

ATTACHMENT Q – DIPOLE VALIDATION

Validation Data (835MHz Head)

SAR Measurement Report

SAR TEST DATA SUMMARY

Simulant Liquid :	Head	Ambient Temperature (°C) :	22.0
Dielectric Constant :	42.2	Relative Humidity (%) :	44
Conductivity (S/m) :	0.86		
Phantom Model :	Flat	Place of Measurement :	HCT
Test Date :	2005-04-29	Measuring Equipment :	ESSAY-III

DUT

Model	X101
Power (dBm) :	24
Frequency (MHz) :	835
Serial No.	#1

Probe

Model	ET20-MAR-0026
Offset (mm) :	2.25
Conversion Factor :	4.23
Duty Factor :	8

Reference Point SAR(W/kg) in Medium

Before Scanning : 2.31829 After Scanning : 2.21149 Drift : -4.607 %

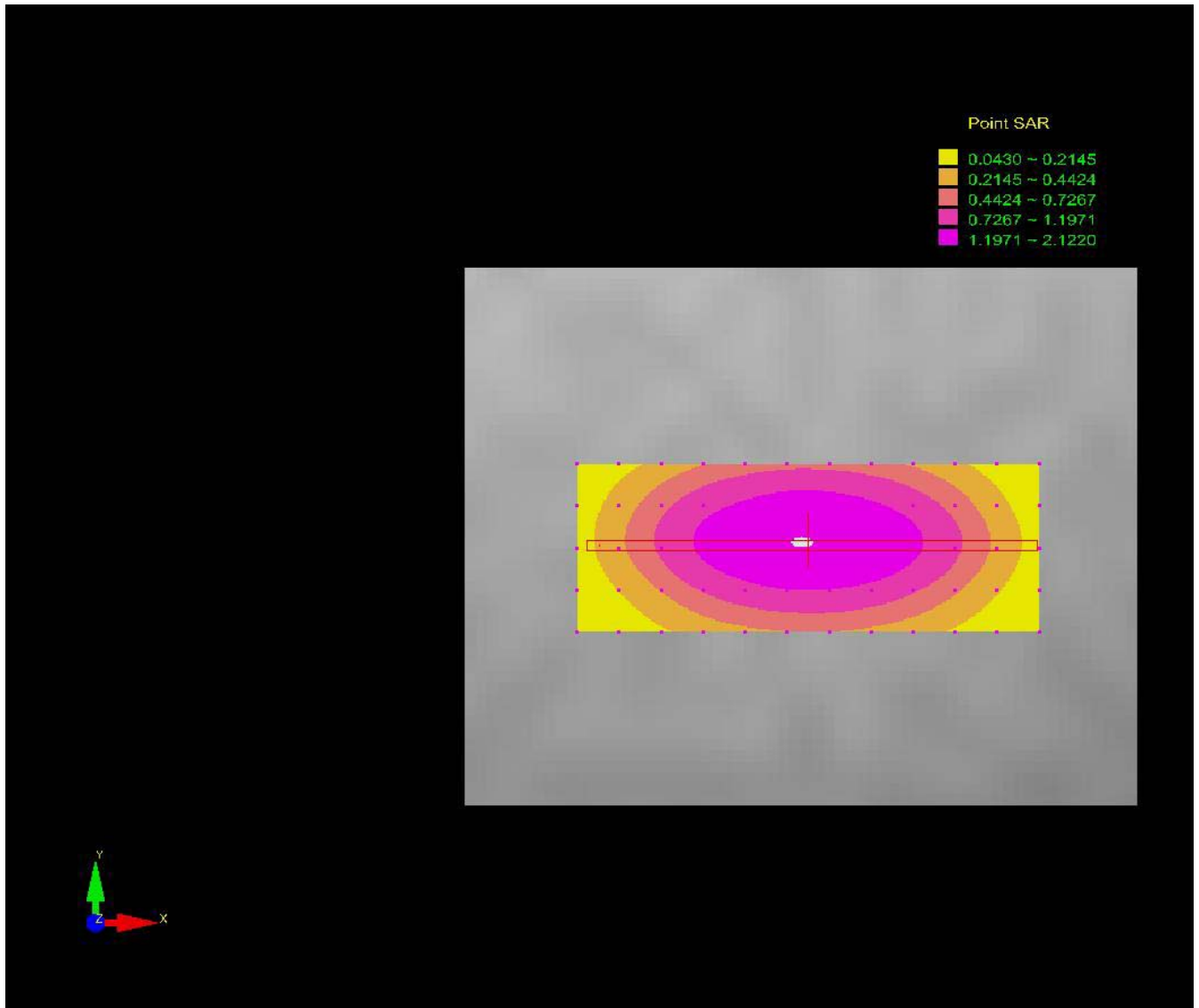
Measurement Result (W/kg)

Averaged 1g SAR : **2.311** Averaged 10g SAR : **1.531**

Notes :

835MHz Head Dipole Validation (D835V2/5.N:)
Antenna Input Power : 24 dBm(1W)
HCT Co., Ltd. Head Tissue Simulating Liquid
Liquid Temperature : 21.5°C

■ Validation Data (835MHz Head)



Validation Data (1900MHz Head)

SAR Measurement Report

SAR TEST DATA SUMMARY

Simulant Liquid :	Head	Ambient Temperature (°C) :	22.0
Dielectric Constant :	42.2	Relative Humidity (%) :	44
Conductivity (S/m) :	0.86		
Phantom Model :	Flat	Place of Measurement :	HCT
Test Date :	2005-04-29	Measuring Equipment :	ESSAY-III

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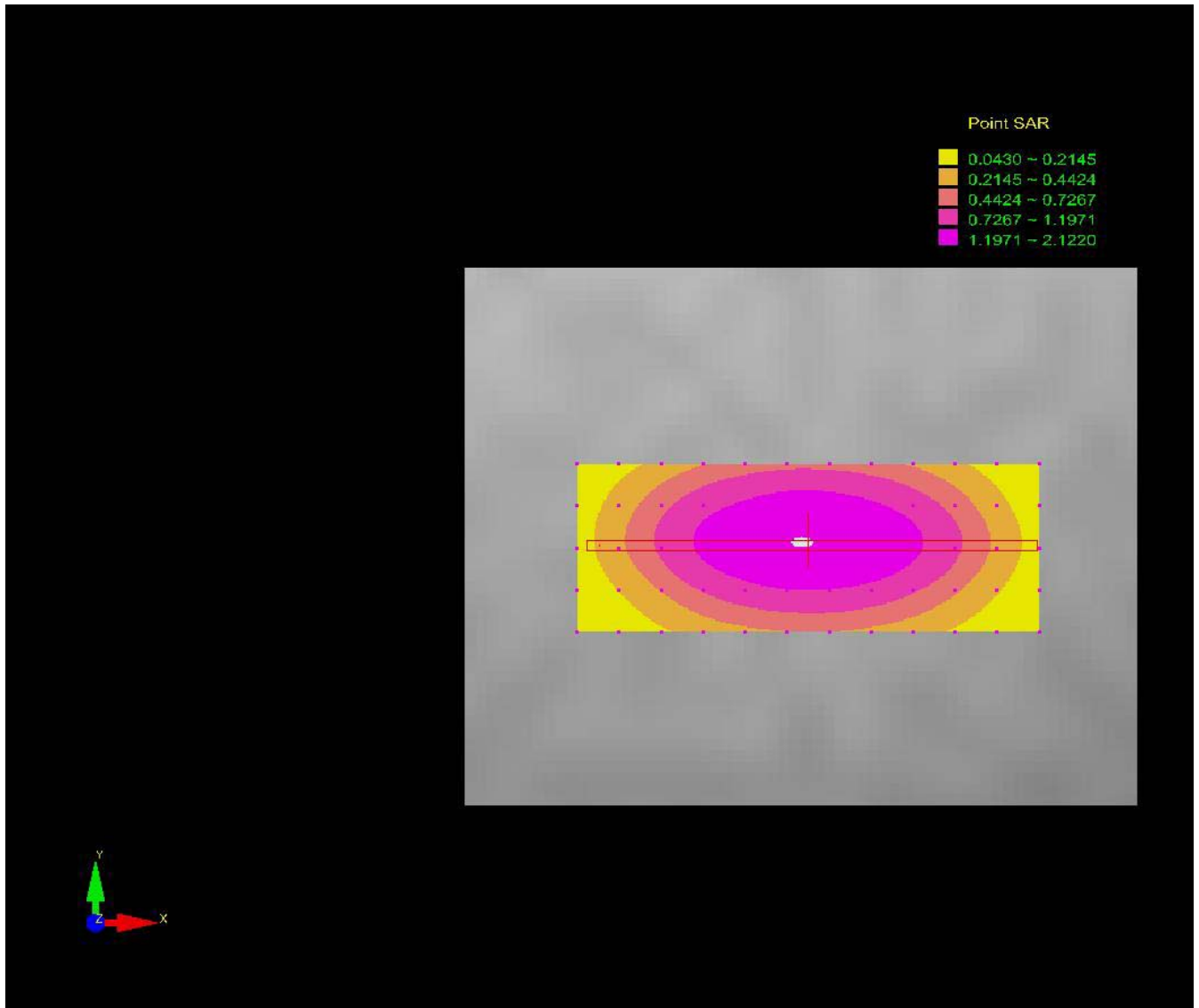
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835MHz Head Dipole Validation (D835V2/5.N:)
Antenna Input Power : 24 dBm(1W)
HCT Co., Ltd. Head Tissue Simulating Liquid
Liquid Temperature : 21.5°C

■ Validation Data (1900MHz Head)



■ Dielectric Parameter (835MHz Head)

Title : X101**SubTitle : GSM850 Head**

April 29, 2005 09:14 AM

Frequency	e'	e''
800.000000 MHz	43.0677	18.6090
805.000000 MHz	43.0435	18.6300
810.000000 MHz	42.8831	18.6999
815.000000 MHz	42.7606	18.7054
820.000000 MHz	42.6567	18.7327
825.000000 MHz	42.4850	18.7211
830.000000 MHz	42.3210	18.6921
835.000000 MHz	42.2403	18.6352
840.000000 MHz	42.2157	18.5525
845.000000 MHz	42.0765	18.5036
850.000000 MHz	42.0482	18.4754
855.000000 MHz	41.9770	18.4394
860.000000 MHz	41.9799	18.4436
865.000000 MHz	41.9726	18.4812
870.000000 MHz	41.8720	18.4749
875.000000 MHz	41.8274	18.4826
880.000000 MHz	41.7836	18.4902
885.000000 MHz	41.7415	18.4672
890.000000 MHz	41.6746	18.4918
895.000000 MHz	41.6542	18.5023
900.000000 MHz	41.5329	18.5038

■ Dielectric Parameter (1900MHz Head)

Title : X101**SubTitle : GSM1900 Head****May 02, 2005 09:36 AM**

Frequency	e'	e''
1.800000000 GHz	38.8782	13.3172
1.810000000 GHz	38.8461	13.3907
1.820000000 GHz	38.8199	13.4364
1.830000000 GHz	38.7973	13.5008
1.840000000 GHz	38.8192	13.5621
1.850000000 GHz	38.8258	13.5813
1.860000000 GHz	38.8105	13.6315
1.870000000 GHz	38.7813	13.6275
1.880000000 GHz	38.7309	13.6456
1.890000000 GHz	38.6246	13.6335
1.900000000 GHz	38.5820	13.6033
1.910000000 GHz	38.5029	13.5934
1.920000000 GHz	38.4506	13.6201
1.930000000 GHz	38.4106	13.6598
1.940000000 GHz	38.4012	13.7182
1.950000000 GHz	38.3796	13.7783
1.960000000 GHz	38.3905	13.8554
1.970000000 GHz	38.3856	13.9510
1.980000000 GHz	38.3803	13.9622
1.990000000 GHz	38.3688	13.9715
2.000000000 GHz	38.3138	13.9570

■ Dielectric Parameter (835MHz Body)

Title : X101**SubTitle : GSM850 Body**

April 29, 2005 01:46 PM

Frequency	e'	e''
800.000000 MHz	54.7074	20.2902
805.000000 MHz	54.5204	20.2777
810.000000 MHz	54.4981	20.3418
815.000000 MHz	54.3367	20.3884
820.000000 MHz	54.3006	20.3898
825.000000 MHz	54.1427	20.4190
830.000000 MHz	53.9990	20.4655
835.000000 MHz	53.9163	20.4623
840.000000 MHz	53.8316	20.4494
845.000000 MHz	53.7914	20.3768
850.000000 MHz	53.7102	20.3960
855.000000 MHz	53.7664	20.3747
860.000000 MHz	53.7543	20.3142
865.000000 MHz	53.7428	20.3393
870.000000 MHz	53.7414	20.3603
875.000000 MHz	53.7501	20.3079
880.000000 MHz	53.8153	20.2919
885.000000 MHz	53.7362	20.2839
890.000000 MHz	53.7310	20.2737
895.000000 MHz	53.7241	20.1908
900.000000 MHz	53.6668	20.1907

■ Dielectric Parameter (1900MHz Body)

Title : X101**SubTitle : GSM1900 Body****May 02, 2005 01:14 PM**

Frequency	e'	e''
1.800000000 GHz	53.0513	13.6313
1.810000000 GHz	53.0265	13.7075
1.820000000 GHz	53.0300	13.7843
1.830000000 GHz	52.9573	13.8376
1.840000000 GHz	52.9235	13.9077
1.850000000 GHz	52.8772	13.9203
1.860000000 GHz	52.7667	13.9439
1.870000000 GHz	52.7087	14.0115
1.880000000 GHz	52.6323	14.0602
1.890000000 GHz	52.4993	14.0997
1.900000000 GHz	52.4230	14.1318
1.910000000 GHz	52.3662	14.2263
1.920000000 GHz	52.3044	14.2970
1.930000000 GHz	52.2564	14.3411
1.940000000 GHz	52.2463	14.4045
1.950000000 GHz	52.2909	14.4818
1.960000000 GHz	52.2478	14.5475
1.970000000 GHz	52.2389	14.5668
1.980000000 GHz	52.2159	14.5961
1.990000000 GHz	52.1518	14.6218
2.000000000 GHz	52.0798	14.6412