

RF Exposure Evaluation Report

Client: Garmin International, Inc.

Address: 1200 E. 151st Street
Olathe, Kansas, 66062, USA

Model: A04627

Test Report No.: R20250314-70-MPE1D

Approved By: 
Fox Lane,
EMC Test Engineer

Date: June 27, 2025

Total Pages: 7

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Revision Page

Rev. No.	Date	Description
Original	19 June 2025	Issued by FLane Prepared by FLane
B	23 June 2025	Updated ISED Limits to accommodate limb-worn – FL
C	24 June 2025	Removed draft watermark – FL
D	27 June 2025	Updated exposure calculation, removed RSS-102 section 6.6 limits – FL

1 Regulatory Requirements:

FCC Part 1.1310, 2.1091, 2.1093
KDB 447498 D01
RSS-102, Issue 6

Summary:

The purpose of this report is to evaluate the EUT's transmitter for exemption from routine SAR testing.

EUT:

Model:	A04627
FCC ID:	IPH-04627
IC:	1792A-04627
HVIN:	A04627

MPE Lab	Nebraska Center for Excellence in Electronics
MPE Labs FCC Cab Designation:	US1060
MPE Labs ISED Cab Designation:	US0177

2 FCC

FCC Limits, Part 1.1310

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f ²	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f ²	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

Occupational/Controlled			☐	Extremity SAR Eval		☒
General Population/uncontrolled			☒	Body SAR Eval		☐
FCC Power Density Calculations						
Frequency	Conducted Output Power	Conducted Output Power +10% for Tolerance (P10)	SAR Exemption Calc (SAC)	Sar Exemption Limit (SAL)	% of limit	Result
GHz	mW	mW	mW/cm^2	Numeric	%	
2,402.0000	2	2.2	2.5	3.0	83.0	PASS
2,440.0000	2	2.2	2.5	3.0	83.7	PASS
2,480.0000	2	2.2	2.5	3.0	84.3	PASS

Distance (d)	10	mm
$S = (P10 / d) * \sqrt{f/x}$ – used to calculate exposure at "d" cm		
f = Frequency (GHz)		
S = power density (mW/cm ²)		
P = transmitter conducted power (in mW)		
d = distance to radiation center (mm)		

Results:
Complies

Note:

The user's manual will stipulate that a 1cm distance from the user is to be maintained. EIRP values in mW were multiplied by 1.1 to account for a 10% tolerance.

3 ISED

RSS 102, Issue 6, Section 6.3 (for distances less than 20cm)

Devices operating at or below the applicable output power levels (adjusted for tune-up tolerance) specified in table 11, based on the separation distance, are exempt from SAR evaluation. The separation distance, defined as the distance between the user and/or bystander and the antenna and/or radiating element of the device or the outer surface of the device, shall be less than or equal to 20 cm for these exemption limits to apply.

Table 11: Power limits for exemption from routine SAR evaluation based on the separation distance

Frequency (MHz)	≤ 5 mm(mW)	10 mm (mW)	15 mm(mW)	20 mm(mW)	25 mm(mW)	30 mm(mW)	35 mm(mW)	40 mm(mW)	45 mm(mW)	> 50 mm(mW)
≤ 300	45	116	139	163	189	216	246	280	319	362
450	32	71	87	104	124	147	175	208	248	296
835	21	32	41	54	72	96	129	172	228	298
1900	6	10	18	33	57	92	138	194	257	323
2450	3	7	16	32	56	89	128	170	209	245
3500	2	6	15	29	50	72	94	114	134	158
5800	1	5	13	23	32	41	54	74	102	128

The exemption limits in table 11 are based on measurements and simulations of half-wave dipole antennas at separation distances of 5 mm to 50 mm from a flat phantom, which provides a SAR value of approximately 0.4 W/kg for 1 g of tissue.

For limb-worn devices where the 10 gram of tissue applies, the exemption limits for routine evaluation in table 11 are multiplied by a factor of 2.5.

For controlled-use devices where the 8 W/kg for 1 gram of tissue applies, the exemption limits for routine evaluation in table 11 are multiplied by a factor of 5.

When the operating frequency of the device is between two frequencies located in table 11, linear interpolation shall be applied for the applicable separation distance. If the separation distance of the device is between two distances located in table 11, linear interpolation may be applied for the applicable frequency. Alternatively, the limit corresponding to the smaller distance may be employed. For example, in case of a 7 mm separation distance, either use the exception value for a 5 mm separation distance or interpolate between the limits corresponding to 5 mm and 10 mm separation distances.

For implanted medical devices, the exemption limit for routine SAR evaluation is set at an output power of 1 mW, regardless of frequency.

The SAR levels from exempted transmitters shall be included in the compliance assessment and the determination of the TER. Detailed guidance is included in sections 7.1.8 and 8.2.2.1.

ISED Power Density Calculations				
Frequency	EIRP Power	EIRP +10% Tolerance	Exemption Limit	Result
MHz	mW	mW	mW	
2402.00	8.188	9.01	18.15	PASS
2440.00	7.946	8.74	17.63	PASS
2480.00	8.005	8.81	17.43	PASS
-Frequencies were individually interpolated based on limits in RSS-102 then multiplied by 2.5 due to being limb operated / limb-worn device -10mm/1cm separation distance -Limits from RSS-102 Section 6.4				

Result:

The EUT was found to be exempt from routine SAR testing and **COMPLIANT** with FCC and ISED RF exposure requirements.

REPORT END