

**MOTOROLA SOLUTIONS**

CERTIFICATE 2518.05

Exhibit 7B: SAR Test Report Photographs**Motorola Solutions Inc****EME Test Laboratory**

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Approval Date: 11/25/2015

Report Revision History

Date	Revision	Comments
11/04/2015	A	Initial release

1.0 Highest SAR Test Position per body location

1.1 Body

DUT with antenna PMAD4116A with offered battery PMNN4488A and body worn kit PMLN7296A against the phantom without an audio accessory attached. Same position used for other applicable offered antennas, with or without audio accessories and internal WLAN antenna without an audio accessory (see table below).



Antenna kit #	Separation Distances (mm)		
	@ bottom surface of the DUT	@ antenna's base	@ antenna's tip
PMAD4116A	8	35	50
PMAD4117A	8	35	50
PMAD4118A	8	35	50
PMAD4119A	8	35	43
PMAD4120A	8	35	43
PMAD4121B	8	35	43

1.2 Face

Front of DUT with antenna PMAD4118A with offered battery PMNN4406BR separated 2.5cm from the phantom without an audio accessory attached. Same position used for other antennas, internal WLAN antenna and batteries (see table below).



Antenna kit #	Separation Distances (mm)		
	@ bottom surface of the DUT	@ antenna's base	@ antenna's tip
PMAD4116A	*27-30	*38-40	*43-45
PMAD4117A	*27-30	*38-40	*43-45
PMAD4118A	*27-30	*38-40	*43-45
PMAD4119A	*27-30	38	42
PMAD4120A	27	*39-40	*42-45
PMAD4121B	30	40	45

(*) Depending on applicable offered battery

1.3 Head
Not applicable.

1.4 Hand
Not applicable

2.0 Other SAR tested positions at the body

2.1 Body worn

DUT with antenna PMAD4116A with offered battery PMNN4489A, audio PMMN4024A, and body worn kit PMLN4651A against the phantom. Same position used for the other applicable offered antennas, batteries and internal WLAN antenna without an audio accessory (see table below).



Antenna kit #	Separation Distances (mm)		
	@ bottom surface of the DUT	@ antenna's base	@ antenna's tip
PMAD4116A	8	*29-34	*45-50
PMAD4117A	8	29	45
PMAD4118A	8	29	45
PMAD4119A	NA	NA	NA
PMAD4120A	8	29	38
PMAD4121B	8	29	38

(*) Depending on applicable offered battery

DUT with antenna PMAD4116A with offered battery NNTN8560A, audio PMMN4024A, and body worn kit PMLN7008A against the phantom. Same position used for the other applicable offered antennas, batteries and internal WLAN antenna without an audio accessory (see table below).



Antenna kit #	Separation Distances (mm)		
	@ bottom surface of the DUT	@ antenna's base	@ antenna's tip
PMAD4116A	*7-8	*37-41	*48-51
PMAD4117A	8	*30-34	48
PMAD4118A	8	30	48
PMAD4119A	NA	NA	NA
PMAD4120A	8	30	39
PMAD4121B	8	30	39

(*) Depending on applicable offered battery

DUT with antenna PMAD4116A with offered battery PMNN4407BR, audio PMMN4024A, and body worn kit RLN4815A against the phantom. Same position used for the other applicable offered antennas, batteries and internal WLAN antenna without an audio accessory (see table below).



Antenna kit #	Separation Distances (mm)		
	@ bottom surface of the DUT	@ antenna's base	@ antenna's tip
PMAD4116A	*10-13	*35-37	*41-43
PMAD4117A	10	35	41
PMAD4118A	10	35	41
PMAD4119A	NA	NA	NA
PMAD4120A	10	35	38
PMAD4121B	10	35	38

(*) Depending on applicable offered battery

DUT with antenna PMAD4116A with offered battery PMNN4491A, audio PMMN4024A, and body worn kit HLN6602A against the phantom. Same position used for the other applicable offered antennas, batteries and internal WLAN antenna without an audio accessory (see table below).



Antenna kit #	Separation Distances (mm)		
	@ bottom surface of the DUT	@ antenna's base	@ antenna's tip
PMAD4116A	5	*20-26	*23-25
PMAD4117A	5	20	23
PMAD4118A	5	20	23
PMAD4119A	NA	NA	NA
PMAD4120A	5	20	21
PMAD4121B	5	20	21

(*) Depending on applicable offered battery

DUT with antenna PMAD4120A with offered battery PMNN4406BR, audio PMMN4024A and body worn RLN4570A against the phantom. Same position used for the other applicable offered antennas, batteries and internal WLAN antenna without an audio accessory (see table below).



Antenna kit #	Separation Distances (mm)		
	@ bottom surface of the DUT	@ antenna's base	@ antenna's tip
PMAD4116A	0	20	21
PMAD4117A	0	20	21
PMAD4118A	0	20	21
PMAD4119A	NA	NA	NA
PMAD4120A	0	*18-22	*18-22
PMAD4121B	0	18	19

(*) Depending on applicable offered battery

DUT with antenna PMAD4116A with offered battery PMNN4491A, audio PMMN4024A and body worn kit PMLN5844A tested with NTN5243A against the phantom. Same position used for the other applicable offered antennas, batteries and internal WLAN antenna without an audio accessory (see table below).



Antenna kit #	Separation Distances (mm)		
	@ bottom surface of the DUT	@ antenna's base	@ antenna's tip
PMAD4116A	3	*37-42	*63-66
PMAD4117A	3	37	63
PMAD4118A	3	37	63
PMAD4119A	NA	NA	NA
PMAD4120A	3	37	50
PMAD4121B	3	37	50

(*) Depending on applicable offered battery

DUT with antenna PMAD4116A with offered battery PMNN4412A, audio PMMN4024A and body worn kit PMLN5838A tested with NTN5243A against the phantom. Same position used for the other applicable offered antennas, batteries and internal WLAN antenna without an audio accessory (see table below).



Antenna kit #	Separation Distances (mm)		
	@ bottom surface of the DUT	@ antenna's base	@ antenna's tip
PMAD4116A	0	*55-58	*100-103
PMAD4117A	0	55	100
PMAD4118A	0	55	100
PMAD4119A	NA	NA	NA
PMAD4120A	0	55	80
PMAD4121B	0	55	80

(*) Depending on applicable offered battery

DUT with antenna PMAD4116A with offered battery PMNN4412A, audio PMMN4024A and body worn kit PMLN5842A without belt loop tested with NTN5243A against the phantom. Same position used for the other applicable offered antennas, batteries and internal WLAN antenna without an audio accessory (see table below).



Antenna kit #	Separation Distances (mm)		
	@ bottom surface of the DUT	@ antenna's base	@ antenna's tip
PMAD4116A	0	*46-50	*78-80
PMAD4117A	0	46	78
PMAD4118A	0	46	78
PMAD4119A	NA	NA	NA
PMAD4120A	0	46	65
PMAD4121B	0	46	65

(*) 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

Not applicable. (Refer to section 1.2)

4.0 Other SAR tested positions at the head

4.1 Left ear touch

Not applicable.

4.2 Left ear tilt

Not applicable.

4.3 Right ear touch

Not applicable.

4.4 Right ear tilt

Not applicable.

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
PMAD4116A	150	$\frac{1}{2}$ wave
PMAD4117A	150	$\frac{1}{2}$ wave
PMAD4118A	150	$\frac{1}{2}$ wave
PMAD4119A	90	$\frac{1}{4}$ wave
PMAD4120A	90	$\frac{1}{4}$ wave
PMAD4121B	90	$\frac{1}{4}$ wave



Top to Bottom: PMAD4116A, PMAD4117A, PMAD4118A, PMAD4119A, PMAD4120A and PMAD4121B

6.2 Body worn accessories



RLN4570A



HLN6602A



RLN4815A



NTN5243A

PMLN5844A
Front ViewPMLN5844A
Back viewPMLN5844A
Side ViewPMLN5842A
Front ViewPMLN5842A
Back ViewPMLN5842A (without Belt
Loop)
Side ViewPMLN5838A
Front ViewPMLN5838A
Back View



**PMLN5842A
Side View**



**PMLN7008A
Back View**



**PMLN7008A
Side View**



**PMLN4651A
Back View**



**PMLN4651A
Side View**



**PMLN7296A
Back view**



**PMLN7296A
Side view**

6.3 Battery accessories:



PMNN4493A
Front and Side View



PMNN4409BR
Front and Side View



PMNN4412A
Front and Side View



PMNN4406BR
Front and Side View



PMNN4407BR
Front and Side View



NNTN8560A
Front and Side View



PMNN4448AR
Front and Side View



PMNN4435A
Front and Side View



NNTN8129A
Front and Side View



PMNN4491A
Front and Side View



PMNN4489A
Front and Side View



PMNN4463A
Front and Side View



PMNN4488A
Front, Back, and Side View

6.4 Audio accessories:**PMMN4024A****6.5 DUT Dimensions**

	Height (mm)	Width (mm)	Depth (mm)
Radio only (w/o battery)	134	65	33
Radio with battery PMNN4493A	134	65	45
Radio with battery PMNN4409BR	134	65	45
Radio with battery PMNN4412A	134	65	45
Radio with battery PMNN4406BR	134	65	39
Radio with battery PMNN4407BR	134	65	39
Radio with battery NNTN8560A	134	65	45
Radio with battery PMNN4448AR	134	65	45
Radio with battery PMNN4435A	134	65	45
Radio with battery NNTN8129A	134	65	45
Radio with battery PMNN4491A	134	65	39
Radio with battery PMNN4489A	134	65	45
Radio with battery PMNN4463A	134	65	45
Radio with battery PMNN4488A	134	65	45

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



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

$W1 = (\text{Width @ Top}) / (\text{Width @ PTT})$

$D2 = (\text{Depth @ Bottom}) / (\text{Depth @ PTT})$