Test Results

INTERFERENCE CHANNEL AT	PHONE PRE-SET CHANNEL AT	PHONE AUTO-SCAN TO CHANNEL AT -13 dBm
1	1	2
2	2	3
3	3	4
4	4	5
5	5	7
6	6	7
7	7	8
8	8	9
9	9	10
10	10	11
11	11	12
12	12	14
13	13	14
14	14	15
15	15	16
16	16	17
17	17	18
18	18	19
19	19	20
20	20	22
21	21	22
22	22	23
23	23	24
24	24	25
25	25	1

Summary

The phone under test has an automatic selection mechanism that will prevent establishment of a link on any occupied frequency channel.

CIRCUIT DESCRIPTION

1. HANDSET

1.1 RECEPTION

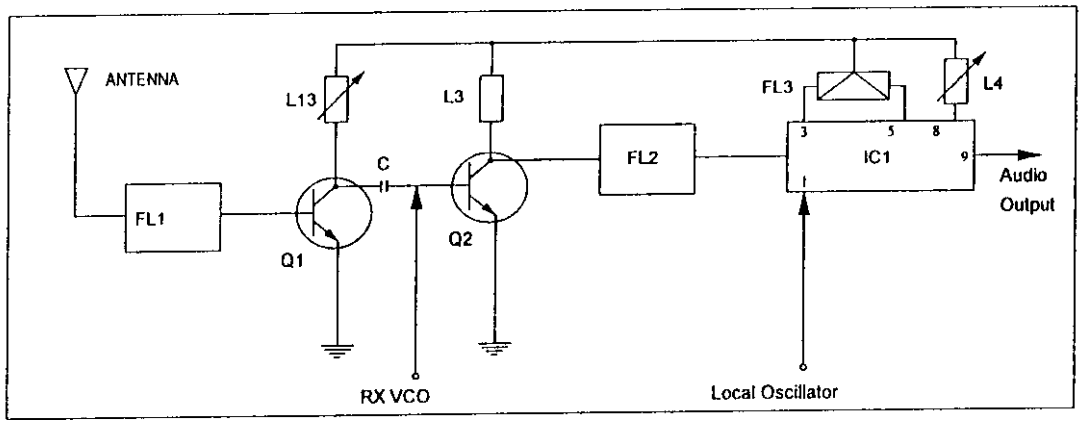


Figure 1

As shown in figure 1, the received signal from the base unit passes through 46 MHz Filter of FL1 and amplified by RF Amplifier (Q1). The amplified input signal is mixed with RX VCO (Q4,L15,D2) signal.

The VCO oscillation is controlled by error signals from PLL IC (IC3) pin no. 10. The channel information to PLL IC is provided by Microprocessor IC (IC4) pin nos. 20, 21 and 23. (Serial data outputs).

The Mixer output from Q2 passes through 10.7 MHz Ceramic Filter (FL2) and enters to FM Demodulator IC (IC1) pin no. 16. This signal mixes with 10.240 MHz signal from PLL IC pin no. 7, which is connected to IC1 pin no.1. The mixed signal is filtered by 455 KHz Filter (FL3).

1.2 RINGER OUTPUT

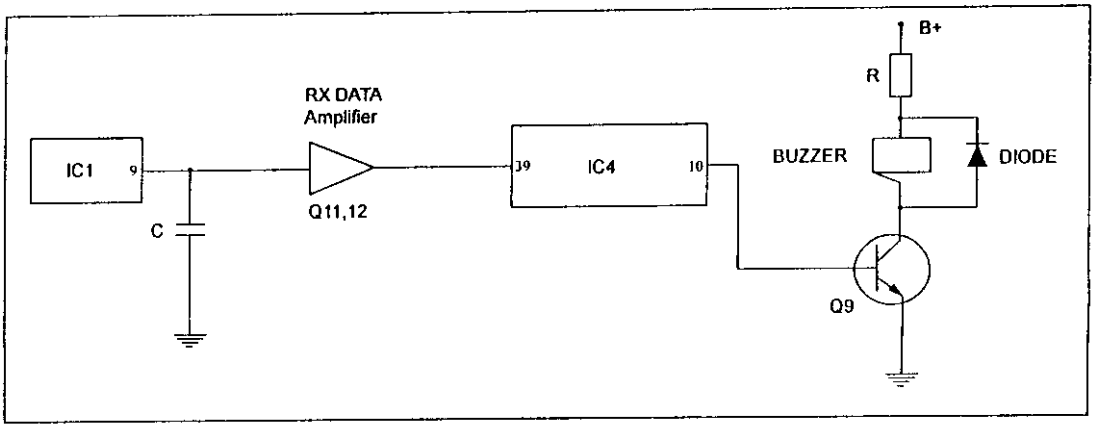


Figure 2

After detection of ring signal, the base unit will transmit the data code signal including security code to handset.

As shown in figure 2, the demodulated ring signal from pin no. 9 of FM Demodulator IC2 is fed to Low pass filter and amplified by RX Data Amplifier (Q11, 12) and its output is connected to RX Data port of Microprocessor IC (IC4).

The ring signal output from pin no.10 of Microprocessor IC (IC4) goes to buzzer driver Q9 to activate the buzzer.

1.3 VOICE OUTPUT

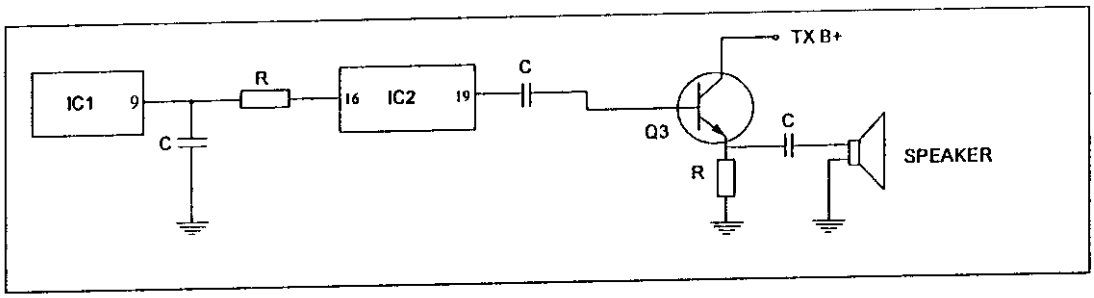


Figure 3

The demodulated signal, resulting from Double Super Heterodyne system, which appears at output pin no. 9 of IC1 is connected to pin no. 16 Expander input of Compander IC (IC2) for expansion.The expanded audio output from IC2 pin no. 19 is finally amplified by Q3 and A.C. coupled to the receiver unit with Hearing Aid Compatibility (HAC).

1.4 DATA TRANSMISSION

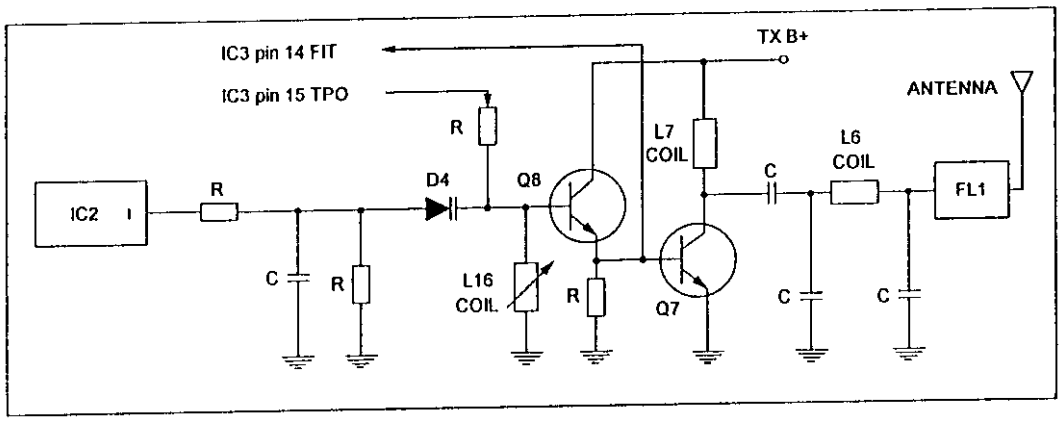


Figure 4

As shown in figure 4, the TX data code output including security code from IC2 pin no. 1 is connected to TX VCO for modulation. The data code signal is modulated with the carrier frequency generated by the RFoscillator (Q8). The oscillator frequency is controlled by the error signal from pin no.15 of PLL IC (IC3). The modulated signal is amplified by RF amplifier stage (Q7) and then passes through 49MHz filter stage (FL1). The FM modulated signal is radiated by by the handset Rubberized Antenna.

1.5 VOICE TRANSMISSION

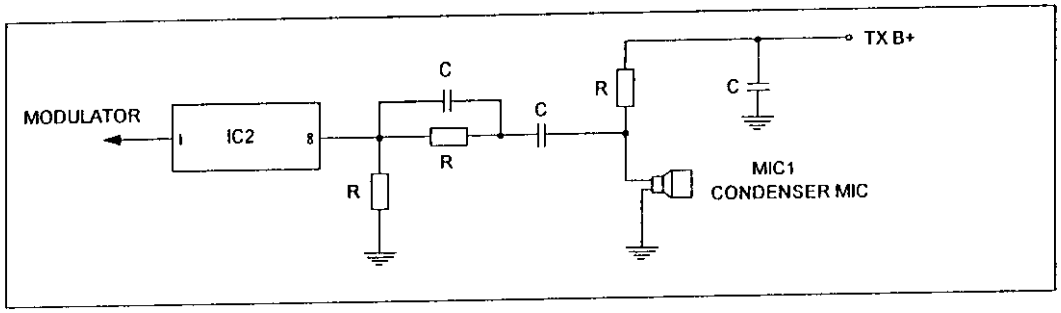


Figure 5

Voice signal from condenser mic is coupled to pin no. 8 of Compander IC (IC3). The voice signal is compressed by IC2 and then connected to TX VCO stage for modulation.

1.6 RECEIVER POWER CONTROL

- When at STANDBY mode and RING ON mode the handset has 50 ms power on and 800ms power off on receiver section.
- When at STANDBY mode and SAVE ON mode, the handset have no power on receiver section.
- The power saving is controlled by Microprocessor (IC4) pin no. 24 (RX power control) and Q5.

1.7 TRANSMIT POWER CONTROL

- When at TALK mode, the handset transmitter should be working.
- The transmitter power is controlled by Microprocessor IC (IC4) pin no. 26 control) and Q6.

1.8 BATTERY LOW DETECTOR

- When the battery voltage goes down until 3.3 to 0.1 Vdc, the LED1 will flash with warning sound "Bi, Bi".

1.9 BATTERY CHARGING

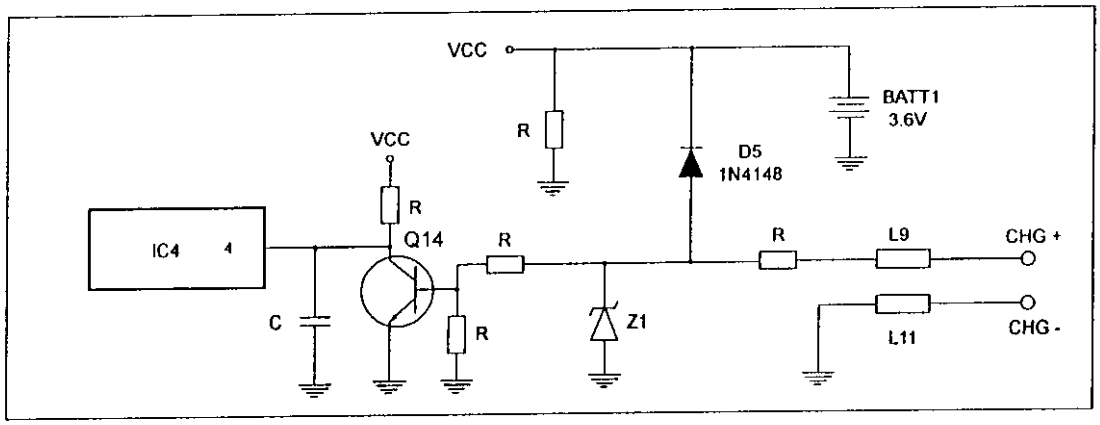


Figure 6

- When the handset is placed on the base unit cradle, the battery will be charging and will be detected by Microprocessor IC (IC4) pin no.3.
- Microprocessor IC will exchange security code randomly.

1.10 SQUELCH

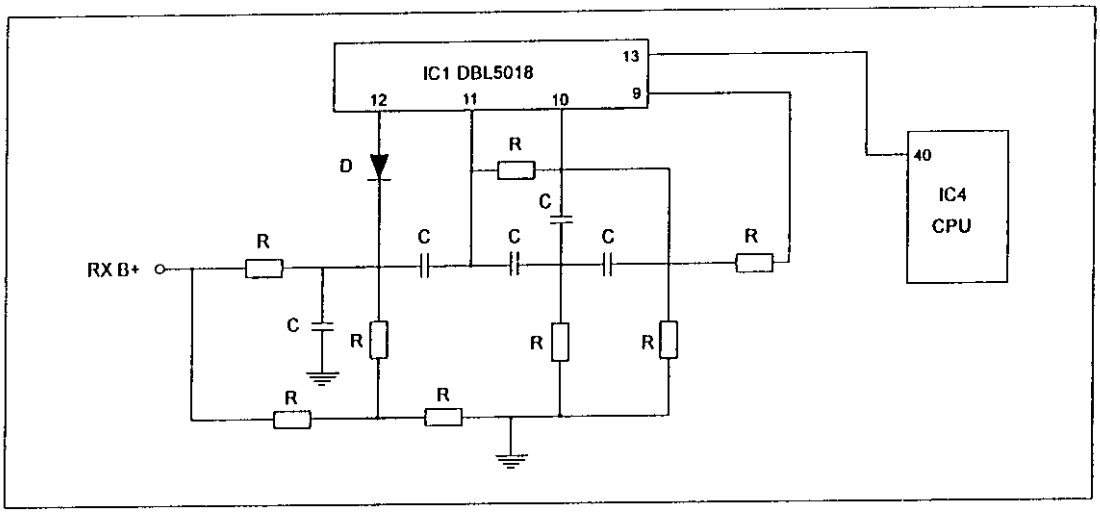


Figure 7

As shown in figure 7, the audio output (noise output) from FM Demodulator IC (IC1) pin no.9 goes to pin no. 10 (Noise filter input) and the output from pin no. 11 will enter to pin no. 12 to activate the squelch control of IC1. The output from pin no. 13 is connected to the Microprocessor IC (IC4) for RSSI Detection.

NOTE :

- When the handset is far away from the base unit, squelch circuit of IC1 operates and pin no. 13 of IC1 goes 'HI'. This will be detected by Microprocessor and after 10 seconds, it goes to standby mode.

2. BASE UNIT

2.1 RECEPTION

Base receiver circuit is similar to handset receiver circuit description as shown in figure 1. The difference with section 1.1 are local frequency and receiving frequency as describe below.

The received signal from the handset unit passes through 49 MHz filter of FL3 and amplified by RF Amplifier (Q6). The amplified signal is mixed with RX VCO (Q11, L2, VD1).

The mixer output from Q7 passes through 10.7 MHz filter and enters to FM Demodulator IC (IC3) pin no. 16. This signal is mixed with 10.245 MHz signal from PLL IC (IC4) pin no.7, which is connected to IC3 pin no. 1. The mixed signal is filtered by 455 KHz Filter (CF2).

2.2 DATA INPUT

The demodulated data code from FM Demodulator IC (IC3) pin no. 9 is fed to Lowpass filter and its output is connected to code input of Microprocessor IC (IC30).

2.3 AUDIO OUTPUT

As shown in figure 8, the demodulated signal which appears at output pin of FM Demodulator IC (IC3) pin no. 9 is sent through lowpass filter to Compander IC (IC9) pin no. 16 (Expander input) for expansion. The expanded audio signal output from IC30 pin no. 31 is coupled to Buffer Amplifier (Q18,Q19) during the CONVERSATION mode. The audio is sent to telephone line via Hybrid X'former (HB2).

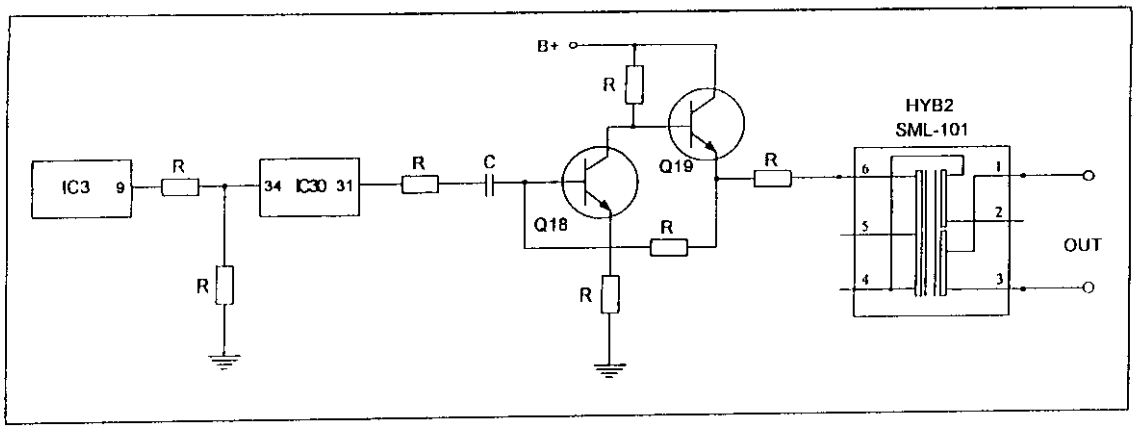


Figure 8

2.4 DATA TRANSMISSION

Refer to figure 4., the difference is that the TX Data is transmitted from pin 26 of Microprocessor IC (IC30).

2.5 VOICE TRANSMISSION

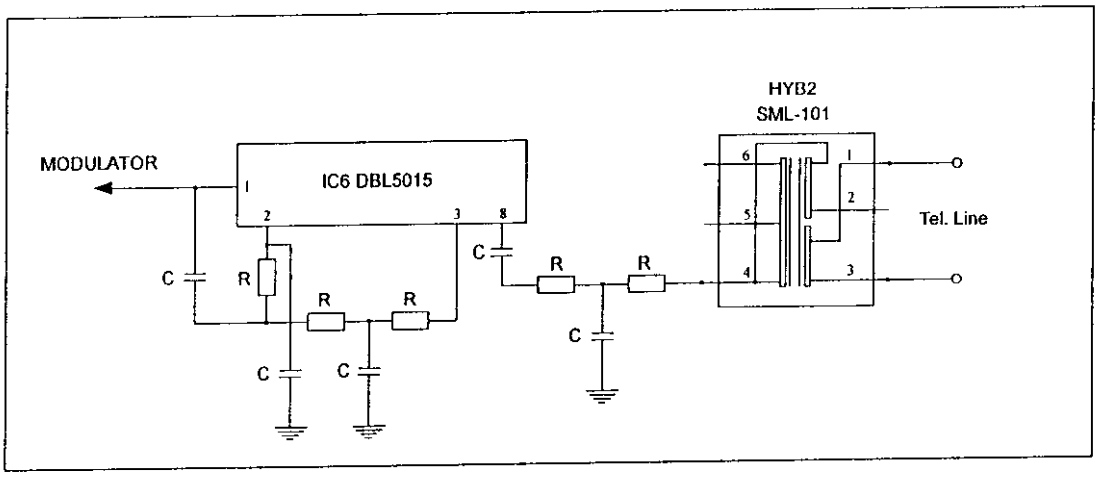


Figure 9

The audio signal receiving from telephone line is input to Compander IC (IC9) pin no. 8 for compression. The compressed audio signal from pin no.1of IC6 is connected to TX VCO for modulation. The signal is modulated with the carrier frequency of the oscillator (Q13), the oscillator frequency is controlled by the error signal from pin 15 of PLL IC. The modulated signal is amplified by RF Amplifier stage (Q12) and then passes through 46 MHz filter stage (FL3). The FM modulated signal is radiated by the base unit antenna.

2.6 DTMF OUT

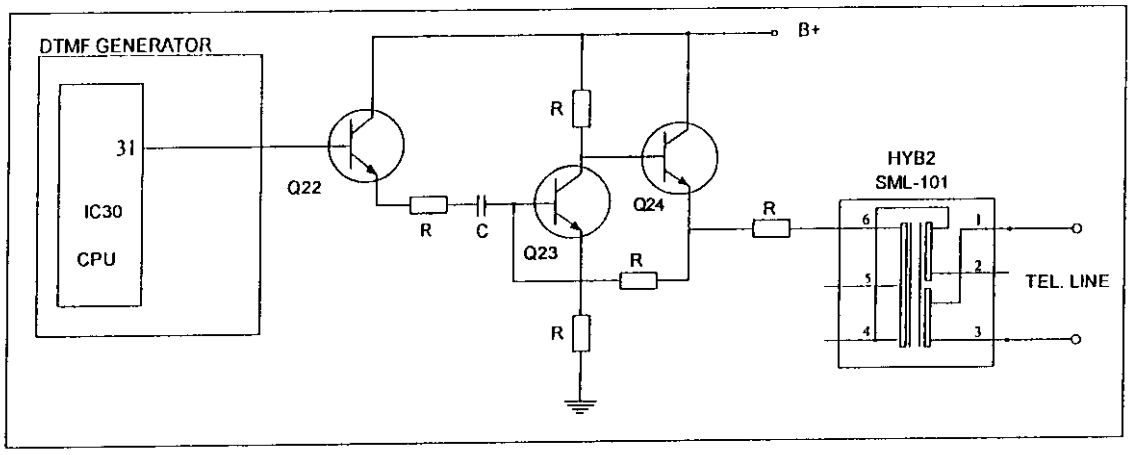


Figure 10

DTMF dialing is generated in pin no. 31 of Microprocessor IC (IC30) and output through the emitter of Q22 (lowpass filter).

2.7 TRANSMIT POWER CONTROL

Transmit power is controlled by IC5 pin 39 and Q14 .

2.8 RINGER DETECT

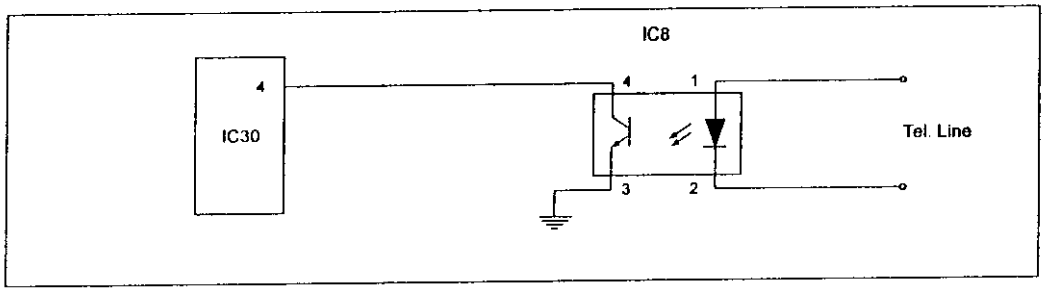


Figure 11

The ring signal from the telephone line is detected by Photocoupler (IC8) and the output from IC8 will be coupled to Microprocessor IC (IC30) pin no.4. After detection of ring signal, the Microprocessor will send data code to handset.

2.9 PULSE DIAL

During pulse dialing, IC30 CPU pin 8 will be sending pulse dial signal to Relay trigger (Q16) then goes to telephone line.

2.10 CHARGE DETECT

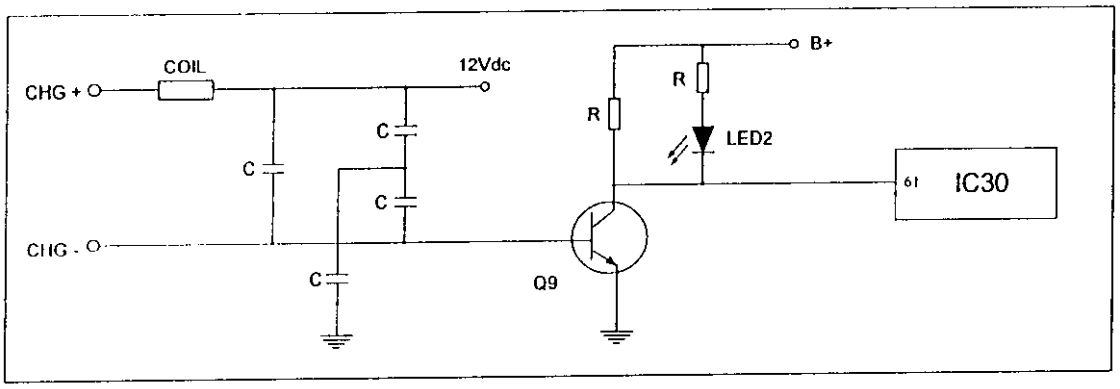


Figure 12

When the handset is on cradle, Q9 is activated and Microprocessor IC (IC30) pin 61 will detect the charging then it will exhange security code randomly.

2.11 SQUELCH

Refer to section 1.10. Squelch operation is same as handset as shown in figure 7.

2.12 PAGE FUNCTION

The Microprocessor IC (IC30) will detect page signal when IC30 pin no. goes low
IC30 will transmit paging signal from pin no. 26 (TX Data port).

2.13 RESET

When handset is place on cradle (charge) or insert the power plug into the socket, Base will reset automatically.

CHANNEL 1, FCC PART 15 CLASS B AT 3 METERS					
Frequency [MHz]	**Polarity [V/H]**	**Corrected Reading [dB(μV)/m]**	**Delta, QP [dB]**	**3 Meters Limit [dB(μV)/m]**	**Correction Factor [dB]**
603.250	V	34.1	-11.9	46.0	21.2
368.557	H	33.8	-12.2	46.0	17.4
339.075	H	33.7	-12.3	46.0	16.4
38.067	V	26.4	-13.6	40.0	16.3
280.110	H	32.1	-13.9	46.0	15.0
33.767	V	24.2	-15.8	40.0	18.3
Note: All reading are quasi-peak unless stated otherwise, using a QPA bandwidth of 120kHz, with a 30 ms sweep time. A video filter was not used.					

CHANNEL 25, FCC PART 15 CLASS B AT 3 METERS					
Frequency [MHz]	**Polarity [V/H]**	**Corrected Reading [dB(μV)/m]**	**Delta, QP [dB]**	**3 Meters Limit [dB(μV)/m]**	**Correction Factor [dB]**
603.255	V	35.5	-10.5	46.0	21.2
36.272	V	28.8	-11.2	40.0	17.2
39.275	V	28.5	-11.5	40.0	15.6
339.087	H	33.6	-12.4	46.0	16.4
368.562	H	32.9	-13.1	46.0	17.4
280.107	H	30.7	-15.3	46.0	15.0
Note: All reading are quasi-peak unless stated otherwise, using a QPA bandwidth of 120kHz, with a 30 ms sweep time. A video filter was not used.					

Test Summary

The Electromagnetic Compatibility requirements on Model "Model" for this test are stated below.

Emission Tests				
Specifications	*Description*	*Test Results*	*Test Point*	*Remark*
CFR Part 15 Section 15.207	*Conducted Emission*	*Passed*	*AC Input Port*	*Attachment 1*
CRF Part 15 Section 15.209c	*Radiated Emission*	*Passed*	*Enclosure*	*Attachment 2*
CFR Part 15.233d	*Bandwidth Requirement*	*Complies*	*Enclosure*	*Attachment 3*
CFR Part 15.233g	*Frequency Tolerance*	*Complies*	*Enclosure*	*Attachment 4*
CFR Part 15.203	*Antenna Requirement*	*Permanent*	*N/A*	*N/A*

Compliance with 15.214 (d)

The Excursion® uses a digital coding security system to prevent unauthorized use of your telephone line by other cordless phones nearby. The Excursion® has 65,536 possible security code combinations, which is randomly generated every time that handset is picked up.

Compliance with 15.233b (ii)

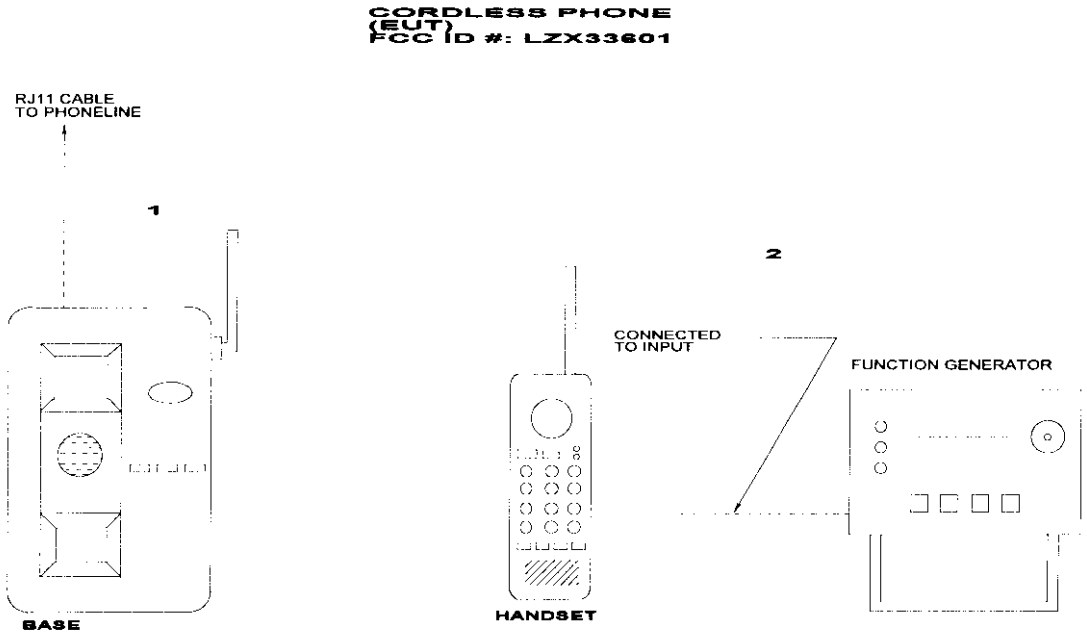
This phone incorporates automatic channel selection circuitry for channels 1-15 to prevents establishment of a link on any occupied frequency. The method in which this is achieved is as follows:

Please see user's manual for interference warning regarding TV's, VCR's and cordless telephone as required by this section.

Antenna Requirement

The transmitter uses a permanently connected antenna.

Configuration of Tested System



Test Location

EMC Compliance Management Group is located at 670 National Ave., Mountain View, CA 94043, USA.

Accreditation Bodies

EMC Compliance Management Group is a fully accredited Test Laboratory for ITE, ISM and Telecommunications Products.

Laboratory Assessment #: 14082, Approved by Assessment Services, A U. K. Competent Body, as meeting the requirements of EN45001and ISO Guide 25.

In compliance with the site registration requirements of Section 2.948 of the FCC Rules to perform EMI measurements for the general public.

Accredited by the National Voluntary Laboratory Accreditation Program for the specific scope of accreditation under Lab Code # 200068-0.

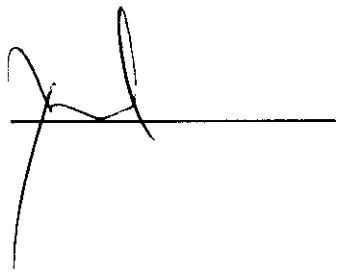
Registered in accordance with Japanese VCCI Regulations.

ATTACHMENT 1 - CONDUCTED EMISSION TEST RESULTS (212-C-01)

CLIENT:	*Unical Enterprises, Inc.*	**TEST REFERENCE:**	*FCC Part 15 Subpart C §15.207*
EUT MODEL:	*33601*	**PRODUCT:**	*Cordless Telephone*
SERIAL NO.:	*Engineering sample*	**EUT DESIGNATION:**	*Home and Office*
TEMPERATURE:	*22'C*	**HUMIDITY:**	*36%*
ATM PRESSURE:	*1017 Mbar*	**GROUNDING:**	*Through power cord*
TESTED BY:	*Chito L. Barcelo*	**DATE OF TEST:**	*03/30/98*
TEST METHOD:	ANSI C63.4 1992		
TEST PROCEDURE:	The EUT is set up according to the guideline of ANSI C63.4 for conducted emissions. The EUT is then plugged into a Line Impedance Stabilization Network (LISN) and an EMI receiver peak scan is made at the frequency measurement range. The six highest significant peaks are then marked, and these signals are then quasi-peaked and averaged. The frequency range investigated is from 150/450KHz to 30MHz.		
TEST VOLTAGE:	120VAC @ 60Hz		
RESULTS:	The EUT meet the requirements of test reference for Conducted Emissions on both line by 17.8 dB of Quasi-Peak detector.		
M.U.:	Freq. $\pm$ 2x10^{-7} x Center Freq., Amp $\pm$ 2.6 dB		

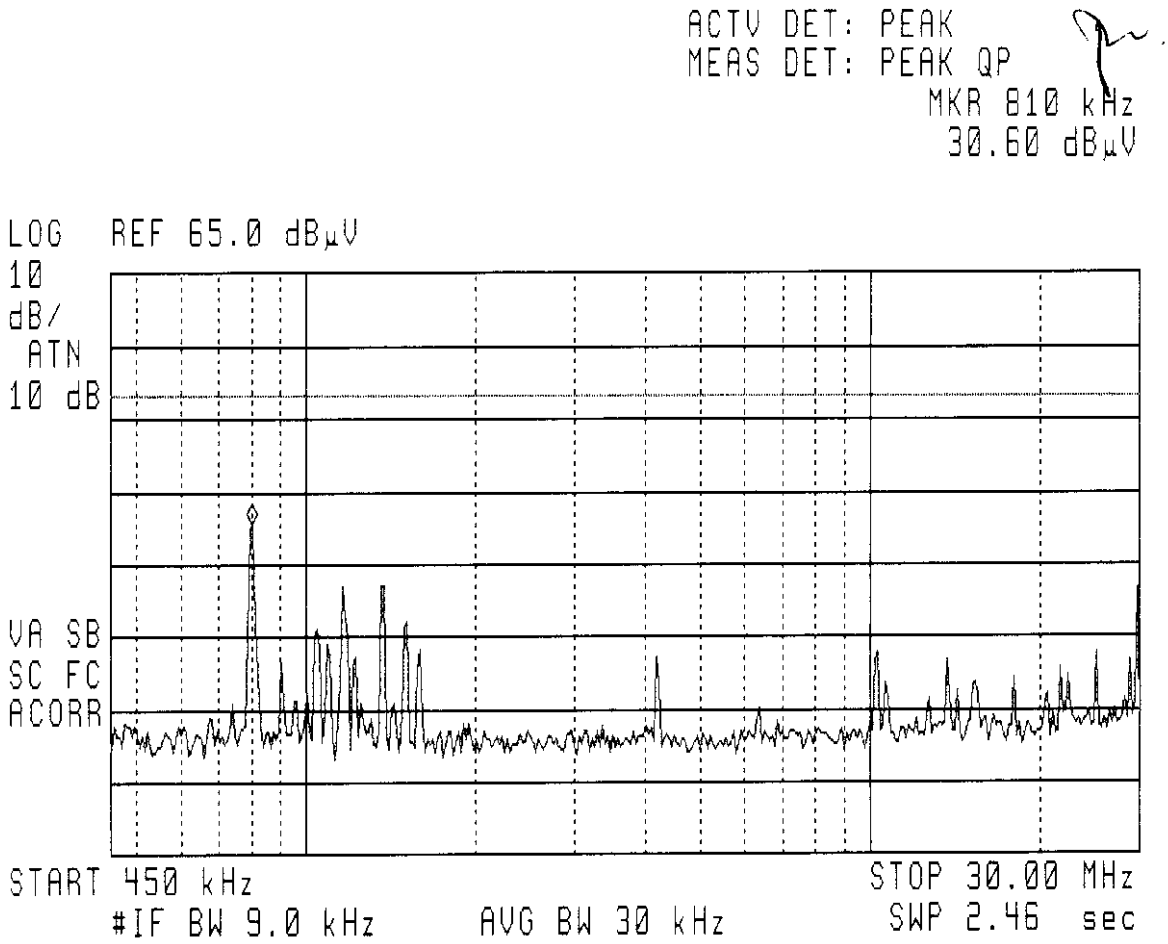
Test Equipment	Manufacturer/ Model	Serial No.	Last Cal.
EMI Receiver	HP 8546A	3650A00363	11/04/97
RF Filter	HP 85460A	3704A00349	11/04/97
LISN	EMCO 3825/2	109804	04/12/97

Line	Frequency [MHz]	Corrected QP Reading [dB(μV)]	Delta QP [dB]	Limit [dB]
L1	0.811	30.2	-17.8	48.8
L1	1.171	23.3	-24.7	48.0
L1	1.370	20.8	-27.2	48.0
L2	0.811	28.1	-19.9	48.0
L2	1.170	23.0	-25.0	48.0
L2	1.499	19.0	-29.0	48.0

SIGNED: 

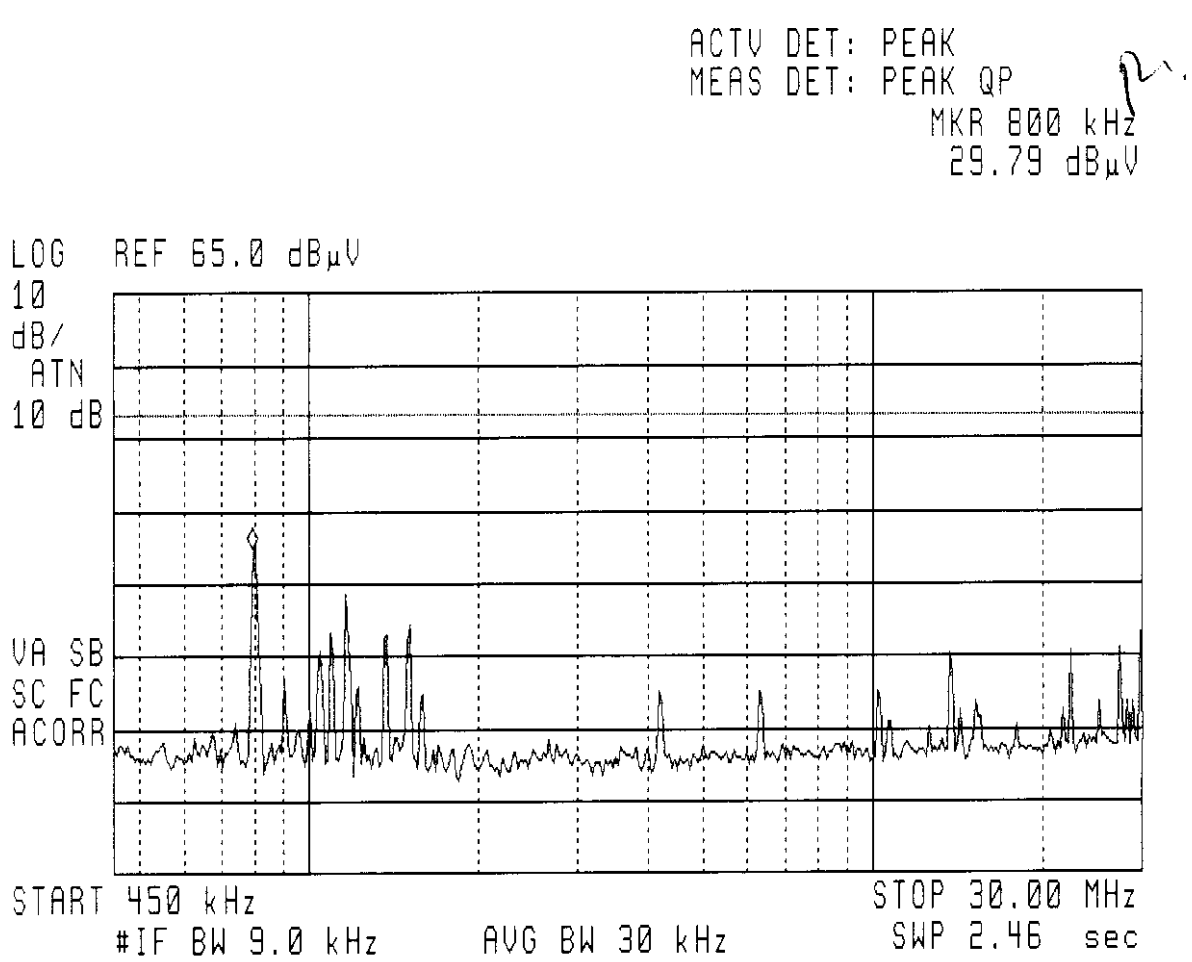
REVIEWED: 

UNICAL 33601 L1



Signal Number	Frequency (MHz)	Peak (dBuV)	QP (dBuV)	QP Delta L 1 (dB)	Corr (dB)
1	0.810677	32.4	30.2	-17.8	0.1
2	1.170720	26.4	23.3	-24.7	0.1
3	1.370537	24.2	20.8	-27.2	0.1

UNICAL 33601 L2



Signal Number	Frequency (MHz)	Peak (dBuV)	QP (dBuV)	QP Delta L 1 (dB)	Corr (dB)
1	0.810957	31.7	28.1	-19.9	0.1
2	1.169843	26.6	23.0	-25.0	0.1
3	1.498831	21.5	19.0	-29.0	0.1

ATTACHMENT 2 - RADIATED EMISSION TEST RESULTS (212-R-01)

CLIENT:	*Unical Enterprises, Inc.*	**TEST REFERENCE:**	*FCC Part 15 Class C §15.209*
EUT MODEL:	*33601*	**PRODUCT:**	*Cordless Telephone*
SERIAL NO.:	*Engineering sample*	**EUT DESIGNATION:**	*Home and Office*
TEMPERATURE:	*22°C*	**HUMIDITY:**	*36%*
ATM PRESSURE:	*1017 Mbar*	**GROUNDING:**	*Through power cord*
TESTED BY:	*Chito L. Barcelo*	**DATE OF TEST:**	*03/30/98*

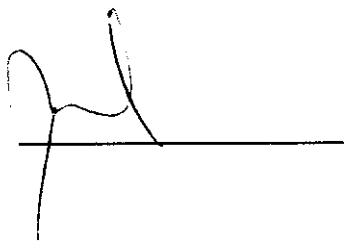
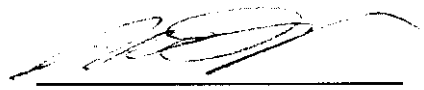
TEST METHOD:	ANSI C63.4 1992
TEST PROCEDURE:	The EUT is set up according to the guidelines of ANSI C63.4 for radiated emissions. An EMI receiver peak scan is made at the frequency measurement range (prescan) in an anechoic chamber. Signal discrimination is then performed and the significant peaks marked. These peaks are then quasi-peaked for final test at the open area test site. The following data lists the significant emission frequencies, measured levels, correction factors (including cable and antenna correction factors), and the corrected readings against the limits. Explanation of the Correction Factor is given as follows: The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain from the measured reading. The basic equation with a sample calculation is as follows: FS= RA + AF + CF - AG Where: FS = Field Strength RA = Receiver Amplitude AF = Antenna Factor CF = Cable Attenuation Factor AG = Amplifier Gain
TEST VOLTAGE:	120VAC @ 60Hz
RESULTS:	The EUT meet the requirements of test reference for Radiated Emissions on both polarities by 21.87 dB at 43.7163 MHz (BASE), and 2.92 dB at 48.7563 MHz (HANDSET).
M.U.:	Freq. $\pm 2 \times 10^{-7}$ x Center Freq., Amp $\pm$ 2.6 dB

Test Equipment	Manufacturer/ Model	Serial No.	Last Cal.
EMI Receiver	HP 8546A	3650A00363	11/04/97
RF Filter	HP 85460A	3704A00349	11/04/97
LISN	EMCO 3825/2	109804	04/12/97
Antenna	CHASE CBL6112A	2274	11/04/97

Channel	BASE FUNDAMENTAL FREQUENCY			
	Frequency (MHz)	Corrected reading AVE. (dBμv)	Limit (dBμV)	Margin (dB)
1	43.7163	58.11	80.0	-21.89
2	43.7375	58.13	80.0	-21.87
3	43.8150	58.02	80.0	-21.98
4	43.8350	57.79	80.0	-22.21
5	43.9163	57.90	80.0	-22.10
6	43.9563	57.75	80.0	-22.25
7	44.1163	57.36	80.0	-22.64
8	44.1563	57.24	80.0	-22.76
9	44.1763	57.26	80.0	-22.74
10	44.1963	56.99	80.0	-23.01
11	44.3150	56.37	80.0	-23.63
12	44.3563	56.24	80.0	-23.76
13	44.3963	55.65	80.0	-24.35
14	44.4563	55.72	80.0	-24.28
15	44.4763	55.47	80.0	-24.53
16	44.6063	55.54	80.0	-24.46
17	44.6263	55.73	80.0	-24.27
18	46.6663	55.84	80.0	-24.16
19	46.7063	55.80	80.0	-24.20
20	46.7263	55.96	80.0	-24.04
21	46.7663	56.27	80.0	-23.73
22	46.8263	56.33	80.0	-23.67
23	46.8663	56.54	80.0	-23.46
24	46.9263	56.48	80.0	-23.52
25	46.9663	56.69	80.0	-23.31

Channel	HANDSET FUNDAMENTAL FREQUENCY			
	Frequency (MHz)	Corrected reading AVE. (dBμv)	Limit (dBμV)	Margin (dB)
1	48.7563	77.08	80.0	2.92
2	48.8363	76.84	80.0	3.16
3	48.8563	76.74	80.0	3.26
4	48.9163	76.74	80.0	3.26
5	49.0150	76.44	80.0	3.56
6	49.0763	75.98	80.0	4.02
7	49.0950	75.91	80.0	4.09
8	49.1563	75.52	80.0	4.48
9	49.1963	74.99	80.0	5.01
10	49.2350	74.63	80.0	5.37
11	49.2750	74.21	80.0	5.79
12	49.3563	73.92	80.0	6.08
13	49.3950	73.87	80.0	6.13
14	49.4563	73.84	80.0	6.16
15	49.4963	73.63	80.0	6.37
16	49.6650	73.41	80.0	6.59
17	49.8413	72.98	80.0	7.02
18	49.8563	72.99	80.0	7.01
19	49.7650	73.22	80.0	6.78
20	49.8713	73.37	80.0	6.63
21	49.8263	73.30	80.0	6.70
22	49.8863	73.42	80.0	6.58
23	49.9263	73.68	80.0	6.32
24	49.9863	73.77	80.0	6.23
25	49.9663	73.92	80.0	6.08

* Automatic/Manual channel selection
* All harmonics of Base frequencies below 20dBμV/m
* No spurious emissions noticed
* All fundamental frequencies within 20 kHz band
* All modulated 26 dB bandwidth within 20 kHz band

SIGNED:  **REVIEWED:** 

ATTACHMENT 3 - OPERATING BANDWIDTH (212-R-01)

CLIENT:	*Unical Enterprises, Inc.*	**TEST REFERENCE:**	*FCC Part 15 Class C §15.233d*
EUT MODEL:	*33601*	**PRODUCT:**	*Cordless Telephone*
SERIAL NO.:	*Engineering sample*	**EUT DESIGNATION:**	*Home and Office*
TEMPERATURE:	*22°C*	**HUMIDITY:**	*36%*
ATM PRESSURE:	*1017 Mbar*	**GROUNDING:**	*Through power cord*
TESTED BY:	*Chito L. Barcelo*	**DATE OF TEST:**	*03/30/98*

TEST METHOD:	CFR 47 *§15.233d*
TEST PROCEDURE:	*Operating Bandwidth Measurement* With the base or handset frequency monitored at the receiver , the 3dB bandwidths are measured using the receiver's bandwidth measurement function. Bandwidths are then evaluated for compliance to the 20Khz bandwidth requirement. *Modulated Bandwidth Measurements* A 2.5Khz sinewave from a function generator is fed into a speaker which directly interfaces with the handset mouthpiece. The signal is then increased until the phone reached its full modulation while monitoring the earpiece sound quality and the signal level noted. Test signal is then adjusted to 80% to full scale to achieve 80% modulation. Bandwidth measurements are then made 26dB below the reference peak of the channel frequency under test.

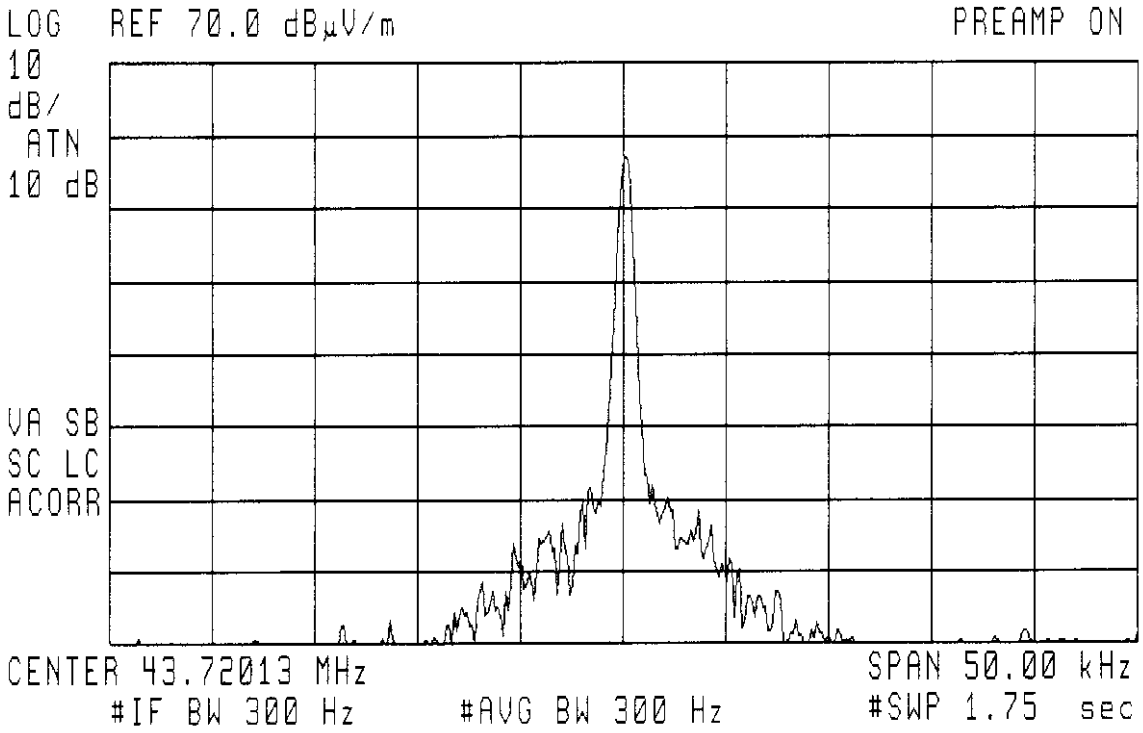
Channel	BAND WIDTH (kHz)	
	BASE (kHz)	HANDSET (kHz)
1	11.38	11.13
13	11.50	11.13
25	11.50	11.00

* All bandwidth within 20kHz bandwidth requirement.

SIGNED: _____ **REVIEWED:** _____

CHANEL 1 BASE UNMODULATION

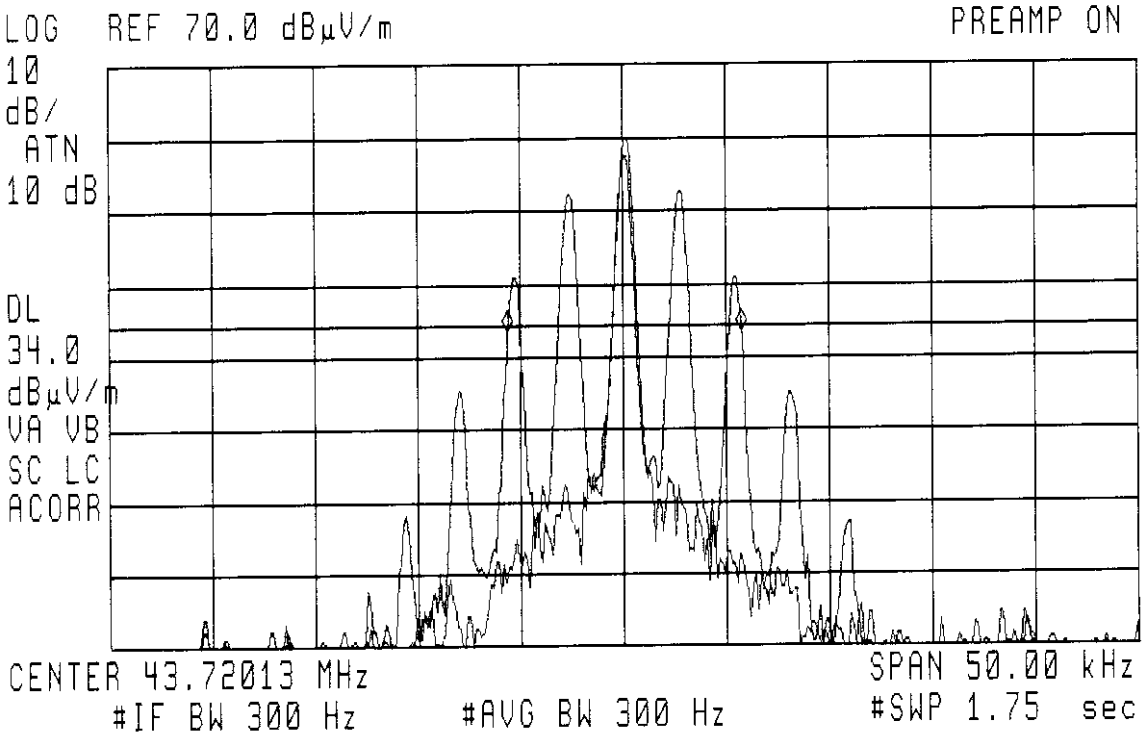
ACTV DET: PEAK
MEAS DET: PEAK QP



CHANEL 1 BASE MODULATION

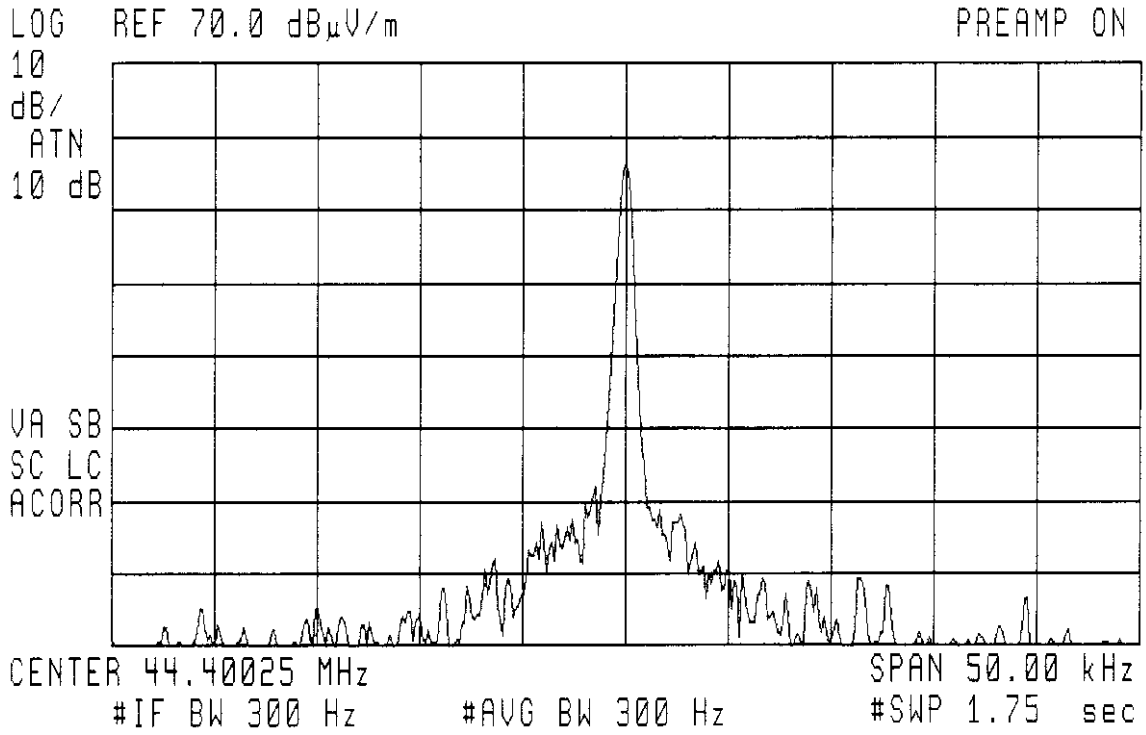
MARKER Δ
11.38 kHz
.12 dB

ACTV DET: PEAK
MEAS DET: PEAK QP
MKRΔ 11.38 kHz
.12 dB



CHANEL 13 BASE UNMODULATION

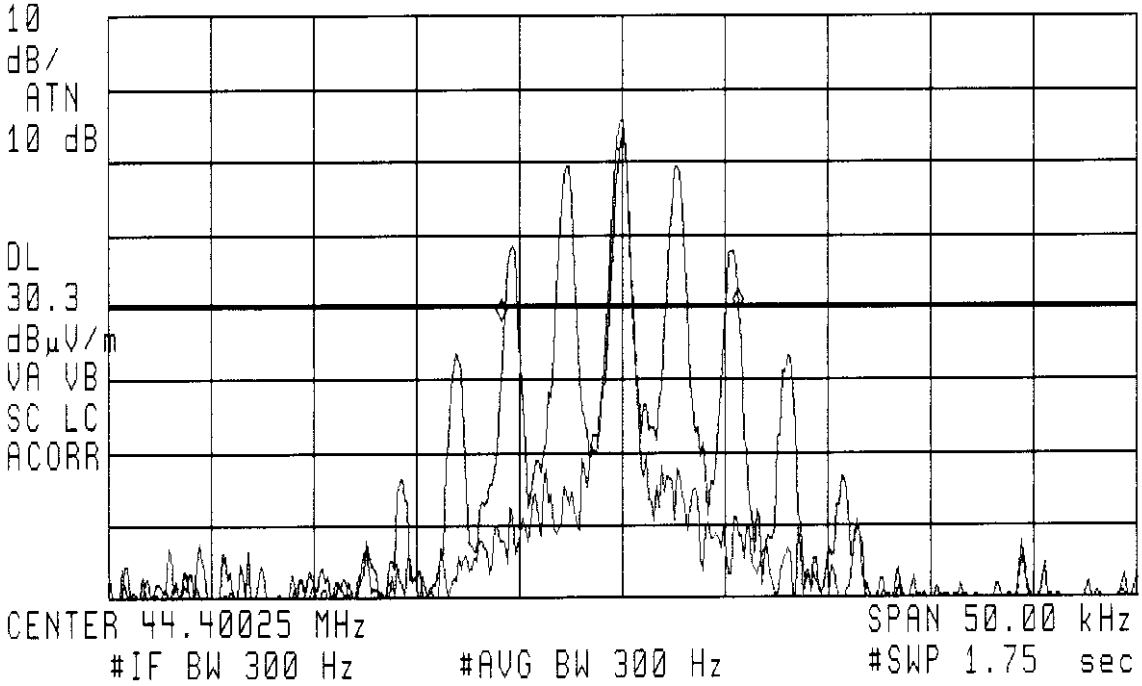
ACTV DET: PEAK
MEAS DET: PEAK QP



CHANEL 13 MODULATION

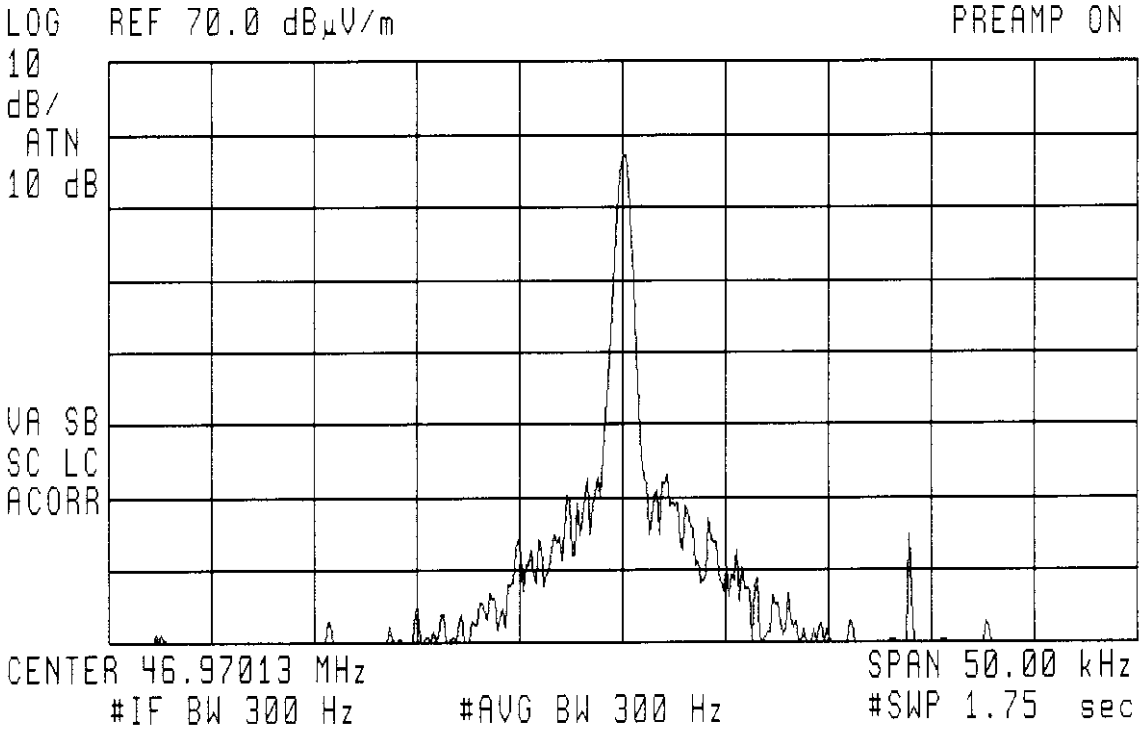
MARKER Δ
11.50 kHz
1.11 dB

ACTV DET: PEAK
MEAS DET: PEAK QP
MKRΔ 11.50 kHz
1.11 dB



CHANEL 25 BASE UNMODULATION

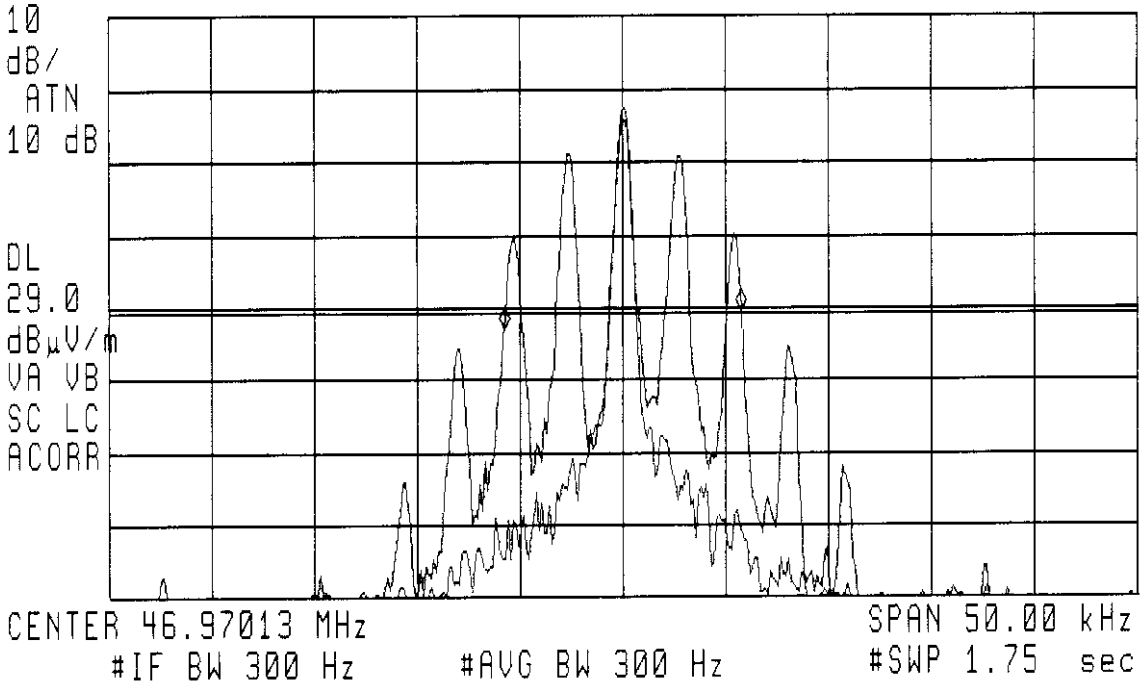
ACTV DET: PEAK
MEAS DET: PEAK QP



CHANEL 25 MODULATION

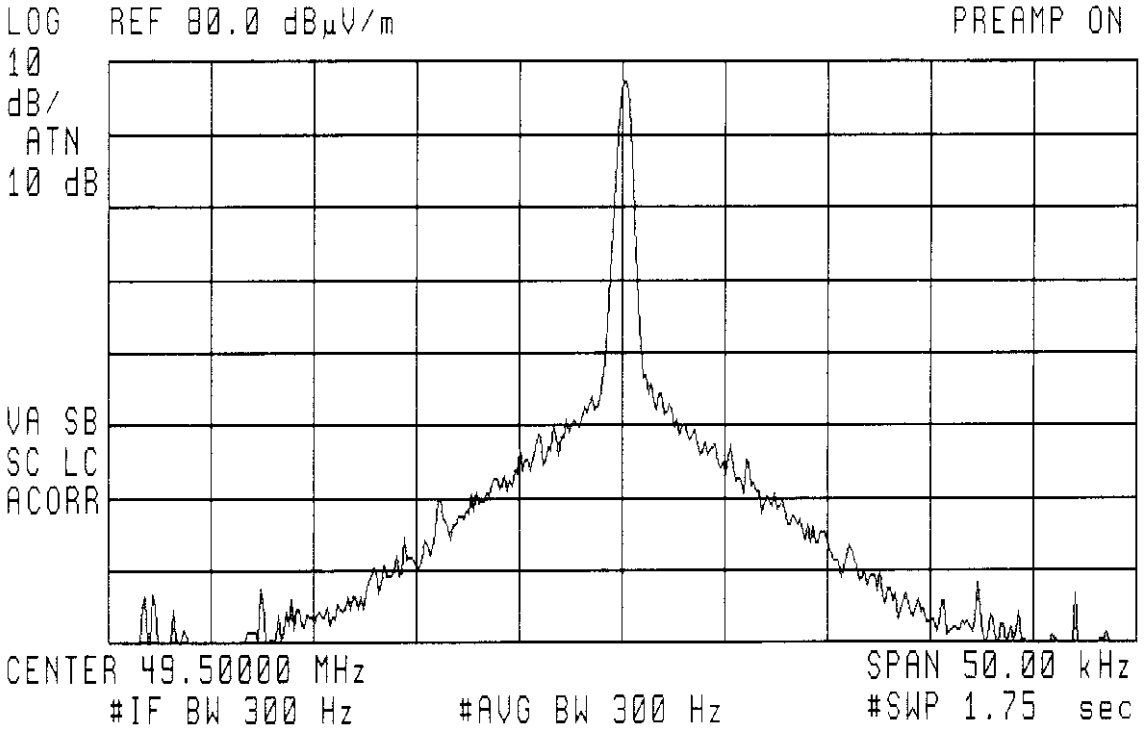
MARKER Δ
11.50 kHz
2.55 dB

ACTV DET: PEAK
MEAS DET: PEAK QP
MKRΔ 11.50 kHz
2.55 dB



CHANEL 1 HANDSET UNMODULATION

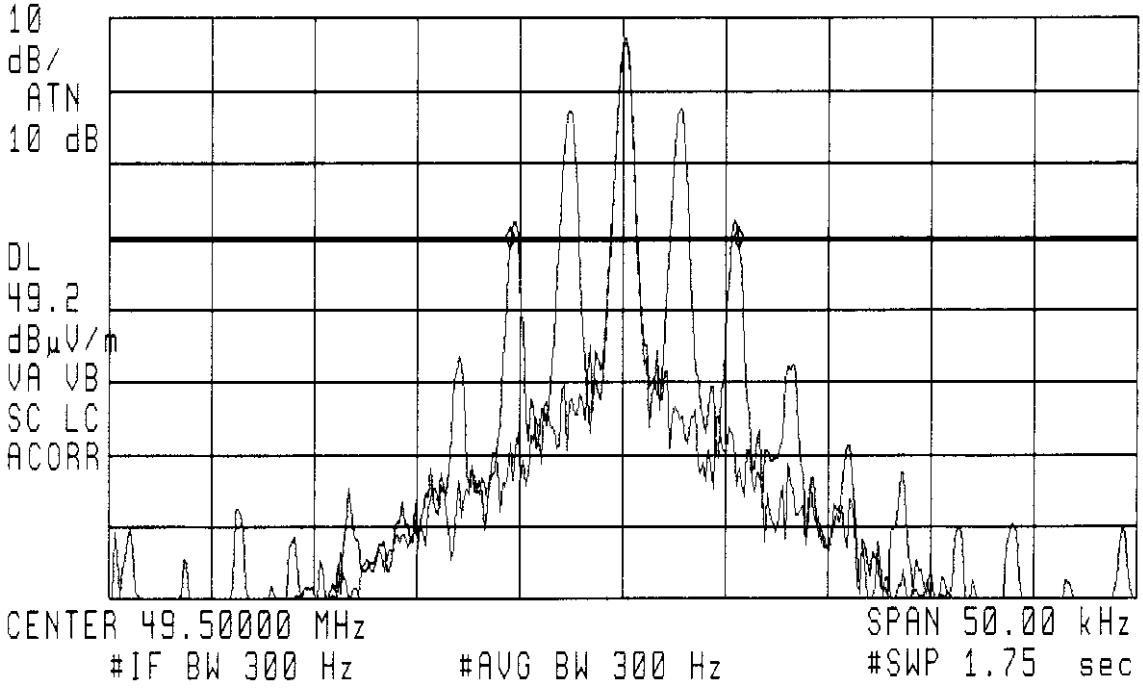
ACTV DET: PEAK
MEAS DET: PEAK QP



CHANEL 1 MODULATION HANDSET

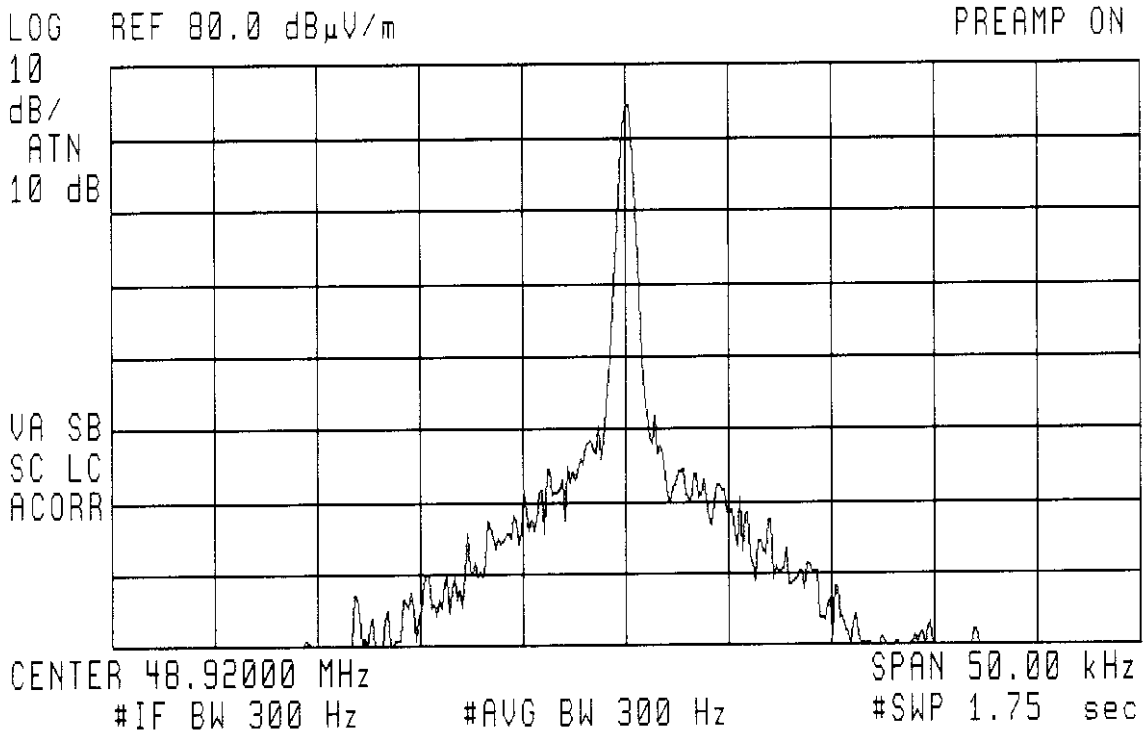
MARKER Δ
11.13 kHz
-.14 dB

ACTV DET: PEAK
MEAS DET: PEAK QP
MKRΔ 11.13 kHz
-.14 dB



CHANEL 13 HANDSET UNMODULATION

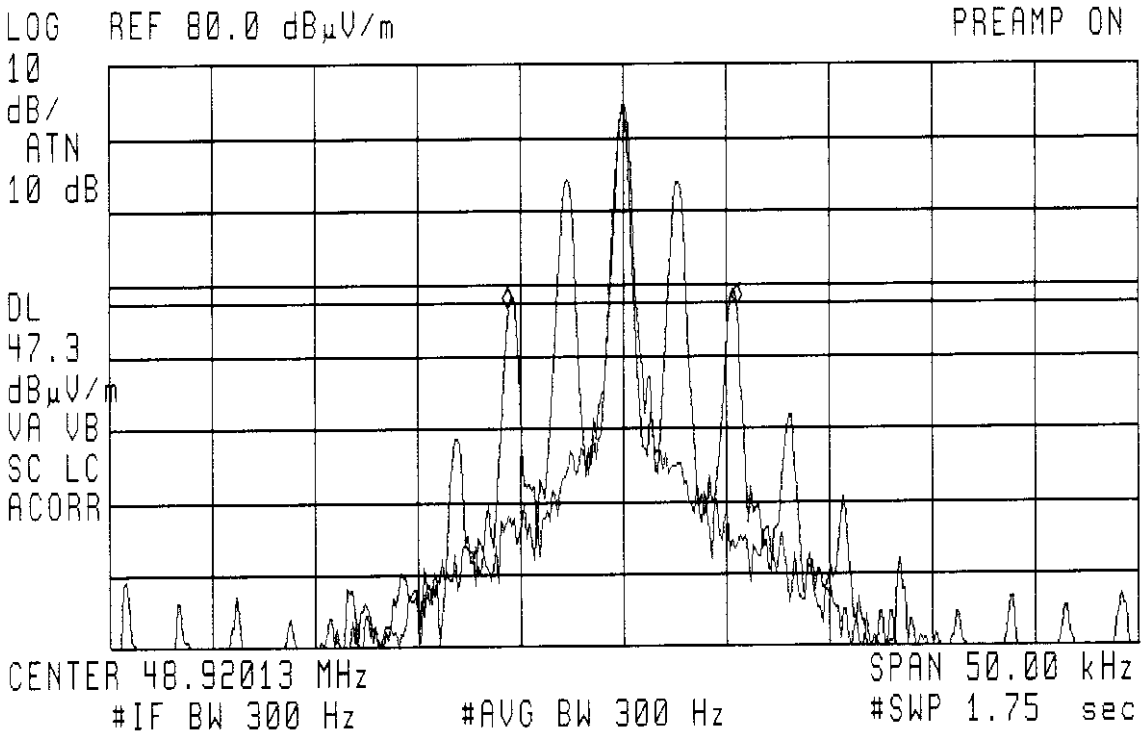
ACTV DET: PEAK
MEAS DET: PEAK QP



CHANEL 13 HANDSET MODULATION

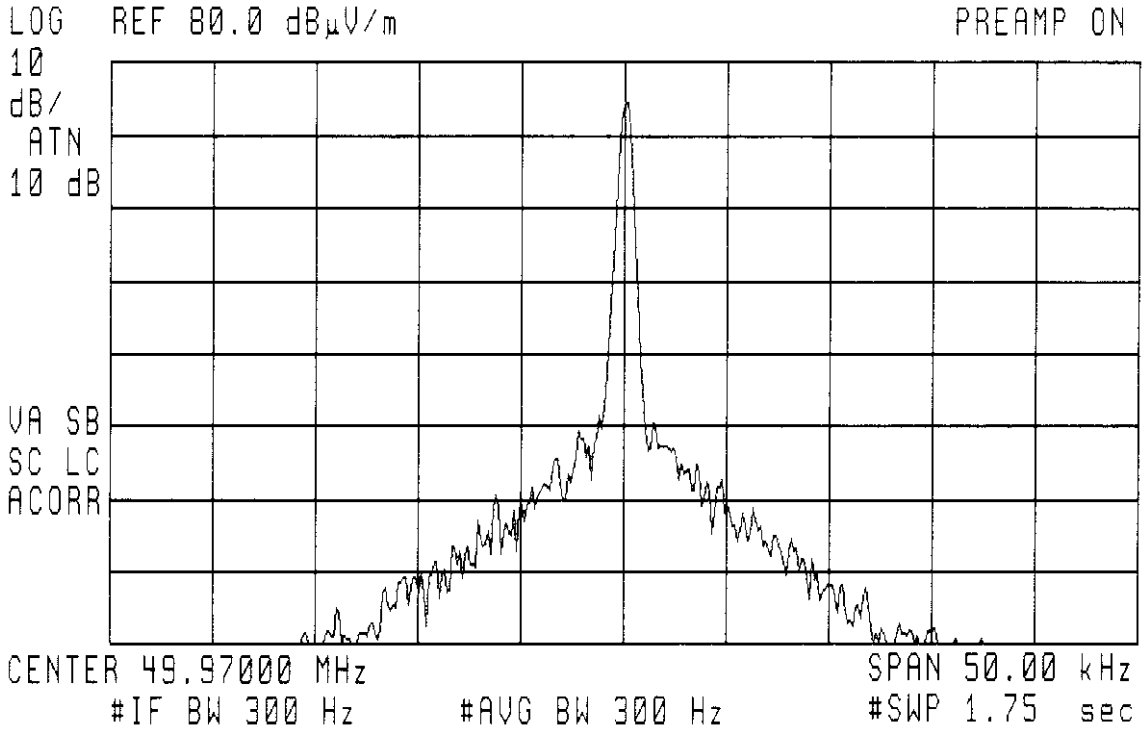
MARKER Δ
11.13 kHz
.26 dB

ACTV DET: PEAK
MEAS DET: PEAK QP
MKRΔ 11.13 kHz
.26 dB



CHANEL 25 HANDSET UNMODULATION

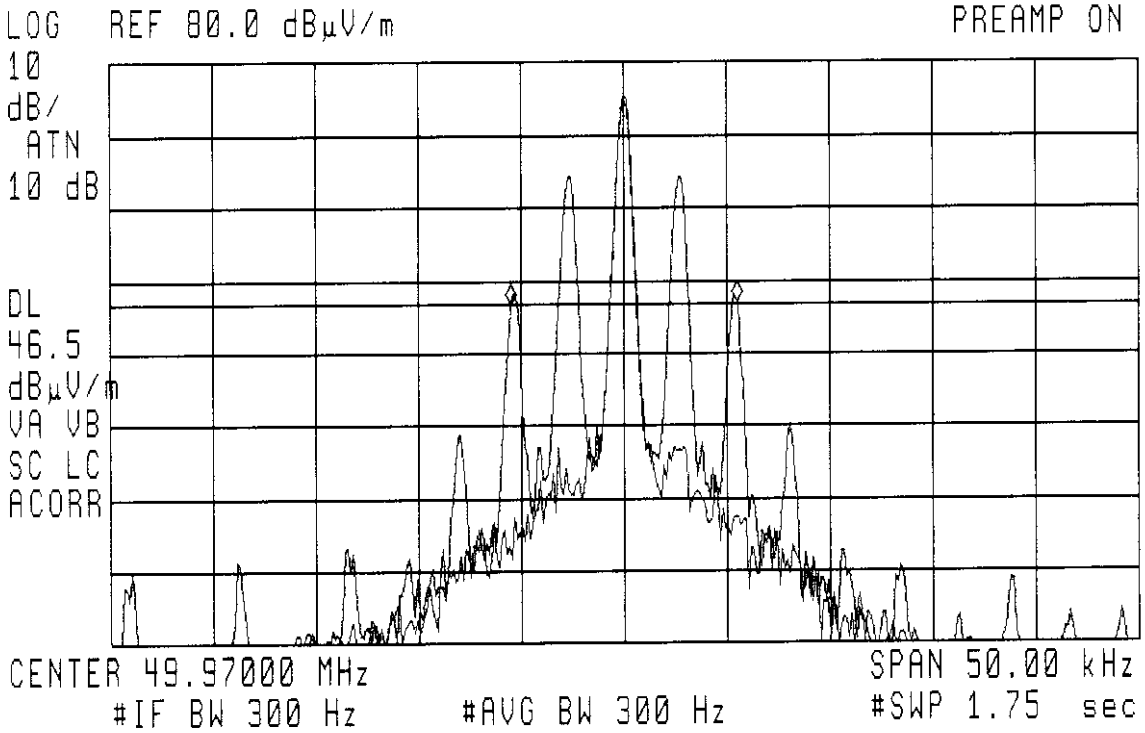
ACTV DET: PEAK
MEAS DET: PEAK QP



CHANEL 25 HANDSET MODULATION

MARKER Δ
11.00 kHz
.38 dB

ACTV DET: PEAK
MEAS DET: PEAK QP
MKRΔ 11.00 kHz
.38 dB



ATTACHMENT 4 - FREQUENCY TOLERANCE (212-R-01)

CLIENT:	*Unical Enterprises, Inc.*	**TEST REFERENCE:**	*FCC Part 15 Class C §15.233g*
EUT MODEL:	*33601*	**PRODUCT:**	*Cordless Telephone*
SERIAL NO.:	*Engineering sample*	**EUT DESIGNATION:**	*Home and Office*
TEMPERATURE:	*22°C*	**HUMIDITY:**	*36%*
ATM PRESSURE:	*1017 Mbar*	**GROUNDING:**	*Through power cord*
TESTED BY:		**DATE OF TEST:**	*01/05/98*

TEST METHOD:	CFR 47 *§15.233g*
TEST PROCEDURE:	*Frequency Stability VS. Temperature:* Test performed in accordance with Appendix I5.2 of ANSI C63.4 1992. EUT was powered on, the readings were obtained for both base and handset frequencies. EUT was left on and readings taken after 2, 5, and 10 minutes. Thereafter the entire procedure was again repeated for each of the other channels. Ambient temperature varies from -20 to +50^{0}C. *Frequency Stability VS. Voltage Variation:* Test performed in accordance with Appendix I5.3 of ANSI C63.4 1992. Voltage test at 102VAC (85% input voltage) and 138VAC (115% of input voltage); a fresh charge battery use in handset
RESULTS:	The EUT meets the requirements of CFR 15.233(g), temperature variation and voltage variation tests.
M.U.:	Freq. ± 2x10^{-7} x Center Freq., Temperature ±0.02^{0}C, Voltage ±0.01VAC

FREQUENCY STABILITY VS. TEMPERATURE

Frequency Measured at Room Temperature

Channel	BASE (MHz)	Reading BASE (MHz	HANDSET (MHz)	Reading HANDSET (MHz)	Deviation %
1	**43.720**	43.7165 ✓	**48.760**	48.7567 ✓	±0.01%
13	**44.400**	44.3985 ✓	**49.400**	49.3955 ✓	±0.01%
25	**46.970**	46.9687 ✓	**49.970**	49.9665 ✓	±0.01%

43.7243
43.7156

Frequency Measured at +50°C					
Channel	**BASE (MHz)**	**Reading BASE (MHz**	**HANDSET (MHz)**	**Reading HANDSET (MHz)**	**Deviation %**
1	**43.720**	43.7196	**48.760**	48.7585	±0.01%
13	**44.400**	44.3977	**49.400**	49.3989	±0.01%
25	**46.970**	46.9672	**49.970**	49.9668	±0.01%
Frequency Measured at -20°C					
Channel	**BASE (MHz)**	**Reading BASE (MHz**	**HANDSET (MHz)**	**Reading HANDSET (MHz)**	**Deviation %**
1	**43.720**	43.7168	**48.760**	48.7574	±0.01%
13	**44.400**	44.3986	**49.400**	49.3992	±0.01%
25	**46.970**	46.9688	**49.970**	49.9671	±0.01%

FREQUENCY STABILITY VS. VOLTAGE VARIATION					
Channel	**BASE Freq. (MHz)**	**Tested at 120VAC Base Freq. (MHz)**	**Tested at 102VAC Base Freq. (MHz)**	**Tested at 138VAC Base Freq. (MHz)**	**Deviation %**
1	**43.720**	43.7179	43.7169	43.7179	±0.01%
13	**44.400**	44.3984	44.3986	44.3992	±0.01%
25	**46.970**	46.9668	46.9681	44.9685	±0.01%

SIGNED: **REVIEWED:**

PHOTOGRAPHS