

Technical Data

Orion™ 2 Custom



ITE

118/55

- 65 dB / 128 dB SPL (ear simulator)
- 55 dB / 118 dB SPL (2 ccm coupler)

123/55

- 64 dB / 132 dB SPL (ear simulator)
- 55 dB / 123 dB SPL (2 ccm coupler)

123/60

- 69 dB / 132 dB SPL (ear simulator)
- 60 dB / 123 dB SPL (2 ccm coupler)

ITC-HS

113/40

- 51 dB / 124 dB SPL (ear simulator)
- 40 dB / 113 dB SPL (2 ccm coupler)

118/45

- 55 dB / 129 dB SPL (ear simulator)
- 45 dB / 118 dB SPL (2 ccm coupler)

118/55

- 65 dB / 129 dB SPL (ear simulator)
- 55 dB / 118 dB SPL (2 ccm coupler)

CIC

113/40

- 53 dB / 124 dB SPL (ear simulator)
- 40 dB / 113 dB SPL (2 ccm coupler)

113/50

- 63 dB / 124 dB SPL (ear simulator)
- 50 dB / 113 dB SPL (2 ccm coupler)

Data Sheet

Orion 2 Custom ITE · Technical Data

Type	118/55		123/55		123/60	
	2 ccm coupler	Ear simulator	2 ccm coupler	Ear simulator	2 ccm coupler	Ear simulator
Output sound pressure level						
at 1.6 kHz	–	119 dB SPL	–	127 dB SPL	–	127 dB SPL
Peak	118 dB SPL	128 dB SPL	123 dB SPL	132 dB SPL	123 dB SPL	132 dB SPL
HFA-OSPL 90	113 dB SPL	–	118 dB SPL	–	118 dB SPL	–
Gain						
Full on gain (FOG) at 1.6 kHz	–	55 dB	–	55 dB	–	60 dB
Full on gain (Peak)	55 dB	65 dB	55 dB	64 dB	60 dB	69 dB
HFA-FOG	48 dB	–	49 dB	–	54 dB	–
Reference test gain	35 dB	45 dB	41 dB	47 dB	41 dB	52 dB
Frequency, noise and directivity						
Frequency range	100-7500 Hz	120-8000 Hz	100-5700 Hz	100-5900 Hz	100-5700 Hz	100-5900 Hz
Equivalent input noise	21 dB SPL	17 dB SPL	21 dB SPL	21 dB SPL	21 dB SPL	21 dB SPL
Total harmonic distortion at 500 / 800 / 1600 Hz	2 / 3 / 2 %	3 / 5 / 3 %	2 / 2 / 3 %	3 / 5 / 3 %	2 / 2 / 3 %	3 / 5 / 3 %
Tinnitus therapy broadband	75 dB SPL	–	75 dB SPL	–	80 dB SPL	–
AI-DI	5.2 dB		5.2 dB		5.2 dB	
Inductive coil sensitivity						
MASL (1 mA/m) at 1.6 kHz	–	85 dB SPL	–	85 dB SPL	–	90 dB SPL
HFA MASL (1 mA/m)	78 dB SPL	–	79 dB SPL	–	84 dB SPL	–
HFA SPLITS (left/right)	94 / 94 dB SPL	–	100 / 100 dB SPL	–	100 / 100 dB SPL	–
RSETS (left/right)	-1 / -1 dB	–	-1 / -1 dB	–	-1 / -1 dB	–
Battery						
Battery voltage	1.3 V		1.3 V		1.3 V	
Battery current drain	1.0 mA		1.0 mA		1.0 mA	
Battery life (cell zinc air) Type 13 / 312	~220 / 120 h		~220 / 120 h		~220 / 120 h	
Battery life (rechargeable)	–		–		–	
IRIL IEC 118-13:2011 (bystander)						
800-960 MHz	<-6 dB SPL		<-6 dB SPL		<-6 dB SPL	
1400-2000 MHz	<-24 dB SPL		<-24 dB SPL		<-24 dB SPL	
ANSI C63.19	M4 / T3		M4 / T3		M4 / T3	

Orion 2 Custom ITC-HS · Technical Data

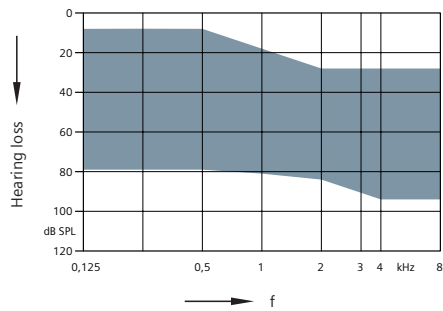
Type	113/40		118/45		118/55	
	2 ccm coupler	Ear simulator	2 ccm coupler	Ear simulator	2 ccm coupler	Ear simulator
Output sound pressure level						
at 1.6 kHz	–	116 dB SPL	–	119 dB SPL	–	119 dB SPL
Peak	113 dB SPL	124 dB SPL	118 dB SPL	129 dB SPL	118 dB SPL	129 dB SPL
HFA-OSPL 90	108 dB SPL	–	112 dB SPL	–	112 dB SPL	–
Gain						
Full on gain (FOG) at 1.6 kHz	–	42 dB	–	43 dB	–	53 dB
Full on gain (Peak)	40 dB	51 dB	45 dB	55 dB	55 dB	65 dB
HFA-FOG	34 dB	–	37 dB	–	47 dB	–
Reference test gain	31 dB	35 dB	35 dB	36 dB	35 dB	44 dB
Frequency, noise and directivity						
Frequency range	100-7800 Hz	110-8000 Hz	100-7800 Hz	110-8000 Hz	100-7800 Hz	110-8000 Hz
Equivalent input noise	21 dB SPL	21 dB SPL	21 dB SPL	22 dB SPL	21 dB SPL	22 dB SPL
Total harmonic distortion at 500 / 800 / 1600 Hz	4 / 3 / 3 %	3 / 4 / 3 %	2 / 2 / 2 %	3 / 5 / 4 %	2 / 2 / 2 %	3 / 5 / 4 %
Tinnitus therapy broadband	65 dB SPL	–	70 dB SPL	–	75 dB SPL	–
AI-DI	4.8 dB		4.8 dB		4.8 dB	
Inductive coil sensitivity						
MASL (1 mA/m) at 1.6 kHz	–	74 dB SPL	–	75 dB SPL	–	85 dB SPL
HFA MASL (1 mA/m)	65 dB SPL	–	67 dB SPL	–	77 dB SPL	–
HFA SPLITS (left/right)	90 / 90 dB SPL	–	94 / 94 dB SPL	–	94 / 94 dB SPL	–
RSETS (left/right)	-1 / -1 dB	–	-1 / -1 dB	–	-1 / -1 dB	–
Battery						
Battery voltage	1.3 V		1.3 V		1.3 V	
Battery current drain	1.1 mA		1.1 mA		1.1 mA	
Battery life (cell zinc air) Type 312 / 10	~110 / 60 h		~110 / 60 h		~110 / 60 h	
Battery life (rechargeable)	–		–		–	
IRIL IEC 118-13:2011 (bystander)						
800-960 MHz	<-6 dB SPL		<-6 dB SPL		<-6 dB SPL	
1400-2000 MHz	<-24 dB SPL		<-24 dB SPL		<-24 dB SPL	
ANSI C63.19	M4 / T3		M4 / T3		M4 / T3	

Orion 2 Custom CIC · Technical Data

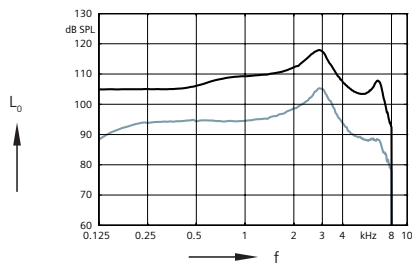
Type	113/40		113/50	
	2 ccm coupler	Ear simulator	2 ccm coupler	Ear simulator
Output sound pressure level				
at 1.6 kHz	–	116 dB SPL	–	116 dB SPL
Peak	113 dB SPL	124 dB SPL	113 dB SPL	124 dB SPL
HFA-OSPL 90	109 dB SPL	–	109 dB SPL	–
Gain				
Full on gain (FOG) at 1.6 kHz	–	42 dB	–	52 dB
Full on gain (Peak)	40 dB	53 dB	50 dB	63 dB
HFA-FOG	35 dB	–	45 dB	–
Reference test gain	32 dB	36 dB	32 dB	41 dB
Frequency, noise and directivity				
Frequency range	100-8100 Hz	110-8100 Hz	100-8100 Hz	110-8100 Hz
Equivalent input noise	21 dB SPL	21 dB SPL	21 dB SPL	21 dB SPL
Total harmonic distortion at 500 / 800 / 1600 Hz	3 / 3 / 2 %	4 / 5 / 4 %	3 / 3 / 2 %	4 / 5 / 4 %
Tinnitus therapy broadband	65 dB SPL	–	70 dB SPL	–
AI-DI	–	–	–	–
Inductive coil sensitivity				
MASL (1 mA/m) at 1.6 kHz	–	–	–	–
HFA MASL (1 mA/m)	–	–	–	–
HFA SPLITS (left/right)	–	–	–	–
RSETS (left/right)	–	–	–	–
Battery				
Battery voltage	1.3 V		1.3 V	
Battery current drain	1.0 mA		1.0 mA	
Battery life (cell zinc air) Type 10	~70 h		~70 h	
Battery life (rechargeable)	–		–	
IRIL IEC 118-13:2011 (bystander)				
800-960 MHz	<-6 dB SPL		<-6 dB SPL	
1400-2000 MHz	<-24 dB SPL		<-24 dB SPL	
ANSI C63.19	M4		M4	

Orion 2 Custom ITE · Basic Data

118/55

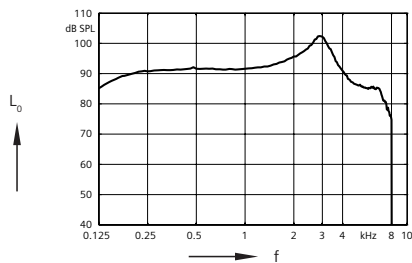


2 ccm coupler



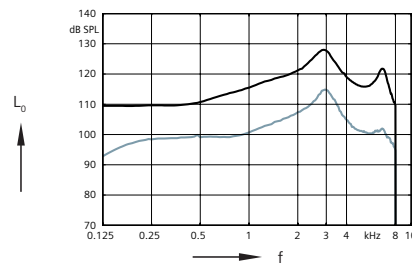
Output sound pressure level
($L_1 = 90$ dB)

Full on gain
($L_1 = 50$ dB)



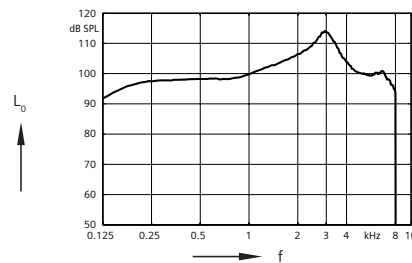
Frequency response
($L_1 = 60$ dB)

Ear simulator



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

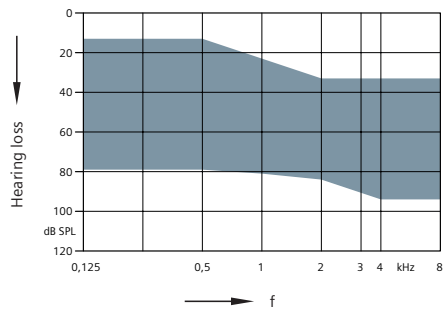
Full on gain
($L_1 = 50$ dB)



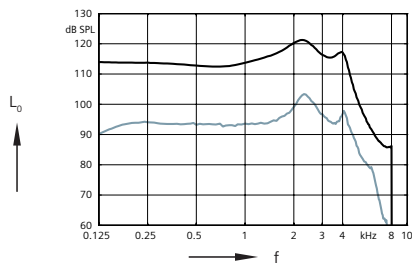
Basic acoustic response
($L_1 = 60$ dB)

Orion 2 Custom ITE · Basic Data

123/55

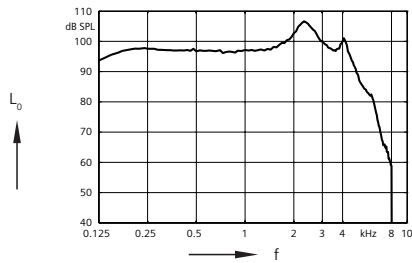


2 ccm coupler



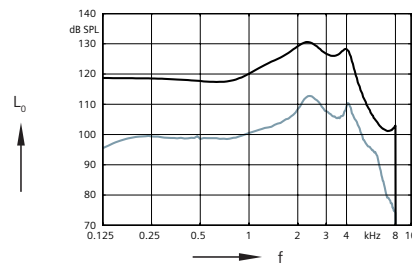
Output sound pressure level ($L_1 = 90$ dB)

Full on gain ($L_1 = 50$ dB)



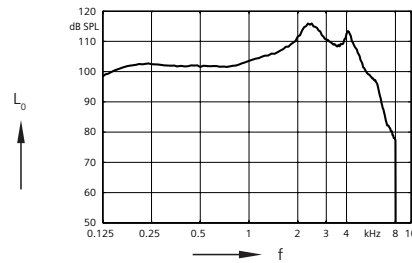
Frequency response ($L_1 = 60$ dB)

Ear simulator



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

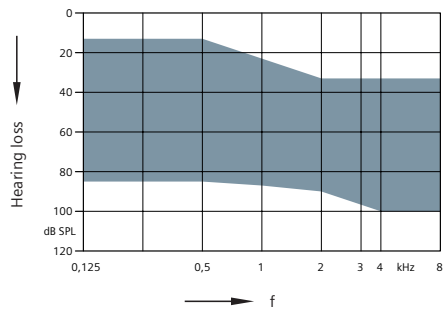
Full on gain ($L_1 = 50$ dB)



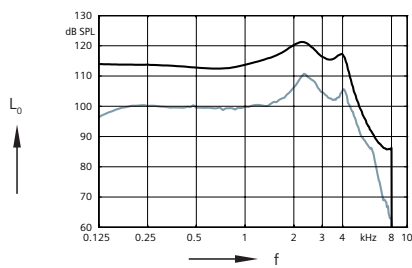
Basic acoustic response ($L_1 = 60$ dB)

Orion 2 Custom ITE · Basic Data

123/60

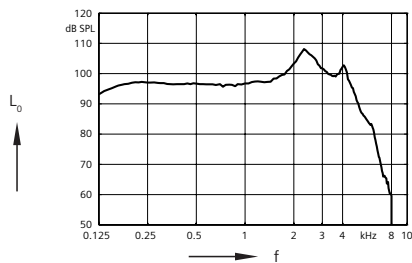


2 ccm coupler



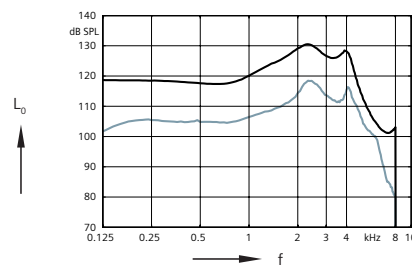
Output sound pressure level
($L_1 = 90$ dB)

Full on gain
($L_1 = 50$ dB)



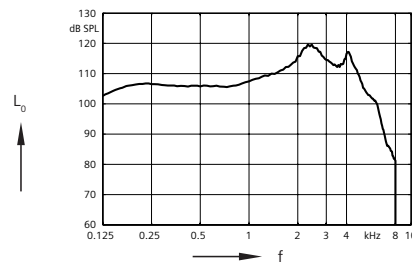
Frequency response
($L_1 = 60$ dB)

Ear simulator



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

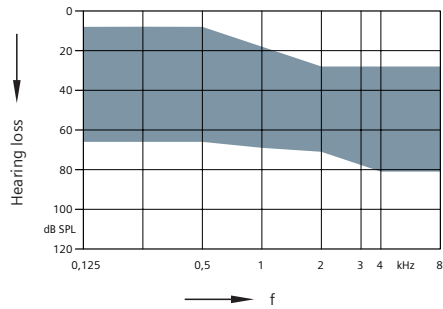
Full on gain
($L_1 = 50$ dB)



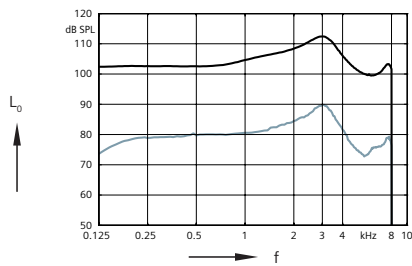
Basic acoustic response
($L_1 = 60$ dB)

Orion 2 Custom ITC-HS · Basic Data

113/40

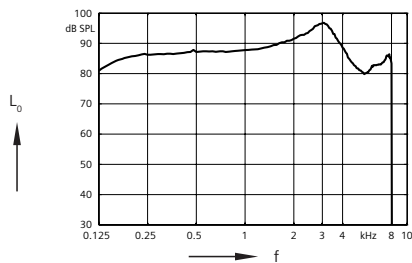


2 ccm coupler



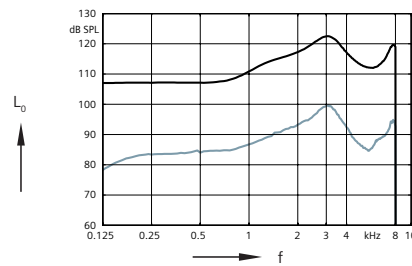
Output sound pressure level
($L_1 = 90$ dB)

Full on gain
($L_1 = 50$ dB)



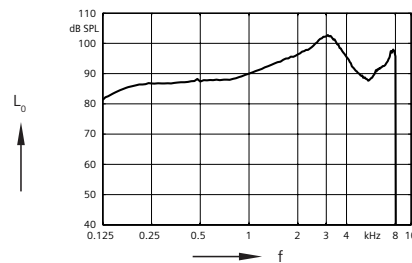
Frequency response
($L_1 = 60$ dB)

Ear simulator



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

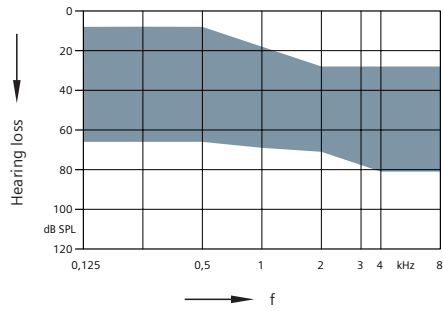
Full on gain
($L_1 = 50$ dB)



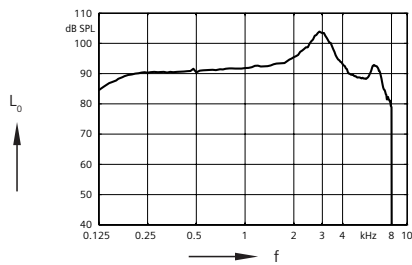
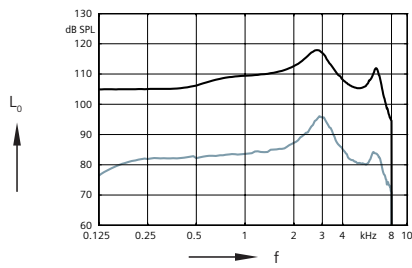
Basic acoustic response
($L_1 = 60$ dB)

Orion 2 Custom ITC-HS · Basic Data

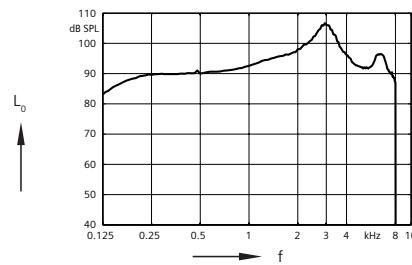
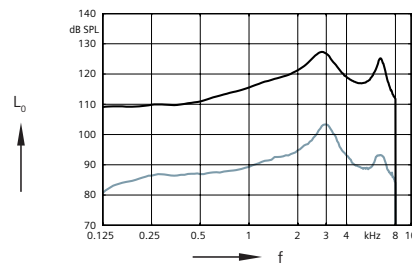
118/45



2 ccm coupler

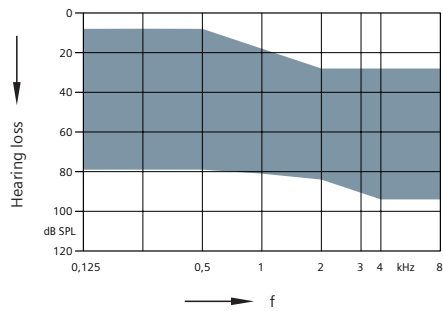


Ear simulator

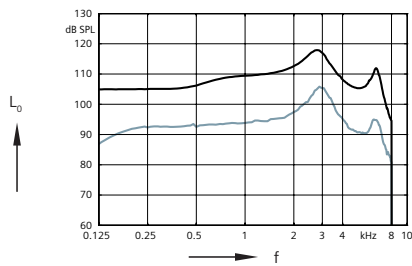


Orion 2 Custom ITC-HS · Basic Data

118/55

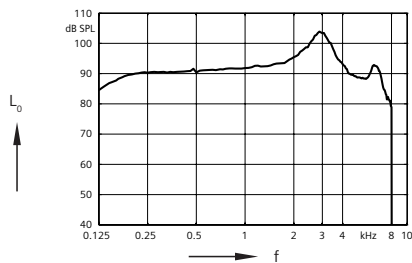


2 ccm coupler



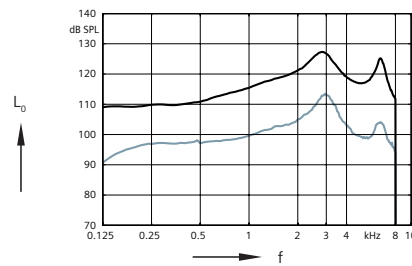
Output sound pressure level
($L_1 = 90$ dB)

Full on gain
($L_1 = 50$ dB)



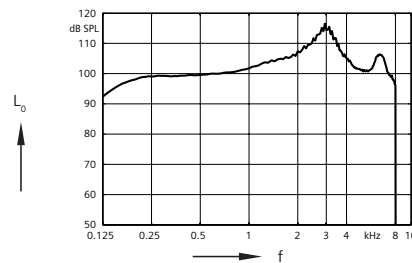
Frequency response
($L_1 = 60$ dB)

Ear simulator



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

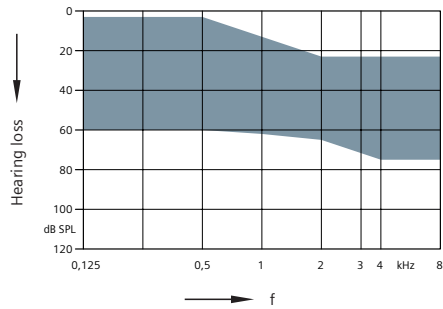
Full on gain
($L_1 = 50$ dB)



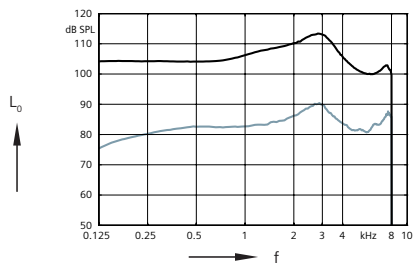
Basic acoustic response
($L_1 = 60$ dB)

Orion 2 Custom CIC · Basic Data

113/40

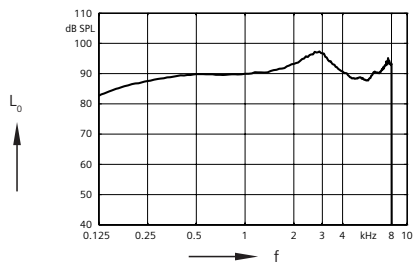


2 ccm coupler



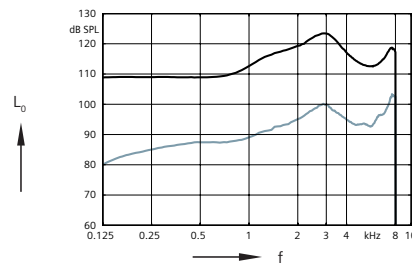
Output sound pressure level ($L_1 = 90$ dB)

Full on gain ($L_1 = 50$ dB)



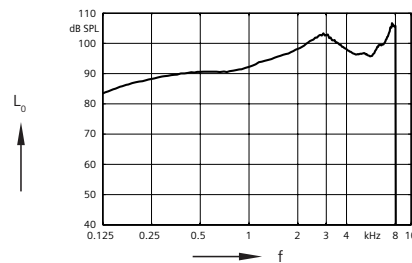
Frequency response ($L_1 = 60$ dB)

Ear simulator



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

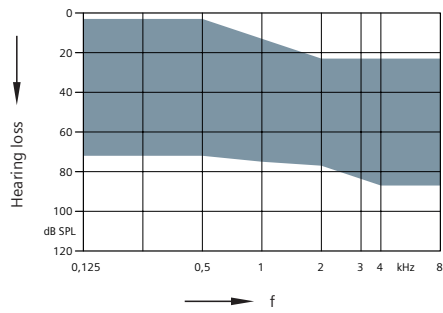
Full on gain ($L_1 = 50$ dB)



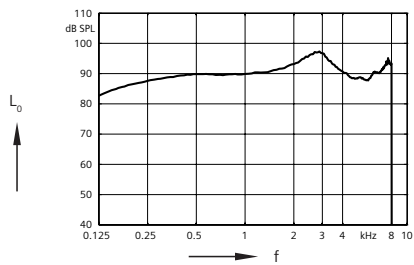
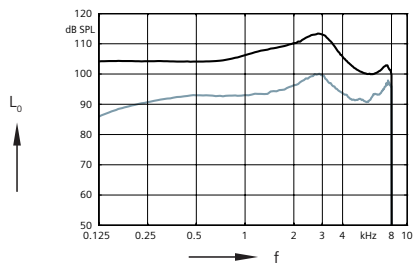
Basic acoustic response ($L_1 = 60$ dB)

Orion 2 Custom CIC · Basic Data

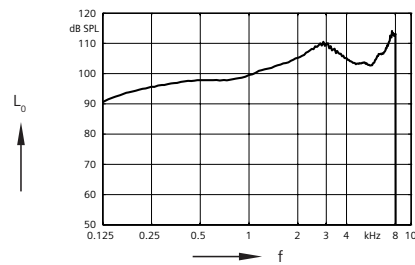
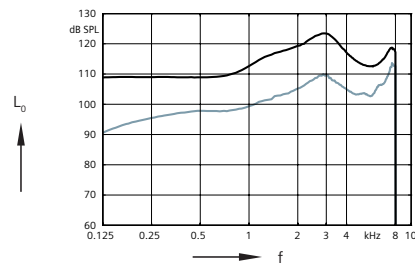
113/50



2 ccm coupler



Ear simulator



Features and Accessories

	ITE / ITC - HS	CIC
General		
Signal processing (channels)	16	16
Gain/MPO (handles)	8	8
Hearing programs	4	4
touchControl™ App (iOS™ / Android™)	●	●
Audibility		
Directional microphone (channels)	16	—
Narrow Directionality (req. bilateral fitting and e2e® 3.0)	—	—
Spatial SpeechFocus™ (req. bilateral fitting and e2e 3.0)	—	—
SpeechFocus	—	—
TruEar™	—	—
Frequency compression	●	●
Sound Quality		
eWindScreen® binaural (req. bilateral fitting and e2e 3.0)	—	—
eWindScreen (steps)	on / off	on / off
Extended bandwidth	—	—
SoundBrilliance™ (streaming only, req. easyTek)	—	—
Adaptive streaming volume (streaming only, req. easyTek™)	—	—
Feedback cancellation	●	●
Speech and noise management (channels / steps)	16 / 3	16 / 3
SoundSmoothing (channels / steps)	16 / on/off	16 / on/off
Directional speech enhancement (channels / steps)	—	—
Individuality		
Sound equalizer (classes)	—	—
Data Logging	●	●
Learning (classes)	—	—
Acclimatization manager	●	●
ConnexxFit	●	●
Spatial Configurator (req. bilateral fitting and e2e 3.0)	—	—
Span (req. easyTek and easyTek App or Rocker switch)	—	—
Direction (req. easyTek and easyTek App)	—	—
Tinnitus Therapy		
Standard (handles / presets)	4 / 1	4 / 1
Ocean Waves (presets)	—	—

Features and Accessories

	ITE	ITC - HS	CIC
Style Specific Features			
Ingress Protection Rating	—	—	—
Telecoil	○	○	—
AutoPhone®	○	○	—
Charging contacts	—	—	—
Battery Size	13 / 312	312	10
Battery door on/off function	●	●	●
Nanocoated housing	—	—	—
e2e wireless® 3.0	○	○	○
Audio streaming	○	○	○
User controls coupling via e2e	○	○	○
Wireless programming via ConnexxLink®	○	○	○
Instrument configurations			
Flat cover	—	—	—
Volume wheel	○	○	—
Push button	○	○	○
Rocker switch	—	—	—
Color conversion kit	—	—	—
Battery door – direct audio input	—	—	—
Battery door – child lock	—	—	—
Programming Accessories			
ConnexxLink	●	●	●
Flex connector	●	●	●
Accessories			
eCharger™	—	—	—
easyPocket™	○	○	○
easyTek™	○	○	○
Transmitter (req. easyTek)	○	○	○
VoiceLink™ (req. easyTek)	○	○	○
App			
easyTek App (req. easyTek)	●	●	●
touchControl™ App	●	●	●

● available ○ optional — not available

Abbreviations and Standards

Abbreviations

The following abbreviations are used in this datasheet:

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
AI-DI	Articulation Index - Directivity Index
IRIL	Input Related Interference Level
RTF	Reference Test Frequency


Standards

- ▶ All measurements with the 2 ccm coupler were performed according to ANSI S3.22-2009 and IEC 60118-7:2005 if applicable.
- ▶ All measurements with an ear simulator were performed according to IEC 118-0/A1 and to DIN 45605 (frequency range) if applicable.
- ▶ Tinnitus therapy 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.

 **WARNING**

Choking hazard posed by small parts.

- ▶ This instrument is not intended for the fitting of infants, children under 3 years and 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.

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.

Hearing instruments help many people hear better, but no hearing instrument can solve every hearing problem nor restore normal hearing.

IOS is a trademark or registered trademark of Cisco in the U.S. and other countries and is used under license.

Android is a trademark of Google Inc.

Information in this brochure is subject to change without notice.

Copyright © 2016 Signia GmbH. All rights reserved.

Sivantos, Inc. is a Trademark Licensee of Siemens AG.

Manufactured by

Sivantos, Inc.

10 Constitution Ave.

Piscataway, NJ 08854

under Trademark License of Siemens AG