

MEASUREMENT/TECHNICAL REPORT



Intermec Technologies Corporation
EasyLAN® Wireless CF Radio
2.4 GHz Spread Spectrum Transmitter

REPORT NO: 040804-1

DATE: Aug. 8, 2004

Appendix G

TX RADIATED EMISSIONS DATA

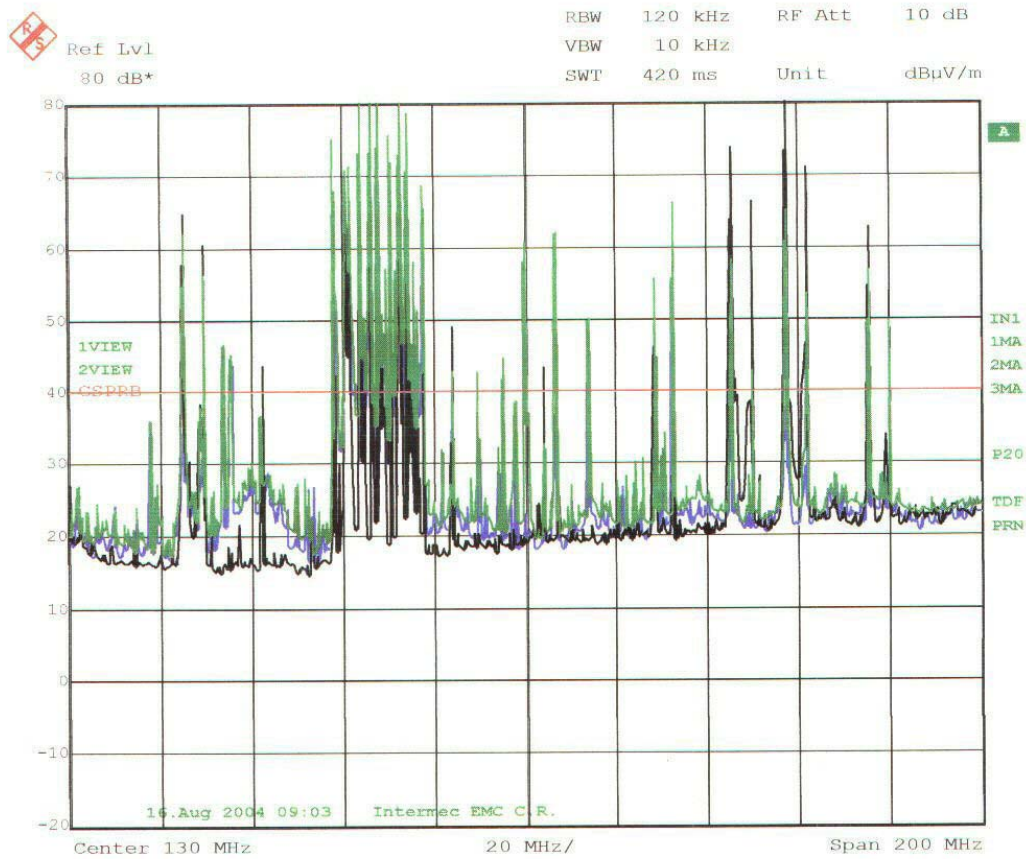
Quasi-peak, average and peak radiated spurious emissions.

Configurations

Pages 2-5 Peak emission scans below 1 GHz.
(no transmitter emissions found)

Pages 6-11 Dipole antenna test data.

Pages 12-17 Dual Panel antenna test data.



Date: 16.AUG.2004 09:03:26

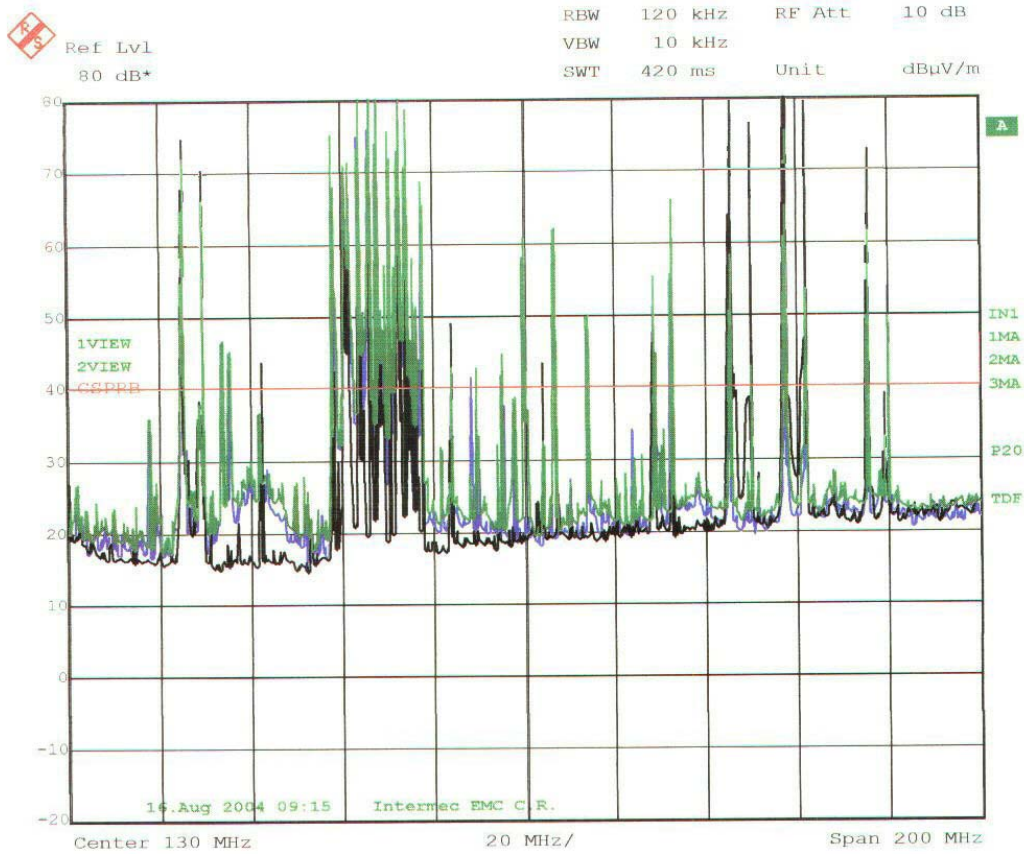
V

TX CH 6

V

TX Ch 6

Blu = TX
 Grn = Stdby
 Blk = Amb.



Date: 16.AUG.2004 09:15:48

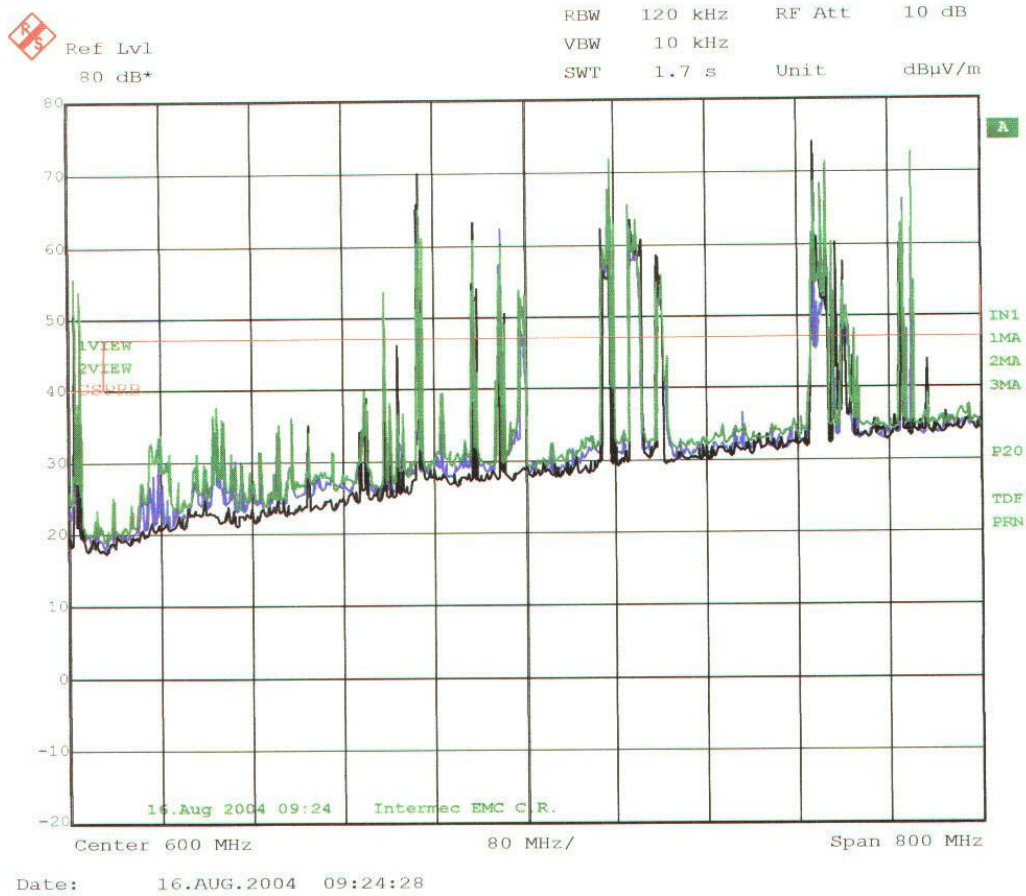
H

TX CH 6

H

TX Ch 6

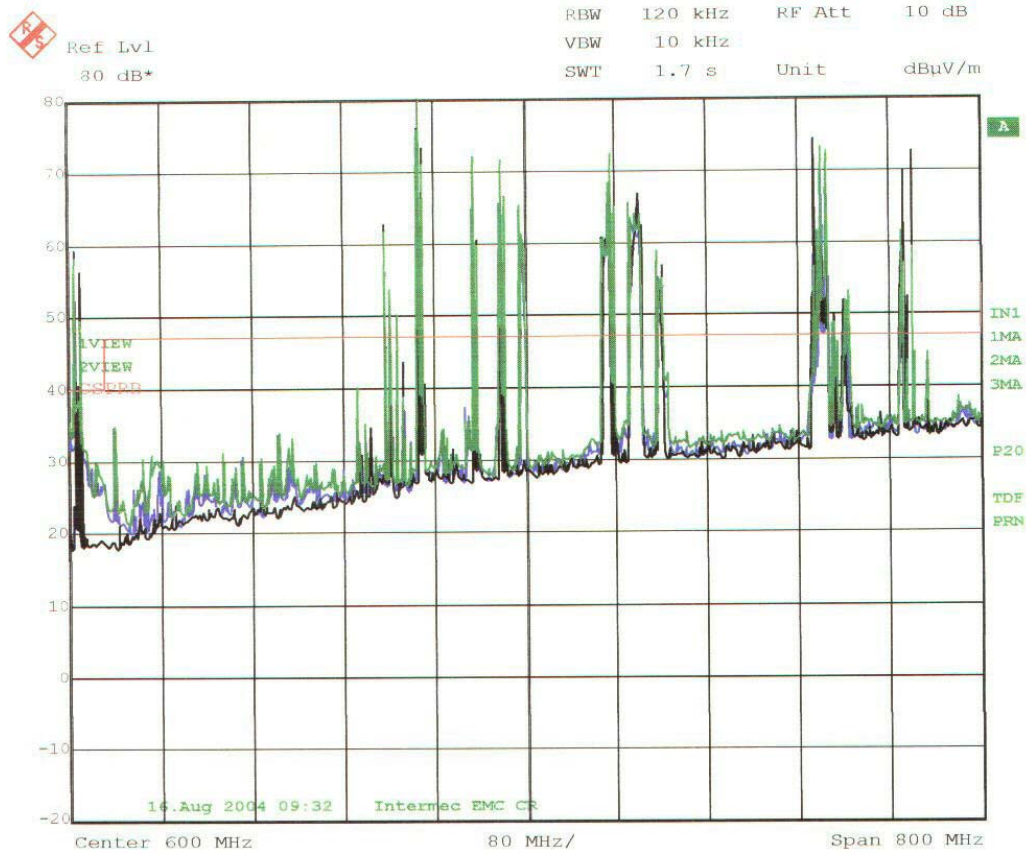
Blu = TX
Grn = Stdby
Blk = Amb.



✓
TX CH 6

V
TX Ch 6

Blu = TX
Grn = stdby
Blk = Amb.



Date: 16.AUG.2004 09:32:39

H
 TX CH 6
 H
 TX ch 6
 Blu = TX
 Grn = Stdby
 Blk = Amb.

AVERAGE TRANSMITTER RADIATED SPURIOUS EMISSIONS

FCC ID: HN2-802CF13E IC: 1223A-802CF13E

Intermec Technologies Corporation

Product: Intermec EasyLAN Wireless with Intermec antenna PN 063363 5 dBi Dipole

EMC Test Laboratory

Set Up: CF Actiontech 802.11b radio within the CF - RF print server board, extended

Cedar Rapids, IA

Test Date (mm/dd/yy): 08/13/04

Standard: FCC 15.247, RSS-210

Measurement System Calibration Date: 08/05/04

AVG Detector 1 MHz BW

| Frequency (MHz) | Measurement Antenna Polarity | EUT Spurious Measured dB(uV) | H.P.filter + Cable Loss (dB) | Antenna Correction Factor dB/M | Amplifier Gain (dB) | Calculated Result dB(uV)/M | AVERAGE Limit @ 1 Meter dB(uV)/Meter | Margin (dB) |
|----------------------|------------------------------|------------------------------|------------------------------|--------------------------------|---------------------|----------------------------|--------------------------------------|-------------|
| a | b | c | d | e | f | g | h | i |
| (formula) | | | | | | (=c+d+e-f) | | (=g-h) |
| Low Channel 1 | | 2412.000 | MHz | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| 2412.000 | Vert | 81.31 | 2.70 | 28.62 | | 112.63 | 113 | 0.00 |
| (Fc) | Hor | 65.32 | 2.70 | 28.62 | | 96.64 | 113 | -15.99 |
| 4824.000 | Vert | 36.88 | 4.80 | 33.54 | 32.86 | 42.36 | 64 | -21.64 |
| (Fc * 2) | Hor | 36.26 | 4.80 | 33.54 | 32.86 | 41.74 | 64 | -22.26 |
| 7236.000 | Vert | 32.20 | 6.40 | 36.68 | 32.16 | 43.12 | 93 | -49.88 |
| (Fc * 3) | Hor | 32.23 | 6.40 | 36.68 | 32.16 | 43.15 | 93 | -49.85 |
| 9648.000 | Vert | 52.84 | 7.10 | 38.18 | 33.40 | 64.72 | 93 | -28.28 |
| (Fc * 4) | Hor | 48.42 | 7.10 | 38.18 | 33.40 | 60.30 | 93 | -32.70 |
| 12060.000 | Vert | 32.37 | 8.00 | 39.10 | 32.40 | 47.07 | 64 | -16.93 |
| (Fc * 5) | Hor | 32.33 | 8.00 | 39.10 | 32.40 | 47.03 | 64 | -16.97 |
| 14472.000 | Vert | 31.62 | 8.80 | 37.08 | 30.56 | 46.94 | 93 | -46.06 |
| (Fc * 6) | Hor | 31.62 | 8.80 | 37.08 | 30.56 | 46.94 | 93 | -46.06 |
| 16884.000 | Vert | 30.88 | 9.80 | 37.22 | 31.26 | 46.64 | 93 | -46.36 |
| (Fc * 7) | Hor | 30.98 | 9.80 | 37.22 | 31.26 | 46.74 | 93 | -46.26 |
| 19296.000 | Vert | 31.53 | 10.70 | 40.25 | 30.70 | 51.78 | 64 | -12.22 |
| (Fc * 8) | Hor | 32.37 | 10.70 | 40.25 | 30.70 | 52.62 | 64 | -11.38 |
| 21708.000 | Vert | 31.66 | 11.80 | 40.33 | 29.28 | 54.51 | 93 | -38.49 |
| (Fc * 9) | Hor | 31.56 | 11.80 | 40.33 | 29.28 | 54.41 | 93 | -38.59 |
| 24120.000 | Vert | 31.02 | 13.00 | 40.41 | 29.40 | 55.03 | 93 | -37.97 |
| (Fc * 10) | Hor | 30.86 | 13.00 | 40.41 | 29.40 | 54.87 | 93 | -38.13 |

| | | | | | | | | |
|-------------------------|------|-----------------|------------|-------|-------|--------|-----|--------|
| Middle Channel 6 | | 2437.000 | MHz | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| 2437.000 | Vert | 81.17 | 2.70 | 28.69 | | 112.56 | 113 | -0.07 |
| (Fc) | Hor | 65.09 | 2.70 | 28.69 | | 96.48 | 113 | -16.15 |
| 4874.000 | Vert | 37.21 | 4.85 | 33.76 | 32.78 | 43.04 | 64 | -20.96 |
| (Fc * 2) | Hor | 37.27 | 4.85 | 33.76 | 32.78 | 43.10 | 64 | -20.90 |
| 7311.000 | Vert | 32.11 | 6.30 | 36.98 | 32.60 | 42.79 | 64 | -21.21 |
| (Fc * 3) | Hor | 32.06 | 6.30 | 36.98 | 32.60 | 42.74 | 64 | -21.26 |
| 9748.000 | Vert | 51.23 | 7.30 | 38.31 | 33.40 | 63.44 | 93 | -29.56 |
| (Fc * 4) | Hor | 48.77 | 7.30 | 38.31 | 33.40 | 60.98 | 93 | -32.02 |
| 12185.000 | Vert | 32.15 | 7.80 | 39.02 | 32.16 | 46.81 | 64 | -17.19 |
| (Fc * 5) | Hor | 32.02 | 7.80 | 39.02 | 32.16 | 46.68 | 64 | -17.32 |
| 14622.000 | Vert | 31.72 | 8.65 | 37.08 | 30.75 | 46.70 | 93 | -46.30 |
| (Fc * 6) | Hor | 31.92 | 8.65 | 37.08 | 30.75 | 46.90 | 93 | -46.10 |
| 17059.000 | Vert | 30.51 | 9.90 | 37.23 | 31.00 | 46.64 | 93 | -46.36 |
| (Fc * 7) | Hor | 30.64 | 9.90 | 37.23 | 31.00 | 46.77 | 93 | -46.23 |
| 19496.000 | Vert | 31.35 | 10.70 | 40.25 | 30.71 | 51.59 | 64 | -12.41 |
| (Fc * 8) | Hor | 32.18 | 10.70 | 40.25 | 30.71 | 52.42 | 64 | -11.58 |
| 21933.000 | Vert | 32.38 | 11.80 | 40.34 | 29.21 | 55.31 | 93 | -37.69 |
| (Fc * 9) | Hor | 32.99 | 11.80 | 40.34 | 29.21 | 55.92 | 93 | -37.08 |
| 24370.000 | Vert | 30.16 | 13.00 | 40.43 | 30.12 | 53.47 | 93 | -39.53 |
| (Fc * 10) | Hor | 29.97 | 13.00 | 40.43 | 30.12 | 53.28 | 93 | -39.72 |

AVERAGE TRANSMITTER RADIATED SPURIOUS EMISSIONS

FCC ID: HN2-802CF13E IC: 1223A-802CF13E

Intermec Technologies Corporation

Product: Intermec EasyLAN Wireless with Intermec antenna PN 063363 5 dBi Dipole

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Cedar Rapids, IA

Test Date (mm/dd/yy): 08/13/04

Standard: FCC 15.247, RSS-210

Measurement System Calibration Date: 08/05/04

AVG Detector 1 MHz BW

| Frequency (MHz) | Measurement Antenna Polarity | EUT Spurious Measured dB(uV) | H.P.filter + Cable Loss (dB) | Antenna Correction Factor dB/M | Amplifier Gain (dB) | Calculated Result dB(uV)/M | AVERAGE Limit @ 1 Meter dB(uV)/Meter | Margin (dB) |
|------------------------|------------------------------|------------------------------|------------------------------|--------------------------------|---------------------|----------------------------|--------------------------------------|-------------|
| a | b | c | d | e | f | g | h | i |
| (formula) | | | | | | (=c+d+e-f) | | (=g-h) |
| High Channel 11 | 2462.000 | MHz | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| 2462.000 | Vert | 80.72 | 2.70 | 28.77 | | 112.19 | 113 | -0.44 |
| (Fc) | Hor | 64.42 | 2.70 | 28.77 | | 95.89 | 113 | -16.74 |
| 4924.000 | Vert | 38.42 | 4.90 | 33.90 | 32.74 | 44.48 | 64 | -19.52 |
| (Fc * 2) | Hor | 36.52 | 4.90 | 33.90 | 32.74 | 42.58 | 64 | -21.42 |
| 7386.000 | Vert | 32.13 | 6.25 | 37.26 | 33.11 | 42.53 | 64 | -21.47 |
| (Fc * 3) | Hor | 31.96 | 6.25 | 37.26 | 33.11 | 42.36 | 64 | -21.64 |
| 9848.000 | Vert | 53.96 | 7.45 | 38.44 | 33.40 | 66.45 | 93 | -26.55 |
| (Fc * 4) | Hor | 50.45 | 7.45 | 38.44 | 33.40 | 62.94 | 93 | -30.06 |
| 12310.000 | Vert | 31.50 | 8.00 | 38.94 | 31.92 | 46.52 | 64 | -17.48 |
| (Fc * 5) | Hor | 31.37 | 8.00 | 38.94 | 31.92 | 46.39 | 64 | -17.61 |
| 14772.000 | Vert | 32.48 | 8.85 | 37.09 | 31.00 | 47.42 | 93 | -45.58 |
| (Fc * 6) | Hor | 32.13 | 8.85 | 37.09 | 31.00 | 47.07 | 93 | -45.93 |
| 17234.000 | Vert | 30.84 | 10.00 | 37.24 | 31.25 | 46.83 | 93 | -46.17 |
| (Fc * 7) | Hor | 30.99 | 10.00 | 37.24 | 31.25 | 46.98 | 93 | -46.02 |
| 19696.000 | Vert | 31.01 | 10.70 | 40.26 | 30.84 | 51.13 | 93 | -41.87 |
| (Fc * 8) | Hor | 31.61 | 10.70 | 40.26 | 30.84 | 51.73 | 64 | -12.27 |
| 22158.000 | Vert | 31.83 | 11.80 | 40.34 | 29.70 | 54.27 | 64 | -9.73 |
| (Fc * 9) | Hor | 31.70 | 11.80 | 40.34 | 29.70 | 54.14 | 64 | -9.86 |
| 24620.000 | Vert | 30.03 | 13.00 | 40.44 | 30.78 | 52.69 | 93 | -40.31 |
| (Fc * 10) | Hor | 29.97 | 13.00 | 40.44 | 30.78 | 52.63 | 93 | -40.37 |

AVERAGE TRANSMITTER RADIATED SPURIOUS EMISSIONS

FCC ID: HN2-802CF13E IC: 1223A-802CF13E

Intermec Technologies Corporation

Product: Intermec EasyLAN Wireless with Intermec antenna PN 063363 5 dBi Dipole

EMC Test Laboratory

Set Up: CF Actiontech 802.11b radio within the CF - RF print server board, extended

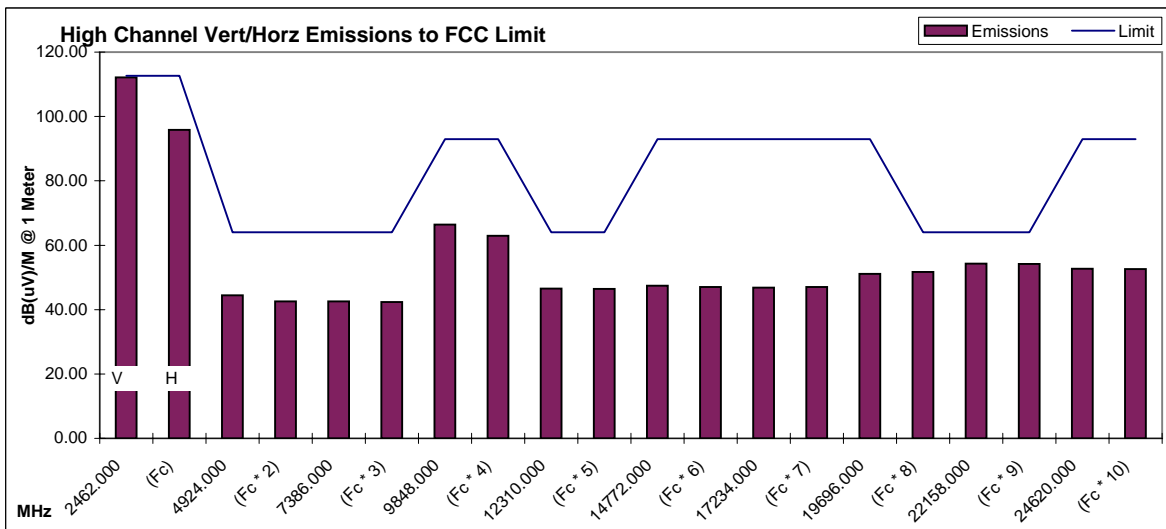
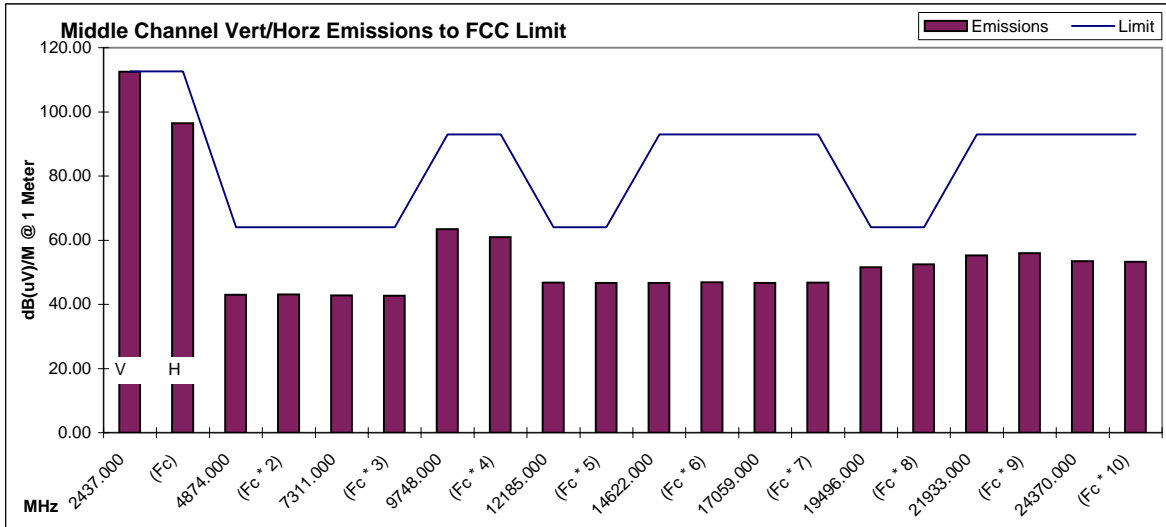
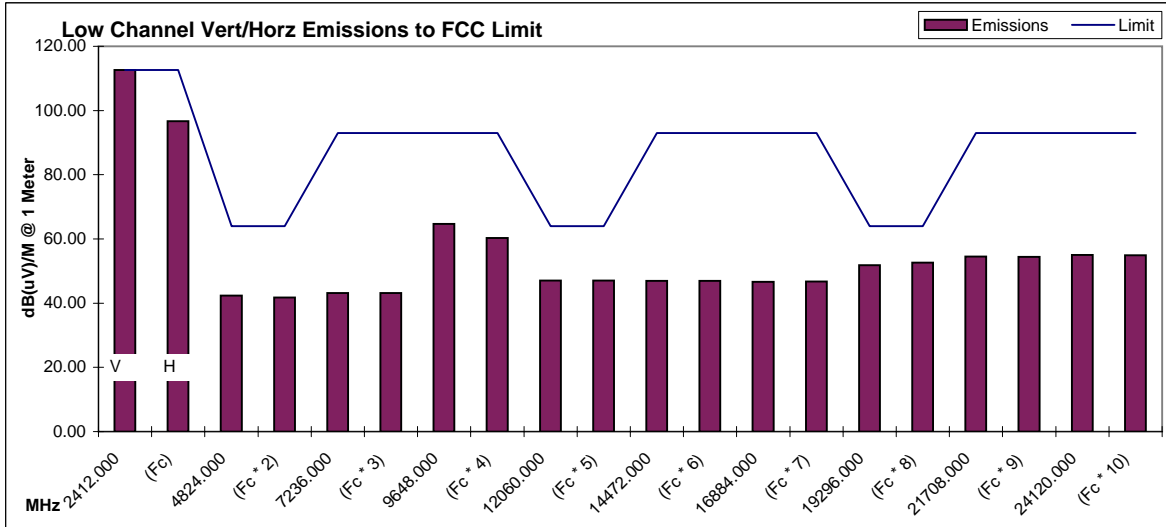
Cedar Rapids, IA

Test Date (mm/dd/yy): 08/13/04

Standard: FCC 15.247, RSS-210

Measurement System Calibration Date: 08/05/04

AVG Detector 1 MHz BW



PEAK TRANSMITTER RADIATED SPURIOUS EMISSIONS

FCC ID: HN2-802CF13E IC: 1223A-802CF13E

Intermec Technologies Corporation

Product: Intermec EasyLAN Wireless with Intermec antenna PN 063363 5 dBi Dipole

EMC Test Laboratory

Set Up: CF Actiontech 802.11b radio within the CF - RF print server board, extended

Cedar Rapids, IA

Test Date (mm/dd/yy): 08/13/04

Standard: FCC 15.247, RSS-210

Measurement System Calibration Date: 08/05/04

PK Detector 1 MHz BW

| Frequency (MHz) | Measurement Antenna Polarity | EUT Spurious Measured dB(uV) | H.P.filter + Cable Loss (dB) | Antenna Correction Factor dB/M | Amplifier Gain (dB) | Calculated Result dB(uV)/M | PEAK Limit @ 1 Meter dB(uV)/Meter | Margin (dB) |
|----------------------|------------------------------|------------------------------|------------------------------|--------------------------------|---------------------|----------------------------|-----------------------------------|-------------|
| a | b | c | d | e | f | g | h | i |
| (formula) | | | | | | (=c+d+e-f) | | (=g-h) |
| Low Channel 1 | | 2412.000 | MHz | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| 2412.000 | Vert | 90.50 | 2.70 | 28.62 | | 121.82 | 122.06 | -0.24 |
| (Fc) | Hor | 72.52 | 2.70 | 28.62 | | 103.84 | 122.06 | -18.22 |
| 4824.000 | Vert | 47.18 | 4.80 | 33.54 | 32.86 | 52.66 | 84 | -31.34 |
| (Fc * 2) | Hor | 45.14 | 4.80 | 33.54 | 32.86 | 50.62 | 84 | -33.38 |
| 7236.000 | Vert | 43.85 | 6.40 | 36.68 | 32.16 | 54.77 | 84 | -29.23 |
| (Fc * 3) | Hor | 44.45 | 6.40 | 36.68 | 32.16 | 55.37 | 84 | -28.63 |
| 9648.000 | Vert | 54.48 | 7.10 | 38.18 | 33.40 | 66.36 | 84 | -17.64 |
| (Fc * 4) | Hor | 51.08 | 7.10 | 38.18 | 33.40 | 62.96 | 84 | -21.04 |
| 12060.000 | Vert | 44.95 | 8.00 | 39.10 | 32.40 | 59.65 | 84 | -24.35 |
| (Fc * 5) | Hor | 43.41 | 8.00 | 39.10 | 32.40 | 58.11 | 84 | -25.89 |
| 14472.000 | Vert | 42.99 | 8.80 | 37.08 | 30.56 | 58.31 | 84 | -25.69 |
| (Fc * 6) | Hor | 43.19 | 8.80 | 37.08 | 30.56 | 58.51 | 84 | -25.49 |
| 16884.000 | Vert | 42.67 | 9.80 | 37.22 | 31.26 | 58.43 | 84 | -25.57 |
| (Fc * 7) | Hor | 42.69 | 9.80 | 37.22 | 31.26 | 58.45 | 84 | -25.55 |
| 19296.000 | Vert | 43.63 | 10.70 | 40.25 | 30.70 | 63.88 | 84 | -20.12 |
| (Fc * 8) | Hor | 43.13 | 10.70 | 40.25 | 30.70 | 63.38 | 84 | -20.62 |
| 21708.000 | Vert | 44.00 | 11.80 | 40.33 | 29.28 | 66.85 | 84 | -17.15 |
| (Fc * 9) | Hor | 43.12 | 11.80 | 40.33 | 29.28 | 65.97 | 84 | -18.03 |
| 24120.000 | Vert | 42.46 | 13.00 | 40.41 | 29.40 | 66.47 | 84 | -17.53 |
| (Fc * 10) | Hor | 42.90 | 13.00 | 40.41 | 29.40 | 66.91 | 84 | -17.09 |

| | | | | | | | | |
|-------------------------|------|-------------|------------|-------|-------|--------|--------|--------|
| Middle Channel 6 | | 2437 | MHz | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| 2437.000 | Vert | 90.67 | 2.70 | 28.69 | | 122.06 | 122.06 | |
| (Fc) | Hor | 72.11 | 2.70 | 28.69 | | 103.50 | 122.06 | -18.56 |
| 4874.000 | Vert | 45.29 | 4.85 | 33.76 | 32.78 | 51.12 | 84 | -32.88 |
| (Fc * 2) | Hor | 45.09 | 4.85 | 33.76 | 32.78 | 50.92 | 84 | -33.08 |
| 7311.000 | Vert | 43.78 | 6.30 | 36.98 | 32.60 | 54.46 | 84 | -29.54 |
| (Fc * 3) | Hor | 43.93 | 6.30 | 36.98 | 32.60 | 54.61 | 84 | -29.39 |
| 9748.000 | Vert | 53.39 | 7.30 | 38.31 | 33.40 | 65.60 | 84 | -18.40 |
| (Fc * 4) | Hor | 50.68 | 7.30 | 38.31 | 33.40 | 62.89 | 84 | -21.11 |
| 12185.000 | Vert | 43.57 | 7.80 | 39.02 | 32.16 | 58.23 | 84 | -25.77 |
| (Fc * 5) | Hor | 43.26 | 7.80 | 39.02 | 32.16 | 57.92 | 84 | -26.08 |
| 14622.000 | Vert | 43.58 | 8.65 | 37.08 | 30.75 | 58.56 | 84 | -25.44 |
| (Fc * 6) | Hor | 43.81 | 8.65 | 37.08 | 30.75 | 58.79 | 84 | -25.21 |
| 17059.000 | Vert | 42.81 | 9.90 | 37.23 | 31.00 | 58.94 | 84 | -25.06 |
| (Fc * 7) | Hor | 42.67 | 9.90 | 37.23 | 31.00 | 58.80 | 84 | -25.20 |
| 19496.000 | Vert | 43.63 | 10.70 | 40.25 | 30.71 | 63.87 | 84 | -20.13 |
| (Fc * 8) | Hor | 43.00 | 10.70 | 40.25 | 30.71 | 63.24 | 84 | -20.76 |
| 21933.000 | Vert | 44.80 | 11.80 | 40.34 | 29.21 | 67.73 | 84 | -16.27 |
| (Fc * 9) | Hor | 44.52 | 11.80 | 40.34 | 29.21 | 67.45 | 84 | -16.55 |
| 24370.000 | Vert | 41.76 | 13.00 | 40.43 | 30.12 | 65.07 | 84 | -18.93 |
| (Fc * 10) | Hor | 41.72 | 13.00 | 40.43 | 30.12 | 65.03 | 84 | -18.97 |

PEAK TRANSMITTER RADIATED SPURIOUS EMISSIONS

FCC ID: HN2-802CF13E IC: 1223A-802CF13E

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EMC Test Laboratory

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Cedar Rapids, IA

Test Date (mm/dd/yy): 08/13/04

Standard: FCC 15.247, RSS-210

Measurement System Calibration Date: 08/05/04

PK Detector 1 MHz BW

| Frequency (MHz) | Measurement Antenna Polarity | EUT Spurious Measured dB(uV) | H.P.filter + Cable Loss (dB) | Antenna Correction Factor dB/M | Amplifier Gain (dB) | Calculated Result dB(uV)/M | PEAK Limit @ 1 Meter dB(uV)/Meter | Margin (dB) |
|------------------------|------------------------------|------------------------------|------------------------------|--------------------------------|---------------------|----------------------------|-----------------------------------|-------------|
| a | b | c | d | e | f | g | h | i |
| (formula) | | | | | | (=c+d+e-f) | | (=g-h) |
| High Channel 11 | 2462 | MHz | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| 2462.000 | Vert | 90.16 | 2.70 | 28.77 | | 121.63 | 122.06 | -0.43 |
| (Fc) | Hor | 71.89 | 2.70 | 28.77 | | 103.36 | 122.06 | -18.70 |
| 4924.000 | Vert | 47.36 | 4.90 | 33.90 | 32.74 | 53.42 | 84 | -30.58 |
| (Fc * 2) | Hor | 44.44 | 4.90 | 33.90 | 32.74 | 50.50 | 84 | -33.50 |
| 7386.000 | Vert | 44.09 | 6.25 | 37.26 | 33.11 | 54.49 | 84 | -29.51 |
| (Fc * 3) | Hor | 43.81 | 6.25 | 37.26 | 33.11 | 54.21 | 84 | -29.79 |
| 9848.000 | Vert | 55.57 | 7.45 | 38.44 | 33.40 | 68.06 | 84 | -15.94 |
| (Fc * 4) | Hor | 52.46 | 7.45 | 38.44 | 33.40 | 64.95 | 84 | -19.05 |
| 12310.000 | Vert | 43.13 | 8.00 | 38.94 | 31.92 | 58.15 | 84 | -25.85 |
| (Fc * 5) | Hor | 43.46 | 8.00 | 38.94 | 31.92 | 58.48 | 84 | -25.52 |
| 14772.000 | Vert | 44.46 | 8.85 | 37.09 | 31.00 | 59.40 | 84 | -24.60 |
| (Fc * 6) | Hor | 43.85 | 8.85 | 37.09 | 31.00 | 58.79 | 84 | -25.21 |
| 17234.000 | Vert | 42.75 | 10.00 | 37.24 | 31.25 | 58.74 | 84 | -25.26 |
| (Fc * 7) | Hor | 42.67 | 10.00 | 37.24 | 31.25 | 58.66 | 84 | -25.34 |
| 19696.000 | Vert | 42.51 | 10.70 | 40.26 | 30.84 | 62.63 | 84 | -21.37 |
| (Fc * 8) | Hor | 42.85 | 10.70 | 40.26 | 30.84 | 62.97 | 84 | -21.03 |
| 22158.000 | Vert | 43.75 | 11.80 | 40.34 | 29.70 | 66.19 | 84 | -17.81 |
| (Fc * 9) | Hor | 44.08 | 11.80 | 40.34 | 29.70 | 66.52 | 84 | -17.48 |
| 24620.000 | Vert | 41.58 | 13.00 | 40.44 | 30.78 | 64.24 | 84 | -19.76 |
| (Fc * 10) | Hor | 42.12 | 13.00 | 40.44 | 30.78 | 64.78 | 84 | -19.22 |

PEAK TRANSMITTER RADIATED SPURIOUS EMISSIONS

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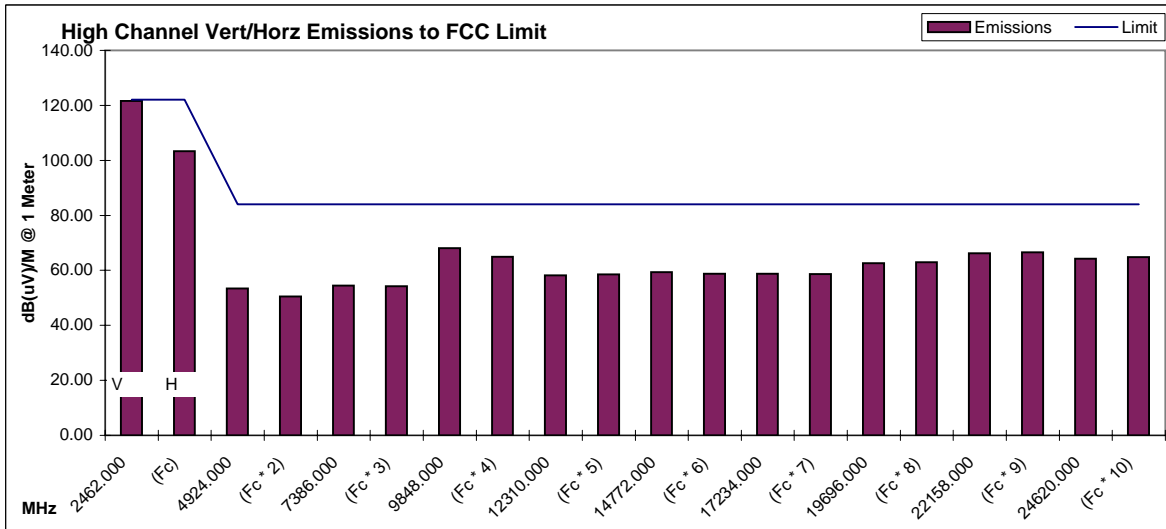
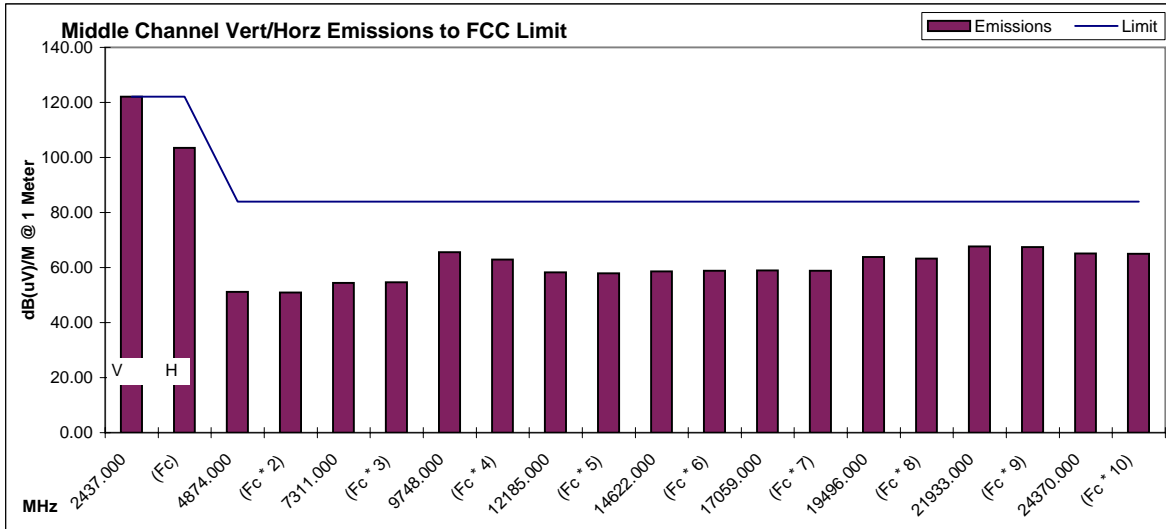
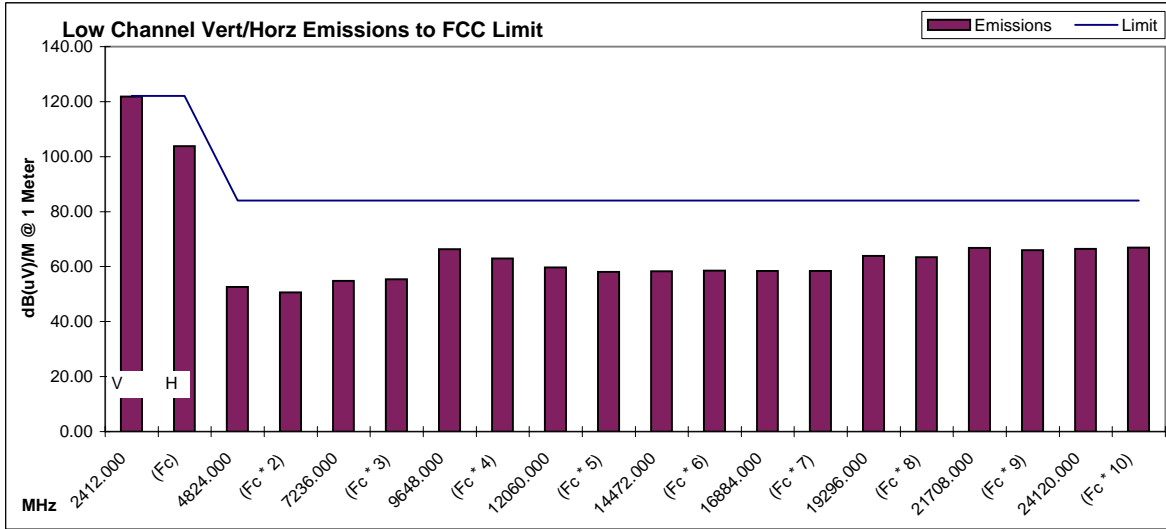
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PK Detector 1 MHz BW



AVERAGE TRANSMITTER RADIATED SPURIOUS EMISSIONS

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Intermec Technologies Corporation

Product: Intermec EasyLAN Wireless with Intermec antenna PN 067262 5 dBi Dual Panel

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| Frequency (MHz) | Measurement Antenna Polarity | EUT Spurious Measured dB(uV) | H.P.filter + Cable Loss (dB) | Antenna Correction Factor dB/M | Amplifier Gain (dB) | Calculated Result dB(uV)/M | AVERAGE Limit @ 1 Meter dB(uV)/Meter | Margin (dB) |
|----------------------|------------------------------|------------------------------|------------------------------|--------------------------------|---------------------|----------------------------|--------------------------------------|-------------|
| a | b | c | d | e | f | g | h | i |
| (formula) | | | | | | (=c+d+e-f) | | (=g-h) |
| Low Channel 1 | | 2412.000 | MHz | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| 2412.000 | Vert | 81.34 | 2.70 | 28.62 | | 112.66 | 114 | -1.12 |
| (Fc) | Hor | 74.49 | 2.70 | 28.62 | | 105.81 | 114 | -7.97 |
| 4824.000 | Vert | 38.11 | 4.80 | 33.54 | 32.86 | 43.59 | 64 | -20.41 |
| (Fc * 2) | Hor | 36.60 | 4.80 | 33.54 | 32.86 | 42.08 | 64 | -21.92 |
| 7236.000 | Vert | 32.12 | 6.40 | 36.68 | 32.16 | 43.04 | 94 | -50.96 |
| (Fc * 3) | Hor | 32.51 | 6.40 | 36.68 | 32.16 | 43.43 | 94 | -50.57 |
| 9648.000 | Vert | 51.43 | 7.10 | 38.18 | 33.40 | 63.31 | 94 | -30.69 |
| (Fc * 4) | Hor | 46.09 | 7.10 | 38.18 | 33.40 | 57.97 | 94 | -36.03 |
| 12060.000 | Vert | 31.94 | 8.00 | 39.10 | 32.40 | 46.64 | 64 | -17.36 |
| (Fc * 5) | Hor | 31.92 | 8.00 | 39.10 | 32.40 | 46.62 | 64 | -17.38 |
| 14472.000 | Vert | 31.60 | 8.80 | 37.08 | 30.56 | 46.92 | 94 | -47.08 |
| (Fc * 6) | Hor | 31.68 | 8.80 | 37.08 | 30.56 | 47.00 | 94 | -47.00 |
| 16884.000 | Vert | 30.76 | 9.80 | 37.22 | 31.26 | 46.52 | 94 | -47.48 |
| (Fc * 7) | Hor | 30.68 | 9.80 | 37.22 | 31.26 | 46.44 | 94 | -47.56 |
| 19296.000 | Vert | 31.37 | 10.70 | 40.25 | 30.70 | 51.62 | 64 | -12.38 |
| (Fc * 8) | Hor | 32.48 | 10.70 | 40.25 | 30.70 | 52.73 | 64 | -11.27 |
| 21708.000 | Vert | 31.38 | 11.80 | 40.33 | 29.28 | 54.23 | 94 | -39.77 |
| (Fc * 9) | Hor | 31.27 | 11.80 | 40.33 | 29.28 | 54.12 | 94 | -39.88 |
| 24120.000 | Vert | 30.31 | 13.00 | 40.41 | 29.40 | 54.32 | 94 | -39.68 |
| (Fc * 10) | Hor | 30.52 | 13.00 | 40.41 | 29.40 | 54.53 | 94 | -39.47 |

| | | | | | | | | |
|-------------------------|------|-----------------|------------|-------|-------|--------|-----|--------|
| Middle Channel 6 | | 2437.000 | MHz | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| 2437.000 | Vert | 81.98 | 2.70 | 28.69 | | 113.37 | 114 | -0.41 |
| (Fc) | Hor | 73.37 | 2.70 | 28.69 | | 104.76 | 114 | -9.02 |
| 4874.000 | Vert | 39.02 | 4.85 | 33.76 | 32.78 | 44.85 | 64 | -19.15 |
| (Fc * 2) | Hor | 37.94 | 4.85 | 33.76 | 32.78 | 43.77 | 64 | -20.23 |
| 7311.000 | Vert | 32.11 | 6.30 | 36.98 | 32.60 | 42.79 | 64 | -21.21 |
| (Fc * 3) | Hor | 31.97 | 6.30 | 36.98 | 32.60 | 42.65 | 64 | -21.35 |
| 9748.000 | Vert | 52.89 | 7.30 | 38.31 | 33.40 | 65.10 | 94 | -28.90 |
| (Fc * 4) | Hor | 48.01 | 7.30 | 38.31 | 33.40 | 60.22 | 94 | -33.78 |
| 12185.000 | Vert | 31.92 | 7.80 | 39.02 | 32.16 | 46.58 | 64 | -17.42 |
| (Fc * 5) | Hor | 31.79 | 7.80 | 39.02 | 32.16 | 46.45 | 64 | -17.55 |
| 14622.000 | Vert | 31.99 | 8.65 | 37.08 | 30.75 | 46.97 | 94 | -47.03 |
| (Fc * 6) | Hor | 32.21 | 8.65 | 37.08 | 30.75 | 47.19 | 94 | -46.81 |
| 17059.000 | Vert | 30.47 | 9.90 | 37.23 | 31.00 | 46.60 | 94 | -47.40 |
| (Fc * 7) | Hor | 30.67 | 9.90 | 37.23 | 31.00 | 46.80 | 94 | -47.20 |
| 19496.000 | Vert | 31.87 | 10.70 | 40.25 | 30.71 | 52.11 | 64 | -11.89 |
| (Fc * 8) | Hor | 32.72 | 10.70 | 40.25 | 30.71 | 52.96 | 64 | -11.04 |
| 21933.000 | Vert | 32.73 | 11.80 | 40.34 | 29.21 | 55.66 | 94 | -38.34 |
| (Fc * 9) | Hor | 32.70 | 11.80 | 40.34 | 29.21 | 55.63 | 94 | -38.37 |
| 24370.000 | Vert | 30.02 | 13.00 | 40.43 | 30.12 | 53.33 | 94 | -40.67 |
| (Fc * 10) | Hor | 29.72 | 13.00 | 40.43 | 30.12 | 53.03 | 94 | -40.97 |

AVERAGE TRANSMITTER RADIATED SPURIOUS EMISSIONS

FCC ID: HN2-802CF13E IC: 1223A-802CF13E

Intermec Technologies Corporation

Product: Intermec EasyLAN Wireless with Intermec antenna PN 067262 5 dBi Dual Panel

EMC Test Laboratory

Set Up: CF Actiontech 802.11b radio within the CF - RF print server board, extended

Cedar Rapids, IA

Test Date (mm/dd/yy): 08/13/04

Standard: FCC 15.247, RSS-210

Measurement System Calibration Date: 08/05/04

AVG Detector 1 MHz BW

| Frequency (MHz) | Measurement Antenna Polarity | EUT Spurious Measured dB(uV) | H.P.filter + Cable Loss (dB) | Antenna Correction Factor dB/M | Amplifier Gain (dB) | Calculated Result dB(uV)/M | AVERAGE Limit @ 1 Meter dB(uV)/Meter | Margin (dB) |
|------------------------|------------------------------|------------------------------|------------------------------|--------------------------------|---------------------|----------------------------|--------------------------------------|-------------|
| a | b | c | d | e | f | g | h | i |
| (formula) | | | | | | (=c+d+e-f) | | (=g-h) |
| High Channel 11 | 2462.000 | MHz | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| 2462.000 | Vert | 82.31 | 2.70 | 28.77 | | 113.78 | 114 | |
| (Fc) | Hor | 73.25 | 2.70 | 28.77 | | 104.72 | 114 | -9.06 |
| 4924.000 | Vert | 38.78 | 4.90 | 33.90 | 32.74 | 44.84 | 64 | -19.16 |
| (Fc * 2) | Hor | 38.12 | 4.90 | 33.90 | 32.74 | 44.18 | 64 | -19.82 |
| 7386.000 | Vert | 32.25 | 6.25 | 37.26 | 33.11 | 42.65 | 64 | -21.35 |
| (Fc * 3) | Hor | 32.34 | 6.25 | 37.26 | 33.11 | 42.74 | 64 | -21.26 |
| 9848.000 | Vert | 54.42 | 7.45 | 38.44 | 33.40 | 66.91 | 94 | -27.09 |
| (Fc * 4) | Hor | 50.62 | 7.45 | 38.44 | 33.40 | 63.11 | 94 | -30.89 |
| 12310.000 | Vert | 31.33 | 8.00 | 38.94 | 31.92 | 46.35 | 64 | -17.65 |
| (Fc * 5) | Hor | 31.51 | 8.00 | 38.94 | 31.92 | 46.53 | 64 | -17.47 |
| 14772.000 | Vert | 32.50 | 8.85 | 37.09 | 31.00 | 47.44 | 94 | -46.56 |
| (Fc * 6) | Hor | 33.19 | 8.85 | 37.09 | 31.00 | 48.13 | 94 | -45.87 |
| 17234.000 | Vert | 30.81 | 10.00 | 37.24 | 31.25 | 46.80 | 94 | -47.20 |
| (Fc * 7) | Hor | 30.76 | 10.00 | 37.24 | 31.25 | 46.75 | 94 | -47.25 |
| 19696.000 | Vert | 31.28 | 10.70 | 40.26 | 30.84 | 51.40 | 94 | -42.60 |
| (Fc * 8) | Hor | 31.40 | 10.70 | 40.26 | 30.84 | 51.52 | 64 | -12.48 |
| 22158.000 | Vert | 31.72 | 11.80 | 40.34 | 29.70 | 54.16 | 64 | -9.84 |
| (Fc * 9) | Hor | 31.52 | 11.80 | 40.34 | 29.70 | 53.96 | 64 | -10.04 |
| 24620.000 | Vert | 29.44 | 13.00 | 40.44 | 30.78 | 52.10 | 94 | -41.90 |
| (Fc * 10) | Hor | 29.68 | 13.00 | 40.44 | 30.78 | 52.34 | 94 | -41.66 |

AVERAGE TRANSMITTER RADIATED SPURIOUS EMISSIONS

FCC ID: HN2-802CF13E IC: 1223A-802CF13E

Intermec Technologies Corporation

Product: Intermec EasyLAN Wireless with Intermec antenna PN 067262 5 dBi Dual Panel

EMC Test Laboratory

Set Up: CF Actiontech 802.11b radio within the CF - RF print server board, extended

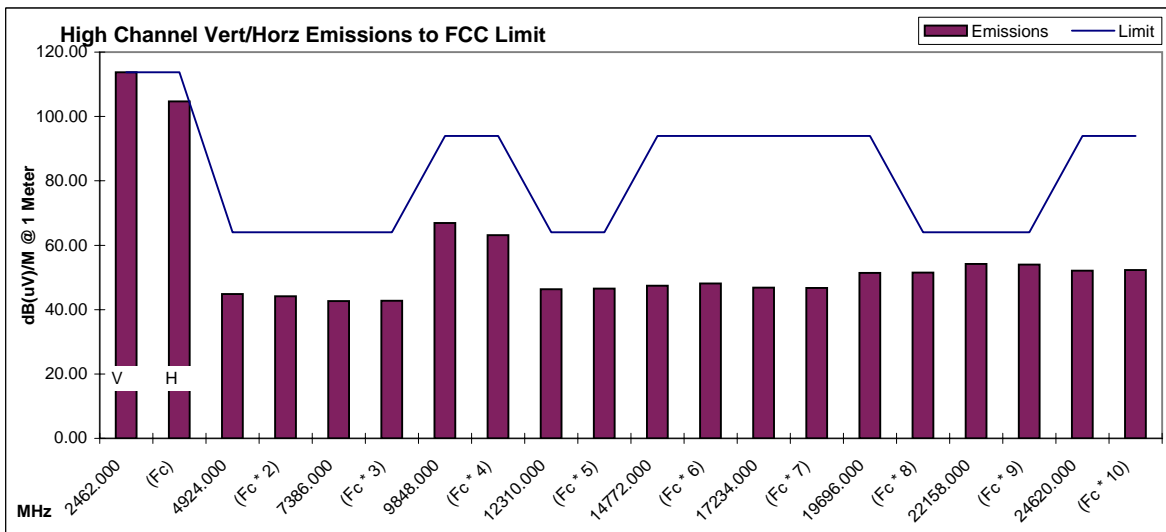
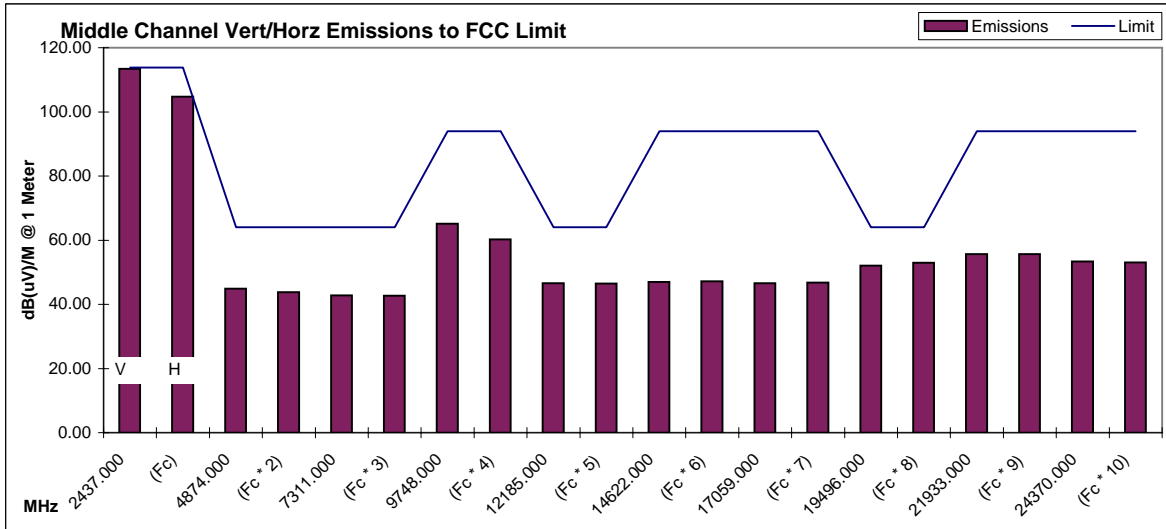
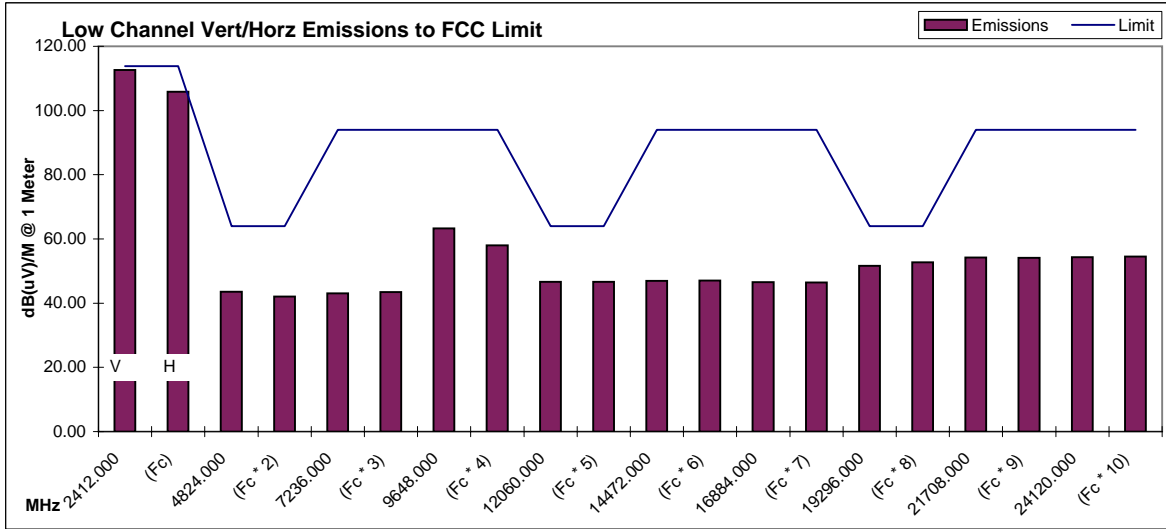
Cedar Rapids, IA

Test Date (mm/dd/yy): 08/13/04

Standard: FCC 15.247, RSS-210

Measurement System Calibration Date: 08/05/04

AVG Detector 1 MHz BW



PEAK TRANSMITTER RADIATED SPURIOUS EMISSIONS

FCC ID: HN2-802CF13E IC: 1223A-802CF13E

Intermec Technologies Corporation

Product: Intermec EasyLAN Wireless with Intermec antenna PN 067262 5 dBi Dual Panel

EMC Test Laboratory

Set Up: CF Actiontech 802.11b radio within the CF - RF print server board, extended

Cedar Rapids, IA

Test Date (mm/dd/yy): 08/13/04

Standard: FCC 15.247, RSS-210

Measurement System Calibration Date: 08/05/04

PK Detector 1 MHz BW

| Frequency (MHz) | Measurement Antenna Polarity | EUT Spurious Measured dB(uV) | H.P.filter + Cable Loss (dB) | Antenna Correction Factor dB/M | Amplifier Gain (dB) | Calculated Result dB(uV)/M | PEAK Limit @ 1 Meter dB(uV)/Meter | Margin (dB) |
|----------------------|------------------------------|------------------------------|------------------------------|--------------------------------|---------------------|----------------------------|-----------------------------------|-------------|
| a | b | c | d | e | f | g | h | i |
| (formula) | | | | | | (=c+d+e-f) | | (=g-h) |
| Low Channel 1 | | 2412.000 | MHz | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| 2412.000 | Vert | 90.79 | 2.70 | 28.62 | | 122.11 | 123 | -0.89 |
| (Fc) | Hor | 82.10 | 2.70 | 28.62 | | 113.42 | 123 | -9.58 |
| 4824.000 | Vert | 45.50 | 4.80 | 33.54 | 32.86 | 50.98 | 84 | -33.02 |
| (Fc * 2) | Hor | 46.52 | 4.80 | 33.54 | 32.86 | 52.00 | 84 | -32.00 |
| 7236.000 | Vert | 44.13 | 6.40 | 36.68 | 32.16 | 55.05 | 84 | -28.95 |
| (Fc * 3) | Hor | 43.82 | 6.40 | 36.68 | 32.16 | 54.74 | 84 | -29.26 |
| 9648.000 | Vert | 53.68 | 7.10 | 38.18 | 33.40 | 65.56 | 84 | -18.44 |
| (Fc * 4) | Hor | 49.41 | 7.10 | 38.18 | 33.40 | 61.29 | 84 | -22.71 |
| 12060.000 | Vert | 43.84 | 8.00 | 39.10 | 32.40 | 58.54 | 84 | -25.46 |
| (Fc * 5) | Hor | 43.76 | 8.00 | 39.10 | 32.40 | 58.46 | 84 | -25.54 |
| 14472.000 | Vert | 43.12 | 8.80 | 37.08 | 30.56 | 58.44 | 84 | -25.56 |
| (Fc * 6) | Hor | 43.31 | 8.80 | 37.08 | 30.56 | 58.63 | 84 | -25.37 |
| 16884.000 | Vert | 42.51 | 9.80 | 37.22 | 31.26 | 58.27 | 84 | -25.73 |
| (Fc * 7) | Hor | 43.03 | 9.80 | 37.22 | 31.26 | 58.79 | 84 | -25.21 |
| 19296.000 | Vert | 43.88 | 10.70 | 40.25 | 30.70 | 64.13 | 84 | -19.87 |
| (Fc * 8) | Hor | 42.66 | 10.70 | 40.25 | 30.70 | 62.91 | 84 | -21.09 |
| 21708.000 | Vert | 43.26 | 11.80 | 40.33 | 29.28 | 66.11 | 84 | -17.89 |
| (Fc * 9) | Hor | 43.15 | 11.80 | 40.33 | 29.28 | 66.00 | 84 | -18.00 |
| 24120.000 | Vert | 41.81 | 13.00 | 40.41 | 29.40 | 65.82 | 84 | -18.18 |
| (Fc * 10) | Hor | 42.40 | 13.00 | 40.41 | 29.40 | 66.41 | 84 | -17.59 |

| | | | | | | | | |
|-------------------------|------|-------------|------------|-------|-------|--------|-----|--------|
| Middle Channel 6 | | 2437 | MHz | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| 2437.000 | Vert | 91.41 | 2.70 | 28.69 | | 122.80 | 123 | -0.20 |
| (Fc) | Hor | 80.99 | 2.70 | 28.69 | | 112.38 | 123 | -10.62 |
| 4874.000 | Vert | 47.15 | 4.85 | 33.76 | 32.78 | 52.98 | 84 | -31.02 |
| (Fc * 2) | Hor | 45.39 | 4.85 | 33.76 | 32.78 | 51.22 | 84 | -32.78 |
| 7311.000 | Vert | 43.58 | 6.30 | 36.98 | 32.60 | 54.26 | 84 | -29.74 |
| (Fc * 3) | Hor | 43.56 | 6.30 | 36.98 | 32.60 | 54.24 | 84 | -29.76 |
| 9748.000 | Vert | 54.81 | 7.30 | 38.31 | 33.40 | 67.02 | 84 | -16.98 |
| (Fc * 4) | Hor | 51.36 | 7.30 | 38.31 | 33.40 | 63.57 | 84 | -20.43 |
| 12185.000 | Vert | 43.03 | 7.80 | 39.02 | 32.16 | 57.69 | 84 | -26.31 |
| (Fc * 5) | Hor | 43.66 | 7.80 | 39.02 | 32.16 | 58.32 | 84 | -25.68 |
| 14622.000 | Vert | 43.64 | 8.65 | 37.08 | 30.75 | 58.62 | 84 | -25.38 |
| (Fc * 6) | Hor | 43.10 | 8.65 | 37.08 | 30.75 | 58.08 | 84 | -25.92 |
| 17059.000 | Vert | 42.61 | 9.90 | 37.23 | 31.00 | 58.74 | 84 | -25.26 |
| (Fc * 7) | Hor | 42.43 | 9.90 | 37.23 | 31.00 | 58.56 | 84 | -25.44 |
| 19496.000 | Vert | 42.39 | 10.70 | 40.25 | 30.71 | 62.63 | 84 | -21.37 |
| (Fc * 8) | Hor | 42.80 | 10.70 | 40.25 | 30.71 | 63.04 | 84 | -20.96 |
| 21933.000 | Vert | 44.48 | 11.80 | 40.34 | 29.21 | 67.41 | 84 | -16.59 |
| (Fc * 9) | Hor | 44.45 | 11.80 | 40.34 | 29.21 | 67.38 | 84 | -16.62 |
| 24370.000 | Vert | 41.26 | 13.00 | 40.43 | 30.12 | 64.57 | 84 | -19.43 |
| (Fc * 10) | Hor | 41.56 | 13.00 | 40.43 | 30.12 | 64.87 | 84 | -19.13 |

PEAK TRANSMITTER RADIATED SPURIOUS EMISSIONS

FCC ID: HN2-802CF13E IC: 1223A-802CF13E

Intermec Technologies Corporation

Product: Intermec EasyLAN Wireless with Intermec antenna PN 067262 5 dBi Dual Panel

EMC Test Laboratory

Set Up: CF Actiontech 802.11b radio within the CF - RF print server board, extended

Cedar Rapids, IA

Test Date (mm/dd/yy): 08/13/04

Standard: FCC 15.247, RSS-210

Measurement System Calibration Date: 08/05/04

PK Detector 1 MHz BW

| Frequency (MHz) | Measurement Antenna Polarity | EUT Spurious Measured dB(uV) | H.P.filter + Cable Loss (dB) | Antenna Correction Factor dB/M | Amplifier Gain (dB) | Calculated Result dB(uV)/M | PEAK Limit @ 1 Meter dB(uV)/Meter | Margin (dB) |
|------------------------|------------------------------|------------------------------|------------------------------|--------------------------------|---------------------|----------------------------|-----------------------------------|-------------|
| a | b | c | d | e | f | g | h | i |
| (formula) | | | | | | (=c+d+e-f) | | (=g-h) |
| High Channel 11 | 2462 | MHz | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| 2462.000 | Vert | 91.41 | 2.70 | 28.77 | | 122.88 | 123 | -0.12 |
| (Fc) | Hor | 80.71 | 2.70 | 28.77 | | 112.18 | 123 | -10.82 |
| 4924.000 | Vert | 46.65 | 4.90 | 33.90 | 32.74 | 52.71 | 84 | -31.29 |
| (Fc * 2) | Hor | 46.32 | 4.90 | 33.90 | 32.74 | 52.38 | 84 | -31.62 |
| 7386.000 | Vert | 44.40 | 6.25 | 37.26 | 33.11 | 54.80 | 84 | -29.20 |
| (Fc * 3) | Hor | 43.58 | 6.25 | 37.26 | 33.11 | 53.98 | 84 | -30.02 |
| 9848.000 | Vert | 55.68 | 7.45 | 38.44 | 33.40 | 68.17 | 84 | -15.83 |
| (Fc * 4) | Hor | 52.35 | 7.45 | 38.44 | 33.40 | 64.84 | 84 | -19.16 |
| 12310.000 | Vert | 43.36 | 8.00 | 38.94 | 31.92 | 58.38 | 84 | -25.62 |
| (Fc * 5) | Hor | 43.03 | 8.00 | 38.94 | 31.92 | 58.05 | 84 | -25.95 |
| 14772.000 | Vert | 43.70 | 8.85 | 37.09 | 31.00 | 58.64 | 84 | -25.36 |
| (Fc * 6) | Hor | 44.00 | 8.85 | 37.09 | 31.00 | 58.94 | 84 | -25.06 |
| 17234.000 | Vert | 42.57 | 10.00 | 37.24 | 31.25 | 58.56 | 84 | -25.44 |
| (Fc * 7) | Hor | 42.92 | 10.00 | 37.24 | 31.25 | 58.91 | 84 | -25.09 |
| 19696.000 | Vert | 43.65 | 10.70 | 40.26 | 30.84 | 63.77 | 84 | -20.23 |
| (Fc * 8) | Hor | 43.72 | 10.70 | 40.26 | 30.84 | 63.84 | 84 | -20.16 |
| 22158.000 | Vert | 43.48 | 11.80 | 40.34 | 29.70 | 65.92 | 84 | -18.08 |
| (Fc * 9) | Hor | 43.67 | 11.80 | 40.34 | 29.70 | 66.11 | 84 | -17.89 |
| 24620.000 | Vert | 41.28 | 13.00 | 40.44 | 30.78 | 63.94 | 84 | -20.06 |
| (Fc * 10) | Hor | 41.52 | 13.00 | 40.44 | 30.78 | 64.18 | 84 | -19.82 |

PEAK TRANSMITTER RADIATED SPURIOUS EMISSIONS

FCC ID: HN2-802CF13E IC: 1223A-802CF13E

Intermec Technologies Corporation

Product: Intermec EasyLAN Wireless with Intermec antenna PN 067262 5 dBi Dual Panel

EMC Test Laboratory

Set Up: CF Actiontech 802.11b radio within the CF - RF print server board, extended

Cedar Rapids, IA

Test Date (mm/dd/yy): 08/13/04

Standard: FCC 15.247, RSS-210

Measurement System Calibration Date: 08/05/04

PK Detector 1 MHz BW

