6b.3 MOTOtalk 900 MHz ISM Band Radiated Spurious Emissions

FCC Limits:

§15.247. In any 100 kHz bandwidth outside the frequency bands, the radio frequency power that is produced by the modulation products of the spreading sequence, the information sequence and the carrier frequency shall be either at least 20 dB below that in any 100 kHz bandwidth within the band that contains the highest level of the desired power or shall not exceed the general levels specified in Sec. 15.209, whichever results in the lesser attenuation. All other emissions outside these bands shall not exceed the general radiated emission limits specified in Sec. 15.209.

§15.35. States the peak of the harmonics shall not exceed 20 dB above the limits specified in 15.209.

Restricted bands specified in 15.205 in the table below:

| MHz | MHz | MHz | GHz |
|----------------------------------|---------------------|---------------|------------------|
| 0.090-0.110 | 16.42-16.423 | 399.9-410 | 4.5–5.15 |
| 10.495-0.505 | 16.69475-16.69525 | 608-614 | 5.35-5.48 |
| 2.1735-2.1905 | 16.80425-16.80475 | 960-1240 | 7.25-7.75 |
| 4.125-4.128 | 25.5-25.67 | 1300-1427 | 8.025-8.5 |
| 4.17725-4.17775 | 37.5-38.25 | 1435-1626.5 | 9.0-9.2 |
| 4.20725-4.20775 | 73-74.6 | 1645.5-1646.5 | 9.3–9.5 |
| 6.215-6.218 | 74.8-75.2 | 1660-1710 | 10.6-12.7 |
| 6.26775-6.26825 | 108-121.94 | 1718.8-1722.2 | 13.25-13.4 |
| 6.31175-6.31225 | 123-138 | 2200-2300 | 14.47-14.5 |
| 8.291-8.294 | 149.9-150.05 | 2310-2390 | 15.35-16.2 |
| 8.362-8.366 | 158.52475-158.52525 | 2483.5-2500 | 17.7-21.4 |
| 8.37625-8.38675 | 156.7-156.9 | 2655-2900 | 22.01-23.12 |
| 8.41425-8.41475 | 162.0125-167.17 | 3260-3267 | 23.6-24.0 |
| 12.29-12.293 | 167.72-173.2 | 3332-3339 | 31.2-31.8 |
| 12.51975-12.52025 | 240-285 | 3345.8-3358 | 36.43-36.5 |
| 12.57675–12.57725 13.36–13.41 | 322–335.4 | 3600-4400 | (²) |

¹Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

- NOTE 1: Spurious emissions are dependent on the linearity of the Power Amplifier (U2051) and are independent of modulation type or TDM interleaving.
- NOTE 2: Spurious emission levels were measured with the non-detachable antenna mounted on the radio product, as in intended use.
- NOTE 3: An asterisk (*) in the data indicates the spurious emission could not be detected due to noise limitations or ambient conditions.
- NOTE 4: Two asterisks (**) after the frequency indicates the harmonic falls in the restricted bands specified in 47 CFR Part 15.205. Emissions limit is 500 μV/m (54 dBμV/m) at 3 meter distance. Emissions not in the restricted band must be 20 dBc.
- NOTE 5: The duty cycle correction factor (see Exhibit 7a) was not applied to these data.

²Above 38.6

Transmitter Radiated Spurious Emissions: i425 ISM Mode

| Frequency (MHz) | FCC Maximum Emission Limit (dBuV/m)) | Horizontal Measured Electric Field Intensity (dBuV/m) | Vertical Measured Electric Field Intensity (dBuV/m) |
|-----------------|---|--|--|
| 1805.0500 | Hor. / Vert. | 45.00 | 43.58 |
| 2707.5750 | 54 | 36.63 | 42.30 |
| 3610.1000 | 54 | 45.41 | 44.43 |
| 4512.6250 | 54 | 37.07 | 37.42 |
| 5415.1500 | 54 | * | * |
| 6317.6750 | 54 | * | * |
| 7220.2000 | 54 | * | * |
| 8122.7250 | 54 | * | * |
| 9025.2500 | 54 | * | * |
| | | | |
| | | | _ |

915.525 MHz

ISM Watts | S/N 364VHE3VTY

| Frequency (MHz) | FCC Maximum Emission Limit (dBuV/m)) | Horizontal Measured Electric Field Intensity (dBuV/m) | Vertical Measured Electric Field Intensity (dBuV/m) |
|-----------------|---|--|--|
| 1831.05 | Hor. / Vert. | 42.12 | 43.54 |
| 2746.5750 | 54 | 47.58 | 36.77 |
| 3662.1000 | 54 | 41.45 | 40.99 |
| 4577.6250 | 54 | 39.58 | 37.39 |
| 5493.1500 | 54 | * | * |
| 6408.6750 | 54 | * | * |
| 7324.2000 | 54 | * | * |
| 8239.7250 | 54 | * | * |
| 9155.2500 | 54 | * | * |
| | | | |
| | | | |

^{*} Indicates the spurious emission could not be detected due to noise limitations or ambients.

927.475 MHz Ch.Sp.: 25kHz

ISM Watts | S/N 364VHE3VTY

| Frequency (MHz) | FCC Maximum Emission Limit (dBuV/m)) | Horizontal Measured Electric Field Intensity (dBuV/m) | Vertical Measured Electric Field Intensity (dBuV/m) |
|-----------------|---|--|--|
| 1854.9500 | Hor. / Vert. | 43.24 | 48.19 |
| 2782.4250 | 54 | 46.31 | 37.18 |
| 3709.9000 | 54 | 43.52 | 42.09 |
| 4637.3750 | 54 | 38.88 | 38.80 |
| 5564.8500 | 54 | * | * |
| 6492.3250 | 54 | * | * |
| 7419.8000 | 54 | * | * |
| 8347.2750 | 54 | * | * |
| 9274.7500 | 54 | * | * |
| | | | |
| | | | |

^{*} Indicates the spurious emission could not be detected due to noise limitations or ambients.

Motorola Plantation EMC Lab – Test Performed by: Frank Baader FCC Registration: 91932 / Industry Canada: IC3679A-1

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