Garmin International Exhibit B to FCC Form 442 File No. 0220-EX-CN-2020 (March 11, 2020)

# **Exhibit B Technical Characteristics**

#### I. NTIA EIRP Limits

Garmin has taken appropriate precautions in system design to ensure the maximum effective isotropic radiated power ("EIRP") from the proposed re-radiation devices does not exceed -140 dBm / 24 MHz at a distance of 100 feet from the exterior of the building, as stipulated in the NTIA Red Book. In doing so

Garmin's analysis demonstrates that the aggregate power levels 100 feet from the building exterior will always be well below the NTIA Redbook limit of - 140 dBm/24 MHz, as depicted in Table 1, below.

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Table 1. Aggregate Power Levels 100' From Building Exterior

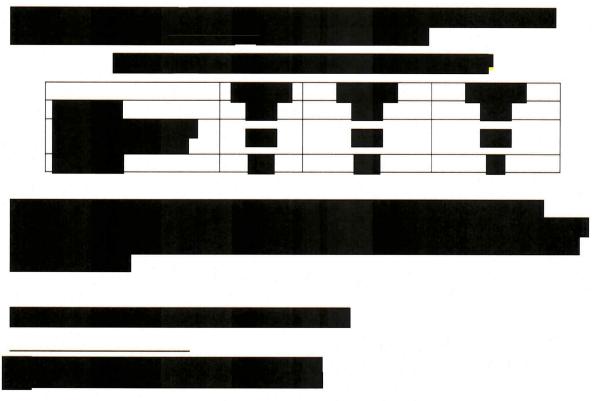
Band	Frequency (MHz)	Combined Aggregate Power (dBm/24 MHz)
L1	1575.42	-153.8
L2	1227.60	-155.5
L5	1176.45	-149.4

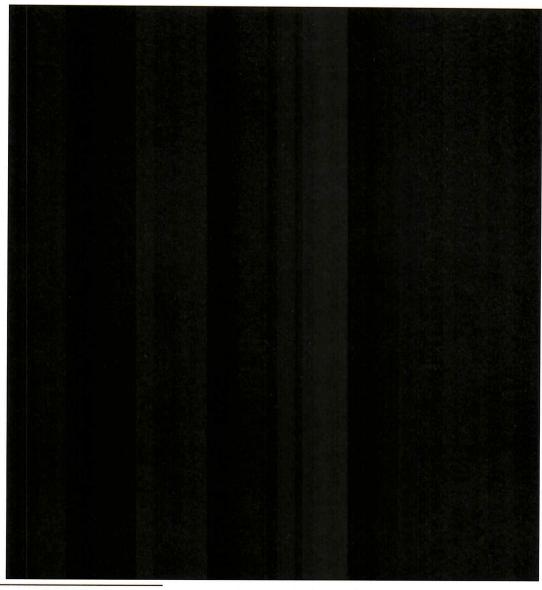
#### II. Technical Parameters and EIRP Calculations

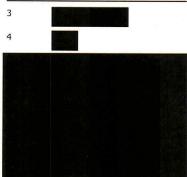
The NTIA standard equation for calculating maximum EIRP is:

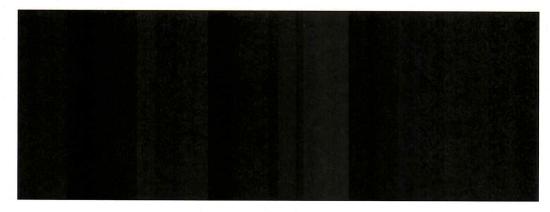
$$P_{Tmax} = P_R + 20\log_{10}f + 20\log_{10}(30+d) - 27.55$$

Where  $P_{TMax}$  is the maximum permissible EIRP (dBm);  $P_R$  is the power received at 100 feet (30 m) from the building; f is the frequency in MHz; and d is the distance between the radiator and the closest exterior wall of the building (m).



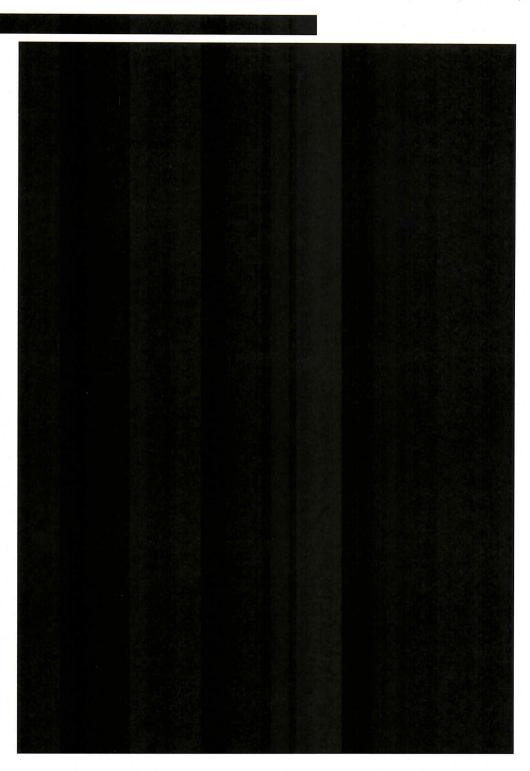


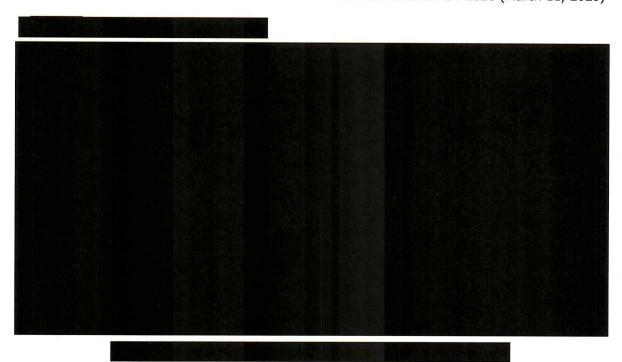


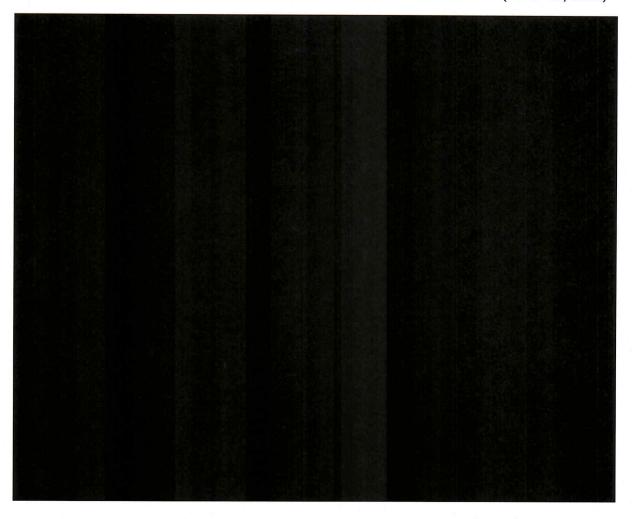


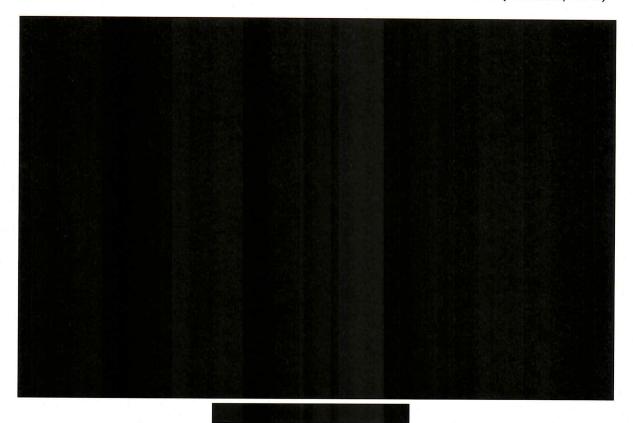












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# IV. Supplemental Form 442 Technical Inputs

