

**PRODUCT RADIO FREQUENCY ENERGY
EXPOSURE COMPLIANCE TEST
PRFEECT CERTIFICATE**

PRFEECT NO.: N/A DATE SUBMITTED: 5/26/99 REVISION DATE/NUMBER: N/A

PRODUCT MANUFACTURER: Motorola

SECTOR/GROUP/DIVISION: PCD/CIG OTHER: _____

LOCATION (ADDRESS): 5555 North Beach Street, Fort Worth, Texas 76137

PRODUCT DESCRIPTION: Fixed Wireless Terminal (FWT)

MODEL: ST1001B SERIAL NUMBER: 634DZG3281

FREQUENCIES OF OPERATION: 1850 -- 1910 MHz

MAXIMUM POWER OUTPUT (WATTS): 1

TEST METHOD: SAR to Occupational/Controlled Exposure Limits

TESTING LOCATION: Motorola Florida Research Laboratories

PRODUCT CUSTOMERS AND LOCATION (to confirm applicable standards, state whether the customers are consumers or other users and identify generally the geographic areas where product is intended to be sold):

Based on the information provided and the testing results obtained for the above described product, the undersigned certifies that, when used as stated in the operating instructions supplied, said product is within the limits identified in Policy, Section III, for the region in which it is intended to be sold.

PRINT NAME: Q. Balzano

SIGNED: Jo Q. Balzano, Zakharina DATE APPROVED: 5/26/99

TITLE: Chief EME Scientist, Motorola Florida Research Laboratories

LOCATION: Motorola, 8000 W. Sunrise Blvd., Plantation, Florida, 33322

PHONE: (954) 723-6139 FAX: (954) 723-5611

Forward a signed copy of this form to: Motorola Chief EME Scientist, Motorola Inc., Motorola Florida Research Laboratories, 8000 West Sunrise Boulevard, Plantation, Florida 33322, USA.



MOTOROLA

Motorola Florida Research Laboratories

SAR Measurement Report

For the compliance of Motorola Communications Devices with the American National Standard Institute, ANSI/IEEE C95.1, 1992. Standard for Safety level with respect to Human Exposure to Radiofrequency Electromagnetic Fields 3KHz to 300GHz.

Radio Type Fixed Wireless Terminal
Model # ST1001B
Serial # 6345263281
Transmitter Freq. (MHz) 1881
Transmitter Power (Watts) .200
Antenna Type center fed
Battery Type ---
Test Conditions full body phantom, abdomen, muscle
Volume for Spatial Peak SAR Averaging (cm³) 1
Spatial Peak Measured SAR Average (mW/g) .46
Transmitter Power Start .200 Transmitter Power End .200
Transmitter Peak Power 1

Equation for max expected SAR value:

$$\text{(Peak Power/Power End) x measured SAR = max expected SAR mW/g}$$
$$\left(\frac{1}{.200} \right) \times .46 = 2.3 \text{ mW/g}$$

If push to talk 50% duty cycle:

$$\text{max expected SAR/2 = time averaged SAR mW/g}$$
$$\frac{N/A}{2} = N/A \text{ mW/g}$$

Observations: unit tested at 2.5cm

Performed By: Nanmay Zakhariva Date: 5/26/99
Approved By: N/A Date: N/A

File : c:/idx3/SYSTEM/SARMEAS3/data/Normal/99052604_ZOOM.VLT
Start : 26-May-99 01:18:04 pm End : 26-May-99 01:24:54 pm
Ver : 3.58

Radio Type : Fixed Wireless Terminal (Ft. Worth)
Model Number : ST1001B
Serial Number : 634DZG3281
Frequency : 1881 MHz
Peak Trans. Pwr : 1.000 W
Start Trans. Pwr: 0.200 W
Antenna Type : Center Fed
Antenna Posn. : Out
Phantom Type : Flat
Phantom Posn. : E Field
Scan Type : ZOOM/SAR
Probe Name : pG
Field Type : E Field
Orientation : 0 Degrees

Mixture Type = Muscle
Mixture Dielectric Constant = 49.900
Mixture Conductivity = 1.900

Comment :
Prototype test
Moved unit down to 2.5cm

Robot : Robot

Probe Offset = 0.28 cm
Sensor Factor = 0.0108
Conversion Factor = 1.672

pG Amplifier Channel Settings : 0.279 0.273 0.177

Max Location : X = -7.000, Y = 0.000, Z = 0.000 (cm) Value = 3.193

Measured Values (volts) =
3.161E-003 2.192E-003 1.530E-003 1.146E-003 8.580E-004 6.521E-004
4.733E-004 3.267E-004 2.283E-004 1.187E-004 5.963E-005

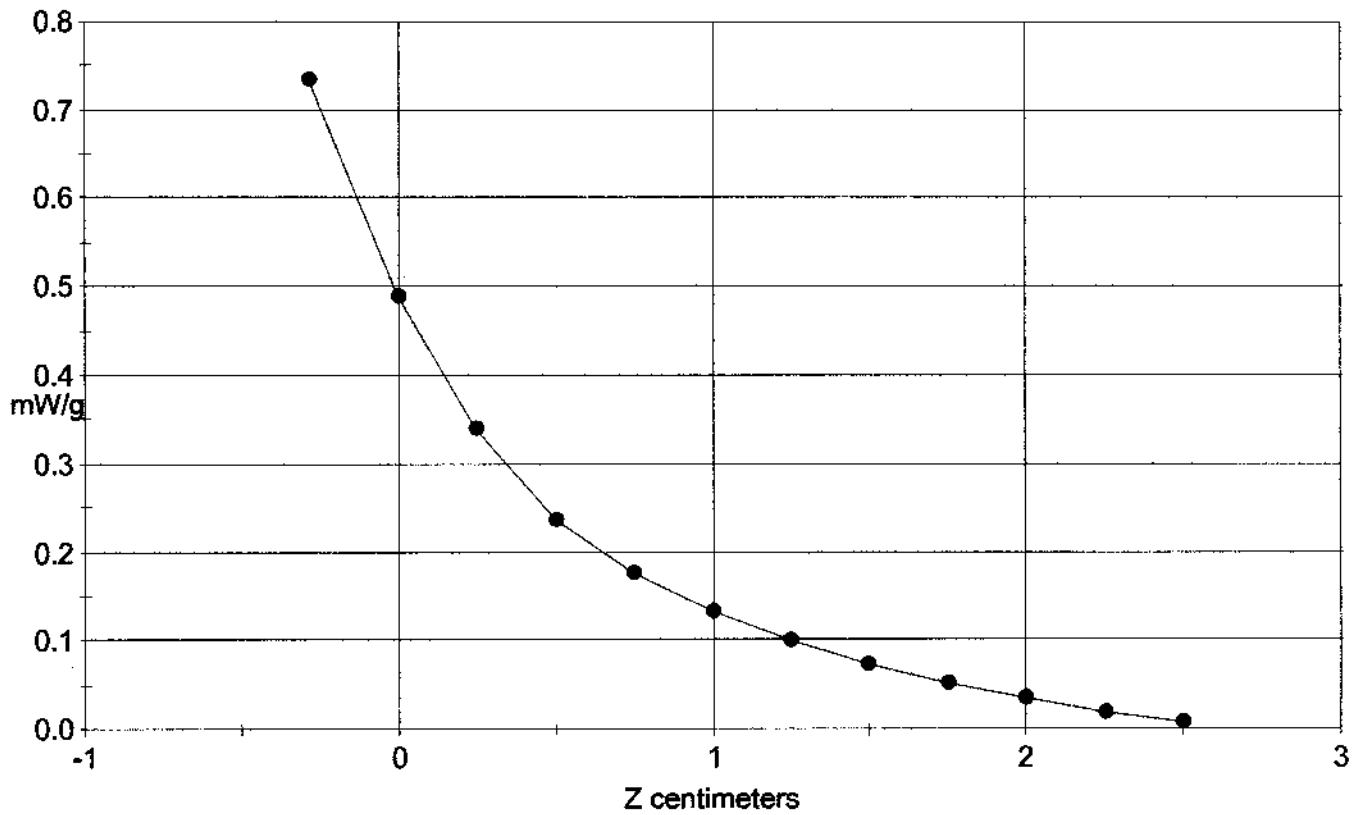
Calc. Voltage @ Surface (Vs) = 0.0047

Voltage @ 1.00 cm (Vt) = 0.0012

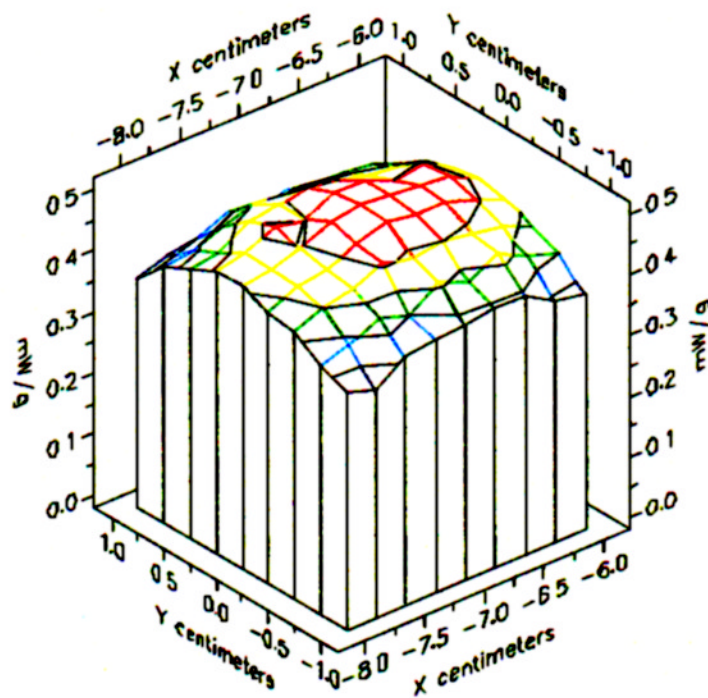
Ave. Voltage (Vs+Vt)/2 = 0.0030

Ave. SAR over 1 g (mW/g) = 0.4595

SAR Scan
File : 99052604_ZOOM.VLT
Start : 26-May-99 01:18:04 pm End : 26-May-99 01:24:54 pm
Fixed Wireless Terminal (Ft. Worth)/ST1001B/634DZG3281;1881MHz;W;Center Fed/Out;
Flat/E Field;ZOOM/SAR;pG/E Field/0 DegreesMuscle/49.900/1.900
3.58



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Start : 26-May-99 01:18:04 pm End : 26-May-99 01:24:54 pm
Fixed Wireless Terminal (Ft. Worth)/ST1001B/634DZG3281;1881MHz;W;Center Fed/Out;
Flat/E Field;ZOOM/SAR;pG/E Field/0 DegreesMuscle/49.900/1.900
3.58



— 0.466 .. 0.494
— 0.438 .. 0.466
— 0.410 .. 0.438
— 0.381 .. 0.410
— 0.353 .. 0.381

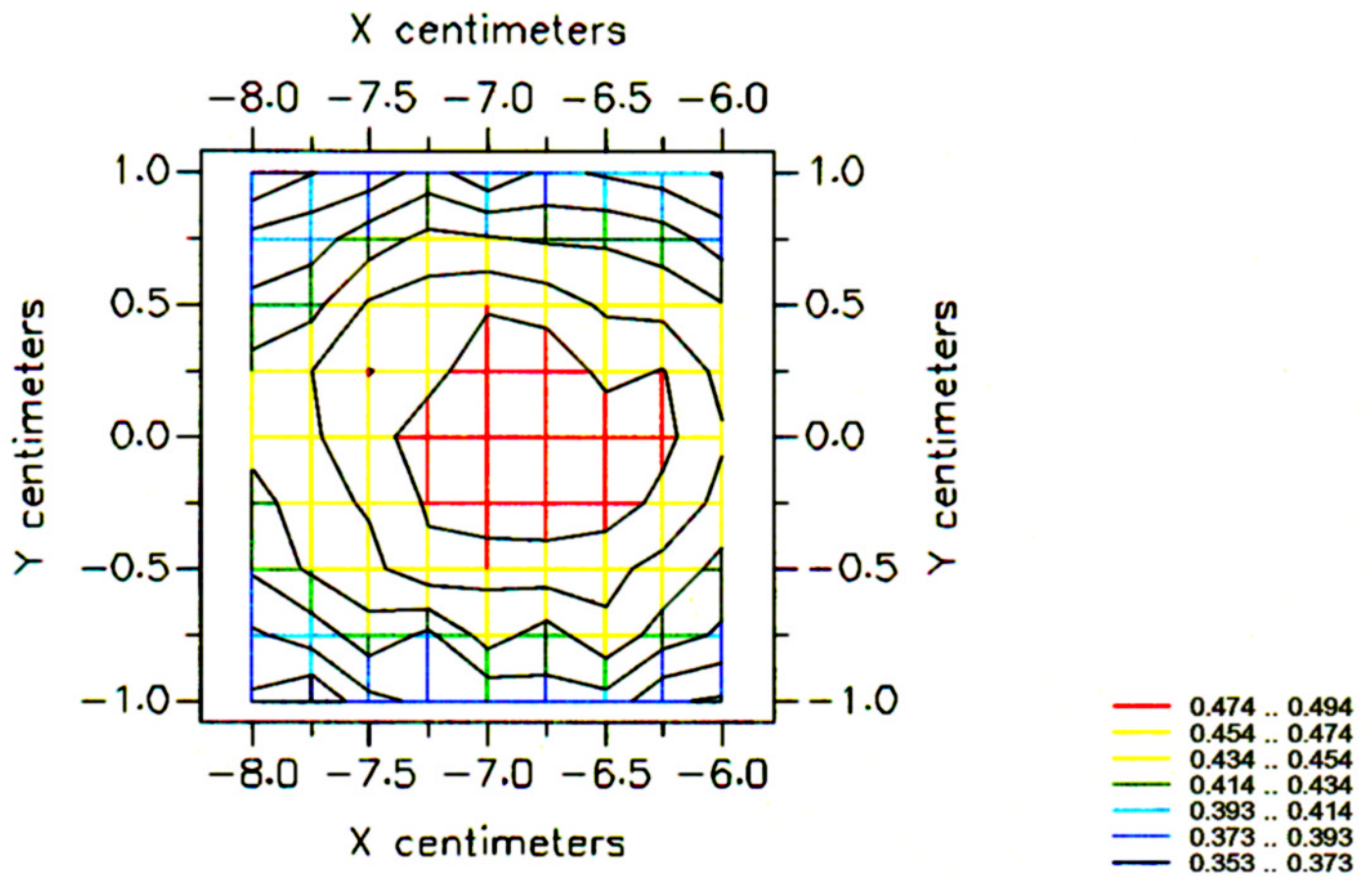
File : 99052604_ZOOM.VLT

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Fixed Wireless Terminal (Ft. Worth)/ST1001B/634DZG3281;1881MHz;W;Center Fed/Out;

Flat/E Field;ZOOM/SAR;pG/E Field/0 DegreesMuscle/49.900/1.900

3.58



File : c:/idx3/SYSTEM/SARMEAS3/data/Normal/99052604_AREA.VLT
Start : 26-May-99 01:09:44 pm End : 26-May-99 01:18:04 pm
Ver : 3.58

Radio Type : Fixed Wireless Terminal (Ft. Worth)
Model Number : ST1001B
Serial Number : 634DZG3281
Frequency : 1881 MHz
Peak Trans. Pwr : 1.000 W
Start Trans. Pwr: 0.200 W
Antenna Type : Center Fed
Antenna Posn. : Out
Phantom Type : Flat
Phantom Posn. : E Field
Scan Type : AREA
Probe Name : pG
Field Type : E Field
Orientation : 0 Degrees

Mixture Type = Muscle
Mixture Dielectric Constant = 49.900
Mixture Conductivity = 1.900

Comment :
Prototype test
Moved unit down to 2.5cm

Robot : Robot

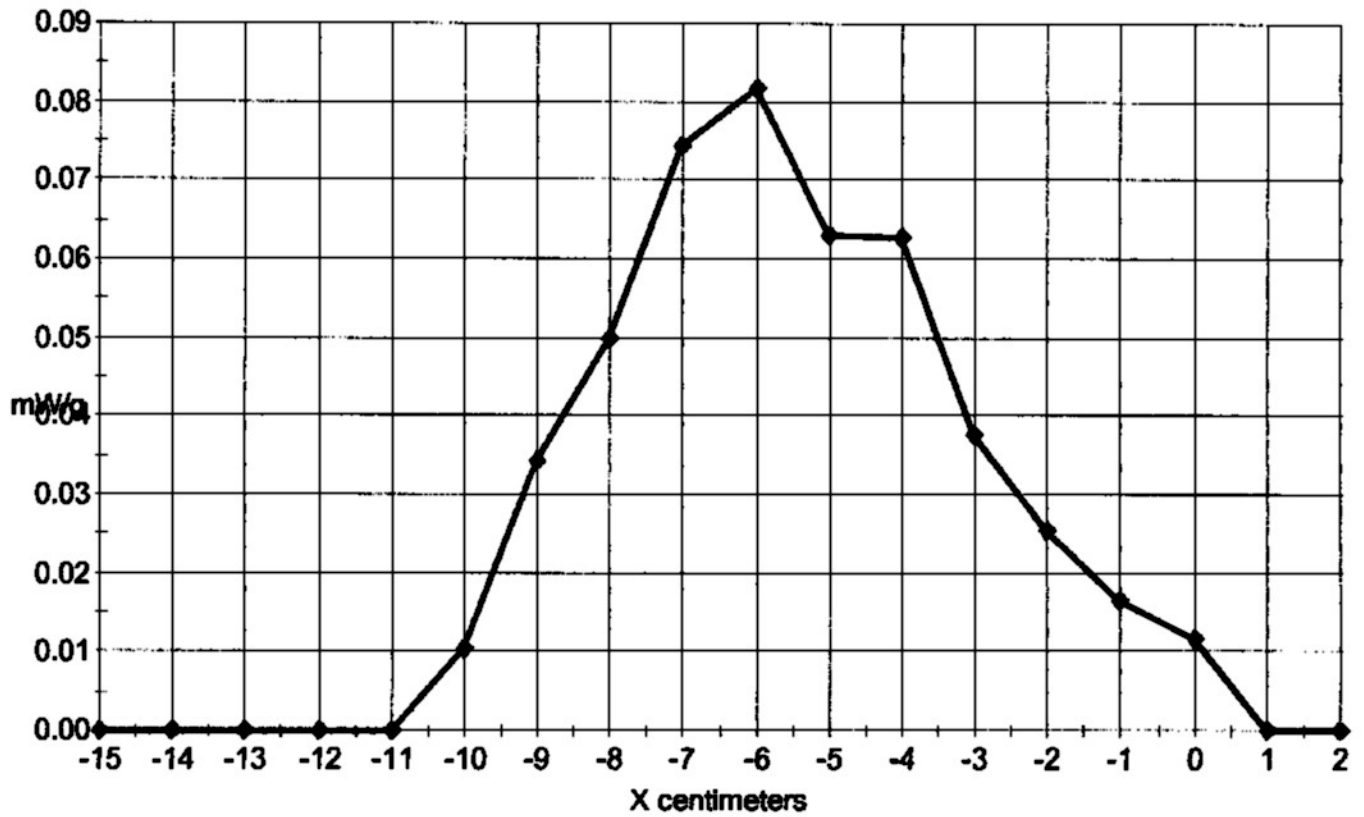
Probe Offset = 0.28 cm
Sensor Factor = 0.0108
Conversion Factor = 1.672

pG Amplifier Channel Settings : 0.279 0.273 0.177

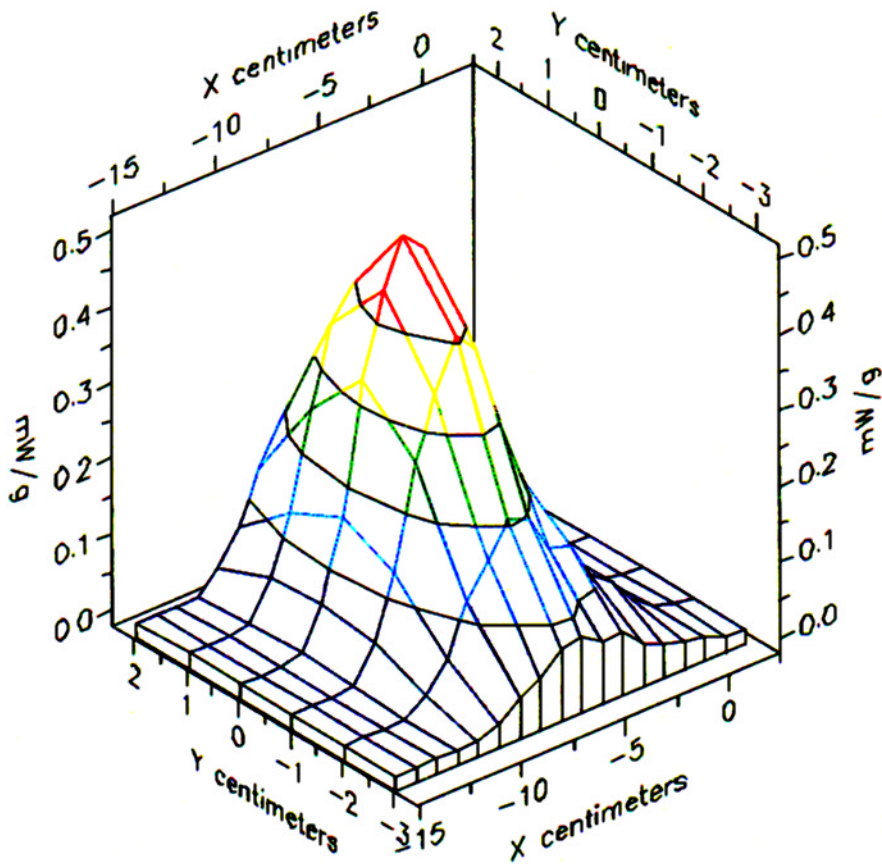
Max Location : X = -7.000, Y = 0.000, Z = 0.000 (cm) Value = 3.246

Area too wide. SAR value not calculated

X-Z Plane Slice Y=-3.000
File : 99052604 AREA.VLT
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Fixed Wireless Terminal (Ft. Worth)/ST1001B/634DZG3281;1881MHz;W;Center Fed/Out;
Flat/E Field;AREA;pG/E Field/0 DegreesMuscle/49.900/1.900
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