Nemko Test Report:	5L0546RUS2
Applicant:	Nokia, Inc.
Equipment Under Test:	6265i
In Accordance With:	**FCC Part 22, Subpart H** Cellular Band Subscriber Services
FCC ID:	QMNRM-66
Tested By:	Nemko USA Inc. 802 N. Kealy Lewisville, TX 75057-3136
Authorized By:	Brian Boyea Resource Manager
Date:	11/30/05

NVLAP LAB CODE: 100426-0

Table of Contents

Section 1. Summary of Test Results

Manufacturer: Nokia, Inc.

Model No.: 6265i

Type: RM-66

Serial No.: ESN:033/07776604

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 FCC Part 22, Subpart H.

☐ New Submission ☐ Production Unit

☒ Class II Permissive Change ☒ Pre-Production Unit

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. None.

Summary Of Test Data

NAME OF TEST	PARA. NO.	RESULT
RF Power Output	2.1046	*Not Tested
Audio Frequency Response	2.1047	*Not Tested
Audio Low Pass Filter Response	2.1047	*Not Tested
Modulation Limiting	2.1047	*Not Tested
Occupied Bandwidth	2.1049	Complies
Spurious Emissions at Antenna Terminals	2.1051	Complies
Field Strength of Spurious Emissions	2.1053	Complies
Frequency Stability	2.1055	Complies

Footnotes: * These tests were performed by Nokia

Measurement uncertainty for each test configuration is expressed to 95% probability.

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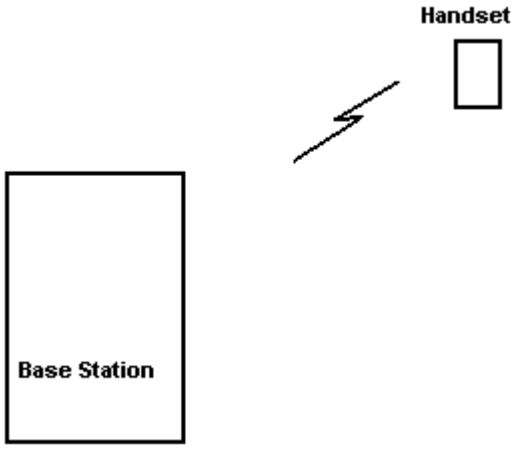
Section 2. General Equipment Specification

Frequency Range:	824.70 to 848.31 MHz (CDMA) 824.04 to 848.97 MHz (AMPS)
Tunable Bands:	824.70 to 848.31 MHz
Necessary Bandwidth:	1.25 MHz CDMA 40 kHz AMPS
Emission Designator:	1M25F9W 40KF1D
Output Impedance:	50 ohms
Operator Selection of Frequency:	Software Controlled
Power Output Adjustment Capability:	Software Controlled

Operational Description

Dual band, tri-mode handset

System Diagram



Section 3. Occupied Bandwidth

NAME OF TEST: Occupied Bandwidth	PARA. NO.: 2.1049
TESTED BY: David Light	DATE: 03 October 2005

Test Results: Complies.

Test Data: See attached plots

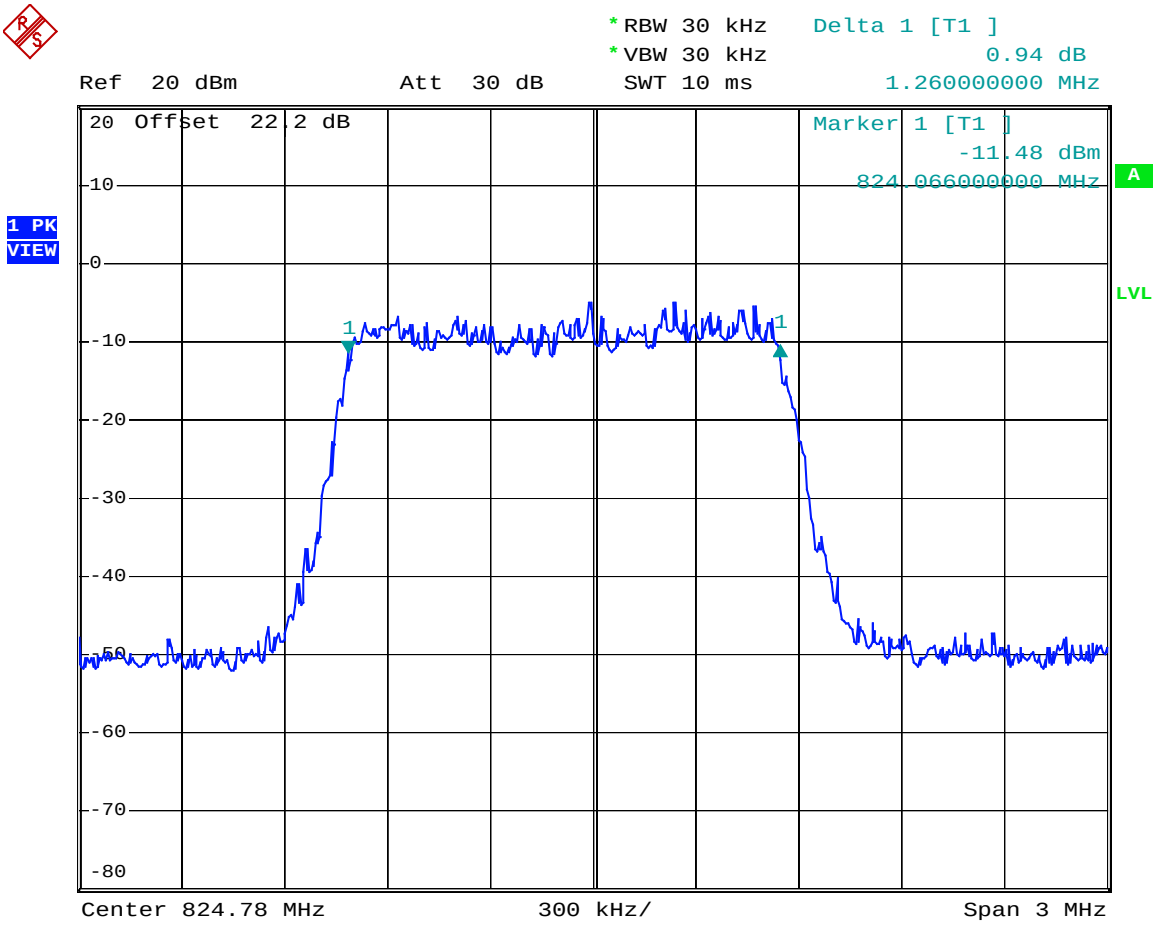
Equipment Used: 1082-1054-1036-HP8924C

Measurement Uncertainty: +/- 1.7 dB

Temperature: 22 °C

Relative Humidity: 45 %

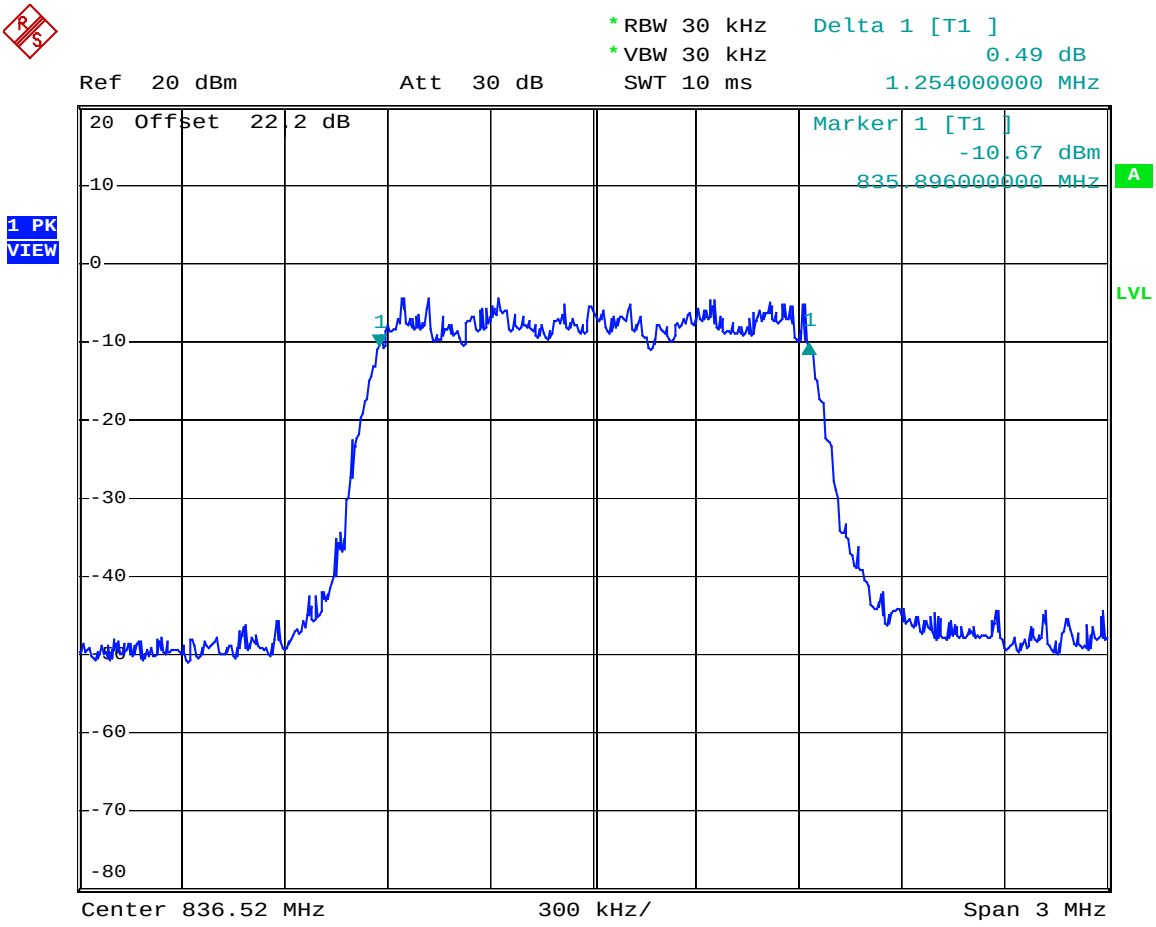
Test Data – Occupied Bandwidth



Date: 16.SEP.2005 16:08:45

OBW Channel 1013

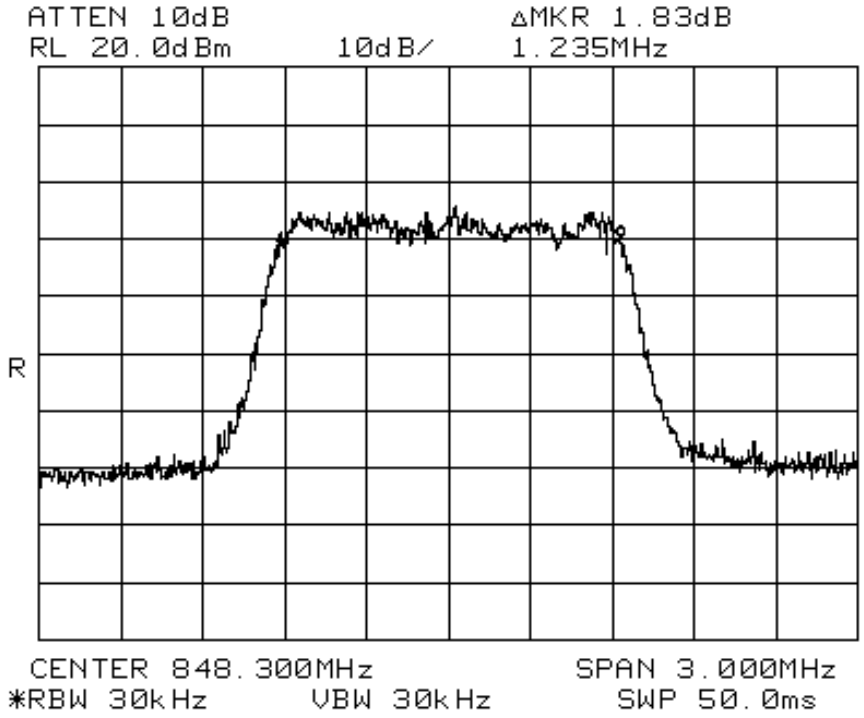
Test Data – Occupied Bandwidth



Date: 16.SEP.2005 16:05:28

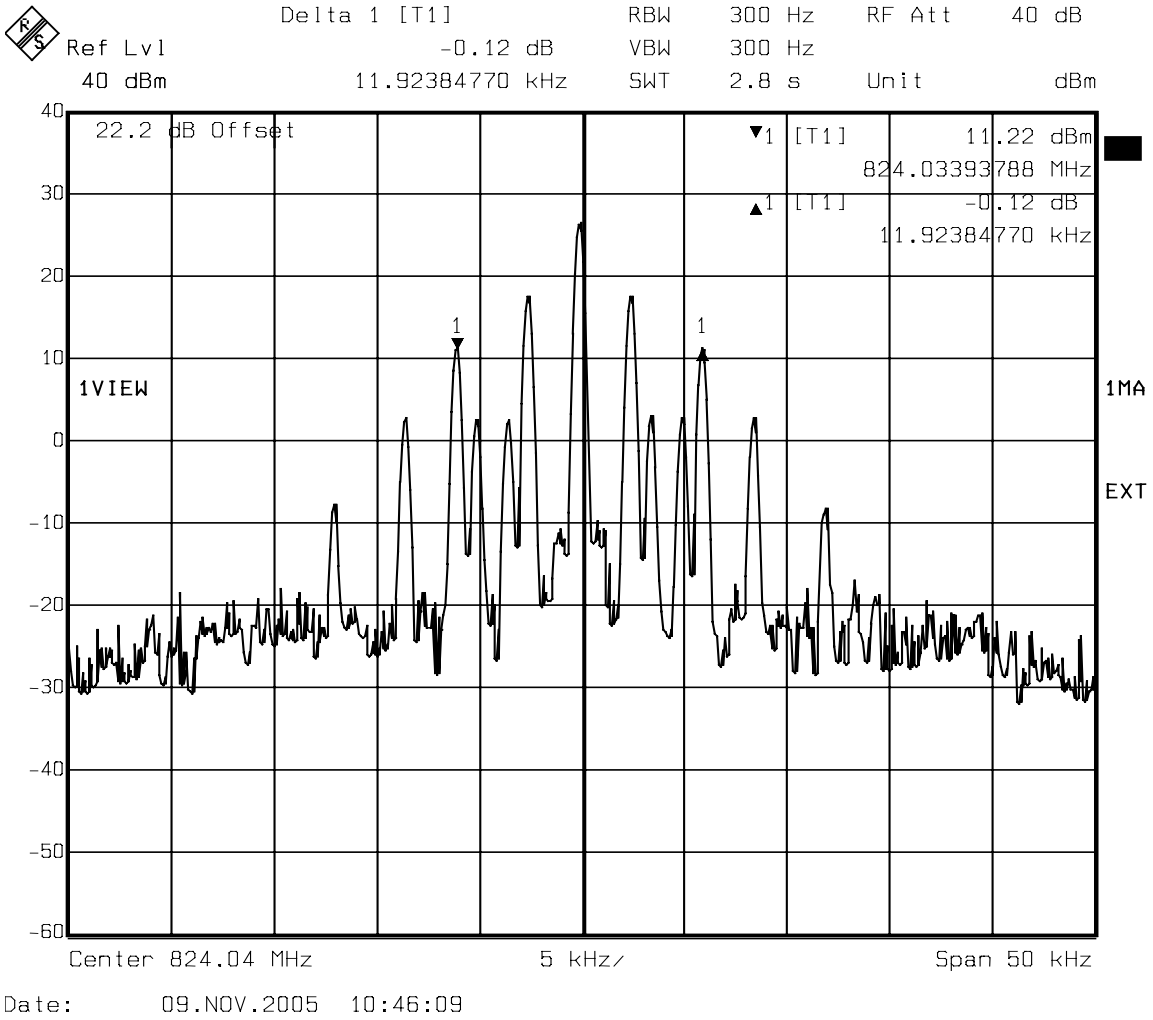
OBW Channel 384

Test Data – Occupied Bandwidth



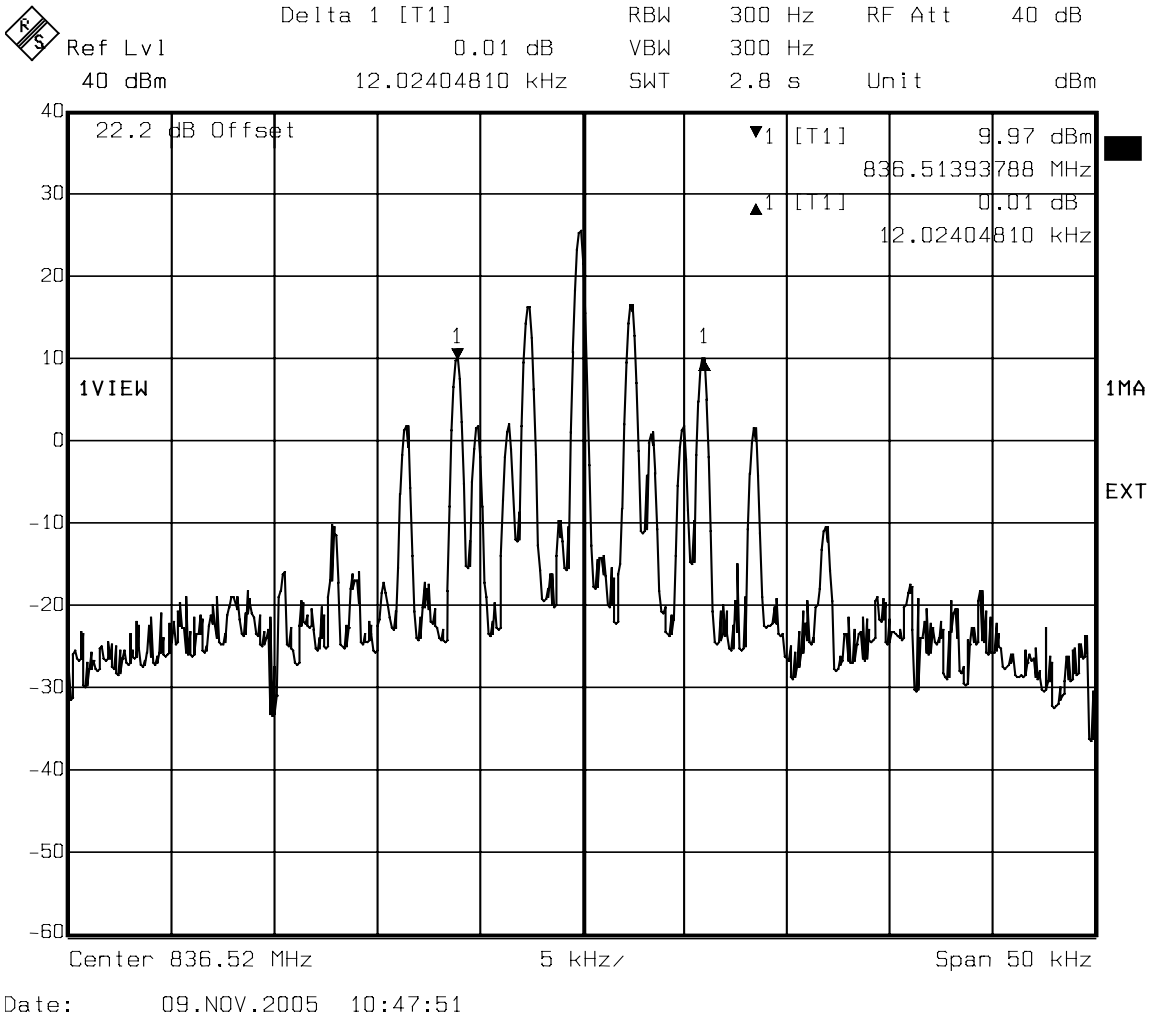
OBW Channel 777

Test Data – Occupied Bandwidth



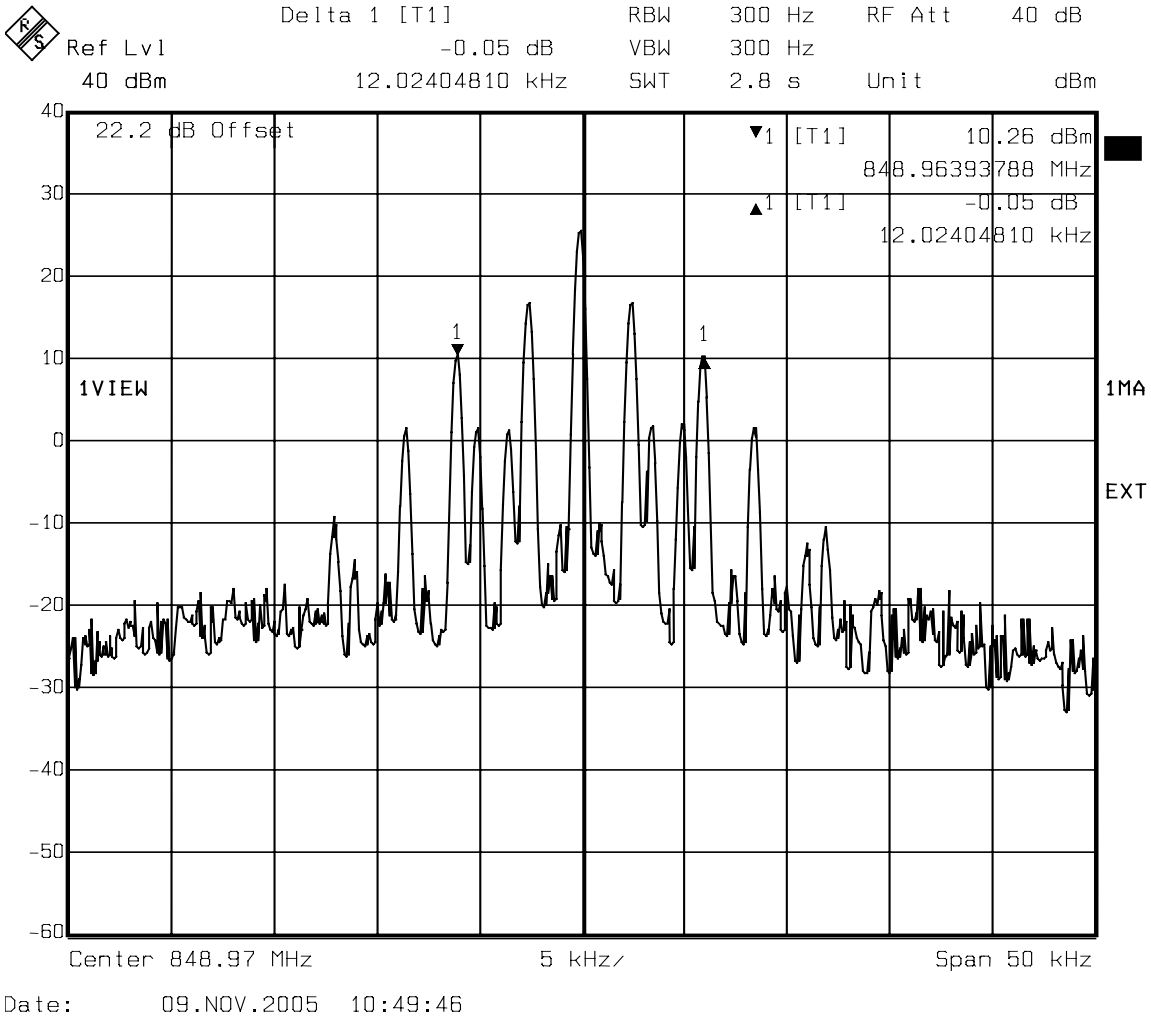
Channel 991

Test Data – Occupied Bandwidth



Channel 384

Test Data – Occupied Bandwidth



Channel 799

Section 4. Spurious Emissions at Antenna Terminals

NAME OF TEST: Spurious Emissions @ Antenna Terminals	PARA. NO.: 2.1051
TESTED BY: David Light	DATE: 03 October 2005

Test Results: Complies.

Test Data: See attached plots

Note: CDMA bandedge data to be supplied by Nokia.

Equipment Used: 1082-1054-1055-1036-1058-HP8924C

Measurement Uncertainty: +/- 1.7 dB

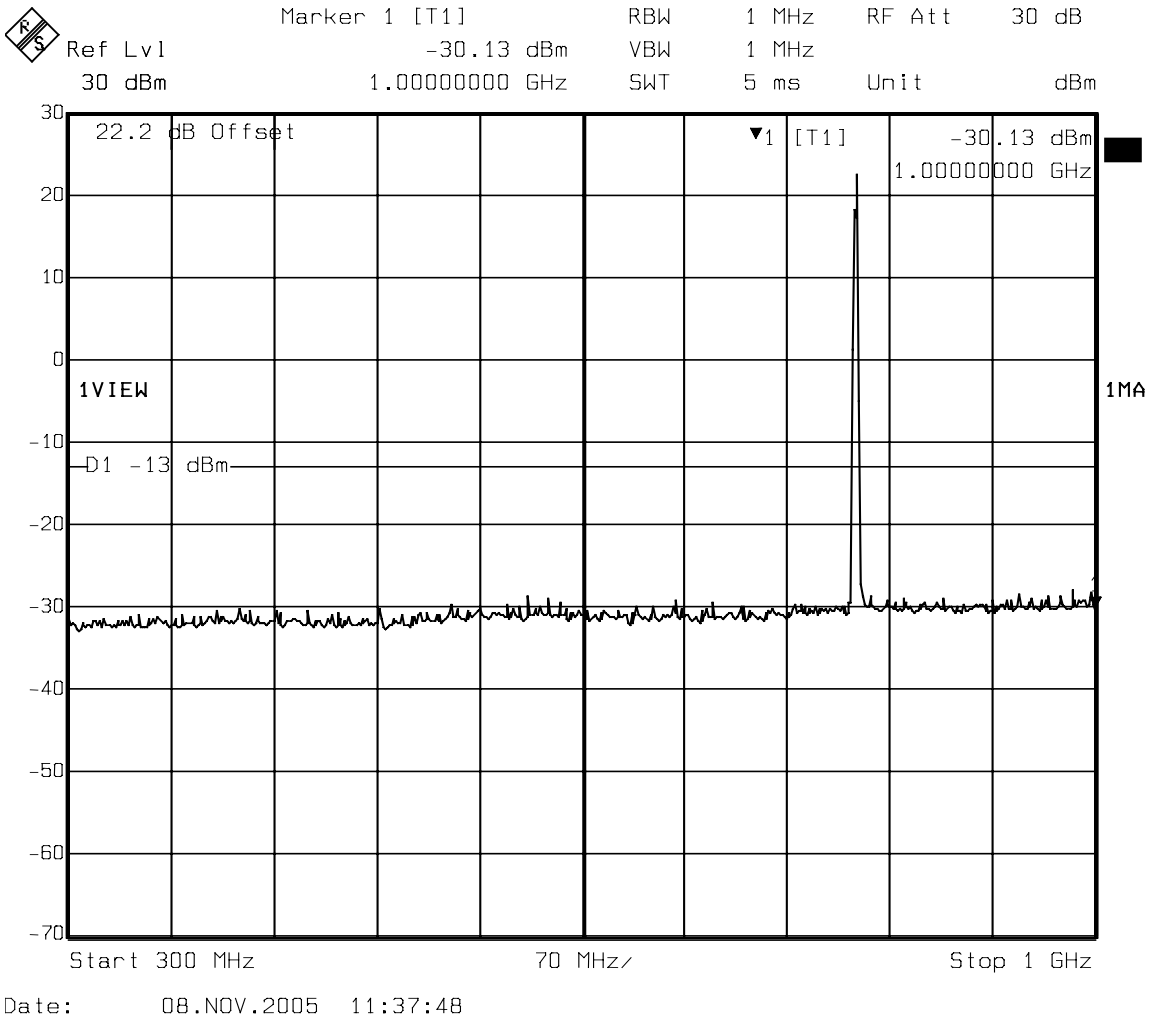
Temperature: 22 °C

Relative Humidity: 45 %

The handset was tested on three channels (low, mid and high) in each mode. The noise floor data presented is representative of all channels.

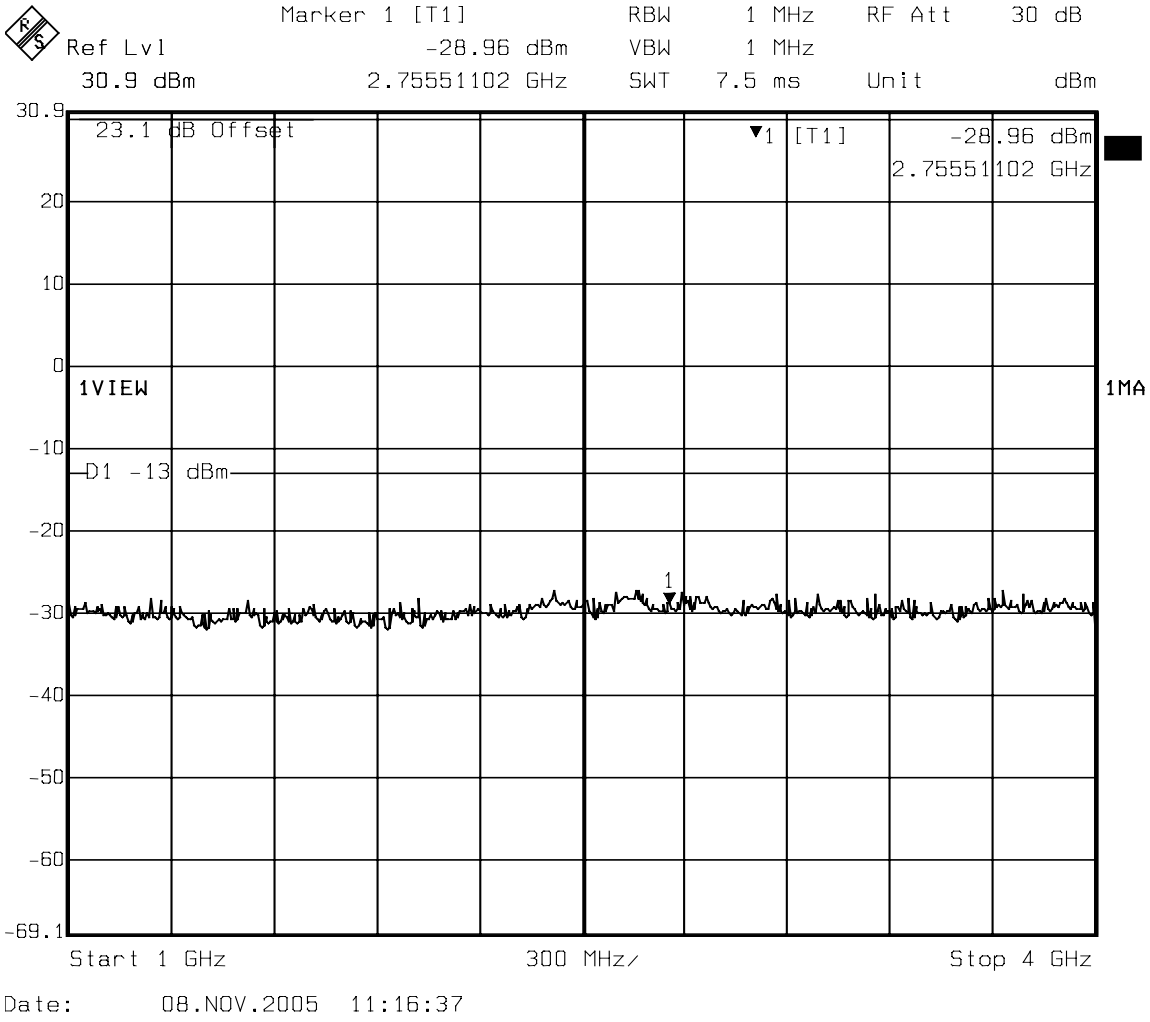
Test Data – Spurious Emissions

Channel 384 - CDMA



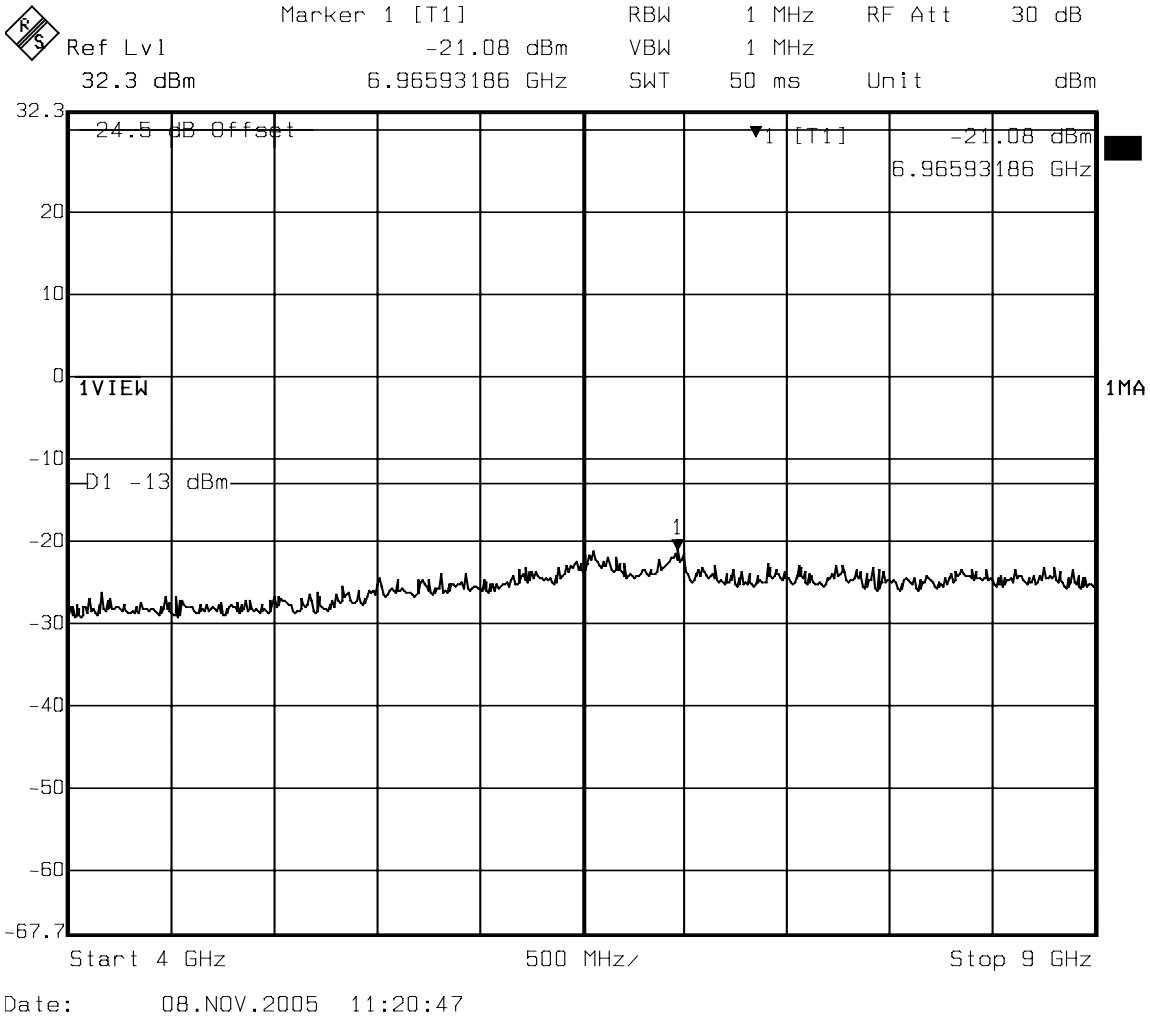
Test Data – Spurious Emissions

Channel 384 - CDMA



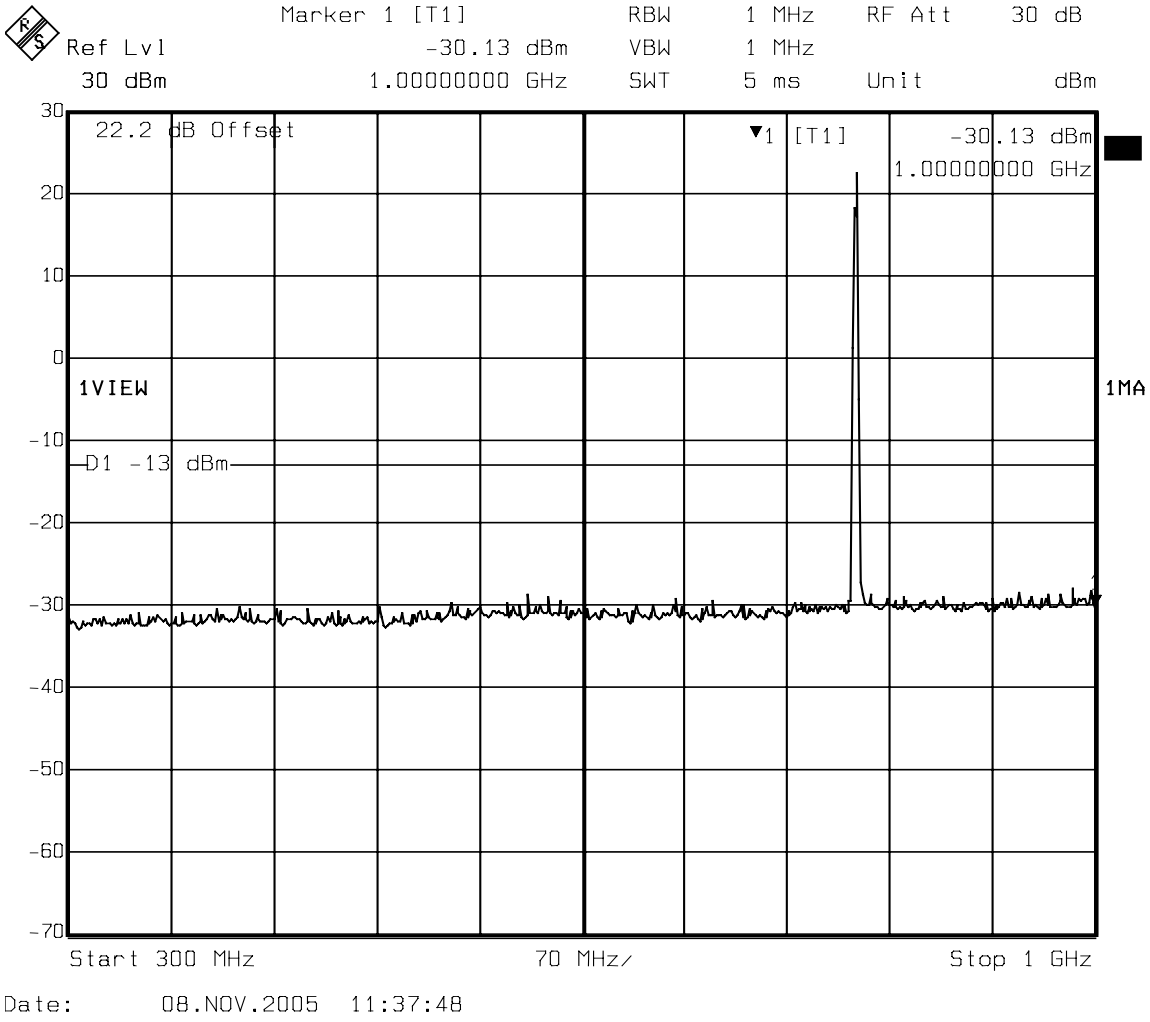
Test Data – Spurious Emissions

Channel 384 - CDMA



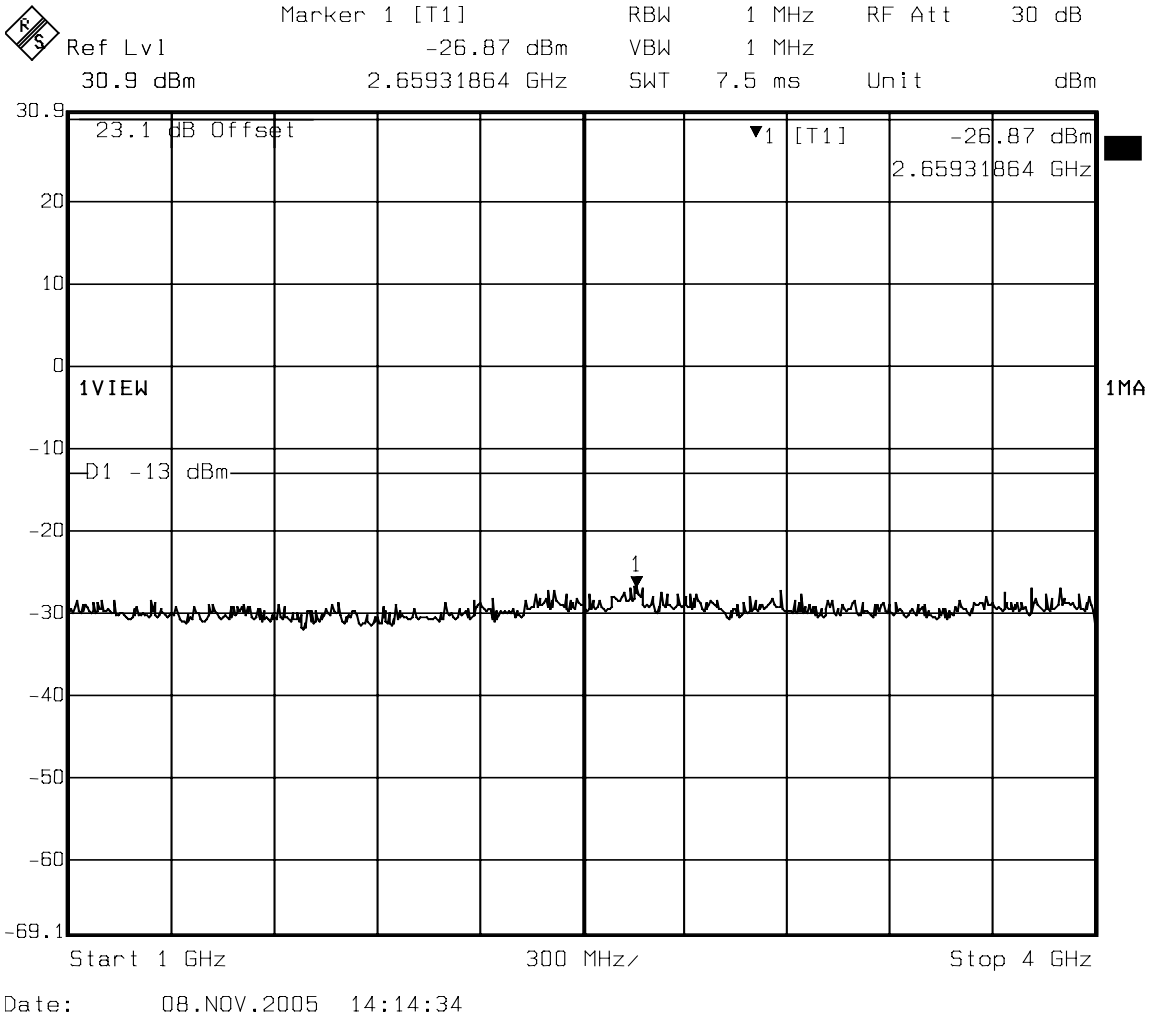
Test Data – Spurious Emissions

Channel 384 – AMPS



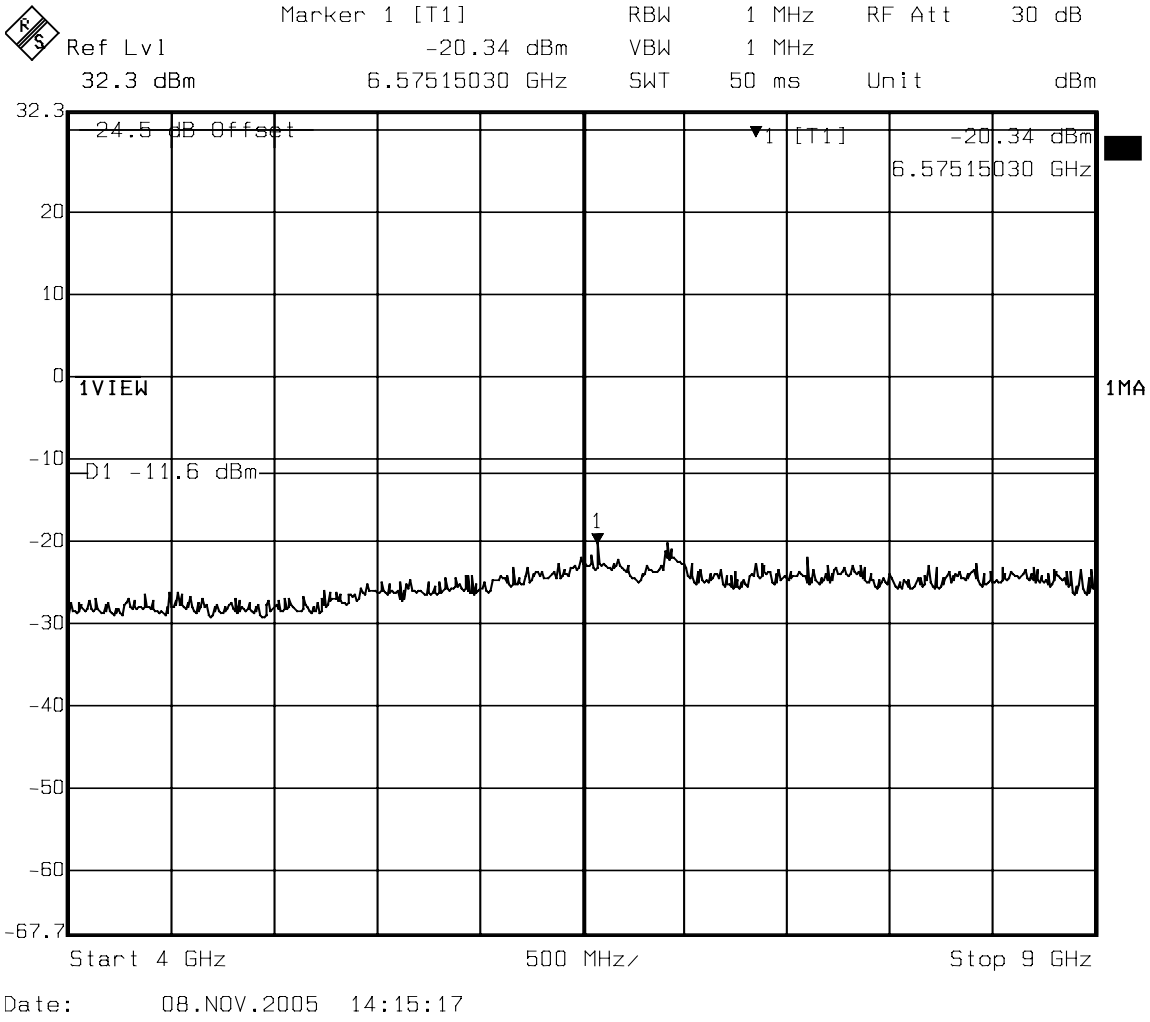
Test Data – Spurious Emissions

Channel 384 – AMPS



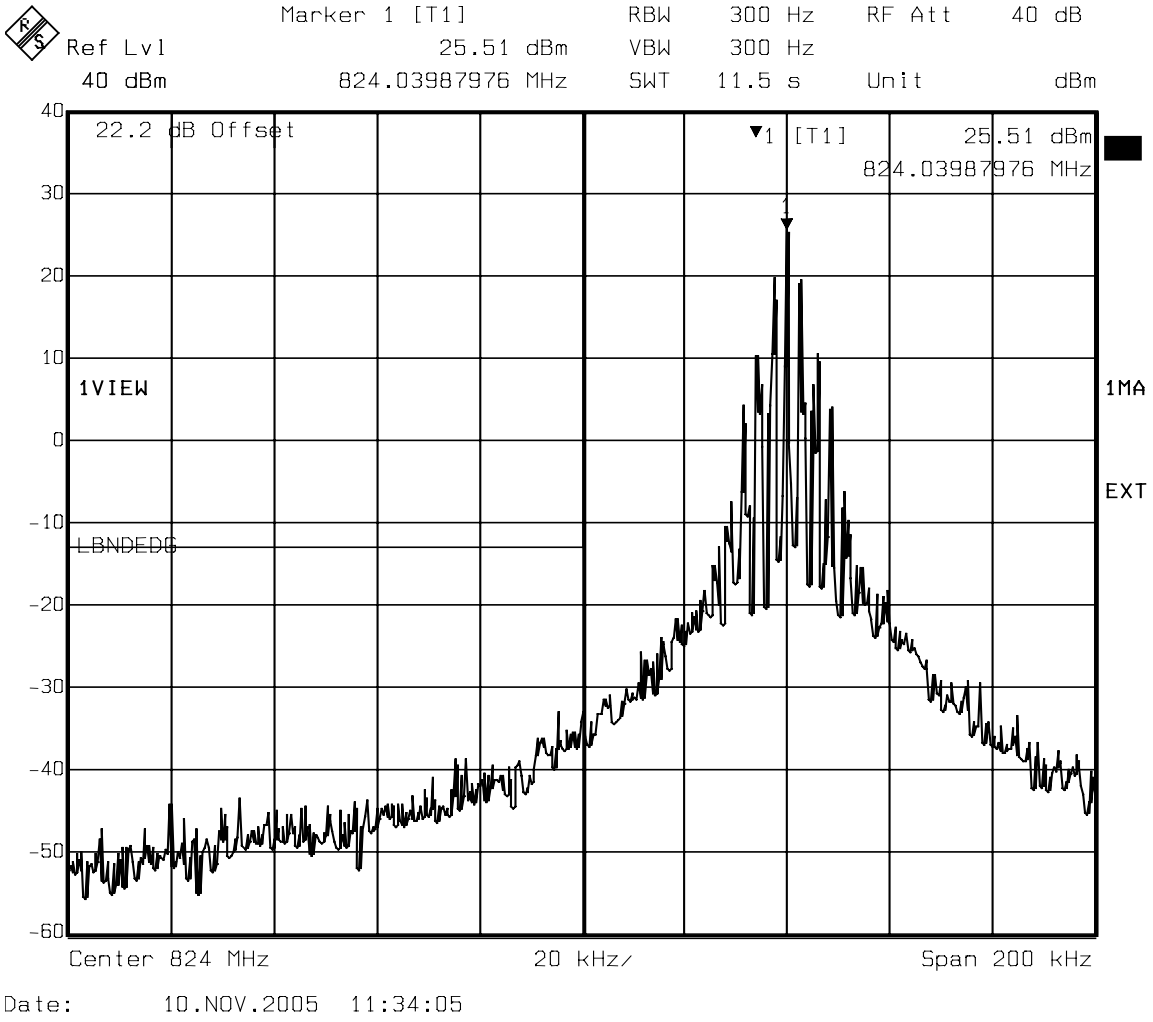
Test Data – Spurious Emissions

Channel 384 – AMPS

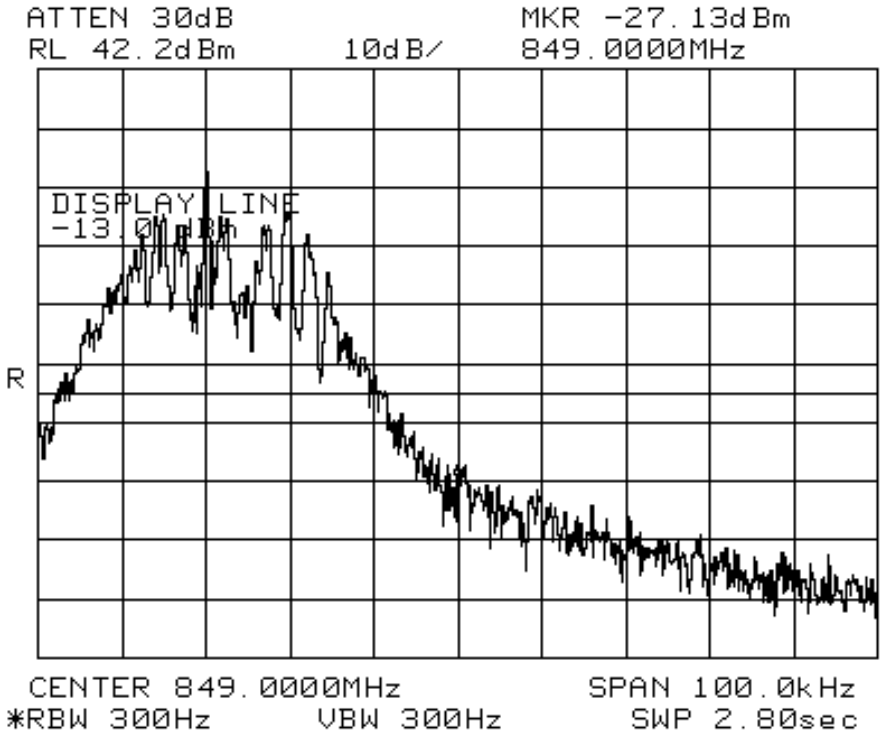


Test Data – Spurious Emissions

Channel 991 – AMPS



Test Data – Spurious Emissions



Channel 799 - AMPS

Section 5. Field Strength of Spurious

NAME OF TEST: Field Strength of Spurious	PARA. NO.: 2.1053
TESTED BY: David Light	DATE: 03 October 2005

Test Results: Complies.

Test Data:

The handset was tested on three orthogonal axis'. The upright position pictured was determined to be worse case.

The spectrum was searched from 30 MHz to 9 GHz.
There were no emissions detected within 20 dB of the specification limit of -13 dBm (attenuation factor of 43 + 10 log(P) dB)

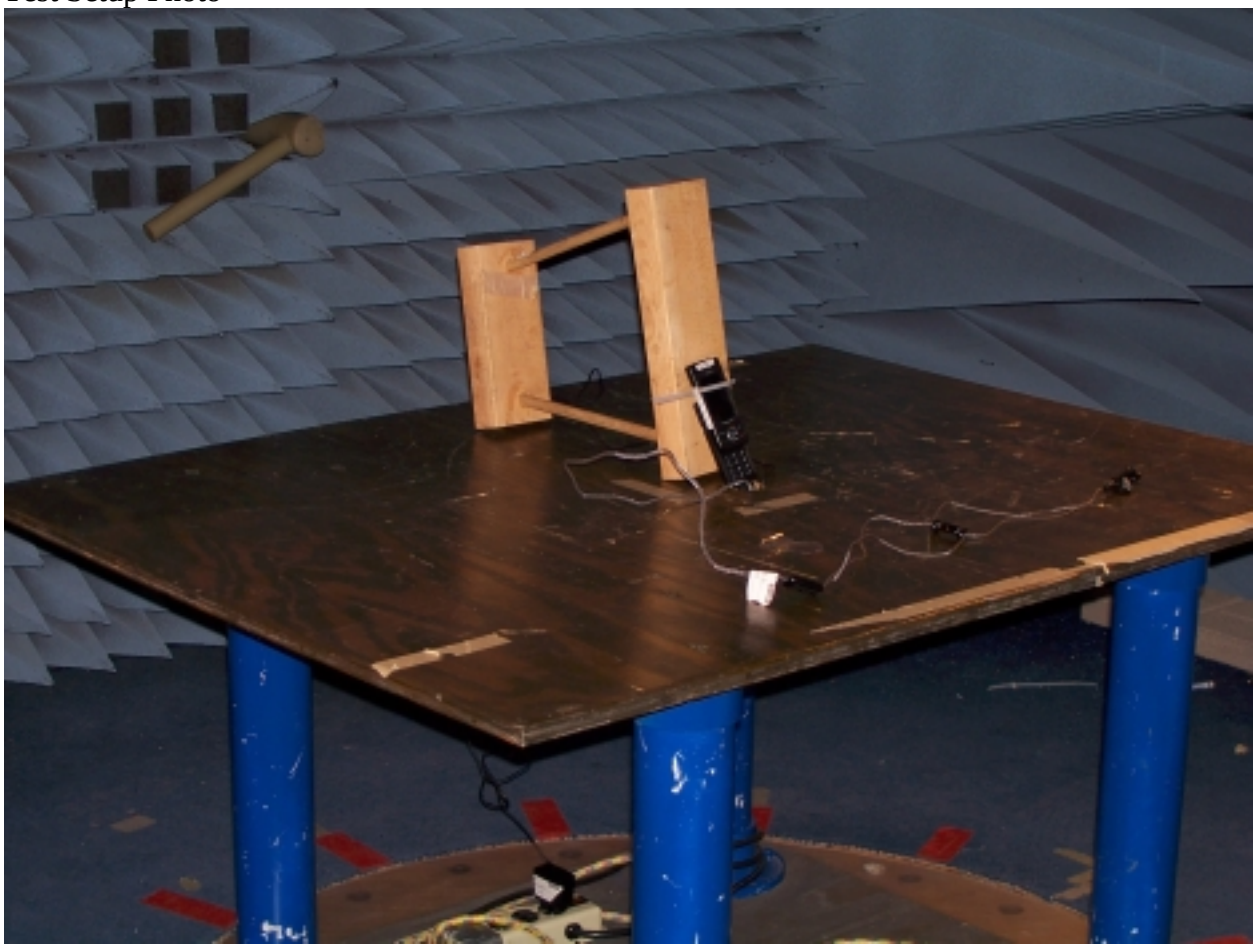
Equipment Used: 1304-1016-1481-1464-1484-1485-1311-791-760-HP8924C

Measurement Uncertainty: +/- 1.7 dB

Temperature: 22 °C

Relative Humidity: 45 %

Test Setup Photo



Section 6. Frequency Stability

NAME OF TEST: Frequency Stability	PARA. NO.: 2.1055
TESTED BY: David Light	DATE: 04 October 2005

Test Results: Complies.

Test Data: See attached table.

Standard Test Frequency:	836.52	MHz
Standard Test Voltage:	3.7	Vdc

Equipment Used: 1082-619-283-HP8924C

Measurement Uncertainty: +/- 1×10^{-7} ppm

Temperature: 22 °C

Relative Humidity: 45 %

Test Data – Frequency Stability

Frequency Stability

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Job No.: 5L0546 Date: 11/25/2005
Specification: Part 22 Temperature(°C): 20
Tested By: David Light Relative Humidity(%) 40
E.U.T.: Trimode hanset
Configuration: Tx CDMA
Sample Number: 1

Test Equipment Used

Antenna: Directional Coupler:
Pre-Amp: Cable #1: 1082
Filter: Cable #2:
Receiver: HP8924C
Chamber 283
Thermometer 619

Measurement Uncertainty: $1x10^{-17}$ppm **Standard Test Frequency 836.520000 MHz**

Temp (°C)	Measured Frequency (MHz)	Rho	Test Voltage	Freqeuncy Error (Hz)	Limit (+/-Hz)	Error (ppm)	Comment
20	836.519999	0.996	3.7	-1	836.5	0.0	
20	836.519990	0.996	4.3	-10	836.5	0.0	
20	836.520000	0.996	3.0	0	836.5	0.0	Battery cutoff
50	836.519999	0.992		-1	836.5	0.0	
40	836.519997	0.995		-3	836.5	0.0	
30	836.519998	0.995		-2	836.5	0.0	
10	836.519994	0.996		-6	836.5	0.0	
0	836.519995	0.991		-5	836.5	0.0	
-10	836.519995	0.995		-5	836.5	0.0	
-20	836.519992	0.996		-8	836.5	0.0	
-25	836.519997	0.992		-3	836.5	0.0	

Notes: Handset ceased operation at -25C

Test Data – Frequency Stability

Frequency Stability

Page 1 of 1

Job No.: 5L0546 Date: 11/25/2005
Specification: Part 22 Temperature(°C): 20
Tested By: David Light Relative Humidity(%) 40
E.U.T.: Tri-mode handset
Configuration: Tx AMPS
Sample Number: 1

Test Equipment Used

Antenna: Directional Coupler:
Pre-Amp: Cable #1: 1082
Filter: Cable #2:
Receiver: HP8924C
Chamber 283
Thermometer 619

Measurement Uncertainty: $1x10^{-17}$ppm **Standard Test Frequency 836.520000 MHz**

Temp (°C)	Measured Frequency (MHz)	Rho	Test Voltage	Freqeuncy Error (Hz)	Limit (+/-Hz)	Error (ppm)	Comment
20	836.519840		3.7	-160	836.5	-0.2	
20	836.519825		4.3	-175	836.5	-0.2	
20	836.519815		3.0	-185	836.5	-0.2	Battery cutoff
50	836.519800		3.7	-200	836.5	-0.2	
40	836.519792		3.7	-208	836.5	-0.2	
30	836.519771		3.7	-229	836.5	-0.3	
10	836.519821		3.7	-179	836.5	-0.2	
0	836.519765		3.7	-235	836.5	-0.3	
-10	836.519795		3.7	-205	836.5	-0.2	
-20	836.519770		3.7	-230	836.5	-0.3	
-25	836.519782		3.7	-218	836.5	-0.3	

Notes: Handset ceased operation at -25C

Section 7. Test Equipment List

Nemko ID	Description	Manufacturer Model Number	Serial Number	Calibration Date	Calibration Due
619	THERMOMETER	FLUKE 51	4520028	09/26/05	09/26/06
283	Environmental Chamber with controller # 1189006	ENVIROTRONICS SH27 & 2030-22844	129010083	NA	NA
993	Horn antenna	A.H. Systems SAS-200/571	XXX	09/01/05	09/01/07
1464	Spectrum analyzer	Hewlett Packard 8563E	3551A04428	07/30/04	07/31/06
1484	Cable 2.0-18.0 Ghz	Storm PR90-010-072	N/A	08/26/05	08/26/06
1485	Cable 2.0-18.0 Ghz	Storm PR90-010-216	N/A	08/02/05	08/02/06
760	Antenna biconical	Electro Metrics MFC-25	477	09/04/05	09/04/06
1034	ANTENNA,LP	A.H. SYSTEMS SAS-200/510	121	09/04/05	09/04/06
791	PREAMP, 25dB	ICC LNA25	398	11/12/05	11/12/06
1016	Pre-Amp	HEWLETT PACKARD 8449A	2749A00159	11/12/05	11/12/06
	Cell site simulator	HP 8924C	US38283285	07/16/05	07/16/07
	PCS Extender	HP	3711J04715	07/16/05	07/16/07
1082	CABLE 2m	Astrolab 32027-2-29094-72TC	N/A	CBU	N/A

ANNEX A - TEST DETAILS

NAME OF TEST: Occupied Bandwidth	**PARA. NO.: 2.1049**

Minimum Standard: Not defined by FCC.

Method Of Measurement:

Spectrum Analyzer Settings:
RBW: CDMA (20 kHz), GSM (30kHz), NADC (1 kHz) and CDPD (1 kHz)
VBW: ≥ RBW
Span: As required
Sweep: Auto

NAME OF TEST: Spurious Emission at Antenna Terminals	**PARA. NO.: 2.1051**

Minimum Standard: Para. No. 22.917(e). The mean power of emissions must be attenuated below the mean power of the unmodulated carrier on any frequency twice or more than twice the fundamental emission by at least 43 + 10 log P. This is equivalent to -13 dBm absolute power.

NAME OF TEST: Field Strength of Spurious Radiation	**PARA. NO.: 2.1053**

Minimum Standard: Para. No. 22.917(e). The mean power of emissions must be attenuated below the mean power of the unmodulated carrier on any frequency twice or more than twice the fundamental emission by at least 43 + 10 log P. This is equivalent to -13 dBm absolute power.

Test Method: TIA/EIA-603-1992

The antenna substitution method was used to determine the equivalent radiated power at spurious frequencies. The spurious emissions were measured at a distance of 3 meters. The EUT was then replaced with a reference substitution antenna with a known gain referenced to a dipole. This antenna was fed with a signal at the spurious frequency. The level of the signal was adjusted to repeat the previously measured level. The resulting erp is the signal level fed to the reference antenna corrected for gain referenced to a dipole.

NAME OF TEST: Frequency Stability **PARA. NO.: 2.1055**

Minimum Standard: Para. No. 22.355. The transmitter carrier frequency shall remain within the tolerances given in Table C-1.

Table C-1

Freq. Range (MHz)	Base, fixed	Mobile > 3 W	Mobile ≤ 3 W
821 to 896	1.5	2.5	2.5

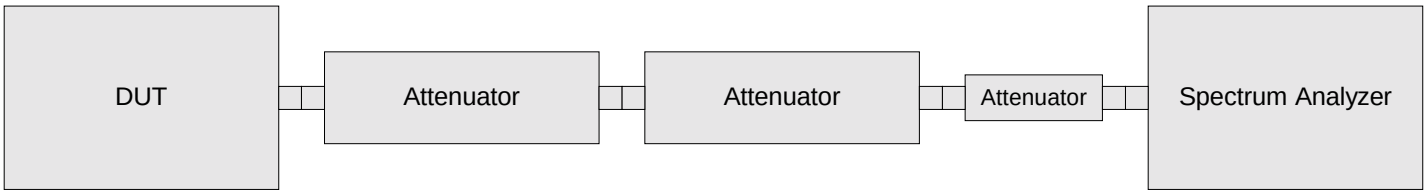
Method Of Measurement:

Frequency Stability With Voltage Variation:
The E.U.T. is placed in an environmental chamber and allowed to stabilize at +20 degrees Celsius for at least 15 minutes. The frequency counter and signal generator are phase locked with the same 10 MHz reference frequency by connecting the 10 MHz ref. out of the counter to the 10 MHz ref, in of the signal generator. With the voltage input to the E.U.T. set to 85% S.T.V., the frequency is measured in 30 second intervals for a period of 5 minutes. This procedure is repeated at 100% S.T.V. and 115% S.T.V. For battery powered equipment, the device is tested at +115% and battery cutoff voltages.

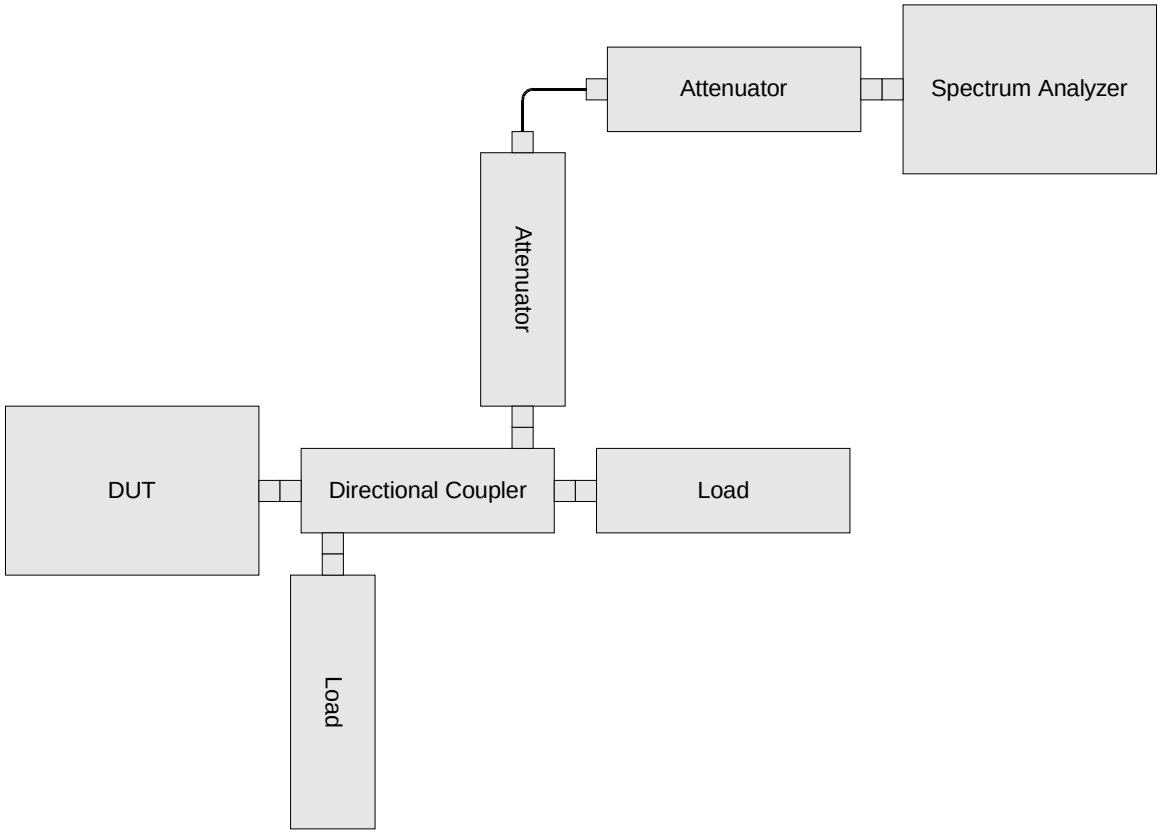
Frequency Stability With Temperature Variation:
The input voltage to the E.U.T. is set to S.T.V. and the temperature of the environmental chamber is varied in 10 degree steps from -30 degrees C to +50 degrees C. The E.U.T. is allowed to stabilize at each temperature and the frequency is measured in 30 second intervals for a period of 5 minutes.

ANNEX B - TEST DIAGRAMS

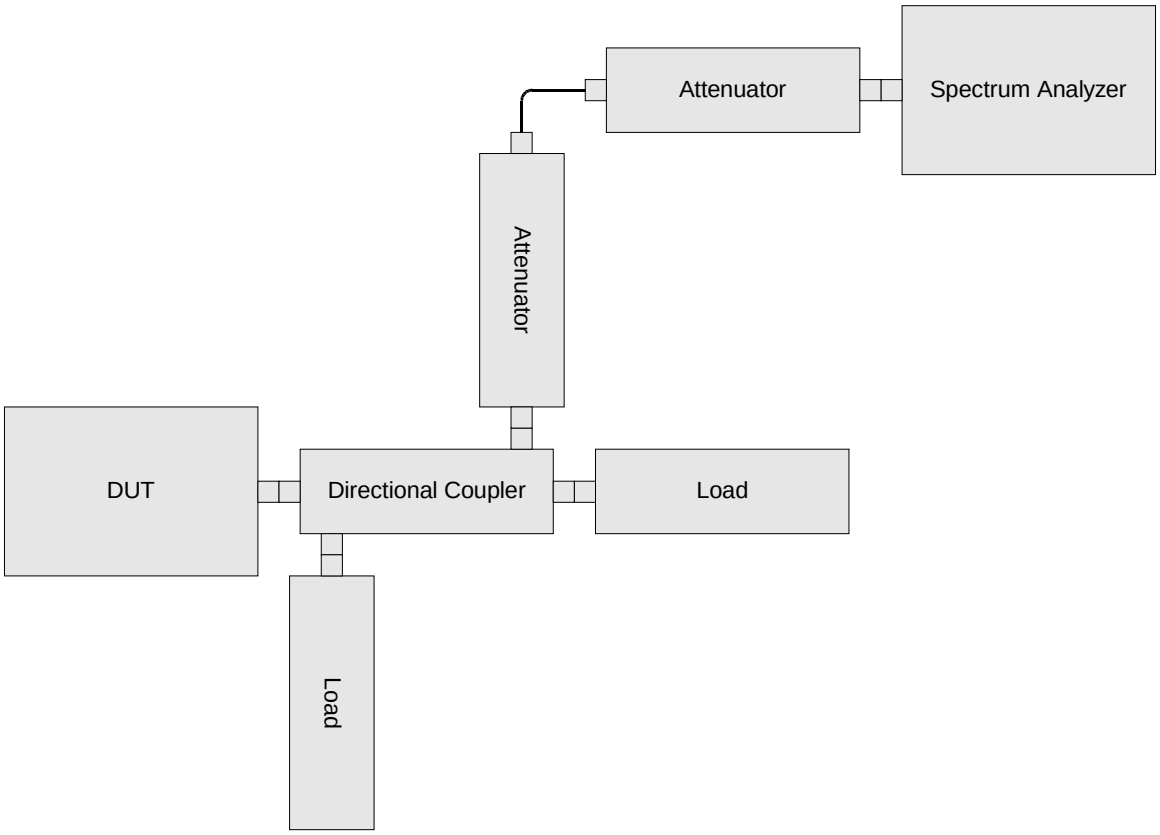
Para. No. 2.1046 - R.F. Power Output



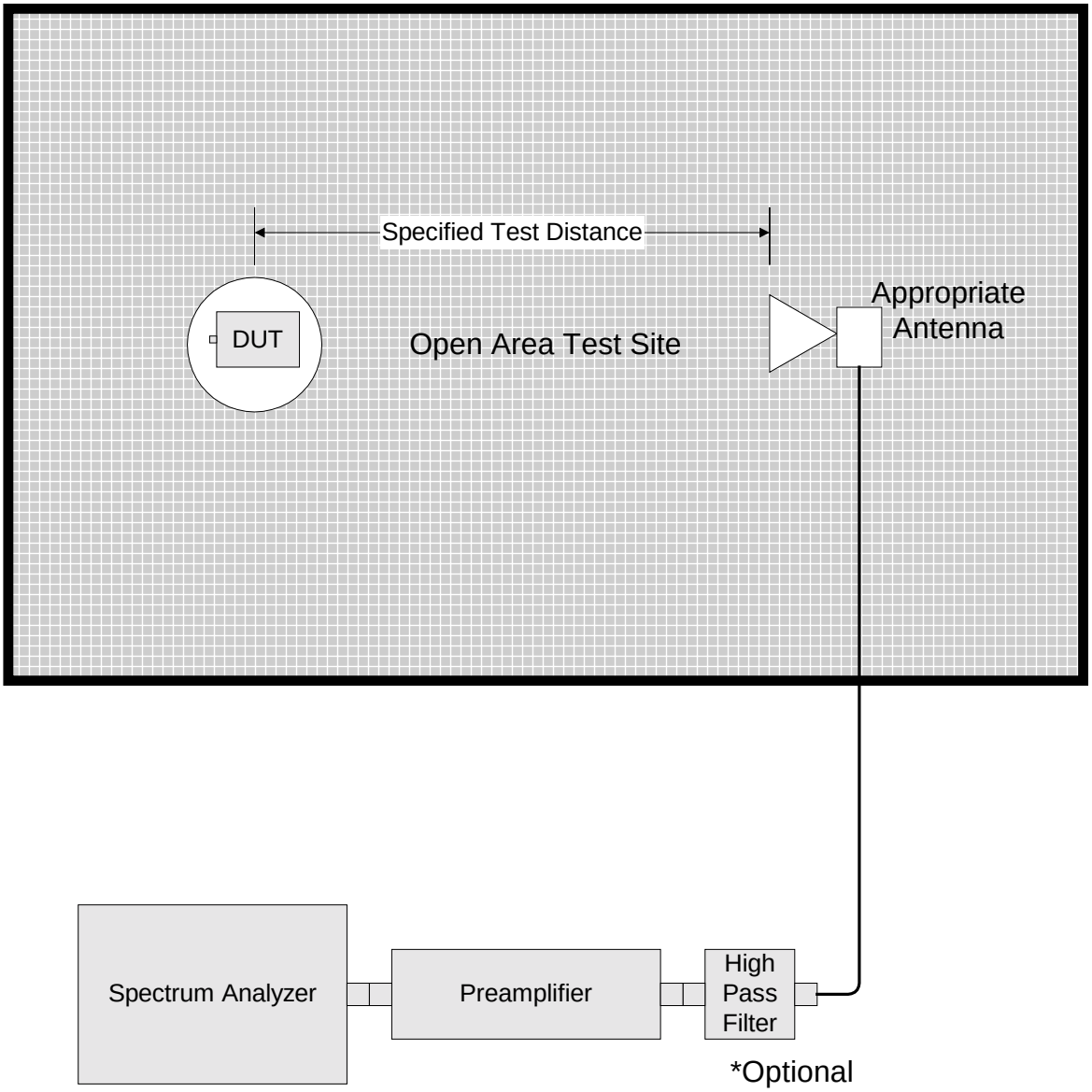
Para. No. 2.1049 - Occupied Bandwidth

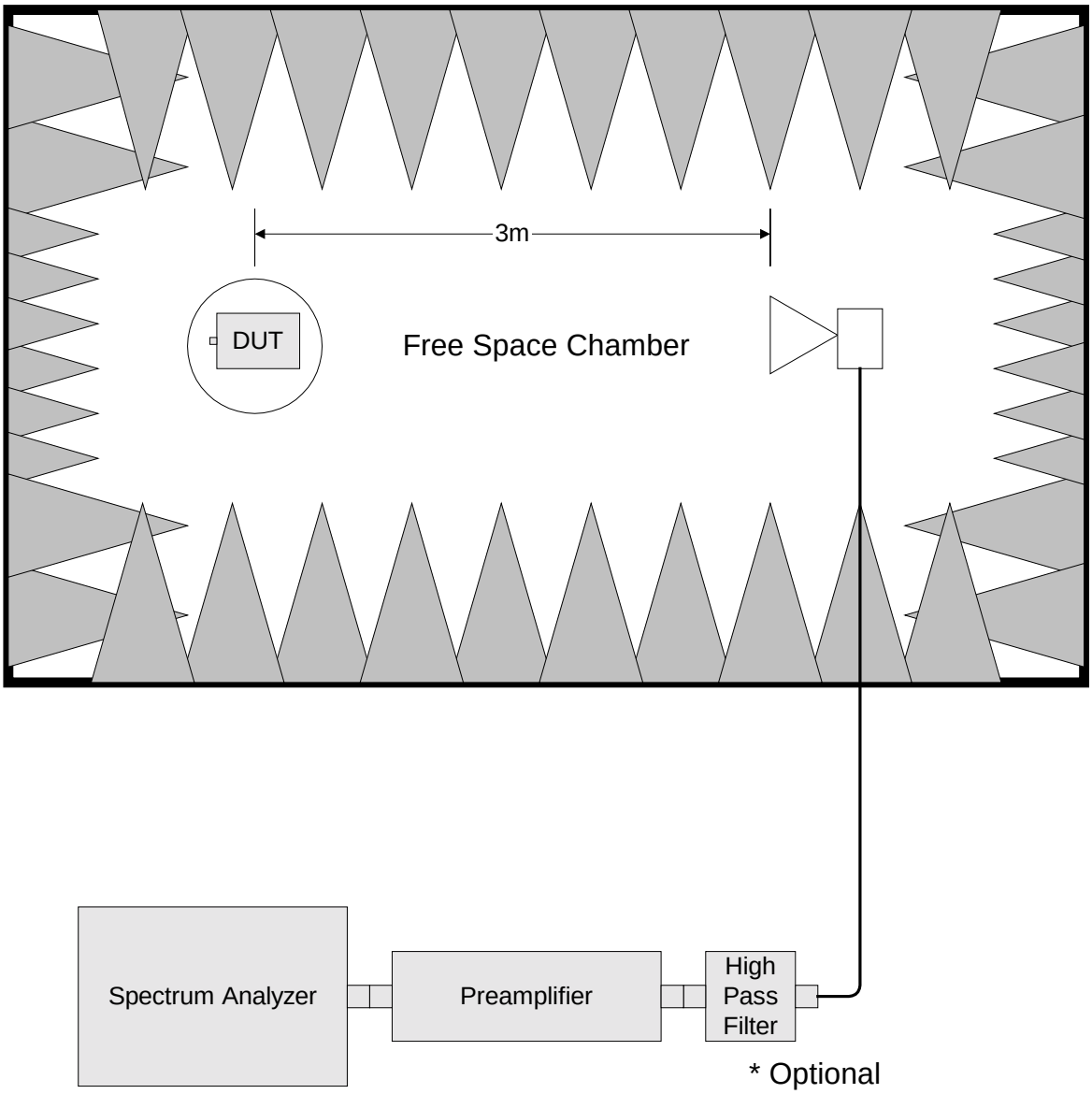


Para. No. 2.1051 Spurious Emissions at Antenna Terminals



Para. No. 2.1053 - Field Strength of Spurious Radiation




3m
DUT
Free Space Chamber
Spectrum Analyzer
Preamplifier
High
Pass
Filter
* Optional

Para. No. 2.1055 - Frequency Stability