Garmin GMN-0278310 RF Exposure Exhibit Controlled / Occupational Environment

Controlled / Occupational Environment HVIN/PMN: GMN-0278310 47CFR 1.1307, RSS-102 Issue 6

Summary and Simultaneous SFX-SBD MPE Calculation

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					Antenna Gain (dBi)	3.0		
				dBd + 2.17 = dBi	dBi to dBd	2.2		
Tx Frequency (MHz)	1621	Peak Power (Watts)	1.7		Antenna Gain (dBd)	0.83		
		Peak Power (mW)	1721.9	A	ntenna Gain (numeric)	2.0		
Cable Loss (dB)	0.0	(dBm)	32.4	Ante	enna minus cable (dBi)	3.00		
		Duty Cycle (%)	9.1%					
		Adjusted Power (mW)	156.7					
		Adjusted Power (dBm)	2.9					
	Calculated ERP (mw)	2084.491		EIRP = Po(dBM) + Gain	n (dB)			
	Calculated EIRP (mw)	3435.579			Radiated (EIRP) dBm	35.360		
				ERP = EIRP - 2.17 dB				
Power density (S	5)				Radiated (ERP) dBm	33.190		
EIRP		FCC radio fr	equency radiation exposure lir	nits per 1.1310				
= mW/cm 4 p r^2	1/2	Frequency (MHz)	Occupational Limit W/m ²	Public Limit W/m ²				
r (cm) EIRP (m)	W)	300-1,500	f/30	f/150				
		1,500-100,000	50	10				
		1621.0	50	10				
		102110	50	10				
IC	r.c. r.c.	1' 'r Di		I IEDI I (NV/	2			
			SS-102, Issue 6 Field Reference					
Frequency (MHz)		ntrolled	Frequency (MHz)	Contro				
10-20	2.0	2.0	10-20	10.0	10.0			
20-48	$8.944/f^{0.5}$	0.2	20-48	$44.72/f^{0.5}$	1.1			
48-300	1.291	1.291	48-100	6.455	6.455			
300-6,000	$0.02619*f^{0.6834}$	4.1	100-6,000	$0.6455*f^{0.5}$	26.0			
6,000-15,000	5.0	10.0	6,000-15,000	50.0	50.0			
15,000-150,000	10	10.0	15,000-150,000	50.0	50.0			
150,000-300,000		0.1	150,000-300,000	$3.33^{*}(10^{-4})^{*}f$	0.5			
150,000-500,000	$6.67*(10^{-5})*f$	0.1	100,000-000,000	5.55"(10 ⁻)*f	0.5			
					FCC	ICED		
					FCC	ISED		
f = Transmit Frequecny	(MHz)			f (MHz) =	1621.0	1621.0	MHz	
$P_T = Power Input to An$	ntenna (mW)			$P_{T}(mW) =$	1,721.9	1,721.9	mW	
Duty cycle (percentage				%		9.1%		
$P_A = Adjusted Power d$	ue to Duty cycle or Cab	le Loss (mW)		$P_A(mW) =$	156.69	156.69	mW	
G _N = Numeric Gain of	the Antenna			GN (numeric) =	2.00	2.00	numeric	
S ₂₀ = Power Density of	f device at 20cm (mW/r	n^2)	$S_{20} = (P_A G_N) / (4\pi R_{20})^2$	$S_{20} (mW/m^2) =$	0.06	0.06	mW/m ²	
S20 = Power Density of	f device at 20cm (W/m ²)	$S_{20} = (P_A G_N) / (4\pi R_{20})^2$	$S_{20} (W/m^2) =$	0.62	0.62	W/m ²	
S _L = Power Density Li	mit (W/m^2)			$S_L(W/m^2) =$	50.00	25.99	W/m ²	
			- 1					
$R_{\rm C} = M_{\rm Infimum} distance$	e to the Radiating Elem	ent for Compliance (cm)	$R_{C} = \sqrt{(P_A G_N / 4\pi s_L)}$	$R_{\rm C}(\rm cm) =$		3.1	cm	
$S_{C} =$ Power Density of	the device at the Compl	liance Distance R _C (W/n	$S_{c} = (P_{A}G_{N})/(4\pi R_{c})^{2}$	$S_{C}(W/m^{2}) =$	50.00	25.99	W/m^2	
$R_{20} = 20 \text{ cm}$		1		R20=			cm	
$R_{SC} = Simultaneous Mi$	nimum distance to the I	Radiating Element for Co	ompliance (cm)	R _{SC} =	30.6	42.1	cm	
$S_{SC} =$ Power Density of	f the device at the Simul	taneous Compliance Dis	stance R _{SC} (W/m ²)	S _{SC} =	0.27	0.14	W/m2	
-		<u> </u>						
			East Community of the Com	1 D 1 1 : 1 ::	t 2.2	2.1		
			For Complaince with Ger				cm	
		Or in Meters	for Complaince with Gene	eral Population Limits	0.02	0.03	Meters	
			Summary: Standalone MPI	E Calculations and Su	mmary			
Radio	Ty Duty Cycle (%)	Tx Frequeny (MHz)	Power Total (mW)	Antenna Gain (dBi)	$S_L(W/m^2)$	$S_{20} (W/m^2)$	R _c (cm)	$S_{C} (W/m^{2})$
		,		· · · ·				
SBD (FCC)	9.1%	1621.0	156.7	3.0	50.0	0.62	2.2	50.0
SFX (FCC)	36.4%	1621.0	27613.04	3.0	50.0	109.6	30.6	46.8
	Ty Duty Cycle (04)	Tx Frequeny (MHz)	Power Total (mW)	Antenna Gain (dBi)	SL (W/m2)	S20 (W/m2)	RC (cm)	c (W// 2
				()				$S_{C} (W/m^{2})$
SBD (ISED)	9.1%	1621.0	1,721.9	3.0	26.0	0.6	3.1	26.0
SFX (ISED)	36.4%	1621.0	27,613.0	3.0	26.0	109.6	42.1	24.8
FCC Si	mlutaneous MPE Ca	lculation		ISED S	imlutaneous MPE C	alculation	1	
100 01	SBD (FCC)	SFX (FCC)			SBD (ISED)	SFX (ISED)	1	
T P (1				T D O C C		· · · · · ·	ł	
Tx Frequency (MHz	1621.0	1621.0		Tx Frequency (MHz)	1621.0	1621.0	Į	
Compliance	30.6	30.6		Compliance	42.1	42.1		
Distance (cm)	30.0	50.6		Distance (cm)	42.1	42.1		
$S_{SC}(W/m^2)$	0.27	46.79		S _{SC} (W/m ²)	0.14	24.77		
$S_L (W/m^2)$	50.000	50.000		$S_L(W/m^2)$	26.0	26.0		
Power Ratio (S ₁ /				Power Ratio (S ₁ /				
、 L	0.005	0.936		(L	0.005	0.953		
S _{SC})				S _{SC})				
Sum of Power Ra	tios at compliance	0.041		Sum of Power Rati	ios at compliance	0.059		
distance (7	Tx1 + Tx2)	0.941		distance (Tr		0.958		
- (-	/			1 .	/		1	

Rogers Labs, a division of The Compatibility Center LLCGarmin International, Inc7915 Nieman RoadModel: GMN-0278310 FCC ID: IPH-0452810 IC: 1792A-0452810Lenexa, KS 66214Test #: 241216Phone: (913) 660-0666Test to: 47CFR 2.1307, RSS-102 Iss.6Revision 1File: GMN-0278310 RFExp FCC-IC 250103 rlPage 1 of 3

Requirement = Σ of MPE Ratio ≤ 1

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SFX MPE Calculation

Frequency (MHz) 10-20 2 20-48 8.944 48-300 1.2 300-6,000 0.02615 6,000-15,000 5 15,000-150,000 1 105,000-300,000 6.67*(P_T Power Input to Antenna (mW Duty cycle (percentage of operati P _A = Adjusted Power due to Duty G_N Numeric Gain of the Antenna S_{20} Power Density of device at 2 S_{20} Power Density of device at 3 S_L Power Density Limit (W/m ²)	EIRP (mw)	Max Duty Cycle (%) Adjusted Power (mW) Adjusted Power (dBm) 72.331 119.213 FCC radio free Frequency (MHz) 300-1,500 1,500-100,000 1621.0	75.8600 75860.0 48.8 36.4% 27613.0 17.8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	A Ante EIRP = Po(dBM) + Ga ERP = EIRP - 2.17 dB its per 1.1310 Public Limit W/m ² f/150 10 10	Radiated (EIRP) dBm Radiated (ERP) dBm Radiated (ERP) dBm //m ²) olled 10.0 1.1 6.455 2.6.0 50.0 50.0	2.2 0.83 2.0 3.0 20.763 18.593		
Cable Loss (dB) Calculated E Calculated E Calculated E Calculated E Calculated E EIRP $=$ mW/cm^2 4 p r^2 r (cm) EIRP (mW) IC radio frequent Frequency (MHz) 10-20 2 20-48 8.944 48-300 1.2 300-6,000 0.02615 6,000-15,000 5 15,000-150,000 1 150,000-300,000 6.67*(F = Transmit Frequecny (MHz) P _T = Power Input to Antenna (mW Duty cycle (percentage of operati P _A = Adjusted Power due to Duty G _N = Numeric Gain of the Antenna S ₂₀ = Power Density of device at 2 S ₂₀ = Power Density of device at 3 S ₂₀ = Power Density Limit (W/m ²)	0.0 IERP (mw) EIRP (mw) ency radiati Unc 2.0 0.44/f ^{0.5} 1.291 19*f ^{0.6834} 5.0 10	Peak Power (mW) (dBm) Max Duty Cycle (%) Adjusted Power (mW) Adjusted Power (dBm) 72.331 119.213 FCC radio free Frequency (MHz) 300-1,500 1,500-100,000 1621.0 on exposure limits per R ontrolled 2.0 0.2 1.291 4.1 10.0	75860.0 48.8 36.4% 27613.0 17.8 quency radiation exposure lim Occupational Limit W/m ² f/30 50 50 30 30 30 30 30 30 30 30 30 30 30 30 30	A Ante EIRP = Po(dBM) + Ga ERP = EIRP - 2.17 dB its per 1.1310 Public Limit W/m ² f/150 10 10 10 10 10 44.72/f ^{0.5} 6.455 0.6455*f ^{0.5} 50.0 50.0	ntenna Gain (numeric) nna minus cable (dBi) in (dB) Radiated (EIRP) dBm Radiated (ERP) dBm Radiated (ERP) dBm 10.0 1.1 6.455 26.0 50.0 50.0	2.0 3.0 20.763		
$\begin{tabular}{ c c c c c } \hline Calculated E \\ \hline Calculate \\ \hline Calculate E \\ \hline Ca$	ERP (mw) EIRP (mw) ency radiati Unc 2.0 44/f ^{0.5} .291 19*f ^{0.6834} 5.0 10	(dBm) Max Duty Cycle (%) Adjusted Power (mW) Adjusted Power (dBm) 72.331 119.213 FCC radio free Frequency (MHz) 300-1,500 1,500-100,000 1621.0 on exposure limits per R ontrolled 2.0 0.2 1.291 4.1 10.0	48.8 36.4% 27613.0 17.8 0ccupation exposure lim Occupational Limit W/m ² f/30 50 50 50 50 50 50 20-48 48-100 100-6,000 6,000-15,000 15,000-150,000	Ante EIRP = Po(dBM) + Ga ERP = EIRP - 2.17 dB its per 1.1310 Public Limit W/m ² f/150 10 10 10 10 10 10 10 10 10 1	nna minus cable (dBi) ain (dB) Radiated (EIRP) dBm Radiated (ERP) dBm //m ²) olled 10.0 1.1 6.455 2.6.0 50.0 50.0	3.0		
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$\begin{tabular}{ c c c c c } \hline Power density (S) \\ \hline EIRP \\ \hline \hline & = mW/cm^2 \\ 4 \ p \ r^2 \\ r \ (cm) \ EIRP \ (mW) \\ \hline \hline & IC \ radio \ frequent \\ \hline r \ (cm) \ EIRP \ (mW) \\ \hline \hline & IC \ radio \ frequent \\ \hline & IC \ radio \ freq \ radio \ freq \\ \hline & IC \ radio \ freq \ radio \ freq \ radio \ freq \ radio \ radio \ freq \ radio \ $	ency radiati Unc 2.0 144/f ^{0.5} .291 19*f ^{0.6834} 5.0	FCC radio free Frequency (MHz) 300-1,500 1,500-100,000 1621.0 on exposure limits per R ontrolled 2.0 0.2 1.291 4.1 10.0	Occupational Limit W/m² f/30 50 50 SS-102, Issue 6 Field Referer Frequency (MHz) 10-20 20-48 48-100 100-6,000 6,000-15,000 15,000-150,000	its per 1.1310 Public Limit W/m ² f/150 10 10 10 10 10 10 10 10 10 1	Radiated (ERP) dBm Radiated (ERP) dBm //m ²) olled 10.0 1.1 6.455 26.0 50.0 50.0			
$\begin{array}{c} \mbox{EIRP} & = mW/cm^2 \\ 4 \ p \ r^2 \\ r \ (cm) \ EIRP \ (mW) \\ \hline \\ $	Unc 2.0 $44/f^{0.5}$ 1.291 $19*f^{0.6834}$ 5.0 10	Frequency (MHz) 300-1,500 1,500-100,000 1621.0 on exposure limits per R ontrolled 2.0 0.2 1.291 4.1 10.0	Occupational Limit W/m² f/30 50 50 SS-102, Issue 6 Field Referer Frequency (MHz) 10-20 20-48 48-100 100-6,000 6,000-15,000 15,000-150,000	its per 1.1310 Public Limit W/m ² f/150 10 10 10 10 10 10 10 10 10 1	Radiated (ERP) dBm //m ²) olled 10.0 1.1 6.4555 26.0 50.0 50.0	18.593		
$\begin{array}{c} \mbox{EIRP} & = mW/cm^2 \\ 4 \ p \ r^2 \\ r \ (cm) \ EIRP \ (mW) \\ \hline \\ $	Unc 2.0 $44/f^{0.5}$ 1.291 $19*f^{0.6834}$ 5.0 10	Frequency (MHz) 300-1,500 1,500-100,000 1621.0 on exposure limits per R ontrolled 2.0 0.2 1.291 4.1 10.0	Occupational Limit W/m² f/30 50 50 SS-102, Issue 6 Field Referer Frequency (MHz) 10-20 20-48 48-100 100-6,000 6,000-15,000 15,000-150,000	Public Limit W/m ² f/150 10 10 nce Level FRL Limit (W Contr 10.0 44.72/f ^{0.5} 6.455 0.6455*f ^{0.5} 50.0 50.0	//m ²) olled 10.0 1.1 6.455 26.0 50.0 50.0	18.593		
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IC radio frequency Frequency (MHz) 10-20 2 20-48 8.944 48-300 1.2 300-6,000 0.02615 6,000-15,000 5 15,000-150,000 1 150,000-300,000 6.67*(f = Transmit Frequecny (MHz) P_T = Power Input to Antenna (mW Duty cycle (percentage of operati P_A = Adjusted Power due to Duty G_N = Numeric Gain of the Antenna S_{20} = Power Density of device at 2 S_{20} = Power Density of device at 2 S_{20} = Power Density Limit (W/m ²)	Unc 2.0 $44/f^{0.5}$ 1.291 $19*f^{0.6834}$ 5.0 10	1,500-100,000 1621.0 on exposure limits per R ontrolled 2.0 0.2 1.291 4.1 10.0	50 50 SS-102, Issue 6 Field Referen Frequency (MHz) 10-20 20-48 48-100 100-6,000 6,000-15,000 15,000-150,000	10 10 10 10 10.0 10.0 44.72/f ^{0.5} 6.455 0.6455*f ^{0.5} 50.0 50.0	olled 10.0 1.1 6.455 26.0 50.0 50.0			
Frequency (MHz) 10-20 2 20-48 8.944 48-300 1.2 300-6,000 0.02619 6,000-15,000 5 15,000-150,000 1 150,000-300,000 6.67*(P_T Power Input to Antenna (mW Duty cycle (percentage of operati P_A = Adjusted Power due to Duty G_N = Numeric Gain of the Antenna S_{20} = Power Density of device at 2 S_{20} = Power Density of device at 2 S_L = Power Density Limit (W/m ²)	Unc 2.0 $44/f^{0.5}$ 1.291 $19*f^{0.6834}$ 5.0 10	1621.0 on exposure limits per R ontrolled 2.0 0.2 1.291 4.1 10.0	50 SS-102, Issue 6 Field Referer Frequency (MHz) 10-20 20-48 48-100 100-6,000 6,000-15,000 15,000-150,000	10 Contr 10.0 44.72/1 ^{0.5} 6.455 0.6455*1 ^{0.5} 50.0 50.0	olled 10.0 1.1 6.455 26.0 50.0 50.0			
Frequency (MHz) 10-20 2 20-48 8.944 48-300 1.2 300-6,000 0.02619 6,000-15,000 5 15,000-15,000 1 150,000-300,000 6.67*(P_T = Power Input to Antenna (mW Duty cycle (percentage of operati P_A = Adjusted Power due to Duty G_N = Numeric Gain of the Antenna S_{20} = Power Density of device at 2 S_{20} = Power Density of device at 2 S_L = Power Density Limit (W/m ²)	Unc 2.0 $44/f^{0.5}$ 1.291 $19*f^{0.6834}$ 5.0 10	on exposure limits per R ontrolled 2.0 0.2 1.291 4.1 10.0	SS-102, Issue 6 Field Referer Frequency (MHz) 10-20 20-48 48-100 100-6,000 6,000-15,000 15,000	nce Level FRL Limit (W Contr 10.0 44.72/f ^{0.5} 6.455 0.6455*f ^{0.5} 50.0 50.0	olled 10.0 1.1 6.455 26.0 50.0 50.0			
Frequency (MHz) 10-20 2 20-48 8.944 48-300 1.2 300-6,000 0.02619 6,000-15,000 5 15,000-150,000 1 150,000-300,000 6.67*(P_T Power Input to Antenna (mW Duty cycle (percentage of operati P_A = Adjusted Power due to Duty G_N = Numeric Gain of the Antenna S_{20} = Power Density of device at 2 S_{20} = Power Density of device at 2 S_L = Power Density Limit (W/m ²)	Unc 2.0 $44/f^{0.5}$ 1.291 $19*f^{0.6834}$ 5.0 10	ontrolled 2.0 0.2 1.291 4.1 10.0	Frequency (MHz) 10-20 20-48 48-100 100-6,000 6,000-15,000 15,000-150,000	$\begin{array}{r} & \text{Contr} \\ 10.0 \\ 44.72/f^{0.5} \\ 6.455 \\ 0.6455*f^{0.5} \\ 50.0 \\ 50.0 \end{array}$	olled 10.0 1.1 6.455 26.0 50.0 50.0			
Frequency (MHz) 10-20 2 20-48 8.944 48-300 1.2 300-6,000 0.02619 6,000-15,000 5 15,000-150,000 1 150,000-300,000 6.67*(P_T Power Input to Antenna (mW Duty cycle (percentage of operati P_A = Adjusted Power due to Duty G_N = Numeric Gain of the Antenna S_{20} = Power Density of device at 2 S_{20} = Power Density of device at 2 S_L = Power Density Limit (W/m ²)	Unc 2.0 $44/f^{0.5}$ 1.291 $19*f^{0.6834}$ 5.0 10	ontrolled 2.0 0.2 1.291 4.1 10.0	Frequency (MHz) 10-20 20-48 48-100 100-6,000 6,000-15,000 15,000-150,000	$\begin{array}{r} & \text{Contr} \\ 10.0 \\ 44.72/f^{0.5} \\ 6.455 \\ 0.6455*f^{0.5} \\ 50.0 \\ 50.0 \end{array}$	olled 10.0 1.1 6.455 26.0 50.0 50.0			
10-20 2 20-48 8.944 48-300 1.2 300-6,000 0.02615 6,000-15,000 5 15,000-150,000 1 150,000-300,000 6.67*(F = Transmit Frequeeny (MHz) P_T = Power Input to Antenna (mW Duty cycle (percentage of operati P_A = Adjusted Power due to Duty G_N = Numeric Gain of the Antenn S_{20} = Power Density of device at 2 S_{20} = Power Density of device at 2 S_L = Power Density Limit (W/m ²)	$\frac{44}{f^{0.5}}$ $\frac{1.291}{19*f^{0.6834}}$ $\frac{5.0}{10}$	0.2 1.291 4.1 10.0	10-20 20-48 48-100 100-6,000 6,000-15,000 15,000-150,000	$ \begin{array}{r} 10.0 \\ $	10.0 1.1 6.455 26.0 50.0 50.0			
20-48 8.944 48-300 1.2 300-6,000 0.02619 6,000-15,000 5 15,000-150,000 1 150,000-300,000 6.67*($f =$ Transmit Frequecny (MHz) $P_T =$ Power Input to Antenna (mW Duty cycle (percentage of operati $P_A =$ Adjusted Power due to Duty $G_N =$ Numeric Gain of the Antenn $S_{20} =$ Power Density of device at 2 $S_{20} =$ Power Density of device at 2 $S_2 =$ Power Density Limit (W/m ²)	$\frac{44}{f^{0.5}}$ $\frac{1.291}{19*f^{0.6834}}$ $\frac{5.0}{10}$	0.2 1.291 4.1 10.0	20-48 48-100 100-6,000 6,000-15,000 15,000-150,000	$\begin{array}{r} 44.72/f^{0.5} \\ 6.455 \\ 0.6455^*f^{0.5} \\ 50.0 \\ 50.0 \\ 50.0 \end{array}$	1.1 6.455 26.0 50.0 50.0			
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	1.291 19*f ^{0.6834} 5.0 10	1.291 4.1 10.0	48-100 100-6,000 6,000-15,000 15,000-150,000	$ \begin{array}{r} 6.455 \\ 0.6455*f^{0.5} \\ 50.0 \\ 50.0 \\ \end{array} $	6.455 26.0 50.0 50.0			
$300-6,000$ 0.02615 $6,000-15,000$ 5 $15,000-150,000$ 1 $150,000-300,000$ $6.67*($ f = Transmit Frequecny (MHz) P_T = Power Input to Antenna (mW Duty cycle (percentage of operati P_A = Adjusted Power due to Duty G_N = Numeric Gain of the Antenn S_{20} = Power Density of device at 2 S_{20} = Power Density of device at 2 S_L = Power Density Limit (W/m ²)	5.0 10	4.1 10.0	100-6,000 6,000-15,000 15,000-150,000	$ \begin{array}{r} 0.6455^*f^{0.5} \\ 50.0 \\ 50.0 \end{array} $	26.0 50.0 50.0			
$\begin{array}{c c} 6,000-15,000 & 5\\ \hline 15,000-150,000 & 1\\ \hline 150,000-300,000 & 6.67*(\\ \hline \\ \hline$	5.0 10		15,000-150,000	50.0 50.0	50.0			
15,000-150,000 1 150,000-300,000 6.67*($f =$ Transmit Frequeeny (MHz) $P_T =$ Power Input to Antenna (mW Duty cycle (percentage of operati $P_A =$ Adjusted Power due to Duty $G_N =$ Numeric Gain of the Antenna $S_{20} =$ Power Density of device at 2 $S_{20} =$ Power Density of device at 2 $S_L =$ Power Density Limit (W/m ²)	10	10.0	15,000-150,000					
150,000-300,000 $6.67*($ f = Transmit Frequeeny (MHz) P_T = Power Input to Antenna (mW Duty cycle (percentage of operati P_A = Adjusted Power due to Duty G_N = Numeric Gain of the Antenna S_{20} = Power Density of device at 2 S_{20} = Power Density of device at 2 S_L = Power Density Limit (W/m ²)	*(10 ⁻⁵)* f			2 2 2 * (10-4) * (
$\begin{split} P_{T} &= Power Input to Antenna (mW) \\ Duty cycle (percentage of operati \\ P_{A} &= Adjusted Power due to Duty \\ G_{N} &= Numeric Gain of the Antenna \\ S_{20} &= Power Density of device at 2 \\ S_{20} &= Power Density of device at 2 \\ S_{L} &= Power Density Limit (W/m^{2}) \end{split}$		0.1	150,000-300,000	3.33*(10)*f	0.5			
$\begin{split} P_{T} &= Power Input to Antenna (mW Duty cycle (percentage of operati P_{A} = Adjusted Power due to Duty G_{N} = Numeric Gain of the Antenna S_{20} = Power Density of device at 2 S_{20} = Power Density of device at 2 S_{L} = Power Density Limit (W/m2) \end{split}$					FCC	KED		
$\begin{split} P_{T} &= Power Input to Antenna (mW) \\ Duty cycle (percentage of operati \\ P_{A} &= Adjusted Power due to Duty \\ G_{N} &= Numeric Gain of the Antenna \\ S_{20} &= Power Density of device at 2 \\ S_{20} &= Power Density of device at 2 \\ S_{L} &= Power Density Limit (W/m^{2}) \end{split}$				£()/[]-) -	FCC 1621.0	ISED 1621.0	MIL	
Duty cycle (percentage of operati $P_A = Adjusted$ Power due to Duty $G_N =$ Numeric Gain of the Antenn $S_{20} =$ Power Density of device at 2 $S_{20} =$ Power Density of device at 2 $S_L =$ Power Density Limit (W/m ²)	W D			f(MHz) =				
$P_A = Adjusted Power due to Duty G_N = Numeric Gain of the Antenn S_{20} = Power Density of device at 2 S_{20} = Power Density of device at 2 S_L = Power Density Limit (W/m2)$	· ·			$P_{T}(mW) =$	75,860.0	75,860.0		
$G_N =$ Numeric Gain of the Antenn $S_{20} =$ Power Density of device at 2 $S_{20} =$ Power Density of device at 2 $S_L =$ Power Density Limit (W/m ²)	,			% =	36.4%	36.4%		
S_{20} = Power Density of device at 2 S_{20} = Power Density of device at 2 S_L = Power Density Limit (W/m ²)		Cable Loss (mW)		$P_A(mW) =$	27,613.04	27,613.04		
$S_{20} =$ Power Density of device at $S_L =$ Power Density Limit (W/m ²)	nna			GN (numeric) =	2.00	2.00	numeric	
$S_L = Power Density Limit (W/m^2)$	S_{20} = Power Density of device at 20cm (mW/m ²)			$S_{20} (mW/m^2) =$	10.96	10.96	mW/m ²	
	S_{20} = Power Density of device at 20cm (W/m ²)			$S_{20} (W/m^2) =$	109.61	109.61	W/m ²	
	$S_L = Power Density Limit (W/m^2)$			$S_{L}(W/m^{2})=$	50.00	25.99	W/m ²	
R _C = Minimum distance to the Ra	Radiating El	ement for Compliance ($R_C = \sqrt{(P_A G_N / 4\pi s_L)}$	$R_{\rm C}$ (cm) =	30.6	42.1		
$S_C =$ Power Density of the device	e at the Co	mpliance Distance R _C (V	$S_c = (P_A G_N)/(4\pi R_c)^2$	$S_{C}(W/m^{2}) =$	46.79	24.77	W/m ²	
$R_{20} = 20 \text{ cm}$		1 0(-c (- A - N) (c)	R20=	20		cm	
			For Compliance w	vith Use Case Limits	30.6	42.1	cm	
		Or in I	Meters for Complaince wi	ith Use Case Limits	0.306	0.421	Meters	
			Summary: Standalone	MPE Calculations	and Summary		<u> </u>	
Radio X Duty C		Tx Frequeny (MHz)	Power Total (mW)	Antenna Gain (dBi)	S_{L} (W/m ²)	$S_{20}(W/m^2)$	R _C (cm)	$S_{C}(W/m^{2})$
,	Cycle (%		27,613.0	3.0	50.0	109.61	30.6	46.79
SFX (ISED) 36.	/ Cycle (% 6.4%	1621	27,613.04	3.0	25.99	109.61	42.1	24.77

Rogers Labs, a division of The Compatibility Center LLCGarmin International, Inc7915 Nieman RoadModel: GMN-0278310 FCC ID: IPH-0452810 IC: 1792A-0452810Lenexa, KS 66214Test #: 241216Phone: (913) 660-0666Test to: 47CFR 2.1307, RSS-102 Iss.6Date: April 24, 2025Revision 1File: GMN-0278310 RFExp FCC-IC 250103 rlPage 2 of 3

Garmin GMN-0278310 RF Exposure Exhibit

Controlled / Occupational Environment HVIN/PMN: GMN-0278310 47CFR 1.1307, RSS-102 Issue 6

Conclusion

The GMN-0278300, a device that is deployed in controlled, occupational environments, meets RF exposure requirements for both FCC and Industry Canada. For RF exposure safety, personnel should maintain a safe distance of **42.1 cm** from the product.

FCC:

The device needs to be a minimum of 30.6 cm distance away from people.

Industry Canada:

The device needs to be a minimum of 42.1 cm distance away from people.