



Willow Run (WR) Test Labs, Inc.  
 7117 Fieldcrest Drive  
 Brighton, MI 48116  
 Phone: (734) 252-9785, Fax (734) 926-9785  
 e-mail: [info@wrttest.com](mailto:info@wrttest.com)

## RF EXPOSURE CALCULATIONS

### Requirement:

According to USA CFR 15 §1.1307 (b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures the public is not exposed to radio frequency energy level in excess of the Commission’s guidelines. For Canada, RSS-102 sets out the requirements and measurement techniques used to evaluate radio frequency (RF) exposure compliance of radiocommunication apparatus designed to be used within the vicinity of the human body.

USA REF: 1.1310, 2.1091/1093, 447498 D01 General RF Exposure Guidance v06  
 IC REF: RSS-102 Issue 5, Safety Code 6  
 Min. Sep. Distance: 20 cm (Mobile)

Test Date: 13-Mar-23  
 Test Engineer: Joseph Brunett  
 EUT: Allegion Digital Core + Access Core Modules  
 EUT Mode: Worst Case  
 Meas. Distance: 3 meters

Mode	Freq. MHz	Worst Case E3(Avg)* dBuV/m	E20cm(Avg) dBuV/m	H20cm(Avg) dBuA/m	Canada ISED RSS-102 MPE			USA FCC 1.1310 MPE		
					SC6 Limit (E20cm) dBuV/m	SC6 Limit (H20cm) dBuA/m	Worst Case MPE Ratio	E20cm Limit*** dBuV/m	H20cm Limit*** dBuA/m	Worst Case MPE Ratio
NFC (47446668)	13.56000	73.3	120.3	69.0	148.8	97.2	0.0015	175.8	124.2	0.000030
NFC (47446672)	13.56000	73.3	120.3	69.0	148.8	97.2	0.0015	175.8	124.2	0.000030
LF (47446672)	0.12500	84.9	131.9	80.6		135.3	0.000003	155.7	104.2	0.0044
Mode	Freq. MHz	Worst Case EIRP(Avg)** dBm	E20cm(Avg) dBuV/m	S20cm(Avg)**** mW/cm2	SC6 Limit (S20cm) mW/cm2	MPE Ratio		S Limit mW/cm2	MPE Ratio	
BLE (47334317)	2400-2483.5	10.9	129.6218	0.0024	5.47	0.0004		1.00000	0.0024	
BLE (47334321)	2400-2483.5	11.4	130.1218	0.0027	5.47	0.0005		1.00000	0.0027	
WLAN (47334321)	2400-2483.5	16.8	135.5218	0.0095	5.47	0.0017		1.00000	0.0095	
<b>MPE Total (&lt;1):</b>						<b>.002</b>		<b>MPE Total (&lt;1):</b>	<b>.019</b>	
Complies?						<b>Yes</b>		Complies?	<b>Yes</b>	

\*As Measured / Computed from highest fundamental emission, see fundamental emission section of the respective radio reports.  
 \*\*EIRP, as computed from either measured data reported in this application or the Modular Device RF Exposure Exhibits.  
 \*\*\* For FCC MPE, use of 300 kHz limit at 125 kHz as previously allowed by FCC.  
 \*\*\*\* EIRP (mW) = S (mW/cm<sup>2</sup>) x 4 x P1 x 20cm<sup>2</sup>

### Summary:

The EUT with all transmitters is compliant with both the FCC power density limit and the ISED Exposure Evaluation limits.