

M-Core R312

M-Core R312 SDemo

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Data Sheet



Made for
iPhone | iPad | iPod

S-Receiver

- 56 dB / 119 dB SPL (ear simulator)
- 45 dB / 108 dB SPL (2 ccm coupler)

M-Receiver

- 70 dB / 129 dB SPL (ear simulator)
- 60 dB / 119 dB SPL (2 ccm coupler)

P-Receiver

- 80 dB / 134 dB SPL (ear simulator)
- 70 dB / 124 dB SPL (2 ccm coupler)

HP-Receiver

- 82 dB / 138 dB SPL (ear simulator)
- 75 dB / 130 dB SPL (2 ccm coupler)

M-Core R312 · 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	-	109 dB SPL	-	123 dB SPL
OSPL 90 (Peak)	108 dB SPL	119 dB SPL	119 dB SPL	129 dB SPL
HFA-OSPL 90	101 dB SPL	-	113 dB SPL	-
Gain				
FOG at 1.6 kHz	-	43 dB	-	55 dB
FOG (peak)	45 dB	56 dB	60 dB	70 dB
HFA-FOG	37 dB	-	50 dB	-
Reference test gain	24 dB	34 dB	36 dB	48 dB
Frequency, noise and directivity				
Frequency range 80 60 / 40	100 - 10000 Hz 100 - 8200 Hz	100 - 10000 Hz 100 - 8300 Hz	100 - 9400 Hz 100 - 8200 Hz	100 - 10000 Hz 100 - 8300 Hz
Equivalent input noise	17 dB SPL	21 dB SPL	17 dB SPL	22 dB SPL
Total harmonic distortion at 500 / 800 / 1600 / 3200 Hz	1 / 1 / 1 / 1 %	1 / 1 / 2 / - %	1 / 2 / 1 / 1 %	2 / 3 / 2 / - %
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	-	74 dB SPL	-	86 dB SPL
HFA MASL (1 mA/m)	68 dB SPL	-	81 dB SPL	-
HFA SPLITS (left/right)	83 / 83 dB SPL	-	95 / 95 dB SPL	-
RSETS (left/right)	-1 / -1 dB	-	-1 / -1 dB	-
HFA SPLIV	83 dB SPL	-	95 dB SPL	-
Battery				
Battery voltage	1.3 V		1.3 V	
Battery current drain	1.7 mA	1.7 mA	1.9 mA	1.9 mA
Battery life (cell zinc air)	~78 h		~76 h	
Battery life (rechargeable)	-		-	
IRIL IEC 60118-13:2016 Ed. 4.0				
700-960 MHz (rating)	user		user	
1400-2000 MHz (rating)	user		user	
2000-2700 MHz (rating)	user		user	
ANSI C63.19-2011				
800-950 MHz (rating)	M4/T4		M4/T4	
1600-2500 MHz (rating)	M4/T4		M4/T4	

M-Core R312 · 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	-	128 dB SPL	-	137 dB SPL
OSPL 90 (Peak)	124 dB SPL	134 dB SPL	130 dB SPL	138 dB SPL
HFA-OSPL 90	119 dB SPL	-	123 dB SPL	-
Gain				
FOG at 1.6 kHz	-	70 dB	-	82 dB
FOG (peak)	70 dB	80 dB	75 dB	82 dB
HFA-FOG	63 dB	-	68 dB	-
Reference test gain	42 dB	53 dB	46 dB	62 dB
Frequency, noise and directivity				
Frequency range 80 60 / 40	100 - 7500 Hz 100 - 7500 Hz	100 - 8100 Hz 100 - 8100 Hz	100 - 7300 Hz 100 - 7300 Hz	250 - 6100 Hz 250 - 6100 Hz
Equivalent input noise	16 dB SPL	20 dB SPL	14 dB SPL	10 dB SPL
Total harmonic distortion at 500 / 800 / 1600 / 3200 Hz	1 / 2 / 1 / 1 %	3 / 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	-	101 dB SPL	-	113 dB SPL
HFA MASL (1 mA/m)	94 dB SPL	-	99 dB SPL	-
HFA SPLITS (left/right)	102 / 102 dB SPL	-	105 / 105 dB SPL	-
RSETS (left/right)	-1 / -1 dB	-	-1 / -1 dB	-
HFA SPLIV	102 dB SPL	-	105 dB SPL	-
Battery				
Battery voltage	1.3 V		1.3 V	
Battery current drain	1.8 mA	1.8 mA	1.8 mA	1.8 mA
Battery life (cell zinc air)	~76 h		~76 h	
Battery life (rechargeable)	-		-	
IRIL IEC 60118-13:2016 Ed. 4.0				
700-960 MHz (rating)	user		user	
1400-2000 MHz (rating)	user		user	
2000-2700 MHz (rating)	user		user	
ANSI C63.19-2011				
800-950 MHz (rating)	M4/T4		M4/T4	
1600-2500 MHz (rating)	M4/T4		M4/T4	

M-Core R312 · Features and Accessories

Features	80	60	40
Channels / Controls / Programs	48 / 20 / 6	32 / 16 / 6	24 / 12 / 6
Soundpro	High Res	High Res	High Res
My Voice (own voice processing)	●	●	●
Direct Streaming / Auto Volume	Made for iPhone via TV Transmitter & Smart Mic. / Auto Volume	Made for iPhone via TV Transmitter & Smart Mic. / Auto Volume	Made for iPhone via TV Transmitter & Smart Mic. / Auto Volume
Wireless Sync	●	●	●
Directionality	Automatic Adaptive iOmni Front & Back Left & Right Narrow	Automatic Adaptive iOmni Front & Back	Automatic Adaptive iOmni
Noise Reduction	Noise Management SoundSmoothing Directional	Noise Management SoundSmoothing Directional	Noise Management SoundSmoothing
Wind Noise Reduction	Standard Binaural	Standard Binaural	Standard
Reverb Reducer	●	–	–
Bandwidth: Extension / Compression	● / ●	– / ●	– / ●
Music Enhancer (Live / Recorded / Playing)	●	●	–
Tinnitus Function	Sound Therapy Notch Therapy	Sound Therapy Notch Therapy	Sound Therapy Notch Therapy
XPhone	●	●	●
Acclimatization / Data logging	● / ●	● / ●	● / ●
Accessories			
Smart Mic	●	●	●
Smart Transmitter 2.4	●	●	●
Smart Key	●	●	●
Rexton App	●	●	●

● available – not available

M-Core R312

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
SPLIV	SPL In a Vertical magnetic field
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 S3.22-2014 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.
- ▶ 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.
- ▶ Inductive coil sensitivity values, inductive response curves and T ratings apply for instruments with telecoil battery door only.
- ▶ 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.
- ▶ The current consumption is measured in reference test setting (RTS) according to the applicable standards. Due to the settling behaviour of hearing instruments supporting RF (radio frequency), the battery current is measured 3 minutes after turning on (note: no pairing).
- ▶ The battery life 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 life is determined by battery quality, hearing loss, sound environment, usage and activated feature set.
- ▶ The following acoustic connections / ear pieces were used:
 - S-Receiver Unit and M-Receiver Unit: Closed Click Dome
 - P-Receiver Unit: Click Mold
 - HP-Receiver Unit: Custom Shell
- ▶ HD Bandwidth up to 10 kHz for 80 devices only.

Made for

Apple iPhone | iPad | iPod

"Made for iPod", "Made for iPhone", and "Made for iPad" mean that an electronic accessory has been designed to connect specifically to iPod, iPhone, or iPad, 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 iPod, iPhone, or iPad 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.

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.