


**MOTOROLA**


TESTING CERT # 2518.01

**DECLARATION OF COMPLIANCE SAR ASSESSMENT Part 3 of 3**

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

**Date of Report:** 09/27/10  
**Report Revision:** 0  
**Report ID:** SAR rpt\_H86XAH6JR7AN\_Rev  
 O\_100927\_SR8668

**Responsible Engineer:** Stephen C. Whalen (Principal Staff Eng.)  
**Report Author:** Stephen C. Whalen (Principal Staff Eng.)  
**Date/s Tested:** 09/3/2010, 09/05/2010, 09/07/2010 – 09/10/2010 & 09/15/2010  
**Manufacturer/Location:** China  
**Sector/Group/Div.:** iDEN Mobile Devices  
**Date submitted for test:** 07/27/2010  
**DUT Description:** TDMA: 81:120, 2:6, 1:12, and 1:6; M64-QAM, M16-QAM, and QPSK Modulations; 0.600 W Pulse Avg; MOTotalk: 114:120 8FSK; 0.760 W nominal; (GPS and Bluetooth Capable)  
**Test TX mode(s):** Phone 1:3, Dispatch 1:6, Data 81:120 and MOTotalk:114:120  
**Max. Power output:** 0.640 W pulsed average conducted power (iDEN); 0.800 W (MOTotalk); 0.010 W (Bluetooth)  
**Nominal Power:** 0.60 W pulsed average conducted power (iDEN); 0.760 W (MOTotalk); 0.0063 W (Bluetooth)  
**Tx Frequency Bands:** 806-825, 896-902 MHz (iDEN); 902-928 MHz (MOTotalk); 2.402-2.480 GHz (Bluetooth)  
**Signaling type:** TDMA: QPSK, M16-QAM, M64-QAM; FHSS: 8FSK (PTT); BT  
**Model(s) Tested:** H86XAH6JR7AN  
**Model(s) Certified:** H86XAH6JR7AN  
**Serial Number(s):** 364VLQ9QDT, 364VLQ9Q8M  
**Classification:** General Population/Uncontrolled


**Regulatory Identifications**

FCC ID: IHDP56LL1 – Rule Part(s) 15, 90

SAR results outside of Part 90 are not applicable for FCC compliance demonstration.

IC: 109O-P56LL1 – Rule Part(s) RSS 102

**Max. Calc. : 1-g Avg. SAR: 1.08 W/kg (Body); 10-g Avg. SAR: 0.78 W/kg (Body)**
**Max. Calc. : 1-g Avg. SAR: 0.69 W/kg (Face); 10-g Avg. SAR: 0.49 W/kg (Face)**
**Max. Calc. : 1-g Avg. SAR: 0.87 W/kg (Head); 10-g Avg. SAR: 0.60 W/kg (Head)**

The test results clearly demonstrate compliance with FCC General Population/Uncontrolled RF Exposure limits of 1.6 W/kg averaged over 1 gram per the requirements of 47 CFR 2.1093(d).

The test results clearly demonstrate compliance with ICNIRP (1998) Guidelines for limiting exposure in time-varying electric, magnetic, and electromagnetic fields (up to 300 GHz), Health Physics 74, 494-522 RF Exposure limits of 2.0 W/kg averaged over 10grams of contiguous tissue.

Based on the information and the testing results provided herein, the undersigned certifies that when used as stated in the operating instructions supplied, said product complies with the national and international reference standards and guidelines listed in section 3.0 of this report. This report shall not be reproduced without written approval from an officially designated representative of the Motorola EME Laboratory.

I attest to the accuracy of the data and assume full responsibility for the completeness of these measurements. This reporting format is consistent with the suggested guidelines of the TIA TSB-150 December 2004. The results and statements contained in this report pertain only to the device(s) evaluated.

*Signature on file – Deanna Zakharia*

**Deanna Zakharia**  
**EMS EME Lab Senior Resource Manager,**  
**Laboratory Director**

**Approval Date: 9/27/2010**
**Certification Date: 9/27/2010**
**Certification No.: L1100914**

**APPENDIX G**  
**DUT Supplementary Data (Power slump)**

Model # : H86XAH6JR7AN  
Serial # : 364VLQ9QDT

Battery SNN5837A  
Frequency 898.99375  
Date 9/24/2010

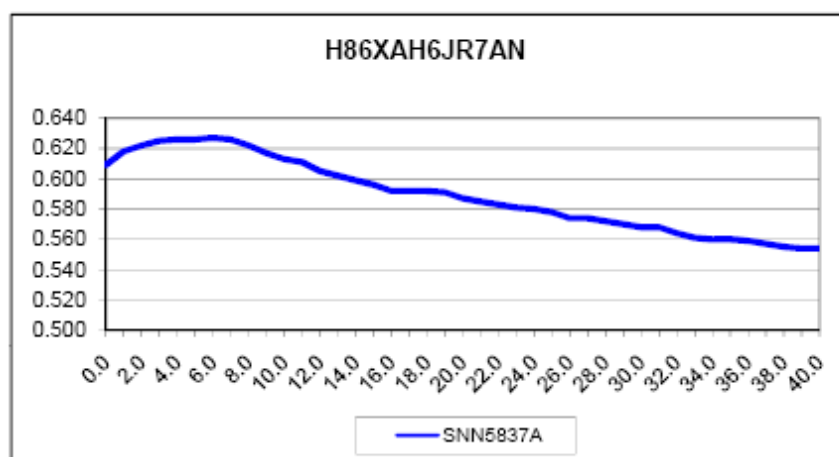
Transmit Mode Packet Data 81:120  
Audio Accessory None  
Technician HvH

Power Meter PWHPB092  
Duty Cycle 66.70%

Power Sensor PMHPL022  
Offset 0 db

**TX TIME**      **Measured Power**  
(minutes)      Watts

TX TIME (minutes)	Measured Power Watts
SNN5837A	
0.0	0.609
1.0	0.618
2.0	0.622
3.0	0.625
4.0	0.626
5.0	0.626
6.0	0.627
7.0	0.626
8.0	0.622
9.0	0.617
10.0	0.613
11.0	0.611
12.0	0.605
13.0	0.602
14.0	0.599
15.0	0.596
16.0	0.592
17.0	0.592
18.0	0.592
19.0	0.591
20.0	0.587
21.0	0.585
22.0	0.583
23.0	0.581
24.0	0.580
25.0	0.578
26.0	0.574
27.0	0.574
28.0	0.572
29.0	0.570
30.0	0.568
31.0	0.568
32.0	0.564
33.0	0.561
34.0	0.560
35.0	0.560
36.0	0.559
37.0	0.557
38.0	0.555
39.0	0.554
40.0	0.554



## **Appendix H**

### **DUT Test Position Photos**

## 1.0 Highest SAR Test Position per body location

### 1.1 Body

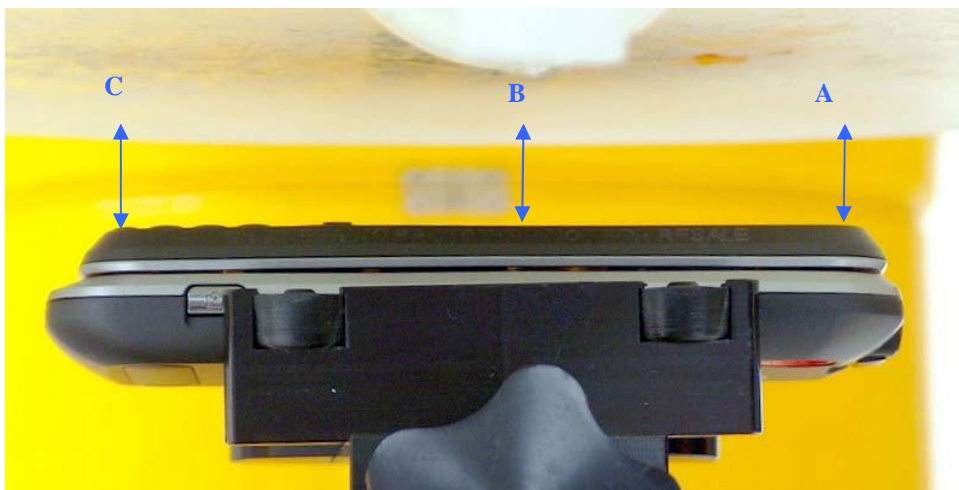
DUT w/ offered carry holster NNTN7900A against the phantom using the offered battery SNN5837A, battery cover NTN3000xxxA without any attached data/audio cable accessory.



Distance A – 15 mm  
Distance B – 13 mm  
Distance C – 28 mm

### 1.2 Face - Front with slide closed and at 2.5cm separation

DUT w/ front side separated 2.5cm from phantom using the offered battery SNN5837A and battery cover NTN3000xxxA without any attached audio cable accessory.



Distance A – 26 mm  
Distance B – 25mm  
Distance C – 26 mm

**1.3 Head**

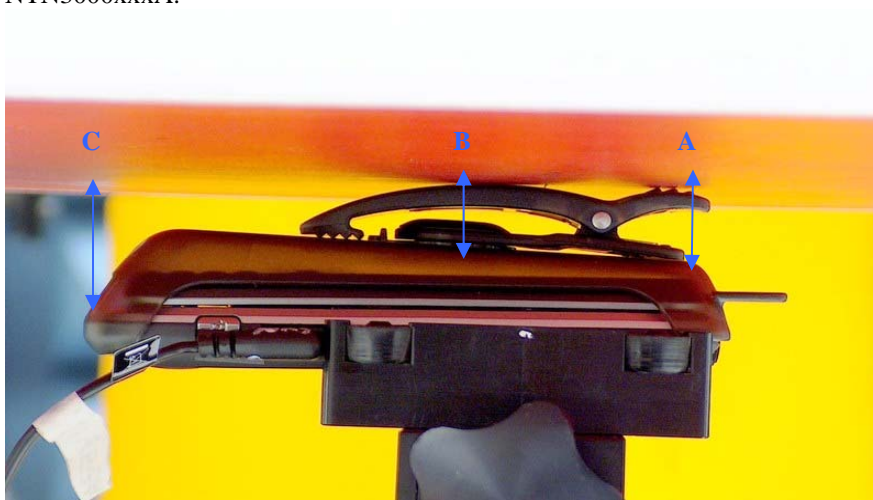
DUT in touch position at right ear using the offered battery SNN5837A and battery cover NTN3000xxxA.

**1.4 Hand**

Not applicable.

**2.0 Other SAR tested positions at the body****2.1 Body worn**

DUT w/ offered carry holster NNTN7900A against the phantom using the offered battery SNN5851A, battery cover NTN2597xxxA with audio cable SYN1458A. Same position used with data/audio cables SKN6238A, SYN1472A and SYN2356A attached and battery SNN5837A with battery cover NTN3000xxxA.



Distance A – 15 mm  
Distance B – 13 mm  
Distance C – 28 mm

**2.2 Front Side against phantom**

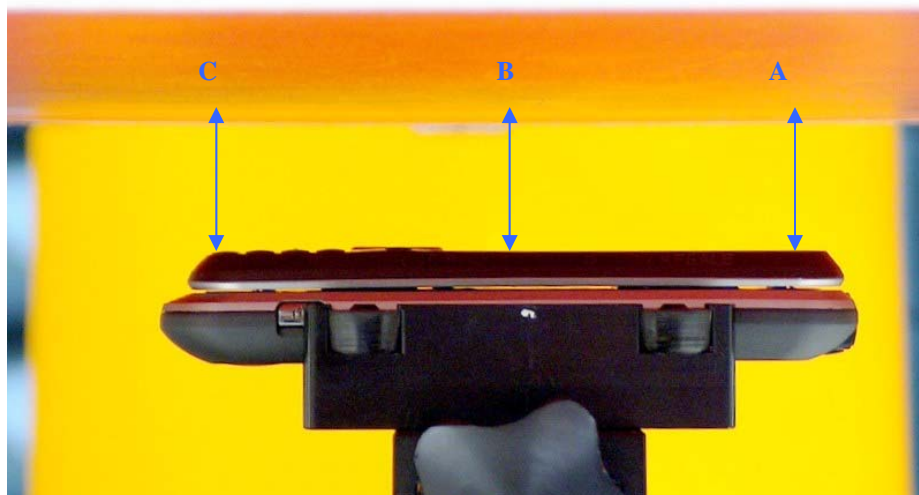
Not applicable.

**2.3 Back side against phantom**

Not applicable.

**2.4 Front 2.5cm separation – Slide closed**

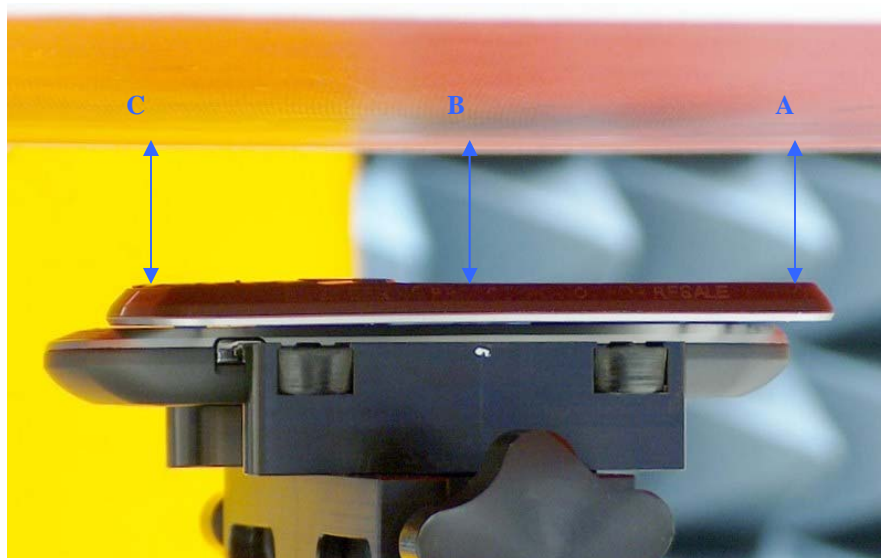
DUT w/ front side separated 2.5cm from phantom using offered battery SNN5851A and battery cover NTN2597xxxA and without any attached data/audio cable accessory. Same position used with audio cable SYN1458A attached.



Distance A – 26 mm  
Distance B – 25 mm  
Distance C – 26 mm

**2.5 Front 2.5cm separation – Slide Opened**

DUT w/ back side separated 2.5cm from phantom using offered battery SNN5851A and battery cover NTN2597xxxA and without any attached audio accessory. Same position used with audio cable SYN1458A attached.

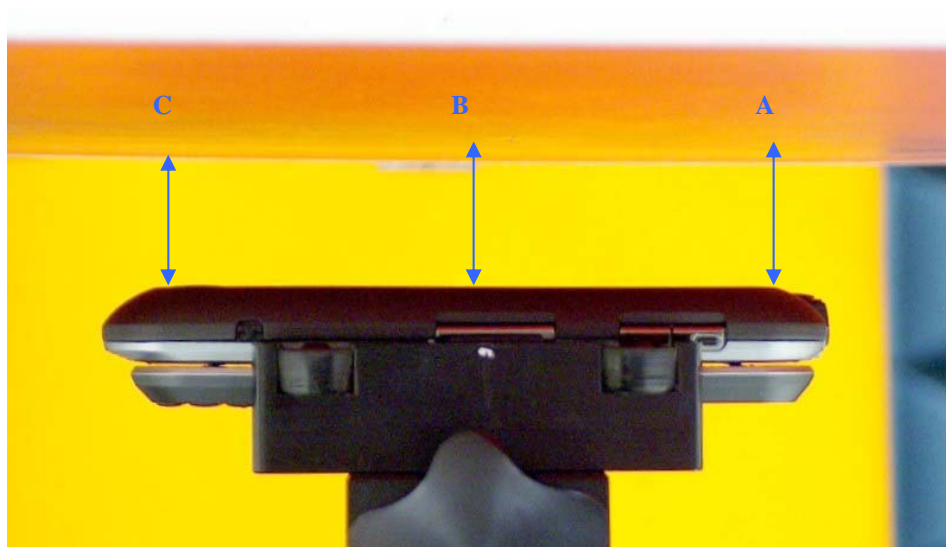


Distance A – 26 mm  
Distance B – 25 mm  
Distance C – 26 mm



**2.6 Back 2.5cm separation – Slide closed**

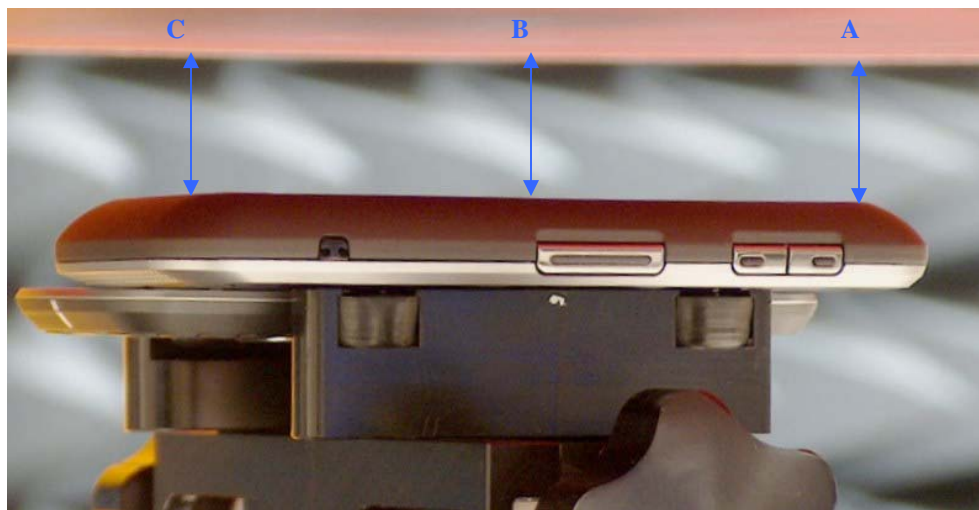
DUT w/ back side separated 2.5cm from phantom using offered battery SNN5851A and battery cover NTN2597xxxA and without any attached audio accessory. Same position used with audio cable SYN1458A attached.



Distance A – 25 mm  
Distance B – 25 mm  
Distance C – 25 mm

**2.7 Back 2.5cm separation – Slide opened**

DUT w/ back side separated 2.5cm from phantom using offered battery SNN5851A and battery cover NTN2597xxxA and without any attached audio accessory. Same position used with audio cable SYN1458A attached.



Distance A – 25 mm  
Distance B – 25 mm  
Distance C – 25 mm



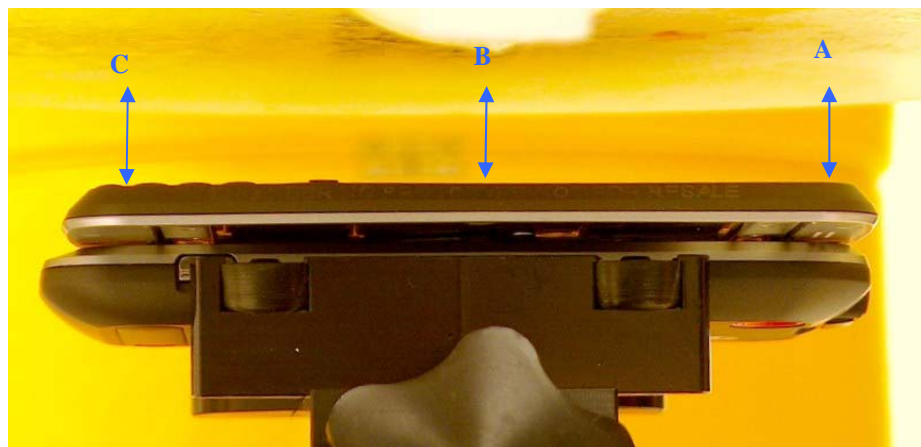
### 3.0 Other SAR tested position at the face

#### 3.1 Front with slide closed with 2.5cm separation

Refer to section 1.2 for picture. Battery SNN5837A and battery cover NTN3000xxxA was also tested.

#### 3.2 Front with slide opened and at 2.5cm separation

DUT w/ front side separated 2.5cm from phantom using the offered battery SNN5851A and battery cover NTN2597xxxA without any attached audio accessory.



Distance A – 26 mm  
Distance B – 25 mm  
Distance C – 26 mm

### 4.0 Other SAR tested positions at the head

#### 4.1 Left ear touch

DUT in touch position at left ear using the offered battery SNN5851A and battery cover NTN2597xxxA. Battery SNN5837A and battery cover NTN3000xxxA was also tested.



**4.2 Left ear tilt**

DUT in tilt position at left ear using the offered battery SNN5851A and battery cover NTN2597xxxA. Battery SNN5837A and battery cover NTN3000xxxA was also tested.

**4.3 Right ear touch**

Refer to section 1.3 for picture. Battery SNN5851A and battery cover NTN2597xxxA was also tested.

**4.4 Right ear tilt**

DUT in tilt position at right ear using the offered battery SNN5851A and battery cover NTN2597xxxA. Battery SNN5837A and battery cover NTN3000xxxA was also tested.



**5.0 Other SAR tested positions at the hand**

**5.1 Left side**  
**Not applicable.**

**5.2 Right side**  
**Not applicable.**

**5.3 Top side**  
**Not applicable.**

**5.4 Bottom side**  
**Not applicable.**

**5.5 Back side**  
**Not applicable.**

**Appendix I**  
**DUT and Body worn Accessory Photos**

## 6.0 DUT and Accessory Photos

The purpose of these photos is to illustrate the offered body-worn carry accessory(ies). The sample that was used in the following photos represents the product used to obtain the results presented herein.

### 6.1 DUT photos



Slide Closed



Slide Opened

### 6.2 Tested body worn photos



DUT Back View w/  
Holster NNTN7900A



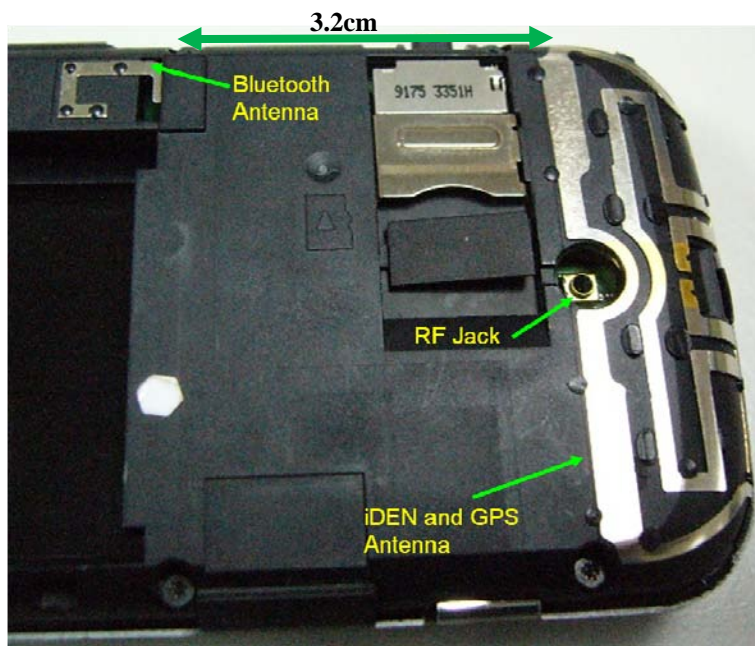
DUT Side View w/  
Holster NNTN7900A



DUT Front View w/  
Holster NNTN7900A

## 7.0 Simultaneous Transmission Considerations – Pursuant to FCC KDB 648474 Practice

### 7.1 Locations of Antenna



The closest distance between the main antenna and the BT antenna is 3.2 cm

### 7.1 Operating modes

Device Operating Mode	Remarks
iDEN SMR	Can operate simultaneously with Bluetooth, but <i>not</i> with MOTotalk.
MOTotalk	Can operate simultaneously with Bluetooth, but <i>not</i> with iDEN.
Bluetooth	Can operate simultaneously with MOTotalk or iDEN.

Note: The iDEN, MOTotalk and GPS services share the same antenna, and cannot operate simultaneously

### 7.2 Simultaneous Transmission Device Exclusion

Per FCC KDB648474 BT testing is not required.

- BT max power (10mW) < 12mW (Pref @ 2.45GHz)
- Antenna separation distance (3.2cm) is greater than 2.5cm. (Refer to section 12.0)