23.85	2N	82.86	12.86	Pass	Pass
UNII-2C	IEEE 802.11a	120	Max	AMR	WB	23.85	8N	87.29	17.29	Pass	Pass
UNII-3	IEEE 802.11a	157	Max	AMR	NB	12.2	2N	77.02	7.02	Pass	Pass
UNII-3	IEEE 802.11a	157	Max	AMR	NB	12.2	8N	81.64	11.64	Pass	Pass
UNII-3	IEEE 802.11a	157	Max	AMR	WB	23.85	2N	83.89	13.89	Pass	Pass
UNII-3	IEEE 802.11a	157	Max	AMR	WB	23.85	8N	87.82	17.82	Pass	Pass

The lowest conversational gain is 6.59dB with a hearing aid.

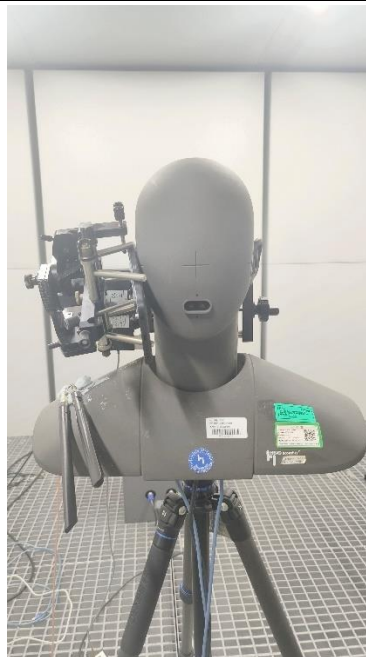
Turn off the accessibility feature - hearing aid function in the phone, and test with the same configuration.

WLAN Band	WLAN Standard	Channel	Volume Level	Codec	Voice Bandwidth	Bit Rate [kbps]	2N/8N	Receive Volume Control [dBSPL]	Conversational Gain [dB]
UNII-2A	IEEE 802.11a	64	Max	AMR	NB	12.2	2N	80.40	10.40

ANNEX D Test Setup Diagrams

Test Diagrams

Artificial Ear Type		3.3
Pressure Force [N]		2/8
Center Fork Offset [°]		/
Postion		
Xe [°]	Ye [°]	Ze [°]
H	+5	H



Pic C-1 Test Layout (Handset)

*****END OF REPORT*****