



中国赛宝实验室
(工业和信息化部电子第五研究所)
CHINA CEPREI LABORATORY



校准证书

CALIBRATION CERTIFICATE

证书编号: 2SB14001520-0001
Certificate No.



委托单位: 深圳市巴伦检测技术有限公司
Client

委托方地址: 深圳市南山区沙河西路白沙科技产业园1楼B区
Address

仪器名称: EPM Series Power Meter
Description

型号规格: E4419B 069
Model/Type

制造商: Agilent
Manufacturer

机身号: GB40201833
Serial No.

管理号: BZ-EMC-069
Asset No.

校准日期: 2014-11-03
Cal. Date

建议再校日期: 2015-11-03
Next Cal. Date

结论: 所校准项目合格(Passed at Calibration Items)
Conclusion

校准: 刘鹏
Calibrated by

核验: 黄帅
Inspected by

签发: 杨格新 无线电室主任
Approved by Director of Radio Lab

印章:
Stamp

说 明

DIRECTIONS

证书编号(Certificate No.): 2SB14001520-0001

1. 本机构是国家质量监督检验检疫总局授权的国家法定计量技术机构, 授权证编号: (国)法计(2012)00068号。质量管理体系符合ISO/IEC 17025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 L0462。

This laboratory is the legal metrological institute authorized by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China, No. (国)法计(2012)00068. Its quality management system meets the ISO/IEC 17025 and is accredited by the China National Accreditation Service for Conformity Assessment, No. CNAS L0462.

2. 本机构出具的数据均可溯源到国家计量基准和国际单位制(SI)。

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

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

▪ JJG (航天) 22-1987 436A型功率计检定规程 功率: (0.1~100) mW@ (0.1MHz~18GHz)

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

名 称 (Description)	技术指标 (Specification)	证书编号 (Certificate No.)	有效期至 (Due Date)
量程校准器	$\pm 0.25\%$	4GC14000073-0017	2015-03-14
功率表	P: $\pm 0.5\%$	4GC14000304-0002	2015-09-21
功率探头	CF: $U_1=2.0\%$ ($k=2$)	4GC14000182-0001	2015-06-12

5. 校准地点(The location where the calibrations were carried out):

赛宝计量检测中心广州实验室

6. 环境条件(Environmental condition):

温度(Temperature): 20℃ 相对湿度(Relative Humidity): 60%

7. 证书数据页中"P"代表"合格", "F"代表"不合格", "N/A"代表"不适用".

In the data sheet, "P" stands for "Pass", "F" stands for "Fail", "N/A" stands for "Not applicable".

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.)



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

结论
(Pass/Fail)
P

2 零点漂移(Zero Shift) (Time: 30s)

通道 (Channel)		指示值 (Indicated) (nW)	允许范围 (Limit) (nW)	结论 (Pass/Fail)
A	接校准器	-60.0	± 76.4	P
B	接校准器	23.0	± 76.4	P

3 功率指示准确度(Power Indication Accuracy)

3.1 通道A(Channel A)

量程 (Range)	标准值 (Reference)	指示值 (Indicated)	误差 (Error)	允许误差 (Limit)	结论 (Pass/Fail)
(μW)	(μW)	(μW)	(μW)	(μW)	
3	3.1600	3.110	-0.050	± 0.066	P
10	10.000	9.95	-0.05	± 0.10	P
30	31.600	31.50	-0.10	± 0.21	P
100	100.00	99.9	-0.1	± 0.6	P
(mW)	(mW)	(mW)	(mW)	(mW)	
0.3	0.31600	0.3162	0.0002	± 0.0016	P
1	1.0000	1.000	0.000	± 0.005	P
3	3.1560	3.160	0.004	± 0.016	P
10	10.034	10.04	0.01	± 0.050	P
30	31.785	31.81	0.03	± 0.16	P
100	101.30	101.3	0.0	± 0.5	P



3.2 通道B(Channel B)

量程	标准值	指示值	误差	允许误差	结论
(Range)	(Reference)	(Indicated)	(Error)	(Limit)	(Pass/Fail)
(μ W)	(μ W)	(μ W)	(μ W)	(μ W)	
3	3.1600	3.185	0.025	± 0.066	P
10	10.000	10.05	0.05	± 0.10	P
30	31.600	31.62	0.02	± 0.21	P
100	100.00	100.1	0.1	± 0.6	P
(mW)	(mW)	(mW)	(mW)	(mW)	
0.3	0.31600	0.3163	0.0003	± 0.0016	P
1	1.0000	1.000	0.000	± 0.005	P
3	3.1560	3.156	0.000	± 0.016	P
10	10.034	10.03	0.00	± 0.050	P
30	31.785	31.80	0.02	± 0.16	P
100	101.30	101.3	0.0	± 0.5	P

4 校准源功率电平(Power Reference Level)

标称值	标准值	误差	允许误差	结论
(Nominal)	(Reference)	(Error)	(Limit)	(Pass/Fail)
(mW)	(mW)	(mW)	(mW)	
1	0.998	0.002	± 0.006	P

附(Appendix):

关于测量结果不确定度的说明

(Directions of measurement uncertainty)

1 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)

2 本次测量结果的扩展不确定度(The expanded uncertainty of the measurement results)($k=2$)

2.1 功率指示准确度(Power Indication Accuracy) 0.5%

2.2 校准源功率电平(Power Reference Level) 0.3%

2.3 零点漂移(Zero Shift) 10nW

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