

RIC BC LI T 81

Data Sheet

681

581

481

381

281



RIC BC LI T 81 | Technical Data

Type	S-Receiver		M-Receiver	
	2 ccm coupler	Ear simulator	2 ccm coupler	Ear simulator
Output sound pressure level				
OSPL90 at 1.6 kHz	—	110 dB SPL	—	123 dB SPL
Maximum OSPL90	110 dB SPL	120 dB SPL	119 dB SPL	129 dB SPL
HFA OSPL90	102 dB SPL	—	115 dB SPL	—
Full-on gain				
FOG at 1.6 kHz	—	44 dB	—	58 dB
Maximum FOG	46 dB	56 dB	60 dB	70 dB
HFA FOG	38 dB	—	51 dB	—
Reference test gain	25 dB	35 dB	38 dB	48 dB
Frequency, noise and directivity				
Frequency range	681 581 481, 381, 281	100 – 10000 Hz 100 – 8700 Hz 100 – 8200 Hz	100 – 10000 Hz 100 – 8800 Hz 100 – 8300 Hz	100 – 9500 Hz 100 – 8700 Hz 100 – 8200 Hz
Equivalent input noise		16 dB SPL	19 dB SPL	16 dB SPL
Total harmonic distortion at 500 / 800 / 1600 / 3200 Hz		1 / 1 / 1 / 1 %	1 / 1 / 2 / — %	1 / 1 / 1 / 1 %
Tinnitus noiser broadband		65 dB SPL	—	70 dB SPL
AI-DI		4.0 dB		4.0 dB
Latency		< 15 ms		< 15 ms
Inductive coil sensitivity				
MASL (1 mA/m) at 1.6 kHz	—	77 dB SPL	—	90 dB SPL
Full-on HFA-SPLIV (10mA/m)	88 dB SPL	—	103 dB SPL	—
HFA SPLITS (left/right)	85 / 85 dB SPL	—	98 / 98 dB SPL	—
RSETS (left/right)	0 / 0 dB	—	0 / 0dB	—
HFA SPLIV	85 dB SPL	—	99 dB SPL	—
Battery				
Battery runtime (without streaming)	up to 54 h		up to 54 h	
Battery runtime (incl. 5 h streaming)	up to 36 h		up to 36 h	
Cellphone Compatibility				
Microphone mode	0.65 – 0.96 GHz 1.4 – 2.7 GHz		0.65 – 0.96 GHz 1.4 – 2.7 GHz	
Telecoil mode	0.65 – 0.96 GHz 1.4 – 2.7 GHz		0.65 – 0.96 GHz 1.4 – 2.7 GHz	

— not applicable

Refer to section "Further information" for additional information on the values.

RIC BC LI T 81 | Technical Data

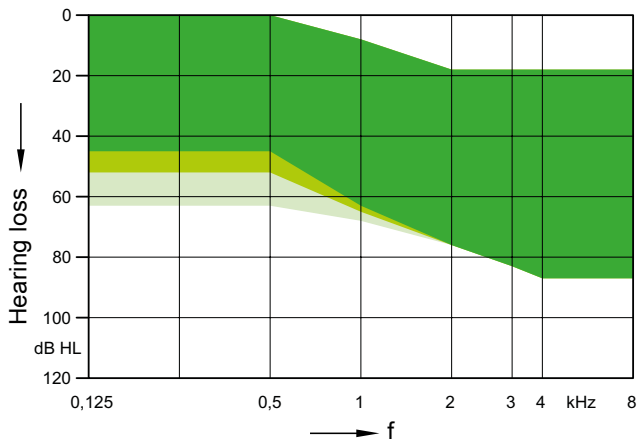
Type	P-Receiver		HP-Receiver	
	2 ccm coupler	Ear simulator	2 ccm coupler	Ear simulator
Output sound pressure level				
OSPL90 at 1.6 kHz	—	129 dB SPL	—	136 dB SPL
Maximum OSPL90	122 dB SPL	131 dB SPL	131 dB SPL	138 dB SPL
HFA OSPL90	120 dB SPL	—	124 dB SPL	—
Full-on gain				
FOG at 1.6 kHz	—	69 dB	—	82 dB
Maximum FOG	65 dB	75 dB	75 dB	83 dB
HFA FOG	61 dB	—	69 dB	—
Reference test gain	43 dB	54 dB	47 dB	61 dB
Frequency, noise and directivity				
Frequency range	681 581, 481, 381, 281	100 – 7400 Hz 100 – 7400 Hz	100 – 8000 Hz 100 – 8000 Hz	100 – 7700 Hz 100 – 7700 Hz
Equivalent input noise		14 dB SPL	16 dB SPL	15 dB SPL 8 dB SPL
Total harmonic distortion at 500 / 800 / 1600 / 3200 Hz		1 / 2 / 1 / 1 %	2 / 3 / 3 / — %	1 / 2 / 1 / 1 % 2 / 3 / 2 / — %
Tinnitus noiser broadband		75 dB SPL	—	85 dB SPL —
AI-DI		4.0 dB		4.0 dB
Latency		< 15 ms		< 15 ms
Inductive coil sensitivity				
MASL (1 mA/m) at 1.6 kHz	—	93 dB SPL	—	109 dB SPL
Full-on HFA-SPLIV (10mA/m)	105 dB SPL	—	114 dB SPL	—
HFA SPLITS (left/right)	103 / 103 dB SPL	—	107 / 107 dB SPL	—
RSETS (left/right)	0 / 0 dB	—	0 / 0 dB	—
HFA SPLIV	104 dB SPL	—	108 dB SPL	—
Battery				
Battery runtime (without streaming)		up to 54 h		up to 54 h
Battery runtime (incl. 5 h streaming)		up to 36 h		up to 36 h
Cellphone Compatibility				
Microphone mode		0.65 – 0.96 GHz 1.4 – 2.7 GHz		0.65 – 0.96 GHz 1.4 – 2.7 GHz
Telecoil mode		0.65 - 0.96 GHz 1.4 - 2.7 GHz		0.65 – 0.96 GHz 1.4 – 2.7 GHz

— not applicable

Refer to section “Further information” for additional information on the values.

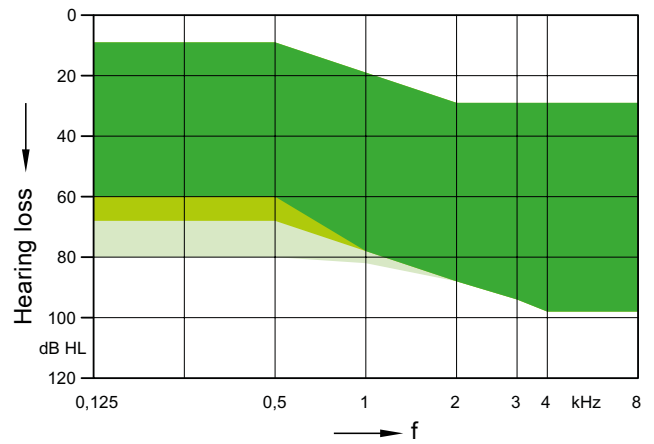
RIC BC LI T 81 | Fitting Range

S-Receiver



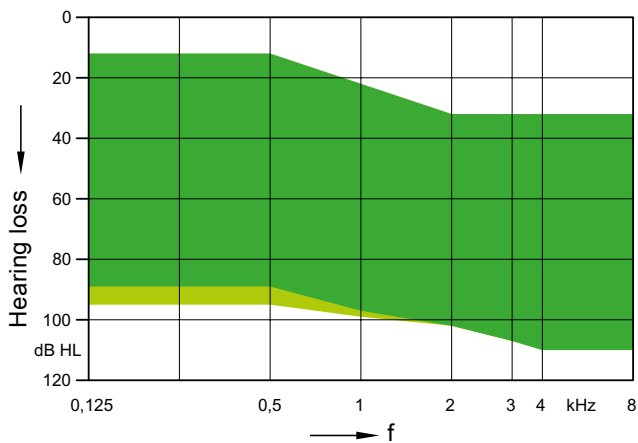
Eartip 3.0 Open
 + Sleeve 3.0 Power
 + + Earmold 3.0

M-Receiver



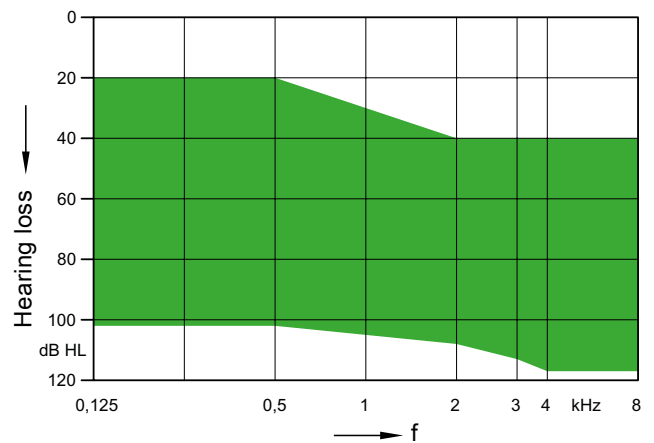
Eartip 3.0 Open
 + Sleeve 3.0 Power
 + + Earmold 3.0

P-Receiver



Sleeve 3.0 Power
 + Earmold 3.0

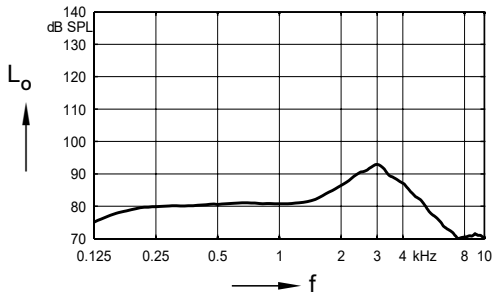
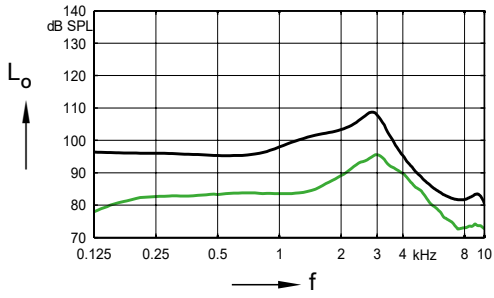
HP-Receiver



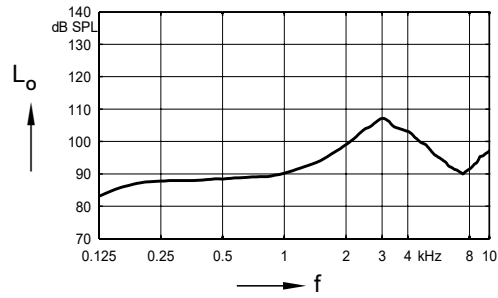
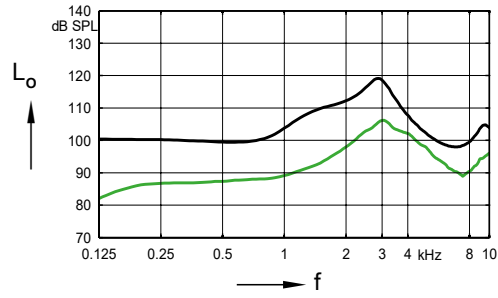
Custom Shell (no vent)

S-Receiver (Sleeve 3.0 Power) | Basic Data

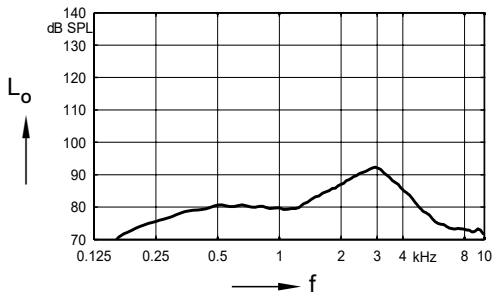
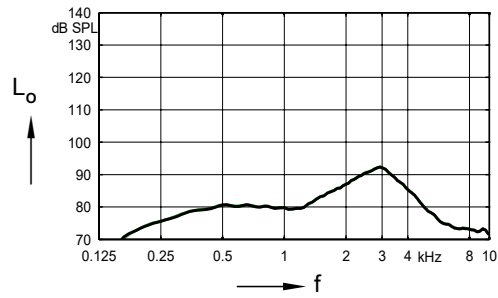
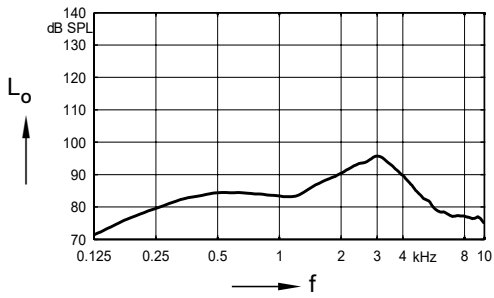
2 ccm coupler



Ear simulator

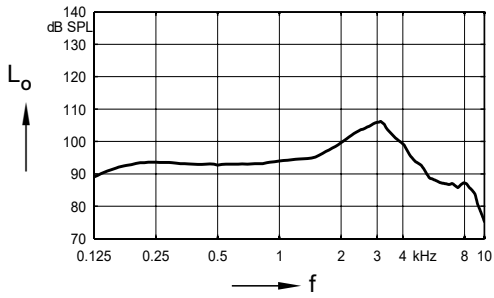
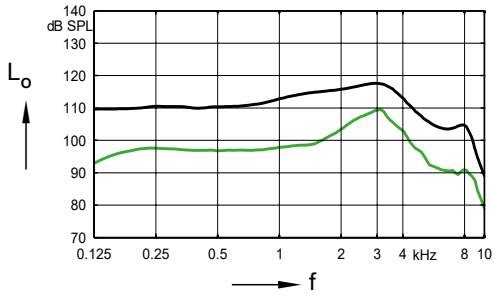


Inductive response

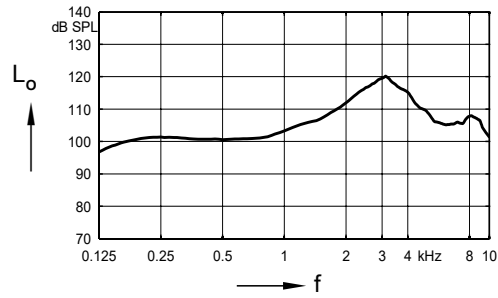
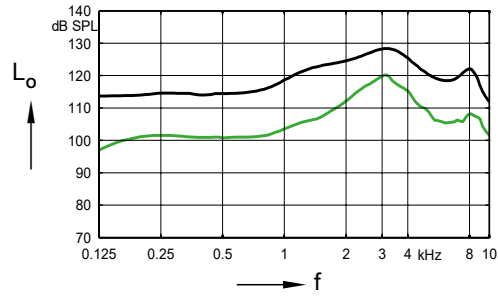


M-Receiver (Sleeve 3.0 Power) | Basic Data

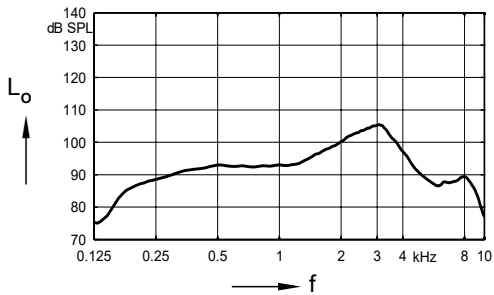
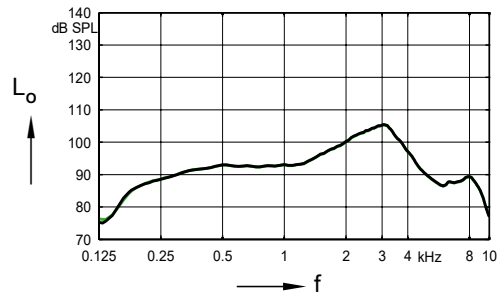
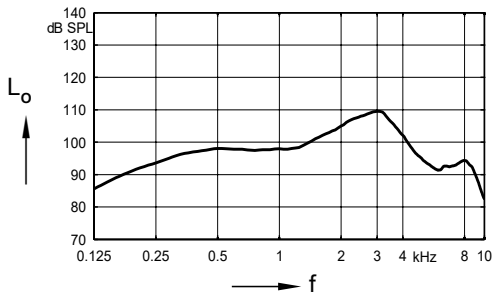
2 ccm coupler



Ear simulator

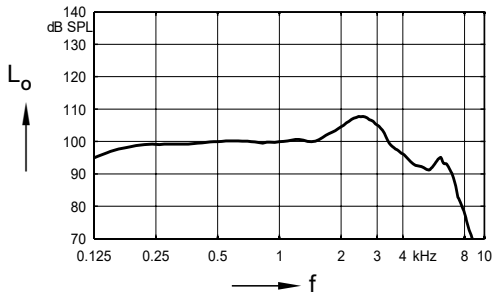
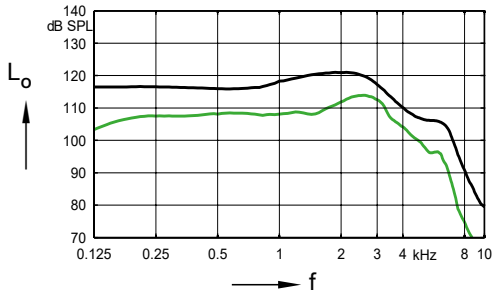


Inductive response

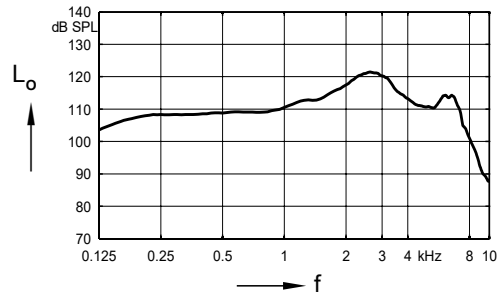
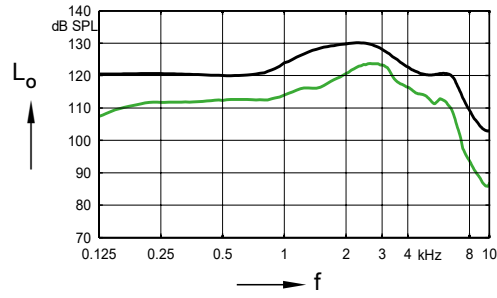


P-Receiver (Earmold 3.0) | Basic Data

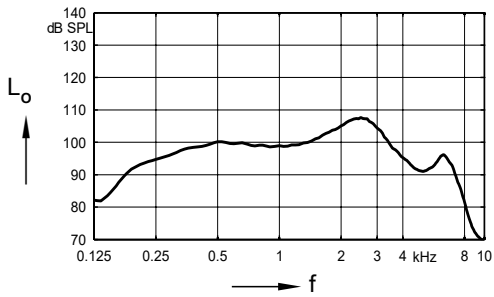
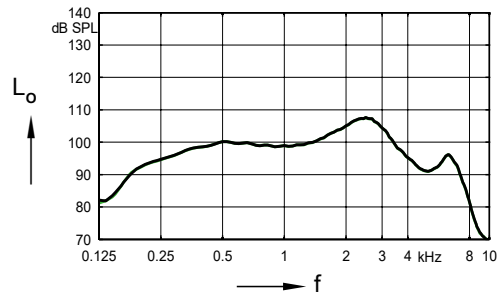
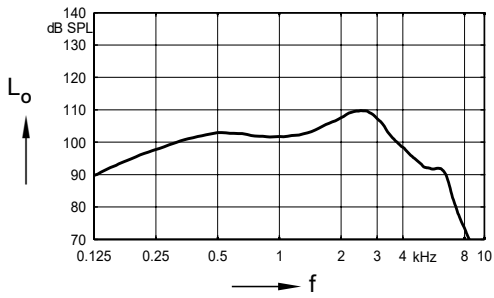
2 ccm coupler



Ear simulator

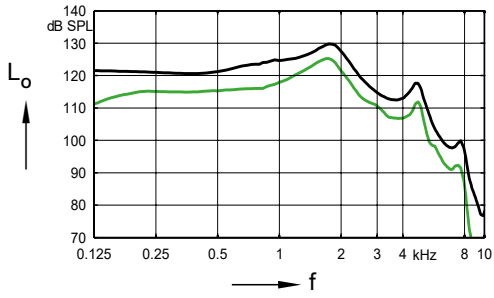


Inductive response



HP-Receiver (Custom Shell) | Basic Data

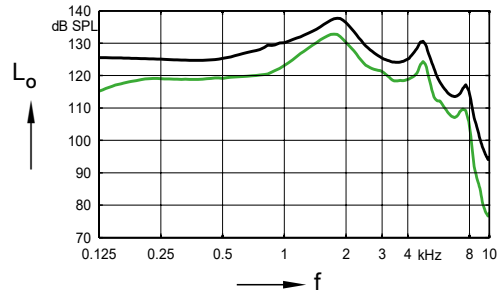
2 ccm coupler



Max. Output sound pressure level
($L_1 = 90$ dB)

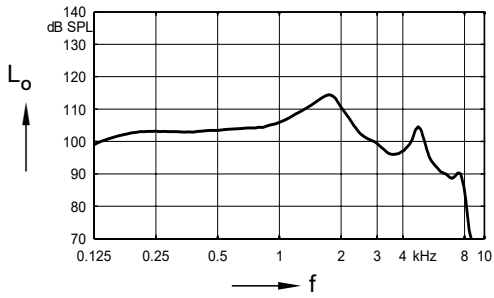
Full-on gain
 $L_1 = 50$ dB)

Ear simulator

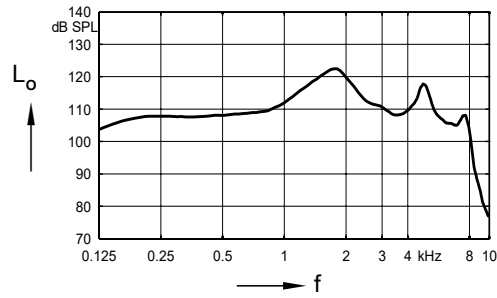


Max. Output sound pressure level
($L_1 = 90$ dB)

Full-on gain
 $L_1 = 50$ dB)

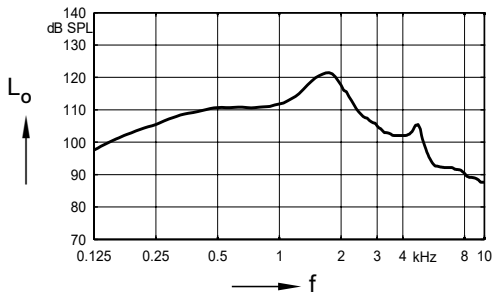


Frequency response
($L_1 = 60$ dB)

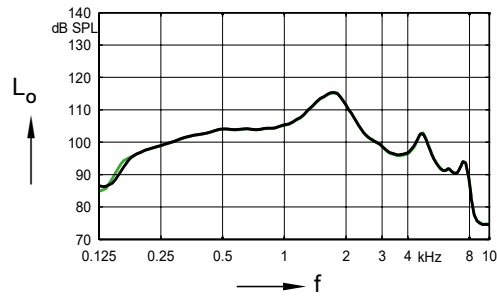


Basic acoustic response
($L_1 = 60$ dB)

Inductive response

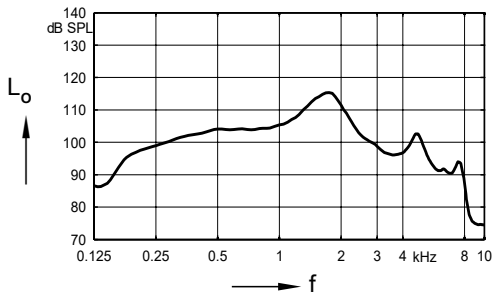


Inductive response
($H = 10$ mA/m)



SPLITS curve left
($H = 31.6$ mA/m)

SPLITS curve right
($H = 31.6$ mA/m)



SPLIV curve
($H = 31.6$ mA/m)

RIC BC LI T 81 | Further information

Abbreviations

The following abbreviations are used in this data sheet:

SPL	Sound Pressure Level
OSPL	Output Sound Pressure Level
HFA	High Frequency Average
FOG	Full-On Gain
MASL	Magneto Acoustical Sensitivity Level
SPLITS	Coupler SPL for an Inductive Telephone Simulator
RSETS	Relative Simulated Equivalent Telephone Sensitivity
SPLIV	SPL In a Vertical magnetic field
AI-DI	Articulation Index - Directivity Index
IRIL	Input Related Interference Level
RTF	Reference Test Frequency
ASHA	Audio Streaming for Hearing Aids

Standards and additional information

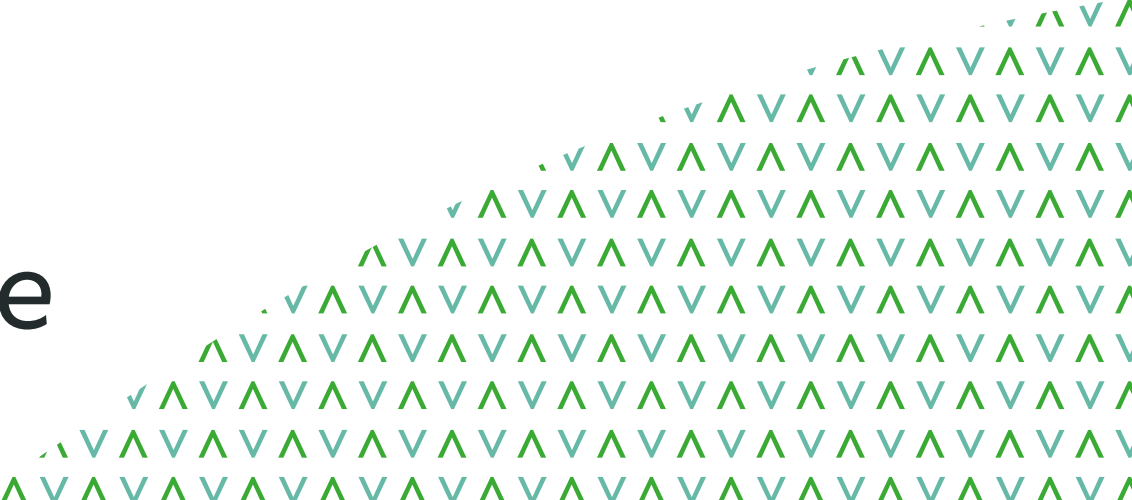
- All measurements with the 2 ccm coupler were performed according to EN IEC 60118-0:2024 and ANSI S3.22:2014 if applicable.
- All measurements with an ear simulator were performed according to EN 60118-0:1993 + A1:1994 and to DIN 45605 (frequency range) if applicable.
- All Cellphone Compatibility measurements were performed according to EN IEC 60118-13:2020 and ANSI C63.19:2019.
- Cellphone Compatibility definition: It is expected that the hearing aid user can effectively use a compliant wireless device held in a talking position at the ear. Maximum achievable Cellphone Compatibility range: 0.65–0.96 GHz and 1.4–2.7 GHz.
- Curves and figures representing FOG are measured with 20 dB reduction and 70 dB SPL input level.
- Figures representing Equivalent Input Noise incorporate a moderate expansion.
- Tinnitus noiser measurement conditions: all tinnitus single frequency sliders in max position, master volume slider in default position (0 dB) and local volume control in default position.
- Inductive coil sensitivity values, inductive response curves and T ratings apply for instruments with telecoil only.
- The current consumption is measured in reference test setting (RTS) according to the applicable standards. Due to the settling behaviour of hearing aids supporting RF (Radio Frequency), the battery current is measured 3 minutes after turning on (note: no pairing).
- The battery runtime is based on first fit settings using 60 % of the fitting range and an ISTS (International Speech Test Signal) input signal at 65 dB SPL (note: pairing established). The actual battery runtime is determined by battery quality, hearing loss, sound environment, usage and activated feature set. Regarding RF usage, Bluetooth audio streaming from phone to hearing aid and from hearing aid to phone are considered.
- Extended bandwidth up to 10 kHz for 681 devices only.
- The following acoustic connections/ear pieces were used:
 - S-Receiver Unit and M-Receiver Unit: Sleeve 3.0 Power
 - P-Receiver Unit: Earmold 3.0
 - HP-Receiver Unit: Custom Shell

Special note for instruments with built-in lithium-ion rechargeable battery

The runtime of all lithium-ion rechargeable batteries reduces over time. The estimates are based on fresh lithium-ion rechargeable battery capacity. Under normal operating conditions, the battery will retain up to 80 % of its initial capacity after 3 years of use. Please note that battery performance will vary depending on individual usage patterns and environmental conditions.

CROS RIC BC LI T 81

Data Sheet



CROS RIC BC LI T 81

Technical Data

Latency	< 15 ms
Cellphone compatibility	
Microphone mode	0.65 – 0.96 GHz 1.4 – 2.7 GHz
Battery	
Battery runtime	up to 62 h

Refer to section “Further information” for additional information on the values.

Instrument and Accessories

Ingress Protection rating	IP68
Battery type / size	Lithium-ion
Accessories	
Charger	▲
Universal Cable Charger	○
Travel Charger RIC	○
Charging Station R	○
Charging+ Station R	○

- ▲ mandatory
- optional
- not available

CROS RIC BC LI T 81 | Further information

Standards and additional information

- All Cellphone Compatibility measurements were performed according to EN IEC 60118-13:2020 and ANSI C63.19:2019.
- Cellphone Compatibility definition: It is expected that the hearing aid user can effectively use a compliant wireless device held in a talking position at the ear. Maximum achievable Cellphone Compatibility range: 0.65–0.96 GHz and 1.4–2.7 GHz.
- The current consumption is measured in normal operating mode (audio link using e2e wireless 4.0). Due to the settling behaviour of hearing aids, the battery current is measured 3 minutes after turning on.
- The battery runtime is based on the given current consumption. The actual battery runtime is determined by battery quality, usage and activated feature set.

Note: Due to the design of the hearing aid, not all earwear couplings will fit inside the charger.

Please consult the data sheet of the available charger for relevant technical information.

Special note for instruments with built-in lithium-ion rechargeable battery

The runtime of all lithium-ion rechargeable batteries reduces over time. The estimates are based on fresh lithium-ion rechargeable battery capacity. Under normal operating conditions, the battery will retain up to 80 % of its initial capacity after 3 years of use. Please note that battery performance will vary depending on individual usage patterns and environmental conditions.

RIC LI 81

Data Sheet

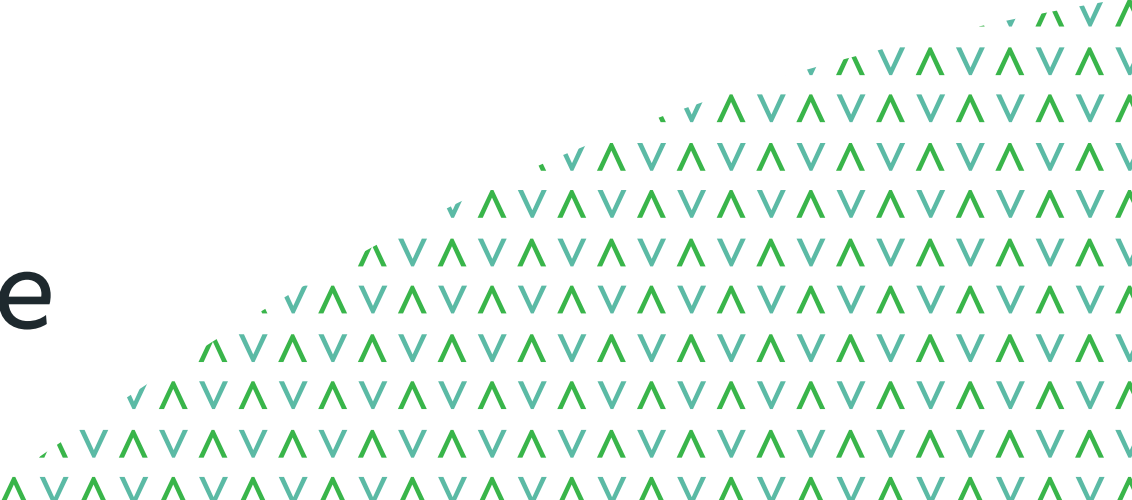
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RIC LI 81 | Technical Data

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OSPL 90 (peak)	110 dB SPL	120 dB SPL	119 dB SPL	129 dB SPL
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AI-DI		4.0 dB		4.0 dB
Latency		< 15 ms		< 15 ms
Inductive coil sensitivity				
MASL (1 mA/m) at 1.6 kHz		—	—	—
HFA MASL (1 mA/m)		—	—	—
HFA SPLITS (left/right)		—	—	—
RSETS (left/right)		—	—	—
HFA SPLIV		—	—	—
Battery				
Battery runtime (without streaming)		up to 28 h		up to 28 h
Battery runtime (incl. 5 h streaming)		up to 24 h		up to 24 h
Cellphone compatibility				
Microphone mode		0.65 – 0.96 GHz 1.4 – 2.7 GHz		0.65 – 0.96 GHz 1.4 – 2.7 GHz
Telecoil mode		—		—

— not applicable

Refer to section “Further information” for additional information on the values.

RIC LI 81 | Technical Data

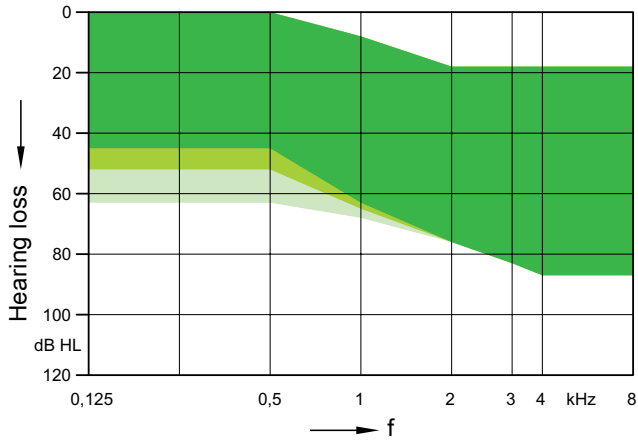
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AI-DI		4.0 dB		4.0 dB
Latency		< 15 ms		< 15 ms
Inductive coil sensitivity				
MASL (1 mA/m) at 1.6 kHz	—	—	—	—
HFA MASL (1 mA/m)	—	—	—	—
HFA SPLITS (left/right)	—	—	—	—
RSETS (left/right)	—	—	—	—
HFA SPLIV	—	—	—	—
Battery				
Battery runtime (without streaming)		up to 28 h		up to 28 h
Battery runtime (incl. 5 h streaming)		up to 24 h		up to 24 h
Cellphone compatibility				
Microphone mode		0.65 – 0.96 GHz 1.4 – 2.7 GHz		0.65 – 0.96 GHz 1.4 – 2.7 GHz
Telecoil mode		—		—

— not applicable

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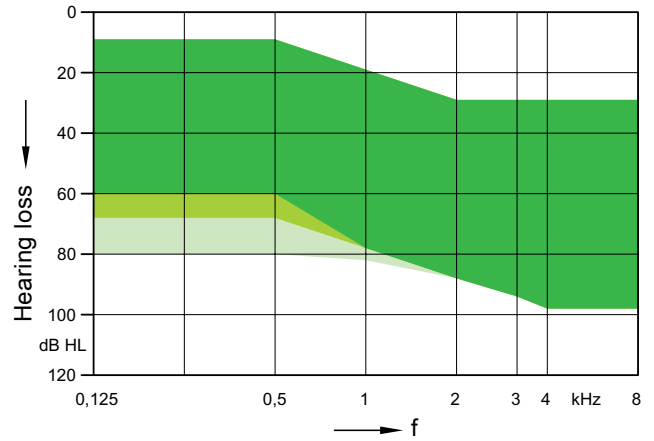
RIC LI 81 | Fitting Range

S-Receiver



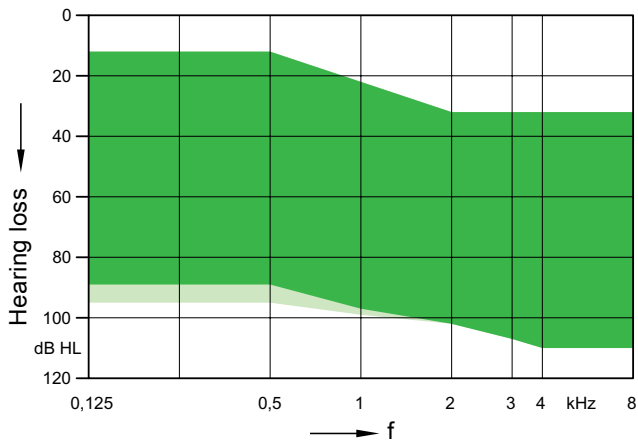
Eartip 3.0 Open
 + Sleeve 3.0 Power
 + + Earmold 3.0

M-Receiver



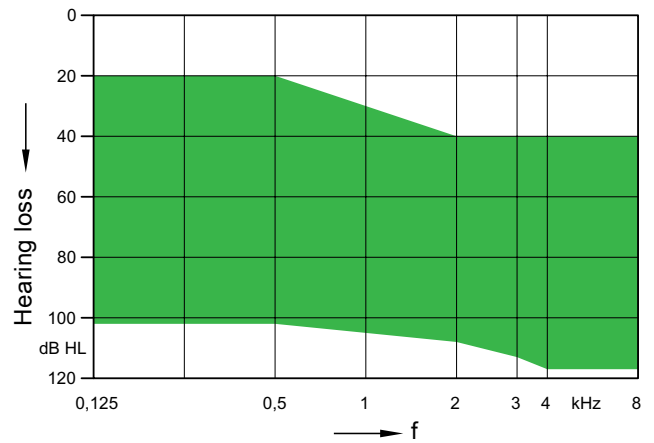
Eartip 3.0 Open
 + Sleeve 3.0 Power
 + + Earmold 3.0

P-Receiver



Sleeve 3.0 Power
 + Earmold 3.0

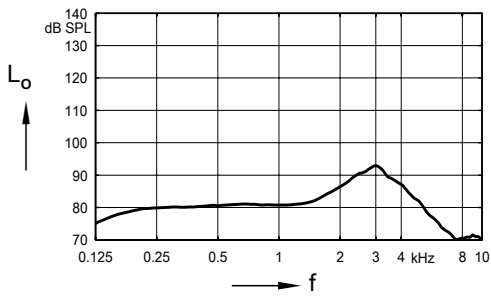
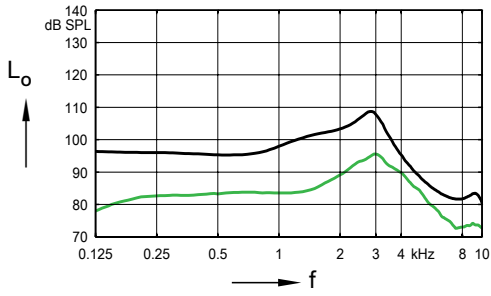
HP-Receiver



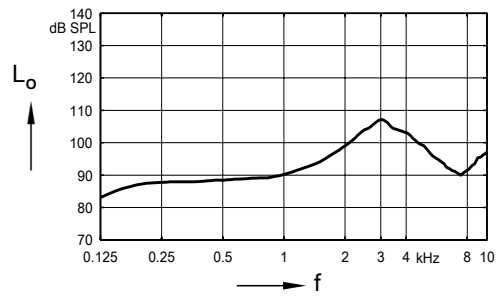
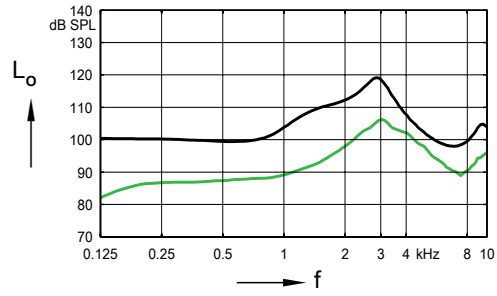
Custom Shell (no vent)

S-Receiver (Sleeve 3.0 Power) | Basic Data

2 ccm coupler

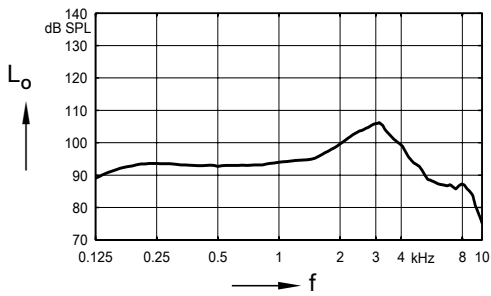
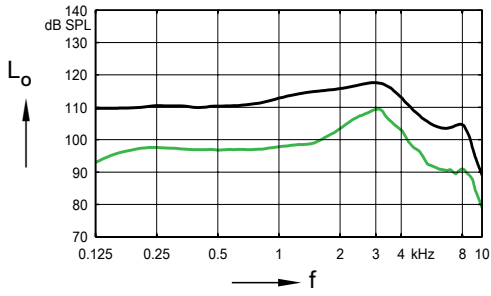


Ear simulator

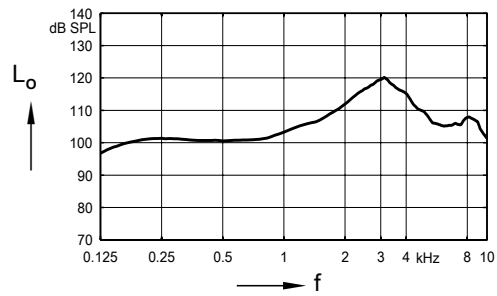
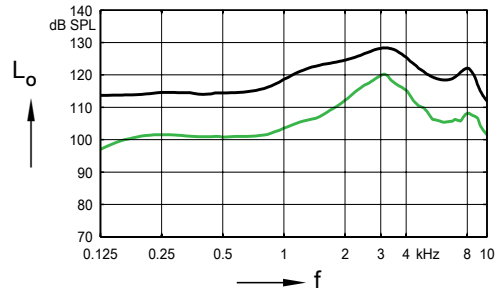


M-Receiver (Sleeve 3.0 Power) | Basic Data

2 ccm coupler

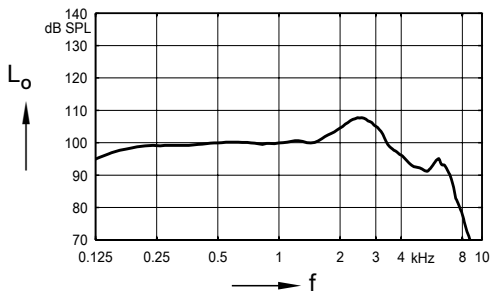
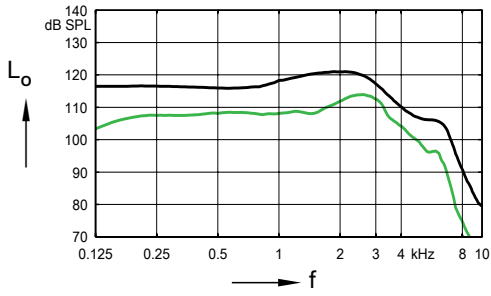


Ear simulator

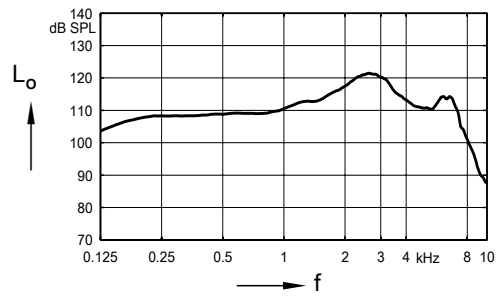
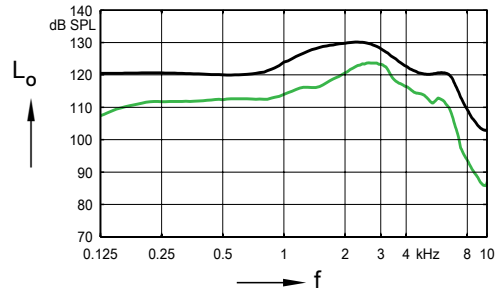


P-Receiver (Earmold 3.0) | Basic Data

2 ccm coupler

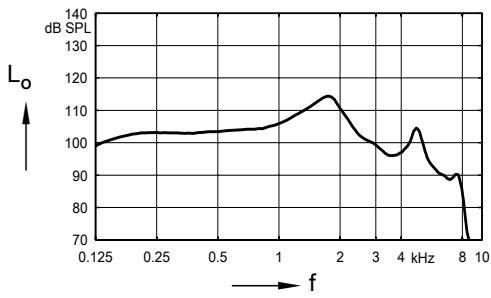
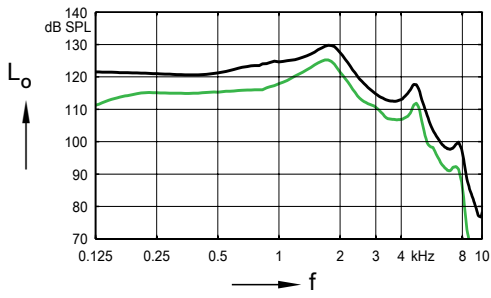


Ear simulator

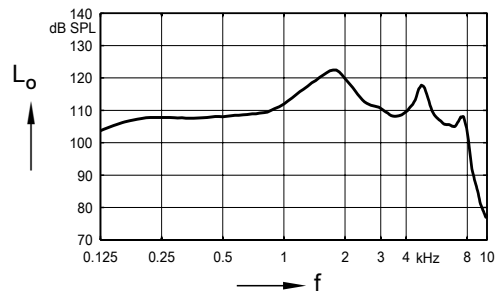
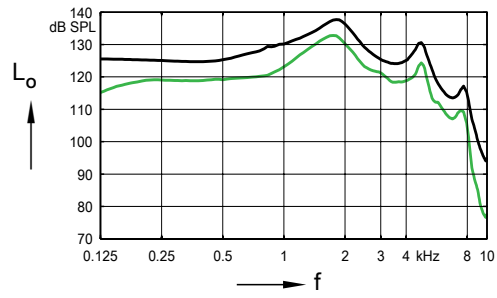


HP-Receiver (Custom Shell) | Basic Data

2 ccm coupler



Ear simulator



RIC LI 81 | Further information

Abbreviations

The following abbreviations are used in this data sheet:

SPL	Sound Pressure Level
OSPL	Output Sound Pressure Level
HFA	High Frequency Average
FOG	Full-On Gain
MASL	Magneto Acoustical Sensitivity Level
SPLITS	Coupler SPL for an Inductive Telephone Simulator
RSETS	Relative Simulated Equivalent Telephone Sensitivity
SPLIV	SPL In a Vertical magnetic field
AI-DI	Articulation Index - Directivity Index
IRIL	Input Related Interference Level
RTF	Reference Test Frequency
ASHA	Audio Streaming for Hearing Aids

Standards and additional information

- All measurements with the 2 ccm coupler were performed according to EN 60118-0:2015 and ANSI S3.22:2014 if applicable.
- All measurements with an ear simulator were performed according to EN 60118-0:1993 + A1:1994 and to DIN 45605 (frequency range) if applicable.
- All Cellphone Compatibility measurements were performed according to EN IEC 60118-13:2020 and ANSI C63.19:2019.
- Cellphone Compatibility definition: It is expected that the hearing aid user can effectively use a compliant wireless device held in a talking position at the ear. Maximum achievable Cellphone Compatibility range: 0.65–0.96 GHz and 1.4–2.7 GHz.
- Curves and figures representing FOG are measured with 20 dB reduction and 70 dB SPL input level.
- Figures representing Equivalent Input Noise incorporate a moderate expansion.
- Tinnitus noiser measurement conditions: all tinnitus single frequency sliders in max position, master volume slider in default position (0 dB) and local volume control in default position.
- Inductive coil sensitivity values, inductive response curves and T ratings apply for instruments with telecoil only.
- The current consumption is measured in reference test setting (RTS) according to the applicable standards. Due to the settling behaviour of hearing aids supporting RF (Radio Frequency), the battery current is measured 3 minutes after turning on (note: no pairing).
- The battery runtime is based on first fit settings using 60 % of the fitting range and an ISTS (International Speech Test Signal) input signal at 65 dB SPL (note: pairing established). The actual battery runtime is determined by battery quality, hearing loss, sound environment, usage and activated feature set. Regarding RF usage, Bluetooth audio streaming from phone to hearing aid and from hearing aid to phone are considered.
- Extended bandwidth up to 10 kHz for 681 devices only.
- The following acoustic connections/ear pieces were used:
 - S-Receiver Unit and M-Receiver Unit: Sleeve 3.0 Power
 - P-Receiver Unit: Earmold 3.0
 - HP-Receiver Unit: Custom Shell

Special note for instruments with built-in lithium-ion rechargeable battery

The runtime of all lithium-ion rechargeable batteries reduces over time. The estimates are based on fresh lithium-ion rechargeable battery capacity. Under normal operating conditions, the battery will retain up to 80 % of its initial capacity after 3 years of use. Please note that battery performance will vary depending on individual usage patterns and environmental conditions.

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Subject to change
without prior notice

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SSWSADSRICLI81V10524

SLIMRIC 81

Data Sheet

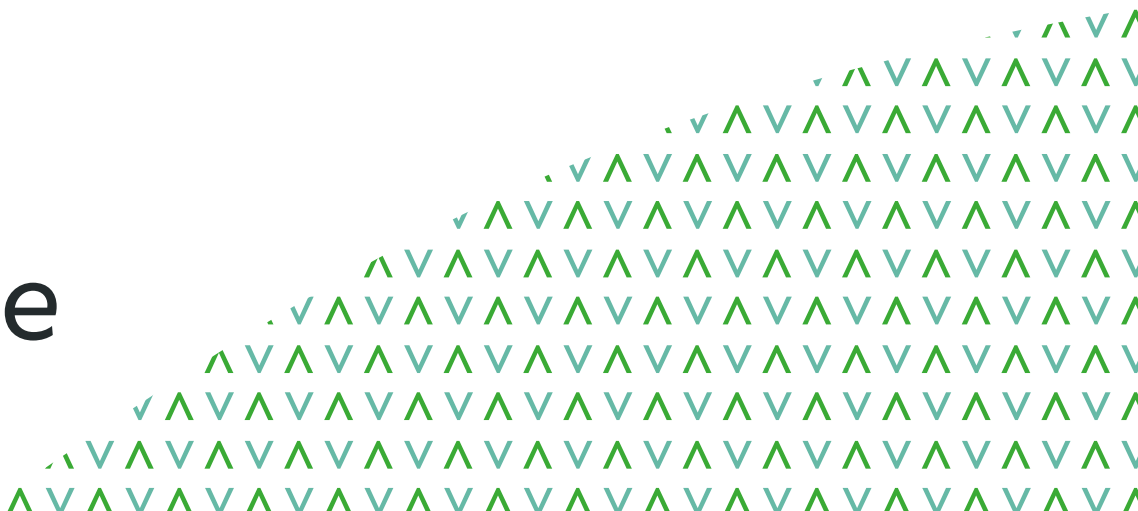
681

581

481

381

281



SLIMRIC 81 | Technical Data

Type	S-Receiver		M-Receiver	
	2 ccm coupler	Ear simulator	2 ccm coupler	Ear simulator
Output sound pressure level				
OSPL90 at 1.6 kHz	—	110 dB SPL	—	123 dB SPL
Maximum OSPL90	110 dB SPL	120 dB SPL	119 dB SPL	129 dB SPL
HFA OSPL90	102 dB SPL	—	115 dB SPL	—
Full-on gain				
FOG at 1.6 kHz	—	44 dB	—	58 dB
Maximum FOG	46 dB	56 dB	60 dB	70 dB
HFA FOG	38 dB	—	51 dB	—
Reference test gain	25 dB	35 dB	38 dB	48 dB
Frequency, noise and directivity				
Frequency range	681 581 481, 381, 281	100 – 10000 Hz 100 – 8700 Hz 100 – 8200 Hz	100 – 10000 Hz 100 – 8800 Hz 100 – 8300 Hz	100 – 9500 Hz 100 – 8700 Hz 100 – 8200 Hz
Equivalent input noise		16 dB SPL	19 dB SPL	16 dB SPL
Total harmonic distortion at 500 / 800 / 1600 / 3200 Hz		1 / 1 / 1 / 1 %	1 / 1 / 2 / — %	1 / 1 / 1 / 1 %
Tinnitus noiser broadband		65 dB SPL	—	70 dB SPL
AI-DI		4.0 dB		4.0 dB
Latency		< 15 ms		< 15 ms
Inductive coil sensitivity				
MASL (1 mA/m) at 1.6 kHz		—	—	—
Full-on HFA-SPLIV (10mA/m)		—	—	—
HFA SPLITS (left/right)		—	—	—
RSETS (left/right)		—	—	—
HFA SPLIV		—	—	—
Battery				
Battery runtime (without streaming)		up to 20 h		up to 20 h
Battery runtime (incl. 5 h streaming)		up to 17 h		up to 17 h
Cellphone compatibility				
Microphone mode		0.65 – 0.96 GHz 1.4 – 2.7 GHz		0.65 – 0.96 GHz 1.4 – 2.7 GHz
Telecoil mode		—		—

— not applicable

Refer to section “Further information” for additional information on the values.

SLIMRIC 81 | Technical Data

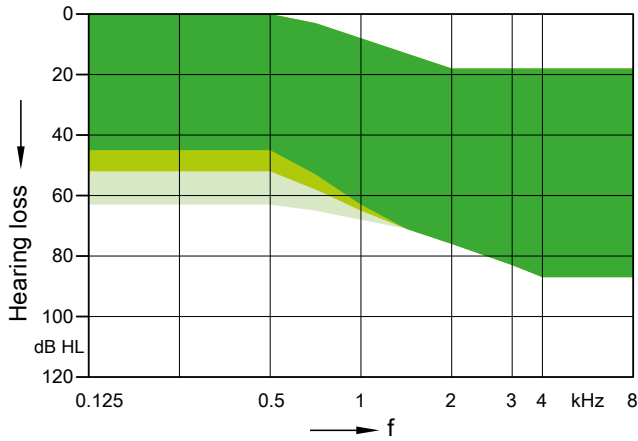
Type	P-Receiver	
	2 ccm coupler	Ear simulator
Output sound pressure level		
OSPL90 at 1.6 kHz	—	129 dB SPL
Maximum OSPL90	122 dB SPL	131 dB SPL
HFA OSPL90	120 dB SPL	—
Full-on gain		
FOG at 1.6 kHz	—	69 dB
Maximum FOG	65 dB	75 dB
HFA FOG	61 dB	—
Reference test gain	43 dB	54 dB
Frequency, noise and directivity		
Frequency range	681 581, 481, 381, 281	100 – 7400 Hz 100 – 7400 Hz
Equivalent input noise	14 dB SPL	16 dB SPL
Total harmonic distortion at 500 / 800 / 1600 / 3200 Hz	1 / 2 / 1 / 1 %	2 / 3 / 3 / — %
Tinnitus noiser broadband	75 dB SPL	—
AI-DI	4.0 dB	
Latency	< 15 ms	
Inductive coil sensitivity		
MASL (1 mA/m) at 1.6 kHz	—	—
Full-on HFA-SPLIV (10mA/m)	—	—
HFA SPLITS (left/right)	—	—
RSETS (left/right)	—	—
HFA SPLIV	—	—
Battery		
Battery runtime (without streaming)	up to 20 h	
Battery runtime (incl. 5 h streaming)	up to 17 h	
Cellphone compatibility		
Microphone mode	0.65 – 0.96 GHz 1.4 – 2.7 GHz	
Telecoil mode	—	

— not applicable

Refer to section “Further information” for additional information on the values.

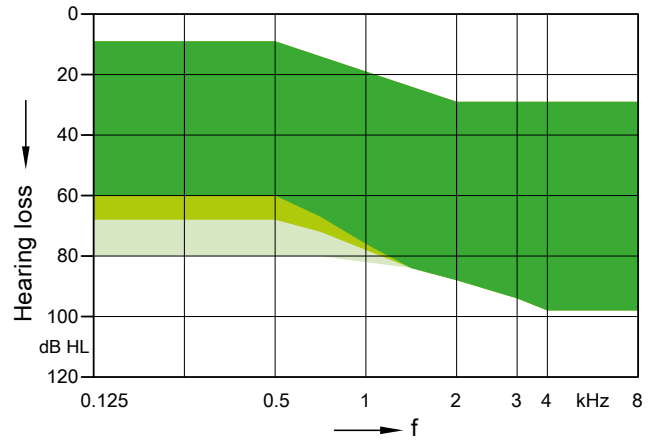
SLIMRIC 81 | Fitting Range

S-Receiver



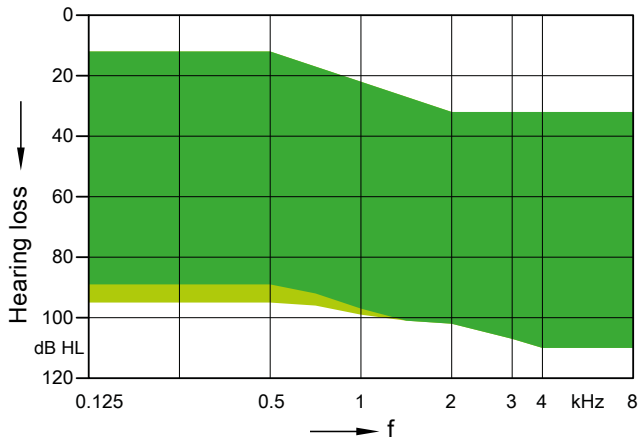
- Eartip 3.0 Open
- + Sleeve 3.0 Power
- + + Earmold 3.0

M-Receiver



- Eartip 3.0 Open
- + Sleeve 3.0 Power
- + + Earmold 3.0

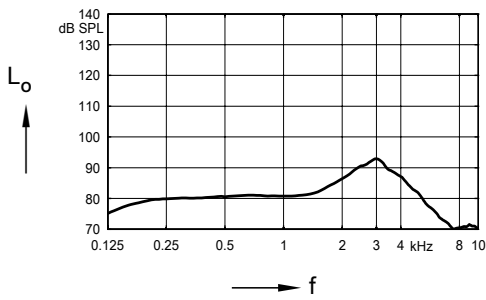
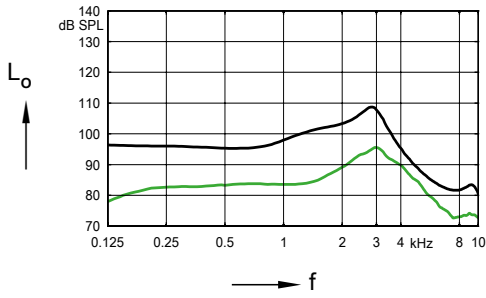
P-Receiver



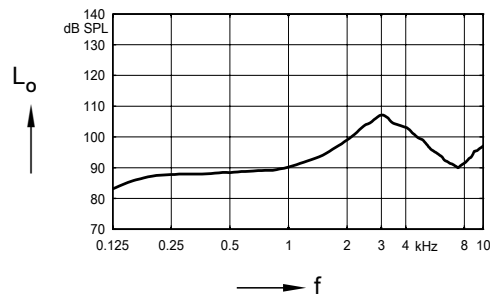
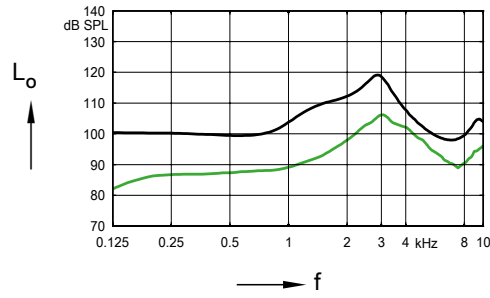
- Sleeve 3.0 Power
- + Earmold 3.0

S-Receiver (Sleeve 3.0 Power) | Basic Data

2 ccm coupler

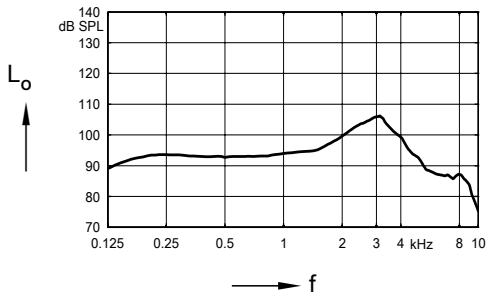
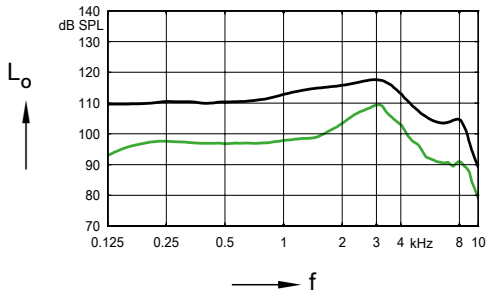


Ear simulator

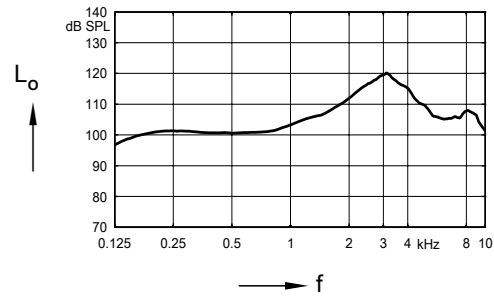
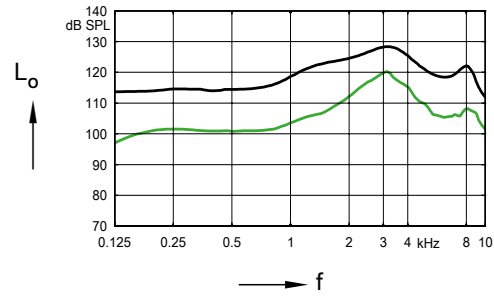


M-Receiver (Sleeve 3.0 Power) | Basic Data

2 ccm coupler

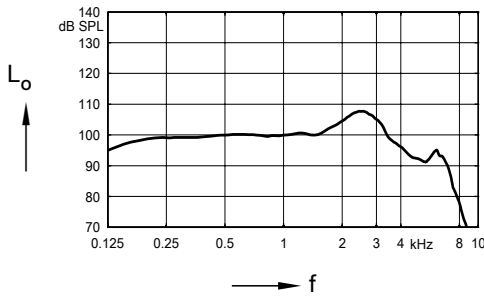
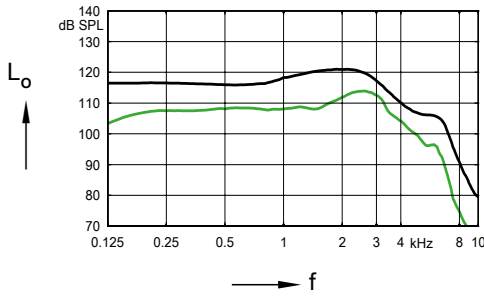


Ear simulator

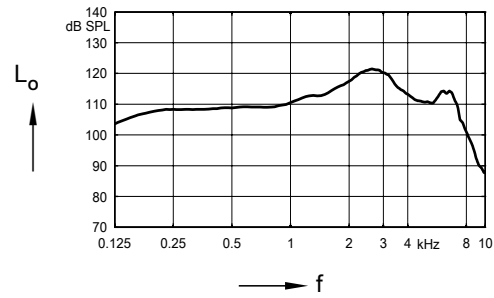
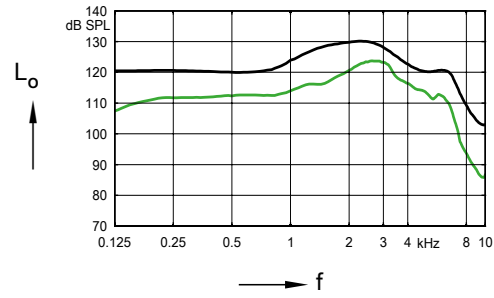


P-Receiver (Earmold 3.0) | Basic Data

2 ccm coupler



Ear simulator



SLIMRIC 81 | Further information

Abbreviations

The following abbreviations are used in this data sheet:

SPL	Sound Pressure Level
OSPL	Output Sound Pressure Level
HFA	High Frequency Average
FOG	Full-On Gain
MASL	Magneto Acoustical Sensitivity Level
SPLITS	Coupler SPL for an Inductive Telephone Simulator
RSETS	Relative Simulated Equivalent Telephone Sensitivity
SPLIV	SPL In a Vertical magnetic field
AI-DI	Articulation Index - Directivity Index
IRIL	Input Related Interference Level
RTF	Reference Test Frequency
ASHA	Audio Streaming for Hearing Aids

Standards and additional information

- All measurements with the 2 ccm coupler were performed according to EN IEC 60118-0:2024 and ANSI S3.22:2014 if applicable.
- All measurements with an ear simulator were performed according to EN 60118-0:1993 + A1:1994 and to DIN 45605 (frequency range) if applicable.
- All Cellphone Compatibility measurements were performed according to EN IEC 60118-13:2020 and ANSI C63.19:2019.
- Cellphone Compatibility definition: It is expected that the hearing aid user can effectively use a compliant wireless device held in a talking position at the ear. Maximum achievable Cellphone Compatibility range: 0.65–0.96 GHz and 1.4–2.7 GHz.
- Curves and figures representing FOG are measured with 20 dB reduction and 70 dB SPL input level.
- Figures representing Equivalent Input Noise incorporate a moderate expansion.
- Tinnitus noiser measurement conditions: all tinnitus single frequency sliders in max position, master volume slider in default position (0 dB) and local volume control in default position.
- Inductive coil sensitivity values, inductive response curves and T ratings apply for instruments with telecoil only.
- The current consumption is measured in reference test setting (RTS) according to the applicable standards. Due to the settling behaviour of hearing aids supporting RF (Radio Frequency), the battery current is measured 3 minutes after turning on (note: no pairing).
- The battery runtime is based on first fit settings using 60 % of the fitting range and an ISTS (International Speech Test Signal) input signal at 65 dB SPL (note: pairing established). The actual battery runtime is determined by battery quality, hearing loss, sound environment, usage and activated feature set. Regarding RF usage, Bluetooth audio streaming from phone to hearing aid and from hearing aid to phone are considered.
- Extended bandwidth up to 10 kHz for 681 devices only.
- The following acoustic connections/ear pieces were used:
 - S-Receiver Unit and M-Receiver Unit: Sleeve 3.0 Power
 - P-Receiver Unit: Earmold 3.0

Note: Due to the design of the hearing aid, not all earwear couplings will fit inside the charger.

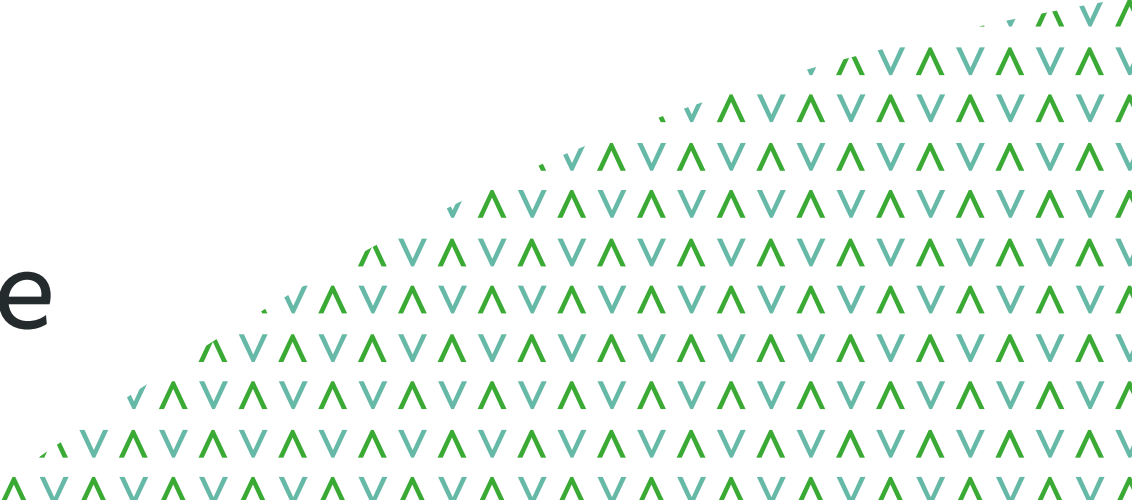
Please consult the data sheet of the available charger for relevant technical information.

Special note for instruments with built-in lithium-ion rechargeable battery

The runtime of all lithium-ion rechargeable batteries reduces over time. The estimates are based on fresh lithium-ion rechargeable battery capacity. Under normal operating conditions, the battery will retain up to 80 % of its initial capacity after 2 years of use. Please note that battery performance will vary depending on individual usage patterns and environmental conditions.

CROS SLIMRIC 81

Data Sheet



CROS SLIMRIC 81

Technical Data

Latency	< 15 ms
Cellphone compatibility	
Microphone mode	0.65 – 0.96 GHz 1.4 – 2.7 GHz
Battery	
Battery runtime	up to 23 h

Refer to section “Further information” for additional information on the values.

Instrument and Accessories

Ingress Protection rating	IP68
Battery type/size	Lithium-ion
Accessories	
Charger	▲
Slim-RIC Travel Charger 2	○
Charging+ Station SR	○

- ▲ mandatory
- optional
- not available

CROS SLIMRIC 81 | Further information

Standards and additional information

- All Cellphone Compatibility measurements were performed according to EN IEC 60118-13:2020 and ANSI C63.19:2019.
- Cellphone Compatibility definition: It is expected that the hearing aid user can effectively use a compliant wireless device held in a talking position at the ear. Maximum achievable Cellphone Compatibility range: 0.65–0.96 GHz and 1.4–2.7 GHz.
- The current consumption is measured in normal operating mode (audio link using e2e wireless 4.0). Due to the settling behaviour of hearing aids, the battery current is measured 3 minutes after turning on.
- The battery runtime is based on the given current consumption. The actual battery runtime is determined by battery quality, usage and activated feature set.

Note: Due to the design of the hearing aid, not all earwear couplings will fit inside the charger.

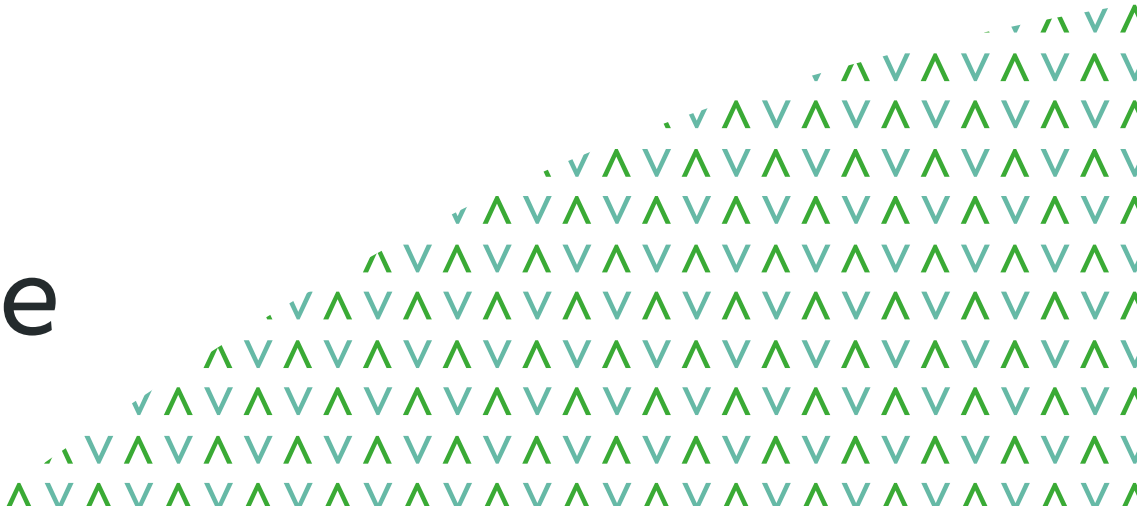
Please consult the data sheet of the available charger for relevant technical information.

Special note for instruments with built-in lithium-ion rechargeable battery

The runtime of all lithium-ion rechargeable batteries reduces over time. The estimates are based on fresh lithium-ion rechargeable battery capacity. Under normal operating conditions, the battery will retain up to 80 % of its initial capacity after 2 years of use. Please note that battery performance will vary depending on individual usage patterns and environmental conditions.

CROS RIC 80

Technical Data



CROS RIC 80 · Features and Accessories

Style specific features

Ingress Protection Rating	IP68
Nanocoated housing	●
RoHS	●

Battery specifications

Battery type	312
Battery voltage	1.3 V
Battery current drain	1.9 mA
Battery runtime (without streaming)	~ 90 h

Cellphone Compatibility

Microphone mode	0.65 – 0.96 GHz 1.4 – 2.7 GHz
-----------------	----------------------------------


● available — not available ○ optional

CROS RIC 80 · Further information

Standards and additional information

- ▶ All Cellphone Compatibility measurements were performed according to IEC 60118-13:2019, EN IEC 60118-13:2020 and ANSI C63.19-2019.
 - ▶ Cellphone Compatibility definition: It is expected that the hearing aid user can effectively use a compliant wireless device held in a talking position at the ear. Maximum achievable Cellphone Compatibility range: 0.65 – 0.96 GHz and 1.4 – 2.7 GHz.
 - ▶ The current consumption is measured in normal operating mode (audio link using e2e wireless 4.0). Due to the settling behaviour of hearing aids, the battery current is measured 3 minutes after turning on.
 - ▶ The battery runtime is based on the given current consumption. The actual battery runtime is determined by battery quality, usage and activated feature set.
-

The information in this document contains general descriptions of the technical options available, which do not always have to be present in individual cases and are subject to change without prior notice. The required features should therefore be specified in each individual case at the time of conclusion of the respective contract.

 **Legal Manufacturer**
WSAUD A/S
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Denmark

CE
0123

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WARNING

Choking hazard posed by small parts.

- ▶ This instrument is not intended for the fitting of infants, children under 3 years or persons of mental incapacity.

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Specsavers

IF CIC LI 81

Data Sheet

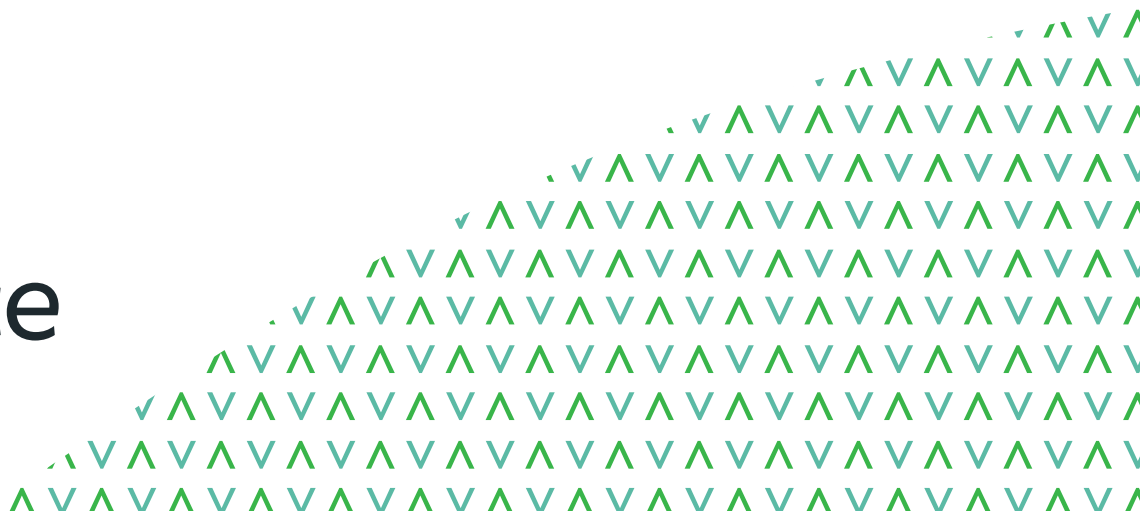
681

581

481

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281

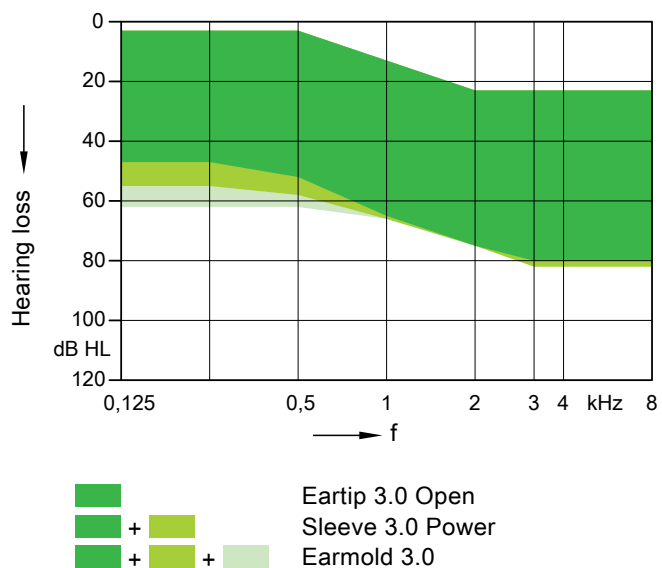


IF CIC LI 81 | Technical Data

		2 ccm coupler	Ear simulator
Output sound pressure level			
OSPL 90 at 1.6 kHz		—	118 dB SPL
OSPL 90 (peak)		114 dB SPL	126 dB SPL
HFA OSPL 90		108 dB SPL	—
Full-on gain			
FOG at 1.6 kHz		—	53 dB
FOG (peak)		50 dB	61 dB
HFA FOG		45 dB	—
Reference test gain		31 dB	43 dB
Frequency, noise and directivity			
Frequency range	681	100 – 9100 Hz	100 – 10300 Hz
	581	100 – 8700 Hz	100 – 8800 Hz
	481, 381, 281	100 – 8200 Hz	100 – 8300 Hz
Equivalent input noise		16 dB SPL	17 dB SPL
Total harmonic distortion at 500 / 800 / 1600 / 3200 Hz		2 / 3 / 2 / 1 %	4 / 6 / 5 / — %
Tinnitus noiser broadband		71 dB SPL	—
AI-DI		—	—
Latency		< 15 ms	
Inductive coil sensitivity			
MASL (1 mA/m) at 1.6 kHz		—	—
HFA MASL (1 mA/m)		—	—
HFA SPLITS (left/right)		—	—
RSETS (left/right)		—	—
HFA SPLIV		—	—
Battery			
Battery runtime		up to 28 h	
Cellphone compatibility			
Microphone mode		0.65 – 0.96 GHz 1.4 – 2.7 GHz	
Telecoil mode		—	
		— not applicable	

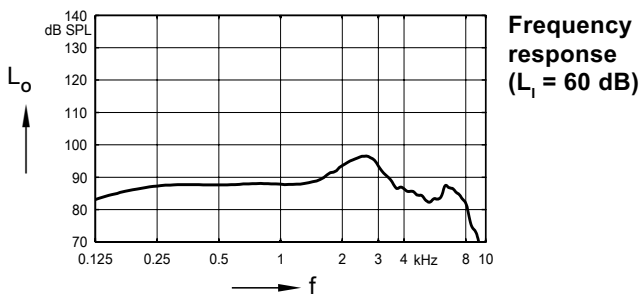
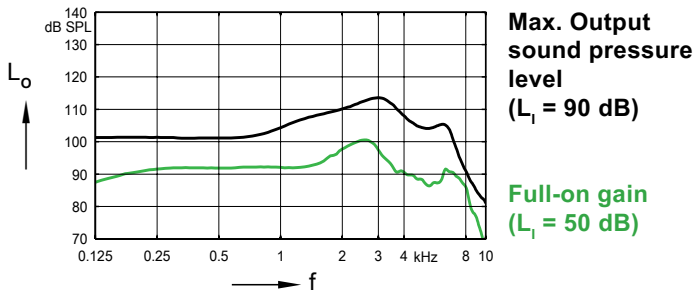
Refer to section “Further information” for additional information on the values.

IF CIC LI 81 | Fitting Range

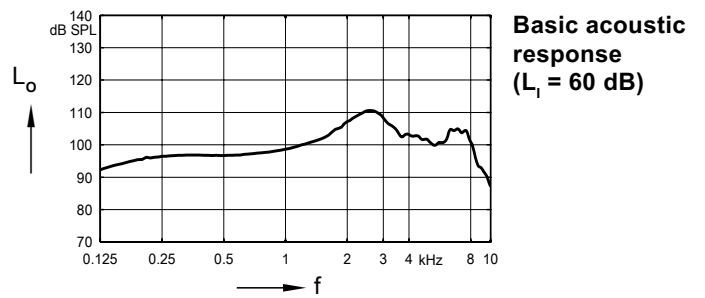
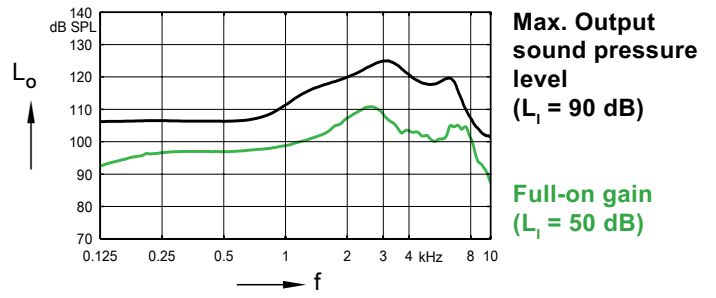


IF CIC LI 81 | Basic Data

2 ccm coupler



Ear simulator



IF CIC LI 81 | Further information

Abbreviations

The following abbreviations are used in this data sheet:

SPL	Sound Pressure Level
OSPL	Output Sound Pressure Level
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FOG	Full-On Gain
MASL	Magneto Acoustical Sensitivity Level
SPLITS	Coupler SPL for an Inductive Telephone Simulator
RSETS	Relative Simulated Equivalent Telephone Sensitivity
SPLIV	SPL In a Vertical magnetic field
AI-DI	Articulation Index - Directivity Index
IRIL	Input Related Interference Level
RTF	Reference Test Frequency
ASHA	Audio Streaming for Hearing Aids

Standards and additional information

- All measurements with the 2 ccm coupler were performed according to EN 60118-0:2015 and ANSI S3.22:2014 if applicable.
- All measurements with an ear simulator were performed according to EN 60118-0:1993 + A1:1994 and to DIN 45605 (frequency range) if applicable.
- All Cellphone Compatibility measurements were performed according to EN IEC 60118-13:2020 and ANSI C63.19:2019.
- Cellphone Compatibility definition: It is expected that the hearing aid user can effectively use a compliant wireless device held in a talking position at the ear. Maximum achievable Cellphone Compatibility range: 0.65–0.96 GHz and 1.4–2.7 GHz.
- Curves and figures representing FOG are measured with 20 dB reduction and 70 dB SPL input level.
- Figures representing Equivalent Input Noise incorporate a moderate expansion.
- Tinnitus noiser measurement conditions: all tinnitus single frequency sliders in max position, master volume slider in default position (0 dB) and local volume control in default position.
- Inductive coil sensitivity values, inductive response curves and T ratings apply for instruments with telecoil only.
- The current consumption is measured in reference test setting (RTS) according to the applicable standards. Due to the settling behaviour of hearing aids supporting RF (Radio Frequency), the battery current is measured 3 minutes after turning on (note: no pairing).
- The battery runtime is based on first fit settings using 60 % of the fitting range and an ISTS (International Speech Test Signal) input signal at 65 dB SPL (note: pairing established). The actual battery runtime is determined by battery quality, hearing loss, sound environment, usage and activated feature set. Regarding RF usage, Bluetooth audio streaming from phone to hearing aid and from hearing aid to phone are considered.
- Extended bandwidth up to 10 kHz for 681 devices only.

Special note for instruments with built-in lithium-ion rechargeable battery

The runtime of all lithium-ion rechargeable batteries reduces over time. The estimates are based on fresh lithium-ion rechargeable battery capacity. Under normal operating conditions, the battery will retain up to 80 % of its initial capacity after 2 years of use. Please note that battery performance will vary depending on individual usage patterns and environmental conditions.

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SSWSADSIFCICLI81V10524

CIC / IIC 81

Data Sheet

681

581

481

381

281

CIC

113/50

- 50 dB / 113 dB SPL (2 ccm coupler)
- 60 dB / 124 dB SPL (Ear simulator)

118/55

- 55 dB / 118 dB SPL (2 ccm coupler)
- 65 dB / 127 dB SPL (Ear simulator)

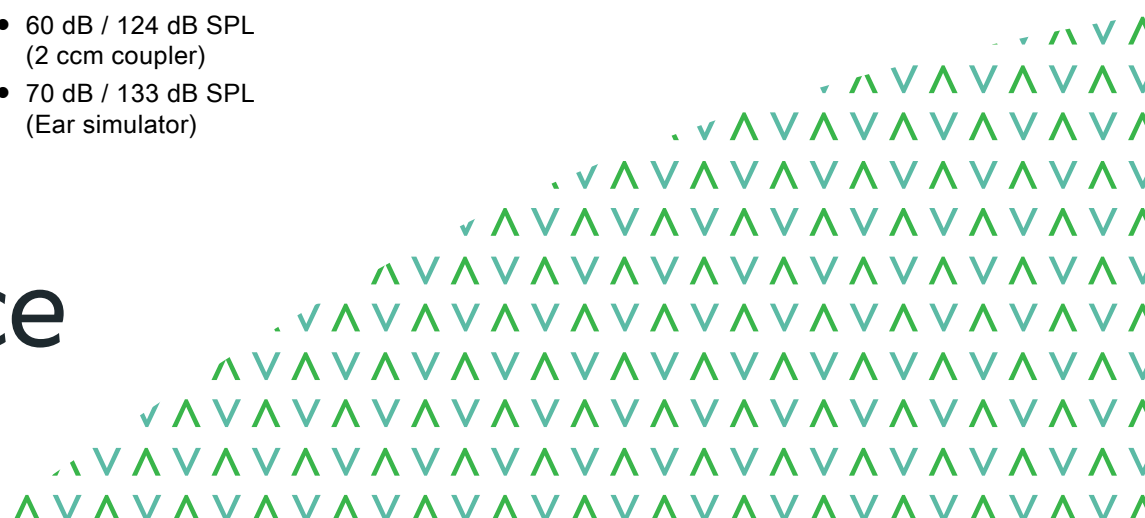
124/60

- 60 dB / 124 dB SPL (2 ccm coupler)
- 70 dB / 133 dB SPL (Ear simulator)

IIC

113/50

- 50 dB / 113 dB SPL (2 ccm coupler)
- 60 dB / 124 dB SPL (Ear simulator)



CIC 81 | Technical Data

Type	113/50		118/55		124/60		
	2 ccm coupler	Ear simulator	2 ccm coupler	Ear simulator	2 ccm coupler	Ear simulator	
Output sound pressure level							
OSPL 90 at 1.6 kHz	—	116 dB SPL	—	117 dB SPL	—	126 dB SPL	
OSPL 90 (peak)	113 dB SPL	124 dB SPL	118 dB SPL	127 dB SPL	124 dB SPL	133 dB SPL	
HFA OSPL 90	107 dB SPL	—	109 dB SPL	—	118 dB SPL	—	
Full-on gain							
FOG at 1.6 kHz	—	52 dB	—	57 dB	—	65 dB	
FOG (peak)	50 dB	60 dB	55 dB	65 dB	60 dB	70 dB	
HFA FOG	45 dB	—	50 dB	—	57 dB	—	
Reference test gain	30 dB	41 dB	32 dB	42 dB	42 dB	51 dB	
Frequency, noise and directivity							
Frequency range	681 581 481, 381, 281	100–10600 Hz 100– 8700 Hz 100– 8200 Hz	100–10600 Hz 100– 8700 Hz 100– 8200 Hz	100–9500 Hz 110– 10600 Hz 100–8700 Hz 110– 8700 Hz 100–8200 Hz 110– 8200 Hz	100–7800 Hz 110– 10600 Hz 100–8700 Hz 110– 8700 Hz 100–8200 Hz 110– 8200 Hz	100–7800 Hz 100–8900 Hz 100–7800 Hz 100–8700 Hz 100–7800 Hz 100–8200 Hz	100–8900 Hz 100–8700 Hz 100–8200 Hz
Equivalent input noise		18 dB SPL 25 dB SPL	18 dB SPL 19 dB SPL	18 dB SPL 19 dB SPL	18 dB SPL 18 dB SPL	18 dB SPL 18 dB SPL	
Total harmonic distortion at 500 / 800 / 1600 / 3200 Hz		2 / 3 / 2 / 1 % 3 / 5 / 5 / — %	1 / 1 / 1 / 1 % 2 / 2 / 2 / — %	1 / 1 / 1 / 1 % 2 / 2 / 2 / — %	1 / 3 / 1 / 1 % 2 / 6 / 2 / — %	1 / 3 / 1 / 1 % 2 / 6 / 2 / — %	
Tinnitus noiser broadband		66 dB SPL —	74 dB SPL —	74 dB SPL —	78 dB SPL —	78 dB SPL —	
AI-DI		—	—	—	—	—	
Latency		< 15 ms	< 15 ms	< 15 ms	< 15 ms	< 15 ms	
Inductive coil sensitivity							
MASL (1 mA/m) at 1.6 kHz		— —	— —	— —	— —	— —	
HFA MASL (1 mA/m)		— —	— —	— —	— —	— —	
HFA SPLITS (left/right)		— —	— —	— —	— —	— —	
RSETS (left/right)		— —	— —	— —	— —	— —	
HFA SPLIV		— —	— —	— —	— —	— —	
Battery							
Battery voltage		1.3 V	1.3 V	1.3 V	1.3 V	1.3 V	
Battery current drain		1.0 mA 1.0 mA	1.0 mA 1.0 mA	1.0 mA 1.0 mA	1.0 mA 1.0 mA	1.0 mA 1.0 mA	
Battery runtime		up to 75 h	up to 75 h	up to 75 h	up to 75 h	up to 75 h	
Cellphone compatibility							
Microphone mode		0.65 – 0.96 GHz 1.4 – 2.7 GHz	0.65 – 0.96 GHz 1.4 – 2.7 GHz	0.65 – 0.96 GHz 1.4 – 2.7 GHz	0.65 – 0.96 GHz 1.4 – 2.7 GHz	0.65 – 0.96 GHz 1.4 – 2.7 GHz	
Telecoil mode		—	—	—	—	—	

— not applicable

Refer to section “Further information” for additional information on the values.

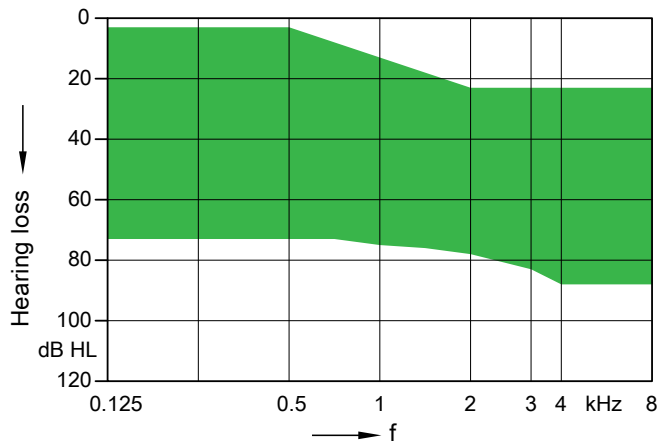
IIC 81 | Technical Data

Type	113/50		
	2 ccm coupler	Ear simulator	
Output sound pressure level			
OSPL 90 at 1.6 kHz	—	117 dB SPL	
OSPL 90 (peak)	113 dB SPL	124 dB SPL	
HFA OSPL 90	108 dB SPL	—	
Full-on gain			
FOG at 1.6 kHz	—	50 dB	
FOG (peak)	50 dB	60 dB	
HFA FOG	44 dB	—	
Reference test gain	31 dB	42 dB	
Frequency, noise and directivity			
Frequency range	681 581 481, 381, 281	100–9500 Hz 100–8700 Hz 100–8200 Hz	100–10600 Hz 100– 8700 Hz 100– 8200 Hz
Equivalent input noise	21 dB SPL	23 dB SPL	
Total harmonic distortion at 500 / 800 / 1600 / 3200 Hz	3 / 3 / 2 / 1 %	4 / 6 / 5 / — %	
Tinnitus noiser broadband	67 dB SPL	—	
AI-DI	—		
Latency	< 15 ms		
Inductive coil sensitivity			
MASL (1 mA/m) at 1.6 kHz	—	—	
HFA MASL (1 mA/m)	—	—	
HFA SPLITS (left/right)	—	—	
RSETS (left/right)	—	—	
HFA SPLIV	—	—	
Battery			
Battery voltage	1.3 V		
Battery current drain	1.0 mA	1.0 mA	
Battery runtime	up to 75 h		
Cellphone compatibility			
Microphone mode	0.65 – 0.96 GHz 1.4 – 2.7 GHz		
Telecoil mode	—		
— not applicable			

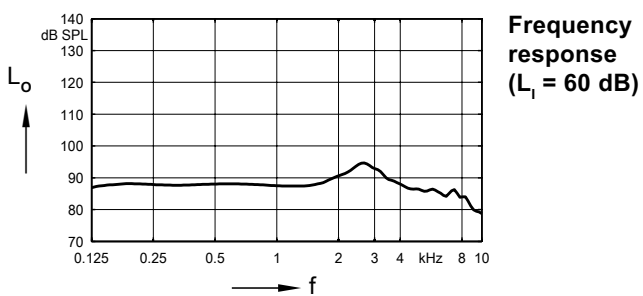
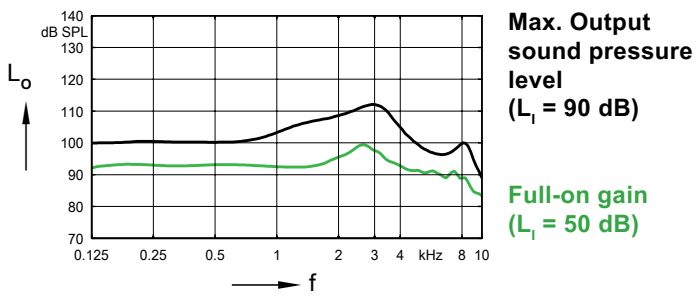
Refer to section “Further information” for additional information on the values.

CIC 81 | Basic Data

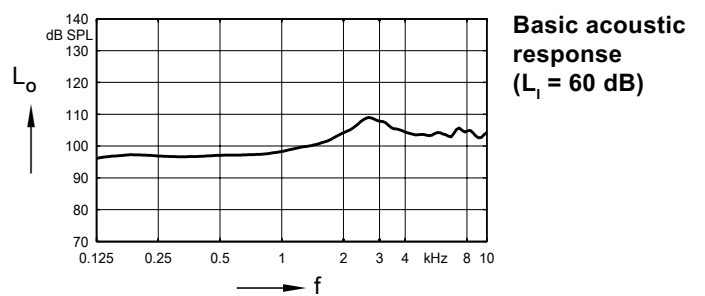
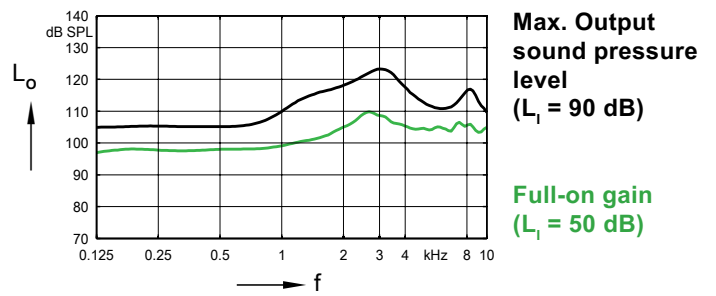
113/50



2 ccm coupler

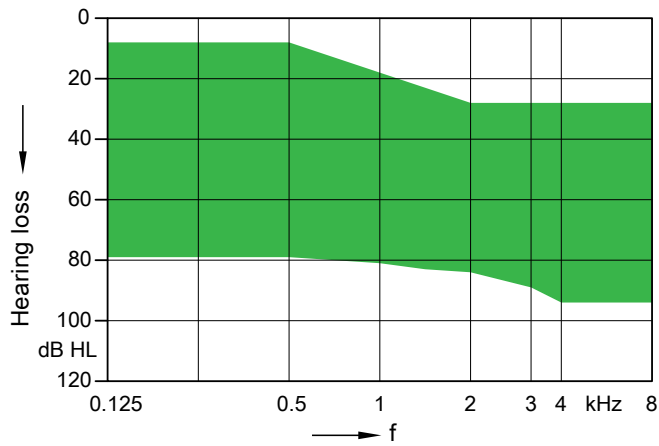


Ear simulator

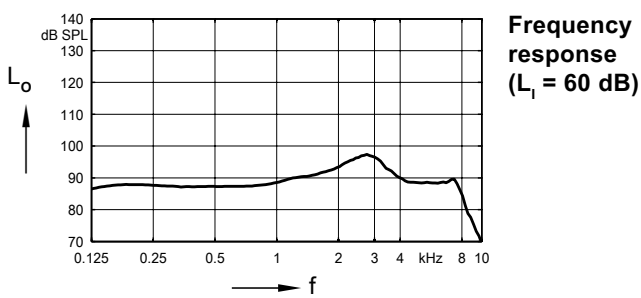
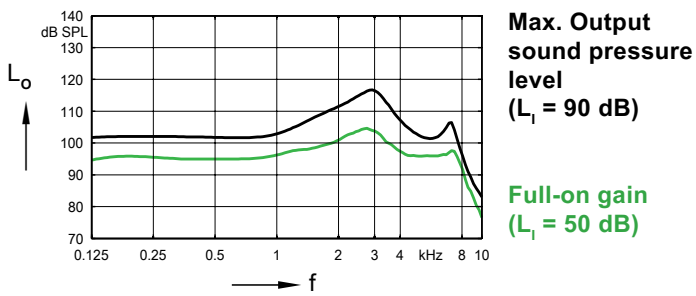


CIC 81 | Basic Data

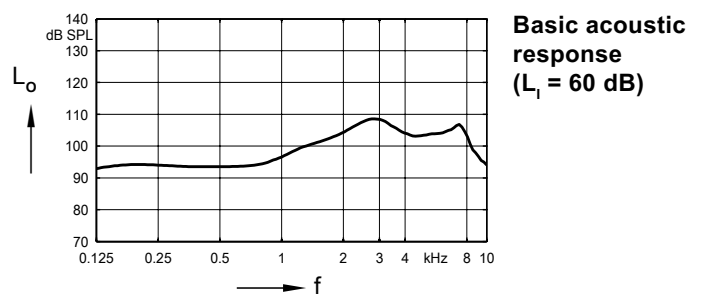
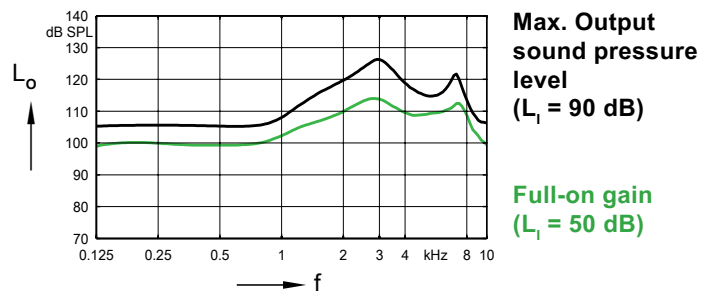
118/55



2 ccm coupler

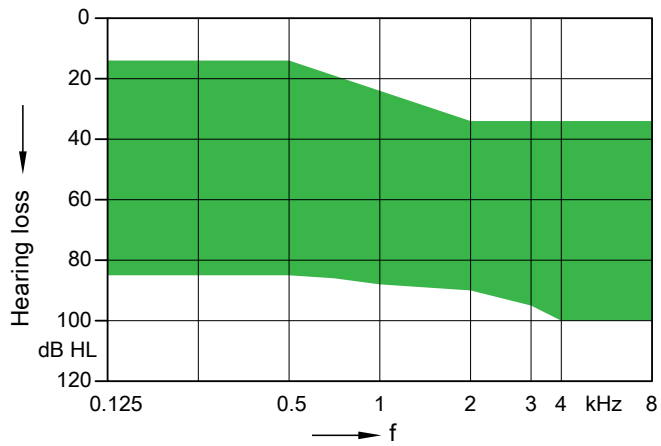


Ear simulator

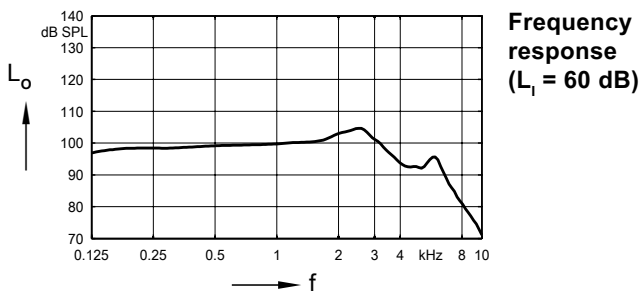
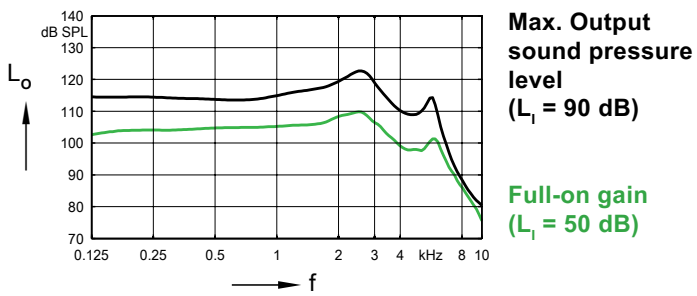


CIC 81 | Basic Data

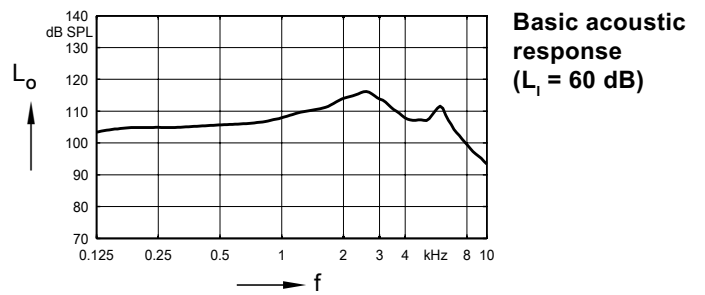
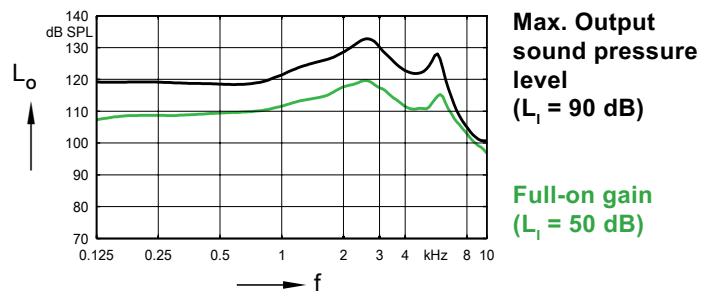
124/60



2 ccm coupler

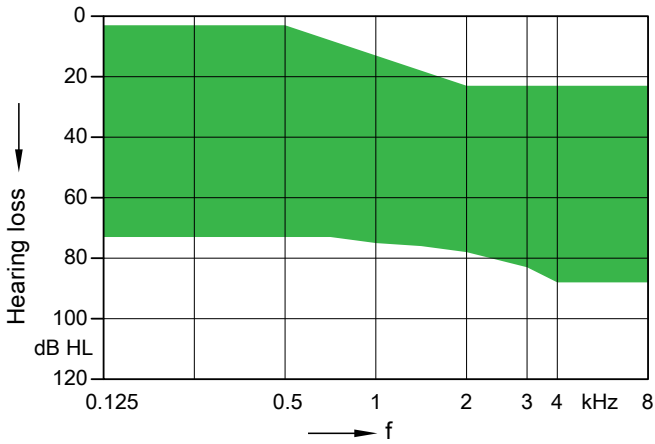


Ear simulator

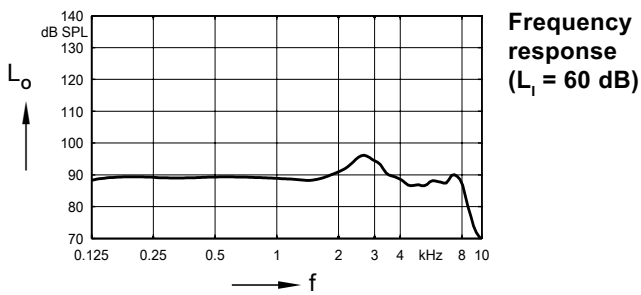
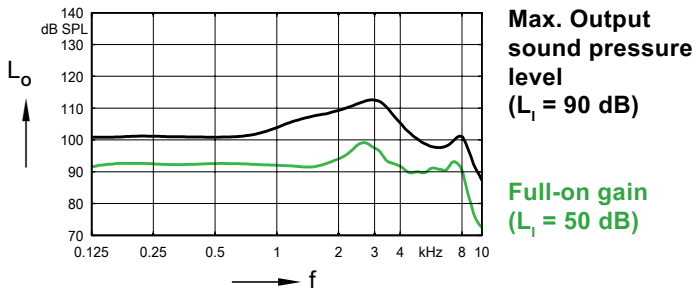


IIC 81 | Basic Data

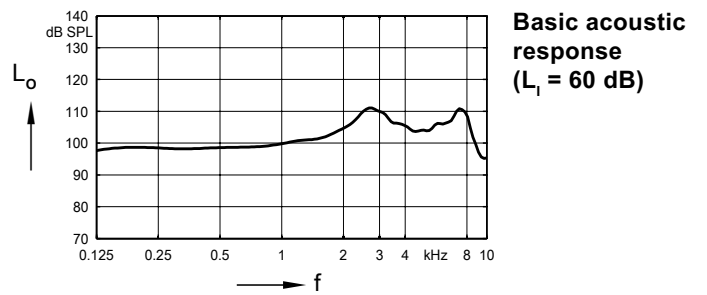
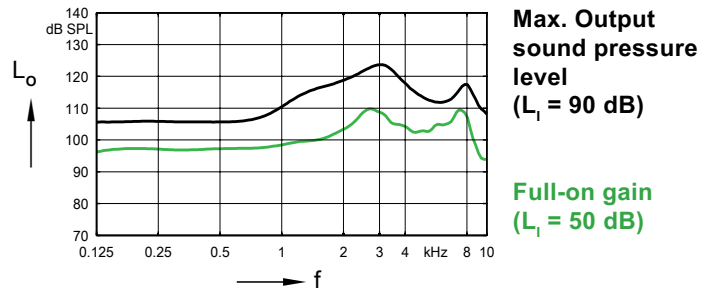
113/50



2 ccm coupler



Ear simulator



CIC / IIC 81 | Further information

Abbreviations

The following abbreviations are used in this data sheet:

SPL	Sound Pressure Level
OSPL	Output Sound Pressure Level
HFA	High Frequency Average
FOG	Full-On Gain
MASL	Magneto Acoustical Sensitivity Level
SPLITS	Coupler SPL for an Inductive Telephone Simulator
RSETS	Relative Simulated Equivalent Telephone Sensitivity
SPLIV	SPL In a Vertical magnetic field
AI-DI	Articulation Index-Directivity Index
IRIL	Input Related Interference Level
RTF	Reference Test Frequency
ASHA	Audio Streaming for Hearing Aids

Standards and additional information

- All measurements with the 2 ccm coupler were performed according to EN 60118-0:2015 and ANSI S3.22:2014 if applicable.
- All measurements with an ear simulator were performed according to EN 60118-0:1993 + A1:1994 and to DIN 45605 (frequency range) if applicable.
- All Cellphone Compatibility measurements were performed according to EN IEC 60118-13:2020 and ANSI C63.19:2019.
- Cellphone Compatibility definition: It is expected that the hearing aid user can effectively use a compliant wireless device held in a talking position at the ear. Maximum achievable Cellphone Compatibility range: 0.65–0.96 GHz and 1.4–2.7 GHz.
- Curves and figures representing FOG are measured with 20 dB reduction and 70 dB SPL input level.
- Figures representing Equivalent Input Noise incorporate a moderate expansion.
- Tinnitus noiser measurement conditions: all tinnitus single frequency sliders in max position, master volume slider in default position (0 dB) and local volume control in default position.
- Inductive coil sensitivity values, inductive response curves and T ratings apply for instruments with telecoil only.
- The current consumption is measured in reference test setting (RTS) according to the applicable standards. Due to the settling behaviour of hearing aids supporting RF (Radio Frequency), the battery current is measured 3 minutes after turning on (note: no pairing).
- The battery runtime is based on first fit settings using 60 % of the fitting range and an ISTS (International Speech Test Signal) input signal at 65 dB SPL (note: pairing established). The actual battery runtime is determined by battery quality, hearing loss, sound environment, usage and activated feature set. Regarding RF usage, Bluetooth audio streaming from phone to hearing aid and from hearing aid to phone are considered.
- Extended bandwidth up to 10 kHz for 681 devices only.

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SSWSADSIICCIC81V10524

SP x80

Data Sheet

380

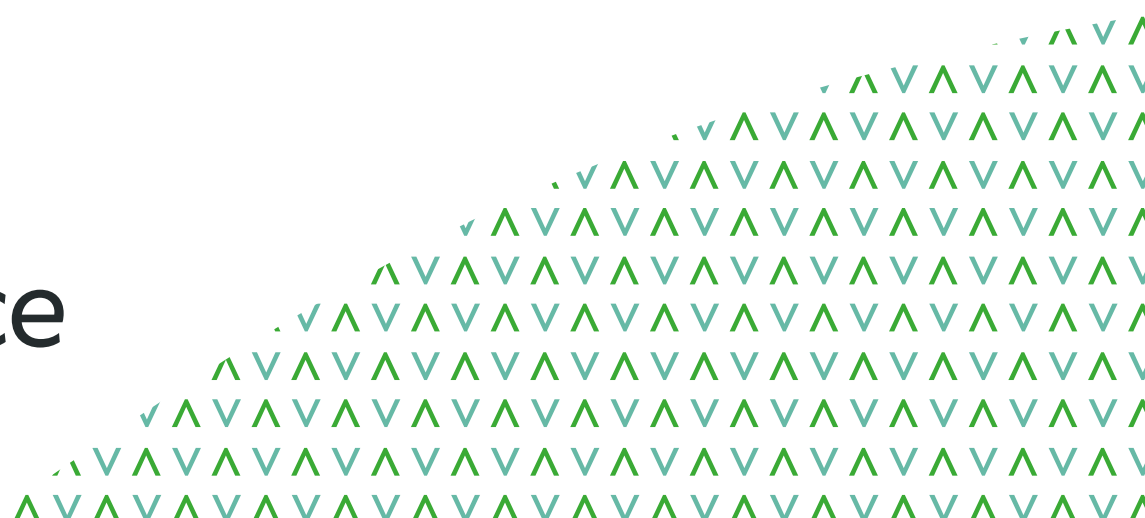
280

180



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Specsavers
Advance
Your hearing, your way

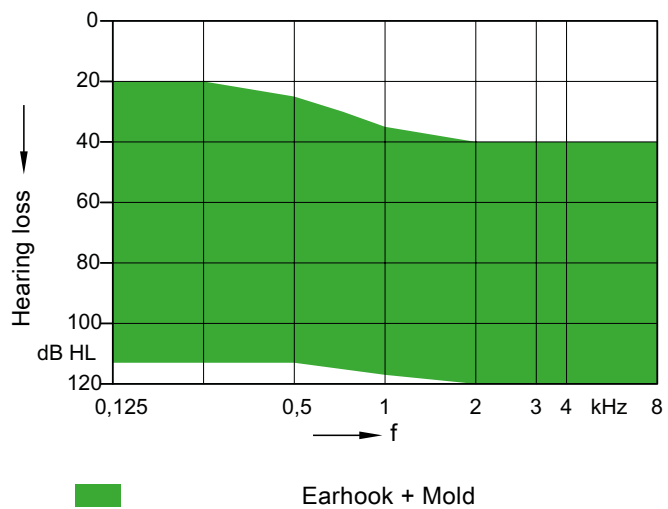


SP x80 · Technical Data

Type	Earhook	
	2 ccm coupler	Ear simulator
Output sound pressure level		
OSPL 90 at 1.6 kHz	–	134 dB SPL
OSPL 90 (peak)	140 dB SPL	143 dB SPL
HFA OSPL 90	132 dB SPL	–
Gain		
FOG at 1.6 kHz	–	77 dB
FOG (peak)	82 dB	85 dB
HFA FOG	74 dB	–
Reference test gain	55 dB	59 dB
Frequency, noise and directivity		
Frequency range	100 – 5300 Hz	100 – 5400 Hz
Equivalent input noise	16 dB SPL	17 dB SPL
Total harmonic distortion at 500 / 800 / 1600 / 3200 Hz	5 / 1 / 1 / 1 %	5 / 1 / 1 / – %
Tinnitus Function broadband	94 dB SPL	–
AI-DI	3.8 dB	
Latency	< 15 ms	
Inductive coil sensitivity		
MASL (1 mA/m) at 1.6 kHz	–	105 dB SPL
HFA MASL (1 mA/m)	103 dB SPL	–
HFA SPLITS (left/right)	114 / 114 dB SPL	–
RSETS (left/right)	-1 / -1 dB	–
HFA SPLIV	115 dB SPL	–
Battery		
Battery voltage	1.3 V	
Battery current drain	2.2 mA	1.8 mA
Battery runtime (without streaming)	up to 277 h	
Battery runtime (incl. 60 h streaming)	up to 217 h	
Cellphone Compatibility		
Microphone mode	0.65 – 0.96 GHz 1.4 – 2.7 GHz	
Telecoil mode	0.65 – 0.96 GHz 1.4 – 2.7 GHz	

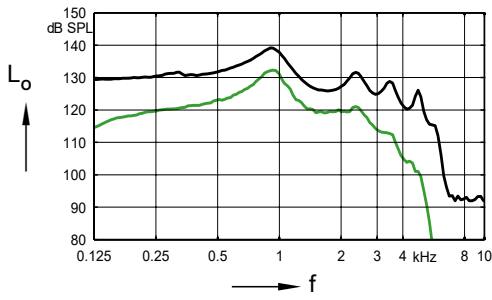
Please find additional information to the values on page “Further information”.

SP x80 · Fitting Range



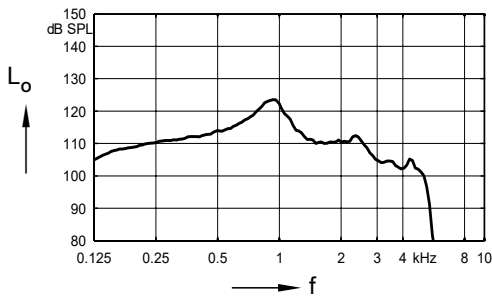
Earhook · Basic Data

2 ccm coupler



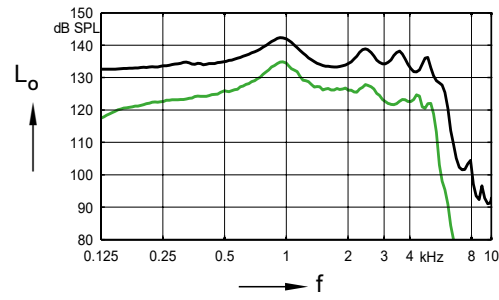
Max. Output sound pressure level
($L_1 = 90$ dB)

Full on gain
($L_1 = 50$ dB)



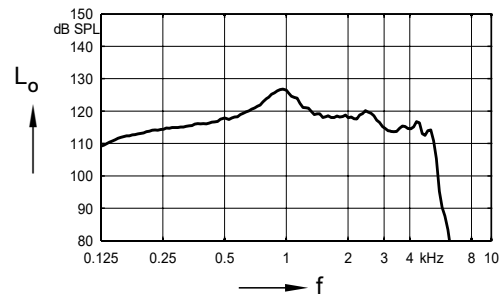
Frequency response
($L_1 = 60$ dB)

Ear simulator



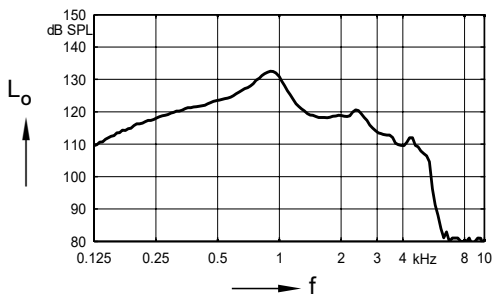
Max. Output sound pressure level
($L_1 = 90$ dB)

Full on gain
($L_1 = 50$ dB)

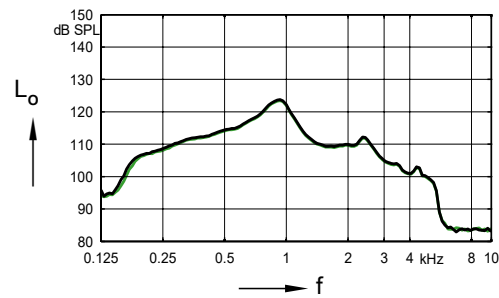


Basic acoustic response
($L_1 = 60$ dB)

Inductive response

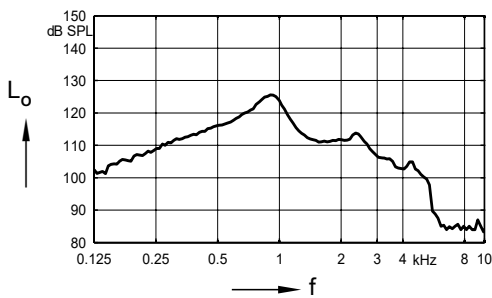


Inductive response
($H = 10$ mA/m)



SPLITS curve left
($H = 31.6$ mA/m)

SPLITS curve right
($H = 31.6$ mA/m)



SPLIV curve
($H = 31.6$ mA/m)

SP x80 · Features and Accessories

	380	280	180
Features			
Ingress Protection Rating	IP68	IP68	IP68
Channels / Controls / Programs	16 / 8 / 4	16 / 8 / 4	12 / 6 / 4
Soundpro 2.0	High Res	High Res	High Res
My Voice 2.0 (Own Voice Processing)	—	—	—
Direct Streaming	Made for iPhone/ Android version 10 or higher (ASHA)	Made for iPhone/ Android version 10 or higher (ASHA)	—
Headset Mode for iOS	—	—	—
Auto Volume	●	●	—
Wireless Sync	●	●	●
Directionality	Automatic adaptive, iOmni	Automatic adaptive, iOmni	Automatic fixed omni
Noise Reduction	Noise Management, SoundSmoothing	Noise Management	Noise Management
Wind Noise Reduction	●	—	—
Auto Echo Reducer	—	—	—
Reverb Reducer	—	—	—
Bandwidth: Extension/Compression	— / ●	— / ●	— / —
Music Enhancer (presets)	1	—	—
Tinnitus Function	Sound Therapy, Notch Therapy	—	—
XPhone	●	●	—
Acclimatization / Data Logging	● / ●	● / ●	— / ●
T-Coil	●	●	●
Battery door – tamper proof	○	○	○
Battery size	675	675	675
Accessories			
Smart Key	○	○	○
Smart Transmitter 2,4	○	○	—
Smart Mic	○	○	—
myRemote APP	○	○	○
Noahlink Wireless	mandatory	mandatory	mandatory
Small earhook	○	○	○
BiCore CROS R-Li	○	○	—
BiCore CROS R312	○	○	—
BiCore CROS SR	—	—	—

● available — not available ○ optional

SP x80 · Further information

Abbreviations

The following abbreviations are used in this datasheet:

SPL	Sound Pressure Level
OSPL	Output Sound Pressure Level
HFA	High Frequency Average
FOG	Full-On Gain
MASL	Magneto Acoustical Sensitivity Level
SPLITS	Coupler SPL for an Inductive Telephone Simulator
RSETS	Relative Simulated Equivalent Telephone Sensitivity
SPLIV	SPL In a Vertical magnetic field
AI-DI	Articulation Index - Directivity Index
IRIL	Input Related Interference Level
RTF	Reference Test Frequency
ASHA	Audio streaming for hearing aids

Standards and additional information

- All measurements with the 2 ccm coupler were performed according to ANSI S3.22-2014 and IEC 60118-0:2015 if applicable.
- All measurements with an ear simulator were performed according to IEC 60118-0:1983 + A1:1994 and to DIN 45605 (frequency range) if applicable.
- All Cellphone Compatibility measurements were performed according to IEC 60118-13:2019, EN IEC 60118-13:2020 and ANSI C63.19-2019.
- Cellphone Compatibility definition: It is expected that the hearing aid user can effectively use a compliant wireless device held in a talking position at the ear. Maximum achievable Cellphone Compatibility range: 0.65–0.96 GHz and 1.4–2.7 GHz.
- Curves and figures representing FOG are measured with 20 dB reduction and 70 dB SPL input level.
- Figures representing Equivalent Input Noise incorporate a moderate expansion.
- Tinnitus noiser measurement conditions: all tinnitus single frequency sliders in max position, master volume slider in default position (0 dB) and local volume control in default position.
- Inductive coil sensitivity values, inductive response curves and T ratings apply for instruments with telecoil only.
- The current consumption is measured in reference test setting (RTS) according to the applicable standards. Due to the settling behaviour of hearing aids supporting RF (radio frequency), the battery current is measured 3 minutes after turning on (note: no pairing).
- The battery runtime is based on first fit settings using 80 % of the fitting range and an ISTS (International Speech Test Signal) input signal at 65 dB SPL (note: pairing established). The actual battery runtime is determined by battery quality, hearing loss, sound environment, usage and activated feature set. Regarding RF usage, Bluetooth audio streaming from phone to hearing aid and from hearing aid to phone are considered.
- Extended bandwidth up to 10 kHz for 680 devices only.
- The following acoustic connections/ear pieces were used:
 - Earhook



“Made for iPhone”, “Made for iPad”, and “Made for iPod” mean that an electronic accessory has been designed to connect specifically to iPhone, iPad, or iPod, respectively, and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. Please note that the use of this accessory with iPhone, iPad, or iPod may affect wireless performance.

The information in this document contains general descriptions of the technical options available, which do not always have to be present in individual cases and are subject to change without prior notice. The required features should therefore be specified in each individual case at the time of conclusion of the respective contract.

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P x80

Data Sheet

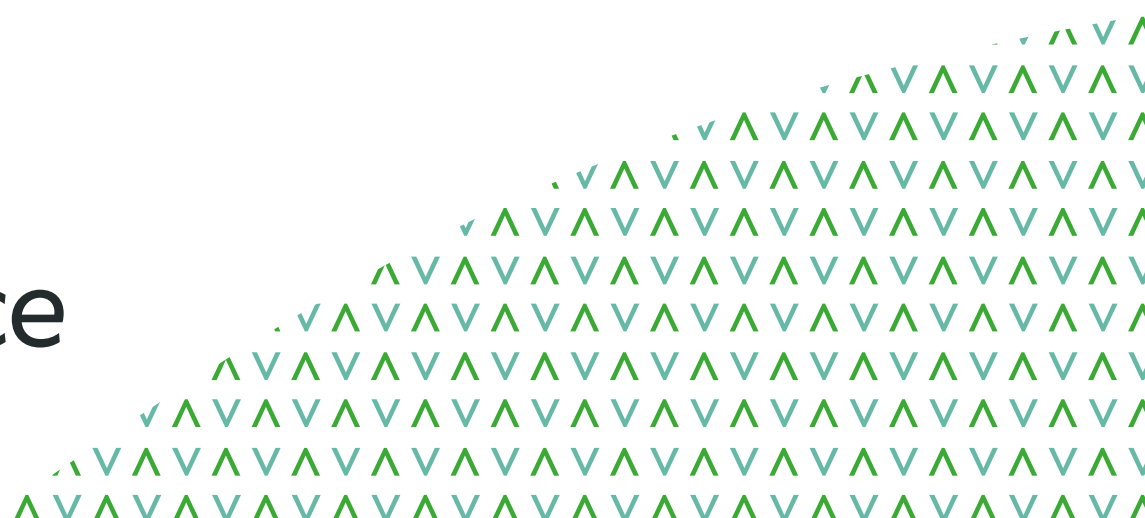
380

280

180



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 iPhone | iPad | iPod



P x80 · Technical Data

Type	Earhook	
	2 ccm coupler	Ear simulator
Output sound pressure level		
OSPL 90 at 1.6 kHz	–	136 dB SPL
OSPL 90 (peak)	135 dB SPL	139 dB SPL
HFA OSPL 90	130 dB SPL	–
Gain		
FOG at 1.6 kHz	–	77 dB
FOG (peak)	77 dB	82 dB
HFA FOG	71 dB	–
Reference test gain	53 dB	61 dB
Frequency, noise and directivity		
Frequency range	100 – 6200 Hz	140 – 6300 Hz
Equivalent input noise	15 dB SPL	15 dB SPL
Total harmonic distortion at 500 / 800 / 1600 / 3200 Hz	4 / 3 / 1 / 1 %	5 / 4 / 1 / – %
Tinnitus Function broadband	80 dB SPL	–
AI-DI	4.0 dB	
Latency	< 15 ms	
Inductive coil sensitivity		
MASL (1 mA/m) at 1.6 kHz	–	106 dB SPL
HFA MASL (1 mA/m)	101 dB SPL	–
HFA SPLITS (left/right)	113 / 113 dB SPL	–
RSETS (left/right)	0 / 0 dB	–
HFA SPLIV	113 dB SPL	–
Battery		
Battery voltage	1.3 V	
Battery current drain	1.9 mA	1.6 mA
Battery runtime (without streaming)	up to 148 h	
Battery runtime (incl. 20 h streaming)	up to 115 h	
Cellphone Compatibility		
Microphone mode	0.65 – 0.96 GHz 1.4 – 2.7 GHz	
Telecoil mode	0.65 – 0.96 GHz 1.4 – 2.7 GHz	

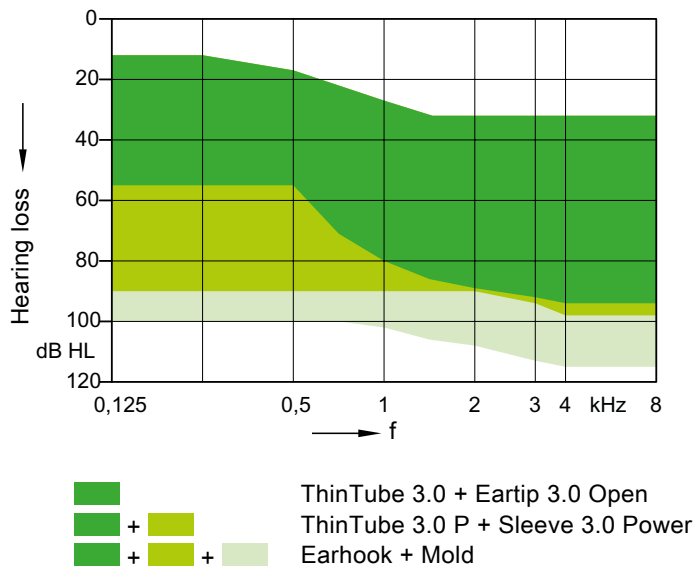
Please find additional information to the values on page “Further information”.

P x80 · Technical Data

Type	ThinTube 3.0		ThinTube 3.0 P	
	2 ccm coupler	Ear simulator	2 ccm coupler	Ear simulator
Output sound pressure level				
OSPL 90 at 1.6 kHz	–	123 dB SPL	–	129 dB SPL
OSPL 90 (peak)	129 dB SPL	133 dB SPL	130 dB SPL	134 dB SPL
HFA OSPL 90	118 dB SPL	–	122 dB SPL	–
Gain				
FOG at 1.6 kHz	–	62 dB	–	72 dB
FOG (peak)	66 dB	69 dB	70 dB	74 dB
HFA FOG	57 dB	–	64 dB	–
Reference test gain	41 dB	48 dB	46 dB	54 dB
Frequency, noise and directivity				
Frequency range	100 – 6200 Hz	100 – 6400 Hz	100 – 5300 Hz	140 – 5200 Hz
Equivalent input noise	17 dB SPL	17 dB SPL	17 dB SPL	17 dB SPL
Total harmonic distortion at 500 / 800 / 1600 / 3200 Hz	1 / 1 / 1 / 1 %	1 / 1 / 2 / – %	2 / 1 / 1 / 1 %	3 / 1 / 2 / – %
Tinnitus Function broadband	80 dB SPL	–	80 dB SPL	–
AI-DI	4.0 dB		4.0 dB	
Latency	< 15 ms		< 15 ms	
Inductive coil sensitivity				
MASL (1 mA/m) at 1.6 kHz	–	92 dB SPL	–	102 dB SPL
HFA MASL (1 mA/m)	86 dB SPL	–	93 dB SPL	–
HFA SPLITS (left/right)	101 / 101 dB SPL	–	105 / 105 dB SPL	–
RSETS (left/right)	0 / 0 dB	–	0 / 0 dB	–
HFA SPLIV	101 dB SPL	–	105 dB SPL	–
Battery				
Battery voltage	1.3 V		1.3 V	
Battery current drain	1.7 mA	1.6 mA	1.6 mA	1.6 mA
Battery runtime (without streaming)	up to 150 h		up to 153 h	
Battery runtime (incl. 20 h streaming)	up to 117 h		up to 123 h	
Cellphone Compatibility				
Microphone mode	0.65 – 0.96 GHz 1.4 – 2.7 GHz		0.65 – 0.96 GHz 1.4 – 2.7 GHz	
Telecoil mode	0.65 – 0.96 GHz 1.4 – 2.7 GHz		0.65 – 0.96 GHz 1.4 – 2.7 GHz	

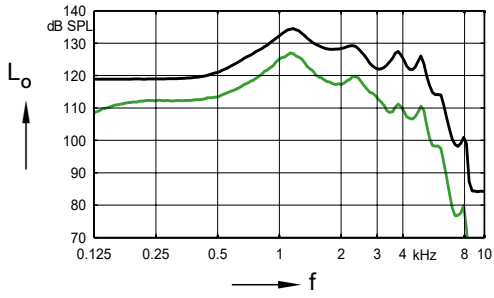
Please find additional information to the values on page “Further information”.

P x80 · Fitting Range



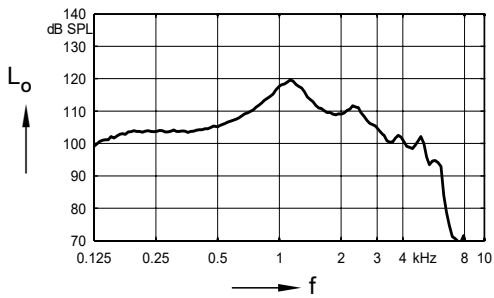
Earhook · Basic Data

2 ccm coupler



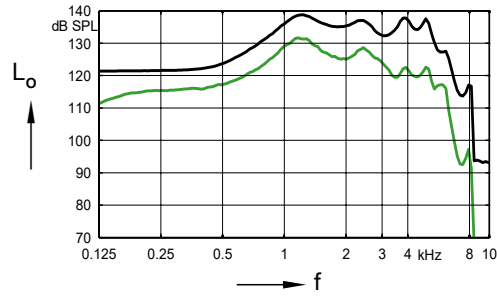
Max. Output sound pressure level
($L_1 = 90$ dB)

Full on gain
($L_1 = 50$ dB)



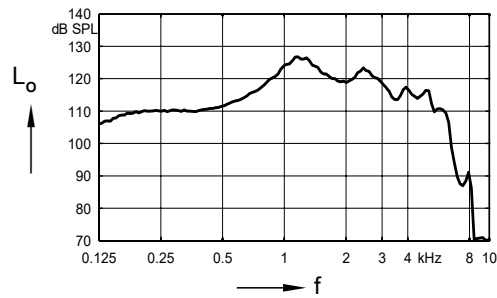
Frequency response
($L_1 = 60$ dB)

Ear simulator



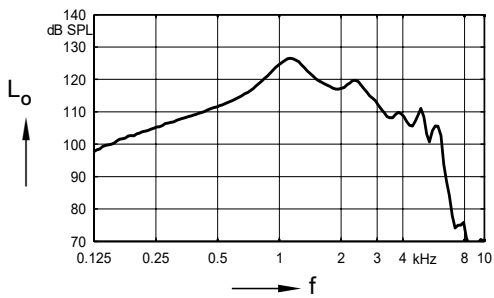
Max. Output sound pressure level
($L_1 = 90$ dB)

Full on gain
($L_1 = 50$ dB)

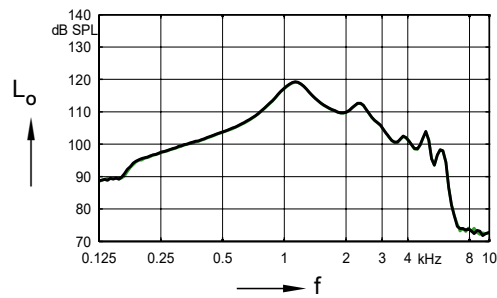


Basic acoustic response
($L_1 = 60$ dB)

Inductive response

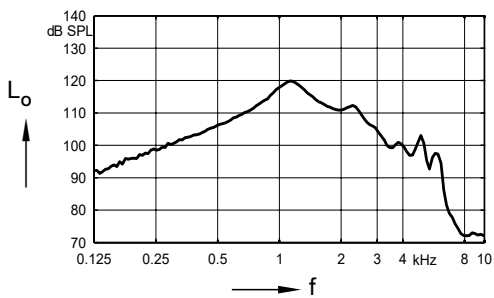


Inductive response
($H = 10$ mA/m)



SPLITS curve left
($H = 31.6$ mA/m)

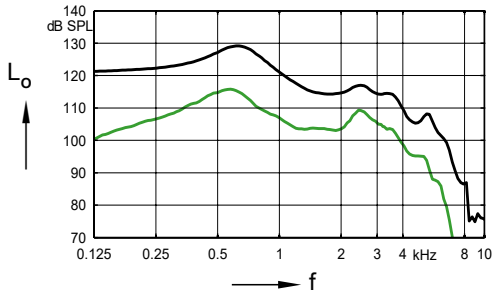
SPLITS curve right
($H = 31.6$ mA/m)



SPLIV curve
($H = 31.6$ mA/m)

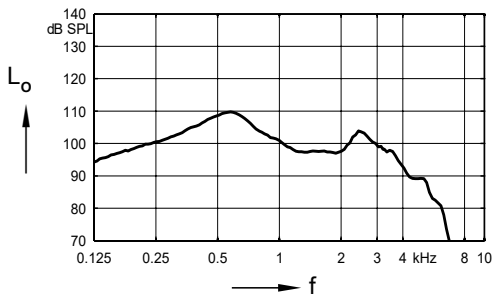
ThinTube 3.0 · Basic Data

2 ccm coupler



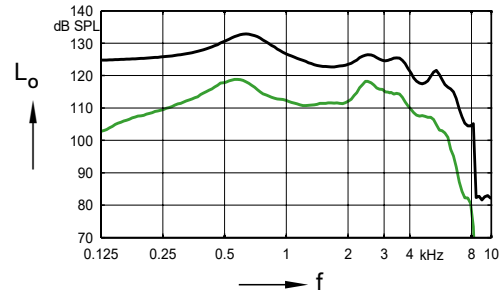
Max. Output sound pressure level
($L_1 = 90$ dB)

Full on gain
($L_1 = 50$ dB)



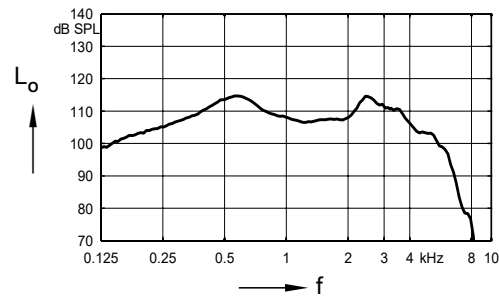
Frequency response
($L_1 = 60$ dB)

Ear simulator



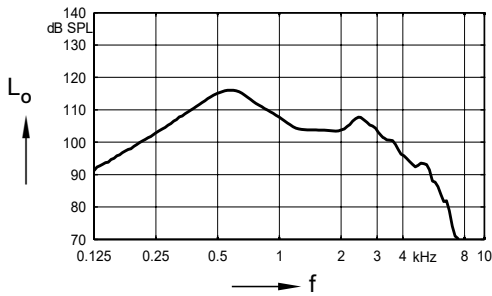
Max. Output sound pressure level
($L_1 = 90$ dB)

Full on gain
($L_1 = 50$ dB)

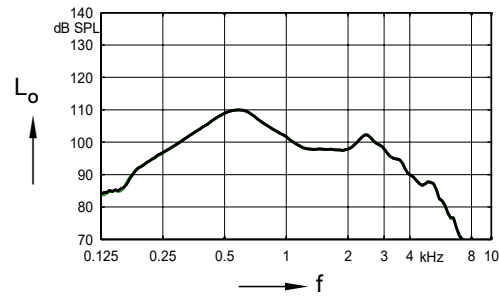


Basic acoustic response
($L_1 = 60$ dB)

Inductive response

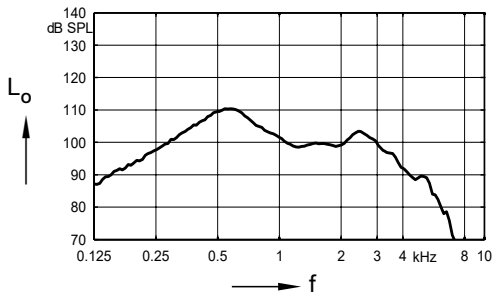


Inductive response
($H = 10$ mA/m)



SPLITS curve left
($H = 31.6$ mA/m)

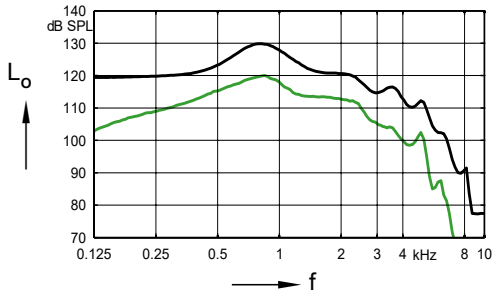
SPLITS curve right
($H = 31.6$ mA/m)



SPLIV curve
($H = 31.6$ mA/m)

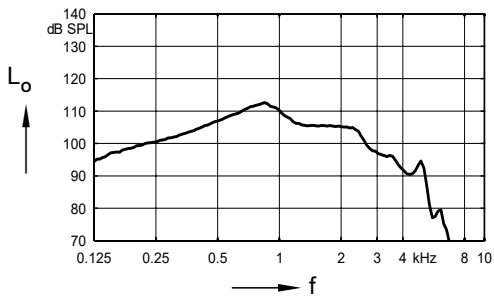
ThinTube 3.0 P · Basic Data

2 ccm coupler



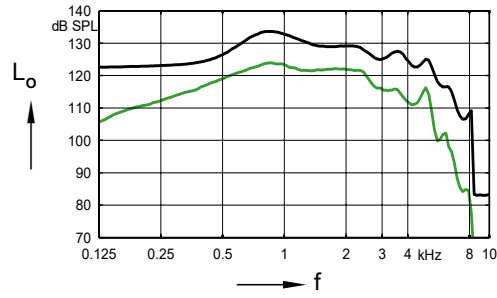
Max. Output sound pressure level
($L_1 = 90$ dB)

Full on gain
($L_1 = 50$ dB)



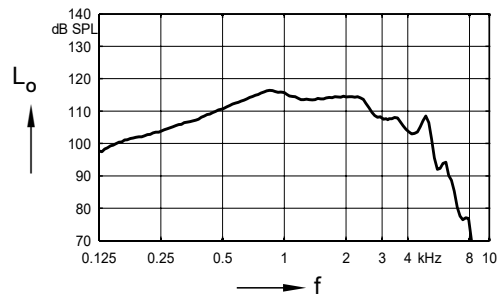
Frequency response
($L_1 = 60$ dB)

Ear simulator



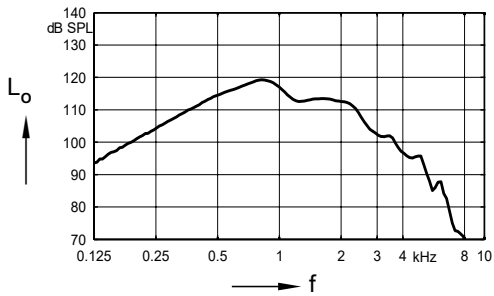
Max. Output sound pressure level
($L_1 = 90$ dB)

Full on gain
($L_1 = 50$ dB)

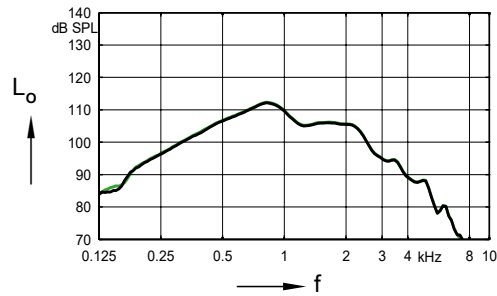


Basic acoustic response
($L_1 = 60$ dB)

Inductive response

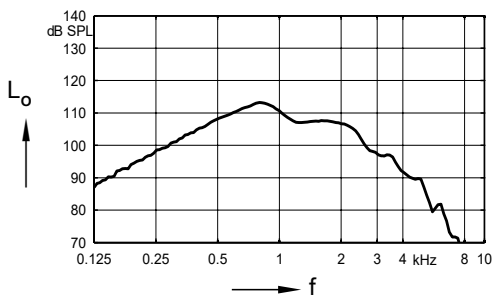


Inductive response
($H = 10$ mA/m)



SPLITS curve left
($H = 31.6$ mA/m)

SPLITS curve right
($H = 31.6$ mA/m)



SPLIV curve
($H = 31.6$ mA/m)

P x80 · Features and Accessories

	380	280	180
Features			
Ingress Protection Rating	IP68	IP68	IP68
Channels / Controls / Programs	16 / 8 / 4	16 / 8 / 4	12 / 6 / 4
Soundpro 2.0	High Res	High Res	High Res
My Voice 2.0 (Own Voice Processing)	—	—	—
Direct Streaming	Made for iPhone/ Android version 10 or higher (ASHA)	Made for iPhone/ Android version 10 or higher (ASHA)	—
Headset Mode for iOS	—	—	—
Auto Volume	●	●	—
Wireless Sync	●	●	●
Directionality	Automatic adaptive, iOmni	Automatic adaptive, iOmni	Automatic fixed omni
Noise Reduction	Noise Management, SoundSmoothing	Noise Management	Noise Management
Wind Noise Reduction	●	—	—
Auto Echo Reducer	—	—	—
Reverb Reducer	—	—	—
Bandwidth: Extension/Compression	— / ●	— / ●	— / —
Music Enhancer (presets)	1	—	—
Tinnitus Function	Sound Therapy, Notch Therapy	—	—
XPhone	●	●	—
Acclimatization / Data Logging	● / ●	● / ●	— / ●
T-Coil	●	●	●
Battery door – tamper proof	○	○	○
Battery size	13	13	13
Accessories			
Smart Key	○	○	○
Smart Transmitter 2,4	○	○	—
Smart Mic	○	○	—
myRemote APP	○	○	○
Noahlink Wireless	mandatory	mandatory	mandatory
Small earhook	○	○	○
CROS RIC LI 80	○	○	—
CROS RIC 80	○	○	—
CROS SlimRIC 80	—	—	—

● available — not available ○ optional

P x80 · Further information

Abbreviations

The following abbreviations are used in this datasheet:

SPL	Sound Pressure Level
OSPL	Output Sound Pressure Level
HFA	High Frequency Average
FOG	Full-On Gain
MASL	Magneto Acoustical Sensitivity Level
SPLITS	Coupler SPL for an Inductive Telephone Simulator
RSETS	Relative Simulated Equivalent Telephone Sensitivity
SPLIV	SPL In a Vertical magnetic field
AI-DI	Articulation Index - Directivity Index
IRIL	Input Related Interference Level
RTF	Reference Test Frequency
ASHA	Audio streaming for hearing aids

Standards and additional information

- All measurements with the 2 ccm coupler were performed according to ANSI S3.22-2014 and IEC 60118-0:2015 if applicable.
- All measurements with an ear simulator were performed according to IEC 60118-0:1983 + A1:1994 and to DIN 45605 (frequency range) if applicable.
- All Cellphone Compatibility measurements were performed according to IEC 60118-13:2019, EN IEC 60118-13:2020 and ANSI C63.19-2019.
- Cellphone Compatibility definition: It is expected that the hearing aid user can effectively use a compliant wireless device held in a talking position at the ear. Maximum achievable Cellphone Compatibility range: 0.65–0.96 GHz and 1.4–2.7 GHz.
- Curves and figures representing FOG are measured with 20 dB reduction and 70 dB SPL input level.
- Figures representing Equivalent Input Noise incorporate a moderate expansion.
- Tinnitus noiser measurement conditions: all tinnitus single frequency sliders in max position, master volume slider in default position (0 dB) and local volume control in default position.
- Inductive coil sensitivity values, inductive response curves and T ratings apply for instruments with telecoil only.
- The current consumption is measured in reference test setting (RTS) according to the applicable standards. Due to the settling behaviour of hearing aids supporting RF (radio frequency), the battery current is measured 3 minutes after turning on (note: no pairing).
- The battery runtime is based on first fit settings using 60 % of the fitting range and an ISTS (International Speech Test Signal) input signal at 65 dB SPL (note: pairing established). The actual battery runtime is determined by battery quality, hearing loss, sound environment, usage and activated feature set. Regarding RF usage, Bluetooth audio streaming from phone to hearing aid and from hearing aid to phone are considered.
- Extended bandwidth up to 10 kHz for 680 devices only.
- The following acoustic connections/ear pieces were used:
 - Earhook
 - ThinTube 3.0
 - ThinTube 3.0 P



“Made for iPhone”, “Made for iPad”, and “Made for iPod” mean that an electronic accessory has been designed to connect specifically to iPhone, iPad, or iPod, respectively, and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. Please note that the use of this accessory with iPhone, iPad, or iPod may affect wireless performance.

The information in this document contains general descriptions of the technical options available, which do not always have to be present in individual cases and are subject to change without prior notice. The required features should therefore be specified in each individual case at the time of conclusion of the respective contract.

OTE x80

Data Sheet

380

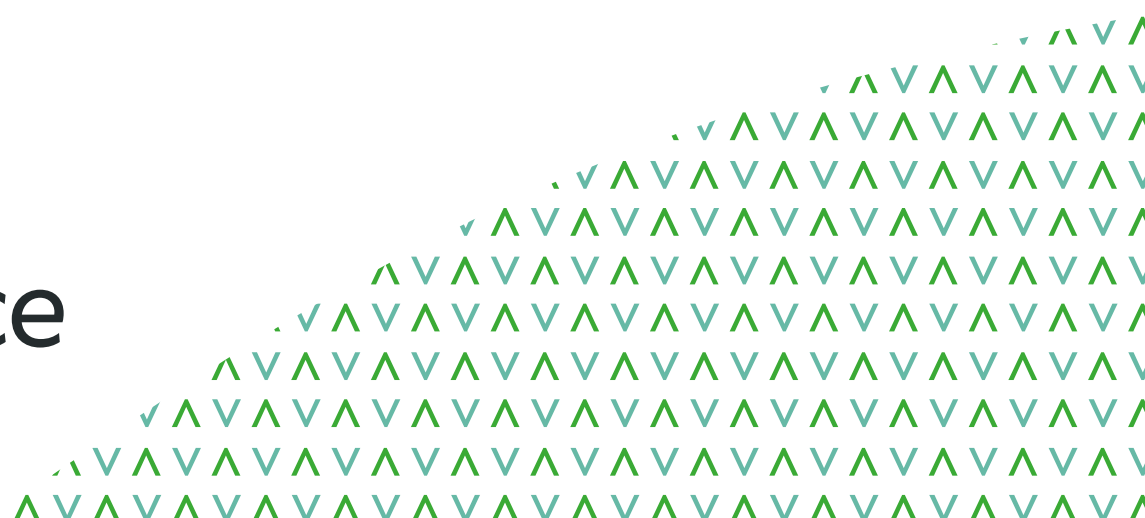
280

180



Made for
iPhone | iPad | iPod

Specsavers
Advance
Your hearing, your way



OTE x80 · Technical Data

Type	Earhook	
	2 ccm coupler	Ear simulator
Output sound pressure level		
OSPL 90 at 1.6 kHz	–	136 dB SPL
OSPL 90 (peak)	133 dB SPL	138 dB SPL
HFA OSPL 90	124 dB SPL	–
Gain		
FOG at 1.6 kHz	–	63 dB
FOG (peak)	60 dB	67 dB
HFA FOG	53 dB	–
Reference test gain	47 dB	56 dB
Frequency, noise and directivity		
Frequency range	120 – 7700 Hz	940 – 7700 Hz
Equivalent input noise	16 dB SPL	16 dB SPL
Total harmonic distortion at 500 / 800 / 1600 / 3200 Hz	4 / 3 / 1 / 1 %	4 / 3 / 1 / – %
Tinnitus Function broadband	70 dB SPL	–
AI-DI	4.0 dB	
Latency	< 15 ms	
Inductive coil sensitivity		
MASL (1 mA/m) at 1.6 kHz	–	92 dB SPL
HFA MASL (1 mA/m)	82 dB SPL	–
HFA SPLITS (left/right)	107 / 107 dB SPL	–
RSETS (left/right)	0 / 0 dB	–
HFA SPLIV	108 dB	–
Battery		
Battery voltage	1.3 V	
Battery current drain	1.6 mA	1.5 mA
Battery runtime (without streaming)	up to 142 h	
Battery runtime (incl. 20 h streaming)	up to 129 h	
Cellphone Compatibility		
Microphone mode	0.65 – 0.96 GHz 1.4 – 2.7 GHz	
Telecoil mode	0.65 – 0.96 GHz 1.4 – 2.7 GHz	

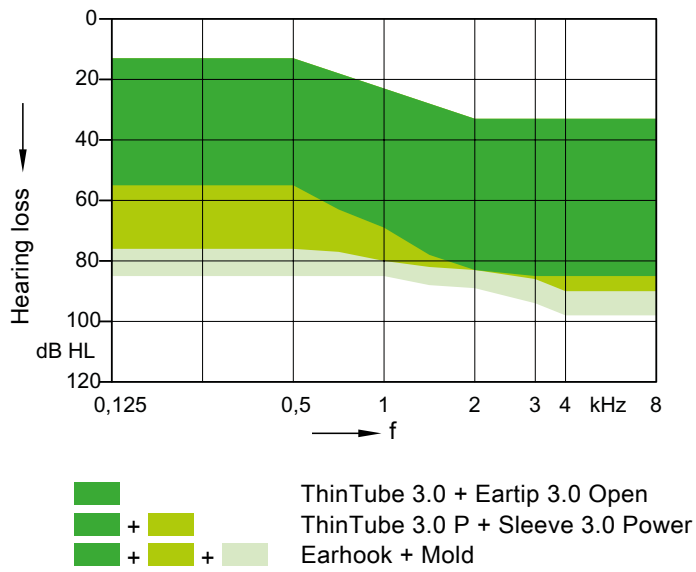
Please find additional information to the values on page “Further information”.

OTE x80 · Technical Data

Type	ThinTube 3.0		ThinTube 3.0 P	
	2 ccm coupler	Ear simulator	2 ccm coupler	Ear simulator
Output sound pressure level				
OSPL 90 at 1.6 kHz	–	121 dB SPL	–	125 dB SPL
OSPL 90 (peak)	125 dB SPL	129 dB SPL	126 dB SPL	131 dB SPL
HFA OSPL 90	116 dB SPL	–	120 dB SPL	–
Gain				
FOG at 1.6 kHz	–	55 dB	–	59 dB
FOG (peak)	61 dB	65 dB	64 dB	67 dB
HFA FOG	51 dB	–	57 dB	–
Reference test gain	39 dB	46 dB	44 dB	51 dB
Frequency, noise and directivity				
Frequency range	100 – 7900 Hz	100 – 8100 Hz	100 – 7100 Hz	100 – 7400 Hz
Equivalent input noise	18 dB SPL	19 dB SPL	15 dB SPL	17 dB SPL
Total harmonic distortion at 500 / 800 / 1600 / 3200 Hz	2 / 1 / 1 / 1 %	4 / 2 / 2 / – %	3 / 1 / 1 / 1 %	4 / 4 / 2 / – %
Tinnitus Function broadband	70 dB SPL	–	70 dB SPL	–
AI-DI	4.0 dB		4.0 dB	
Latency	< 15 ms		< 15 ms	
Inductive coil sensitivity				
MASL (1 mA/m) at 1.6 kHz	–	80 dB SPL	–	84 dB SPL
HFA MASL (1 mA/m)	76 dB SPL	–	81 dB SPL	–
HFA SPLITS (left/right)	99 / 99 dB SPL	–	103 / 103 dB SPL	–
RSETS (left/right)	0 / 0 dB	–	0 / 0 dB	–
HFA SPLIV	99 dB SPL	–	103 dB SPL	–
Battery				
Battery voltage	1.3 V		1.3 V	
Battery current drain	2.2 mA	1.8 mA	2.0 mA	1.8 mA
Battery runtime (without streaming)	up to 132 h		up to 136 h	
Battery runtime (incl. 20 h streaming)	up to 120 h		up to 124 h	
Cellphone Compatibility				
Microphone mode	0.65 – 0.96 GHz 1.4 – 2.7 GHz		0.65 – 0.96 GHz 1.4 – 2.7 GHz	
Telecoil mode	0.65 – 0.96 GHz 1.4 – 2.7 GHz		0.65 – 0.96 GHz 1.4 – 2.7 GHz	

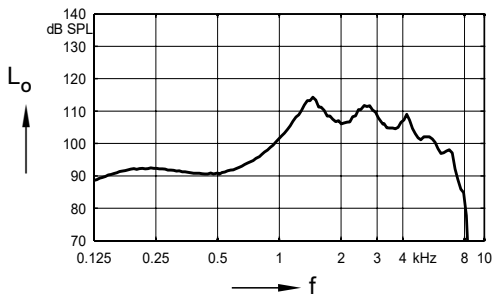
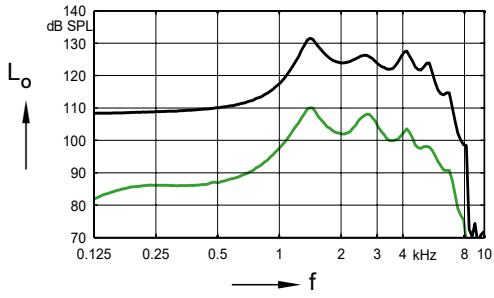
Please find additional information to the values on page “Further information”.

OTE x80 · Fitting Range

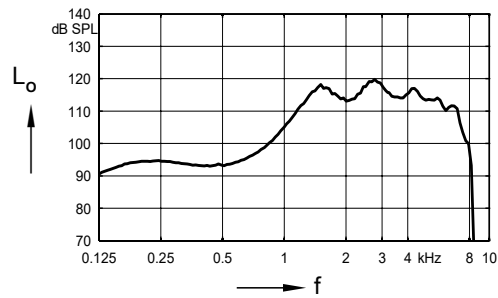
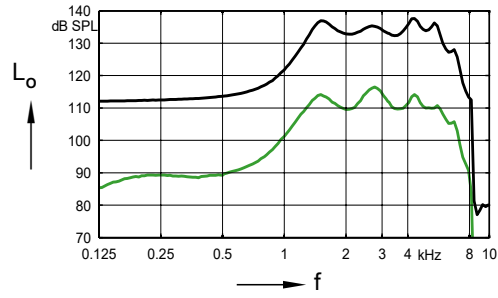


Earhook · Basic Data

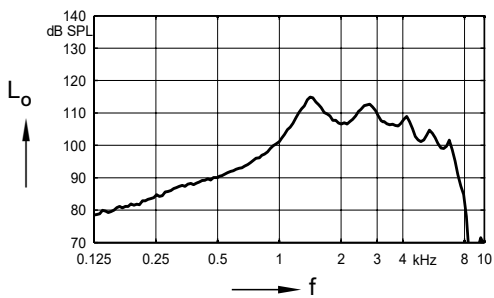
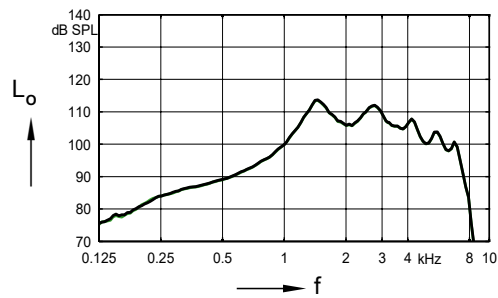
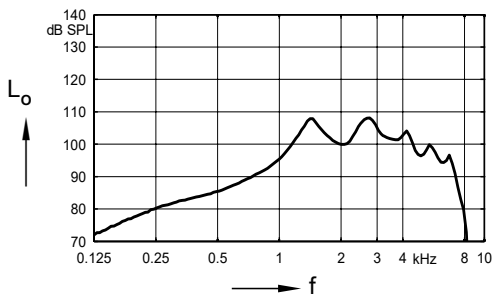
2 ccm coupler



Ear simulator

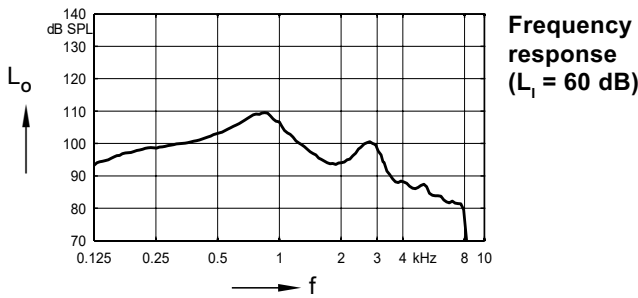
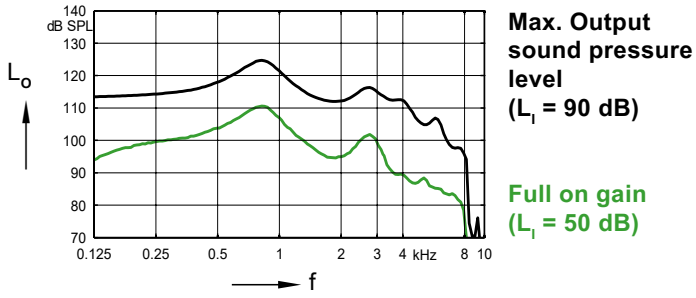


Inductive response

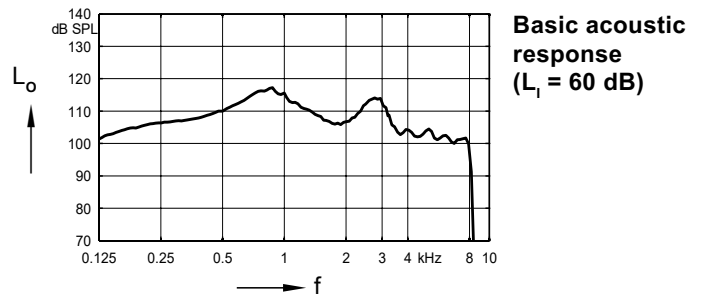
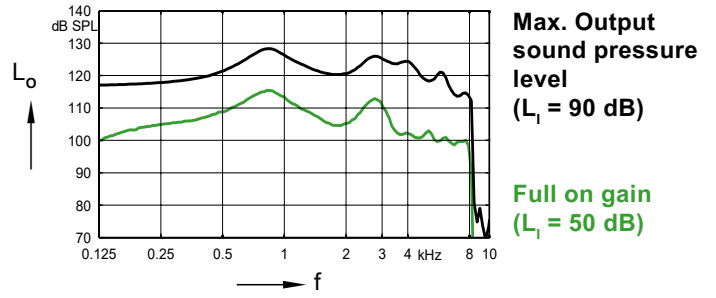


ThinTube 3.0 · Basic Data

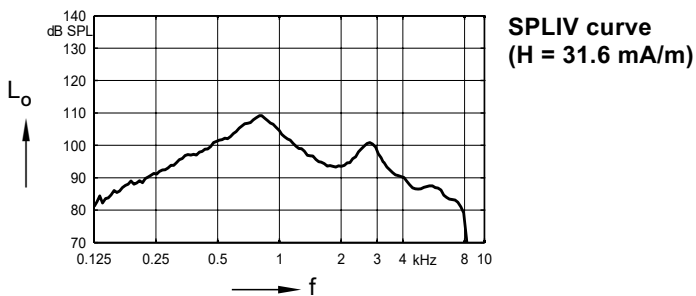
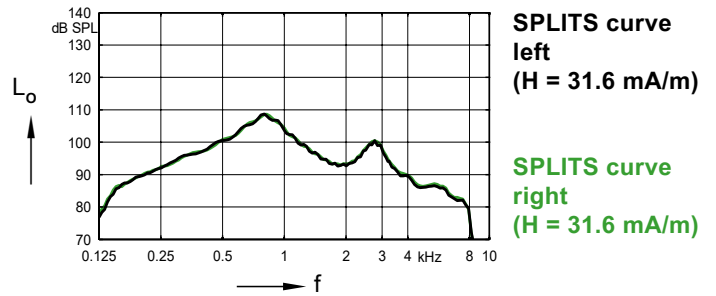
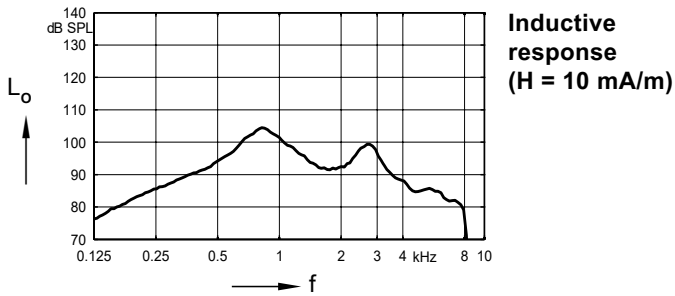
2 ccm coupler



Ear simulator

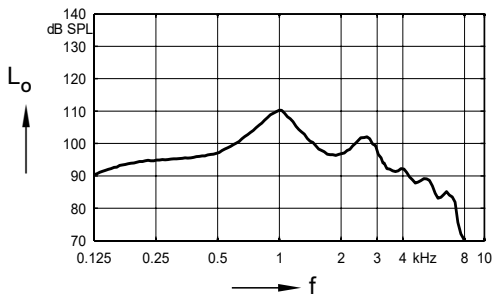
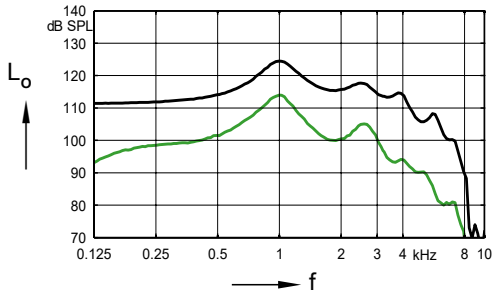


Inductive response

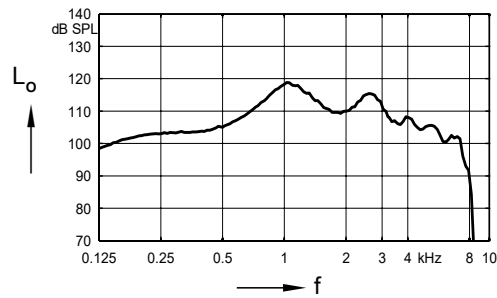
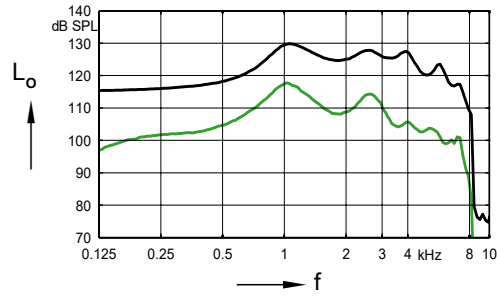


ThinTube 3.0 P · Basic Data

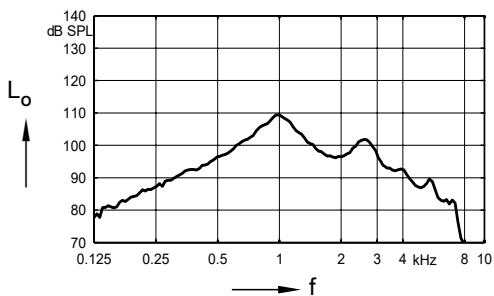
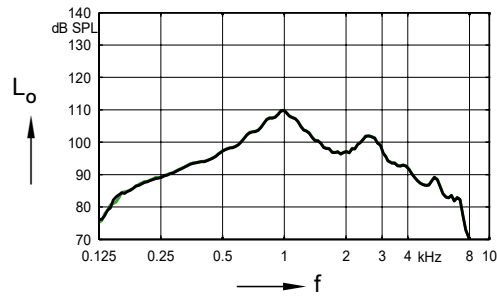
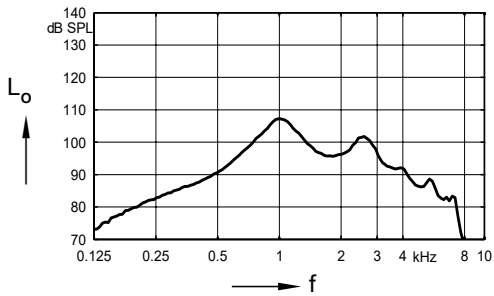
2 ccm coupler



Ear simulator



Inductive response



OTE x80 · Features and Accessories

	380	280	180
Features			
Ingress Protection Rating	IP68	IP68	IP68
Channels / Controls / Programs	16 / 8 / 4	16 / 8 / 4	12 / 6 / 4
Soundpro 2.0	High Res	High Res	High Res
My Voice 2.0 (Own Voice Processing)	—	—	—
Direct Streaming	Made for iPhone/ Android version 10 or higher (ASHA)	Made for iPhone/ Android version 10 or higher (ASHA)	—
Headset Mode for iOS	—	—	—
Auto Volume	●	●	—
Wireless Sync	●	●	●
Directionality	Automatic adaptive, iOmni	Automatic adaptive, iOmni	Automatic fixed omni
Noise Reduction	Noise Management, SoundSmoothing	Noise Management	Noise Management
Wind Noise Reduction	●	—	—
Auto Echo Reducer	—	—	—
Reverb Reducer	—	—	—
Bandwidth: Extension/Compression	— / ●	— / ●	— / —
Music Enhancer (presets)	1	—	—
Tinnitus Function	Sound Therapy, Notch Therapy	—	—
XPhone	●	●	—
Acclimatization / Data Logging	● / ●	● / ●	— / ●
T-Coil	●	●	●
Battery door – tamper proof	○	○	○
Battery size	13	13	13
Accessories			
Smart Key	○	○	○
Smart Transmitter 2,4	○	○	—
Smart Mic	○	○	—
myRemote APP	○	○	○
Noahlink Wireless	mandatory	mandatory	mandatory
Small earhook	○	○	○
CROS RIC LI 80	○	○	—
CROS RIC 80	○	○	—
CROS SlimRIC 80	—	—	—

● available — not available ○ optional

OTE x80 · Further information

Abbreviations

The following abbreviations are used in this datasheet:

SPL	Sound Pressure Level
OSPL	Output Sound Pressure Level
HFA	High Frequency Average
FOG	Full-On Gain
MASL	Magneto Acoustical Sensitivity Level
SPLITS	Coupler SPL for an Inductive Telephone Simulator
RSETS	Relative Simulated Equivalent Telephone Sensitivity
SPLIV	SPL In a Vertical magnetic field
AI-DI	Articulation Index - Directivity Index
IRIL	Input Related Interference Level
RTF	Reference Test Frequency
ASHA	Audio streaming for hearing aids

Standards and additional information

- All measurements with the 2 ccm coupler were performed according to ANSI S3.22-2014 and IEC 60118-0:2015 if applicable.
- All measurements with an ear simulator were performed according to IEC 60118-0:1983 + A1:1994 and to DIN 45605 (frequency range) if applicable.
- All Cellphone Compatibility measurements were performed according to IEC 60118-13:2019, EN IEC 60118-13:2020 and ANSI C63.19-2019.
- Cellphone Compatibility definition: It is expected that the hearing aid user can effectively use a compliant wireless device held in a talking position at the ear. Maximum achievable Cellphone Compatibility range: 0.65–0.96 GHz and 1.4–2.7 GHz.
- Curves and figures representing FOG are measured with 20 dB reduction and 70 dB SPL input level.
- Figures representing Equivalent Input Noise incorporate a moderate expansion.
- Tinnitus noiser measurement conditions: all tinnitus single frequency sliders in max position, master volume slider in default position (0 dB) and local volume control in default position.
- Inductive coil sensitivity values, inductive response curves and T ratings apply for instruments with telecoil only.
- The current consumption is measured in reference test setting (RTS) according to the applicable standards. Due to the settling behaviour of hearing aids supporting RF (radio frequency), the battery current is measured 3 minutes after turning on (note: no pairing).
- The battery runtime is based on first fit settings using 60 % of the fitting range and an ISTS (International Speech Test Signal) input signal at 65 dB SPL (note: pairing established). The actual battery runtime is determined by battery quality, hearing loss, sound environment, usage and activated feature set. Regarding RF usage, Bluetooth audio streaming from phone to hearing aid and from hearing aid to phone are considered.
- Extended bandwidth up to 10 kHz for 680 devices only.
- The following acoustic connections/ear pieces were used:
 - Earhook
 - ThinTube 3.0
 - ThinTube 3.0 P



“Made for iPhone”, “Made for iPad”, and “Made for iPod” mean that an electronic accessory has been designed to connect specifically to iPhone, iPad, or iPod, respectively, and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. Please note that the use of this accessory with iPhone, iPad, or iPod may affect wireless performance.

The information in this document contains general descriptions of the technical options available, which do not always have to be present in individual cases and are subject to change without prior notice. The required features should therefore be specified in each individual case at the time of conclusion of the respective contract.

OTE LI x80

Data Sheet

680

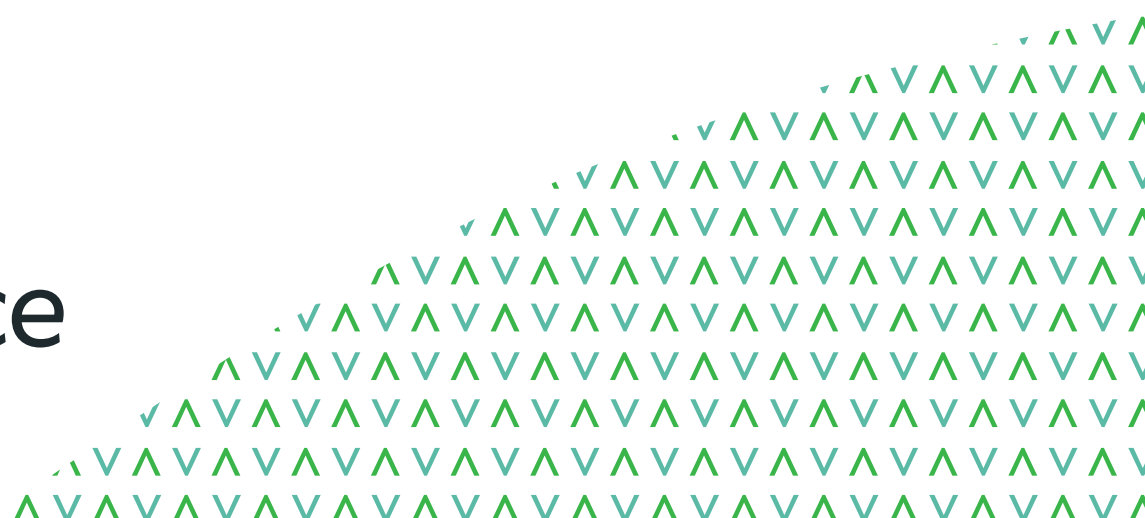
580

480



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Specsavers
Advance
Your hearing, your way



OTE LI x80 · Technical Data

Type	Earhook	
	2 ccm coupler	Ear simulator
Output sound pressure level		
OSPL 90 at 1.6 kHz	–	137 dB SPL
OSPL 90 (peak)	133 dB SPL	138 dB SPL
HFA OSPL 90	125 dB SPL	–
Gain		
FOG at 1.6 kHz	–	64 dB
FOG (peak)	60 dB	67 dB
HFA FOG	54 dB	–
Reference test gain	48 dB	57 dB
Frequency, noise and directivity		
Frequency range 680 580 / 480	120 – 7700 Hz 120 – 7700 Hz	940 – 7700 Hz 940 – 7700 Hz
Equivalent input noise	17 dB SPL	17 dB SPL
Total harmonic distortion at 500 / 800 / 1600 / 3200 Hz	4 / 3 / 1 / 1 %	4 / 3 / 1 / – %
Tinnitus Function broadband	70 dB SPL	–
AI-DI	4.0 dB	
Latency	< 15 ms	
Inductive coil sensitivity		
MASL (1 mA/m) at 1.6 kHz	–	95 dB SPL
HFA MASL (1 mA/m)	84 dB SPL	–
HFA SPLITS (left/right)	108 / 108 dB SPL	–
RSETS (left/right)	0 / 0 dB	–
HFA SPLIV	108 dB SPL	–
Battery		
Battery runtime (without streaming)	up to 39 h	
Battery runtime (incl. 5 h streaming)	up to 36 h	
Cellphone Compatibility		
Microphone mode	0.65 – 0.96 GHz 1.4 – 2.7 GHz	
Telecoil mode	0.65 – 0.96 GHz 1.4 – 2.7 GHz	

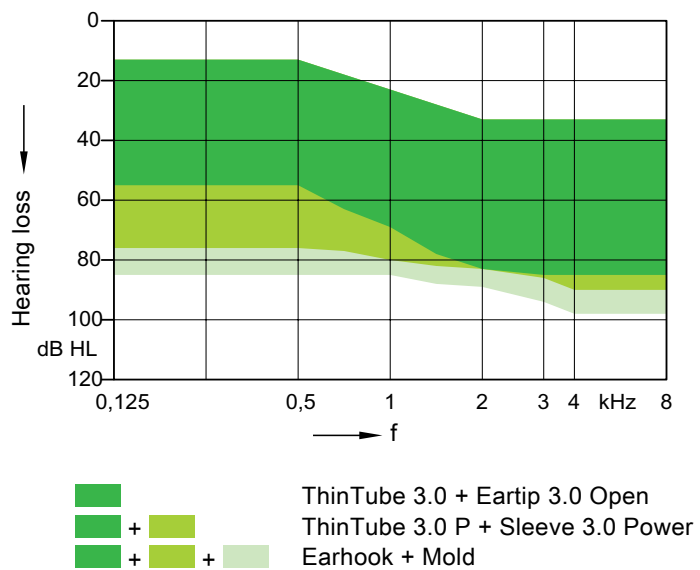
Please find additional information to the values on page “Further information”.

OTE LI x80 · Technical Data

Type	ThinTube 3.0		ThinTube 3.0 P	
	2 ccm coupler	Ear simulator	2 ccm coupler	Ear simulator
Output sound pressure level				
OSPL 90 at 1.6 kHz	–	121 dB SPL	–	126 dB SPL
OSPL 90 (peak)	125 dB SPL	129 dB SPL	126 dB SPL	131 dB SPL
HFA OSPL 90	116 dB SPL	–	121 dB SPL	–
Gain				
FOG at 1.6 kHz	–	54 dB	–	61 dB
FOG (peak)	60 dB	64 dB	63 dB	68 dB
HFA FOG	50 dB	–	56 dB	–
Reference test gain	39 dB	45 dB	44 dB	51 dB
Frequency, noise and directivity				
Frequency range 680 580 / 480	100 – 8100 Hz 100 – 8100 Hz	100 – 9500 Hz 100 – 8300 Hz	100 – 7200 Hz 100 – 7200 Hz	100 – 7400 Hz 100 – 7400 Hz
Equivalent input noise	19 dB SPL	19 dB SPL	16 dB SPL	18 dB SPL
Total harmonic distortion at 500 / 800 / 1600 / 3200 Hz	2 / 1 / 1 / 1 %	4 / 3 / 3 / – %	3 / 1 / 1 / 1 %	4 / 4 / 2 / – %
Tinnitus Function broadband	70 dB SPL	–	70 dB SPL	–
AI-DI	4.0 dB		4.0 dB	
Latency	< 15 ms		< 15 ms	
Inductive coil sensitivity				
MASL (1 mA/m) at 1.6 kHz	–	80 dB SPL	–	86 dB SPL
HFA MASL (1 mA/m)	75 dB SPL	–	81 dB SPL	–
HFA SPLITS (left/right)	99 / 99 dB SPL	–	105 / 105 dB SPL	–
RSETS (left/right)	0 / 0 dB	–	1 / 1 dB	–
HFA SPLIV	99 dB SPL	–	104 dB SPL	–
Battery				
Battery runtime (without streaming)	up to 39 h		up to 39 h	
Battery runtime (incl. 5 h streaming)	up to 36 h		up to 36 h	
Cellphone Compatibility				
Microphone mode	0.65 – 0.96 GHz 1.4 – 2.7 GHz		0.65 – 0.96 GHz 1.4 – 2.7 GHz	
Telecoil mode	0.65 – 0.96 GHz 1.4 – 2.7 GHz		0.65 – 0.96 GHz 1.4 – 2.7 GHz	

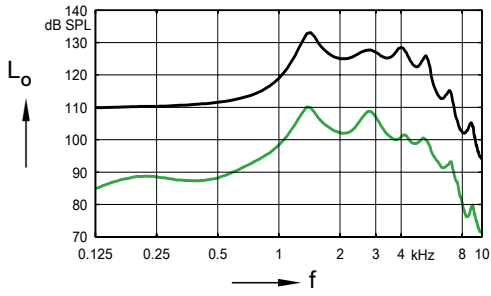
Please find additional information to the values on page “Further information”.

OTE LI x80 · Fitting Range



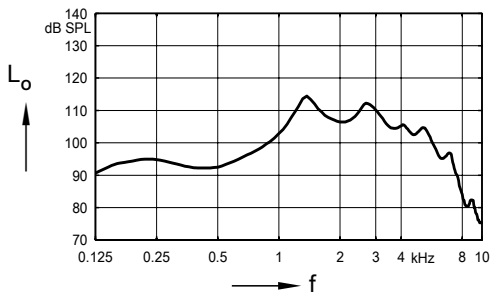
Earhook · Basic Data

2 ccm coupler



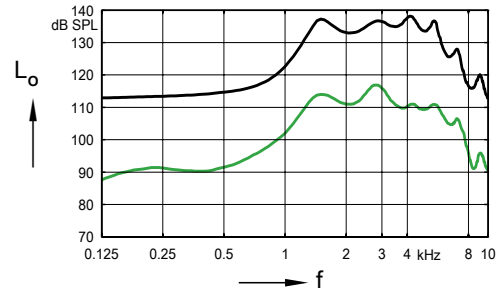
Max. Output sound pressure level
($L_1 = 90$ dB)

Full on gain
($L_1 = 50$ dB)



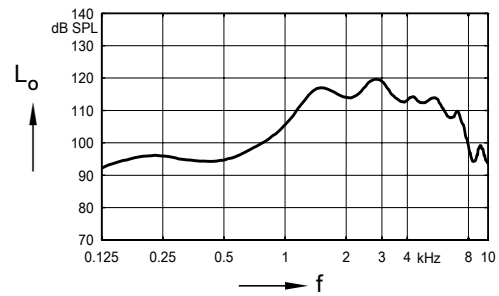
Frequency response
($L_1 = 60$ dB)

Ear simulator



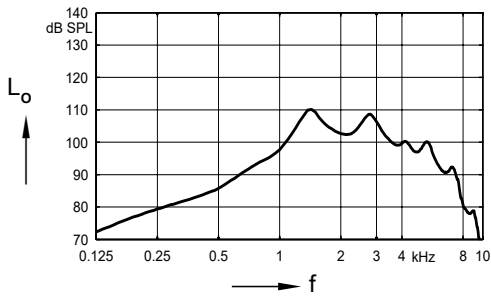
Max. Output sound pressure level
($L_1 = 90$ dB)

Full on gain
($L_1 = 50$ dB)

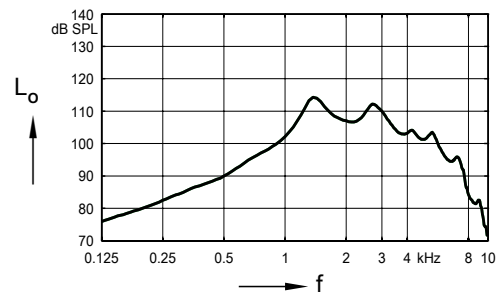


Basic acoustic response
($L_1 = 60$ dB)

Inductive response

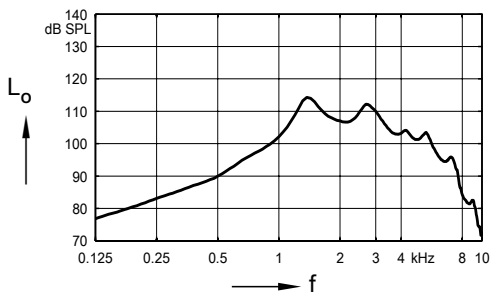


Inductive response
($H = 10$ mA/m)



SPLITS curve left
($H = 31.6$ mA/m)

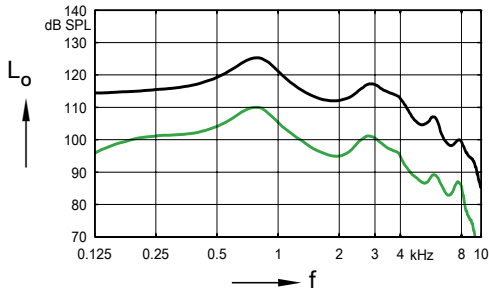
SPLITS curve right
($H = 31.6$ mA/m)



SPLIV curve
($H = 31.6$ mA/m)

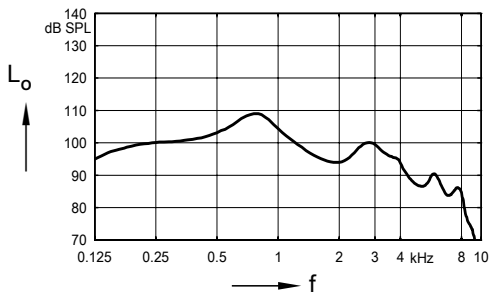
ThinTube 3.0 · Basic Data

2 ccm coupler



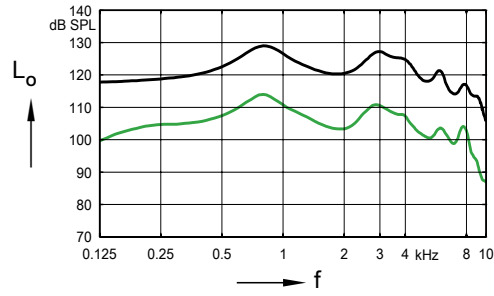
Max. Output sound pressure level
($L_1 = 90$ dB)

Full on gain
($L_1 = 50$ dB)



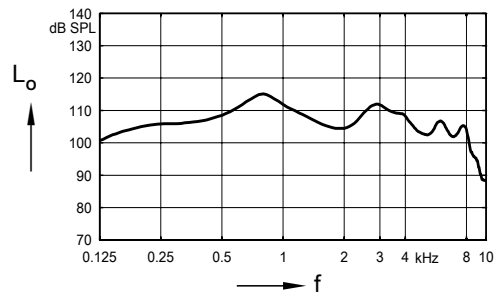
Frequency response
($L_1 = 60$ dB)

Ear simulator



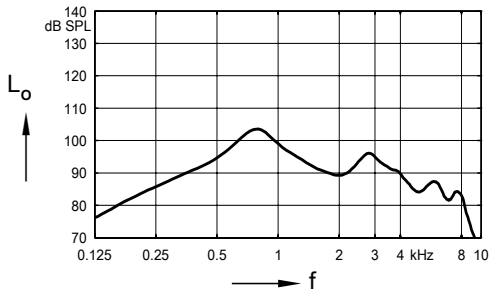
Max. Output sound pressure level
($L_1 = 90$ dB)

Full on gain
($L_1 = 50$ dB)

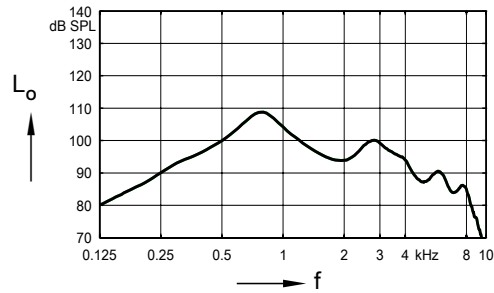


Basic acoustic response
($L_1 = 60$ dB)

Inductive response

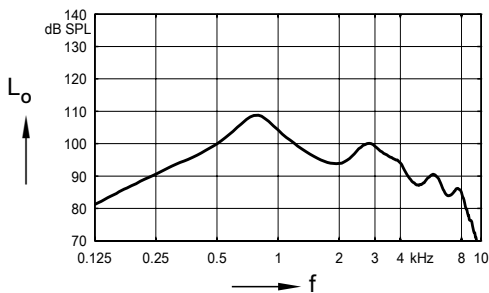


Inductive response
($H = 10$ mA/m)



SPLITS curve left
($H = 31.6$ mA/m)

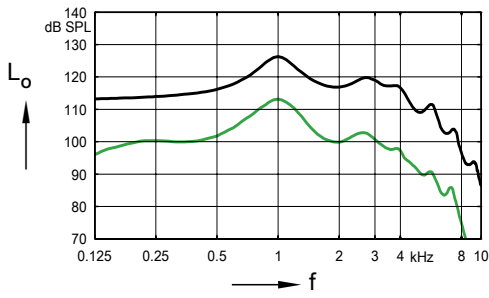
SPLITS curve right
($H = 31.6$ mA/m)



SPLIV curve
($H = 31.6$ mA/m)

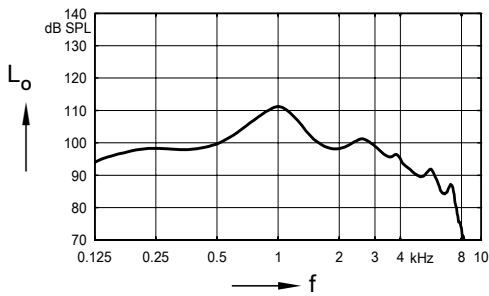
ThinTube 3.0 P · Basic Data

2 ccm coupler



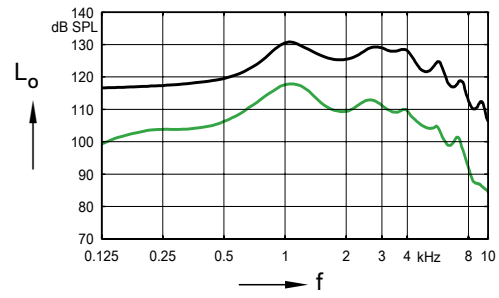
Max. Output sound pressure level
($L_1 = 90$ dB)

Full on gain
($L_1 = 50$ dB)



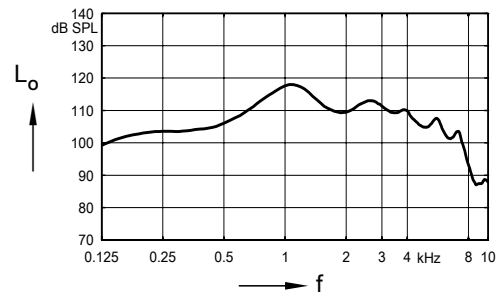
Frequency response
($L_1 = 60$ dB)

Ear simulator



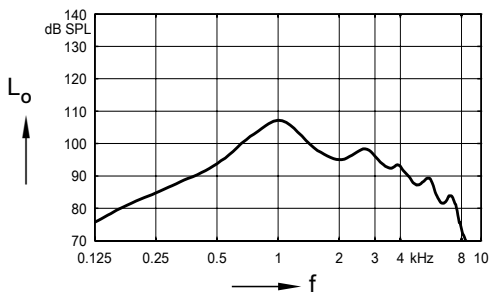
Max. Output sound pressure level
($L_1 = 90$ dB)

Full on gain
($L_1 = 50$ dB)

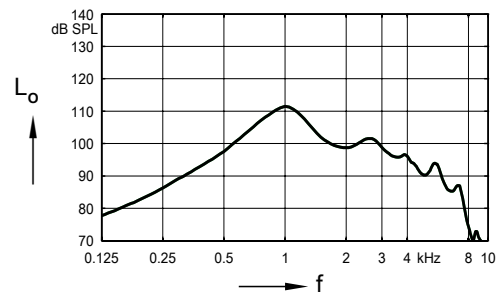


Basic acoustic response
($L_1 = 60$ dB)

Inductive response

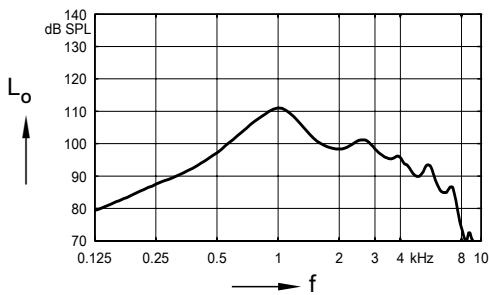


Inductive response
($H = 10$ mA/m)



SPLITS curve left
($H = 31.6$ mA/m)

SPLITS curve right
($H = 31.6$ mA/m)



SPLIV curve
($H = 31.6$ mA/m)

OTE LI x80 · Features and Accessories

	680	580	480
Features			
Ingress Protection Rating	IP68	IP68	IP68
Channels / Controls / Programs	48 / 20 / 6	32 / 16 / 6	24 / 12 / 6
Soundpro 2.0	High Res	High Res	High Res
My Voice 2.0 (Own Voice Processing)	●	●	●
Direct Streaming	Made for iPhone/ Android version 10 or higher (ASHA)	Made for iPhone/ Android version 10 or higher (ASHA)	Made for iPhone/ Android version 10 or higher (ASHA)
Headset Mode for iOS	●	●	●
Auto Volume	●	●	●
Wireless Sync	●	●	●
Directionality	Automatic adaptive, iOmni, Front/Back / Left/Right automatic & manual, Narrow	Automatic adaptive, iOmni, Front/Back automatic & manual, Left/Right manual, Narrow	Automatic adaptive, iOmni, Narrow
Noise Reduction	Noise Management, SoundSmoothing, Directional	Noise Management, SoundSmoothing, Directional	Noise Management, SoundSmoothing
Wind Noise Reduction	●	●	●
Auto Echo Reducer	●	—	—
Reverb Reducer	●	●	—
Bandwidth: Extension/Compression	● / ●	— / ●	— / ●
Music Enhancer (presets)	3	3	1
Tinnitus Function	Sound Therapy, Notch Therapy	Sound Therapy, Notch Therapy	Sound Therapy, Notch Therapy
XPhone	●	●	●
Acclimatization / Data Logging	● / ●	● / ●	● / ●
T-Coil	●	●	●
Battery door – tamper proof	—	—	—
Battery size	—	—	—
Accessories			
Smart Key	○	○	○
Smart Transmitter 2,4	○	○	○
Smart Mic	○	○	○
myRemote APP	○	○	○
Noahlink Wireless	mandatory	mandatory	mandatory
Charging Station B-M	mandatory	mandatory	mandatory
Small earhook	○	○	○
CROS RIC LI 80	○	○	○
CROS RIC 80	○	○	○
CROS SlimRIC 80	—	—	—

● available — not available ○ optional

OTE LI x80 · Further information

Abbreviations

The following abbreviations are used in this datasheet:

SPL	Sound Pressure Level
OSPL	Output Sound Pressure Level
HFA	High Frequency Average
FOG	Full-On Gain
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RTF	Reference Test Frequency
ASHA	Audio streaming for hearing aids

Standards and additional information

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- Figures representing Equivalent Input Noise incorporate a moderate expansion.
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- The current consumption is measured in reference test setting (RTS) according to the applicable standards. Due to the settling behaviour of hearing aids supporting RF (radio frequency), the battery current is measured 3 minutes after turning on (note: no pairing).
- The battery runtime is based on first fit settings using 60 % of the fitting range and an ISTS (International Speech Test Signal) input signal at 65 dB SPL (note: pairing established). The actual battery runtime is determined by battery quality, hearing loss, sound environment, usage and activated feature set. Regarding RF usage, Bluetooth audio streaming from phone to hearing aid and from hearing aid to phone are considered.
- Extended bandwidth up to 10 kHz for 680 devices only.
- The following acoustic connections/ear pieces were used:
 - Earhook
 - ThinTube 3.0
 - ThinTube 3.0 P

Special note for instruments with built-in lithium-ion rechargeable battery

The runtime of all lithium-ion rechargeable batteries reduces over time. The estimates are based on fresh lithium-ion rechargeable battery capacity. Under normal operating conditions, the battery will retain up to 80 % of its initial capacity after 2 years of use. Please note that battery performance will vary depending on individual usage patterns and environmental conditions.



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RIC x80

Technical Data



680

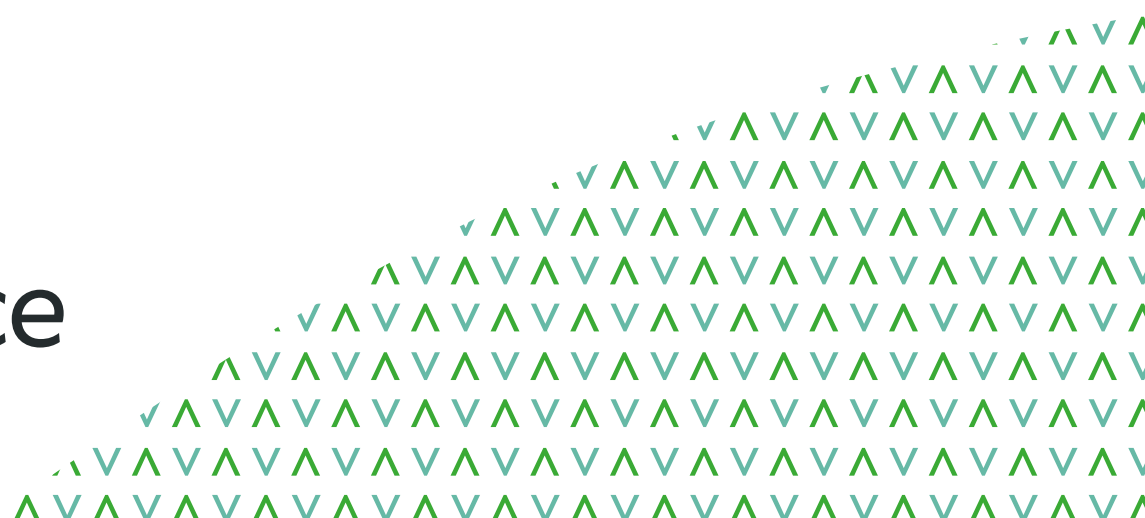
580

480

380

280

Made for
iPhone | iPad | iPod



RIC x80 · Technical Data

Type	S-Receiver		M-Receiver	
	2 ccm coupler	Ear simulator	2 ccm coupler	Ear simulator
Output sound pressure level				
OSPL 90 at 1.6 kHz	–	110 dB SPL	–	121 dB SPL
OSPL 90 (Peak)	109 dB SPL	119 dB SPL	117 dB SPL	127 dB SPL
HFA-OSPL 90	102 dB SPL	–	114 dB SPL	–
Gain				
FOG at 1.6 kHz	–	44 dB	–	57 dB
FOG (peak)	46 dB	56 dB	58 dB	68 dB
HFA-FOG	38 dB	–	51 dB	–
Reference test gain	25 dB	35 dB	37 dB	47 dB
Frequency, noise and directivity				
Frequency range 80 60 / 40 / 30 / 20	100 – 10000 Hz 100 – 8200 Hz	100 – 10000 Hz 100 – 8300 Hz	100 – 9500 Hz 100 – 8200 Hz	100 – 10000 Hz 100 – 8300 Hz
Equivalent input noise	14 dB SPL	19 dB SPL	18 dB SPL	21 dB SPL
Total harmonic distortion at 500 / 800 / 1600 / 3200 Hz	1 / 1 / 1 / 1 %	1 / 2 / 1 / – %	1 / 1 / 1 / 1 %	2 / 2 / 3 / – %
Tinnitus Function broadband	65 dB SPL	–	70 dB SPL	–
AI-DI	4.0 dB		4.0 dB	
Inductive coil sensitivity				
MASL (1 mA/m) at 1.6 kHz	–	–	–	–
HFA MASL (1 mA/m)	–	–	–	–
HFA SPLITS (left/right)	–	–	–	–
RSETS (left/right)	–	–	–	–
HFA SPLIV	–	–	–	–
Battery				
Battery voltage	1.3 V		1.3 V	
Battery current drain	1.5 mA	1.5 mA	1.7 mA	1.7 mA
Battery runtime (without streaming)	up to 89 h		up to 84 h	
Battery runtime (incl. 20 h streaming)	up to 72 h		up to 69 h	
Cellphone Compatibility				
Microphone mode	0.65 – 0.96 GHz 1.4 – 2.7 GHz		0.65 – 0.96 GHz 1.4 – 2.7 GHz	
Telecoil mode	–		–	

Please find additional information to the values on page “Further information”.

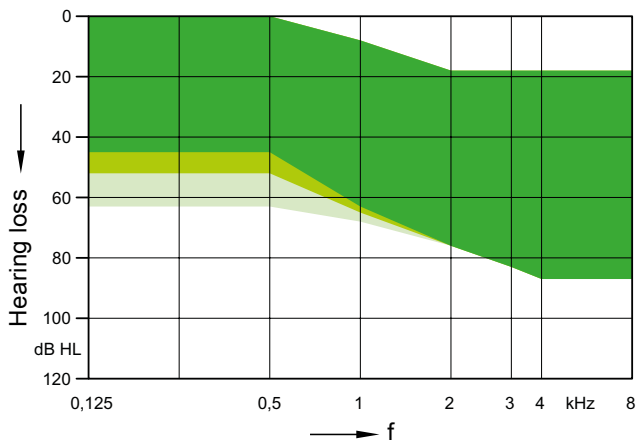
RIC x80 · Technical Data

Type	P-Receiver		HP-Receiver	
	2 ccm coupler	Ear simulator	2 ccm coupler	Ear simulator
Output sound pressure level				
OSPL 90 at 1.6 kHz	–	127 dB SPL	–	135 dB SPL
OSPL 90 (Peak)	120 dB SPL	130 dB SPL	128 dB SPL	137 dB SPL
HFA-OSPL 90	118 dB SPL	–	122 dB SPL	–
Gain				
FOG at 1.6 kHz	–	66 dB	–	81 dB
FOG (peak)	63 dB	73 dB	74 dB	82 dB
HFA-FOG	59 dB	–	67 dB	–
Reference test gain	41 dB	53 dB	46 dB	60 dB
Frequency, noise and directivity				
Frequency range 80 60 / 40 / 30 / 20	100 – 7400 Hz 100 – 7400 Hz	100 – 8000 Hz 100 – 8000 Hz	100 – 7700 Hz 100 – 7700 Hz	200 – 7500 Hz 200 – 7500 Hz
Equivalent input noise	14 dB SPL	16 dB SPL	14 dB SPL	8 dB SPL
Total harmonic distortion at 500 / 800 / 1600 / 3200 Hz	1 / 2 / 1 / 1 %	2 / 4 / 2 / – %	1 / 2 / 1 / 1 %	2 / 2 / 1 / – %
Tinnitus Function broadband	75 dB SPL	–	85 dB SPL	–
AI-DI	4.0 dB		4.0 dB	
Inductive coil sensitivity				
MASL (1 mA/m) at 1.6 kHz	–	–	–	–
HFA MASL (1 mA/m)	–	–	–	–
HFA SPLITS (left/right)	–	–	–	–
RSETS (left/right)	–	–	–	–
HFA SPLIV	–	–	–	–
Battery				
Battery voltage	1.3 V		1.3 V	
Battery current drain	1.7 mA	1.6 mA	1.7 mA	1.6 mA
Battery runtime (without streaming)	up to 87 h		up to 87 h	
Battery runtime (incl. 20 h streaming)	up to 71 h		up to 71 h	
Cellphone Compatibility				
Microphone mode	0.65 – 0.96 GHz 1.4 – 2.7 GHz		0.65 – 0.96 GHz 1.4 – 2.7 GHz	
Telecoil mode	–		–	

Please find additional information to the values on page “Further information”.

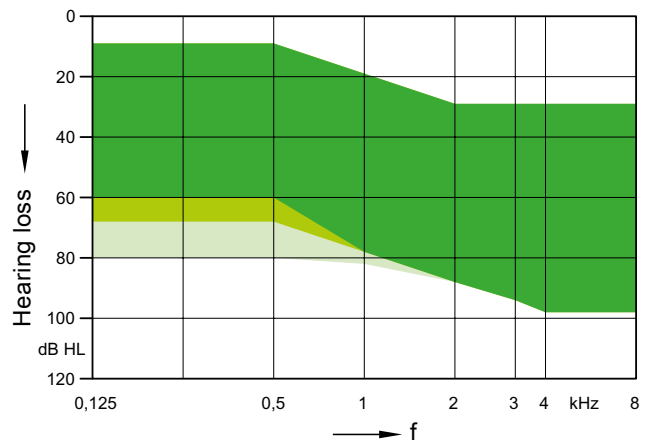
RIC x80 · Fitting Range

S-Receiver



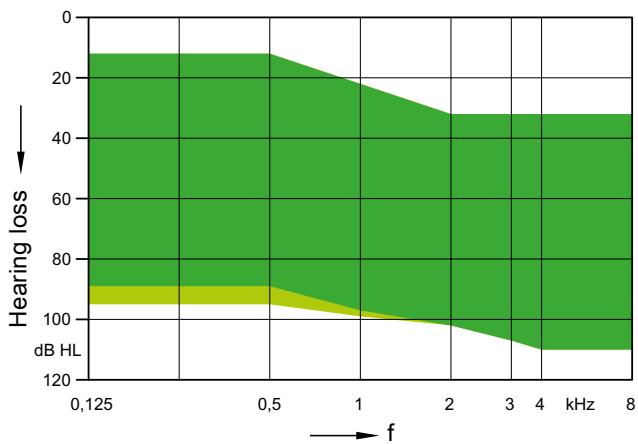
- Eartip 3.0 Open
- + Sleeve 3.0 Power
- + + Earmold 3.0

M-Receiver



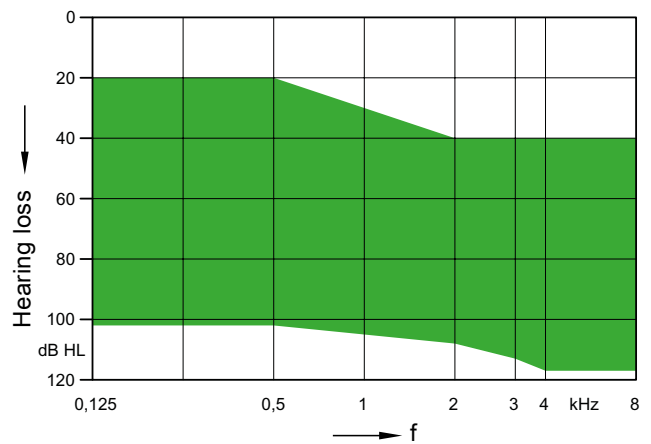
- Eartip 3.0 Open
- + Sleeve 3.0 Power
- + + Earmold 3.0

P-Receiver



- Sleeve 3.0 Power
- + Earmold 3.0

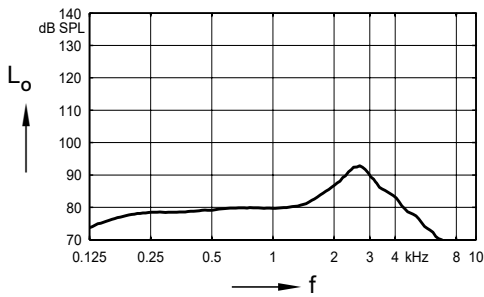
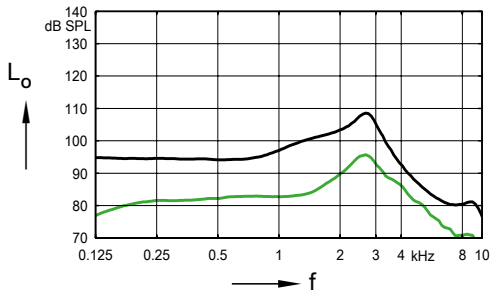
HP-Receiver



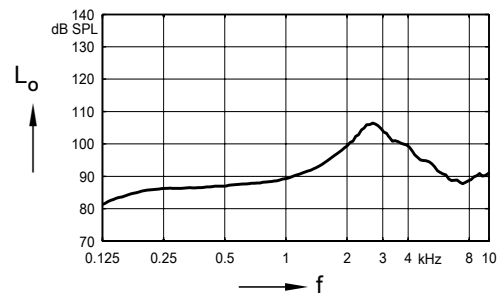
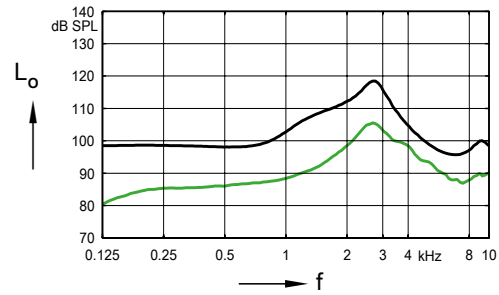
- Custom Shell (no vent)

S-Receiver (Sleeve 3.0 Power) · Basic Data

2 ccm coupler

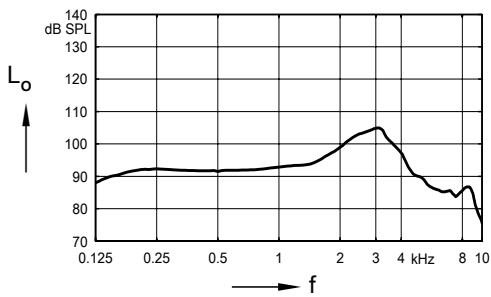
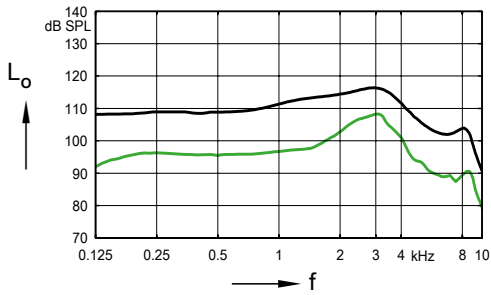


Ear simulator

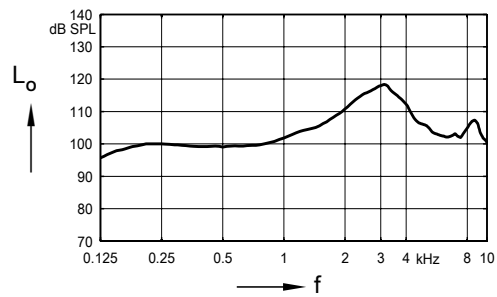
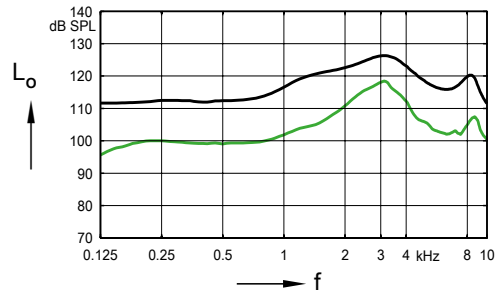


M-Receiver (Sleeve 3.0 Power) · Basic Data

2 ccm coupler

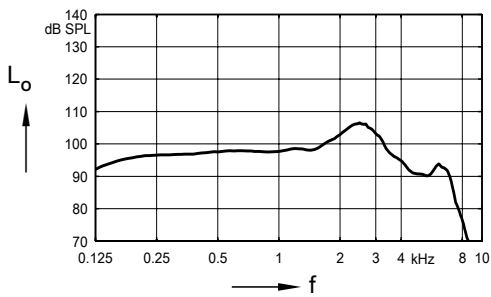
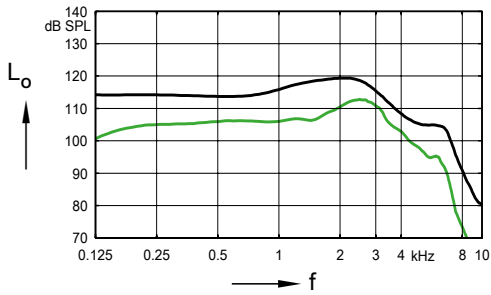


Ear simulator

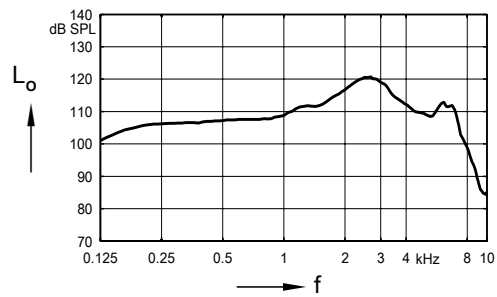
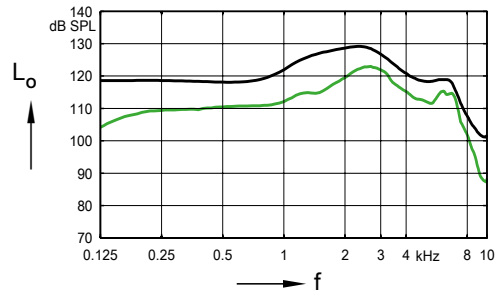


P-Receiver (Earmold 3.0) · Basic Data

2 ccm coupler

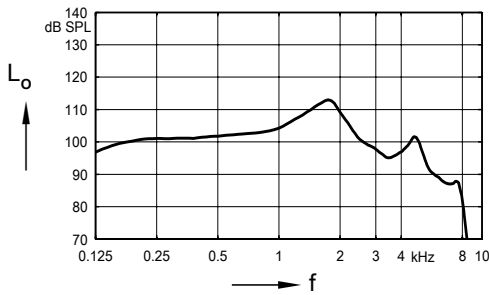
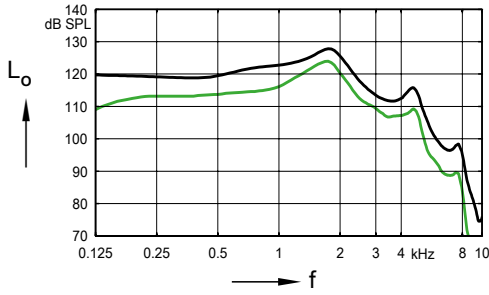


Ear simulator

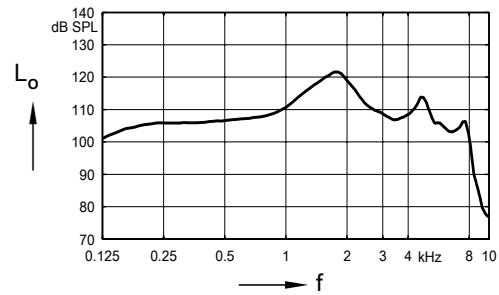
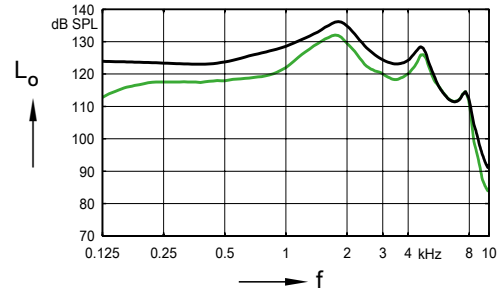


HP-Receiver (Custom Shell) · Basic Data

2 ccm coupler



Ear simulator



RIC x80 · Features and Accessories

	680	580	480	380	280
Features					
Ingress Protection Rating	IP68	IP68	IP68	IP68	IP68
Channels / Controls / Programs	48 / 20 / 6	32 / 16 / 6	24 / 12 / 6	16 / 8 / 4	16 / 8 / 4
Soundpro 2.0	High Res	High Res	High Res	High Res	High Res
My Voice (Own Voice Processing)	●	●	●	—	—
Direct Streaming	Made for iPhone / Android version 10 or higher (ASHA)	Made for iPhone / Android version 10 or higher (ASHA)	Made for iPhone / Android version 10 or higher (ASHA)	Made for iPhone / Android version 10 or higher (ASHA)	Made for iPhone / Android version 10 or higher (ASHA)
Auto Volume	●	●	●	●	●
Wireless Sync	●	●	●	●	●
Directionality	Automatic Adaptive, iOmni, Front/Back / Left/Right automatic & manual, Narrow	Automatic Adaptive, iOmni, Front/Back automatic & manual, Left/Right manual, Narrow	Automatic Adaptive, iOmni, Narrow	Automatic Adaptive, iOmni	Automatic Adaptive, iOmni
Noise Reduction	Noise Management, Sound Smoothing, Directional	Noise Management, Sound Smoothing, Directional	Noise Management, Sound Smoothing	Noise Management, Sound Smoothing	Noise Management
Wind Noise Reduction	●	●	●	●	—
Reverb Reducer	●	●	—	—	—
Bandwidth: Extension / Compression	● / ●	— / ●	— / ●	— / ●	— / ●
Music Enhancer (Live / Recorded / Playing)	●	●	—	—	—
Tinnitus Function	Sound Therapy, Notch Therapy	Sound Therapy, Notch Therapy	Sound Therapy, Notch Therapy	Sound Therapy, Notch Therapy	—
XPhone	●	●	●	●	●
Acclimatization / Data Logging	● / ●	● / ●	● / ●	● / ●	● / ●
T-Coil	—	—	—	—	—
Small earhook	—	—	—	—	—
Accessories					
Smart Key	○	○	○	○	○
Smart Transmitter 2,4	○	○	○	○	○
Smart Mic	○	○	○	○	○
myRemote App	○	○	○	○	○
CROS RIC LI 80	○	○	○	○	○
CROS RIC 80	○	○	○	○	○
CROS SlimRIC 80	—	—	—	—	—

● available — not available ○ optional

RIC x80 · Further information

Abbreviations

The following abbreviations are used in this datasheet:

SPL	Sound Pressure Level
OSPL	Output Sound Pressure Level
HFA	High Frequency Average
FOG	Full-On Gain
MASL	Magneto Acoustical Sensitivity Level
SPLITS	Coupler SPL for an Inductive Telephone Simulator
RSETS	Relative Equivalent Telephone Sensitivity
SPLIV	SPL In a Vertical magnetic field
AI-DI	Articulation Index - Directivity Index
IRIL	Input Related Interference Level
RTF	Reference Test Frequency
ASHA	Audio streaming for hearing aids

Standards and additional information

- ▶ All measurements with the 2 ccm coupler were performed according to ANSI S3.22-2014 and IEC 60118-0:2015 if applicable.
- ▶ All measurements with an ear simulator were performed according to IEC 118-0/A1:1994 and to DIN 45605 (frequency range) if applicable.
- ▶ All Cellphone Compatibility measurements were performed according to IEC 60118-13:2019, EN IEC 60118-13:2020 and ANSI C63.19-2019.
- ▶ Cellphone Compatibility definition: It is expected that the hearing aid user can effectively use a compliant wireless device held in a talking position at the ear. Maximum achievable Cellphone Compatibility range: 0.65 – 0.96 GHz and 1.4 – 2.7 GHz.
- ▶ Curves and figures representing FOG are measured with 20 dB reduction and 70 dB SPL input level.
- ▶ Figures representing Equivalent Input Noise incorporate a moderate expansion.
- ▶ Tinnitus noiser measurement conditions: all tinnitus single frequency sliders in max position, master volume slider in default position (0 dB) and local volume control in default position.
- ▶ Inductive coil sensitivity values, inductive response curves and T ratings apply for instruments with telecoil only.
- ▶ The current consumption is measured in reference test setting (RTS) according to the applicable standards. Due to the settling behaviour of hearing aids supporting RF (radio frequency), the battery current is measured 3 minutes after turning on (note: no pairing).
- ▶ The battery runtime is based on first fit settings using 60 % of the fitting range and an ISTS (International Speech Test Signal) input signal at 65 dB SPL (note: pairing established). The actual battery runtime is determined by battery quality, hearing loss, sound environment, usage and activated feature set. Regarding RF usage (Bluetooth streaming) two different conditions are considered.
- ▶ Extended bandwidth up to 10 kHz for 680 devices only.
- ▶ The following acoustic connections / ear pieces were used:
 - S-Receiver Unit and M-Receiver Unit: Sleeve 3.0 Power
 - P-Receiver Unit: Earmold 3.0
 - HP-Receiver Unit: Custom Shell


Special note for instruments with built-in lithium-ion rechargeable battery

- ▶ The runtime of all lithium-ion rechargeable batteries reduces over time. The estimates are based on fresh lithium-ion rechargeable battery capacity. Under normal operating conditions, the battery will retain up to 80 % of its initial capacity after 2 years of use. Please note that battery performance will vary depending on individual usage patterns and environmental conditions.



“Made for iPhone”, “Made for iPad”, and “Made for iPod” mean that an electronic accessory has been designed to connect specifically to iPhone, iPad, or iPod, respectively, and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. Please note that the use of this accessory with iPhone, iPad, or iPod may affect wireless performance.

The information in this document contains general descriptions of the technical options available, which do not always have to be present in individual cases and are subject to change without prior notice. The required features should therefore be specified in each individual case at the time of conclusion of the respective contract.

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0123

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WARNING

Choking hazard posed by small parts.

- ▶ This instrument is not intended for the fitting of infants, children under 3 years or persons of mental incapacity.



WARNING

Instrument has an output sound pressure level of 132 dB SPL or more. Risk of impairing the residual hearing of the user.

- ▶ Take special care when fitting this instrument.

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