MOTOROLA

ACCREDITED
Certificate Number: 1449-01

FCC ID: AZ489FT5846
DECLARATION OF COMPLIANCE SAR ASSESSMENT Part 3 of 3

Government & Enterprise Mobility Solutions
EME Test Laboratory
8000 West Sunrise Blvd
Fort Lauderdale, FL. 33322

Date of Report: August 5, 2005
Report Revision: Rev. O
Report ID: FCC rpt_i870_Rev O_050805 SR2563

Responsible Engineer: Kim Uong (EME lead Eng.)
Date/s Tested: 7/22/05 – 8/1/05
Manufacturer/Location: Motorola - Plantation
Sector/Group/Div.: iDEN Subscriber
Date submitted for test: 7/14/05
DUT Description: i870; TDMA: 236:310 (76.1%), 1:6, 2:6, 81:120, 1:12; 64QAM, 16 QAM & QPSK Modulation; 0.6W Pulse Avg. MOTOtalk (114:120 8FSK; 0.85 W nominal); GPS and Bluetooth capable
Test TX mode(s): 1:3, 1:6, 81:120, 114:120, 236:310
Max. Power output: iDEN/WiDEN - 0.640W; MOTOtalk – 0.891W, Bluetooth – 2.5mW
Nominal Power: iDEN/WiDEN - 0.600W; MOTOtalk – 0.850W, Bluetooth – 1mW
Tx Frequency Bands: iDEN - 806-825, 896-902MHz; MOTOtalk - 902-928MHz; BT - 2.402-2.480GHz
Signaling type: TDMA: iDEN; WiDEN; MOTOtalk; Bluetooth
Model(s) Tested: H85XAH6RR5AN-NWF1089A
Model(s) Certified: H85XAH6RR5AN-NWF1089A
Serial Number(s): 000AFJ00J2; 000AFJ00HZ
Classification: General Population/Uncontrolled
Rule Part(s): 15 & 90

Approved Accessories:
Antenna(s):
8575108A01 retractable ¼ wave antenna (806-825MHz, -7.6 dBi to -4.7dBi; 896-902MHz, -9.2dBi to -5.2dBi; 902-928Mhz, -9.2dBi to -5.2dBi
Battery(ies):
SNN5705C (Hi performance Li Ion); NNTN2291XXXA (Battery cover)
Body worn accessory(ies):
NNTN4747A (Belt clip); NNTN6231A (Carry Holster)
Audio/Data cable accessory(ies):
NSN6066A (Light duty RSM), NNTN5004A (headset over ear), NNTN5005A (headset over head), SYN8390B (Privacy earpiece), SYN8146C (Lightweight headset w/ boom mic), NTN8496A (Lightweight headset w/ mic), NNTN4033A (Privacy Earpiece/mic w/ PTT), NNTN5006A (Black Earbud), SYN7875C (Hearing Aid Neckloop), NTN8513B (Lightweight headband), NNTN5330A (Ear bud accessory), NNTN4620A (Silver ear bud), NNTN5774A (Stereo Head set); NKN6559A (USB Cable), NKN6560A (RS232), NNTN5405A (USB cable w/ charging), NNTN5406A (RS-232 data cable w/ charging)

Max. Calc. 1-g/10-g Avg. SAR: 1.32/0.92 mW/g (Body)
Max. Calc. 1-g/10-g Avg. SAR: 0.52/0.37 mW/g (Face)
Max. Calc. 1-g/10-g Avg. SAR: 0.59/0.40 mW/g (Head)

This reporting format is consistent with the test report guidelines of the TIA TSB-150 December 2004
The results and statements contained in this report pertain only to the device(s) evaluated.

Ken Enger's signature on file
Ken Enger GEMS EME Lab Senior Resource Manager, Laboratory Director,

Approval Date: 8/5/05

Certification Date: 8/5/05

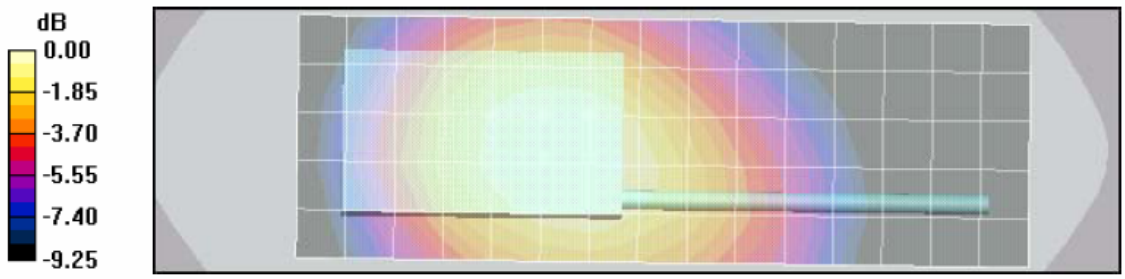
Certification No.: L1050813P

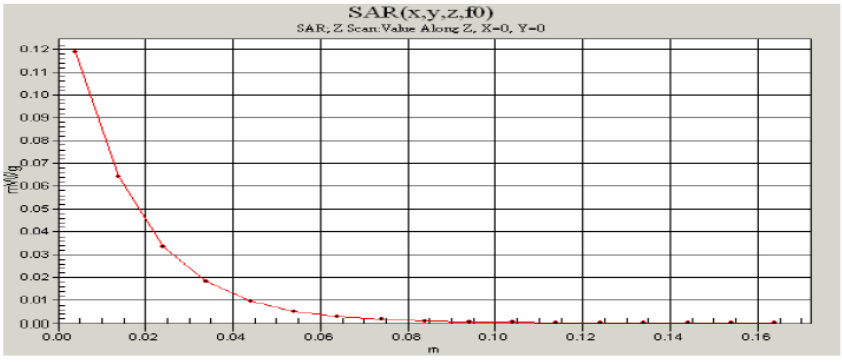
Appendix E (Continued)
Highest SAR Configurations Results

Motorola GEMS EME Laboratory
FCC ID: AZ489FT5846; Test Date: 7/24/05
Run #: ErC Face 050724-21
Sim Temp: 20.7 (C)
Model #: H85XAH6RR5AN-NWF1089A SN: 000AFJ00HZ

Antenna: OUT TX Freq: 896.01875 MHz
Battery: SNN5705C Start power: .627 W
Carry acc.: NONE Audio/Data acc.: NONE

DUT with front housing separated 2.5cm from the phantom
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.53, 6.53, 6.53)
Duty Cycle: 1:6, Medium: 899 IEEE Head, Medium parameters used: σ = 1.01 mho/m, εr = 42.3; ρ = 1000 kg/m3
Electronics: DAE3 Sn374, Calibrated: 4/6/2005
Face template/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.67 V/m; Power Drift = -0.0426 dB
SAR(1 g) = 0.108 mW/g; SAR(10 g) = 0.078 mW/g

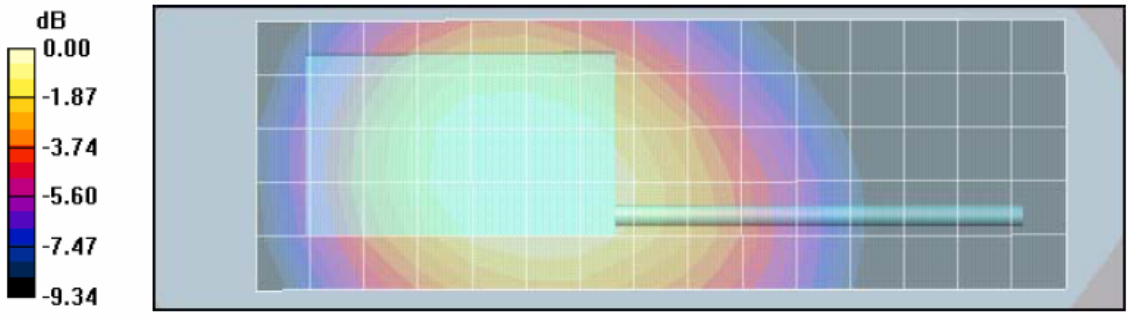


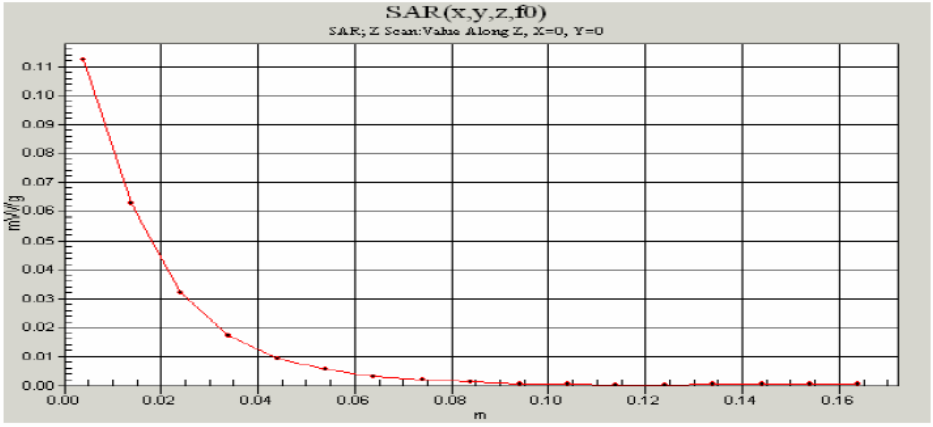


Motorola GEMS EME Laboratory
FCC ID: AZ489FT5846; Test Date: 7/24/05
Run #: ErC Face 050724-22
Sim Temp: 20.7 (C)
Model #: H85XAH6RR5AN-NWF1089A SN: 000AFJ00HZ

Antenna: OUT TX Freq: 896.01875 MHz
Battery: SNN5705C Start power: .627 W
Carry acc.: NONE Audio/Data acc.: NONE

DUT with front housing separated 2.5cm from the phantom with BLUETOOTH on
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.53, 6.53, 6.53)
Duty Cycle: 1:6, Medium: 899 IEEE Head, Medium parameters used: σ = 1.01 mho/m, εr = 42.3; ρ = 1000 kg/m3
Electronics: DAE3 Sn374, Calibrated: 4/6/2005
Face template/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.55 V/m; Power Drift = 0.0306 dB
SAR(1 g) = 0.113 mW/g; SAR(10 g) = 0.082 mW/g

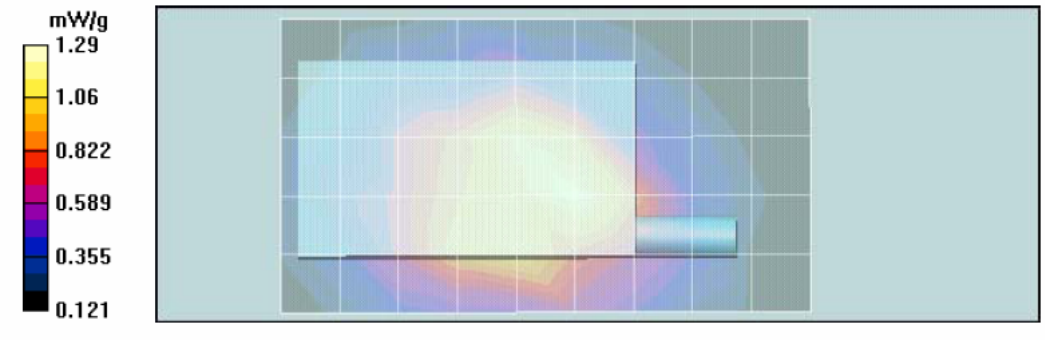


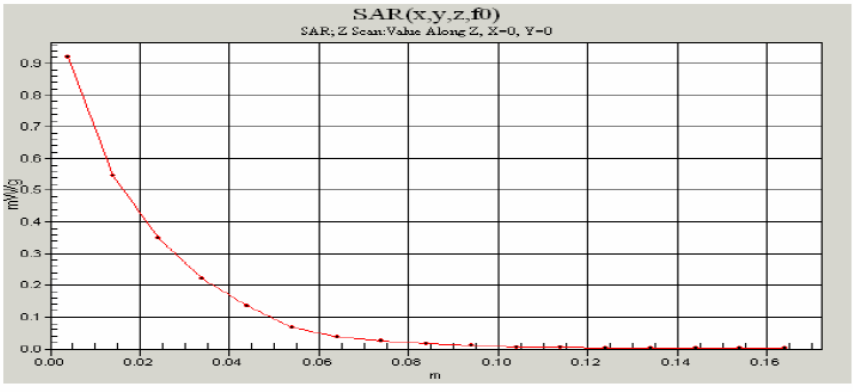


Motorola GEMS EME Laboratory
FCC ID: AZ489FT5846; Test Date: 7/28/05
Run #: ErC Ab 050728-16
Sim Temp: 20.4 C)
Model #: H85XAH6RR5AN-NWF1089A SN: 000AFJ00J2

Antenna: IN TX Freq: 813.5125 MHz
Battery: SNN5705C Start power: .608 W
Carry acc.: NNTN6231A Audio/Data acc.: NONE

DUT with carry case against the phantom
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.19, 6.19, 6.19)
Duty Cycle: 1:1.31, Medium: 813 MHz FCC Body, Medium parameters used: σ = 0.96 mho/m, εr = 53.7; ρ = 1000 kg/m3
Electronics: DAE3 Sn374, Calibrated: 4/6/2005
Ab Scan/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.7 V/m; Power Drift = -0.323 dB
SAR(1 g) = 1.16 mW/g; SAR(10 g) = 0.813 mW/g

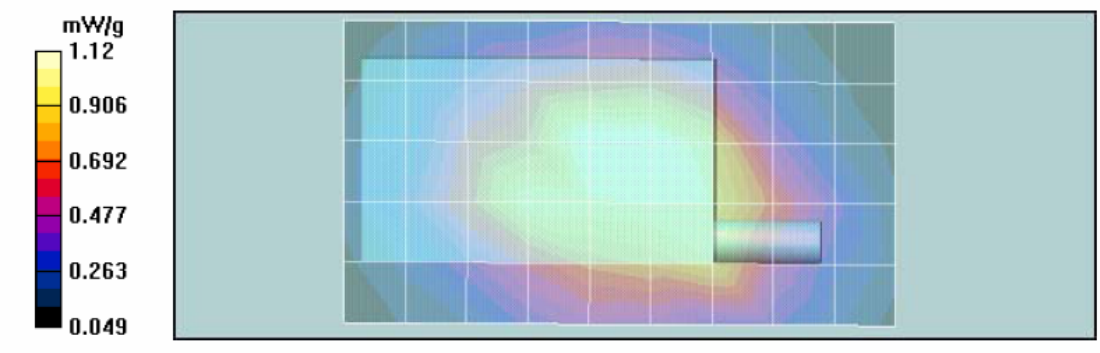


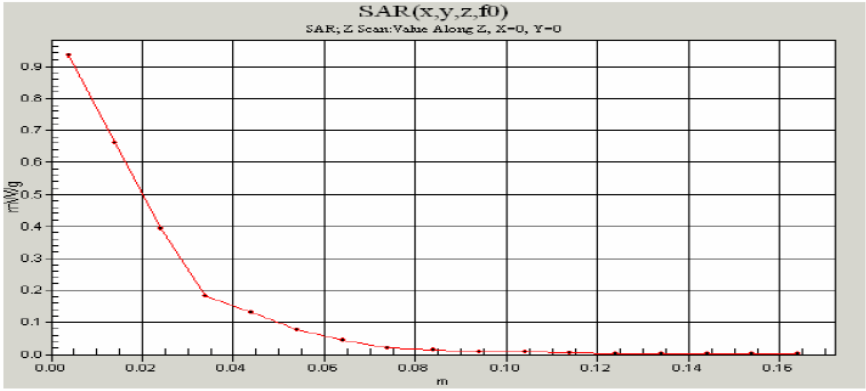


Motorola GEMS EME Laboratory
FCC ID: AZ489FT5846; Test Date: 7/28/05
Run #: ErC Ab 050728-19
Sim Temp: 20.4 C)
Model #: H85XAH6RR5AN-NWF1089A SN: 000AFJ00J2

Antenna: IN TX Freq: 813.5125 MHz
Battery: SNN5705C Start power: .610 W
Carry acc.: NNTN6231A Audio/Data acc.: NONE

DUT with carry case against the phantom with BLUETOOTH on
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.19, 6.19, 6.19)
Duty Cycle: 1:1.31, Medium: 813 MHz FCC Body, Medium parameters used: σ = 0.96 mho/m, εr = 53.7; ρ = 1000 kg/m3
Electronics: DAE3 Sn374, Calibrated: 4/6/2005
Ab Scan/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.3 V/m; Power Drift = -0.209 dB
SAR(1 g) = 1.11 mW/g; SAR(10 g) = 0.813 mW/g

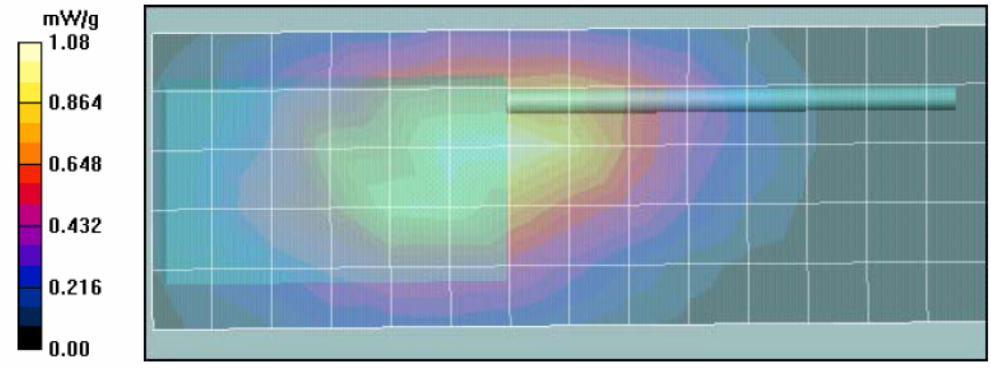


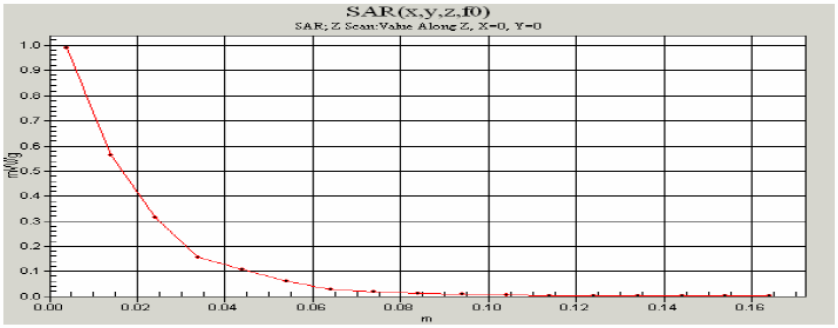


Motorola GEMS EME Laboratory
FCC ID: AZ489FT5846; Test Date: 7/29/05
Run #: ErC Ab 050729-09
Sim Temp: 20.4 (C)
Model #: H85XAH6RR5AN-NWF1089A SN: 000AFJ00HZ

Antenna: OUT TX Freq: 898.49375 MHz
Battery: SNN5705C Start power: .618 W
Carry acc.: NNTN4747A Audio/Data acc.: NONE

DUT with carry case against the phantom
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.19, 6.19, 6.19)
Duty Cycle: 1:1.31, Medium: 899 MHz FCC Body, Medium parameters used: σ = 1.06 mho/m, εr = 53.2; ρ = 1000 kg/m3
Electronics: DAE3 Sn374, Calibrated: 4/6/2005
Ab Scan/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 28.7 V/m; Power Drift = -0.268 dB
SAR(1 g) = 1.04 mW/g; SAR(10 g) = 0.717 mW/g

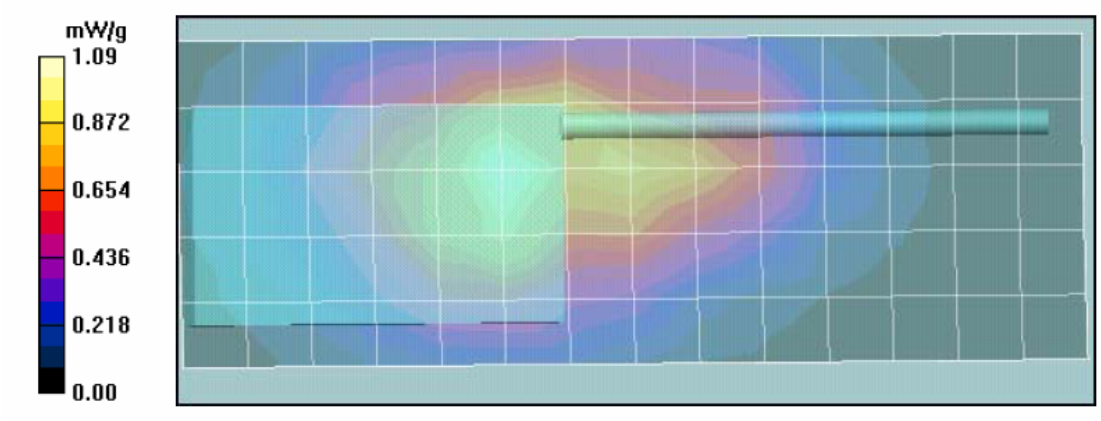


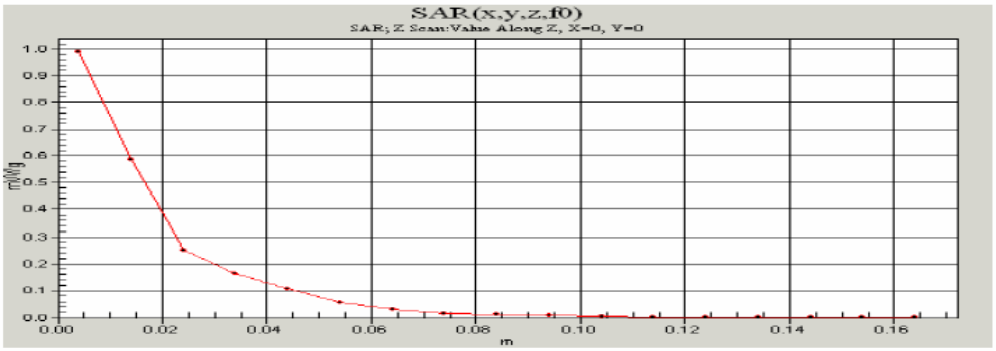


Motorola GEMS EME Laboratory
FCC ID: AZ489FT5846; Test Date: 7/29/05
Run #: ErC Ab 050729-10
Sim Temp: 20.4 (C)
Model #: H85XAH6RR5AN-NWF1089A SN: 000AFJ00HZ

Antenna: OUT TX Freq: 898.49375 MHz
Battery: SNN5705C Start power: .621 W
Carry acc.: NNTN4747A Audio/Data acc.: NONE

DUT with carry case against the phantom with BLUETOOTH on
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.19, 6.19, 6.19)
Duty Cycle: 1:1.31, Medium: 899 MHz FCC Body, Medium parameters used: σ = 1.06 mho/m, εr = 53.2; ρ = 1000 kg/m3
Electronics: DAE3 Sn374, Calibrated: 4/6/2005
Ab Scan/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 29.9 V/m; Power Drift = -0.323 dB
SAR(1 g) = 1 mW/g; SAR(10 g) = 0.679 mW/g

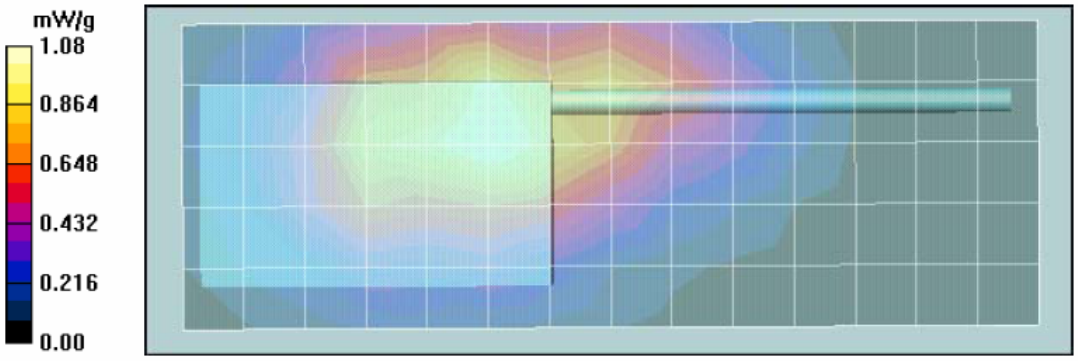


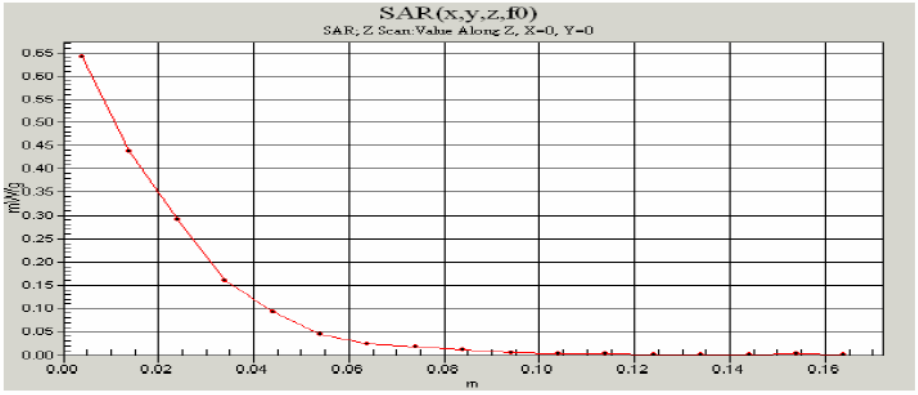


Motorola GEMS EME Laboratory
FCC ID: AZ489FT5846; Test Date: 8/01/05
Run #: ErC Ab 050801-09
Sim Temp: 20.9 (C)
Model #: H85XAH6RR5AN-NWF1089A SN: 000AFJ00J2

Antenna: OUT TX Freq: 901.98125 MHz
Battery: SNN5705C Start power: .630 W
Carry acc.: NNTN4747A Audio/Data acc.: NONE

DUT with carry case against the phantom
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.19, 6.19, 6.19)
Duty Cycle: 1:1.31, Medium: 899 MHz FCC Body, Medium parameters used: σ = 1.06 mho/m, εr = 53.3; ρ = 1000 kg/m3
Electronics: DAE3 Sn374, Calibrated: 4/6/2005
Ab Scan/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 29.7 V/m; Power Drift = -0.121 dB
SAR(1 g) = 0.920 mW/g; SAR(10 g) = 0.681 mW/g

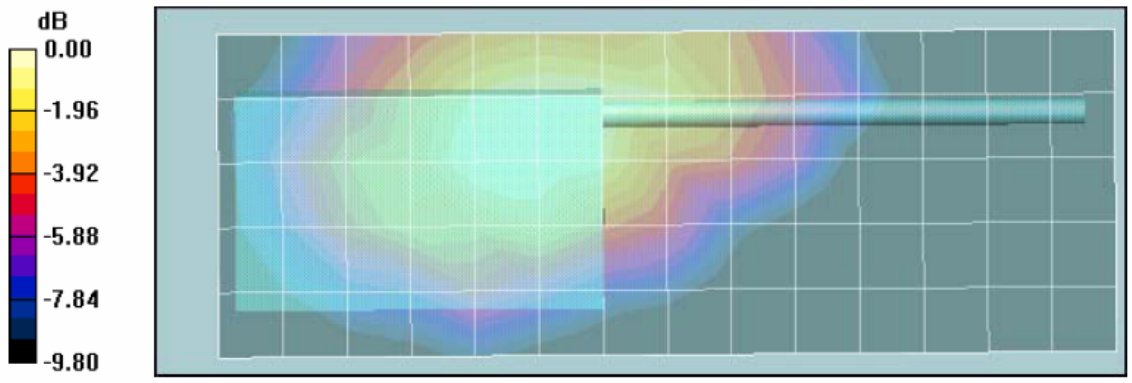


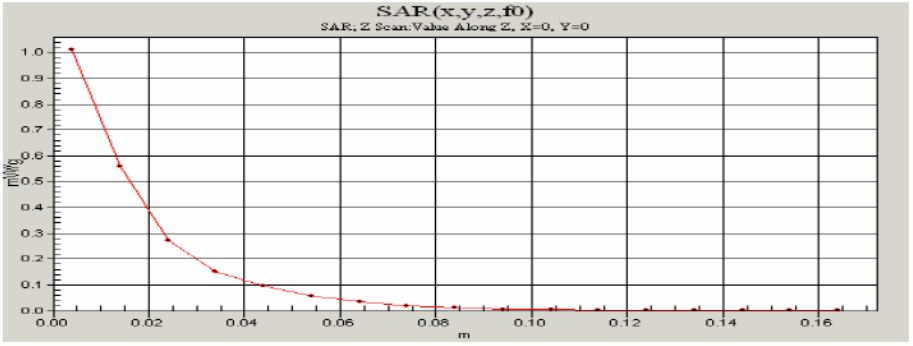


Motorola GEMS EME Laboratory
FCC ID: AZ489FT5846; Test Date: 8/01/05
Run #: ErC Ab 050801-10
Sim Temp: 20.9 (C)
Model #: H85XAH6RR5AN-NWF1089A SN: 000AFJ00J2

Antenna: OUT TX Freq: 901.98125 MHz
Battery: SNN5705C Start power: .633 W
Carry acc.: NNTN4747A Audio/Data acc.: NONE

DUT with carry case against the phantom with BLUETOOTH on
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.19, 6.19, 6.19)
Duty Cycle: 1:1.31, Medium: 899 MHz FCC Body, Medium parameters used: σ = 1.06 mho/m, εr = 53.3; ρ = 1000 kg/m3
Electronics: DAE3 Sn374, Calibrated: 4/6/2005
Ab Scan/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 30.0 V/m; Power Drift = -0.134 dB
SAR(1 g) = 0.976 mW/g; SAR(10 g) = 0.681 mW/g

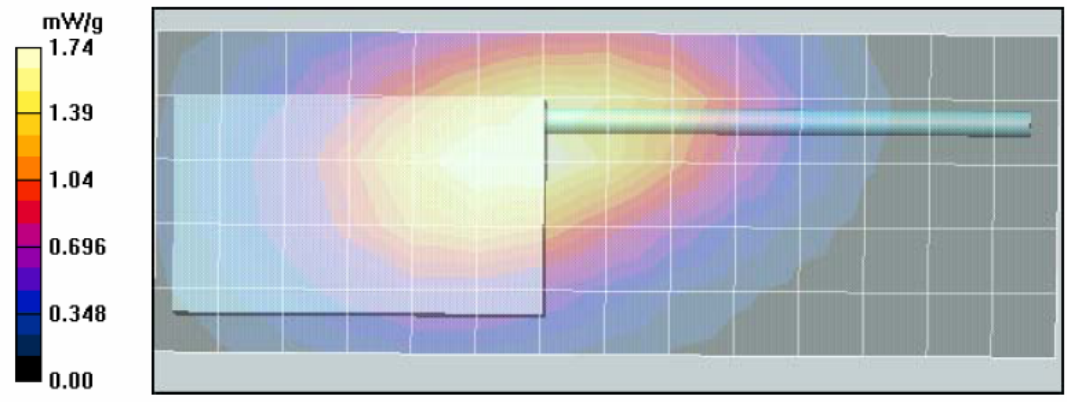


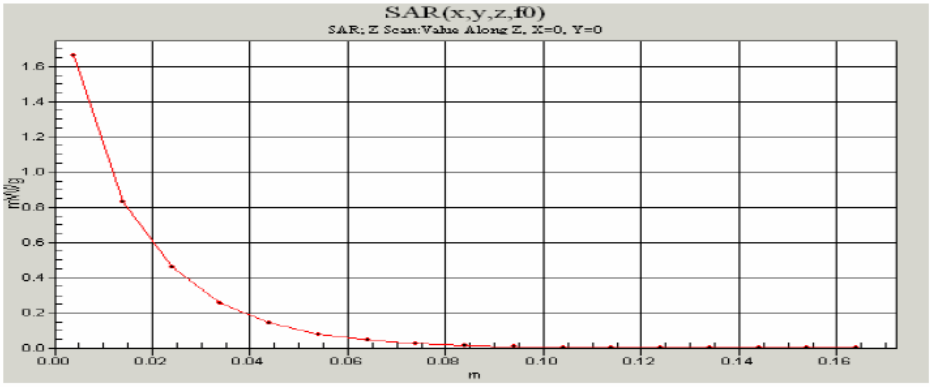


Motorola GEMS EME Laboratory
FCC ID: AZ489FT5846; Test Date: 7/29/05
Run #: ErC Ab 050729-11
Sim Temp: 20.4 (C)
Model #: H85XAH6RR5AN-NWF1089A SN: 000AFJ00J2

Antenna: OUT TX Freq: 915.525 MHz
Battery: SNN5705C Start power: .888 W
Carry acc.: NNTN4747A Audio/Data acc.: NTN8496A

DUT with carry case against the phantom
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.19, 6.19, 6.19)
Duty Cycle: 1:1.05, Medium: 915 MHz FCC Body, Medium parameters used: σ = 1.07 mho/m, εr = 53.2; ρ = 1000 kg/m3
Electronics: DAE3 Sn374, Calibrated: 4/6/2005
Ab Scan/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 40.4 V/m; Power Drift = 0.0135 dB
SAR(1 g) = 1.78 mW/g; SAR(10 g) = 1.27 mW/g

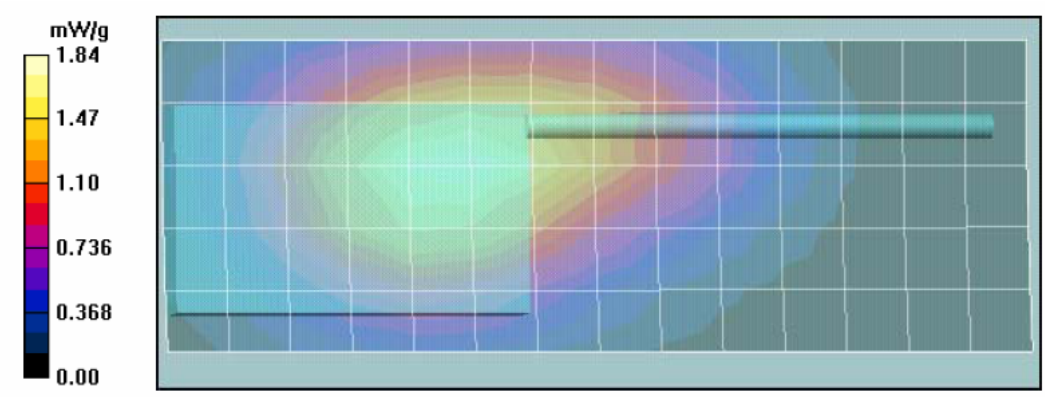


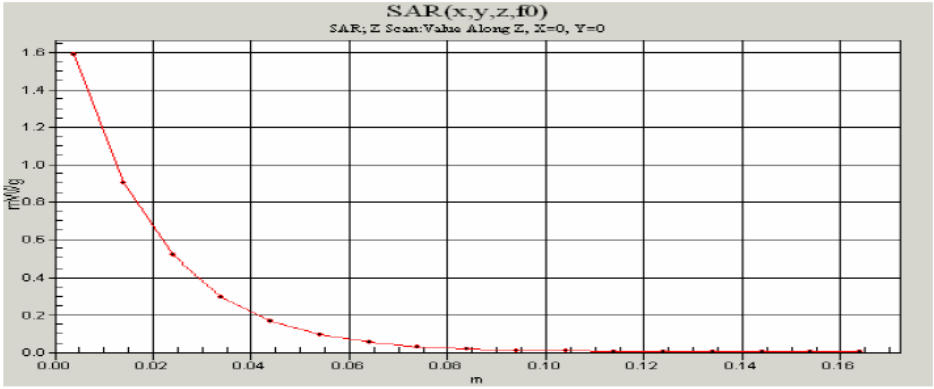


Motorola GEMS EME Laboratory
FCC ID: AZ489FT5846; Test Date: 7/29/05
Run #: ErC Ab 050729-12
Sim Temp: 20.4 (C)
Model #: H85XAH6RR5AN-NWF1089A SN: 000AFJ00J2

Antenna: OUT TX Freq: 915.525 MHz
Battery: SNN5705C Start power: .892 W
Carry acc.: NNTN4747A Audio/Data acc.: NONE

DUT with carry case against the phantom with BLUETOOTH on
Probe: ET3DV6 - SN1384, Calibrated: 5/26/2005, ConvF(6.19, 6.19, 6.19)
Duty Cycle: 1:1.05, Medium: 915 MHz FCC Body, Medium parameters used: σ = 1.07 mho/m, εr = 53.2; ρ = 1000 kg/m3
Electronics: DAE3 Sn374, Calibrated: 4/6/2005
Ab Scan/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 38.6 V/m; Power Drift = -0.450 dB
SAR(1 g) = 1.83 mW/g; SAR(10 g) = 1.33 mW/g

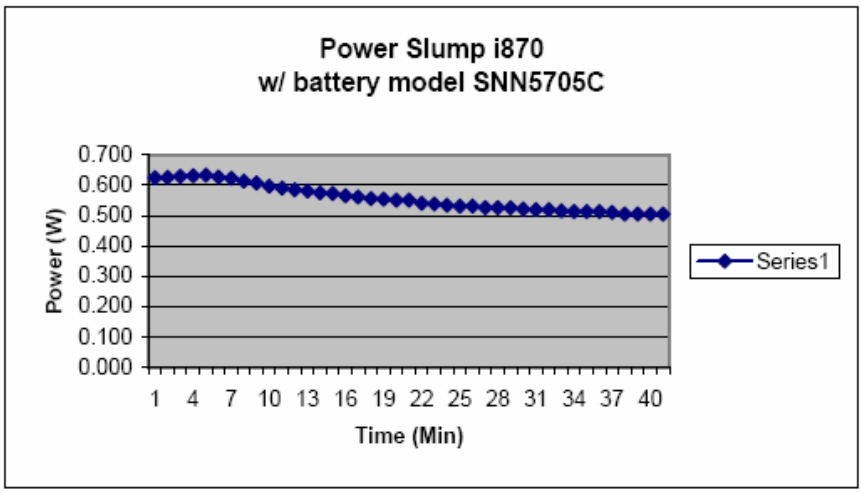




APPENDIX F
DUT Supplementary Data (Power slump)

WiDen **000AFJ00J2** 815.5125 7/29/2005	SNN5705C

9:30	0.624
9:31	0.625
9:32	0.628
9:33	0.630
9:34	0.632
9:35	0.626
9:36	0.622
9:37	0.613
9:38	0.607
9:39	0.596
9:40	0.590
9:41	0.585
9:42	0.581
9:43	0.574
9:44	0.572
9:45	0.565
9:46	0.561
9:47	0.556
9:48	0.554
9:49	0.550
9:50	0.550
9:51	0.540
9:52	0.538
9:53	0.534
9:54	0.531
9:55	0.531
9:56	0.526
9:57	0.526
9:58	0.526
9:59	0.521
10:00	0.519
10:01	0.519
10:02	0.515
10:03	0.513
10:04	0.513
10:05	0.513
10:06	0.510
10:07	0.505
10:08	0.505
10:09	0.505
10:10	0.505



Appendix G
DUT Test Position Photos

Figure 1: Highest S.A.R. Test Position (Head)
DUT at right ear in cheek touch position

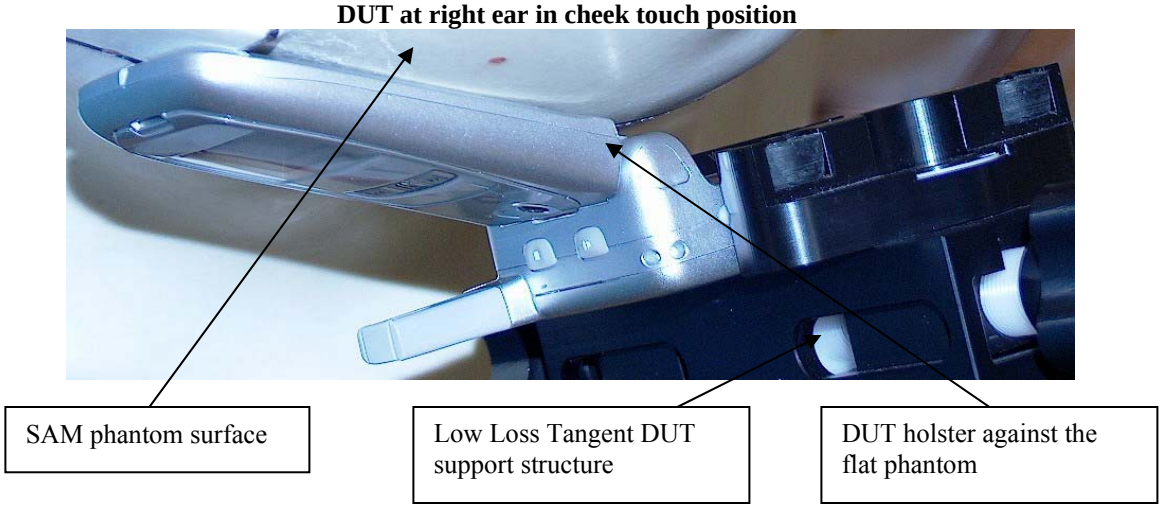


Figure 2: Highest S.A.R. Test Position (face)
DUT front side separated 2.5cm from the phantom

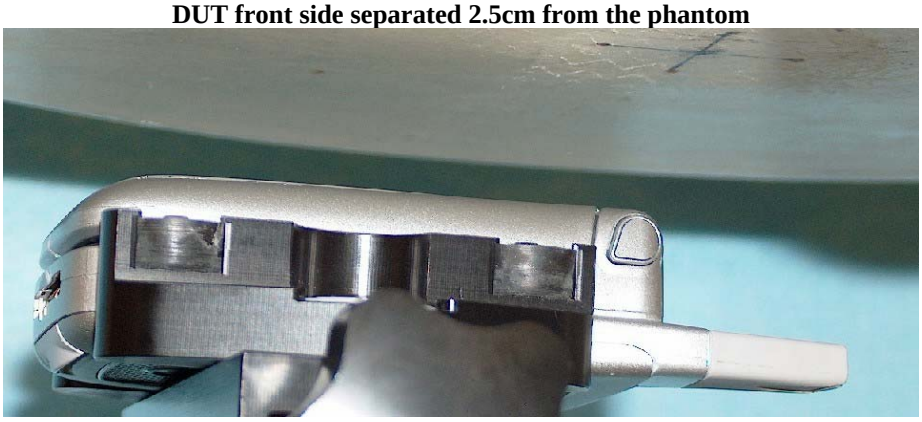


Figure 3: Highest S.A.R. Test Position (Body)
DUT with carry accessory model NNTN6231A against the phantom.
(same position used for each attached data cable accessories)

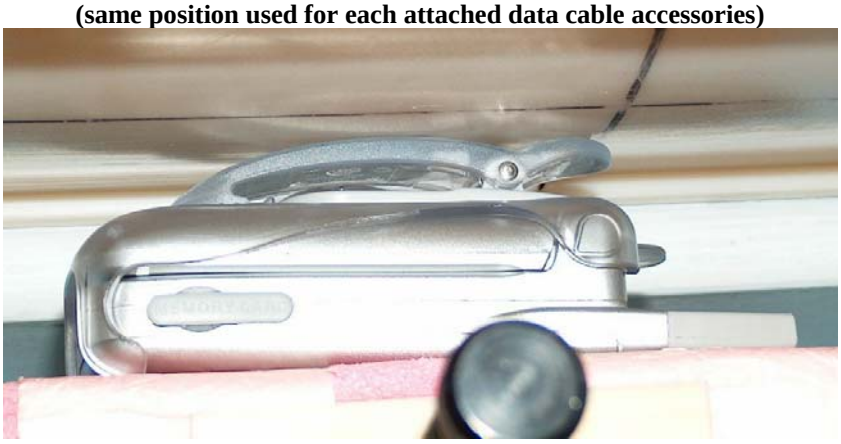


Figure 4: Body Assessment
DUT with carry accessory model NNTN4747A against the phantom.
(same position used for each attached data and audio cable accessories)

Figure 5: Head Assessment
DUT at the right ear in tilt position.

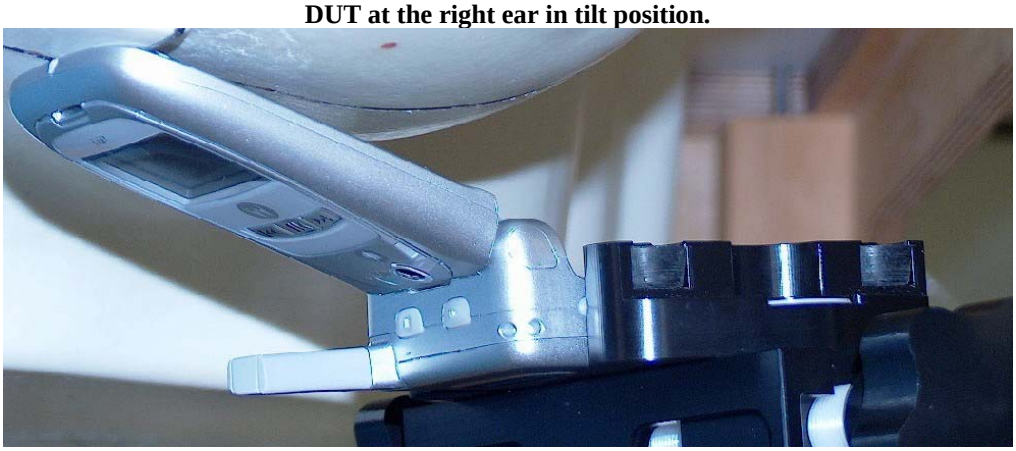


Figure 6: Head Assessment
DUT at the left ear in touch position.

Figure 7: Head Assessment
DUT at the left ear in tilt position.

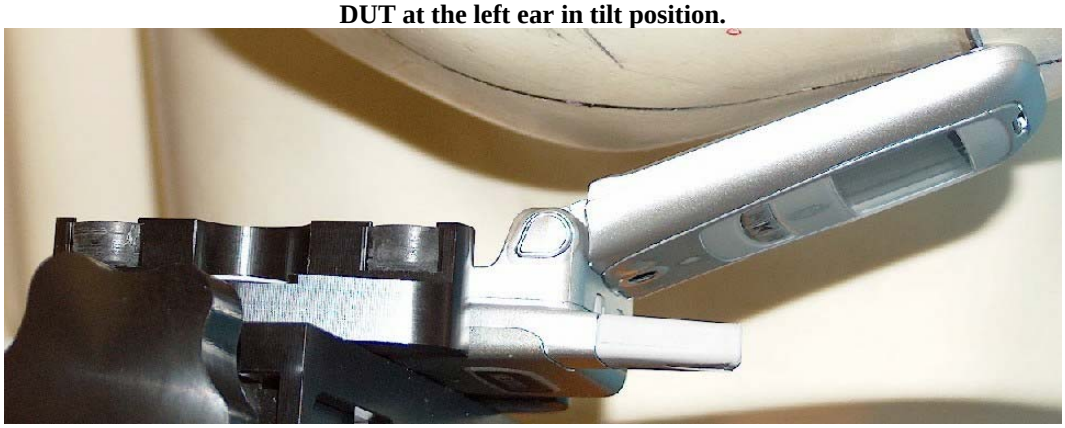


Figure 8: Body Assessment
DUT back separated 2.5cm from the phantom

Figure 9: Body Assessment
DUT front separated 2.5cm from the phantom

Appendix H
DUT and Accessory Photos

The purpose of this appendix is to illustrate the body-worn carry accessory(ies) for FCC ID: AZ489FT5846. The sample that was used in the following photos represents the product used to obtain the results presented herein and was used in this section to demonstrate the offered body-worn accessory(ies).

Photo 1.
Model NNTN4747A
Back View

Photo 2.
Model NNTN4747A
Side View

Photo 3.
Model NNTN6231A
Back View

Photo 4.
Model NNTN6231A
Side View

Photo 5.
Model NNTN6231A
Front View

Appendix I
DUT Body-worn Separation Distances

The following table summarizes the test status and separation distance provided by each of the applicable body-worn accessory(ies):

Carry Case Models	Tested ?	Min. Separation distances between DUT antenna and phantom surface. (mm)	Comments
NNTN4747A	Yes	33 - 37	NA
NNTN6231A	Yes	24 -26	NA

Audio Acc. Models	Tested ?	Separation distances between DUT antenna and phantom surface. (mm)	Comments
NNTN4620A	Yes	NA	NA
SYN8146C	Yes	NA	NA
SYN7875C	Yes	NA	NA
NTN8496A	Yes	NA	NA
NTN8513B	Yes	NA	NA
SYN8390B	Yes	NA	NA
NNTN4033A	Yes	NA	NA
NSN6066A	Yes	NA	NA
NNTN5004A	Yes	NA	NA
NNTN5005A	Yes	NA	NA
NNTN5006A	Yes	NA	NA
NNTN5330A	Yes	NA	NA
NNTN5774A	Yes	NA	NA

Data cable Models	Tested ?	Separation distances between DUT antenna and phantom surface. (mm)	Comments
NKN6560A	Yes	NA	NA
NKN6559A	Yes	NA	NA
NNTN5405A	Yes	NA	NA
NNTN5406A	Yes	NA	NA