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SAR Test Report for Motorola the 800 MHz mobile cellular phone (FCC ID IHDT5ZX1).

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1. Introduction

The Motorola Florida Research Laboratory has performed measurements of the maximum potential exposure to the user of portable cellular Carry phone FCC ID IHDT5ZX1. The Specific Absorption Rate (SAR) of this product was measured. This report details the test setup and equipment as well as the results of those tests.

2. Applicable Regulations

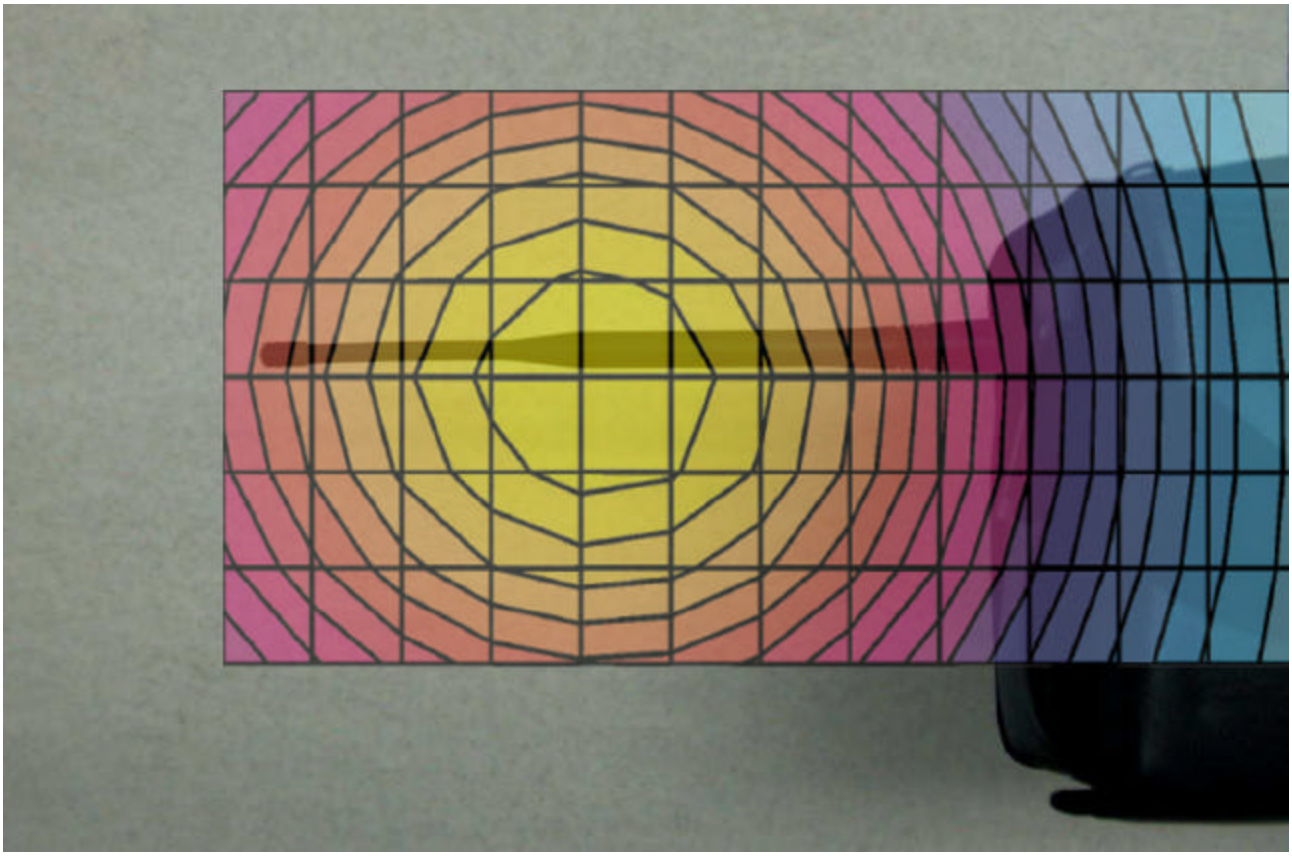
Federal Communications Commission rule §2.1093(d)(2), the ANSI/IEEE C95.1 1992 and the NCRP Report Number 86 specify the maximum exposure limit of 1.6 W/kg as averaged over any 1 gram of tissue for portable devices being used within 20cm of the user in the uncontrolled environment.

3. Description of Test Sample

A prototype unit serial number FC71AD19 was measured. This unit is identical in physical construction, maximum radiated power levels and antenna structure to units that will be in production. It transmits in the frequency range of 824 to 849 MHz using AMPS mode. The unit was tested at its maximum transmitter power. The unit is equipped with a fixed antenna that serves as both a receive and transmit antenna. Figures 1 and 2 show the unit with its cover closed and open respectively. Normal operation of this unit is with the cover either closed or open. However, it would typically be carried with the cover closed. The unit was tested with the cover closed. The unit was placed under a flat phantom, with the antenna extending parallel to the bottom of the phantom for maximum coupling. Figure 3 shows a picture of the unit and antenna under the flat phantom.

For the purposes of these tests, the distance between the antenna and the flat phantom is kept constant at 7 cm. The maximum SAR level for the Motorola portable cellular phone (FCC ID IHDT5ZX1) in the 800MHz Analog band is 1.24 W/kg in this test condition. A full data set output of the test condition with the highest SAR values from the Dasy™ measurement system is included as appendix A. The test condition included is indicated as a bold number in the following table. All other test conditions measured lower SAR values than those included.

800 MHz Analog Channel	SAR (W/kg)	Conducted Power (W)
991	**1.24**	3.52
385	0.93	3.45
799	0.69	2.14



In the Cellular Mobile/Carry Phone Users Guide supplied with the product, Motorola has made the following statement: "**IMPORTANT:** To meet the FCC's RF Exposure Guidelines, the Carry Phone should be used so there is at least 10 cm of separation between the body of the user and nearby persons and the antenna." At 10 cm the SAR values will be lower than the SAR values measured at 7cm. Therefore, the SAR values for the cellular carry phone (FCC ID lHDT5ZX1) are below the maximum recommended levels of 1.6 W/kg.

Figure 1, Cover Closed.

Figure 2, Cover Open

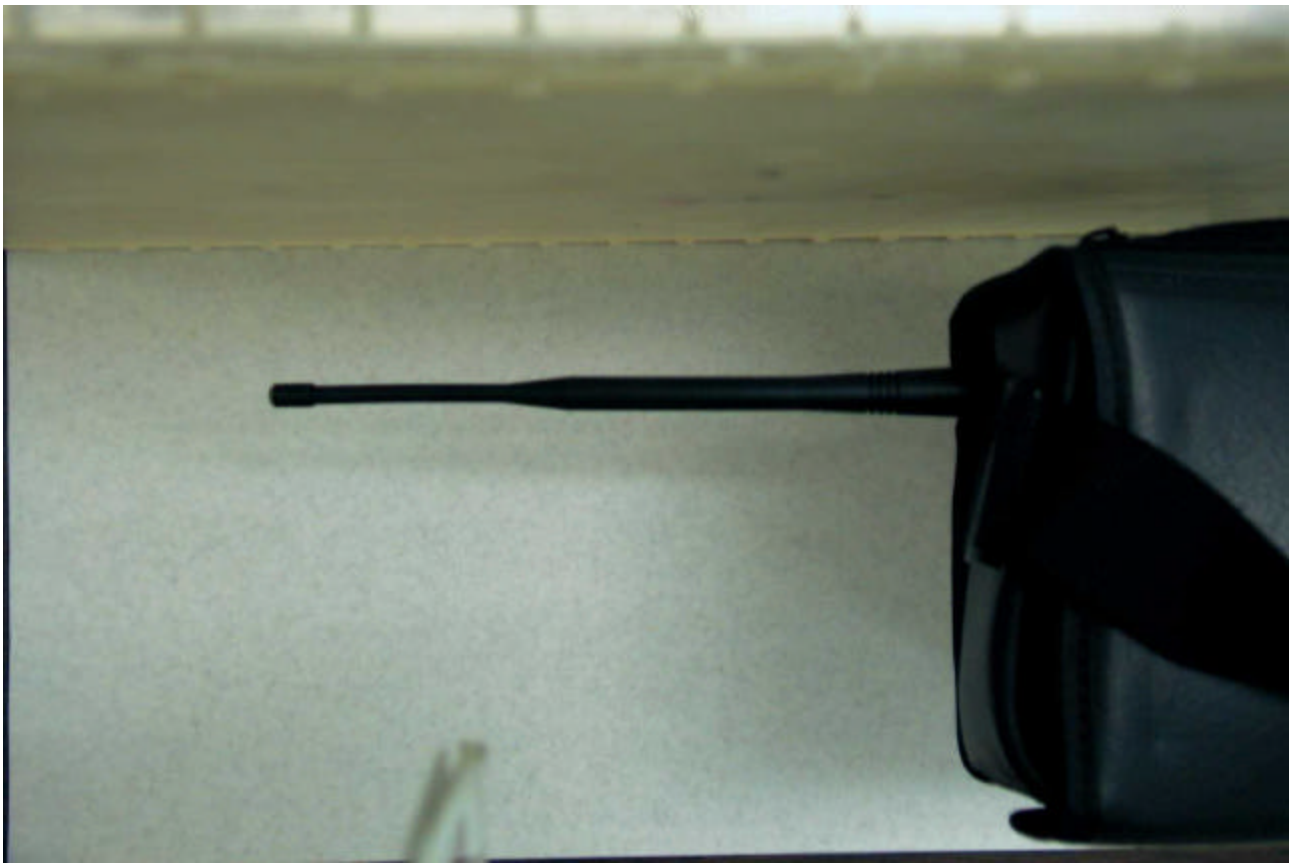


Figure 3, Unit under Flat Phantom

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S/N FC71AD19

Flat phantom Phantom; Section; Position: ; Frequency: 824 MHz
Probe: ET3DV5 - SN1364; ConvF(5.68,5.68,5.68); Crest factor: 1.0; Brain 835MHz: σ = 0.89 mho/m ε_r = 43.4 ρ = 1.00 g/cm^3
Cube 5x5x7: SAR (1g): 1.24 mW/g, SAR (10g): 0.927 mW/g, (Worst-case extrapolation)
Coarse: Dx = 10.0, Dy = 10.0, Dz = 10.0
Penetration depth: 18.5 (15.4, 23.3) [mm]
Powerdrift: -0.27 dB