ANNEX A.7

Justification of SAR result using a 4mm thick phantom.

a) **Test Lab is in the process of acquiring a 2mm thick phantom for future measurements.**

b) Below is an analysis of the expected effect on SAR for the 4mm thick phantom.

(1) A comparison testing was carried out using the 4mm thick phantom and the SAM (2mm thick) phantom.
(2) 450MHz and 900MHz dipole was used to make the comparsion.

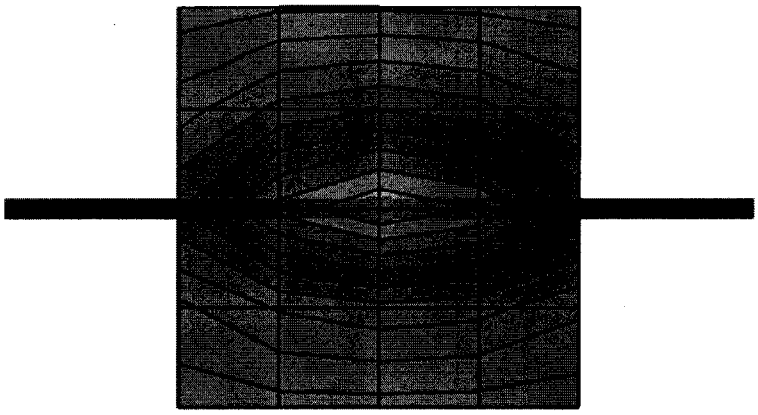
Below is the summary of the comparison testing.

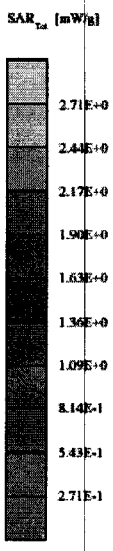
Dipole	**SAM Phantom (2mm)**	**4mm Phantom**	**Differences**
Using 900MHz Dipole (Forward Power = 250mW)	2.59mW/g*	2.45mW/g*	-5.4%
Using 450MHz Dipole (Forward Power = 250mW)	1.33mW/g*	1.24mW/g*	-6.7%

* SAR_1g

(i) Using 900MHz Dipole (Forward Power = 250mW) – SAM Phantom

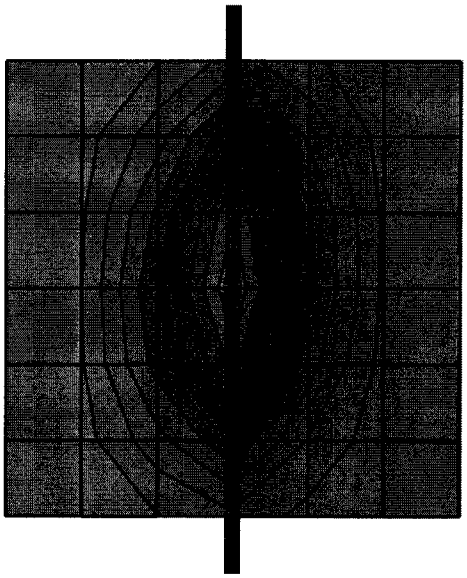
Dipole 900 MHz
SAM Phantom; Flat Section; Position: (90°,90°); Frequency: 900 MHz
Probe: ET3DV6 - SN1647; ConvF(6.60,6.60,6.60); Crest factor: 1.0; Head 900 MHz: σ = 0.98 mho/m ε_r = 40.9 ρ = 1.00 g/cm³
Cubes (2): SAR (1g): 2.59 mW/g ± 0.09 dB, SAR (10g): 1.68 mW/g ± 0.09 dB, (Worst-case extrapolation)
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Powerdrift: -0.04 dB





(ii) Using 900MHz Dipole (Forward Power = 250mW) – 4mm Phantom

Dipole 900 MHz
Rectangle Phantom; Flat
Probe: ET3DV6 - SN1647; ConvF(6.60,6.60,6.60); Crest factor: 1.0; Head 900 MHz: σ = 0.98 mho/m ε_r = 40.9 ρ = 1.00 g/cm³
Cubes (2): Peak: 3.72 mW/g ± 0.08 dB, SAR (1g): 2.45 mW/g ± 0.08 dB, SAR (10g): 1.61 mW/g ± 0.08 dB, (Worst-case extrapolation)
Penetration depth: 12.9 (11.9, 14.1) [mm]
Powerdrift: 0.01 dB



Date/Time: 02/04/03 17:59:47

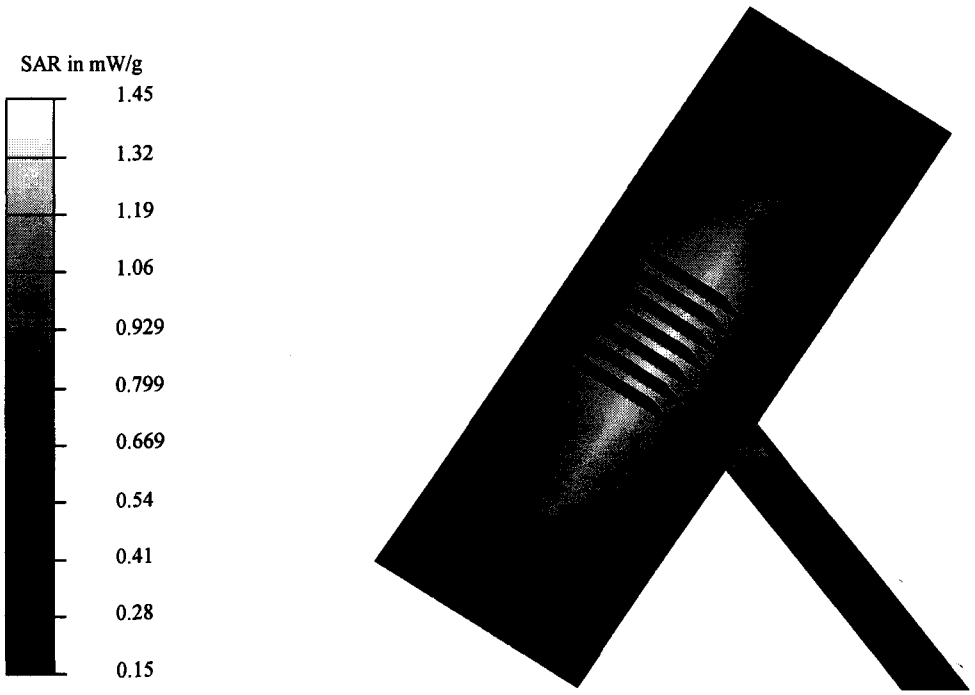
Test Laboratory: Telecom & EMC Testing Group
File Name: 450MHz_Dipole Validation at Sam Phantom_250mW_Data 2_Verification.da4

DUT: Dipole 450MHz Type & Serial Number: D450V2 & 1004 respectively.
Program: 450MHz_Dipole Validation at Sam Phantom_Data 2_Verified; Antenna Input Power: 250mW

Communication System: CW; Frequency: 450 MHz; Duty Cycle: 1:1
Medium: 450MHz Head Tissue (σ = 0.891 mho/m, ε = 43.505, ρ = 1000 kg/m3)
Phantom section: FlatSection

DASY4 Configuration:
- Probe: ET3DV6 - SN1647; ConvF(7.5, 7.5, 7.5); Calibrated: 11/20/2002
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn475; Calibrated: 11/14/2002
- Phantom: SAM V4.0 - TP:Type: 1116
- Software: DASY4, V4.0 Build 51

Area Scan (7x17x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm
Reference Value = 41.9 V/m
Peak SAR = 2.14 mW/g
SAR(1 g) = 1.33 mW/g; SAR(10 g) = 0.842 mW/g
Power Drift = 0.01 dB



Date/Time: 02/05/03 11:33:51

Test Laboratory: Telecom & EMC Testing Group
File Name: 450MHz_Dipole Validation at PSB Flat Phantom_Data 1_Verification.da4

DUT: Dipole 450MHz Type & Serial Number: D450V2 & 1004 respectively
Program: 450MHz_Dipole Validation at Flat Phantom_Data 1_Verified; Antenna Input Power: 250mW

Communication System: CW; Frequency: 450 MHz; Duty Cycle: 1:1
Medium: 450MHz Head Tissue (σ = 0.891 mho/m, ε = 43.505, ρ = 1000 kg/m3)
Phantom section: bottomSection

DASY4 Configuration:
- Probe: ET3DV6 - SN1647; ConvF(7.5, 7.5, 7.5); Calibrated: 11/20/2002
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn475; Calibrated: 11/14/2002
- Phantom: PSB Flat Phantom - TP:
- Software: DASY4, V4.0 Build 51

Area Scan (7x17x1): Measurement grid: dx=10mm, dy=10mm
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm
Reference Value = 38.9 V/m
Peak SAR = 1.82 mW/g
SAR(1 g) = 1.24 mW/g; SAR(10 g) = 0.826 mW/g
Power Drift = -0.03 dB