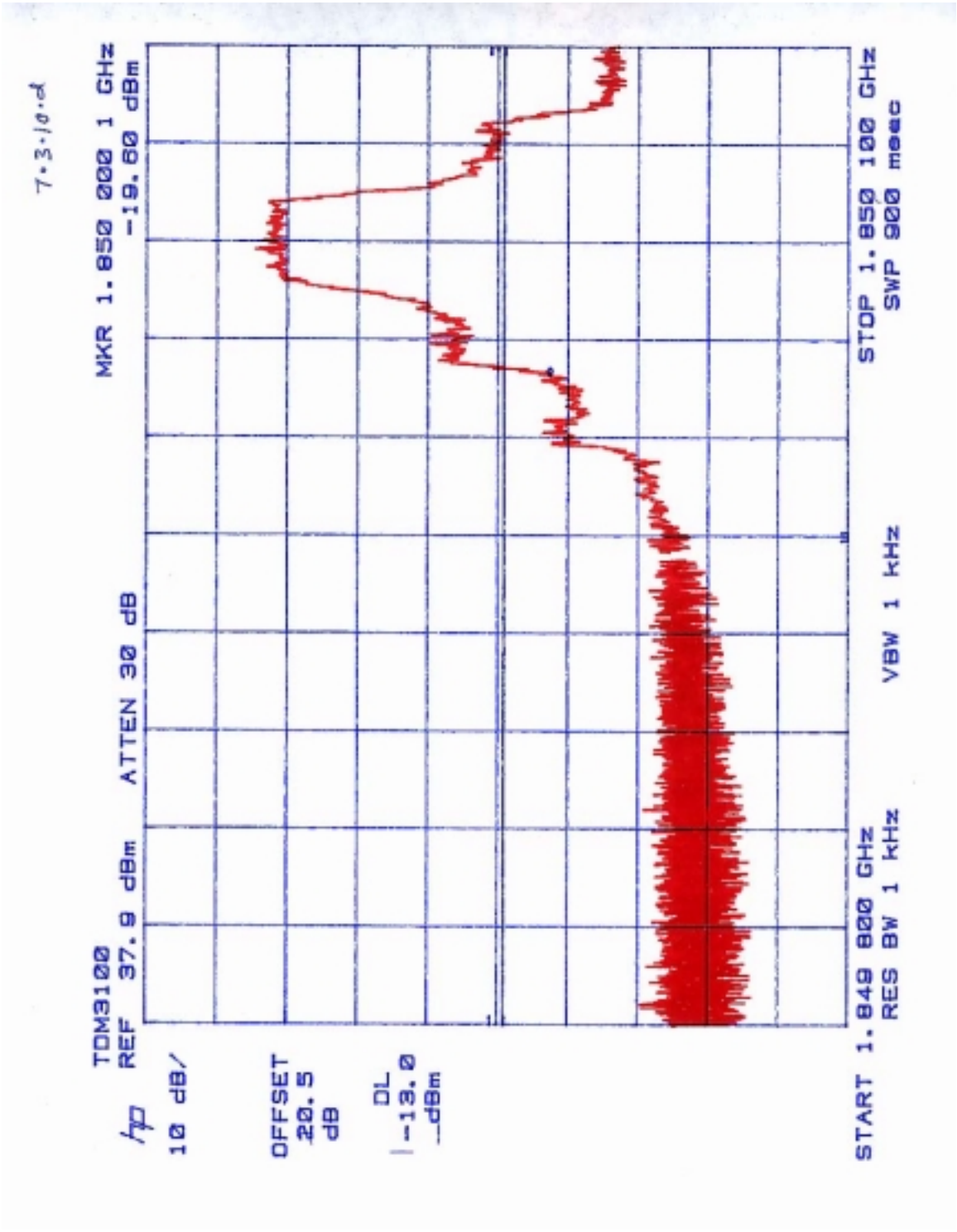
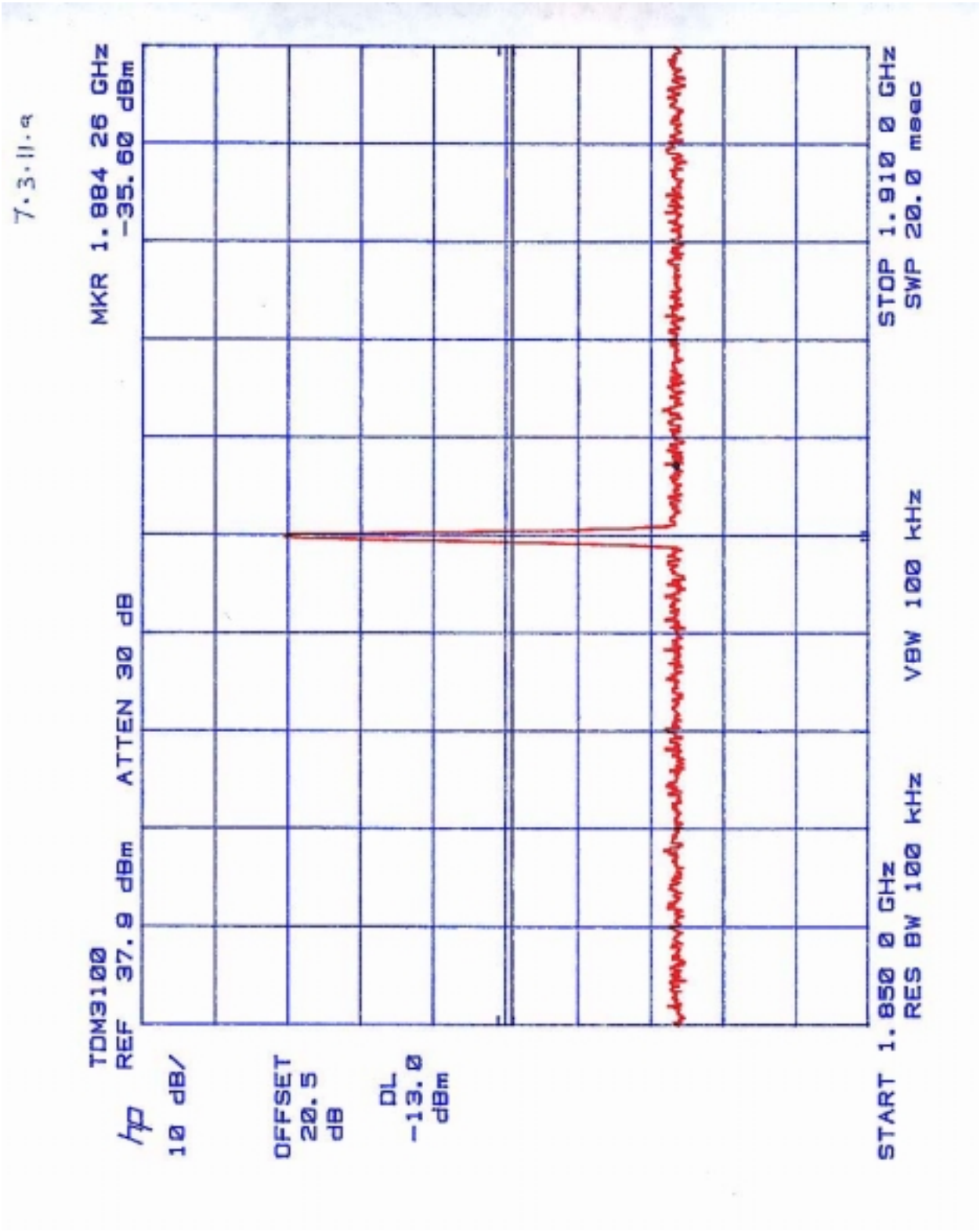
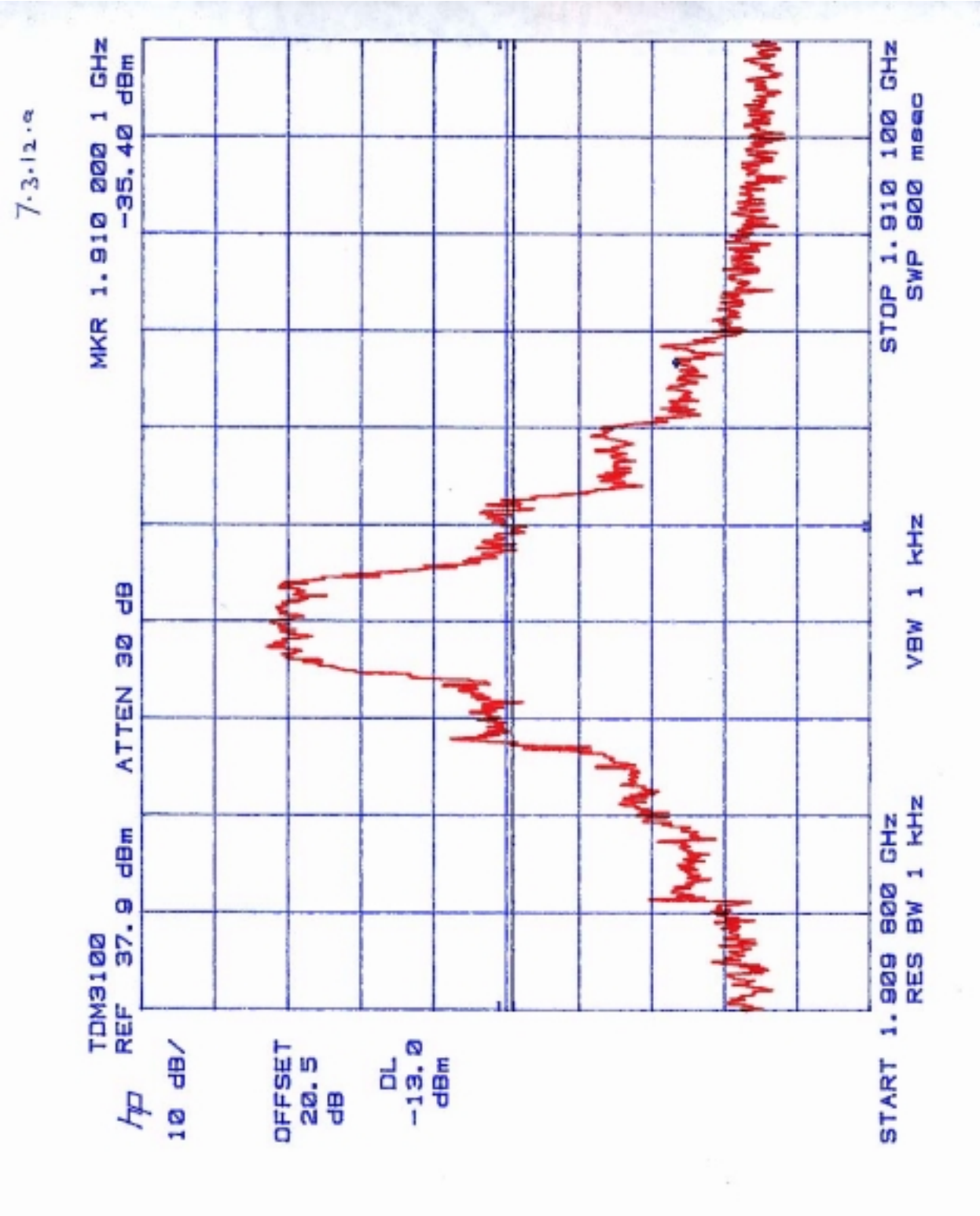
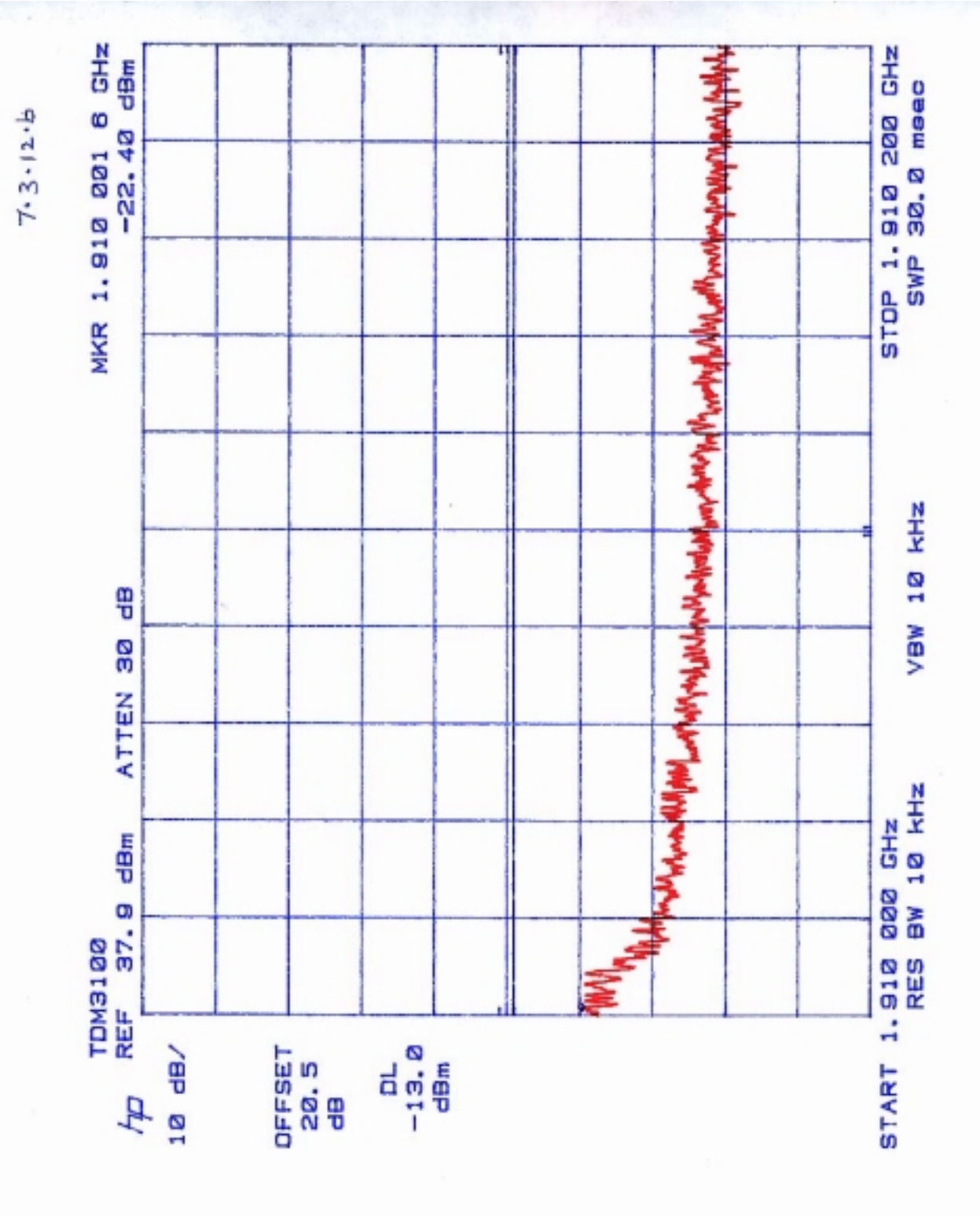
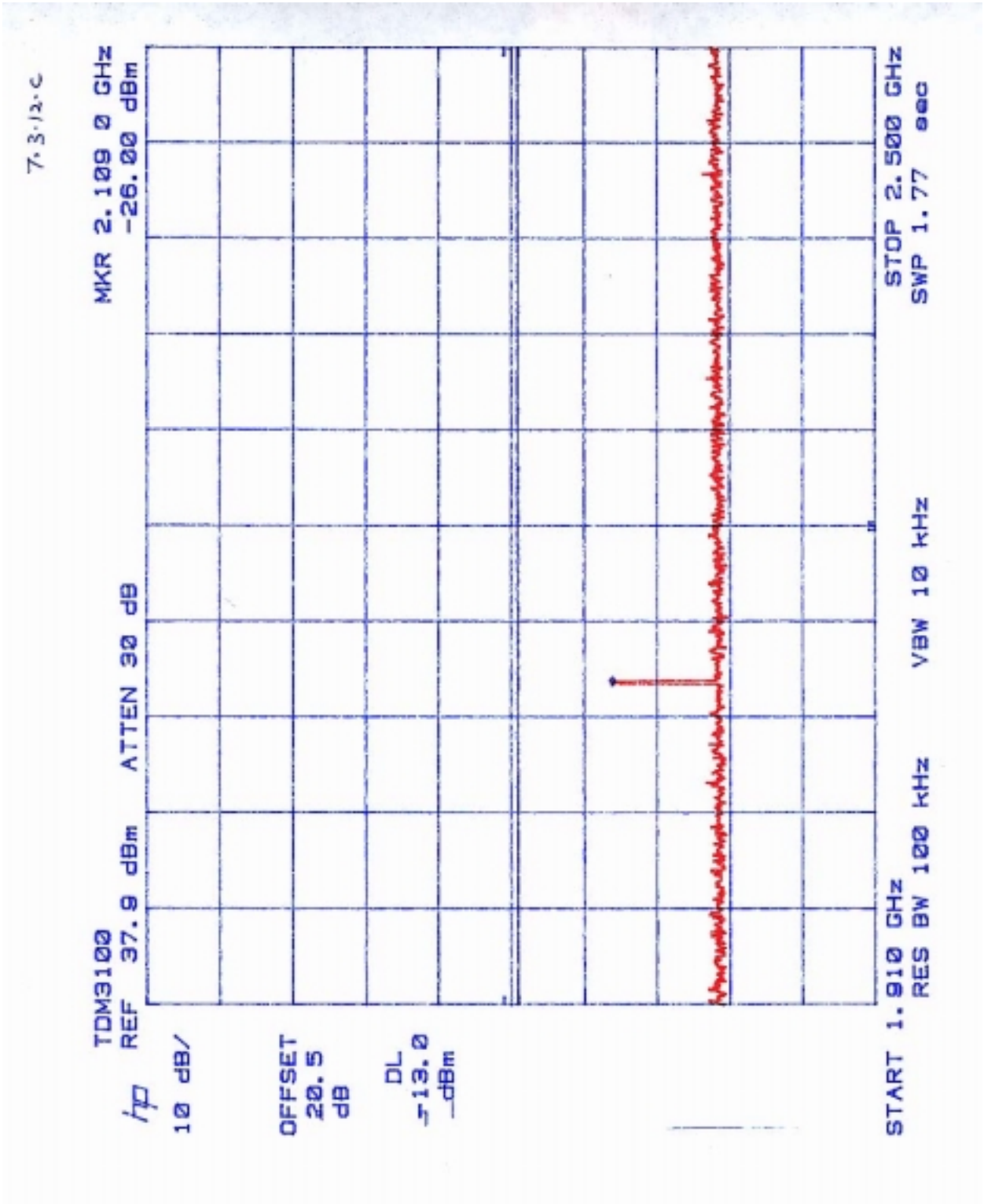
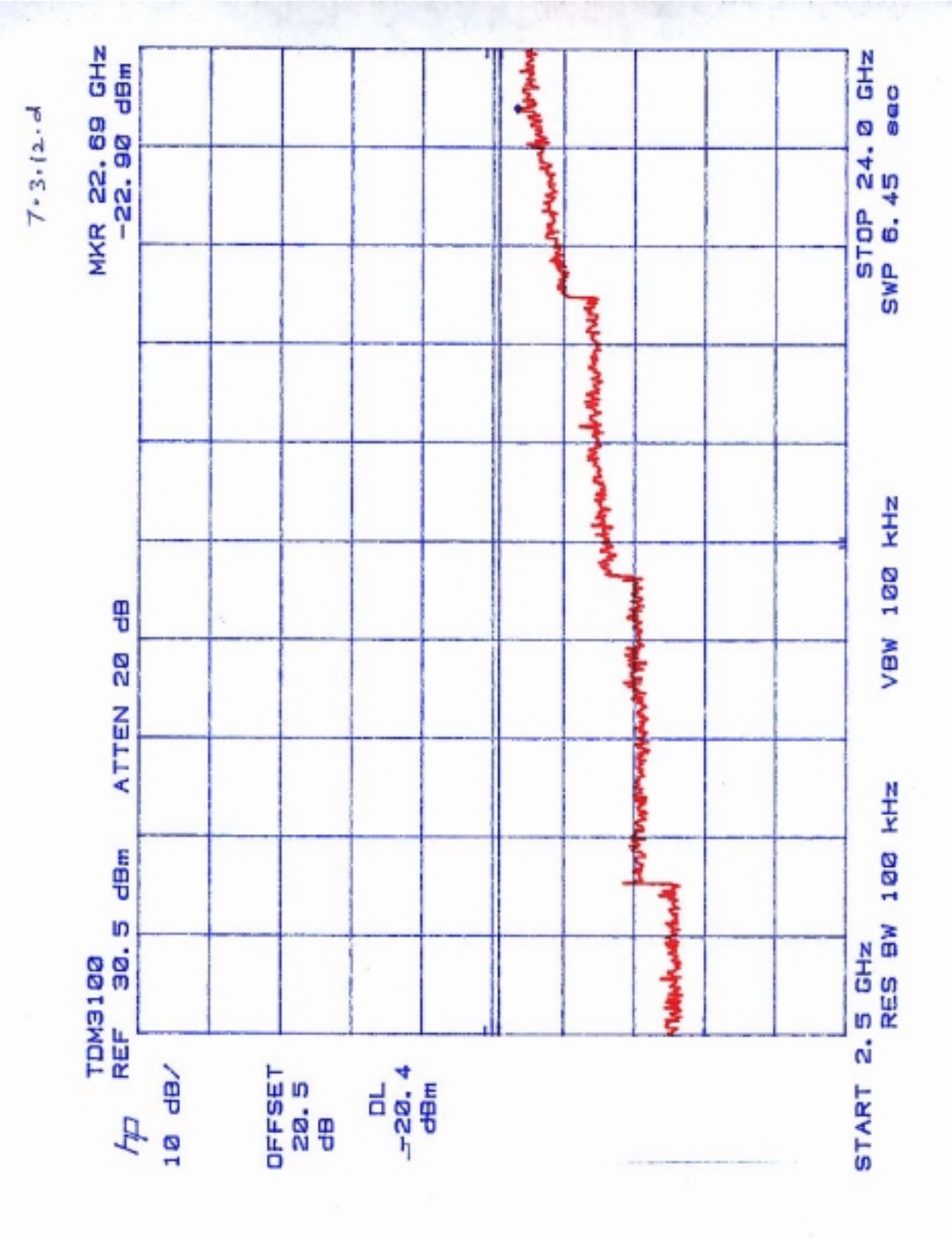

7·3·10·d
MKR 1.850 000 1 GHz
-19.80 dBm
STOP 1.850 100 GHz
SWP 900 msec
TDM3100
REF 37.9 dBm
ATTEN 30 dB
VBW 1 kHz
10 dB/
OFFSET
20.5
dB
DL
-13.0
dBm
START 1.849 800 GHz
RES BW 1 kHz


7.3.11.a
MKR 1.884 26 GHz
-35.60 dBm
STOP 1.910 0 GHz
SWP 20.0 msec
TDM3100
REF 37.9 dBm
ATTEN 30 dB
VBW 100 kHz
hp
10 dB/
OFFSET
20.5
dB
DL
-13.0
dBm
START 1.850 0 GHz
RES BW 100 kHz


7.3.12.a
MKR 1.910 000 1 GHz
-35.40 dBm
TDM3100
REF 37.9 dBm
ATTEN 30 dB
10 dB/
OFFSET
20.5
dB
DL
-13.0
dBm
START 1.909 800 GHz
RES BW 1 kHz
VBW 1 kHz
STOP 1.910 100 GHz
SWP 900 msec


7.3.12.b
MKR 1.910 001 6 GHz
-22.40 dBm
TDM3100
REF 37.9 dBm
ATTEN 30 dB
hp
10 dB/
OFFSET
20.5
dB
DL
-13.0
dBm
START 1.910 000 GHz
RES BW 10 kHz
STOP 1.910 200 GHz
SWP 30.0 msec
VBW 10 kHz


7.3.12.c
MKR 2.109 0 GHz
-26.00 dBm
STOP 2.500 GHz
SWP 1.77 sec
TDM3100
REF 37.9 dBm
ATTEN 30 dB
VBW 10 kHz
10 dB/
OFFSET
20.5
dB
DL
-13.0
dBm
START 1.910 GHz
RES BW 100 kHz


7.3.12.d
MKR 22.69 GHz
-22.90 dBm
TDM3100
REF 30.5 dBm
ATTEN 20 dB
10 dB/
OFFSET
20.5
dB
DL
-20.4
dBm
START 2.5 GHz
RES BW 100 kHz
VBW 100 kHz
STOP 24.0 GHz
SWP 6.45 sec

8.0 **Field Strength of Spurious Radiation**, FCC 2.1053

8.1 Test Procedure

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT.

The frequency range up to tenth harmonic of each of the three fundamental frequency (low, middle, and high channels) was investigated.

The spurious emissions attenuation was calculated as the difference between Field strength in dBuV/m at the fundamental frequency (See Section 3) and at the spurious emissions frequency.

8.2 Test Equipment

EMCO 3115 Horn Antenna
HP 8566B Spectrum Analyzer
Tektronix 2782 Spectrum Analyzer
Low Pass Filter
Preamplifier

8.3 Test Results

Test Result:	Passed, refer to the attached

Data Sheet No	Description
8.3.a	Radiated Emissions FCC 15B
8.3.b	Radiated Emissions Reciever LO & Harmonics
8.3.c	Radiated Emissions Harmonics, AMPS Low Channel
8.3.d	Radiated Emissions Harmonics, AMPS Mid Channel
8.3.e	Radiated Emissions Harmonics, AMPS High Channel
8.3.f	Radiated Emissions Harmonics, TDMA Low Channel
8.3.g	Radiated Emissions Harmonics, TDMA Mid Channel
8.3.h	Radiated Emissions Harmonics, TDMA High Channel
8.3.i	Radiated Emissions, Harmonics PCS Band Low channel
8.3.j	Radiated Emissions, Harmonics PCS Band Mid channel
8.3.k	Radiated Emissions, Harmonics PCS Band High channel

8.3.9

Radiated Emissions Test Data

Company:	Wireless link	Model #:	TDM -3100	Standard	FCC § 15B	
EUT:	Cell Phone TDM -3100	S/N #:	089	Limits	2	
Project #:	J20028710	Test Date:	Oct 30, 2000	Test Distance	3	meters
Test Mode:	Normal	Engineer:	Suresh	Duty Relaxation	0	dB

	Antenna Used			Pre-Amp Used			Cable Used			Transducer Used
Number:	9	7	0	7	0	0	22	0	0	0
Model:	EMCO [illegible]	SM LPA [illegible]	None	CPPA_in 2	None	None	Grn_M/L	None	None	None

Frequency MHz	Reading dB(uV)	Detector P/A/Q	Ant. #	Amp. #	Ant. Pol. H/V	Ant Factor dB(1/m)	Pre Amp dB	Insert Loss dB	D. C. F dB	Net dB(µV/m)	Limit @3m dB(µV/m)	Margin dB
32.76	47.3	QP	9	7	V	11.2	36.5	0.5	0.0	22.5	40.0	-17.5
38.87	55.3	Peak	9	7	V	10.4	36.5	0.5	0.0	29.7	40.0	-10.3
131.05	53.6	Peak	9	7	V	13.2	36.7	1.5	0.0	31.6	43.5	-11.9
229.30	52.8	Peak	9	7	V	15.8	37.4	1.8	0.0	33.0	46.0	-13.0
137.10	44.4	Peak	9	7	H	12.9	36.7	1.5	0.0	22.1	43.5	-21.4
388.70	44.9	Peak	7	7	V	15.8	36.9	2.3	0.0	26.1	46.0	-19.9
360.50	46.5	Peak	7	7	V	16.9	36.9	2.3	0.0	28.8	46.0	-17.2
950.18	39.7	QP	7	7	V	23.5	34.2	4.2	0.0	33.2	46.0	-12.8

Notes:

a) D.C.F.:Distance Correction Factor
b) Insert. Loss (dB) = Cable A + Cable B + Cable C .
c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only).
d) Negative signs (-) in Margin column signify levels below the limits.
e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.

8-3-b

Radiated Emissions Test Data

Company:	Wireless Link Inc	Model #:	TDM-3100	Standard	FCC § 15B
EUT:	Cell Phone	S/N #:	089	Limits	2
Project #:	J20028710	Test Date:	Nov 7,2000	Test Distance	3 meters
Test Mode:	Normal	Engineer:	Suresh	Duty Relaxation	0 dB

	Antenna Used		Pre-Amp Used			Cable Used			Transducer Used
Number:	2	14	7	5	8	0	21	0	0	0
Model:	EMCO 3145	EMCO 3115	EM LNA-25	CDI P950	CDI P1000	None	Gm-Mtl	None	None	None

Frequency MHz	Reading dB(uV)	Detector PK/QP	Ant #	Amp. #	Ant. Pol. H/V	Ant. Factor dB(S/m)	Pre-Amp dB	Insert. Loss dB	D. C. F. dB	Net dB(uV/m)	Limit @3m dB(uV/m)	Margin dB
958.68	20.9	Peak	7	5	V	23.8	9.4	2.3	0.0	37.6	54.0	-16.4
1977.20	25.9	Peak	14	8	V	28.6	29.2	2.2	0.0	25.5	54.0	-28.5
1001.19	30.2	Peak	14	8	V	28.2	30.3	2.3	0.0	28.4	54.0	-25.6
2002.30	24.8	Peak	14	8	V	30.1	29.1	2.3	0.0	28.1	54.0	-25.9
1013.61	26.4	Peak	14	8	V	28.2	30.3	2.3	0.0	24.6	54.0	-29.4
2027.20	25.1	Peak	14	8	V	30.1	29.1	2.3	0.0	28.4	54.0	-25.6
PCS												
2109.60	35.3	Peak	14	8	V	30.1	29.1	2.3	0.0	38.6	54.0	-15.4
4219.20	28.9	Peak	14	8	V	34.2	27.9	2.9	0.0	38.1	54.0	-15.9
2079.66	38.6	Peak	14	8	V	30.1	29.1	2.3	0.0	39.9	54.0	-14.1
4158.30	28.3	Peak	14	8	V	34.2	27.9	2.9	0.0	37.5	54.0	-16.5
2049.72	35.4	Peak	14	8	V	30.1	29.1	2.3	0.0	38.7	54.0	-15.3
4129.30	27.0	Peak	14	8	V	34.2	27.9	2.9	0.0	36.2	54.0	-17.8

Notes:

a) D.C.F. Distance Correction Factor
b) Insert. Loss (dB) = Cable A + Cable B + Cable C
c) Net (dB) = Reading + Antenna Factor - Pre-amp + Insert. Loss. - Transducer Loss - Duty Relaxation (transmitter only)
d) Negative signs (-) in Margin column signify levels below the limits.
e) All other emissions not reported are below the equipment noise floor which is at least 20 dB below the limits.

8-3-C

Radiated Emissions Test Data

Company:	Wireless Link	Model #:	TDM - 3810	Req.	FCC 2.993	
EUT:	Cell Phone	S/N or FCC #:	089	Test Dist.	3	meters
Project #:	J20028710	Test Date:	November 8, 2000	TP	0.25	Watt
Test Mode:	Tx@824.04MHz AMPS	Engineer:	Suresh	Min. Attn.	[illegible]	dBc

	Antenna Used			Pre-Amp Used			Cable Used			Transducer Used
Number:	14	7	12	8	3	13	21	0	0	0
Model:	EMCO 3115	EM LPA-25	EMCO 3104	[illegible]	[illegible]	[illegible]	[illegible]	None	None	None

Frequency	Reading	Detector	Ant.	Amp.	Ant. Pol.	Ant. Factor	Pre-Amp	Insert. Loss	Net	ERP	Attn.	Margin
MHz	dB(uV)	P/A/Q	#	#	H/V	dB/1/m	dB	dB	dB(uV/m)	mW	dBc	dB
824.04	103.7	Peak	7	0	V	21.9	0.0	2.0	127.6	1.05E+03	0.0	N/A
1648.08	34.4	Peak	14	0	V	26.6	0.0	3.0	64.0	4.59E-04	63.6	-26.6
2472.10	46.0	Peak	14	8	V	30.1	28.5	2.3	49.9	1.79E-05	77.7	-40.7
3296.10	29.1	Peak	14	8	V	31.3	27.9	2.5	35.0	5.78E-07	92.6	-55.6
4120.10	27.6	Peak	14	8	V	34.2	27.8	2.9	36.8	8.76E-07	90.8	-53.8
4944.20	27.5	Peak	14	8	V	33.9	28.1	3.2	36.5	8.17E-07	91.1	-54.1
5768.20	28.6	Peak	14	8	V	36.1	28.3	3.7	40.1	1.87E-06	87.5	-50.5
6592.20	36.8	Peak	14	8	V	36.4	28.0	4.2	49.4	1.59E-05	78.2	-41.2
7416.30	36.1	Peak	14	8	V	38.0	28.0	4.3	50.4	2.01E-05	77.2	-40.2
8240.40	35.2	Peak	14	8	V	37.9	27.2	4.8	50.7	2.15E-05	76.9	-39.9

Notes:
a) O.C.F.:Other Correction Factor
b) Insert. Loss = Cable A + Cable B + Cable C + Transducer.
c) Net = Reading + Antenna Factor - Pre-Amp + Insert. Loss.
d) Attn. = Field Strength (Fundamental) - Field Strength (Harmonics).
e) Negative signs (-) in Margin column signify levels below the limits.

A

8-3-8

Radiated Emissions Test Data

Company:	Wireless Link	Model #:	TDM - 3810		Req.:	FCC 2.993	
EUT:	Cell Phone	S/N or FCC #:	089		Test Dist.	3	meters
Project #:	J20028710	Test Date:	November 8, 2000		[illegible]	0.25	Watt
Test Mode:	Tx@836.55 MHz AMPS	Engineer:	Suresh.		Min. Attn.	36.99	dBc

	Antenna Used			Pre-Amp Used			Cable Used			Transducer Used
Number:	14	7	0	8	0	0	21	0	0	0
Model:	EMCO 3115	EM LPA-25	None	CDL R1000	None	None	[illegible]	None	None	None

Frequency MHz	Reading dBµV	Detector P/A/Q	Ant. #	Amp. #	Ant. Pol. H/V	Ant. Factor dB/m	Pre-Amp dB	Insert Loss dB	Net dBµV/m	ERP mW	Attn. dBc	Margin dB
836.55	104.3	Peak	7	0	V	22.2	0.0	2.0	128.5	1.30E+03	0.0	N/A
1673.10	47.3	Peak	14	0	V	26.6	0.0	3.0	76.9	8.95E-03	51.6	-14.6
2509.65	35.5	Peak	14	8	V	30.4	28.5	2.3	39.7	1.71E-06	88.8	-51.8
3346.20	29.1	Peak	14	8	V	31.3	27.9	2.6	35.0	5.78E-07	93.5	-56.5
4182.75	27.5	Peak	14	8	V	34.2	27.9	2.9	36.7	8.56E-07	91.8	-54.8
5019.30	27.8	Peak	14	8	V	35.4	28.3	3.5	38.4	1.27E-06	90.1	-53.1
5855.85	36.6	Peak	14	8	V	36.1	28.3	3.7	48.1	1.18E-05	80.4	-43.4
6692.40	36.0	Peak	14	8	V	36.4	28.0	4.2	48.6	1.33E-05	79.9	-42.9
7528.95	36.5	Peak	14	8	V	37.8	28.0	4.6	50.9	2.25E-05	77.6	-40.6
8365.50	36.7	Peak	14	8	V	37.9	27.2	4.8	52.2	3.04E-05	76.3	-39.3

Notes:
a) O.C.F.:Other Correction Factor
b) Insert. Loss = Cable A + Cable B + Cable C + Transducer.
c) Net = Reading + Antenna Factor - Pre-Amp + Insert. Loss.
d) Attn. = Field Strength (Fundamental) - Field Strength (Harmonics).
e) Negative signs (-) in Margin column signify levels below the limits.

8-3-e

Radiated Emissions Test Data

Company:	Wireless Link	**Model #:**	TDM - 3810	Req.	FCC 2.993	
EUT:	Cell Phone	**S/N or FCC #:**	089	Test Dist.	3	meters
Project #:	J20028710	**Test Date:**	November 6, 2000	TP	0.25	Watt
Test Mode:	Tx@848.97 MHz AMPS	**Engineer:**	Suresh	Max. Attn	[illegible]	dBc

	Antenna Used			Pre-Amp Used			Cable Used			Transducer Used
Number:	14	7	0	8	0	0	21	0	0	0
Model:	EMCO 3115	EM EPA-25	None	[illegible]	None	None	[illegible]	None	None	None

Frequency	Reading	Detector	Ant.	Amp.	Ant. Pol.	Ant. Factor	Pre-Amp	Insert. Loss	Net	ERP	Attn.	Margin
MHz	dBuV	P/A/Q	#	#	H/V	dB(1/m)	dB	dB	dBuV/m	[illegible]	dBc	dB
848.97	102.9	Peak	7	0	V	22.0	0.0	2.0	126.9	8.98E+02	0.0	N/A
1697.94	36.6	Peak	14	0	V	26.6	0.0	3.0	66.2	7.63E-04	60.7	-23.7
2546.91	35.3	Peak	14	8	V	30.4	28.5	2.3	39.5	1.63E-06	87.4	-50.4
3395.88	27.4	Peak	14	8	V	31.3	27.9	2.5	33.3	3.91E-07	93.6	-56.6
4244.85	27.7	Peak	14	8	V	34.2	27.9	2.9	36.9	8.96E-07	90.0	-53.0
5093.82	27.7	Peak	14	8	V	35.4	28.3	3.5	38.3	1.24E-06	88.6	-51.6
5942.79	38.5	Peak	14	8	V	36.1	28.3	3.7	48.0	1.15E-05	78.9	-41.9
6791.76	35.8	Peak	14	8	V	36.4	28.0	4.2	48.4	1.27E-05	78.5	-41.5
7640.73	38.4	Peak	14	8	V	37.8	27.8	4.6	51.0	2.30E-05	75.9	-38.9
8489.70	38.3	Peak	14	8	V	37.9	27.1	4.8	53.9	4.49E-05	73.0	-36.0

Notes:
a) O.C.F. :Other Correction Factor
b) Insert. Loss = Cable A + Cable B + Cable C + Transducer.
c) Net = Reading + Antenna Factor - Pre-Amp + Insert. Loss.
d) Attn. = Field Strength (Fundamental) - Field Strength (Harmonics).
e) Negative signs (-) in Margin column signify levels below the limits.

8.3.4

Radiated Emissions Test Data

Company:	Wireless Link	Model #:	TDM - 3810	Reg	FCC 2.993
EUT:	Cell Phone	S/N or FCC #:	059	Test Dist	3 meters
Project #:	J20028710	Test Date:	November 7, 2000	TP	0.60 Watt
Test Mode:	Tx@824.04 MHz TDMA	Engineer:	Suresh	Min. Attn	40.78 dBc

	Antenna Used			Pre-Amp Used			Cable Used			Transducer Used
Number:	14	7	12	8	3	13	21	0	0	0
Model:	EMCO 3115	EM_PA-22	EMCO 3104	CD LP100	MC-19542	ACO0400	Cmc_Mr.E	None	None	None

Frequency MHz	Reading dB(uV)	Detector PK/QP	Ant #	Amp #	Ant. Pol. H/V	Ant. Factor dB/m	Pre-Amp dB	Insert. Loss dB	Net dBuV/m	ERP mW	Attn. dBc	Margin dB
824.04	104.9	Peak	7	0	V	21.9	0.0	2.0	128.8	1.39E+03	0.0	N/A
1648.08	39.1	Peak	14	0	V	26.6	0.0	3.0	68.7	1.36E-03	60.1	-19.3
2472.12	53.1	Peak	14	8	V	30.1	28.5	2.3	57.0	9.17E-05	71.8	-31.0
3296.16	33.3	Peak	14	8	V	31.3	27.9	2.5	39.2	1.52E-06	89.6	-48.8
4120.20	30.0	Peak	14	8	V	34.2	27.9	2.9	39.2	1.52E-06	89.6	-48.8
4944.24	27.6	Peak	14	8	V	33.9	28.1	3.2	36.5	8.17E-07	92.3	-51.5
5768.28	27.8	Peak	14	8	V	36.1	28.3	3.7	39.3	1.56E-06	89.5	-48.7
6592.32	36.3	Peak	14	8	V	36.4	28.0	4.2	48.9	1.42E-05	79.9	-39.1
7416.36	36.3	Peak	14	8	V	38.0	28.0	4.3	50.6	2.10E-05	78.2	-37.4
8240.40	35.8	Peak	14	8	V	37.9	27.2	4.8	51.1	2.36E-05	77.7	-36.9

Notes:
a) O.C.F.: Other Correction Factor
b) Insert. Loss = Cable A + Cable B + Cable C + Transducer.
c) Net = Reading + Antenna Factor - Pre-Amp + Insert. Loss.
d) Attn. = Field Strength (Fundamental) - Field Strength (Harmonics).
e) Negative signs (-) in Margin column signify levels below the limits.

8.3.9

Radiated Emissions Test Data

Company:	Wireless Link	Model #:	TDM - 3810		Reg.	FCC 2.993	
EUT:	Cell Phone	S/N or FCC #:	089		Test Dist.	3	meter
Project #:	J20028710	Test Date:	November 7, 2000		ERP	0.00	Watt
Test Mode:	Tx@836.55 MHz TDMA	Engineer:	Suresh		EIRP Adj.	46.78	dBd

	Antenna Used			Pre-Amp Used			Cable Used			Transducer Used
Number:	14	7	12	8	3	13	21	0	0	0
Model:	EMCO 3115	CM LPA-25	EMCO 3104	CDI P100	MC 1042	ACO/400	Cable M-L	None	None	None

Frequency MHz	Reading dB(uV)	Detector P/A/Q	Ant. h	Amp. #	Ant. Pol. H/V	Ant. Factor dB(1/m)	Pre-Amp dB	Insert Loss dB	Net dB(uV/m)	ERP mW	Atten. dBc	Margin dB
836.55	103.5	Peak	7	0	V	22.2	0.0	2.0	127.7	1.08E+03	0.0	N/A
1673.10	40.3	Peak	14	0	V	25.6	0.0	3.0	69.9	1.79E-03	57.8	-17.0
2509.65	41.1	Peak	14	8	V	30.4	28.5	2.3	45.3	6.20E-06	82.4	-41.6
3346.20	31.0	Peak	14	8	V	31.3	27.9	2.5	36.9	8.98E-07	90.8	-50.0
4182.75	29.2	Peak	14	8	V	34.2	27.9	2.9	38.4	1.27E-06	89.3	-48.5
5019.30	28.3	Peak	14	8	V	35.4	28.3	3.5	38.9	1.42E-06	88.8	-48.0
5855.85	35.9	Peak	14	8	V	36.1	28.3	3.7	47.4	1.01E-05	80.3	-39.5
6692.40	37.3	Peak	14	8	V	36.4	28.0	4.2	49.9	1.78E-05	77.8	-37.0
7528.95	36.3	Peak	14	8	V	37.8	28.0	4.6	50.7	2.15E-05	77.0	-36.2
8365.50	36.8	Peak	14	8	V	37.9	27.2	4.8	52.3	3.11E-05	75.4	-34.6

Notes:
a) C.C.F. Other Correction Factor
b) Insert. Loss = Cable A + Cable B + Cable C + Transducer.
c) Net = Reading + Antenna Factor - Pre-Amp + Insert. Loss.
d) Attn. = Field Strength (Fundamental) - Field Strength (Harmonics).
e) Negative signs (-) in Margin column signify levels below the limits.

8.3.h

Radiated Emissions Test Data

Company:	Wireless Link	Model #:	TDM - 3810	Reg:	FCC 22/03
EUT:	Cell Phone	S/N or FCC #:	089	Test Dist:	3 meter
Project #:	J20028710	Test Date:	November 6, 2000	RP:	0.60 Watt
Test Mode:	Tx@848.97 MHz TDMA	Engineer:	Suresh.	Min. Attn:	40.78 dBc

	Antenna Used:			Pre-Amp Used:			Cable Used:			Transducer Used:
Number:	14	7	12	8	3	13	21	0	0	0
Model:	EMCO 3115	EMCO 3104	EMCO 3104	CDI PA100	MC 8932	ACO 3000	Sw_M+1	None	None	None

Frequency MHz	Reading dBuV	Detector PK/QP	Ant. #	Amp. #	Ant. Pol. H/V	Ant. Factor dB(1/m)	Pre Amp dB	Insert Loss dB	Net dBuV/m	ERP uV	Attn. dBc	Margin dB
848.97	103.2	Peak	7	0	V	22.0	0.0	2.0	127.2	9.60E+02	0.0	N/A
1697.94	40.3	Peak	14	0	V	26.8	0.0	3.0	69.9	1.79E-03	57.3	-16.5
2546.91	35.7	Peak	14	8	V	30.4	28.5	2.3	40.9	2.25E-06	86.3	-45.5
3395.88	30.3	Peak	14	8	V	31.3	27.9	2.5	36.2	7.63E-07	91.0	-50.2
4244.85	28.6	Peak	14	8	V	34.2	27.9	2.9	37.7	1.08E-06	89.5	-48.7
5093.82	30.7	Peak	14	8	V	35.4	28.3	3.5	41.3	2.47E-06	85.9	-45.1
5942.79	45.5	Peak	14	8	V	36.1	28.3	3.7	57.0	9.17E-05	70.2	-29.4
6791.76	36.0	Peak	14	8	V	36.4	28.0	4.2	48.6	1.33E-05	78.6	-37.8
7640.73	40.3	Peak	14	8	V	37.8	27.8	4.6	54.9	5.65E-05	72.3	-31.5
8489.70	45.0	Peak	14	8	V	37.9	27.1	4.8	60.8	2.10E-04	66.6	-25.8

Notes:
a) O.C.F.:Other Correction Factor
b) Insert. Loss = Cable A + Cable B + Cable C + Transducer.
c) Net = Reading + Antenna Factor + Pre-Amp + Insert. Loss.
d) Attn. = Field Strength (Fundamental) - Field Strength (Harmonics).
e) Negative signs (-) in Margin column signify levels below the limits.

8-3-j

Radiated Emissions Test Data

Company:	Wireless Link	Model #:	TDM - 3810	Req.	FCC 2.993	
EUT:	Cell Phone	S/N or FCC #:	089	Test Dist.	3	meters
Project #:	J20028710	Test Date:	November 8, 2000	Tx	0.60	Watt
Test Mode:	Tx@1879.95MHz PCS (TDMA)	Engineer:	Suresh	Min. Attn.	40.78	dBc

	Antenna Used			Pre-Amp Used			Cable Used			Transducer Used
Number:	14	7	21	8	10	13	21	0	0	0
Model:	EMCO3115	EM LPA-25	3160-9	CDI P100-6	AFT18855	ACO/400	Ort_M+L	None	None	None

Frequency MHz	Reading dB(uV)	Detect or P/A/Q	Ant #	Amp #	Ant. Pol H/V	Ant Factor dB(1/m)	Pre-Amp dB	Insert. Loss dB	Net dB(uV/m)	ERP mW	Attn. dBc	Margin dB
1878.98	90.9	Peak	-	-	-	-	-	-	120.6	2.10E+02	-	-
3757.96	61.4	Peak	14	8	V	32.5	27.8	2.7	68.8	1.39E-03	51.8	-11.0
5636.94	28.6	Peak	14	8	V	36.1	28.3	3.7	40.1	1.67E-06	80.5	-39.7
7515.92	40.1	Peak	14	8	V	37.8	28.0	4.6	54.5	5.16E-05	66.1	-25.3
9394.90	45.5	Peak	14	8	V	40.2	27.0	4.7	63.4	4.00E-04	57.2	-16.4
11273.88	46.9	Peak	14	10	V	40.7	38.9	5.6	53.3	3.91E-05	67.3	-26.5
13152.86	39.8	Peak	14	10	V	40.7	39.2	6.1	47.4	1.01E-05	73.2	-32.4
15031.84	42.2	Peak	14	10	V	42.5	38.3	6.8	53.2	3.79E-05	67.4	-26.7
16910.82	40.8	Peak	14	10	V	41.3	39.4	7.2	49.9	1.79E-05	70.7	-29.9
18789.80	45.8	Peak	21	10	V	40.2	38.1	7.6	57.5	1.03E-04	63.1	-22.3

Notes:
a) O.C.F.:Other Correction Factor
b) Insert. Loss = Cable A + Cable B + Cable C + Transducer.
c) Net = Reading + Antenna Factor - Pre-Amp + Insert. Loss.
d) Attn. = Field Strength (Fundamental) - Field Strength (Harmonics).
e) Negative signs (-) in Margin column signify levels below the limits.

8-3-k

Radiated Emissions Test Data

Company:	Wireless Link	Model #:	TDM - 3510		Req.	FCC 2.993	
EUT:	Cell Phone	S/N or FCC #:	089		Test Dist.	3	meters
Project #:	J20028710	Test Date:	November 7, 2000		TP	0.60	Watt
Test Mode:	Tx@1909.97MHz PCS (TDMA)	Engineer:	Suresh		Min. Attn.	40.78	dBc

	Antenna Used			Pre-Amp Used			Cable Used			Transducer Used
Number:	14	7	21	8	10	13	21	0	0	0
Model:	EMCO-3115	EM LPA-25	3160-9	CDI_P1000-9	[illegible]	[illegible]	[illegible]	None	None	None

Frequency MHz	Reading dB(µV)	Detect or P/A/Q	Ant #	Amp #	Ant. Pol H/V	Ant Factor dB(1/m)	Pre-Amp dB	Insert Loss dB	Net dB(µV/m)	ERP mW	Attn dBc	Margin dB
1909.97	87.4	Peak	-	-	-	-	-	-	116.2	7.63E+01	-	-
3819.94	55.2	Peak	14	8	V	32.5	27.8	2.7	62.6	3.33E-04	53.6	-12.8
5729.91	28.7	Peak	14	8	V	36.1	28.3	3.7	40.2	1.92E-06	76.0	-35.2
7639.88	41.9	Peak	14	8	V	37.8	27.8	4.6	56.5	8.17E-05	59.7	-18.9
9549.85	54.9	Peak	14	8	V	38.3	27.3	5.0	70.9	2.25E-03	45.3	-4.5
11459.82	55.1	Peak	14	10	V	40.7	39.9	5.6	61.5	2.58E-04	54.7	-13.9
13369.79	40.2	Peak	14	10	V	40.7	39.2	6.1	47.8	1.10E-05	68.4	-27.6
15279.76	42.7	Peak	14	10	V	42.5	38.3	6.8	53.7	4.25E-05	62.5	-21.8
17189.73	41.9	Peak	14	10	V	42.2	38.8	7.5	52.8	3.49E-05	63.4	-22.8
19099.70	46.0	Peak	21	10	V	40.2	36.1	7.7	57.8	1.10E-04	58.4	-17.8

Notes:

a) O.C.F.:Other Correction Factor
b) Insert. Loss = Cable A + Cable B + Cable C + Transducer.
c) Net = Reading + Antenna Factor - Pre-Amp + Insert. Loss.
d) Attn. = Field Strength (Fundamental) - Field Strength (Harmonics).
e) Negative signs (-) in Margin column signify levels below the limits.

9.0 **Line Conducted Emissions**, FCC 15.107

9.1 Test Procedure

Test Not Applicable

Test procedure described in the ANSI C63.4 Standard was employed.

The EUT was connected to the DC power supply (HP Model No.:), that was connected to the AC line through the LISNs.

Both HOT and NEUTRAL leads were tested.

9.2 Test Results - Line Conducted Emissions

Test not applicable as EUT is Battery Operated

10.0 **Frequency Stability vs Temperature**, FCC 2.1055, ə 22.355
Frequency Tolerance: 2.5 ppm

10.1 Test Procedure

The equipment under test was connected to an external DC power supply and the RF output was connected to a frequency counter via feedthrough attenuators. The EUT was placed inside the temperature chamber. The DC leads, RF output cable, and external PTT cable exited the chamber through an opening made for that purpose.

After the temperature stabilized for approximately 20 minutes, the external PTT switch was activated, and the frequency output was recorded from the counter.

10.2 Test Equipment
Temperature Chamber, -50C to +100C
Hewlett Packard 5383A Frequency Counter
Goldstar DC Power Supply, GR303
Rohde & Schwarz ESVP Test Receiver

10.3 Test Results

Test Result:	Passed

Tx Frequency: 836.01 MHz
Tolerance: +/- 2091 Hz

Temperature (°C)	Frequency (MHz)	Difference (“ Hz)	Output Power (dBm)
60	836.009277	-723	21.20
50	836.010049	49	21.94
40	836.010179	179	22.70
30	836.009917	-83	23.41
20	836.009694	-306	23.73
10	836.009581	-419	24.58
0	836.009806	-194	25.10
-10	836.010738	738	26.06
-20	836.011400	1400	26.66
-30	836.011575	1575	27.43

Note: The measured frequency stability vs. temperature for the US PCS band is identical (% difference) to the above table since the Tx frequency is locked to the same TCXO.

11.0 **Frequency Stability vs Voltage**, FCC 2.1055, 22.355
Frequency Tolerance: 2.5 ppm

11.1 Test Procedure

An external variable DC power supply was connected to the battery terminals of the equipment under test. The voltage was set to 115% of the nominal value and was then decreased until the transmitter light no longer illuminates; i.e., the battery end point. The output frequency was recorded for each battery voltage.

11.2 Test Equipment

Hewlett Packard 5383A Frequency Counter
DC Power Supply
Rohde & Schwarz ESVP Test Receiver

11.3 Test Results.

Test Result:	Passed

Tx Frequency: 836.01 MHz
Tolerance: +/- 2091 Hz

Supply (Battery) Volts	Frequency (MHz)	Difference (“ Hz)	Output Power (dBm)
3.4	836.010084	84	25.86
3.6	836.010128	128	26.03
3.9	836.010177	177	26.23
4.5	836.010199	199	26.31

12.0 Miscellaneous Comments

None.