

**MOTOROLA SOLUTIONS****MS ISO/IEC 17025  
TESTING  
SMM No.0826****Exhibit 7B: SAR Test Report Photographs****Motorola Solutions Inc****EME Test Laboratory**

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**Report Revision History**

| <b>Date</b> | <b>Revision</b> | <b>Comments</b> |
|-------------|-----------------|-----------------|
| 10/02/2018  | A               | Initial release |

## 1.0 Highest SAR Test Position per body location

### 1.1 Body

DUT w/ antenna 85012070001 with offered battery NNTN8020B and body worn kit RLN4570A against the phantom without an audio accessory attached. Same position used for the other applicable offered antenna, batteries and audio accessories.



| Antenna kit # | Separation Distances (mm)   |                  |                 |
|---------------|-----------------------------|------------------|-----------------|
|               | @ bottom surface of the DUT | @ antenna's base | @ antenna's tip |
| 85012070001   | 0                           | *17-18           | *20-22          |
| 85012069001   | 0                           | *17-18           | *18-20          |

(\*) Depending on applicable offered battery

### 1.2 Face

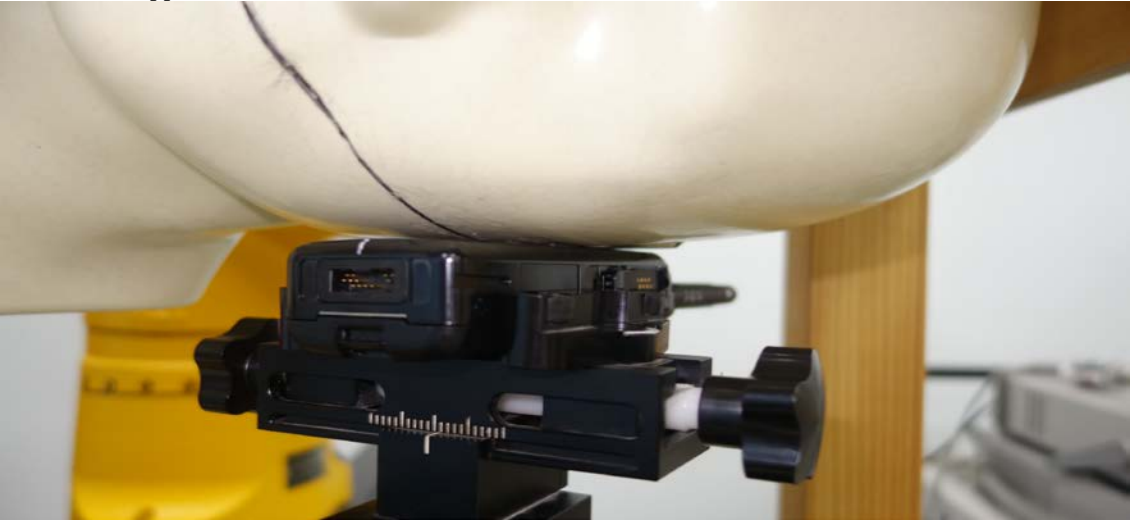
Back of DUT w/ antenna 85012070001 with offered battery NNTN8023C separated 2.5cm from the phantom without an audio accessory attached. Same position used for the other applicable offered antenna and batteries.



| Antenna kit # | Separation Distances (mm)   |                  |                 |
|---------------|-----------------------------|------------------|-----------------|
|               | @ bottom surface of the DUT | @ antenna's base | @ antenna's tip |
| 85012070001   | 25                          | 38               | 40              |
| 85012069001   | 25                          | 38               | 39              |

1.3 Head – Left ear touch

DUT in touch position using offered antenna 85012070001 and battery NNTN8023C. Same position used for the other applicable offered antenna and batteries.



1.4 Hand

Not applicable

2.0 Other SAR tested positions at the body

2.1 Body worn

DUT w/ antenna 85012070001 with offered battery NNTN8020B and body worn PMLN5004B w/GMDN0386A positioned against the phantom without an audio accessory attached. Same position used for the other applicable offered antenna and batteries.



| Antenna kit # | Separation Distances (mm)   |                  |                 |
|---------------|-----------------------------|------------------|-----------------|
|               | @ bottom surface of the DUT | @ antenna's base | @ antenna's tip |
| 85012070001   | *18-20                      | *26-28           | *28-30          |
| 85012069001   | 18                          | 26               | 30              |

(\*) Depending on applicable offered battery

DUT w/ antenna 85012070001 with offered battery NNTN8020B and body worn PMLN5004B w/GMDN0445AA positioned against the phantom without an audio accessory attached. Same position used for the other applicable offered antenna and batteries.



| Antenna kit # | Separation Distances (mm)   |                  |                 |
|---------------|-----------------------------|------------------|-----------------|
|               | @ bottom surface of the DUT | @ antenna's base | @ antenna's tip |
| 85012070001   | 37                          | *28-30           | *18-22          |
| 85012069001   | 37                          | 28               | 22              |

(\*) Depending on applicable offered battery

DUT w/ antenna 85012070001 with offered battery NNTN8020B and body worn PMLN5004B w/GMDN0497A positioned against the phantom without an audio accessory attached. Same position used for the other applicable offered antenna and batteries.



| Antenna kit # | Separation Distances (mm)   |                  |                 |
|---------------|-----------------------------|------------------|-----------------|
|               | @ bottom surface of the DUT | @ antenna's base | @ antenna's tip |
| 85012070001   | *22-23                      | *30-32           | *32-35          |
| 85012069001   | 23                          | 30               | 32              |

(\*) Depending on applicable offered battery

DUT w/ antenna 85012070001 with offered battery NNTN8020B and body worn PMLN5004B w/GMDN0547A positioned against the phantom without an audio accessory attached. Same position used for the other applicable offered antenna and batteries.



| Antenna kit # | Separation Distances (mm)   |                  |                 |
|---------------|-----------------------------|------------------|-----------------|
|               | @ bottom surface of the DUT | @ antenna's base | @ antenna's tip |
| 85012070001   | 33                          | *31-35           | *27-30          |
| 85012069001   | 33                          | 31               | 29              |

(\*) Depending on applicable offered battery

DUT w/ antenna 85012070001 with offered battery NNTN8020B and body worn PMLN5004B w/GMDN0566AC positioned against the phantom without an audio accessory attached. Same position used for the other applicable offered antenna and batteries.



| Antenna kit # | Separation Distances (mm)   |                  |                 |
|---------------|-----------------------------|------------------|-----------------|
|               | @ bottom surface of the DUT | @ antenna's base | @ antenna's tip |
| 85012070001   | *8-10                       | *60-62           | *87-90          |
| 85012069001   | 10                          | 60               | 75              |

(\*) Depending on applicable offered battery

DUT w/ antenna 85012070001 with offered battery NNTN8020B and body worn HLN6602A positioned against the phantom without an audio accessory attached. Same position used for the other applicable offered antenna and batteries.



| Antenna kit # | Separation Distances (mm)   |                  |                 |
|---------------|-----------------------------|------------------|-----------------|
|               | @ bottom surface of the DUT | @ antenna's base | @ antenna's tip |
| 85012070001   | *3-5                        | *15-17           | *17-20          |
| 85012069001   | *3-5                        | *15-17           | *16-19          |

(\*) Depending on applicable offered battery

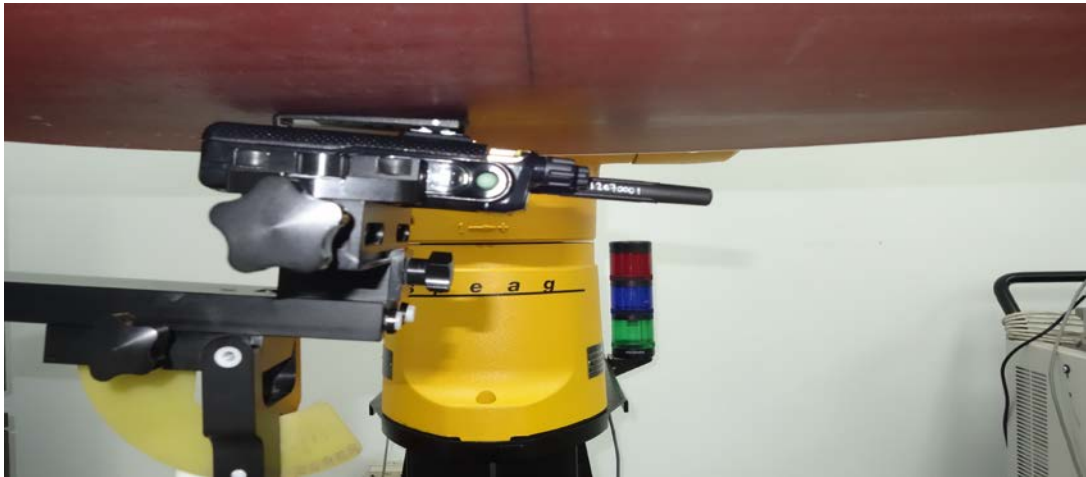
DUT w/ antenna 85012070001 with offered battery NNTN8020B and body worn HLN9714A positioned against the phantom without an audio accessory attached. Same position used for the other applicable offered antenna and batteries.



| Antenna kit # | Separation Distances (mm)   |                  |                 |
|---------------|-----------------------------|------------------|-----------------|
|               | @ bottom surface of the DUT | @ antenna's base | @ antenna's tip |
| 85012070001   | 8                           | *24-26           | *32-35          |
| 85012069001   | 8                           | *24-26           | *30-32          |

(\*) Depending on applicable offered battery

DUT w/ antenna 85012070001 with offered battery NNTN8020B and body worn PMLN5616B positioned against the phantom without an audio accessory attached. Same position used for the other applicable offered antenna and batteries.



| Antenna kit # | Separation Distances (mm)   |                  |                 |
|---------------|-----------------------------|------------------|-----------------|
|               | @ bottom surface of the DUT | @ antenna's base | @ antenna's tip |
| 85012070001   | *5-6                        | *28-30           | *32-35          |
| 85012069001   | *5-6                        | *28-30           | *38-40          |

(\*) Depending on applicable offered battery

DUT w/ antenna 85012070001 with offered battery NNTN8020B and body worn PMLN5885B positioned against the phantom without an audio accessory attached. Same position used for the other applicable offered antenna and batteries.



| Antenna kit # | Separation Distances (mm)   |                  |                 |
|---------------|-----------------------------|------------------|-----------------|
|               | @ bottom surface of the DUT | @ antenna's base | @ antenna's tip |
| 85012070001   | 15                          | *65-68           | *85-88          |
| 85012069001   | 15                          | 65               | 75              |

(\*) Depending on applicable offered battery

DUT w/ antenna 85012070001 with offered battery NNTN8020B and body worn PMLN5887B positioned against the phantom without an audio accessory attached. Same position used for the other applicable offered antenna and batteries.



| Antenna kit # | Separation Distances (mm)   |                  |                 |
|---------------|-----------------------------|------------------|-----------------|
|               | @ bottom surface of the DUT | @ antenna's base | @ antenna's tip |
| 85012070001   | *16-18                      | *65-67           | *80-82          |
| 85012069001   | 18                          | 65               | 75              |

(\*) Depending on applicable offered battery

DUT w/ antenna 85012070001 with offered battery NNTN8020B and body worn PMLN5004B w/PMLN7961A positioned against the phantom without an audio accessory attached. Same position used for the other applicable offered antenna and batteries.



| Antenna kit # | Separation Distances (mm)   |                  |                 |
|---------------|-----------------------------|------------------|-----------------|
|               | @ bottom surface of the DUT | @ antenna's base | @ antenna's tip |
| 85012070001   | 28                          | 32               | 30              |
| 85012069001   | *28-30                      | *31-34           | *29-32          |

(\*) Depending on applicable offered battery

DUT w/ antenna 85012070001 with offered battery NNTN8020B and body worn PMLN5004B w/ GMDN0445AC positioned against the phantom without an audio accessory attached. Same position used for the other applicable offered antenna and batteries.



| Antenna kit # | Separation Distances (mm)   |                  |                 |
|---------------|-----------------------------|------------------|-----------------|
|               | @ bottom surface of the DUT | @ antenna's base | @ antenna's tip |
| 85012070001   | *22-24                      | *44-46           | *55-57          |
| 85012069001   | 24                          | 44               | 50              |

(\*) Depending on applicable offered battery

DUT w/ antenna 85012070001 with offered battery NNTN8020B and body worn PMLN5004B w/WALN4307A positioned against the phantom without an audio accessory attached. Same position used for the other applicable offered antenna and batteries.



| Antenna kit # | Separation Distances (mm)   |                  |                 |
|---------------|-----------------------------|------------------|-----------------|
|               | @ bottom surface of the DUT | @ antenna's base | @ antenna's tip |
| 85012070001   | *22-24                      | *32-35           | *35-38          |
| 85012069001   | 24                          | 32               | 35              |

(\*) Depending on applicable offered battery

**2.2 Front Side against phantom**  
Not applicable.

**2.3 Back side against phantom**  
Not applicable.

**2.4 Front 2.5cm separation**  
Not applicable

**2.5 Antenna 2.5cm separation**  
Not applicable

**2.6 Back 2.5cm separation**  
Not applicable

**3.0 Other SAR tested positions at the face**

**3.1 Back of DUT at 2.5cm separation**  
Not applicable

**3.2 Front of DUT at 2.5cm separation**  
Refer to section 1.2

#### 4.0 Other SAR tested positions at the head

##### 4.1 Left ear touch Refer to section 1.3

##### 4.2 Left ear tilt

DUT in tilt position using offered antenna 85012070001 and battery PMNN4522A. Same position used for the other applicable offered antenna and batteries.



##### 4.3 Right ear touch

DUT in touch position using offered antenna 85012070001 and battery NNTN8023C. Same position used for the other applicable offered antenna and batteries.



#### 4.4 Right ear tilt

DUT in tilt position using offered antenna 85012070001 and battery PMNN4522A. Same position used for the other applicable offered antenna and batteries.



#### 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.

6.0 DUT and Accessory Photos

The purpose of these photos is to illustrate the tested accessories. Refer to Part 1 of 2, section 7.0 for additional details on the offered accessories.

6.1 Antenna dimension and photo(s):

| Antenna Kit # | Physical Length (mm) | Electrical Length |
|---------------|----------------------|-------------------|
| 85012069001   | 3.7                  | ½ wave            |
| 85012070001   | 7.0                  | ½ wave            |



Antennas: 85012069001 (left) & 85012070001 (right)

## 6.2 Body worn accessories



**HLN9714A with DUT: Front, side and back views (left to right)**



**PMLN5004B w/GMDN0566AC with DUT: Front, side and back views (left to right)**



**PMLN5004B w/PMLN7961A with DUT: Front, side and back views (left to right)**



**PMLN5004A w/GMDN0386A with DUT: Front, side and back views (left to right)**



PMLN5004A w/GMDN0445AA with DUT: Front, side and back views (left to right)



PMLN5004A w/GMDN0445AC with DUT: Front, side and back views (left to right)



**PMLN5004A w/GMDN0497A with DUT: Front, side and back views (left to right)**



**PMLN5004A w/GMDN0547A with DUT: Front, side and back views (left to right)**



**PMLN5004A w/WALN4307A with DUT: Front, side and back views (left to right)**



**PMLN5616B with DUT: Front, side and back views (left to right)**



**PMLN5885B with DUT: Front, side and back views (left to right)**



**PMLN5887B with DUT: Front, side and back views (left to right)**



HLN6602A



RLN4570A

### 6.3 Battery accessories:



Front View: NNTN8020B, NNTN8023C &amp; PMNN4522A (left to right)



**Side View: NNTN8020B, NNTN8023C & PMNN4522A (left to right)**



**Back View: NNTN8020B, NNTN8023C & PMNN4522A (left to right)**

6.4 Audio accessories:



PMMN4072A

6.5 DUT Dimensions

|                              | Height<br>(mm) | Width<br>(mm) | Depth<br>(mm) |
|------------------------------|----------------|---------------|---------------|
| Radio only (w/o battery)     | 124            | 57            | 23            |
| Radio with battery NNTN8020B | 124            | 57            | 34            |
| Radio with battery NNTN8023C | 124            | 57            | 37            |
| Radio with battery PMNN4522A | 124            | 57            | 37            |

For illustration purposes only - the following figure reflects the location of the device’s dimensions.



Note: H = Height; W = Width; D = Depth

W1 = (Width @ Top) / (Width @ PTT)

D2 = (Depth @ Bottom) / (Depth @ PTT)