



Test Report: 4W07975
Issue II


Applicant: Aastra Telecom Inc.
155 Snow Boulevard
Concord, ON
L4K 4N9

**Equipment Under Test:
(EUT)** CM-16, 2.4 GHz Cordless Phone for M1 PBX

FCC ID: SDVCM16

In Accordance With: **FCC Part 15, Subpart C**
Frequency Hopping Systems
2400 - 2483.5 MHz

Tested By: Nemko Canada Inc.
303 River Road, R.R. 5
Ottawa, Ontario K1V 1H2

Authorized By: 
Glen Westwell, Wireless Specialist

Date: 21 October 2004

Total Number of Pages: 48

Table of Contents

Section 1. Summary of Test Results3

Section 2. General Equipment Specification.....5

Section 3. Powerline Conducted Emissions.....7

Section 4. Channel Separation12

Section 5. Number of Hopping Channels14

Section 6. Time of Occupancy21

Section 7. Occupied Bandwidth24

Section 8. Peak Power Output.....31

Section 9. Spurious Emissions (Radiated).....33

Section 10. Block Diagrams47

Section 11. Test Equipment List48

EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

Section 1. Summary of Test Results

General

All measurements are traceable to national standards.

These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15, Subpart C, Paragraph 15.247 for Frequency Hopping Spread Spectrum devices. Radiated tests were conducted in accordance with ANSI C63.4-2001. Radiated emissions are made on an open area test site. A description of the test facility is on file with the FCC.

THIS TEST REPORT RELATES ONLY TO THE ITEM(S) TESTED.

THE FOLLOWING DEVIATIONS FROM, ADDITIONS TO, OR EXCLUSIONS FROM THE TEST SPECIFICATIONS HAVE BEEN MADE.

See "Summary of Test Data".

TESTED BY: Daxesh Thakker, Wireless Test Engineer

TESTED BY: Kevin Carr, EMC/EMI/Wireless Specialist



TESTED BY: _____ DATE: 21 October 2004
Phil Taffinder, EMC Specialist

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This report applies only to the items tested.

EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

Summary Of Test Data

Name Of Test	Para. No.	Result
Powerline Conducted Emissions	15.207(a)	Complied
Channel Separation	15.247(a)(1)	Complied
Time of Occupancy	15.247(a)(1)(iii)	Complied
20 dB Occupied Bandwidth	15.247(a)(1)	Complied
Number of Hopping Channels	15.247(a)(1)(iii)	Complied
Peak Power Output	15.247(b)(1)	Complied
Spurious Emissions (Antenna Conducted)	15.247(c)	N/A ⁽¹⁾
Spurious Emissions (Radiated)	15.247(c)	Complied

Footnotes For N/A's: **(1) No access port.**

Test Conditions:

Indoor Temperature: 21° C
 Humidity: 30 %

Outdoor Temperature: 20° C
 Humidity: 45 %

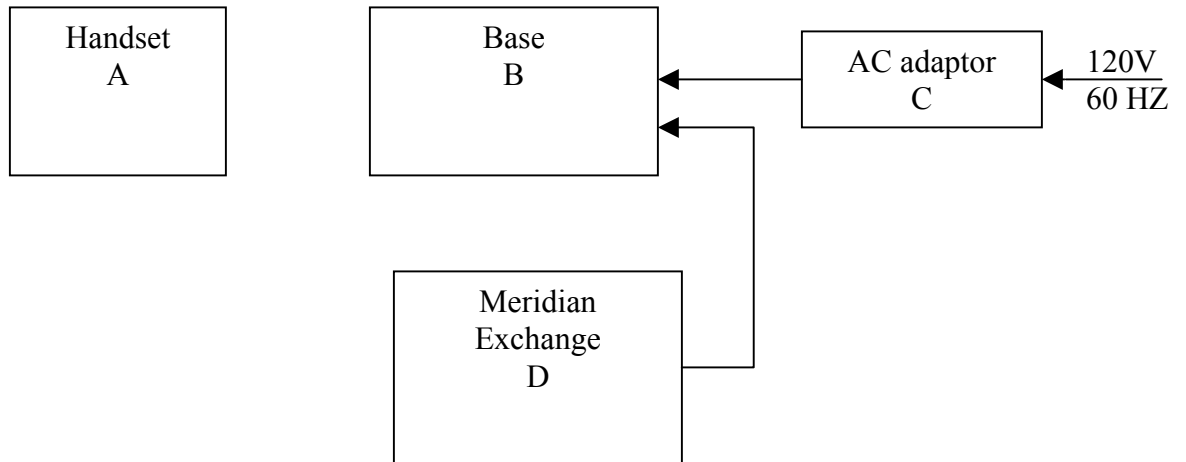
EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

Section 2. General Equipment Specification

Manufacturer:	Aastra Telecom Inc.
Model No.:	CM-16
Serial No.:	None
Date Received In Laboratory:	5 May 2004
Nemko Identification No.:	16,17, 27 & 29
Frequency Range:	2400-2483 MHz
Modulation	GFSK
Tunable Bands:	1
Number of Channels:	Base: 94 channels Handset: 94 channels
Min. Channel Spacing:	Base: 877 KHz Handset: 860 KHz
Emissions Designator:	667KF1D
User Frequency Adjustment:	None
Rated Output Power:	Base: 29.77 dBm (0.948 W) Handset: 23.77 dBm (0.238 W)

EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for M1 PBX

Test Set-up



Equipment Configuration List:		
Item	Description	Identification: (M/N #, S/N #, P/N #, Rev.)
(A)	Handset	P/N CM16, S/N None
(B)	Base	P/N CM16, S/N None
(C)	Power Adapter	S/N None
(D)	Meridian Exchange	P/N M1

EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

Section 3. Power line Conducted Emissions

Para. No.: 15.207 (a)

Test Performed By: Phil Taffinder	Date of Test: 20 April 2004
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Minimum Standard: CISPR 22-96

Limits For Conducted Disturbance At The Mains Ports Of Class B

Frequency Range MHz	Limits dB(µV)		Result
	Quasi-Peak	Average	
0.15 to 0.50	66 to 56	56 to 46	Complies
0.5 to 5	56	46	
5 to 30	60	50	

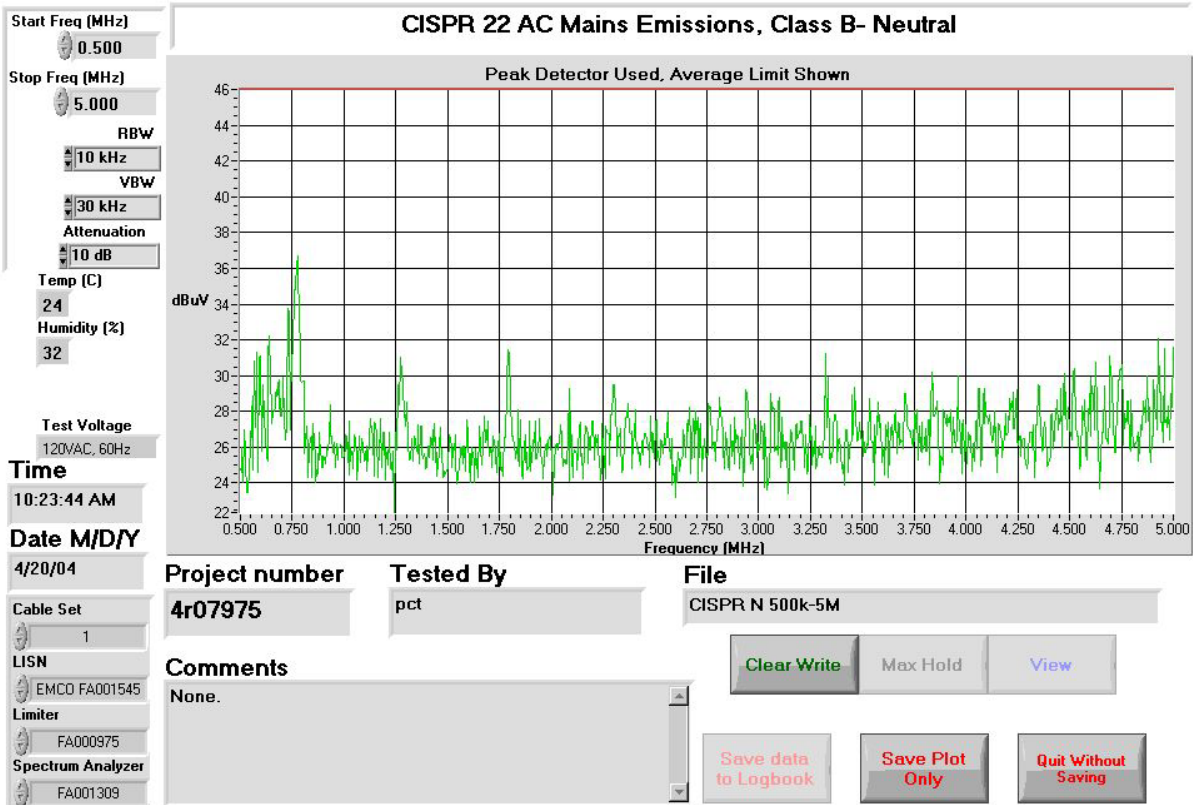
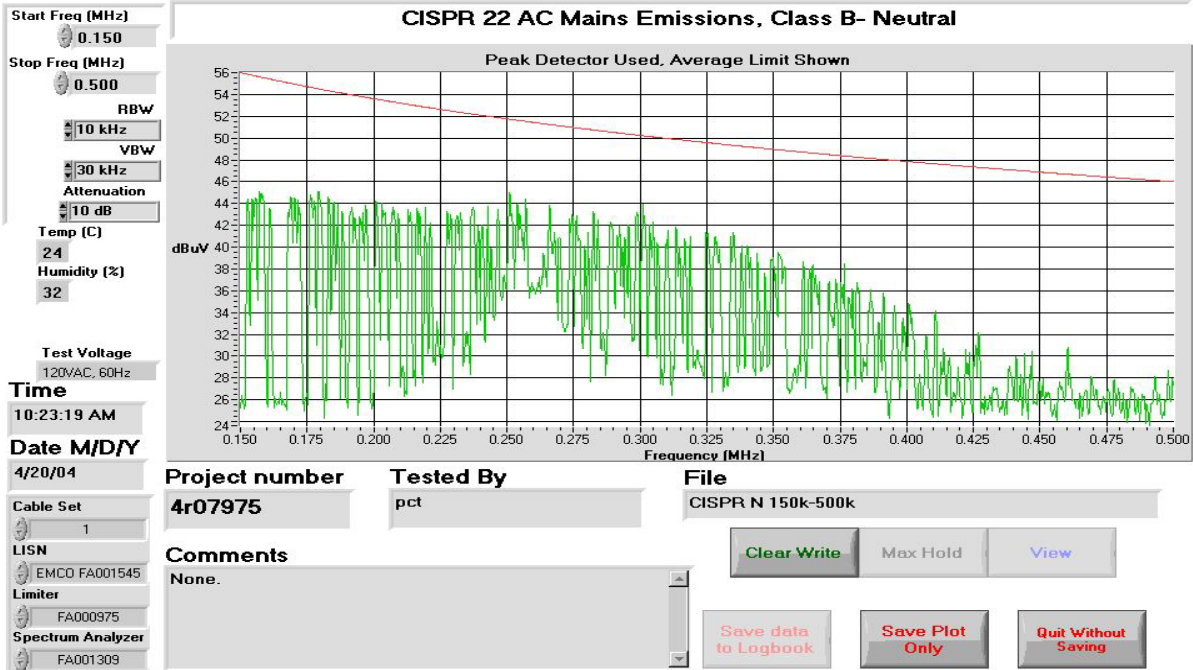
Note:
1. The lower limit shall apply at the transition frequency.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 to 0.50MHz.

Test Results: Complied.

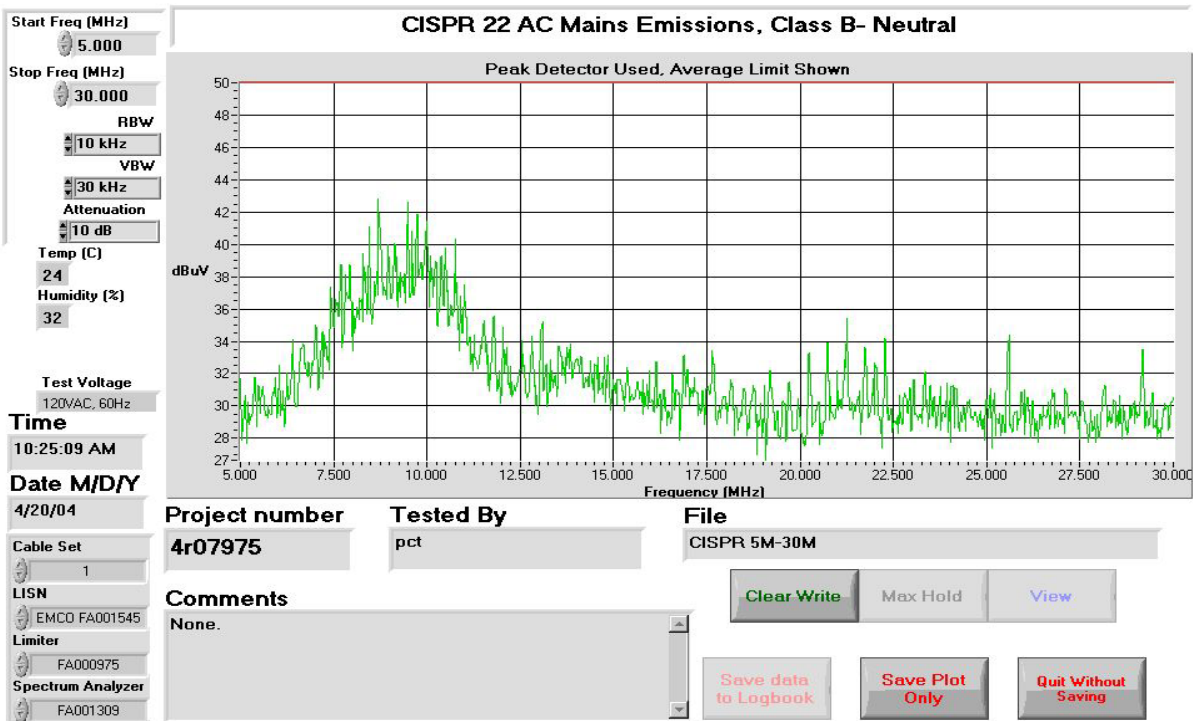
Measurement Data: See attached graph(s).

EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

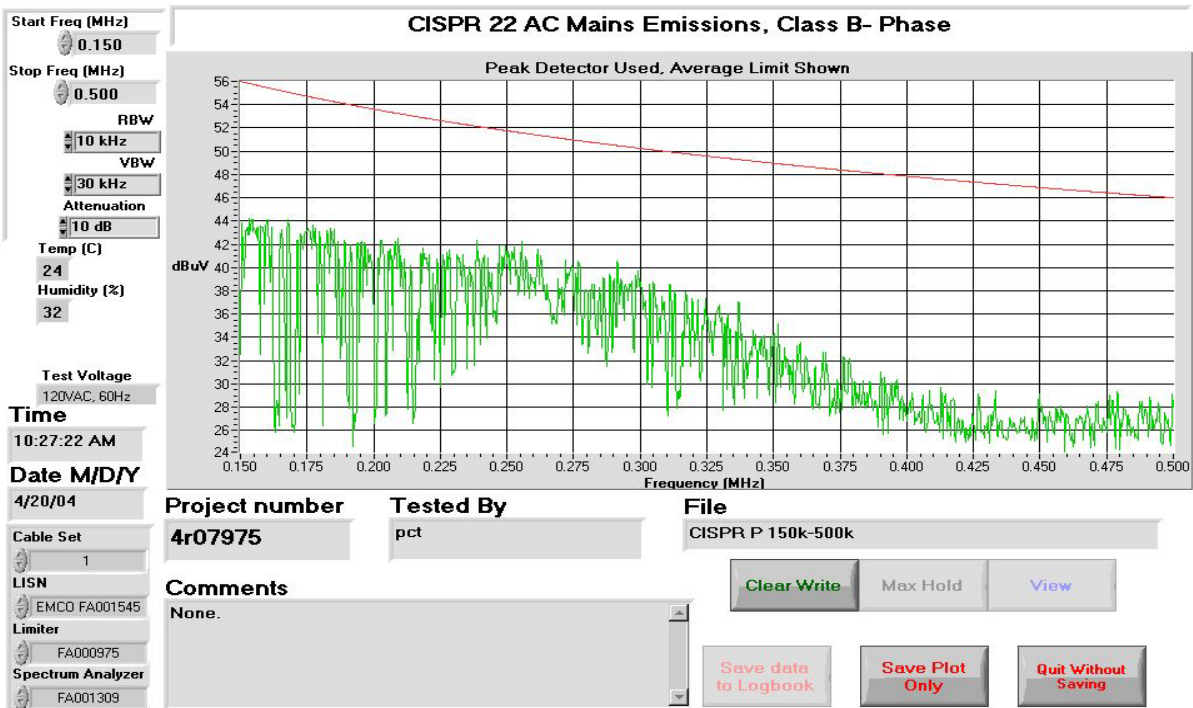
Conducted Disturbance @ Neutral



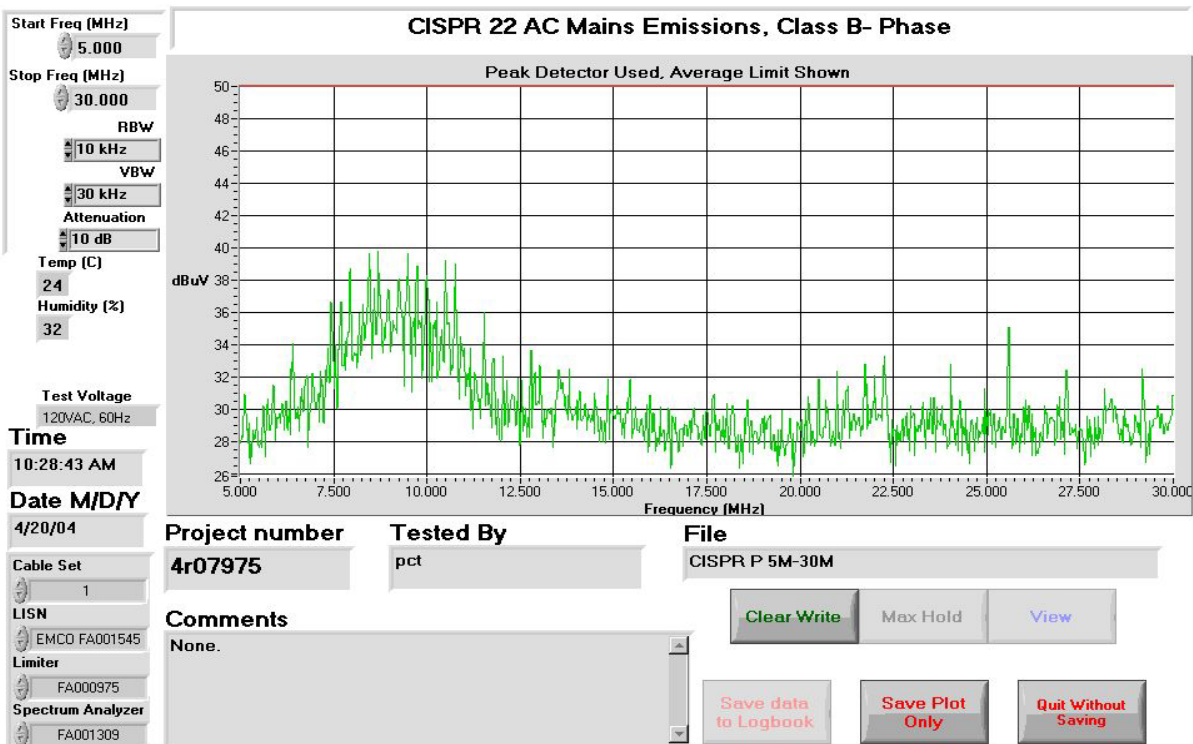
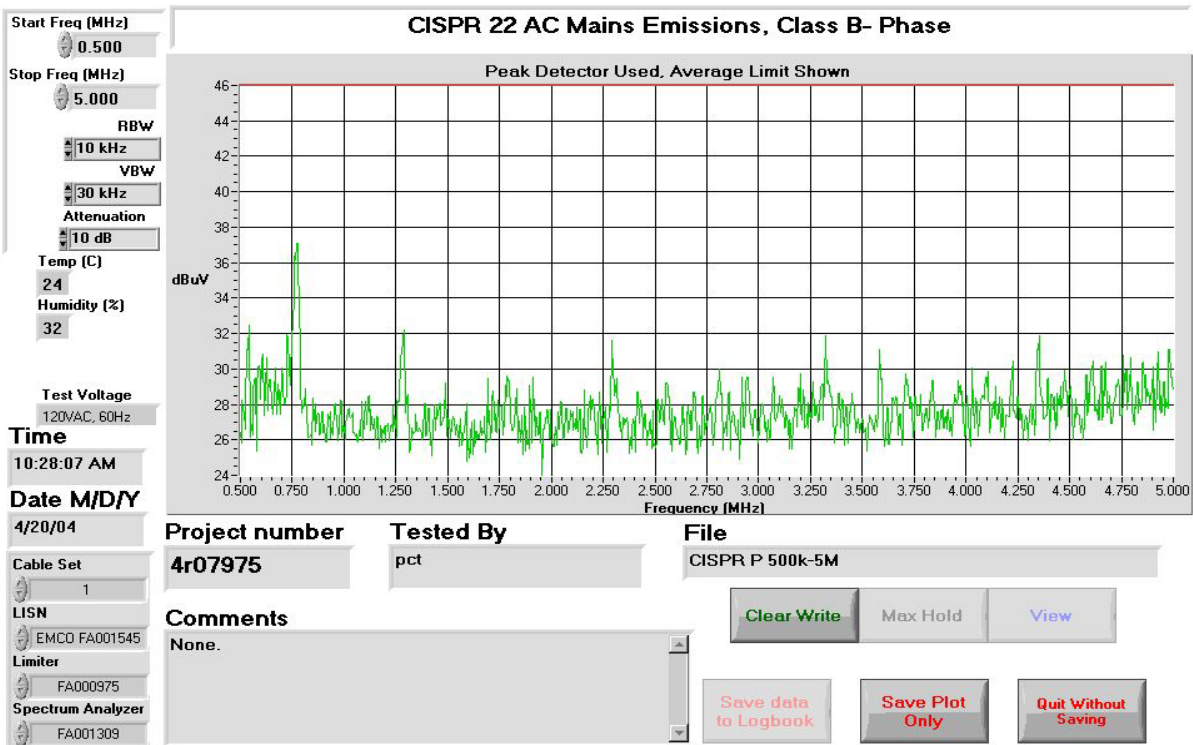
EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX



Conducted Disturbance @ Phase

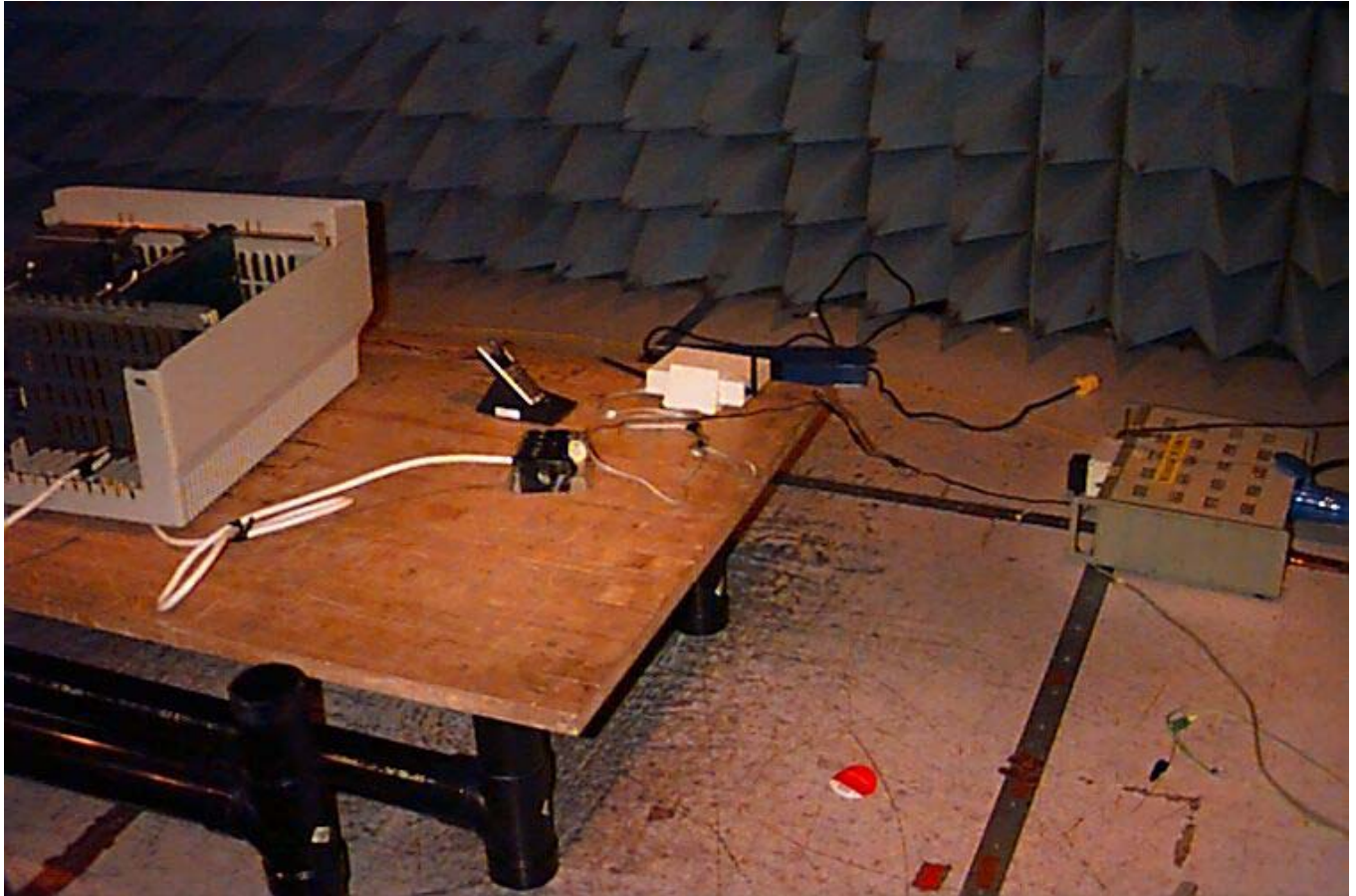


EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX



EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

Test Setup Photo



EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

Section 4. Channel Separation

Para. No.: 15.247 (a)(1)

Test Performed By: Kevin Carr & Daxesh Thakker	Date of Test: 12 May 2004 & 25 June 2004
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Test Results: Complied.

Measurement Data: **Minimum Channel Separation**
Base: 877 KHz, 20dB BW = 700kHz
Handset: 860 KHz. 20dB BW = 708kHz

EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

Section 5. Number of Hopping Channels

Para. No.: 15.247(a)(1)(iii)

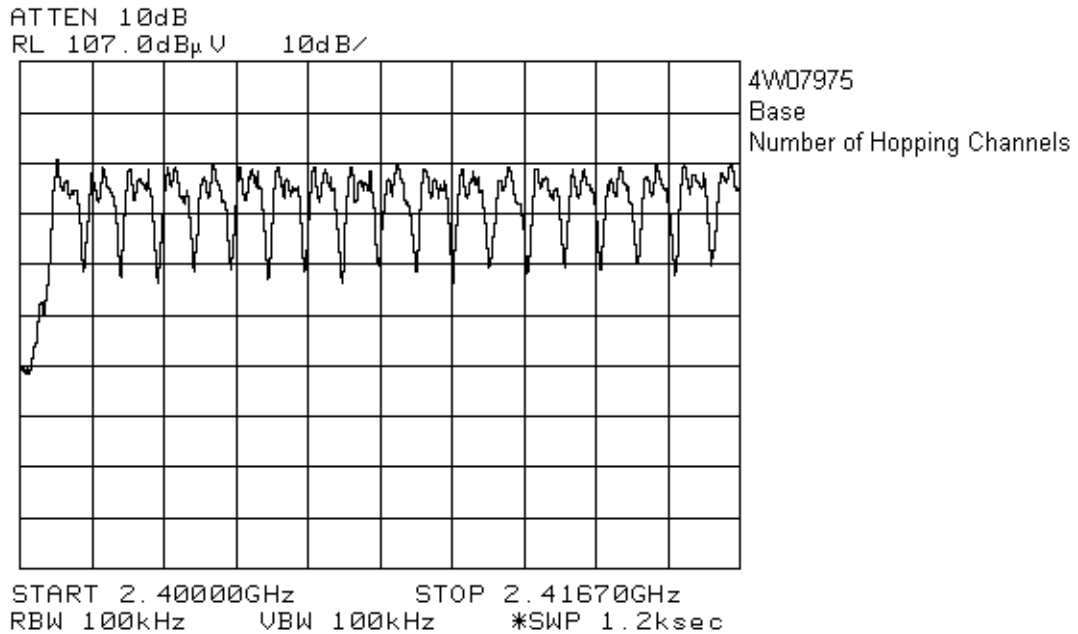
Test Performed By: Kevin Carr & Daxesh Thakker	Date of Test: 11 May 2004 & 25 June 2004
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Test Results: Complied

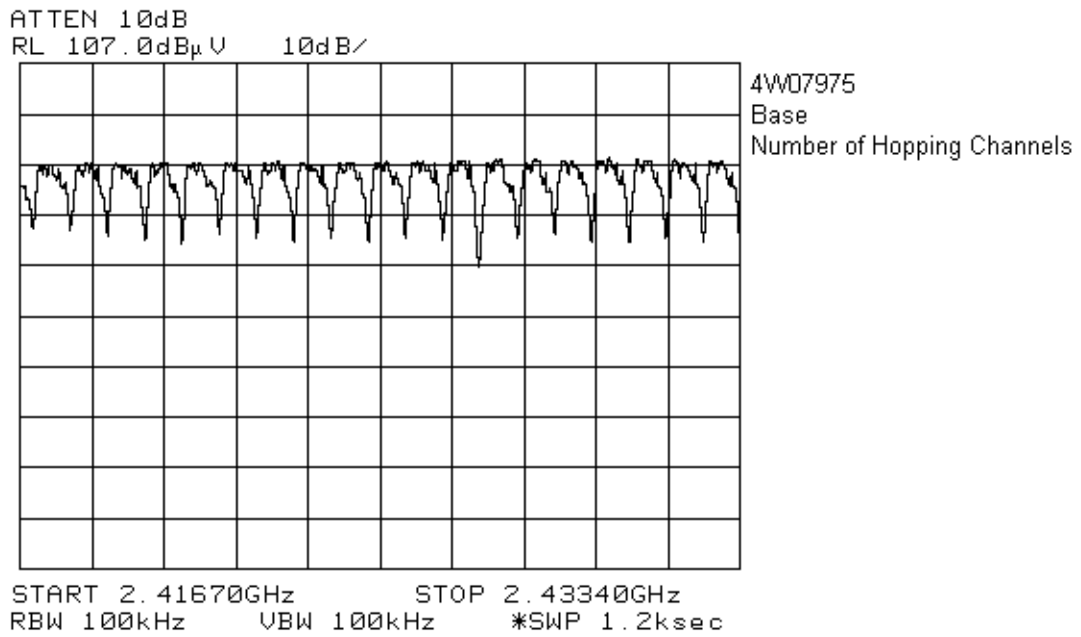
Measurement Data: Number of Hopping Channel Frequencies:
Base: 94 channels
Handset: 94 channels

EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

Number of Hopping Channels
Base station

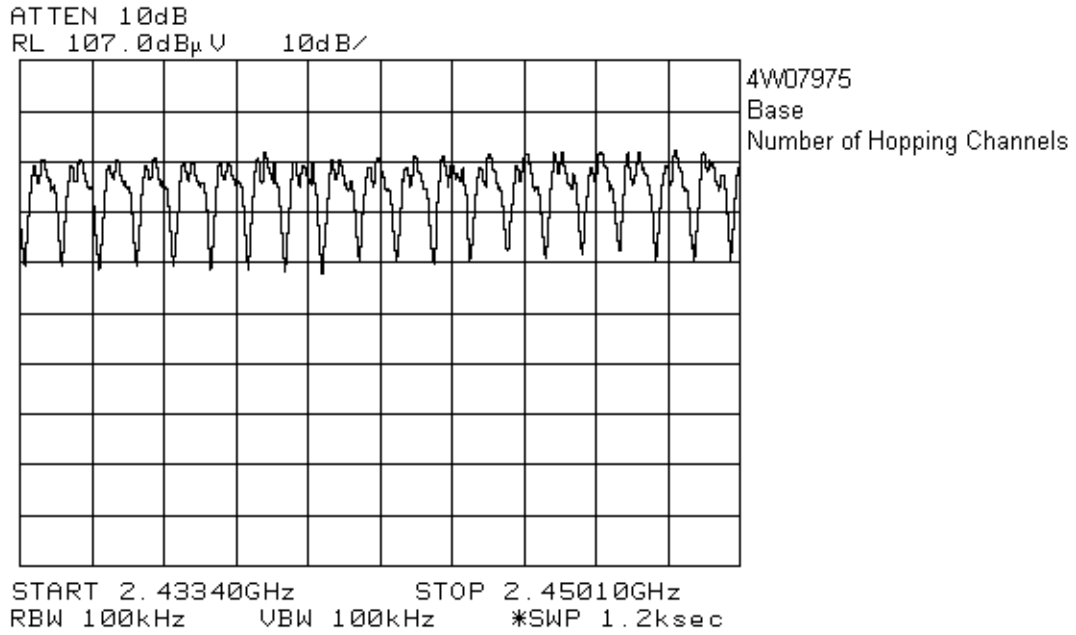


Band 1 showing 19 channels

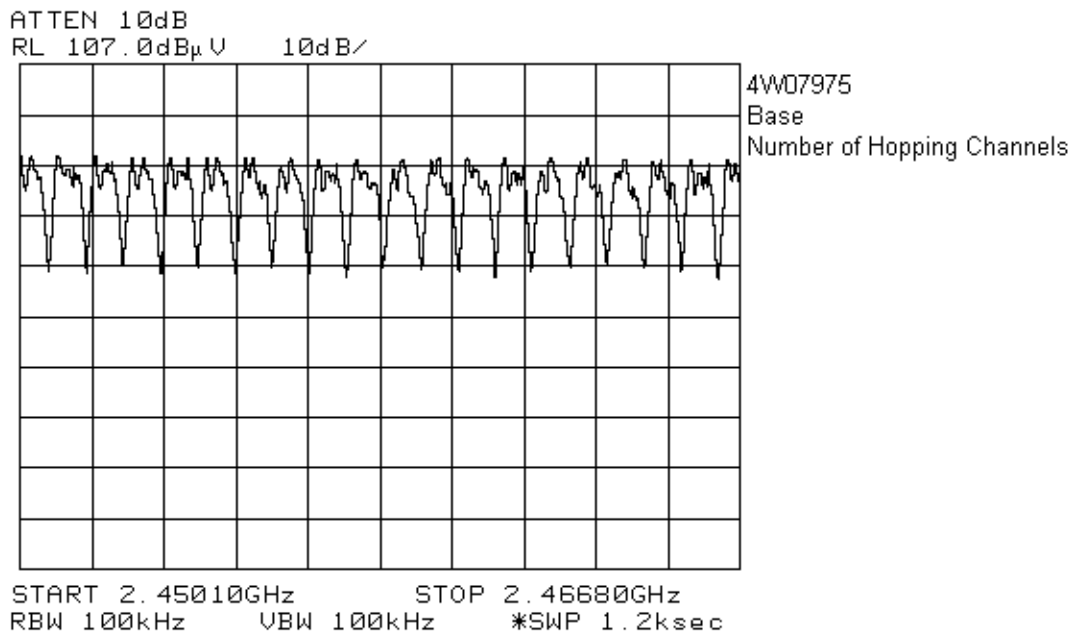


Band 2 showing 19 channels

EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

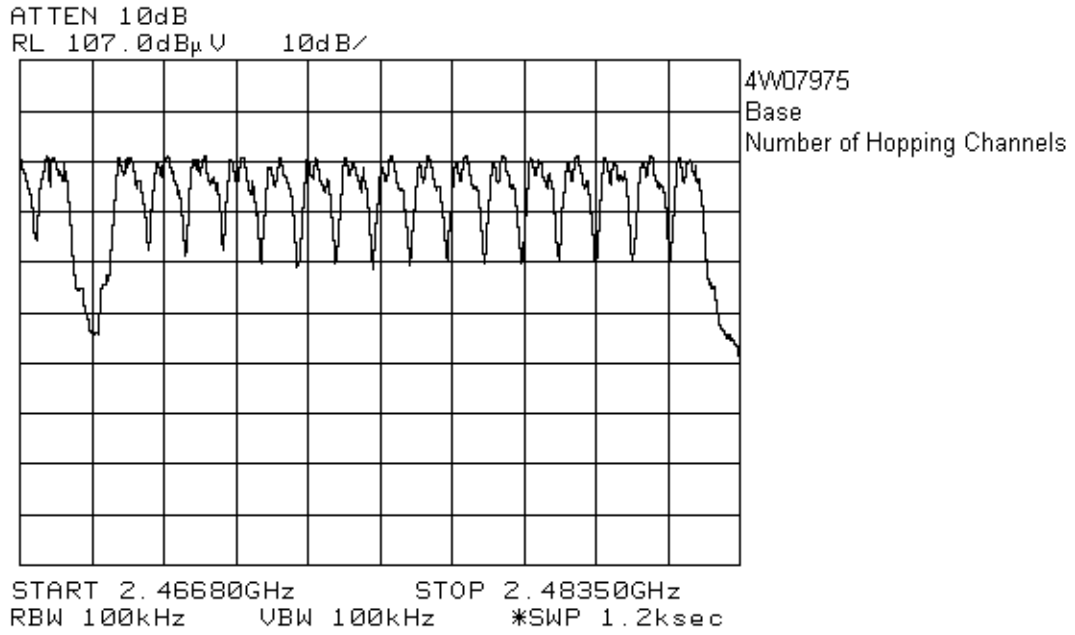


Band 3 showing 19 channels



Band 4 showing 20 channels

EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

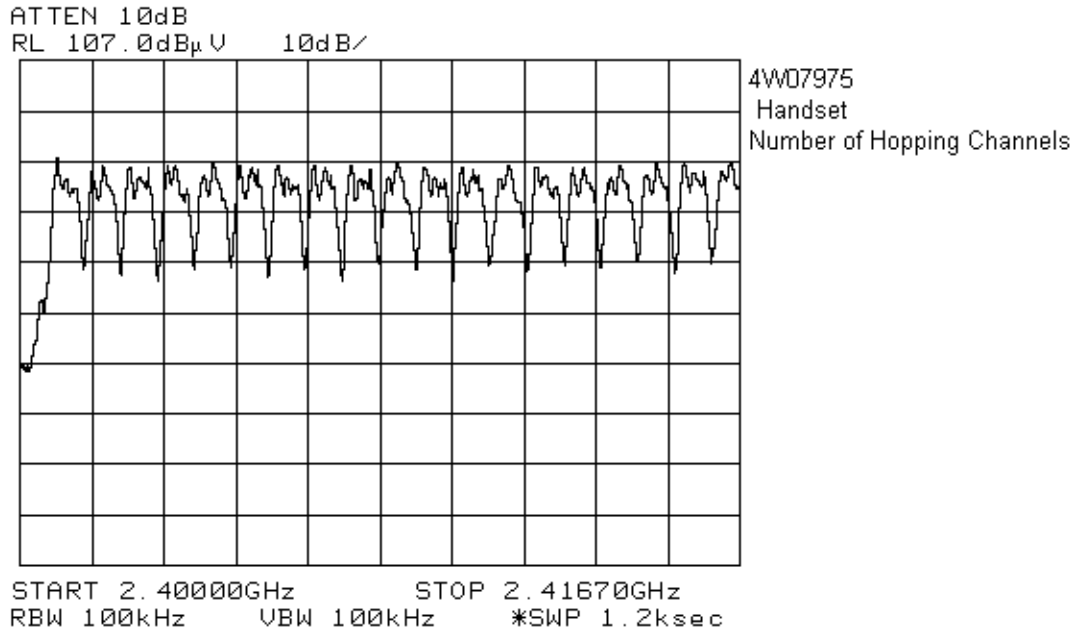


Band 5 showing 17 channels

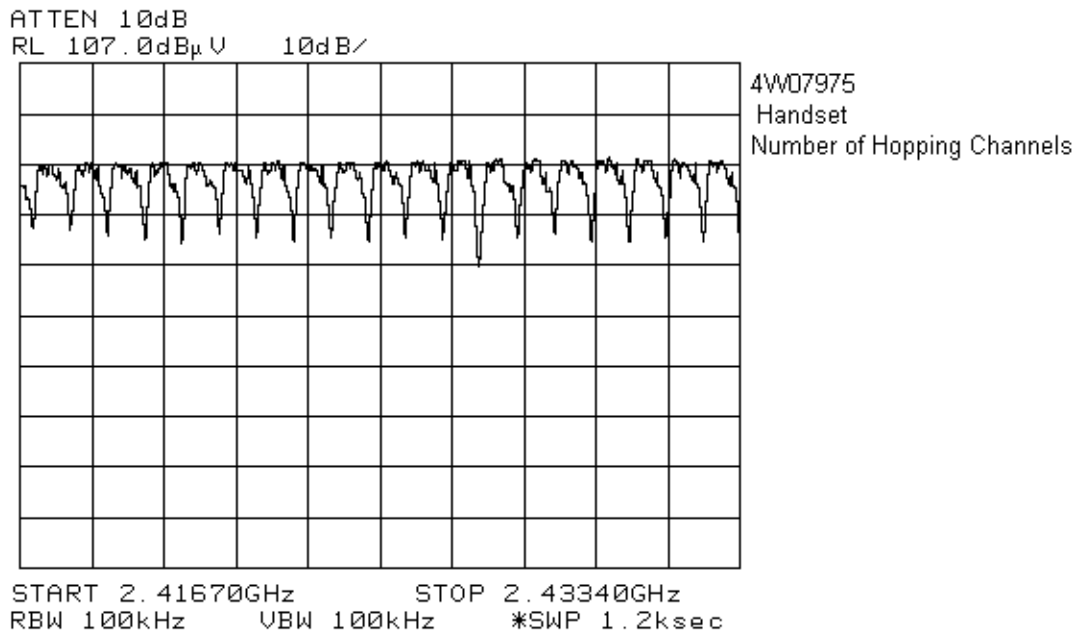
94 channels total

EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

Handset

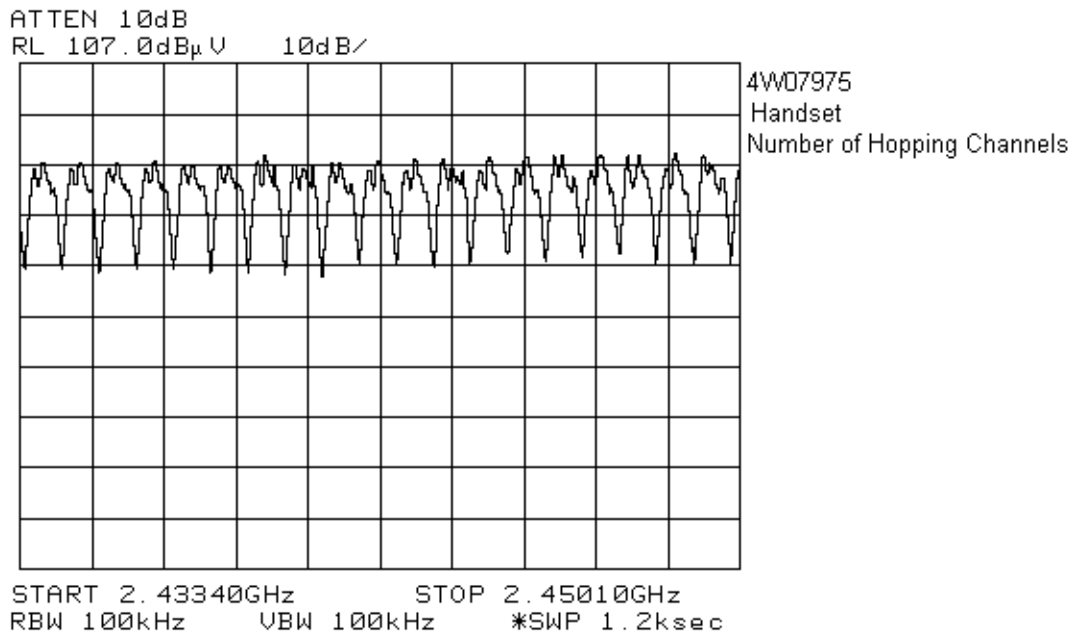


Band 1 showing 19 channels

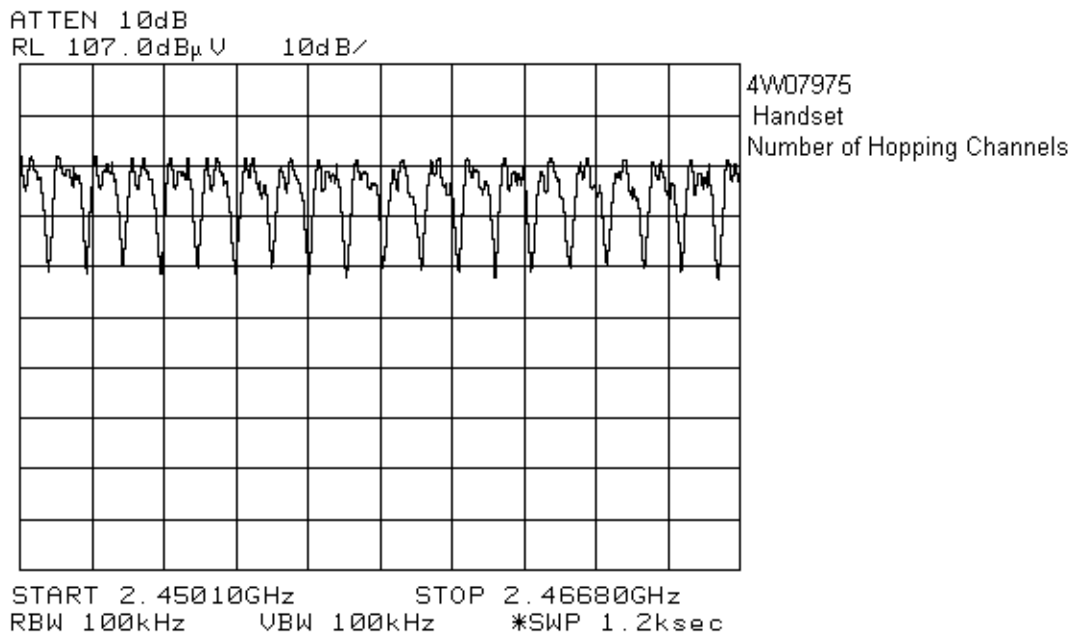


Band 2 showing 19 channels

EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

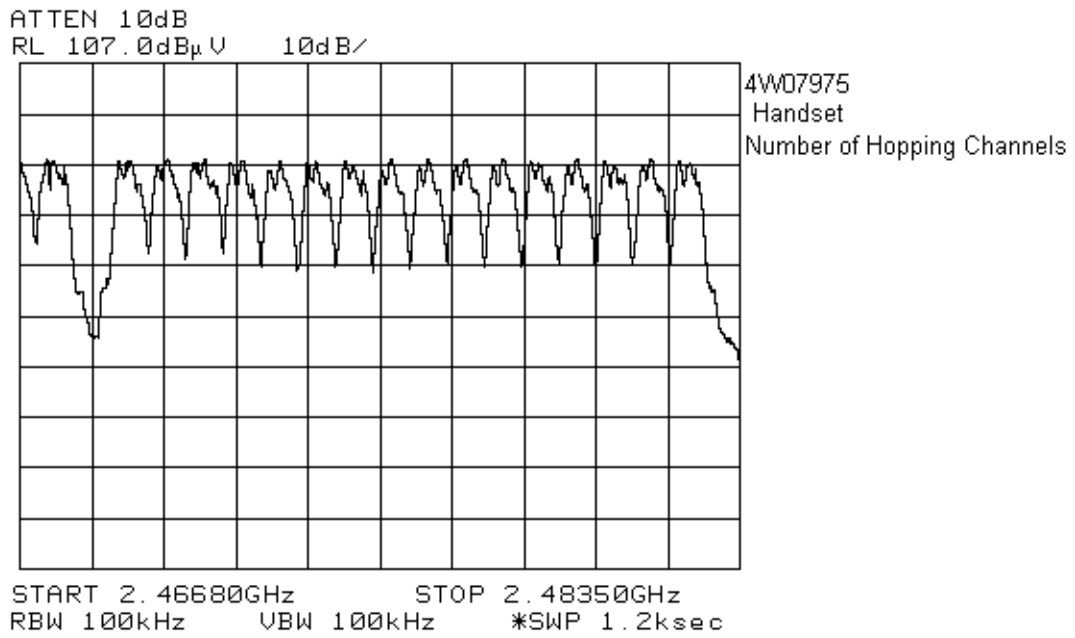


Band 3 showing 19 channels



Band 4 showing 20 channels

EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX



Band 5 showing 17 channels

94 channels total

EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

Section 6. Time of Occupancy

Para. No.: 15.247 (a)(1)(iii)

Test Performed By: Kevin Carr & Daxesh Thakker	Date of Test: May 11, 2004 June 12, 2004
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Test Results: Complies

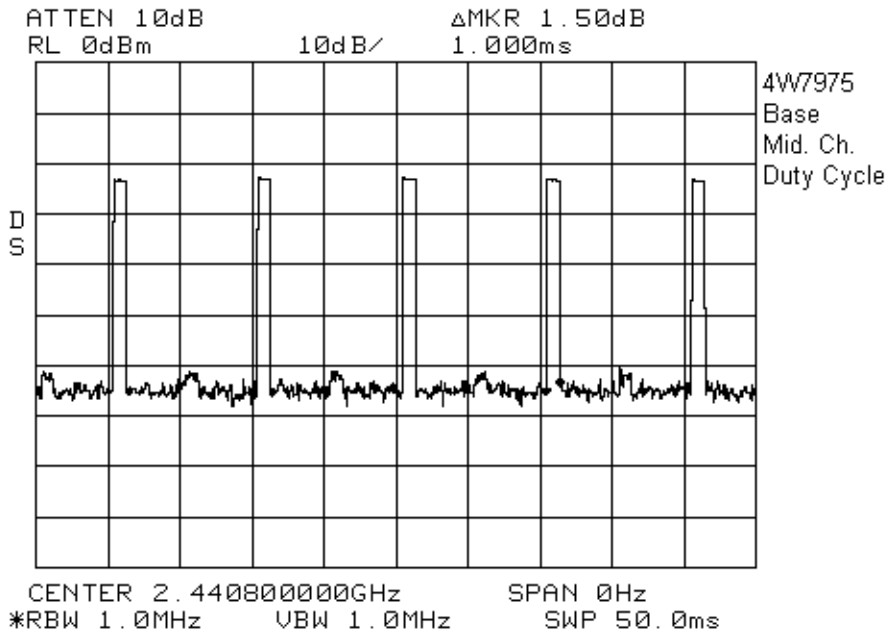
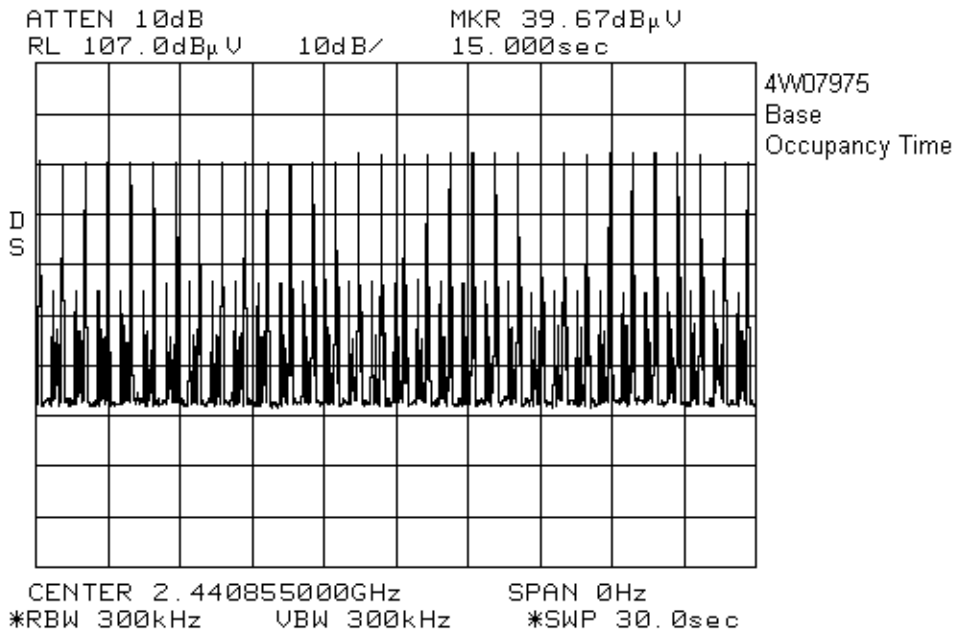
Measurement Data: Maximum Dwell Time On Any Channel:
See Plots.

Base: 32 mSec
Handset: 25.76 mSec

EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

Time Of Occupancy Plots.

Base



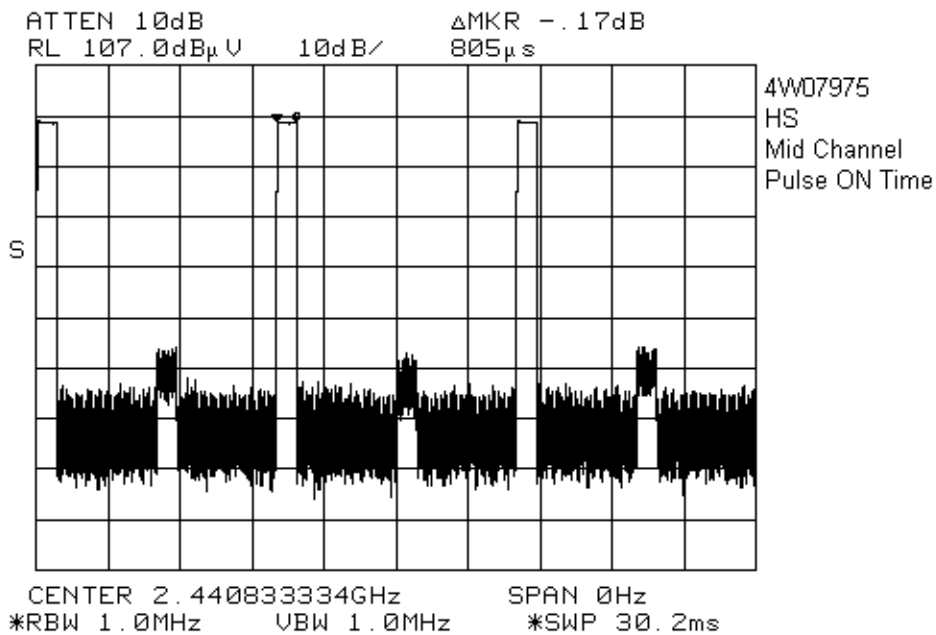
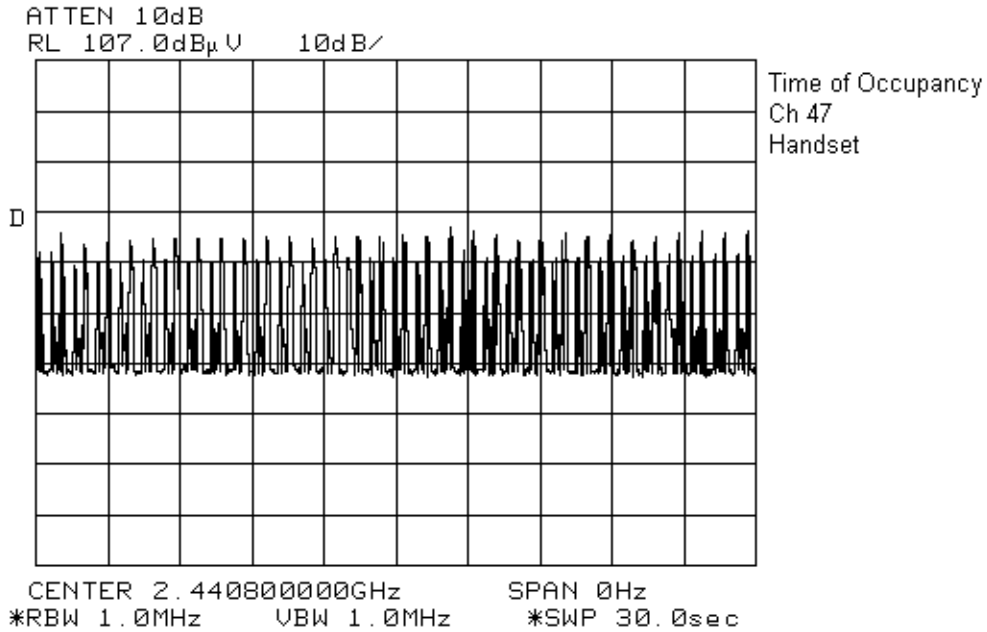
Active Slot showing 1 mSec On-Time

Time of Occupancy showing 32 hits per 30sec

32 * 1 = 32 mSec

EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

Handset



Active Slot showing 805 μSec On-Time

Time of Occupancy showing 32 hits per 30sec

$$32 * 0.805 = 25.76 \text{ mSec}$$

EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

Section 7. Occupied Bandwidth

Para. No.: 15.247 (a)(1))

Test Performed By: Kevin Carr & Daxesh Thakker	Date of Test: 12 May 2004, 25 June 2004, 18 Oct. 2004
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Test Results: Complied

Measurement Data: See attached graphs.

Maximum 20 dB Bandwidth

Base: 700 KHz

Handset: 708 KHz

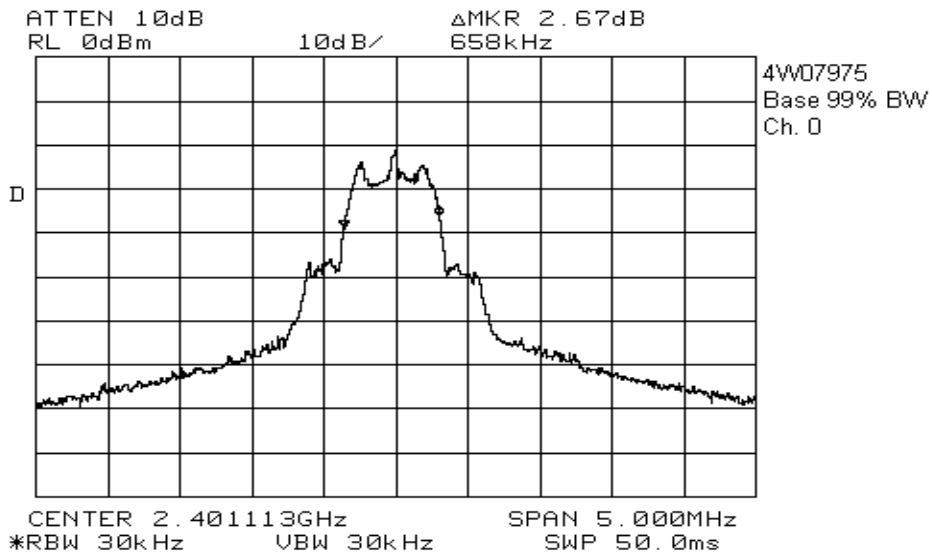
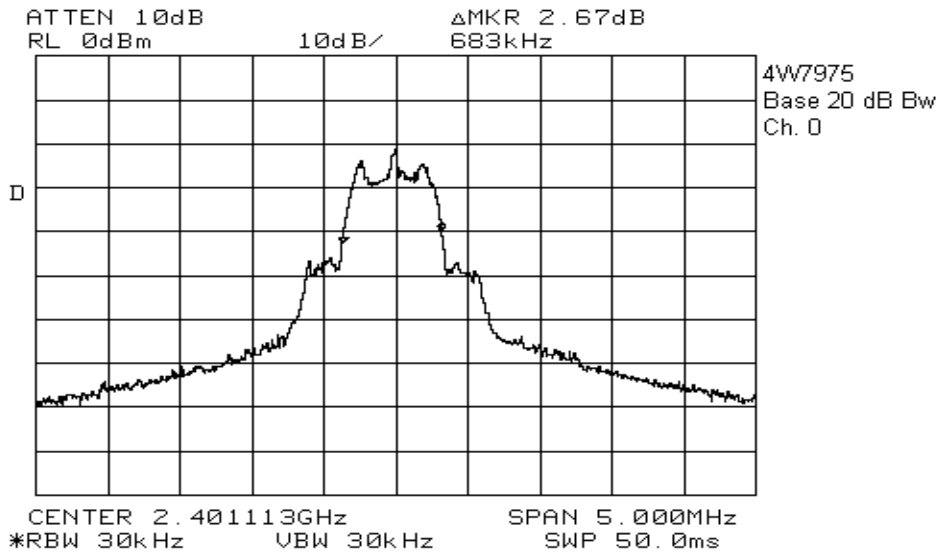
Maximum 99% Occupied Bandwidth

Base: 658 KHz

Handset: 667 KHz

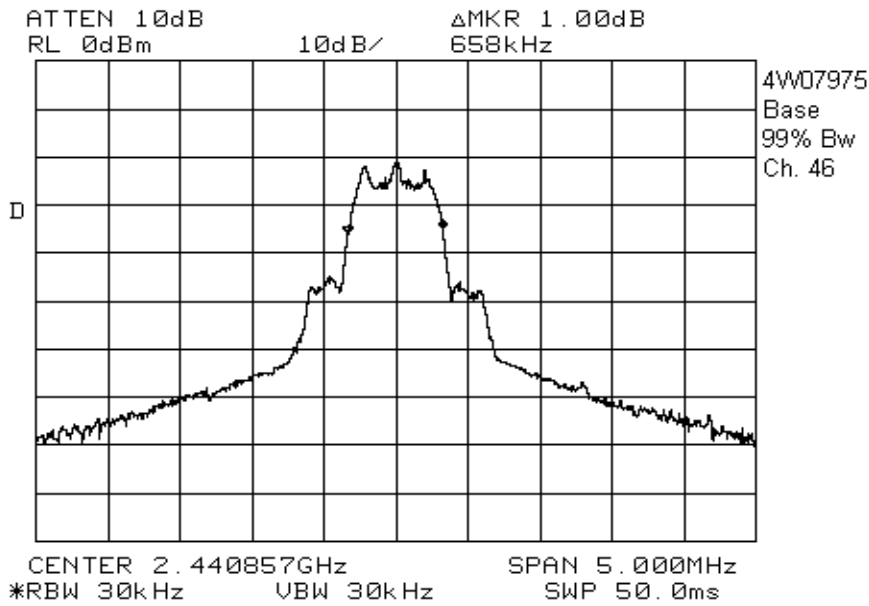
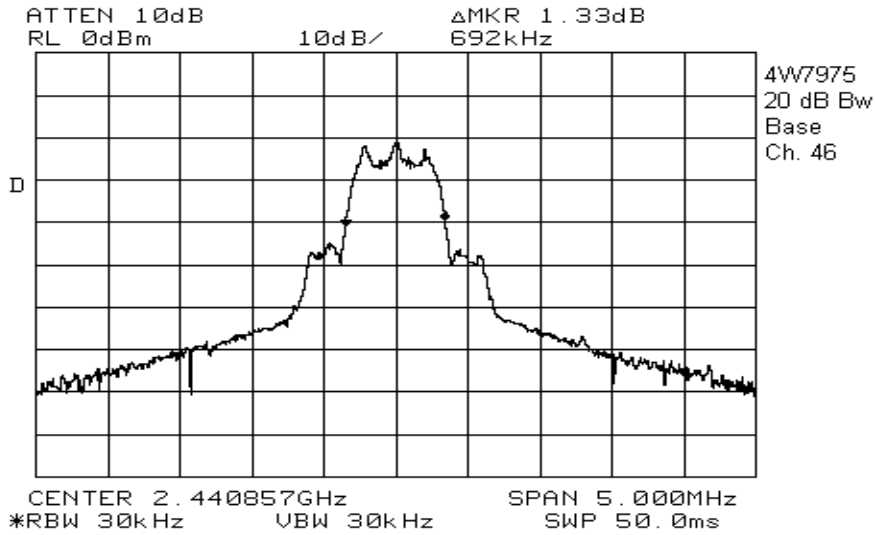
EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

Occupied Bandwidth Plots
Base, Low Channel



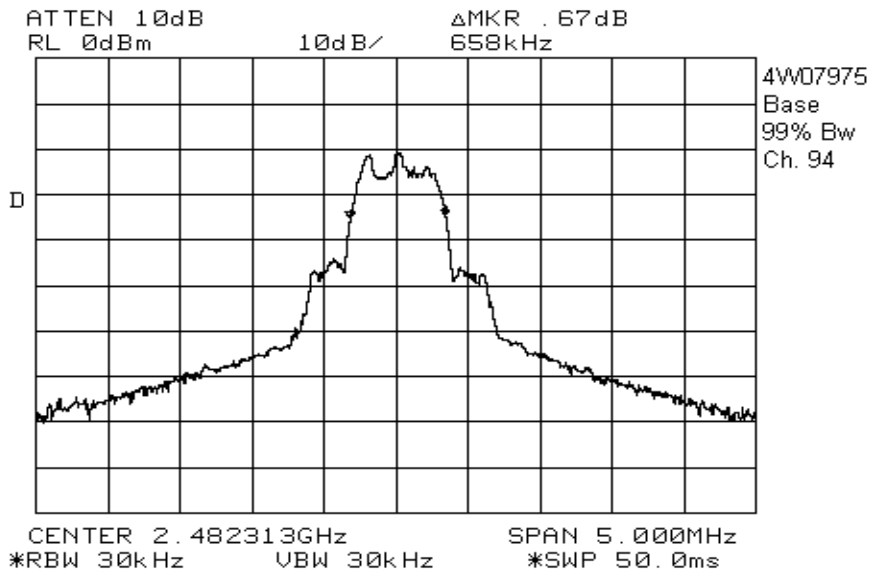
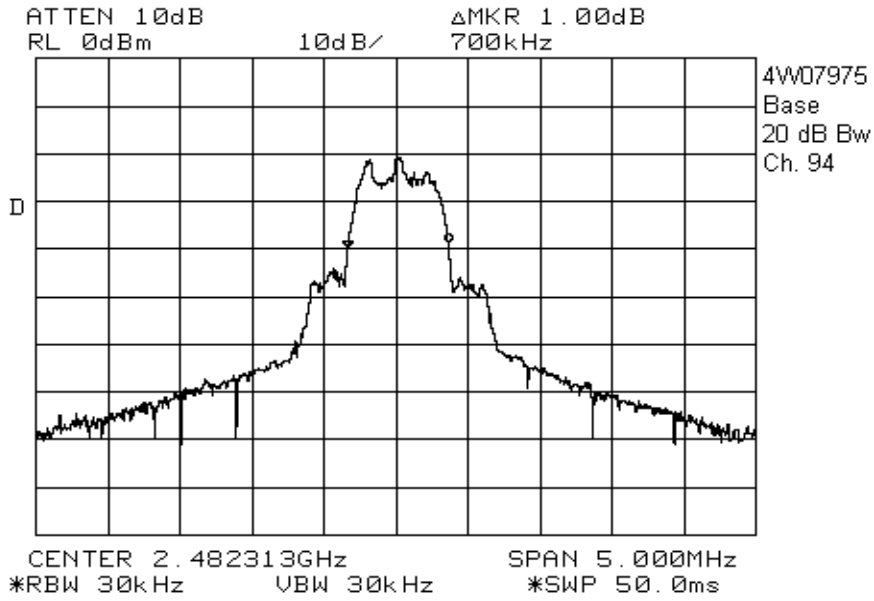
EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

Mid. Channel



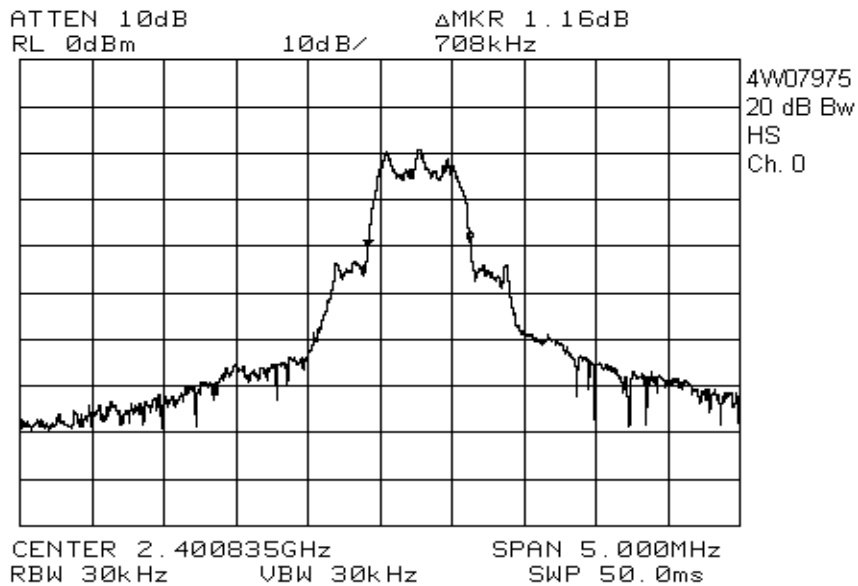
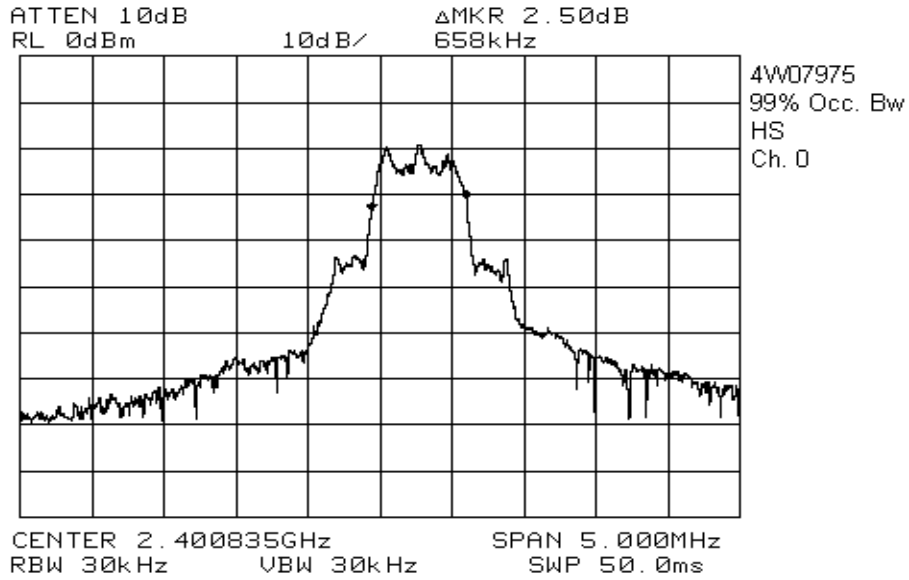
EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

Upper Channel



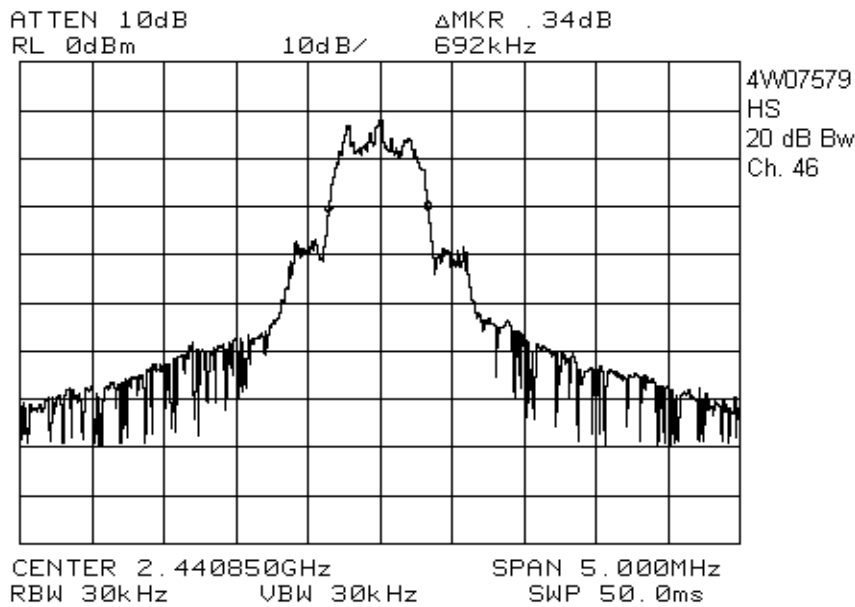
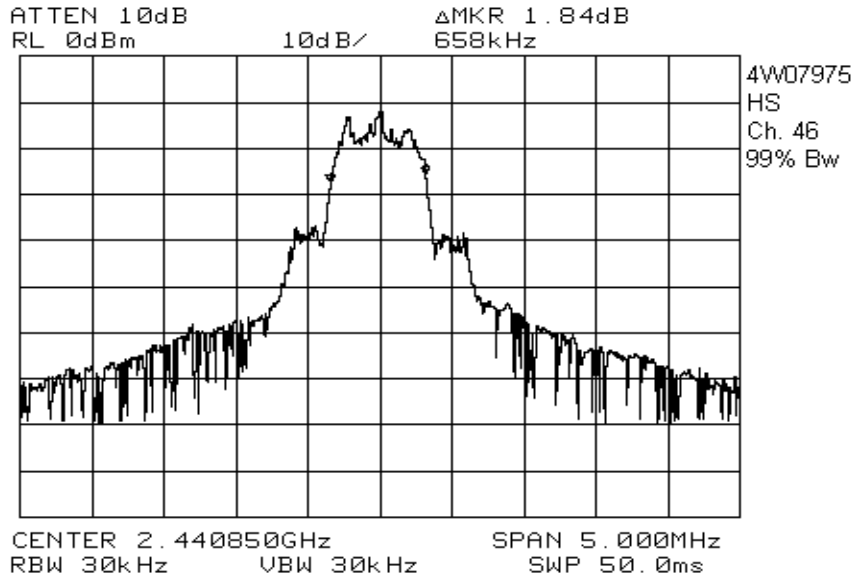
EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

Handset, Low channel



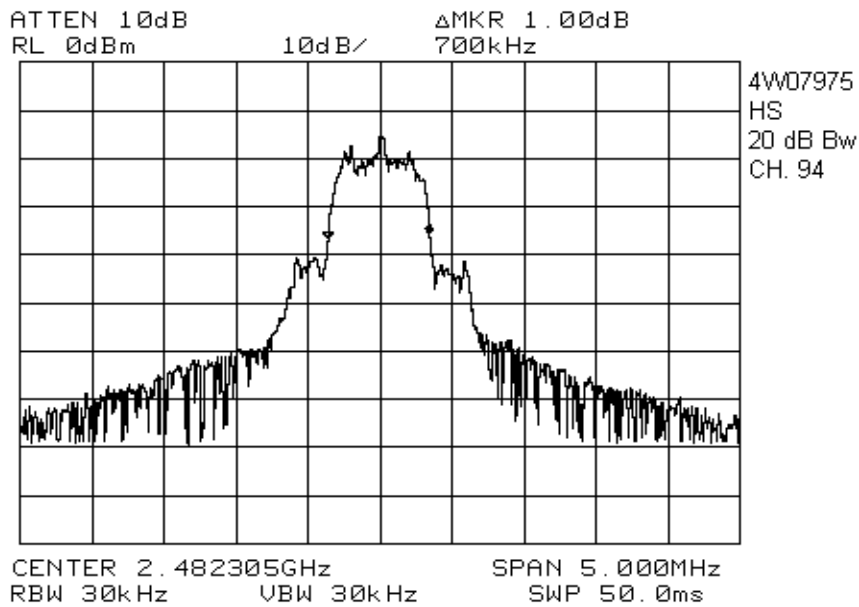
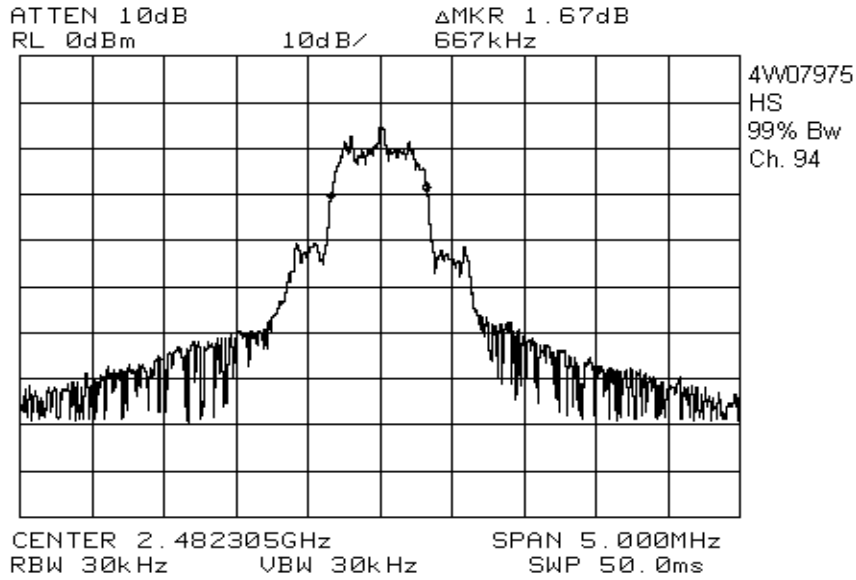
EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

Mid channel



EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

Upper channel



EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

Section 8. Peak Power Output

Para. No.: 15.247 (b)(1)

Test Performed By: Daxesh Thakker	Date of Test: 24 June 2004
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Test Results: Complied. The maximum peak power output of the transmitter is

$$P = \{E^2R^2/30G\} \text{ where}$$

	E, V/mtr @ 3m	R, mtr	G
Base	2.11	3	1.41
Handset	1.49	3	2.81

Base = 0.948W, 29.77dBm
 Handset = 0.238W, 23.77dBm

The Base Station was tested at +/- 15% of AC line voltage. The received level did not change
 The Handset was tested with a fresh battery.
 This EUT was searched in 3 orthogonal axes to determine worst-case emissions.

Measurement Data: Detachable antenna? Yes No
 If yes, state the type of non-standard connector used at the antenna port:

Directional Gain of Antenna:
 Base: 1.5 dBi or 1.41 Numeric.
 Handset: 4.5 dBi or 2.81 Numeric.

Base (worst Case)
 Field Strength: 126.5 dBµV/m @ 3m or 2.11 V/m @ 3m.

Handset (worst Case)
 Field Strength: 123.5 dBµV/m @ 3m or 1.49 V/m @ 3m.

EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

Radiated Emissions Test Data:

Test Date: 10 June 2004						
Engineer's Name: Daxesh Thakker						
Base Station fundamental						
Tested as per (Table Top/Floor Standing): Table Top						
Test Distance (meters): 3				Range: 1		
Freq. (MHz)	Ant.	Pol. V/H	RCVD Signal (dBμV)	Ant. Factor (dB)	Cable Loss (dB)	Field Strength (dBμV/m)
2401.1300	Horn2	H	84.3	28.9	4.8	118.0
2401.1300	Horn2	V	89.8	28.9	4.8	123.5
2440.8500	Horn2	V	92.3	28.9	5.3	126.5
2440.8500	Horn2	H	88.5	28.9	5.3	122.7
2482.4200	Horn2	H	82.8	28.9	5.9	117.6
2482.4200	Horn2	V	90.1	28.9	5.9	124.9
Note 1: Antenna Legend: BC = Biconical, BL = Bilog, LP = Log-Periodic, Horn = Horn, ED = EMCO Dipole						
Note 2: Detector Legend: Q-Peak = 120 kHz RBW, Average = 1.0 MHz RBW						
Notes:		Measurement Receiver = H.P.8565E, RBW = 1MHz				

Test Date: 24 June, 2004						
Engineer's Name: Daxesh Thakker						
Handset fundamental						
Tested as per (Table Top/Floor Standing): Table Top						
Test Distance (meters): 3				Range: 1		
Freq. (MHz)	Ant.	Pol. V/H	RCVD Signal (dBμV)	Ant. Factor (dB)	Cable Loss (dB)	Field Strength (dBμV/m)
2401.1530	Horn1	V	82.0	29.2	4.8	116.0
2401.1530	Horn1	H	86.9	29.2	4.8	120.9
2440.9200	Horn1	V	81.5	29.2	5.3	116.0
2440.9200	Horn1	H	86.5	29.2	5.3	121.0
2482.2820	Horn1	V	77.6	29.2	5.9	112.7
2482.2820	Horn1	H	88.4	29.2	5.9	123.5
Note 1: Antenna Legend: BC = Biconical, BL = Bilog, LP = Log-Periodic, Horn = Horn, ED = EMCO Dipole						
Note 2: Detector Legend: Q-Peak = 120 kHz RBW, Average = 1.0 MHz RBW						
Notes:		Measurement Receiver = H.P.8565E, RBW = 1MHz				

EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

Section 9. Spurious Emissions (Radiated)

Para. No.: 15.247 (c)

Test Performed By: Phil Taffinder & Daxesh Thakker	Date of Test: 19 April 2004 & 10 June 2004
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Test Results: Complied.

The worst-case emissions level is 45.6 dB μ V/m @ 3m @ 4964.84 MHz. This is 8.4 dB below the specification limit.

Test Data: See attached table.

Duty Cycle Calculation:

Base: $20\text{Log}\{(10 \times 1\text{mS})/100\} = -20\text{dB}$.

Handset: $20\text{Log}\{(10 \times 0.805)/100\} = -38.11\text{dB}$, max. allowed -20 dB.

EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

Radiated Disturbance Test Data: Digital Emissions

Test Date: 19 April, 2004											
Engineer's Name: Phil Taffinder											
Temperature (C°): 21						Humidity %: 34					
Tested as per (Table Top/Floor Standing): Table Top											
Test Distance (meters): 3						Range: Dome 1					
Freq. (MHz)	Ant.	Pol. V/H	RCVD Signal (dBµV)	Ant. Factor (dB)	Amp. Gain (dB)	Cable Loss (dB)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Amp.
199.9980	BC1	V	23.4	14.3	N/A	1.7	39.4	43.5	4.1	Q-Peak	None
199.9980	BC1	H	23.0	14.0	N/A	1.7	38.7	43.5	4.8	Q-Peak	None
51.7130	BC1	V	23.7	9.5	N/A	0.8	34.0	40.0	6.0	Q-Peak	None
51.7130	BC1	H	20.8	10.4	N/A	0.8	32.0	40.0	8.0	Q-Peak	None
50.6891	BC1	V	19.6	9.6	N/A	0.8	30.0	40.0	10.0	Q-Peak	None
50.6891	BC1	H	21.2	10.6	N/A	0.8	32.6	40.0	7.4	Q-Peak	None
51.2012	BC1	V	21.4	9.6	N/A	0.8	31.8	40.0	8.2	Q-Peak	None
51.2012	BC1	H	18.7	10.5	N/A	0.8	30.0	40.0	10.0	Q-Peak	None
52.7370	BC1	V	20.4	9.4	N/A	0.8	30.6	40.0	9.4	Q-Peak	None
52.7370	BC1	H	17.8	10.3	N/A	0.8	28.9	40.0	11.1	Q-Peak	None
53.7610	BC1	H	19.0	10.1	N/A	0.8	29.9	40.0	10.1	Q-Peak	None
53.7610	BC1	V	17.6	9.2	N/A	0.8	27.7	40.0	12.3	Q-Peak	None
Note 1: Antenna Legend: BC = Biconical, BL = Bilog, LP = Log-Periodic, Horn = Horn, ED = EMCO Dipole Note 2: Detector Legend: Q-Peak = 120 kHz RBW, Peak = 1.0 MHz RBW Note 3: The EUT was searched up to 5th harmonic of the highest frequency generated in the system											
Notes:											

EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

Radiated Disturbance Test Data: Base station harmonics, Average

Test Date: 10 June, 2004											
Engineer's Name: Daxesh Thakker											
Tested as per (Table Top/Floor Standing): Table Top											
Test Distance (meters): 3						Range: 1					
Freq. (MHz)	Ant.	Pol. V/H	RCVD Signal (dBµV)	Ant. Factor (dB)	Amp. Gain (dB)	Duty Cycle Corr. Factor (dB)	Cable Loss (dB)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Amp.
Ch. 00											
4802.2600	Horn2	H	65.9	34.3	53.2	-20.0	8.1	35.1	54.0	18.9	4-8GHz
4802.2600	Horn2	V	68.9	34.1	53.2	-20.0	8.1	37.9	54.0	16.1	4-8GHz
7203.3900	Horn2	H	66.1	37.0	53.7	-20.0	11.3	40.7	54.0	13.3	4-8GHz
7203.3900	Horn2	V	66.0	36.8	53.7	-20.0	11.3	40.3	54.0	13.7	4-8GHz
Ch. 47											
4881.6200	Horn2	V	71.0	34.2	52.6	-20.0	8.8	41.4	54.0	12.6	4-8GHz
4881.6200	Horn2	H	68.0	34.4	52.6	-20.0	8.8	38.6	54.0	15.4	4-8GHz
7322.5500	Horn2	V	63.7	36.8	53.7	-20.0	10.1	36.9	54.0	17.1	4-8GHz
7322.5500	Horn2	H	65.8	37.0	53.7	-20.0	10.1	39.3	54.0	14.7	4-8GHz
Ch. 94											
4964.8400	Horn2	H	74.0	34.4	52.3	-20.0	9.5	45.6	54.0	8.4	4-8GHz
4964.8400	Horn2	V	69.7	34.2	52.3	-20.0	9.5	41.1	54.0	12.9	4-8GHz
7447.2600	Horn2	H	67.0	37.0	53.2	-20.0	11.1	42.0	54.0	12.0	4-8GHz
7447.2600	Horn2	V	63.5	36.8	53.2	-20.0	11.1	38.3	54.0	15.7	4-8GHz
Note 1: Antenna Legend: BC = Biconical, BL = Bilog, LP = Log-Periodic, Horn = Horn, ED = EMCO Dipole											
Note 2: Detector Legend: Q-Peak = 120 kHz RBW, Average = 1.0 MHz RBW											
Note 3: The EUT was searched up to 10 harmonics of the fundamental.											
Notes:		Measurement Receiver = H.P.8565E, RBW = 1MHz									

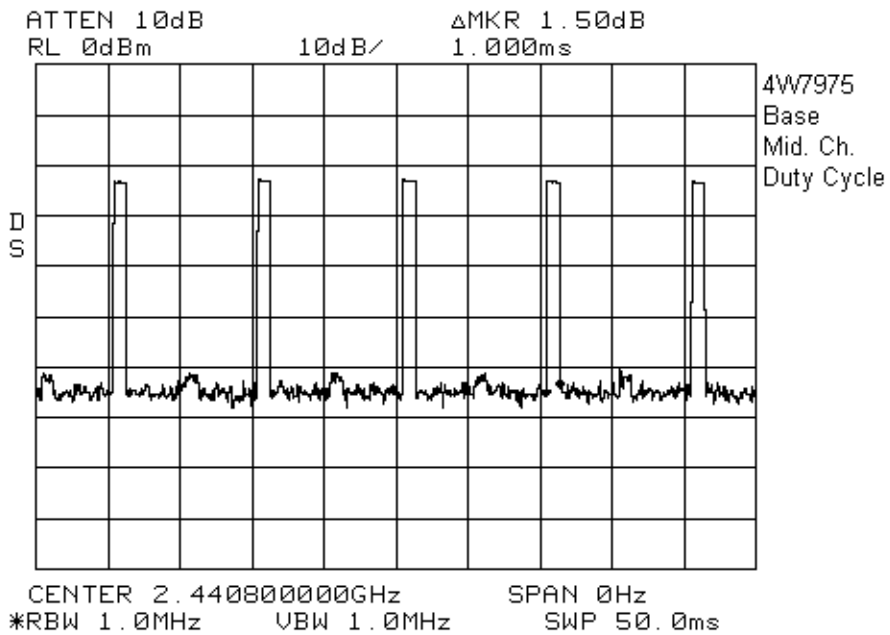
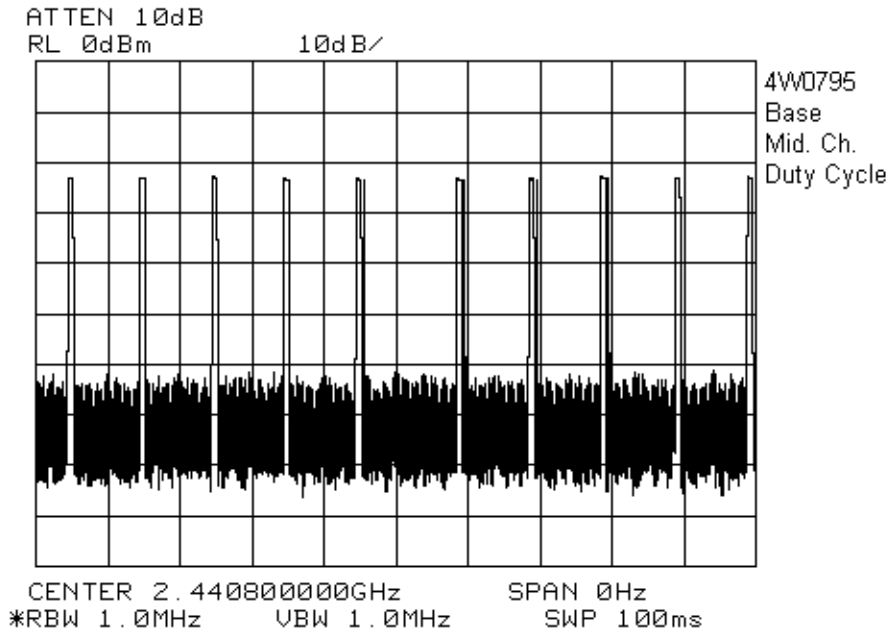
EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

Radiated Disturbance Test Data: Handset Harmonics, Average

Test Date: 24 June, 2004											
Engineer's Name: Daxesh Thakker											
Tested as per (Table Top/Floor Standing): Table Top											
Test Distance (meters): 3						Range: 1					
Freq. (MHz)	Ant.	Pol. V/H	RCVD Signal (dBµV)	Ant. Factor (dB)	Amp. Gain (dB)	Duty Cycle Corr. Factor (dB)	Cable Loss (dB)	Field Strength (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Amp.
Ch. 00											
4802.2110	Horn1	V	62.8	34.3	53.2	-20.0	8.1	32.0	54.0	22.0	4-8GHz
4802.2110	Horn1	H	61.4	34.1	53.2	-20.0	8.1	30.4	54.0	23.6	4-8GHz
7203.3170	Horn1	V	67.5	36.5	53.7	-20.0	11.3	41.6	54.0	12.4	4-8GHz
7203.3170	Horn1	H	63.9	36.5	53.7	-20.0	11.3	38.0	54.0	16.0	4-8GHz
Ch. 47											
4842.0250	Horn1	V	59.6	34.3	52.9	-20.0	8.5	29.5	54.0	24.5	4-8GHz
4842.0250	Horn1	H	60.4	34.2	52.9	-20.0	8.5	30.1	54.0	23.9	4-8GHz
7243.1310	Horn1	V	60.5	36.5	53.7	-20.0	11.2	34.6	54.0	19.4	4-8GHz
7243.1310	Horn1	H	60.6	36.5	53.7	-20.0	11.2	34.6	54.0	19.4	4-8GHz
Ch. 94											
4964.5000	Horn1	V	60.0	34.4	52.3	-20.0	9.5	31.5	54.0	22.5	4-8GHz
4964.5000	Horn1	H	60.0	34.2	52.3	-20.0	9.5	31.3	54.0	22.7	4-8GHz
7446.7500	Horn1	V	60.3	36.5	53.2	-20.0	11.1	34.8	54.0	19.2	4-8GHz
7446.7500	Horn1	H	60.6	36.5	53.2	-20.0	11.1	35.1	54.0	18.9	4-8GHz
Note 1: Antenna Legend: BC = Biconical, BL = Bilog, LP = Log-Periodic, Horn = Horn, ED = EMCO Dipole											
Note 2: Detector Legend: Q-Peak = 120 kHz RBW, Average = 1.0 MHz RBW											
Note 3: The EUT was searched up to 10 harmonics of the fundamental.											
Notes:		Measurement Receiver = H.P.8565E, RBW = 1MHz									

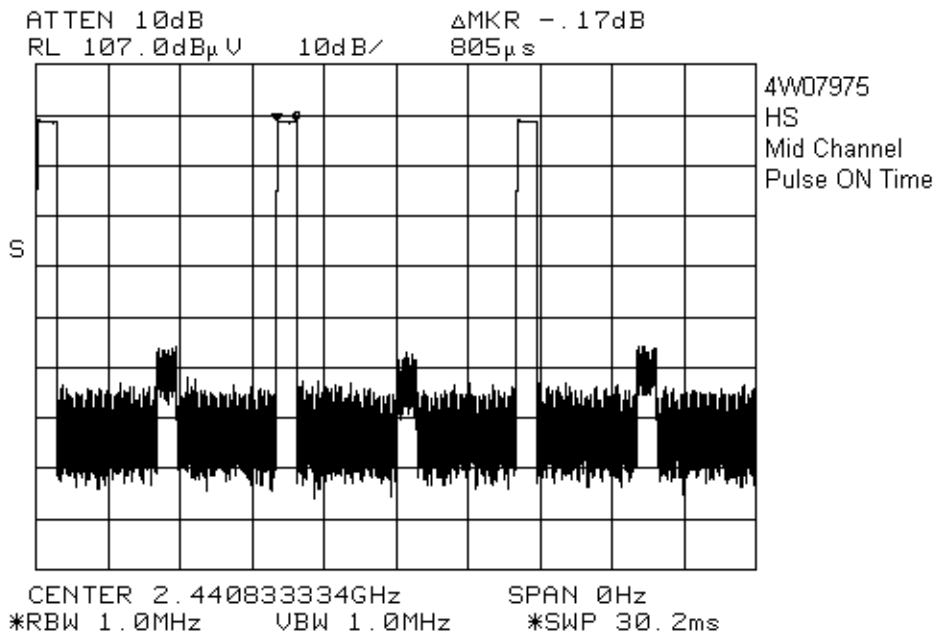
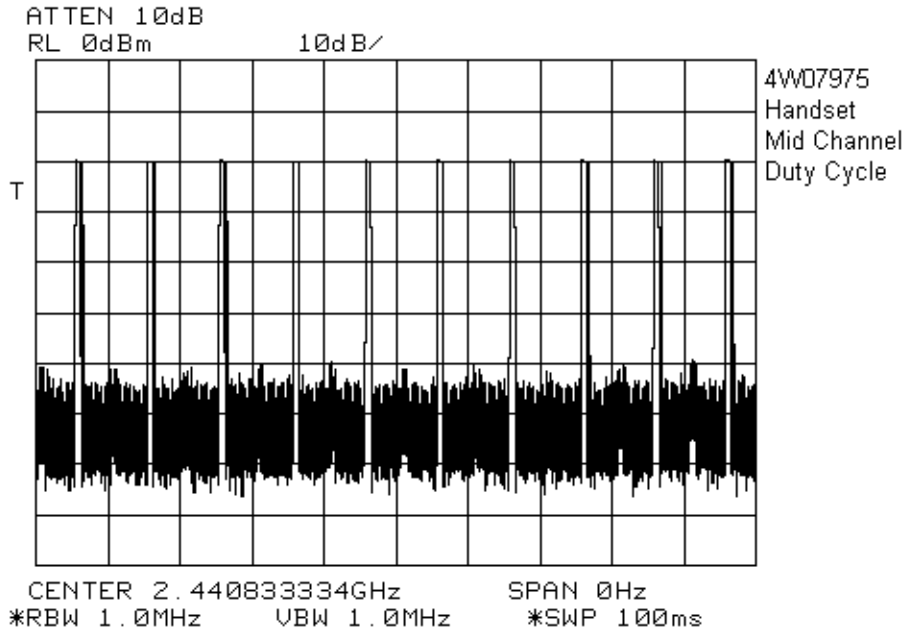
EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

Duty Cycle Plots
Base station

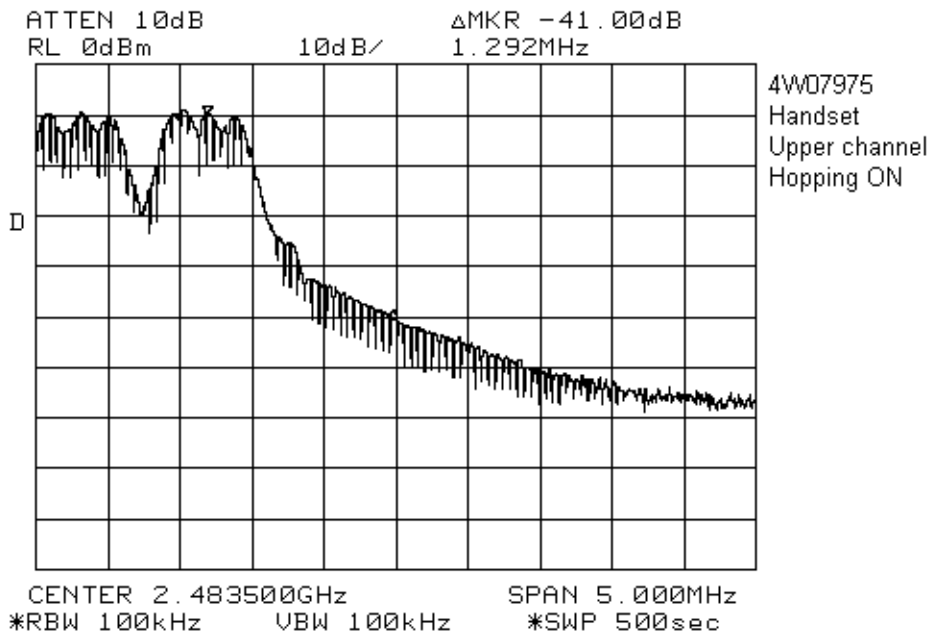
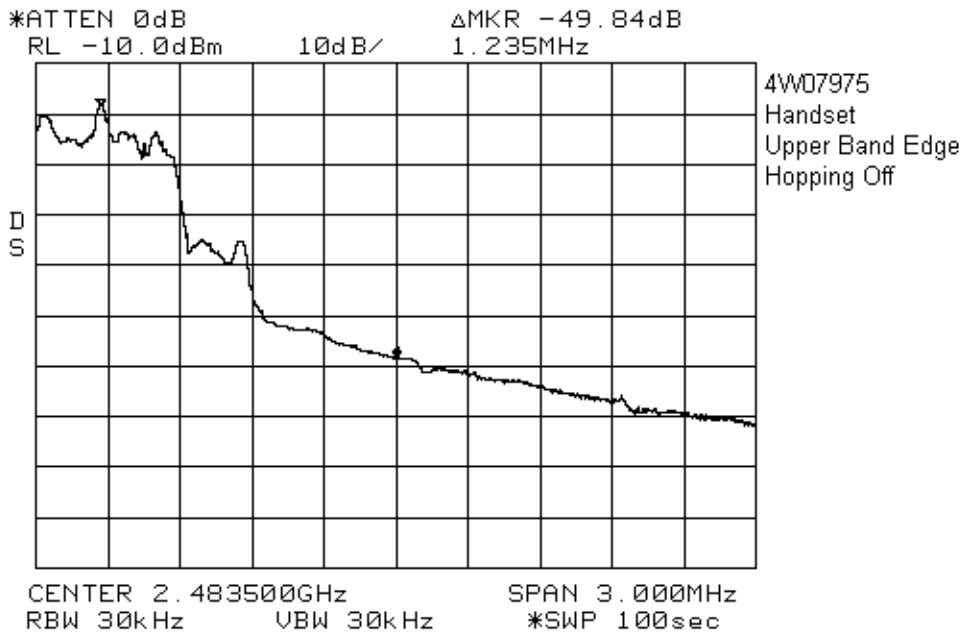


EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

Handset

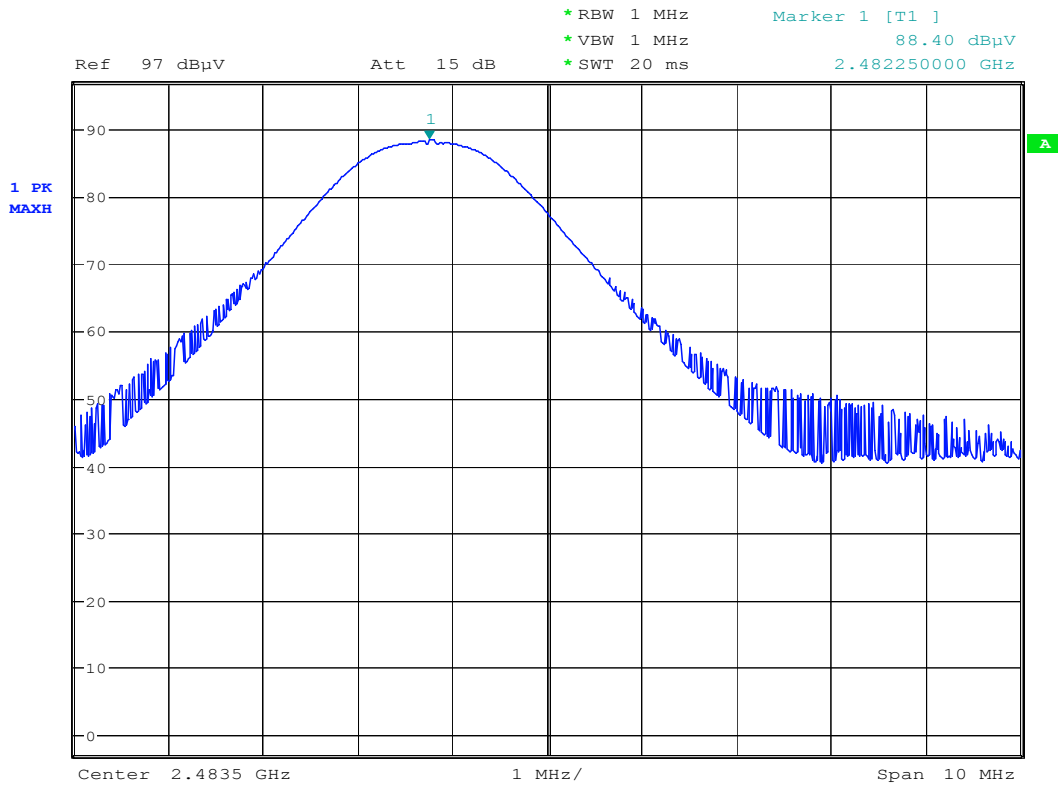


EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX



EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

**Band Edge (Restricted Band)
 Marker Delta Method Calculation:
 Handset**

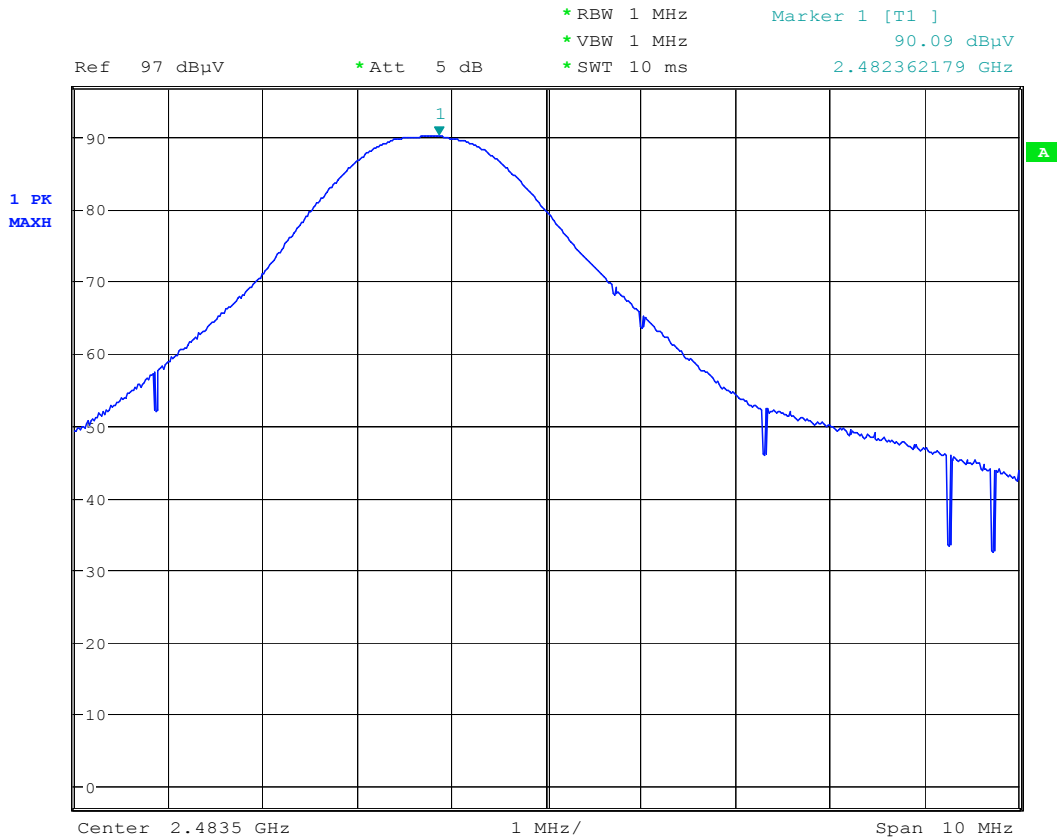


Date: 25.JUN.2004 00:44:50

Peak Level, Band Edge = 88.4 dBuV + 29.2dB + 5.9 = 123.5dBuV @ 3m.
Peak Band Edge Level (Marker Delta): = 123.5 dBuV/m – 49.84 = 73.66dBuV/m at 3 m.
Average = 73.66 dBuV/m -20 = 53.66 dBuV/m @ 3m.
Limit is 54 dBuV/m @ 3m.

EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

Base

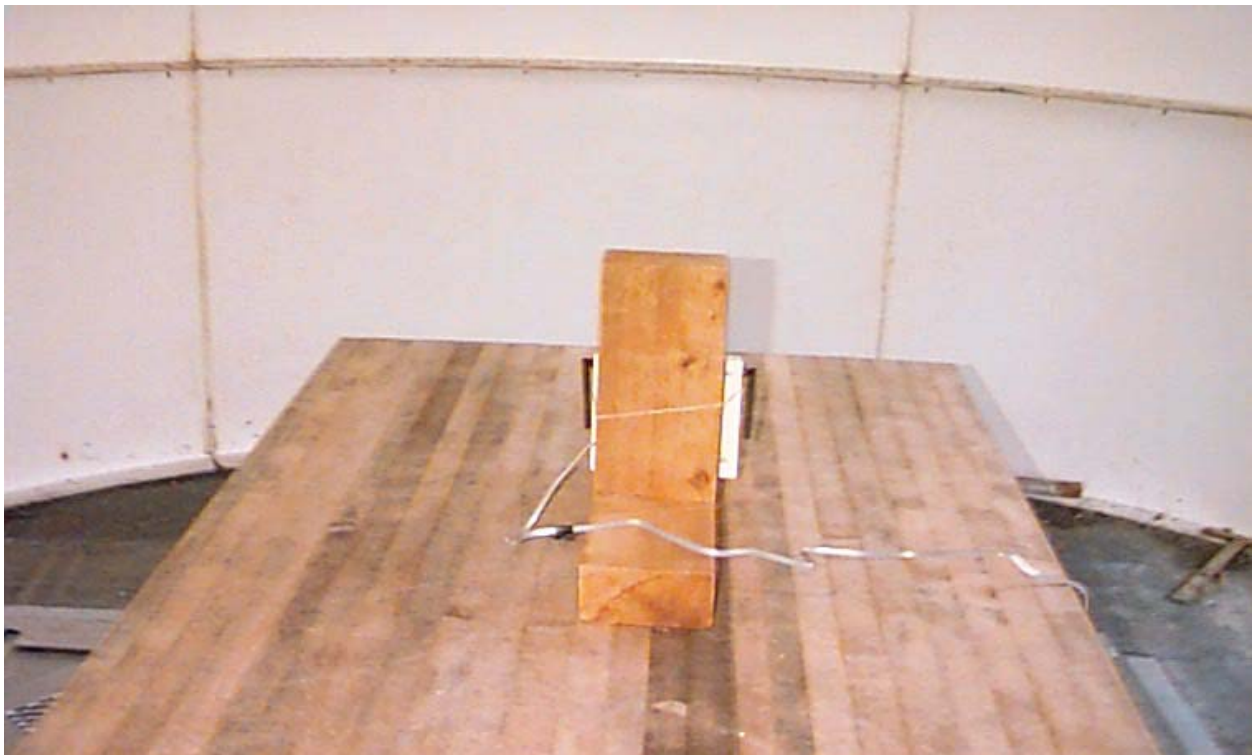


Date: 13.JUL.2004 02:44:35

Peak Level, Band Edge = 90.1 dBuV + 29.2dB + 5.9 = 125.2dBuV @ 3m.
Peak Band Edge Level (Marker Delta): = 125.2 dBuV/m – 51.67 = 73.53dBuV/m at 3 m.
Average = 73.53 dBuV/m -20 = 53.53 dBuV/m @ 3m.

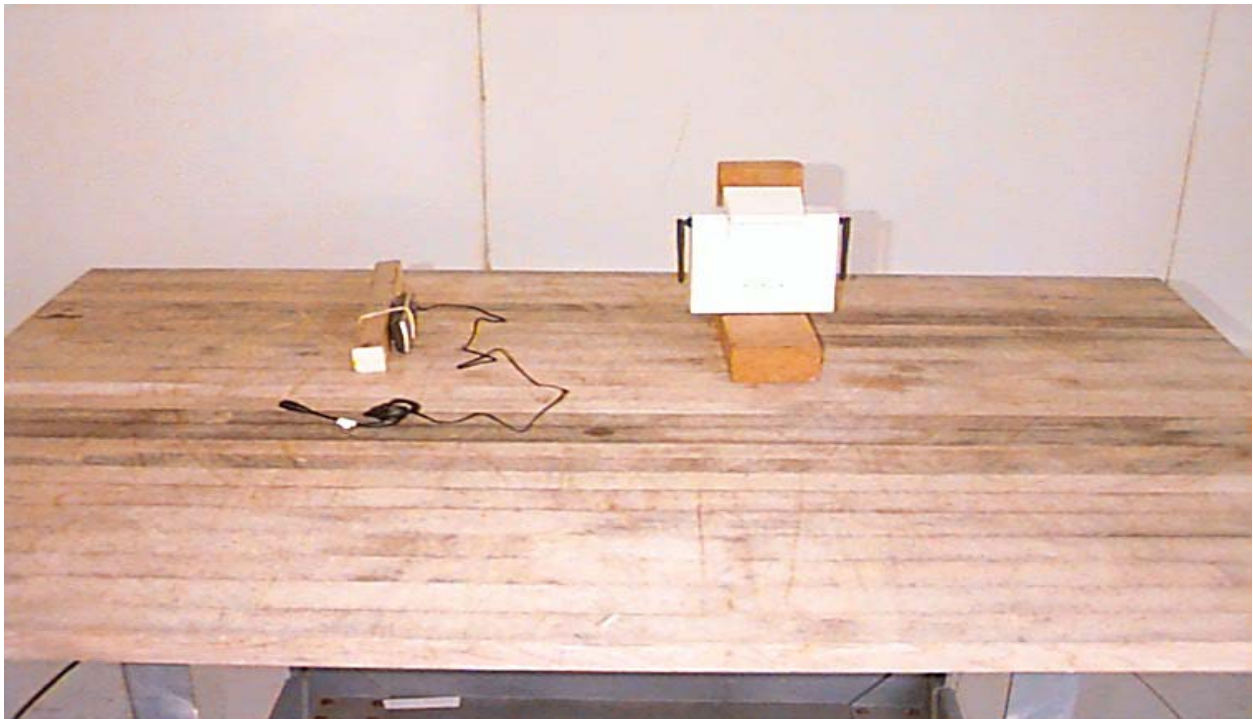
EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

Set-up Photo:
Base



EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

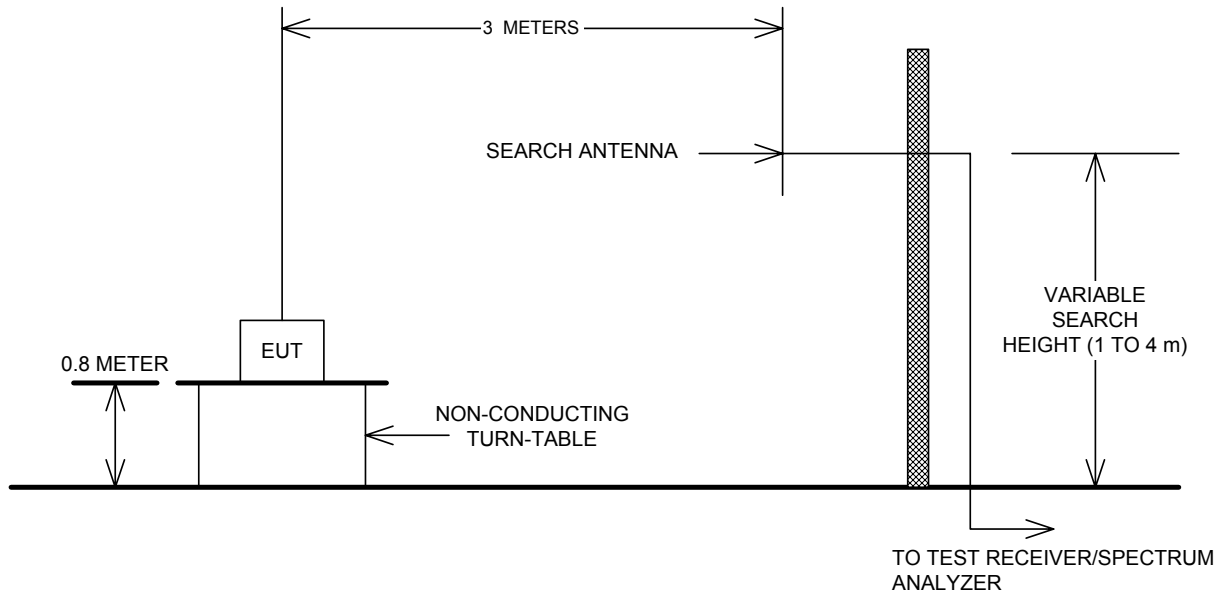
Handset



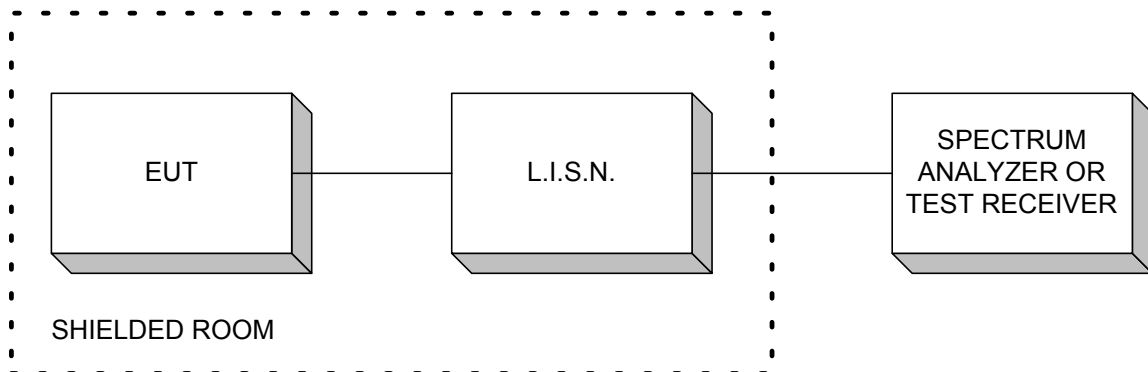
EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

Section 10. Block Diagrams

Test Site For Radiated Emissions



Conducted Emissions



EQUIPMENT: CM-16, 2.4 GHz Cordless Phone for MI PBX

Section 11. Test Equipment List

Conducted Disturbance at Mains Test Equipment Used:

CAL Cycle	Equipment	Manufacturer	Model No.	Asset/Serial No.	Last Cal.	Next Cal.
1 Year	LISN	EMCO	4825/2	FA001545	Oct. 30/03	Oct. 30/04
Extended	Spectrum Analyzer	Hewlett-Packard	8566B	FA001309	May 26/04	May. 26/05
Extended	Spectrum Analyzer Display	Hewlett-Packard	85662A	FA001309	May 26/04	May. 26/05
1 Year	Transient Limiter	Hewlett-Packard	1194 7A	FA000975	June. 16/03	June. 16/04

Note: N/A = Not Applicable, NCR = No Cal Required, COU = CAL On Use, OUT = Out For CAL/Repair

Equipment List - Radiated Emissions

CAL Cycle	Equipment	Manufacturer	Model No.	Asset/Serial No.	Last Cal.	Next Cal.
1 Year	Receiver	Rohde & Schwarz	ESVS-30	FA001437	July. 24/03	July. 24/04
1 Year	Spectrum Analyzer	Hewlett-Packard	8565E	FA000981	May 31/04	May 31/05
1 Year	Biconical (1) Antenna	EMCO	3109	FA000805	Apr. 23/04	Apr. 23/05
1 Year	Horn Antenna #1	EMCO	3115	FA000649	Dec. 18/03	Dec. 18/04
1 Year	Log Periodic Antenna #1	EMCO	LPA-25	FA000477	Sept. 2/03	Sept. 2/04
1 Year	1.0 – 2.0 GHz Amplifier	JCA	12-400	FA001498	June. 18/04	June. 18/05
1 Year	2.0 – 4.0 GHz Amplifier	JCA	24-600	FA001496	June. 18/04	June. 18/05
1 Year	4.0 – 8.0 GHz Amplifier	JCA	48-600	FA001497	June. 18/04	June. 18/05
1 Year	18-40 GHz Horn Antenna #5	ETS	3116	FA001847	Jan. 19/04	Jan. 19/05
1 Year	Horn Antenna #2	EMCO	3115	FA000825	Dec. 10/03	Dec. 10/04
COU	8.2 – 12 GHz Passband Filter	Dorado	WA-90-S	-----	COU	COU
COU	12 – 18 GHz Passband Filter	Dorado	62-SMA	-----	COU	COU
COU	5.0 – 18.0 GHz Amplifier	NARDA	DWT-186N23U40	FA001409	COU	COU
COU	18.0 – 26.0 GHz Amplifier	NARDA	BBS-1826N612	FA001550	COU	COU
COU	26 – 40.0 GHz Amplifier	NARDA	DBL-2640N610	FA001556	COU	COU

Note: N/A = Not Applicable, NCR = No Cal Required, COU = CAL On Use, OUT = Out For CAL/Repair