



Certificate Number: 1449-02



**MOTOROLA**

**ELECTROMAGNETIC EXPOSURE (EME)  
TESTING LABORATORY**

8000 West Sunrise Blvd  
Fort Lauderdale, Florida

**S.A.R. TEST REPORT  
(APPENDIX C & D)  
FCC ID: AZ489FT5817  
H18UCH9PW7AN**

August 17, 2001 - Rev. O

<b>Tested By:</b>	Andy Gessner, Pat Lomax SAR Test Technicians
<b>Prepared By:</b>	Jim Fortier Lead Engineer
<b>Reviewed and Approved By:</b>	Ken Enger Sr. Resource Manager Product Safety and EME Lab Director

## **Appendix C: Measurement Probe Calibration Certificate**

# Schmid & Partner Engineering AG

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

## Calibration Certificate

### Dosimetric E-Field Probe

Type

ET3DV6R

Serial Number:

1417

Place of Calibration:

Zurich

Date of Calibration:

Mar. 16, 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

*Blouie Katja*

Approved by

*[Signature]*

ET3DV6R SN:1417

## DASY3 - Parameters of Probe: ET3DV6R SN:1417

### Sensitivity in Free Space

NormX	2.46 $\mu\text{V}/(\text{V}/\text{m})^2$
NormY	2.35 $\mu\text{V}/(\text{V}/\text{m})^2$
NormZ	2.47 $\mu\text{V}/(\text{V}/\text{m})^2$

### Diode Compression

DCP X	95 mV
DCP Y	95 mV
DCP Z	95 mV

### Sensitivity in Tissue Simulating Liquid

<b>Head</b>	<b>450 MHz</b>	$\epsilon_r = 43.5 \pm 5\%$ 41.35 45.65	$\sigma = 0.87 \pm 10\% \text{ mho/m}$ .826 - .913	
ConvF X	6.41	extrapolated	Boundary effect:	
ConvF Y	6.41	extrapolated	Alpha	0.29
ConvF Z	6.41	extrapolated	Depth	3.07

<b>Head</b>	<b>900 MHz</b>	$\epsilon_r = 42 \pm 5\%$	$\sigma = 0.97 \pm 10\% \text{ mho/m}$	
ConvF X	5.97	$\pm 7\% (k=2)$	Boundary effect:	
ConvF Y	5.97	$\pm 7\% (k=2)$	Alpha	0.37
ConvF Z	5.97	$\pm 7\% (k=2)$	Depth	2.76

<b>Head</b>	<b>1500 MHz</b>	$\epsilon_r = 40.4 \pm 5\%$	$\sigma = 1.23 \pm 10\% \text{ mho/m}$	
ConvF X	5.39	interpolated	Boundary effect:	
ConvF Y	5.39	interpolated	Alpha	0.49
ConvF Z	5.39	interpolated	Depth	2.36

<b>Head</b>	<b>1800 MHz</b>	$\epsilon_r = 40 \pm 5\%$	$\sigma = 1.40 \pm 10\% \text{ mho/m}$	
ConvF X	5.10	$\pm 7\% (k=2)$	Boundary effect:	
ConvF Y	5.10	$\pm 7\% (k=2)$	Alpha	0.54
ConvF Z	5.10	$\pm 7\% (k=2)$	Depth	2.15

### Sensor Offset

Probe Tip to Sensor Center **2.7** mm

**Additional Conversion Factors**  
for Dosimetric E-Field Probe

Type:

**ET3DV6R**

Serial Number:

**1417**

Place of Assessment:

**Zurich**

Date of Assessment:

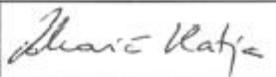
**April 20, 2001**

Probe Calibration Date:

**March 16, 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.

Approved by:



## Dosimetric E-Field Probe ET3DV6 SN:1417

Conversion factor ( $\pm$  standard deviation)

450 MHz	ConvF	6.69 $\pm$ 8%	$\epsilon_r = 47.0$ $\sigma = 0.63$ mho/m (brain tissue)
835 MHz	ConvF	6.10 $\pm$ 8%	$\epsilon_r = 44.0$ $\sigma = 0.90$ mho/m (brain tissue)
925 MHz	ConvF	5.93 $\pm$ 8%	$\epsilon_r = 44.0$ $\sigma = 0.93$ mho/m (brain tissue)
1500 MHz	ConvF	5.34 $\pm$ 8%	$\epsilon_r = 41.1$ $\sigma = 1.00$ mho/m (brain tissue)
1900 MHz	ConvF	4.86 $\pm$ 8%	$\epsilon_r = 39.9$ $\sigma = 1.42$ mho/m (brain tissue)
150 MHz	ConvF	7.93 $\pm$ 8%	$\epsilon_r = 70.00$ $\sigma = 0.75$ mho/m (muscle tissue)
450 MHz	ConvF	6.67 $\pm$ 8%	$\epsilon_r = 58.0$ $\sigma = 1.00$ mho/m (muscle tissue)
835 MHz	ConvF	6.05 $\pm$ 8%	$\epsilon_r = 52.0$ $\sigma = 1.10$ mho/m (muscle tissue)
925 MHz	ConvF	5.91 $\pm$ 8%	$\epsilon_r = 52.0$ $\sigma = 1.20$ mho/m (muscle tissue)
1500 MHz	ConvF	5.50 $\pm$ 8%	$\epsilon_r = 41.2$ $\sigma = 1.48$ mho/m (muscle tissue)
1920 MHz	ConvF	4.63 $\pm$ 8%	$\epsilon_r = 51.5$ $\sigma = 1.95$ mho/m (muscle tissue)

## Appendix D: Illustrations of Body-worn Accessories

The purpose of this appendix is to illustrate the body-worn carry accessories for XTS5000 Series Radios. The radio that is used in the following photos is of the XTS5000 type and was used solely to demonstrate the different body-worn carry accessories. There are two types of body-worn carry cases 1) Belt clip and 2) High Activity Leather Case with Swivel belt loop.

### 1) Belt Clip

Currently one version is available, NTN8266B. This belt clip is a plastic assembly with a spring and small metal clip which attaches to the back of the battery. The belt clip is of a length sufficient to accommodate a 2 1/4 inch belt. Photos 1 and 2 illustrate this belt clip and the metal spring.



**Photo 1.** Side view of NTN8266A



Metallic  
spring and  
clip

**Photo 2.** Front and Rear view of NTN8266A

### High Activity Leather Case with Swivel belt loop

This carry case, NTN8381B, is constructed of hard leather and includes a 3 inch belt loop, NTN8040B, which attaches at the rear with a heavy duty metal swivel joint. The design allows the radio and case to swivel freely at the waist and yet allow rapid removal for hand-held use by rotating and lifting upward. A snap on "T-strap", incorporating 3 metal snaps, secures the radio within the case.



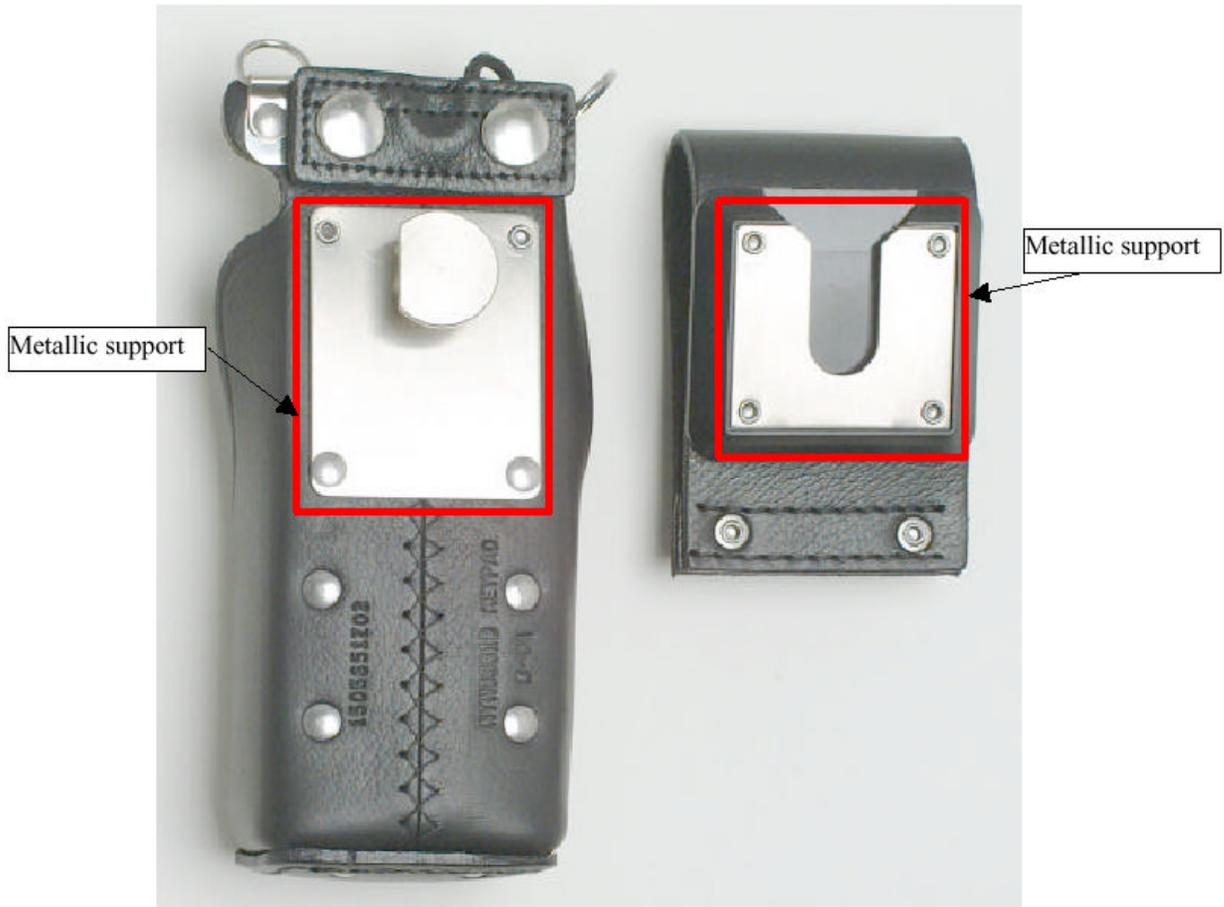
Photo 3. Side view of NTN8381B



Photo 4. Front view of NTN8381B



Photo 5. Rear view of NTN8381B



**Photo 6.** NTN8381B with belt loop NTN8040B detached.

The following table summarizes the body spacing distance provided by each of the body - worn accessories:

<b>Carry Case Kit #</b>	<b>Closest separation distance @ base of antenna to the bottom of phantom surface (cm)</b>
NTN8266B	21 mm
NTN8381B	47 mm