

**31<sup>st</sup> September 2003**

Reference to:      FCC ID:      QDJ-0212BAC01  
                    Product:      Tri-Mode Cellular Telephone  
                    Model:      Bach  
                    Client:      Chi Mei Communications Systems Inc  
                    Address:      C/O ITS Taiwan Ltd  
                    Project #:      ITSD-CMS GSM 1900 Handset GPRS-3968B

Miss Hu,

In reference to the telephone conversation held today and the above project, conducted between yourself and APREL (Stuart Nicol) I am writing to provide you with the additional information, which was requested in support of the above grant.

I must make you aware that had APREL received a copy of the original correspondence, which was received by the CAB/TCB from the FCC, the outstanding issues would have been resolved in a more expedient manor.

Attached, as an appendix is an update to the pages numbered 20, 22, and 24, which show the graphic plots, associated with the area scan, executed on the above named device.

The following text is the question received by APREL concerning power measurement methodology, and the answer provided.

***FCC: 1) Please confirm that conducted power was measured on the same device as used for SAR testing. Page 13 of the SAR report might be understood to mean that the device used for SAR testing was not measured for power. Please clarify. Power of the device tested must be provided.***

***[Andreas] I am wondering about the Note on page 13 of the SAR report . Please explain why? Thank you.***

*"The note on page 13 describes the way in which APREL assessed the device for power. The unit tested for SAR was not assessed for conducted power, hence the request for an attestation in respect to the method employed to assess the DUT power. APREL notified ITS of the FCC power measurement requirement prior to commencement of the project. The result of this requirement being the attached attestation, and an additional DUI with an SMA attached being received for conducted power measurements."*

*"I have attached a copy of the attestation, which was provided to APREL."*

APREL find it unusual that the answer provided above is not acceptable to the FCC, in respect to the method used to assess power drift. As APREL were not involved during the EMC assessment for the device it is difficult for us to understand why the method employed would not be acceptable.

APREL understand that if the manufacturer of the device under test provides written attestation that samples used during the assessment process have been taken from a specific production run, and all are within manufacturing tolerances, it is acceptable to modify a unit so as to make power measurements on a device, so as to assess power drift.

This was the method in which APREL used for this project at the request of ITS.

During the measurement process the power measured by the base station emulator was also gauged to see if any drift could be measured. Taking ambient conditions into account, it was assessed that the device tested followed the same characteristics of the sample used during the SAR analysis.

If you require that APREL carry out a series of ERP assessments on the sample tested during the SAR assessment and provide a report in support of this exercise then it will be necessary for ITS Taiwan to authorise this exercise on condition of payment being received.

If you have any further questions please feel free to contact me.

Regards,

Stuart Nicol  
Director Product Development,  
Dosimetric R&D.

**SAR Data Report CMCS SAM LHS -Head-Low-Touch**

Start : 17-Dec-02 05:39:03 pm  
End : 17-Dec-02 05:55:57 pm  
Code Version : 4.12  
Robot Version: 4.08

Product Data:

Type : Clamshell Hanset  
Model Number : CMCS1  
Serial Number : 1  
Frequency : 1850.2 MHz  
Transmit Pwr : 1 W  
Antenna Type : Center Fed  
Antenna Posn. : Out

Measurement Data:

Phantom Name : SAM LHS-01  
Phantom Type : SAM LHS  
Tissue Type : Brain  
Tissue Dielectric : 41.450  
Tissue Conductivity : 1.470  
Tissue Density : 1.000  
Crest Factor : 8.000  
Robot Name : CRS

Probe Data:

Probe Name : 163  
Probe Type : E Fld Triangle  
Frequency : 1900 MHz  
Tissue Type : Brain  
Calibrated Dielectric : 41  
Calibrated Conductivity : 1.40  
Probe Offset : 2.500 mm  
Conversion Factor : 5.850  
Diode Compression Pt : 76.0 mV  
Probe Sensitivity : 0.580 0.580 0.580 mV/(mW/cm<sup>2</sup>)  
Amplifier Gains : 20.00 20.00 20.00  
Chan. Offset (mV) : 2.59 2.00 2.13

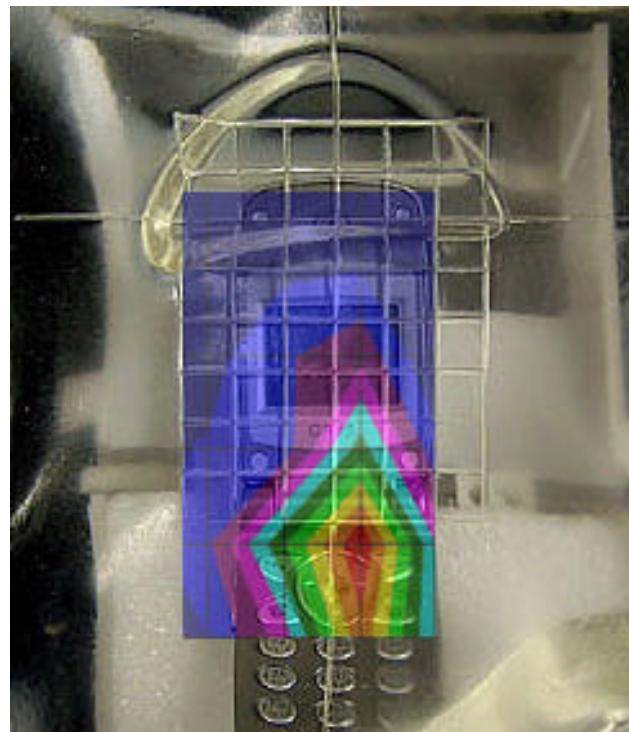
Sample:

Rate: 6000 Samples/Sec  
Count: 1000 Samples  
NIQAQ Gain: 5  
Scan Time: 166.7 msec

Comments:

Area Scan - Max Local SAR Value at x=45.0 y=2.0 = 0.12 W/kg  
Zoom Scan - Max Local SAR Value at x=54.0 y=1.0 z=0.0 = 0.50 W/kg  
Max 1g SAR at x=56.0 y=1.0 z=0.0 = 0.24 W/kg  
Max 10g SAR at x=50.0 y=2.0 z=0.0 = 0.09 W/kg

**GRAPH 1**



Frequency MHz	Channel	Tissue Temp °	Position & Phantom	Sigma	Epsilon	Conv F	1g SAR
1850.2	512	20	LHS- Touch- SAM	1.47	41.45	5.85	0.24

**SAR Data Report CMCS SAM LHS-Head-MidTouch**

Start : 17-Dec-02 05:59:34 pm  
End : 17-Dec-02 06:16:10 pm  
Code Version : 4.12  
Robot Version: 4.08

Product Data:

Type : Clamshell Hanset  
Model Number : CMCS1  
Serial Number : 1  
Frequency : 1880 MHz  
Transmit Pwr : 1 W  
Antenna Type : Center Fed  
Antenna Posn. : Out

Measurement Data:

Phantom Name : SAM LHS-01  
Phantom Type : SAM LHS  
Tissue Type : Brain  
Tissue Dielectric : 41.450  
Tissue Conductivity : 1.470  
Tissue Density : 1.000  
Crest Factor : 8.000  
Robot Name : CRS

Probe Data:

Probe Name : 163  
Probe Type : E Fld Triangle  
Frequency : 1900 MHz  
Tissue Type : Brain  
Calibrated Dielectric : 41  
Calibrated Conductivity : 1.40  
Probe Offset : 2.500 mm  
Conversion Factor : 5.850  
Diode Compression Pt : 76.0 mV  
Probe Sensitivity : 0.580 0.580 0.580 mV/(mW/cm<sup>2</sup>)  
Amplifier Gains : 20.00 20.00 20.00  
Chan. Offset (mV) : 2.59 2.00 2.13

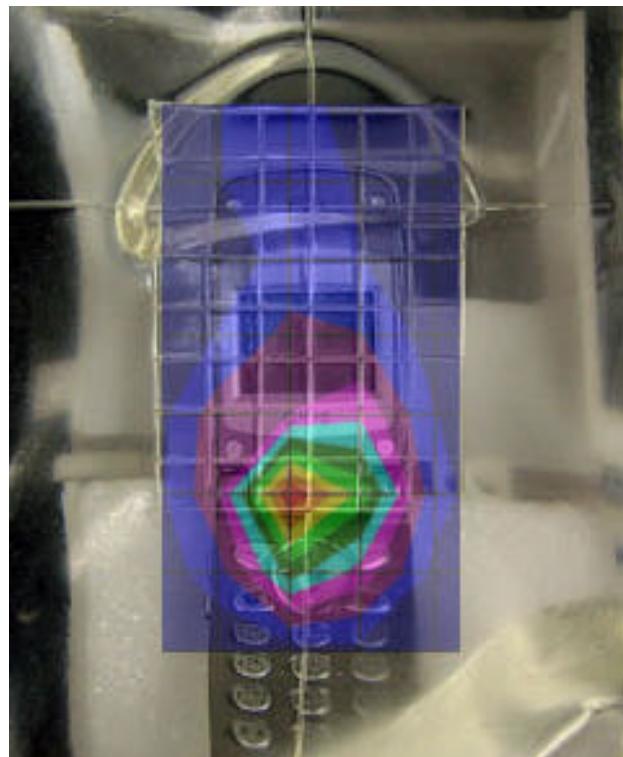
Sample:

Rate: 6000 Samples/Sec  
Count: 1000 Samples  
NIDAQ Gain: 5  
Scan Time: 166.7 msec

Comments:

Area Scan - Max Local SAR Value at x=45.0 y=2.0 = 0.09 W/kg  
Zoom Scan - Max Local SAR Value at x=61.0 y=1.0 z=0.0 = 0.35 W/kg  
Max 1g SAR at x=56.0 y=2.0 z=0.0 = 0.18 W/kg  
Max 10g SAR at x=50.0 y=3.0 z=0.0 = 0.06 W/kg

Graph 2



Frequency MHz	Channel	Tissue Temp °	Position & Phantom	Sigma	Epsilon	Conv F	1g SAR
1880	661	20	LHS-Touch-SAM	1.47	41.45	5.85	0.18

**SAR Data Report CMCS SAM LHS -Head-MidTouch**

Start : 17-Apr-02 06:24:57 pm  
End : 17-Apr-02 06:41:33 pm  
Code Version : 4.12  
Robot Version: 4.08

Product Data:

Type : Clamshell Hanset  
Model Number : CMCS1  
Serial Number : 1  
Frequency : 1909.8 MHz  
Transmit Pwr : 1 W  
Antenna Type : Center Fed  
Antenna Posn. : Out

Measurement Data:

Phantom Name : SAM LHS-01  
Phantom Type : SAM LHS  
Tissue Type : Brain  
Tissue Dielectric : 41.450  
Tissue Conductivity : 1.470  
Tissue Density : 1.000  
Crest Factor : 8.000  
Robot Name : CRS

Probe Data:

Probe Name : 163  
Probe Type : E Fld Triangle  
Frequency : 1900 MHz  
Tissue Type : Brain  
Calibrated Dielectric : 41  
Calibrated Conductivity : 1.40  
Probe Offset : 2.500 mm  
Conversion Factor : 5.850  
Diode Compression Pt : 76.0 mV  
Probe Sensitivity : 0.580 0.580 0.580 mV/(mW/cm<sup>2</sup>)  
Amplifier Gains : 20.00 20.00 20.00  
Chan. Offset (mV) : 2.59 2.00 2.13

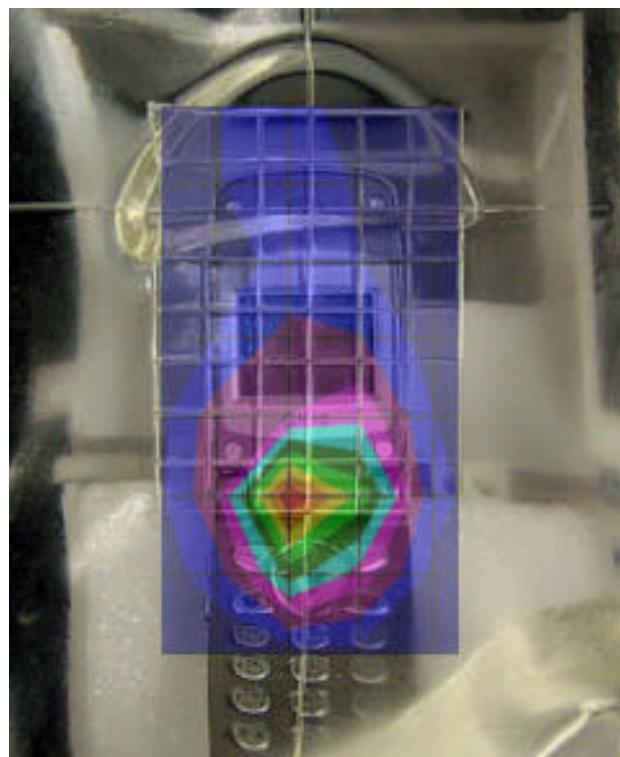
Sample:

Rate: 6000 Samples/Sec  
Count: 1000 Samples  
NIDAQ Gain: 5  
Scan Time: 166.7 msec

Comments:

Area Scan - Max Local SAR Value at x=45.0 y=2.0 = 0.09 W/kg  
Zoom Scan - Max Local SAR Value at x=58.0 y=1.0 z=0.0 = 0.29 W/kg  
Max 1g SAR at x=56.0 y=2.0 z=0.0 = 0.16 W/kg  
Max 10g SAR at x=50.0 y=2.0 z=0.0 = 0.06 W/kg

**Graph 3**



Frequency MHz	Channel	Tissue Temp °	Position & Phantom	Sigma	Epsilon	Conv F	1g SAR
1909.8	880	20	LHS-Touch-SAM	1.47	41.45	5.85	0.16