

| | | | | | | |
|--|--|--|--|---------------------------------------|----------------------------|--------|
| | Model: E3545 | | Test Number: | 190806 | | |
| MPE Calculator | RF Exposure uses EIRP for calculation. EIRP is based on TX power added to the antenna gain in dBi. dBi = dB gain compared to an isotropic radiator. | | | | | |
| | S = power density in mW/cm ² | | | NOTE: need to update cell below value | | |
| | Transmitter maximum Output power operating at 100% (Watts) | | 0.0720 | | Antenna Gain (dBi) | 2 |
| | | | 0.07 | | Antenna Gain (Numeric) | 1.58 |
| Tx Frequency (MHz) | 2437 | Calculation power (Watts) | 0.07 | dBd + 2.17 = dBi | dBi to dBd | 2.2 |
| | | | | | Antenna Gain (dBd) | -0.17 |
| Cable Loss (dB) | 0.0 | Adjusted Power (dBm) | 18.57 | | Antenna minus cable (dBi) | 2.00 |
| | Calculated ERP (mw) | 69.236 | | | EIRP = Po(dBm) + Gain (dB) | |
| | Calculated EIRP (mw) | 114.112 | | | Radiated (EIRP) dBm | 20.573 |
| | | | | | ERP = EIRP - 2.17 dB | |
| | | | | | Radiated (ERP) dBm | 18.403 |
| Power density (S) mW/cm ² = $\frac{EIRP}{4\pi r^2}$ | | | | | | |
| | r (cm) | EIRP (mW) | | | | |
| Occupational Limit | | FCC radio frequency radiation exposure limits per 1.1310 | | | | |
| 5 | mW/cm ² | Frequency (MHz) | Occupational Limit (mW/cm ²) | Public Limit (mW/cm ²) | | |
| 50 | W/m ² | 30-300 | 1 | 0.2 | | |
| General Public Limit | | 300-1,500 | f/300 | f/1500 | | |
| 1.0 | mW/cm ² | 1,500-10,000 | 5 | 1 | | |
| 10.0 | W/m ² | | | | | |
| Occupational Limit | | IC radio frequency radiation exposure limits per RSS-102 | | | | |
| $0.6455f^{0.5}$ | W/m ² | Frequency (MHz) | Occupational Limit (W/m ²) | Public Limit (W/m ²) | | |
| 39.66212 | W/m ² | 100-6,000 | $0.6455f^{0.5}$ | | | |
| General Public Limit | | 6,000-15,000 | 50 | | | |
| $0.02619f^{0.6834}$ | W/m ² | 48-300 | | 1.291 | | |
| 5.40397 | W/m ² | 300-6,000 | | $0.02619f^{0.6834}$ | | |
| | | 6,000-15,000 | 50 | 10 | | |
| f = Transmit Frequency (MHz) | | | | f (MHz) = | 2437 | |
| P _T = Power Input to Antenna (mW) | | | | P _T (mW) = | 72.0000 | |
| Duty cycle (percentage of operation) | | | | % = | 100 | |
| P _A = Adjusted Power due to Duty cycle or Cable Loss (mW) | | | | P _A (mW) = | 72.00 | |
| G _N = Numeric Gain of the Antenna | | | | GN (numeric) = | 1.58 | |
| S ₂₀ = Power Density of device at 20cm (W/m ²) | | | $S_{20} = (P_A G_N) / (4\pi R_{20}^2)$ | S ₂₀ (W/m ²) = | 0.23 | |
| S _L = Power Density Limit (W/m ²) | | | | S _L (W/m ²) = | 5.404 | |
| R _C = Minimum distance to the Radiating Element for Compliance (cm) | | | $R_C = \sqrt{(P_A G_N) / (4\pi S_L)}$ | R _C (cm) = | 4.1 | |
| S _C = Power Density of the device at the Compliance Distance R _C (W/m ²) | | | $S_C = (P_A G_N) / (4\pi R_C^2)$ | S _C (W/m ²) = | 5.40 | |
| R ₂₀ = 20cm | | | | R ₂₀ = | 20 | |
| For Compliance with Canada General Population Limits, User Manual must indicate a minimum separation distance of | | | | | 4.1 cm | |

Rogers Labs, Inc.
4405 West 259th Terrace
Louisburg, KS 66053
Phone/Fax: (913) 837-3214
Revision 1

Garmin International, Inc.
Model: E3545
Test: 190806
Test to: CFR47 15C, RSS-210 RSS-247
File: E3545 MPE Exclusion

SN's: 3998030586, 3998030578
FCC ID: IPH-E3545
IC: 1792A-E3545
Date: February 26, 2020
Page 1 of 1