

COMOSAR Dipole 2450 MHz

Calibration Report



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Date: 2011/9/23

DIPOLE 2450 MHZ CALIBRATION REPORT

Prepared By: LUC Jérôme, SATIMO

Project Description: SAR TEST BENCH

Prepared For (End User): Shenzhen Morlab Communication Technology

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DIPOLE 2450 MHz CALIBRATION REPORT

DATE: 19/02/2009

REFERENCE: SN 36/08 DIPJ103

OBJECT: COMOSAR IEEE REFERENCE DIPOLE

MANUFACTURER: SATIMO

SERIAL NUMBER: SN 36/08 DIPJ103

CUSTOMER: Shenzhen Morlab Communication Technology

CONTRACT: PF2130108b_SAR_Morlab

DATE OF CALIBRATION: 23/09/2011

WARRANTY:

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COMOSAR Dipole 2450 MHz

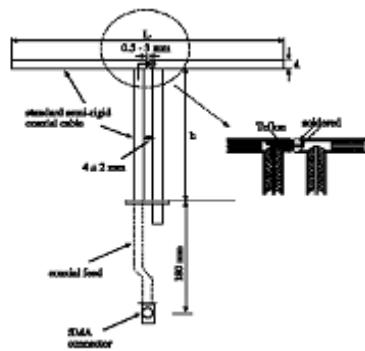
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PRODUCT DESCRIPTION



Dimension: L=161 mm/ h=89.8mm / d=3.6 mm

CALIBRATION TEST EQUIPMENT

TYPE	IDENTIFICATION	DATE OF CALIBRATION
Vector Network Analyzer	HP8753D (SN: 5410A08882)	10-05-2011

MEASUREMENT PROCEDURE

We placed the dipole under the flat part of SAM phantom fill with 2450 MHz head and body liquid.

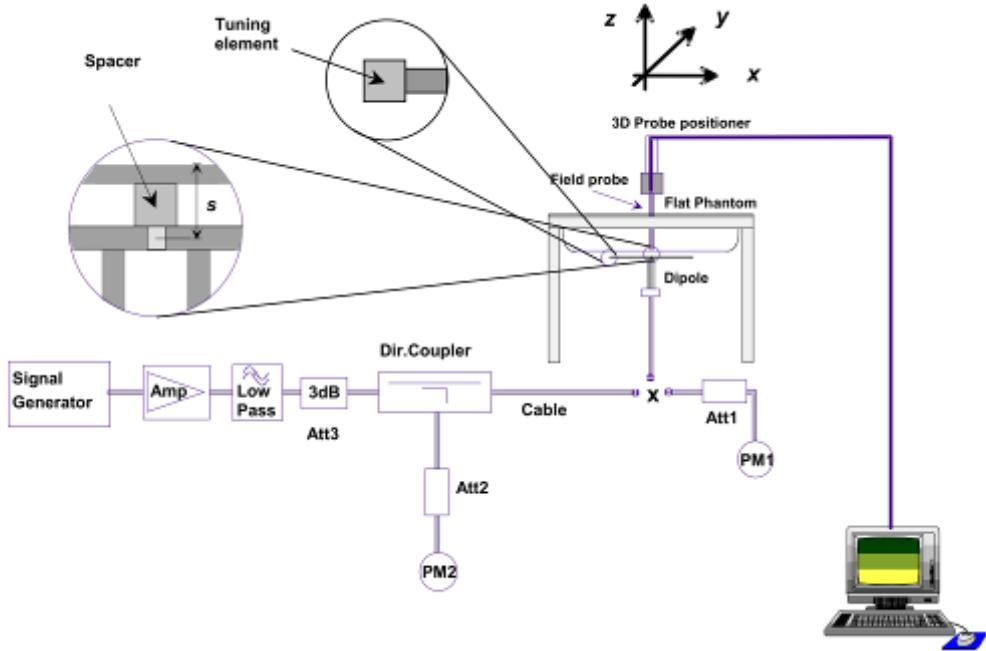
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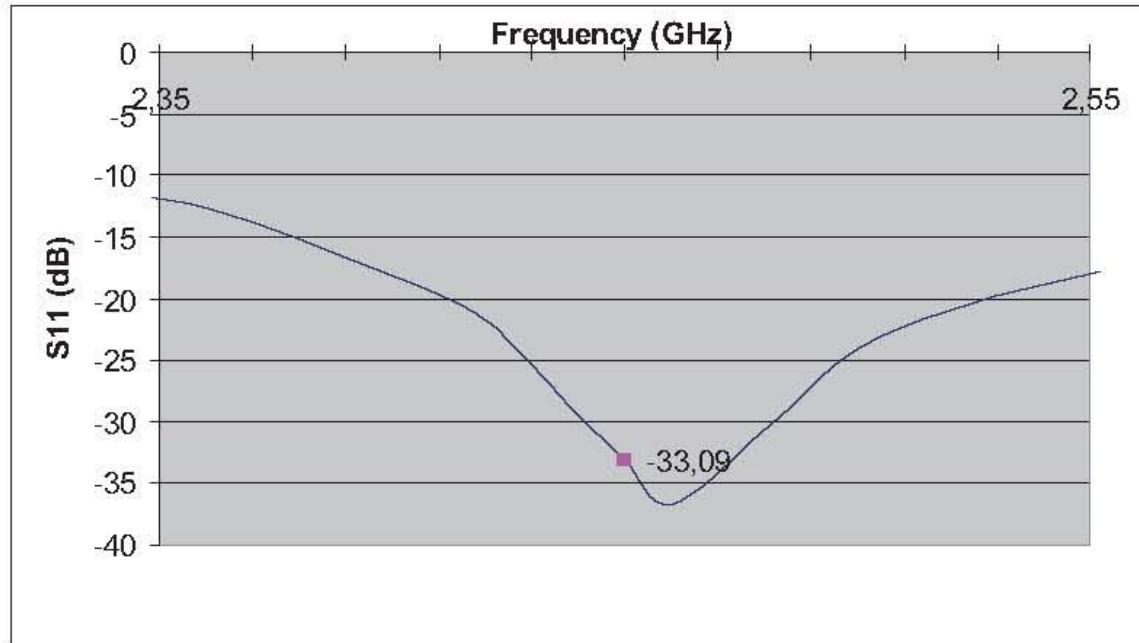
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Calibration was performed according to IEEE Std P1528-2003 and OET bulletin 65 Supplement C (Ed. 01-01)

VSWR at 2450 MHz: -33.09 dB.



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SAR MEASUREMENT EQUIPEMENT Head

Voltmeter	Keithley (2000, SN:1000572)	Date of calibration: 01-07-2011
Signal generator	Rohde&Schwarz (SML_03, SN:101868)	Date of calibration: 15-11-2010
Power amplifier	Nucléitudes (ALB216, SN:10800)	Date of calibration: 24-10-2010
Power meter	Rohde&Schwarz (NRVD, SN:101066)	Date of calibration: 04-07-2011
Probe	SATIMO Bretagne (SN:EP37) CF (30.41,29.18,32.33)	Date of calibration: 19-06-2011

SAR MEASUREMENT CONDITION

Software	OpenSAR V3
Phantom	SATIMO Bretagne (SN: SN_20_07_SAM42)
Liquid	SATIMO Bretagne (Last Calibration: 18 09 11) Head Liquid Values: ϵ_r : 39,80 sigma : 1,88
Distance between the center of the dipole and the liquid (set with a spacer)	15 mm
Area scan resolution	$dx=8mm/dy=8mm$
Zoom scan resolution	$dx=8mm/dy=8m/dz=5mm$
Frequency	2450 MHz
Input power	30 dBm

Expanded uncertainty (K=1)	8.09%
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SAR MEASUREMENT RESULT

	10g	1g
SAR measured	23,61 W/Kg	53,85W/Kg
Liquid : HL	-1,63 %	+ 2,77 %
Input power : 1W		

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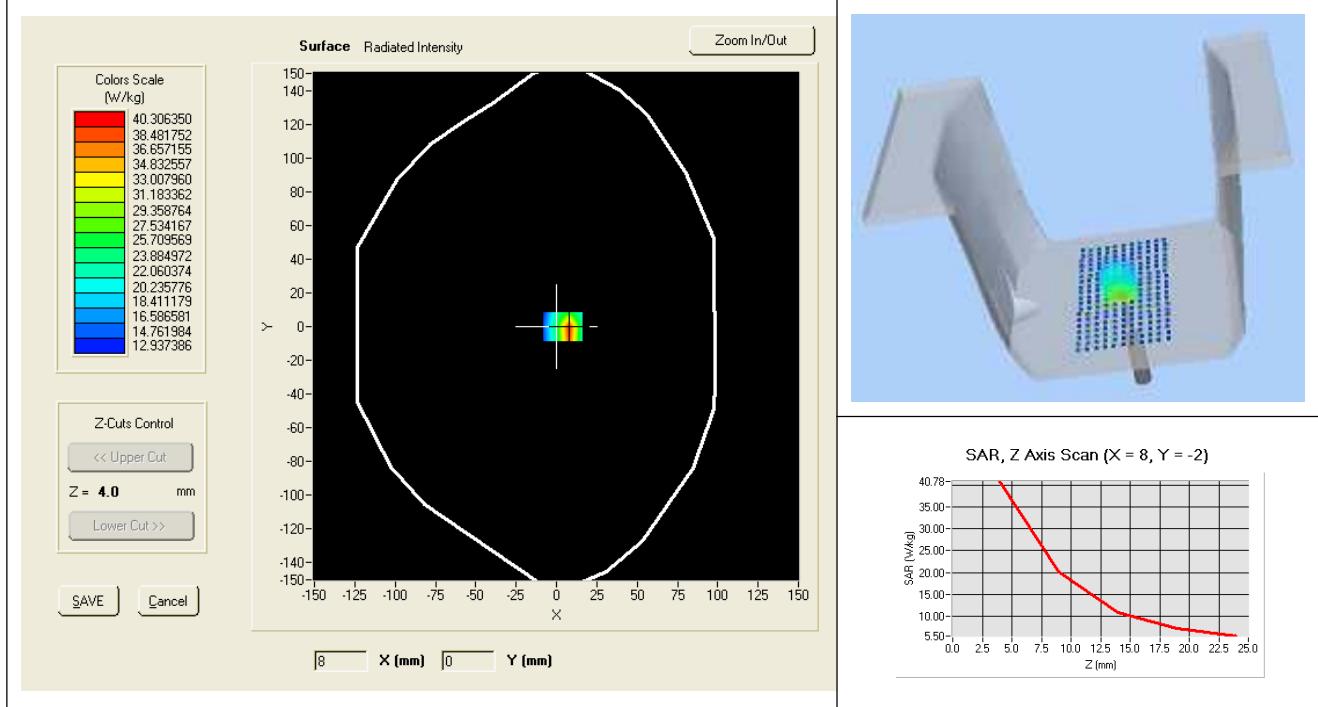
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SAR MEASUREMENT PLOTS

Head:



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SAR MEASUREMENT EQUIPEMENT Body

Voltmeter	Keithley (2000, SN:1000572)	Date of calibration: 01-07-2011
Signal generator	Rohde&Schwarz (SML_03, SN:101868)	Date of calibration: 15-11-2010
Power amplifier	Nucléitudes (ALB216, SN:10800)	Date of calibration: 24-10-2010
Power meter	Rohde&Schwarz (NRVD, SN:101066)	Date of calibration: 04-07-2011
Probe	SATIMO Bretagne (SN:EP37) CF (30.41,29.18,32.33)	Date of calibration: 19-06-2011

SAR MEASUREMENT CONDITION

Software	OpenSAR V3
Phantom	SATIMO Bretagne (SN: SN_20_07_SAM42)
Liquid	SATIMO Bretagne (Last Calibration: 18 09 11) Body Liquid Values: ϵ_s' : 52,50 sigma : 1,78
Distance between the center of the dipole and the liquid (set with a spacer)	15 mm
Area scan resolution	$dx=8mm/dy=8mm$
Zoom scan resolution	$dx=8mm/dy=8m/dz=5mm$
Frequency	835 MHz
Input power	30 dBm
Expanded uncertainty (K=1)	8.09%

SAR MEASUREMENT RESULT

	10g	1g
SAR measured	21,45 W/Kg	50,82 W/Kg
Liquid : HL	+ 1,66 %	-3,01 %
Input power : 1W		

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SAR MEASUREMENT PLOTS

Body:

