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MEMBER ACIL

REPORT OF MEASUREMENTS

FOR
CELLULAR SPECIALTIES, INC.

BI-DIRECTIONAL DUAL BAND AMPLIFIER

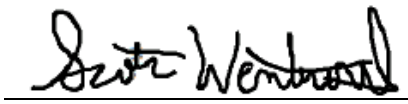
MODEL: T61080-10W

FCC ID: NVRCSIT61080-10W

Company Name:	Cellular Specialties, Inc.
Date of Report:	April 20, 2009
Test Report No:	R-5153N-1
Test Start Date:	March 27, 2009
Test Finish Date:	April 7, 2009
Test Technician:	Matt Seamans
Lab Supervisor:	Todd Hannemann
Report Prepared By:	Jamie Ramsey

Certification and Signatures

We certify that this report is a true report of the results obtained from the tests of the equipment stated and relates only to the equipment tested. We further certify that the measurements shown in this report were made in accordance with the procedures indicated and vouch for the qualifications of all Retlif Testing Laboratories personnel taking them.



Scott Wentworth
Branch Manager
NVLAP Approved Signatory

Todd Hannemann
Laboratory Supervisor

Non-Warranty Provision
The testing services have been performed, findings obtained, and reports prepared in accordance with generally accepted testing laboratory principles and practices. This warranty is in lieu of all other warranties, either express or implied.

Non-Endorsement
This test report contains only findings and results arrived at after employing the specific test procedures and standards listed herein. It is not intended to constitute a recommendation, endorsement, or certification of the product or material tested. This report must not be used by the client to claim product endorsement by NVLAP, NIST or any agency of the U.S. Government.

CERTIFICATION APPLICATION SUMMARY

Applicant/Manufacturer:	Cellular Specialties 670 North Commercial Street Manchester, NH 03101
Equipment under Test (EUT):	The EUT is a Bi-Directional Dual Band Amplifier
Model:	T61089-10W
FCC ID Number:	FCC ID: NVRCIT61080-10W
Applicable Test Standard:	FCC Parts 2 & 90
Measurement Procedure:	ANSI/TIA-603-C-2004
Device Classification:	Mobile
EUT Frequency Bands:	Uplink: 793MHz to 805MHz Downlink: 763MHz to 776MHz Uplink: 806MHz to 824MHz Downlink: 851MHz to 869MHz
Power Output Rating Based on two tone composite power (For Certification Grant):	700MHz Band Uplink: +31.86dBm = 1.53W 700MHz Band Downlink: +30.84dBm = 1.21W 800MHz Band Uplink: +31.61dBm = 1.45W 800MHz Band Downlink: +31.23dBm = 1.33W
Modulation Types:	FM (F1D), TDMA (DXW)
RF Exposure + Antenna Installation:	See Attached Installation/Users Manual and MPE Evaluation
Measurements Required by FCC:	See Report Section 1 (Summary of Test Program) and the following Test Report Data Attachments: -RF Power Output -Intermodulation Characteristics (Two-Tone) -Occupied Bandwidth -Spurious Emissions at Antenna Terminals -Effective Radiated Power of Spurious Radiation -Frequency Stability

SECTION 1
SUMMARY OF TEST PROGRAM

INTERMODULATION CHARACTERISTICS (TWO TONE)

Measurement Procedure:

Two signals were injected, in turn, to each uplink and downlink frequency band via a two way power combiner. Testing was performed at both the low band edge and high band edge of each pass band. The output of each signal generator was adjusted so that the two output fundamental frequencies were equal in magnitude. Testing was performed for FM & TDMA Modulation types. At the maximum specified input power levels all intermodulation products were at -13dBm or below. See attached test data.

OCCUPIED BANDWIDTH

Measurement Procedure:

For Occupied Bandwidth, measurements were made to compare the input signal to the output signal. The signal generator output was connected to the spectrum analyzer. A TDMA modulation signal was then applied to the carrier. Waveforms were then noted on an X-Y plot. Next, the signal generator was connected to the EUT and the output of the EUT was connected to the spectrum analyzer. The output waveform after amplification was then compared to the original input signal to ensure that no significant differences occurred between the input signal and the amplified signal. Testing was performed at one frequency within each passband (uplink and downlink). Testing was repeated with FM Modulation. See Occupied Bandwidth Data.

SPURIOUS EMISSIONS AT ANTENNA TERMINALS

Measurement Procedure:

The signal generator output was connected in turn to the uplink and downlink input ports of the EUT. The input power level was at the maximum level which was ascertained during the Power Output test. A spectrum analyzer was connected to the output of the EUT. The input test frequencies used were three frequencies (low, mid & high) within each passband (uplink and downlink). The level of any spurious emission was recorded. Testing was performed in the frequency range of 30MHz to 9GHz. Testing was performed for TDMA & FM modulation types. The spurious emissions limit is -13dBm as specified in FCC Part 90. All emissions were below the specified -13dBm limit. See attached test data.

EFFECTIVE RADIATED POWER OF SPURIOUS RADIATION

Measurement Procedure:

The test sample was placed on a 80cm high wooden test stand which was located 3 meters from the test antenna on an FCC listed test site. A signal generator was connected to the input of the amplifier. The signal generator output was set to provide the input power level necessary to achieve maximum output power of the amplifier at 3 frequencies (low, mid & high) within each passband (pcs uplink and downlink). The effective radiated power of each out of band spurious emission was measured using the substitution method specified in ANSI/TIA-603-C-2004. The frequency range of the test was 30MHz – 9GHz. The limit for out of band spurious emissions is -13dBm as specified in Part 90. All emissions were below the specified -13dBm limit. See attached test data.

RF POWER OUTPUT

The RF Power Output rating for both the uplink and downlink frequency bands was calculated using the composite power value from the intermodulation two tone test data. The measured output power matched the manufacturer's rated output power. See attached test data.

FREQUENCY STABILITY MEASUREMENTS

The test sample was placed into a temperature chamber with the AC input power supplied through a variable power source. A signal generator was used to provide the input signal and the output was measured with a frequency counter. With the test sample operating at maximum output power the test sample's output frequency was measured and recorded at the extremes of the temperature range and at 10 degree increments from -30 degrees C to +50 degrees C while the AC input voltage was varied from 85 to 115% of nominal. The output frequency for both the passband uplink and downlink stayed within the assigned frequency band. See attached test data.

SECTION 2

EQUIPMENT LISTS

Spurious Radiated Emissions

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due Date
3116	Pre-Amplifier	Miteq	0.1 GHz - 18 GHz	AFS42-35	1/21/2009	1/21/2010
3117	Power Supply	B&K Precision	0-30 Vdc, 3.0 A	1630	1/31/2009	1/31/2010
3258	Double Ridge Guide	EMCO	1 - 18 GHz	3115	8/20/2008	8/20/2009
4029B	Test Site Attenuation	Retlif	3 / 10 Meters	RNH	7/21/2008	7/21/2009
5053	Biconilog	EMCO	26 MHz - 3 GHz	3142C	10/4/2008	11/4/2009
R425B	Spectrum Analyzer	Agilent	100 Hz - 26.5 GHz	E7405A;A	5/11/2008	5/11/2009

RF Power Output

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due Date
5038	10 DB Atten. (50 ohm)	Fluke	DC - 12.4 GHz	Y9304	1/20/2009	1/20/2010
5040	30 DB Atten. (50 ohm)	Fluke	DC - 12.4 GHz	Y9306	1/20/2009	1/20/2010
R420B	Signal Generator	Agilent	250K - 3G	AT/E4437B;F	9/9/2008	10/7/2010
R425B	Spectrum Analyzer	Agilent	100 Hz - 26.5 GHz	E7405A;A	5/11/2008	5/11/2009

Frequency Stability

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due Date
4997	Digital Thermometer	Omega	N/A		7/28/2008	7/28/2009
5013	Variac	Powerstat	0 - 140 VAC	116B	5/30/2008	5/30/2009
5049A	Digital Multimeter	Fluke	N/A	111	1/22/2009	1/22/2010
5077	Temperature Chamber	Associated Env. Systems	-50 to 150 Deg C	ZFD-531	1/30/2008	1/30/2009
R420B	Signal Generator	Agilent	250K - 3G	AT/E4437B;F	9/9/2008	10/7/2010
R425B	Spectrum Analyzer	Agilent	100 Hz - 26.5 GHz	E7405A;A	5/11/2008	5/11/2009

Intermodulation Characteristics

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due Date
5038	10 DB Atten. (50 ohm)	Fluke	DC - 12.4 GHz	Y9304	1/20/2009	1/20/2010
5040	30 DB Atten. (50 ohm)	Fluke	DC - 12.4 GHz	Y9306	1/20/2009	1/20/2010
R420B	Signal Generator	Agilent	250K - 3G	AT/E4437B;F	9/9/2008	10/7/2010
R425B	Spectrum Analyzer	Agilent	100 Hz - 26.5 GHz	E7405A;A	5/11/2008	5/11/2009

Occupied Bandwidth

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due Date
5038	10 DB Atten. (50 ohm)	Fluke	DC - 12.4 GHz	Y9304	1/20/2009	1/20/2010
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R425B	Spectrum Analyzer	Agilent	100 Hz - 26.5 GHz	E7405A;A	5/11/2008	5/11/2009

Spurious Emissions Antenna Ports

EN	Type	Manufacturer	Description	Model No.	Cal Date	Due Date
5038	10 DB Atten. (50 ohm)	Fluke	DC - 12.4 GHz	Y9304	1/20/2009	1/20/2010
5040	30 DB Atten. (50 ohm)	Fluke	DC - 12.4 GHz	Y9306	1/20/2009	1/20/2010
R420B	Signal Generator	Agilent	250K - 3G	AT/E4437B;F	9/9/2008	10/7/2010
R425B	Spectrum Analyzer	Agilent	100 Hz - 26.5 GHz	E7405A;A	5/11/2008	5/11/2009

SETUP PHOTOGRAPHS
SPURIOUS RADIATED EMISSIONS
30MHz to 1000 MHz

Test Setup, Horizontal Antenna Polarization

Test Setup, Vertical Antenna Polarization

SETUP PHOTOGRAPHS
SPURIOUS RADIATED EMISSIONS
1 GHz to 9 GHz

Test Setup, Horizontal Antenna Polarization

Test Setup, Vertical Antenna Polarization

SPURIOUS EMISSIONS AT ANTENNA TERMINALS
OCCUPIED BANDWIDTH/RF POWER OUTPUT
INTERMODULATION (TWO TONE)

FREQUENCY STABILITY

FREQUENCY STABILITY

RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

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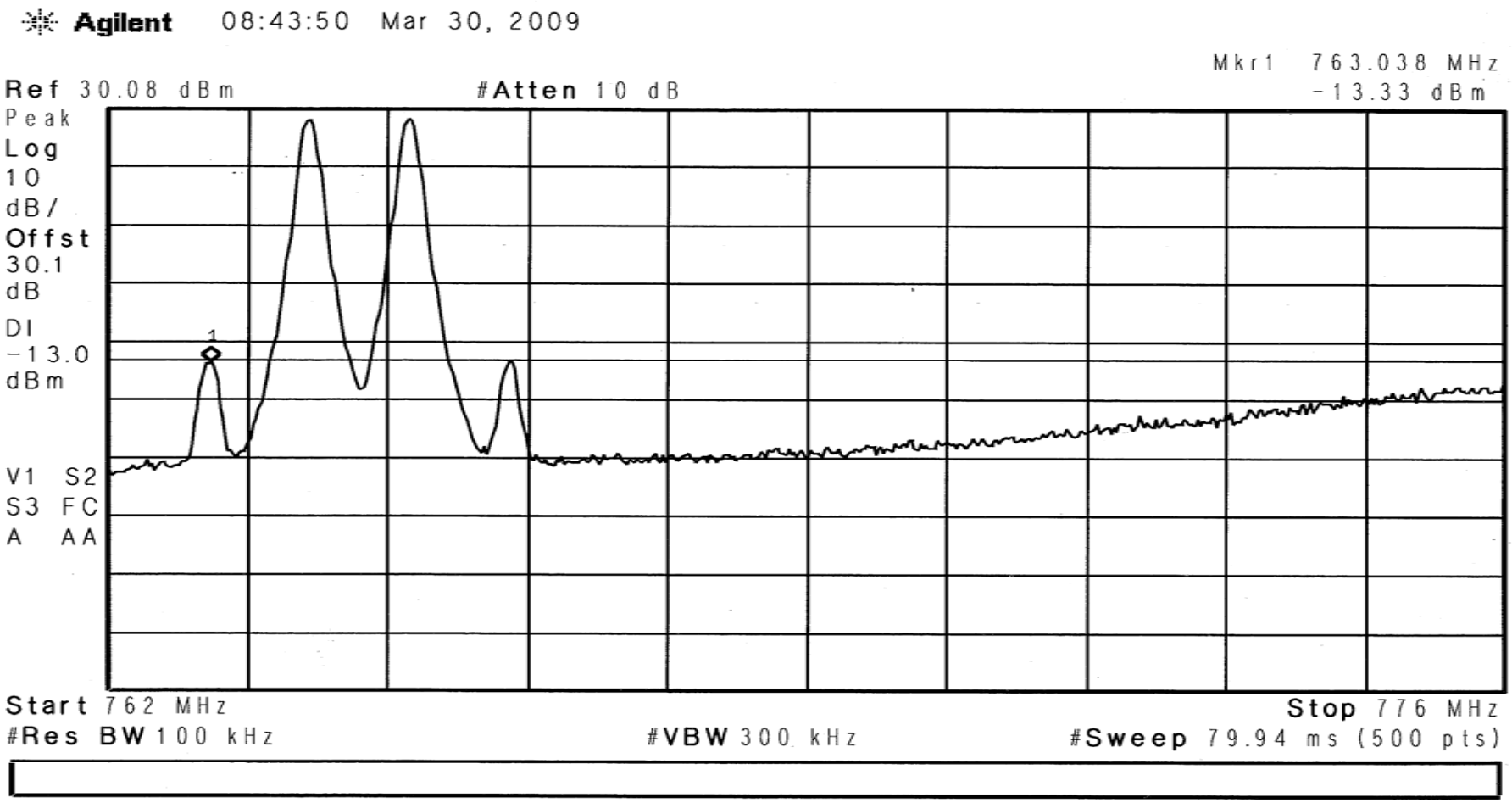
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5153N-1
Model No:	61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2	Paragraph: 2.1047		**Date:**	3/30/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 1 - FM - Downlink				



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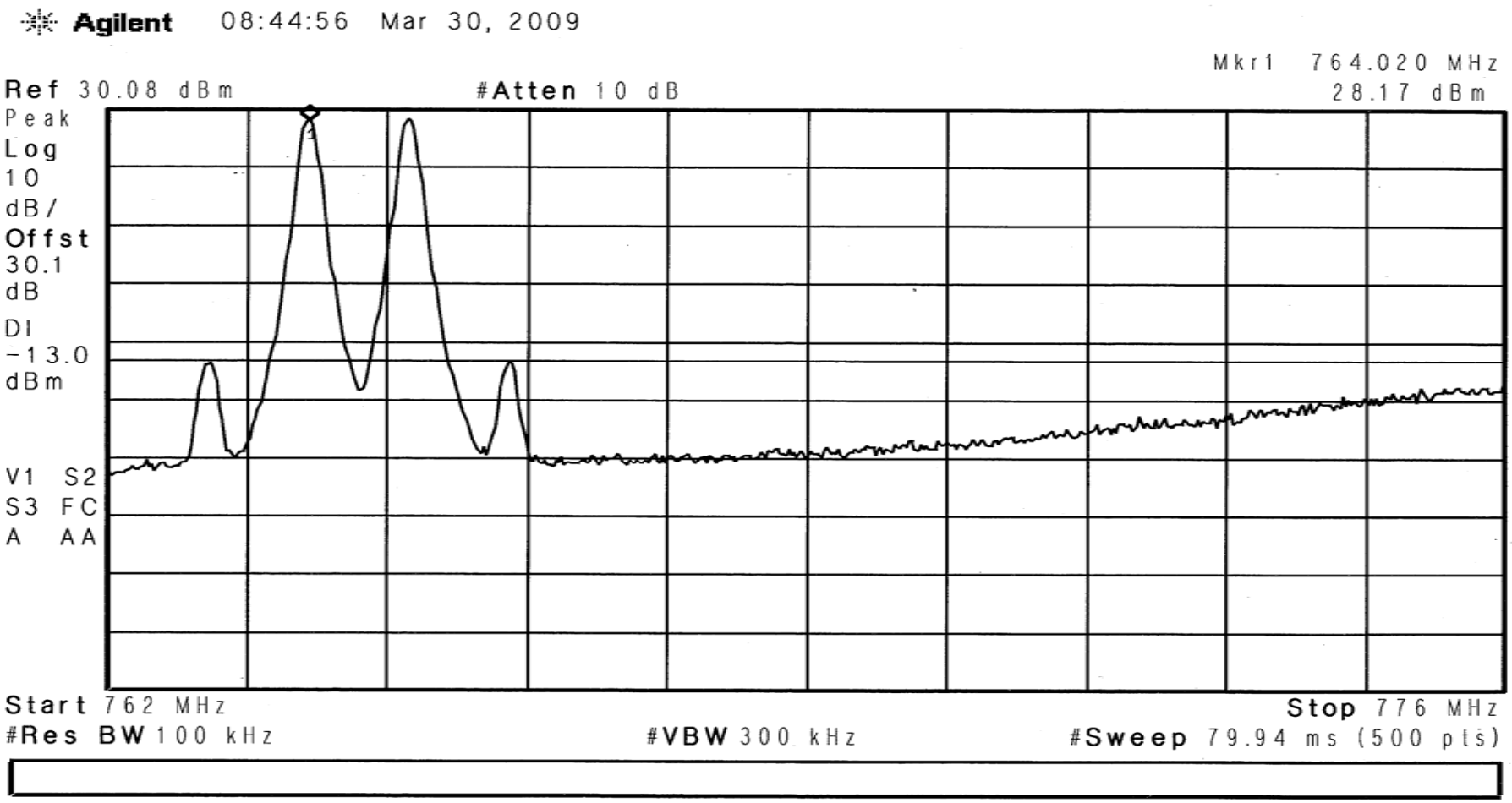

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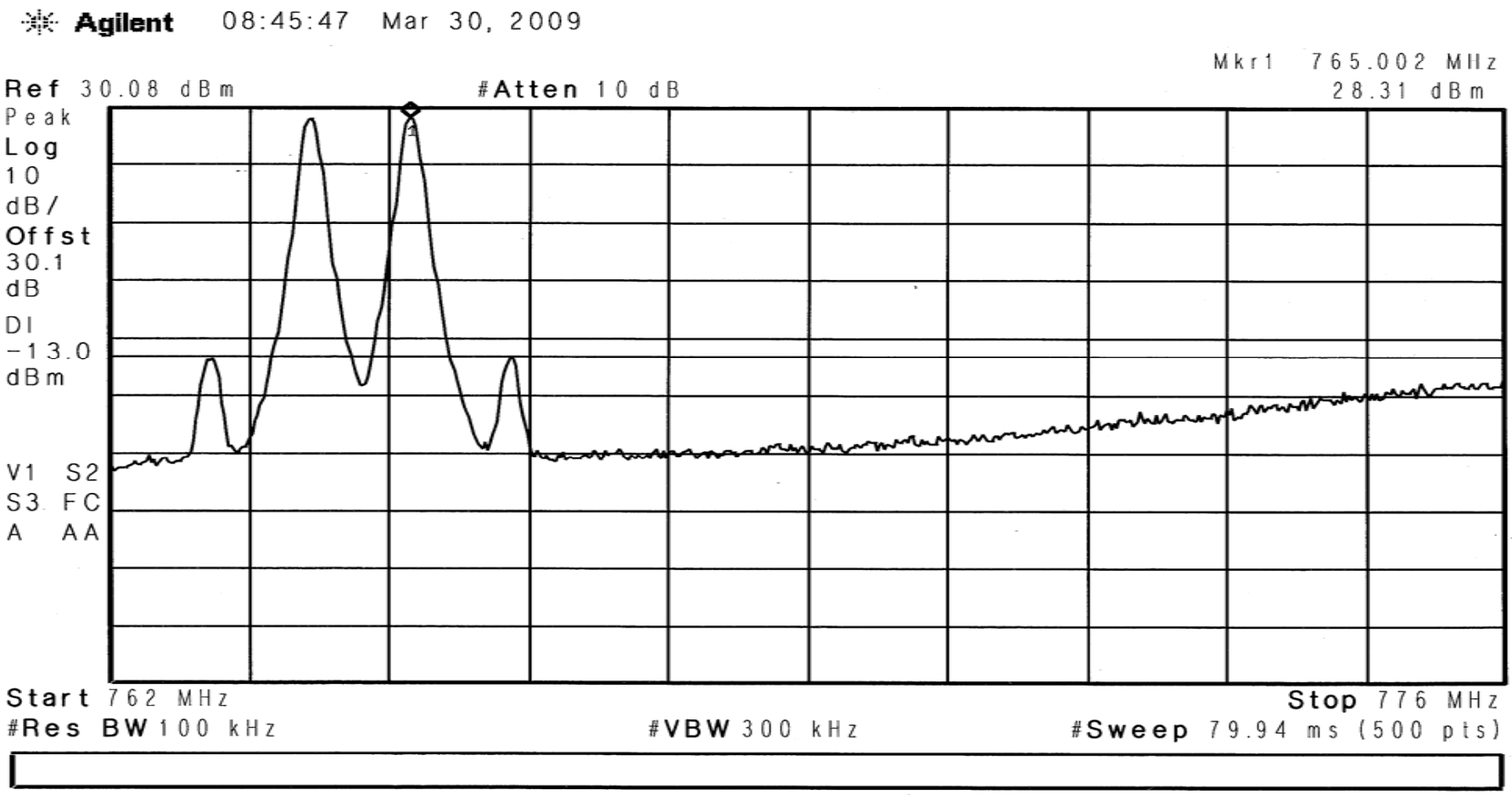

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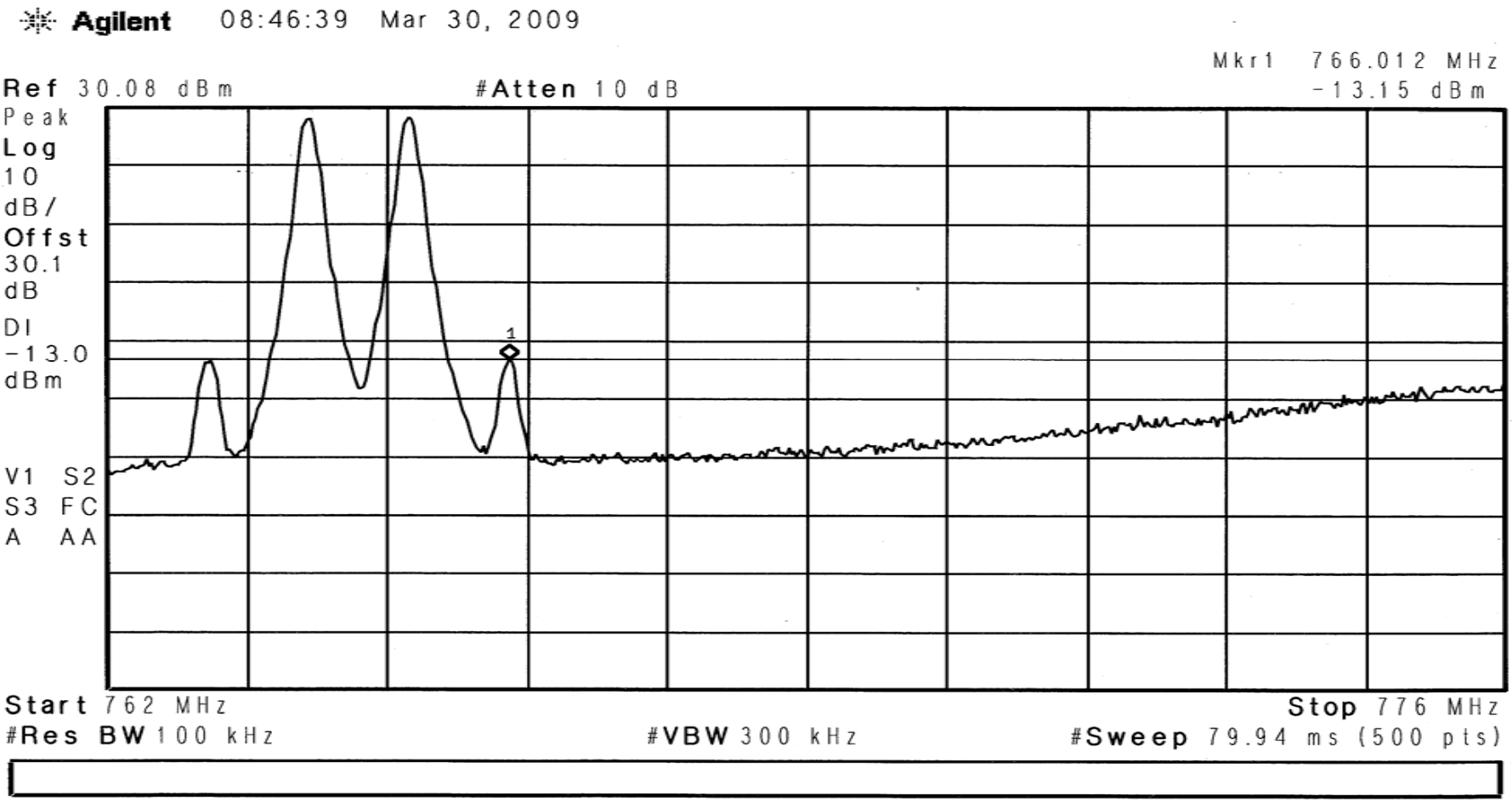

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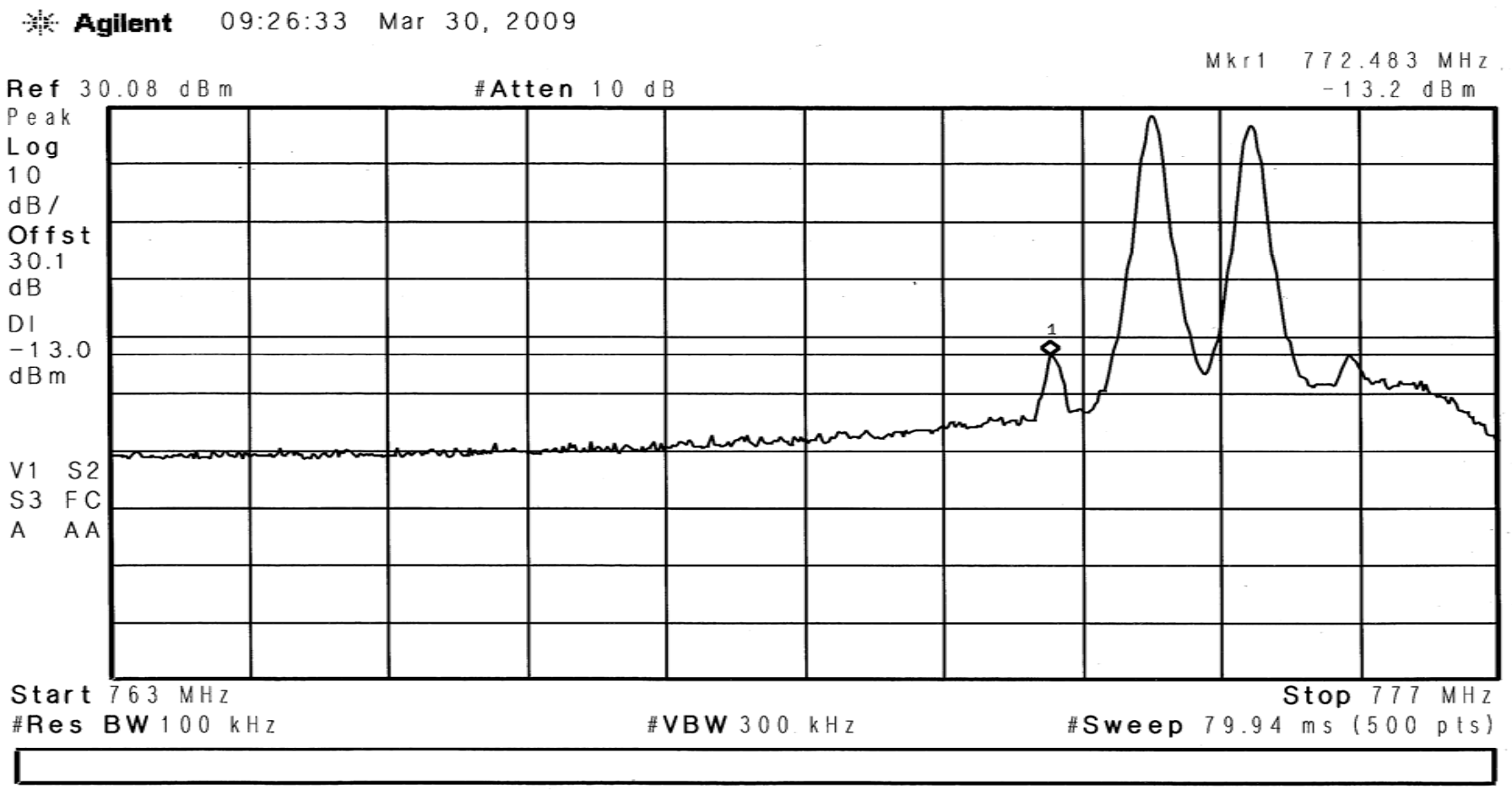

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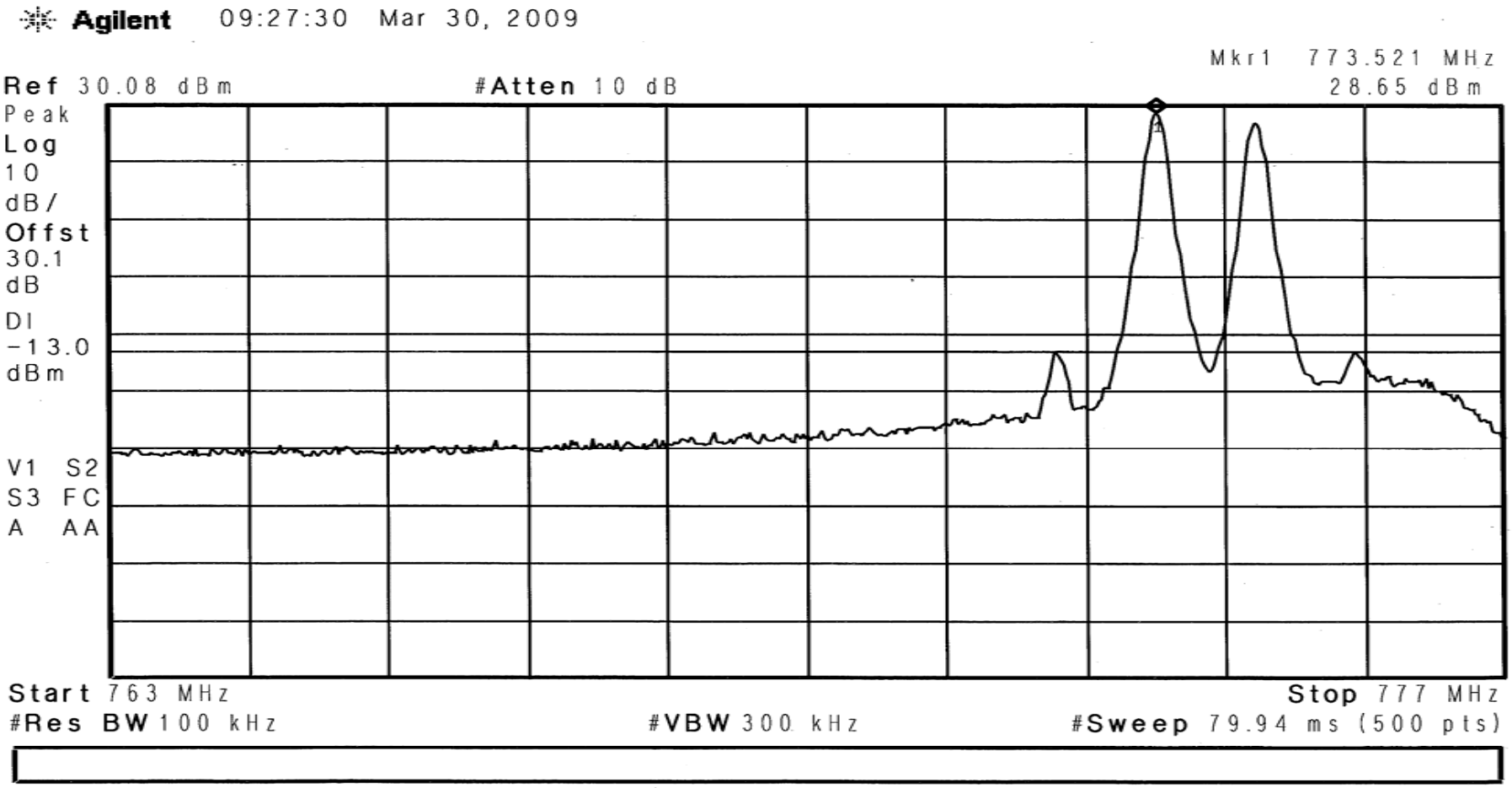

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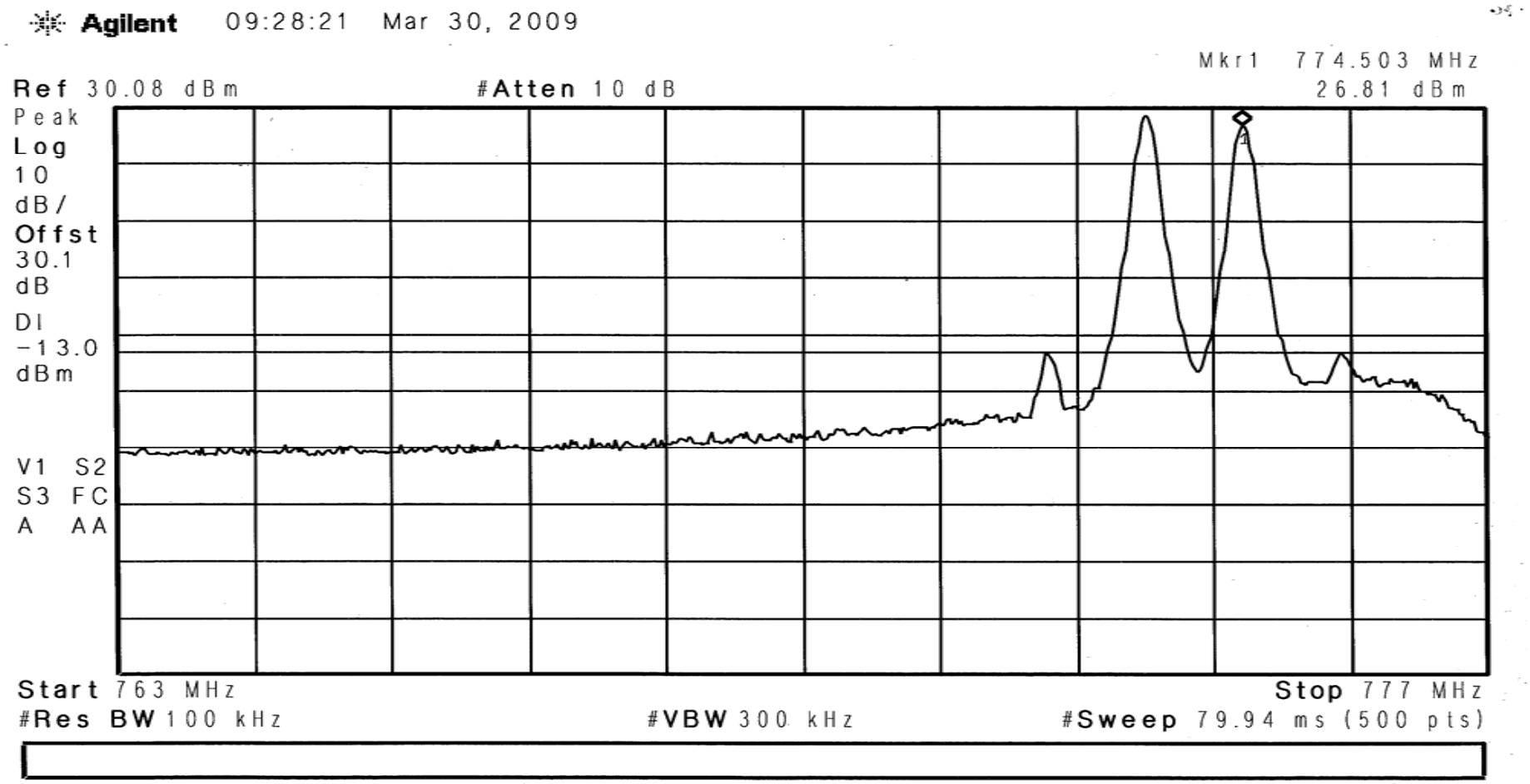

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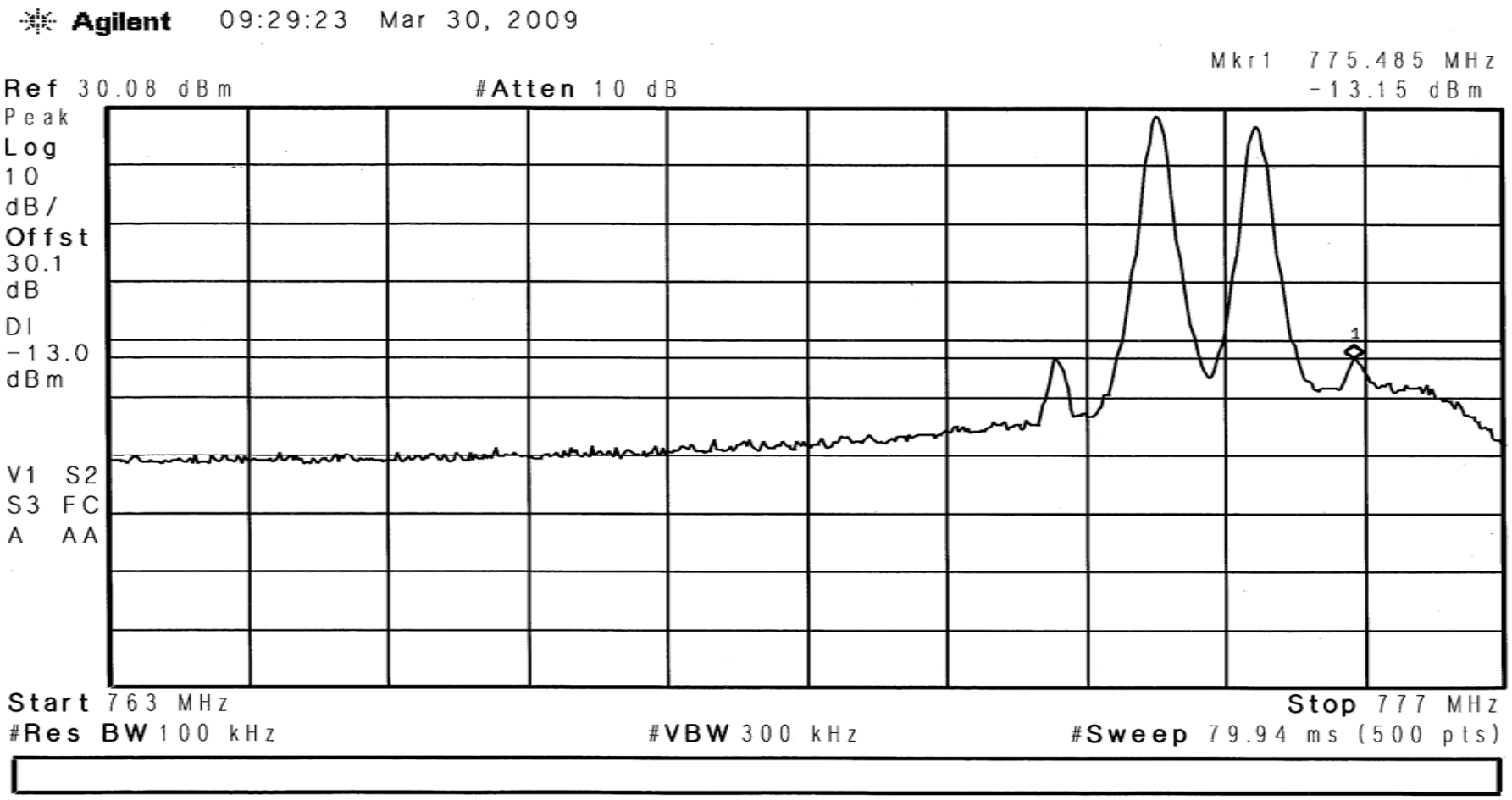

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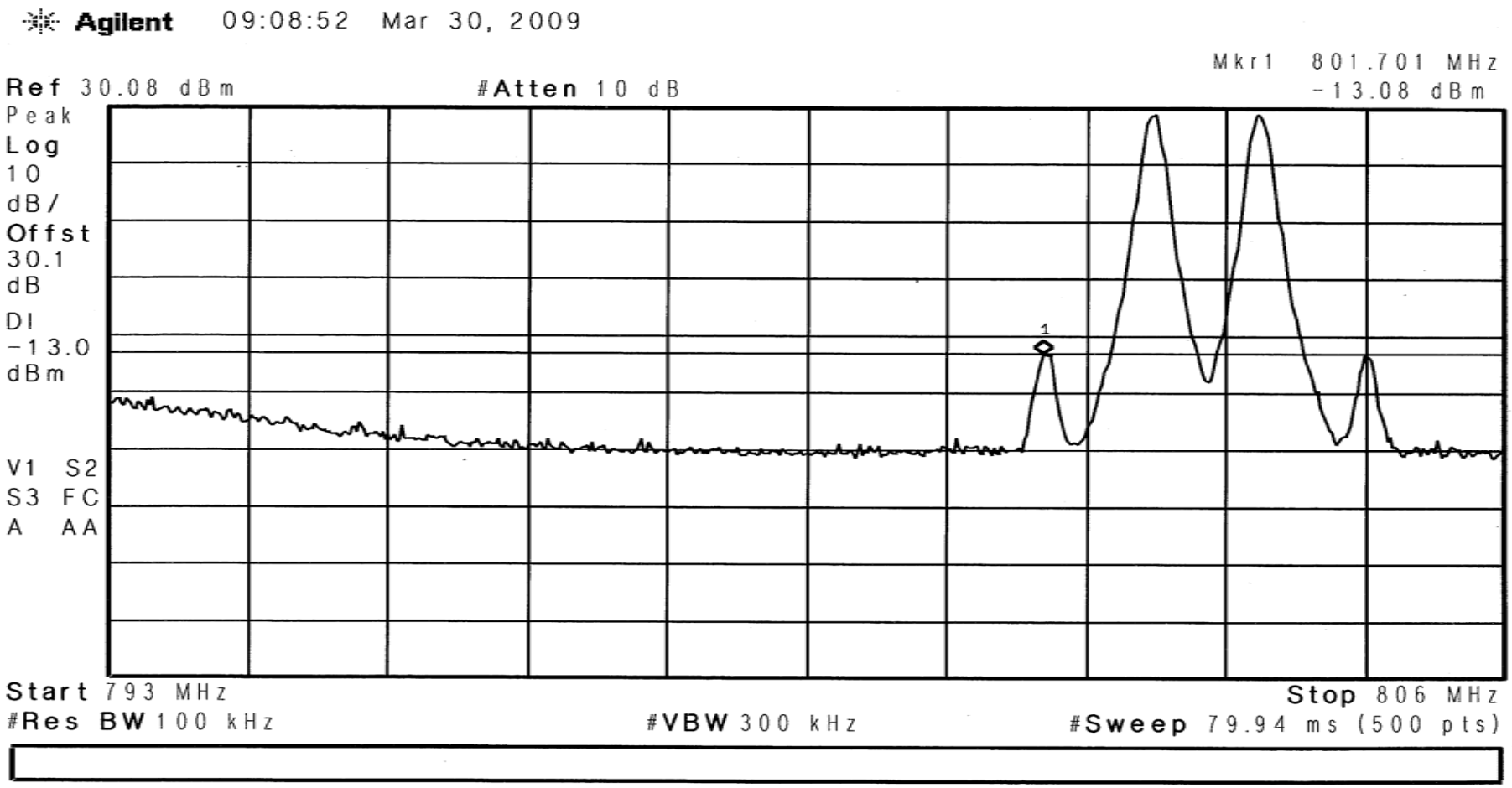

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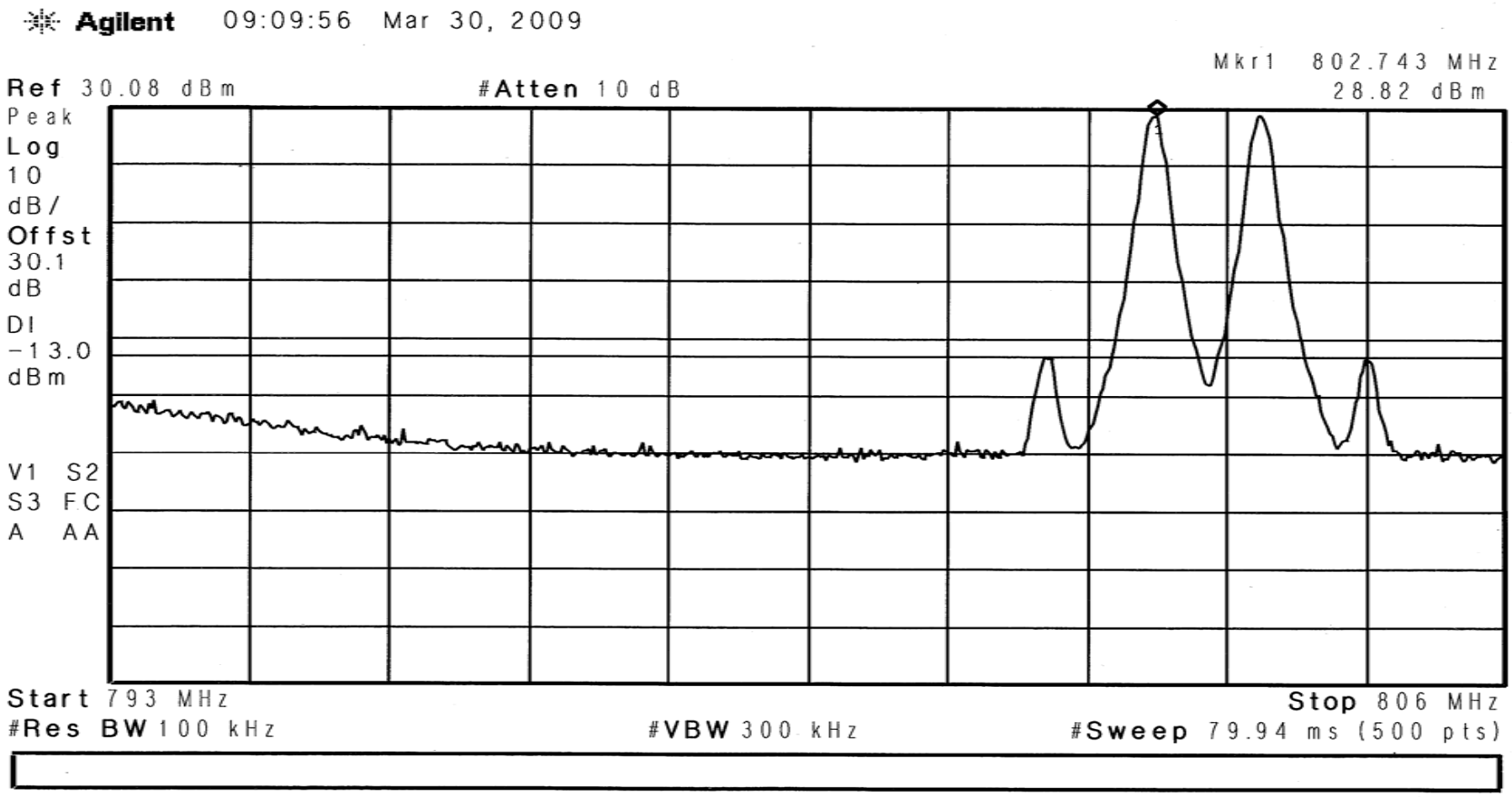

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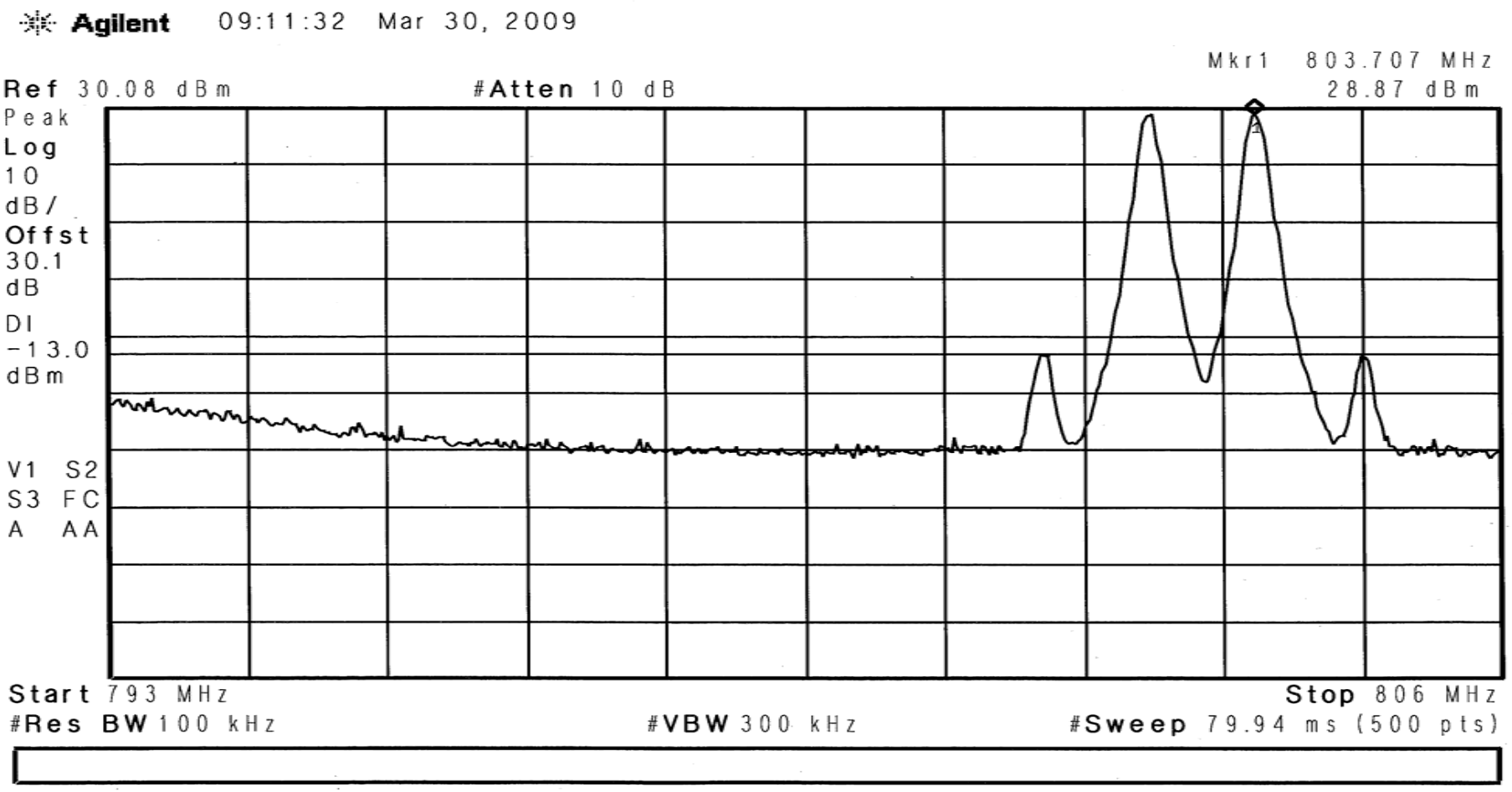

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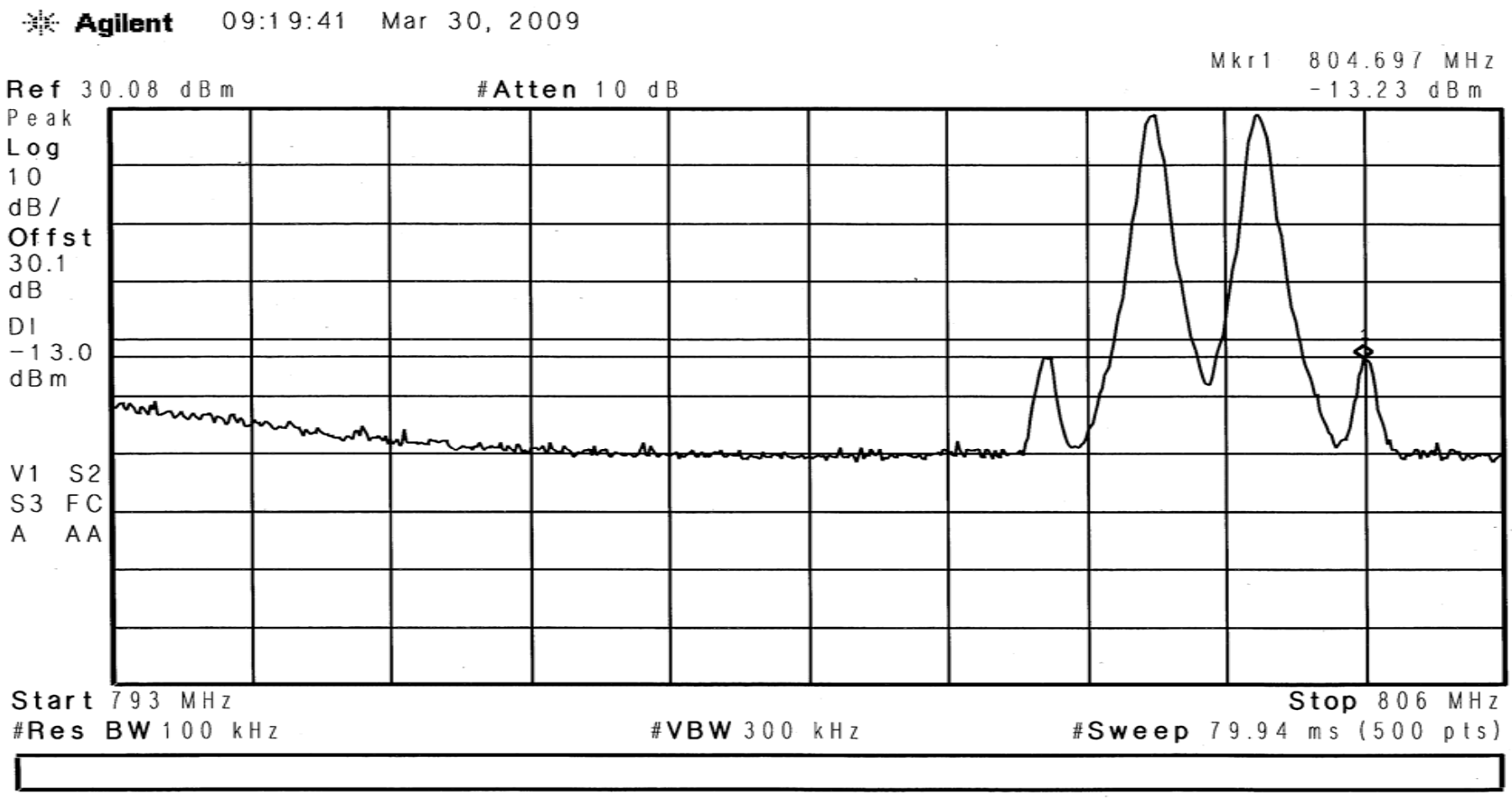

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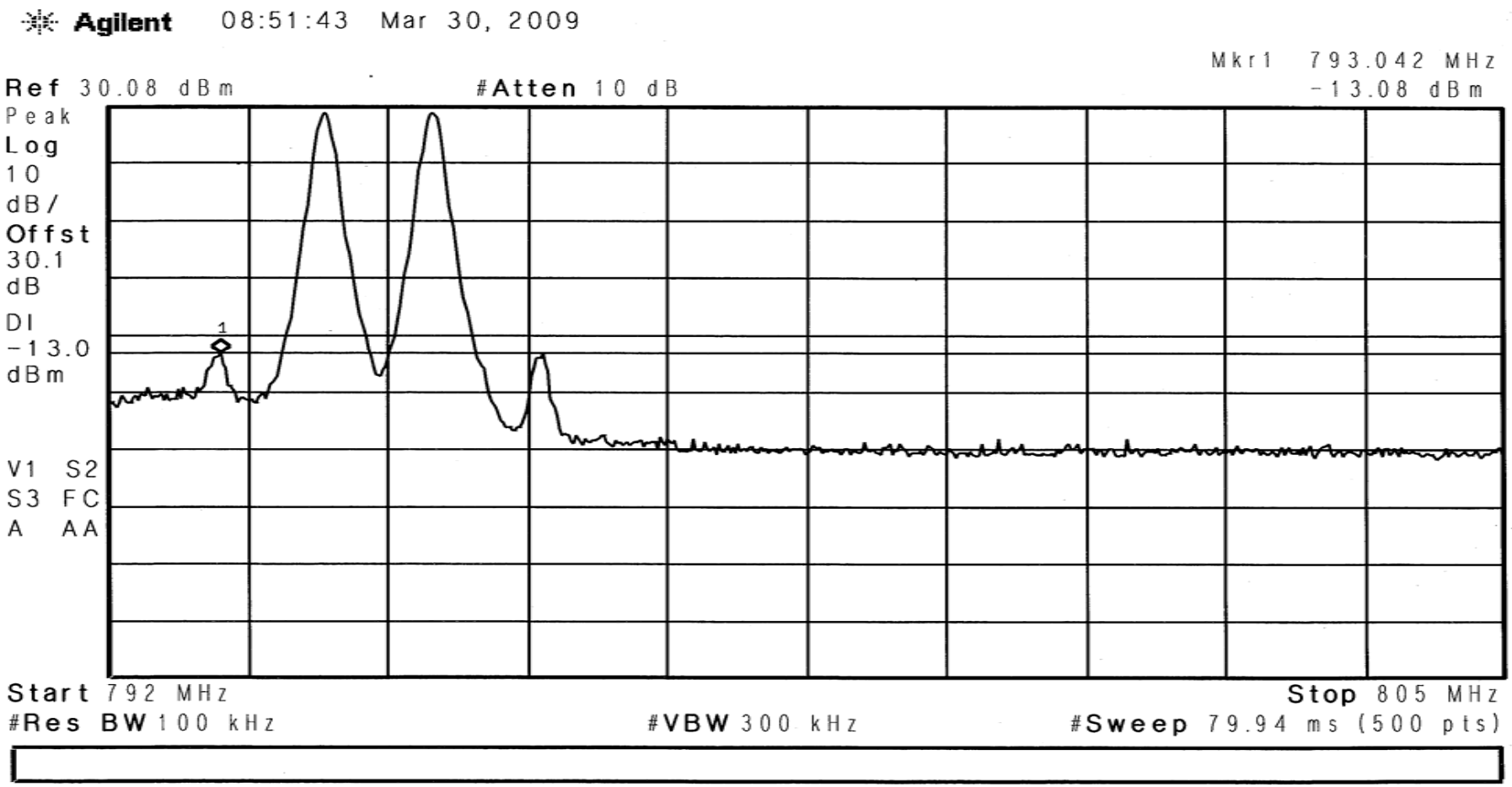

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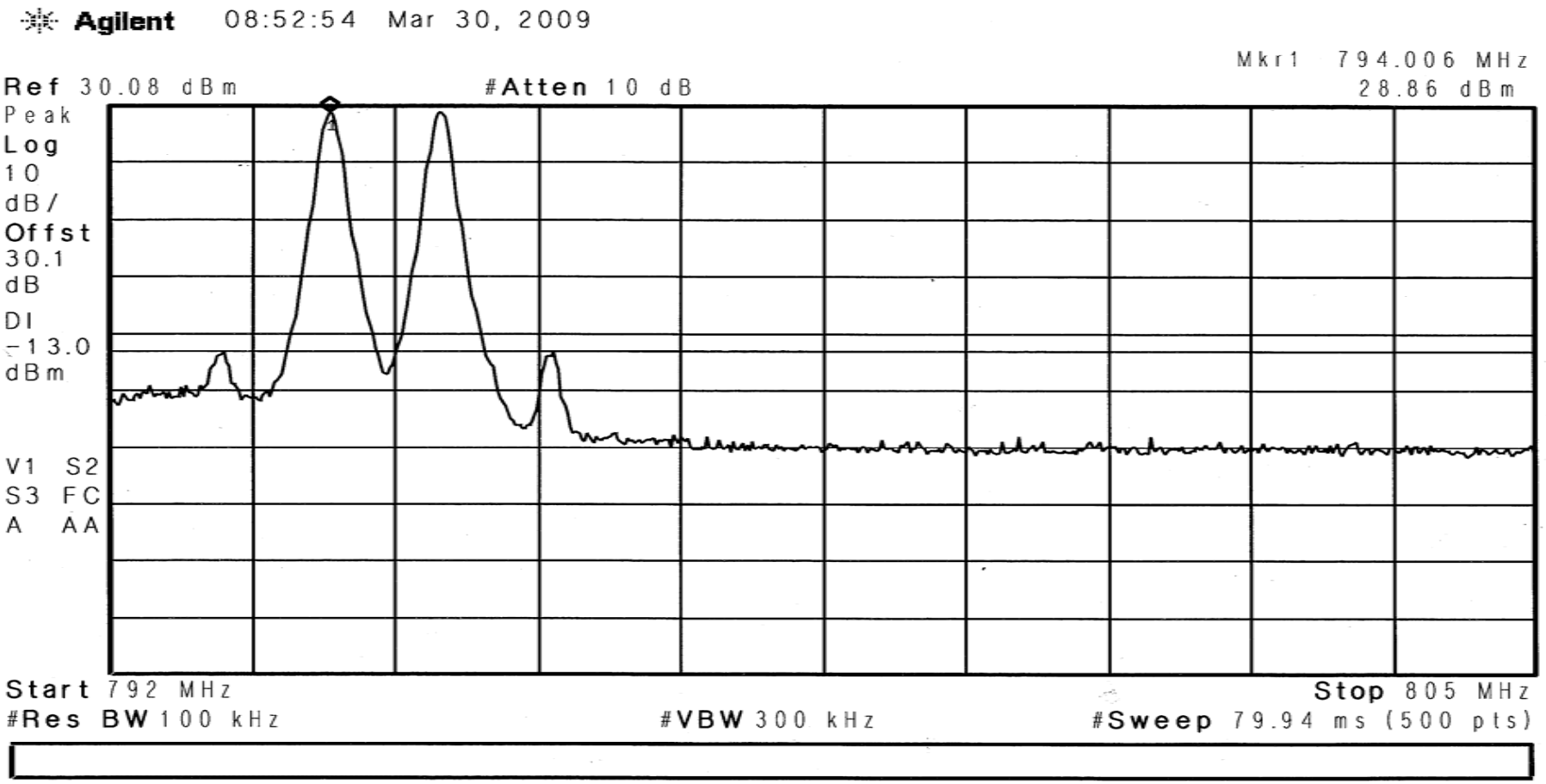
Notes:	Band 1 - FM - Uplink				



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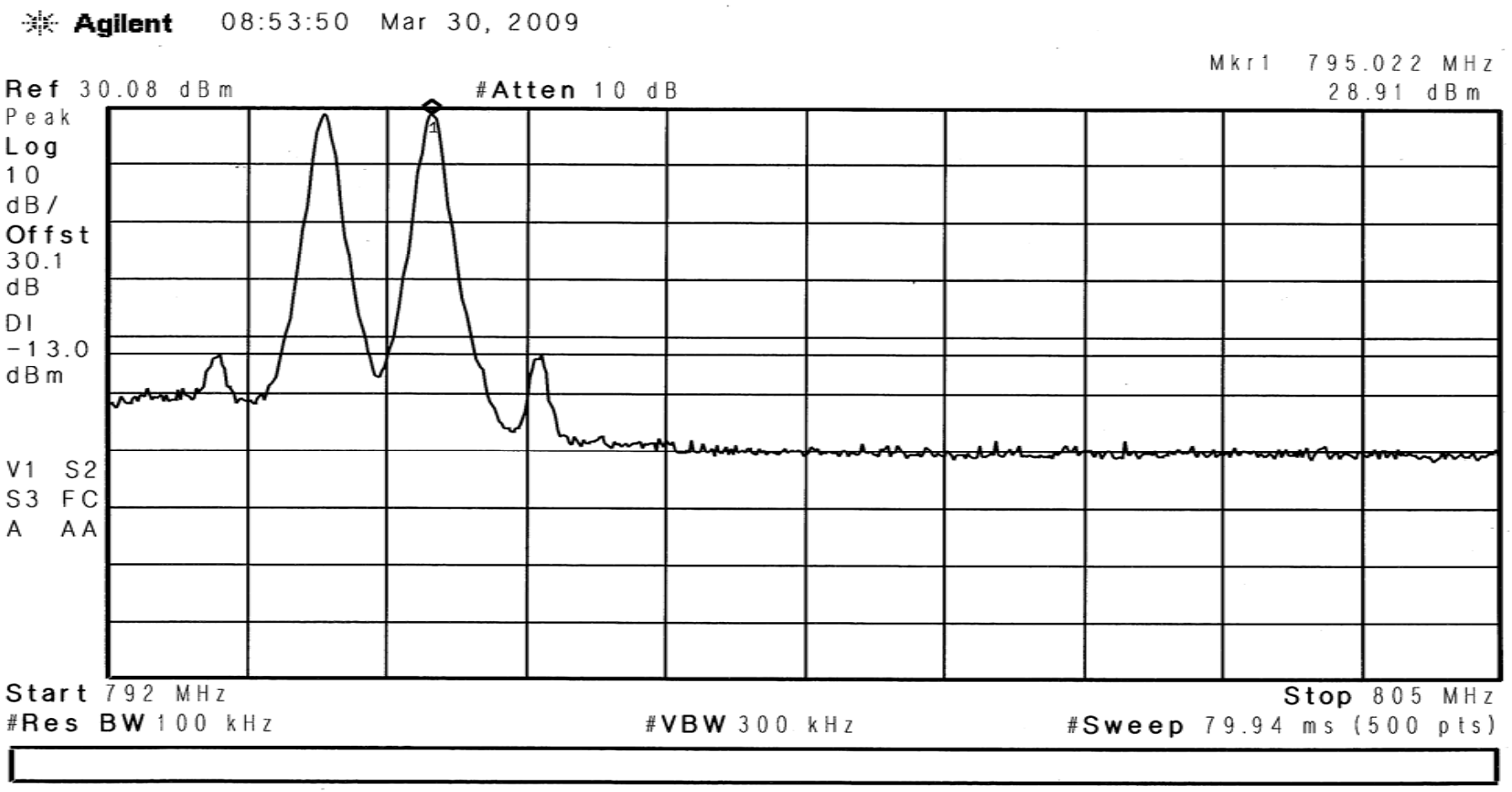

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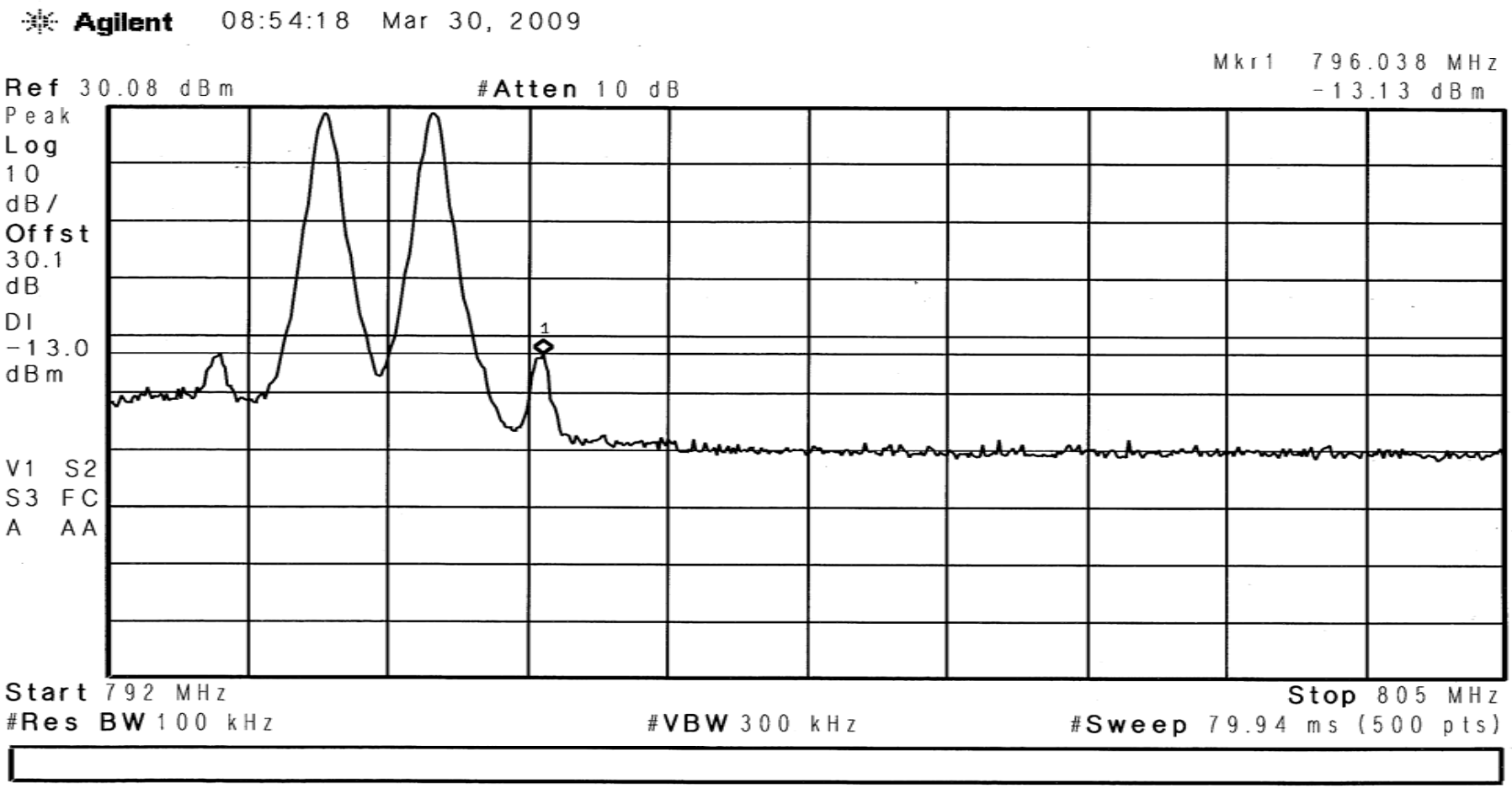
Notes:	Band 1 - FM - Uplink				



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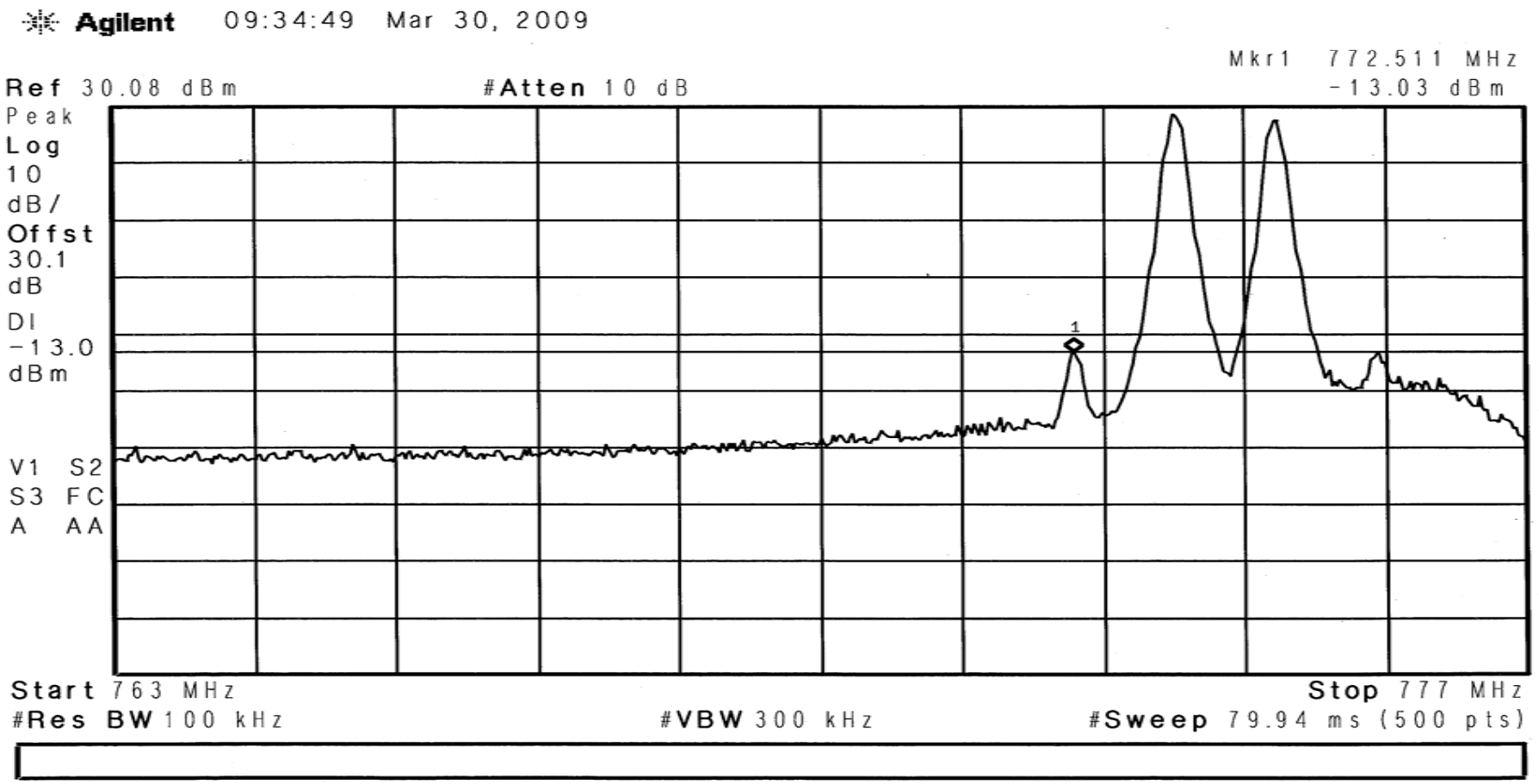
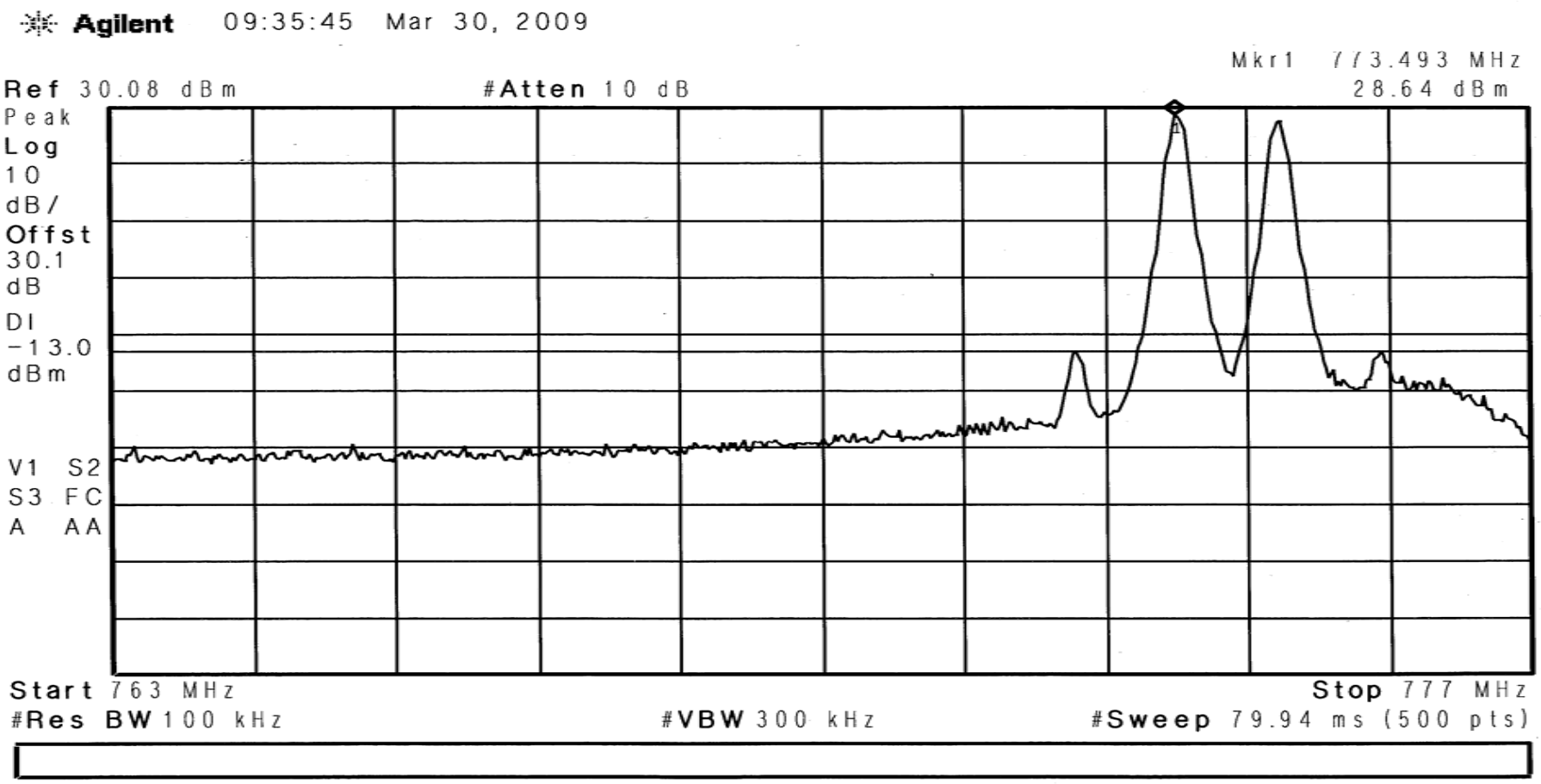
Operating Mode:	Amplifying input signal				
Notes:	Band 1 - TDMA - Downlink				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method:	**Inter-modulation Characteristics**				
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5153N-1
Model No:	61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2 Paragraph: 2.1047			**Date:**	3/30/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 1 - TDMA - Downlink				



RETLIF TESTING LABORATORIES

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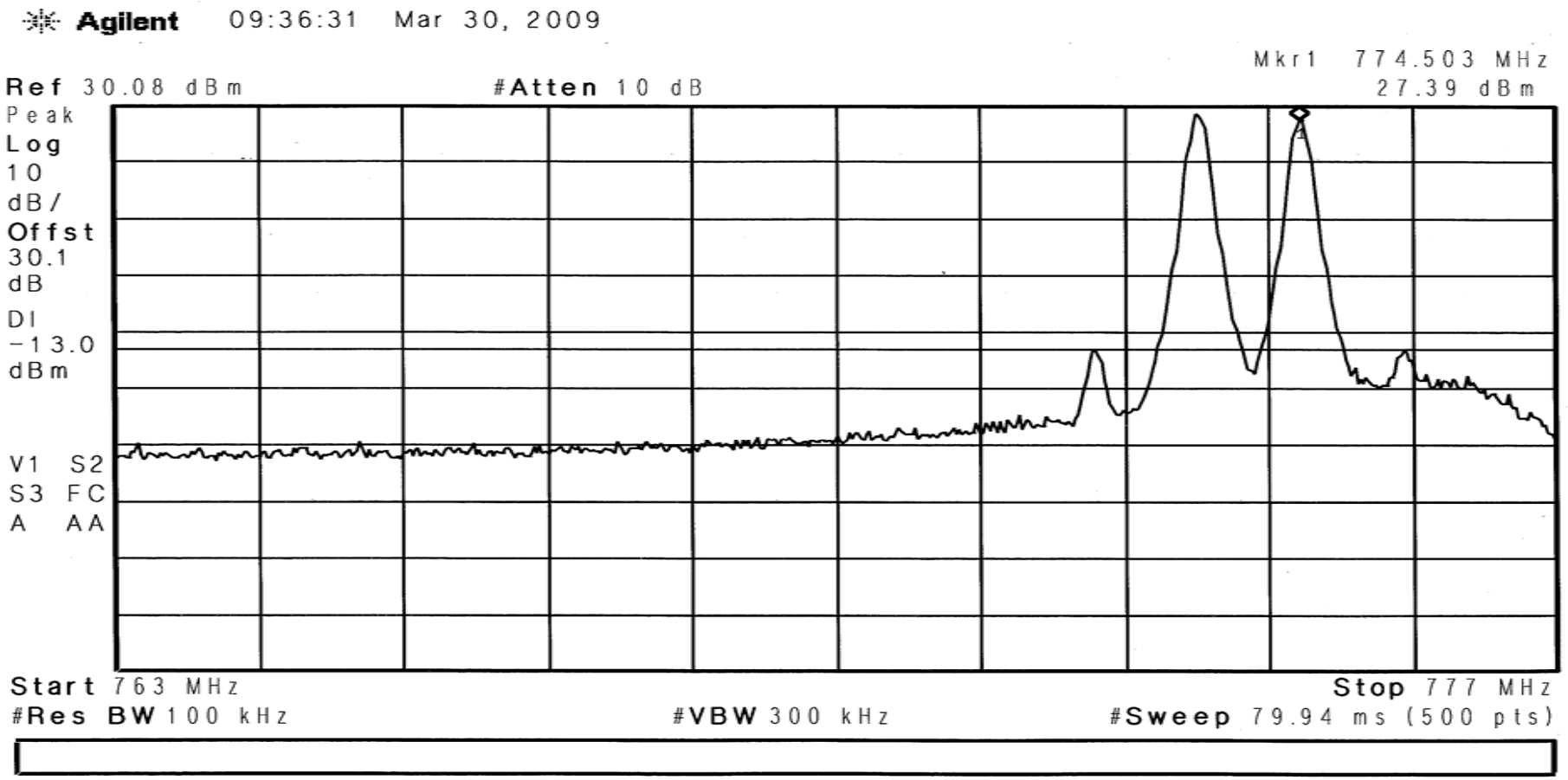
Test Specification:	FCC Part 2	Paragraph: 2.1047		**Date:**	3/30/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 1 - TDMA - Downlink				



RETLIF TESTING LABORATORIES

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Operating Mode:	Amplifying input signal				
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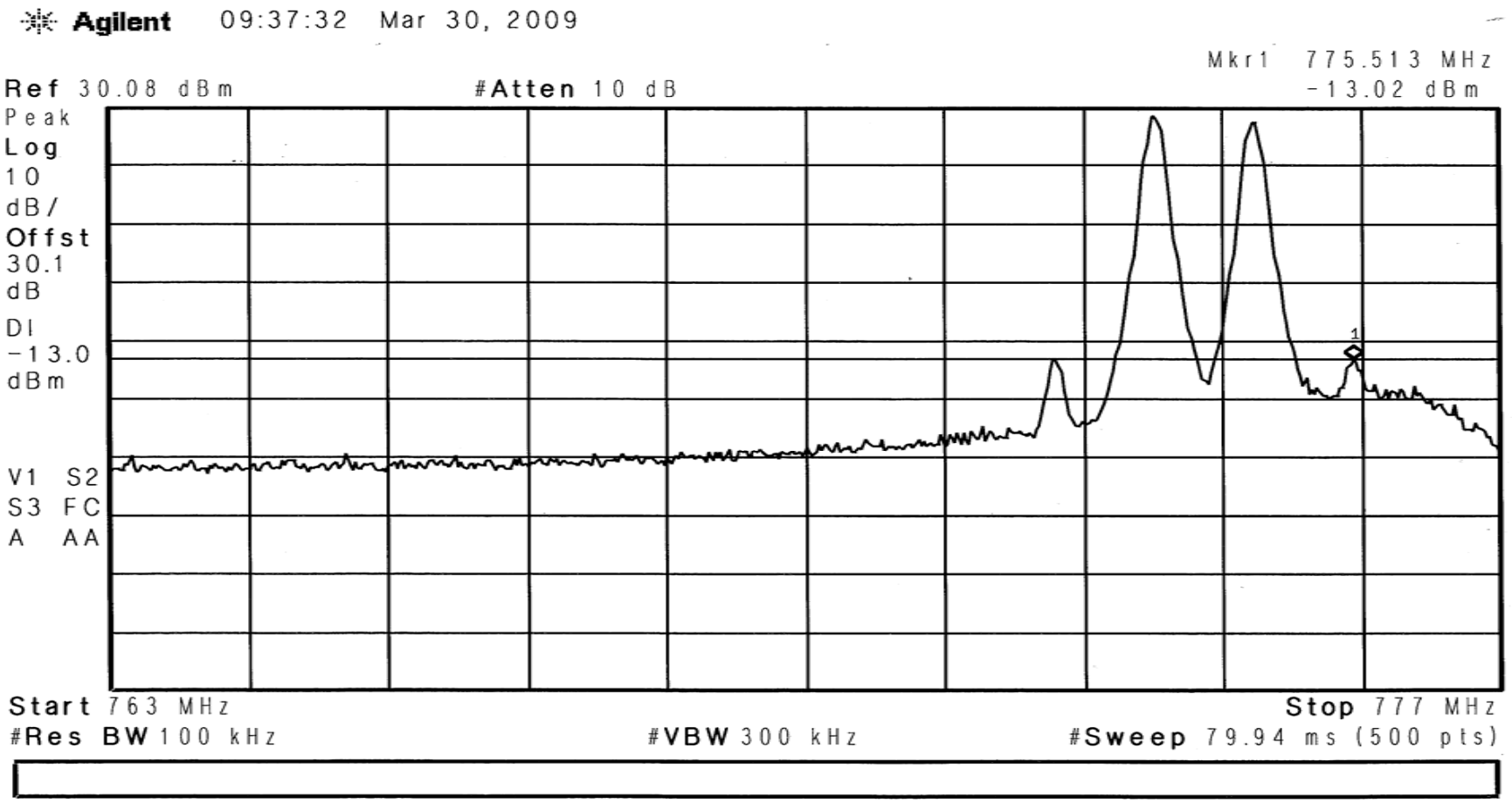

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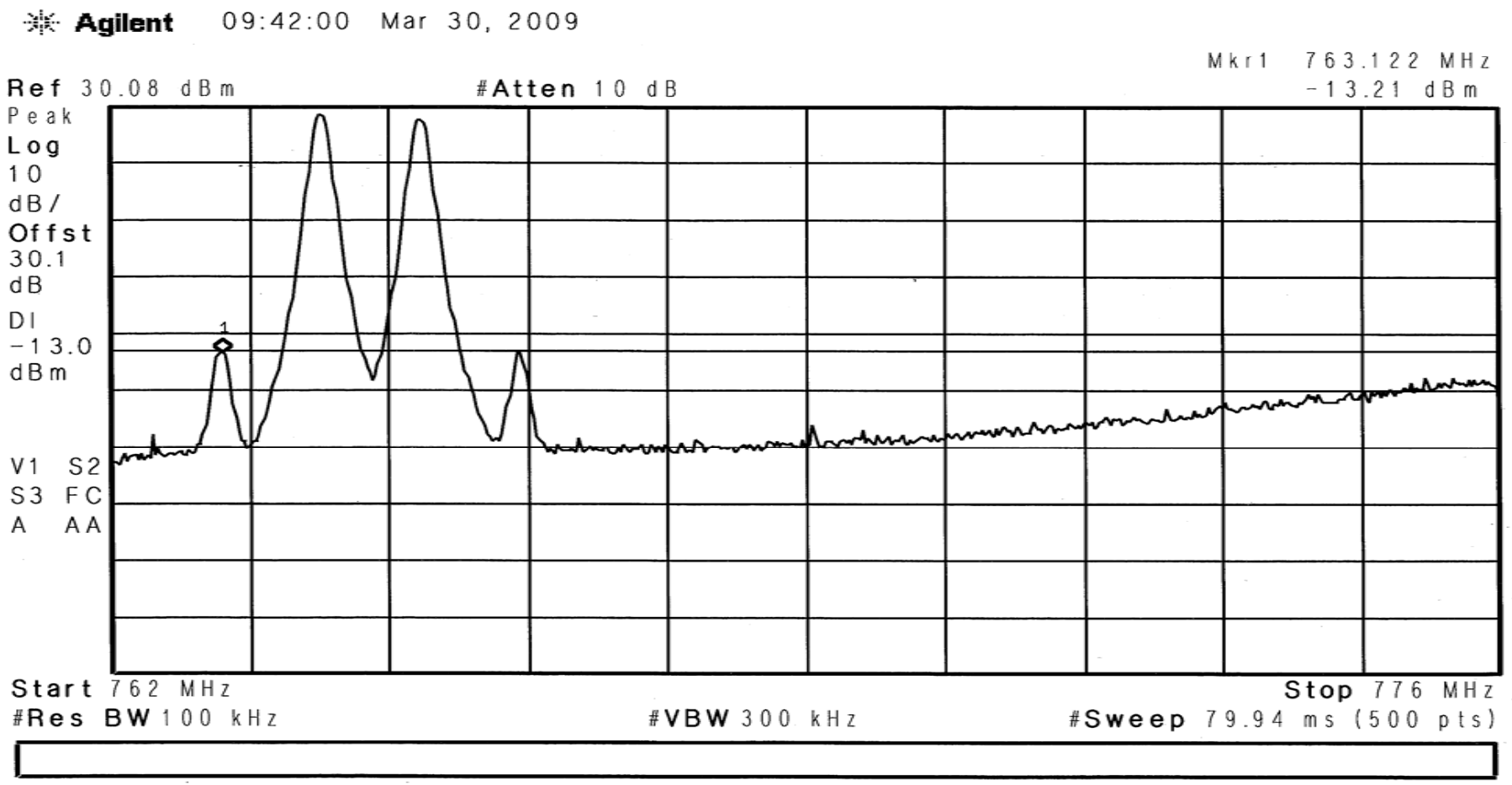

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Test Specification:	FCC Part 2	Paragraph: 2.1047		**Date:**	3/30/2009
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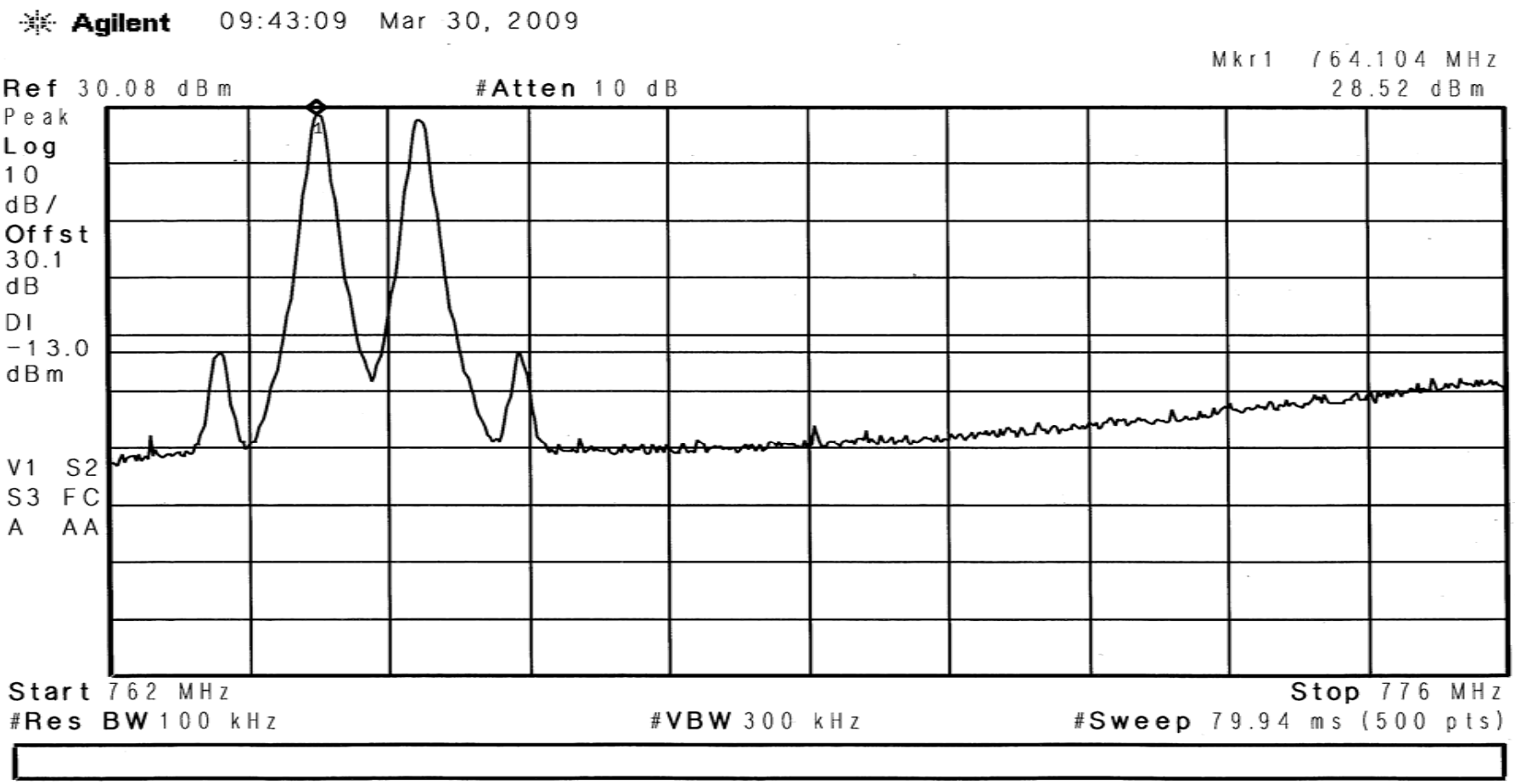

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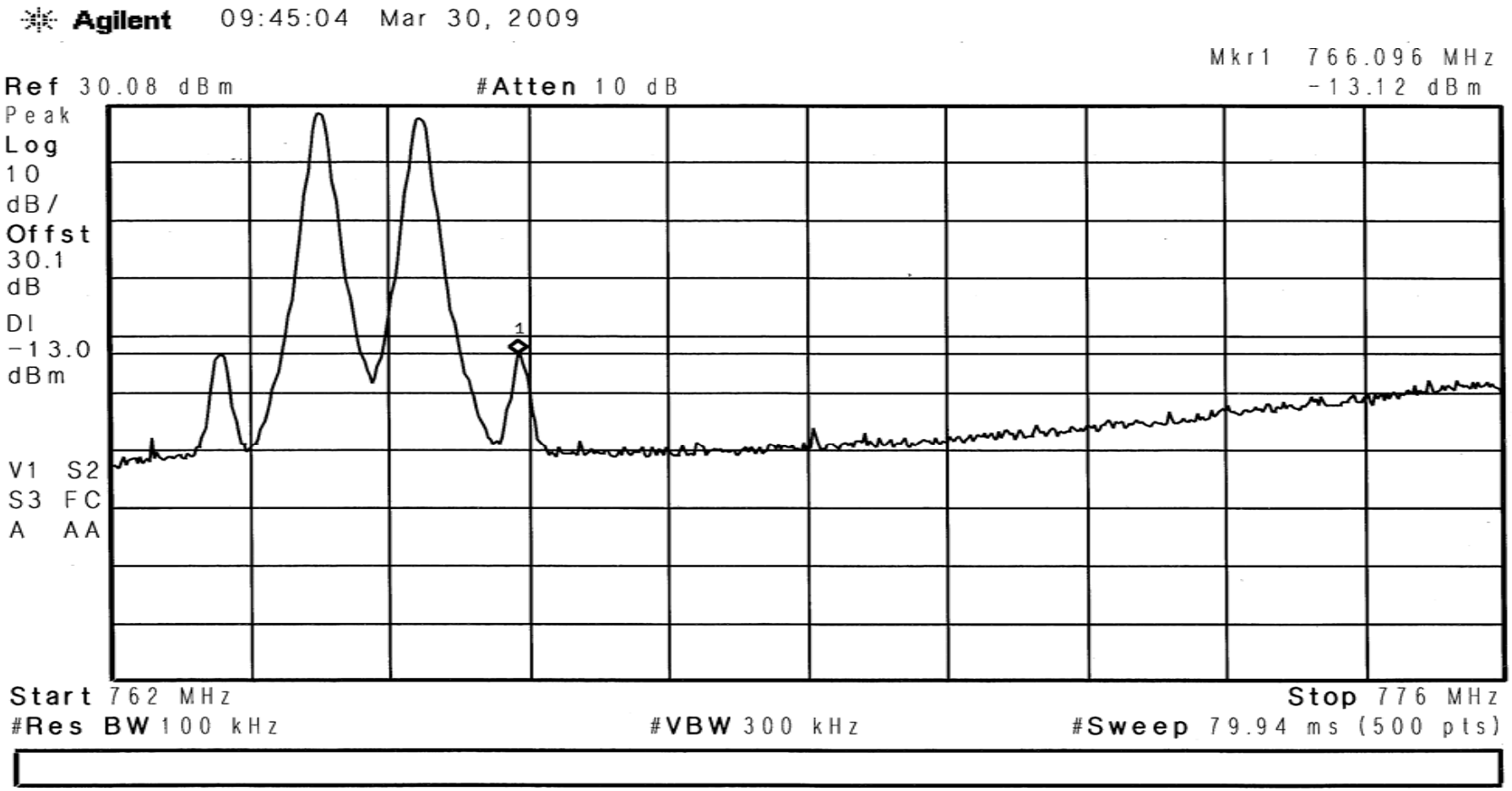

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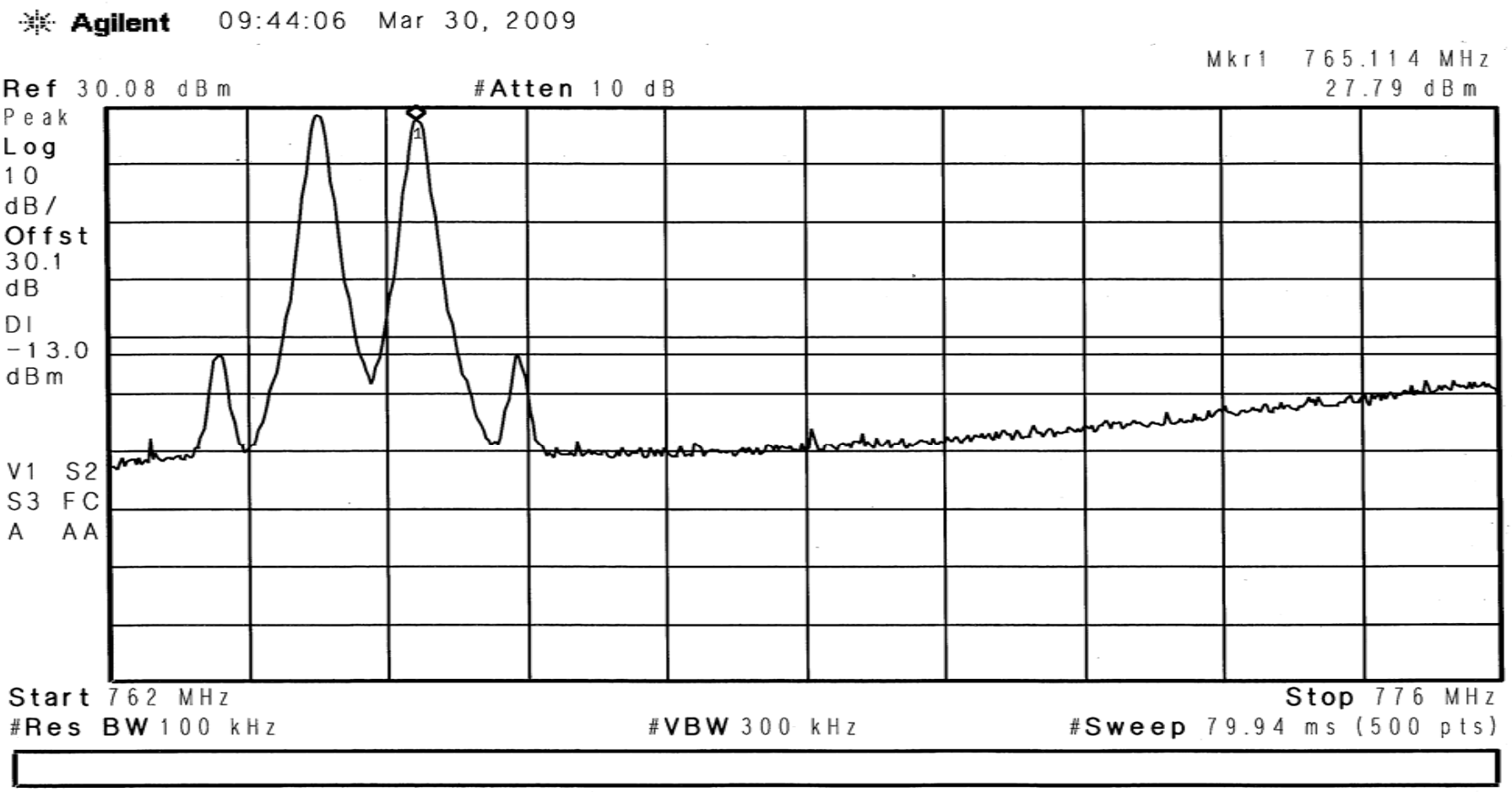

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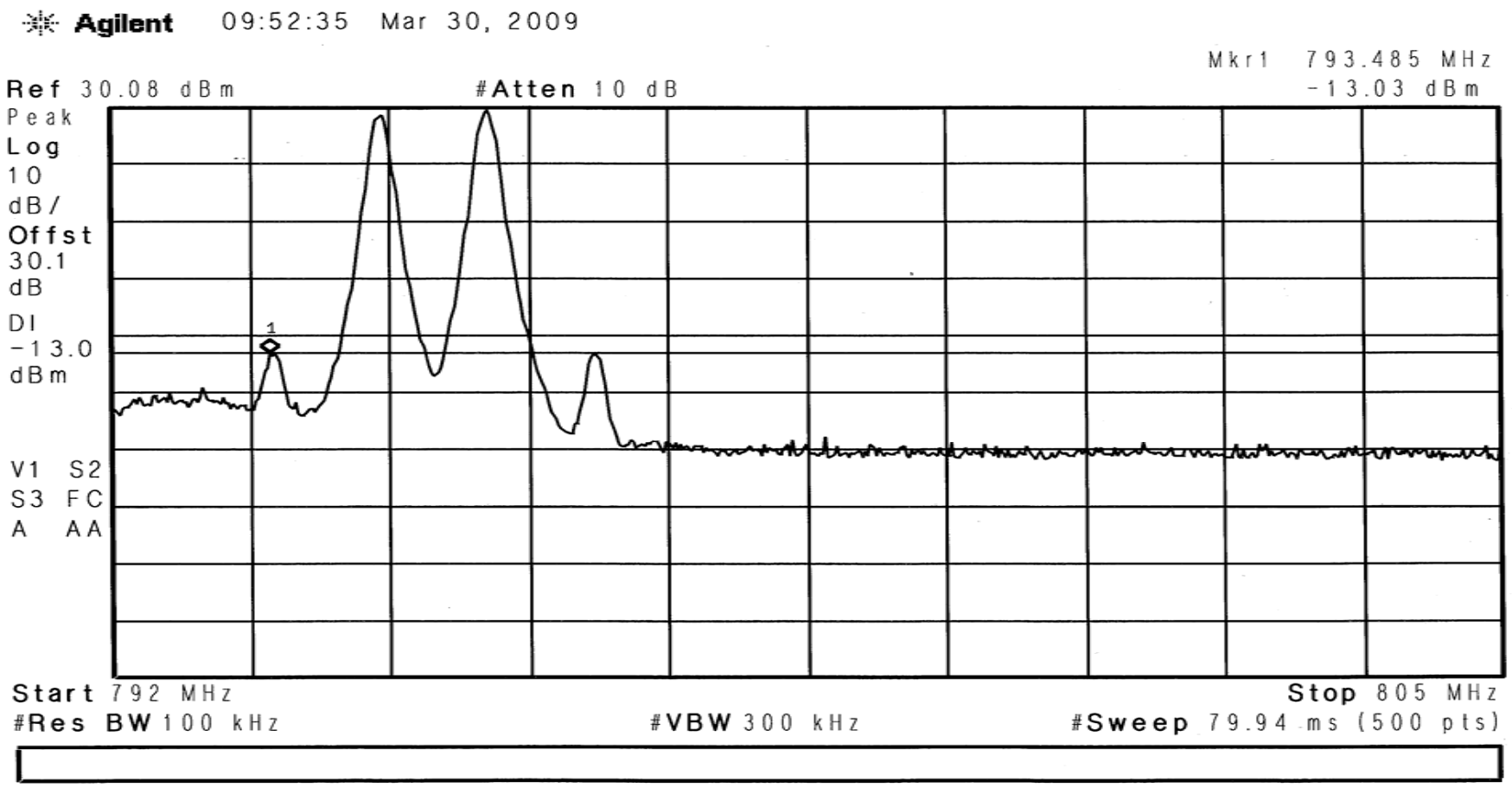

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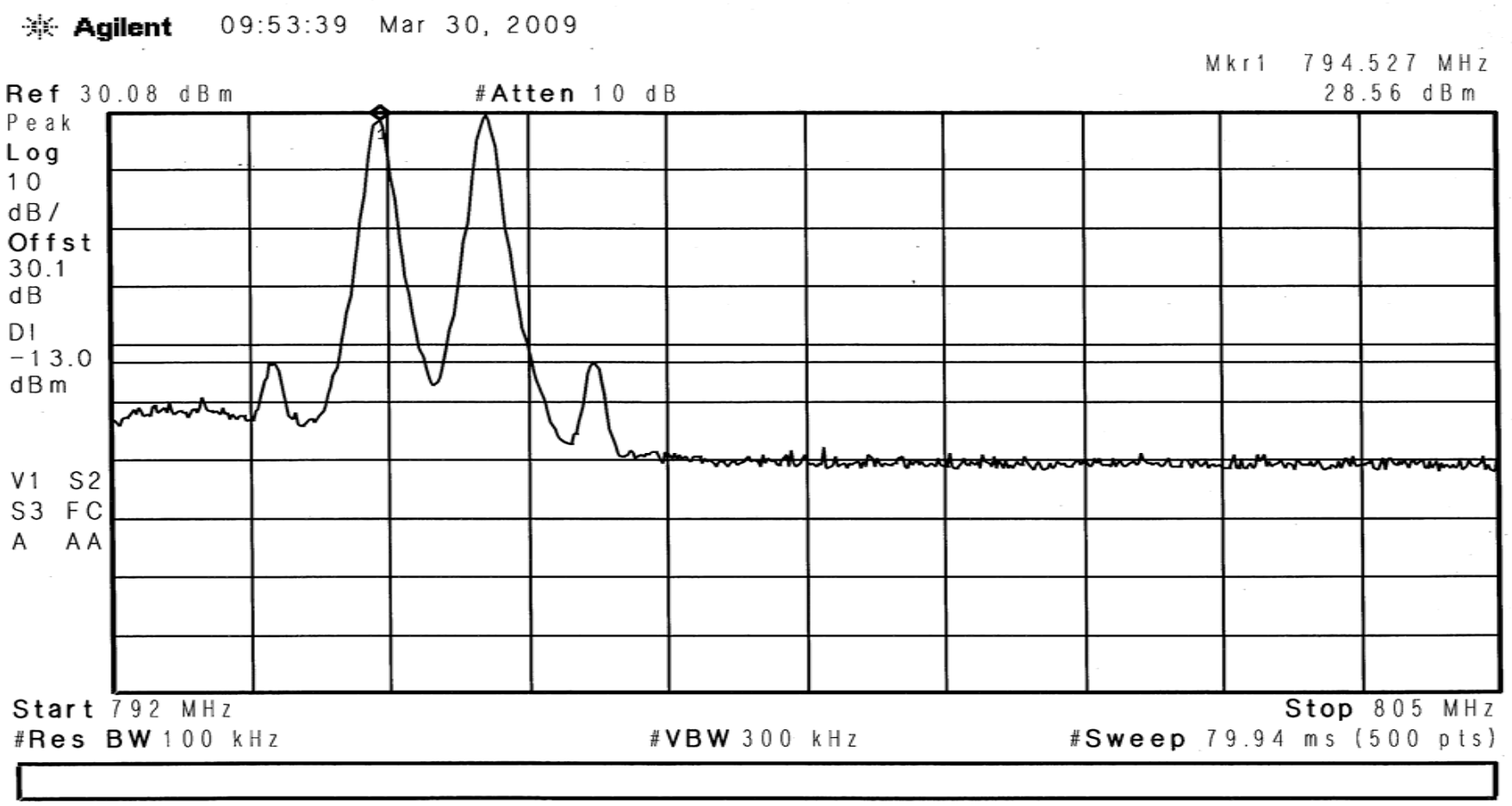

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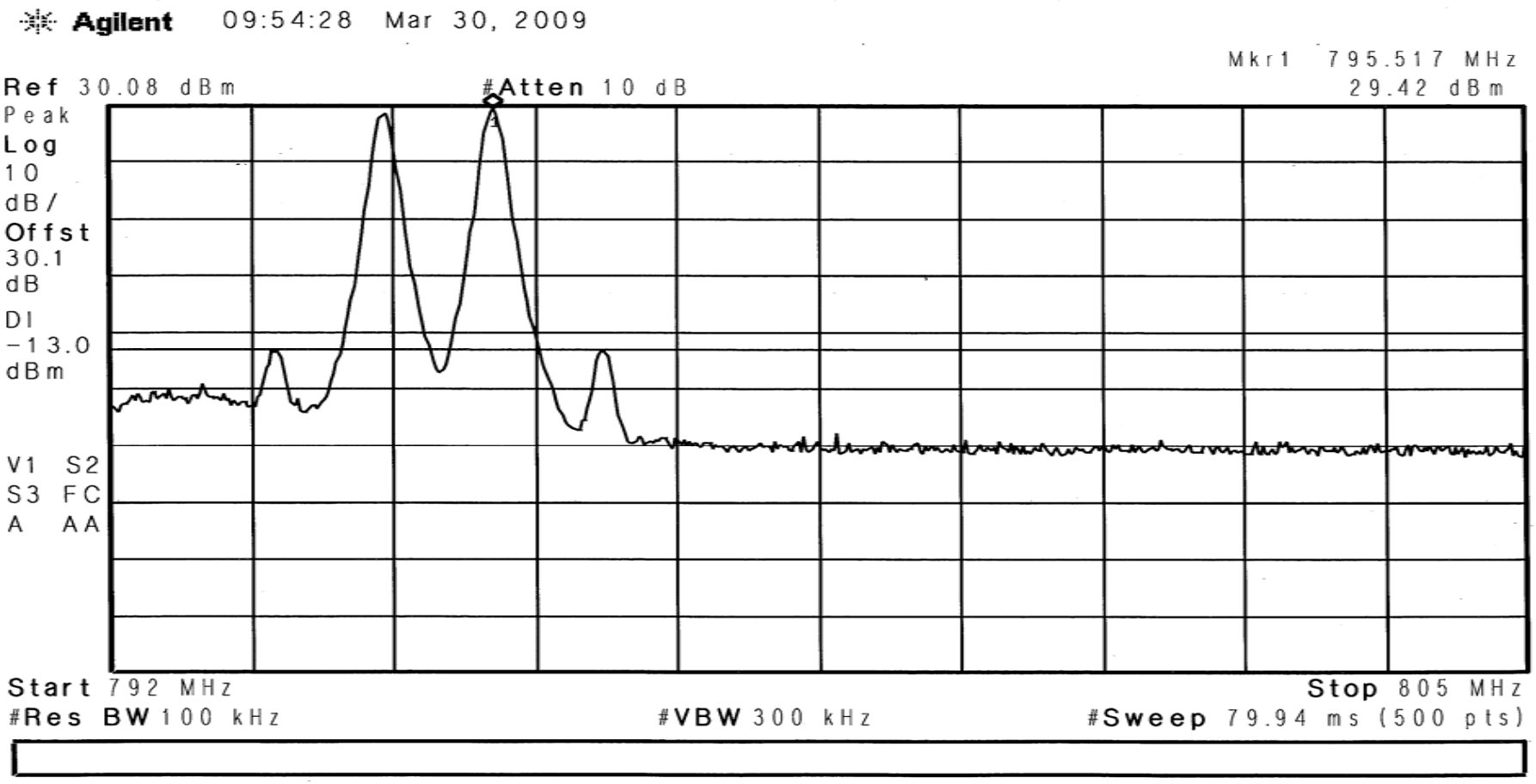

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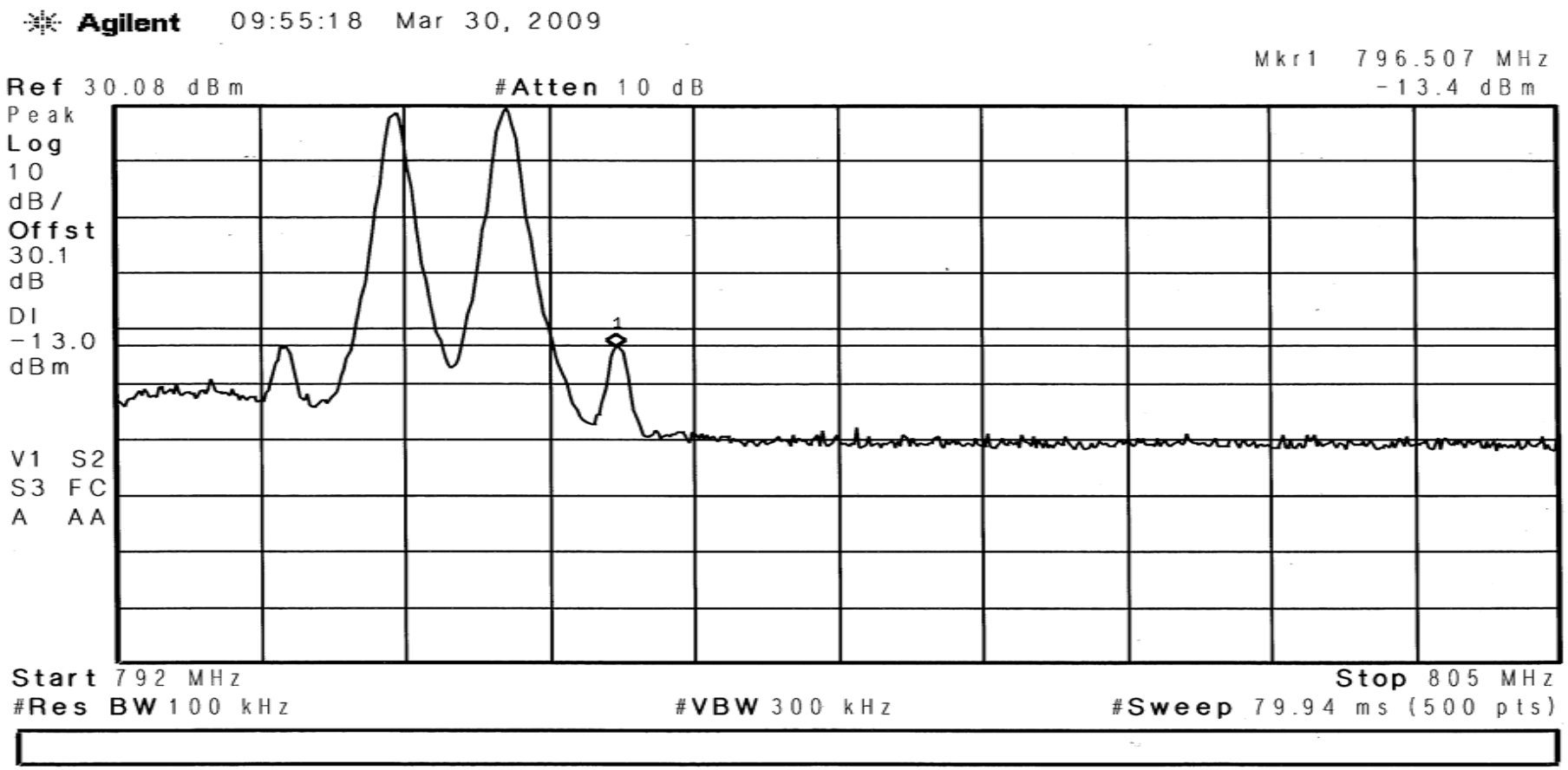
Operating Mode:	Amplifying input signal				
Notes:	Band 1 - TDMA - Uplink				



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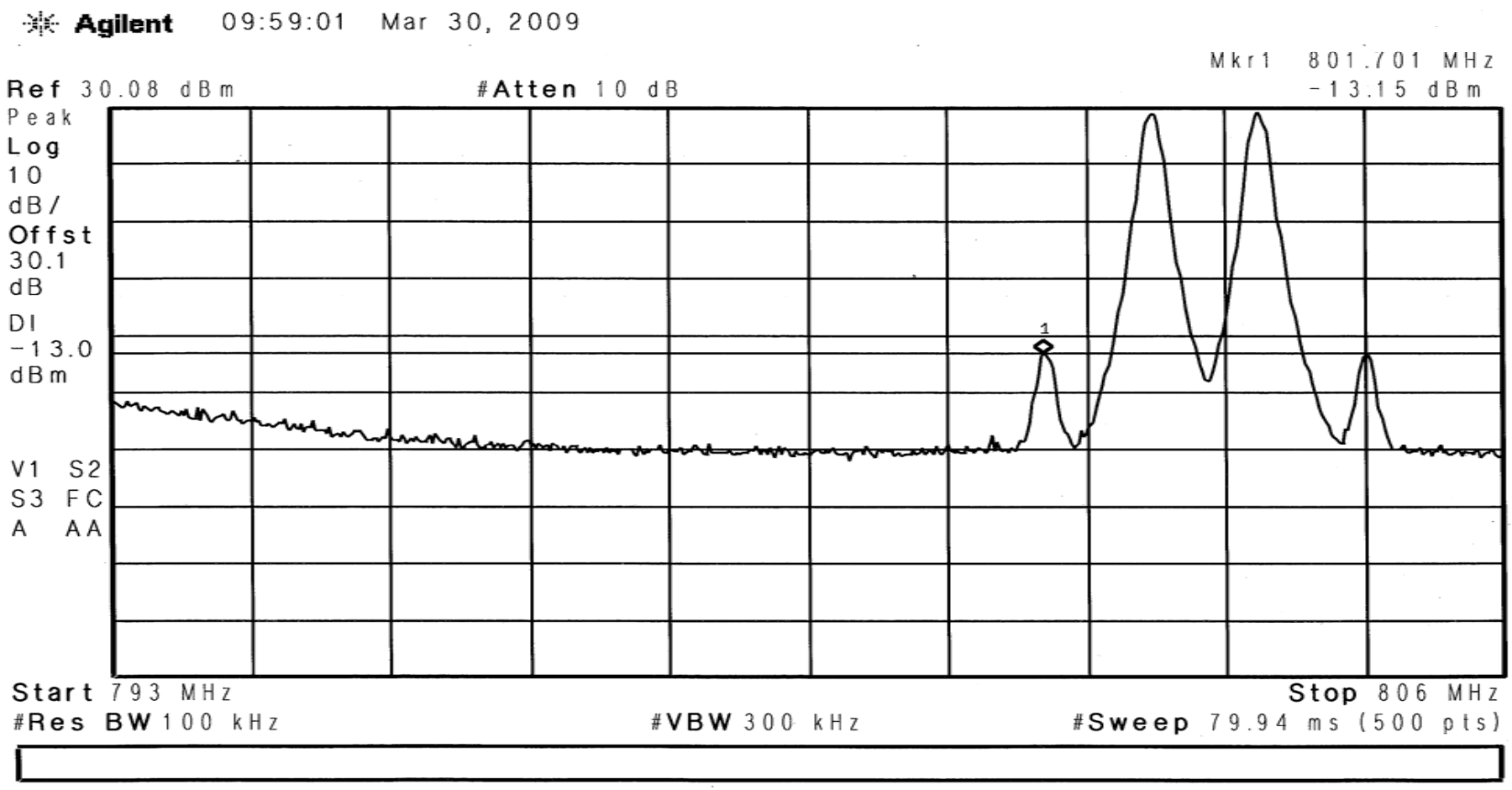
Operating Mode:	Amplifying input signal				
Notes:	Band 1 - TDMA - Uplink				



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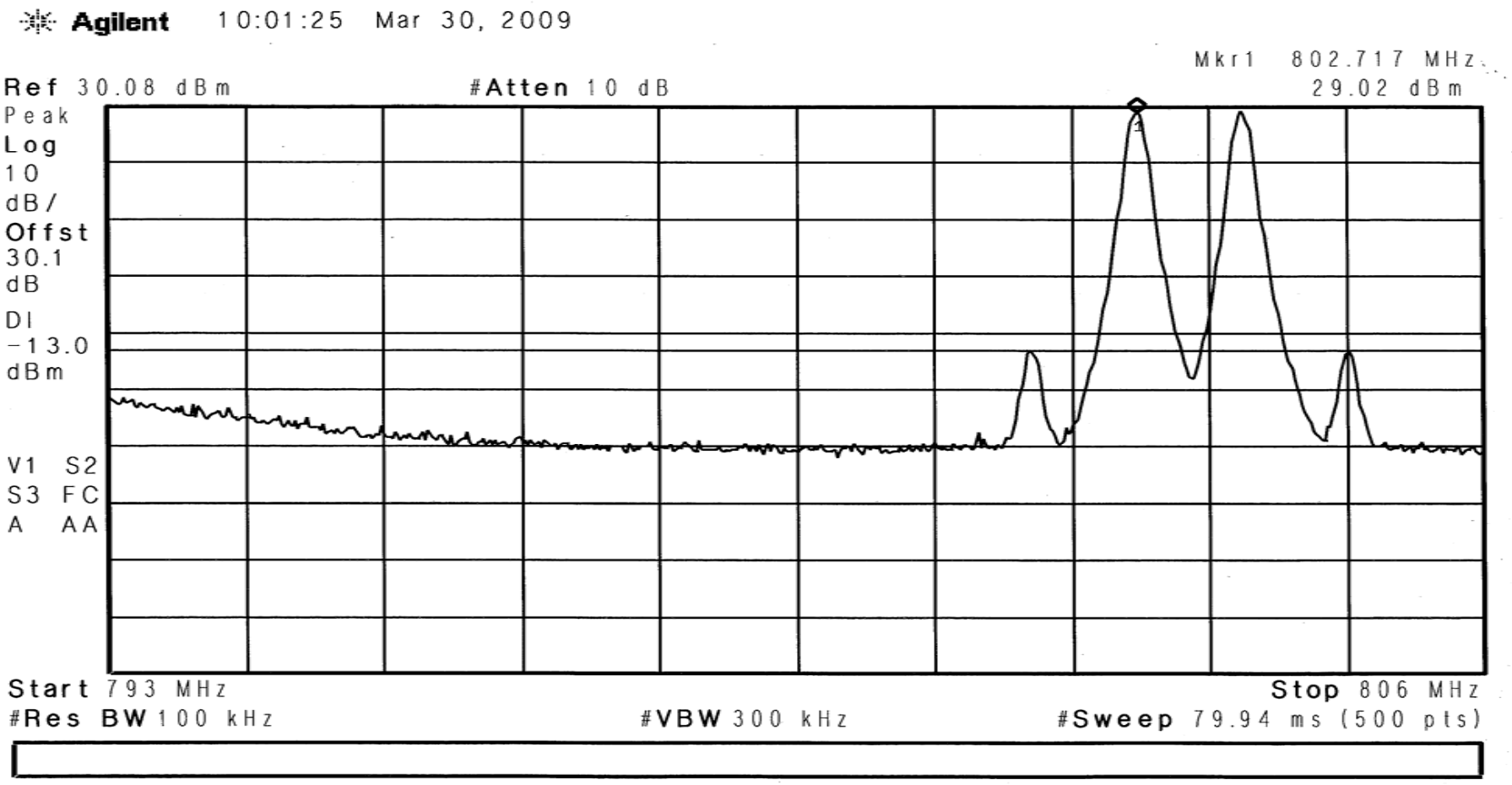
Test Specification:	FCC Part 2 Paragraph: 2.1047			**Date:**	3/30/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 1 - FM - Uplink				



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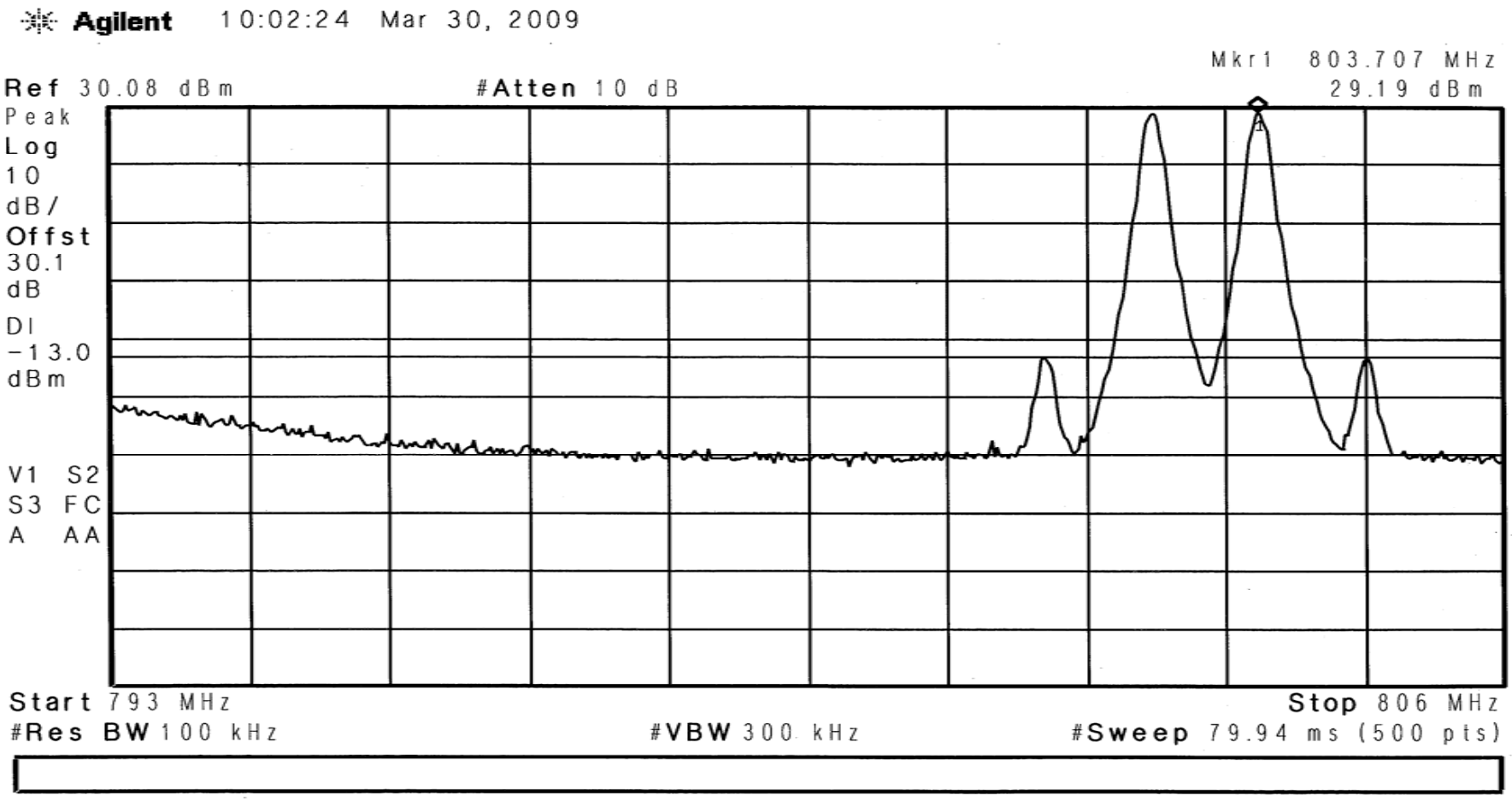
Operating Mode:	Amplifying input signal				
Notes:	Band 1 - FM - Uplink				



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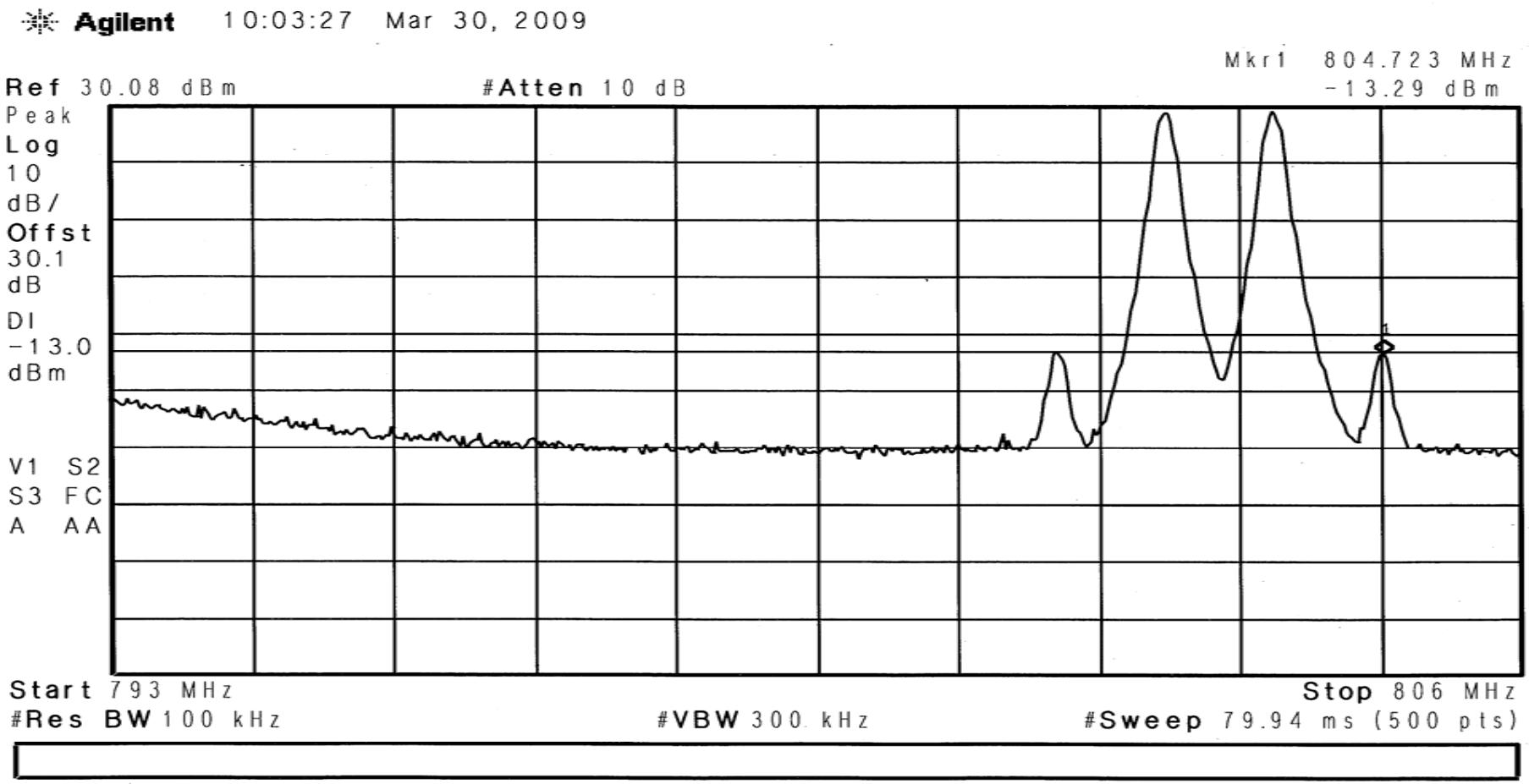
Operating Mode:	Amplifying input signal				
Notes:	Band 1 - FM - Uplink				



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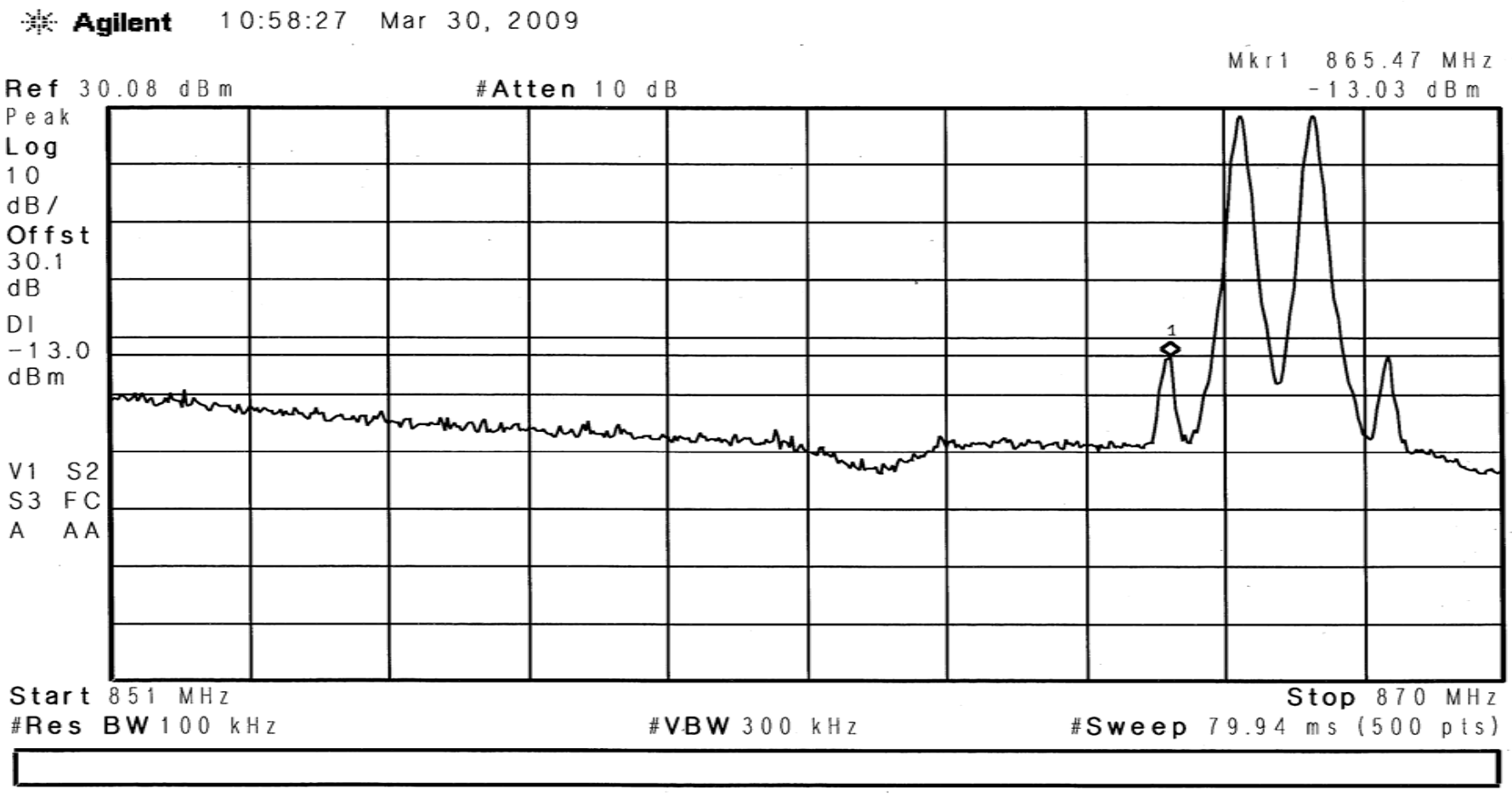
Test Specification:	FCC Part 2	Paragraph: 2.1047		**Date:**	3/30/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 2- FM - Downlink				



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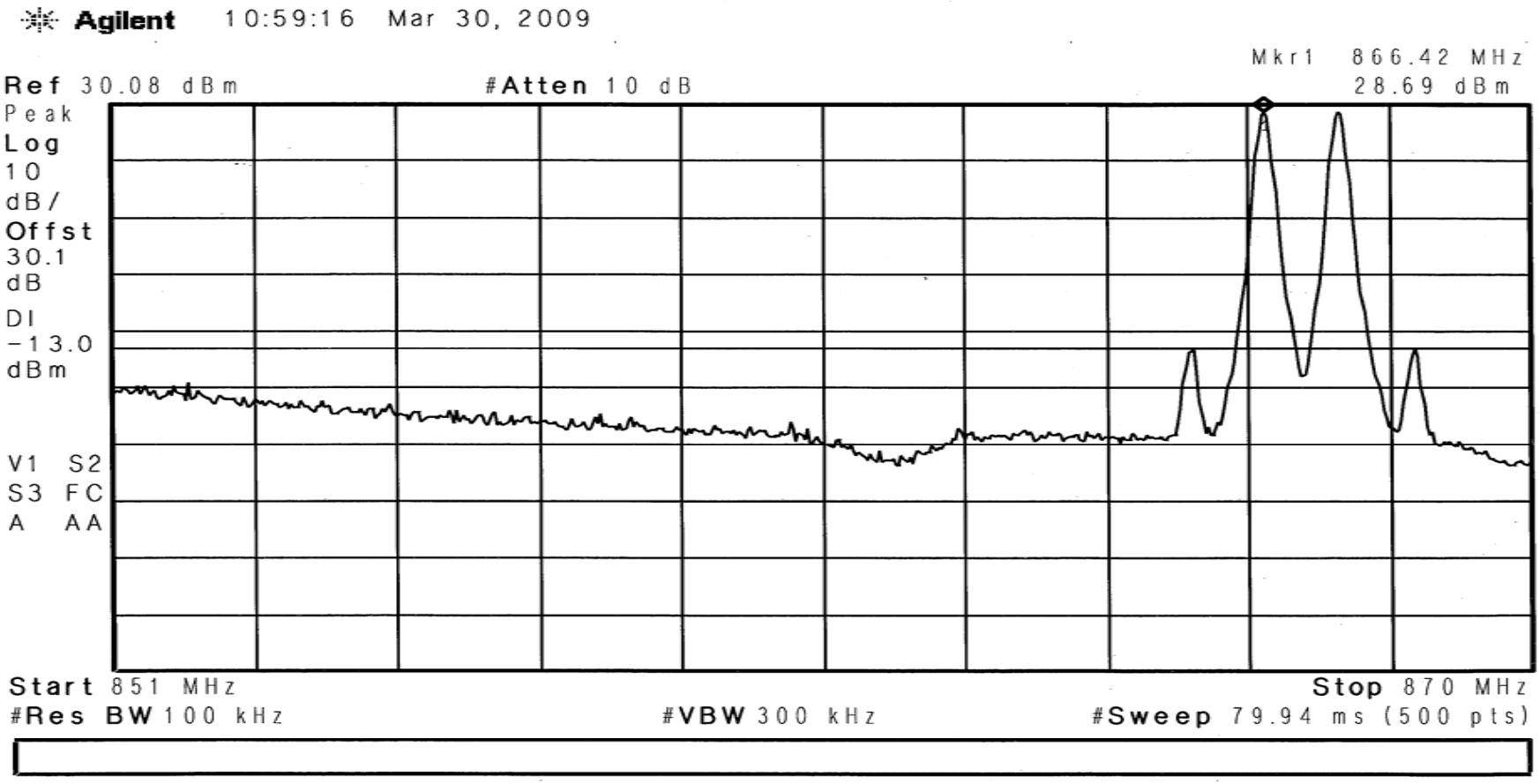
Operating Mode:	Amplifying input signal				
Notes:	Band 2- FM - Downlink				



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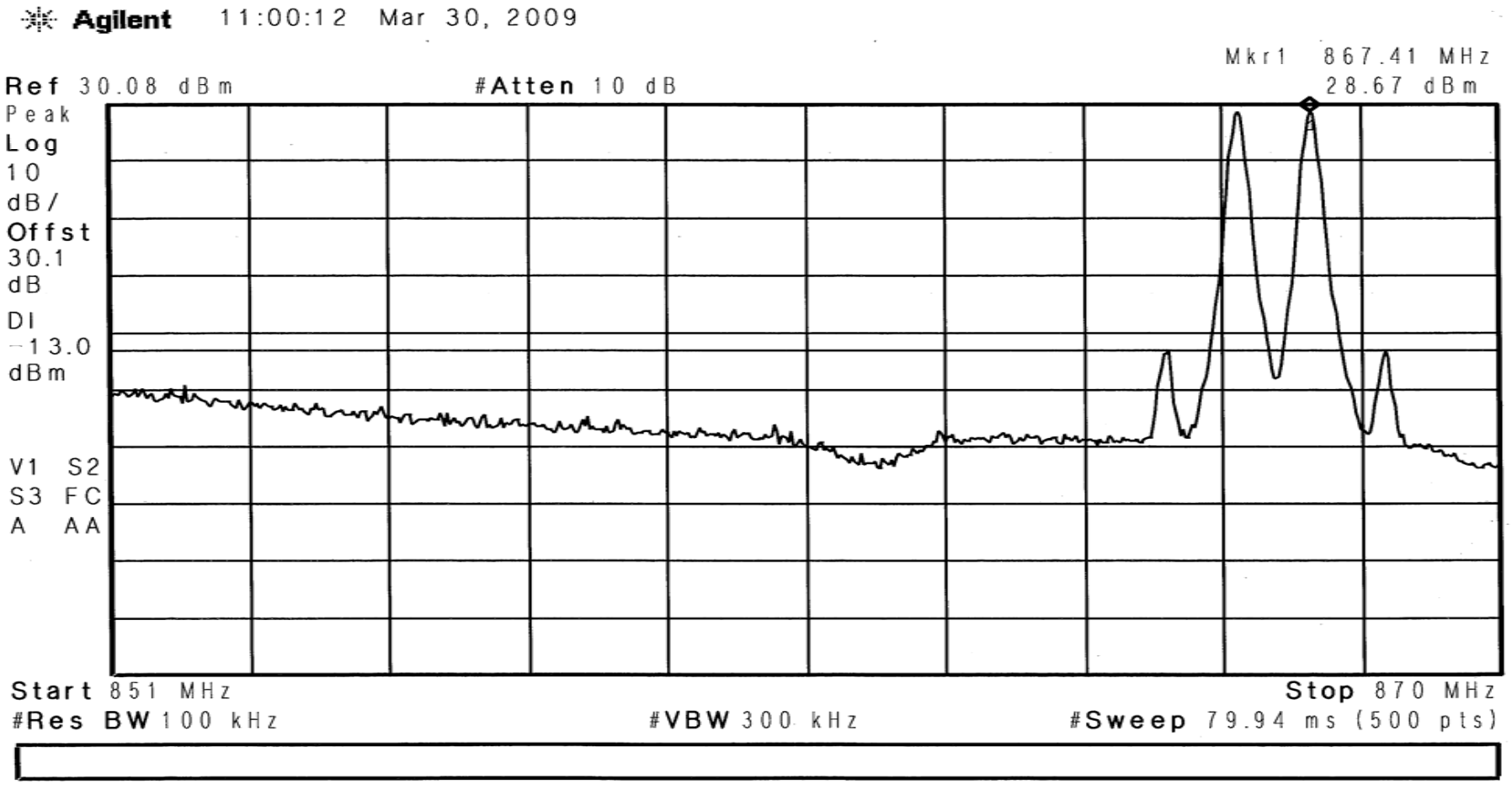

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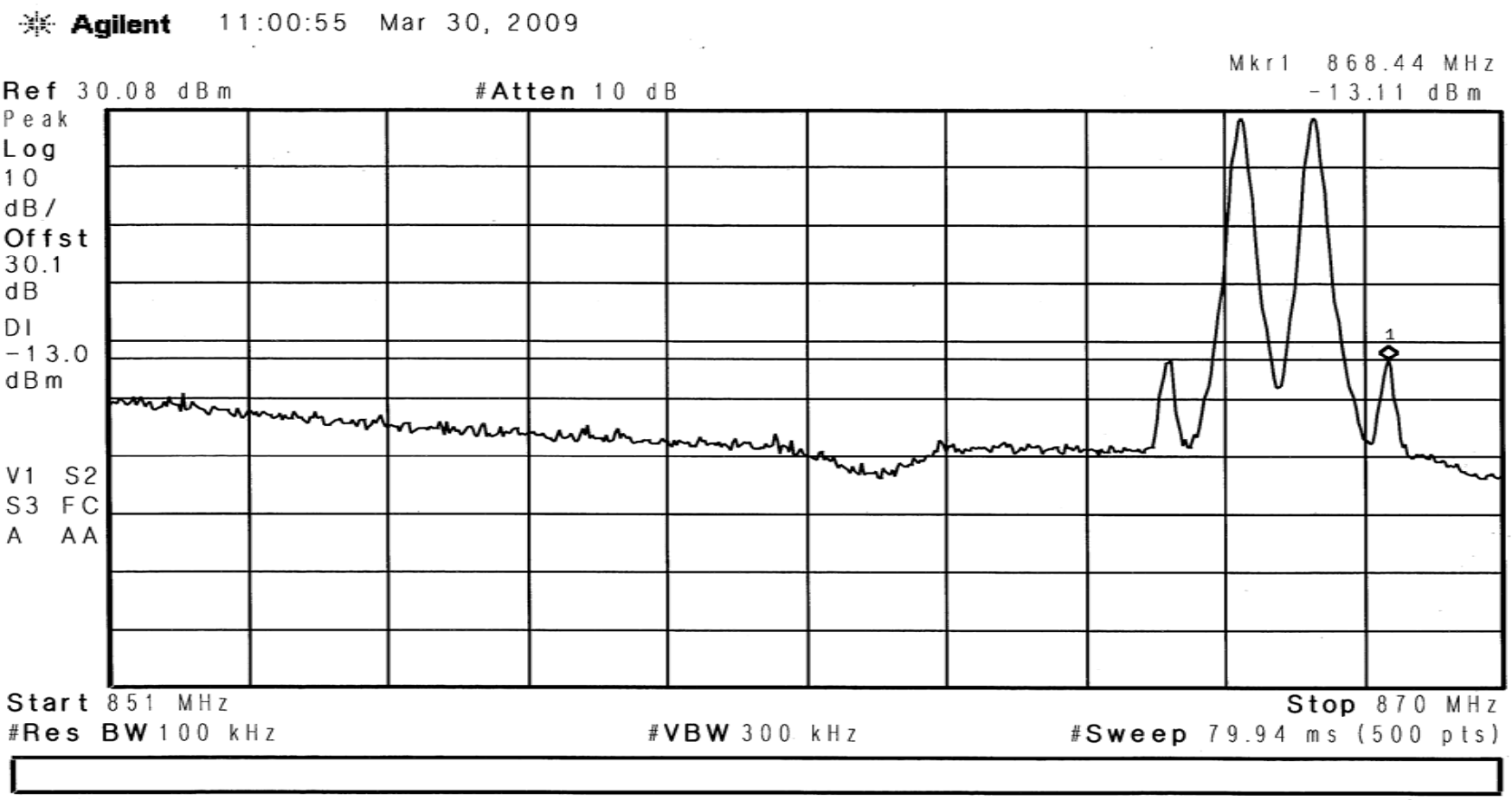

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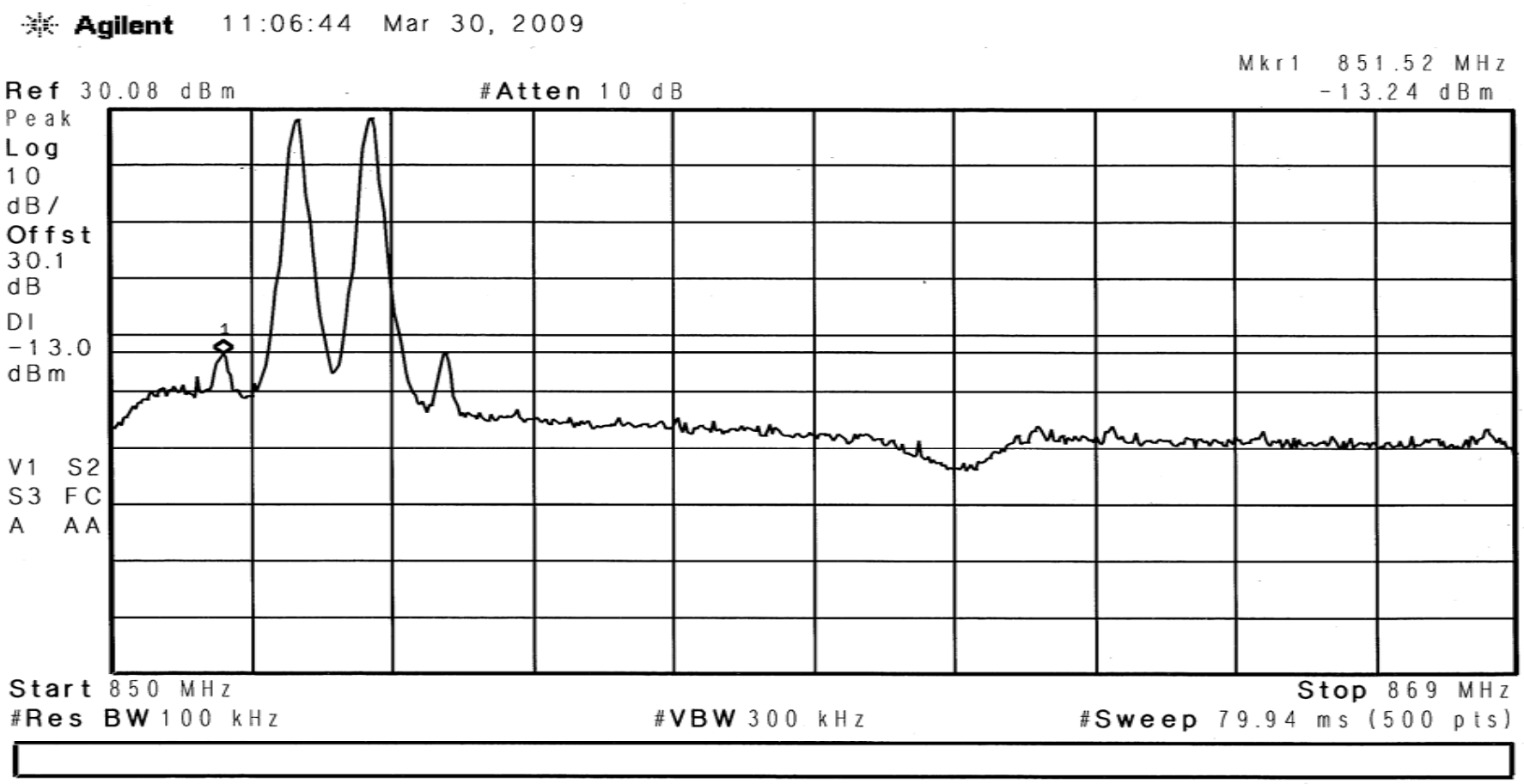

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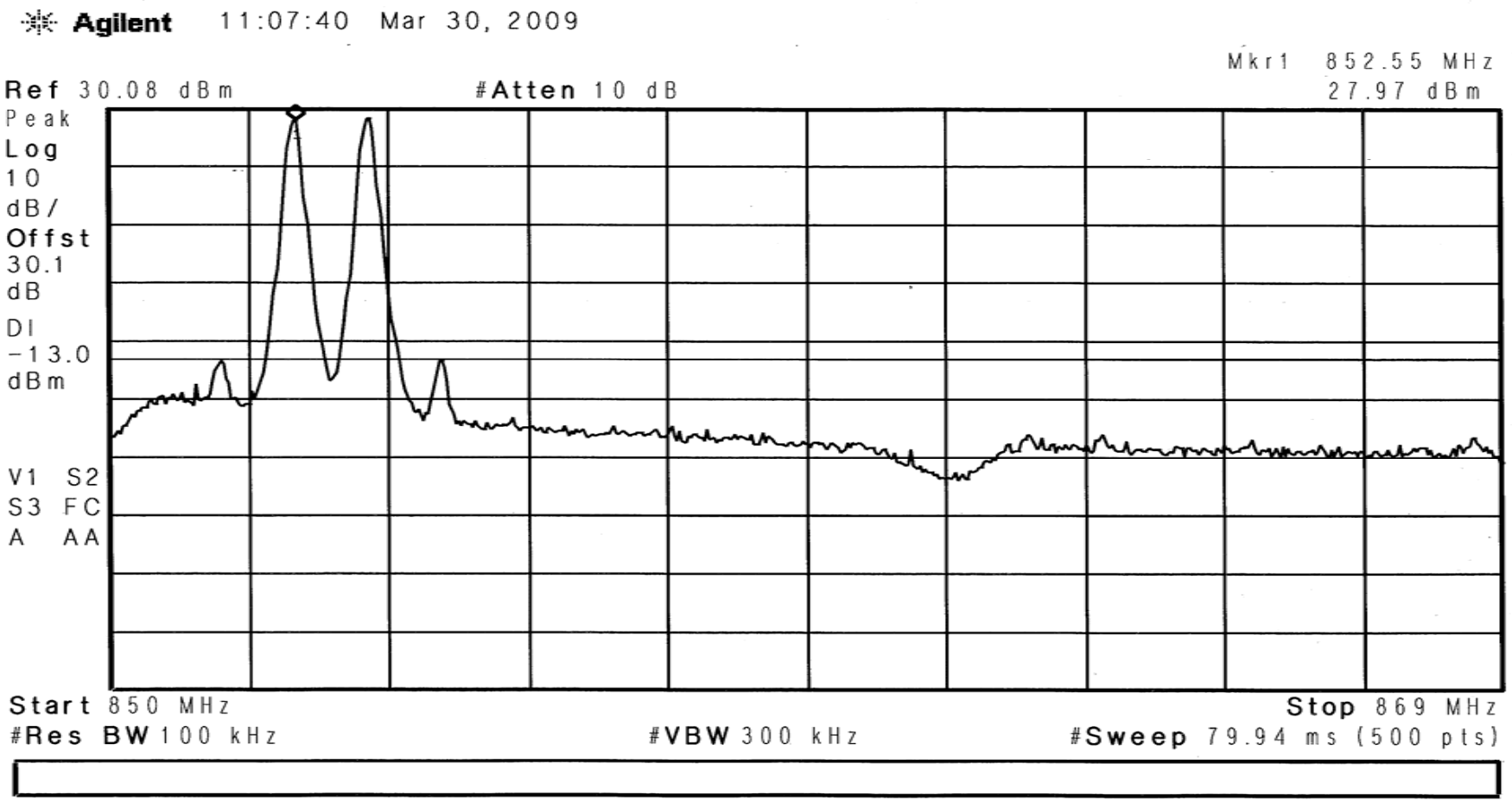

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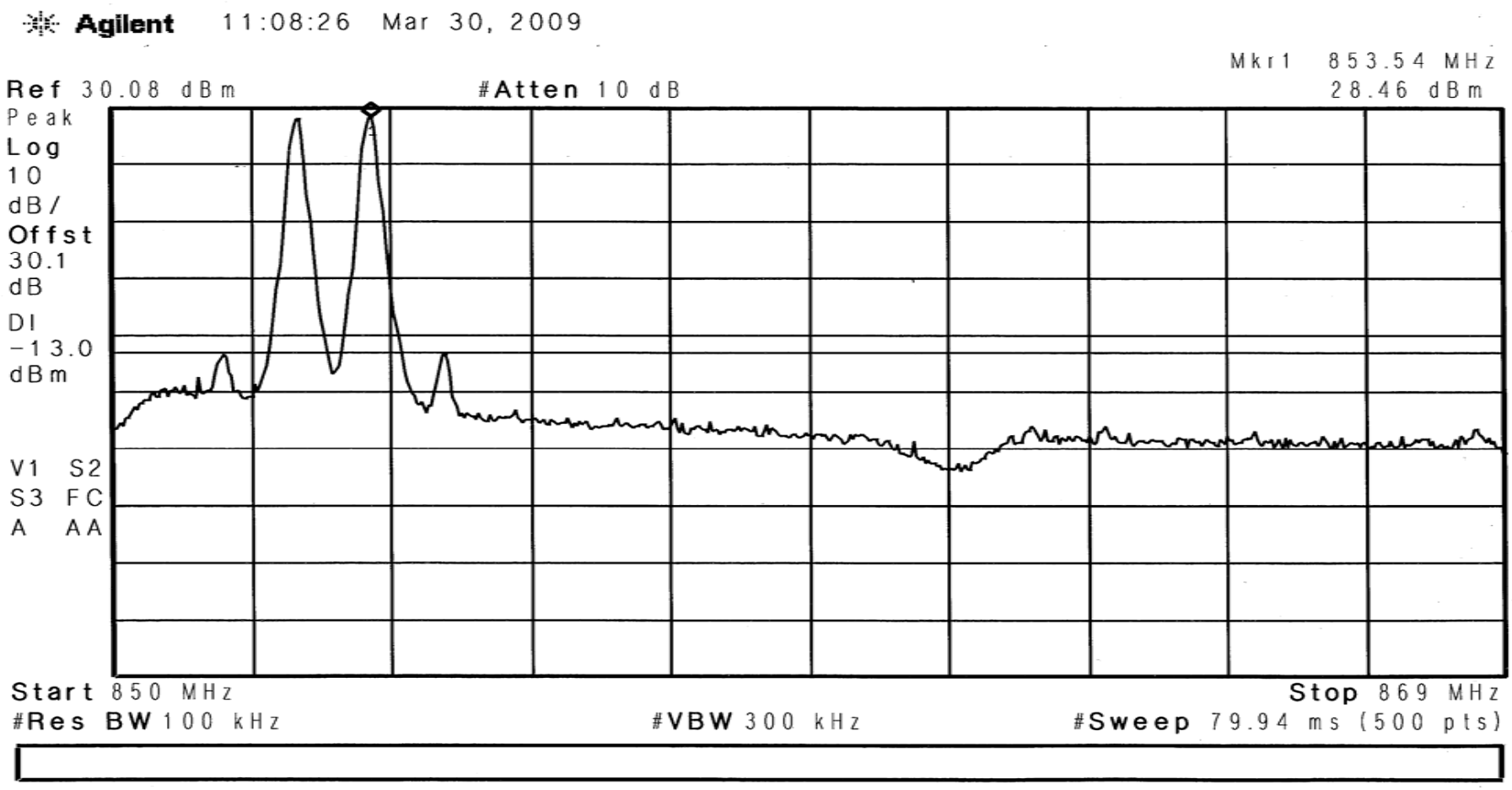

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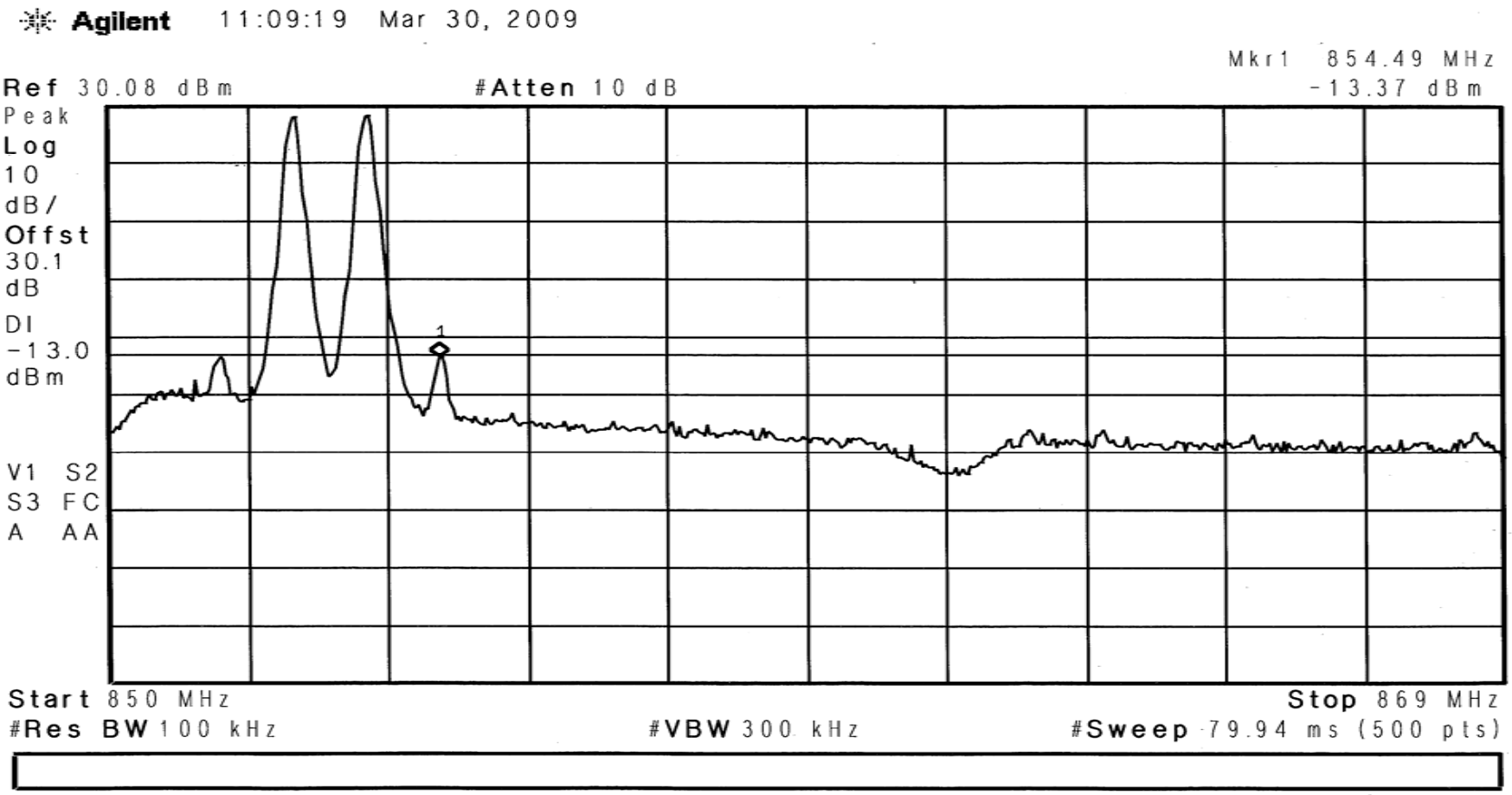

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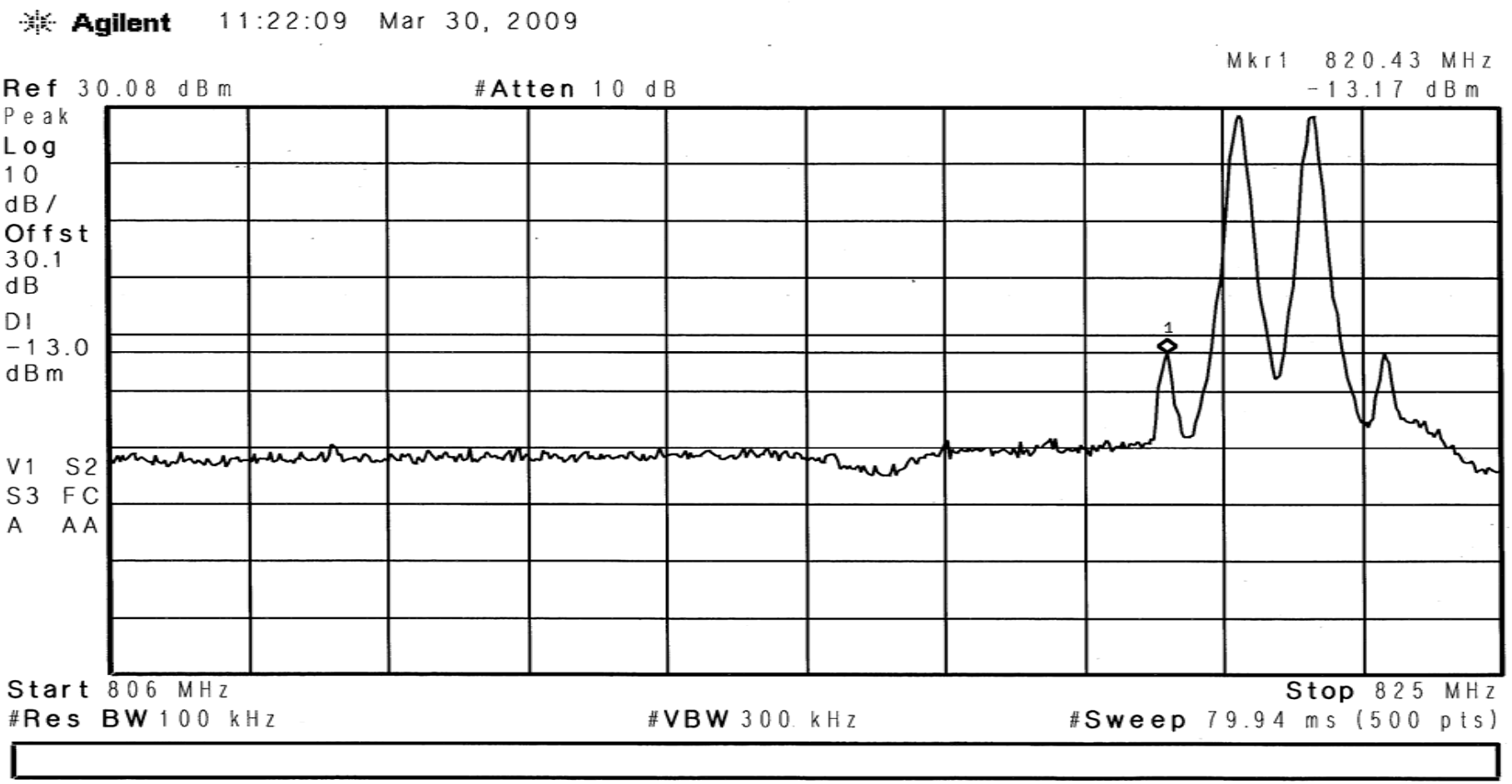

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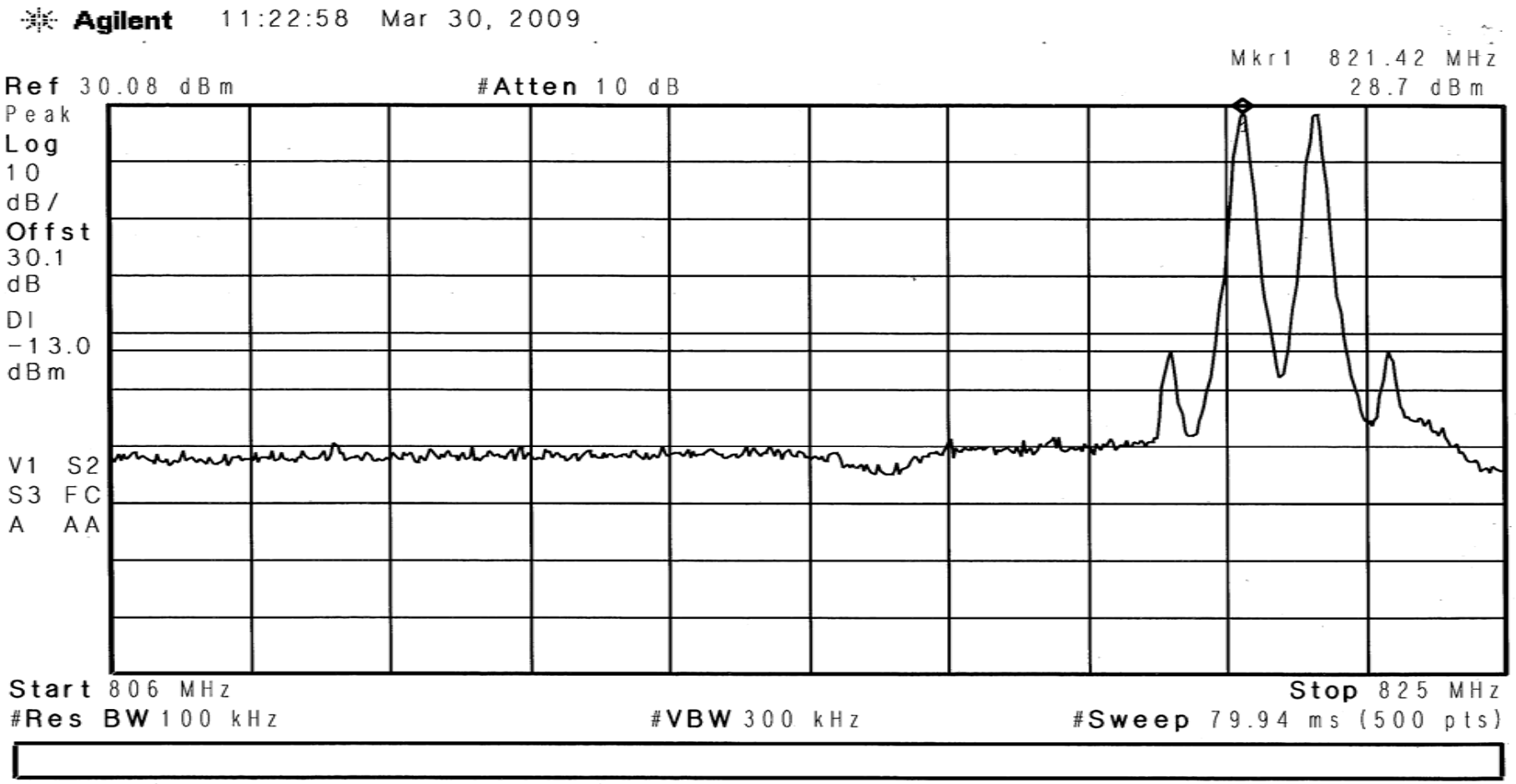

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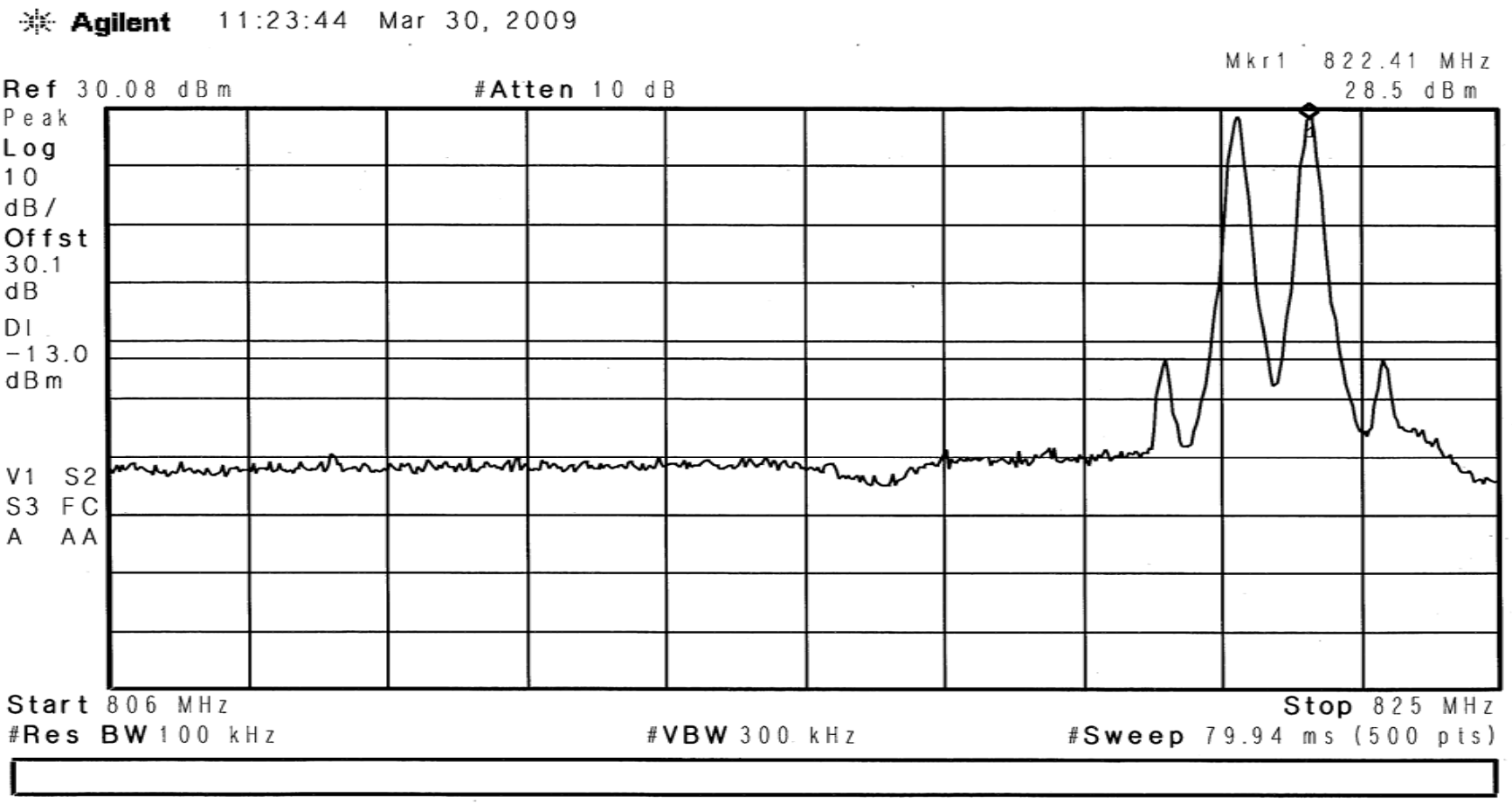

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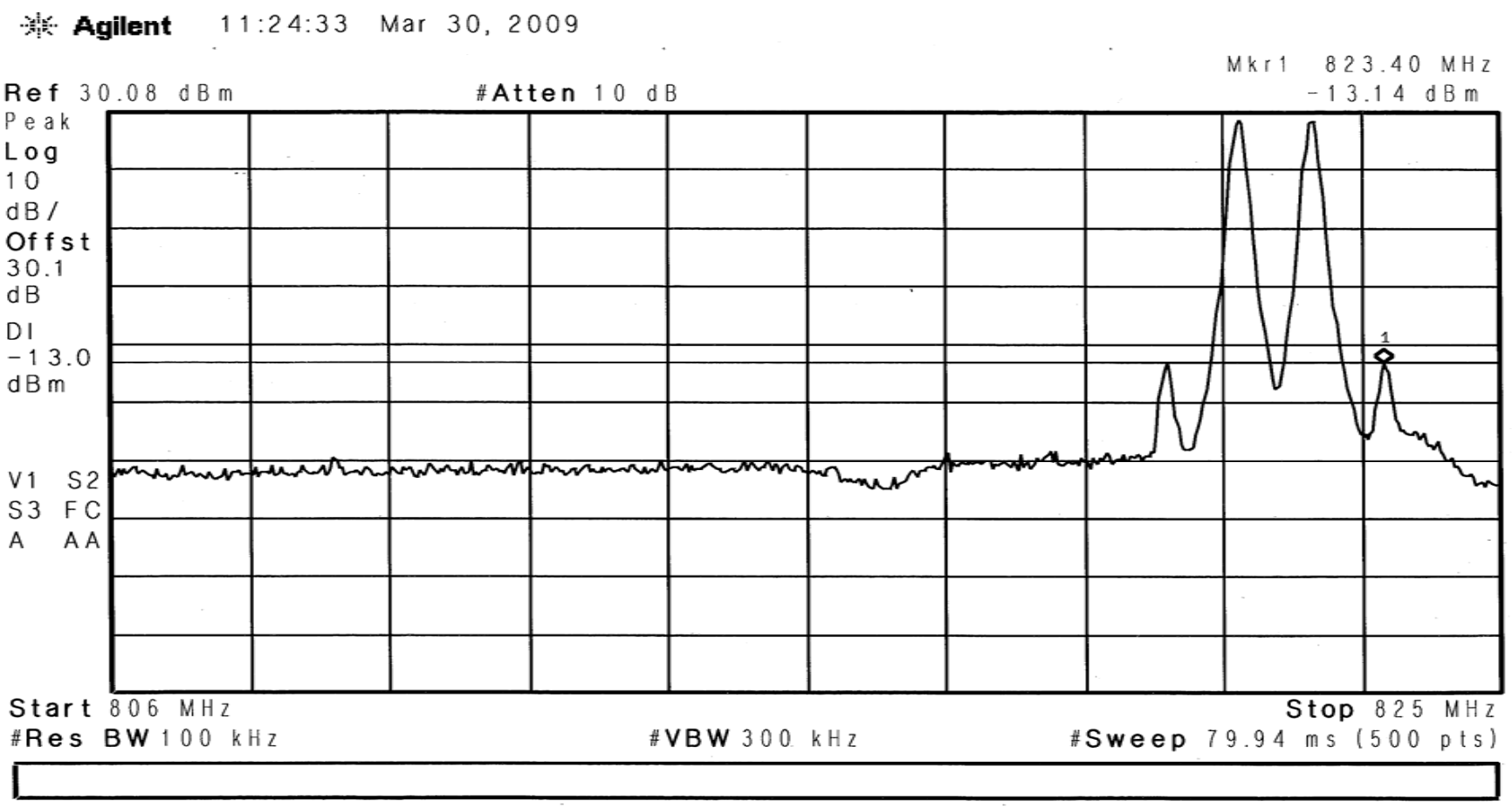

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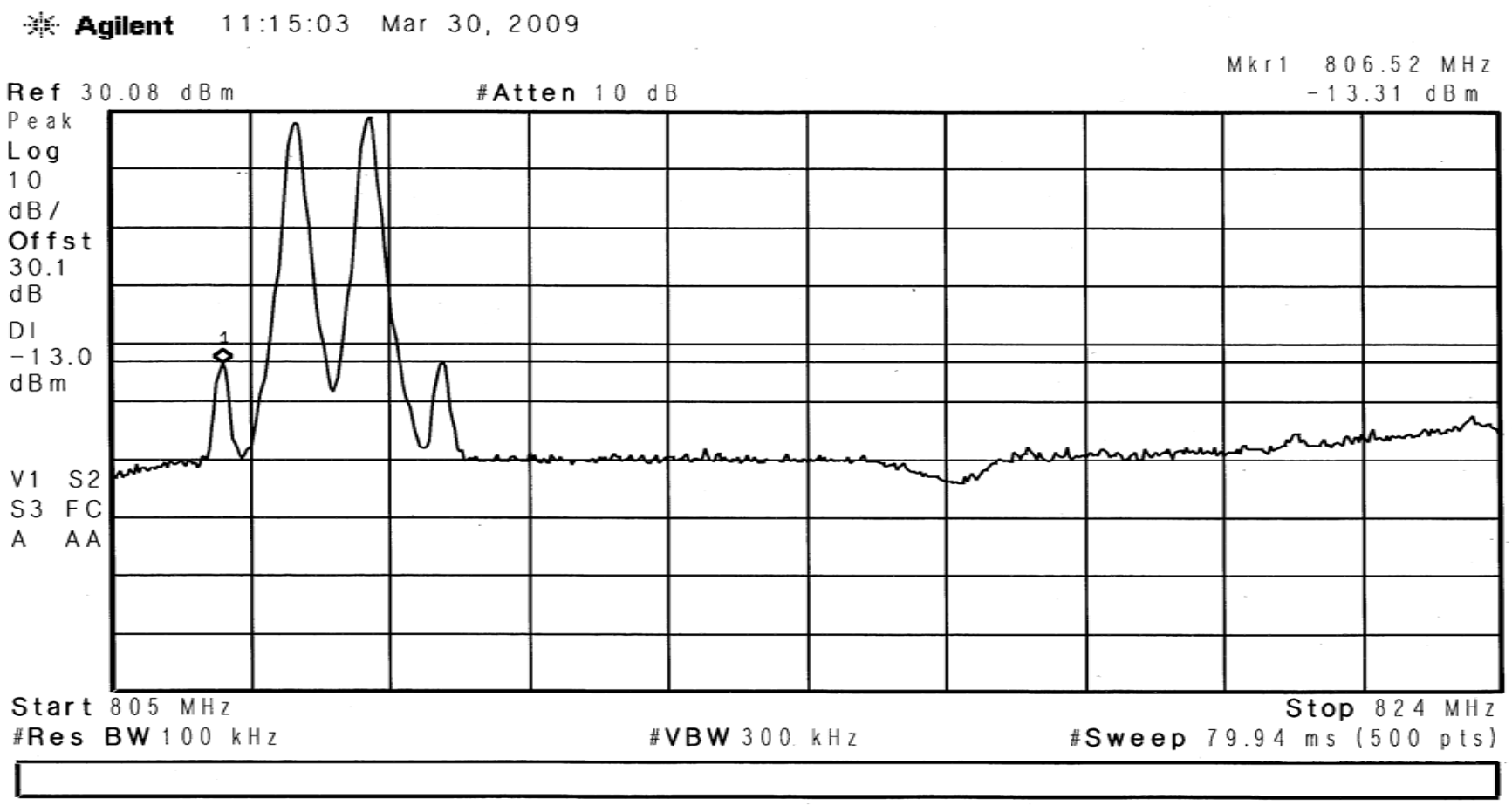

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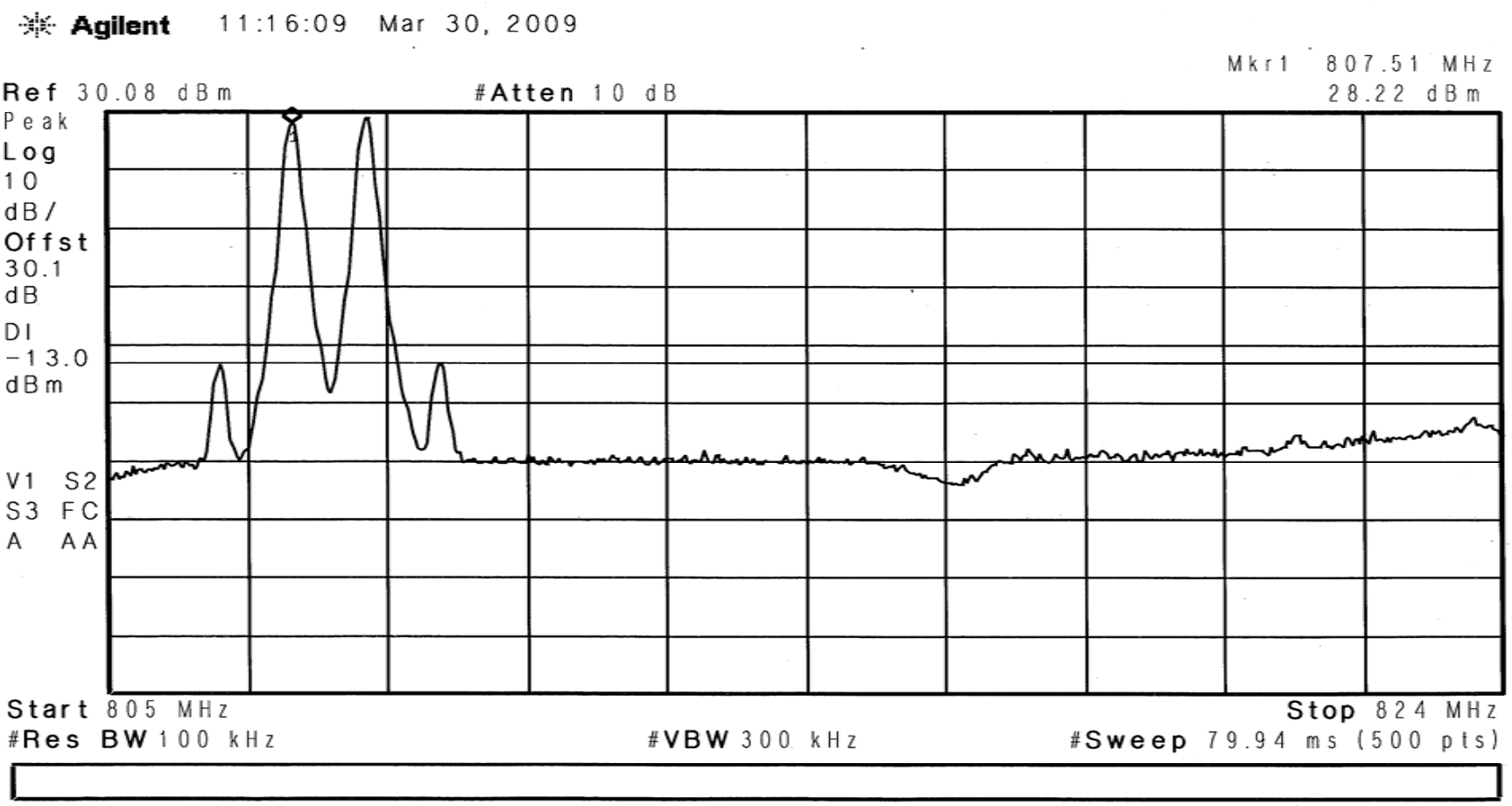
EMISSIONS DATA SHEET

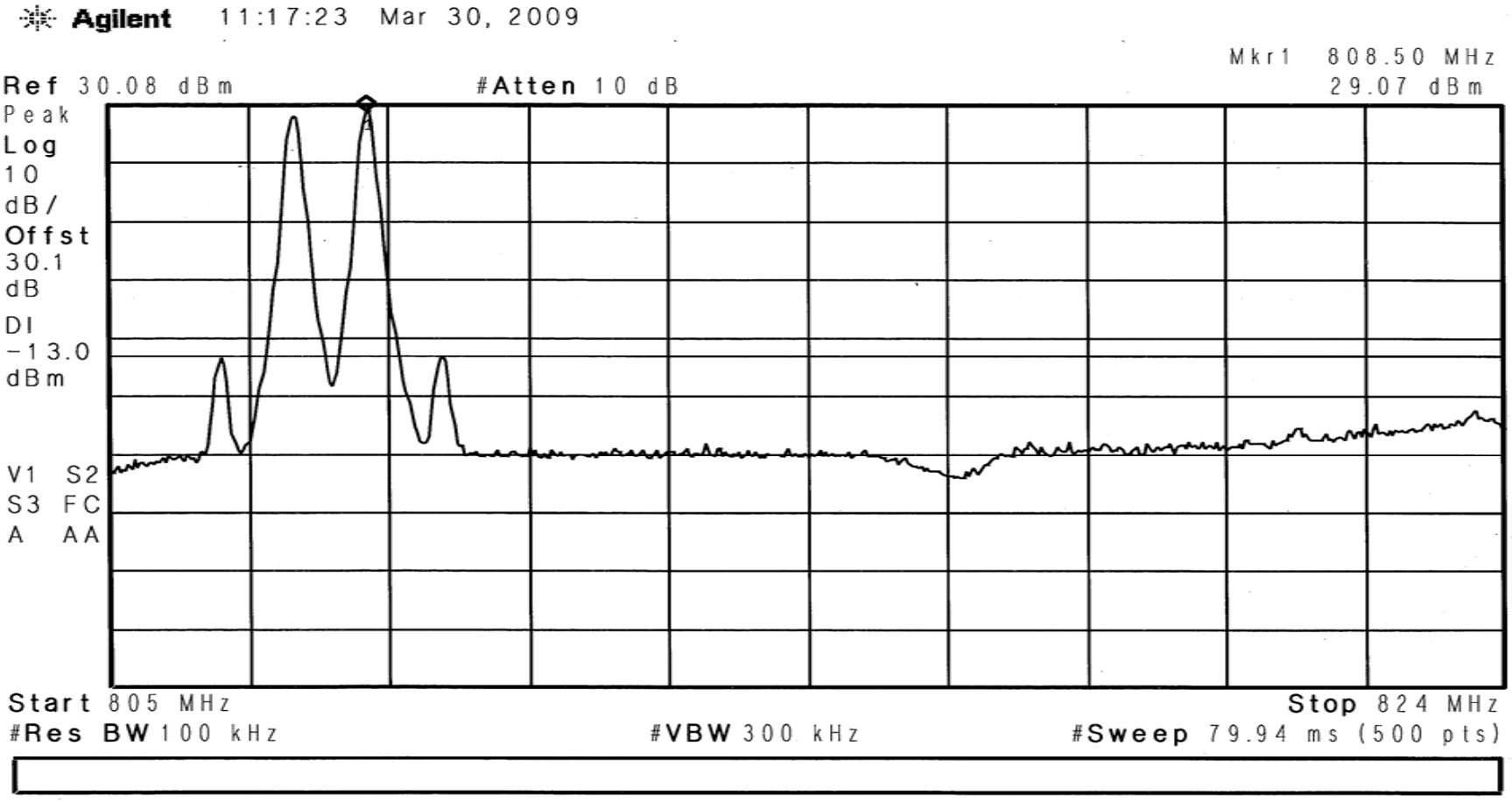
Test Method:	**Inter-modulation Characteristics**				
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5153N-1
Model No:	T61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2	Paragraph: 2.1047		**Date:**	3/30/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 2 - FM - Uplink				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

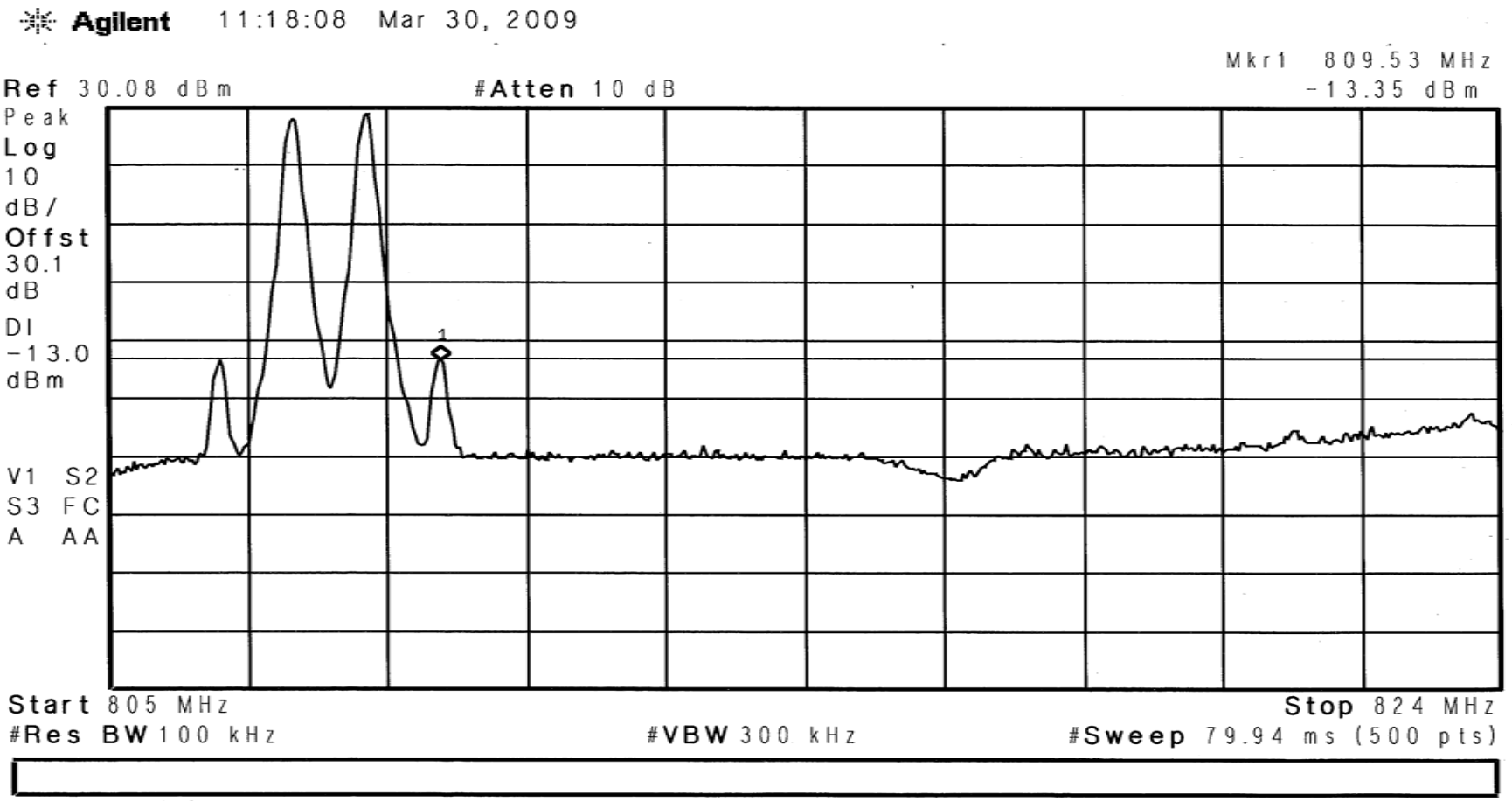
Test Method:	**Inter-modulation Characteristics**				
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5153N-1
Model No:	T61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2	Paragraph: 2.1047		**Date:**	3/30/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 2 - FM - Uplink				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

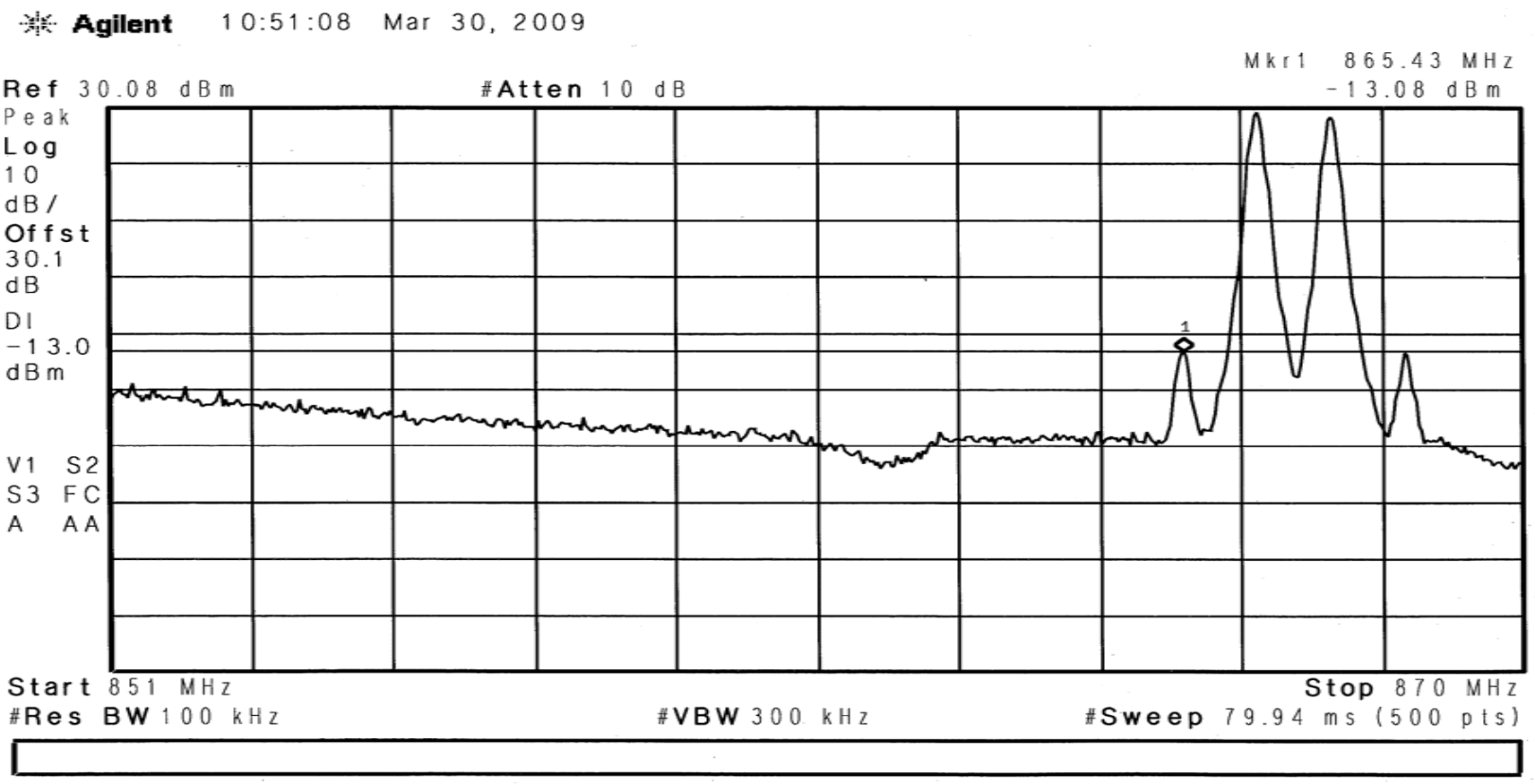
Test Method:	**Inter-modulation Characteristics**				
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5153N-1
Model No:	T61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2	Paragraph: 2.1047		**Date:**	3/30/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 2 - FM - Uplink				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

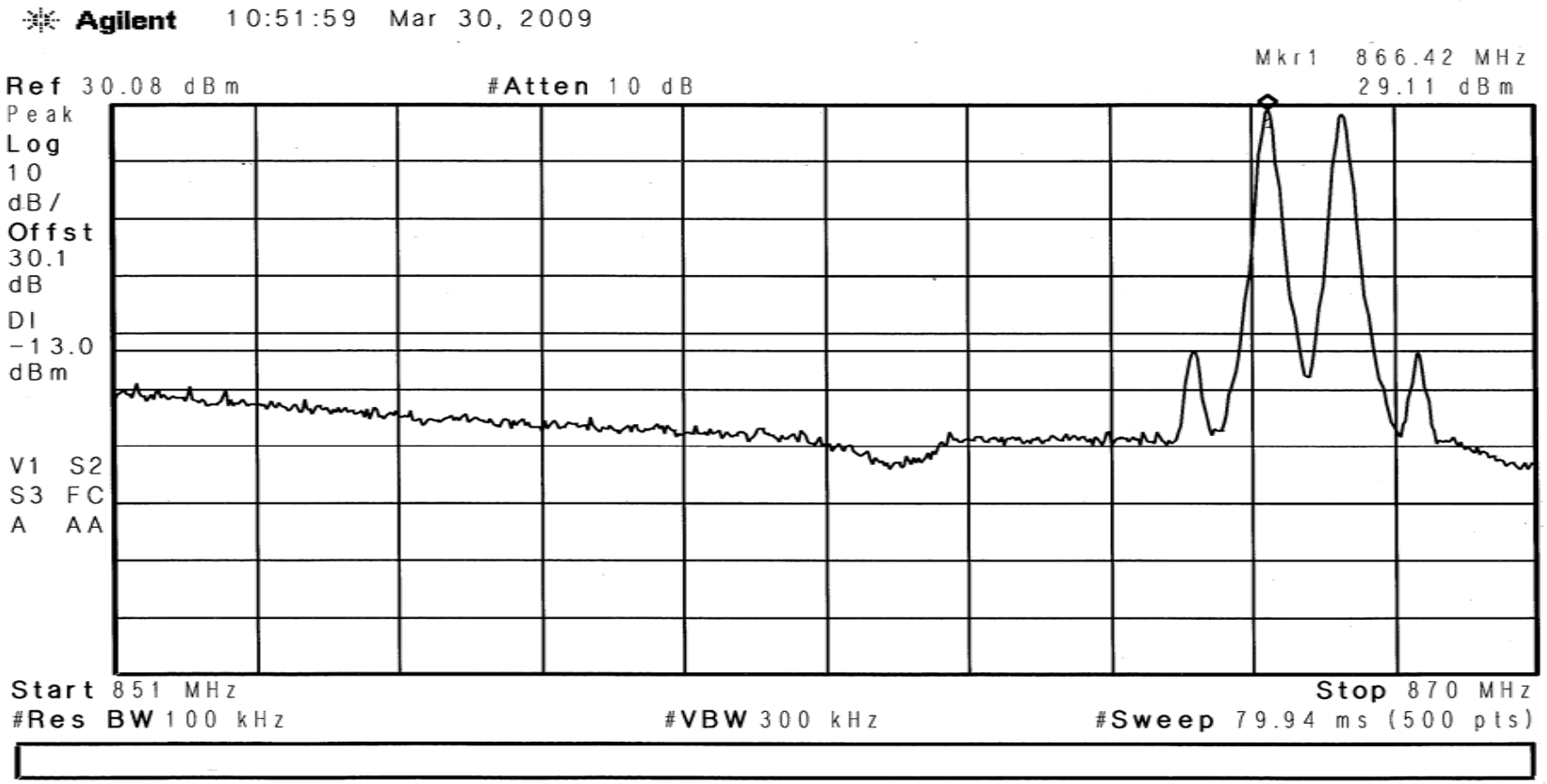
Test Method:	**Inter-modulation Characteristics**				
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5153N-1
Model No:	T61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2	Paragraph: 2.1047		**Date:**	3/30/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 2 -TDMA- Downlink				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

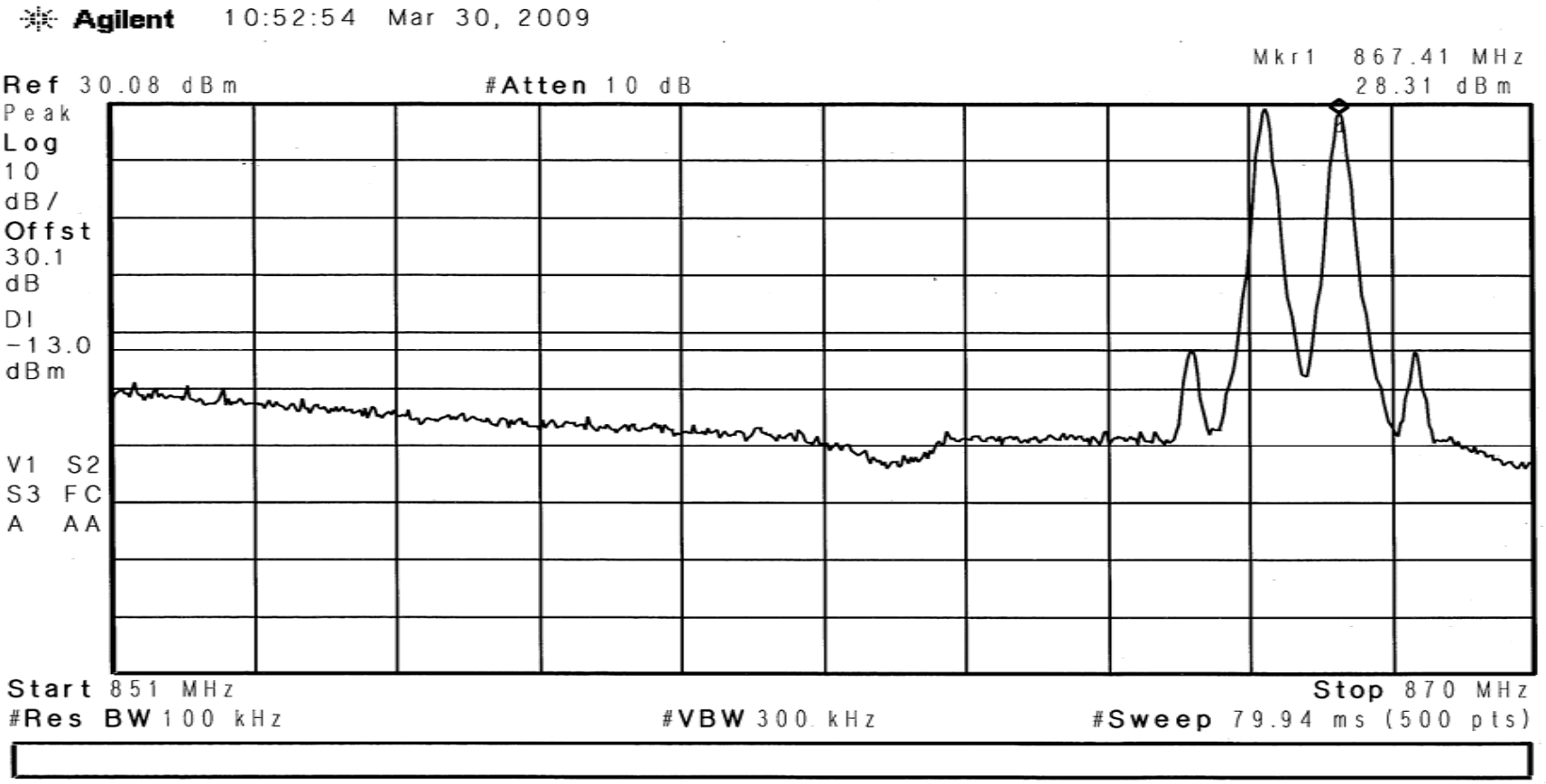
Test Method:	**Inter-modulation Characteristics**				
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5153N-1
Model No:	T61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2	Paragraph: 2.1047		**Date:**	3/30/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 2 -TDMA- Downlink				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method:	**Inter-modulation Characteristics**				
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5153N-1
Model No:	T61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2	Paragraph: 2.1047		**Date:**	3/30/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 1 - FM - Uplink				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method:	**Inter-modulation Characteristics**				
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5153N-1
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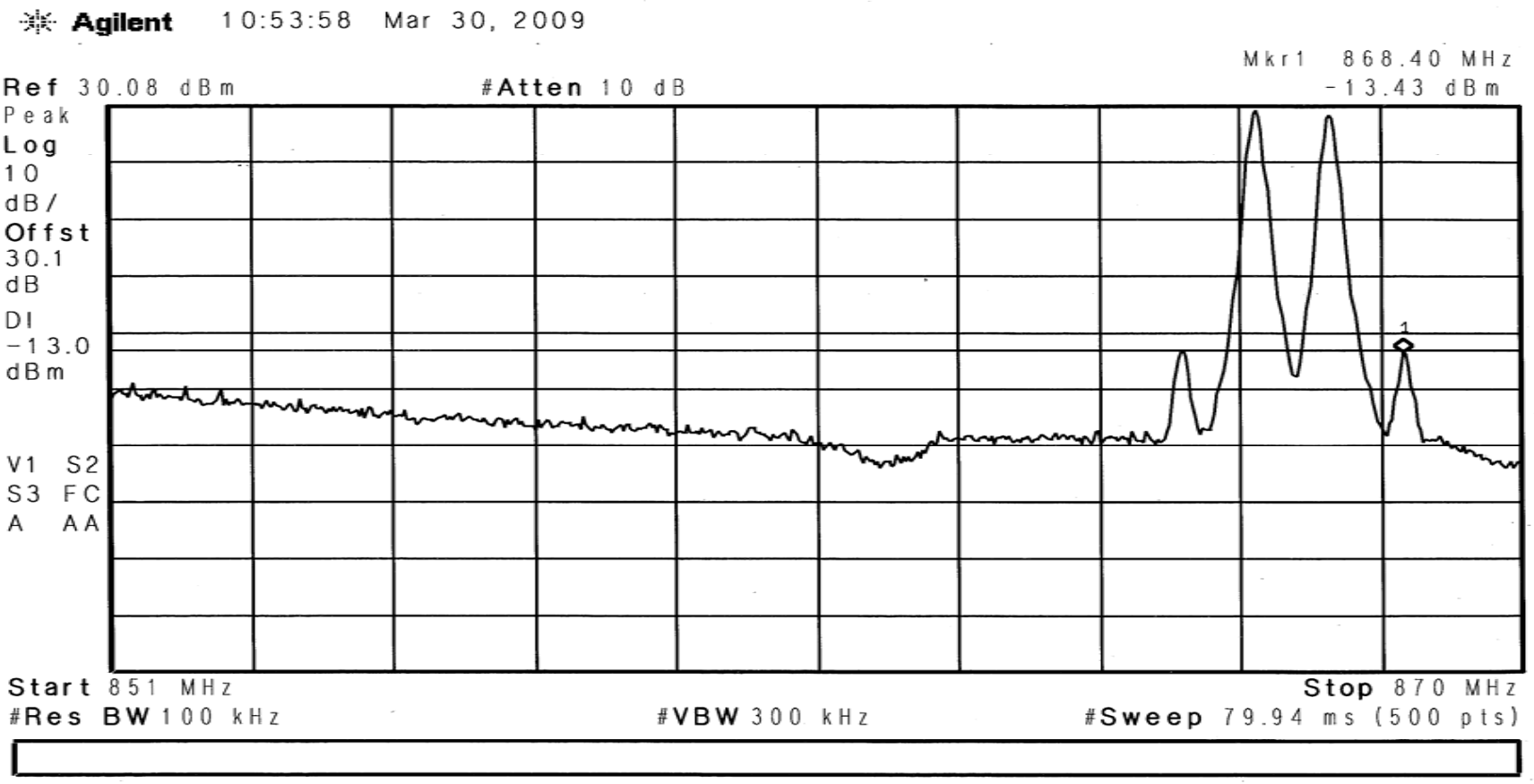
Test Specification:	FCC Part 2	Paragraph: 2.1047		**Date:**	3/30/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 1 - FM - Uplink				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

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Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5153N-1
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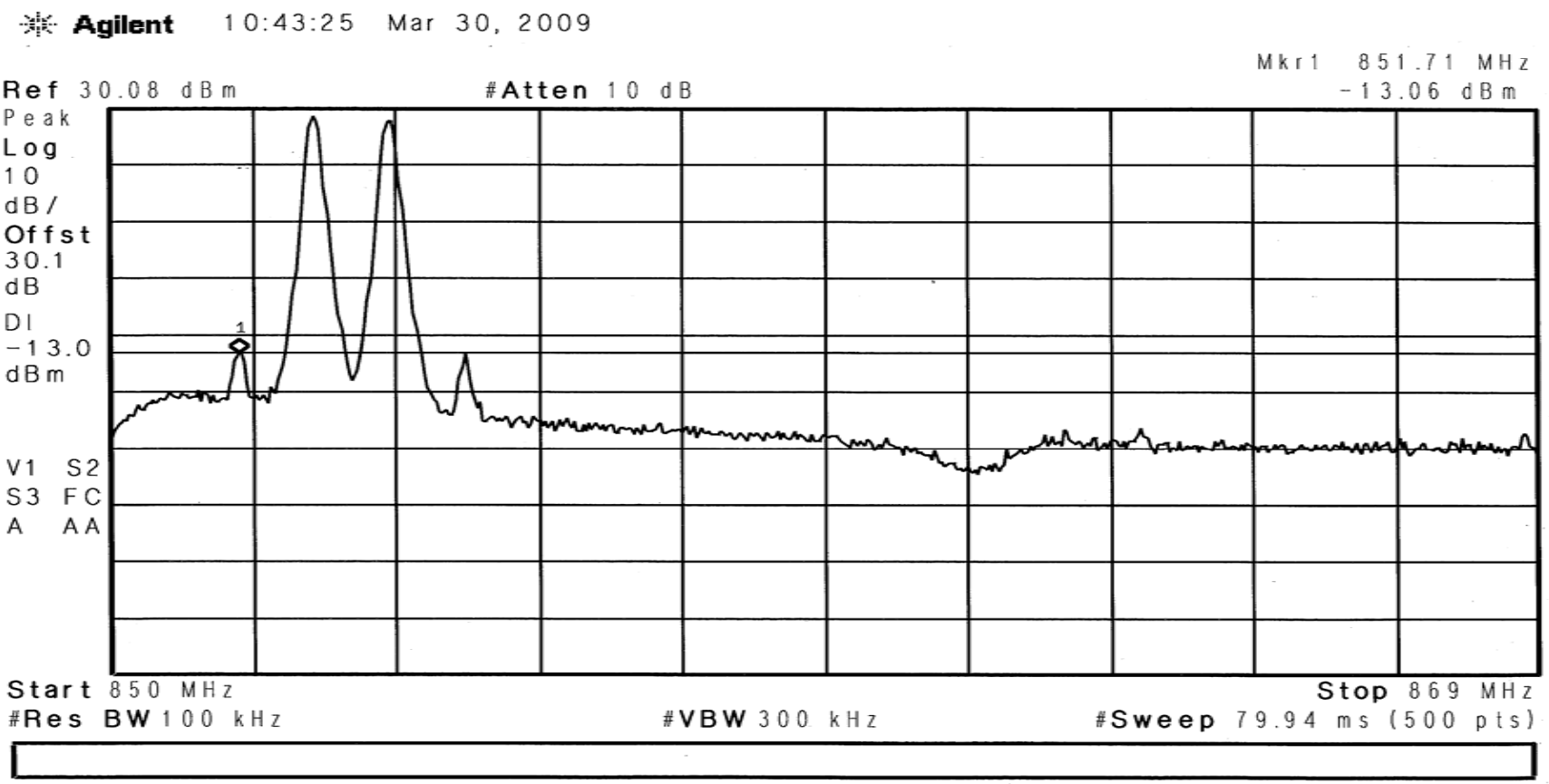
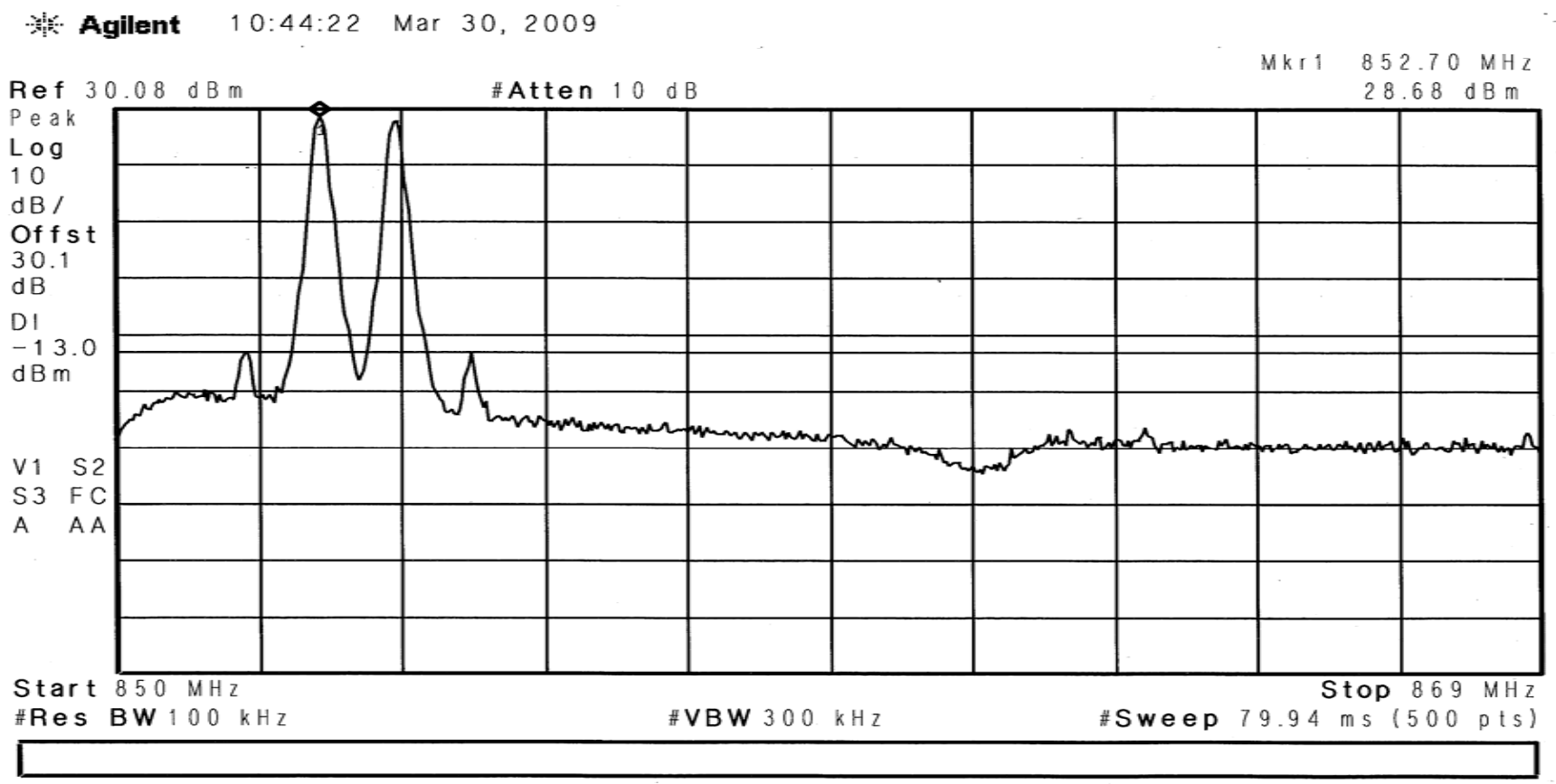
Test Specification:	FCC Part 2	Paragraph: 2.1047		**Date:**	3/30/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 1 - FM - Uplink				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

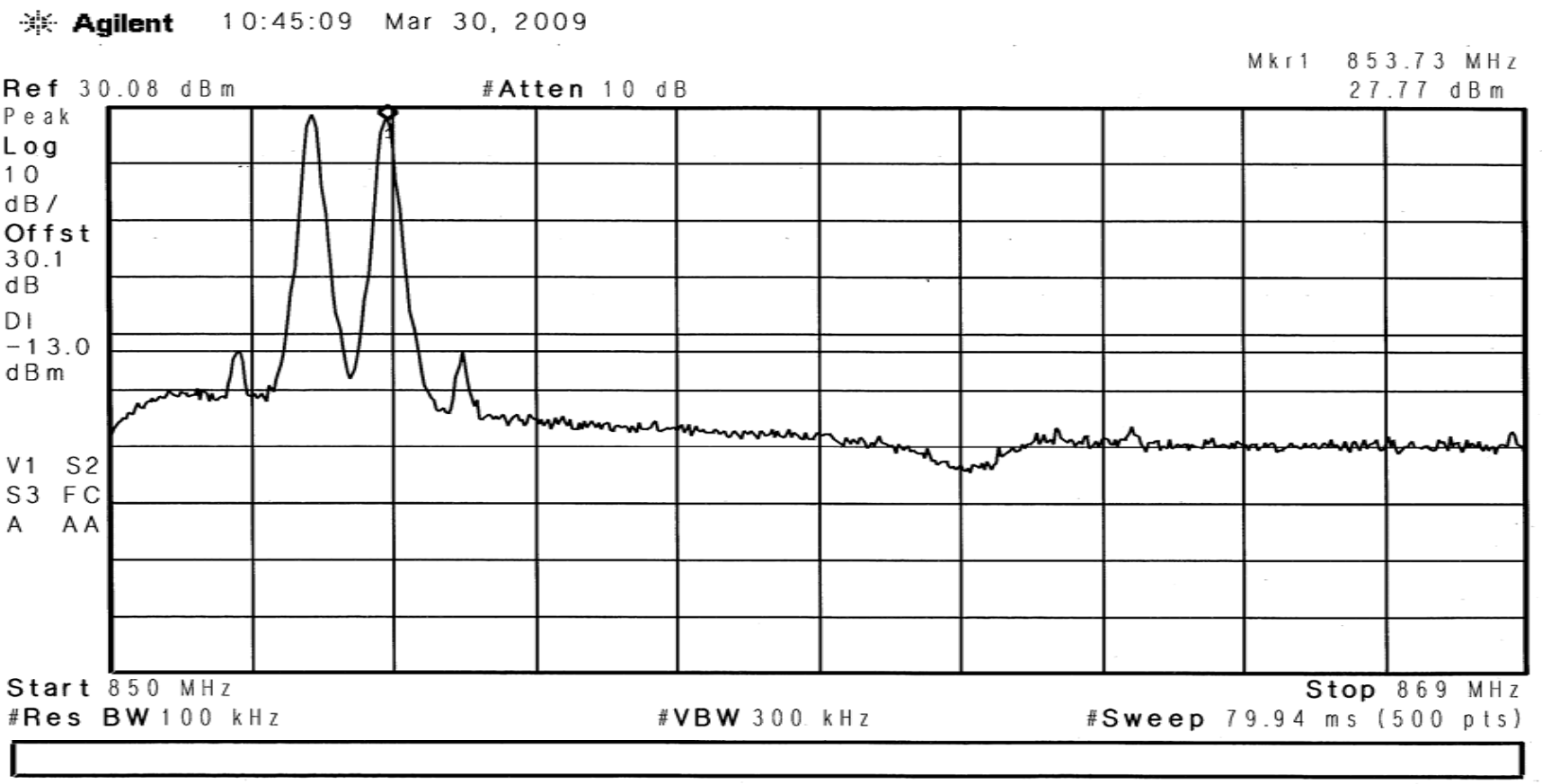
Test Method:	**Inter-modulation Characteristics**				
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5153N-1
Model No:	T61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2	Paragraph: 2.1047		**Date:**	3/30/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 1 - FM - Uplink				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

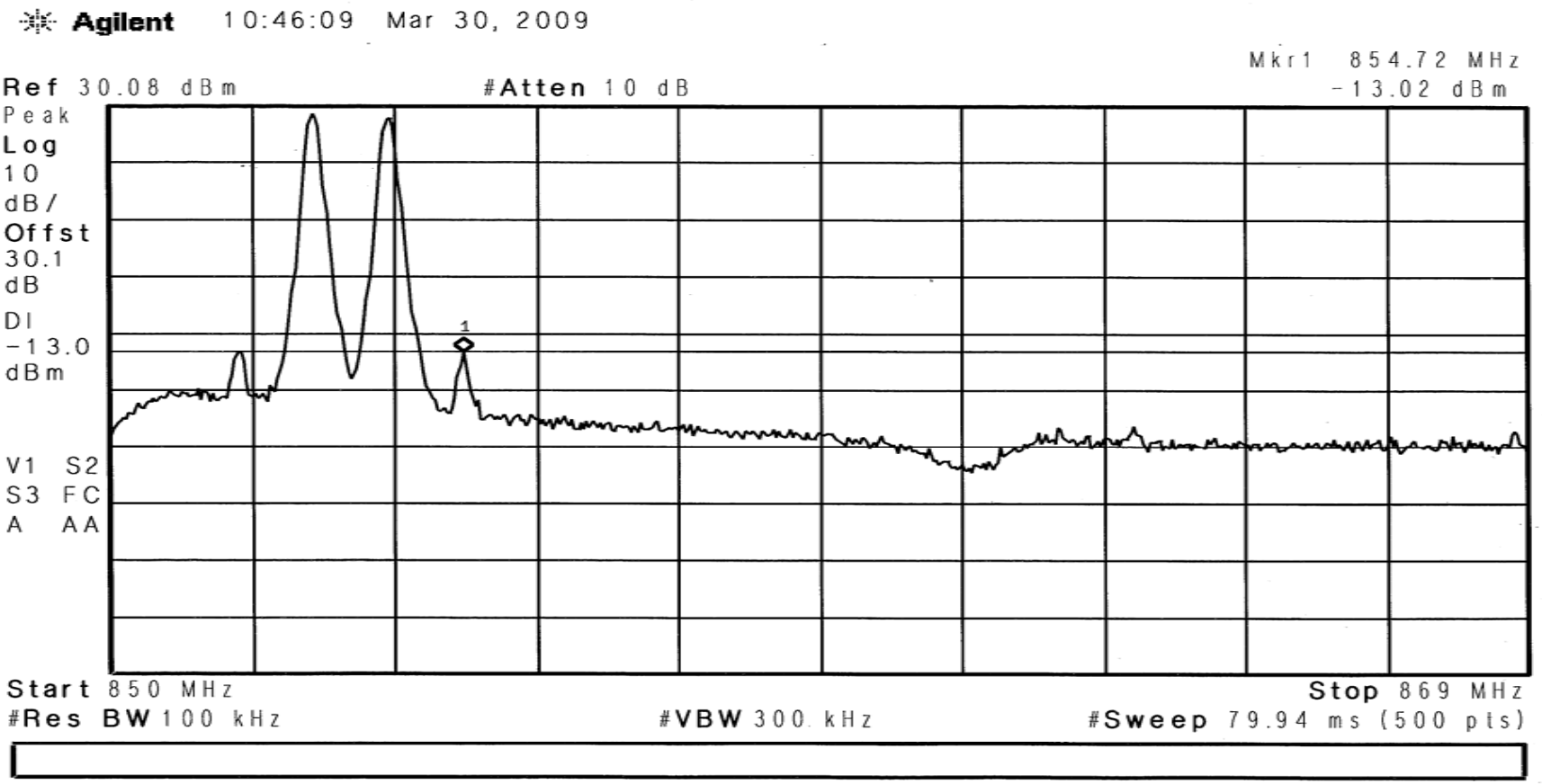
Test Method:	**Inter-modulation Characteristics**				
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5153N-1
Model No:	T61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2	Paragraph: 2.1047		**Date:**	3/30/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 1 - FM - Uplink				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method:	**Inter-modulation Characteristics**				
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5153N-1
Model No:	T61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2	Paragraph: 2.1047		**Date:**	3/30/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 1 - FM - Uplink				



RETLIF TESTING LABORATORIES

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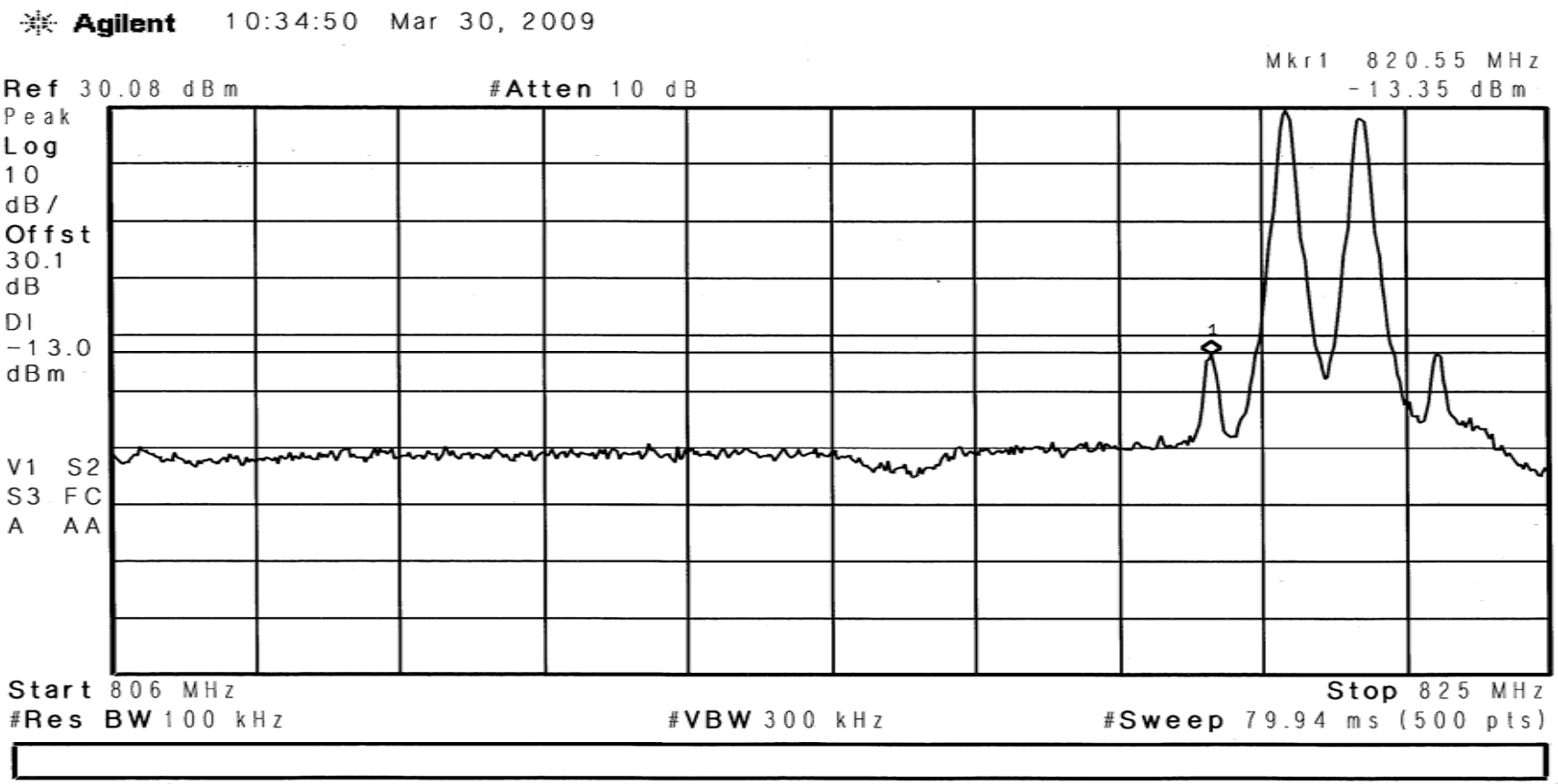
Test Method:	**Inter-modulation Characteristics**				
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5153N-1
Model No:	T61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2	Paragraph: 2.1047		**Date:**	3/30/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 2 - TDMA - Downlink				



RETLIF TESTING LABORATORIES

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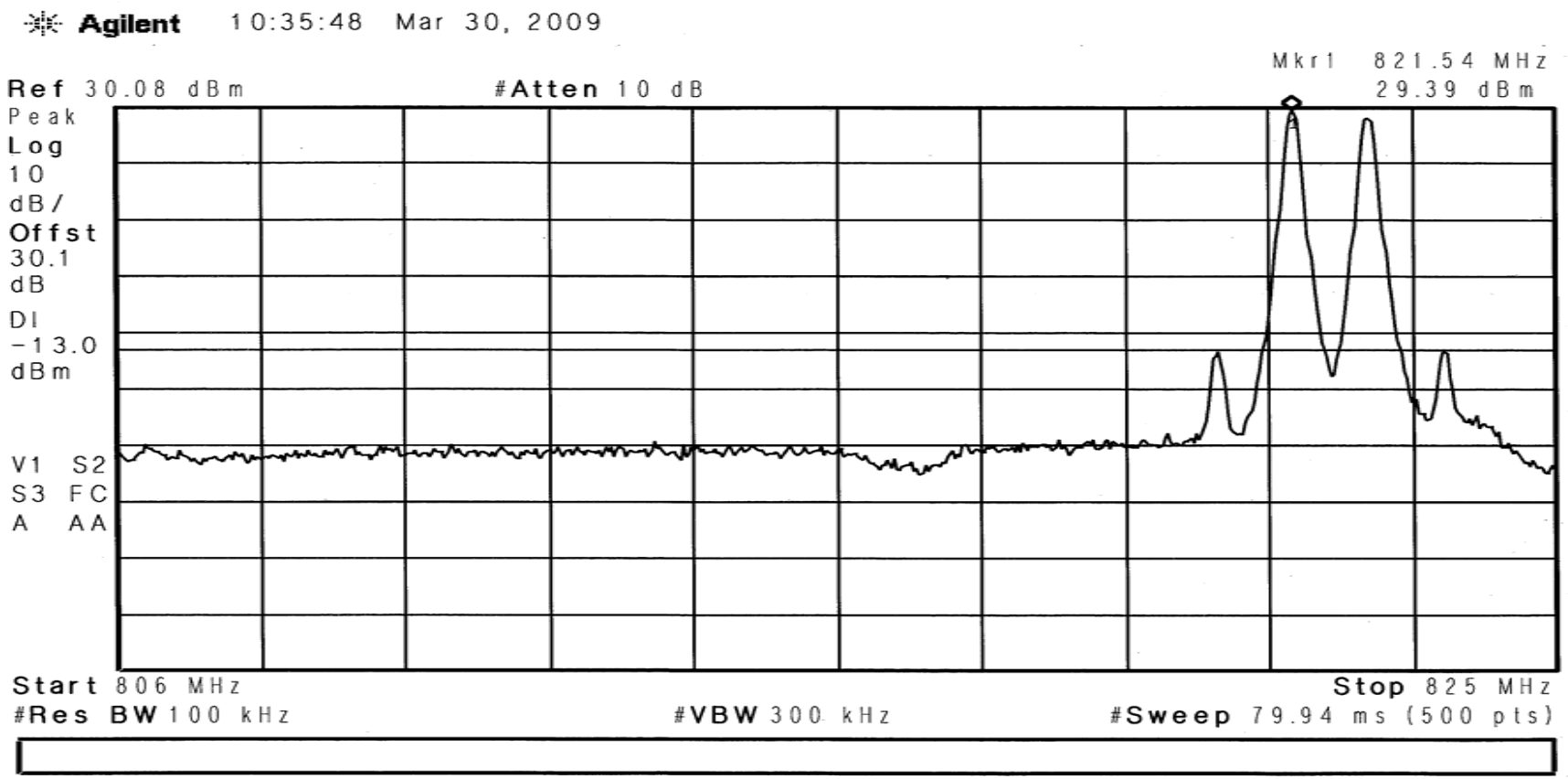
Test Specification:	FCC Part 2	Paragraph: 2.1047		**Date:**	3/30/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 2 - TDMA - Downlink				



RETLIF TESTING LABORATORIES

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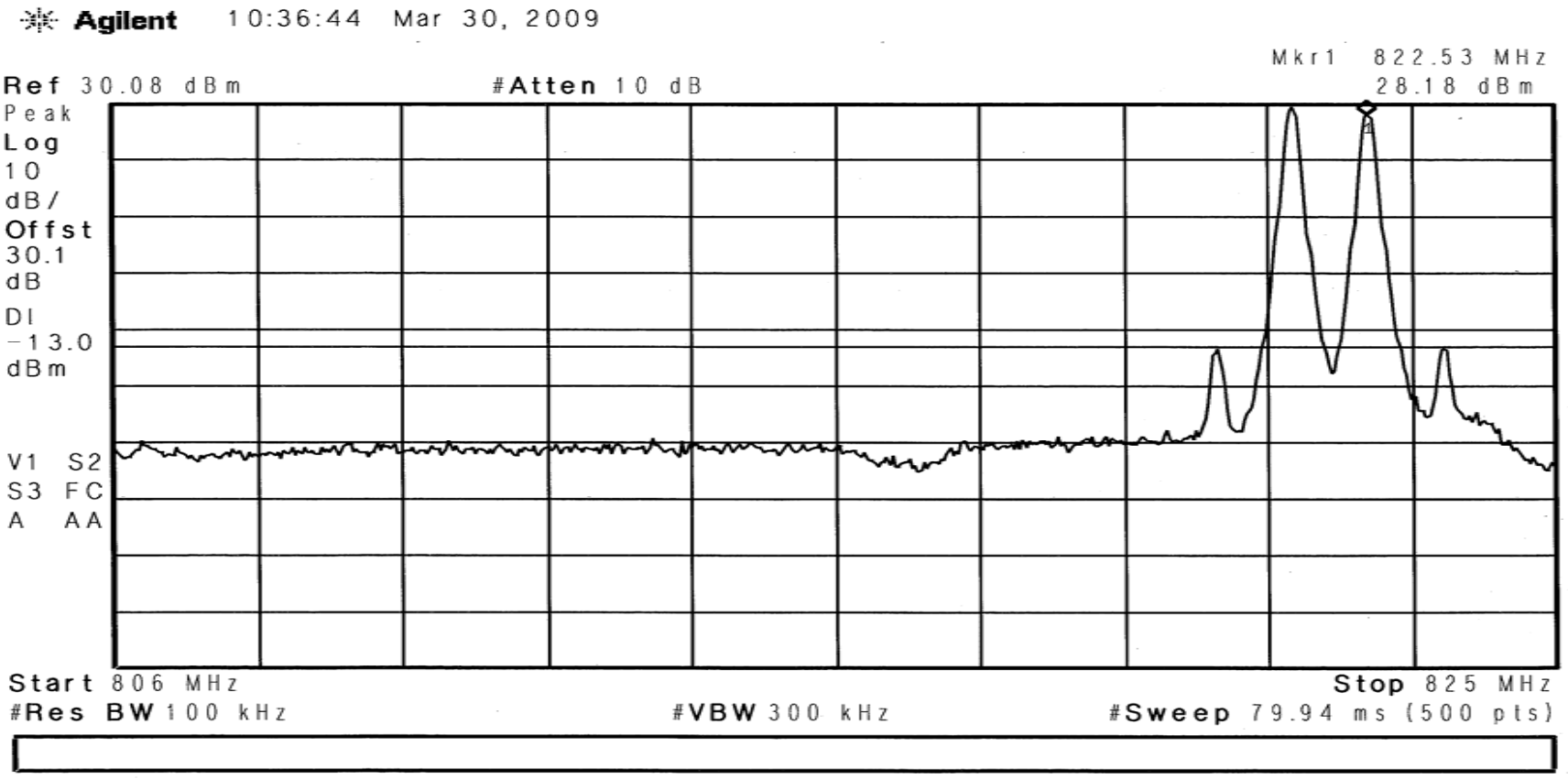
Test Specification:	FCC Part 2	Paragraph: 2.1047		**Date:**	3/30/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 2 - TDMA - Downlink				



RETLIF TESTING LABORATORIES

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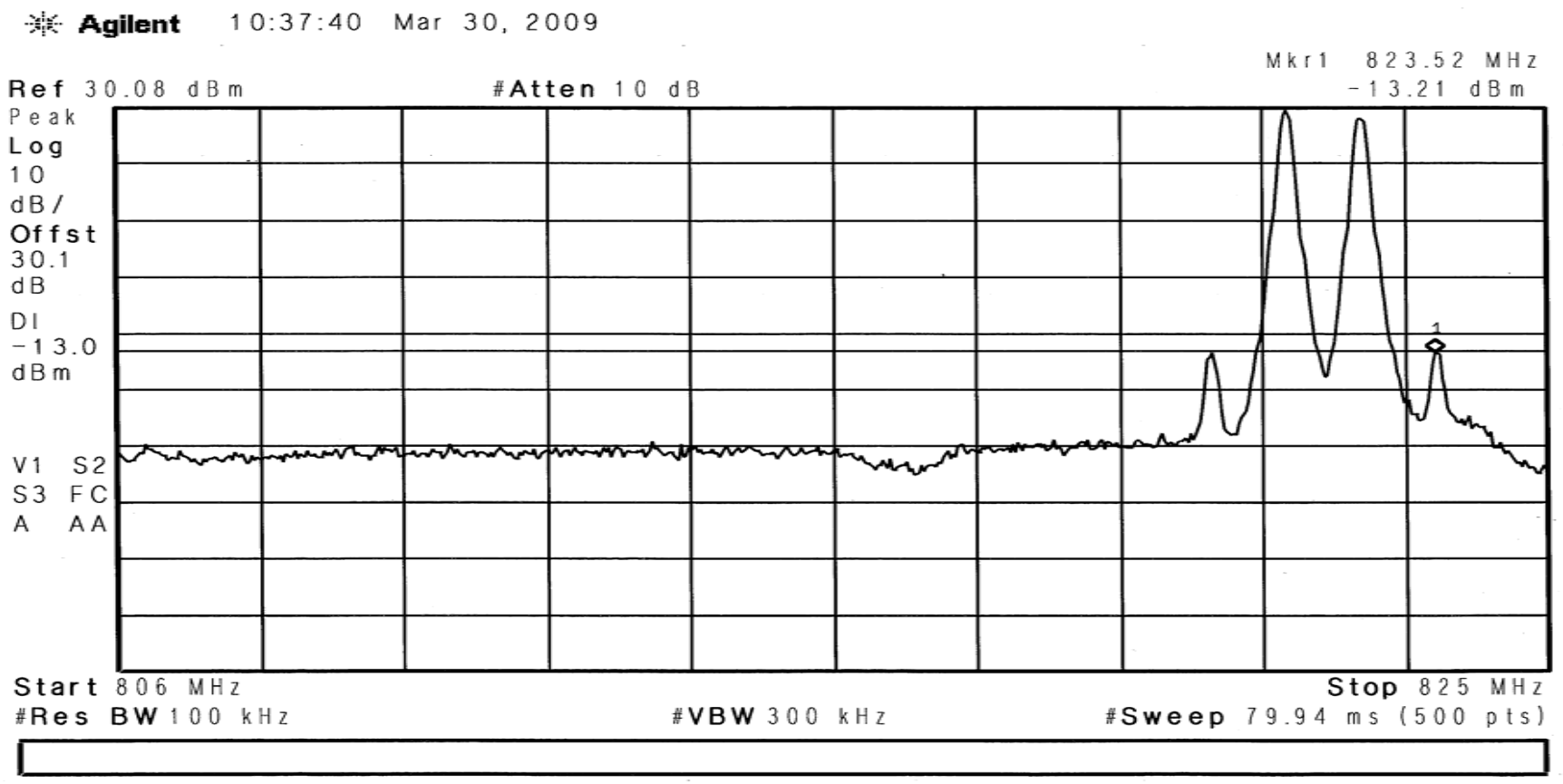
Test Specification:	FCC Part 2	Paragraph: 2.1047		**Date:**	3/30/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 2 - TDMA - Downlink				



RETLIF TESTING LABORATORIES

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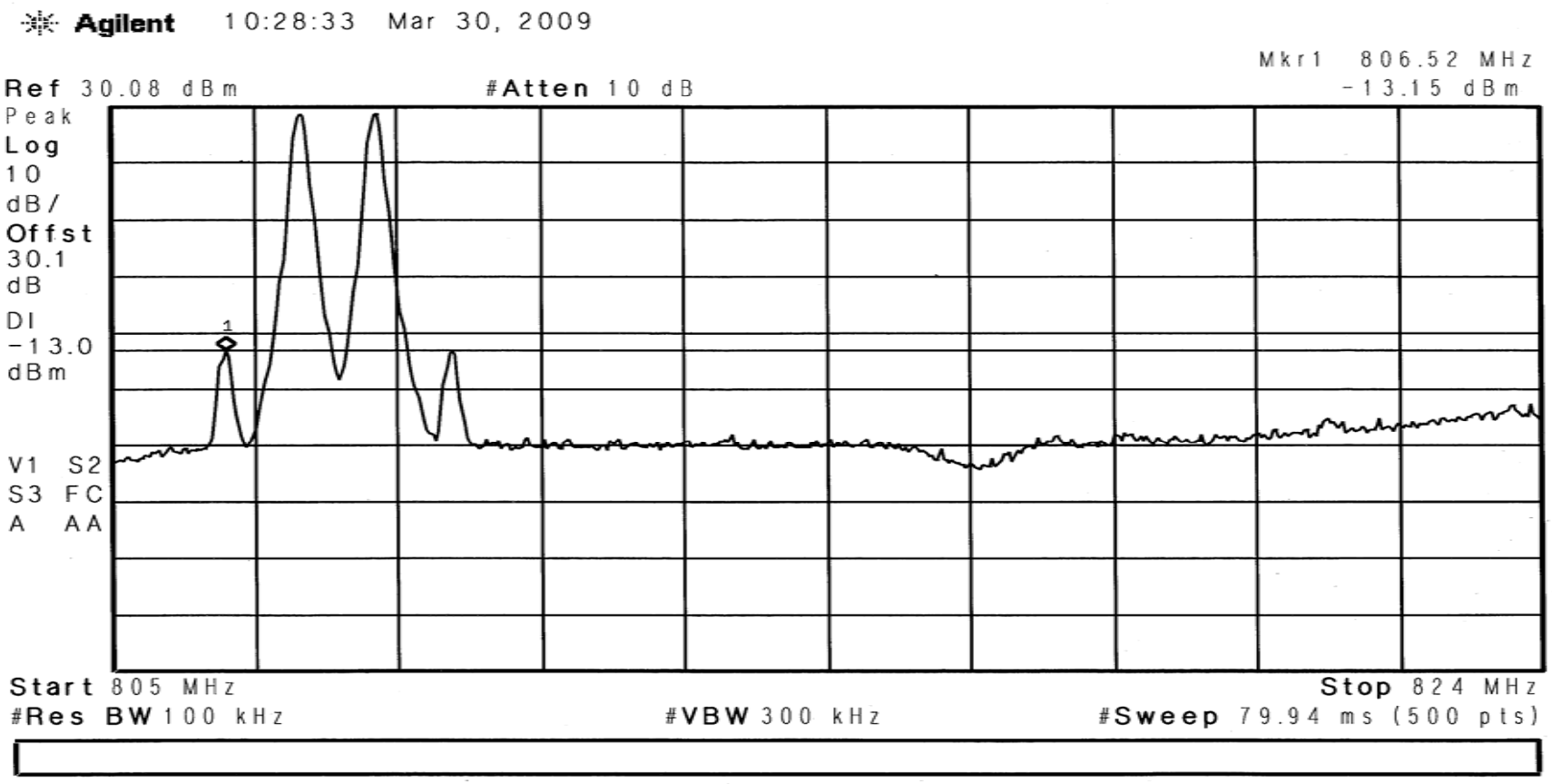
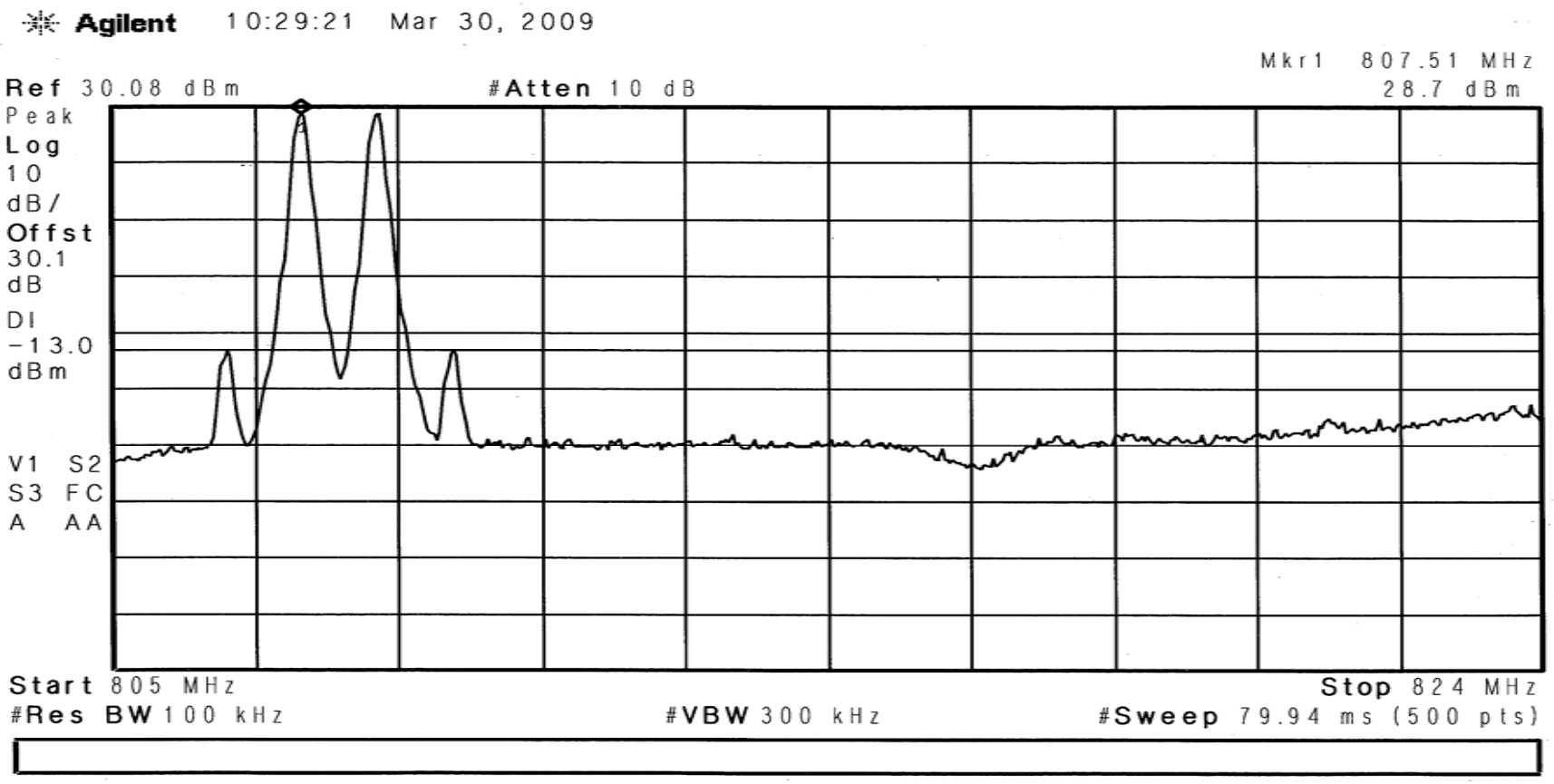
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5153N-1
Model No:	T61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2	Paragraph: 2.1047		**Date:**	3/30/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 2 - TDMA - Downlink				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

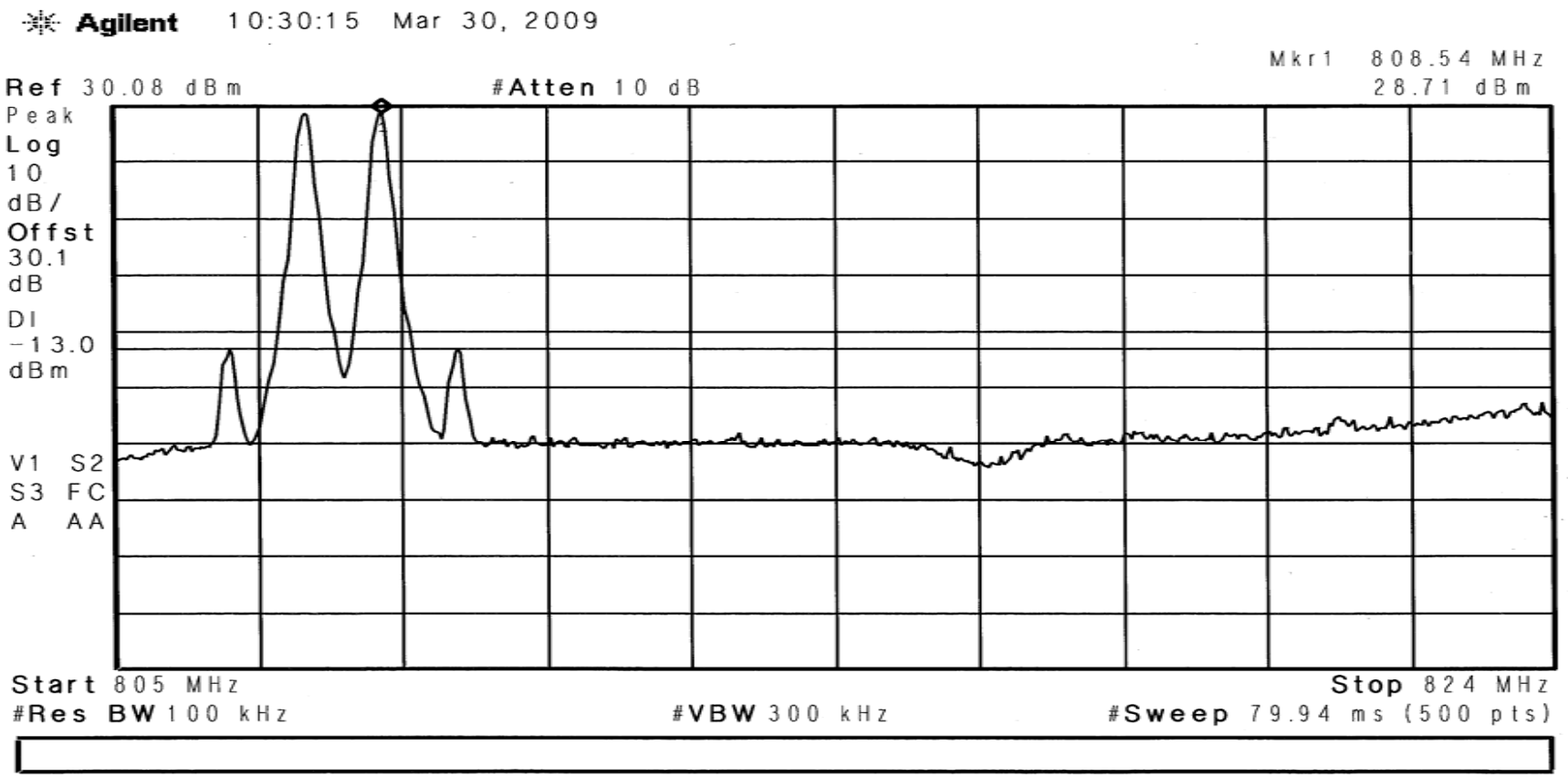
Test Method:	**Inter-modulation Characteristics**				
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5153N-1
Model No:	T61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2	Paragraph: 2.1047		**Date:**	3/30/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 2 - TDMA - Downlink				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

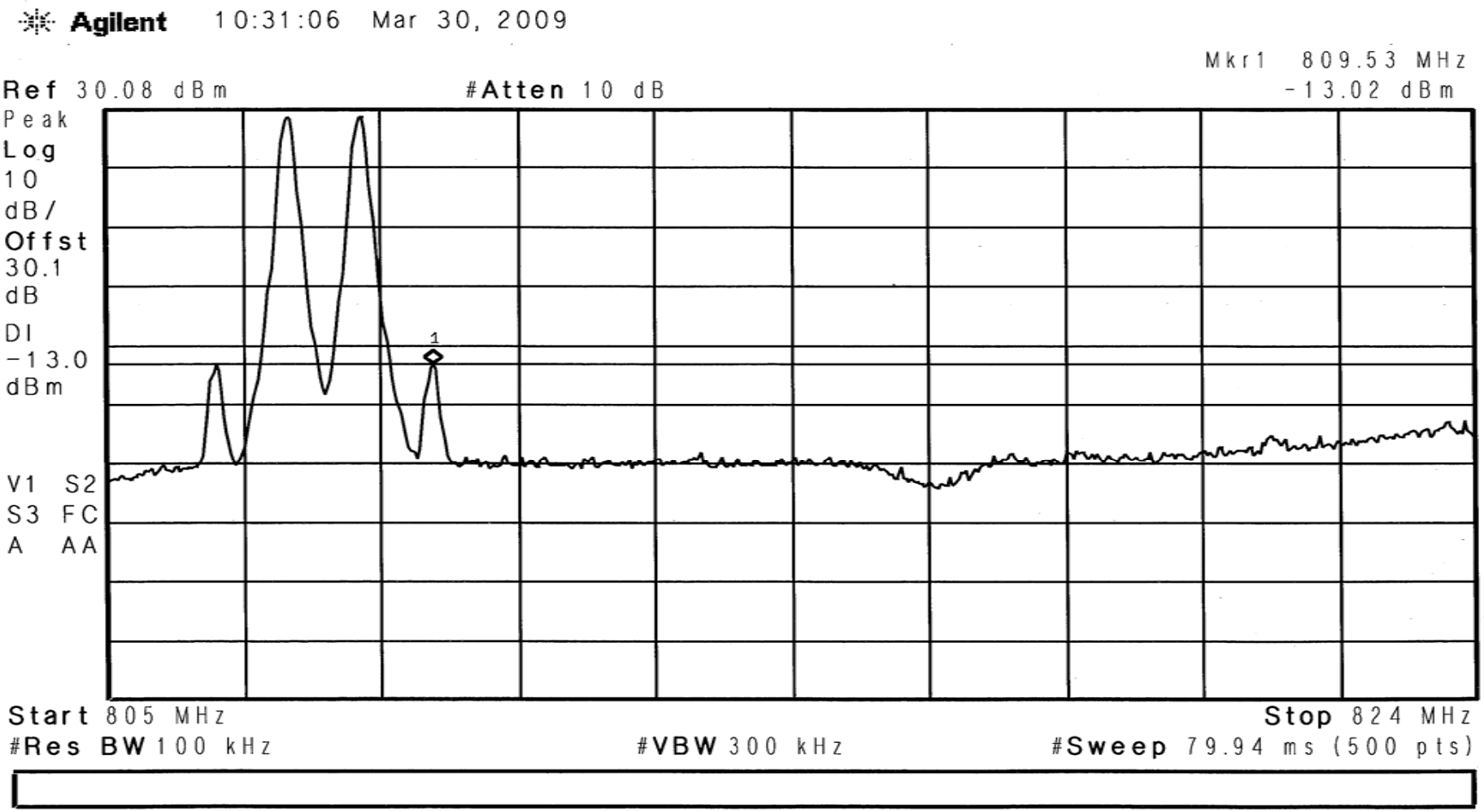
Test Method:	**Inter-modulation Characteristics**				
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5153N-1
Model No:	T61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2	Paragraph: 2.1047		**Date:**	3/30/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 2 - TDMA - Downlink				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

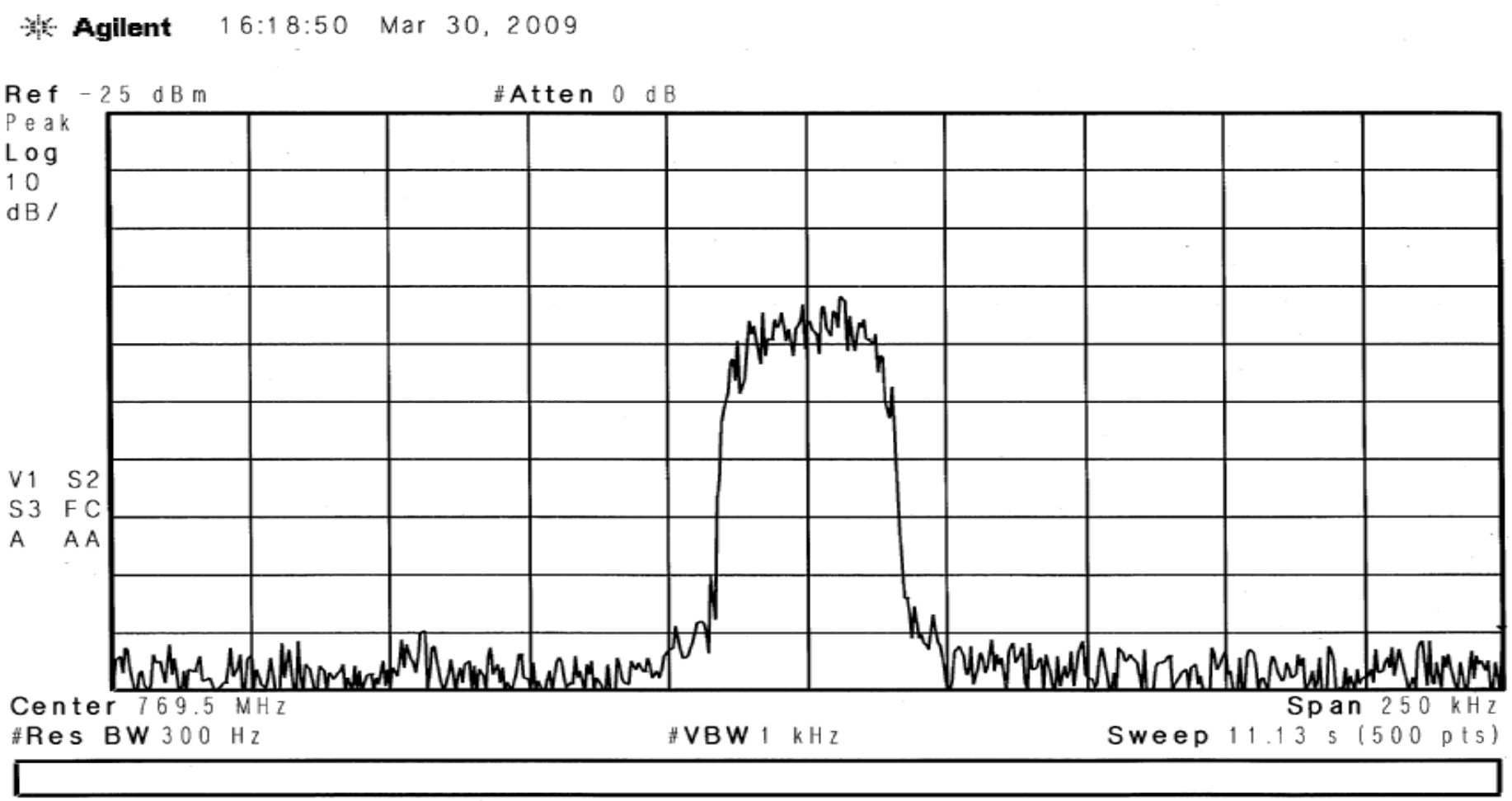
Test Method:	**Inter-modulation Characteristics**				
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-55153N-1
Model No:	T61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2 Paragraph: 2.1047			**Date:**	3/30/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 2 - TDMA - Downlink				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

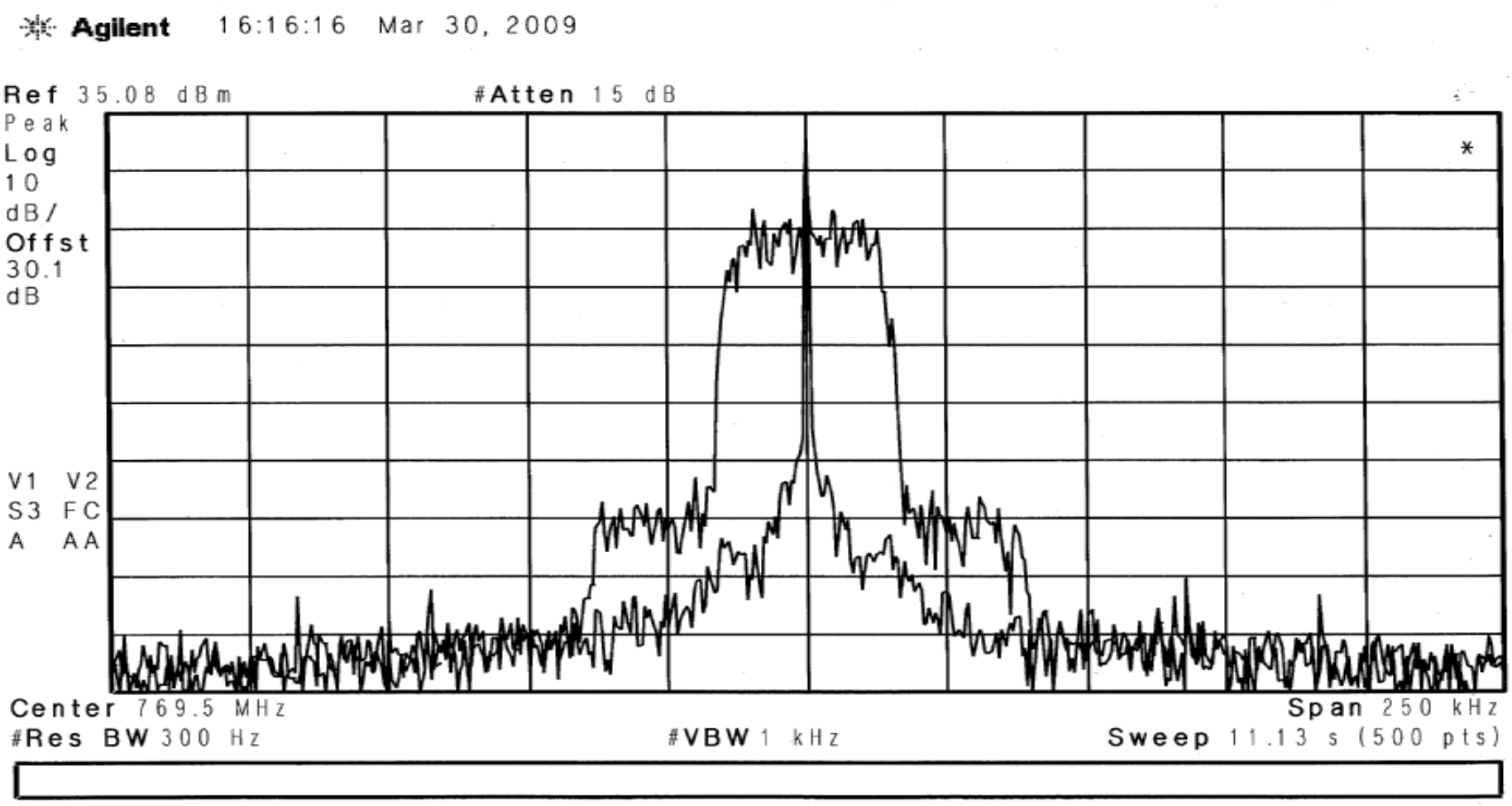
Test Method:	**Occupied Bandwidth**				
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5153N-1
Model No:	T61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2	Paragraph: 2.1049		**Date:**	4/1/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 1 TDMA - Downlink - Input at 769.5 MHz				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

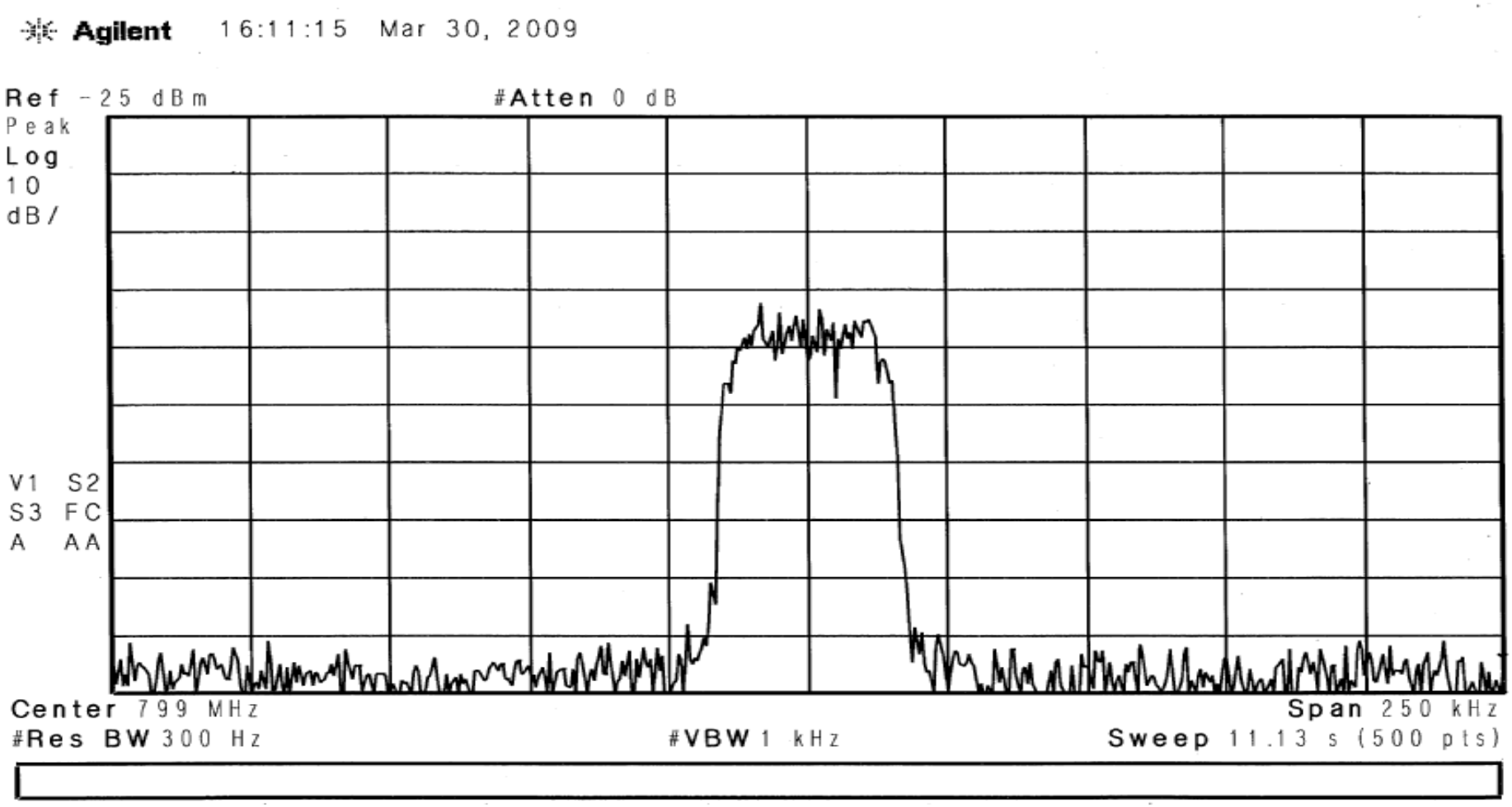
Test Method:	**Occupied Bandwidth**				
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5153N-1
Model No:	T61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2	Paragraph: 2.1049		**Date:**	4/1/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 1 TDMA - Downlink - Output at 769.5 MHz				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

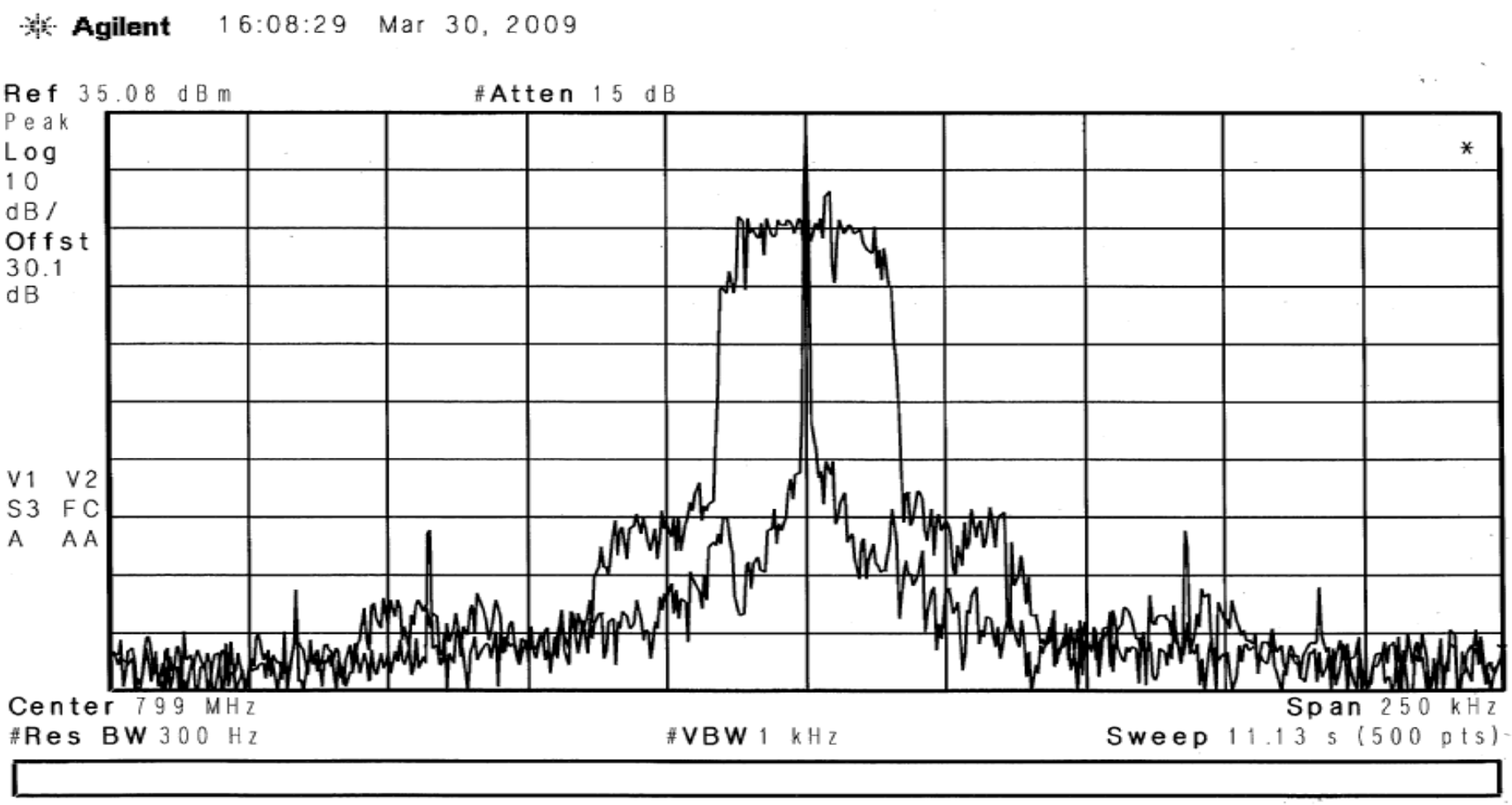
Test Method:	**Occupied Bandwidth**				
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5153N-1
Model No:	T61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2	Paragraph: 2.1049		**Date:**	4/1/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 1 TDMA - Upink - Input at 799 MHz				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

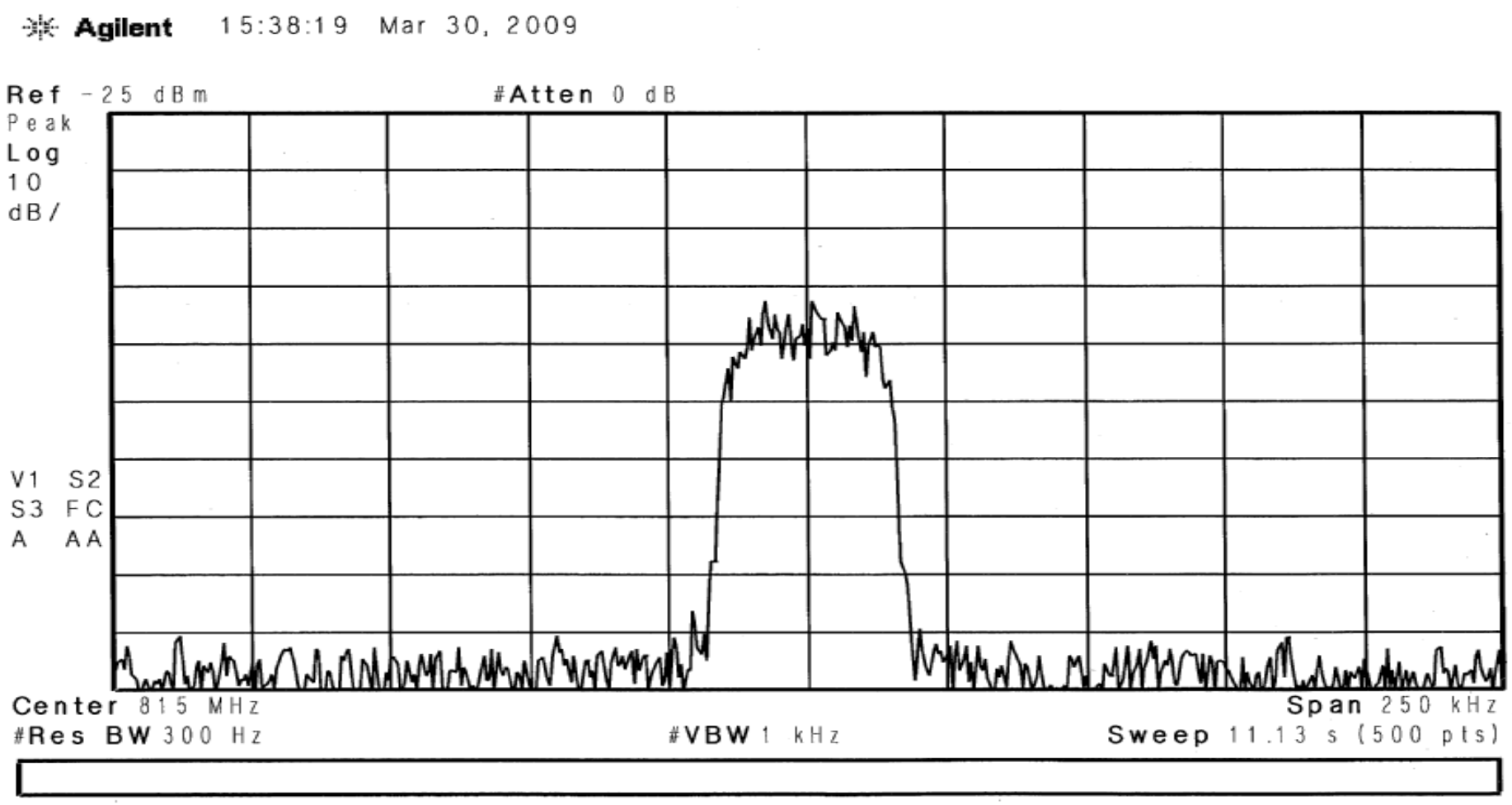
Test Method:	**Occupied Bandwidth**				
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5153N-1
Model No:	T61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2	Paragraph: 2.1049		**Date:**	4/1/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 1 TDMA - Upink - Output at 799 MHz				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

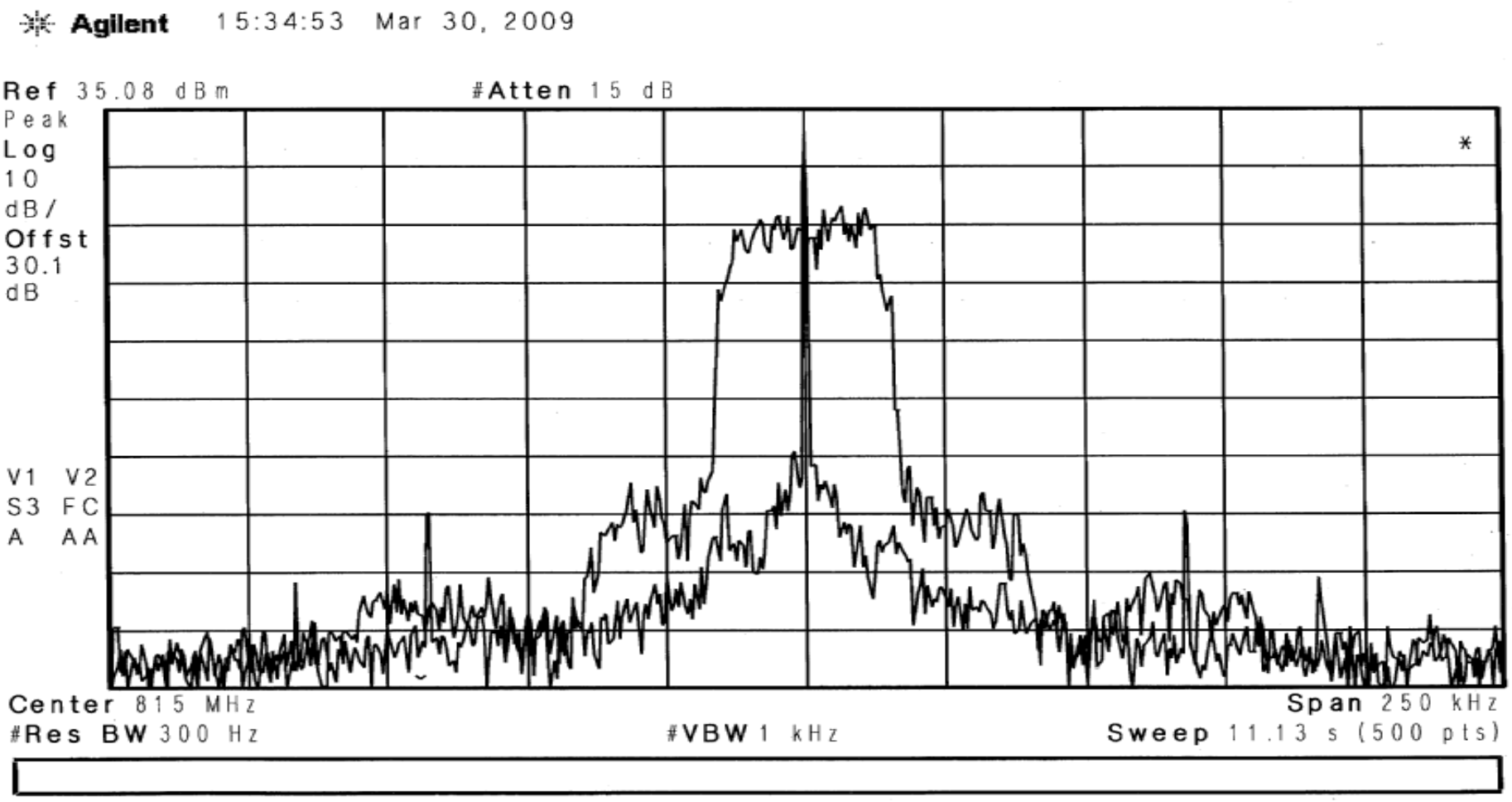
Test Method:	**Occupied Bandwidth**				
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5153N-1
Model No:	T61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2	Paragraph: 2.1049		**Date:**	4/1/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 2 TDMA - Upink - Input at 815 MHz				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

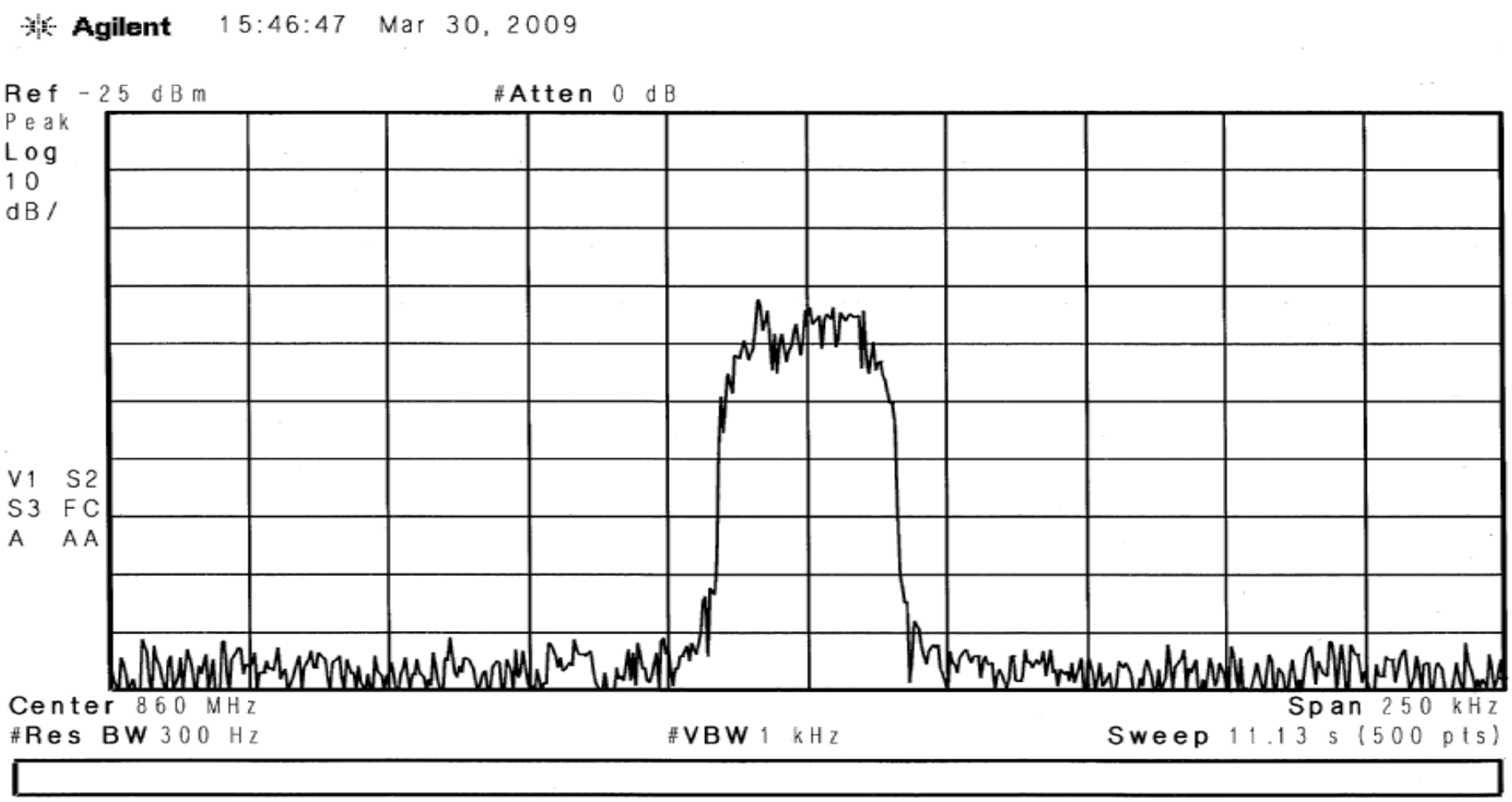
Test Method:	**Occupied Bandwidth**				
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5153N-1
Model No:	T61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2	Paragraph: 2.1049		**Date:**	4/1/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 2 TDMA - Upink - Output at 815 MHz				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

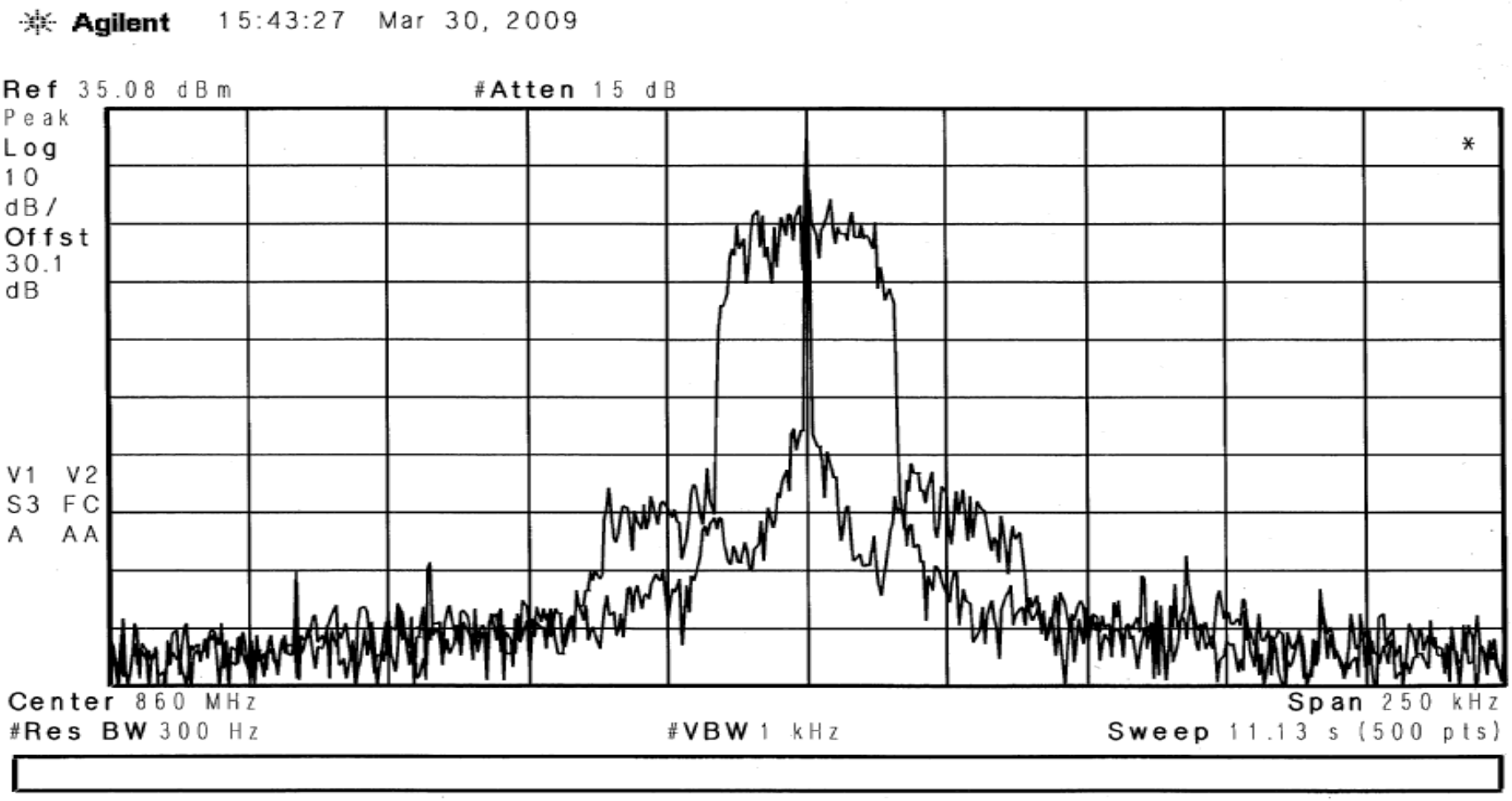
Test Method:	**Occupied Bandwidth**				
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5153N-1
Model No:	T61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2	Paragraph: 2.1049		**Date:**	4/1/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 2 TDMA - Downlink - Input at 860 MHz				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

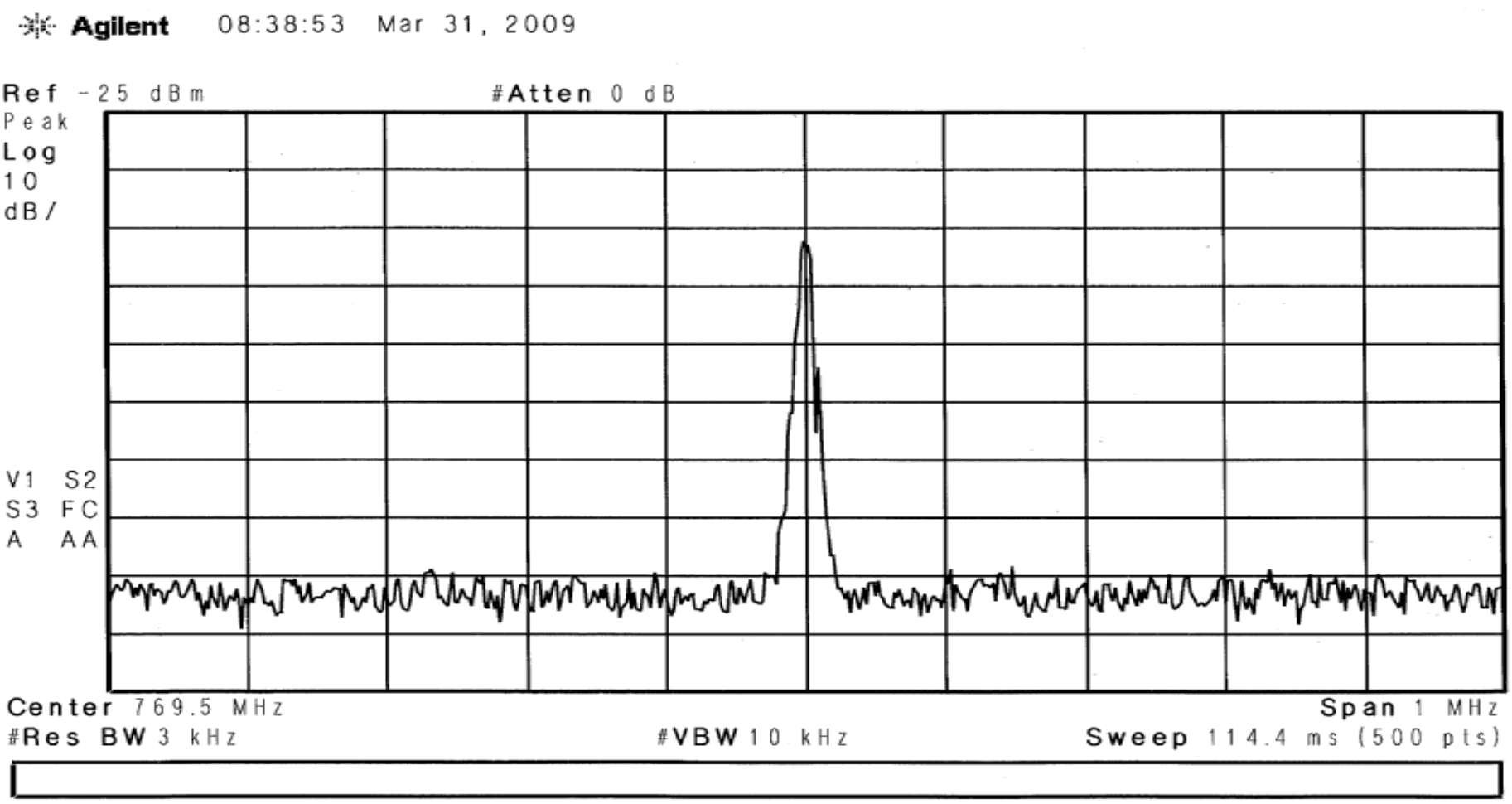
Test Method:	**Occupied Bandwidth**				
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5153N-1
Model No:	T61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2	Paragraph: 2.1049		**Date:**	4/1/2009
Operating Mode:	Amplifying input signal				
Notes:	Band 2 TDMA - Downlink - Output at 860 MHz				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

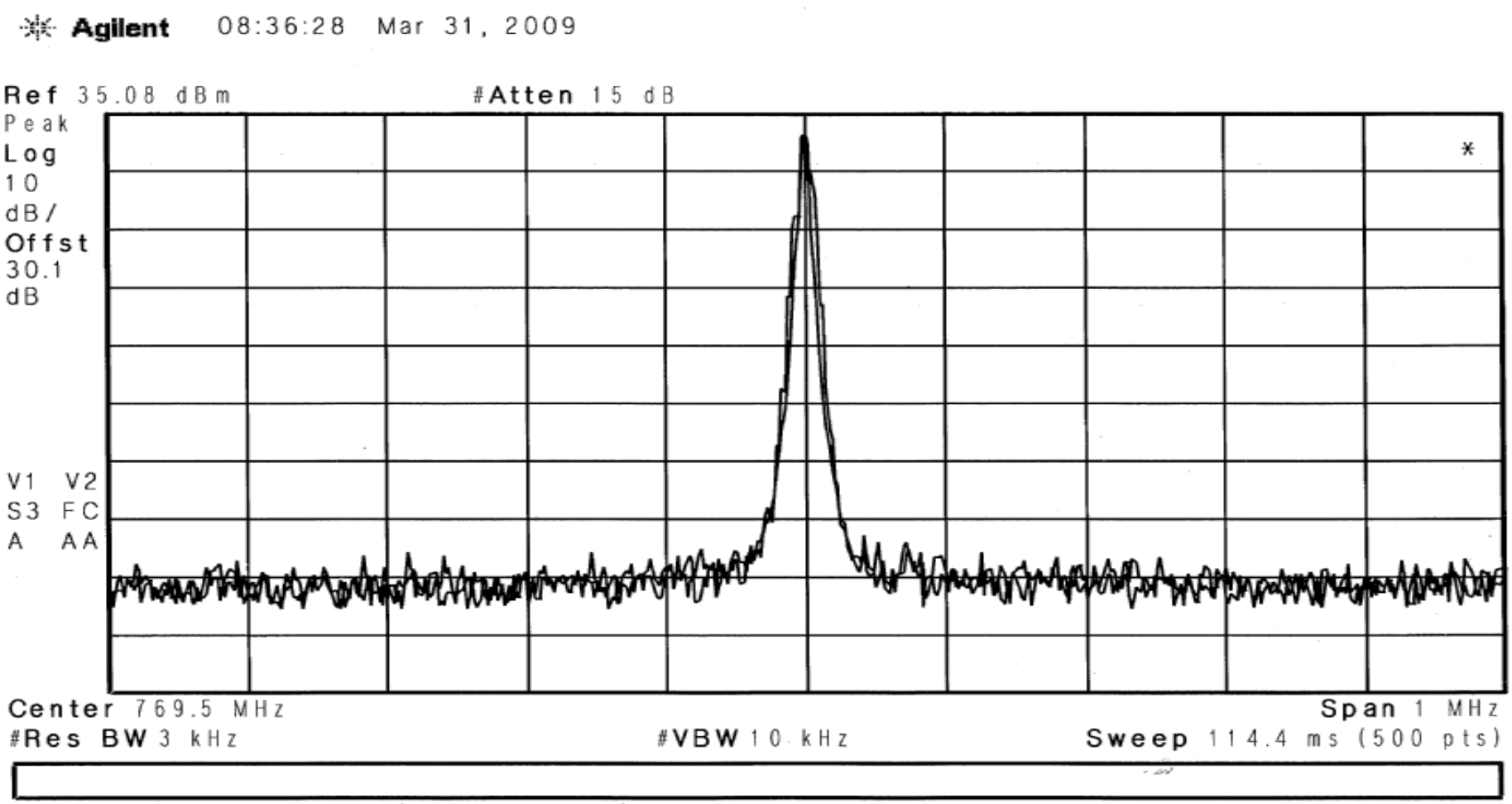
Test Method:	**Occupied Bandwidth**				
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5086N
Model No:	T61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2	Paragraph: 2.1049		**Date:**	11/20/2008
Operating Mode:	Amplifying input signal				
Notes:	Band 1 FM - Downlink - Input at 769.5 MHz				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

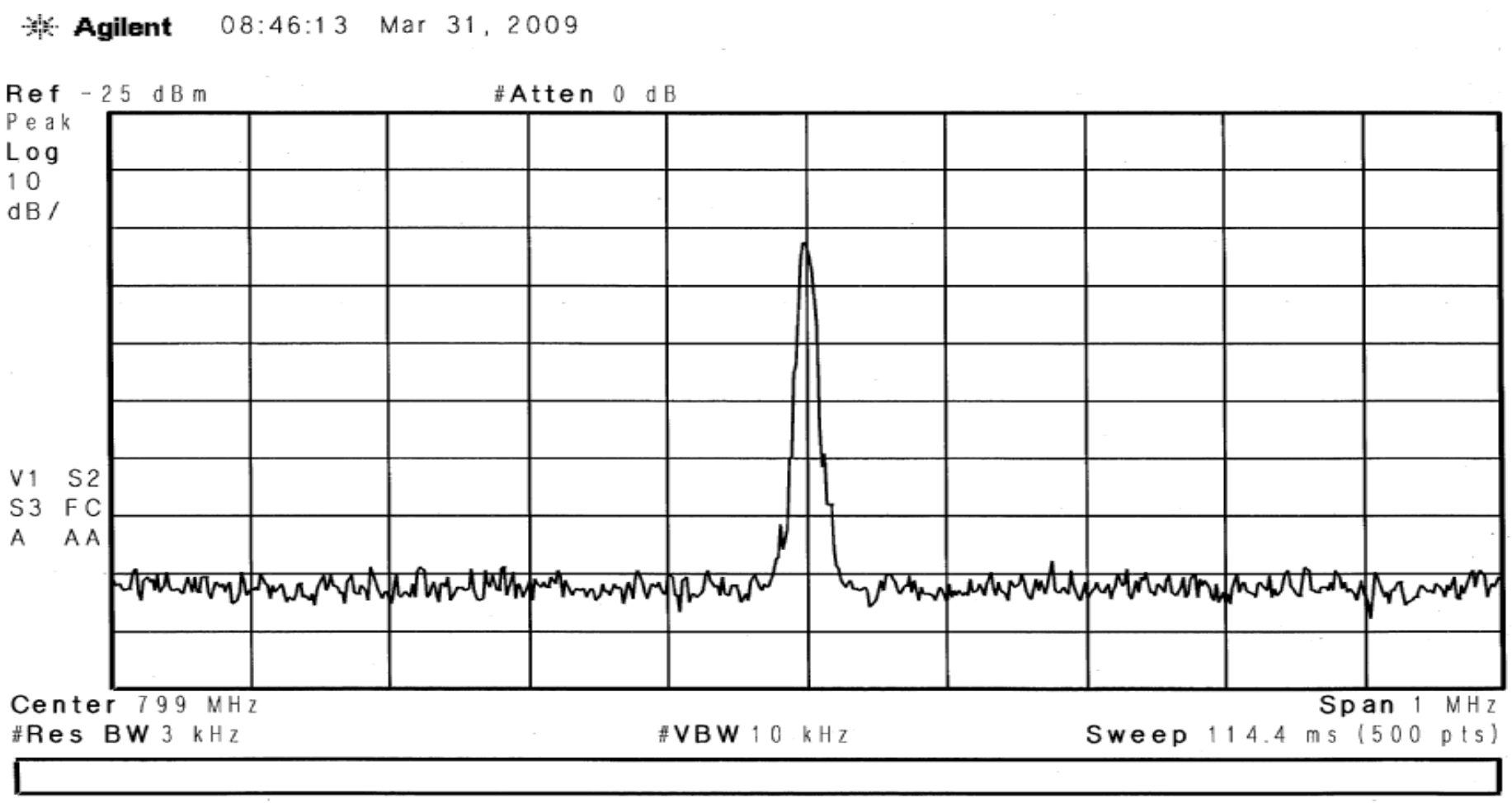
Test Method:	**Occupied Bandwidth**				
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5086N
Model No:	T61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2	Paragraph: 2.1049		**Date:**	11/20/2008
Operating Mode:	Amplifying input signal				
Notes:	Band 1 FM - Downlink - Output at 769.5 MHz				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

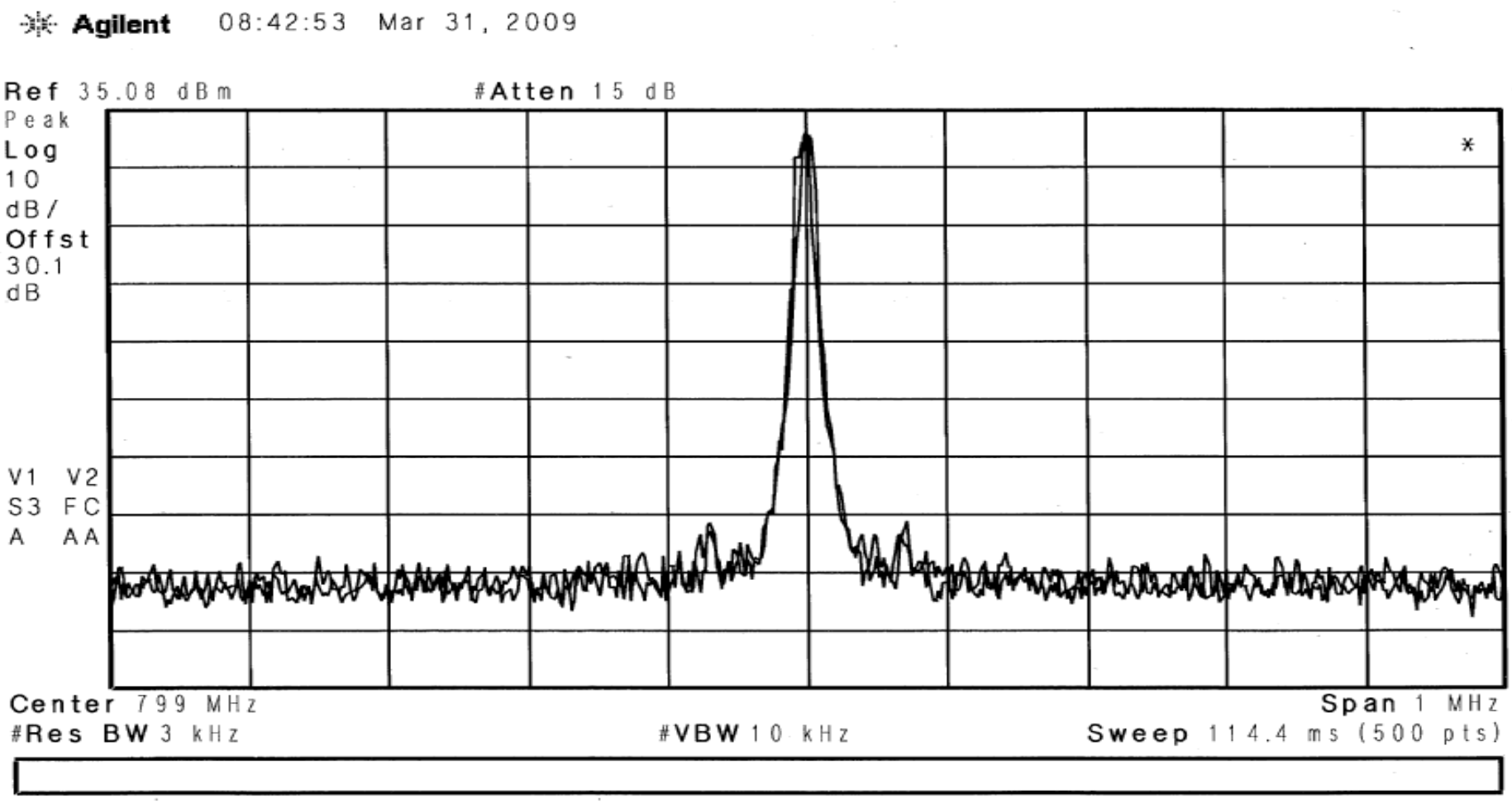
Test Method:	**Occupied Bandwidth**				
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5086N
Model No:	T61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2	Paragraph: 2.1049		**Date:**	11/20/2008
Operating Mode:	Amplifying input signal				
Notes:	Band 1 FM - Uplink - Input at 799 MHz				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

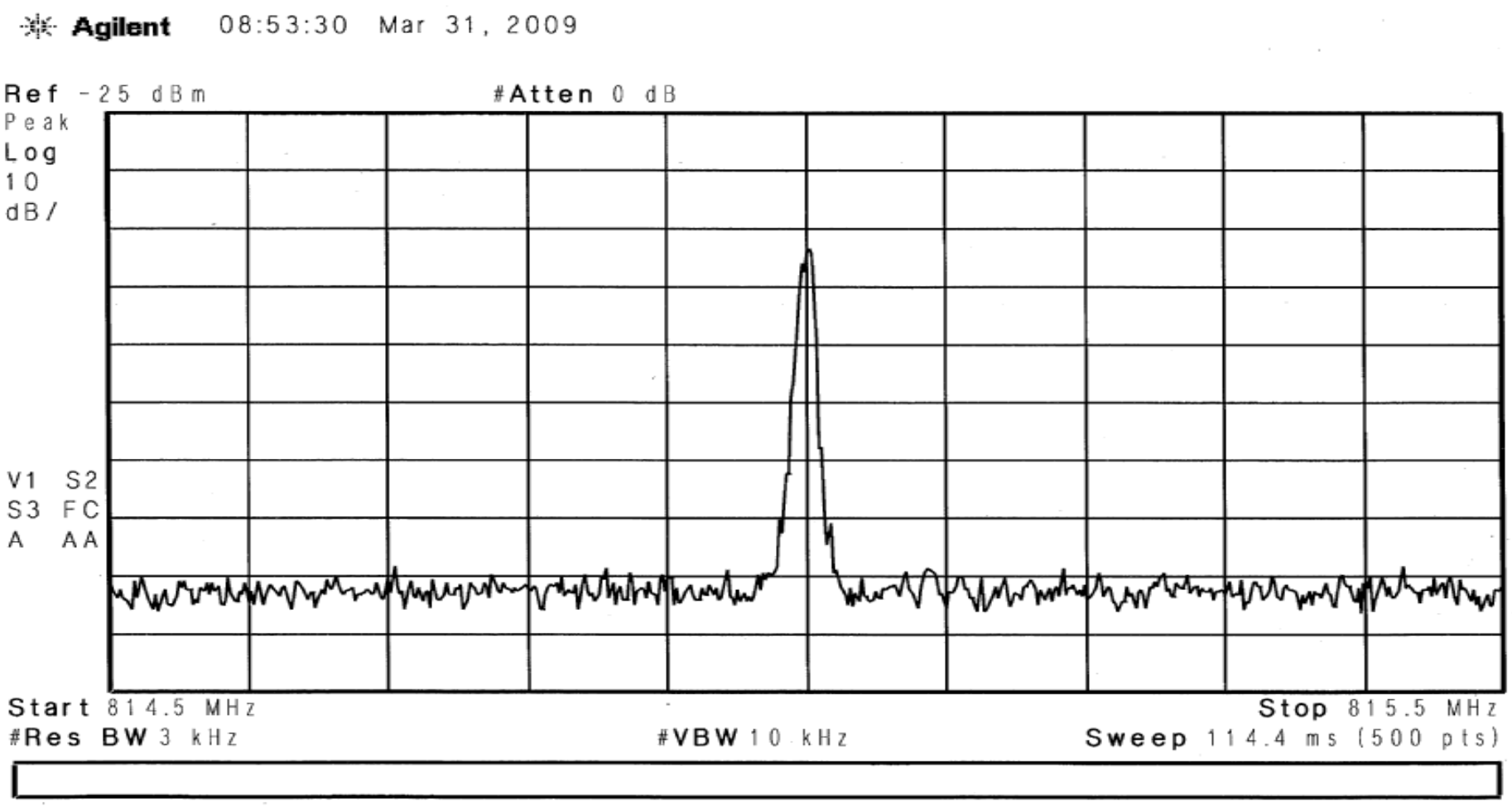
Test Method:	**Occupied Bandwidth**				
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5086N
Model No:	T61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2	Paragraph: 2.1049		**Date:**	11/20/2008
Operating Mode:	Amplifying input signal				
Notes:	Band 1 FM - Uplink - Output at 799 MHz				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

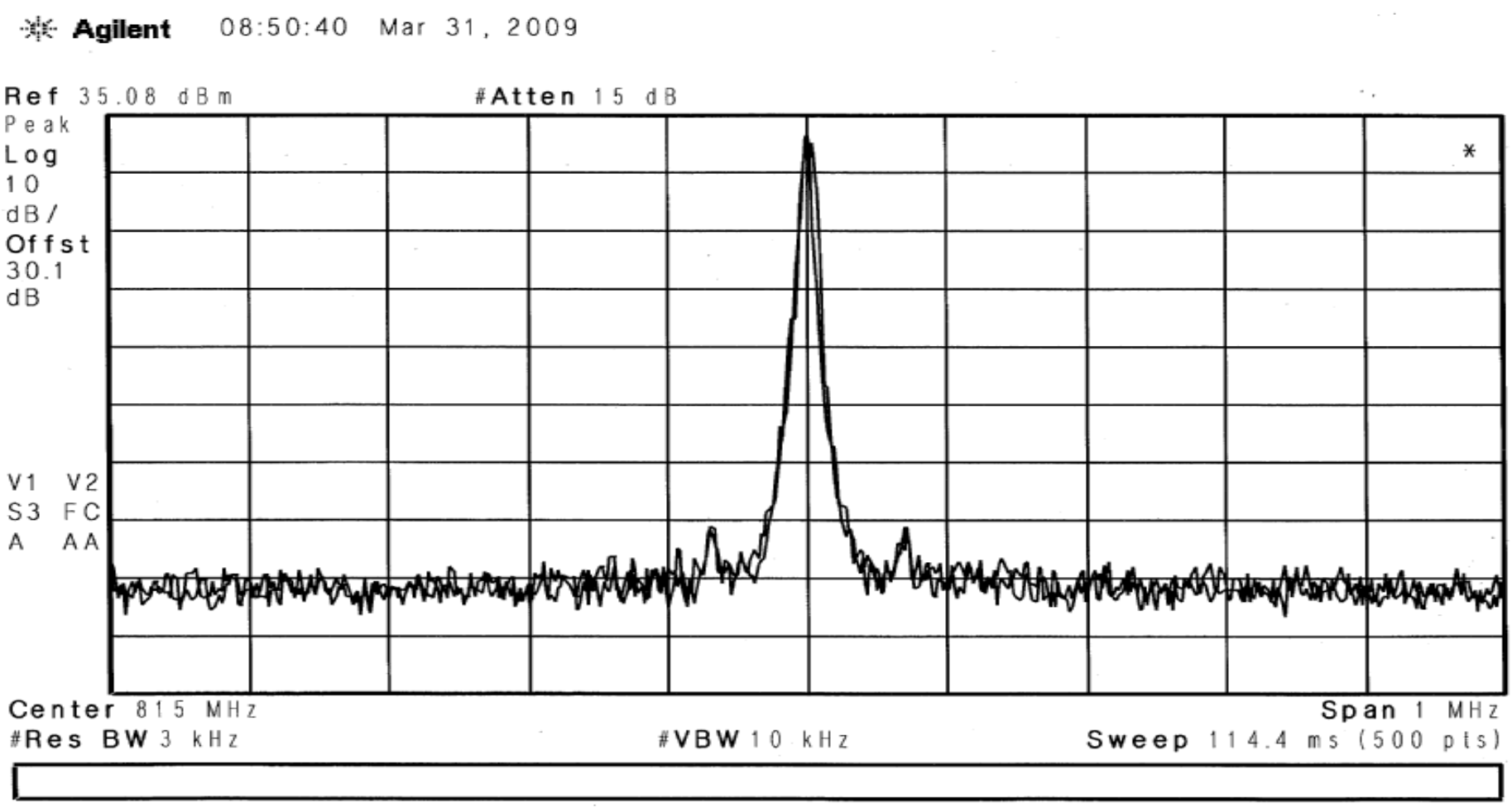
Test Method:	**Occupied Bandwidth**				
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5086N
Model No:	T61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2	Paragraph: 2.1049		**Date:**	11/20/2008
Operating Mode:	Amplifying input signal				
Notes:	Band 2 FM - Uplink - Input at 815 MHz				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

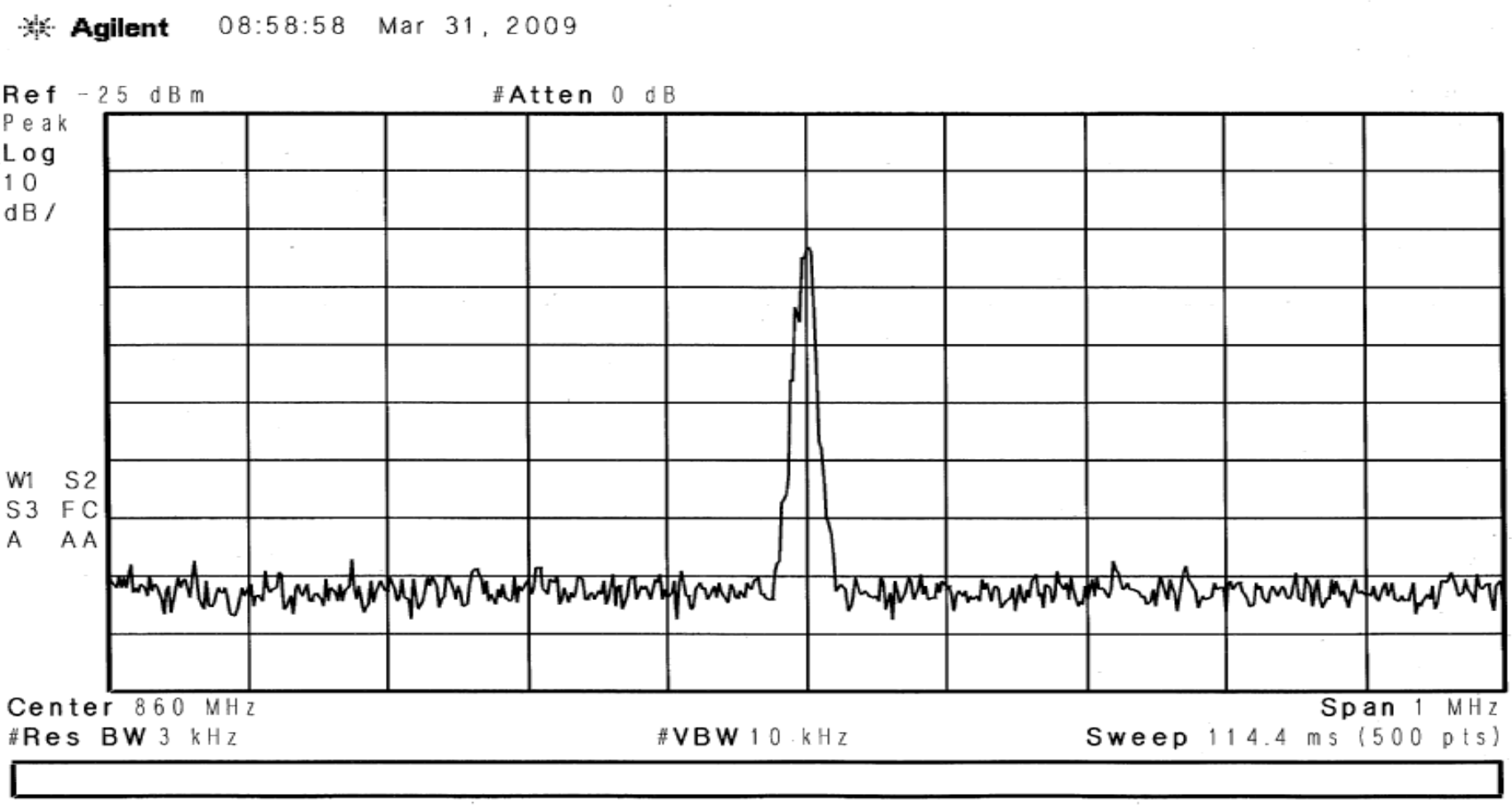
Test Method:	**Occupied Bandwidth**				
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5086N
Model No:	T61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2	Paragraph: 2.1049		**Date:**	11/20/2008
Operating Mode:	Amplifying input signal				
Notes:	Band 2 FM - Uplink - Output at 815 MHz				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

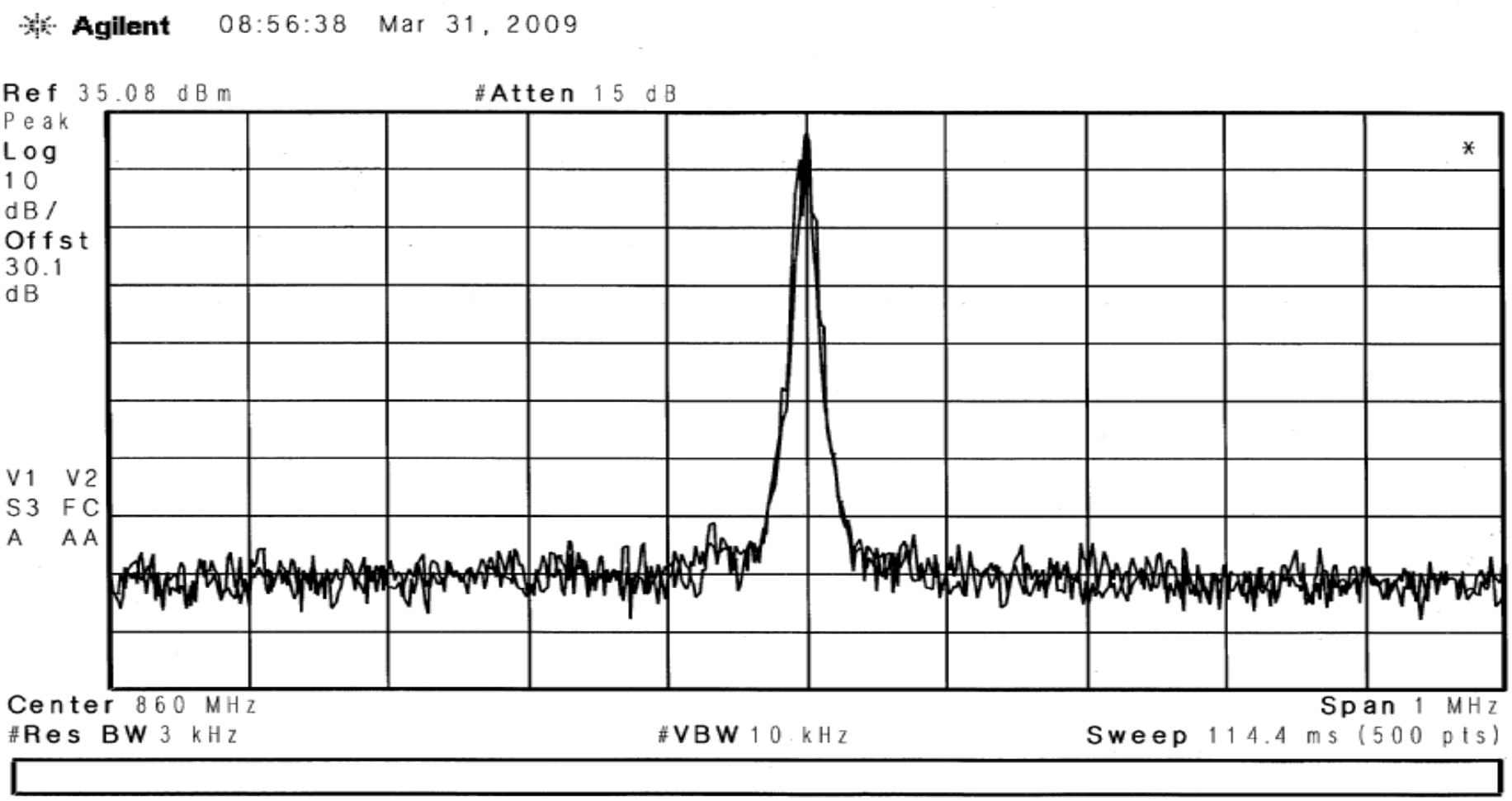
Test Method:	**Occupied Bandwidth**				
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5086N
Model No:	T61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2	Paragraph: 2.1049		**Date:**	11/20/2008
Operating Mode:	Amplifying input signal				
Notes:	Band 2 FM - Downlink - Input at 860 MHz				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method:	**Occupied Bandwidth**				
Customer:	Cellular Specialties, Inc.	**Test Sample:**	Bi-directional Cellular Amplifier	**Job No:**	R-5086N
Model No:	T61080-10W	**Serial No:**	001	**Technician:**	M.Seamans
Test Specification:	FCC Part 2	Paragraph: 2.1049		**Date:**	11/20/2008
Operating Mode:	Amplifying input signal				
Notes:	Band 2 FM - Downlink - Output at 860 MHz				



RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method: **Spurious Emissions at the Antenna Terminals 30 MHz to 9 GHz**

Customer: Cellular Specialties, Inc. **Job No:** R-5153N-1

Test Sample: Bi-directional Cellular Amplifier

Model No: T61080-10W **Serial No:** 001

Test Specification: FCC Part 2
Paragraph: 2.1051

Operating Mode: Amplifying input signal

Technician: M.Seamans **Date:** 4/1/2009

Notes: Uplink Frequency: 793-805 MHz Downlink Frequency: 763-776 MHz
FM modulation

Uplink Input Signal	Test Frequency	Frequencies	Reading	Limit	Downlink Input Signal	Test Frequency	Frequencies	Reading	Limit	
dBm	MHz	MHz	dBm	dBm	dBm	MHz	MHz	dBm	dBm	
-45.50	794.00				-45.50	764.00				
I	I	1588.00	-30.15	-13.0	I	I	1528.00	-29.80	-13.0	
I	I	2382.00	-28.90	I	I	I	2292.00	-29.41	I	
I	I	3176.00	-29.18	I	I	I	3056.00	-27.97	I	
I	I	3970.00	-30.04	I	I	I	3820.00	-29.89	I	
I	I	4764.00	-30.76	I	I	I	4584.00	-30.52	I	
I	I	5558.00	-31.17	I	I	I	5348.00	-30.07	I	
I	I	6352.00	-31.71	I	I	I	6112.00	-30.61	I	
I	I	7146.00	-29.28	I	I	I	6876.00	-30.43	I	
-45.50	794.00	7940.00	-30.61	-13.0	-45.50	764.00	7640.00	-30.69	-13.0	
-45.50	799.00				-45.50	769.50				
I	I	1598.00	-29.81	-13.0	I	I	1539.00	-30.66	-13.0	
I	I	2397.00	-28.84	I	I	I	2308.50	-28.49	I	
I	I	3196.00	-29.55	I	I	I	3078.00	-28.86	I	
I	I	3995.00	-30.17	I	I	I	3847.50	-30.80	I	
I	I	4794.00	-30.19	I	I	I	4617.00	-31.14	I	
I	I	5593.00	-30.97	I	I	I	5386.50	-31.62	I	
I	I	6392.00	-31.32	I	I	I	6156.00	-31.32	I	
I	I	7191.00	-31.04	I	I	I	6925.50	-30.06	I	
-45.50	799.00	7990.00	-30.67	-13.0	-45.50	769.50	7695.00	-30.71	-13.0	
-45.50	804.00				-45.50	775.00				
I	I	1608.00	-30.34	-13.0	I	I	1550.00	-29.25	-13.0	
I	I	2412.00	-29.33	I	I	I	2325.00	-28.33	I	
I	I	3216.00	-29.54	I	I	I	3100.00	-29.69	I	
I	I	4020.00	-30.42	I	I	I	3875.00	-30.07	I	
I	I	4824.00	-30.46	I	I	I	4650.00	-31.33	I	
I	I	5628.00	-30.79	I	I	I	5425.00	-31.18	I	
I	I	6432.00	-30.56	I	I	I	6200.00	-31.38	I	
I	I	7236.00	-30.57	I	I	I	6975.00	-30.21	I	
-45.50	804.00	8040.00	-29.81	-13.0	-45.50	775.00	7750.00	-29.89	-13.0	

Data Sheet 1 of 1 **R-5153N-1**

RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method:	**Spurious Emissions at the Antenna Terminals 30 MHz to 9 GHz**		
Customer:	Cellular Specialties, Inc.	**Job No:**	R-5153N-1
Test Sample:	Bi-directional Cellular Amplifier		
Model No:	T61080-10W	**Serial No:**	001
Test Specification:	FCC Part 2 Paragraph: 2.1051		
Operating Mode:	Amplifying input signal		
Technician:	M.Seamans	**Date:**	4/1/2009
Notes:	Uplink Frequency: 793-805 MHz Downlink Frequency: 763-776 MHz TDMA modulation		

Uplink Input Signal	Test Frequency	Frequencies	Reading	Limit	Downlink Input Signal	Test Frequency	Frequencies	Reading	Limit	
dBm	MHz	MHz	dBm	dBm	dBm	MHz	MHz	dBm	dBm	
-45.50	794.00				-45.50	764.00				
I	I	1588.00	-30.35	-13.0	I	I	1528.00	-29.83	-13.0	
I	I	2382.00	-28.65	I	I	I	2292.00	-28.28	I	
I	I	3176.00	-29.75	I	I	I	3056.00	-28.87	I	
I	I	3970.00	-30.46	I	I	I	3820.00	-29.01	I	
I	I	4764.00	-30.79	I	I	I	4584.00	-30.86	I	
I	I	5558.00	-31.98	I	I	I	5348.00	-31.18	I	
I	I	6352.00	-32.63	I	I	I	6112.00	-30.55	I	
I	I	7146.00	-29.14	I	I	I	6876.00	-30.02	I	
-45.50	794.00	7940.00	-30.98	-13.0	-45.50	764.00	7640.00	-29.69	-13.0	
-45.50	799.00				-45.50	769.50				
I	I	1598.00	-29.20	-13.0	I	I	1539.00	-30.29	-13.0	
I	I	2397.00	-26.84	I	I	I	2308.50	-28.76	I	
I	I	3196.00	-29.30	I	I	I	3078.00	-28.78	I	
I	I	3995.00	-30.74	I	I	I	3847.50	-30.59	I	
I	I	4794.00	-30.54	I	I	I	4617.00	-30.89	I	
I	I	5593.00	-31.22	I	I	I	5386.50	-30.11	I	
I	I	6392.00	-31.48	I	I	I	6156.00	-30.06	I	
I	I	7191.00	-29.75	I	I	I	6925.50	-30.32	I	
-45.50	799.00	7990.00	-30.36	-13.0	-45.50	769.50	7695.00	-29.98	-13.0	
-45.50	804.00				-45.50	775.00				
I	I	1608.00	-30.61	-13.0	I	I	1550.00	-29.56	-13.0	
I	I	2412.00	-26.73	I	I	I	2325.00	-25.97	I	
I	I	3216.00	-28.68	I	I	I	3100.00	-29.13	I	
I	I	4020.00	-30.55	I	I	I	3875.00	-30.20	I	
I	I	4824.00	-30.02	I	I	I	4650.00	-29.63	I	
I	I	5628.00	-30.91	I	I	I	5425.00	-31.22	I	
I	I	6432.00	-31.56	I	I	I	6200.00	-29.77	I	
I	I	7236.00	-29.77	I	I	I	6975.00	-29.89	I	
-45.50	804.00	8040.00	-28.98	-13.0	-45.50	775.00	7750.00	-30.62	-13.0	

RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method:	**Spurious Emissions at the Antenna Terminals 30 MHz to 9 GHz**		
Customer:	Cellular Specialties, Inc.	**Job No:**	R-5153N-1
Test Sample:	Bi-directional Cellular Amplifier		
Model No:	T61080-10W	**Serial No:**	001
Test Specification:	FCC Part 2 Paragraph: 2.1051		
Operating Mode:	Amplifying input signal		
Technician:	M.Seamans	**Date:**	4/1/2009
Notes:	Uplink Frequency: 806-824 MHz Downlink Frequency: 851-869 MHz FM modulation		

Uplink Input Signal	Test Frequency	Frequencies	Reading	Limit	Downlink Input Signal	Test Frequency	Frequencies	Reading	Limit	
dBm	MHz	MHz	dBm	dBm	dBm	MHz	MHz	dBm	dBm	
-43.60	807.00				-47.50	852.00				
I	I	1614.00	-29.84	-13.0	I	I	1704.00	-30.16	-13.0	
I	I	2421.00	-28.67	I	I	I	2556.00	-28.74	I	
I	I	3228.00	-29.18	I	I	I	3408.00	-28.99	I	
I	I	4035.00	-29.75	I	I	I	4260.00	-29.22	I	
I	I	4842.00	-30.95	I	I	I	5112.00	-32.05	I	
I	I	5649.00	-29.91	I	I	I	5964.00	-31.05	I	
I	I	6456.00	-30.39	I	I	I	6816.00	-30.45	I	
I	I	7263.00	-27.52	I	I	I	7668.00	-29.60	I	
-43.60	807.00	8070.00	-30.16	-13.0	-47.50	852.00	8520.00	-29.85	-13.0	
-43.60	815.00				-47.50	860.00				
I	I	1630.00	-29.01	-13.0	I	I	1720.00	-29.19	-13.0	
I	I	2445.00	-25.59	I	I	I	2580.00	-27.52	I	
I	I	3260.00	-28.83	I	I	I	3440.00	-29.31	I	
I	I	4075.00	-29.37	I	I	I	4300.00	-29.68	I	
I	I	4890.00	-30.49	I	I	I	5160.00	-30.44	I	
I	I	5705.00	-30.32	I	I	I	6020.00	-30.50	I	
I	I	6520.00	-31.48	I	I	I	6880.00	-29.57	I	
I	I	7335.00	-29.18	I	I	I	7740.00	-31.00	I	
-43.60	815.00	8150.00	-30.15	-13.0	-47.50	860.00	8600.00	-30.08	-13.0	
-43.60	823.00				-47.50	868.00				
I	I	1646.00	-29.92	-13.0	I	I	1736.00	-29.16	-13.0	
I	I	2469.00	-25.58	I	I	I	2604.00	-28.30	I	
I	I	3292.00	-29.64	I	I	I	3472.00	-29.05	I	
I	I	4115.00	-30.57	I	I	I	4340.00	-30.29	I	
I	I	4938.00	-30.14	I	I	I	5208.00	-31.52	I	
I	I	5761.00	-31.29	I	I	I	6076.00	-31.37	I	
I	I	6584.00	-31.92	I	I	I	6944.00	-29.52	I	
I	I	7407.00	-28.94	I	I	I	7812.00	-28.70	I	
-43.60	823.00	8230.00	-29.27	-13.0	-47.50	868.00	8680.00	-29.42	-13.0	

RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method:	**Spurious Emissions at the Antenna Terminals 30 MHz to 9 GHz**		
Customer:	Cellular Specialties, Inc.	**Job No:**	R-5153N-1
Test Sample:	Bi-directional Cellular Amplifier		
Model No:	T61080-10W	**Serial No:**	001
Test Specification:	FCC Part 2 Paragraph: 2.1051		
Operating Mode:	Amplifying input signal		
Technician:	M.Seamans	**Date:**	4/1/2009
Notes:	Uplink Frequency: 806-824 MHz Downlink Frequency: 851-869 MHz TDMA modulation		

Uplink Input Signal	Test Frequency	Frequencies	Reading	Limit	Downlink Input Signal	Test Frequency	Frequencies	Reading	Limit	
dBm	MHz	MHz	dBm	dBm	dBm	MHz	MHz	dBm	dBm	
-43.60	807.00				-47.50	852.00				
I	I	1614.00	-29.29	-13.0	I	I	1704.00	-29.27	-13.0	
I	I	2421.00	-26.55	I	I	I	2556.00	-28.45	I	
I	I	3228.00	-28.31	I	I	I	3408.00	-28.66	I	
I	I	4035.00	-29.06	I	I	I	4260.00	-31.50	I	
I	I	4842.00	-30.02	I	I	I	5112.00	-31.03	I	
I	I	5649.00	-30.73	I	I	I	5964.00	-31.57	I	
I	I	6456.00	-31.33	I	I	I	6816.00	-30.91	I	
I	I	7263.00	-29.12	I	I	I	7668.00	-30.57	I	
-43.60	807.00	8070.00	-30.05	-13.0	-47.50	852.00	8520.00	-30.75	-13.0	
-43.60	815.00				-47.50	860.00				
I	I	1630.00	-29.86	-13.0	I	I	1720.00	-29.44	-13.0	
I	I	2445.00	-22.48	I	I	I	2580.00	-27.26	I	
I	I	3260.00	-29.21	I	I	I	3440.00	-28.90	I	
I	I	4075.00	-30.94	I	I	I	4300.00	-29.87	I	
I	I	4890.00	-30.77	I	I	I	5160.00	-30.53	I	
I	I	5705.00	-31.25	I	I	I	6020.00	-30.69	I	
I	I	6520.00	-31.41	I	I	I	6880.00	-29.74	I	
I	I	7335.00	-28.62	I	I	I	7740.00	-30.42	I	
-43.60	815.00	8150.00	-31.17	-13.0	-47.50	860.00	8600.00	-29.71	-13.0	
-43.60	823.00				-47.50	868.00				
I	I	1646.00	-29.80	-13.0	I	I	1736.00	-29.83	-13.0	
I	I	2469.00	-24.33	I	I	I	2604.00	-27.60	I	
I	I	3292.00	-30.23	I	I	I	3472.00	-29.03	I	
I	I	4115.00	-29.75	I	I	I	4340.00	-29.32	I	
I	I	4938.00	-30.54	I	I	I	5208.00	-30.75	I	
I	I	5761.00	-30.50	I	I	I	6076.00	-30.83	I	
I	I	6584.00	-30.99	I	I	I	6944.00	-29.55	I	
I	I	7407.00	-29.13	I	I	I	7812.00	-29.14	I	
-43.60	823.00	8230.00	-29.56	-13.0	-47.50	868.00	8680.00	-30.29	-13.0	

RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method:	Spurious Radiated Emissions (ERP) 30 MHz to 9GHz		
Customer:	Cellular Specialties, Inc.	**Job No:**	R-5153N-1
Test Sample:	Bi-directional Cellular Amplifier		
Model No:	T61080-10W	**Serial No:**	001
Test Specification:	FCC Part 2.1053 TIA/EIA-603 Paragraph: 2.1053		
Operating Mode:	Amplifying input signal		
Technician:	M.Seamans	**Date:**	4/7/2009
Notes:	Uplink Frequency Range: 793-805 MHz Input frequencies: 794 MHz, 799 MHz and 804 MHz Peak Detector Modulation: CW Testing performed at 3 Meters		

Test Frequency	Antenna Position	Reference Reading	Signal Gen Level	Reference Ant Gain					Corrected Reading	Spurious Limit
MHz	(H/V) - Height	dBuV	dBm	dBI					dBm	dBm
30.00	-	-	-	-					-	-13.00
	-	-	-	-					-	
	-	-	-	-					-	
	-	-	-	-					-	
	-	-	-	-					-	
	-	-	-	-					-	
	-	-	-	-					-	
	-	-	-	-					-	
	-	-	-	-					-	
	-	-	-	-					-	
9000.00	-	-	-	-					-	-13.00

No emissions observed above the noise floor of the test equipment which was a minimum of 10dB below the limit.

RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method:	Spurious Radiated Emissions (ERP) 30 MHz to 9GHz		
Customer:	Cellular Specialties, Inc.	**Job No:**	R-5153N-1
Test Sample:	Bi-directional Cellular Amplifier		
Model No:	T61080-10W	**Serial No:**	001
Test Specification:	FCC Part 2.1053 TIA/EIA-603 Paragraph: 2.1053		
Operating Mode:	Amplifying input signal		
Technician:	M.Seamans	**Date:**	4/7/2009
Notes:	Downlink Frequency Range: 763-776 MHz Input frequencies: 764 MHz, 769.5 MHz and 775 MHz Peak Detector Modulation: CW Testing performed at 3 Meters		

Test Frequency	Antenna Position	Reference Reading	Signal Gen Level	Reference Ant Gain					Corrected Reading	Spurious Limit
MHz	(H/V) - Height	dBuV	dBm	dBI					dBm	dBm
30.00	-	-	-	-					-	-13.00
	-	-	-	-					-	
	-	-	-	-					-	
	-	-	-	-					-	
	-	-	-	-					-	
	-	-	-	-					-	
	-	-	-	-					-	
	-	-	-	-					-	
	-	-	-	-					-	
	-	-	-	-					-	
9000.00	-	-	-	-					-	-13.00

No emissions observed above the noise floor of the test equipment which was a minimum of 10dB below the limit.

RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method:	Spurious Radiated Emissions (ERP) 30 MHz to 9GHz		
Customer:	Cellular Specialties, Inc.	**Job No:**	R-5153N-1
Test Sample:	Bi-directional Cellular Amplifier		
Model No:	T61080-10W	**Serial No:**	001
Test Specification:	FCC Part 2.1053 TIA/EIA-603 Paragraph: 2.1053		
Operating Mode:	Amplifying input signal		
Technician:	M.Seamans	**Date:**	4/7/2009
Notes:	Uplink Frequency Range: 806-824 MHz Input frequenies: 807 MHz, 815 MHz and 823 MHz Peak Detector Modulation: CW Testing performed at 3 Meters		

Test Frequency	Antenna Position	Reference Reading	Signal Gen Level	Reference Ant Gain					Corrected Reading	Spurious Limit
MHz	(H/V) - Height	dBuV	dBm	dBI					dBm	dBm
30.00	-	-	-	-					-	-13.00
	-	-	-	-					-	
	-	-	-	-					-	
	-	-	-	-					-	
	-	-	-	-					-	
	-	-	-	-					-	
	-	-	-	-					-	
	-	-	-	-					-	
	-	-	-	-					-	
	-	-	-	-					-	
9000.00	-	-	-	-					-	-13.00

No emissions observed above the noise floor of the test equipment which was a minimum of 10dB below the limit.

RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method:	Spurious Radiated Emissions (ERP) 30 MHz to 9GHz		
Customer:	Cellular Specialties, Inc.	**Job No:**	R-5153N-1
Test Sample:	Bi-directional Cellular Amplifier		
Model No:	T61080-10W	**Serial No:**	001
Test Specification:	FCC Part 2.1053 TIA/EIA-603 Paragraph: 2.1053		
Operating Mode:	Amplifying input signal		
Technician:	M.Seamans	**Date:**	4/7/2009
Notes:	Downlink Frequency Range: 851-869 MHz Input frequencies: 852 MHz, 860 MHz and 868 MHz Peak Detector Modulation: CW Testing performed at 3 Meters		

Test Frequency	Antenna Position	Reference Reading	Signal Gen Level	Reference Ant Gain					Corrected Reading	Spurious Limit
MHz	(H/V) - Height	dBuV	dBm	dBI					dBm	dBm
30.00	-	-	-	-					-	-13.00
|	-	-	-	-					-	|
|	-	-	-	-					-	|
|	-	-	-	-					-	|
|	-	-	-	-					-	|
|	-	-	-	-					-	|
|	-	-	-	-					-	|
|	-	-	-	-					-	|
|	-	-	-	-					-	|
|	-	-	-	-					-	|
9000.00	-	-	-	-					-	-13.00

No emissions observed above the noise floor of the test equipment which was a minimum of 10dB below the limit.

RETLIF TESTING LABORATORIES

TABULAR DATA SHEET

Test Method: **RF Power Output**

Customer: Cellular Specialties, Inc. **Job No:** R-5153N-1

Test Sample: Bi-directional Cellular Amplifier

Model No: T61080-10W **Serial No:** 001

Test Specification: FCC Part 2
Paragraph: 2.1046

Operating Mode: Amplifying input signal

Technician: M.Seamans **Date:** 3/30/2009

Notes: Band 1 - Uplink Frequency Range: 793-805 MHz Downlink Frequency Range: 763-776 MHz
RF Power output data taken from the two tone test combined power Modulation Type: FM

Test Frequency	Measured Level	Measured Level		Combined Level	Combined Level					
MHz	dBm	mW		mW	dBm					
(Uplink) Low										
794.01	28.86	769.13		1547.17	31.90					
795.02	28.91	778.04								
(Uplink) High										
802.74	28.82	762.08		1532.98	31.86					
803.71	28.87	770.90								
(Downlink) Low										
764.02	28.17	656.1		1333.8	31.25					
765.00	28.31	677.6								
(Downlink) High										
773.52	28.65	732.8		1212.6	30.84					
774.50	26.81	479.7								
	Res. Bandwidth: 100kHz									
	Video Bandwidth: 300kHz									
	Sweep Time: 80ms									
	Detector: Peak									

Data Sheet 1 of 1 **R-5153N-1**

RETLIF TESTING LABORATORIES

TABULAR DATA SHEET

Test Method:	**RF Power Output**		
Customer:	Cellular Specialties, Inc.	**Job No:**	R-5153N-1
Test Sample:	Bi-directional Cellular Amplifier		
Model No:	T61080-10W	**Serial No:**	001
Test Specification:	FCC Part 2 Paragraph: 2.1046		
Operating Mode:	Amplifying input signal		
Technician:	M.Seamans	**Date:**	3/30/2009
Notes:	Band 1 - Uplink Frequency Range: 793-805 MHz Downlink Frequency Range: 763-776 MHz RF Power output data taken from the two tone test combined power Modulation Type: TDMA		

Test Frequency	Measured Level	Measured Level		Combined Level	Combined Level					
MHz	dBm	mW		mW	dBm					
(Uplink) Low										
794.53	28.56	717.79		1592.78	32.02					
795.52	29.42	874.98								
(Uplink) High										
802.72	29.02	797.99		1627.85	32.12					
803.71	29.19	829.85								
(Downlink) Low										
764.10	28.52	711.2		1312.4	31.18					
765.11	27.79	601.2								
(Downlink) High										
773.49	28.64	731.1		1279.4	31.07					
774.50	27.39	548.3								
	Res. Bandwidth: 100kHz									
	Video Bandwidth: 300kHz									
	Sweep Time: 80ms									
	Detector: Peak									

RETLIF TESTING LABORATORIES

TABULAR DATA SHEET

Test Method:	**RF Power Output**		
Customer:	Cellular Specialties, Inc.	**Job No:**	R-5153N-1
Test Sample:	Bi-directional Cellular Amplifier		
Model No:	T61080-10W	**Serial No:**	001
Test Specification:	FCC Part 2 Paragraph: 2.1046		
Operating Mode:	Amplifying input signal		
Technician:	M.Seamans	**Date:**	3/30/2009
Notes:	Band 2 - Uplink Frequency Range: 806-824 MHz Downlink Frequency Range: 851-869 MHz RF Power output data taken from the two tone test combined power Modulation Type: FM		

Test Frequency	Measured Level	Measured Level		Combined Level	Combined Level					
MHz	dBm	mW		mW	dBm					
(Uplink) Low										
807.51	28.22	663.74		1470.98	31.68					
808.50	29.07	807.24								
(Uplink) High										
821.42	28.70	741.31		1449.26	31.61					
822.41	28.50	707.95								
(Downlink) Low										
852.55	27.97	626.6		1328.1	31.23					
853.54	28.46	701.5								
(Downlink) High										
866.42	28.69	739.6		1475.8	31.69					
867.41	28.67	736.2								
	Res. Bandwidth: 100kHz									
	Video Bandwidth: 300kHz									
	Sweep Time: 80ms									
	Detector: Peak									

RETLIF TESTING LABORATORIES

TABULAR DATA SHEET

Test Method:	**RF Power Output**		
Customer:	Cellular Specialties, Inc.	**Job No:**	R-5153N-1
Test Sample:	Bi-directional Cellular Amplifier		
Model No:	T61080-10W	**Serial No:**	001
Test Specification:	FCC Part 2 Paragraph: 2.1046		
Operating Mode:	Amplifying input signal		
Technician:	M.Seamans	**Date:**	3/30/2009
Notes:	Band 2 - Uplink Frequency Range: 806-824 MHz Downlink Frequency Range: 851-869 MHz RF Power output data taken from the two tone test combined power Modulation Type: TDMA		

Test Frequency	Measured Level	Measured Level		Combined Level	Combined Level					
MHz	dBm	mW		mW	dBm					
(Uplink) Low										
807.51	28.70	741.31		1484.33	31.72					
808.54	28.71	743.02								
(Uplink) High										
821.54	29.39	868.96		1526.62	31.84					
822.53	28.18	657.66								
(Downlink) Low										
852.70	28.68	737.9		1336.3	31.26					
853.73	27.77	598.4								
(Downlink) High										
866.42	29.11	814.7		1492.3	31.74					
867.41	28.31	677.6								
	Res. Bandwidth: 100kHz									
	Video Bandwidth: 300kHz									
	Sweep Time: 80ms									
	Detector: Peak									

RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method: **Frequency Stability**

Customer: Cellular Specialties, Inc. **Job No:** R-5153N-1

Test Sample: Bi-directional Cellular Amplifier

Model No: T61080-10W **Serial No:** 001

Test Specification: FCC Part 2
Paragraph: 2.1055

Operating Mode: Amplifying input signal

Technician: M.Seamans **Date:** 4/7/2009

Notes: Uplink Frequency 799 MHz Nominal Voltage = 120 VAC
Downlink Frequency 769.5 MHz

Temp	Test Frequency			Frequency @ 102 VAC	Frequency @ 108 VAC	Frequency @ 114 VAC	Frequency @ 120 VAC	Frequency @ 126 VAC	Frequency @ 132 VAC	Frequency @ 138 VAC
C	MHz			MHz	MHz	MHz	MHz	MHz	MHz	MHz
	(Uplink)									
-30	799.0000			798.999424	798.999424	798.999424	798.999424	798.999424	798.999424	798.999424
-20	|			798.999424	798.999424	798.999424	798.999424	798.999424	798.999424	798.999424
-10	|			798.999424	798.999424	798.999424	798.999424	798.999424	798.999424	798.999424
0	|			798.999424	798.999424	798.999424	798.999424	798.999424	798.999424	798.999424
10	|			798.999424	798.999424	798.999424	798.999424	798.999424	798.999424	798.999424
20	|			798.999424	798.999424	798.999424	798.999424	798.999424	798.999424	798.999424
30	|			798.999424	798.999424	798.999424	798.999424	798.999424	798.999424	798.999424
40	|			798.999424	798.999424	798.999424	798.999424	798.999424	798.999424	798.999424
50	799.0000			798.999424	798.999424	798.999424	798.999424	798.999424	798.999424	798.999424
	(Downlink)									
-30	769.5000			769.499350	769.499350	769.499350	769.499350	769.499350	769.499350	769.499350
-20	|			769.499350	769.499350	769.499350	769.499350	769.499350	769.499350	770.499350
-10	|			769.499350	769.499350	769.499350	769.499350	769.499350	769.499350	771.499350
0	|			769.499350	769.499350	769.499350	769.499350	769.499350	769.499350	772.499350
10	|			769.499350	769.499350	769.499350	769.499350	769.499350	769.499350	773.499350
20	|			769.499350	769.499350	769.499350	769.499350	769.499350	769.499350	774.499350
30	|			769.499350	769.499350	769.499350	769.499350	769.499350	769.499350	775.499350
40	|			769.499350	769.499350	769.499350	769.499350	769.499350	769.499350	776.499350
50	769.5000			769.499350	769.499350	769.499350	769.499350	769.499350	769.499350	777.499350

RETLIF TESTING LABORATORIES

EMISSIONS DATA SHEET

Test Method:	**Frequency Stability**		
Customer:	Cellular Specialties, Inc.	**Job No:**	R-5153N-1
Test Sample:	Bi-directional Cellular Amplifier		
Model No:	T61080-10W	**Serial No:**	001
Test Specification:	FCC Part 2 Paragraph: 2.1055		
Operating Mode:	Amplifying input signal		
Technician:	M.Seamans	**Date:**	4/7/2009
Notes:	Uplink Frequency 815 MHz Nominal Voltage = 120 VAC Downlink Frequency 860 MHz		

Temp	Test Frequency			Frequency @ 102 VAC	Frequency @ 108 VAC	Frequency @ 114 VAC	Frequency @ 120 VAC	Frequency @ 126 VAC	Frequency @ 132 VAC	Frequency @ 138 VAC
C	MHz			MHz	MHz	MHz	MHz	MHz	MHz	MHz
	(Uplink)									
-30	815.0000			815.002227	815.002227	815.002227	815.002227	815.002227	815.002227	815.002227
-20	|			815.002227	815.002227	815.002227	815.002227	815.002227	815.002227	816.002227
-10	|			815.002227	815.002227	815.002227	815.002227	815.002227	815.002227	817.002227
0	|			815.002227	815.002227	815.002227	815.002227	815.002227	815.002227	818.002227
10	|			815.002227	815.002227	815.002227	815.002227	815.002227	815.002227	819.002227
20	|			815.002227	815.002227	815.002227	815.002227	815.002227	815.002227	820.002227
30	|			815.002227	815.002227	815.002227	815.002227	815.002227	815.002227	821.002227
40	|			815.002227	815.002227	815.002227	815.002227	815.002227	815.002227	822.002227
50	815.0000			815.002227	815.002227	815.002227	815.002227	815.002227	815.002227	823.002227
	(Downlink)									
-30	860.0000			859.999469	859.999469	859.999469	859.999469	859.999469	859.999469	859.999469
-20	|			859.999469	859.999469	859.999469	859.999469	859.999469	859.999469	859.999469
-10	|			859.999469	859.999469	859.999469	859.999469	859.999469	859.999469	859.999469
0	|			859.999469	859.999469	859.999469	859.999469	859.999469	859.999469	859.999469
10	|			859.999469	859.999469	859.999469	859.999469	859.999469	859.999469	859.999469
20	|			859.999469	859.999469	859.999469	859.999469	859.999469	859.999469	859.999469
30	|			859.999469	859.999469	859.999469	859.999469	859.999469	859.999469	859.999469
40	|			859.999469	859.999469	859.999469	859.999469	859.999469	859.999469	859.999469
50	860.0000			859.999469	859.999469	859.999469	859.999469	859.999469	859.999469	859.999469

Data Sheet 1 of 1 **R-5153N-1**