Standards Council of Canada
Accredited Laboratory
Scope of Accreditation 75

Conseil canadien des normes
Laboratoire accrédité
Portée d'accréditation 75

TM

Test Report: 5W38286

Applicant:
Mitel Networks Corporation
350 Legget Drive
Kanata, Ontario
K2K 2W7

Equipment Under Test: (EUT) Verizon One Phone Handset

In Accordance With:
FCC Part 15.247, Subpart C
FHSS System and Digitally Modulated Radiators
902-928MHz, 2400 - 2483.5 MHz, 5725-5850MHz

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

Authorized By:
Sim Jagpal, Resource Manager

Date: 18 February 2005

Total Number of Pages: 24

Table of Contents

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. Radiated tests were conducted is accordance with ANSI C63.4-2003. 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: _____ DATE: 18 February 2005
Jason Nixon, Telecom Specialist

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This report applies only to the items tested.

Summary Of Test Data

Name Of Test	Para. No.	Result
Powerline Conducted Emissions	15.207(a)	N/A (1)
6dB Bandwidth	15.247(a)(2)	N/A (2)
20 dB Bandwidth	15.247(a)(1)(ii)	Complies
Number of Hopping Channels	15.247(a)(1)(ii)	Complies
Occupancy Time	15.247(f)	Complies
Minimum Channel Separation	15.247(a)(1)	Complies
Peak Output Power	15.247(b)(1)	Complies
Spurious Emissions (Antenna Conducted)	15.247(c)	N/A(3)
Spurious Emissions (Radiated)	15.247(c)	Complies
Peak Power Spectral Density	15.247(d)	N/A(2)

Footnotes For N/A's:

1) The EUT is battery operated.
2) The EUT is not a digitally modulated system.
3) The EUT contained an integral antenna, therefore a conducted measurement was not possible.

Test Conditions:

Indoor	Temperature:	22°C
	Humidity:	21%
Outdoor	Temperature:	10°C
	Humidity:	47%

Section 2. General Equipment Specification

Manufacturer:	Verizon for Mitel
Model No.:	A90-VZ1015-06
Serial No.:	04B412000471
Date Received In Laboratory:	February 10, 2005
Nemko Identification No.:	6
Band of Operation:	5725-5850MHz
Operating Frequency of EUT:	5725.809323-5848.888935MHz
Peak Output Power (measured):	10.2dBm
Modulation:	EDCT FHSS
Antenna Gain:	3dBi

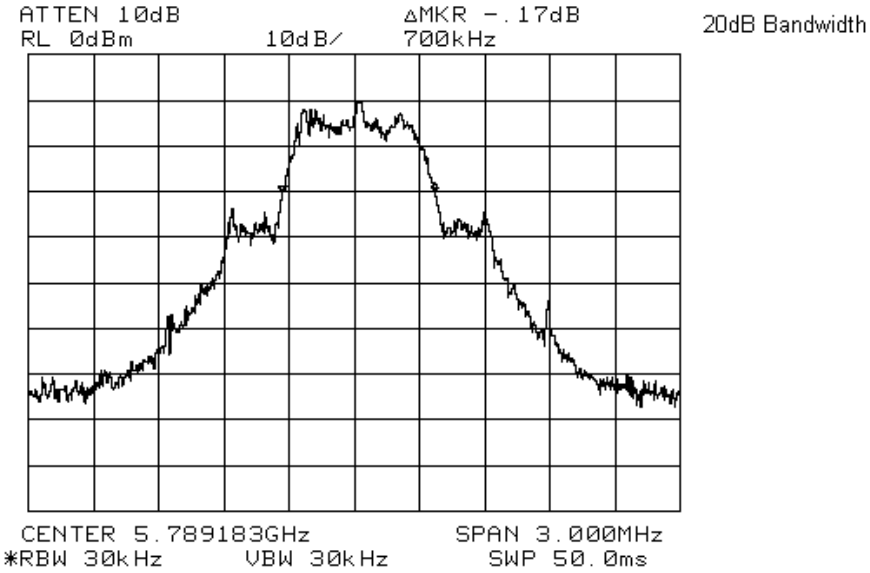
Section 3. 20 dB Bandwidth

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

Test Performed By: Jason Nixon	**Date of Test: February 16, 2005**

Limit: </= 1MHz

Measurement Data: 700kHz



Section 4. Occupancy Time

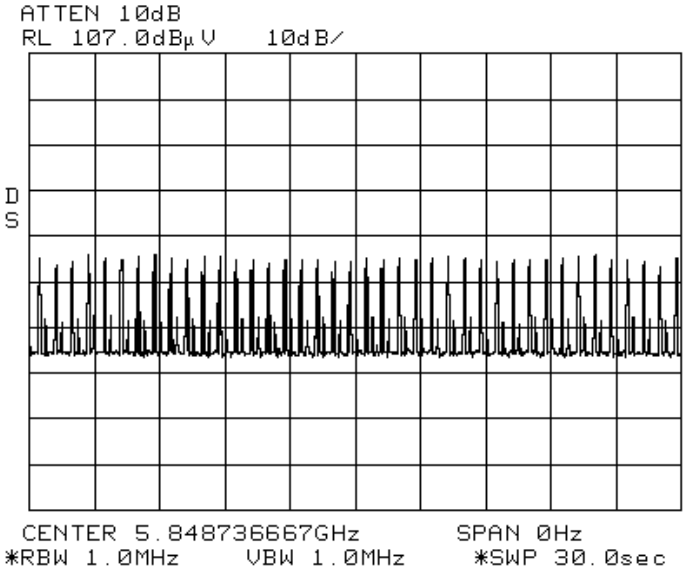
Para. No.: 15.247(f)

Test Performed By: Jason Nixon	**Date of Test: February 1, 2005**

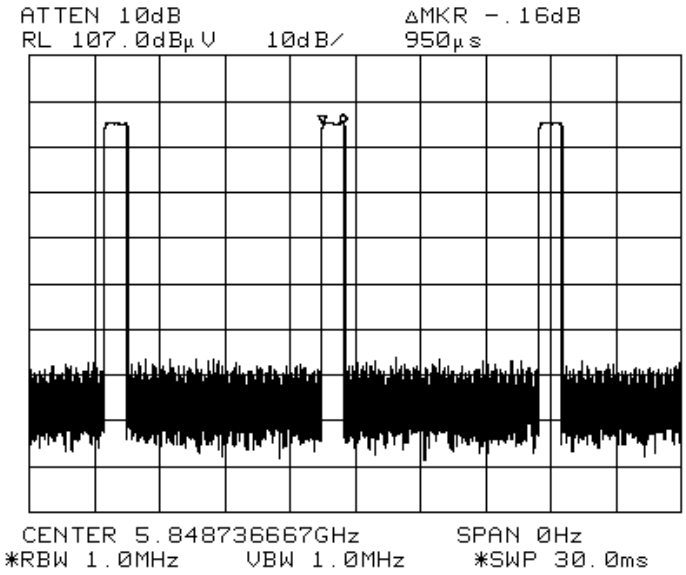
Limit: For the purposes of this section, hybrid systems are those that employ a combination of both frequency hopping and digital modulation techniques. The frequency hopping operation of the hybrid system, with the direct sequence or digital modulation operation turned off, shall have an average time of occupancy on any frequency not to exceed 0.4 seconds within a time period in seconds equal to the number of hopping frequencies employed multiplied by 0.4. The digital modulation operation of the hybrid system, with the frequency hopping operation turned off, shall comply with the power density requirements of paragraph (d) of this section.

Measurement Data: See Plot

Time of Occupancy = 0.95msec x 40pulses = 38msec per 30sec



Time of Occupancy
40 x 0.95ms = 38msec



On-time of pulses

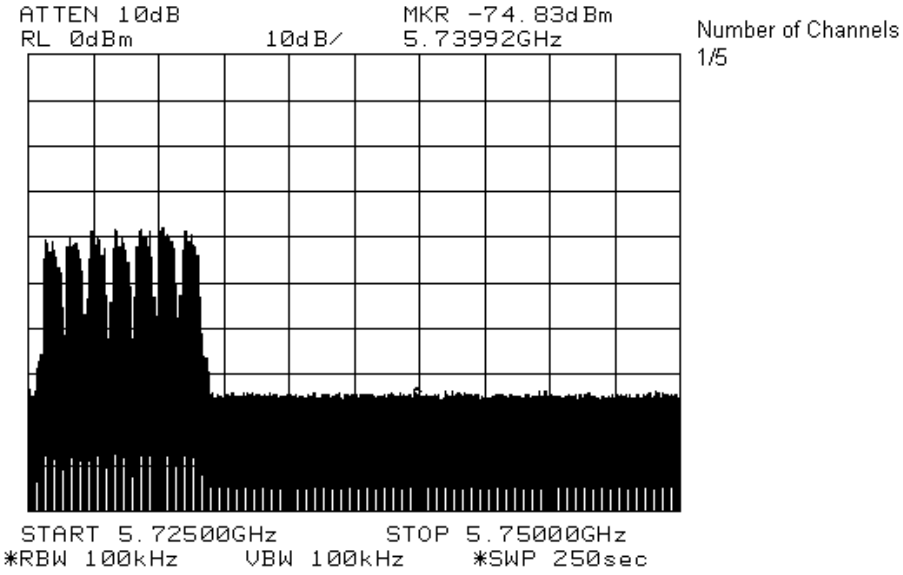
Section 5. Number of Hopping Channels

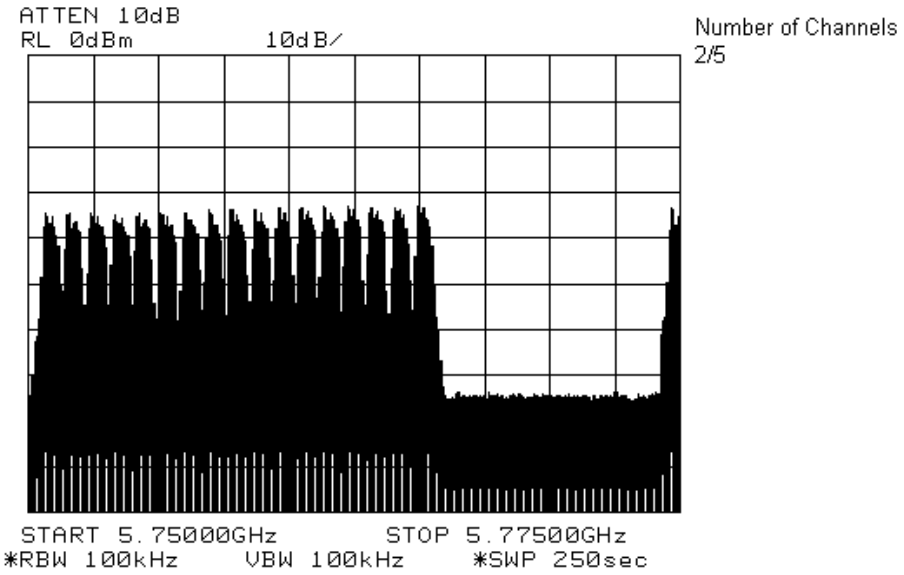
Para. No.: 15.247(a)(1)(ii)

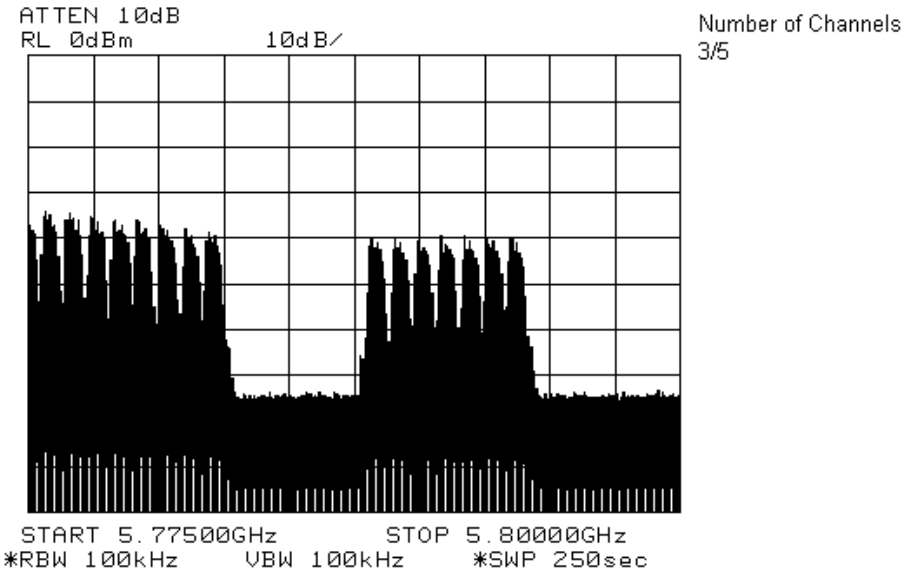
Test Performed By: Jason Nixon	**Date of Test: February 11, 2005**

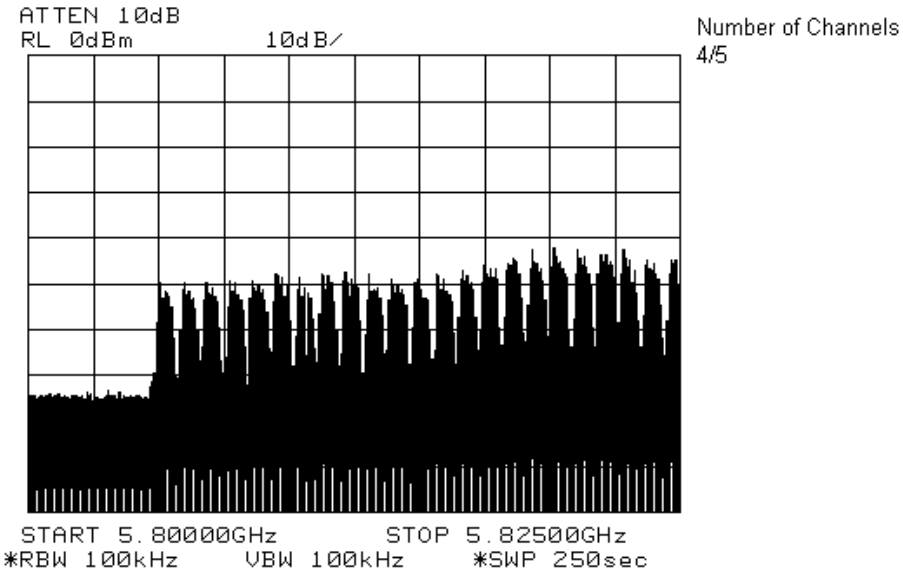
Limit: Frequency hopping systems operating in the 5725-5850 MHz band shall use at least 75 hopping frequencies. The maximum 20 dB bandwidth of the hopping channel is 1 MHz. The average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 30 second period.

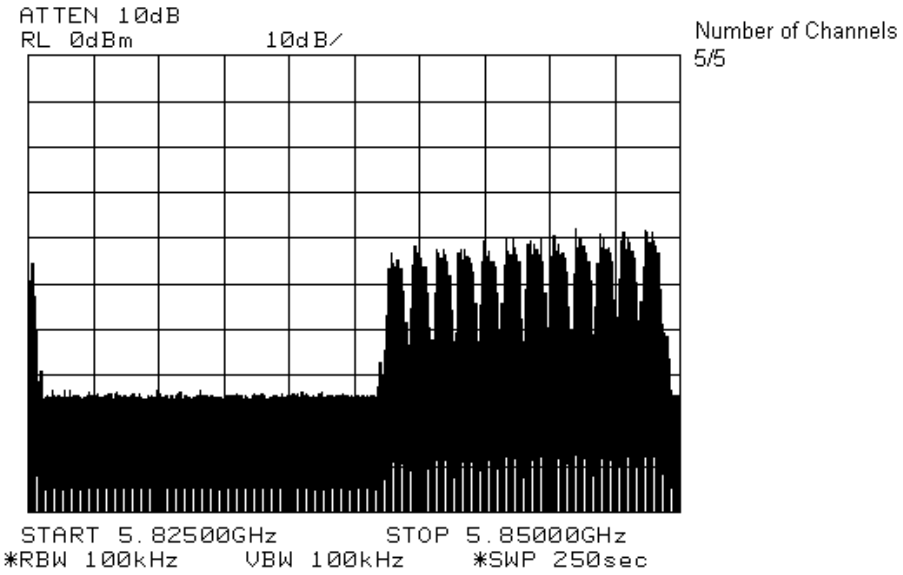
Measurement Data: See Plots, Number of Channels = 75




ATTEN 10dB
RL 0dBm
10dB/
Number of Channels
2/5
START 5.75000GHz
STOP 5.77500GHz
*RBW 100kHz
VBW 100kHz
*SWP 250sec


ATTEN 10dB
RL 0dBm
10dB/
Number of Channels
3/5
START 5.77500GHz
STOP 5.80000GHz
*RBW 100kHz
VBW 100kHz
*SWP 250sec


ATTEN 10dB
RL 0dBm
10dB/
Number of Channels
4/5
START 5.80000GHz
STOP 5.82500GHz
*RBW 100kHz
VBW 100kHz
*SWP 250sec


ATTEN 10dB
RL 0dBm
10dB/
Number of Channels
5/5
START 5.82500GHz
STOP 5.85000GHz
*RBW 100kHz
VBW 100kHz
*SWP 250sec

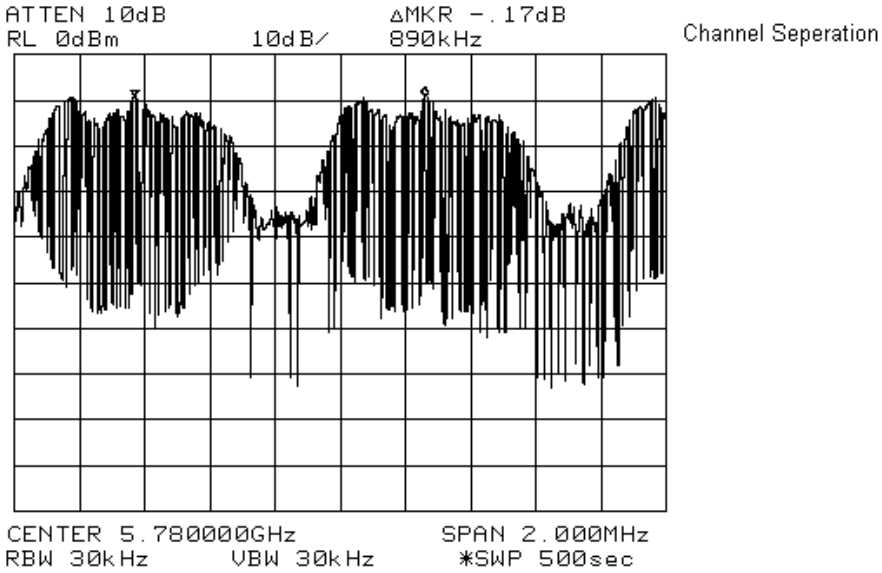
Section 6. Minimum Channel Separation

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

Test Performed By: Jason Nixon	**Date of Test: February 16, 2005**

Limit: Frequency hopping systems operating in the 5725-5850 MHz band shall use at least 75 hopping frequencies. The maximum 20 dB bandwidth of the hopping channel is 1 MHz. The average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 30 second period.

Measurement Data: Channel Spacing = 890kHz



Section 7. Peak Output Power

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

Test Performed By: Jason Nixon	**Date of Test: February 11,2005**

Limit: 1W

Measurement Data: See Tabulated Data.

Ch.	Freq.	Pol V/H	ANT.	Rx dBuV	Cable loss dB	Ant Factor dB/m	F.S. dBuV/m
low	5725.6000	Horn2	V	66.2	6.8	34.3	107.3
	5725.6000	Horn2	H	64.2	6.8	34.3	105.3
mid	5788.9000	Horn2	V	67.2	6.9	34.4	108.4
	5788.9000	Horn2	H	63.8	6.9	34.3	105.0
hi	5848.6000	Horn2	V	66.8	6.9	34.4	108.1
	5848.6000	Horn2	H	63.3	6.9	34.3	104.5

Measured value (V/m) = $10^{(FS/20)}$ /1000000 = 0.263V/m

Antenna Gain (numeric) = $10^{(Ag/10)}$ = 1.995

Output Power (W) = $\frac{E^2R^2}{30G}$ = 0.0104W

E = Measured Value (V/m)
R = Measurement distance
G = Antenna Gain (numeric)

Additional Observations:

All Measurements were performed at 3m using a 1MHz RBW/VBW.

The EUT was measured on three orthogonal axis to maximize emissions.

Section 8. Spurious Emissions

Para. No.: 15.247(c)

Test Performed By: Jason Nixon	**Date of Test: February 11, 2005**

Limit: In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

Measurement Data: See Attached Tabulated Data

The Spectrum was searched from 30MHz to 40GHz on an OATS at 3m.

All emissions were searched on three orthogonal axis.

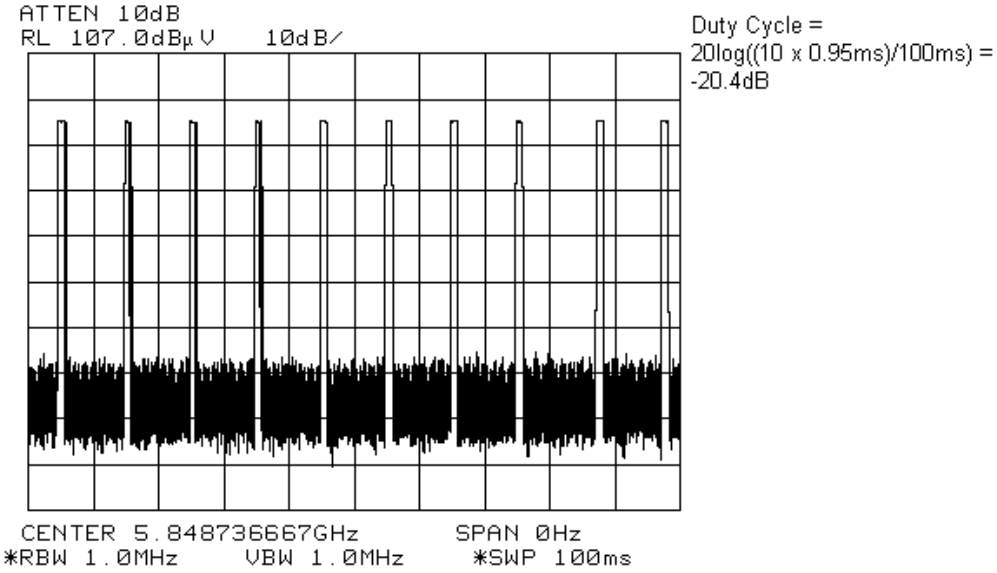
Measurements performed within Restricted Bands were measured using a 1MHz RBW/VBW and measurements performed outside of the restricted bands were measured with a 100kHz RBW/VBW and compared to the Fundamental emission in a 100kHz RBW.

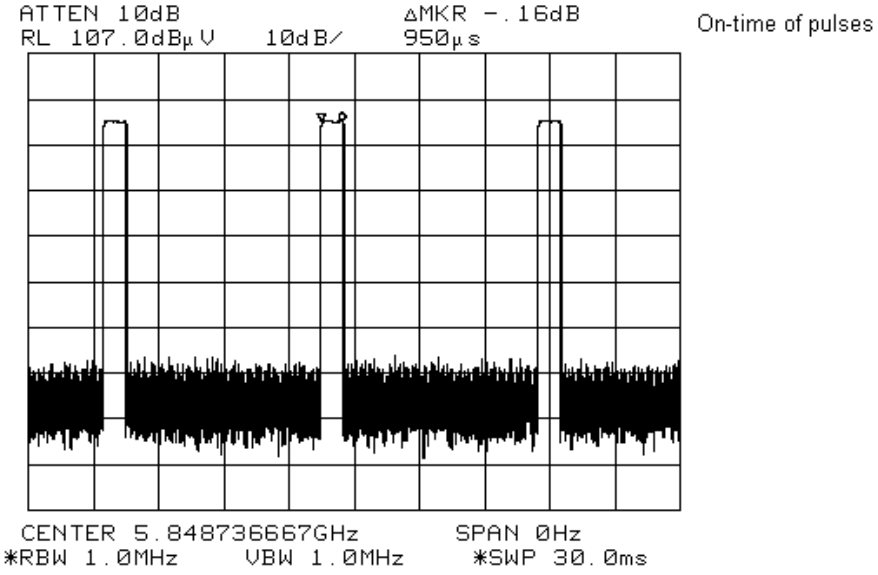
Frequency (MHz)	Antenna	Polarity	RCVD Signal (dBuV)	Ant. Factor (dB)	Amp. Gain / Cable Loss (dB)	Duty Cycle Corr.	Emission Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
11451.2000	Horn2	V	69.8	38.6	37.7	20.4	70.8	74	3.2	Peak
							50.4	54	3.6	Average
11451.2000	Horn2	H	67.2	38.6	37.7	20.4	68.1	74	5.9	Peak
							47.7	54	6.3	Average
17176.8000	Horn2	V	67.7	42.0	36.0	-	73.6	87.5	13.9	Peak
17176.8000	Horn2	H	70.2	41.9	36.0	-	76.1	84.8	8.7	Peak
22902.4000	18-40GHz Horn	V	62.0	45.6	35.8	20.4	71.8	74	2.2	Peak
							51.4	54	2.6	Average
22902.4000	18-40GHz Horn	H	61.0	45.0	35.8	20.4	70.2	74	3.8	Peak
							49.8	54	4.2	Average
11577.8000	Horn2	V	67.7	38.8	37.7	20.4	68.7	74	5.3	Peak
							48.3	54	5.7	Average
11577.8000	Horn2	H	67.2	38.7	37.7	20.4	68.2	74	5.8	Peak
							47.8	54	6.2	Average
17366.7000	Horn2	V	65.3	43.0	36.0	-	72.4	88.2	15.8	Peak
17366.7000	Horn2	H	68.2	43.0	36.0	-	75.2	84.3	9.1	Peak
23155.6000	18-40GHz Horn	V	55.2	45.5	35.8	-	64.8	88.2	23.4	Peak
23155.6000	18-40GHz Horn	H	58.0	44.8	35.8	-	67.0	84.3	17.3	Peak
11697.2000	Horn2	V	65.5	38.9	37.7	20.4	66.7	74	7.3	Peak
							46.3	54	7.7	Average
11697.2000	Horn2	H	64.0	38.8	37.7	20.4	65.1	74	8.9	Peak
							44.7	54	9.3	Average
17545.8000	Horn2	V	64.3	43.9	36.0	-	72.3	87.7	15.4	Peak
17545.8000	Horn2	H	67.2	43.9	36.0	-	75.1	82.2	7.1	Peak
23394.4000	18-40GHz Horn	V	55.3	45.4	35.8	-	64.9	87.7	22.8	Peak
23394.4000	18-40GHz Horn	H	55.7	44.6	35.8	-	64.5	82.2	17.7	Peak

Emission Level Peak (dBuV/m) = RCVD Signal + Ant. Factor – Amp Gain

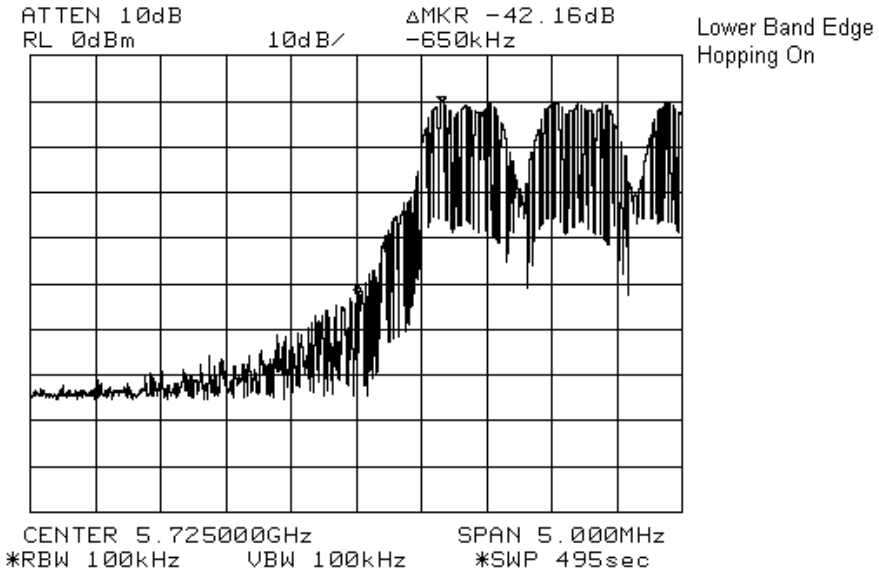
Emission Level Average (dBuV/m) = RCVD Signal + Ant. Factor – Amp Gain – Duty Cycle

Duty Cycle

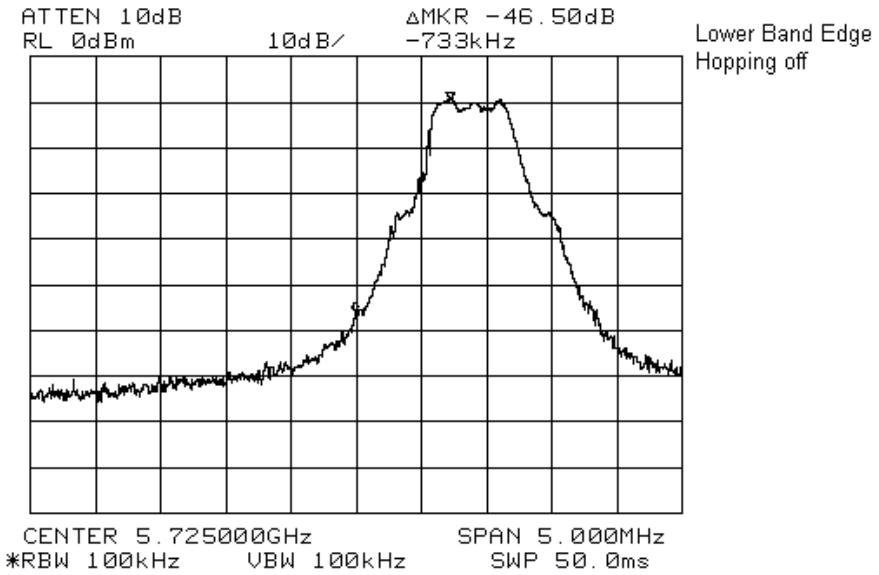

ATTEN 10dB
RL 107.0dBµV 10dB/
Duty Cycle =
20log((10 x 0.95ms)/100ms) =
-20.4dB
CENTER 5.848736667GHz
SPAN 0Hz
*RBW 1.0MHz
VBW 1.0MHz
*SWP 100ms


ATTEN 10dB
RL 107.0dBµV 10dB/
ΔMKR -.16dB
950µs
On-time of pulses
CENTER 5.848736667GHz
SPAN 0Hz
*RBW 1.0MHz
VBW 1.0MHz
*SWP 30.0ms

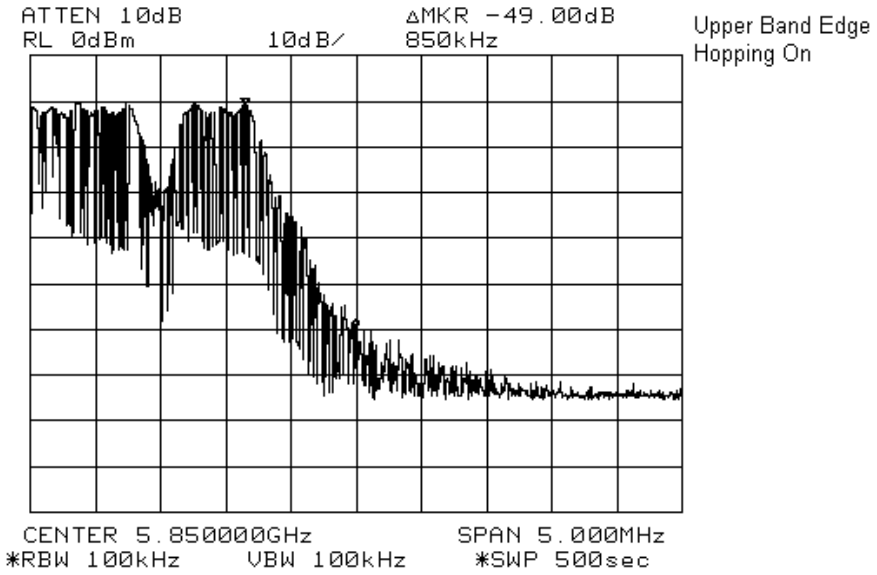
Lower Band Edge Hopping On



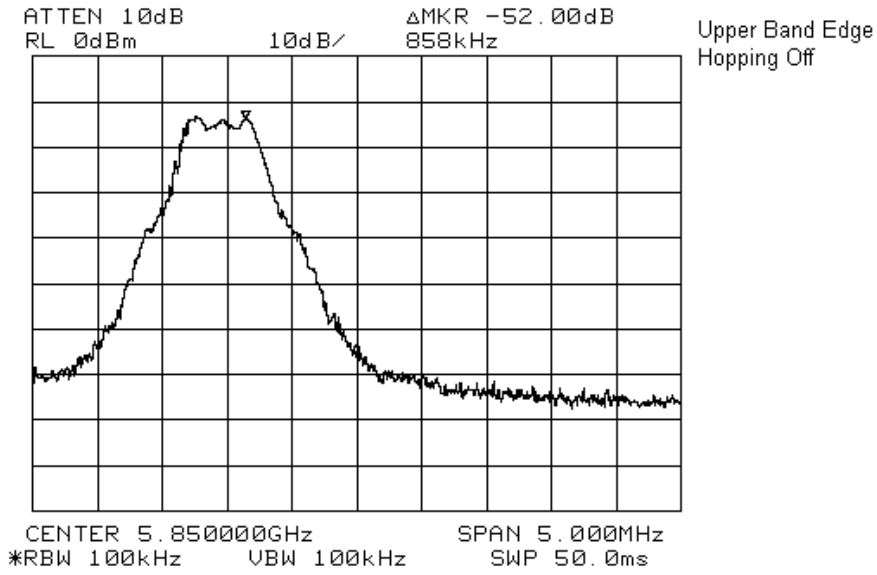
Lower Band Edge Hopping Off



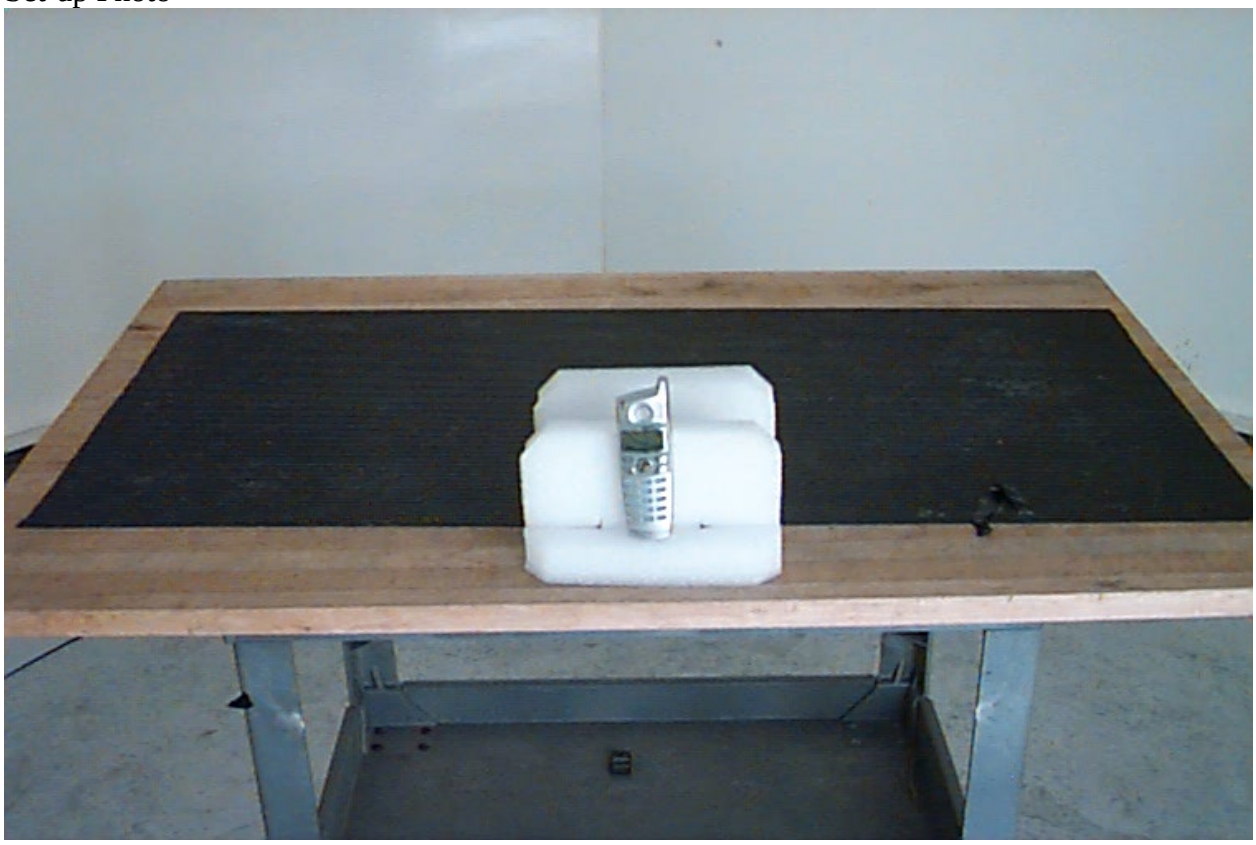
Upper Band Edge Hopping On



Upper Band Edge Hopping Off

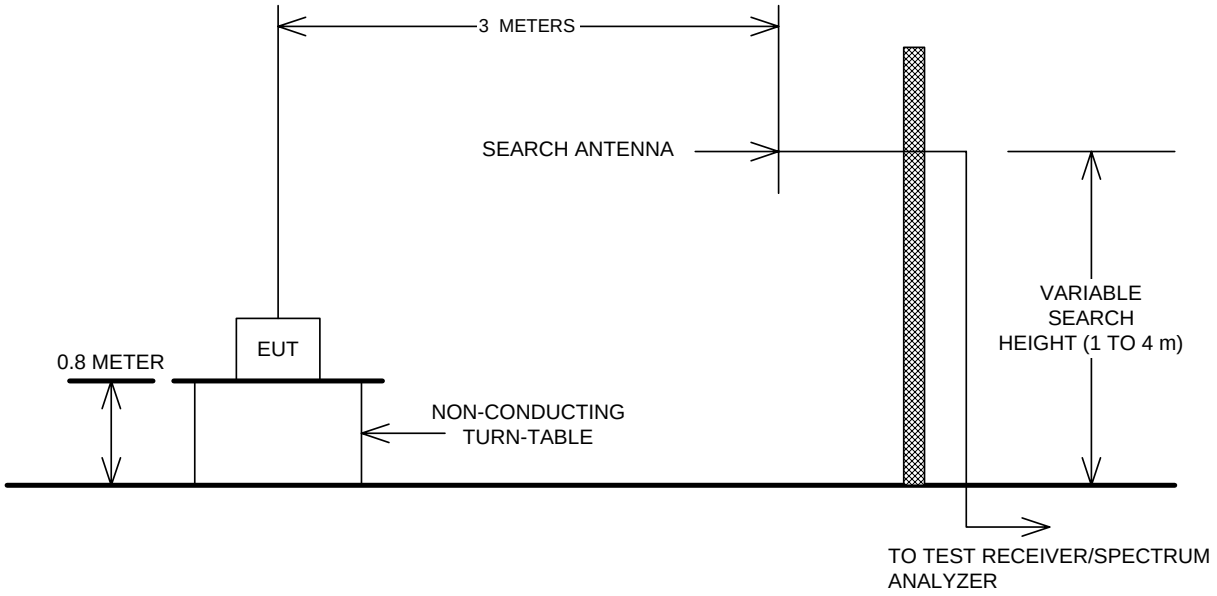


Set-up Photo

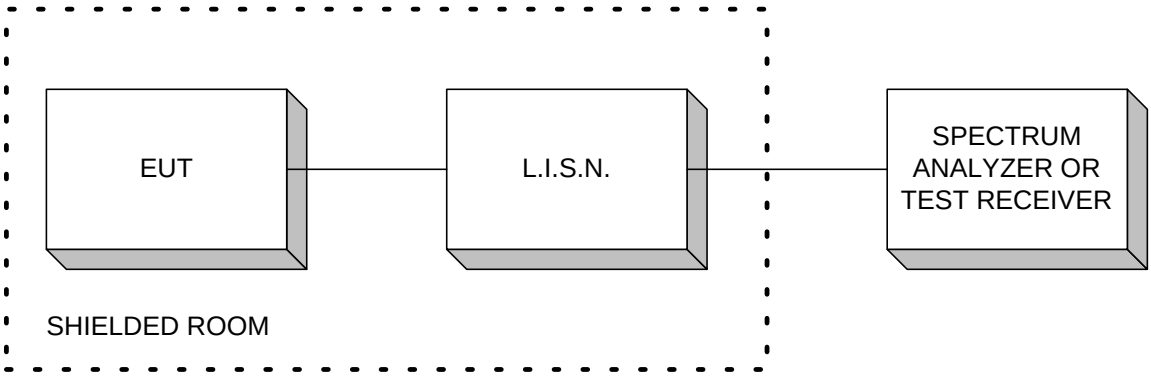


Section 9. Block Diagrams

Test Site For Radiated Emissions



Conducted Emissions



Section 10. Test Equipment List

Equipment	Manufacturer	Model No.	Asset/Serial No.	Last Cal.	Next Cal.
Spectrum Analyzer	Hewlett-Packard	8564E	3943A01798	Dec 22/04	Dec 22/05
Horn Antenna #2	EMCO	3115	FA000825	Dec. 14/04	Dec. 14/05
5.0 – 18.0 GHz Amplifier	NARDA	DWT-186N23U40	FA001409	COU	COU
18.0 – 26.0 GHz Amplifier	NARDA	BBS-1826N612	FA001550	COU	COU
26 – 40.0 GHz Amplifier	NARDA	DBL-2640N610	FA001556	COU	COU
18-40GHz Horn	EMCO	3116	FA001847	Jan 19/04	Apr 19/05

Section 11. Restricted bands (15.205)

(a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2655-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	Above 38.6
13.36-13.41			