Marstech Limited

11 Kelfield Street, Etobicoke, Ontario, Canada, M9W 5A1
Telephone (416) 246-1116, Fax (416) 246-1020

Authorized by: Professional Engineers Ontario

Engineering & Administrative

Testing For FCC Submissions/Verifications

Approved Test Facility Industry Canada / Industrie Canada

Qualified Facility

TEST REPORT

REPORT DATE:	July 22, 1998		REPORT NO: 98261D
CONTENTS:	See Table of Contents		
SUBMITTOR:	THOMSON CONSUMER ELECTRONICS, INC. Audio & Communications Product Dev. 101 West 103rd Street Indianapolis, IN 46290-1102 USA		
SUBJECT:	Model No:	2-9774(XXXX)	
	FCC ID:	G9H2-9774	
TEST SPECIFICATION	FCC CFR 47 15.233 AND 2.989 Sections: 15.35, 15.107, 15.109, 15.207 and 15.209 NOTE: Tests Conducted Are "Type" Tests.		
DATE SAMPLE RECEIVED:	June 15, 1998	DATE TESTED:	June 30, July 1 & 13, 1998
RESULTS:	Equipment tested complies with referenced specification.		
ALTERATIONS	NONE		
Tested by:	Original signed by: Jim Sims	Approved and Certified by:	Robert G. Marshall, P. Eng.
	Hiran De Silva		
Reviewed by:	Ed Chang	Date:	29 July 98

TECHNICAL REPORT - FCC 2.1033(b)

Applicant

Thomson Consumer Electronics, Inc.
Audio & Communications Product Dev.
101 West 103rd Street
Indianapolis, IN
46290-1102 USA

FCC Identifier

G9H2-9774

Manufacturer

Integrated Display Technology Ltd.
Block D, Xixian Chen Tian Industrial Estate
Xixian Town, Bao An City
China

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EXHIBIT D

(FCC Ref. 2.1033(b)(6))

"Report of Measurements"

EXHIBIT D(1)

DEVICE MEASURED

(FCC Ref. 2.1033(b)(6))

APPLICANT:	Thomson Consumer Electronics, Inc. Audio & Communications Product Dev. 101 West 103rd Street Indianapolis, IN 46290-1102 USA
MANUFACTURER:	Integrated Display Technology Ltd. Block D, Xixian Chen Tian Industrial Estate Xixian Town, Bao An City China
FCC IDENTIFIER:	G9H2-9774
TRADE NAME:	GE
MODEL NUMBER:	2-9774(XXXX)
SERIAL NO.:	N/M

Marstech Limited
11 Kelfield Street
Etobicoke, Ontario
M9W 5A1 CANADA

TECHNICIANS:
Jim Sims - Com-Serve Corp.
Hiran De Silva - Marstech Limited

_____
Robert G. Marshall, P. Eng.

Date: _____

EXHIBIT D(2)

TEST FACILITY AND EQUIPMENT LIST

FACILITIES

Radiated — ANSI C63.4 (FCC OET/55) open field 3 meter test range. This test range is protected from the cold and moisture by a non-conductive enclosure.

Conducted — 2.5m Anechoic Chamber

EQUIPMENT

Hewlett-Packard spectrum analyzer # 8554 RF & 141T video.
Anritsu 2601 A spectrum analyzer.
Advantest R3261A Spectrum Analyzer
Hewlett-Packard RF generator # 8640 B with an 002 doubler
Hewlett-Packard attenuator 30 dB # 11708A.
Narda 20 watt (20 dB) attenuator
Compliance Design P950 Preamp (16 dB)..... 25 MHZ -1.0 GHZ
A.H. Systems biconical antenna; ....20 MHZ - 330 MHZ
A.H. Systems log periodic antenna; .....300 MHZ - 1.8 GHZ
Eaton dipole antennas; T1, T2, T3 .....25 MHZ - 1.0 GHZ
CDI Roberts dipole antennas; T1, T2, T3 & T4.....25 MHZ - 1.0 GHZ

NOTE:

The Anritsu 2601 A spectrum analyzer, the Hewlett-Packard spectrum analyzer and the Advantest R3261A spectrum analyzer are calibrated annually, and that calibration is directly traceable to the National Research Council of Canada (NRC). This equipment is only used by qualified technicians and only for the purpose of EMI measurements. The three meter test range has been carefully evaluated to the ANSI document C63.4 and will be remeasured for reflections and losses every three years.

FEDERAL COMMUNICATIONS COMMISSION

7435 Oakland Mills Road
Columbia, MD 21046
Telephone: 301-725-1585 (ext-216)
Facsimile: 301-344-2050

September 23, 1997

IN REPLY REFER TO
31040/SIT
1300F2

Electrohome Electronics Ltd
809 Wellington Street, North
Kitchener, Ontario N2G 4J6, Canada

Attention: Gerry Gallagher

Re: Measurement facility located at Roseville
(3 meter site)

Gentlemen:

Your submission of the description of the subject measurement facility has been reviewed and found to be in compliance with the requirements of Section 2.948 of the FCC Rules. The description has, therefore, been placed on file and the name of your organization added to the Commission's list of facilities whose measurement data will be accepted in conjunction with applications for certification or notification under Parts 15 or 18 of the Commission's Rules. Our list will also indicate that the facility complies with the radiated and AC line conducted test site criteria in ANSI C63.4-1992. Please note that this filing must be updated for any changes made to the facility, and at least every three years the data on file must be certified as current.

Per your request, the above mentioned facility has been also added to our list of those who perform these measurement services for the public on a fee basis. This list is published periodically and is also available on the Laboratory's Public Access Link as described in the enclosed Public Notice.

Sincerely,

Thomas W. Phillips
Electronics Engineer
Customer Service Branch

FCC ID: G9H2-9774
EXHIBIT D(2)-2
Marstech Report No. 98261D

EXHIBIT D(2)

SPECTRUM ANALYZER -	ANRITSU MS2601A S/N MT64544 - NEXT CALIBRATION APRIL 1999
MULTIMETER -	FLUKE 75
POWER SUPPLY -	IN HOUSE
OVEN -	IN HOUSE
FREEZER -	IN HOUSE

SUMMARY OF RESULTS

	COMPLIANCE (yes)	(no)
FIELD STRENGTH OF THE CARRIER FREQUENCIES		
Handset: 48 MHz and 49 MHz bands	(x)	( )
Base Station: 43/44 MHz and 46 MHz bands	(x)	( )
OCCUPIED BANDWIDTH		
Handset: 48 MHz and 49 MHz bands	(x)	( )
Base Station: 43/44 MHz and 46 MHz bands	(x)	( )
SPURIOUS RADIATED EMISSIONS		
Handset: 48 MHz and 49 MHz bands	(x)	( )
Base Station: 43/44 MHz and 46 MHz bands	(x)	( )
LINE CONDUCTED SPURIOUS EMISSIONS		
Base Station: Telephone Mode: 43/44 MHz and 46 MHz bands	(x)	( )
TRANSMITTER ENVIRONMENTAL TESTS		
Handset:	(x)	( )
Base Station:	(x)	( )
EQUIPMENT REQUIREMENTS AND IDENTIFICATION		
a) Manufacturers or applicants name:	(x)	( )
b) FCC ID:	(x)	( )
c) Serial number:	(N/M)	( )
d) Antenna:	(x)	( )
e) Operator controls:	(x)	( )
f) Security Coding	(x)	( )
g) Equipment/Packaging Marking	(x)	( )

CARRIER FREQUENCY FIELD STRENGTH

RESULTS

Handset: **Maximum field strength of 1,859 μV/M: Channel # 01**
Handset: **Maximum field strength of 4,410 μV/M: Channel # 25**

Base Station:
Modes:
Telephone: **Maximum field strength of 9,825 μV/M: Channel # 01**
Telephone: **Maximum field strength of 6,800 μV/M: Channel # 25**

TEST CONDITIONS

Equipment Positioning:
Handset: Vertical or upright
Base Station: Standing on its back with the antenna extended in the vertical plane.

Antenna Polarization:
Handset: Vertical
Base Station: Vertical

Antenna Type: T.1; tuned half wave dipole

Measurement Bandwidth: 100 KHz (IF)

Supply Voltages:
Handset: 3.6 VDC from an internal battery.
Base Station: 120 VAC/60 Hz to 12 VDC (adapter)

METHODS OF MEASUREMENT

The cordless phone components were placed in turn on a one metre high, non-metallic turntable. Measurements were made in a minimum of 3 positions for the handset and 2 for the base station. If adjustable, the whip antennas were fully extended.

For each of the above conditions the turntable was rotated through 360 degrees while the receiving antenna, at three (3) metres from the EUT, was varied in height from 1 to 4 metres and set in both planes of polarization to find the maximum signal strength. The unmodulated carrier level was measured using a spectrum analyzer and a substitution signal from an RF generator. The measured level was converted to a field strength using the antenna correction factors and cable losses.

All base station measurements were made with the equipment under test connected to an artificial telephone line network, with 48 VDC applied.

OCCUPIED BANDWIDTH RESULTS

RESULTS

The highest level emission resulting from the modulation process exceeding the specified frequency range of ± 10 KHz (20 KHz) over the carrier frequency was:

Handset:
Unmodulated carrier level: **-39 dB** (30 dB external pad) **Channel # 01**
Unmodulated carrier level: **-38 dB** (30 dB external pad) **Channel # 25**

a) 85% the maximum frequency deviation at 2,500 Hz: Channel # 01
-76 dB at -12.5 KHz.
b) 85% the maximum frequency deviation at 2,500 Hz: Channel # 25
-76 dB at -12.5 KHz.

Base Station:
Unmodulated carrier level: **-50 dB** (30 dB external pad) **Channel # 01**
Unmodulated carrier level: **-53 dB** (30 dB external pad) **Channel # 25**

Telephone:
a) 85% the maximum frequency deviation at 2,500 Hz: Channel # 01
-89 dB at +12.5 KHz.
b) 85% the maximum frequency deviation at 2,500 Hz: Channel # 25
-92 dB at +12.5 KHz.

METHODS OF MEASUREMENT

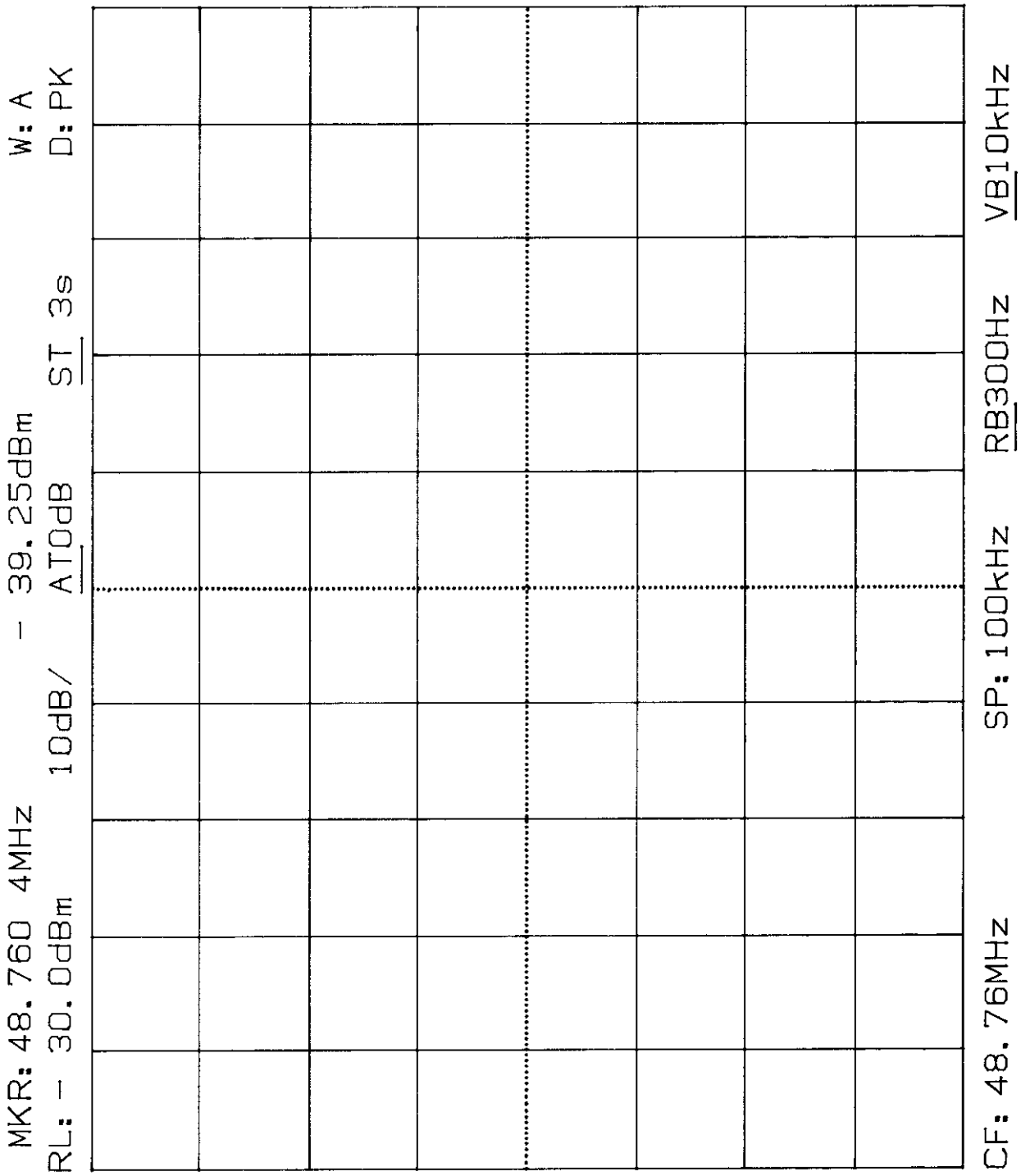
Each transmitter was operated in turn under the standard test conditions specified, and at the maximum output power. An external 2,500 Hz audio signal was coupled to the standard input port and adjusted to a level which produced 85% of the measured "Maximum Frequency Deviation". In this case, the base station and handset, modulation in-band emissions meet the requirements at maximum frequency deviation. Levels for compliance have therefore been evaluated at these levels. Any internal modulation source that normally operates on a continuous basis was disabled.

A portion of the radio frequency power delivered by the transmitter into the standard output termination was coupled to a spectrum analyzer.

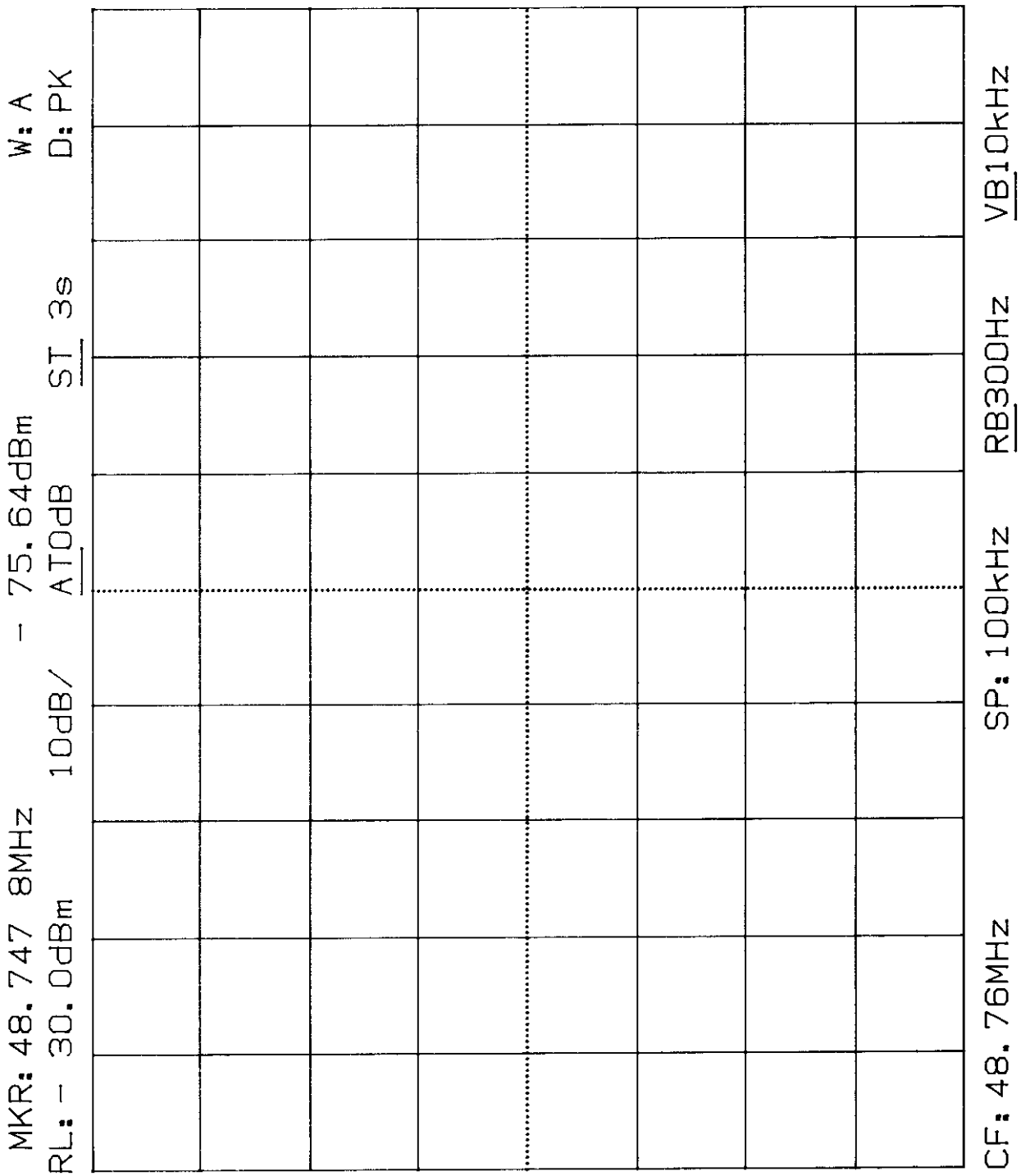
If the cordless telephone contained an internal modulation source that normally operates continuously or for more than three (3) seconds, then the above test was also repeated with the external 2,500 Hz disconnected.

Please refer to the attached results.

HANDSET; UNMODULATED CARRIER LEVEL
MODEL 2-9774(XXXX); 48 MHz

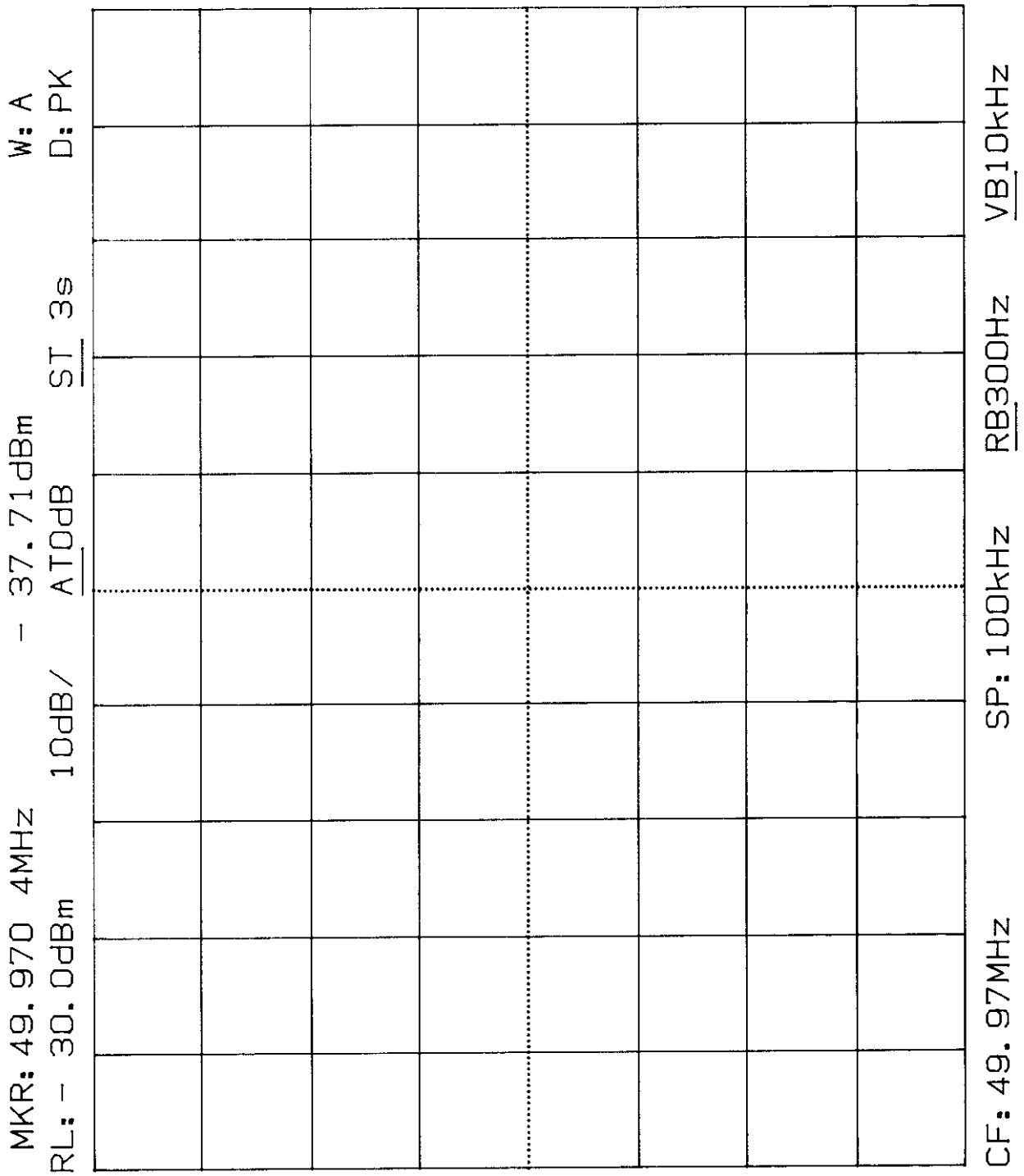


OUT-OF-BAND HANDSET; 48 MHz
4.00 VOLTS AT MFD; MODEL 2-9774(XXXX)



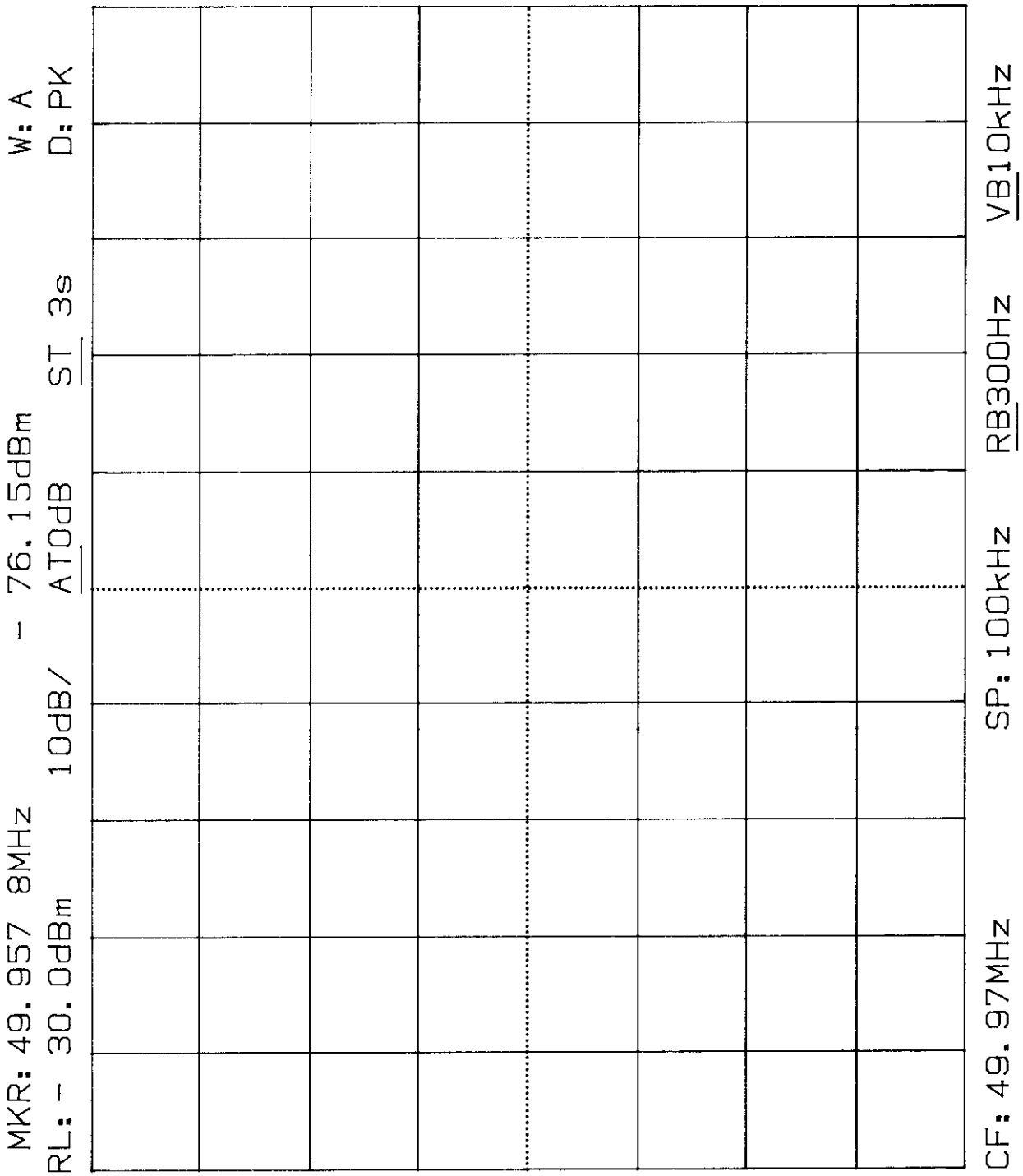
FCC ID: G9H2-9774
EXHIBIT D(3)-8
Marstech Report No. 98261D

HANDSET; UNMODULATED CARRIER LEVEL
MODEL 2-9774(XXXX); 49 MHz



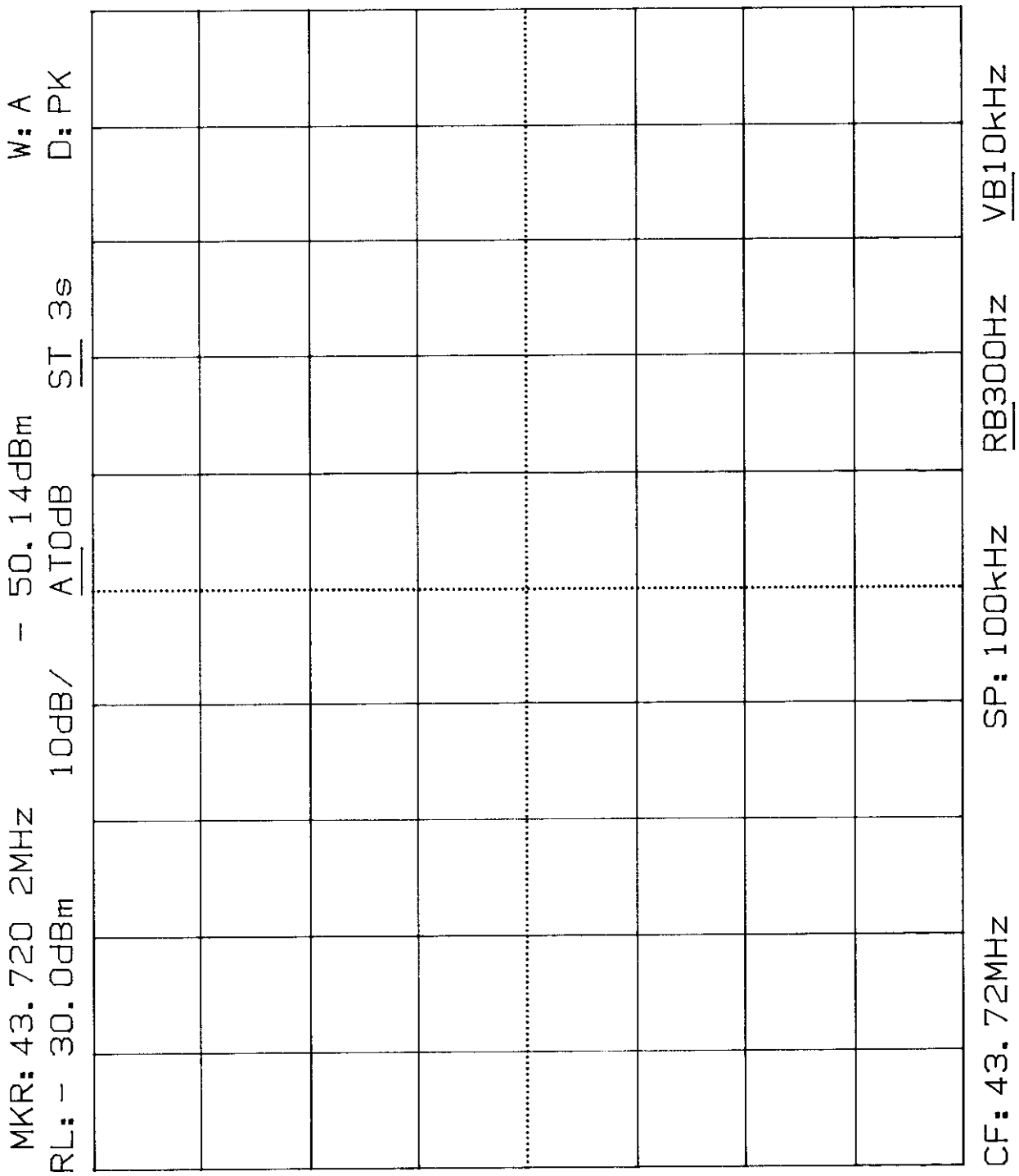
FCC ID: G9H2-9774
EXHIBIT D(3)-5
Marstech Report No. 98261D

OUT-OF-BAND HANDSET; 49 MHz
2.95 VOLTS AT MFD; MODEL 2-9774(XXXX)



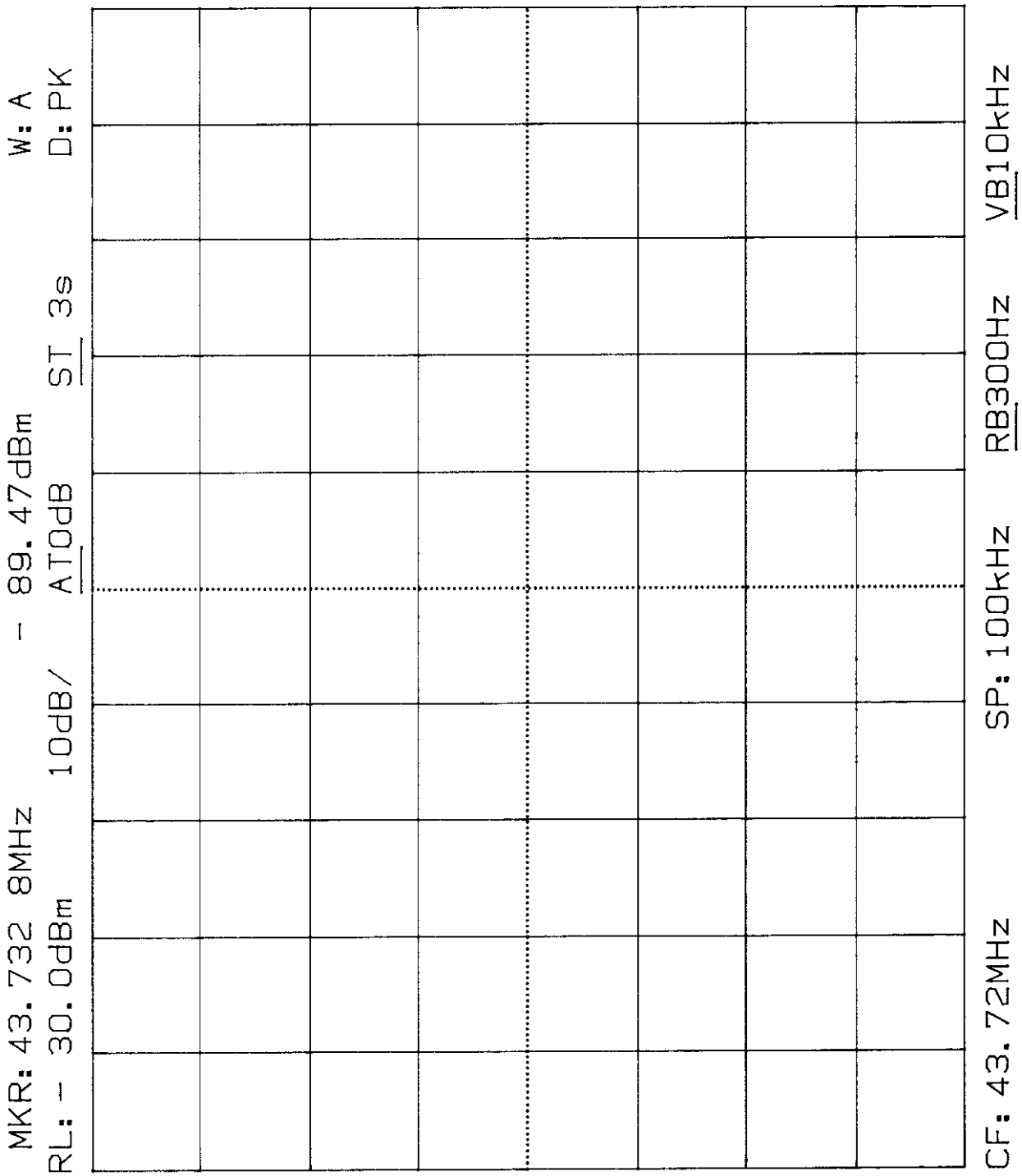
FCC ID: G9H2-9774
EXHIBIT D(3)-9
Marstech Report No. 98261D

BASE STATION; UNMODULATED CARRIER LEVEL
MODEL 2-9774(XXXX); 43/44 MHz



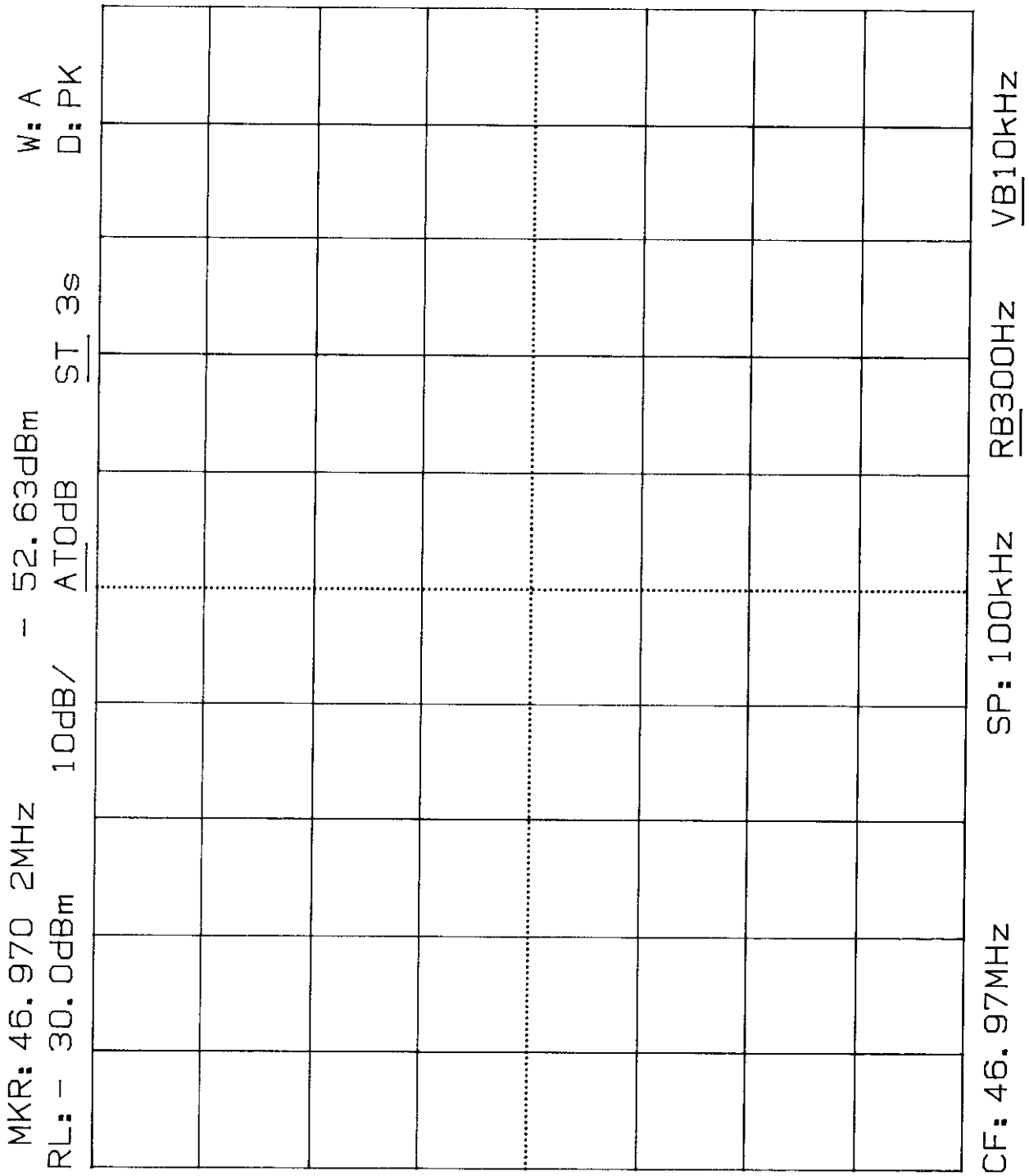
FCC ID: G9H2-9774
EXHIBIT D(3)-6
Marstech Report No. 98261D

OUT-OF-BAND BASE STATION; 43/44 MHz
4.00 VOLTS AT MFD; MODEL 2-9774(XXXX)



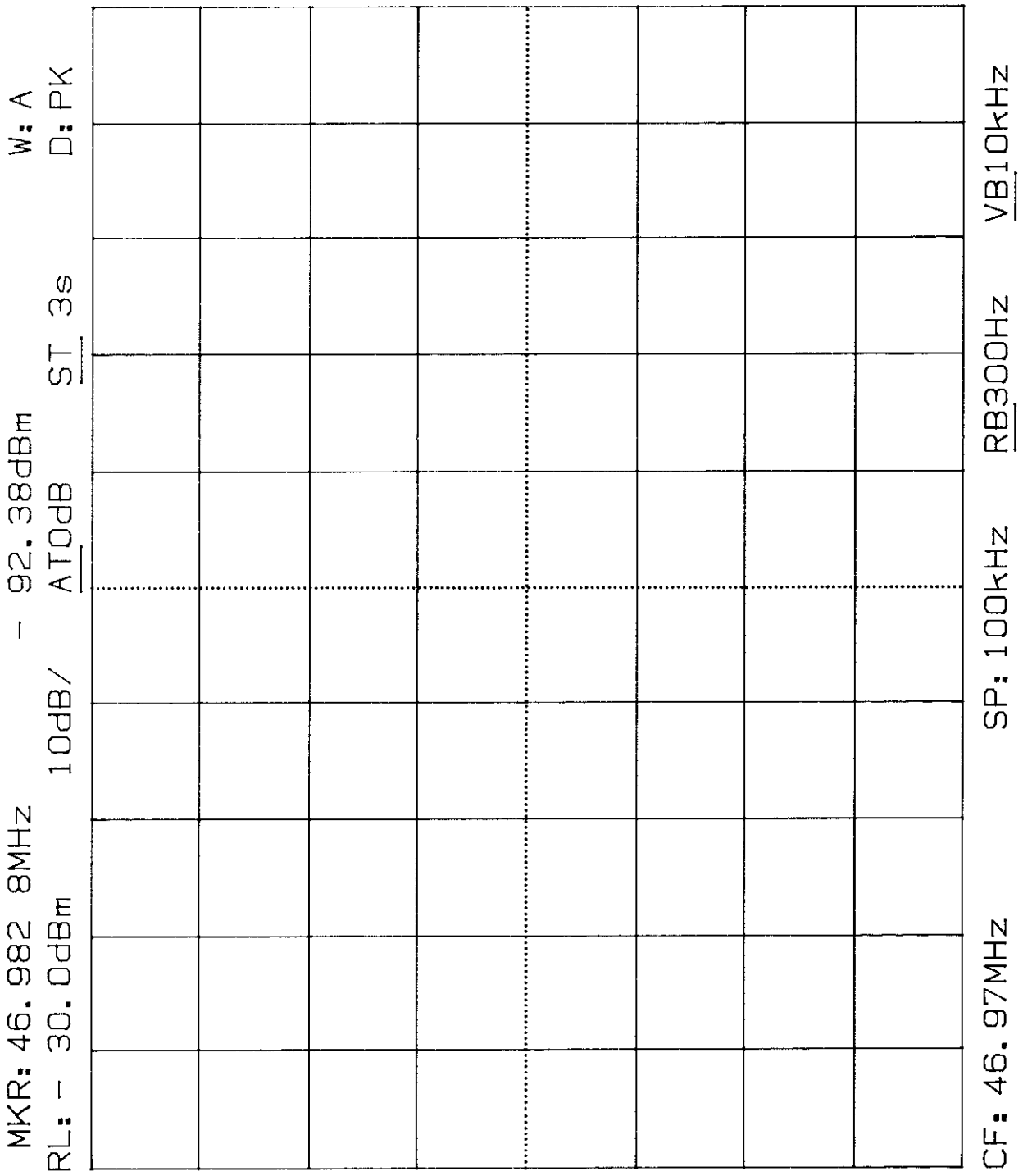
FCC ID: G9H2-9774
EXHIBIT D(3)-10
Marstech Report No. 98261D

BASE STATION; UNMODULATED CARRIER LEVEL
MODEL 2-9774(XXXX); 46 MHz

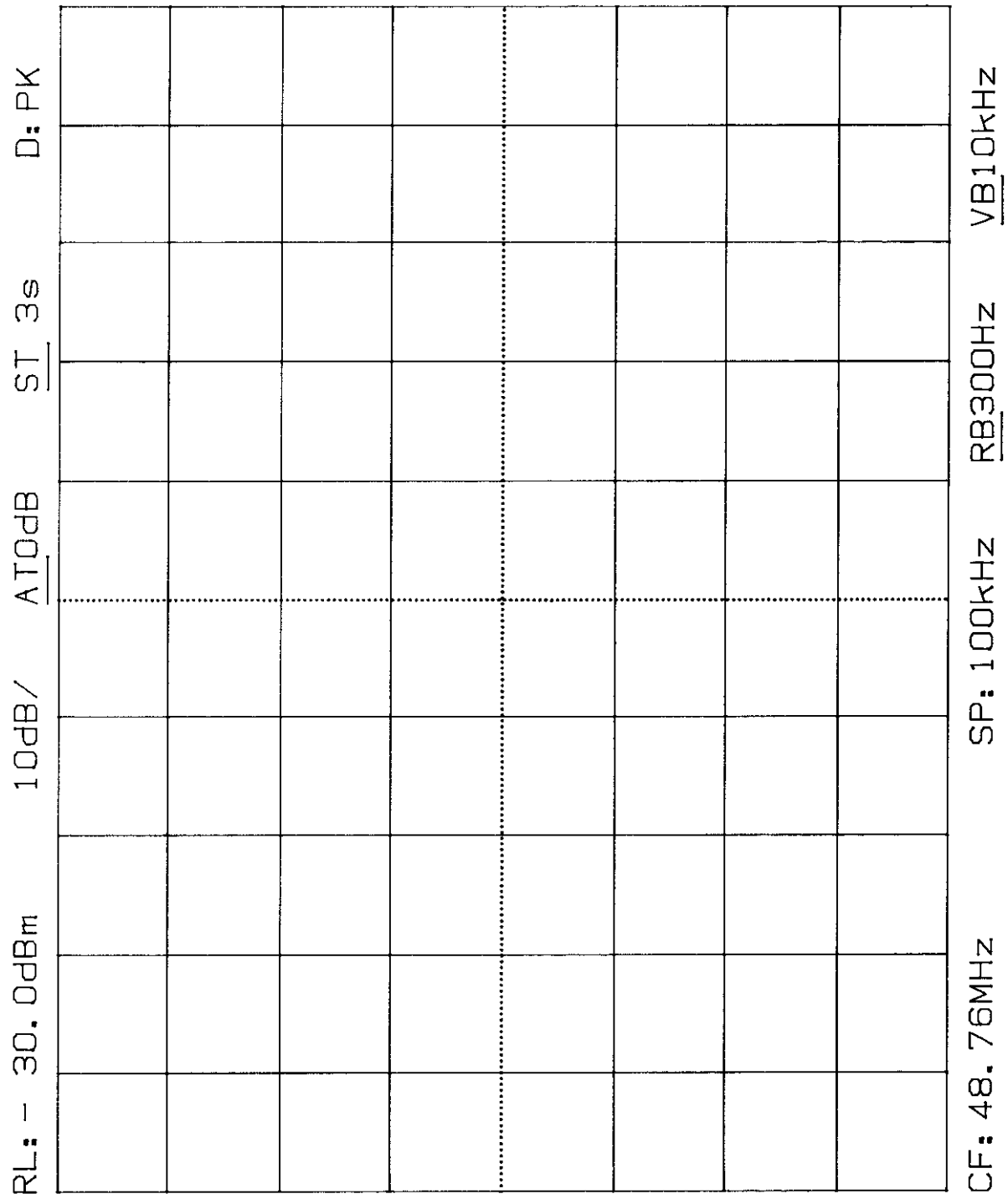


FCC ID: G9H2-9774
EXHIBIT D(3)-7
Marstech Report No. 98261D

OUT-OF-BAND BASE STATION; 46 MHz
4.00 VOLTS AT MFD; MODEL 2-9774(XXXX)

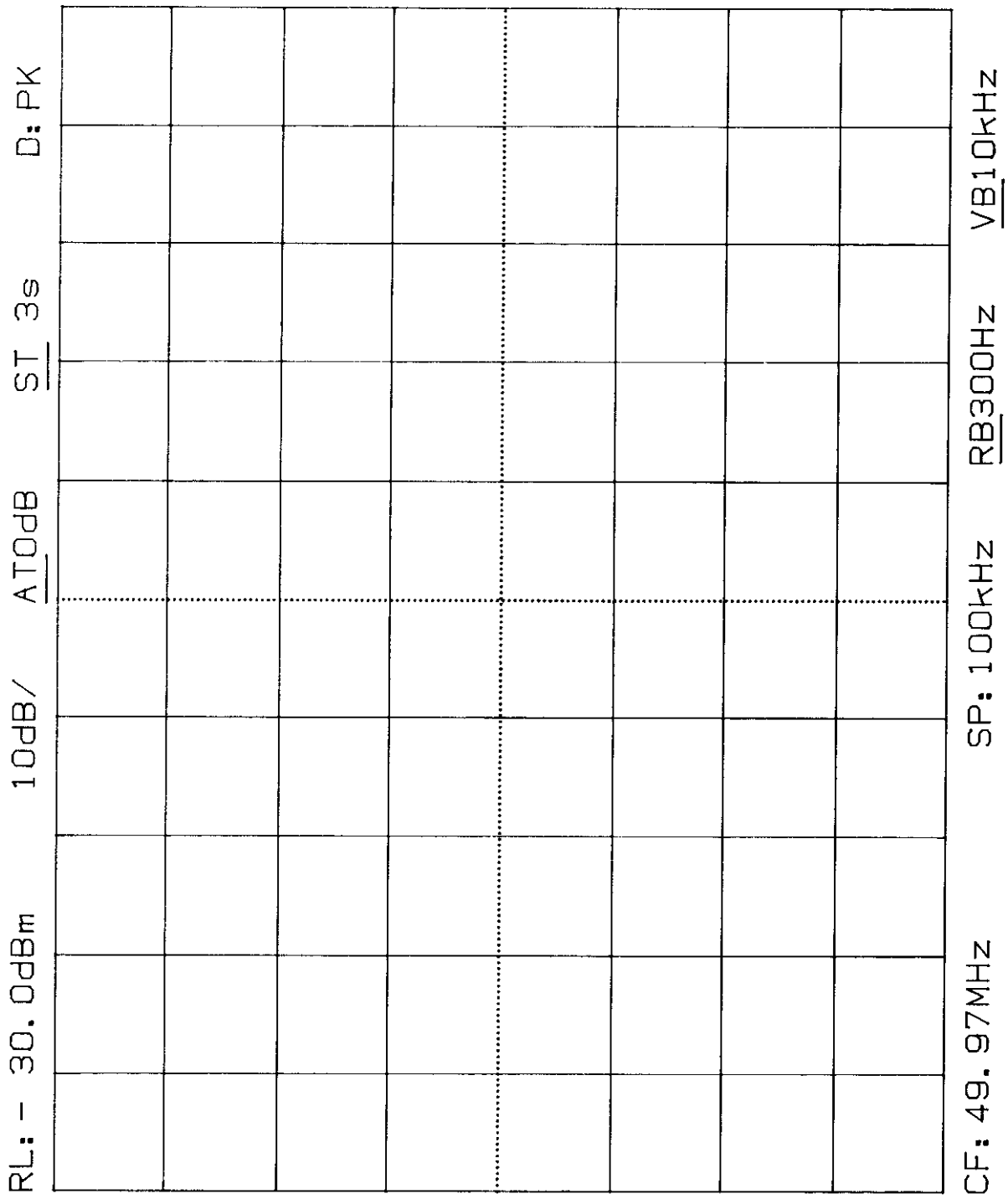


MAXIMUM FREQUENCY DEVIATION; 48 MHz
HANDSET; 4.00 VOLTS MODEL 2-9774(XXXX)

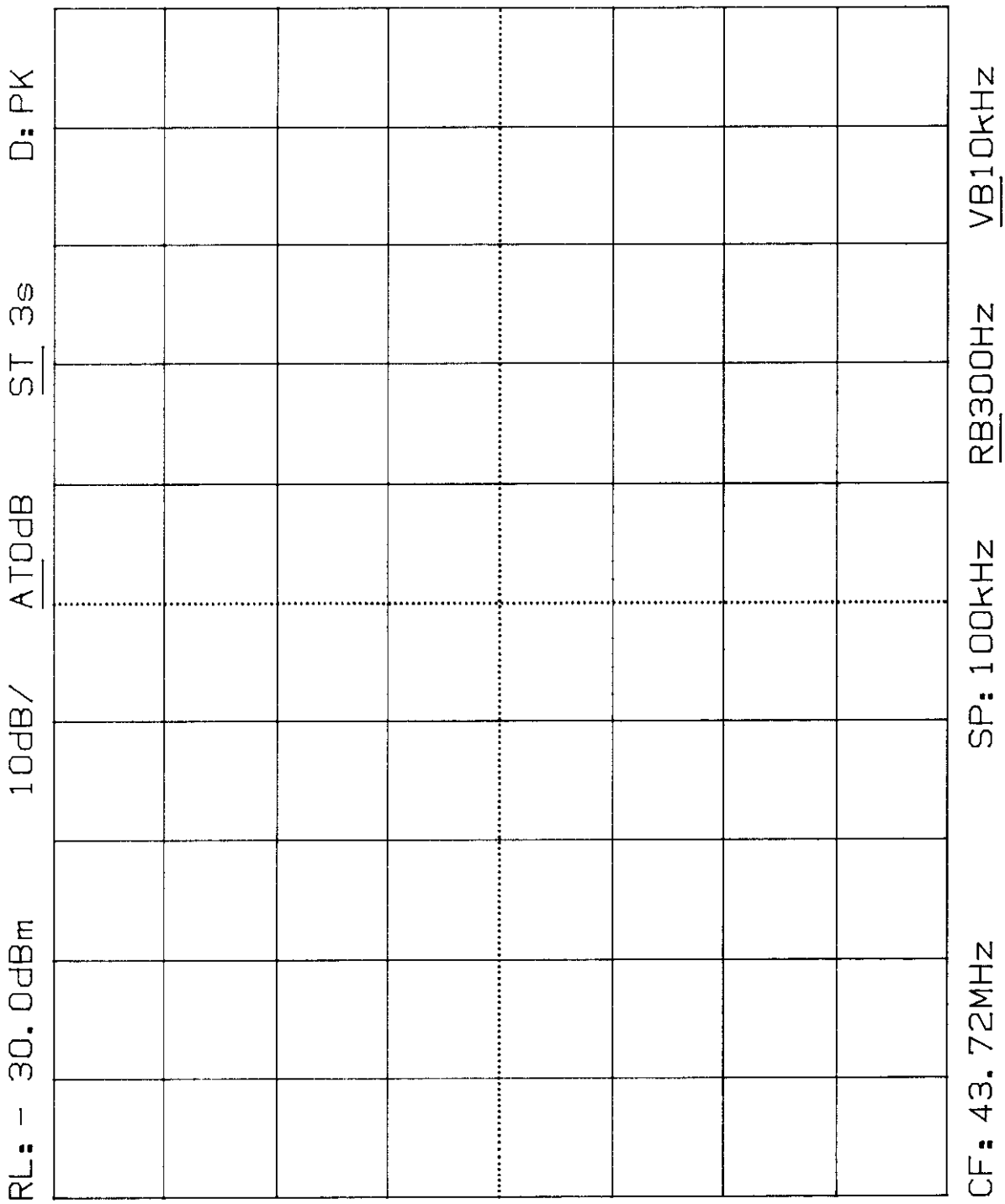


FCC ID: G9H2-9774
EXHIBIT D(3)-12
Marstech Report No. 98261D

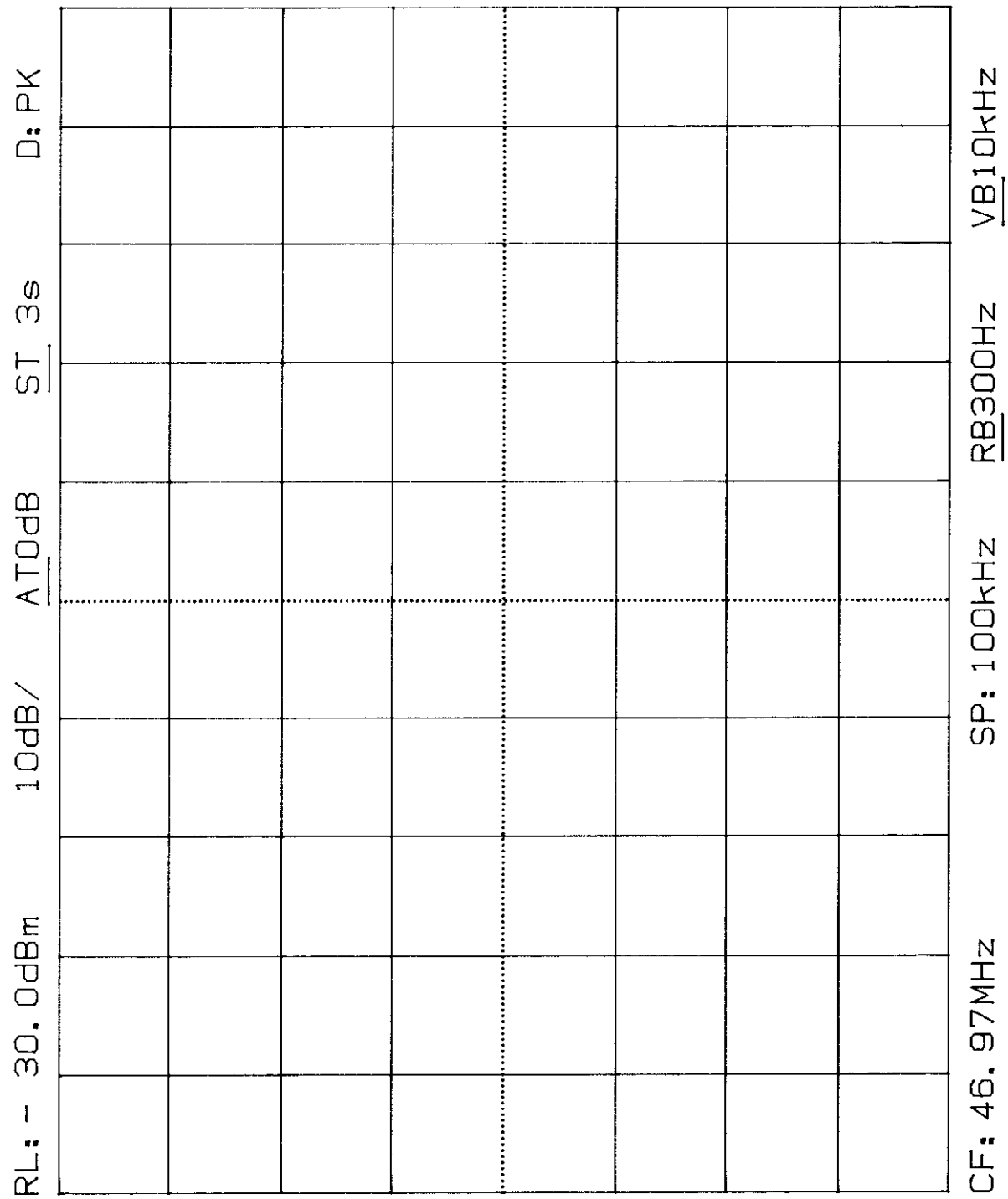
MAXIMUM FREQUENCY DEVIATION; 49 MHz
HANDSET; 2.95 VOLTS MODEL 2-9774(XXXX)



MAXIMUM FREQUENCY DEVIATION; 43/44 MHz
BASE STATION; 4.00 VOLTS MODEL 2-9774(XXXX)



MAXIMUM FREQUENCY DEVIATION; 46 MHz
BASE STATION; 4.00 VOLTS MODEL 2-9774(XXXX)



SPURIOUS RADIATED EMISSIONS

RESULTS

The maximum field strength of any spurious emission, with respect to the applicable limit, to 1,000 MHz, while transmitting or receiving was:

Handset: **Maximum field strength of 108.7 μV/M at 195.04 MHz; Channel 01**
Maximum field strength of 134.4 μV/M at 749.55 MHz; Channel 25

Base Station:

Maximum field strength of: NONE FOUND; Channel 01
Maximum field strength of: NONE FOUND; Channel 25
Maximum field strength of: NONE FOUND; RECEIVE

TEST CONDITIONS

Equipment Positioning:

Handset:	Laying on its side
Base Station:	Standing on its back with the antenna extended in the vertical plane

Antenna Polarization:

Handset:	Horizontal
Base Station:	Vertical and horizontal
Base Station: Receive	Vertical and horizontal

Measurement Bandwidth: 100 KHz/120 KHz Q.P. (IF)

Supply Voltages:

Handset:	3.6 VDC from an internal battery.
Base Station:	120 VAC/60 Hz to 12 VDC (adapter)

METHODS OF MEASUREMENT

The cordless phone components were placed in turn on a one metre high, non-metallic turntable. Measurements were made in a minimum of 3 positions for the handset and 2 for the base station. If adjustable, the whip antennas were fully extended.

For each of the above conditions the turntable was rotated through 360 degrees while the receiving antenna, at three (3) metres from the EUT, was varied in height from 1 to 4 metres and set in both planes of polarization to find the maximum signal strength. The level was measured using a spectrum analyzer and a substitution signal from an RF generator. The measured level was converted to a field strength using the antenna correction factors and cable losses.

All base station measurements were made with the equipment under test connected to an artificial telephone line network, with 48 VDC applied.

RADIATED EMISSION RESULTS

BW: 100/120 KHz
Span: 5 to 50 MHz

BASE STATION

TEST # MODE	FREQ MHz BAND	LEVEL μV	ANT. TYPE (PZ)	ANT. FACT.	F.S. μV/M	LIMIT μV/M	DIFF. TO LIMIT; dB
CARRIER	43.720	7,500.0	RT.1 V	1.31	9825.0	10,000	-0.15
CARRIER	46.970	5,000.0	RT.1 V	1.36	6800.0	10,000	-3.35

HANDSET

TEST # MODE	FREQ MHz BAND	LEVEL μV	ANT. TYPE (PZ)	ANT. FACT.	F.S. μV/M	LIMIT μV/M	DIFF. TO LIMIT; dB
CARRIER	48.760	1,300.0	RT.1 V	1.43	1859.0	10,000	-14.61
01 TX	195.04	15.1	B/C H	7.2	108.7	150	-2.80
02 TX	292.56	06.3	B/C H	17.7	111.5	200	-5.07
CARRIER	49.970	3,000.0	RT.1 V	1.47	4410.0	10,000	-7.11
03 TX	199.88	09.8	B/C H	7.2	70.6	150	-6.55
04 TX	249.85	08.8	B/C H	12.0	105.6	200	-5.55
05 TX	299.80	06.6	B/C H	20.3	134.0	200	-3.48
06 TX	449.73	10.2	L/P H	8.9	90.8	200	-6.86
07 TX	549.67	09.1	L/P H	13.0	118.3	200	-4.56
08 TX	599.63	07.2	L/P H	13.9	100.1	200	-6.01
09 TX	749.55	06.0	L/P H	22.4	134.4	200	-3.45
10 TX	799.50	03.0	L/P H	27.1	81.3	200	-7.82
11 TX	849.48	03.5	L/P H	25.4	88.9	200	-7.04

POWER LINE CONDUCTED EMISSIONS

RESULTS

The largest RF voltages on the AC power lines, over the frequency range of 450 KHz to 30 MHz, was **6.90 μV (16.78 dBμV) at 28.26 MHz** from the base station while transmitting and/or receiving. (A side of the line in the telephone mode) Refer to the attached results.

TEST CONDITIONS

Measurement Bandwidth:	9 KHz Q.P. (IF)
AC Test Voltage:	120 VAC (filtered and stabilized)
Mode of Operation:	Telephone

METHODS OF MEASUREMENT

The base station portion of the cordless phone was placed on a wooden table directly above a 50 ohm line impedance stabilization network.(LISN) If adjustable, the whip antenna was fully extended vertically and the AC power attachment cord went directly down to the LISN. The LISN is grounded directly to the floor of the test facility. Excess AC cord was coiled in a figure eight pattern before connecting directly to the 50 micro-henry LISN.

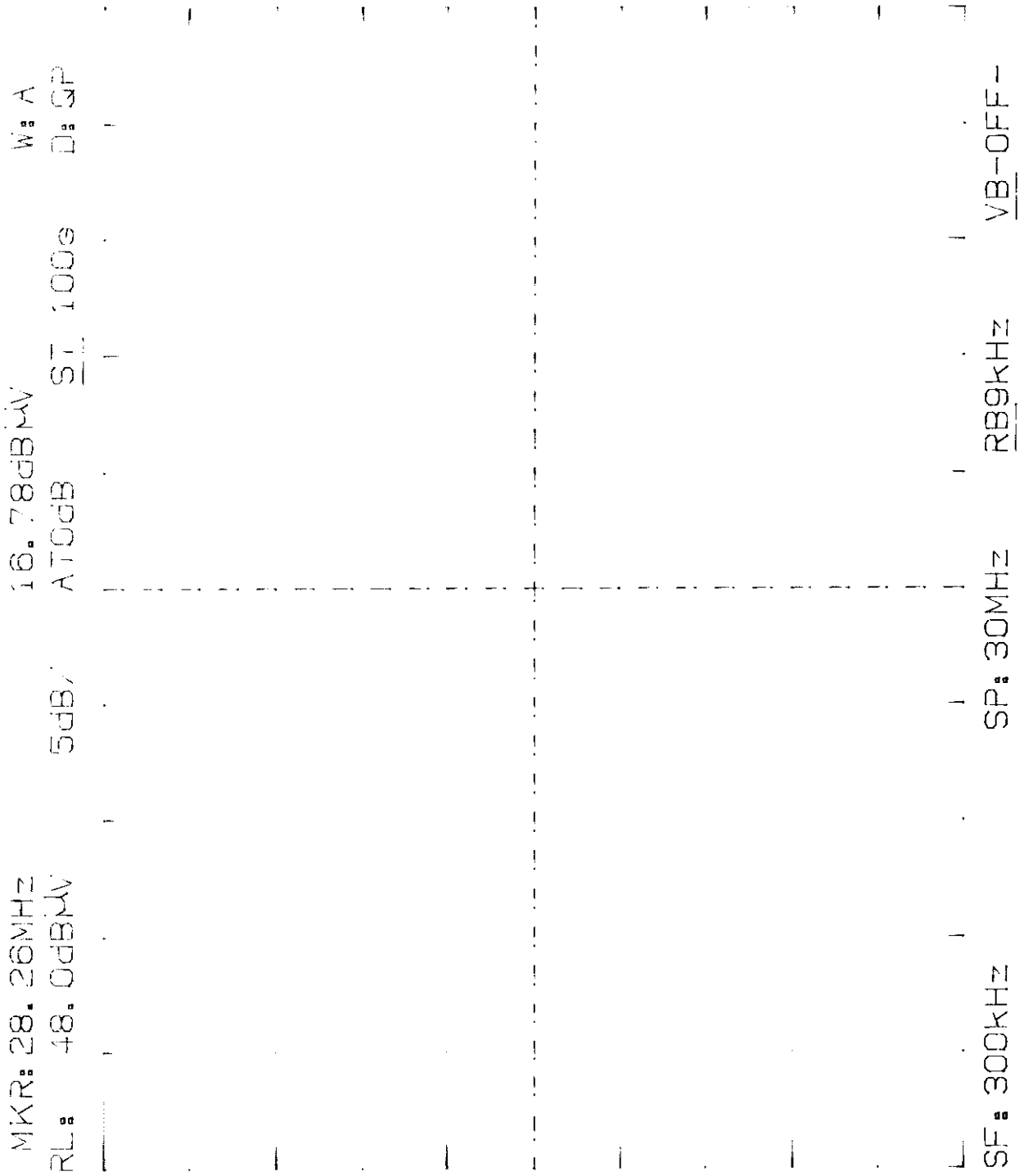
The base station was connected to a simulated 9,000 foot phone line and 48 VDC was applied. The 9,000 foot phone line network was grounded to the nearest AC outlet with a test lead.

A length of low loss RF foam cable was used to couple the RF voltages from the LISN to the spectrum analyzer. The base station transmitter was keyed on by the handset transmitting nearby. All of the RF voltages were recorded and are attached.

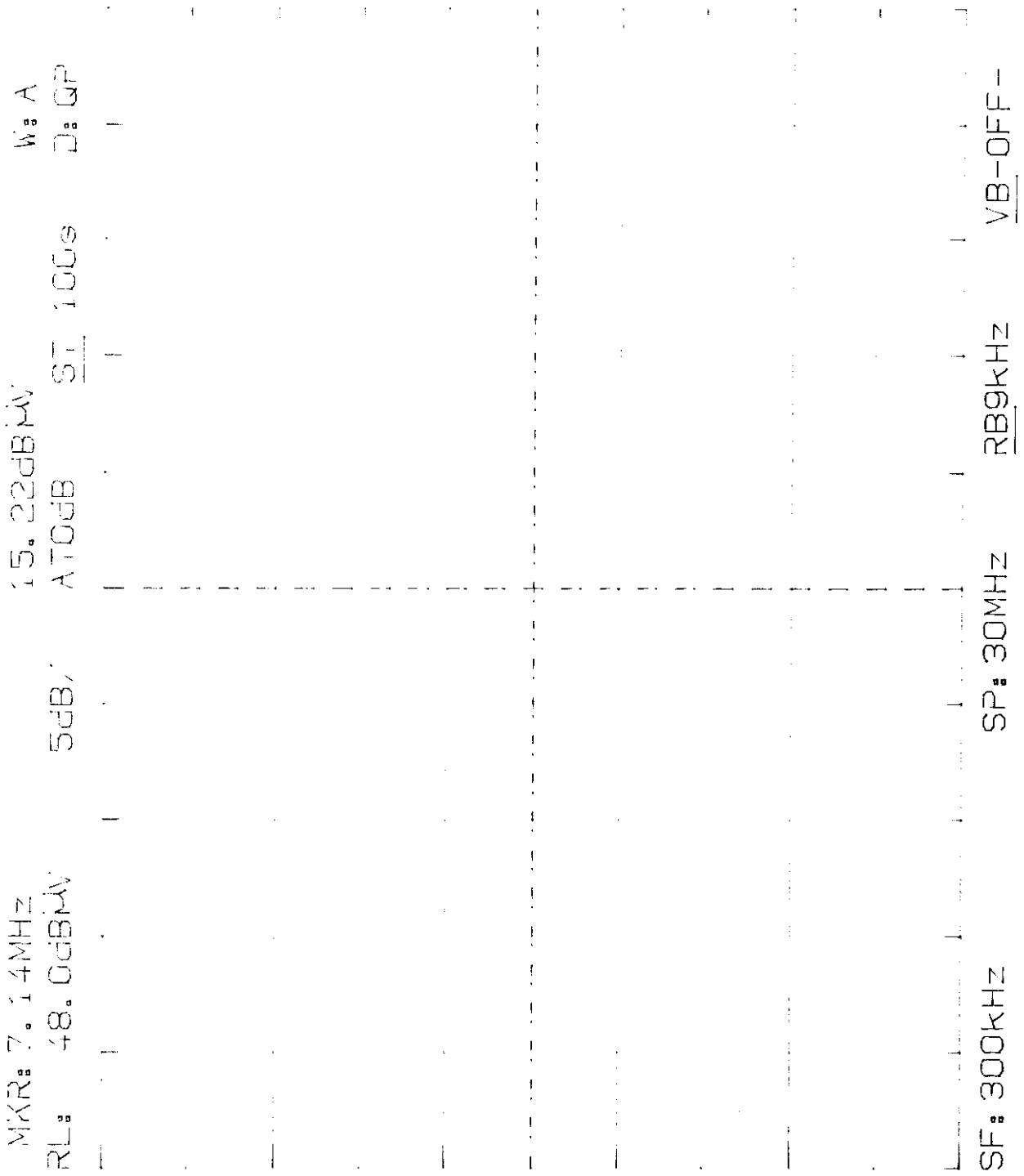
The base station was tested in all modes of operation which were applicable to the specific equipment under test. This included operating modes such as "calling/paging", quiescent or receive mode and standard telephone/transmit operation in both the 43/44 MHz and the 46 MHz bands.

If the cordless phone contained an intercom mode of operation, then this test was repeated in that mode. The attached results represent the **worst case results** in each test condition and frequency band.

POWER LINE CONDUCTED EMISSIONS
MODEL 2-9774(XXXX)
SIDE: A



POWER LINE CONDUCTED EMISSIONS
MODEL 2-9774(XXXX)
SIDE: B



TRANSMITTER ENVIRONMENTAL TESTS

FREQUENCY TOLERANCE OF CARRIER

MINIMUM PERFORMANCE STANDARD: The stability of the carrier frequency shall be maintained within +0.01 percent over a range of:

a) Temperature from -20 to +50 degrees Celsius at normal supply voltage;
b) Voltages that vary from 85 percent to 115 percent of the rated supply voltage at a temperature of +20 degrees Celsius.

TEST RESULTS:

Channel 1:

Handset: The largest deviation from the authorized carrier frequency of 48,760,000 Hz was +811 Hz ±10Hz at -20 degrees Celsius and 3.6VDC. The test limit is ±4876 Hz.

Base Station: The largest deviation from the authorized carrier frequency of 43,720,000 Hz was +574 Hz ±10Hz at -10 degrees Celsius and 120 VAC. This was within the ±4372 Hz limit.

Channel 25:

Handset: The largest deviation from the authorized carrier frequency of 49,970,000 Hz was -424 Hz ±10Hz at -20 degrees Celsius and 3.6VDC. The test limit is ±4997 Hz.

Base Station: The largest deviation from the authorized carrier frequency of 46,970,000 Hz was +578 Hz ±10Hz at -10 degrees Celsius and 120VAC. This was within the ±4697 Hz limit.

TEST CONDITIONS:

Supply Voltages:	85%, 100% and 115% of 120VAC, ±2% and 3.6VDC
Stabilization Time:	60 minutes
Temperature:	-20, -10, 0, +10, +20, +30, +40 and +50, ±3 degrees Celsius
Modulation:	Both transmitters were unmodulated.

METHOD OF MEASUREMENT:

Both the base and handset components were placed individually in a thermal chamber. The frequency was monitored by a spectrum analyzer and recorded at 1 minute intervals.

The base station was powered from a variable AC transformer. The internal battery was used for handset power. The antennae of both transmitters were replaced with short lengths of miniature 50Ω cable fitted with BNC connectors, for shielded connections to the frequency counter.

At +20 degrees Celsius, after the chamber had stabilized for at least 60 minutes and the samples had been turned off for 15 minutes, the transmitters were operated continuously for 5 minutes at each voltage condition. At the temperature extremes, each transmitter was operated for 5 minutes following stabilization. The frequencies were recorded at 1 minute intervals. The temperature was monitored by a thermocouple on the enclosure.

ENVIRONMENTAL TEST RESULTS FCC 15

CHANNEL 1

	BASE		HANDSET
+50°C	120V		3.6V
	43719623		48759749
	43719623		48759743
	43719626		49759744
	43719631		49759753
	43719630		49759743
+40°C	120V		3.6V
	43719684		48759808
	43719665		48759802
	43719661		48759799
	43719650		48759786
	43719645		48759777
+30°C	120V		3.6V
	43719733		48759907
	43719726		48759846
	43719706		48759842
	43719698		48759829
	43719687		48759815

	102V	120V	138V	3.6V
+20°C				
	43719559	43719593	43719585	48759935
	43719554	43719595	43719582	48759937
	43719560	43719592	43719578	48759939
	43719570	43719585	43719569	48759933
	43719571	43719587	43719561	48759937

+10°C	120V	3.6V
	43719935	48759873
	43720017	48759894
	43720068	48759976
	43720154	48760002
	43720370	48760040

0°C	120V	3.6V
	43720488	48760042
	43720500	48760055
	43720544	48760068
	43720547	48760091
	43720549	48760092

-10°C	120V	3.6V
	43720571	48760132
	43720572	48760148
	43720574	48760281
	43720574	48760330
	43720570	48760410

-20°C	120V	3.6V
	43720572	48760617
	43720570	48760811
	43720558	48760457
	43720552	48760516
	43720542	48760624

MODEL NO.:	2-9774(XXXX)
DATE:	July 13, 1998
BASE FREQ:	**43,720,000 Hz**
HANDSET FREQ:	**48,760,000 Hz**

ENVIRONMENTAL TEST RESULTS FCC 15

CHANNEL 25

		BASE		HANDSET
+50°C		120V		3.6V
		46969626		49969751
		46969619		49969752
		46969607		49969745
		46969606		49969743
		46969604		49969743
+40°C		120V		3.6V
		46969711		49969799
		46969698		49969616
		46969677		49969804
		46969668		49969789
		46969647		49969774
+30°C		120V		3.6V
		46969843		49969872
		46969809		49969863
		46969789		49969842
		46969752		49969822
		46969737		49969805
+20°C	102V	120V	138V	3.6V
	46969552	46969533	46969583	49969942
	46969560	46969523	46969580	49969943
	46969568	46969522	46969573	49969949
	46969576	46969527	46969554	49969946
	46969582	46969527	46969537	49969946
+10°C		120V		3.6V
		46970104		49970003
		46970123		49970005
		46970144		49970017
		46970252		49970024
		46970337		49970045

0°C	120V	3.6V
	46970498	49970132
	46970511	49970130
	46970538	49970149
	46970558	49970171
	46970568	49970168

-10°C	120V	3.6V
	46970578	49970195
	46970576	49970200
	46970552	49970242
	46970548	49970277
	46970541	49970322

-20°C	120V	3.6V
	46970436	49969576
	46970425	49969620
	46970424	49969651
	46970409	49969664
	46970403	49969714

MODEL NO.:	2-9774(XXXX)
DATE:	July 13, 1998
BASE FREQ:	**46,970,000 Hz**
HANDSET FREQ:	**49,970,000 Hz**

CLEAR CHANNEL DETECTION

Test Procedure

Setup the equipment as per figure 1.

Verification of Base Unit Detector

1. Connect the base unit to an AC source and place the handset in the off hook mode and select channel 1.
2. Using the spectrum analyzer verify the base and handset frequencies are on channel 1 using the RX antenna.
3. Put the handset on hook.
4. Set the signal generator to channel 12 modulated at 1KHz dev., approx. 20KHz, to produce approximately -30dBM to -40dBM on the analyzer from the RX antenna when feeding this signal to the TX antenna for several seconds.
5. Turn the handset on and go off hook.
6. Re-measure the base and handset frequencies. They must be other than the initial ones.
7. Busy the resulting frequency and repeat the above steps.

Verification of Handset Unit Detector

1. Connect the base unit to an AC source and place the handset in the off hook mode and select channel 1.
2. Using the spectrum analyzer verify the base and handset frequencies are on channel 1 using the RX antenna.
3. Put the handset on hook.
4. Set the signal generator to channel 12 modulated at 1KHz dev., approx. 20KHz, to produce approximately -30dBM to -40dBM on the analyzer from the RX antenna when feeding this signal to the TX antenna for several seconds.
5. Place the handset off hook.
6. Re-measure the base and handset frequencies. They must be other than the initial ones.
7. Busy the resulting frequency and repeat the above steps.

TESTS RESULTS

Model: 2-9774(XXXX) Date: July 13, 1998

Base Unit Detector

Step 2 - Check initial channel frequencies

43,719,879 Hz Channel 1
Base

Step 6 - Recheck channel frequencies

43,919,869 Hz Channel 5
Base

Step 7 - Recheck channel frequencies

44,179,861 Hz Channel 09
Base

Step 7 - Recheck channel frequencies

44,399,847 Hz Channel 13
Base

Step 7 - Recheck channel frequencies

43,839,850 Hz Channel 04
Base

Step 7 - Recheck channel frequencies

44,159,852 Hz Channel 08
Base

Step 7 - Recheck channel frequencies

44,359,841 Hz Channel 12
Base

Step 7 - Recheck channel frequencies

44,479,891 Hz Channel 15
Base

Step 7 - Recheck channel frequencies

46,709,898 Hz — Channel 19
Base

Handset Unit Detector

Step 2 - Check initial channel frequencies

48,760,037 Hz — Channel 1
Handset

Step 6 - Recheck channel frequencies

49,020,032 Hz — Channel 5
Handset

Step 7 - Recheck channel frequencies

49,200,035 Hz — Channel 9
Handset

Step 7 - Recheck channel frequencies

49,400,030 Hz — Channel 13
Handset

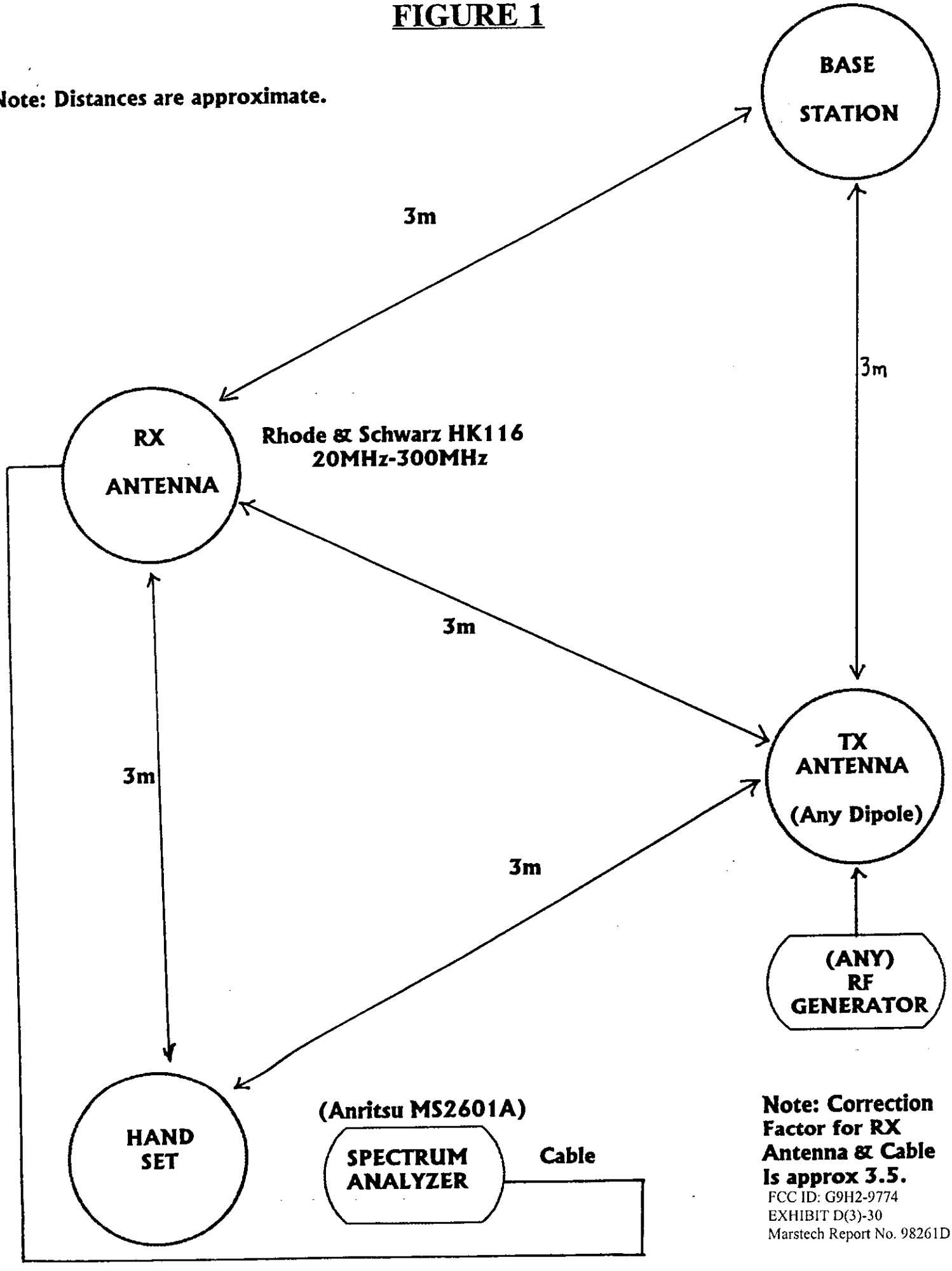
Step 7 - Recheck channel frequencies

49,845,024 Hz — Channel 17
Handset

Results: Satisfactory

Technician: Hiran De Silva

FIGURE 1



FCC ID: G9H2-9774
EXHIBIT D(3)-30
Marstech Report No. 98261D

P.15

VERIFY ACCORDING TO THE 15.233(b)(2)(I) REQUIREMENTS

According to 15.233(b)(2)(I), an automatic channel selection mechanism that will prevent establishment of a link on any occupied frequency on channels one through fifteen must be incorporated. The following test method is used to confirm this function :

1. Turn on the EUT and record the frequency of base from the spectrum analyzer
2. Turn off the EUT
3. Set the signal generator (HP3325B) to the frequency recorded in step 1
4. Turn on the EUT again and read the frequency from the spectrum analyzer. If the reading is not same as the frequency recorded in step 1, this means the EUT complies with the requirements
5. Press the channel select button 25 times and read the frequency every time the button is pressed. If the frequency reading is not same as the frequency recorded in step 1, this means the EUT complies with the requirements
6. Repeat steps 1-5 for the handset
7. Repeat steps 1-6 another frequency pairs

PS : The level of the radiated signal generated by signal generator is set to 10dB below, 10dB above and equal to the EUT's radiated level respectively for testing

RESULT :

After three pairs of frequency (channel 1,8, 15) was verified with the steps mentioned above, no frequency reading is recorded same as the pre-set frequency of signal generator