



Willow Run (WR) Test Labs, Inc.
7117 Fieldcrest Drive
Brighton, MI 48116
Phone: (734) 252-9785, Fax (734) 926-9785
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.

USA REF: 1.1310, 2.1091/1093, 447498 D01 General RF Exposure Guidance v06

IC REF: RSS-102 Issue 6, Safety Code 6

Min. Sep. Distance: 20 cm (Mobile)

Test Date:

31-Dec-24

Test Engineer:

J. Brunett

EUT:

Density Waffle

EUT Mode:

Worst Case (all radios active)

Meas. Distance:

3 meters

R0	SAR Exemption											
	Mode	Freq. MHz	Max EIRP(Pk) dBm	Max EIRP (Avg) dBm	EIRP(Avg) mW	S20cm(Avg) mW/cm2	Canada ISSED RSS-102 MPE			USA FCC 1.1310 MPE		
R1	NARROWBAND	60270.000	17.5	6.2	56.2341	0.0112	1.00	0.0112		1.00000	0.0112	
R2	WIDEBAND	59912.000	17.6	6.3	57.5440	0.0114	1.00	0.0114		1.00000	0.0114	
R3												
R4	Mode	Freq. MHz	Worst Case EIRP(Avg) dBm		EIRP(Avg) mW	S20cm(Avg) mW/cm2	SC6 Limit (S20cm) mW/cm2	MPE Ratio		S Limit mW/cm2	MPE Ratio	
R5	MODULE BT/BLE	2480.00	17.5		55.5904	0.0111	0.55	0.0202		1.00000	0.0111	
R6	MODULE 802.15.4	2475.00	19.5		88.1049	0.0175	0.55	0.0321		1.00000	0.0175	
R7	MODULE 2.4G	2437.00	21.5		139.6368	0.0278	0.54	0.0514		1.00000	0.0278	
R8	MODULE 5G	5785.00	20.5		110.9175	0.0221	0.98	0.0226		1.00000	0.0221	
R9							MPE Total (<1):			MPE Total (<1):		
R11							Complies?	Yes		Complies?	Yes	
#	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
(ROW)	(COLUMN) NOTE											
R0/R4	C3	As Measured / Computed from highest fundamental emission, see fundamental emission section of the respective radio reports. Includes antenna gain.										
R4	C4	Conversion from EIRP dBm to EIRP(mW): 10^(EIRP dBm/10)										
R4	C5	EIRP (mW) = S (mW/cm^2) x 4 x PI x 20cm^2										
R4	C10	Limit for uncontrolled environment according to FCC 1.1310, Table 1										

REF Module RF MPE Report: FCC ID: VPYLBESSPL2EL, IC: 772C-LBES5PL2EL, Report No. TESA2211000527ES

Summary:

The EUT with all transmitters is compliant with both the FCC power density limit.