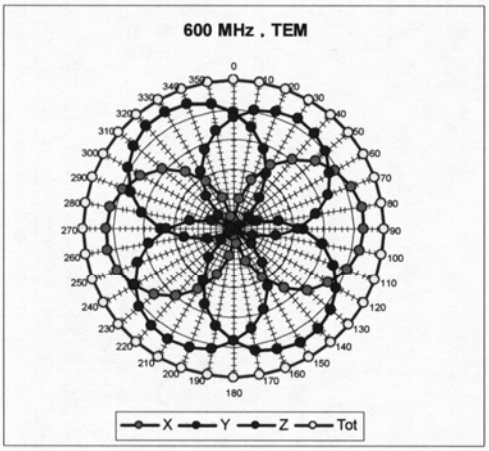
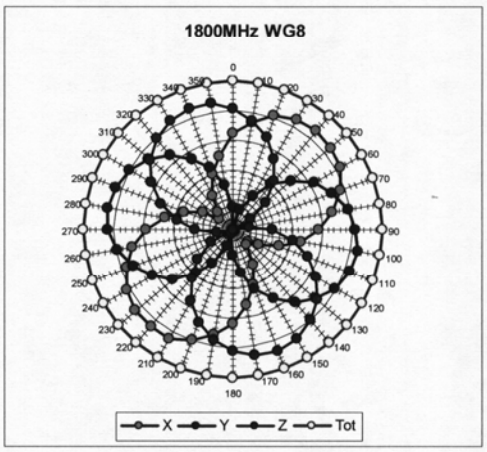
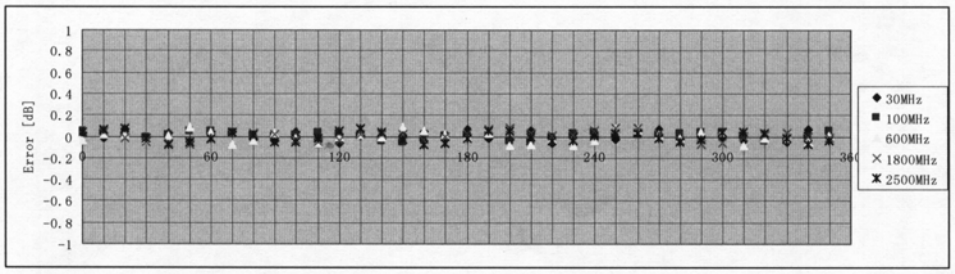
Add: No.52 Huayuanbei Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62303288-2082 Fax: +86-10-62304793
E-mail: Info@emcite.com Http://www.emcite.com

Receiving Pattern (ϕ), θ =0°







Uncertainty of Axial Isotropy Assessment: ±0.5% (k=2)

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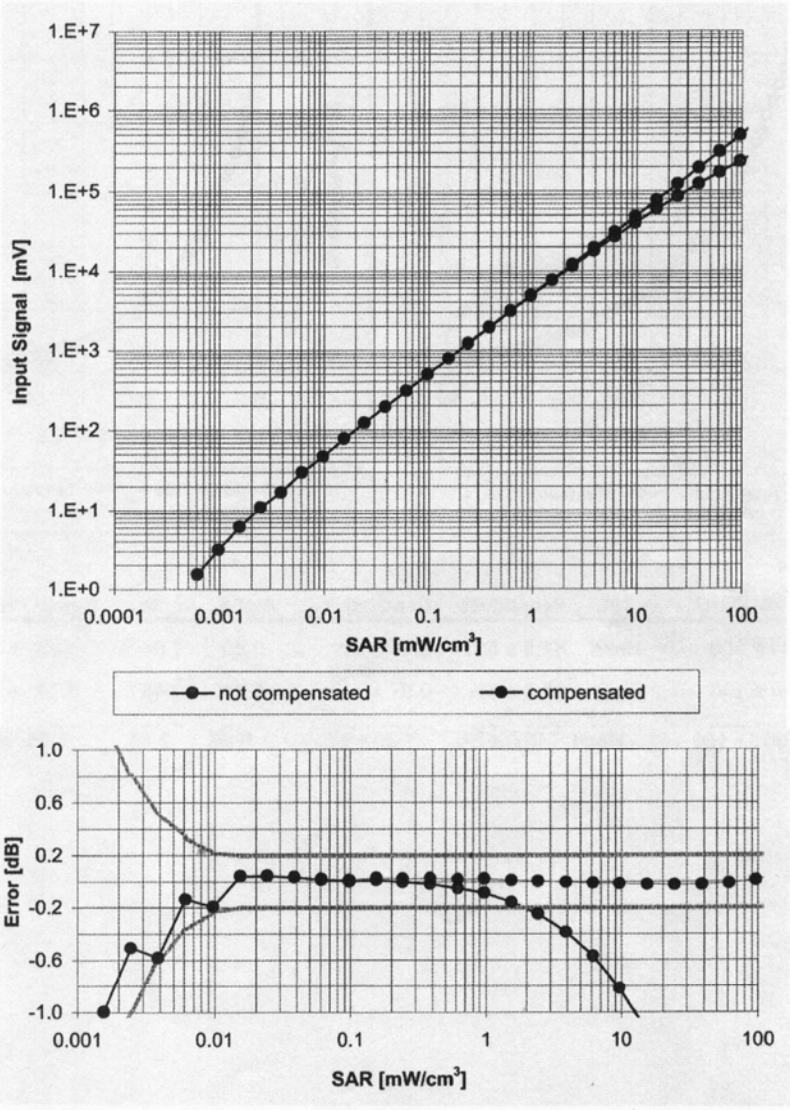
Dynamic Range f(SAR_{head})

(Waveguide: WG8, f = 1800 MHz)



Uncertainty of Linearity Assessment: ±0.6% (k=2)

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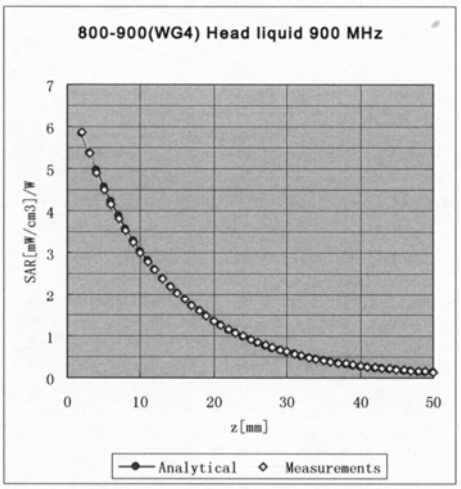
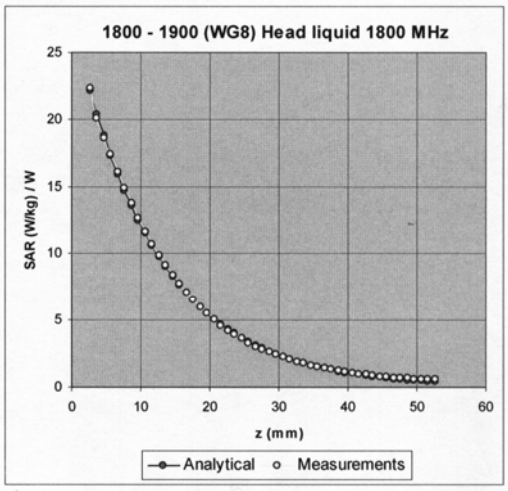
Conversion Factor Assessment





f[MHz]	Validity[MHz][C]	TSL	Permittivity	Conductivity	Alpha	Depth	ConvF	Uncertainty
450	±50 /±100	Head	43.5±5%	0.87±5%	0.36	1.84	7.20	±13.3% (k=2)
835	±50 /±100	Head	41.5±5%	0.90±5%	0.25	3.53	6.33	±11.0% (k=2)
900	±50 /±100	Head	41.5±5%	0.97±5%	0.27	3.53	6.14	±11.0% (k=2)
1750	±50 /±100	Head	40.0±5%	1.37±5%	0.56	2.77	5.35	±11.0% (k=2)
1950	±50 /±100	Head	40.0±5%	1.40±5%	0.57	2.72	4.89	±11.0% (k=2)
2450	±50 /±100	Head	39.2±5%	1.80±5%	0.51	1.60	4.39	±11.0% (k=2)
450	±50 /±100	Body	56.7±5%	0.94±5%	0.27	1.80	7.52	±13.3% (k=2)
835	±50 /±100	Body	55.2±5%	0.97±5%	0.36	2.75	6.14	±11.0% (k=2)
900	±50 /±100	Body	55.0±5%	1.05±5%	0.43	2.51	5.98	±11.0% (k=2)
1750	±50 /±100	Body	53.4±5%	1.49±5%	0.99	1.74	4.84	±11.0% (k=2)
1950	±50 /±100	Body	53.3±5%	1.52±5%	0.99	1.50	4.60	±11.0% (k=2)
2450	±50 /±100	Body	52.7±5%	1.95±5%	0.98	1.42	3.91	±11.0% (k=2)

[C] The validity of ±100 MHz only applies for DASY v4.4 and higher (see Page 2). The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

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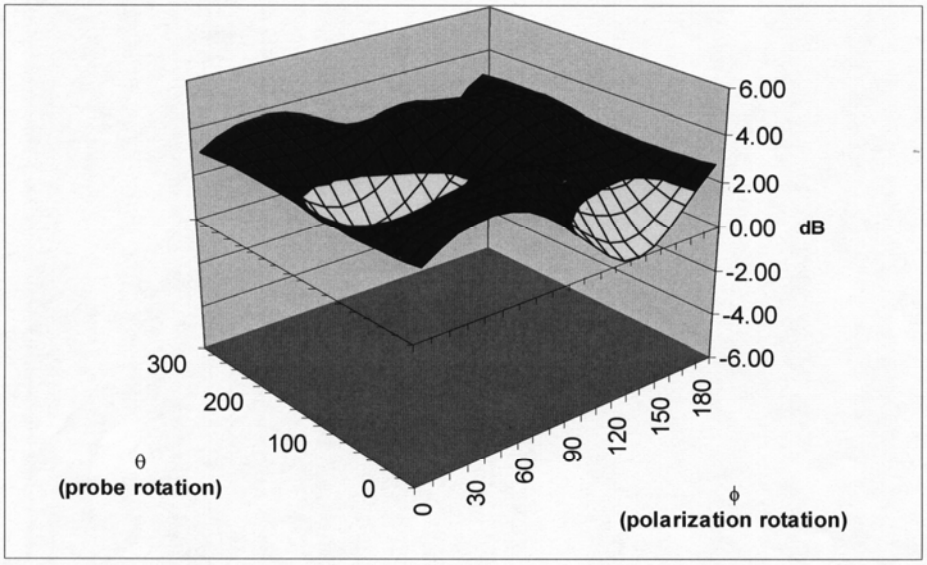
Deviation from Isotropy

Error (Φ , θ), f = 900 MHz



Uncertainty of Spherical Isotropy Assessment: ±2.6% (k=2)

ANNEX E: D450V3 Dipole Calibration Certificate

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 108

Client TA (Auden)

Certificate No: D450V3-1065_Nov09

CALIBRATION CERTIFICATE

Object	D450V3 - SN: 1065
Calibration procedure(s)	QA CAL-15.v5 Calibration Procedure for dipole validation kits below 800 MHz
Calibration date:	November 09, 2009

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power meter E4419B	GB41293874	1-Apr-09 (No. 217-01030)	Apr-10
Power sensor E4412A	MY41495277	1-Apr-09 (No. 217-01030)	Apr-10
Power sensor E4412A	MY41498087	1-Apr-09 (No. 217-01030)	Apr-10
Reference 3 dB Attenuator	SN: S5054 (3c)	31-Mar-09 (No. 217-01026)	Mar-10
Reference 20 dB Attenuator	SN: S5086 (20b)	31-Mar-09 (No. 217-01028)	Mar-10
Type-N mismatch combination	SN: 5047.2 / 06327	31-Mar-09 (No. 217-01029)	Mar-10
Reference Probe ET3DV6 (LF)	SN: 1507	03-Jul-09 (No. ET3-1507_Jul09)	Jul-10
DAE4	SN: 654	04-May-09 (No. DAE4-654_May09)	May-10

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	04-Aug-99 (in house check Oct-09)	In house check: Oct-11
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-09)	In house check: Oct-10

	Name	Function	Signature
Calibrated by:	Jeton Kastrati	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: November 9, 2009

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 108

Glossary:

TSL	tissue simulating liquid
ConF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
c) Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

Additional Documentation:

d) DASY4 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.