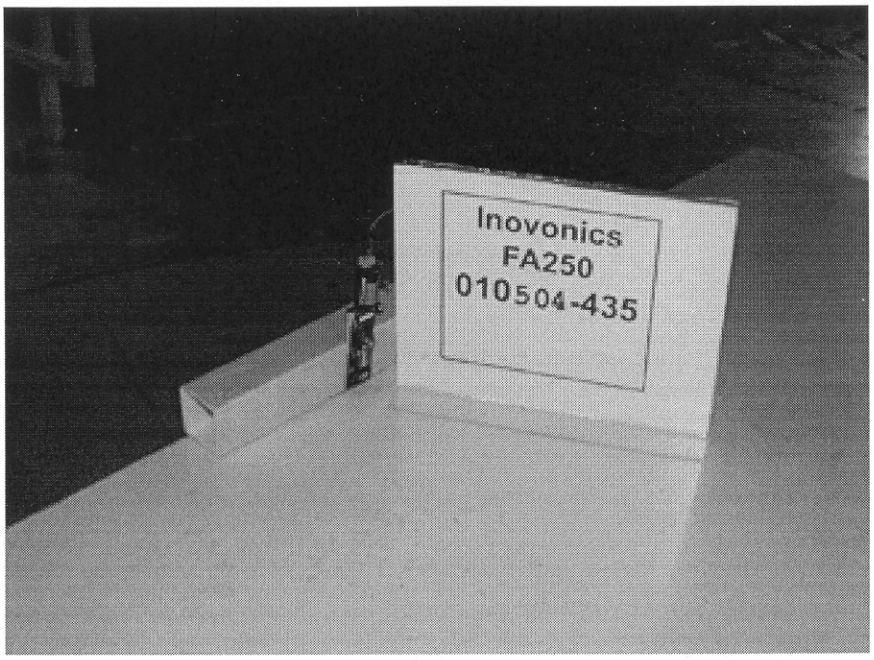
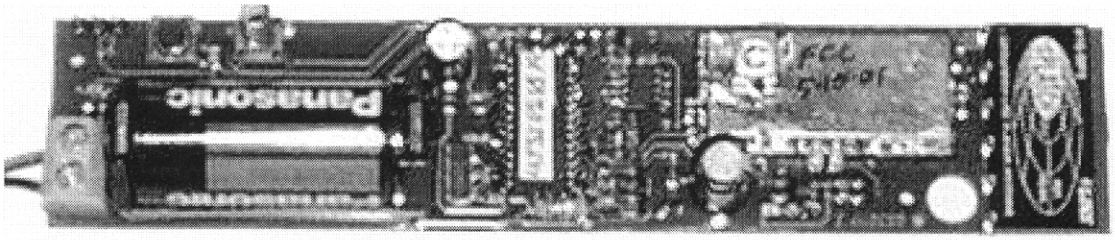
Orthogonal Position 3

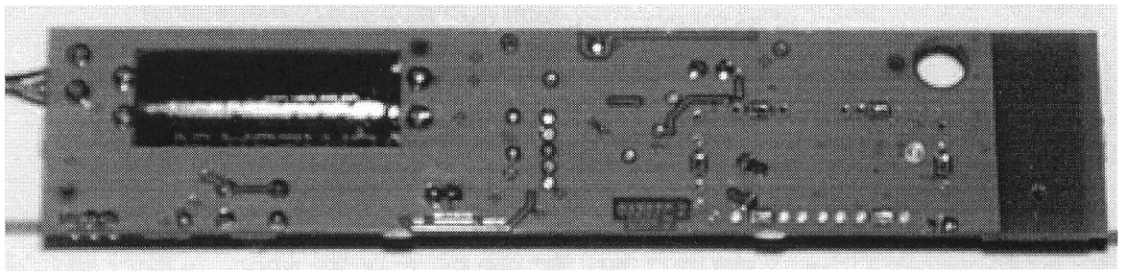


Part 3.2 Printed Circuit Board Top and Bottom

PCB TOP



PCB BOTTOM



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Section 4 Original Test Data / Plots

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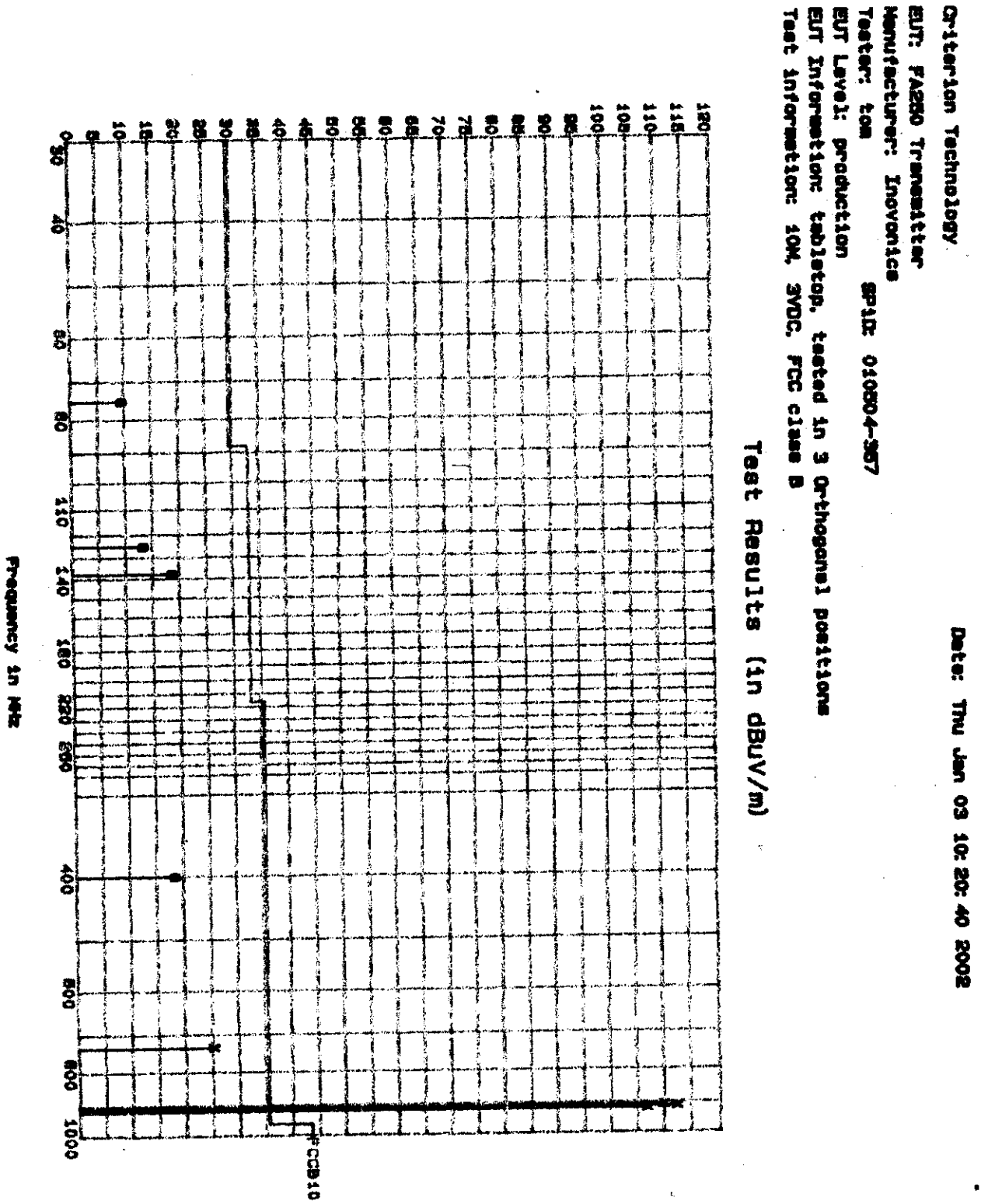
Part 4.1 Radiated Emissions Data Plot 30MHZ to 1 GHz



Part 4.2 Radiated Emissions Data 30MHz to 1 GHz

Notes:

The third column below contains alpha characters which pertain to the type of measurements made. The following are the definitions for those characters: q = Quasi Peak, m = Maximized (cable, rotation and antenna height), s = scanned but no data taken, and a = average. For the first character in column four, a '-' indicates that value is below the limit while an '*' indicates that value is above the limit

If the list is sorted using "I-sort", then quasi-peak and average levels are weighted higher than peak levels and are moved to the front of the scan list.

The following keys help to better understand the data:

TT: Turntable position in degrees

Hght: Height of antenna in centimeters

Az: Azimuth, V = Vertical, H= Horizontal

Table 1: Scan List, sorted by margin to limit FCCB10, -200.0dB filter

Freq, MHz	Value	Sts	FCCB10	TT	Hght	Az	Comment
912.6325	111.95	m	76.39	248	112	H	fo #2
907.5025	109.53	m	73.97	118	104	H	fo #1
919.3975	106.42	m	70.86	142	108	H	fo #3
733.3475	25.22	m	-10.34	113	100	H	nb
137.6635	18.59	q	-14.47	11	402	H	.
400.1005	18.47	q	-17.09	90	100	H	nb amb?
125.0015	13.32	q	-19.74	0	399	H	nb
74.9954	9.57	q	-19.97	0	399	H	nb

Scan List for FCCB10, sorted by Frequency, -200.0dB filter

Freq, MHz	Value	Sts	FCCB10	TT	Hght	Az	Comment
74.9954	9.57	q	-19.97	0	399	H	nb
125.0015	13.32	q	-19.74	0	399	H	nb
137.6635	18.59	q	-14.47	11	402	H	.
400.1005	18.47	q	-17.09	90	100	H	nb amb?
733.3475	25.22	m	-10.34	113	100	H	nb
907.5025	109.53	m	73.97	118	104	H	fo #1
912.6325	111.95	m	76.39	248	112	H	fo #2
919.3975	106.42	m	70.86	142	108	H	fo #3

Part 4.3 Radiated Emission Data 1GHz to 10 GHz

Orthogonal Position 1

Test Number 010504_357 **Orthognal 1**
Inovonics PMTH Spread Spectrum Transmitter **5/11/01** 12/5/01 12/27/01

Freq. (MHz)	TRN (dB/m)	I Val(pk) (dBuV)	F Val(pk) (dBuV/m)	Fval(avg) (dBuV/m)	Azimuth (deg)	Ant. Ht. (m)	Polariz.	comment	Spec Limit (dBuV/m)	Margin (- Fails)
907.43	27.98	87.75	115.73	95.73	109	1.03	h	fo meas @ 10m	137	41.27
912.25	28.12	82.1	110.22	90.22	166	2.95	h	fo meas @ 10m	137	46.78
919.23	28.16	81.25	109.41	89.41	168	2.89	h	fo meas @ 10m	137	47.59
1811.20	-2.80	71.65	68.85	48.85	290	1.13	v	2fo	86.19	37.34
1822.60	-2.89	71.65	68.76	48.76	60	1.20	v	2fo	80.68	31.92
1837.07	-2.95	71.60	68.65	48.65	297	1.59	h	2fo	79.87	31.22
2721.96	1.29	54.30	55.59	35.59	346	1.13	h	3fo	54	18.41
2737.37	1.22	55.45	56.67	36.67	15	1.11	h	3fo	54	17.33
2758.23	1.18	55.95	57.13	37.13	1	1.12	h	3fo	54	16.87
3629.01	2.59	48.80	51.39	31.39	174	1.12	v	4fo	54	22.61
3649.66	2.50	53.50	56.00	36.00	185	1.13	v	4fo	54	18
3676.06	2.34	51.45	53.79	33.79	156	1.47	h	4fo	54	20.21
4536.41	4.31	46.75	51.06	31.06	352	1.14	v	5fo	54	22.94
4561.70	4.54	47.60	52.14	32.14	357	1.12	v	5fo	54	21.86
4595.20	4.74	49.75	54.49	34.49	3	1.57	v	5fo	54	19.51
5444.80	8.27	38.9	47.17	27.17	2	1.50	h	6fo noise floor	78.64	51.47
5475.95	8.57	38.95	47.52	27.52	0	1.50	h	6fo noise floor	81.22	53.7
5516.06	8.66	38.9	47.56	27.56	0	1.50	v	6fo noise floor	80.39	52.83
6352.20	9.51	47.8	57.31	37.31	360	1.50	h	7fo noise floor	78.64	41.33
6389.24	9.37	48.2	57.57	37.57	341	1.79	v	7fo	81.22	43.65
6436.10	9.36	49.1	58.46	38.46	278	1.47	v	7fo	80.39	41.93
7260.24	12.26	49.9	62.16	42.16	47	1.16	v	8fo	54	11.84
7301.92	12.56	51.75	64.31	44.31	46	1.34	v	8fo	54	9.69
7355.28	12.53	50	62.53	42.53	335	1.35	h	8fo	54	11.47
8167.77	12.05	33.87	45.92	25.92	89	1.55	h	9fo	54	28.08
8214.66	12.02	34.15	46.17	26.17	91	1.53	h	9fo	54	27.83
8274.69	12.54	33.97	46.51	26.51	99	1.56	h	9fo	54	27.49
9075.30	15.28	33.99	49.27	29.27	136	1.22	h	10fo	54	24.73
9127.40	14.99	34.06	49.05	29.05	135	1.22	v	10fo	54	24.95
9197.10	15.27	33.96	49.23	29.23	133	1.29	v	10fo	54	24.77

Orthogonal Positions 2

Test Number 010504_357 Orthoganal 2

Inovonics FA250 Transmitter 5/11/01 12/27/01

Freq. (MHz)	TRN (dB/m)	I Val (pk) (dBuV)	F Val (pk) (dBuV/m)	Fval (avg) (dBuV/m)	Azimuth deg.	Ant Ht. (m)	Pol.	comments	Spec Limit (dBuV/m)	Margin (-Fails)
907.43	28.53	79.65	108.18	88.18	118	1.03	h	fo meas @ 10m	137	48.82
912.56	32.66	78.10	110.76	90.76	248	1.16	h	fo meas @ 10m	137	46.24
919.23	42.33	67.60	109.93	89.93	249	1.00	h	fo meas @ 10m	137	47.07
1814.71	-2.80	64.15	61.35	41.35	91	1.01	h	2fo	78.64	39.87
1825.05	-2.89	63.95	61.06	41.06	285	1.29	h	2fo	81.22	39.33
1838.11	-2.95	62.80	59.85	39.85	90	1.22	h	2fo	80.39	38.79
2721.96	1.29	54.30	55.59	35.59	346	1.13	h	3fo	54	18.41
2737.37	1.22	55.45	56.67	36.67	15	1.11	h	3fo	54	17.33
2758.23	1.18	55.95	57.13	37.13	1	1.12	h	3fo	54	16.87
3629.01	2.59	48.80	51.39	31.39	174	1.12	v	4fo	54	22.61
3649.66	2.50	53.50	56.00	36.00	185	1.13	v	4fo	54	18
3676.06	2.34	51.45	53.79	33.79	156	1.47	h	4fo	54	20.21
4536.41	4.31	46.75	51.06	31.06	352	1.14	v	5fo	54	22.94
4561.70	4.54	47.60	52.14	32.14	357	1.12	v	5fo	54	21.86
4595.20	4.74	49.75	54.49	34.49	3	1.57	v	5fo	54	19.51
5444.80	8.27	38.9	47.17	27.17	2	1.50	h	6fo noise floor	78.64	51.47
5475.95	8.57	38.95	47.52	27.52	0	1.50	h	6fo noise floor	81.22	53.7
5516.06	8.66	38.9	47.56	27.56	0	1.50	v	6fo noise floor	80.39	52.83
6352.20	9.51	47.8	57.31	37.31	360	1.50	h	7fo noise floor	78.64	41.33
6389.24	9.37	47	56.37	36.37	0	1.50	v	7fo noise floor	81.22	44.85
6436.10	9.36	47.15	56.51	36.51	360	1.50	h	7fo noise floor	80.39	43.88
7260.24	12.26	34.4	46.66	26.66	0	1.50	v	7fo noise floor	54	27.34
7301.92	12.56	34.31	46.87	26.87	360	1.50	h	7fo noise floor	54	27.13
7355.28	12.53	34.39	46.92	26.92	56	1.35	h	8fo	54	27.08
8167.77	12.05	33.87	45.92	25.92	89	1.55	h	9fo	54	28.08
8214.66	12.02	34.15	46.17	26.17	91	1.53	h	9fo	54	27.83
8274.69	12.54	33.97	46.51	26.51	99	1.56	h	9fo	54	27.49
9075.30	15.28	33.99	49.27	29.27	136	1.22	h	10fo	54	24.73

Orthogonal Positions 3

Test Number 010504_357 orthogonal 3

Inovonics FA250 Transmitter 5/11/01 10/19/01 12/5/01 12/27/01

Freq. (MHz)	TRN (dB/m)	I Val (pk) (dBuV)	F Val (pk) (dBuV/m)	Fval (avg) (dBuV/m)	Azimuth deg.	Ant Ht. (m)	Pol.	comments	Spec Limit (dBuV/m)	Margin (-Fails)
907.43	28.53	79.65	108.18	88.18	142	1.14	H	fo meas @ 10m	137	48.82
912.56	32.66	78.10	110.76	90.76	142	1.14	H	fo meas @ 10m	137	46.24
919.23	42.33	67.60	109.93	89.93	142	1.14	H	fo meas @ 10m	137	47.07
1817.63	-2.80	69.95	67.15	47.15	362	1.02	h	2fo	78.64	34.07
1824.71	-2.89	63.8	60.91	40.91	358	1.3	h	2fo	81.22	39.48
1838.11	-2.95	64.8	61.85	41.85	15	1	H	2fo	80.39	36.79
2726.23	1.29	62.55	63.84	43.84	53	1	V	3fo	54	10.16
2737.06	1.22	63.5	64.72	44.72	289	1	V	3fo	54	9.28
2760.52	1.18	58.25	59.43	39.43	327	1	H	3fo	54	14.57
3635.54	2.59	55.4	57.99	37.99	345	1.2	V	4fo	54	16.01
3650.30	2.50	55.3	57.80	37.80	348	1.26	V	4fo	54	16.2
3681.56	2.34	55.9	58.24	38.24	324	1.06	V	4fo	54	15.76
4544.38	4.31	58	62.31	42.31	232	1	H	5fo	54	11.69
4561.70	4.54	57.55	62.09	42.09	56	1.44	V	5fo	54	11.91
4598.66	4.74	58.15	62.89	42.89	58	1.41	V	5fo	54	11.11
5444.80	8.27	45.05	53.32	33.32	72	1.47	V	6fo	78.64	45.32
5473.54	8.57	45.3	53.87	33.87	138	1.38	H	6fo	81.22	47.35
5519.16	8.66	48.05	56.71	36.71	68	1.63	V	6fo	80.39	43.68
6352.20	9.51	47.25	56.76	36.76	363	1.67	H	7fo noise floor	78.64	41.88
6389.24	9.37	46.85	56.22	36.22	363	1.67	V	7fo noise floor	81.22	45
6436.10	9.36	46.8	56.16	36.16	0	1.67	H	7fo noise floor	80.39	44.23
7260.24	12.26	46.1	58.36	38.36	0	1.37	H	7fo noise floor	54	15.64
7301.92	12.56	46.2	58.76	38.76	0	1.37	V	8fo noise floor	54	15.24
7355.28	12.53	46.45	58.98	38.98	0	1.5	V	8fo noise floor	54	15.02
8167.77	12.05	46.85	58.90	38.90	0	1.5	H	9fo noise floor	54	15.1
8214.66	12.02	48.1	60.12	40.12	153	1.57	H	9fo	54	13.88
8274.69	12.54	46.05	58.59	38.59	0	1.5	H	9fo noise floor	54	15.41
9078.00	15.28	46.25	61.53	41.53	0	1.5	H	10fo noise floor	54	12.47
9125.20	14.99	46.6	61.59	41.59	0	1.5	H	10fo	54	12.41

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Section 5 Equipment Calibration Information

Manufacturer	Name/Description	Model Number	Serial Number	Cal. Due Date
Hewlett Packard	Tracking Generator	HP85645A	3210A00124	06/12/02
Hewlett Packard	Quasi Peak Adapter	HP 85650A	2521A00733	06/12/02
Hewlett Packard	Spectrum Analyzer	HP 8566B	2403A07322	07/21/02
Hewlett Packard	Spectrum Analyzer	HP 8566B	2421A00527	06/12/02
Rohde/Schwarz	LISN	ESH2-Z5	828739-001	07/23/02
Rohde/Schwarz	HF Receiver	ESHS-30	82600/011	08/01/02
Haefely Trench	Coupling Network	IP6.2	083 957-02	09/18/01
Haefely Trench	De-coupling Network	DEC1A	080057-09	09/18/01
Haefely Trench	EFT Coupling Clamp	IP4A	080-011-06	09/18/01
Haefely Trench	EFT Tester	PEFT Junior	583-333-51	09/18/01
Haefely Trench	Impulse Module	PHV 30.2	083991-06	09/18/01
Haefely Trench	Surge Generator	PSURGE 6.1	083 906-07	09/18/01
Haefely Trench	Surge Network	FP-SURGE 32.1	083925-05	09/18/01
Lehman Chambers	Semi Anechoic Chamber	N/A	N/A	09/20/01
Hewlett Packard	Pulse Generator	HP 8116A	2901G09493	10/05/01
Hewlett Packard	Spectrum Analyzer	HP 8594E	3412A01039	10/10/01
Haefely Trench	ESD Gun	PESD 1600	H605100	10/11/01
Gigatronics	Power Meter	8541C	1830945	10/14/01
EMCO	Active Loop	6502	2626	10/19/01
Gigatronics	Power Sensor	80301A-410	1831996	10/20/01
Solar	50 uH LISN	8612-50-TS-100N	967621	10/20/01
Solar	50 uH LISN	8612-50-TS-100N	967622	10/20/01
FCC	CDN	FCC-801-M3-25	9714	10/23/01

FCC	EM Clamp	F2031	309	10/23/01
FCC	Current Probe	F-33-2	None	10/25/01
FCC	Current Probe	F-33-1	154	10/26/01
FCC	Current Probe	F-33-1	None	10/26/01
Haefely Trench	Dip Generator	PLINE1610	083 970-07	10/26/01
Tegam	Current Probe	925236-1	12588	10/26/01
Microwave Instrumentation Technologies	18-26.5 GHz Horn	12A-18	115300	11/04/01
Fluke	Digital Multimeter	87	60800598	12/20/01
Fluke	Digital Multimeter	87	66320753	12/20/01
Tektronix	Oscilloscope	2467B	B051203	12/20/01
Tektronix	Oscilloscope	2465A	B021016	12/20/01
Fluke	Digital Multimeter	87	68630334	12/26/01
Abbeon	Thermometer/ Hygrometer	HTAB169B	1	01/05/02
Hewlett Packard	Spectrum Analyzer	HP 8591A	2919A00220	01/29/02
Dickson	Temperature/ RH Recorder	THDX	5300245	02/02/02
Amplifier Research	E-Field Probe	FP2000	19682	02/10/02
Amplifier Research	E-Field Probe	FP2080	20236	02/13/02
Veratech	Preamp (AMP3)			02/13/02
Rohde/Schwarz	VHF/UHF Receiver	ESVS-30	8634221014	03/09/02
Antenna Research Associates	1-18 GHz Horn	DRG118/A	1056	03/10/02
Microwave Instrumentation Technologies	26.5 - 40 GHz Horn	12A-26	20493KE	03/19/02
Hewlett Packard	Preselector	HP 9445B	1704A02674	04/09/02
Haefely Trench	Power Supply	PHF555	080-419-05	04/12/02
Le Croy	Digital Storage Oscilloscope	9450	2141	04/19/02

Antenna Research Associates	1-18 GHz Horn	DRG118/A	1057	04/23/02
Hewlett Packard	Signal Generator	HP 8648D	3642000145	04/23/02
Amplifier Research	Power Amplifier	150A100A	20183	04/27/02
Amplifier Research	Power Amplifier	100W1000M1	20214	04/30/02
Amplifier Research	Power Amplifier	10S1G4	20155	05/02/02
Amplifier Research	Coupler	DC6080	19529	05/03/02
Andrews Heliax Cable	F2-50 Low Loss Coax	F2-50	N/A	05/04/02
Chase	Bilog 30 - 1000 MHz	CB6111	1121	05/09/02
EMCO	BiConnical 30-200 MHz	3108	2343	05/09/02
EMCO	BiConnical 30-200 MHz	3108	2441	05/09/02
EMCO	Log Periodic 200 - 1000 MHz	3146	2763	05/09/02
EMCO	Log Periodic 200 - 1000 MHz	3146	3096	05/09/02
Mini Circuits	Preamp (AMP2)			05/16/02
Heise	Barometer	710A	S7-15256	02/06/03
EMCO	Horn	3115	4003	Verif. for Use
EMCO	Dipole	3121C	722	Verify

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Section 6 Product Information Forms

No product information was provided. Manufacurer will provide product informaion with Occupied BW Measurements

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