DECLARATION OF COMPLIANCE
FCC PART 24(E) EMC MEASUREMENTS

Test Lab

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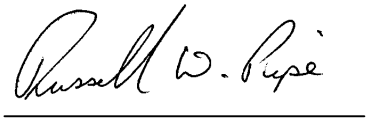
Applicant Information

HITACHI LTD.
6 Kanda, Surugadai 4 Chome
Chiyoda-ku, Tokyo 101
Japan

FCC Rule Part(s):	**47 CFR §24(E), §2**
Test Procedure(s):	**FCC 47 CFR §24(E), §2; ANSI TIA/EIA-603-A-2001**
FCC Device Classification:	**Part 24 Licensed Portable Transmitter held to ear (PCE)**
Device Type:	**PCS CDMA Phone / PDA Combination with Wireless Capabilities**
FCC ID:	**ABLSH-G1000**
Model(s):	**SH-G1000**
Tx Frequency Range:	**1851.25 - 1908.75 MHz**
Rx Frequency Range:	**1931.25 - 1988.75 MHz**
Max. RF Output Power:	**0.341 Watts EIRP (25.33 dBm)**
Conducted Power Tested:	**24.5 dBm (Max.)**
Emission Designator(s):	**1M25F9W**
Frequency Tolerance(s):	**150 Hz**
Antenna Type:	**Fixed Stubby**
Battery Type(s):	**3.7V Lithium-ion (Model: SH-G1000BAT)**

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in FCC 47 CFR §24(E), §2, and ANSI TIA/EIA-603-A-2001.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.



Russell Pipe
Senior Compliance Technologist
Celltech Labs Inc.

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FCC PART 24(E) EMC MEASUREMENT REPORT

1.1 SCOPE

Measurement and determination of electromagnetic emissions (EME) from radio frequency devices for compliance with the technical rules and regulations of the Federal Communications Commission.

1.2 GENERAL INFORMATION - §2.1033(a)

APPLICANT

HITACHI LTD.
6 Kanda, Surugadai 4 Chome
Chiyoda-ku, Tokyo 101
Japan

FCC ID	ABLSH-G1000
Model(s)	SH-G1000
EUT Type	PCS CDMA Phone / PDA Combination with Wireless Capabilities
FCC Rule Part(s)	47 CFR §24(E), §2
FCC Classification	Part 24 Licensed Portable Transmitter held to ear (PCE)
Tx Frequency Range	1851.25 - 1908.75 MHz
Rx Frequency Range	1931.25 - 1988.75 MHz
Max. RF Output Power	0.341 Watts EIRP (25.33 dBm)
Max. RF Conducted Output Power Tested	24.5 dBm
Emission Designator	1M25F9W
Frequency Tolerance	150 Hz
Battery Type(s)	3.7V Lithium-ion (Model: SH-G1000BAT)
Antenna Type	Fixed Stubby (Length: 34 mm)

2.1 RF OUTPUT POWER MEASUREMENT - §2.1046

The average and peak conducted power levels were measured with a Gigatronics 8652A Universal Power Meter using modulated average power mode. An offset was entered into the power meter to correct for the losses of the attenuator and cable installed before the sensor input. The transmitter terminal was coupled to the power meter and the EUT was placed in test mode via internal software. All subsequent tests were performed using the same tune-up procedures.

Conducted Power Measurement		
Frequency (MHz	**Average Power (dBm)**	**Peak Power (dBm)**
1851.25	24.5	28.28
1880.00	24.5	28.28
1908.75	24.5	28.28

3.1 SPURIOUS EMISSIONS AT ANTENNA TERMINAL - §2.1051

The EUT was placed in test mode via internal software in the “always up” power control mode. An offset was entered into the power meter to correct for all losses of the attenuator and cable installed before the sensor input. The level of the carrier and the various conducted spurious frequencies were measured by means of a calibrated spectrum analyzer. The resolution bandwidth and video bandwidth were set to 1MHz. The spectrum was scanned from 10MHz to 20GHz at the low, mid, and high channels. The radio transmitter was operating at maximum output power. The antenna output terminal of the EUT was connected to the input of a 50Ω spectrum analyzer through a matched 30dB attenuator and coaxial cable. The reported emissions were below the specified limit of -13dBm. The test plots are shown in Appendix A.

4.1 FIELD STRENGTH OF SPURIOUS RADIATION - §2.1053

Radiated and harmonic emissions were measured on a 3-meter open area test site using the Signal Substitution Method in accordance with ANSI TIA/EIA-603-A-2001. The EUT was placed into test mode via internal software in the “always up” power control mode. The EUT was placed on the turntable with the transmitter transmitting into a non-radiating load. A receiving antenna located 3 meters from the turntable received any signal radiated from the transmitter and its operating accessories. The receiving antenna was varied in height from 1 to 4 meters and the polarization was varied (horizontal and vertical) to determine the worst-case emission level. A standard gain horn antenna was substituted in place of the EUT. A CDMA signal was fed through a directional coupler to the antenna and the power at the coupler port was monitored. A signal generator and power amplifier controlled the antenna, and the input level of the antenna was adjusted to the same field strength level as the EUT. The feed point for the antenna was then connected to a calibrated power meter and the power was adjusted to read the same power at the coupler port previously recorded, this is to account for any mismatch in impedance, which may occur at the horn antenna. The conducted power at the antenna feed point was then recorded. The forward conducted power for the horn antenna was determined by measuring the power at the horn antenna feed point and reproducing the coupler power previously measured. The EIRP level was determined by adding the horn forward conducted power and the horn antenna gain. All spurious emissions from the lowest radio frequency generated in the equipment to the tenth harmonic of the carrier were investigated. The test data is shown on pages 7-9.

5.1 RADIATED MEASUREMENT TEST SETUP

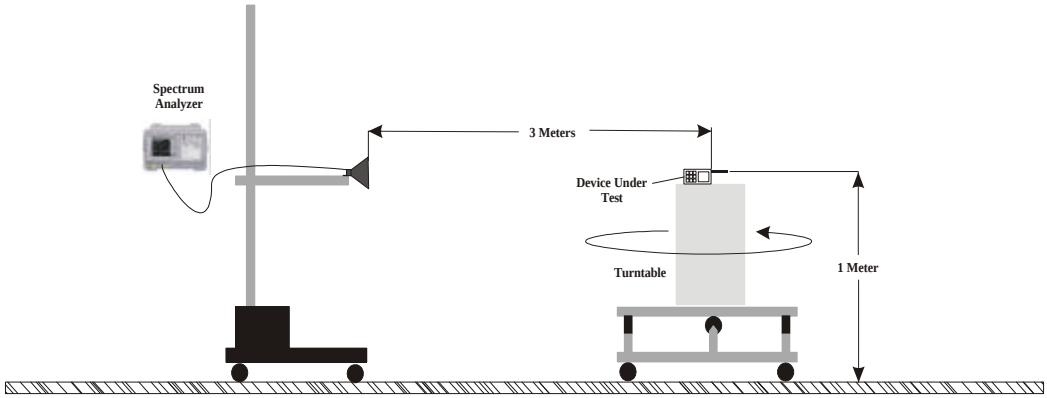


Figure 1. Radiated Measurement Test Setup Diagram

6.1 OCCUPIED BANDWIDTH - §2.1049, §24.238

The EUT was placed in test mode via internal software in the "always up" power control mode. The EUT was connected to the input of a 50Ω spectrum analyzer through a matched 30dB attenuator. The resolution bandwidth and video bandwidth were set to 1MHz or 1% of the emission bandwidth. The test plots are shown in Appendix A.

Specified Limits (as of February 18, 2003):

(a) On any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB.
(b) Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.
(c) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the licensee's frequency block edges, both upper and lower, as the design permits.
(d) The measurements of emission power can be expressed in peak or average values, provided they are expressed in the same parameters as the transmitter power.
(e) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

7.1 EMISSION DESIGNATOR - §2.202

CDMA BW = 1.25 MHz
F = Frequency Modulation
9 = Composite Digital Info
W = Combination Audio/Data Transmission

8.1 FREQUENCY STABILITY / TEMPERATURE VARIATION - §2.1055, §24.235

The minimum frequency stability shall be ±150Hz referenced to a received carrier frequency. This meets the requirement for operational accuracy of 0.00005% for digital mode. An HP 53181A Frequency Counter was used to measure the error in the fundamental frequency. The transmitter was set to maximum power at the center frequency of the band. The EUT was placed inside the temperature chamber. The test data is shown on page 10.

Measurement Method:

The frequency stability of the transmitter was measured by:

1. Temperature: The temperature was varied from -30°C to +60°C at intervals no more than 10°C throughout the temperature range using an environmental chamber. A period of time sufficient to stabilize all of the components in the equipment was allowed prior to each frequency measurement.
2. Primary Supply Voltage: The primary supply voltage was set at the specified nominal rating and reduced to the battery operating endpoint specified by the manufacturer. The voltage was measured at the terminals of the power supply or at the input to the cable normally provided with the equipment.

Time Period and Procedure:

1. The carrier frequency of the transmitter was measured at room temperature (25°C to 27°C to provide a reference).
2. The equipment was subjected to an overnight "soak" at -30°C without any power applied.
3. After the overnight "soak" at -30°C, the measurement of the carrier frequency of the transmitter was made within a three-minute interval after applying power to the transmitter.
4. Frequency measurements were made at 10°C intervals up to +60°C, then back to room temperature. A minimum period of one hour was provided to allow stabilization of the equipment at each temperature level.

9.1 EFFECTIVE ISOTROPIC RADIATED POWER OUTPUT - §24.232(b)

Measurement Summary

EIRP measurements were performed using the Signal Substitution Method in accordance with ANSI TIA/EIA-603-A-2001 on a 3-meter open area test site. The EUT was placed on a turntable 3-meters from the receive antenna and placed into test mode via internal software in the "always up" power control mode. The field of maximum intensity was found by rotating the EUT approximately 360 degrees and changing the height of the receive antenna from 1 to 4 meters. Once a peak was found the spectrum analyzer was set to peak hold and the value of the emission was extracted. The field strength was recorded for each channel being tested, and for both EUT antenna polarizations. A standard gain horn antenna was substituted in place of the EUT. A CDMA signal was fed through a directional coupler to the antenna and the power at the coupler port was monitored. A signal generator and power amplifier controlled the antenna, and the input level of the antenna was adjusted to the same field strength level as the EUT. The feed point for the antenna was then connected to a calibrated power meter and the power adjusted to read the same as the coupler port previously recorded, this is to account for any mismatch in impedance, which may occur at the horn antenna. The conducted power at the antenna feed point was recorded. The forward conducted power for the horn antenna was determined by measuring the power at the horn antenna feed point and reproducing the coupler power previously measured. The EIRP level was determined by adding the horn forward conducted power and the horn antenna gain.

Measurement Data

Freq. Tuned	EUT Conducted Power	Maximum Field Strength of EUT (dBm)		Horn Gain	Horn Forward Conducted Power	EIRP of EUT Horn Gain + Horn Forward Conducted Power	
MHz	dBm	V	H	dBi	dBm	dBm	Watts
1851.25	24.5	-20.21	-13.78	6.55	16.65	23.20	0.209
1880.00	24.5	-19.86	-13.31	6.58	18.41	24.99	0.316
1908.75	24.5	-19.99	-13.42	6.61	18.72	25.33	0.341

10.1 FIELD STRENGTH OF SPURIOUS RADIATION - §2.1053

Operating Frequency (MHz): 1851.25
Channel: 25 (Low)
EUT Conducted Pwr. (dBm): 24.5
Measured EIRP (dBm): 23.20
Mode: PCS CDMA
Distance: 3 Meters
Limit: 43 + 10 log (W) = 36.20 dBc

Frequency	Field Strength of Spurious Radiation	Horn Forward Conducted Power	Standard Gain Horn Antenna Gain	POL	EIRP	ERP	dBc
MHz	dBm	dBm	dBi	H/V	dBm	dBm	
3702.50	-87.08	-54.19	6.6	H	-47.59	-49.73	72.93
5553.75	-86.30	-48.50	7.8	H	-40.70	-42.84	66.04
7405.00	-83.44	-46.86	7.8	H	-39.06	-41.20	64.40
9256.25	-84.64	-46.62	7.6	H	-39.02	-41.16	64.36
11107.50	-85.79	-49.43	8.5	H	-40.93	-43.07	66.27
12958.75	-83.99	-46.11	8.8	H	-37.31	-39.45	62.65
14810.00	-84.73	-46.85	9.6	H	-37.25	-39.39	62.59
16661.25	-81.79	-43.96	9.0	H	-34.96	-37.10	60.30
18512.50	-83.23	-47.02	9.3	H	-37.72	-39.86	63.06

Notes:
1. Radiated spurious measurements were performed using the Signal Substitution Method per ANSI/TIA/EIA-603-A-2001.
2. All other spurious emissions generated from the lowest frequency of the EUT to the tenth harmonic were investigated and found to be below the magnitude of each harmonic level.
3. Spurious emissions more than 20 dB below the limit are reported, though not required per §2.1051.

FIELD STRENGTH OF SPURIOUS RADIATION - §2.1053

Operating Frequency (MHz): 1880.00
Channel: 600 (Mid)
EUT Conducted Pwr. (dBm): 24.5
Measured EIRP (dBm): 24.99
Mode: PCS CDMA
Distance: 3 Meters
Limit: 43 + 10 log (W) = 38.00 dBc

Frequency	Field Strength of Spurious Radiation	Horn Forward Conducted Power	Standard Gain Horn Antenna Gain	POL	EIRP	ERP	dBc
MHz	dBm	dBm	dBi	H/V	dBm	dBm	
3760.00	-86.69	-53.80	6.6	H	-47.20	-49.34	74.33
5640.00	-86.37	-48.57	7.8	H	-40.77	-42.91	67.90
7520.00	-85.12	-48.54	7.8	H	-40.74	-42.88	67.87
9400.00	-85.35	-47.33	7.6	H	-39.73	-41.87	66.86
11280.00	-85.23	-48.87	8.5	H	-40.37	-42.51	67.50
13160.00	-80.02	-42.14	8.8	H	-33.34	-35.48	60.47
15040.00	-82.76	-44.88	9.6	H	-35.28	-37.42	62.41
16920.00	-83.84	-46.01	9.0	H	-37.01	-39.15	64.14
18800.00	-85.65	-49.44	9.3	H	-40.14	-42.28	67.27

Notes:
1. Radiated spurious measurements were performed using the Signal Substitution Method per ANSI/TIA/EIA-603-A-2001.
2. All other spurious emissions generated from the lowest frequency of the EUT to the tenth harmonic were investigated and found to be below the magnitude of each harmonic level.
3. Spurious emissions more than 20 dB below the limit are reported, though not required per §2.1051.

FIELD STRENGTH OF SPURIOUS RADIATION - §2.1053

Operating Frequency (MHz): 1908.75
Channel: 1175 (High)
EUT Conducted Pwr. (dBm): 24.5
Measured EIRP (dBm): 25.33
Mode: PCS CDMA
Distance: 3 Meters
Limit: 43 + 10 log (W) = 38.33 dBc

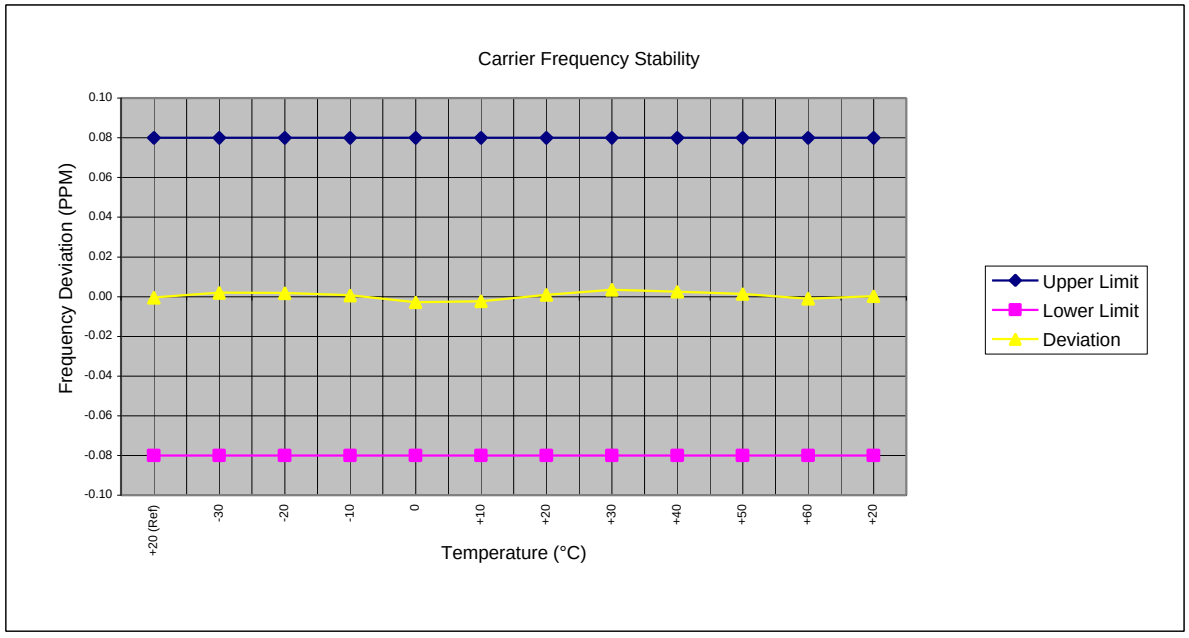
Frequency	Field Strength of Spurious Radiation	Horn Forward Conducted Power	Standard Gain Horn Antenna Gain	POL	EIRP	ERP	dBc
MHz	dBm	dBm	dBi	H/V	dBm	dBm	
3817.50	-86.25	-53.36	6.6	H	-46.76	-48.90	74.23
5726.25	-87.34	-49.54	7.8	H	-41.74	-43.88	69.21
7635.00	-85.32	-48.74	7.8	H	-40.94	-43.08	68.41
9543.75	-85.42	-47.40	7.6	H	-39.80	-41.94	67.27
11452.50	-85.51	-49.15	8.5	H	-40.65	-42.79	68.12
13361.25	-84.14	-46.26	8.8	H	-37.46	-39.60	64.93
15270.00	-79.44	-41.56	9.6	H	-31.96	-34.10	59.43
17178.75	-82.38	-44.55	9.0	H	-35.55	-37.69	63.02
19087.50	-81.91	-45.70	9.3	H	-36.40	-38.54	63.87

Notes:
1. Radiated spurious measurements were performed using the Signal Substitution Method per ANSI/TIA/EIA-603-A-2001.
2. All other spurious emissions generated from the lowest frequency of the EUT to the tenth harmonic were investigated and found to be below the magnitude of each harmonic level.
3. Spurious emissions more than 20 dB below the limit are reported, though not required per §2.1051.

11.1 FREQUENCY STABILITY - §24.235

Carrier Frequency (GHz): 1.88
Channel: 600
Mode: PCS CDMA
Deviation Limit (PPM): 0.08

Temperature	Voltage	Power	Carrier Frequency Deviation		Specification	
(°C)	(%)	(VDC)	(Hz)	(PPM)	Lower Limit (PPM)	Upper Limit (PPM)
+20 (Ref)	100	5.0	-0.70	0.000	0.08	-0.08
-30	100	5.0	3.80	0.002	0.08	-0.08
-20	100	5.0	3.50	0.002	0.08	-0.08
-10	100	5.0	1.40	0.001	0.08	-0.08
0	100	5.0	-5.30	-0.003	0.08	-0.08
+10	100	5.0	-4.30	-0.002	0.08	-0.08
+20	100	5.0	1.80	0.001	0.08	-0.08
+30	100	5.0	6.70	0.004	0.08	-0.08
+40	100	5.0	4.80	0.003	0.08	-0.08
+50	100	5.0	2.60	0.001	0.08	-0.08
+60	100	5.0	-1.80	-0.001	0.08	-0.08
+20	Battery Endpoint	3.7	0.50	0.000	0.08	-0.08



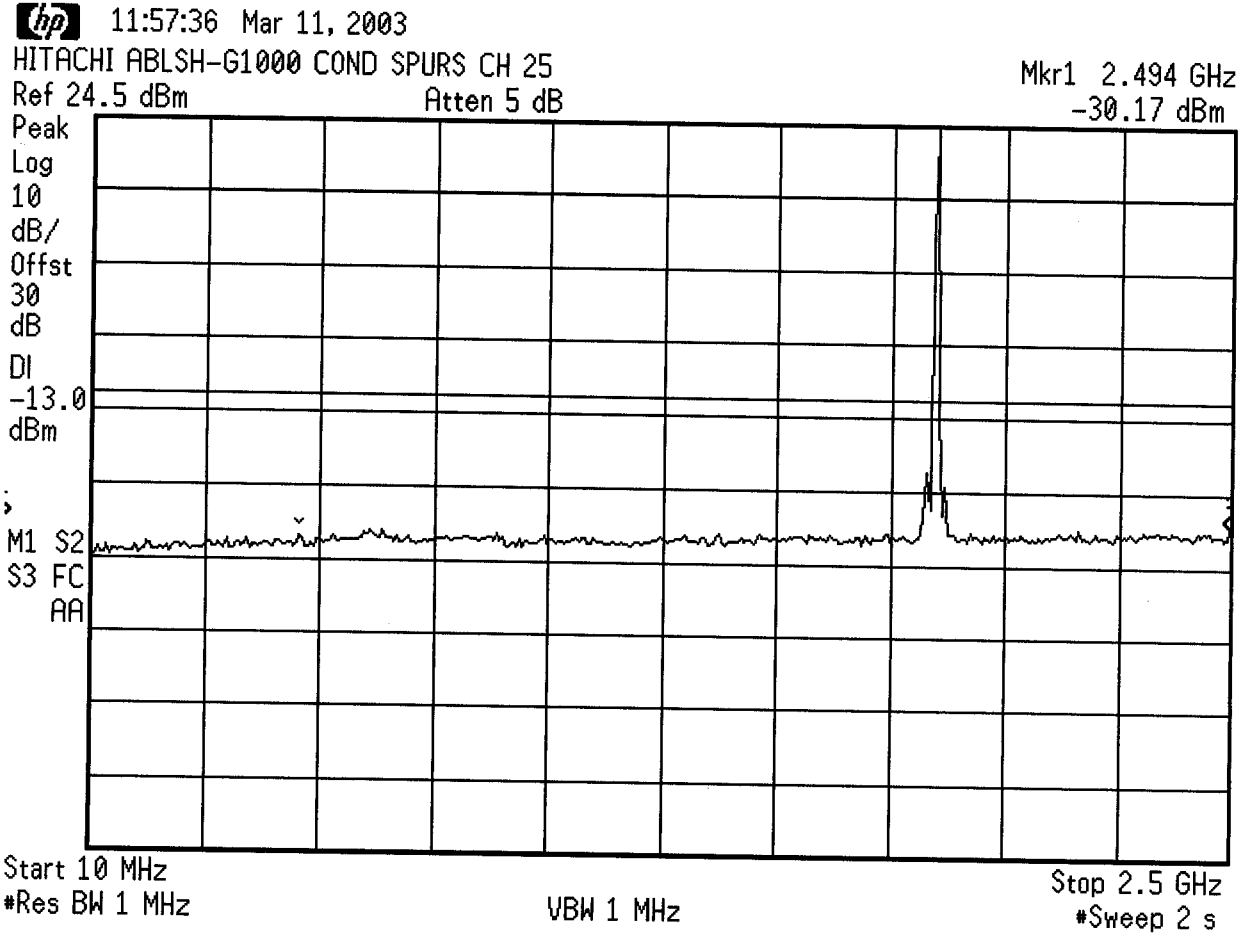
12.1 TEST EQUIPMENT LIST

TEST EQUIPMENT LIST			
Equipment Type	**Model**	**Serial No.**	**Calibration Due Date**
HP Signal Generator	8648D (9kHz-4.0GHz)	3847A00611	Feb 2004
Rohde & Schwarz Signal Generator	SMR40 (10MHz-40GHz)	835537/022	Nov 2003
Gigatronics Power Meter	8652A	1835272	Feb 2004
Gigatronics Power Sensor	80701A (0.05-18GHz)	1833535	Feb 2004
Gigatronics Power Sensor	80701A (0.05-18GHz)	1833542	Feb 2004
Amplifier Research Power Amp.	5S1G4 (5W, 800MHz-4.2GHz)	26235	N/A
Microwave System Amplifier	HP 83017A (0.5-26.5GHz)	3123A00587	N/A
Network Analyzer	HP 8753E (30kHz-3GHz)	US38433013	Feb 2004
Audio Analyzer	HP 8903B	3729A18691	Nov 2003
Modulation Analyzer	HP 8901A	3749A07154	July 2003
Frequency Counter	HP 53181A (3GHz)	3736A05175	May 2003
DC Power Supply	HP E3611A	KR83015294	N/A
Multi-Device Controller	EMCO 2090	9912-1484	N/A
Mini Mast	EMCO 2075	0001-2277	N/A
Turntable	EMCO 2080-1.2/1.5	0002-1002	N/A
Double Ridged Horn Antenna	ETS 3115 (1-18GHz)	6267	Oct. 2003
Double Ridged Horn Antenna	ETS 3115 (1-18GHz)	6276	Oct. 2003
Horn Antenna	Chase BBHA 9120-A (0.7-4.8GHz)	9120A-239	Sept 2003
Horn Antenna	Chase BBHA 9120-A (0.7-4.8GHz)	9120A-240	Sept 2003
Roberts Dipoles	Compliance Design (2 sets) 3121C		June 2003
Spectrum Analyzer	HP 8594E	3543A02721	Feb 2004
Spectrum Analyzer	HP E4408B	US39240170	Nov 2003
Shielded Screen Room	Lindgren R.F. 18W-2/2-0	16297	N/A
Environmental Chamber	ESPEC ECT-2 (Temperature/Humidity)	0510154-B	Feb 2004

13.1 CONCLUSION

The data in this measurement report shows that the HITACHI LTD. FCC ID: ABLSH-G1000 PCS CDMA Phone / PDA Combination with Wireless Capabilities Model: SH-G1000 complies with the requirements of FCC Rule Parts §24(E) and §2.

APPENDIX A - TEST PLOTS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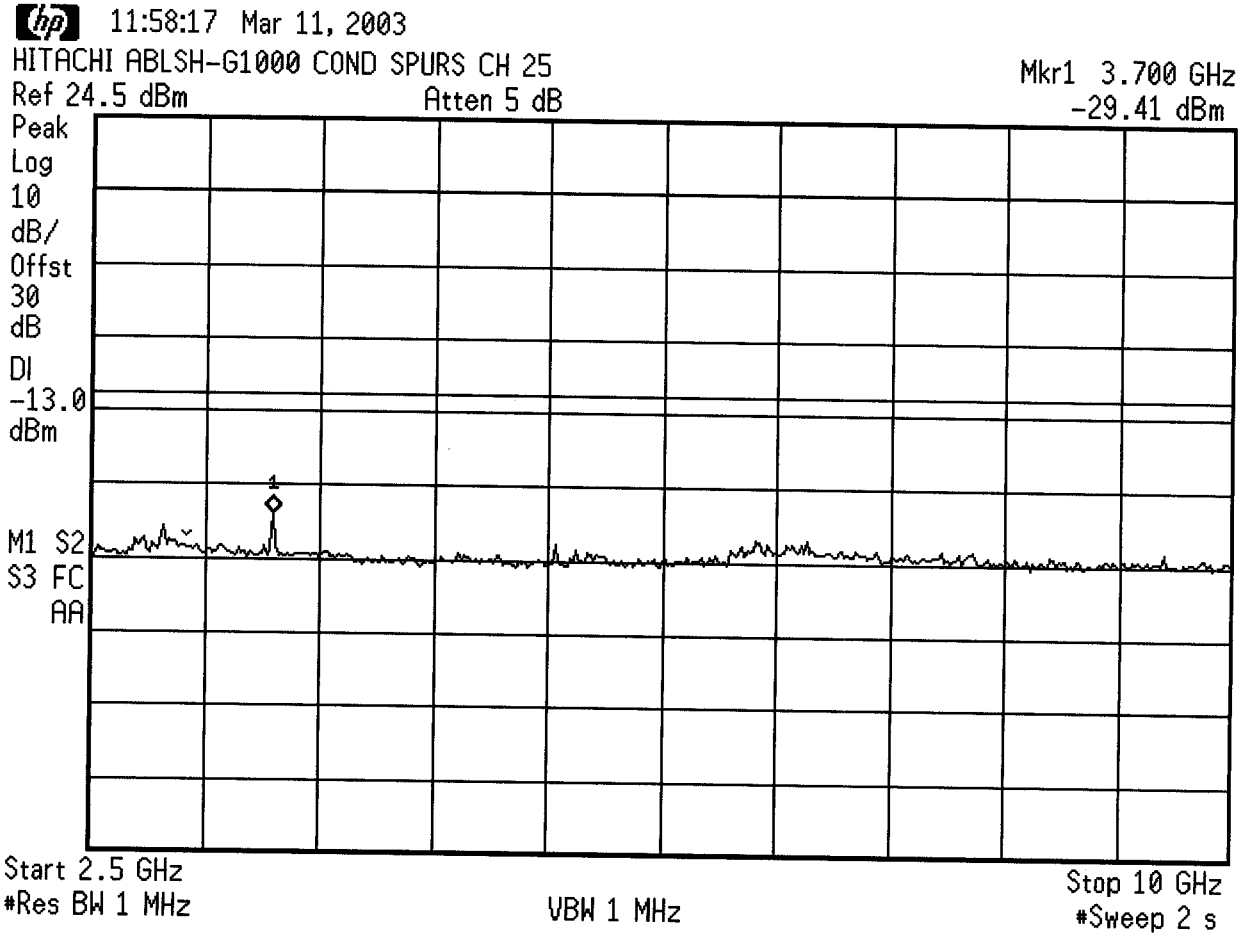
Ref 24.5 dBm
Atten 5 dB
Mkr1 2.494 GHz
-30.17 dBm
Peak
Log
10
dB/
Offst
30
dB
Dl
-13.0
dBm
M1 S2
S3 FC
AA
Start 10 MHz
#Res BW 1 MHz
VBW 1 MHz
Stop 2.5 GHz
#Sweep 2 s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Atten 5 dB
Mkr1 3.700 GHz
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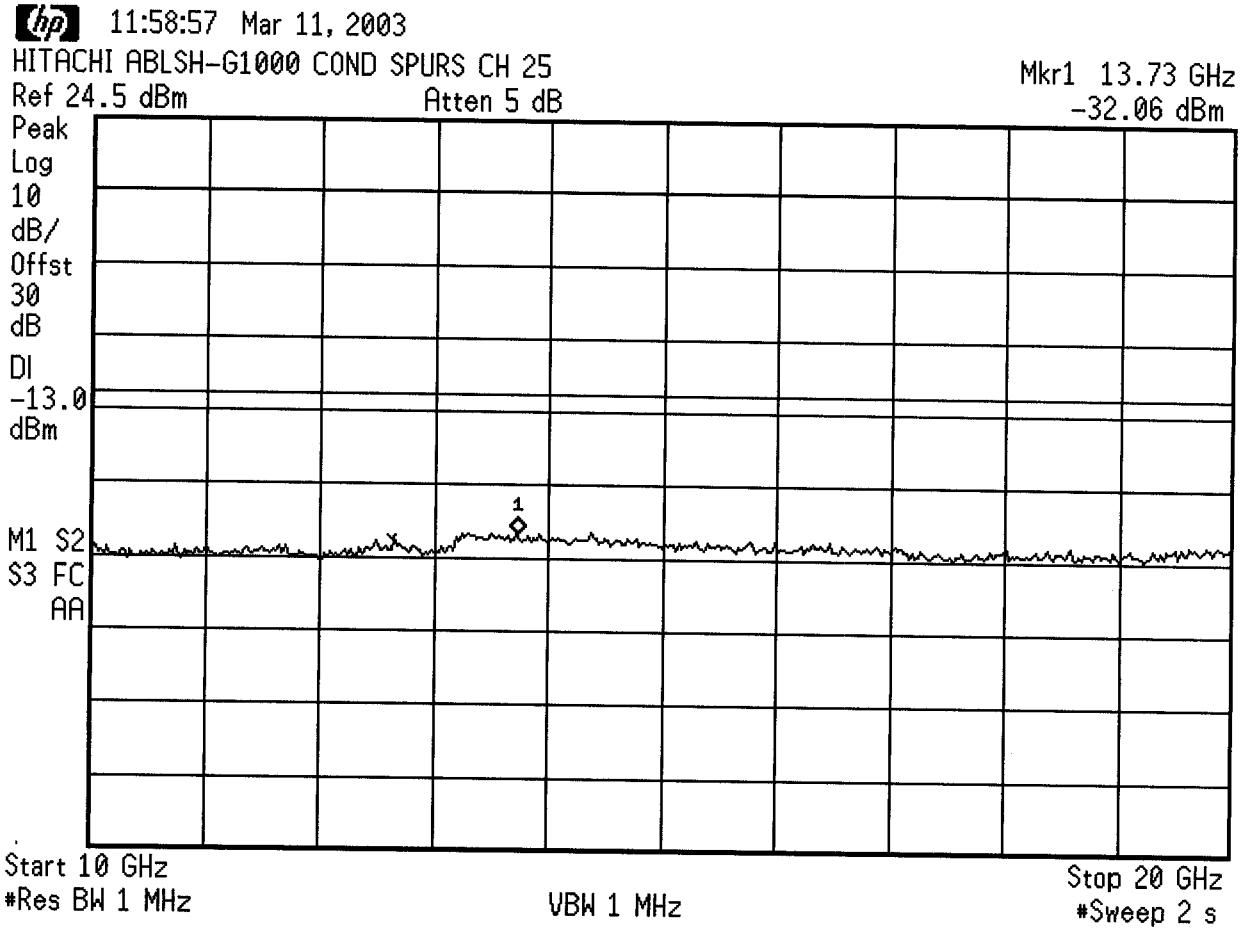
Peak
Log
10
dB/
Offst
30
dB
Dl
-13.0
dBm
M1 S2
S3 FC
AA
Start 2.5 GHz
#Res BW 1 MHz
VBW 1 MHz
Stop 10 GHz
#Sweep 2 s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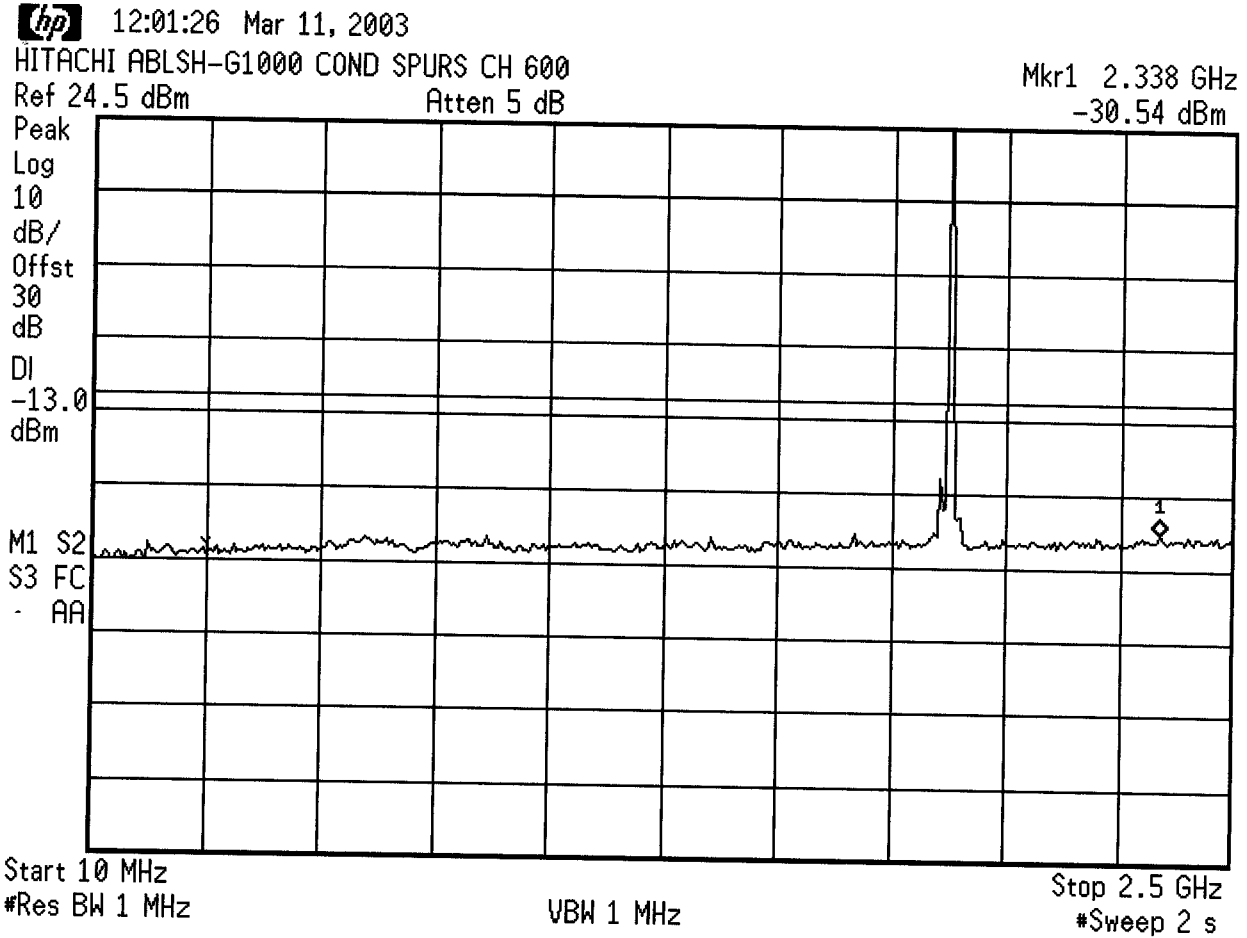
Ref 24.5 dBm
Atten 5 dB
Mkr1 13.73 GHz
-32.06 dBm
Peak
Log
10
dB/
Offst
30
dB
Dl
-13.0
dBm
M1 S2
S3 FC
AA
1
Start 10 GHz
#Res BW 1 MHz
VBW 1 MHz
Stop 20 GHz
#Sweep 2 s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Ref 24.5 dBm
Atten 5 dB
Mkr1 2.338 GHz
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Peak
Log
10
dB/
Offst
30
dB
Dl
-13.0
dBm
M1 S2
S3 FC
AA
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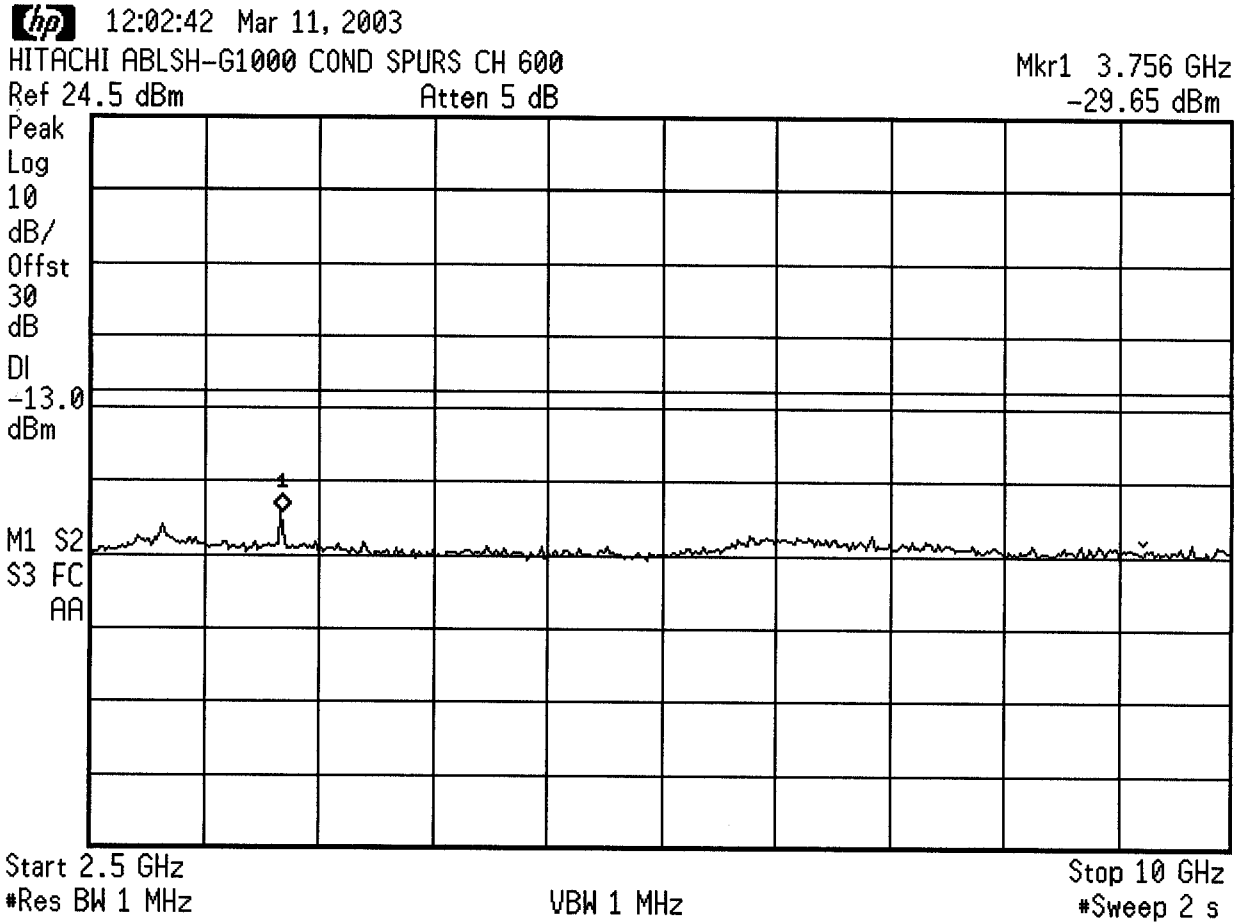
Start 10 MHz
#Res BW 1 MHz
VBW 1 MHz
Stop 2.5 GHz
#Sweep 2 s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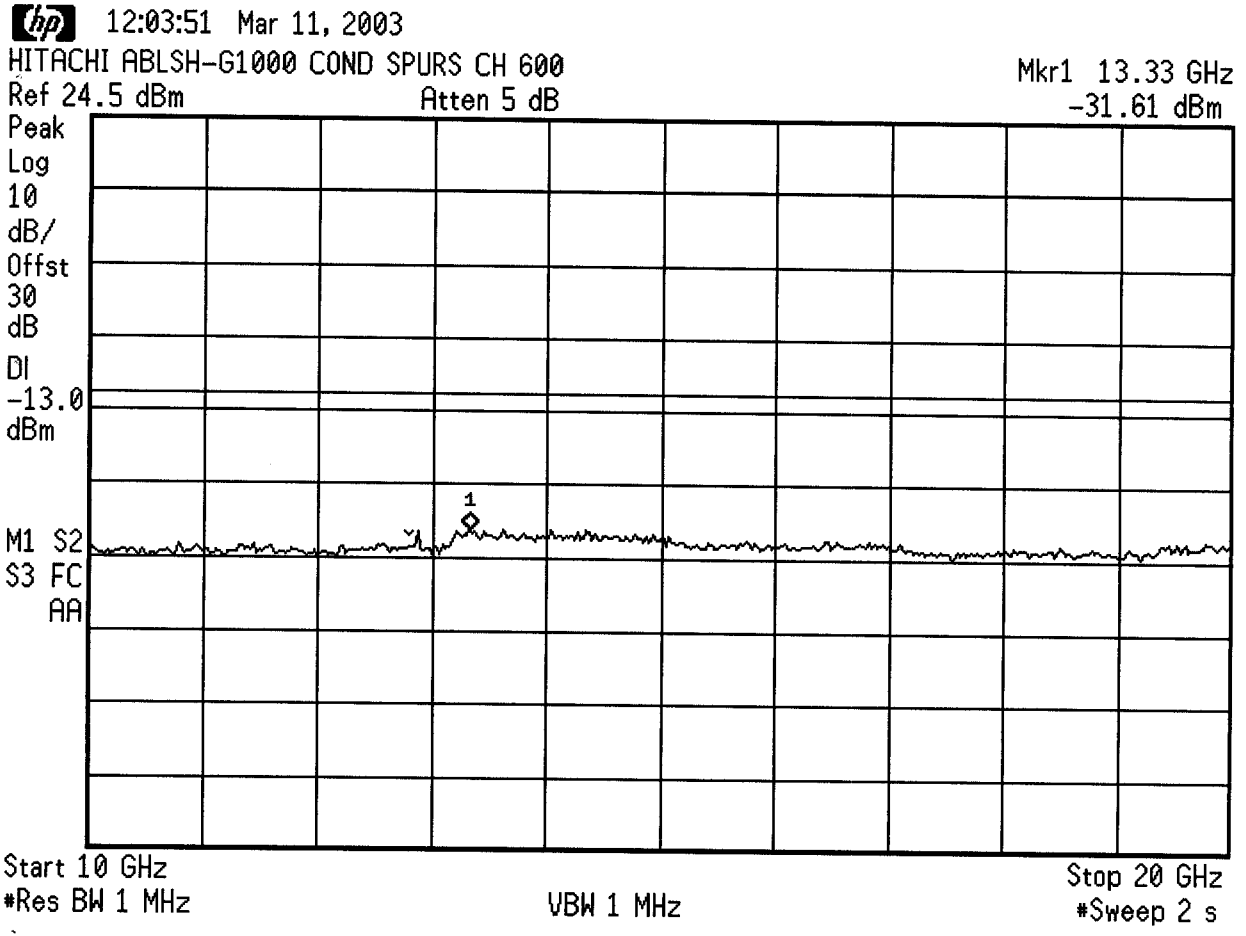
Atten 5 dB
Mkr1 3.756 GHz
-29.65 dBm
Peak
Log
10
dB/
Offst
30
dB
Dl
-13.0
dBm
M1 S2
S3 FC
AA
Start 2.5 GHz
#Res BW 1 MHz
VBW 1 MHz
Stop 10 GHz
#Sweep 2 s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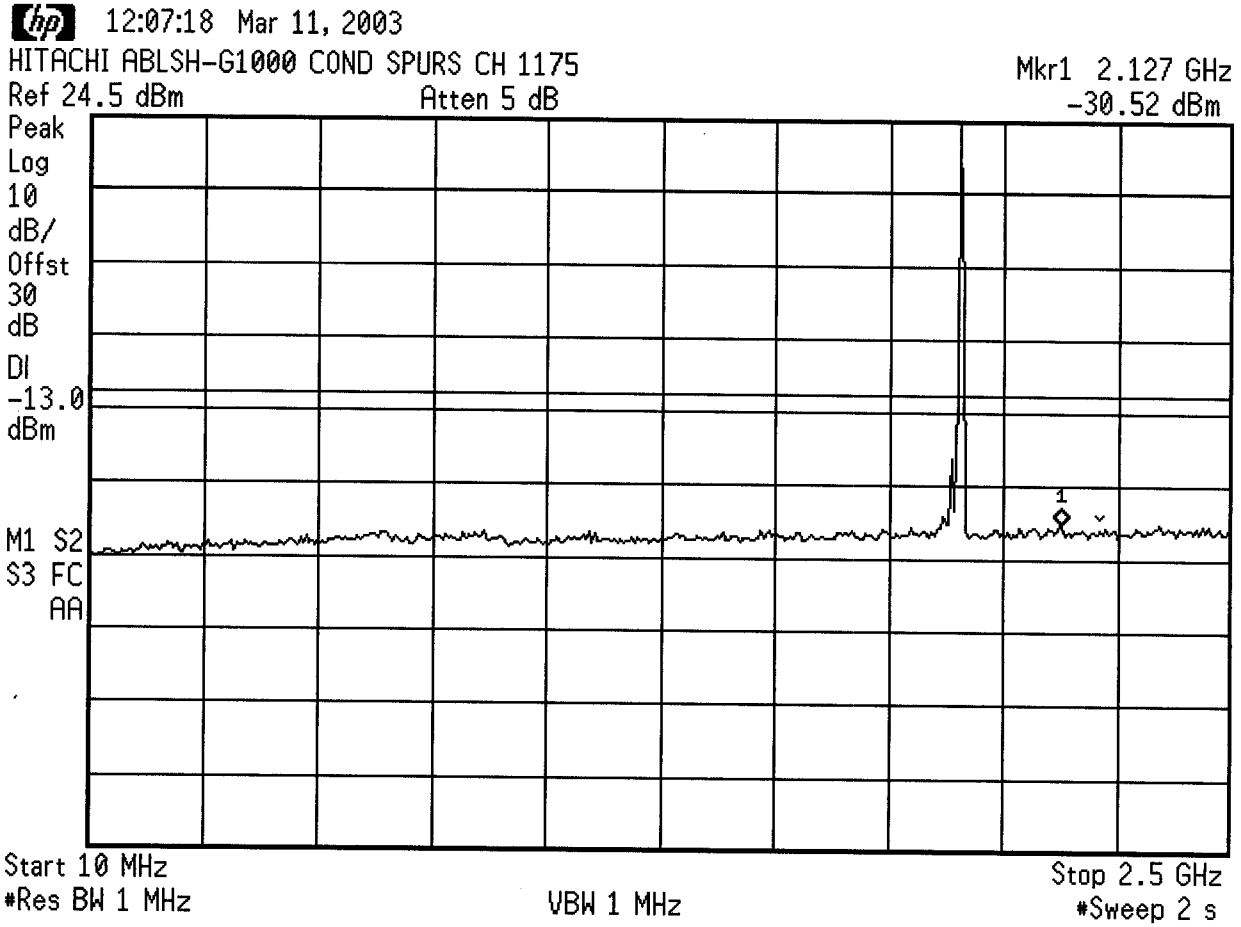
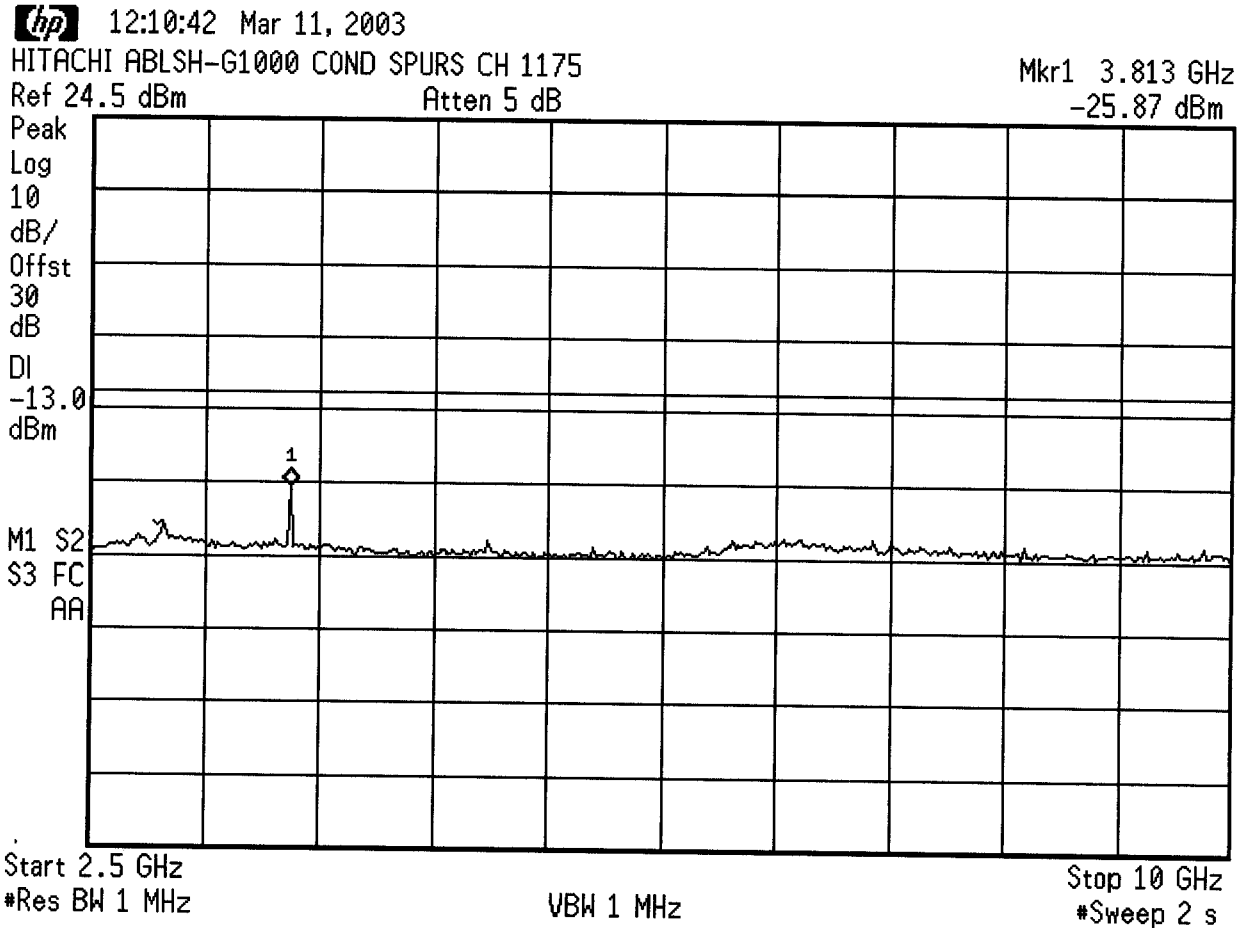
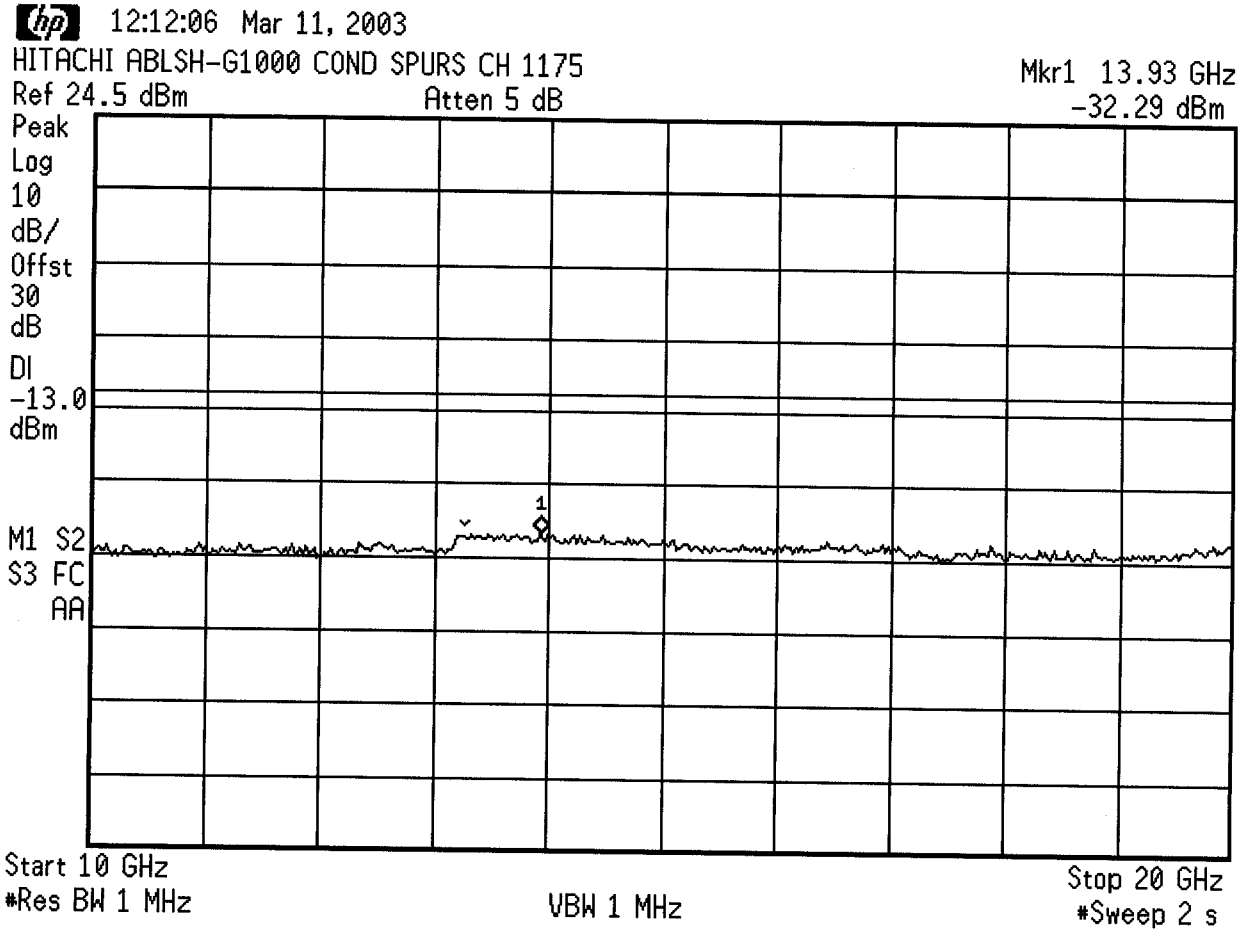
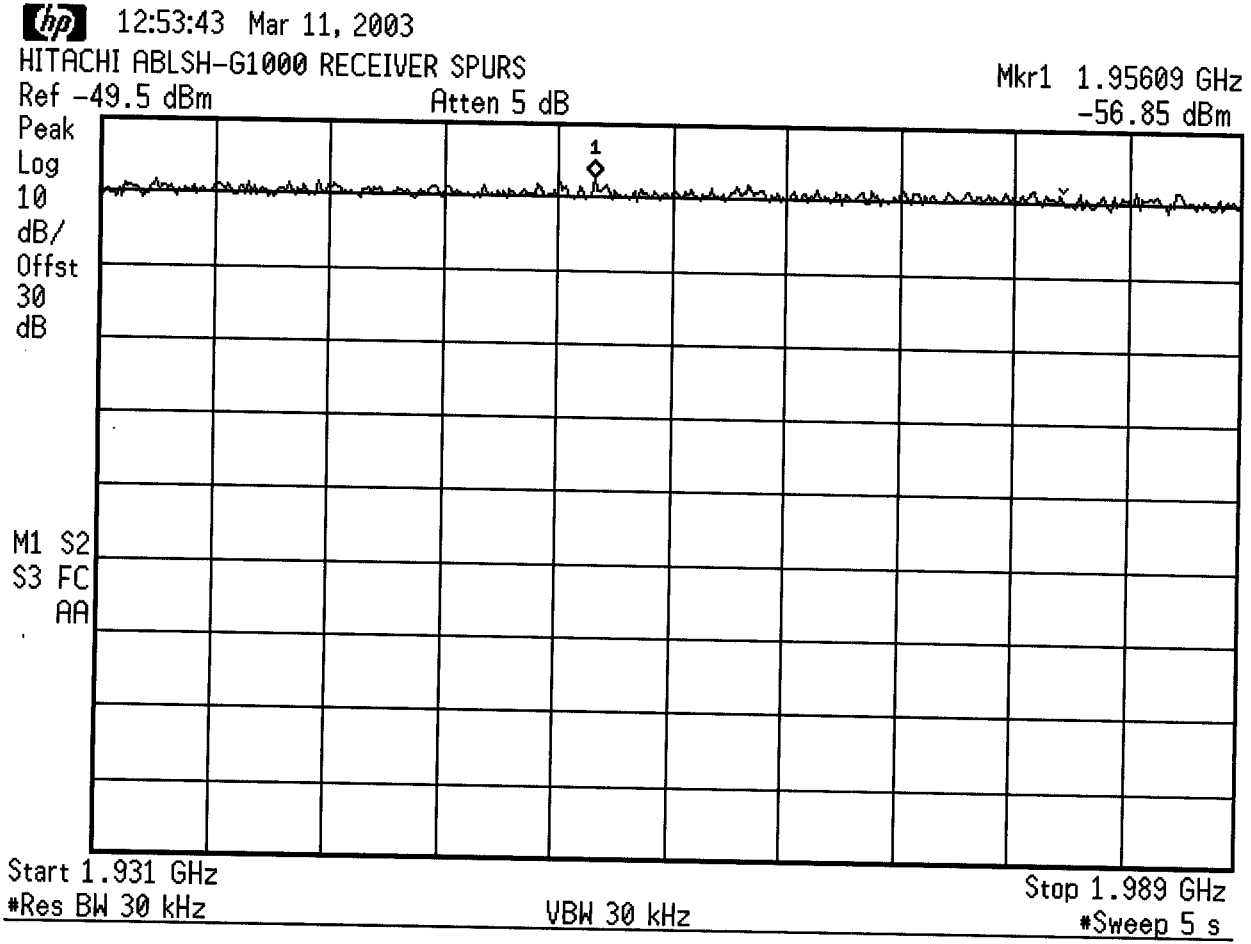
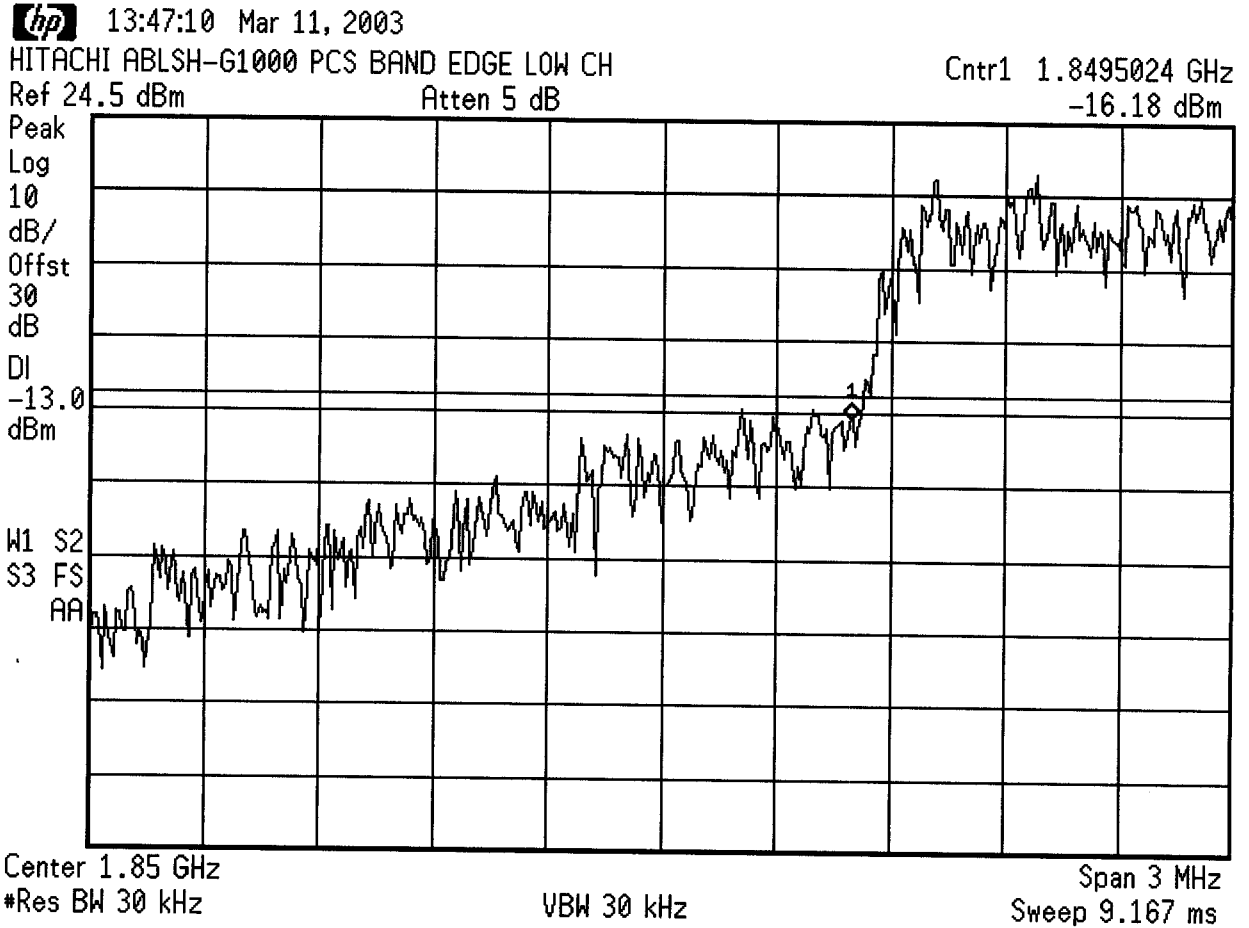
Atten 5 dB
Mkr1 13.33 GHz
-31.61 dBm
Peak
Log
10
dB/
Offst
30
dB
Dl
-13.0
dBm
M1 S2
S3 FC
AA
1
Start 10 GHz
#Res BW 1 MHz
VBW 1 MHz
Stop 20 GHz
#Sweep 2 s

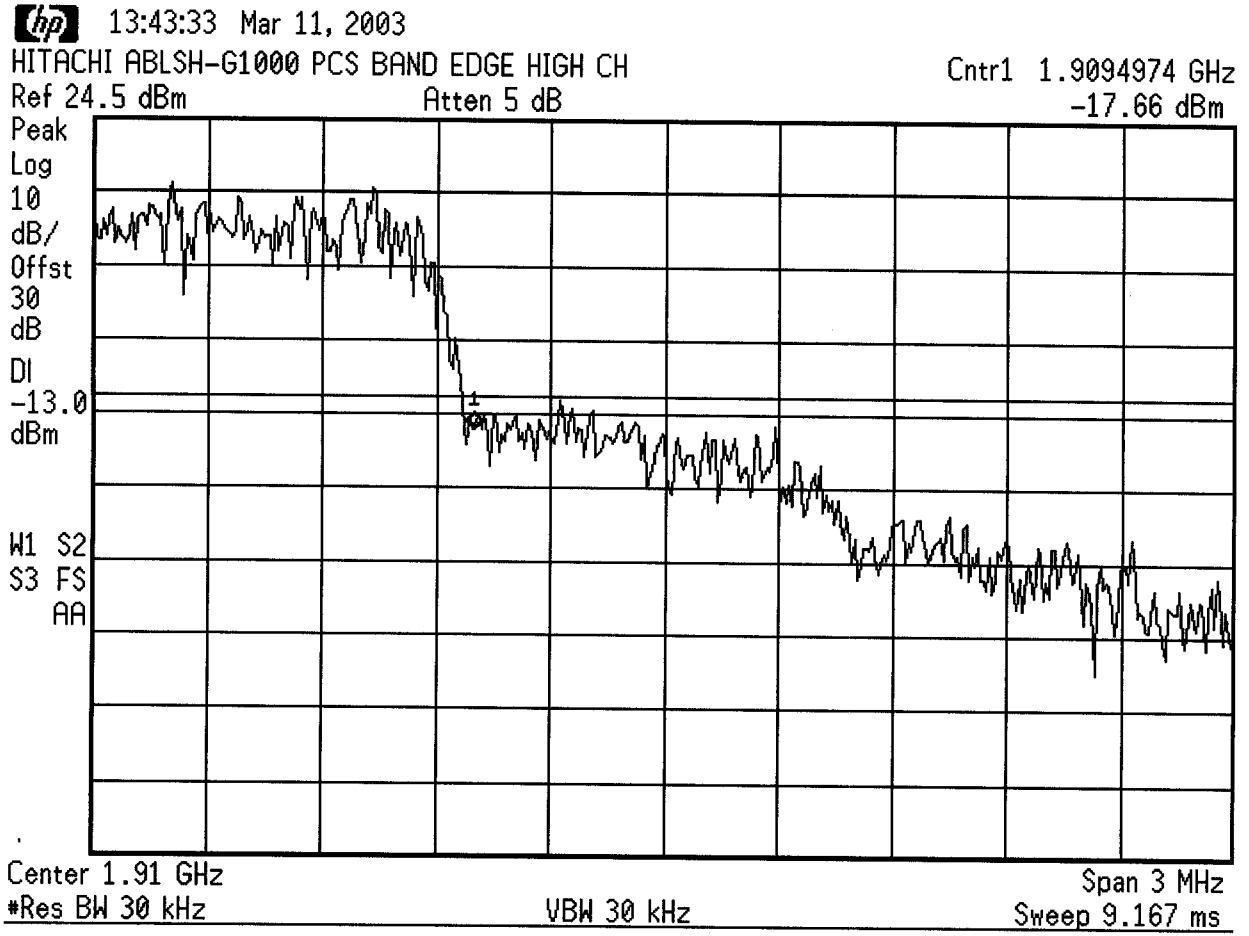

12:07:18 Mar 11, 2003
HITACHI ABLSH-G1000 COND SPURS CH 1175
Ref 24.5 dBm
Atten 5 dB
Mkr1 2.127 GHz
-30.52 dBm
Peak
Log
10
dB/
Offst
30
dB
Dl
-13.0
dBm
M1 S2
S3 FC
AA
1
Start 10 MHz
#Res BW 1 MHz
VBW 1 MHz
Stop 2.5 GHz
#Sweep 2 s

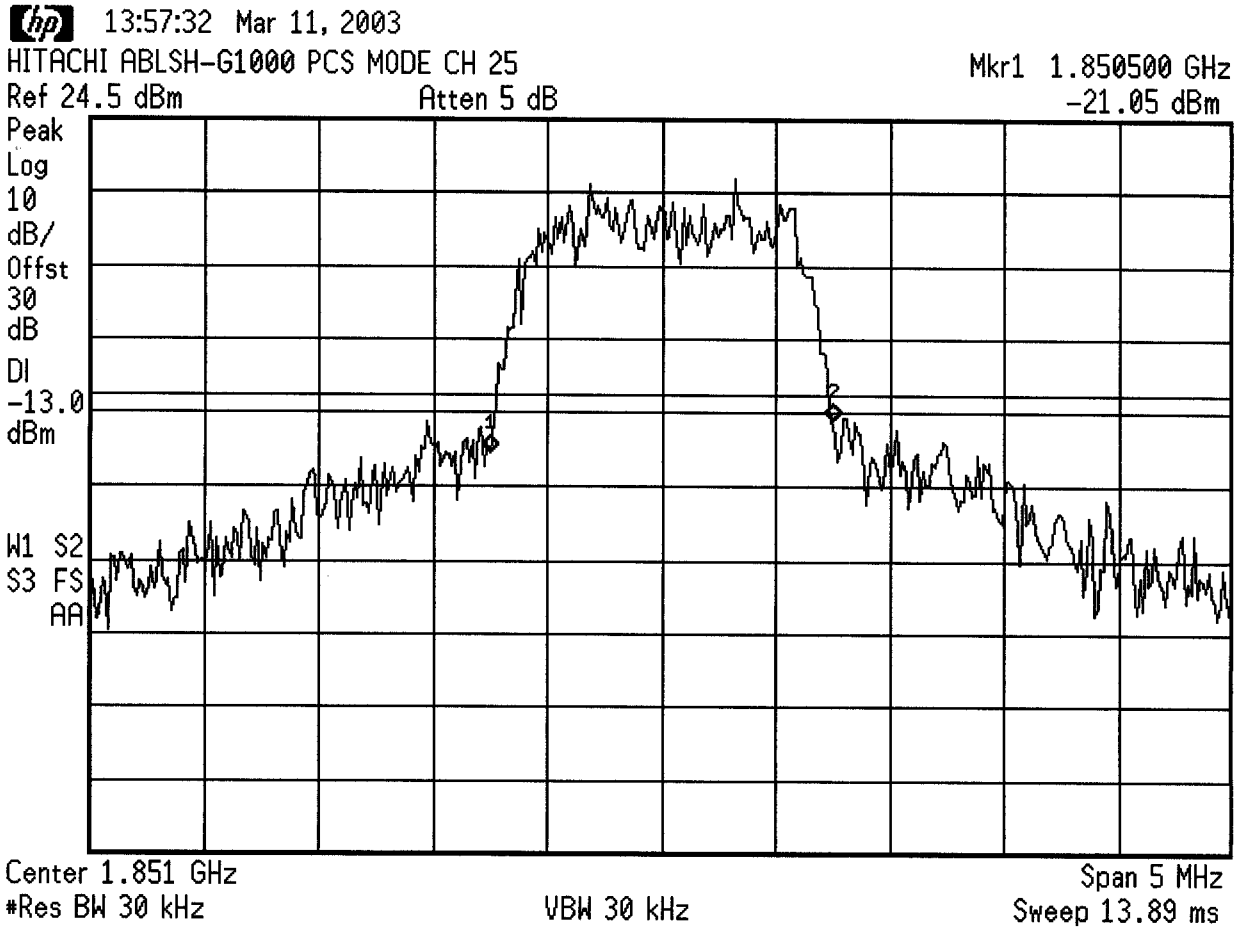

12:10:42 Mar 11, 2003
HITACHI ABLSH-G1000 COND SPURS CH 1175
Ref 24.5 dBm
Atten 5 dB
Mkr1 3.813 GHz
-25.87 dBm
Peak
Log
10
dB/
Offst
30
dB
Dl
-13.0
dBm
1
M1 S2
S3 FC
AA
Start 2.5 GHz
#Res BW 1 MHz
VBW 1 MHz
Stop 10 GHz
#Sweep 2 s

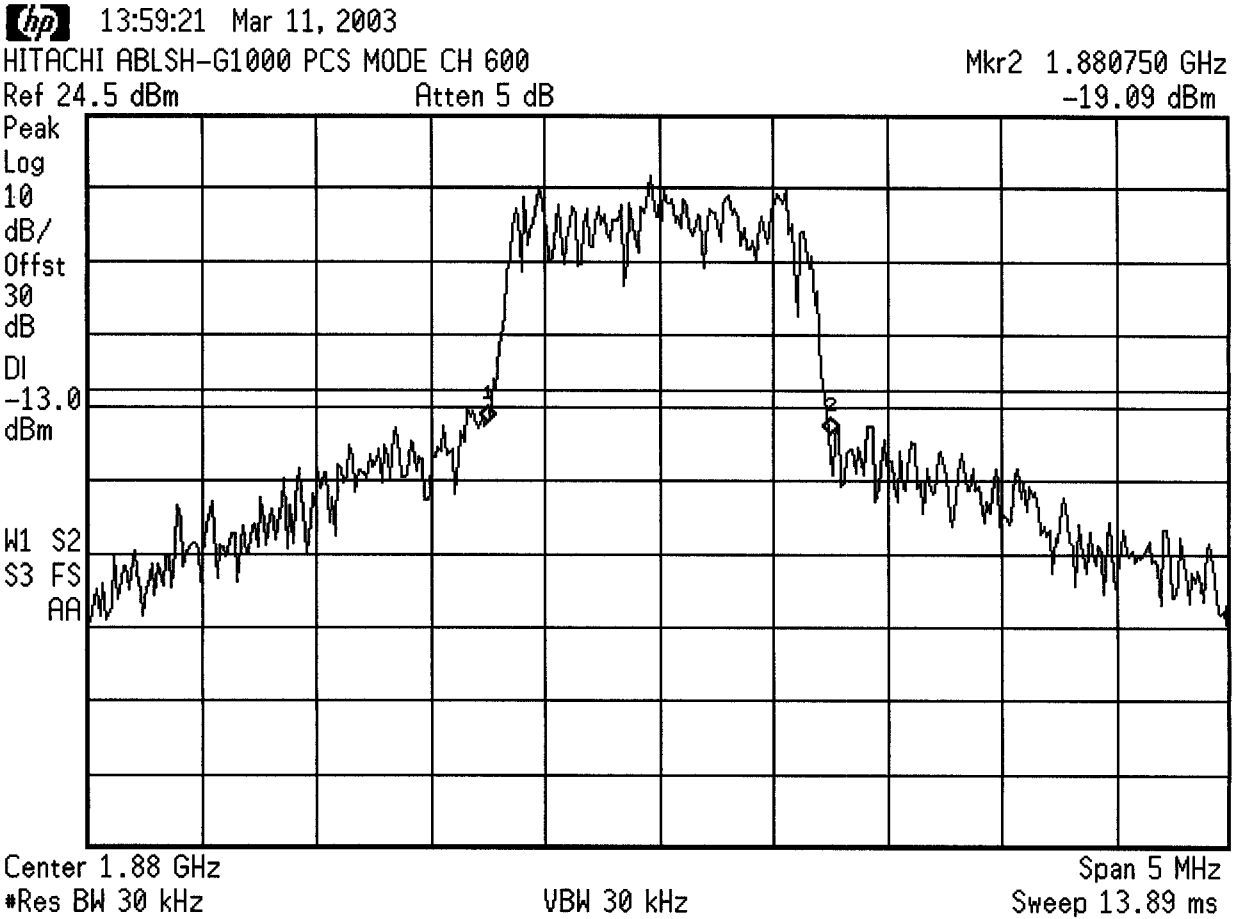

12:12:06 Mar 11, 2003
HITACHI ABLSH-G1000 COND SPURS CH 1175
Ref 24.5 dBm
Atten 5 dB
Mkr1 13.93 GHz
-32.29 dBm
Peak
Log
10
dB/
Offst
30
dB
Dl
-13.0
dBm
M1 S2
S3 FC
AA
1
Start 10 GHz
#Res BW 1 MHz
VBW 1 MHz
Stop 20 GHz
#Sweep 2 s

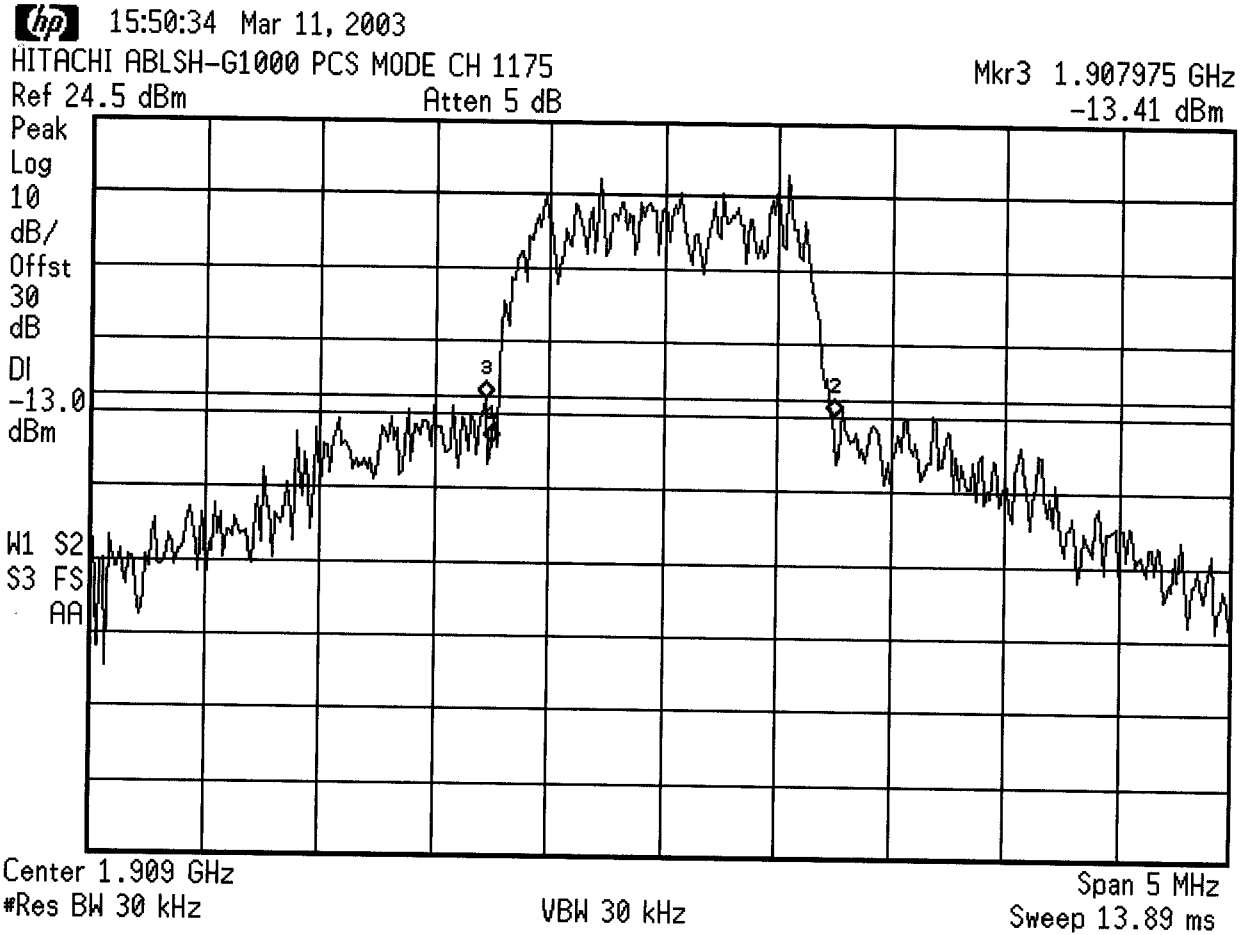

12:53:43 Mar 11, 2003
HITACHI ABLSH-G1000 RECEIVER SPURS
Ref -49.5 dBm
Atten 5 dB
Mkr1 1.95609 GHz
-56.85 dBm
Peak
Log
10
dB/
Offst
30
dB
1
M1 S2
S3 FC
AA
Start 1.931 GHz
#Res BW 30 kHz
VBW 30 kHz
Stop 1.989 GHz
#Sweep 5 s


13:47:10 Mar 11, 2003
HITACHI ABLSH-G1000 PCS BAND EDGE LOW CH
Cntr1 1.8495024 GHz
Ref 24.5 dBm
Atten 5 dB
-16.18 dBm
Peak
Log
10
dB/
Offst
30
dB
Dl
-13.0
dBm
1
W1 S2
S3 FS
AA
Center 1.85 GHz
#Res BW 30 kHz
VBW 30 kHz
Span 3 MHz
Sweep 9.167 ms

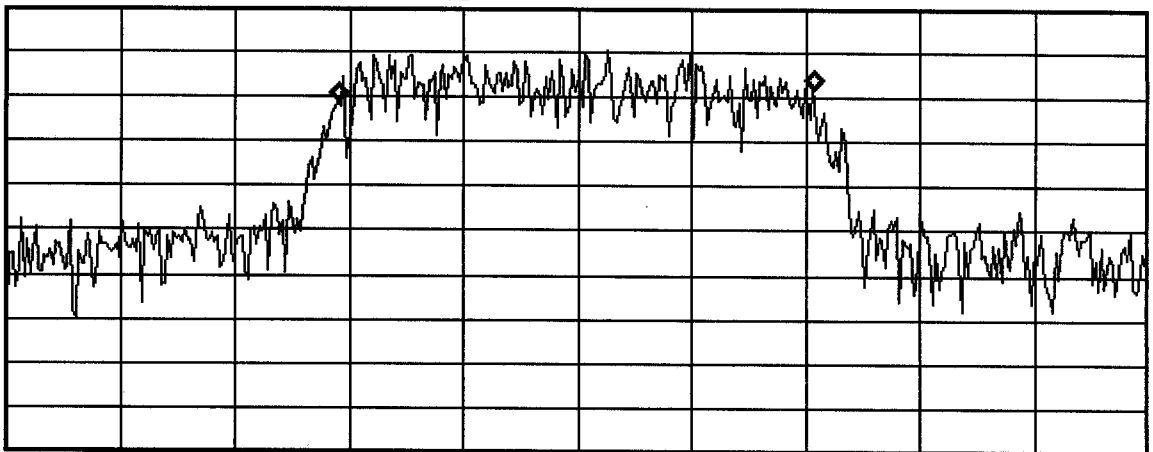

13:43:33 Mar 11, 2003
HITACHI ABLSH-G1000 PCS BAND EDGE HIGH CH
Ref 24.5 dBm
Atten 5 dB
Cntr1 1.9094974 GHz
-17.66 dBm
Peak
Log
10
dB/
Offst
30
dB
Dl
-13.0
dBm
W1 S2
S3 FS
AA
Center 1.91 GHz
#Res BW 30 kHz
VBW 30 kHz
Span 3 MHz
Sweep 9.167 ms


13:57:32 Mar 11, 2003
HITACHI ABLSH-G1000 PCS MODE CH 25
Ref 24.5 dBm
Atten 5 dB
Mkr1 1.850500 GHz
-21.05 dBm
Peak
Log
10
dB/
Offst
30
dB
Dl
-13.0
dBm
W1 S2
S3 FS
AA
Center 1.851 GHz
#Res BW 30 kHz
VBW 30 kHz
Span 5 MHz
Sweep 13.89 ms


13:59:21 Mar 11, 2003
HITACHI ABLSH-G1000 PCS MODE CH 600
Mkr2 1.880750 GHz
Ref 24.5 dBm
Atten 5 dB
-19.09 dBm
Peak
Log
10
dB/
Offst
30
dB
Dl
-13.0
dBm
W1 S2
S3 FS
AA
Center 1.88 GHz
Span 5 MHz
#Res BW 30 kHz
VBW 30 kHz
Sweep 13.89 ms


15:50:34 Mar 11, 2003
HITACHI ABLSH-G1000 PCS MODE CH 1175
Ref 24.5 dBm
Atten 5 dB
Mkr3 1.907975 GHz
-13.41 dBm
Peak
Log
10
dB/
Offst
30
dB
Dl
-13.0
dBm
W1 S2
S3 FS
AA
Center 1.909 GHz
#Res BW 30 kHz
VBW 30 kHz
Span 5 MHz
Sweep 13.89 ms

13:32:49 Mar 11, 2003
HITACHI ABLSH-G1000 OCCUPIED BANDWIDTH
Ref 24.5 dBm
Atten 5 dB
Samp
Log
10
dB/
Offst
30
dB



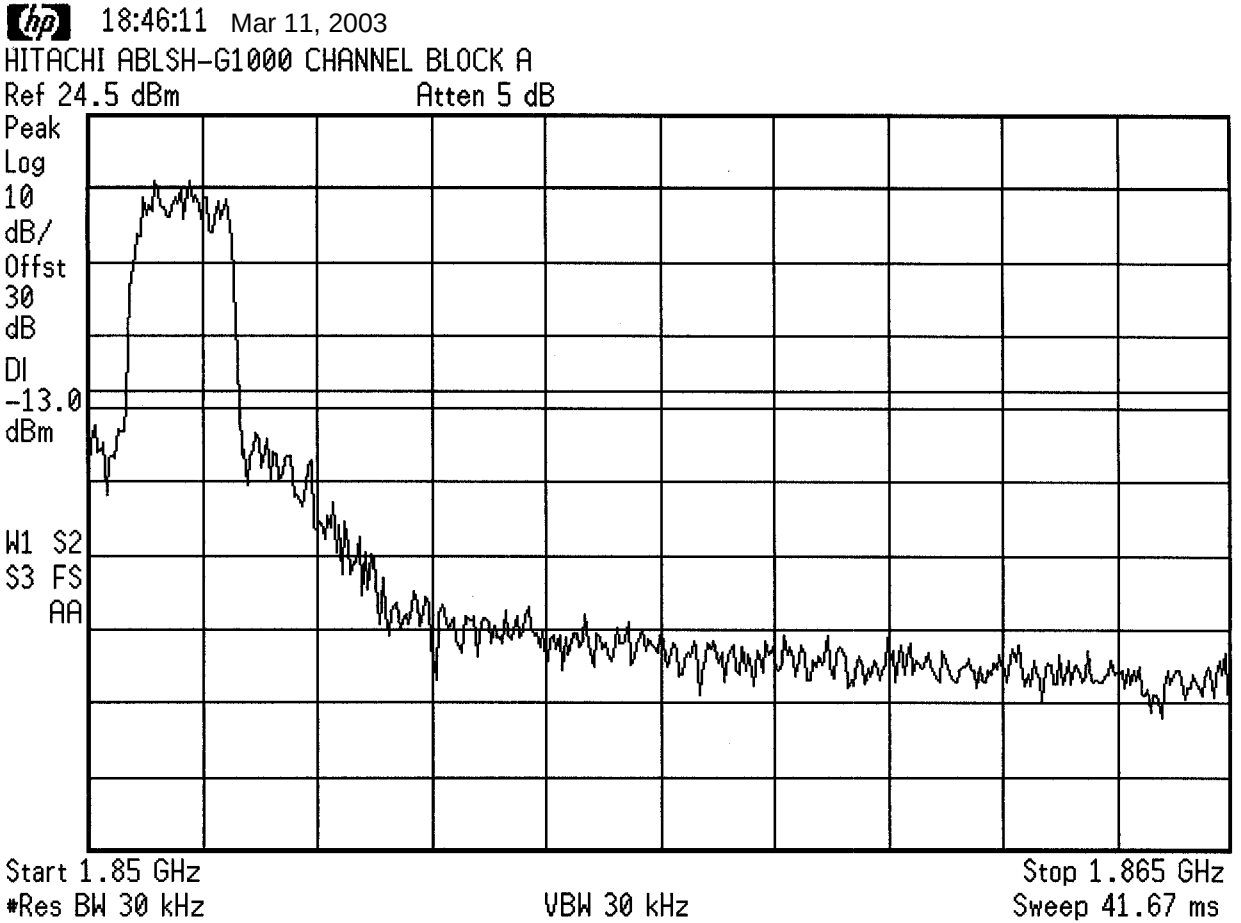
W1 S2
Center 1.88 GHz
Span 3 MHz
#Res BW 30 kHz
#VBW 30 kHz
Sweep 9.167 ms

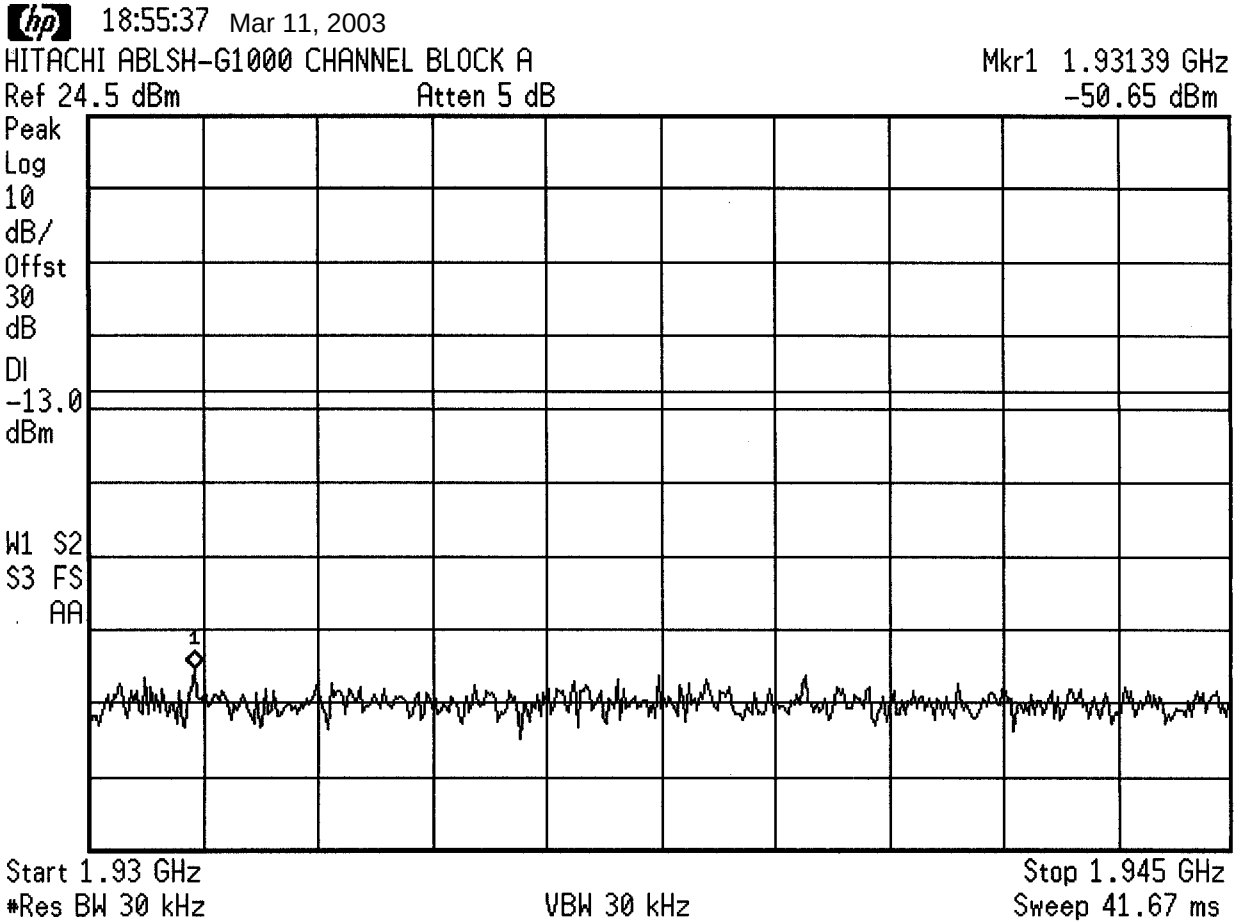
Occupied Bandwidth Results (idle)

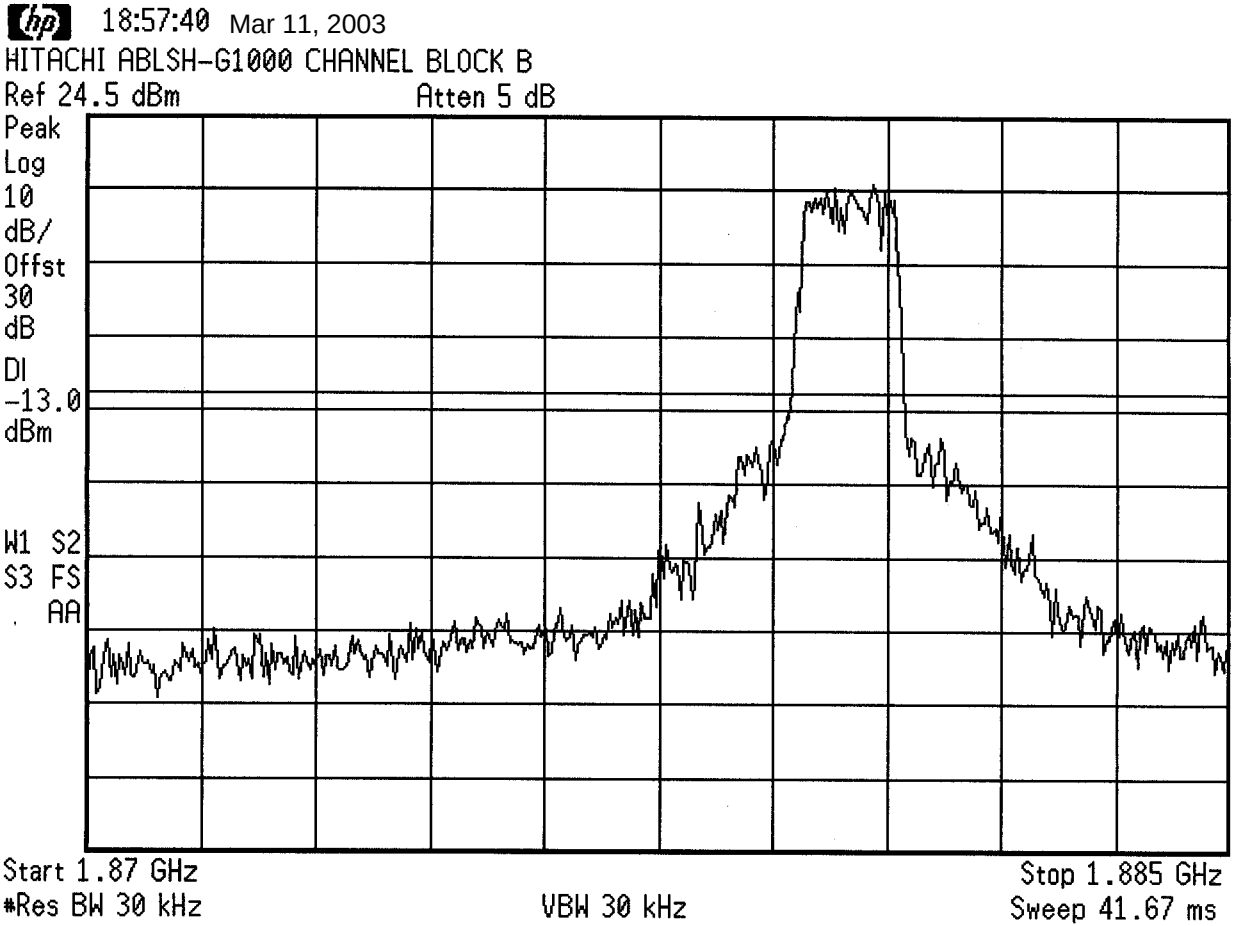
Occupied Bandwidth
1.254 MHz

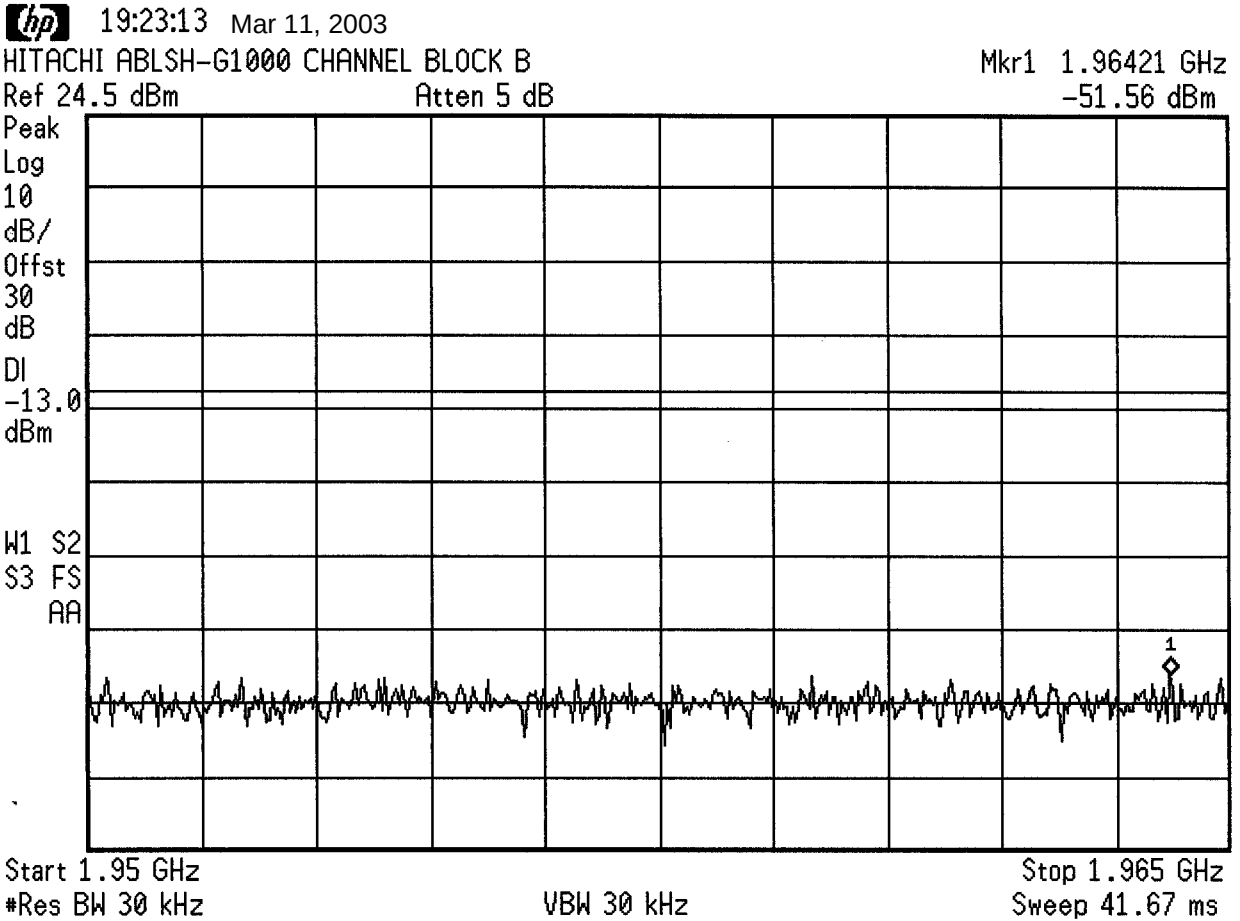
Occ BW % Pwr 99.00 %

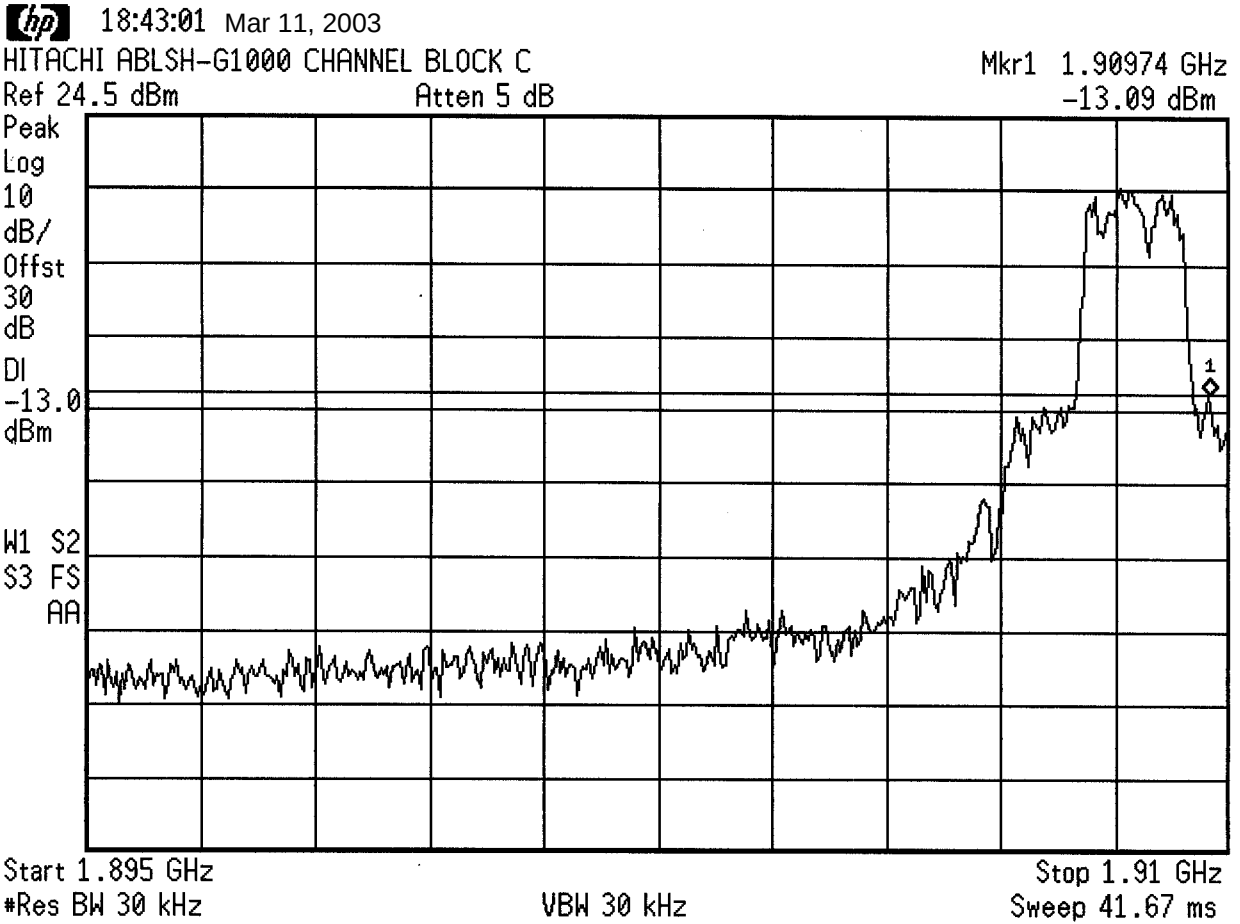
Transmit Freq Error -3.307 kHz

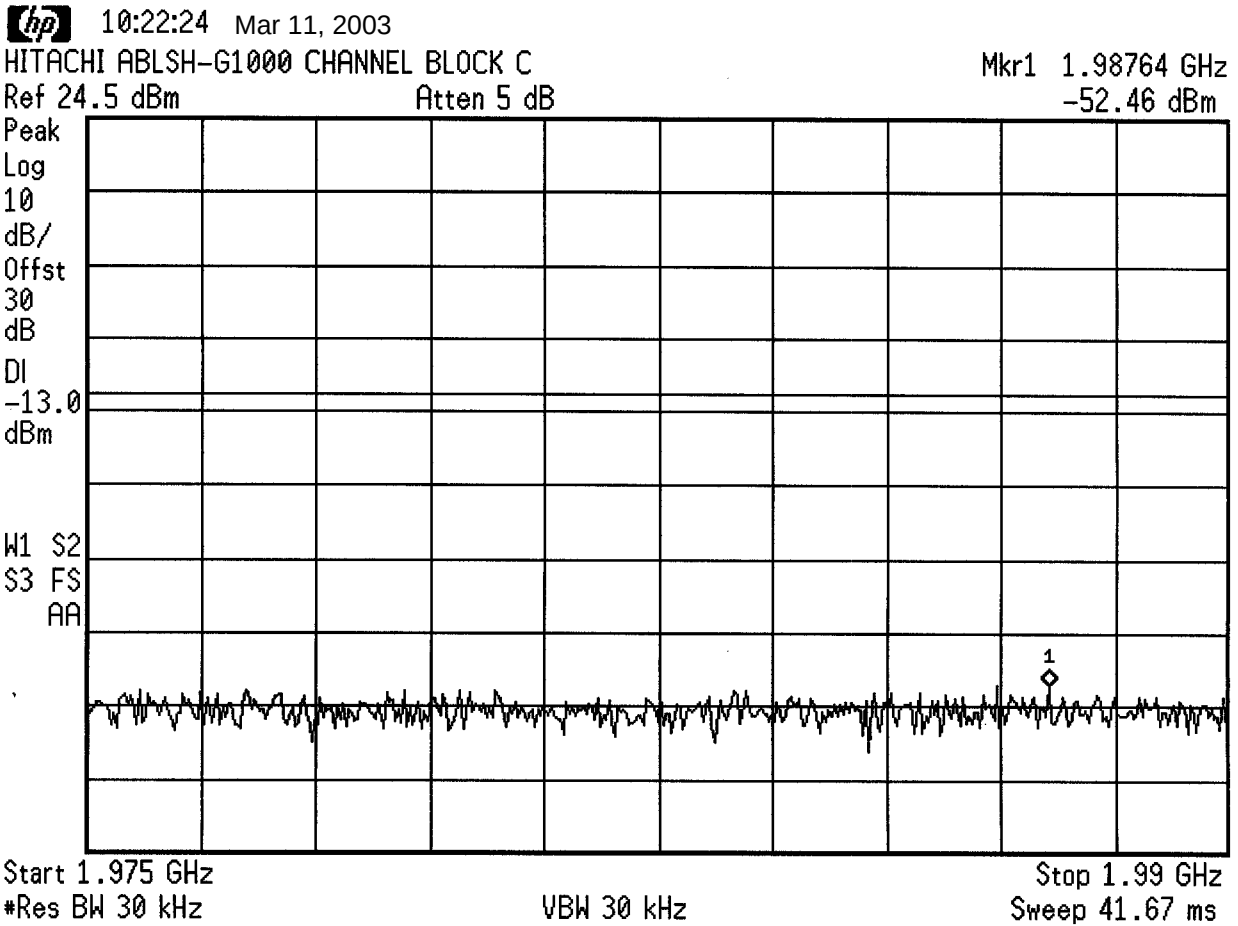

18:46:11 Mar 11, 2003
HITACHI ABLSH-G1000 CHANNEL BLOCK A
Ref 24.5 dBm
Atten 5 dB
Peak
Log
10
dB/
Offst
30
dB
Dl
-13.0
dBm
W1 S2
S3 FS
AA
Start 1.85 GHz
#Res BW 30 kHz
VBW 30 kHz
Stop 1.865 GHz
Sweep 41.67 ms

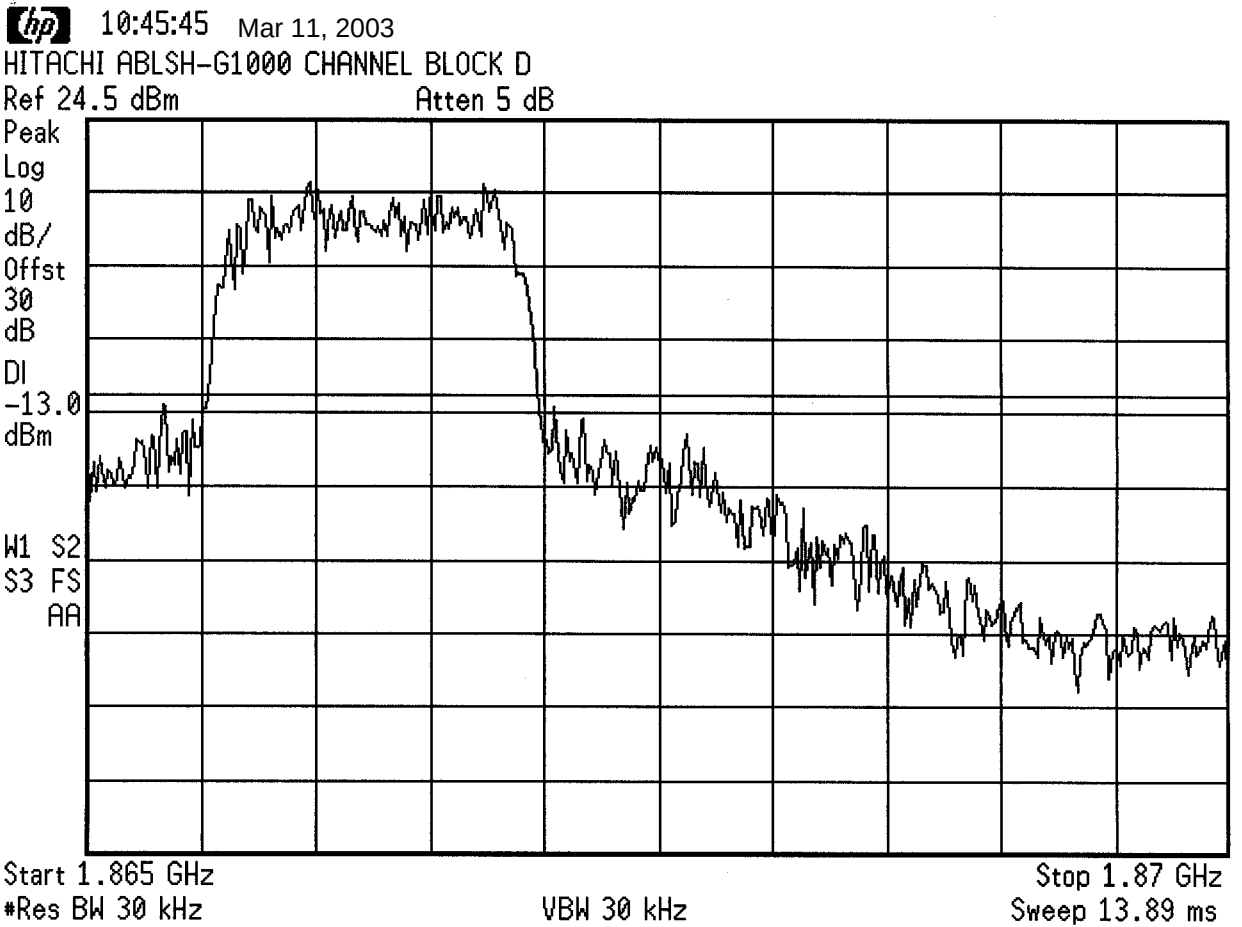

18:55:37 Mar 11, 2003
HITACHI ABLSH-G1000 CHANNEL BLOCK A
Mkr1 1.93139 GHz
Ref 24.5 dBm
Atten 5 dB
-50.65 dBm
Peak
Log
10
dB/
Offst
30
dB
Dl
-13.0
dBm
W1 S2
S3 FS
AA
1
Start 1.93 GHz
Stop 1.945 GHz
#Res BW 30 kHz
VBW 30 kHz
Sweep 41.67 ms

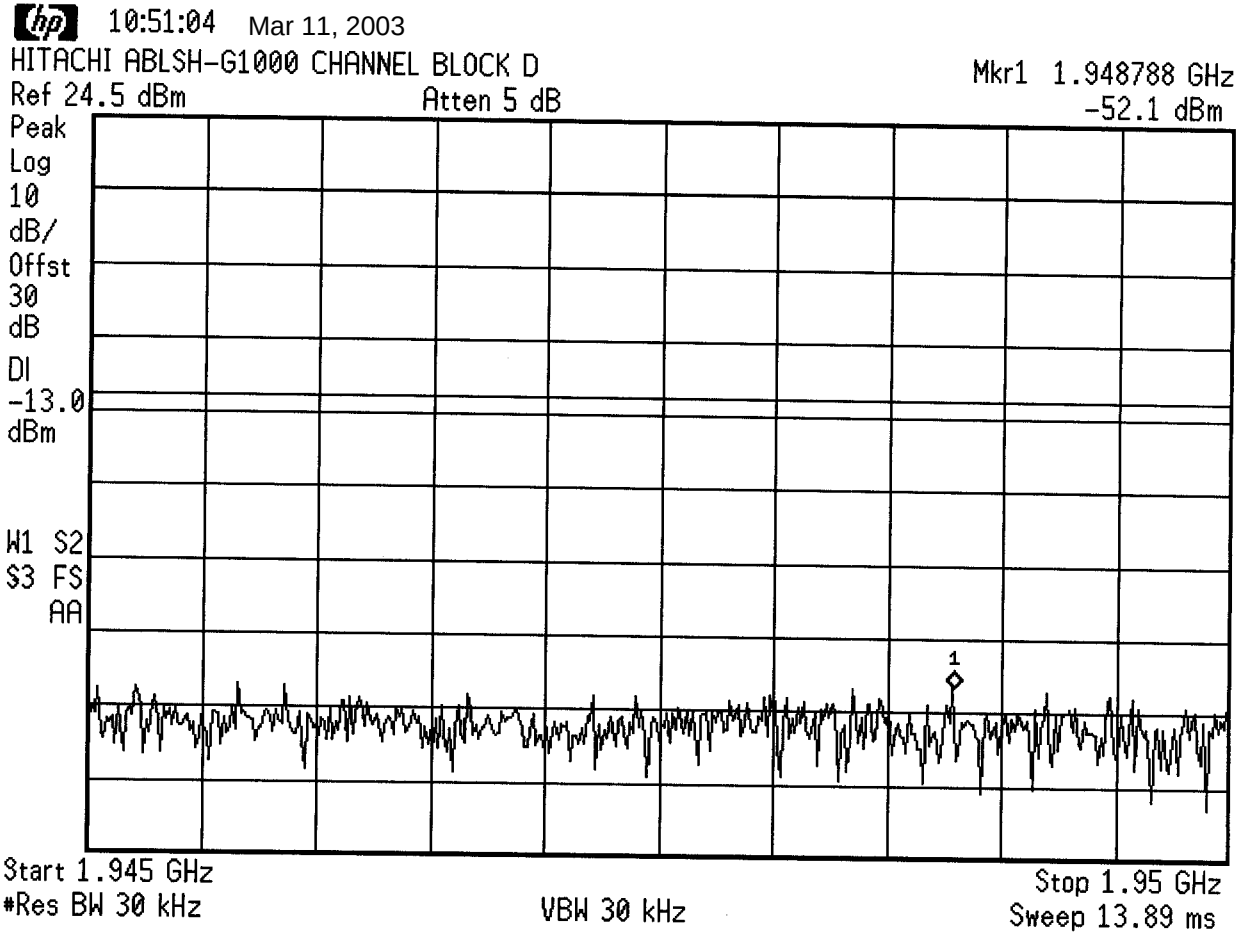

18:57:40 Mar 11, 2003
HITACHI ABLSH-G1000 CHANNEL BLOCK B
Ref 24.5 dBm
Atten 5 dB
Peak
Log
10
dB/
Offst
30
dB
Dl
-13.0
dBm
W1 S2
S3 FS
AA
Start 1.87 GHz
#Res BW 30 kHz
VBW 30 kHz
Stop 1.885 GHz
Sweep 41.67 ms

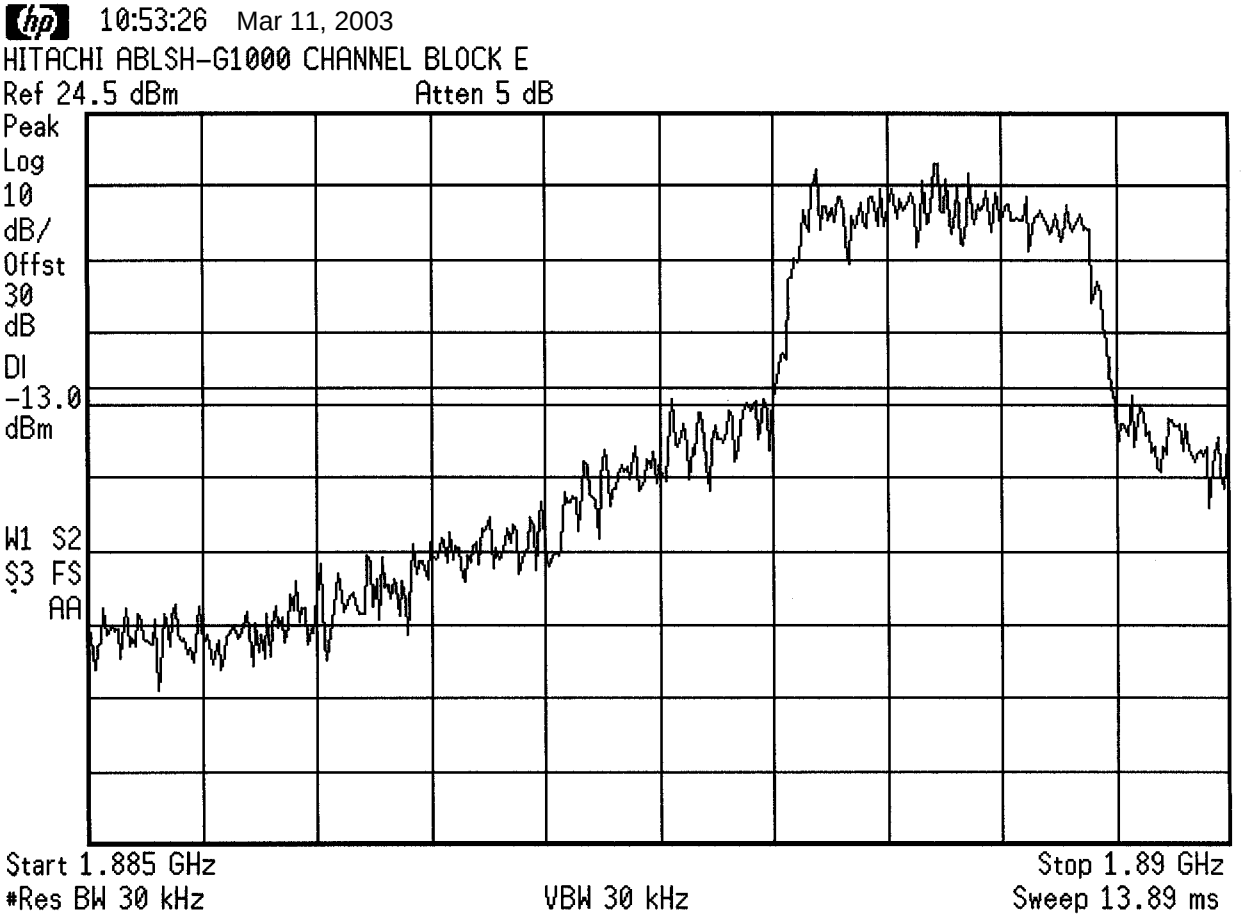

19:23:13 Mar 11, 2003
HITACHI ABLSH-G1000 CHANNEL BLOCK B
Mkr1 1.96421 GHz
Ref 24.5 dBm
Atten 5 dB
-51.56 dBm
Peak
Log
10
dB/
Offst
30
dB
Dl
-13.0
dBm
W1 S2
S3 FS
AA
1
Start 1.95 GHz
Stop 1.965 GHz
#Res BW 30 kHz
VBW 30 kHz
Sweep 41.67 ms

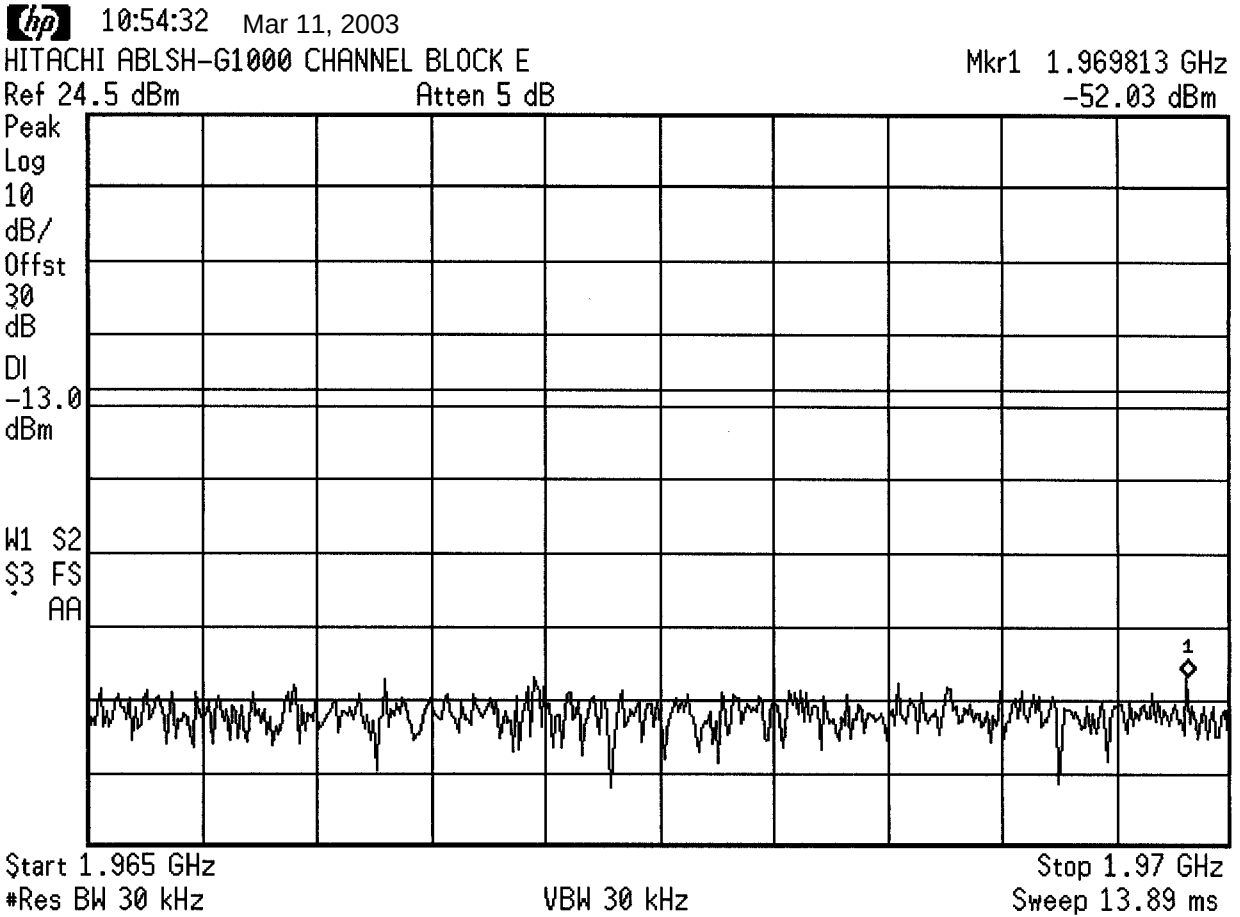

18:43:01 Mar 11, 2003
HITACHI ABLSH-G1000 CHANNEL BLOCK C
Mkr1 1.90974 GHz
Ref 24.5 dBm
Atten 5 dB
-13.09 dBm
Peak
Log
10
dB/
Offst
30
dB
Dl
-13.0
dBm
W1 S2
S3 FS
AA
1
Start 1.895 GHz
Stop 1.91 GHz
#Res BW 30 kHz
VBW 30 kHz
Sweep 41.67 ms

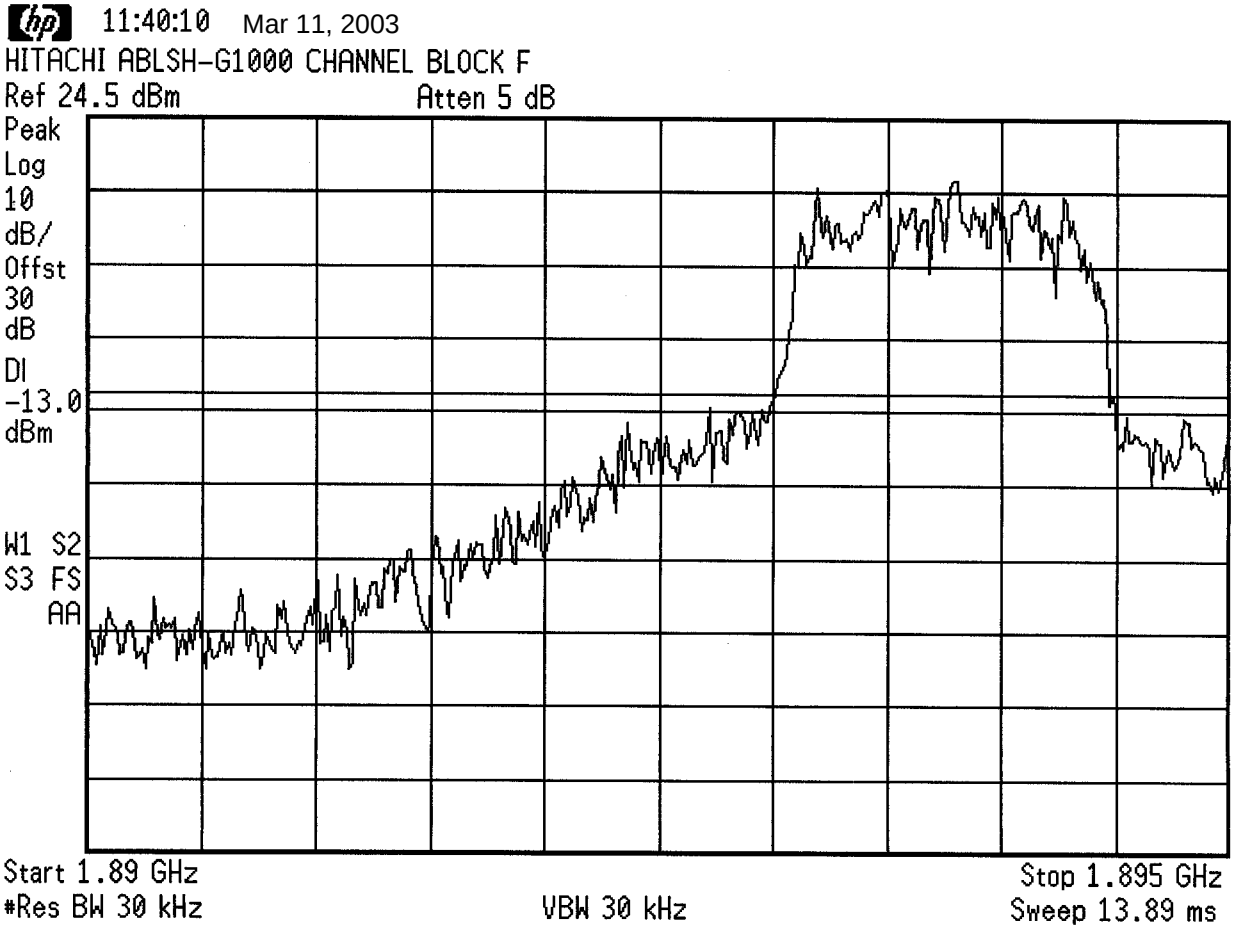

10:22:24 Mar 11, 2003
HITACHI ABLSH-G1000 CHANNEL BLOCK C
Mkr1 1.98764 GHz
Ref 24.5 dBm
Atten 5 dB
-52.46 dBm
Peak
Log
10
dB/
Offst
30
dB
Dl
-13.0
dBm
W1 S2
S3 FS
AA
1
Start 1.975 GHz
Stop 1.99 GHz
#Res BW 30 kHz
VBW 30 kHz
Sweep 41.67 ms

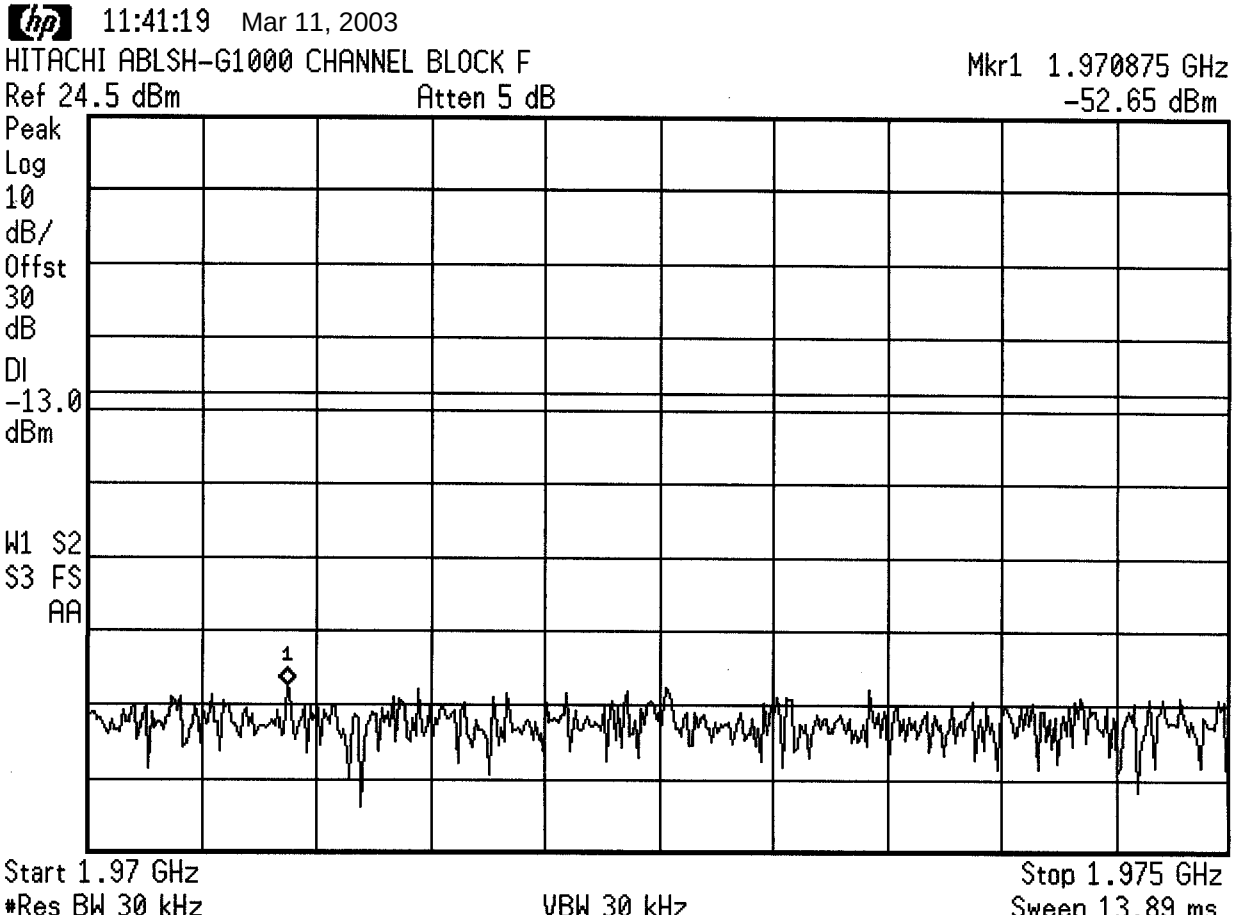

10:45:45 Mar 11, 2003
HITACHI ABLSH-G1000 CHANNEL BLOCK D
Ref 24.5 dBm
Atten 5 dB
Peak
Log
10
dB/
Offst
30
dB
Dl
-13.0
dBm
W1 S2
S3 FS
AA
Start 1.865 GHz
#Res BW 30 kHz
VBW 30 kHz
Stop 1.87 GHz
Sweep 13.89 ms


10:51:04 Mar 11, 2003
HITACHI ABLSH-G1000 CHANNEL BLOCK D
Ref 24.5 dBm
Atten 5 dB
Mkr1 1.948788 GHz
-52.1 dBm
Peak
Log
10
dB/
Offst
30
dB
Dl
-13.0
dBm
W1 S2
$3 FS
AA
1
Start 1.945 GHz
#Res BW 30 kHz
VBW 30 kHz
Stop 1.95 GHz
Sweep 13.89 ms


10:53:26 Mar 11, 2003
HITACHI ABLSH-G1000 CHANNEL BLOCK E
Ref 24.5 dBm
Atten 5 dB
Peak
Log
10
dB/
Offst
30
dB
Dl
-13.0
dBm
W1 S2
$3 FS
AA
Start 1.885 GHz
#Res BW 30 kHz
VBW 30 kHz
Stop 1.89 GHz
Sweep 13.89 ms


10:54:32 Mar 11, 2003
HITACHI ABLSH-G1000 CHANNEL BLOCK E
Mkr1 1.969813 GHz
Ref 24.5 dBm
Atten 5 dB
-52.03 dBm
Peak
Log
10
dB/
Offst
30
dB
Dl
-13.0
dBm
W1 S2
S3 FS
AA
1
Start 1.965 GHz
Stop 1.97 GHz
#Res BW 30 kHz
VBW 30 kHz
Sweep 13.89 ms

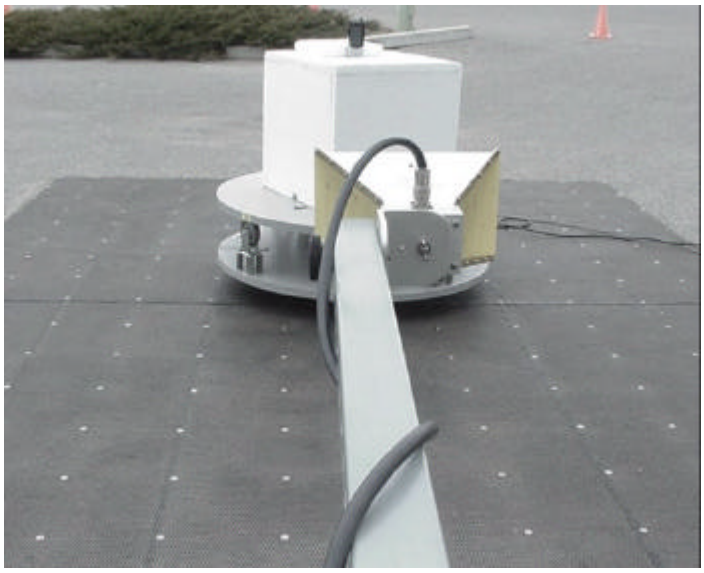

11:40:10 Mar 11, 2003
HITACHI ABLSH-G1000 CHANNEL BLOCK F
Ref 24.5 dBm
Atten 5 dB
Peak
Log
10
dB/
Offst
30
dB
Dl
-13.0
dBm
W1 S2
S3 FS
AA
Start 1.89 GHz
#Res BW 30 kHz
VBW 30 kHz
Stop 1.895 GHz
Sweep 13.89 ms

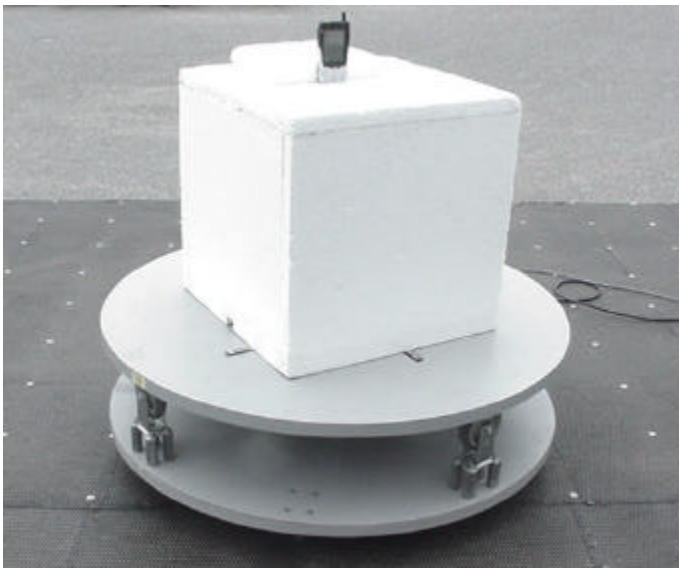

11:41:19 Mar 11, 2003
HITACHI ABLSH-G1000 CHANNEL BLOCK F
Mkr1 1.970875 GHz
Ref 24.5 dBm
Atten 5 dB
-52.65 dBm
Peak
Log
10
dB/
Offst
30
dB
Dl
-13.0
dBm
W1 S2
S3 FS
AA
1
Start 1.97 GHz
#Res BW 30 kHz
VBW 30 kHz
Stop 1.975 GHz
Sweep 13.89 ms

APPENDIX B - RADIATED TEST SETUP PHOTOGRAPHS

RADIATED TEST SETUP PHOTOGRAPHS

Vertical Polarization





RADIATED TEST SETUP PHOTOGRAPHS

Horizontal Polarization