

APPENDIX D - TEST SYSTEM VERIFICATIONS SCANS

Liquid Measurement Result

2005-01-03

| Simulant | Freq [MHz] | Parameters | Liquid Temp [°C] | Target Value | Measured Value | Deviation [%] | Limits [%] |
|----------|------------|---------------|------------------|--------------|----------------|---------------|------------|
| Body | 300 | ε | 22 | 58.2 | 58.0 | -0.34 | ± 5 |
| | | σ | 22 | 0.92 | 0.91 | -1.09 | ± 5 |
| | | 1g SAR | 22 | 3.81 | 3.82 | 0.26 | ± 10 |
| Head | 300 | ε | 22 | 45.3 | 45.6 | 0.66 | ± 5 |
| | | σ | 22 | 0.87 | 0.86 | -1.15 | ± 5 |
| | | 1g SAR | 22 | 3.00 | 3.00 | 0.00 | ± 10 |

ε = relative permittivity, σ = conductivity and $\rho=1000\text{kg/m}^3$

Note: Forward power for Body = 20.16 dBm = 103.75 mW

Forward power for Head = 20.12 dBm = 102.80 mW

300 MHz Body Liquid System Validation (Ambient Temp = 21 Deg C, Liquid Temp = 22 Deg C, Forward Power = 20.16 dBm, 01/03/2005)

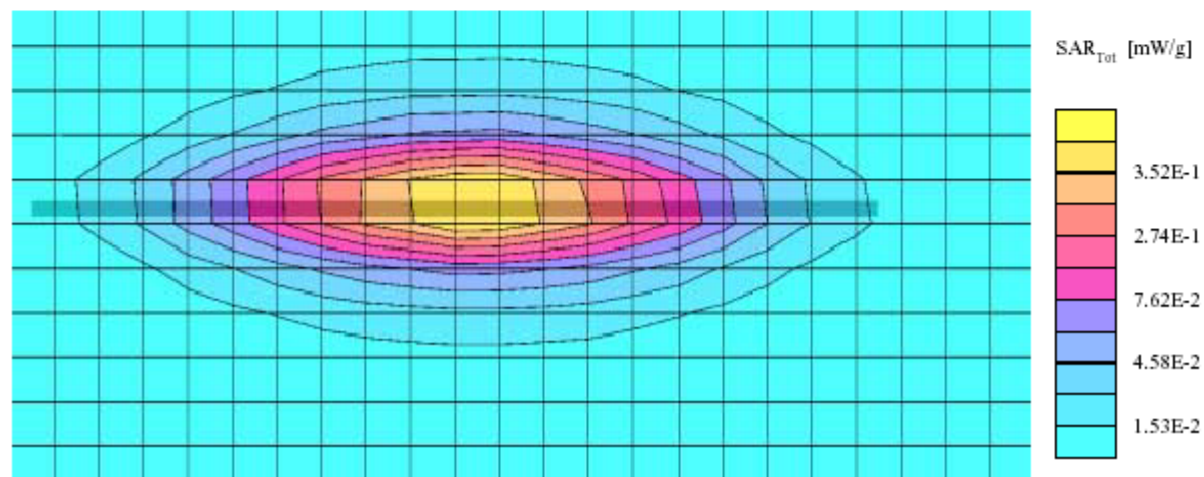
Flat Phantom v4.4 Phantom; Flat Section; Position: (90°,90°); Frequency: 300 MHz

Probe: ES3DV2 - SN3019; ConvF(8.30,8.30,8.30); Crest factor: 1.0; Body liquid 300 MHz: $\sigma = 0.91 \text{ mho/m}$ $\epsilon_r = 58.0$ $\rho = 1.00 \text{ g/cm}^3$

Cube 5x5x7: SAR (1g): 0.396 mW/g, SAR (10g): 0.254 mW/g, (Worst-case extrapolation)

Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0

Powerdrift: -0.01 dB



300 MHz Head Liquid System Validation (Ambient Temp = 23 Deg C, Liquid Temp = 22 Deg C, Forward Power = 20.12 dBm, 01/03/2005)

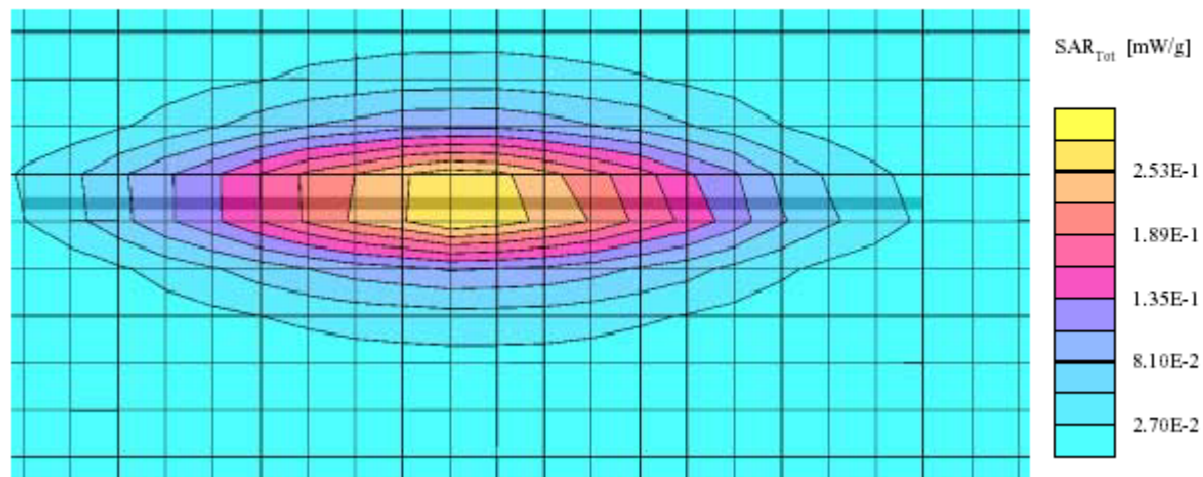
Flat Phantom v4.4 Phantom; Flat Section; Position: (90°, 90°); Frequency: 300 MHz

Probe: ES3DV2 - SN3019; ConvF(8.70,8.70,8.70); Crest factor: 1.0; Head liquid 300 MHz: $\sigma = 0.86 \text{ mho/m}$, $\epsilon_r = 45.6$, $\rho = 1.00 \text{ g/cm}^3$

Cube 5x5x7: SAR (1g): 0.308 mW/g, SAR (10g): 0.165 mW/g, (Worst-case extrapolation)

Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0

Powerdrift: 0.01 dB



APPENDIX E - EUT SCANS

HYT, Model number: TC3600-KV (2) (Back touching flat phantom with belt clip and headset, Mid Channel, Ambient Temp = 23 Deg C, Liquid Temp = 22 Deg C, 01/03/2005)

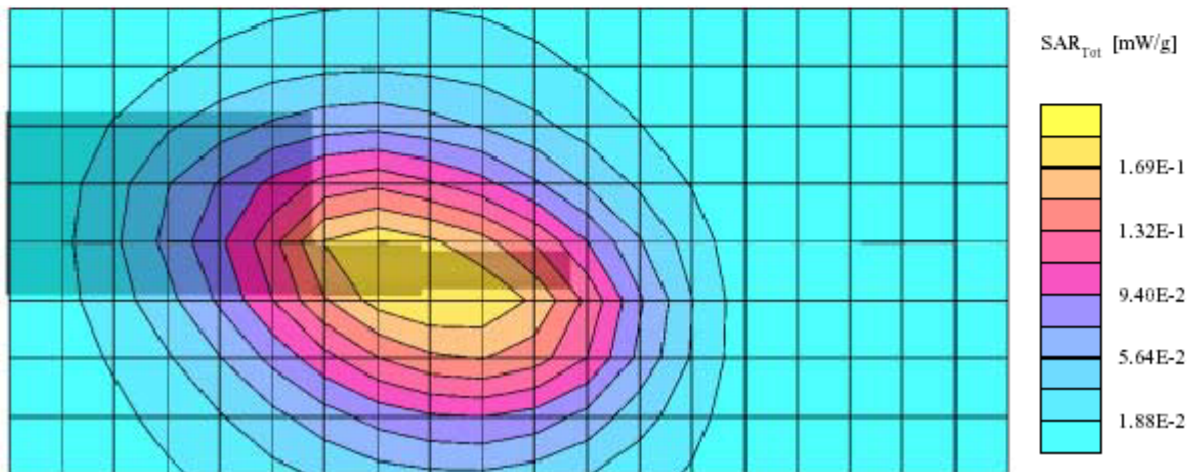
Flat Phantom v4.4 Phantom; Flat Section; Position: (90°, 270°); Frequency: 160.3 MHz

Probe: ES3DV2 - SN3019; ConvF(8.30,8.30,8.30); Crest factor: 1.0; Body 150 MHz: $\sigma = 0.79$ mho/m $\epsilon_r = 61.6$ $\rho = 1.00$ g/cm³

Cube 5x5x7: SAR (1g): 0.0477 mW/g, SAR (10g): 0.0368 mW/g, (Worst-case extrapolation)

Coarse: Dx = 20.0, Dy = 18.0, Dz = 10.0

Powerdrift: 0.05 dB



Plot #1

HYT, Model number: TC3000-KV (2) (2.5 cm separation to flat phantom, Mid Channel,
Ambient Temp = 23 Deg C, Liquid Temp = 22 Deg C, 01/03/2005)

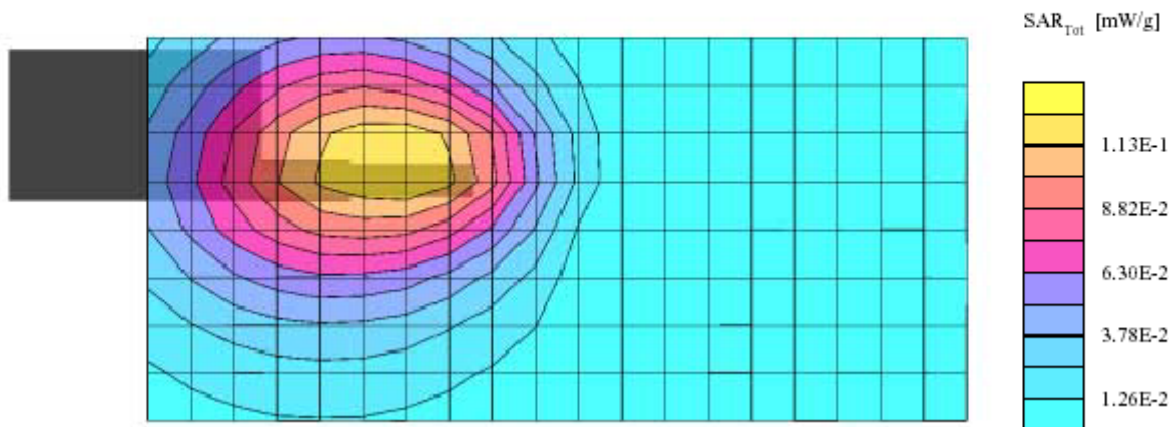
Flat Phantom v4.4 Phantom; Flat Section; Position: (90°, 270°); Frequency: 160.3 MHz

Probe: ES3DV2 - SN3019; ConvF(8.70,8.70,8.70); Crest factor: 1.0; Head 150 MHz: $\sigma = 0.75 \text{ mho/m}$, $\epsilon_r = 52.3$, $\rho = 1.00 \text{ g/cm}^3$

Cubes (2): SAR (1g): 0.0261 mW/g, SAR (10g): 0.0199 mW/g, (Worst-case extrapolation)

Coarse: Dx = 20.0, Dy = 18.0, Dz = 10.0

Powerdrift: -0.01 dB



Plot #2

APPENDIX F – CONDUCTED OUTPUT POWER MEASUREMENT

Provision Applicable

According to FCC §22.913 (a), the ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts. According to FCC § 24.232(b), EIRP peak power for mobile/portable stations are limited to 2 watts.

Test Procedure

The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.

Test equipment

Hewlett Packard HP8564E Spectrum Analyzer, Calibration Due Date: 2005-08-06.

Hewlett Packard HP 7470A Plotter, Calibration not required.

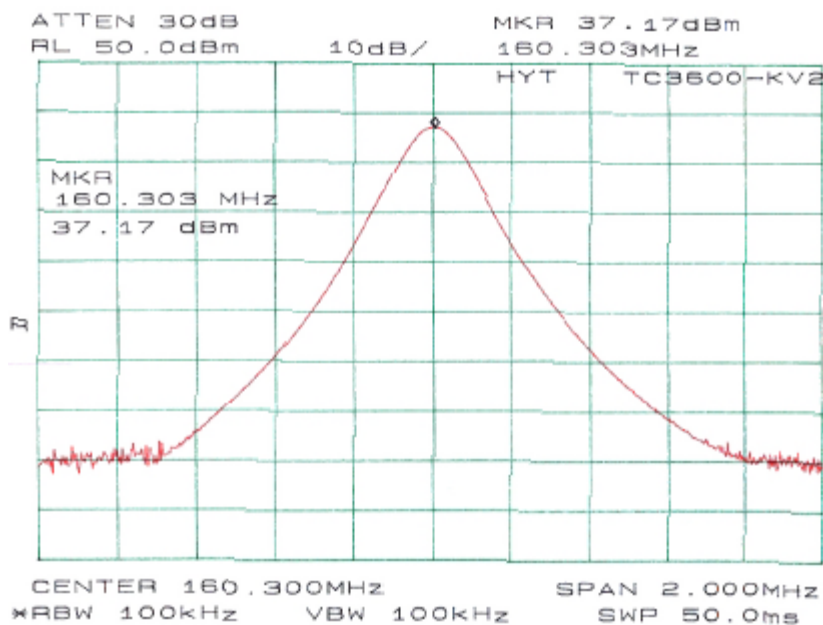
A.H. Systems SAS200 Horn Antenna, Calibration Due Date: 2005-05-31

Com-Power AB-100 Dipole Antenna, Calibration Due Date: 2005-09-05

Test Results

| Frequency (MHz) | Output Power in dBm | Output Power in W |
|-----------------|---------------------|-------------------|
| 160.30 | 37.17 | 5.21 |

Please refer to the following plots.



APPENDIX G – Z-AXIS PLOT

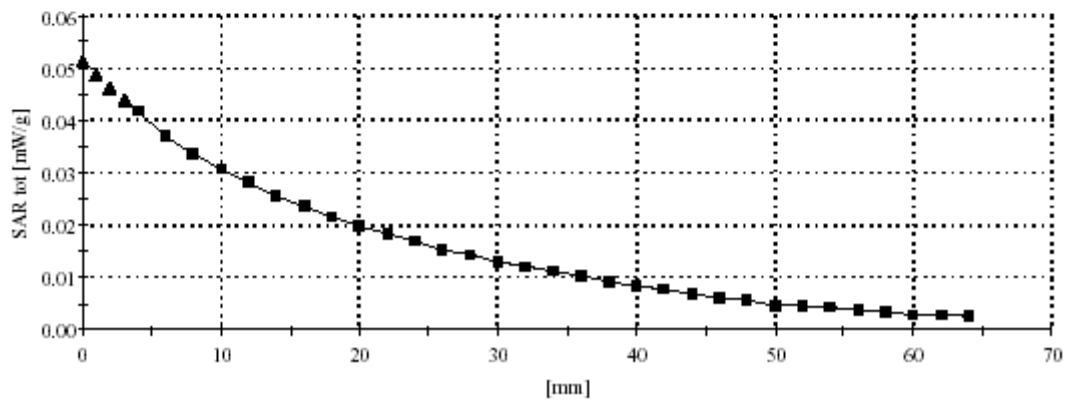
HYT, Model number: TC3600-KV (2) (Back touching flat phantom with belt clip and headset, Mid Channel, Ambient Temp = 23 Deg C, Liquid Temp = 22 Deg C, 01/03/2005)

Flat Phantom v4.4 Phantom; Section; Position: ; Frequency: 160.3 MHz

Probe: ES3DV2 - SN3019; ConvF(8.30,8.30,8.30); Crest factor: 1.0; Body 150 MHz: $\sigma = 0.79 \text{ mho/m}$ $\epsilon_r = 61.6$ $\rho = 1.00 \text{ g/cm}^3$

; 0

Z-Axis: Dx = 0.0, Dy = 0.0, Dz = 2.0



APPENDIX H – EUT TEST POSITION PHOTOS

2.5cm Head Separation to Flat Phantom

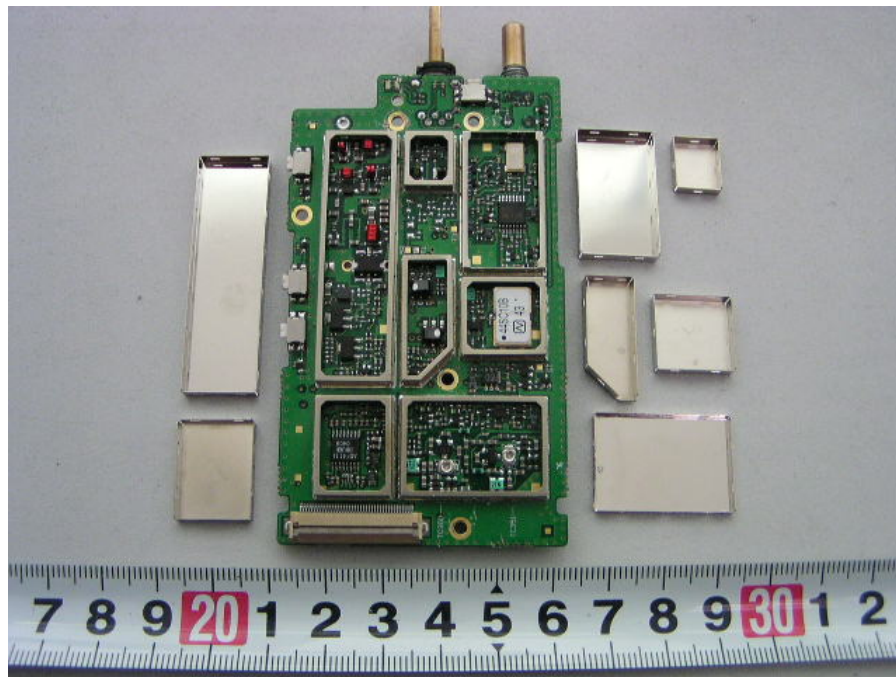


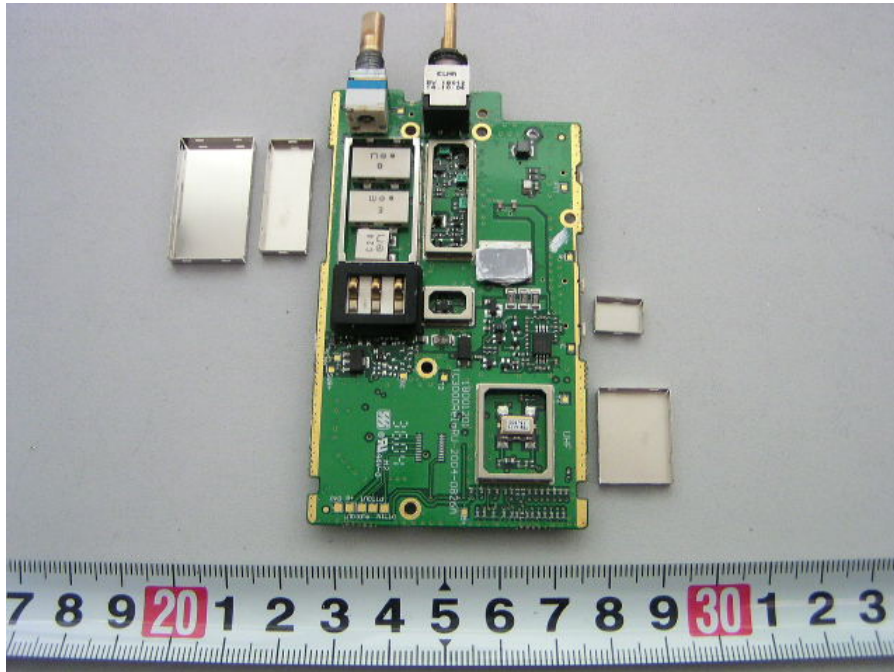
Back Touching with Flat Phantom with Belt Clip and Headset

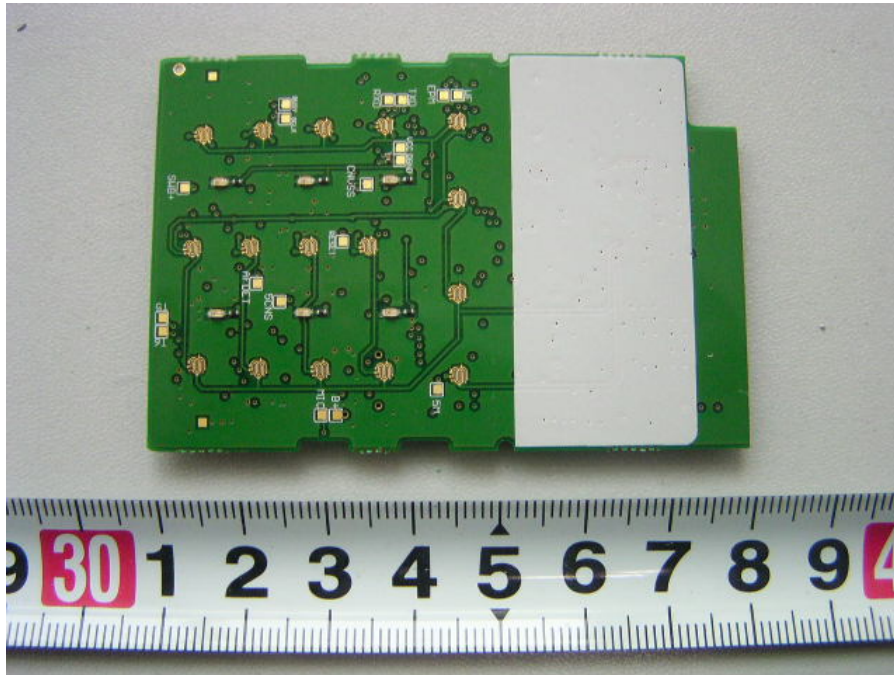
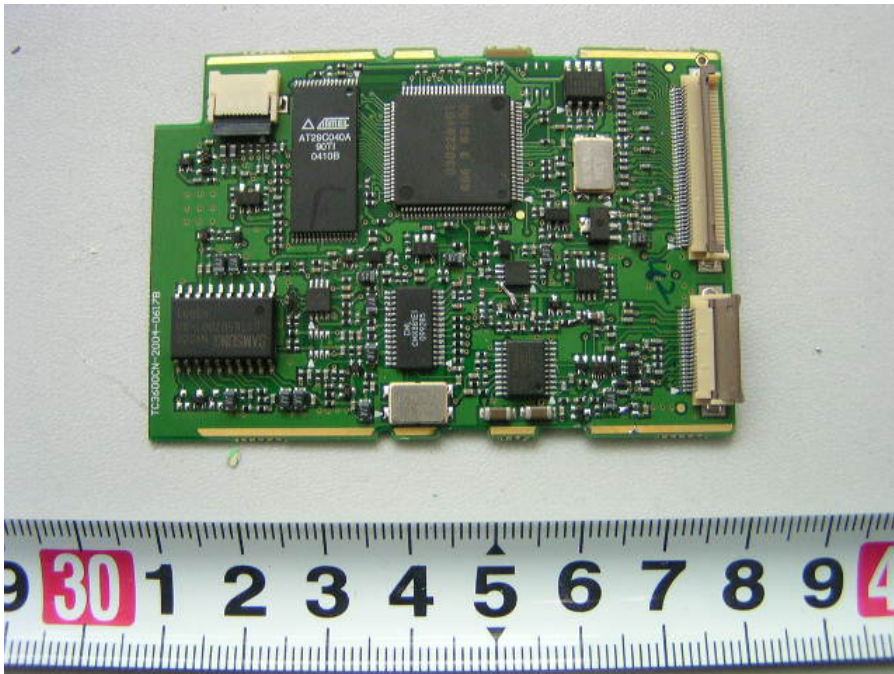


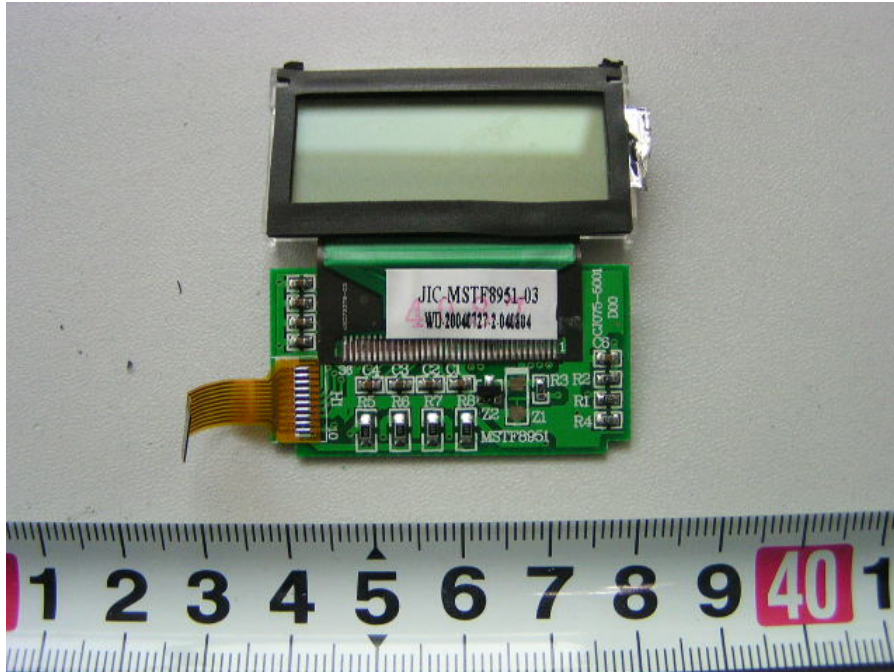
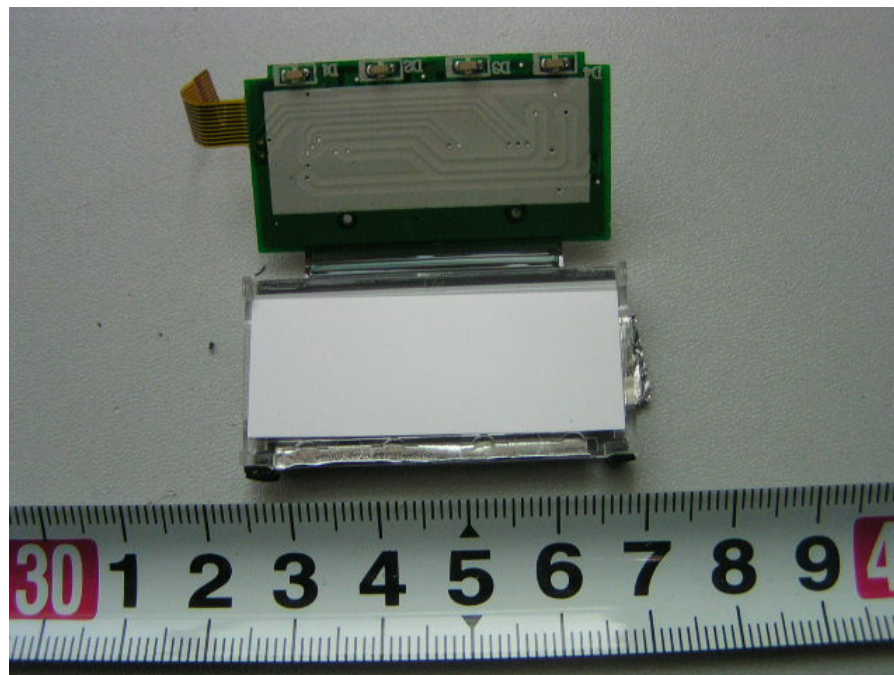
APPENDIX I – EUT & ACCESSORIES PHOTOS**EUT – Front View****EUT – Rear View**

[illegible]

Board – Top Shield Cover Removed View**Board – Bottom View**

Board – Bottom Shield Cover Removed View**Display Board and Housing**

Display Board Top View**Display Board Bottom View**

Screen Board Top View**Screen Board Bottom View**

Charger – Top View**Charger – Bottom View**

Adapter View

APPENDIX J - INFORMATIVE REFERENCES

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- [2] David L. Means Kwok Chan, Robert F. Cleveland, "Evaluating compliance with FCC guidelines for human exposure to radiofrequency electromagnetic fields", Tech. Rep., Federal Communication Commission, Office of Engineering & Technology, Washington, DC, 1997.
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- [4] Niels Kuster, Ralph Kastle, and Thomas Schmid, "Dosimetric evaluation of mobile communications equipment with known precision", IEEE Transactions on Communications, vol. E80-B, no. 5, pp. 645-652, May 1997.
- [5] CENELEC, "Considerations for evaluating of human exposure to electromagnetic fields (EMFs) from mobile telecommunication equipment (MTE) in the frequency range 30MHz - 6GHz", Tech. Rep., CENELEC, European Committee for Electrotechnical Standardization, Brussels, 1997.
- [6] ANSI, ANSI/IEEE C95.1-1992: IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz, The Institute of Electrical and Electronics Engineers, Inc., New York, NY 10017, 1992.
- [7] Katja Pokovic, Thomas Schmid, and Niels Kuster, "Robust setup for precise calibration of E-field probes in tissue simulating liquids at mobile communications frequencies", in ICECOM '97, Dubrovnik, October 15-17, 1997, pp. 120-24.
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- [13] NIS81 NAMAS, "The treatment of uncertainty in EMC measurement", Tech. Rep., NAMAS Executive, National Physical Laboratory, Teddington, Middlesex, England, 1994.
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