April 19, 2002
Supplement to SAR Test Report for Motorola portable cellular phone (FCC ID IHDT6CC1).

Prepared by:
Steven Hauswirth, Senior Staff Engineer
Motorola Personal Communications Sector Product Safety Laboratory
Harvard, Illinois

Summary of request for additional information

There was a request for additional information regarding Motorola's SAR Test Report for Motorola portable cellular phone (FCC ID IHDT6CC1). The requested information is addressed below in the same numbering sequence received.

```
3) Please justify use of ConvF=5.47 for head. Exhibit "Addl. Conv.
Fact." for probe sn. 1397 shows ConvF=5.2. Lower ConvF means higher SAR,
means max SAR goes from 1.54 to 1.62.
```

The SAR plots show that Probe S/N: 1397 used a Conversion Factor of 5.47 for 1800-1900MHz head. This value is shown on the "Calibration Certificate" on the 3rd page, located under the heading of "Head 1700-1910MHz". Please do not confuse the 1950MHz head and body tissue conversion factors shown in the "Additional Conversion Factors" for probe 1397 with the values used. The conversion factors for 1950MHz are intended to be used for products that have UMTS modulation (3G).

Schmid & Partner
Engineering AG

Zeughausstrasse 43, 8004 Zurich, Switzerland, Phone +41 1 245 97 00, Fax +41 1 245 97 79

Calibration Certificate

Dosimetric E-Field Probe

Type:	ET3DV6
Serial Number:	1397
Place of Calibration:	Zurich
Date of Calibration:	November 23, 2001
Calibration Interval:	12 months

Schmid & Partner Engineering AG hereby certifies, that this device has been calibrated on the date indicated above. The calibration was performed in accordance with specifications and procedures of Schmid & Partner Engineering AG.

Wherever applicable, the standards used in the calibration process are traceable to international standards. In all other cases the standards of the Laboratory for EMF and Microwave Electronics at the Swiss Federal Institute of Technology (ETH) in Zurich, Switzerland have been applied.

Calibrated by:

Approved by:

Schmid & Partner
Engineering AG

Zeughausstrasse 43, 8004 Zurich, Switzerland, Telephone +41 1 245 97 00, Fax +41 1 245 97 79

Probe ET3DV6

SN:1397

Manufactured:	October 24, 1999
Repaired:	November 15, 2001
Recalibrated:	November 23, 2001

Calibrated for System DASY3

DASY3 - Parameters of Probe: ET3DV6 SN:1397

Sensitivity in Free Space

NormX	2.05 $\mu V/(V/m)^2$
NormY	2.01 $\mu V/(V/m)^2$
NormZ	2.03 $\mu V/(V/m)^2$

Diode Compression

DCP X	97 mV
DCP Y	97 mV
DCP Z	97 mV

Sensitivity in Tissue Simulating Liquid

Head 450 MHz ε_r = 43.5 ± 5% σ = 0.87 ± 10% mho/m

ConvF X	7.17 extrapolated		Boundary effect:	
ConvF Y	7.17 extrapolated		Alpha	0.40
ConvF Z	7.17 extrapolated		Depth	2.15

Head 800 - 1000 MHz ε_r = 39.0 - 43.5 σ = 0.80 - 1.10 mho/m

ConvF X	6.61 ± 9.5% (k=2)		Boundary effect:	
ConvF Y	6.61 ± 9.5% (k=2)		Alpha	0.46
ConvF Z	6.61 ± 9.5% (k=2)		Depth	2.18

Head 1500 MHz ε_r = 40.4 ± 5% σ = 1.23 ± 10% mho/m

ConvF X	5.85 interpolated		Boundary effect:	
ConvF Y	5.85 interpolated		Alpha	0.54
ConvF Z	5.85 interpolated		Depth	2.21

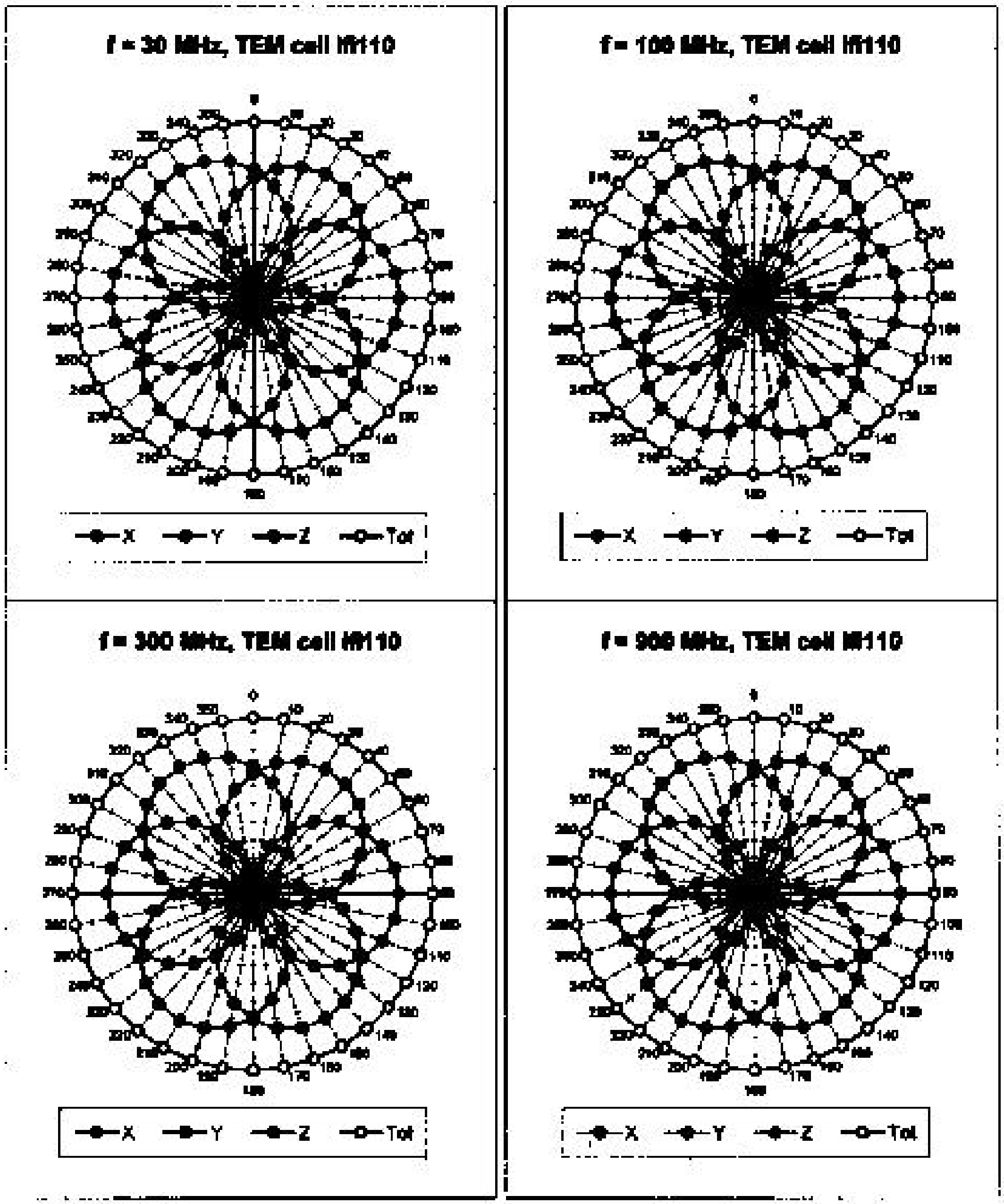
Head 1700 - 1910 MHz ε_r = 39.5 - 41.0 σ = 1.30 - 1.45 mho/m

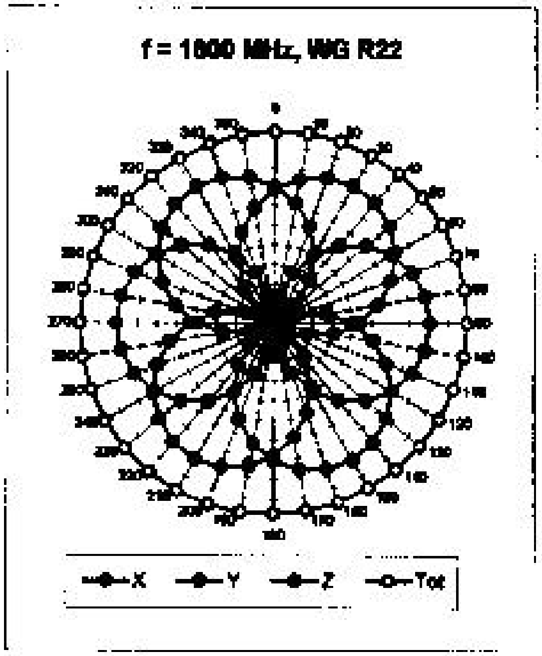
ConvF X	5.47 ± 9.5% (k=2)		Boundary effect:	
ConvF Y	5.47 ± 9.5% (k=2)		Alpha	0.57
ConvF Z	5.47 ± 9.5% (k=2)		Depth	2.23

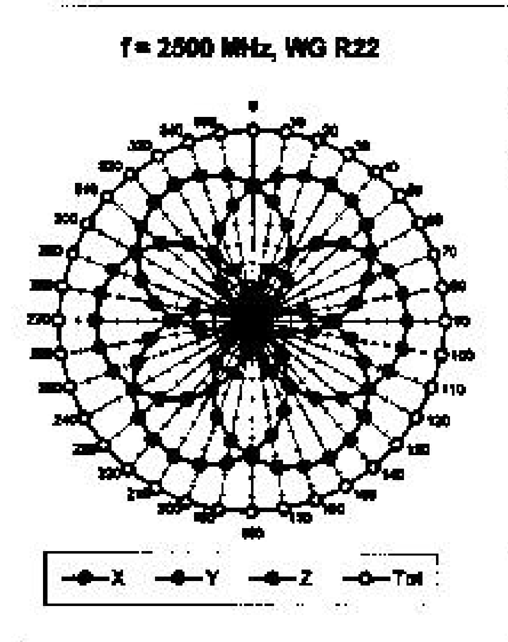
Sensor Offset

Probe Tip to Sensor Center	2.7	mm
Optical Surface Detection	1.5 ± 0.2	mm

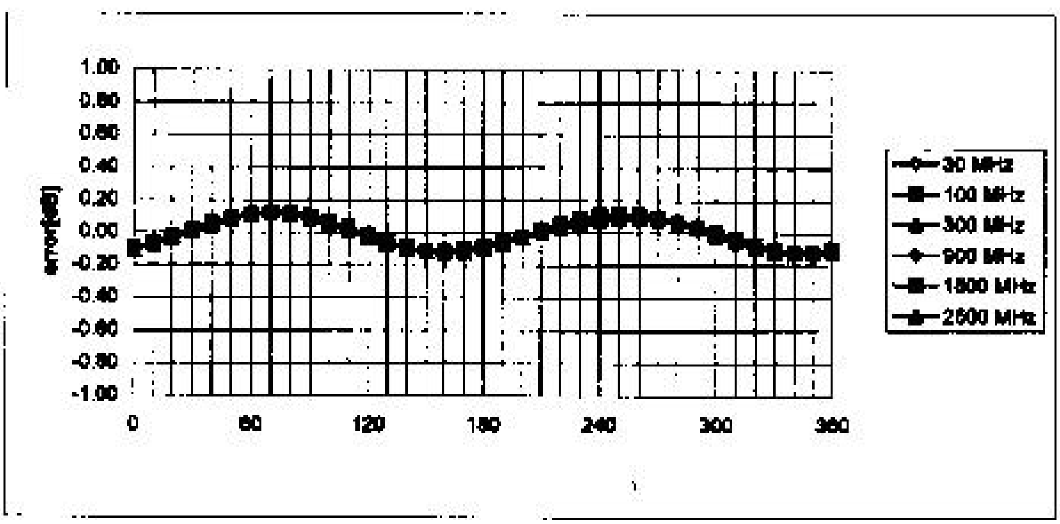
Receiving Pattern (ϕ), $\theta = 0°$





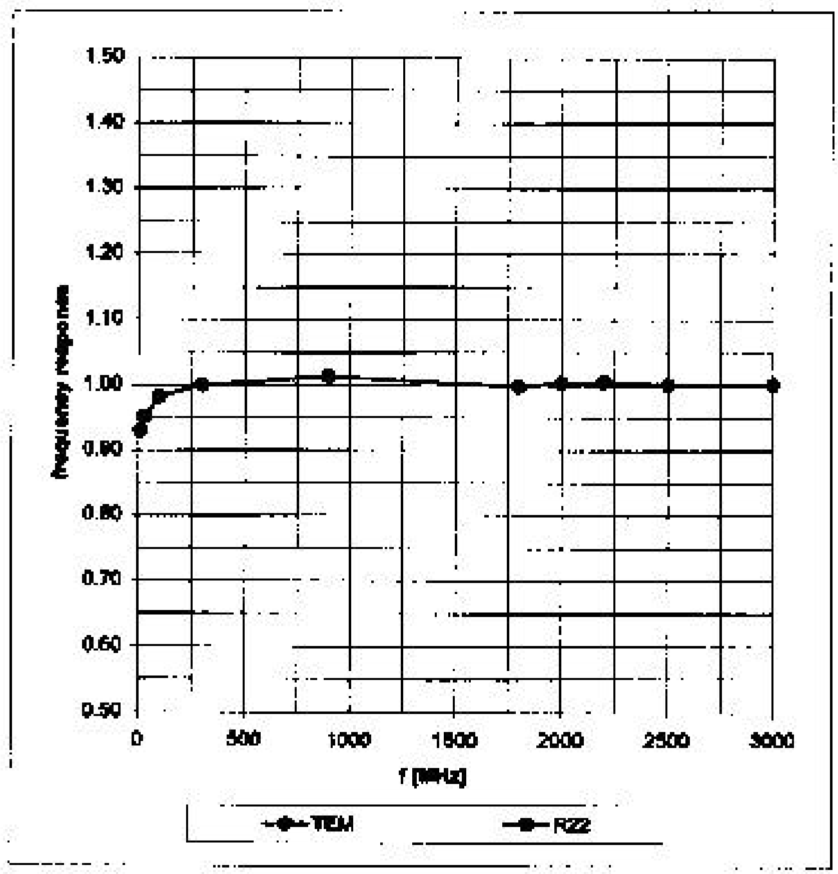


Isotropy Error (ϕ), θ = 0°



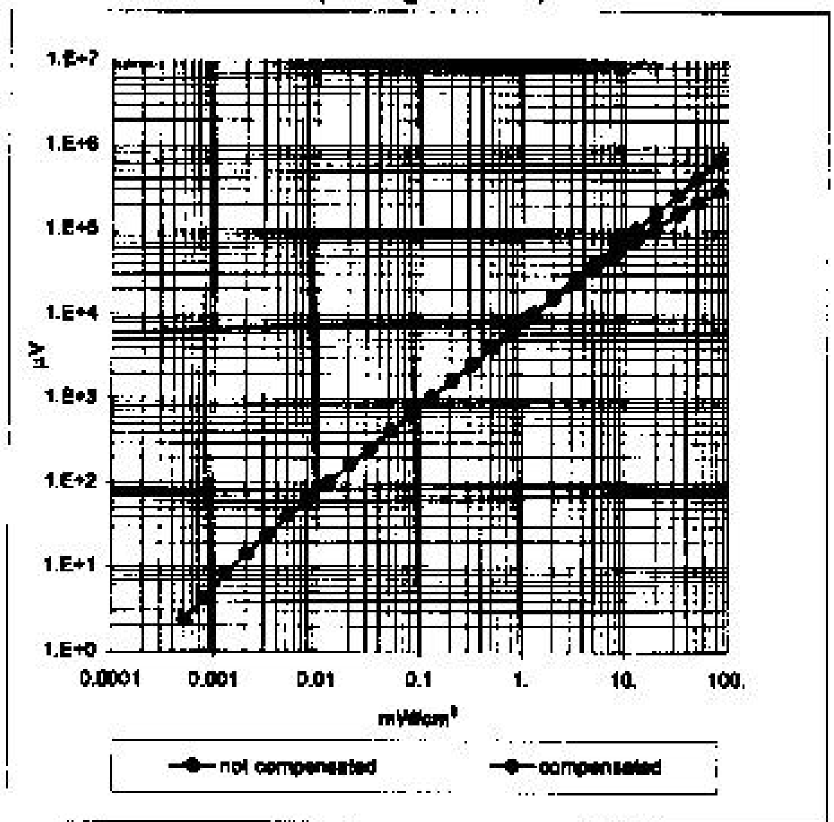
Frequency Response of E-Field

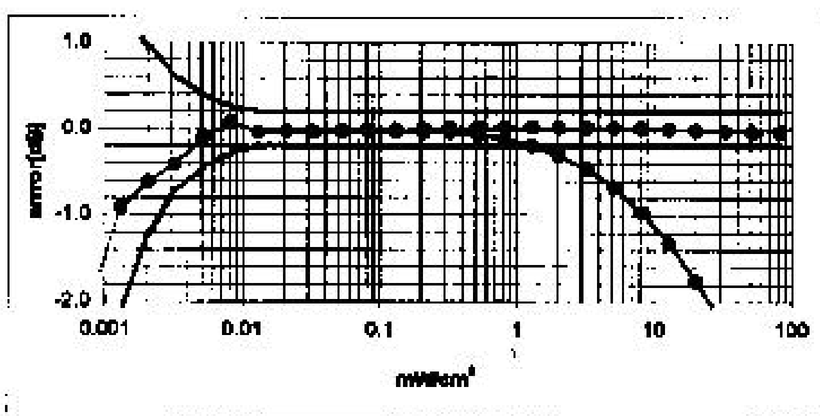
(TEM-Cell:ifi110, Waveguide R22)



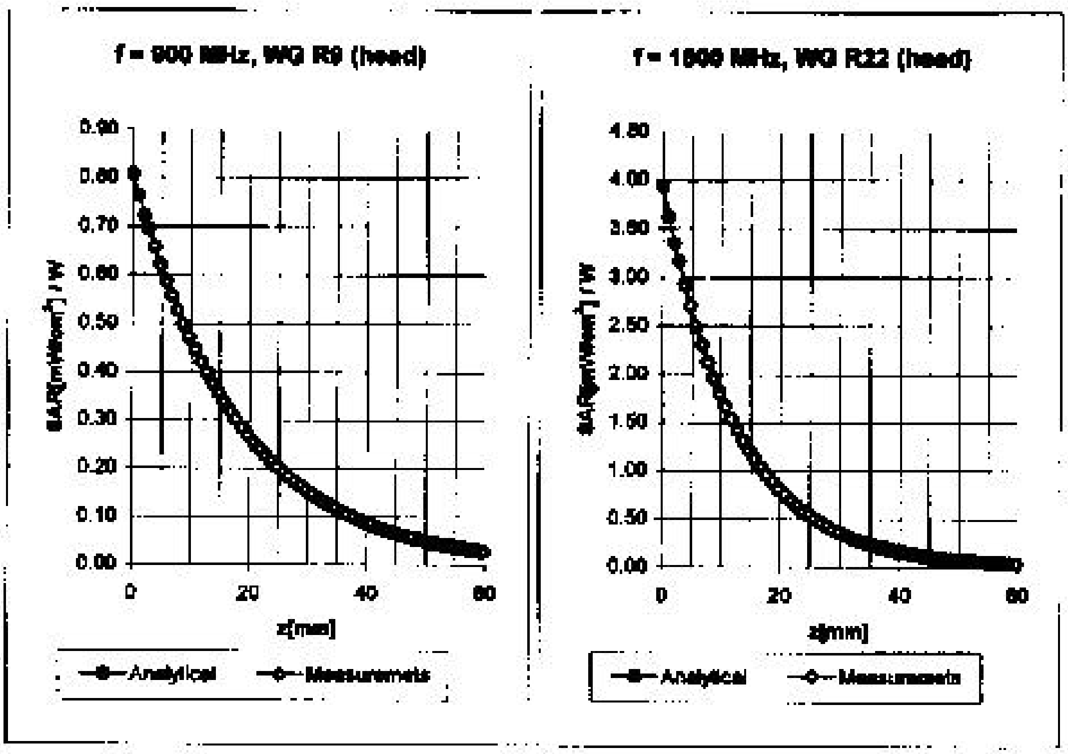
Dynamic Range f(SAR_{brain})

(Waveguide R22)





Conversion Factor Assessment



Head	800 - 1000 MHz		ε_r = 39.0 - 43.6	σ = 0.80 - 1.10 mho/m	
	ConvF X	**6.61** ± 9.5% (k=2)		Boundary effect:	
	ConvF Y	**6.61** ± 9.5% (k=2)		Alpha	**0.46**
	ConvF Z	**6.61** ± 9.5% (k=2)		Depth	**2.18**

Head	1700 - 1910 MHz		ε_r = 39.5 - 41.0	σ = 1.20 - 1.55 mho/m	
	ConvF X	**5.47** ± 9.5% (k=2)		Boundary effect:	
	ConvF Y	**5.47** ± 9.5% (k=2)		Alpha	**0.67**
	ConvF Z	**5.47** ± 9.5% (k=2)		Depth	**2.23**

Schmid & Partner
Engineering AG

Zeughausstrasse 43, 8004 Zurich, Switzerland, Phone +41 1 245 97 00, Fax +41 1 245 97 79

Additional Conversion Factors

for Dosimetric E-Field Probe

Type:	**ET3DV6**
Serial Number:	**1897**
Place of Assessment:	**Zurich**
Date of Assessment:	**November 25, 2001**
Probe Calibration Date:	**November 23, 2001**

Schmid & Partner Engineering AG hereby certifies that conversion factor(s) of this probe have been evaluated on the date indicated above. The assessment was performed using the FDTD numerical code SEMCAD of Schmid & Partner Engineering AG. Since the evaluation is coupled with measured conversion factors, it has to be recalculated yearly, i.e., following the re-calibration schedule of the probe. The uncertainty of the numerical assessment is based on the extrapolation from measured value at 900 MHz or at 1800 MHz.

Assessed by: Nicolai Kuster

Dosimetric E-Field Probe ET3DV6 SN:1397

Conversion factor (± standard deviation)

835 MHz	ConvF	6.7 ± 8%	ε_r = 41.5 σ = 0.90 mho/m (head tissue)
1950 MHz	ConvF	5.2 ± 8%	ε_r = 40.0 σ = 1.40 mho/m (head tissue)
835 MHz	ConvF	6.5 ± 8%	ε_r = 55.2 σ = 0.97 mho/m (body tissue)
900 MHz	ConvF	6.4 ± 8%	ε_r = 55.0 σ = 1.05 mho/m (body tissue)
1800 MHz	ConvF	5.1 ± 8%	ε_r = 53.3 σ = 1.52 mho/m (body tissue)
1950 MHz	ConvF	4.9 ± 8%	ε_r = 53.3 σ = 1.52 mho/m (body tissue)