



Willow Run (WR) Test Labs, Inc.
 7117 Fieldcrest Drive
 Brighton, MI 48116
 Phone: (734) 252-9785, e-mail: info@wrtest.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.

Maximum Permissible Exposure Calculations:

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: 4-Mar-22
 Test Engineer: Joseph Brunett
 EUT: Allegion FE789W(C)
 EUT Mode: Worst Case
 Meas. Distance: Conducted

Mode	Freq. MHz	Worst Case Po/EIRP(Avg)** dBm	E20cm(Avg) dBuV/m	S20cm(Avg)**** mW/cm2	Canada ISED RSS-102 MPE		USA FCC 1.1310 MPE		
					SC6 Limit (S20cm) mW/cm2	MPE Ratio	S Limit mW/cm2	MPE Ratio	
BLE	2402	3.1	121.9	0.00041	5.5	0.0000747	1.00000	0.0004091	
BLE	2440	2.9	121.6	0.00039	5.5	0.0000710	1.00000	0.0003889	
BLE	2480	2.8	121.5	0.00038	5.5	0.0000691	1.00000	0.0003783	
WLAN – B/G/N	2412.00	14.0	132.8	0.00504	5.5	0.0009215	1.00000	0.0050443	
WLAN – B/G/N	2437.00	11.3	130.1	0.00271	5.5	0.0004949	1.00000	0.0027089	
WLAN – B/G/N	2462.00	13.9	132.6	0.00486	5.5	0.0008881	1.00000	0.0048618	
					MPE Max (<1):	.000921		MPE Total (<1):	.005044
					Complies?	Yes		Complies?	Yes

*As Measured / Computed from highest fundamental emission, see fundamental emission section of this report.
 **maximum of either EIRP or Pout as measured.
 *** For FCC MPE, use of 300 kHz limit for signals below 300 kHz as previously requested by FCC.
 **** EIRP (mW) = S (mW/cm²) x 4 x PI x 20cm²

Summary:

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