



深圳电子产品质量检测中心
SHENZHEN ELECTRONIC PRODUCT QUALITY TESTING CENTER

校准证书

Certificate of Calibration

证书编号 Cert.No. 200904006

委托单位名称 (Client Name): 深圳电子产品质量检测中心

委托单位地址 (Client Address): 深圳市南山区西丽沙河路电子检测大厦

被校设备名称 DUT Name	<u>450MHz validation Dipole</u>	型号规格 Model/Type	<u>IXD-045 S/N 0012</u>
制造厂商 Manufacturer	<u>INDEXSAR</u>	出厂编号 Serial No.	<u>S/N 0111</u>

接收日期 Application Data	<u>2005年04月02日</u>	校准日期 Calibration Data	<u>2009年04月28日</u>
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校准地点 Operation Location	<u>本中心校准室</u>	环境条件 Environment	<u>温度: 24 °C 湿度: 56 %R.H.</u>
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校准依据
Cal. in Accordance to IEEE Std 1528-2003

校准结论
Calibration Conclusion PASS

本次校准所使用的主要测量标准器具

标准设备名称	型号/规格	编号	证书编号	有效期至
矢量网络分析仪	ZVB 8 (R&S)	100343	20-210640	2010-06-10
液体校准系统	DiLine (IndexSAR)	/	/	2010-04-15
SAR 测试系统	SARA2 (IndexSAR)	/	/	2010-04-15

校准:
Operator Zheng Can

审核: Zhao Yanni
Checked by

批准: 李思雄部长
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校准结果

Calibration Results

1. Typical SAR Measurement

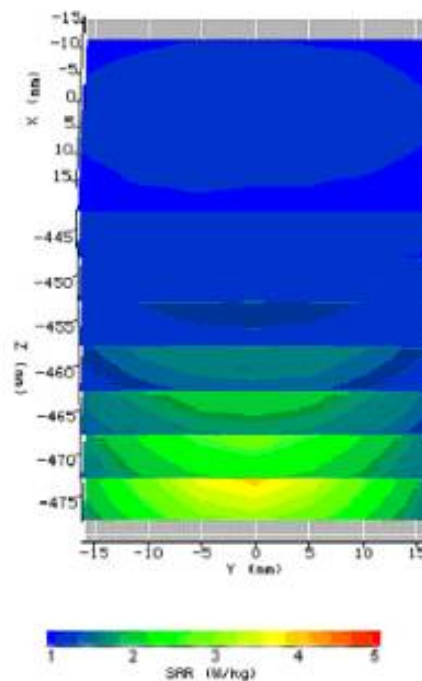
A SAR validation check is performed with the box-phantom located on the SARA2 phantom support base on the SARA2 robot system. Tests are then conducted at a feed power level of approx. 0.25W. The actual power level is recorded and used to normalise the results obtained to the standard input power conditions of 1W (forward power).

The phantom is filled with a 450MHz brain liquid using a recipe from IEEE Std 1528-2003, which has the following electrical parameters (measured using an DiLine) at 450MHz:

Relative Permittivity **43.38**
Conductivity **0.884 S/m**

The SARA2 software version 2.2 VPM is used with an Indexsar probe(SN 0201)previously calibrated using waveguides.

The 3D measurements made using the dipole at the bottom of the phantom box is shown below:



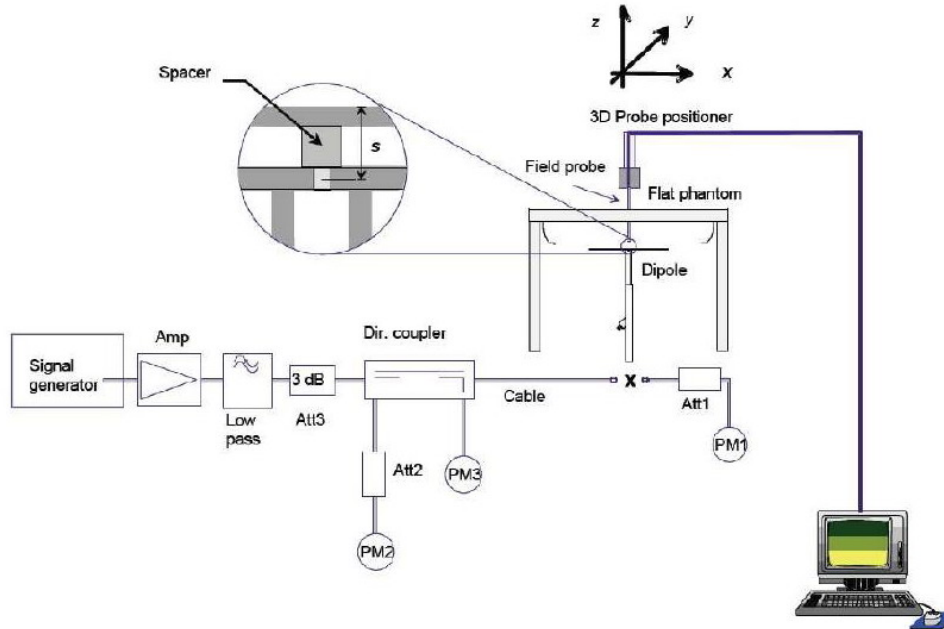
The results, normalised to an input power of 1W (forward power) are typically:

Averaged over 1 cm³ (1g) of tissue **4.937 W/kg**

These results can be compared with IEEE Std 1528-2003. The agreement is within 10%.(against 4.9W/kg)

2. Dipole VSWR

We placed the dipole under the flat part of SAM phantom fill with 450MHz head liquid.



Calibration was performed according to IEEE Std P1528-2003 and OET bulletin 65 Supplement C (Ed. 01-01)

VSWR at 450MHz -24.71 dB

