



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

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 6, Safety Code 6

Min. Sep. Distance: 20 cm

Test Date: 12-Mar-25

Test Engineer: J. Nantz

EUT: Grace G-FM-VBXT-BAT

EUT Mode: Active

Meas. Distance: 3m

R0	Mode	Frequency Band		EIRP+Duty (RMS) dBm	Tune Up dB	E20cm (Avg) dBuV/m	S20cm (Avg) mW/cm2	Canada ISED Safety Code 6		USA FCC 1.1310 MPE		
		Start MHz	Stop MHz					SrI Table 5 mW/cm2	SAR Ratio	MPE Limit Table 1 (mW/cm2)	MPE Ratio	
R1	Zigbee	2405.00	2480.00	25.3	1.000	145.022	0.085	0.536	0.158	1.000	0.085	
R2												
R3												
R6												
R7								Total MPE	0.158		Total MPE	0.085
R8								MPE Ratio < 1	YES		MPE Ratio < 1	YES
#	C1	C2	C3	C4	C5	C6	C7	C9	C10	C11	C12	C13

(ROW) (COLUMN) NOTE:

- R0 C4 No duty factor were applied to demonstrate compliance
- R0 C5 TUNE UP – The manufacturer declares +/-1dB tune up.
- R0 C6 $E20cm = EIRP + \text{Tune Up} + 95.2 + 20 \cdot \log(3/0.2)$
- R0 C7 $EIRP + \text{Tune up (mW)} = S \text{ (mW/cm}^2\text{)} / 4 \times \pi \times 20cm^2$
- R0 C9 $mW/cm2 \text{ limit} = 0.1 \cdot W/m2$

Summary:

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