

MEASUREMENT/TECHNICAL REPORT



Intermec Technologies Corporation

2126

2.4 GHz Spread Spectrum Transmitter

REPORT NO: 981030-1

DATE: October 30 , 1998

APPENDIX F

SPREADSHEET FILES CONTAINED WITHIN:

sheets labled 981029.xls

File contains 18 pages as follows:

- 1-4 FCC TX Average Emissions
- 5-8 FCC TX Peak Emissions
- 9-10 Canada RX Emissions
- 11-14 ETSI 300-328 TX Emissions (reference)
- 15-16 ETSI 300-328 RX Emissions (reference)
- 17 RX Emissions below 1 GHz, Canada
- 18 RX Emissions below 1 GHz, ETSI 300-328 (reference)

AVERAGE TRANSMITTER RADIATED SPURIOUS EMISSIONS

FCC ID: EHA2126

Intermec Technologies Corporation

Product: Intermec DSSS Type II Radio, Approval

Norand Mobile Systems Division

Set Up: Radiall Integral Patch, radio tested as module HORIZONTAL

EMC Test Laboratory

Test Date (mm/dd/yy): 10/29/98

Standard: FCC 15.247

Measurement System Calibration Date: 3/2/98

Span 100 MHz, Res. B.W. 1 MHz, Video B.W. 3 kHz

Frequency (MHz)	Antenna Polarity	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 @ 3 Meters < 1 GHz, 1 Meter > 1 GHz dB(uV)/Meter	Margin (dB)
a	b	c	d	e	f	g	h	i
(formula)						(=c+d+e-f)		(=g-h)
Low Channel 01		2412.000 MHz						
352	Vert	12.4	1.7	15.0		29.1	46	-16.9
(IF)	Hor	16.8	1.7	15.0		33.5	46	-12.5
704	Vert	12.4	2.8	20.9		36.1	46	-9.9
(IF * 2)	Hor	12.7	2.8	20.9		36.4	46	-9.6
1056	Vert	19.8	1.7	23.1		44.6	64	-19.4
(IF * 3)	Hor	14.3	1.7	23.1		39.1	64	-24.9
1408	Vert	14.5	1.9	24.3		40.7	64	-23.3
(IF * 4)	Hor	12.8	1.9	24.3		39.0	64	-25.0
1760	Vert	11.8	4.3	25.8		41.9	64	-22.1
(IF * 5)	Hor	12.4	4.3	25.8		42.5	64	-21.5
2060	Vert	40.5	4.2	27.1	33.6	38.2	64	-25.8
(Fc-IF)	Hor	34.1	4.2	27.1	33.6	31.8	64	-32.2
2412	Vert		4.0	28.0				
(Fc)	Hor		4.0	28.0				
2816	Vert	46.0	4.2	29.3	33.8	45.7	64	-18.3
(IF*8)	Hor	39.3	4.2	29.3	33.8	39.0	64	-25.0
3468	Vert	33.6	3.8	30.6	33.8	34.2	64	-29.8
(Fc+IF*3)	Hor	33.6	3.8	30.6	33.8	34.2	64	-29.8
4824	Vert	49.7	4.8	32.8	32.9	54.4	64	-9.6
(Fc * 2)	Hor	51.9	4.8	32.8	32.9	56.6	64	-7.4
7236	Vert	37.4	6.3	36.8	33.3	47.2	64	-16.8
(Fc * 3)	Hor	36.5	6.3	36.8	33.3	46.3	64	-17.7
9648	Vert	33.8	7.1	37.4	33.5	44.8	64	-19.2
(Fc * 4)	Hor	33.3	7.1	37.4	33.5	44.3	64	-19.7
12060	Vert	30.2	7.9	39.1	32.4	44.8	64	-19.2
(Fc * 5)	Hor	30.0	7.9	39.1	32.4	44.6	64	-19.4
14472	Vert	31.5	8.8	40.8	31.3	49.8	64	-14.2
(Fc * 6)	Hor	31.7	8.8	40.8	31.3	50.0	64	-14.0
16884	Vert	31.4	11.1	40.3	31.1	51.7	64	-12.3
(Fc * 7)	Hor	31.6	11.1	40.3	31.1	51.9	64	-12.1
19296	Vert	38.7	1.9	44.2	31.1	53.7	64	-10.3
(Fc * 8)	Hor	38.9	1.9	44.2	31.1	53.9	64	-10.1
21708	Vert	37.7	1.4	44.3	30.5	52.9	64	-11.1
(Fc * 9)	Hor	37.7	1.4	44.3	30.5	52.9	64	-11.1
24120	Vert	37.3	1.1	45.1	30.8	52.7	64	-11.3
(Fc * 10)	Hor	37.3	1.1	45.1	30.8	52.7	64	-11.3

AVERAGE TRANSMITTER RADIATED SPURIOUS EMISSIONS

FCC ID: EHA2126

Intermec Technologies Corporation

Product: Intermec DSSS Type II Radio, Approval

Norand Mobile Systems Division

Set Up: Radiall Integral Patch, radio tested as module HORIZONTAL

EMC Test Laboratory

Test Date (mm/dd/yy): 10/29/98

Standard: FCC 15.247

Measurement System Calibration Date: 3/2/98

Span 100 MHz, Res. B.W. 1 MHz, Video B.W. 3 kHz

Frequency (MHz)	Antenna Polarity	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 @ 3 Meters < 1 GHz, 1 Meter > 1 GHz dB(uV)/Meter	Margin (dB)
a	b	c	d	e	f	g	h	i
(formula)						(=c+d+e-f)		(=g-h)
Middle Channel 7	2442.000	MHz						
352	Vert	12.4	1.7	15.0		29.1	46	-16.9
(IF)	Hor	16.8	1.7	15.0		33.5	46	-12.5
704	Vert	12.4	2.8	20.9		36.1	46	-9.9
(IF * 2)	Hor	12.7	2.8	20.9		36.4	46	-9.6
1056	Vert	19.8	1.7	23.1		44.6	64	-19.4
(IF * 3)	Hor	14.3	1.7	23.1		39.1	64	-24.9
1408	Vert	14.5	1.9	24.3		40.7	64	-23.3
(IF * 4)	Hor	12.8	1.9	24.3		39.0	64	-25.0
1760	Vert	11.8	4.3	25.8		41.9	64	-22.1
(IF * 5)	Hor	12.4	4.3	25.8		42.5	64	-21.5
2090	Vert	40.6	4.0	27.2	33.7	38.1	64	-25.9
(Fc-IF)	Hor	36.3	4.0	27.2	33.7	33.8	64	-30.2
2442	Vert		3.9	28.1				
(Fc)	Hor		3.9	28.1				
2816	Vert	46.6	4.3	29.5	32.9	47.5	64	-16.5
(IF*8)	Hor	38.5	4.3	29.5	32.9	39.4	64	-24.6
3498	Vert	32.5	3.7	30.7	32.9	34.0	64	-30.0
(Fc+IF*3)	Hor	31.0	3.7	30.7	32.9	32.5	64	-31.5
4884	Vert	47.0	4.7	32.9	32.9	51.7	64	-12.3
(Fc * 2)	Hor	51.9	4.7	32.9	32.9	56.6	64	-7.4
7326	Vert	35.2	6.0	37.2	33.3	45.1	64	-18.9
(Fc * 3)	Hor	34.2	6.0	37.2	33.3	44.1	64	-19.9
9768	Vert	33.9	6.7	37.6	33.4	44.8	64	-19.2
(Fc * 4)	Hor	34.6	6.7	37.6	33.4	45.5	64	-18.5
12210	Vert	30.1	7.8	39.2	32.4	44.7	64	-19.3
(Fc * 5)	Hor	29.9	7.8	39.2	32.4	44.5	64	-19.5
14652	Vert	31.5	9.0	40.5	31.4	49.6	64	-14.4
(Fc * 6)	Hor	31.4	9.0	40.5	31.4	49.5	64	-14.5
17094	Vert	31.6	11.4	41.5	31.1	53.4	64	-10.6
(Fc * 7)	Hor	31.6	11.4	41.5	31.1	53.4	64	-10.6
19536	Vert	39.1	1.4	44.0	31.3	53.2	64	-10.8
(Fc * 8)	Hor	39.3	1.4	44.0	31.3	53.4	64	-10.6
21978	Vert	38.1	2.0	44.7	30.4	54.4	64	-9.6
(Fc * 9)	Hor	38.0	2.0	44.7	30.4	54.3	64	-9.7
24420	Vert	38.5	2.3	45.6	31.3	55.1	64	-8.9
(Fc * 10)	Hor	38.6	2.3	45.6	31.3	55.2	64	-8.8

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Frequency (MHz)	Antenna Polarity	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 @ 3 Meters < 1 GHz, 1 Meter > 1 GHz 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						
352	Vert	12.4	1.7	15.0		29.1	46	-16.9
(IF)	Hor	16.8	1.7	15.0		33.5	46	-12.5
704	Vert	12.4	2.8	20.9		36.1	46	-9.9
(IF * 2)	Hor	12.7	2.8	20.9		36.4	46	-9.6
1056	Vert	19.8	1.7	23.1		44.6	64	-19.4
(IF * 3)	Hor	14.3	1.7	23.1		39.1	64	-24.9
1408	Vert	14.5	1.9	24.3		40.7	64	-23.3
(IF * 4)	Hor	12.8	1.9	24.3		39.0	64	-25.0
1760	Vert	11.8	4.3	25.8		41.9	64	-22.1
(IF * 5)	Hor	12.4	4.3	25.8		42.5	64	-21.5
2110	Vert	42.0	4.0	27.3	33.8	39.5	64	-24.5
(Fc-IF)	Hor	39.0	4.0	27.3	33.8	36.5	64	-27.5
2462	Vert		3.8	28.2				
(Fc)	Hor		3.8	28.2				
2816	Vert	46.3	4.4	29.6	32.7	47.6	64	-16.4
(Fc+IF)	Hor	39.4	4.4	29.6	32.7	40.7	64	-23.3
3518	Vert	31.5	3.6	30.8	32.7	33.2	64	-30.8
(Fc+IF*3)	Hor	30.9	3.6	30.8	32.7	32.6	64	-31.4
4924	Vert	44.2	4.4	32.9	32.7	48.8	64	-15.2
(Fc * 2)	Hor	43.6	4.4	32.9	32.7	48.2	64	-15.8
7386	Vert	34.2	5.9	37.4	33.3	44.2	64	-19.8
(Fc * 3)	Hor	33.3	5.9	37.4	33.3	43.3	64	-20.7
9848	Vert	34.9	6.0	37.8	33.3	45.4	64	-18.6
(Fc * 4)	Hor	33.3	6.0	37.8	33.3	43.8	64	-20.2
12310	Vert	29.9	7.2	39.3	32.2	44.2	64	-19.8
(Fc * 5)	Hor	29.9	7.2	39.3	32.2	44.2	64	-19.8
14772	Vert	31.4	9.2	40.2	31.6	49.2	64	-14.8
(Fc * 6)	Hor	31.5	9.2	40.2	31.6	49.3	64	-14.7
17234	Vert	31.7	10.9	43.4	31.0	55.0	64	-9.0
(Fc * 7)	Hor	31.5	10.9	43.4	31.0	54.8	64	-9.2
19696	Vert	38.1	1.8	44.0	31.4	52.5	64	-11.5
(Fc * 8)	Hor	38.0	1.8	44.0	31.4	52.4	64	-11.6
22158	Vert	37.0	1.2	45.0	30.4	52.8	64	-11.2
(Fc * 9)	Hor	37.3	1.2	45.0	30.4	53.1	64	-10.9
24620	Vert	38.8	1.7	45.9	31.5	54.9	64	-9.1
(Fc * 10)	Hor	38.9	1.7	45.9	31.5	55.0	64	-9.0

AVERAGE TRANSMITTER RADIATED SPURIOUS EMISSIONS

FCC ID: EHA2126

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Set Up: Radiall Integral Patch, radio tested as module HORIZONTAL

Test Date (mm/dd/yy): 10/29/98

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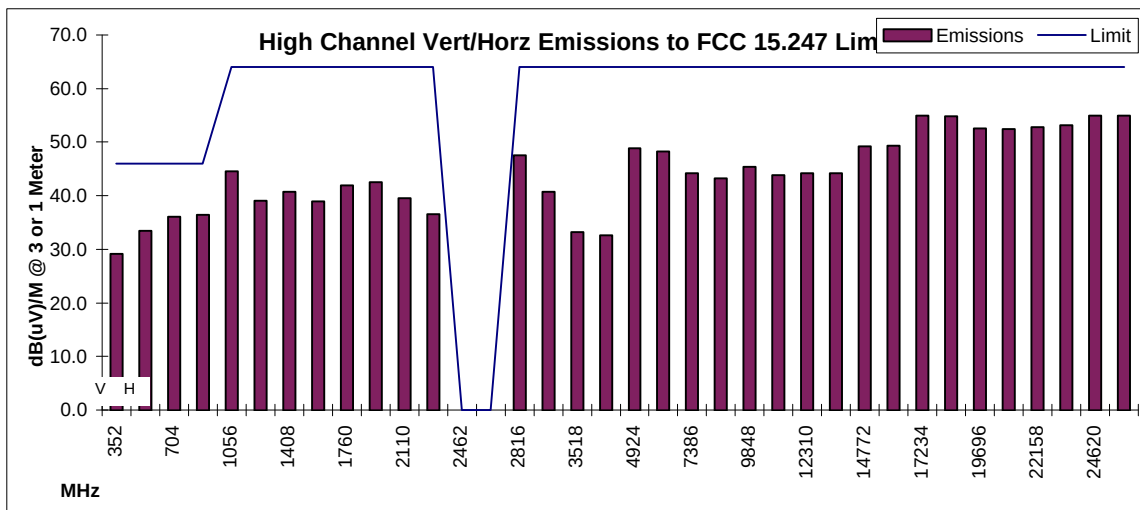
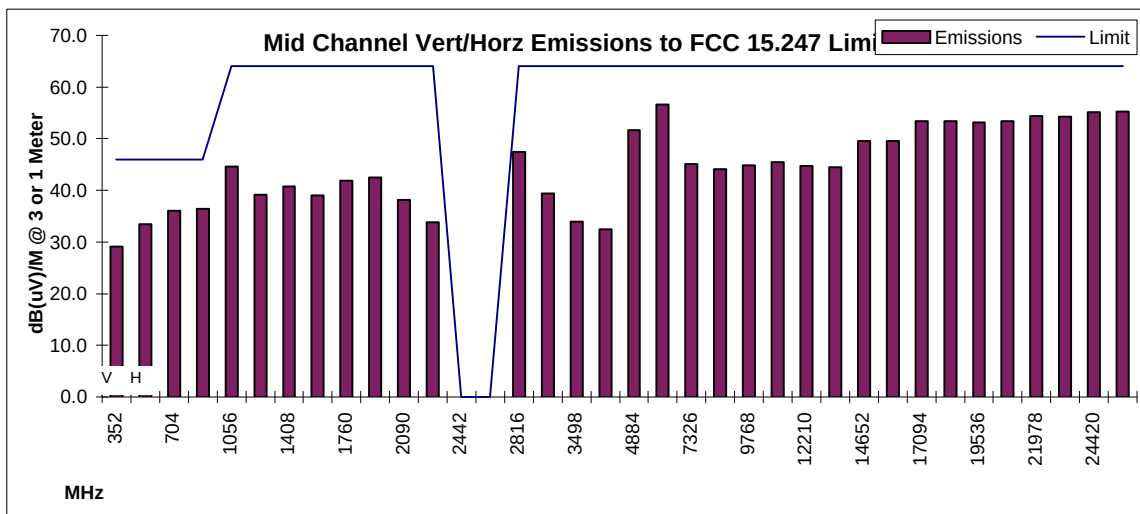
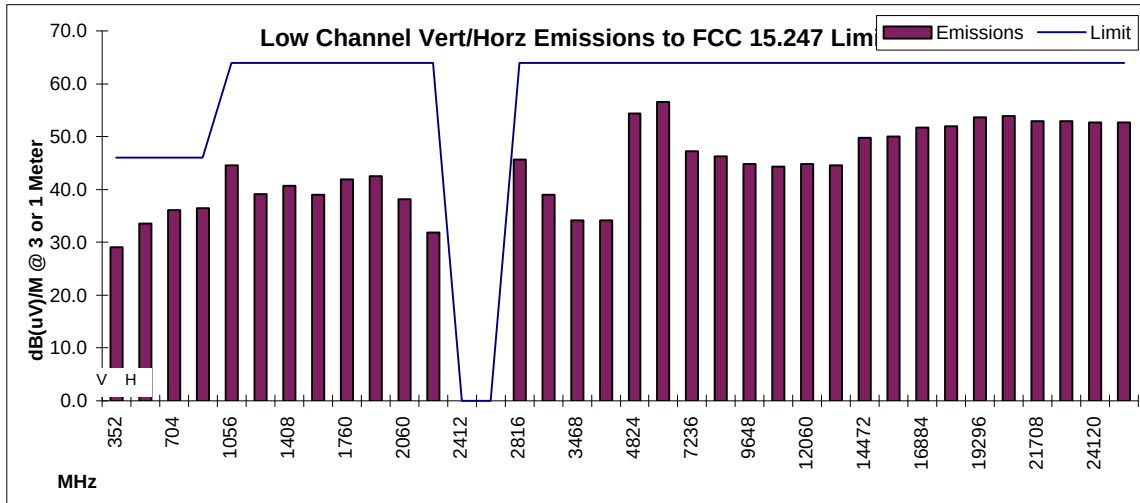
Intermec Technologies Corporation

Norand Mobile Systems Division

EMC Test Laboratory

Standard: FCC 15.247

Span 100 MHz, Res. B.W. 1 MHz, Video B.W. 3 kHz



PEAK TRANSMITTER RADIATED SPURIOUS EMISSIONS

FCC ID: EHA2126

Intermec Technologies Corporation

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Norand Mobile Systems Division

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EMC Test Laboratory

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Span 100 MHz, Res. B.W. 1 MHz, Video B.W. 1 MHz

Frequency (MHz)	Antenna Polarity	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 @ 3 Meters < 1 GHz, 1 Meter > 1 GHz dB(uV)/Meter	Margin (dB)
a	b	c	d	e	f	g	h	i
(formula)						(=c+d+e-f)		(=g-h)
Low Channel 01 2412.000 MHz								
352	Vert	12.4	1.7	15.0		29.1	46	-16.9
(IF)	Hor	16.8	1.7	15.0		33.5	46	-12.5
704	Vert	12.4	2.8	20.9		36.1	46	-9.9
(IF * 2)	Hor	12.7	2.8	20.9		36.4	46	-9.6
1056	Vert	23.7	1.7	23.1		48.5	84	-35.5
(IF * 3)	Hor	19.9	1.7	23.1		44.7	84	-39.3
1408	Vert	19.7	1.9	24.3		45.9	84	-38.1
(IF * 4)	Hor	18.2	1.9	24.3		44.4	84	-39.6
1760	Vert	20.0	4.3	25.8		50.1	84	-33.9
(IF * 5)	Hor	20.1	4.3	25.8		50.2	84	-33.8
2060	Vert	44.7	4.2	27.1	33.7	42.3	84	-41.7
(Fc-IF)	Hor	43.6	4.2	27.1	33.7	41.2	84	-42.8
2412	Vert		4.0	28.0				
(Fc)	Hor		4.0	28.0				
2816	Vert	49.2	4.2	29.3	32.9	49.8	84	-34.2
(IF*8)	Hor	45.4	4.2	29.3	32.9	46.0	84	-38.0
3468	Vert	42.3	3.8	30.6	32.9	43.8	84	-40.2
(Fc+IF*3)	Hor	42.5	3.8	30.6	32.9	44.0	84	-40.0
4824	Vert	53.3	4.8	32.8	32.9	58.0	84	-26.0
(Fc * 2)	Hor	55.0	4.8	32.8	32.9	59.7	84	-24.3
7236	Vert	45.1	6.3	36.8	33.3	54.9	84	-29.1
(Fc * 3)	Hor	44.4	6.3	36.8	33.3	54.2	84	-29.8
9648	Vert	43.5	7.1	37.4	33.5	54.5	84	-29.5
(Fc * 4)	Hor	43.0	7.1	37.4	33.5	54.0	84	-30.0
12060	Vert	42.2	7.9	39.1	32.4	56.8	84	-27.2
(Fc * 5)	Hor	41.2	7.9	39.1	32.4	55.8	84	-28.2
14472	Vert	42.3	8.8	40.8	31.3	60.6	84	-23.4
(Fc * 6)	Hor	42.5	8.8	40.8	31.3	60.8	84	-23.2
16884	Vert	41.8	11.1	40.3	31.1	62.1	84	-21.9
(Fc * 7)	Hor	42.3	11.1	40.3	31.1	62.6	84	-21.4
19296	Vert	50.0	1.9	44.2	31.1	65.0	84	-19.0
(Fc * 8)	Hor	50.5	1.9	44.2	31.1	65.5	84	-18.5
21708	Vert	48.9	1.4	44.3	30.5	64.1	84	-19.9
(Fc * 9)	Hor	49.1	1.4	44.3	30.5	64.3	84	-19.7
24120	Vert	48.7	1.1	45.1	30.8	64.1	84	-19.9
(Fc * 10)	Hor	48.5	1.1	45.1	30.8	63.9	84	-20.1

PEAK TRANSMITTER RADIATED SPURIOUS EMISSIONS

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Frequency (MHz)	Antenna Polarity	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 @ 3 Meters < 1 GHz, 1 Meter > 1 GHz dB(uV)/Meter	Margin (dB)
a	b	c	d	e	f	g	h	i
(formula)						(=c+d+e-f)		(=g-h)
Middle Channel 7	2442.000	MHz						
352	Vert	12.4	1.7	15.0		29.1	46	-16.9
(IF)	Hor	16.8	1.7	15.0		33.5	46	-12.5
704	Vert	12.4	2.8	20.9		36.1	46	-9.9
(IF * 2)	Hor	12.7	2.8	20.9		36.4	46	-9.6
1056	Vert	23.7	1.7	23.1		48.5	84	-35.5
(IF * 3)	Hor	19.9	1.7	23.1		44.7	84	-39.3
1408	Vert	19.7	1.9	24.3		45.9	84	-38.1
(IF * 4)	Hor	18.2	1.9	24.3		44.4	84	-39.6
1760	Vert	20.0	4.3	25.8		50.1	84	-33.9
(IF * 5)	Hor	20.1	4.3	25.8		50.2	84	-33.8
2090	Vert	45.7	4.0	27.2	33.7	43.2	84	-40.8
(Fc-IF)	Hor	44.7	4.0	27.2	33.7	42.2	84	-41.8
2442	Vert		3.9	28.1				
(Fc)	Hor		3.9	28.1				
2816	Vert	49.3	4.3	29.5	32.9	50.2	84	-33.8
(IF*8)	Hor	44.8	4.3	29.5	32.9	45.7	84	-38.3
3498	Vert	41.0	3.7	30.7	32.9	42.5	84	-41.5
(Fc+IF*3)	Hor	41.9	3.7	30.7	32.9	43.4	84	-40.6
4884	Vert	51.3	4.7	32.9	32.9	56.0	84	-28.0
(Fc * 2)	Hor	55.7	4.7	32.9	32.9	60.4	84	-23.6
7326	Vert	43.7	6.0	37.2	33.3	53.6	84	-30.4
(Fc * 3)	Hor	43.3	6.0	37.2	33.3	53.2	84	-30.8
9768	Vert	42.9	6.7	37.6	33.4	53.8	84	-30.2
(Fc * 4)	Hor	43.3	6.7	37.6	33.4	54.2	84	-29.8
12210	Vert	39.5	7.8	39.2	32.4	54.1	84	-29.9
(Fc * 5)	Hor	40.8	7.8	39.2	32.4	55.4	84	-28.6
14652	Vert	43.3	9.0	40.5	31.4	61.4	84	-22.6
(Fc * 6)	Hor	42.0	9.0	40.5	31.4	60.1	84	-23.9
17094	Vert	42.2	11.4	41.5	31.1	64.0	84	-20.0
(Fc * 7)	Hor	42.7	11.4	41.5	31.1	64.5	84	-19.5
19536	Vert	50.6	1.4	44.0	31.3	64.7	84	-19.3
(Fc * 8)	Hor	51.2	1.4	44.0	31.3	65.3	84	-18.7
21978	Vert	49.5	2.0	44.7	30.4	65.8	84	-18.2
(Fc * 9)	Hor	49.7	2.0	44.7	30.4	66.0	84	-18.0
24420	Vert	49.8	2.3	45.6	31.3	66.4	84	-17.6
(Fc * 10)	Hor	49.6	2.3	45.6	31.3	66.2	84	-17.8

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Frequency (MHz)	Antenna Polarity	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 @ 3 Meters < 1 GHz, 1 Meter > 1 GHz 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								
352	Vert	12.4	1.7	15.0		29.1	46	-16.9
(IF)	Hor	16.8	1.7	15.0		33.5	46	-12.5
704	Vert	12.4	2.8	20.9		36.1	46	-9.9
(IF * 2)	Hor	12.7	2.8	20.9		36.4	46	-9.6
1056	Vert	23.7	1.7	23.1		48.5	84	-35.5
(IF * 3)	Hor	19.9	1.7	23.1		44.7	84	-39.3
1408	Vert	19.7	1.9	24.3		45.9	84	-38.1
(IF * 4)	Hor	18.2	1.9	24.3		44.4	84	-39.6
1760	Vert	20.0	4.3	25.8		50.1	84	-33.9
(IF * 5)	Hor	20.1	4.3	25.8		50.2	84	-33.8
2110	Vert	46.1	4.0	27.3	33.8	43.6	84	-40.4
(Fc-IF)	Hor	46.3	4.0	27.3	33.8	43.8	84	-40.2
2462	Vert		3.8	28.2				
(Fc)	Hor		3.8	28.2				
2816	Vert	49.4	4.4	29.6	32.7	50.7	84	-33.3
(Fc+IF)	Hor	44.6	4.4	29.6	32.7	45.9	84	-38.1
3518	Vert	41.8	3.6	30.8	32.7	43.5	84	-40.5
(Fc+IF*3)	Hor	40.8	3.6	30.8	32.7	42.5	84	-41.5
4924	Vert	48.7	4.4	32.9	32.7	53.3	84	-30.7
(Fc * 2)	Hor	48.6	4.4	32.9	32.7	53.2	84	-30.8
7386	Vert	43.6	5.9	37.4	33.3	53.6	84	-30.4
(Fc * 3)	Hor	43.2	5.9	37.4	33.3	53.2	84	-30.8
9848	Vert	43.6	6.0	37.8	33.3	54.1	84	-29.9
(Fc * 4)	Hor	41.3	6.0	37.8	33.3	51.8	84	-32.2
12310	Vert	40.6	7.2	39.3	32.2	54.9	84	-29.1
(Fc * 5)	Hor	40.5	7.2	39.3	32.2	54.8	84	-29.2
14772	Vert	42.6	9.2	40.2	31.6	60.4	84	-23.6
(Fc * 6)	Hor	41.8	9.2	40.2	31.6	59.6	84	-24.4
17234	Vert	42.3	10.9	43.4	31.0	65.6	84	-18.4
(Fc * 7)	Hor	42.1	10.9	43.4	31.0	65.4	84	-18.6
19696	Vert	49.2	1.8	44.0	31.4	63.6	84	-20.4
(Fc * 8)	Hor	49.3	1.8	44.0	31.4	63.7	84	-20.3
22158	Vert	48.3	1.2	45.0	30.4	64.1	84	-19.9
(Fc * 9)	Hor	48.4	1.2	45.0	30.4	64.2	84	-19.8
24620	Vert	50.1	1.7	45.9	31.5	66.2	84	-17.8
(Fc * 10)	Hor	50.4	1.7	45.9	31.5	66.5	84	-17.5

PEAK TRANSMITTER RADIATED SPURIOUS EMISSIONS

FCC ID: EHA2126

Product: Intermec DSSS Type II Radio, Approval

Set Up: Radiall Integral Patch, radio tested as module HORIZONTAL

Test Date (mm/dd/yy): 10/29/98

Measurement System Calibration Date: 3/2/98

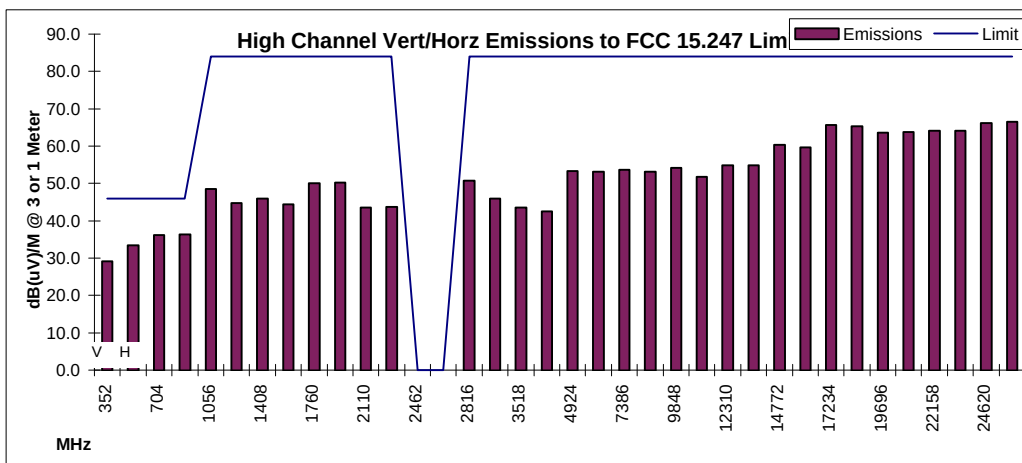
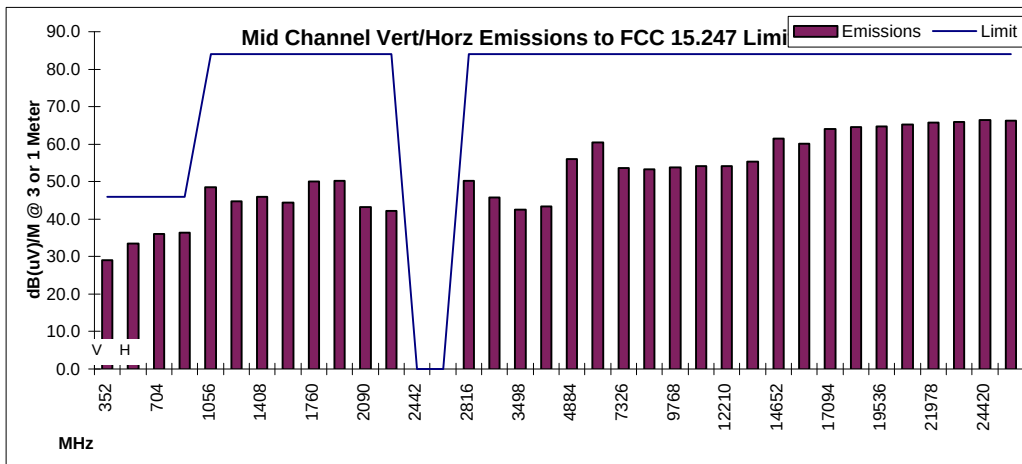
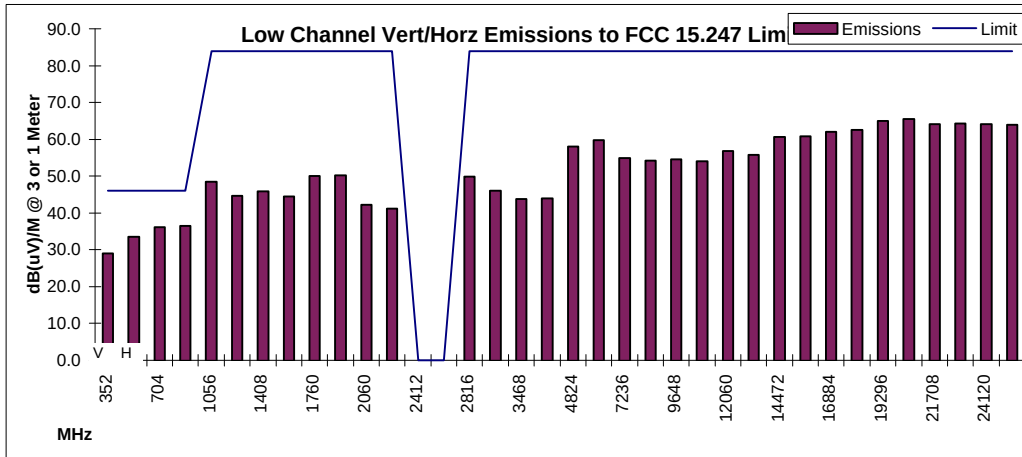
Intermec Technologies Corporation

Norand Mobile Systems Division

EMC Test Laboratory

Standard: FCC 15.247

Span 100 MHz, Res. B.W. 1 MHz, Video B.W. 1 MHz



RECEIVER RADIATED SPURIOUS EMISSIONS

Average Emissions Data Compared to Average Emissions Limit

FCC ID: EHA2126

Intermec Technologies Corporation

Product: Intermec DSSS Type II Radio, Approval

Norand Mobile Systems Division

Set Up: Radiall Integral Patch, radio tested as module HORIZONTAL

EMC Test Laboratory

Test Date (mm/dd/yy): 10/29/98

Standard: Canada RSS-210/GL-36

Measurement System Calibration Date: 3/2/98

Span 100 MHz, Res. B.W. 1 MHz, Video B.W. 3 kHz

Frequency (MHz)	Antenna Polarity	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 01 2412 MHz								
2060	Vert	34.6	3.1	27.1	33.6	31.2	64	-32.8
(Lo)	Hor	39.7	3.1	27.1	33.6	36.3	64	-27.7
4120	Vert	37.6	3.9	32.6	33.2	40.9	64	-23.1
(Lo * 2)	Hor	36.5	3.9	32.6	33.2	39.8	64	-24.2
6180	Vert	31.3	5.6	34.5	33.0	38.4	64	-25.6
(Lo * 3)	Hor	31.0	5.6	34.5	33.0	38.1	64	-25.9
8240	Vert	34.7	6.2	37.3	33.3	44.9	64	-19.1
(Lo * 4)	Hor	34.8	6.2	37.3	33.3	45.0	64	-19.0
10300	Vert	30.6	6.8	38.3	32.9	42.8	64	-21.2
(Lo * 5)	Hor	30.4	6.8	38.3	32.9	42.6	64	-21.4
12360	Vert	30.7	7.9	39.2	32.3	45.5	64	-18.5
(Lo * 6)	Hor	30.3	7.9	39.2	32.3	45.1	64	-18.9

Middle Channel 7 2442 MHz								
2090	Vert	38.1	3.0	27.2	33.6	34.7	64	-29.3
(Lo)	Hor	42.1	3.0	27.2	33.6	38.7	64	-25.3
4180	Vert	40.2	4.2	32.5	33.2	43.7	64	-20.3
(Lo * 2)	Hor	39.8	4.2	32.5	33.2	43.3	64	-20.7
6270	Vert	31.1	5.9	34.4	33.0	38.4	64	-25.6
(Lo * 3)	Hor	31.3	5.9	34.4	33.0	38.6	64	-25.4
8360	Vert	34.9	6.4	37.4	33.4	45.3	64	-18.7
(Lo * 4)	Hor	34.5	6.4	37.4	33.4	44.9	64	-19.1
10450	Vert	30.4	6.9	38.5	32.9	42.9	64	-21.1
(Lo * 5)	Hor	30.2	6.9	38.5	32.9	42.7	64	-21.3
12540	Vert	31.7	8.1	39.4	32.1	47.1	64	-16.9
(Lo * 6)	Hor	31.4	8.1	39.4	32.1	46.8	64	-17.2

High Channel 11 2462 MHz								
2110	Vert	44.6	3.0	27.3	33.6	41.3	64	-22.7
(Lo)	Hor	42.2	3.0	27.3	33.6	38.9	64	-25.1
4220	Vert	38.4	4.2	32.5	33.2	41.9	64	-22.1
(Lo * 2)	Hor	38.1	4.2	32.5	33.2	41.6	64	-22.4
6330	Vert	31.8	6.0	34.3	33.1	39.0	64	-25.0
(Lo * 3)	Hor	31.0	6.0	34.3	33.1	38.2	64	-25.8
8440	Vert	36.9	6.7	37.5	33.5	47.6	64	-16.4
(Lo * 4)	Hor	37.9	6.7	37.5	33.5	48.6	64	-15.4
10550	Vert	29.7	7.2	38.5	32.8	42.6	64	-21.4
(Lo * 5)	Hor	29.6	7.2	38.5	32.8	42.5	64	-21.5
12660	Vert	31.5	8.1	39.7	31.5	47.8	64	-16.2
(Lo * 6)	Hor	31.6	8.1	39.7	31.5	47.9	64	-16.1

RECEIVER RADIATED SPURIOUS EMISSIONS

Average Emissions Data Compared to Average Emissions Limit

FCC ID: EHA2126

Product: Intermec DSSS Type II Radio, Approval

Set Up: Radiall Integral Patch, radio tested as module HORIZONTAL

Test Date (mm/dd/yy): 10/29/98

Measurement System Calibration Date: 3/2/98

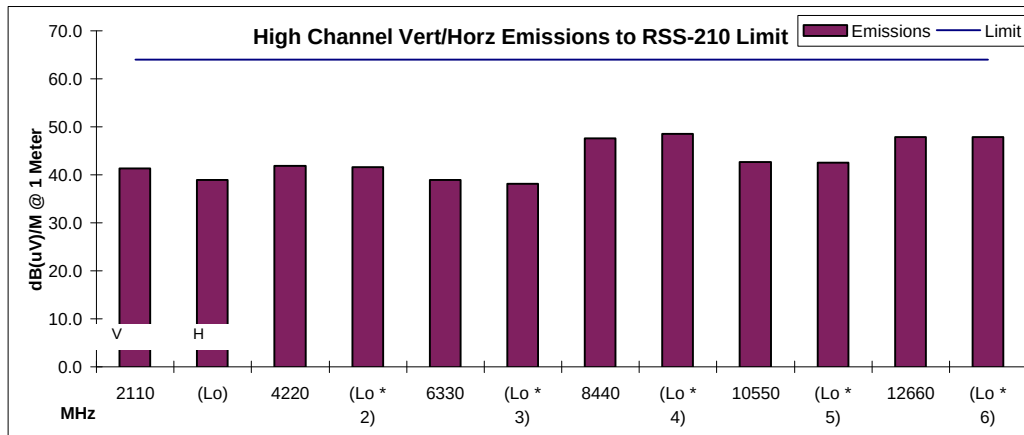
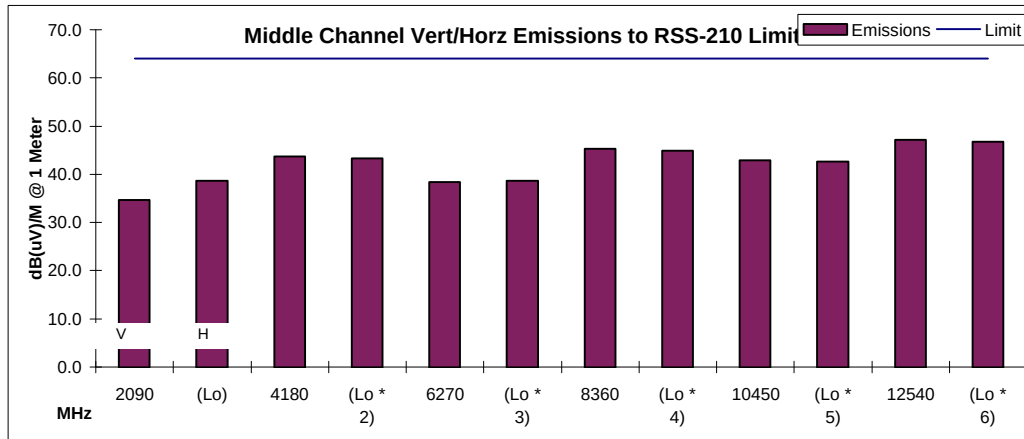
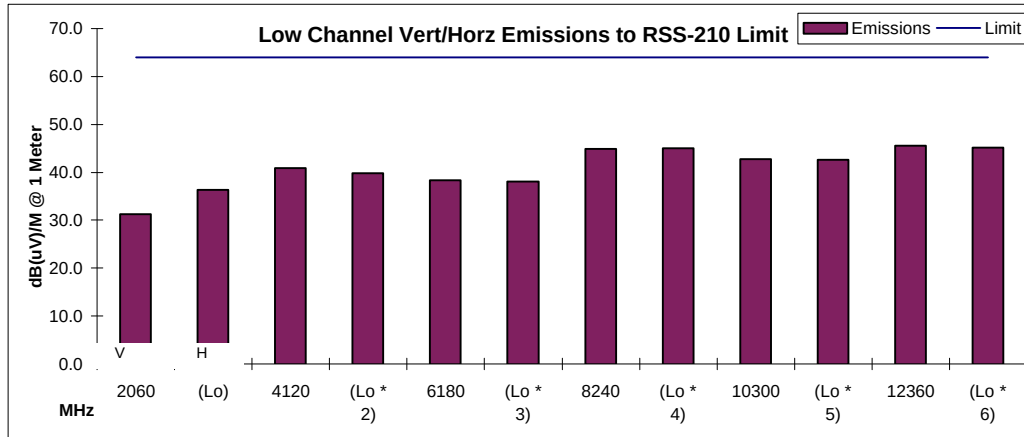
Intermec Technologies Corporation

Norand Mobile Systems Division

EMC Test Laboratory

Standard: Canada RSS-210/GL-36

Span 100 MHz, Res. B.W. 1 MHz, Video B.W. 3 kHz



TRANSMITTER RADIATED SPURIOUS EMISSIONS

Product: Intermec DSSS Type II Radio, Approval

Intermec Technologies Corporation

Set Up: Radiall Integral Patch, radio tested as module HORIZONTAL

Norand Mobile Systems Division

Test Date (mm/dd/yy): 10/29/98

EMC Test Laboratory

Measurement System Calibration Date: 2/26/98

Span 100 MHz, Res. B.W. 1 MHz, Video B.W. 3 kHz

Standard: ETS 300-328

Data recorded here is based upon FCC data sheets within this file

Frequency (MHz)	Antenna Polarity	Spurious Measured dB(uV)	Spur Meas. (dBm)	Generator 0 dBm Ref. Level	Caculated Generator Substitution (dBm)	Antenna Comp (dB)	Cable Comp (dB)	Generator Reference at Antenna (dBm)	Spec Limit (dBm)	Margin (dB)
a	b	c	d	e	f	g	h	i	j	k
(formula)			(=c-107)		(=d-e)			(=f-g+h)		(=i-j)
Low Channel 01										
	2412	MHz								
352	Vert	12.4	-94.6	-27.4	-67.2		0.6	-67.8	-36	-31.8
(IF)	Hor	16.8	-90.2	-24.0	-66.2		0.6	-66.8	-36	-30.8
704	Vert	12.4	-94.6	-35.8	-58.8		1.0	-59.8	-36	-23.8
(IF * 2)	Hor	12.7	-94.3	-31.4	-62.9		1.0	-63.9	-36	-27.9
1056	Vert	19.8	-87.2	-26.3	-60.9	4.1	1.4	-58.2	-30	-28.2
(IF * 3)	Hor	14.3	-92.7	-26.1	-66.6	4.1	1.4	-63.9	-30	-33.9
1408	Vert	14.5	-92.5	-26.2	-66.3	6.3	1.7	-61.7	-30	-31.7
(IF * 4)	Hor	12.8	-94.2	-26.9	-67.3	6.3	1.7	-62.7	-30	-32.7
1760	Vert	11.8	-95.2	-30.9	-64.3	6.5	2.0	-59.8	-30	-29.8
(IF * 5)	Hor	12.4	-94.6	-30.9	-63.7	6.5	2.0	-59.2	-30	-29.2
2060	Vert	40.5	-107.0	2.8	-109.8	6.3	2.2	-105.7	-30	-75.7
(Fc-IF)	Hor	34.1	-72.9	2.8	-75.7	6.3	2.2	-71.6	-30	-41.6
2412	Vert		-107.0	-31.2	-75.8	7.4	3.5			
(Fc)	Hor		-107.0	-31.1	-75.9	7.4	3.5			
2816	Vert	46.0	-61.0	0.8	-61.8	6.5	2.6	-57.9	-30	-27.9
(IF*8)	Hor	39.3	-67.7	0.7	-68.4	6.5	2.6	-64.5	-30	-34.5
3468	Vert	33.6	-73.4	-1.2	-72.2	6.9	2.9	-68.2	-30	-38.2
(Fc+IF*3)	Hor	33.6	-73.4	-1.6	-71.8	6.9	2.9	-67.8	-30	-37.8
4824	Vert	49.7	-57.3	-4.9	-52.4	7.3	3.7	-48.8	-30	-18.8
(Fc * 2)	Hor	51.9	-55.1	-5.1	-50.0	7.3	3.7	-46.4	-30	-16.4
7236	Vert	37.4	-69.6	-12.1	-57.5	6.0	3.8	-55.3	-30	-25.3
(Fc * 3)	Hor	36.5	-70.5	-12.1	-58.4	6.0	3.8	-56.2	-30	-26.2
9648	Vert	33.8	-95.2	-15.5	-79.7	7.9	6.2	-78.0	-30	-48.0
(Fc * 4)	Hor	33.3	-73.7	-15.1	-58.6	7.9	6.2	-56.9	-30	-26.9
12060	Vert	30.2	-66.4	-21.4	-45.0	6.5	6.5	-45.0	-30	-15.0
(Fc * 5)	Hor	30.0	-77.0	-21.4	-55.6	6.5	6.5	-55.6	-30	-25.6

TRANSMITTER RADIATED SPURIOUS EMISSIONS

Product: Intermec DSSS Type II Radio, Approval

Intermec Technologies Corporation

Set Up: Radial Integral Patch, radio tested as module HORIZONTAL

Norand Mobile Systems Division

Test Date (mm/dd/yy): 10/29/98

EMC Test Laboratory

Measurement System Calibration Date: 2/26/98

Span 100 MHz, Res. B.W. 1 MHz, Video B.W. 3 kHz

Standard: ETS 300-328

Data recorded here is based upon FCC data sheets within this file

Frequency (MHz)	Antenna Polarity	Spurious Measured dB(uV)	Spur Meas. (dBm)	Generator 0 dBm Ref. Level	Calculated Generator Substitution (dBm)	Antenna Comp (dB)	Cable Comp (dB)	Generator Reference at Antenna (dBm)	Spec Limit (dBm)	Margin (dB)
a	b	c	d	e	f	g	h	i	j	k
(formula)			(=c-107)		(=d-e)			(=f-g+h)		(=i-j)
Middle Channel 7	2442	MHz								
352	Vert	12.4	-94.6	-27.4	-67.2		0.6	-67.8	-36	-31.8
(IF)	Hor	16.8	-90.2	-24.0	-66.2		0.6	-66.8	-36	-30.8
704	Vert	12.4	-94.6	-35.8	-58.8		1.0	-59.8	-36	-23.8
(IF * 2)	Hor	12.7	-94.3	-31.4	-62.9		1.0	-63.9	-36	-27.9
1056	Vert	19.8	-87.2	-26.3	-60.9	4.1	1.4	-58.2	-30	-28.2
(IF * 3)	Hor	14.3	-92.7	-26.1	-66.6	4.1	1.4	-63.9	-30	-33.9
1408	Vert	14.5	-92.5	-26.2	-66.3	6.3	1.7	-61.7	-30	-31.7
(IF * 4)	Hor	12.8	-94.2	-26.9	-67.3	6.3	1.7	-62.7	-30	-32.7
1760	Vert	11.8	-95.2	-30.9	-64.3	6.5	2.0	-59.8	-30	-29.8
(IF * 5)	Hor	12.4	-94.6	-30.9	-63.7	6.5	2.0	-59.2	-30	-29.2
2090	Vert	40.6	-66.4	3.0	-69.4	6.3	2.2	-65.3	-30	-35.3
(Fc-IF)	Hor	36.3	-70.7	3.0	-73.7	6.3	2.2	-69.6	-30	-39.6
2442	Vert		-107.0	-32.2	-74.8	7.6	3.3			
(Fc)	Hor		-107.0	-32.1	-74.9	7.6	3.3			
2816	Vert	46.6	-60.4	0.7	-61.1	6.5	2.6	-57.2	-30	-27.2
(IF*8)	Hor	38.5	-68.5	0.7	-69.2	6.5	2.6	-65.3	-30	-35.3
3498	Vert	32.5	-74.5	-1.4	-73.1	7.1	2.9	-68.9	-30	-38.9
(Fc+IF*3)	Hor	31.0	-76.0	-1.8	-74.2	7.1	2.9	-70.0	-30	-40.0
4884	Vert	47.0	-60.0	-5.4	-54.6	7.0	5.7	-53.3	-30	-23.3
(Fc * 2)	Hor	51.9	-55.1	-5.2	-49.9	7.0	5.7	-48.6	-30	-18.6
7326	Vert	35.2	-71.8	-11.5	-60.3	7.3	6.8	-59.8	-30	-29.8
(Fc * 3)	Hor	34.2	-72.8	-11.7	-61.1	7.3	6.8	-60.6	-30	-30.6
9768	Vert	33.9	-73.1	-16.4	-56.7	6.0	8.7	-59.4	-30	-29.4
(Fc * 4)	Hor	34.6	-72.4	-16.5	-55.9	6.0	8.7	-58.6	-30	-28.6
12210	Vert	30.1	-76.9	-21.7	-55.2	5.3	9.7	-59.6	-30	-29.6
(Fc * 5)	Hor	29.9	-77.1	-21.6	-55.5	5.3	9.7	-59.9	-30	-29.9

TRANSMITTER RADIATED SPURIOUS EMISSIONS

Product: Intermec DSSS Type II Radio, Approval

Intermec Technologies Corporation

Set Up: Radiall Integral Patch, radio tested as module HORIZONTAL

Norand Mobile Systems Division

Test Date (mm/dd/yy): 10/29/98

EMC Test Laboratory

Measurement System Calibration Date: 2/26/98

Span 100 MHz, Res. B.W. 1 MHz, Video B.W. 3 kHz

Standard: ETS 300-328

Data recorded here is based upon FCC data sheets within this file

Frequency (MHz)	Antenna Polarity	Spurious Measured dB(uV)	Spur Meas. (dBm)	Generator 0 dBm Ref. Level	Calculated Generator Substitution (dBm)	Antenna Comp (dB)	Cable Comp (dB)	Generator Reference at Antenna (dBm)	Spec Limit (dBm)	Margin (dB)
a	b	c	d	e	f	g	h	i	j	k
(formula)			(=c-107)		(=d-e)			(=f-g+h)		(=i-j)
High Channel 11	2462.0	MHz								
352	Vert	12.4	-94.6	-27.4	-67.2		0.6	-67.8	-36	-31.8
(IF)	Hor	16.8	-90.2	-24.0	-66.2		0.6	-66.8	-36	-30.8
704	Vert	12.4	-94.6	-35.8	-58.8		1.0	-59.8	-36	-23.8
(IF * 2)	Hor	12.7	-94.3	-31.4	-62.9		1.0	-63.9	-36	-27.9
1056	Vert	19.8	-87.2	-26.3	-60.9	4.1	1.4	-58.2	-30	-28.2
(IF * 3)	Hor	14.3	-92.7	-26.1	-66.6	4.1	1.4	-63.9	-30	-33.9
1408	Vert	14.5	-92.5	-26.2	-66.3	6.3	1.7	-61.7	-30	-31.7
(IF * 4)	Hor	12.8	-94.2	-26.9	-67.3	6.3	1.7	-62.7	-30	-32.7
1760	Vert	11.8	-95.2	-30.9	-64.3	6.5	2.0	-59.8	-30	-29.8
(IF * 5)	Hor	12.4	-94.6	-30.9	-63.7	6.5	2.0	-59.2	-30	-29.2
2110	Vert	42.0	-65.0	3.1	-68.1	6.2	2.0	-63.9	-30	-33.9
(Fc-IF)	Hor	39.0	-68.0	3.3	-71.3	6.2	2.0	-67.1	-30	-37.1
2462	Vert		-107.0	-31.7	-75.3	7.7	3.6			
(Fc)	Hor		-107.0	-31.6	-75.4	7.7	3.6			
2816	Vert	46.3	-60.7	0.4	-61.1	6.5	2.7	-57.3	-30	-27.3
(Fc+IF)	Hor	39.4	-67.6	0.4	-68.0	6.5	2.7	-64.2	-30	-34.2
3518	Vert	31.5	-75.5	-1.5	-74.0	7.3	2.9	-69.6	-30	-39.6
(Fc+IF*3)	Hor	30.9	-76.1	-1.9	-74.2	7.3	2.9	-69.8	-30	-39.8
4924	Vert	44.2	-62.8	-6.1	-56.7	7.1	5.2	-54.8	-30	-24.8
(Fc * 2)	Hor	43.6	-63.4	-6.3	-57.1	7.1	5.2	-55.2	-30	-25.2
7386	Vert	34.2	-72.8	-11.3	-61.5	7.7	6.7	-60.5	-30	-30.5
(Fc * 3)	Hor	33.3	-73.7	-11.8	-61.9	7.7	6.7	-60.9	-30	-30.9
9848	Vert	34.9	-72.1	-17.2	-54.9	6.2	8.6	-57.3	-30	-27.3
(Fc * 4)	Hor	33.3	-73.7	-17.1	-56.6	6.2	8.6	-59.0	-30	-29.0
12310	Vert	29.9	-77.1	-23.3	-53.8	5.6	9.3	-57.5	-30	-27.5
(Fc * 5)	Hor	29.9	-77.1	-23.1	-54.0	5.6	9.3	-57.7	-30	-27.7

TRANSMITTER RADIATED SPURIOUS EMISSIONS

Product: Intermec DSSS Type II Radio, Approval

Set Up: Radial Integral Patch, radio tested as module HORIZONTAL

Test Date (mm/dd/yy): 10/29/98

Measurement System Calibration Date: 2/26/98

Span 100 MHz, Res. B.W. 1 MHz, Video B.W. 3 kHz

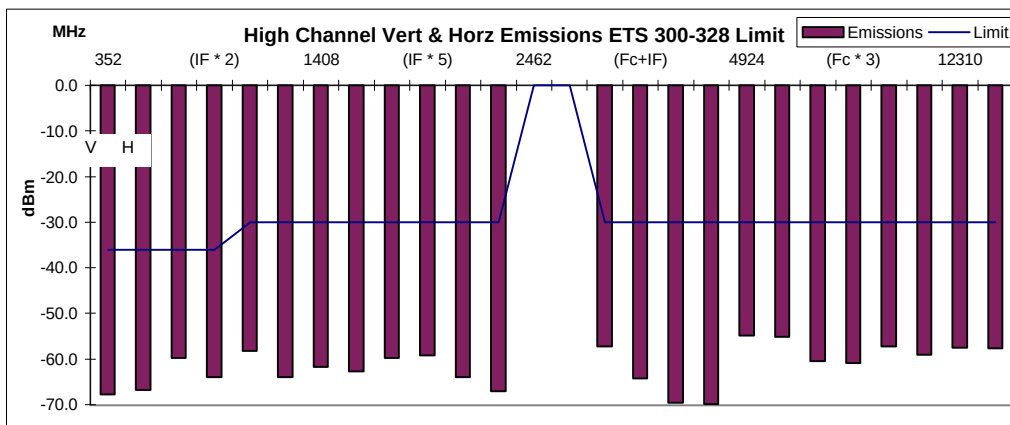
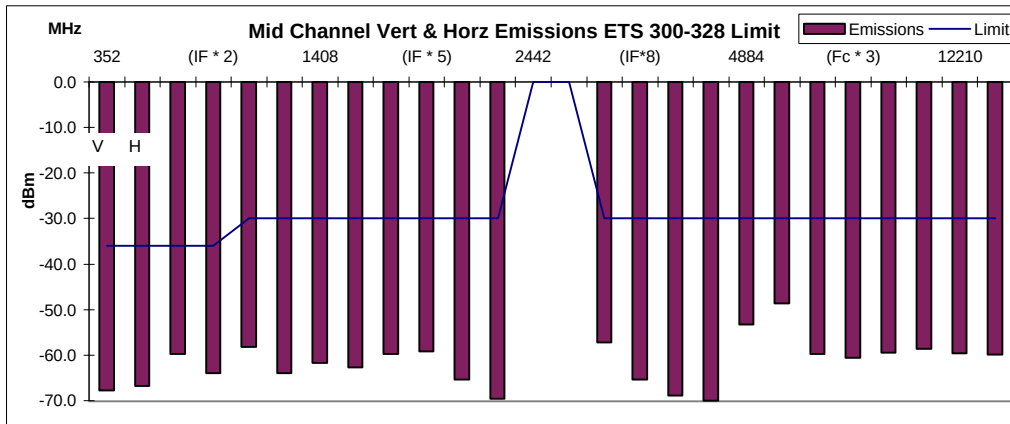
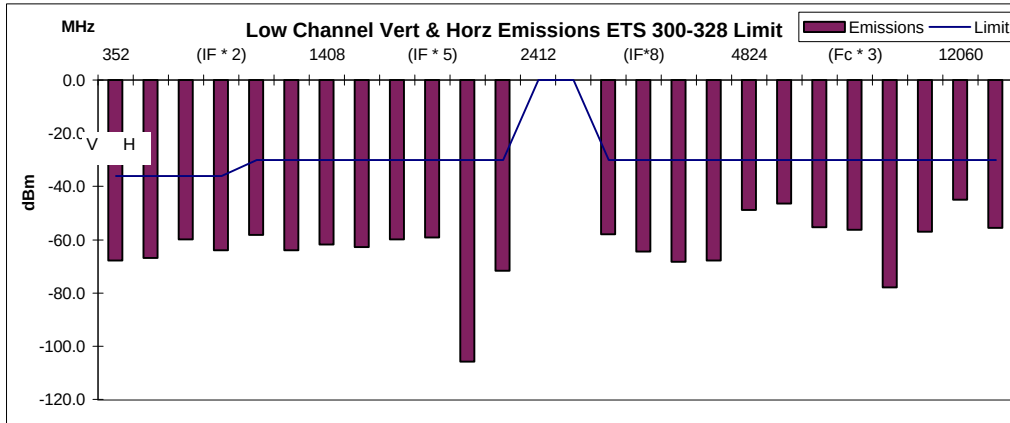
Data recorded here is based upon FCC data sheets within this file

Intermec Technologies Corporation

Norand Mobile Systems Division

EMC Test Laboratory

Standard: ETS 300-328



RECEIVER RADIATED SPURIOUS EMISSIONS

Product: Intermec DSSS Type II Radio, Approval

Intermec Technologies Corporation

Set Up: Radial Integral Patch, radio tested as module HORIZONTAL

Norand Mobile Systems Division

Test Date (mm/dd/yy): 10/29/98

EMC Test Laboratory

Measurement System Calibration Date: 2/26/98

Span 100 MHz, Res. B.W. 1 MHz, Video B.W. 3 kHz

Standard: ETS 300-328

Data recorded here is based upon FCC data sheets within this file

Frequency (MHz)	Antenna Polarity	Spurious Measured dB(uV)	Spur Meas. (dBm)	Generator 0 dBm Ref. Level	Calculated Generator Substitution (dBm)	Antenna Comp (dB)	Cable Comp (dB)	Generator Reference at Antenna (dBm)	Spec Limit (dBm)	Margin (dB)
a	b	c	d	e	f	g	h	i	j	k
(formula)			(=c-107)		(=d-e)			(=f-g+h)		(=i-j)
Low Channel 01 2412 MHz										
2060	Vert	34.6	-72.4	2.8	-75.2	6.3	2.2	-71.1	-47	-24.1
(Lo)	Hor	39.7	-67.3	2.8	-70.1	6.3	2.2	-66.0	-47	-19.0
4120	Vert	37.6	-69.4	-4.0	-65.4	7.4	3.4	-61.4	-47	-14.4
(Lo * 2)	Hor	36.5	-70.5	-4.3	-66.2	7.4	3.4	-62.2	-47	-15.2
6180	Vert	31.3	-75.7	-8.0	-67.7	8.3	3.9	-63.3	-47	-16.3
(Lo * 3)	Hor	31.0	-76.0	-8.3	-67.7	8.3	3.9	-63.3	-47	-16.3
8240	Vert	34.7	-72.3	-13.2	-59.1	8.2	5.0	-55.9	-47	-8.9
(Lo * 4)	Hor	34.8	-72.2	-13.0	-59.2	8.2	5.0	-56.0	-47	-9.0
10300	Vert	30.6	-76.4	-17.4	-59.0	7.2	6.7	-58.5	-47	-11.5
(Lo * 5)	Hor	30.4	-76.6	-16.6	-60.0	7.2	6.7	-59.5	-47	-12.5
12360	Vert	30.7	-76.3	-22.2	-54.1	7.1	6.4	-53.4	-47	-6.4
(Lo * 6)	Hor	30.3	-76.7	-22.5	-54.2	7.1	6.4	-53.5	-47	-6.5
Middle Channel 7 2442 MHz										
2090	Vert	38.1	-68.9	3.0	-71.9	6.3	2.2	-67.8	-47	-20.8
(Lo)	Hor	42.1	-64.9	3.0	-67.9	6.3	2.2	-63.8	-47	-16.8
4180	Vert	40.2	-66.8	-3.8	-63.0	7.3	3.5	-59.2	-47	-12.2
(Lo * 2)	Hor	39.8	-67.2	-4.2	-63.0	7.3	3.5	-59.2	-47	-12.2
6270	Vert	31.1	-75.9	-8.1	-67.8	8.3	3.8	-63.3	-47	-16.3
(Lo * 3)	Hor	31.3	-75.7	-8.3	-67.4	8.3	3.8	-62.9	-47	-15.9
8360	Vert	34.9	-72.1	-13.4	-58.7	8.3	5.2	-55.6	-47	-8.6
(Lo * 4)	Hor	34.5	-72.5	-13.3	-59.2	8.3	5.2	-56.1	-47	-9.1
10450	Vert	30.4	-76.6	-18.8	-57.8	6.7	6.8	-57.9	-47	-10.9
(Lo * 5)	Hor	30.2	-76.8	-18.4	-58.4	6.7	6.8	-58.5	-47	-11.5
12540	Vert	31.7	-75.3	-23.4	-51.9	6.9	6.8	-51.8	-47	-4.8
(Lo * 6)	Hor	31.4	-75.6	-23.8	-51.8	6.9	6.8	-51.7	-47	-4.7
High Channel 11 2462 MHz										
2110	Vert	44.6	-62.4	3.1	-65.5	6.3	2.2	-61.4	-47	-14.4
(Lo)	Hor	42.2	-64.8	3.3	-68.1	6.3	2.2	-64.0	-47	-17.0
4220	Vert	38.4	-68.6	-3.5	-65.1	7.2	3.6	-61.5	-47	-14.5
(Lo * 2)	Hor	38.1	-68.9	-3.8	-65.1	7.2	3.6	-61.5	-47	-14.5
6330	Vert	31.8	-75.2	-8.9	-66.3	8.3	3.6	-61.6	-47	-14.6
(Lo * 3)	Hor	31.0	-76.0	-9.0	-67.0	8.3	3.6	-62.3	-47	-15.3
8440	Vert	36.9	-70.1	-13.0	-57.1	8.3	5.3	-54.1	-47	-7.1
(Lo * 4)	Hor	37.9	-69.1	-13.0	-56.1	8.3	5.3	-53.1	-47	-6.1
10550	Vert	29.7	-77.3	-20.1	-57.2	6.3	6.8	-57.7	-47	-10.7
(Lo * 5)	Hor	29.6	-77.4	-20.6	-56.8	6.3	6.8	-57.3	-47	-10.3
12660	Vert	31.5	-75.5	-24.1	-51.4	5.7	7.1	-52.8	-47	-5.8
(Lo * 6)	Hor	31.6	-75.4	-24.8	-50.6	5.7	7.1	-52.0	-47	-5.0

RECEIVER RADIATED SPURIOUS EMISSIONS

Product: Intermec DSSS Type II Radio, Approval

Set Up: Radial Integral Patch, radio tested as module HORIZONTAL

Test Date (mm/dd/yy): 10/29/98

Measurement System Calibration Date: 2/26/98

Span 100 MHz, Res. B.W. 1 MHz, Video B.W. 3 kHz

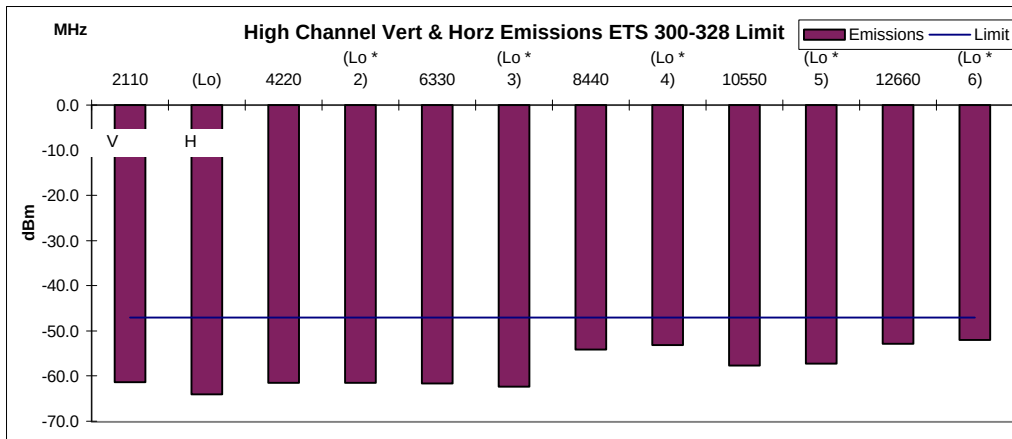
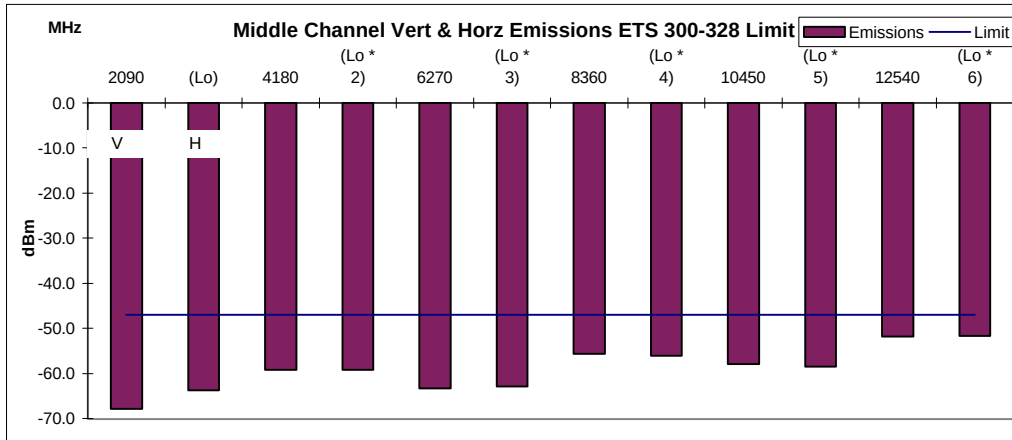
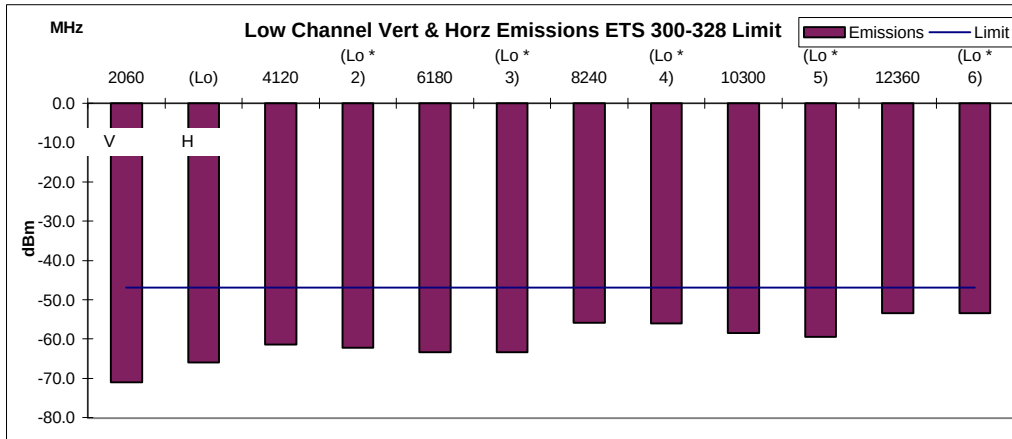
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Intermec Technologies Corporation

Norand Mobile Systems Division

EMC Test Laboratory

Standard: ETS 300-328



RECEIVER RADIATED SPURIOUS EMISSIONS

Quasi-Peak Emissions Data Compared to Emissions Limit

FCC ID: EHA2126

Product: Intermec DSSS Type II Radio, Approval

Set Up: Radiall Integral Patch, radio tested as module HORIZONTAL

Test Date (mm/dd/yy): 10/29/98

Measurement System Calibration Date: 3/2/98

Intermec Technologies Corporation

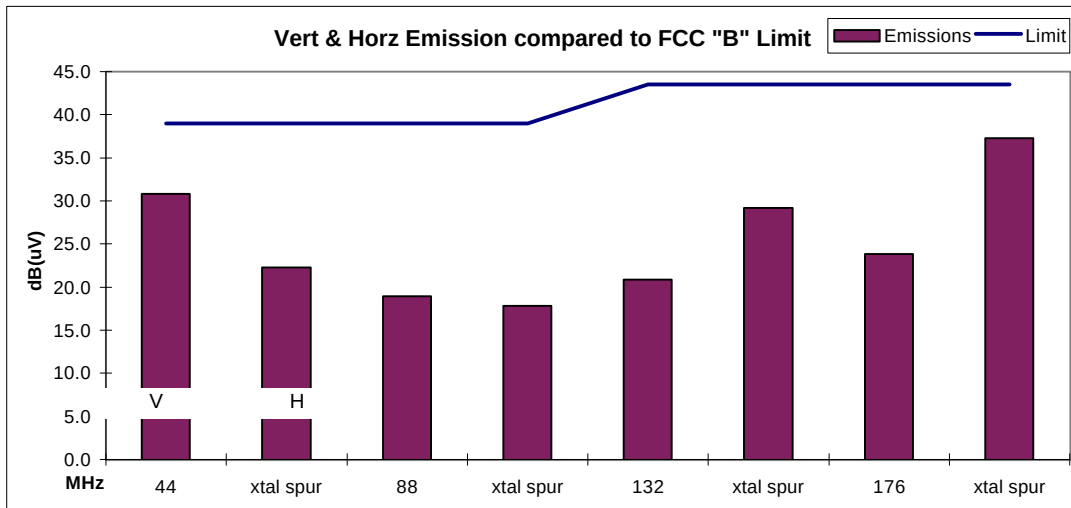
Norand Mobile Systems Division

EMC Test Laboratory

Standard: Canada RSS-210/GL-36

Quasi-Peak detector 120 kHz BW on ESVP Receiver

Frequency (MHz)	Antenna Polarity	Spurious Measured dB(uV)	H.P.filter + Cable Loss (dB)	Antenna Correction Factor dB/M	Amplifier Gain (dB)	Calculated Result dB(uV)/M	Limit @ 3 Meter dB(uV)/Meter	Margin (dB)
a	b	c	d	e	f	g	h	i
(formula)						(=c+d+e-f)		(=g-h)
44	Vert	19.8	0.1	10.9		30.8	39	-8.2
xtal spur	Hor	11.3	0.1	10.9		22.3	39	-16.7
88	Vert	8.5	0.6	9.8		18.9	39	-20.1
xtal spur	Hor	7.4	0.6	9.8		17.8	39	-21.2
132	Vert	8.1	0.8	12.0		20.9	43.5	-22.6
xtal spur	Hor	16.4	0.8	12.0		29.2	43.5	-14.3
176	Vert	9.6	1.0	13.3		23.9	43.5	-19.7
xtal spur	Hor	23.0	1.0	13.3		37.3	43.5	-6.3



RECEIVER RADIATED SPURIOUS EMISSIONS

Quasi-Peak Emissions Data Compared to Emissions Limit

Product: Intermec DSSS Type II Radio, Approval

Set Up: Radiall Integral Patch, radio tested as module HORIZONTAL

Test Date (mm/dd/yy): 10/29/98

Measurement System Calibration Date: 2/26/98

Quasi-Peak detector 120 kHz BW on ESVP Receiver

Intermec Technologies Corporation

Norand Mobile Systems Division

EMC Test Laboratory

Standard: ETS 300-328

Frequency (MHz)	Antenna Polarity	Spurious Measured dB(uV)	Spur Meas. (dBm)	Generator 0 dBm Ref. Level	Calculated Generator Substitution (dBm)	Antenna Comp (dB)	Cable Comp (dB)	Generator Reference at Antenna (dBm)	Spec Limit (dBm)	Margin (dB)
a	b	c	d	e	f	g	h	i	j	k
(formula)			(=c-107)		(=d-e)			(=f-g+h)		(=i-j)
44	Vert	19.8	-87.2	-22.1	-65.1		0.1	-65.2	-57	-8.2
xtal spur	Hor	11.3	-95.7	-22.3	-73.4		0.1	-73.5	-57	-16.5
88	Vert	8.5	-98.5	-22.0	-76.5		0.2	-76.7	-57	-19.7
xtal spur	Hor	7.4	-99.6	-19.3	-80.3		0.2	-80.5	-57	-23.5
132	Vert	8.1	-98.9	-26.1	-72.8		0.3	-73.1	-57	-16.1
xtal spur	Hor	16.4	-90.6	-20.2	-70.4		0.3	-70.7	-57	-13.7
176	Vert	9.6	-97.4	-26.6	-70.8		0.4	-71.2	-57	-14.2
xtal spur	Hor	23.0	-84.0	-21.6	-62.4		0.4	-62.8	-57	-5.8

