



# 校准证书

## CALIBRATION CERTIFICATE

证书编号: 1JA23000010-0001

Certificate No.



中国认可  
国际互认  
校准  
CALIBRATION  
CNAS L13344

委托单位: 华瑞赛维(宿州)科技有限公司/Huarui 7layers High Technology (Suzhou) Co., Ltd

Client

安徽省宿州市高新区竹邑路88号创业中心N座/Tower N, Innovation Center, 88 Zhuyi Road, High-tech District, Suzhou City, Anhui Province, P.R.CHINA

委托方地址:

Address

仪器名称:

Description

测试前端

型号规格:

Model/Type

labCORE/labBGN

制造商:

Manufacturer

/

机身号:

Serial No.

77000207/64860403

管理号:

Asset No.

SZ-YP2020002/SZ-YP2020003

接收日期:

Rec. Date

2022-12-15

校准日期:

Cal. Date

2022-12-15

签发日期:

App. Date

2023-01-03

建议校准周期:

Reference Cal. Period

12个月(12 months)

结论:

Conclusion

所校准项目符合技术要求(The calibrated items meet the technical requirements)

校准:

Calibrated by

徐俊

徐俊

核验:

Inspected by

曹慧慧

曹慧慧

签发:

Approved by

田立丰

田立丰

印章:

Stamp



扫一扫查真伪

赛宝计量检测中心

总部地址: 广州市增城区朱村街朱村大道西78号

实验室地址: 江苏省苏州市高新区泰山路601号

客服电话: 0512-68076661 传真: 0512-68076669

投诉电话: 0512-68026260/66719750、020-87236896

邮件: service-hd@ceprei.com

网址: www.ceprei-cal.com

CEPREI Calibration and Testing Centre

H.Q. Addr: No.78,Zhucun Avenue West,Zengcheng District,Guangzhou,China

Add. of the Lab:No.601, Taishan Road, Hi-Tech District, Suzhou, Jiangsu, China

Service Tel: 0512-68076661 Fax: 0512-68076669

Complaint Tel: 0512-68078465/66719750、020-87236896

Email: service-hd@ceprei.com

Website: www.ceprei-cal.com



# 说 明

## DIRECTIONS

**1. 本机构质量管理体系符合ISO/IEC 17025:2017标准的要求, 获得中国合格评定国家认可委员会 (CNAS) 认可, 认可证书号为: CNAS L13344。**

This laboratory quality management system meets the ISO/IEC 17025:2017 and is accredited by the China National Accreditation Service for Conformity Assessment, No. CNAS L13344.

**2. 本机构出具的数据均可溯源到国际单位制 (SI) 单位和社会公用计量标准。**

The data issued by this laboratory is traceable to International system of Units (SI) and national primary standards.

**3. 本次校准的技术依据及CNAS认可范围(Reference documents and CNAS accredited scopes):**

- JJG 834-2006 动态信号分析仪检定规程: Frequency: 1mHz~200kHz; Voltage:10mV~10V,(1Hz~100kHz)
- JJF 1288-2011 多通道声分析仪校准规范: Sound pressure level:(20~130)dB;Voltage:1mV~100V;Frequency:1Hz~30kHz;Total distortion:(0.01~100)%

\* 详细内容请查看CNAS网站中注册编号为L13344的证书附件, 超出范围的内容未被认可, 其结果/结论所依据的合格评定活动不在认可范围内。(Please see the attachment of certificate No. L13344 at CNAS website for details, beyond which is not accredited, the conformity assessment activities on which the results/conclusions are based are outside the scope of accreditation.)

**4. 本次校准所使用的主要测量标准(The main measurement standards used during the calibration):**

名称 (Description)	证书号/有效期/溯源单位 (Certificate No./Due Date/Traceability to)	技术指标 (Specification)	测量范围 (Measuring Range)
PULSE分析系统(3160-107274)	4JC21000116-0020/2023-01-04/赛宝(苏州)	频率: $U_{rel}=0.001\%,k=2$ ;电压: $U_{rel}=0.04\%,k=2$	频率:0.001Hz~51.2kHz, 电压:( $1 \times 10^{-5}$ ~30)V
数字万用表(US36108646)	4JC21000116-0080/2023-01-12/赛宝(苏州)	DCV: $\pm 0.0035\%$ ; ACV: $\pm 0.06\%$ ; DCI: $\pm 0.05\%$ ; ACI: $\pm 0.1\%$ ; R: $\pm 0.01\%$ ; f: $\pm 0.001\%$	DCV:(0~1000)V; ACV:(0.001~750)V@(3Hz~300kHz); DCI:(0~3)A; ACI:(0~3)A@(3Hz~5kHz); R:(0~100)M $\Omega$ ; f:3Hz~300kHz

**5. 校准地点(The calibration place):**

安徽省宿州市高新区竹邑路88号创业中心N座一楼实验室

**6. 环境条件(Environmental conditions):**

温度(Temperature): 12°C 相对湿度(Relative Humidity): 48%

**7. 本证书中给出的扩展不确定度依据JJF1059.1-2012《测量不确定度的评定与表示》评定, 由合成标准不确定度乘以包含概率约为95%时对应的包含因子 $k$ 得到。**

The extended uncertainty given in this certificate is evaluated according to JJF1059.1-2012 "Evaluation and Expression of Uncertainty in Measurement", and is calculated by multiplying the combined standard uncertainty by the coverage factor  $k$  which corresponding to the coverage probability about 95%.

**8. 证书中"P"、"合格"代表"测量结果在允许范围内", "F"、"不合格"代表"测量结果不在允许范围内", "N/A"代表"不适用或技术指标暂时无法确认等"。本证书报告的结论仅供参考, 使用人员应结合实际测量的要求合理使用, 如考虑测量结果测量不确定度的影响等。**

"P" and "Pass" in this certificate stand for "Low Limit $\leq$ the measured value $\leq$ High Limit", "F" and "Fail" stand for "the measured value $<$ Low Limit or the measured value $>$ High Limit", "N/A" stands for "Not Applicable or The technical specification has not been confirmed etc".The conclusions of this certificate are for reference only. Users should use them reasonably according to the actual measurement requirements, such as considering the impact of measurement uncertainty, etc.

**9. 建议校准周期是本实验室依据本证书报告的技术依据和仪器设备常规使用条件给出的建议, 供委托方参考。委托方可以根据实际使用情况自行决定样品的校准周期。**

The reference calibration period is based on the reference documents and normal operating conditions of the calibrated instrument. It is only for reference. The client may decide the calibration period of the instrument according to the actual use.



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注: 1.本证书未经本机构书面授权, 不得部分复制。(The certificate shall not be partly reproduced without written approval of the laboratory.)

2.本次校准结果仅与被校物有关。(The results are only related to the items calibrated.)

3.“委托方”、“委托方联络信息”由委托方提供, “制造厂”、“型号规格”、“出厂编号”以及“设备编号”为仪器上标注, 委托方对上面内容如有异议, 须在收到证书后二十个工作日内提出。

The information Client and Contact Information are provided by client, and the Manufacturer, Model/Type, Serial No. and Equipment No. are marked on the items. Client shall submit any objection within 20 working days after receiving the certificate for the information above.

## 1 外观与工作正常性检查 (Appearance and Function Check)

无影响证书中测量结果准确度的因素和缺陷。

**There are no factor and defect that affect the measurement result accuracy of the certificate.**

## 2 线性度(Linearity)

Frequency : 1000 Hz

标准值 (Reference)	示值 (Indication)	误差 (Error)	允许误差 (Limit)	结论 (Pass/Fail)	$U_{rel}$ ( $k=2$ )
(dB)	(dB)	(dB)	(dB)	(P/F)	(dB)
94.0	94.0	0.0	±0.6	P	0.3
84.0	84.0	0.0	±0.6	P	0.3
74.0	74.0	0.0	±0.6	P	0.3
64.0	64.0	0.0	±0.6		0.3
54.0	54.0	0.0	±0.6	P	0.3
44.0	44.0	0.0	±0.6	P	0.3
34.0	34.1	0.1	±0.6	P	0.3

## 3 A加权特性(A-Weighting Characteristic)

频率 (Frequency)	标准值 (Reference)	示值 (Indication)	误差 (Error)	允许误差 (Limit)	结论 (Pass/Fail)	$U_{rel}$ ( $k=2$ )
(Hz)	(dB)	(dB)	(dB)	(dB)	(P/F)	(dB)
100	-19.1	-19.0	-0.1	±1.5	P	0.5
125	-16.1	-16.1	0.0	±1.5	P	0.5
160	-13.4	-13.3	-0.1	±1.5	P	0.5
200	-10.9	-10.8	-0.1	±1.5	P	0.5
250	-8.6	-8.6	0.0	±1.4	P	0.4
315	-6.6	-6.6	0.0	±1.4	P	0.4
400	-4.8	-4.8	0.0	±1.4	P	0.4
500	-3.2	-3.3	0.1	±1.4	P	0.4
630	-1.9	-1.8	-0.1	±1.4	P	0.4
800	-0.8	-0.8	0.0	±1.4	P	0.4
1000(Ref.)	0.0	0.0	0.0	±1.1	P	0.4
1250	0.6	0.6	0.0	±1.4	P	0.4
1600	1.0	1.0	0.0	±1.6	P	0.6
2000	1.2	1.1	0.1	±1.6	P	0.6
2500	1.3	1.3	0.0	±1.6	P	0.6
3150	1.2	1.2	0.0	±1.6	P	0.6
4000	1.0	1.0	0.0	±1.6	P	0.6
5000	0.5	0.5	0.0	±2.1	P	0.6
6300	-0.1	-0.1	0.0	+2.1~ -2.6	P	0.6
8000	-1.1	-1.0	-0.1	+2.1~ -3.1	P	0.6
10000	-2.5	-2.3	-0.2	+2.6~ -3.6	P	0.6
12500	-4.3	-4.0	-0.3	+3.0~ -6.0	P	1.0
16000	-6.6	-6.4	-0.2	+3.5~ -17.0	P	1.0
20000	-9.3	-9.0	-0.3	+4.0~ -∞	P	1.0

## 4 信号源频率(Generator Frequency)

输出电平(Output Level) : 1V

示值 (Indication)	标准值 (Reference)	误差 (Error)	允许误差 (Limit)	结论 (Pass/Fail)	$U_{rel}$ ( $k=2$ )
(Hz)	(Hz)	(%)	(%)	(P/F)	(%)
20	20.00	0.0	±1.0	P	0.1
50	50.00	0.0	±1.0	P	0.1
100	100.00	0.0	±1.0	P	0.1
200	200.00	0.0	±1.0	P	0.1
500	500.00	0.0	±1.0	P	0.1
1000	1000.0	0.0	±1.0	P	0.1
2000	2000.0	0.0	±1.0	P	0.1
5000	5000.0	0.0	±1.0	P	0.1
10000	10000.0	0.0	±1.0	P	0.1
20000	20000.0	0.0	±1.0	P	0.1

## 5 输出电压(Output Voltage)

频率(Frequency) : 1kHz

示值 (Indication)	标准值 (Reference)	误差 (Error)	允许误差 (Limit)	结论 (Pass/Fail)	$U_{rel}$ ( $k=2$ )
(V)	(V)	(%)	(%)	(P/F)	(%)
2.000	1.9939	0.3	±2.5	P	0.2
1.000	0.99954	0.0	±2.5	P	0.2
0.5000	0.49988	0.0	±2.5	P	0.2
0.2000	0.19998	0.0	±2.5	P	0.2
0.1000	0.099998	0.0	±2.5	P	0.2

## 6 幅频特性(Amplitude-Frequency Characteristic)

频率 (Frequency)	标准值 (Reference)	平坦度 (Flatness)	允许误差 (Limit)	结论 (Pass/Fail)	$U$ ( $k=2$ )
(Hz)	(V)	(dB)	(dB)	(P/F)	(dB)
20	1.0004	0.01	±0.5	P	0.1
50	1.0004	0.01	±0.5	P	0.1
100	1.0004	0.01	±0.5	P	0.1
200	1.0003	0.01	±0.5	P	0.1
500	0.99988	0.00	±0.5	P	0.1
1000	0.99943	0.00	Ref.		0.1
2000	1.0001	0.01	±0.5	P	0.1
5000	0.99946	0.00	±0.5	P	0.1
10000	0.99932	0.00	±0.5	P	0.1
20000	0.99307	-0.06	±0.5	P	0.1

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# 校准证书

## CALIBRATION CERTIFICATE

证书编号:



Certificate No.

J202204130648A-0003

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委托方

华瑞赛维（宿州）科技有限公司

Client

联络信息

安徽省宿州市高新区竹邑路88号创业中心N座

Contact Inf.

仪器名称

人工头（音频耳模拟器）

Description

型号/规格

HMS II.3

制造厂

HEAD

Model/Type

Manufacturer

出厂编号

12306613

管理号

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Serial No.

Asset No.

接收日期

2022年04月24日

校准日期

2022年04月24日

Receipt Date

Y M D

Cal. Date

Y M D

发布日期

2022年04月24日

Issued Date

Y M D

批准

Approved by

李平

李平

审核

Inspected by

李俊杰

李俊杰

校准

Calibrated by

陈君

陈君



总部地址(Headquarters Add.): 广东省广州市黄埔大道西平云路163号

No.163.Pingyun Rd, West of HuangPu Ave.Guangzhou Guangdong China

实验室地址(Add.of the Lab): 广东省广州市黄埔大道西平云路163号

No.163.Pingyun Rd,West of HuangPu Ave.Guangzhou,Guangdong,China

联系电话(Tel.):400-602-0999

邮政编码(Postcode):510656

网站(Website):http:// www.grgtest.com

电子邮件(E-mail):grgtest@grgtest.com



扫一扫验真伪

## 校 准 说 明

### DIRECTIONS OF CALIBRATION

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- 1.本实验室的质量管理体系符合ISO/IEC 17025:2017标准的要求,校准结果均可溯源至国际单位制(SI)。(The quality system is in accordance with ISO/IEC 17025:2017,the calibration results are traceable to the International System of Units (SI).)
- 2.本结果仅对本次校准样品有效。未经实验室批准,不得部分复制。如有疑问请在15个工作日内反馈。(The result is only valid for the calibrated sample.The certificate shall not be reproduced except in full,without the written approval of our laboratroy .please feedback to us within 15 days if you have any question.)
- 3.本证书编号具有唯一性,后缀若带有“-Gx”的证书为替换证书,自发出后原证书即刻作废。(Each certificate has a unique number. The suffix of "-Gx" will be added to the number as a replacement of the old version. The original certificate will be officially invalid once the new certificate number is issued.)
- 4.证书中最大允许误差、判定结果仅供参考,其中“P”代表“合格”,“F”代表“不合格”,“N/A”代表“不适用”。使用人员应结合实际测量需求,评估测量不确定度对符合性评定的影响。(MPE & judgement result in the datasheet is only for reference , "P" is "Pass" , "F" is "Fail" and "N/A" is "Not Applicable".Whereas users should evaluate the effects of MU of calibration results on conformance assessment by actual measurement.)
- 5.本次校准的技术依据及CNAS认可范围,超出范围的内容未被认可。详细认可范围请查看CNAS网站证书附件。(Reference document and accredited scope by CNAS for calibration, beyond which isn't accredited. Please see the attachment of certificate on CNAS website for details.)

JJF 1520-2015 声学用头和躯干模拟器校准规范 (C. S. for Head and Torso Simulator Used in Acoustical Measurement) 耳灵敏度级: (-60~40)dB (250Hz或1000Hz) 耳自由场频率响应: (-20~30)dB; 100Hz~10kHz 耳指向性: (-20~20)dB; 100Hz~10kHz 嘴参考点处幅频特性: (-60~40)dB; 100Hz~10kHz 嘴参考点处失真: (0.01%~100%) 100Hz~10kHz 嘴自由场幅频特性: (-60~40)dB; 100Hz~10kHz

6. 本次校准使用的主要测量标准(Main Standards of Measurement Used in the Calibration.):

名称	编号	证书号/有效期	溯源机构	技术特征
Description	Serial No.	Certificate No./ Due Date	Traceability Institute	Technique Character
噪声振动测试系统(主机) Noise vibration testing system -Host	3160-107026	LSvm2022-00766等 2023-01-20	中国计量科学研究院	频率计权 $U=0.3\text{dB}(k=2)$ ; A级
全指向性声源 Omnidirectional sound source	073005	213606073 2022-09-16	深圳市计量质量检测研究院	MPE: $\pm 2\text{dB} \sim \pm 8\text{dB}$
自由场传声器及前置放大器 Free field microphone and preamplifier	3137362	J202111011452-0004 2022-11-09	广州广电计量检测股份有限公司	组合声压灵敏度级 $\geq -40\text{dB}$
压力场传声器 Pressure field microphone	3038692	J202203283355-0007 2023-03-30	广州广电计量检测股份有限公司	灵敏度 $> -40\text{dB}$

7. 校准地点、环境条件(Place and environmental conditions of the calibration):

地点	客户一层全消声室	温度	22	℃	相对湿度	48	%
Place		Temperature			Relative Humidity		

8. 建议复校时间间隔: 1年,送校单位也可按实际使用情况自主决定。

Suggested calibration interval is 1 year or it can be altered depending on the actual usage of the user.



## 校准结果 RESULTS OF CALIBRATION

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1、外观及各部分相互作用: 符合要求

Apparent inspection and the function of each part of interaction:

2、耳自由场频率响应

Frequency Response of Ear in Free-field

2.1、左耳 Left Ear

频率	左耳频率响应	误差	接受限	结论
Frequency	F.R.of Left Ear	Error	Acceptance Limit	Conclusion
(Hz)	(dB)	(dB)	(dB)	(P/F)
100	-0.5	-0.5	±1.0	P
125	-0.5	-0.5	±1.0	P
160	-0.2	-0.2	+1.0,-1.5	P
200	-0.5	-0.5	+1.0,-1.5	P
250	0.2	-0.3	+1.0,-1.5	P
315	0.9	-0.1	+1.0,-1.5	P
400	0.9	-0.6	+1.0,-1.5	P
500	2.7	+0.7	+1.5,-1.0	P
630	3.5	+1.0	+1.5,-1.0	P
800	5.2	+1.7	+2.5,-1.0	P
1000	3.7	+0.2	+2.0,-1.5	P
1250	4.0	+0.5	+2.5,-3.0	P
1600	5.8	+0.8	+2.0,-3.0	P
2000	10.9	-1.6	+1.0,-3.5	P
2500	16.0	-2.5	+1.0,-4.0	P
3150	16.7	+1.2	+5.0,-2.0	P
4000	15.5	+2.5	+5.0,-1.0	P
5000	11.5	+0.5	+4.5,-2.5	P
6300	6.1	+1.1	+4.0,-2.5	P
8000	3.0	+1.0	+9.0,-3.0	P
10000	7.1	+0.1	+3.0,-6.5	P

广电计量

## 校准结果 RESULTS OF CALIBRATION

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### 2.2、右耳 Right Ear

频率	右耳频率响应	误差	接受限	结论
Frequency	F.R.of Right Ear	Error	Acceptance Limit	Conclusion
(Hz)	(dB)	(dB)	(dB)	(P/F)
100	0.3	+0.3	±1.0	P
125	0.4	+0.4	±1.0	P
160	0.7	+0.7	+1.0,-1.5	P
200	0.3	+0.3	+1.0,-1.5	P
250	1.0	+0.5	+1.0,-1.5	P
315	1.6	+0.6	+1.0,-1.5	P
400	1.4	-0.1	+1.0,-1.5	P
500	3.4	+1.4	+1.5,-1.0	P
630	4.0	+1.5	+1.5,-1.0	P
800	5.7	+2.2	+2.5,-1.0	P
1000	3.9	+0.4	+2.0,-1.5	P
1250	4.2	+0.7	+2.5,-3.0	P
1600	6.2	+1.2	+2.0,-3.0	P
2000	11.1	-1.4	+1.0,-3.5	P
2500	16.4	-2.1	+1.0,-4.0	P
3150	16.9	+1.4	+5.0,-2.0	P
4000	14.7	+1.7	+5.0,-1.0	P
5000	10.6	-0.4	+4.5,-2.5	P
6300	6.3	+1.3	+4.0,-2.5	P
8000	3.2	+1.2	+9.0,-3.0	P
10000	6.2	-0.8	+3.0,-6.5	P

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### 3、耳指向性 Directivity of Ear

#### 3.1、与声源夹角0° 0° between HATS and Sound Source

频率	左耳声压级	右耳声压级	频率	左耳声压级	右耳声压级
Frequency	S.L. of Left Ear	S.L. of Right Ear	Frequency	S.L. of Left Ear	S.L. of Right Ear
(Hz)	(dB)	(dB)	(Hz)	(dB)	(dB)
100	43.3	44.1	1250	66.3	66.5
125	49.7	50.6	1600	67.9	68.3
160	52.1	53.0	2000	76.1	76.3
200	52.9	53.7	2500	81.4	81.8
250	56.1	56.9	3150	81.2	81.4
315	56.6	57.3	4000	78.9	78.1
400	57.7	58.2	5000	76.0	75.1
500	61.9	62.6	6300	69.5	69.7
630	64.9	65.4	8000	67.5	67.7
800	67.0	67.5	10000	65.7	64.8
1000	68.2	68.4	/	/	/

#### 3.2、与声源夹角90° 90° between HATS and Sound Source

频率	左耳声压级	右耳声压级	频率	左耳声压级	右耳声压级
Frequency	S.L. of Left Ear	S.L. of Right Ear	Frequency	S.L. of Left Ear	S.L. of Right Ear
(Hz)	(dB)	(dB)	(Hz)	(dB)	(dB)
100	42.4	45.9	1250	68.1	74.9
125	48.4	51.7	1600	67.6	75.3
160	51.3	54.6	2000	70.3	75.2
200	51.3	56.0	2500	73.8	81.3
250	54.3	59.1	3150	73.6	81.4
315	55.9	60.0	4000	69.7	80.0
400	56.0	61.9	5000	64.4	82.9
500	59.0	65.9	6300	58.2	80.6
630	61.6	68.8	8000	55.8	82.1
800	63.3	71.1	10000	53.9	76.9
1000	65.0	72.4	/	/	/

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### 3.3、与声源夹角180° 180° between HATS and Sound Source

频率	左耳声压级	右耳声压级	频率	左耳声压级	右耳声压级
Frequency	S.L. of Left Ear	S.L. of Right Ear	Frequency	S.L. of Left Ear	S.L. of Right Ear
(Hz)	(dB)	(dB)	(Hz)	(dB)	(dB)
100	43.0	43.2	1250	67.2	67.7
125	49.1	49.3	1600	69.1	69.4
160	52.1	52.4	2000	73.3	74.0
200	52.2	52.6	2500	77.7	78.6
250	55.3	55.5	3150	76.6	77.2
315	55.5	55.8	4000	74.6	75.0
400	55.7	56.2	5000	69.0	67.9
500	59.5	60.0	6300	64.3	65.3
630	62.2	62.9	8000	67.6	69.6
800	64.9	65.5	10000	65.1	65.9
1000	66.7	67.1	/	/	/

### 3.4、与声源夹角270° 270° between HATS and Sound Source

频率	左耳声压级	右耳声压级	频率	左耳声压级	右耳声压级
Frequency	S.L. of Left Ear	S.L. of Right Ear	Frequency	S.L. of Left Ear	S.L. of Right Ear
(Hz)	(dB)	(dB)	(Hz)	(dB)	(dB)
100	44.6	42.9	1250	74.0	68.5
125	50.6	49.2	1600	74.5	68.3
160	53.6	52.2	2000	74.3	70.3
200	55.1	52.4	2500	79.3	74.1
250	58.4	55.5	3150	79.6	73.5
315	59.0	57.0	4000	78.8	69.1
400	61.0	56.9	5000	81.4	63.0
500	65.2	60.2	6300	78.9	61.5
630	68.0	62.7	8000	79.7	63.1
800	70.1	64.0	10000	74.9	57.6
1000	71.6	65.4	/	/	/

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### 4、嘴参考点处幅频特性

#### Amplitude Frequency Characteristics at MRP

频率	测量值	幅频特性	频率	测量值	幅频特性
Frequency	Measured Value	Amplitude Frequency Characteristics	Frequency	Measured Value	Amplitude Frequency Characteristics
(Hz)	(dB)	(dB)	(Hz)	(dB)	(dB)
100	69.0	-18.3	1250	86.2	-1.1
125	73.1	-14.2	1600	84.1	-3.2
160	76.0	-11.3	2000	83.2	-4.1
200	78.7	-8.6	2500	81.8	-5.5
250	80.4	-6.9	3150	83.0	-4.3
315	81.6	-5.7	4000	86.6	-0.7
400	83.1	-4.2	5000	85.0	-2.3
500	84.4	-2.9	6300	75.6	-11.7
630	84.7	-2.6	8000	79.6	-7.7
800	85.5	-1.8	10000	77.3	-10.0
1000 (ref)	87.3	0.0	/	/	/

### 5、嘴参考点处失真

#### Distortion at MRP

嘴参考点处总谐波失真:

Total Harmonic Distortion at MRP

2.4% (200Hz~250Hz, 94dB)

0.9% (>250Hz, 94dB)

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### 6、嘴自由场幅频特性

#### Amplitude Characteristics in Free-Field of the Mouth

频率	测量值	幅频特性	频率	测量值	幅频特性
Frequency	Measured Value	Amplitude Frequency Characteristics	Frequency	Measured Value	Amplitude Frequency Characteristics
(Hz)	(dB)	(dB)	(Hz)	(dB)	(dB)
100	33.6	-18.3	1250	52.1	0.2
125	39.1	-12.8	1600	54.1	2.2
160	42.2	-9.7	2000	58.0	6.1
200	44.2	-7.7	2500	54.2	2.3
250	48.6	-3.3	3150	52.9	1.0
315	49.0	-2.9	4000	58.4	6.5
400	50.9	-1.0	5000	53.9	2.0
500	54.7	2.8	6300	46.2	-5.7
630	54.2	2.3	8000	50.7	-1.2
800	53.7	1.8	10000	50.3	-1.6
1000 (ref)	51.9	0.0	/	/	/

备注:

Notes:

结论 (Conclusion): 所校项目符合技术要求

1.本报告中的扩展不确定度是由标准不确定度乘以包含概率约为95%时的包含因子 $k$ 。  
The expanded uncertainty is given in the report by the standard uncertainty multiplied by the probability of about 95% when the factor  $k$ .

耳灵敏度级:  $U=0.6\text{dB}$  ( $k=2$ ) 耳指向性 (100Hz~10kHz)  $U=0.8\text{dB}$  ( $k=2$ )

耳自由场频率响应: (100Hz~10kHz)  $U=0.8\text{dB}$  ( $k=2$ )

嘴参考点处幅频特性 (100Hz~10kHz)  $U=0.8\text{dB}$  ( $k=2$ )

嘴参考点处失真 (100Hz~10kHz)  $U=0.4\%$  ( $k=2$ )

嘴自由场幅频特性 (100Hz~10kHz)  $U=0.8\text{dB}$  ( $k=2$ )

2.依据(Reference document)

JJF 1059.1-2012 测量不确定度评定与表示

(JJF 1059.1-2012 Evaluation and Expression of Uncertainty in Measurement)

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