



**ESTECH Co., Ltd.**

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## APPENDIX B : Validation Test Data

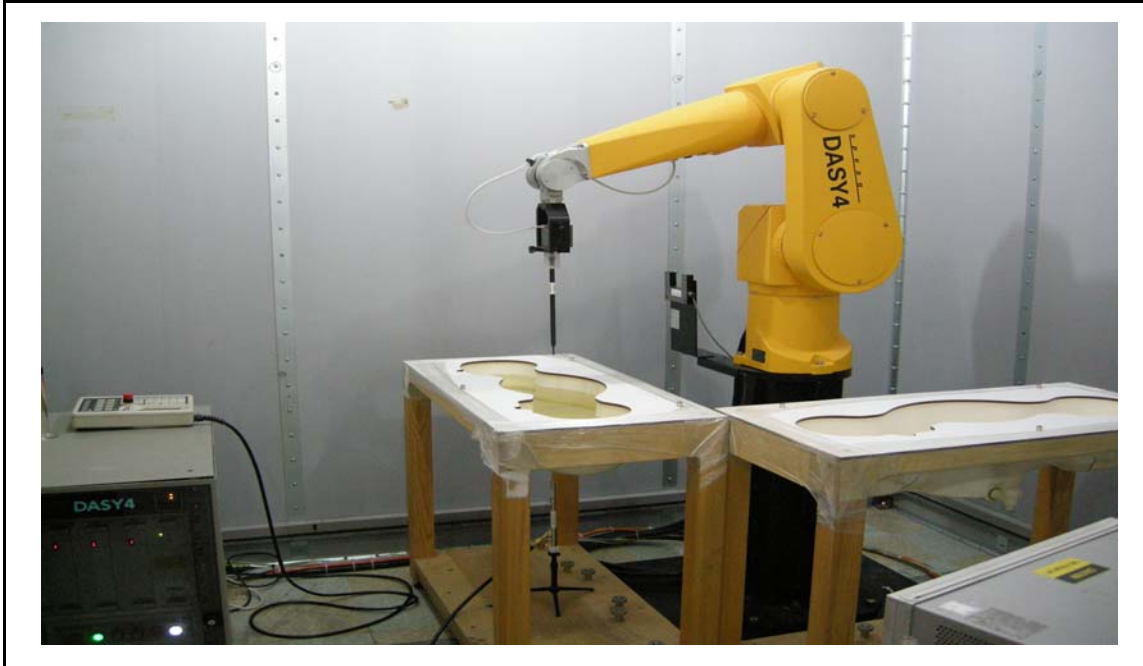


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### Dipole Validation



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**- GSM850/WCDMA850 Validation**

Date: 2009-06-25

Test Laboratory: ESTECH

**VALIDATION**

**DUT: Dipole 835 MHz; Type: D835V2; Serial: 475**

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.97$  mho/m;  $\epsilon_r = 43.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ET3DV6 - SN1750; ConvF(6.37, 6.37, 6.37); Calibrated: 2009-05-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn551; Calibrated: 2009-04-28
- Phantom: SAM 900; Type: SAM; Serial: tp1262
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186
- Temperature : 23 °C, Humidity : 48%

**Area Scan (41x71x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 2.65 mW/g

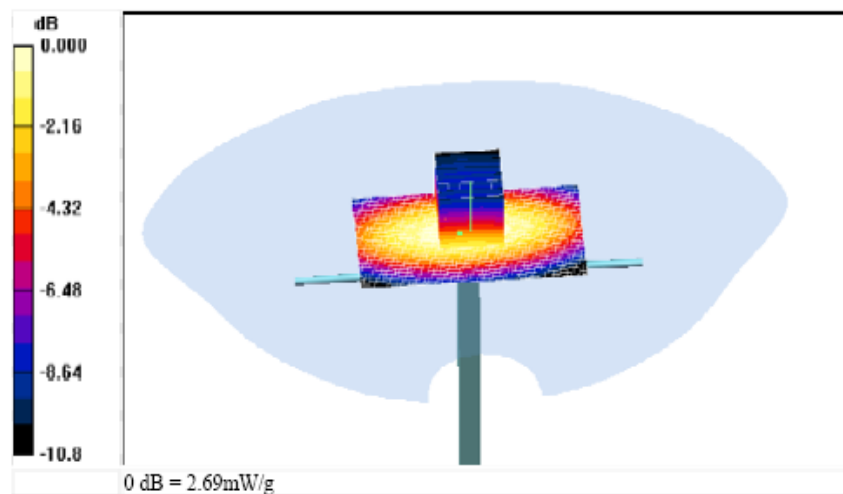
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 54.0 V/m; Power Drift = 0.025 dB

Peak SAR (extrapolated) = 3.66 W/kg

SAR(1 g) = 2.5 mW/g; SAR(10 g) = 1.65 mW/g

Maximum value of SAR (measured) = 2.69 mW/g



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**– GSM1900/WCDMA1900 Validation**

Date: 2009-06-29

Test Laboratory: ESTECH

**VALIDATION**

**DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:xxx**

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1900.4$  MHz;  $\sigma = 1.39$  mho/m;  $\epsilon_r = 38.3$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3123; ConvF(4.84, 4.84, 4.84); Calibrated: 2009-01-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn551; Calibrated: 2009-04-28
- Phantom: SAM 1800; Type: SAM; Serial: TP 1263
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186
- Temperature : 23 °C, Humidity : 48%

**Area Scan (61x61x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 12.4 mW/g

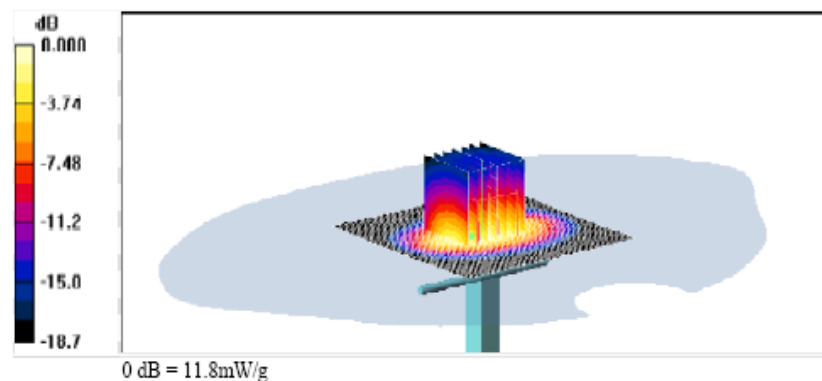
**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 93.0 V/m; Power Drift = 0.019 dB

Peak SAR (extrapolated) = 19.6 W/kg

SAR(1 g) = 10.3 mW/g; SAR(10 g) = 5.3 mW/g

Maximum value of SAR (measured) = 11.8 mW/g



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**- WLAN Validation**

Date: 2009-07-06

Test Laboratory: ESTECH

**VALIDATION**

**DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:xxx**

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.83$  mho/m;  $\epsilon_r = 37.4$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY4 (High Precision Assessment)

DASY4 Configuration:

- Probe: ES3DV3 - SN3123; ConvF(4.44, 4.44, 4.44); Calibrated: 2009-01-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn551; Calibrated: 2009-04-28
- Phantom: SAM 1800; Type: SAM; Serial: TP 1263
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186
- Temperature : 22 °C, Humidity : 46%

**Area Scan (41x61x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 15.6 mW/g

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 88.7 V/m; Power Drift = 0.018 dB

Peak SAR (extrapolated) = 26.1 W/kg

**SAR(1 g) = 12.6 mW/g; SAR(10 g) = 5.82 mW/g**

Maximum value of SAR (measured) = 14.3 mW/g

