MPE Calculation page

| Trig Avionics | Model: TT26 | | Test Number: | 170226 | | |
|---|--------------------------------------|---|---|------------------------------------|----------------------------|---------------------------|
| MPE Calculator | MPE uses EIRP for calculation. EIR | P is based on TX power added to | the antenna gain in dBi. | | | |
| | dBi = dB gain compared to an isotrop | pic radiator. | | | | |
| | S = power density in mW/cm^2 | | | | | |
| | Transmitter maximum Output | power operating at 100% (Watts) | 261.2161 | | Antenna Gain (dBi) | 1 |
| | | 50% duty Cycle operation (Watts) | 130.6081 | dBd + 2.17 = dBi | | |
| x Frequency (MHz) | 1090 | Calcualtion power (Watts) | 130.6081 | | Antenna Gain (dBd) | -1.17 |
| | | | | | | |
| f300 36.33 | 0.0 | (dBm) | 51.16 | | Antenna minus cable (dBi) | 1.00 |
| | | | | | | |
| | Calculated ERP (mw) | 99763.116 | | | EIRP = Po(dBM) + Gain (dB) | |
| | Calculated EIRP (mw) | 164425.815 | | | Radiated (EIRP) dBm | 52.160 |
| | | P 1 1 (0) | | | ERP = EIRP - 2.17 dB | |
| | | Power density (S) | | | Radiated (ERP) dBm | 49.990 |
| | | EIRP | | | | |
| | | = mW/cm^2 | | | | |
| | | 4 p r^2 | | | | |
| | | | | | | |
| | | | | | | |
| | Occupational Limit | | FCC radio frequency radiation exposure limits | | | |
| | mW/cm ² | Frequency (MHz) | Occupational Limit (mW/cm ²) | Public Limit (mW/cm ²) | | |
| | W/m ² | 30-300 | 1 | 0.2 | | |
| | General Public Limit | 300-1,500 | f/300 | f/1500 | | |
| | | 1,500-10,000 | 5 | 1 | | |
| 7.27 | | *************************************** | - | | | |
| 1.21 | W/III | | | | | |
| | | | | | | |
| | Occupational Limit | | | | | |
| 0.6455.60.5 | W/m ² | 1 | IC radio frequency radiation exposure limits po | or DSS 102 | | |
| 0.6455 <i>f</i> ^{0.5} 21.31 | | | | | | |
| | | Frequency (MHz) | Occupational Limit (W/m²) | Public Limit (W/m ²) | | |
| | General Public Limit | 100-6,000 | $0.6455 f^{0.5}$ | | | |
| $0.02619f^{0.6834}$ | W/m ² | 6,000-15,000 | 50 | | | |
| 3.12 | W/m ² | 48-300 | | 1.291 | | |
| | | 300-6,000 | | $0.02619f^{0.6834}$ | | |
| | | 6,000-15,000 | 50 | 10 | | |
| | | 0,000 15,000 | 30 | 10 | | |
| | | | | | | |
| EIRP | S | S | Distance | Distance | Distance | Distance |
| milliwatts | mW/cm ² | W/m ² | cm | meter | inches | Feet |
| 164425.815 | 0.14538 | 1.45384 | 300.00 | 3.00 | 118.11 | 0.25 |
| 164425.815 | 0.20935 | 2.09353 | 250.00 | 2.50 | 98.43 | 0.21 |
| 164425.815 | 0.25846 | 2.58461 | 225.00 | 2.25 | 88.58 | 0.19 |
| 164425.815 | 0.23640 | 3.11353 | 205.00 | 2.05 | 80.71 | 0.17 |
| 164425.815 | 0.58154 | 5.81537 | 150.00 | 1.50 | 59.06 | 0.17 |
| 164425.815 | 0.71795 | 7.17947 | 135.00 | 1.35 | 53.15 | 0.13 |
| 164425.815 | 2.04447 | 20.44467 | 80.00 | 0.80 | 31.50 | 0.07 |
| 164425.815 | 3.40390 | 34.03900 | 62.00 | 0.62 | 24.41 | 0.05 |
| 164425.815 | 3.51642 | 35.16418 | 61.00 | 0.61 | 24.02 | 0.05 |
| 164425.815 | 4.65810 | 46.58096 | 53.00 | 0.53 | 20.87 | 0.04 |
| 164425.815 | 5.23384 | 52.33836 | 50.00 | 0.50 | 19.69 | 0.04 |
| 164425.815 | 8.17787 | 81.77869 | 40.00 | 0.40 | 15.75 | 0.03 |
| 164425.815 | 10.09613 | 100.96135 | 36.00 | 0.36 | 14.17 | 0.03 |
| 164425.815 | 16.68953 | 166.89529 | 28.00 | 0.28 | 11.02 | 0.02 |
| 164425.815 | 17.94868 | 179.48684 | 27.00 | 0.27 | 10.63 | 0.02 |
| 164425.815 | 20.93535 | 209.35345 | 25.00 | 0.25 | 9.84 | 0.02 |
| 164425.815 | 32.71148 | 327.11477 | 20.00 | 0.20 | 7.87 | 0.02 |
| | | | | | | |
| | | | FCC Occupational Limit minimum Distance | Canada Occupational Limit minimum | FCC Public Limit minimum | Canada Public Limit minin |
| | | Frequency (MHz) | | Distance (meters) | | |
| | | 30-300 | (meters) N/A | N/A | distance (meters) N/A | distance (meters) |
| | | 30-300 | N/A 0.61 | N/A 0.62 | 1.25 | N/A 2.05 |
| | | 1,500-10,000 | N/A | N/A | N/A | N/A |
| | | 1,500-10,000 | IN/A | IN/A | IN/A | IN/A |

Rogers Labs, Inc. 4405 W. 259th Terrace Louisburg, KS 66053

Phone/Fax: (913) 837-3214

Revision 1

Trig Avionics Limited

Model: TT26 Test #: 170228

Test to: CFR47 Parts 2, 87

File: TT26 RFExp

SN: 00017 FCC: VZI01629

Date: 10 March, 2017

Page 1 of 1