

DECLARATION OF COMPLIANCE FCC PART 22.901(d) EMC MEASUREMENTS

Test Lab

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Applicant Information

COMMERCIANT L.P.
2901 Wilcrest, #250
Houston, TX 77042

FCC Rule Part(s):	47 CFR §22.901(d), §2
Test Procedure(s):	FCC 47 CFR §22.901(d), §2; ANSI TIA/EIA-603-A-2001
FCC Device Classification:	Licensed Non-Broadcast Station Transmitter (TNB)
Device Type:	Wireless Transaction Terminal with Novatel Expedite CDPD Modem
FCC ID:	QWLM105
Model Name:	M
Model No.:	M105
Modulation:	GMSK
Tx Frequency Range:	824.04 - 848.97 MHz
Rx Frequency Range:	869.04 - 893.97 MHz
Max. RF Output Power:	0.287 Watts (ERP)
Conducted Power Tested:	28.0 dBm
Emission Designator(s):	28K8FXW
Frequency Tolerance(s):	± 0.00025 %
Antenna Type:	External Dipole
Battery Type:	Lithium-Ion 4.2V (1800mAh)

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 §22.901(d), §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.

This test report shall not be reproduced partially, or in full, without the prior written approval of Celltech Labs Inc. The results and statements contained in this report pertain only to the device(s) evaluated.



Russell Pipe
Senior Compliance Technologist
Celltech Labs Inc.



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FCC PART 22.901(d) 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)

<u>APPLICANT</u> COMMERCIANT L.P. 2901 Wilcrest, #250 Houston, TX 77042	
FCC ID	QWLM105
Model(s)	M105
Serial No.	Pre-production
EUT Type	Wireless Transaction Terminal with Novatel Wireless Technologies Model: Expedite internal CDPD Modem
FCC Rule Part(s)	47 CFR §22.901(d), §2
FCC Classification	Licensed Non-Broadcast Station Transmitter (TNB)
Tx Frequency Range	824.04 - 848.97 MHz
Rx Frequency Range	869.04 - 893.97 MHz
Max. RF Output Power	0.287 Watts (ERP)
RF Conducted Output Power Tested	28.0 dBm
Emission Designator	28K8FXW
Frequency Tolerance	± 0.00025 %
Modulation	GMSK
Battery Type	Lithium-Ion 4.2V (1800 mAh)
Antenna Type	External Dipole (Length: 137 mm)

2.1 MEASUREMENT PROCEDURES

2.2 RF OUTPUT POWER MEASUREMENT - §2.1046

The peak conducted power levels were measured with a Gigatronics 8650A Universal Power Meter in Continuous Wave 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 into test mode via internal software. All subsequent tests were performed using the same tune-up procedures.

Conducted Power Measurement	
Frequency (MHz)	Peak Power (dBm)
824.04	28.0
836.49	28.0
848.97	28.0

2.3 SPURIOUS EMISSIONS AT ANTENNA TERMINAL - §2.1051

The EUT was placed in test mode via internal software at a full rated power. The conducted power was measured with a Gigatronics 8650A Universal Power Meter. 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.

2.4 RECEIVER SPURIOUS EMISSIONS - §22.917(f)

Conducted spurious emissions were measured at the antenna terminal of the EUT using a spectrum analyzer. The transmitter of the EUT was placed into full power and the frequency span of the spectrum analyzer was set to the receiving band of the device. The recorded spurious emissions at the antenna terminal must be attenuated to a level not to exceed -80dBm.

2.5 OCCUPIED BANDWIDTH - §2.1049, §22.917

The EUT was placed in test mode via internal software at a full rated power. 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 3kHz.

Specified Limits (as of February 18, 2003):

- (a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.
- (b) Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. 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. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 100 kHz or 1 percent of emission bandwidth, as specified). 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) Alternative out of band emission limit. Licensees in this service may establish an alternative out of band emission limit to be used at specified band edge(s) in specified geographical areas, in lieu of that set forth in this section, pursuant to a private contractual arrangement of all affected licensees and applicants. In this event, each party to such contract shall maintain a copy of the contract in their station files and disclose it to prospective assignees or transferees and, upon request, to the FCC.
- (d) Interference caused by out of band emissions. If any emission from a transmitter operating in this service results in interference to users of another radio service, the FCC may require a greater attenuation of that emission than specified in this section.

2.6 FIELD STRENGTH OF SPURIOUS RADIATION - §2.1053

Radiated and harmonic emissions were measured on a 3-meter open area test site. The EUT was placed into test mode via internal software at a full rated power. 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. All spurious emissions made from the lowest radio frequency generated in the equipment to the tenth harmonic of the carrier were investigated.

2.7 EFFECTIVE RADIATED POWER OUTPUT - §22.913

ERP 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. 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. The field strength was recorded from a calibrated spectrum analyzer for each channel being tested. A half-wave dipole was substituted in place of the EUT. A CW signal with the same bandwidth as the EUT was generated, amplified, and fed through a directional coupler. The height and direction of the dipole was adjusted in order to give the field of maximum intensity. The power to the dipole was adjusted in order to give the same field strength reading as previously recorded for the EUT. The power at the coupler port was recorded at this point. The feed point for the dipole 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 dipole antenna. The conducted power at the antenna feed point was recorded. The ERP level was determined by adding the dipole forward conducted power and the dipole gain in dB. For readings above 1GHz the above method is repeated using a standard gain horn antenna.

2.8 RADIATED MEASUREMENT TEST SETUP

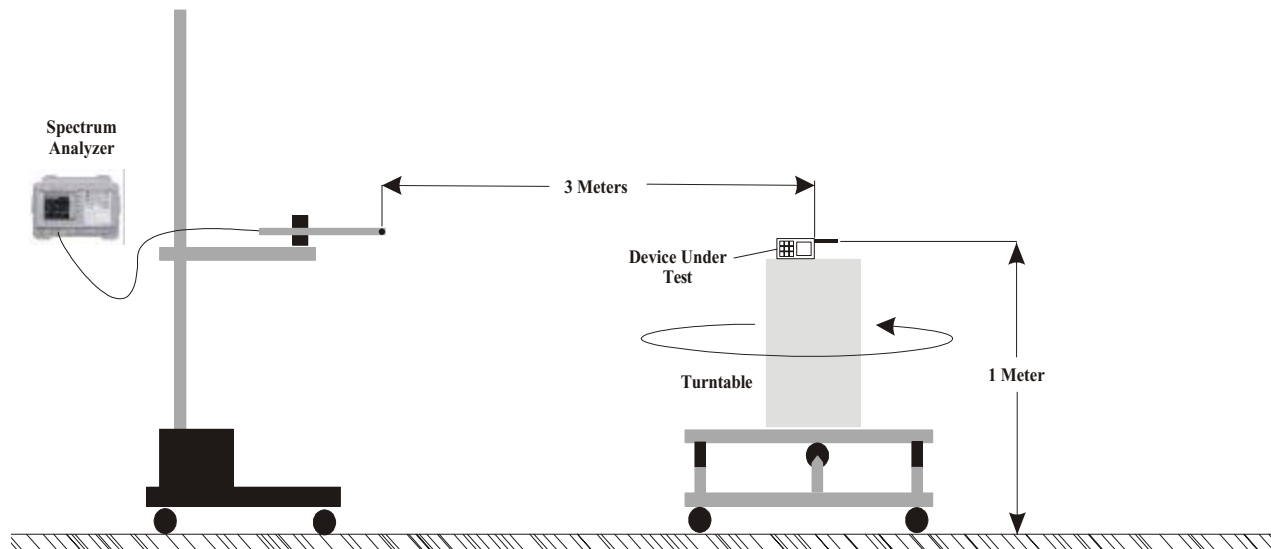


Figure 1. Radiated Measurement Test Setup Diagram

2.9 FREQUENCY STABILITY / TEMPERATURE VARIATION - §2.1055

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 evaluated using the ESPEC ECT-2 temperature chamber.

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.

3.1 TEST DATA

3.2 EFFECTIVE RADIATED POWER OUTPUT - §22.913

Freq. Tuned	EUT Conducted Power	Maximum Field Strength of EUT	Antenna Polariz.	Dipole Gain	Dipole Forward Conducted Power	ERP of EUT Dipole Gain + Dipole Forward Conducted Power	
MHz	dBm	dBm	H/V	dBd	dBm	dBm	Watts
824.04	28.0	-12.66	V	- 1.44	25.32	23.88	0.244
836.49	28.0	-13.15	V	- 1.34	25.92	24.58	0.287
848.97	28.0	-14.09	V	- 1.24	25.08	23.84	0.242

Notes:

1. ERP measurements were performed in both horizontal and vertical antenna polarizations and the worst-case configuration is reported.

3.3 FIELD STRENGTH OF SPURIOUS RADIATION - §2.1053

Operating Frequency (MHz): 824.04
Channel: 991 (Low)
EUT Conducted Pwr. (dBm): 28.0
Measured ERP (dBm): 23.88
Mode: CW
Distance: 3 Meters
Limit: $43 + 10 \log (W) = 36.87 \text{ dBc}$

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	
1648.08	-74.40	-41.51	6.6	V	-34.91	-37.05	60.93
2472.12	-73.64	-35.84	7.8	V	-28.04	-30.18	54.06
3296.16	-76.41	-39.83	7.8	V	-32.03	-34.17	58.05
4120.20	-77.10	-39.08	7.6	V	-31.48	-33.62	57.50
4944.24	-77.35	-40.99	8.5	V	-32.49	-34.63	58.51
5768.28	-77.08	-39.20	8.8	V	-30.40	-32.54	56.42
6592.32	-73.24	-35.36	9.6	V	-25.76	-27.90	51.78
7416.36	-73.12	-35.29	9.0	V	-26.29	-28.43	52.31
8240.40	-75.73	-39.52	9.3	V	-30.22	-32.36	56.24

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): 836.49
Channel: 383 (Mid)
EUT Conducted Pwr. (dBm): 28.0
Measured ERP (dBm): 24.58
Mode: CW
Distance: 3 Meters
Limit: $43 + 10 \log (W) = 37.58 \text{ dBc}$

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	
1672.98	-74.35	-41.46	6.6	V	-34.86	-37.00	61.58
2509.47	-72.20	-34.40	7.8	V	-26.60	-28.74	53.32
3345.96	-75.38	-38.80	7.8	V	-31.00	-33.14	57.72
4182.45	-78.12	-40.10	7.6	V	-32.50	-34.64	59.22
5018.94	-77.23	-40.87	8.5	V	-32.37	-34.51	59.09
5855.43	-76.45	-38.57	8.8	V	-29.77	-31.91	56.49
6691.92	-74.68	-36.80	9.6	V	-27.20	-29.34	53.92
7528.41	-73.93	-36.10	9.0	V	-27.10	-29.24	53.82
8364.90	-74.76	-38.55	9.3	V	-29.25	-31.39	55.97

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): 848.97
Channel: 799 (High)
EUT Conducted Pwr. (dBm): 28.0
Measured ERP (dBm): 23.84
Mode: CW
Distance: 3 Meters
Limit: $43 + 10 \log (W) = 36.84 \text{ dBc}$

Frequency	Field Strength of Spurious Radiation	Horn Forward Conducted Power	Standard Gain Horn Antenna Gain	POL	EIRP	ERP	dBc
MHz	dBm	dBm	dBd	H/V	dBm	dBm	
1697.94	-74.85	-41.96	6.6	V	-35.36	-37.50	61.34
2546.91	-75.04	-37.24	7.8	V	-29.44	-31.58	55.42
3395.88	-76.71	-40.13	7.8	V	-32.33	-34.47	58.31
4244.85	-77.86	-39.84	7.6	V	-32.24	-34.38	58.22
5093.82	-76.92	-40.56	8.5	V	-32.06	-34.20	58.04
5942.79	-76.36	-38.48	8.8	V	-29.68	-31.82	55.66
6791.76	-76.47	-38.59	9.6	V	-28.99	-31.13	54.97
7640.73	-74.62	-36.79	9.0	V	-27.79	-29.93	53.77
8489.70	-75.82	-39.61	9.3	V	-30.31	-32.45	56.29

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.

3.4 FREQUENCY STABILITY - §2.1055

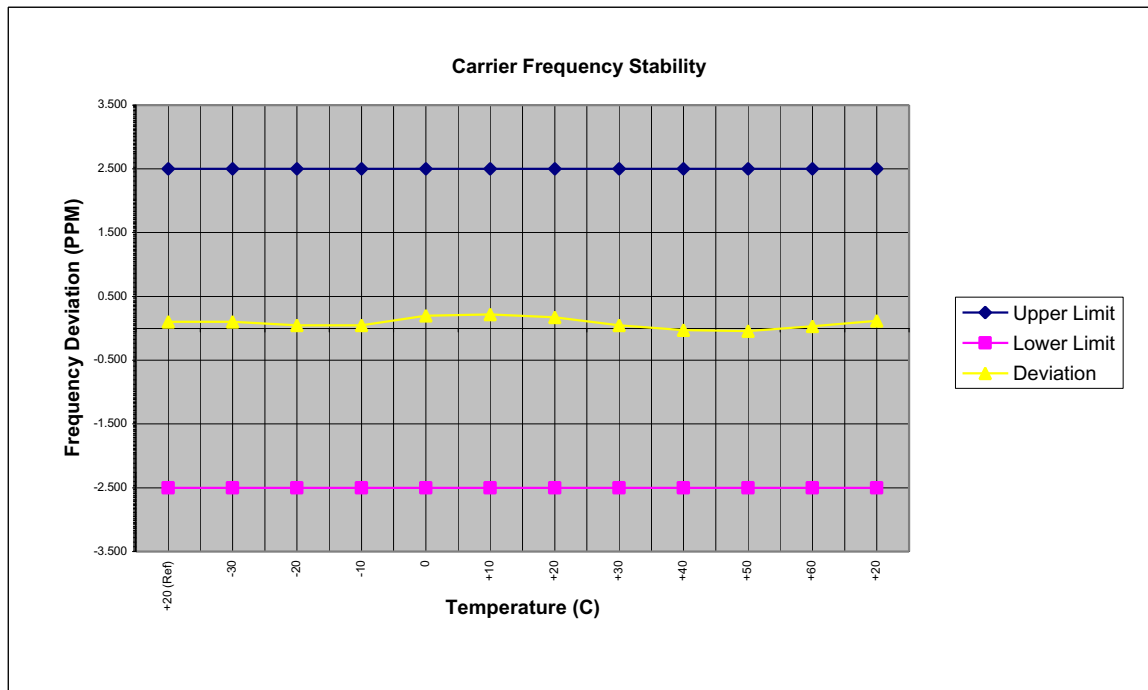
Carrier Frequency (MHz): 836.49

Channel: 383

Mode: CW

Deviation Limit (PPM): 2.5

Temperature (C)	Voltage (%)	Power (VDC)	Carrier Frequency Deviation		Specification	
			(Hz)	(PPM)	Lower Limit (PPM)	Upper Limit (PPM)
+20 (Ref)	100	4.2	83.14	0.099	2.500	-2.500
-30	100	4.2	83.21	0.099	2.500	-2.500
-20	100	4.2	38.44	0.046	2.500	-2.500
-10	100	4.2	42.83	0.051	2.500	-2.500
0	100	4.2	166.52	0.199	2.500	-2.500
+10	100	4.2	181.16	0.217	2.500	-2.500
+20	100	4.2	146.02	0.175	2.500	-2.500
+30	100	4.2	36.67	0.044	2.500	-2.500
+40	100	4.2	-24.92	-0.030	2.500	-2.500
+50	100	4.2	-35.58	-0.043	2.500	-2.500
+60	100	4.2	26.05	0.031	2.500	-2.500
+20	Battery Endpoint	3.3	97.90	0.117	2.500	-2.500



4.1 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

5.1 CONCLUSION

The data in this measurement report shows that the COMMERCIANT L.P. Model: M105 FCC ID: QWLM105 Wireless Transaction Terminal with Novatel Wireless Technologies internal CDPD Modem Model: Expedite complies with the requirements of FCC Rule Parts §22.901(d), and §2.

APPENDIX A - TEST PLOTS



11:05:20 Feb 14, 2003

COMMERCIANT COND SPURS CH 991

Ref 28 dBm

Atten 10 dB

Mkr1 1.647 GHz

-26.16 dBm

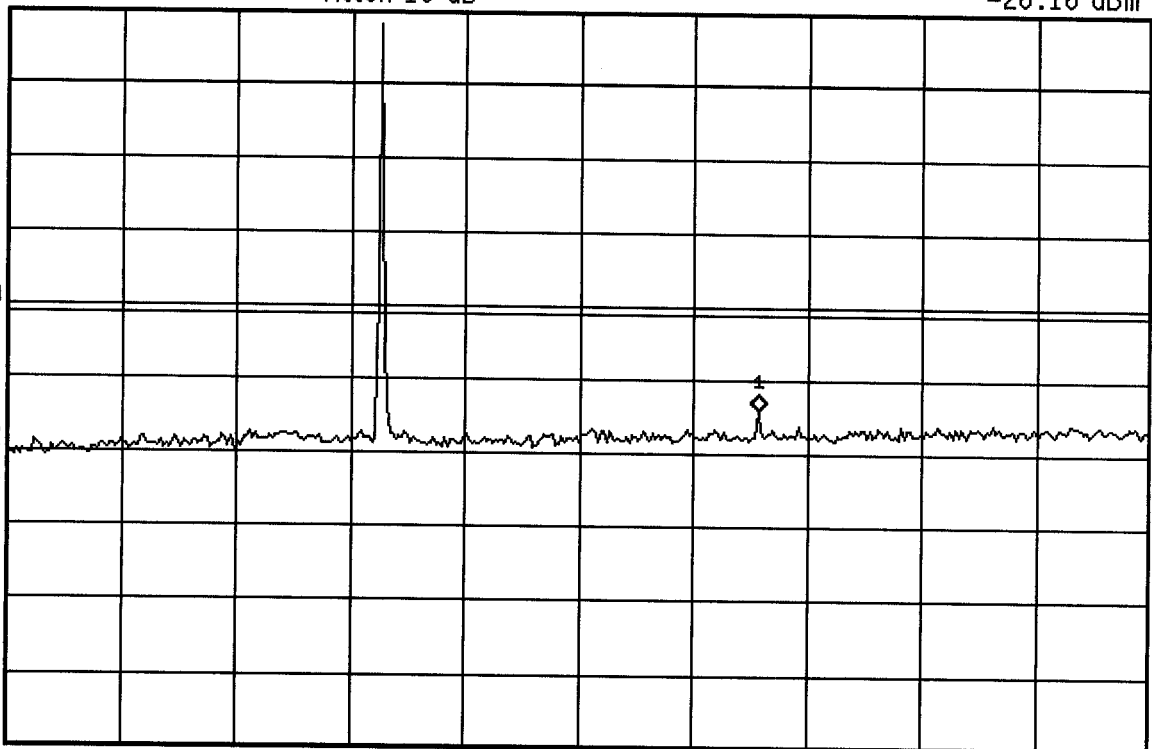
Peak
Log
10
dB/
Offst
30
dB
DI
-13.0
dBm

M1 S2
S3 FC
AA

Start 10 MHz
*Res BW 1 MHz

VBW 1 MHz

Stop 2.5 GHz
Sweep 6.225 ms





11:06:56 Feb 14, 2003

COMMERCIANT COND SPURS CH 991

Ref 28 dBm

Atten 10 dB

Mkr1 6.831 GHz

-29.33 dBm

Peak

Log

10

dB/

Offst

30

dB

DI

-13.0

dBm

M1 S2

S3 FC

AA

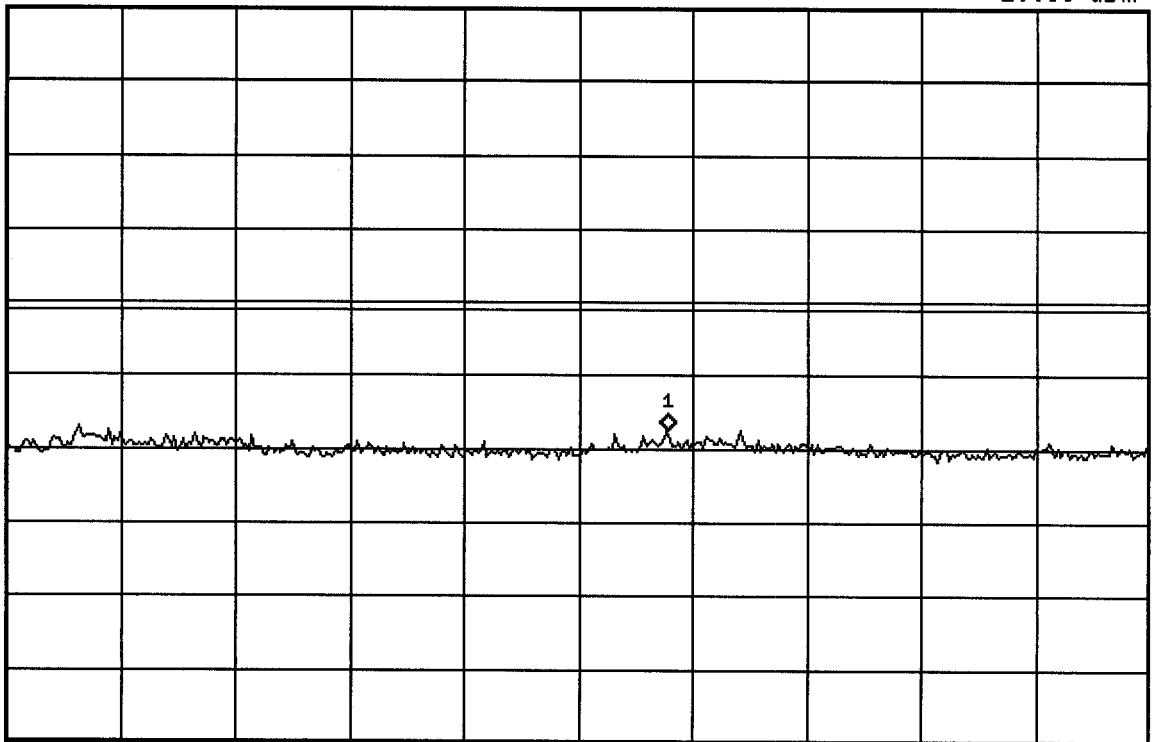
Start 2.5 GHz

*Res BW 1 MHz

VBW 1 MHz

Stop 10 GHz

Sweep 18.75 ms





11:09:03 Feb 14, 2003

COMMERCIAL COND SPURS CH 991

Mkr1 13.35 GHz

Ref 28 dBm

Atten 10 dB

-27.93 dBm

Peak

Log

10

dB/

Offst

30

dB

DI

-13.0

dBm

M1 S2

S3 FC

AA

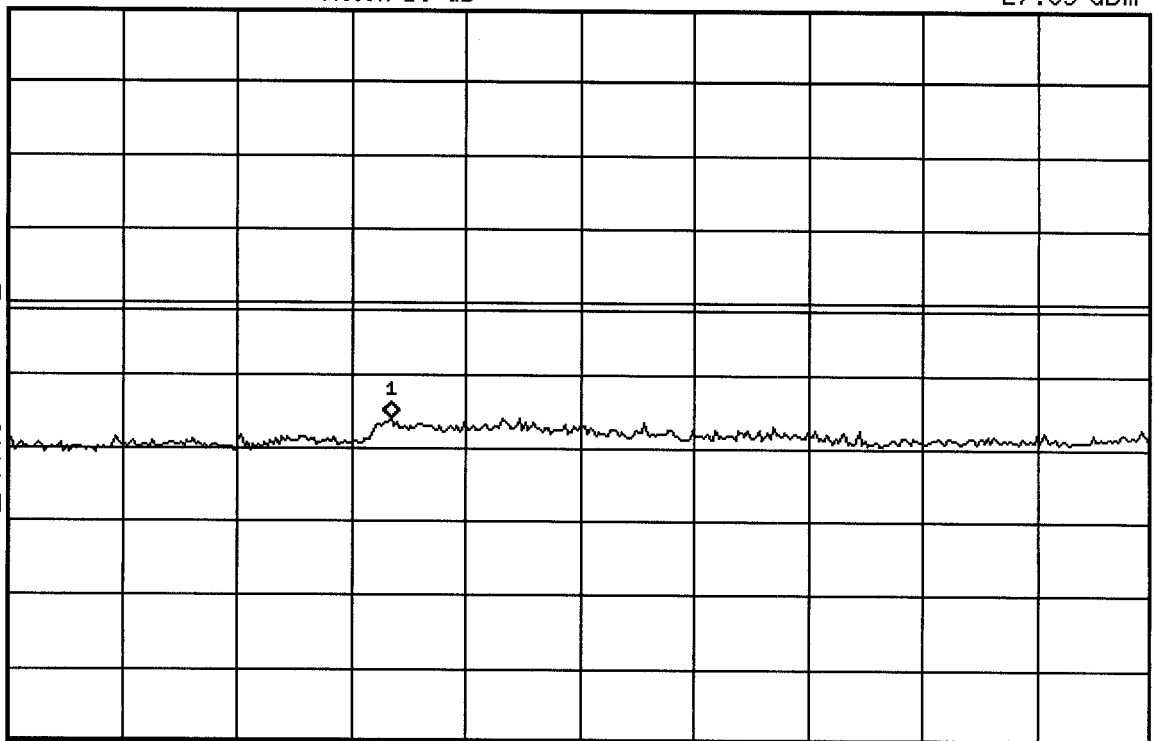
Start 10 GHz

*Res BW 1 MHz

VBW 1 MHz

Stop 20 GHz

Sweep 100 ms





11:15:31 Feb 14, 2003

COMMERCIANT COND SPURS CH 383

Ref 28 dBm

Atten 10 dB

Mkr1 2.139 GHz

-27.15 dBm

Peak

Log

10

dB/

Offst

30

dB

DI

-13.0

dBm

M1 S2

S3 FC

AA

Start 10 MHz

*Res BW 1 MHz

VBW 1 MHz

Stop 2.5 GHz

Sweep 6.225 ms





11:16:57 Feb 14, 2003

COMMERCIAL COND SPURS CH 383

Ref 28 dBm

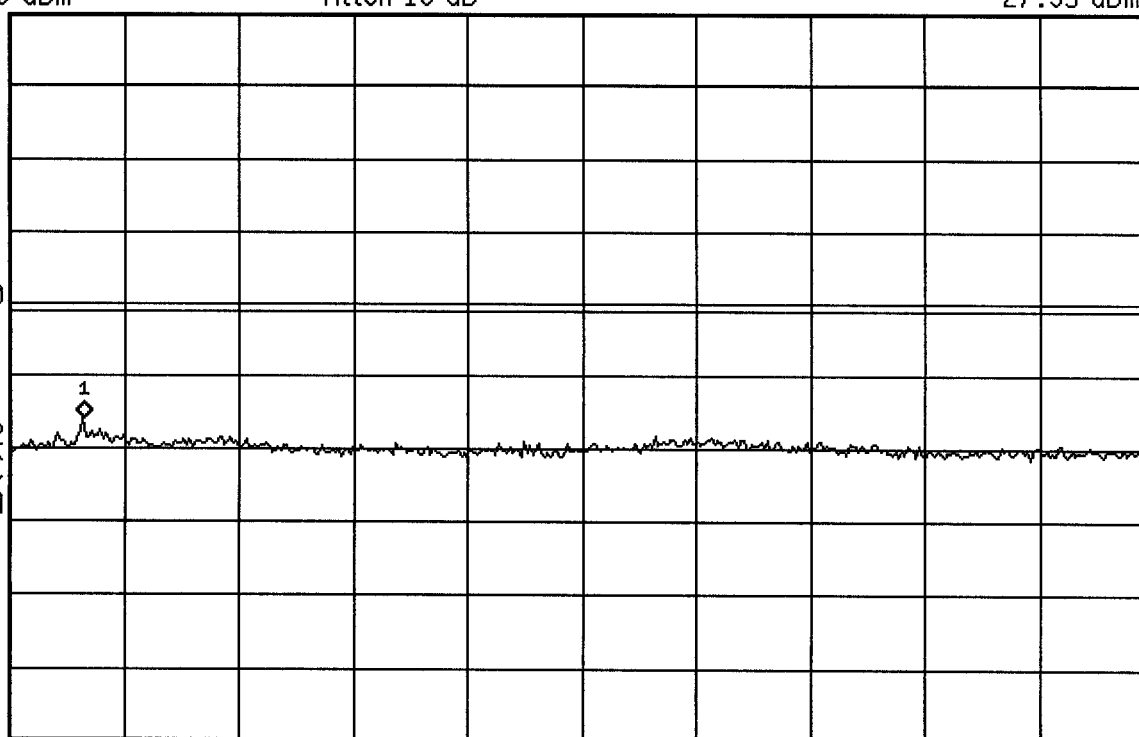
Atten 10 dB

Mkr1 2.988 GHz

-27.95 dBm

Peak
Log
10
dB/
Offst
30
dB
DI
-13.0
dBm

M1 S2
S3 FC
RA



Start 2.5 GHz
*Res BW 1 MHz

VBW 1 MHz

Stop 10 GHz
Sweep 18.75 ms



11:18:29 Feb 14, 2003

COMMERCIAL COND SPURS CH 383

Mkr1 13.23 GHz

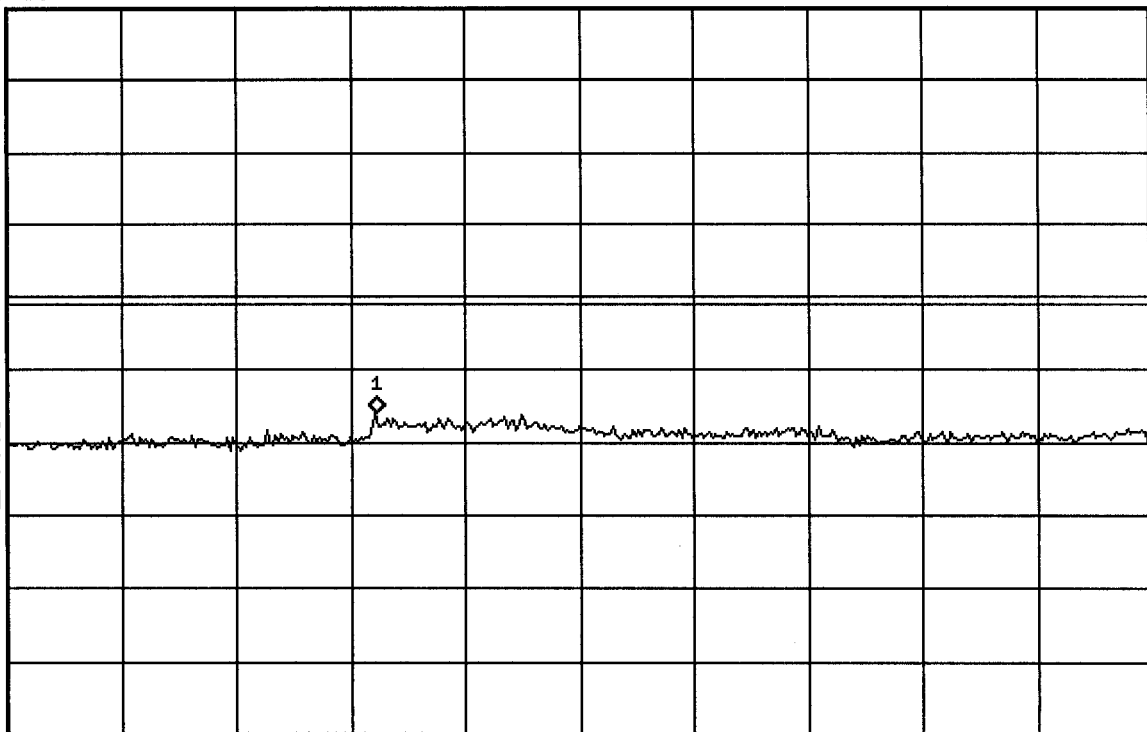
Ref 28 dBm

Atten 10 dB

-27.84 dBm

Peak
Log
10
dB/
Offst
30
dB
DI
-13.0
dBm

M1 S2
S3 FC
AA



Start 10 GHz
*Res BW 1 MHz

VBW 1 MHz

Stop 20 GHz
Sweep 100 ms



11:23:47 Feb 14, 2003

COMMERCIAL COND SPURS CH 799

Mkr1 2.344 GHz

Ref 28 dBm

Atten 10 dB

-26.89 dBm

Peak

Log

10

dB/

Offst

30

dB

DI

-13.0

dBm

M1 S2

S3 FC

AA

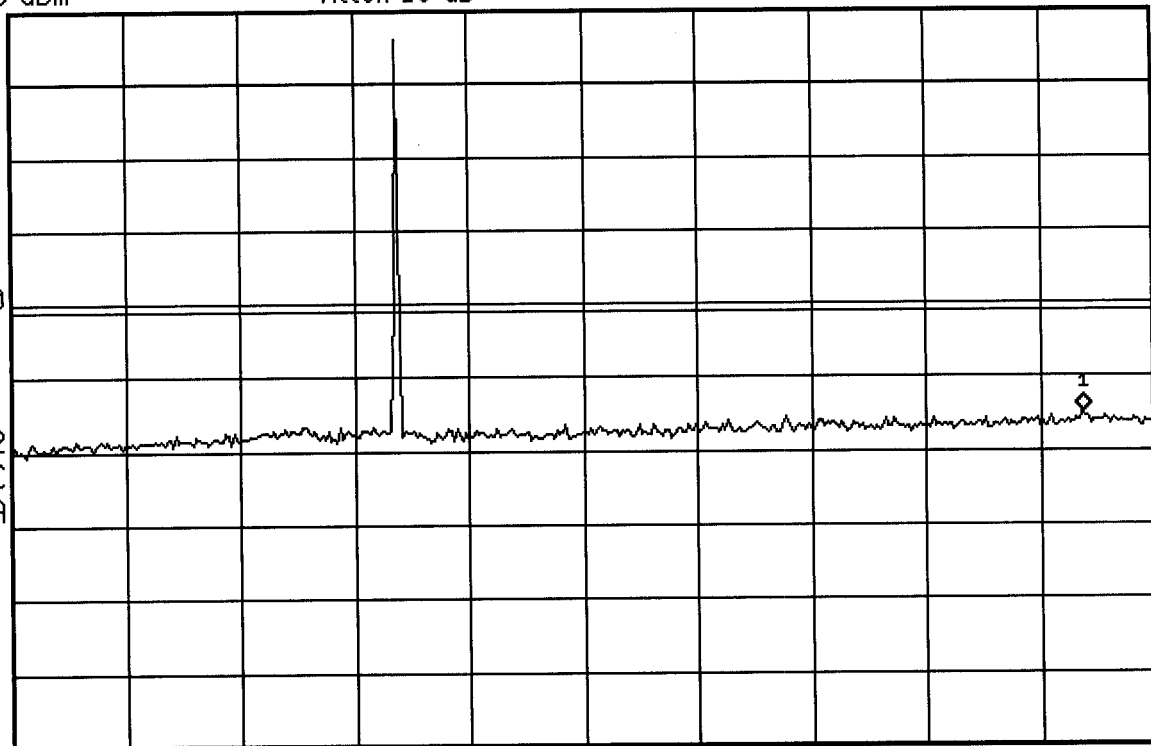
Start 10 MHz

*Res BW 1 MHz

VBW 1 MHz

Stop 2.5 GHz

Sweep 6.225 ms





11:24:54 Feb 14, 2003

COMMERCIAL COND SPURS CH 799

Mkr1 2.988 GHz

Ref 28 dBm

Atten 10 dB

-29.4 dBm

Peak

Log

10

dB/

Offst

30

dB

DI

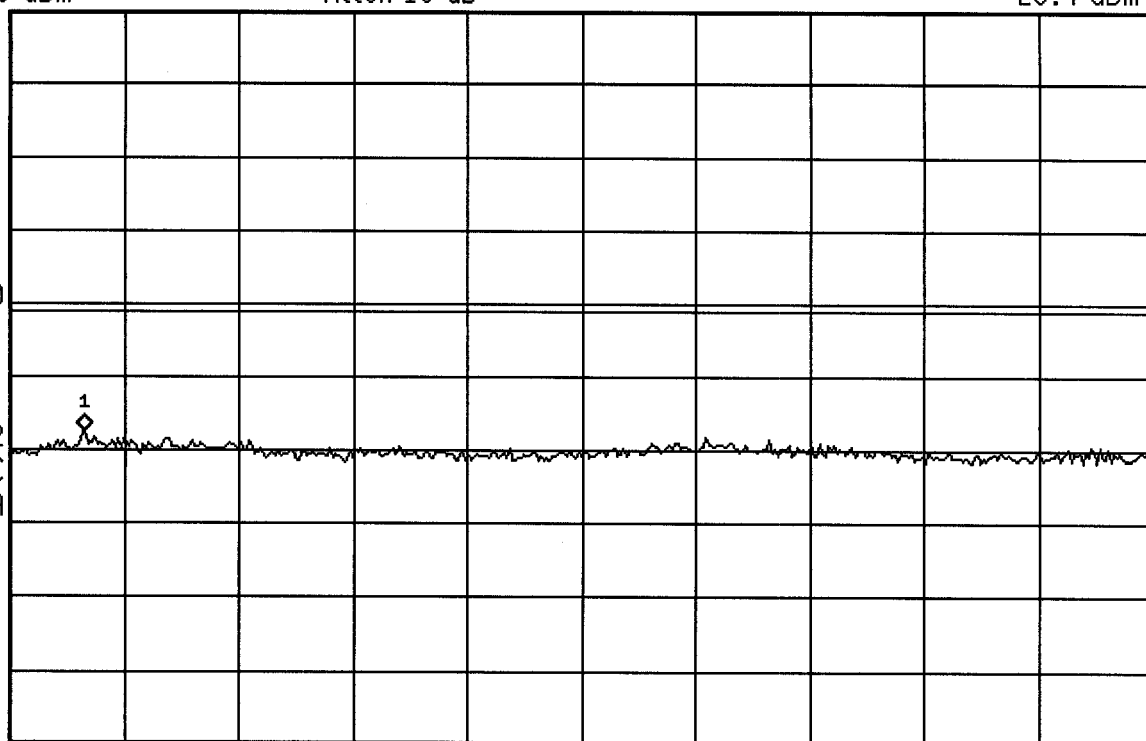
-13.0

dBm

M1 S2

S3 FC

AA



Start 2.5 GHz

Stop 10 GHz

*Res BW 1 MHz

VBW 1 MHz

Sweep 18.75 ms



11:26:38 Feb 14, 2003

COMMERCIANT COND SPURS CH 799

Mkr1 13.23 GHz

Ref 28 dBm

Atten 10 dB

-27.86 dBm

Peak

Log

10

dB/

Offst

30

dB

DI

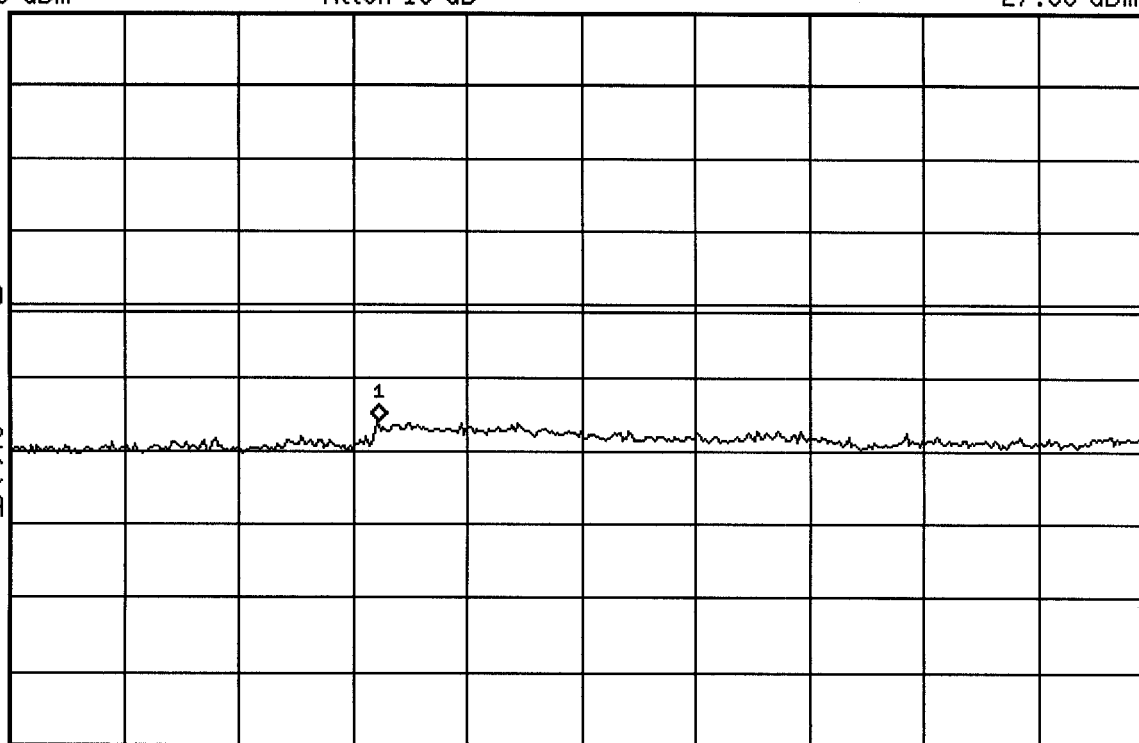
-13.0

dBm

M1 S2

S3 FC

AA



Start 10 GHz

*Res BW 1 MHz

VBW 1 MHz

Stop 20 GHz

Sweep 100 ms



10:30:51 Feb 14, 2003

COMMERCIAL RECEIVER SPURS CDPD MODE

Ref -50 dBm

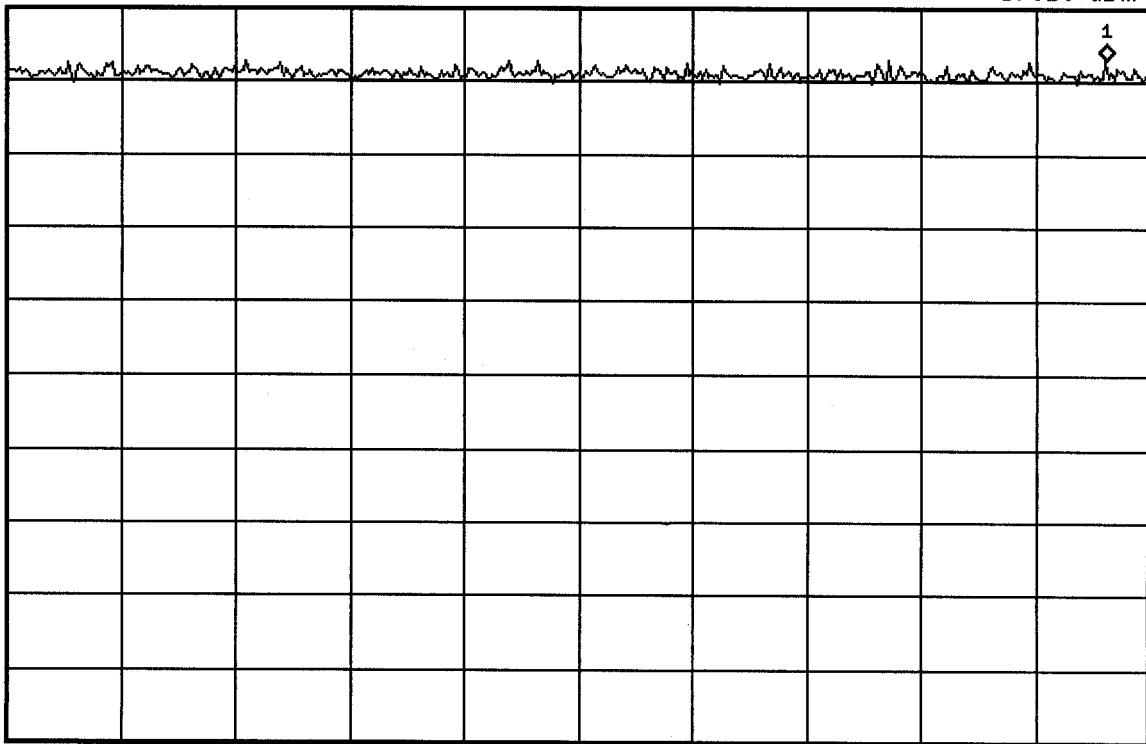
Atten 5 dB

Mkr1 893.06 MHz

-57.16 dBm

Peak
Log
10
dB/
Offst
30
dB

M1 S2
S3 FC
AA



Start 869 MHz
*Res BW 30 kHz

VBW 30 kHz

Stop 894 MHz
Sweep 69.44 ms



18:40:17 Feb 14, 2003

COMMERCIAL OCCUPIED BANDWIDTH

Mkr1 836.0103 MHz

Ref 28 dBm

Atten 10 dB

27.91 dBm

Peak

Log

10

dB/

Offst

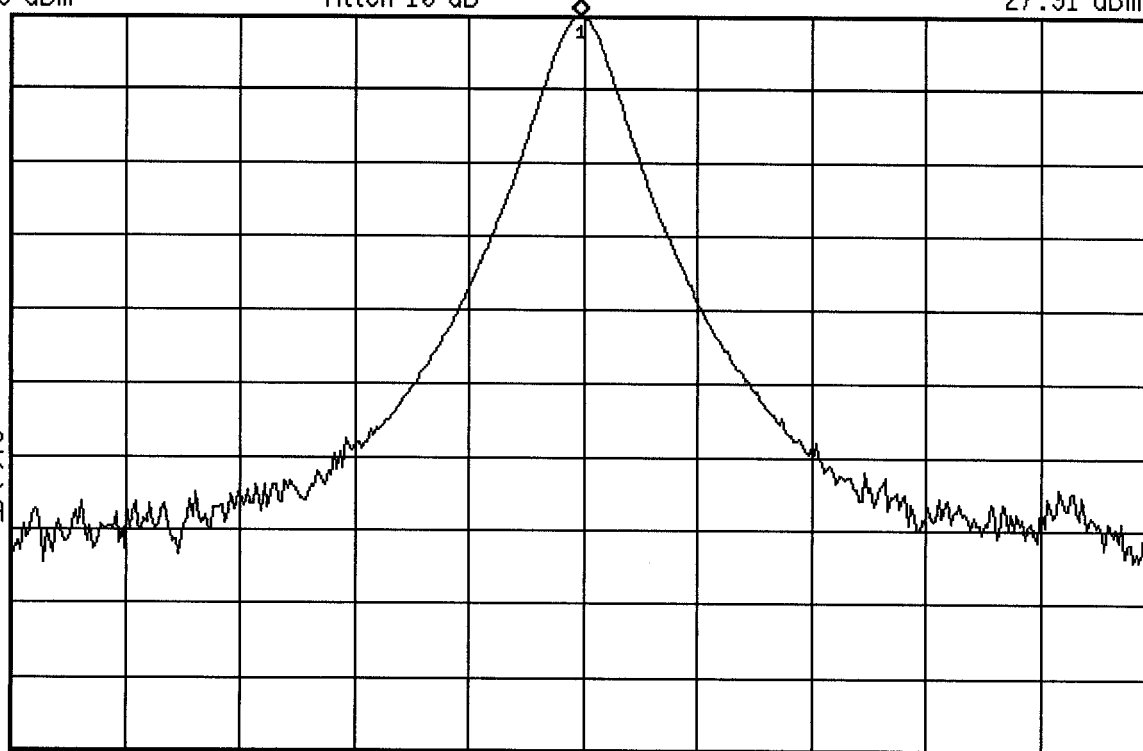
30

dB

W1 S2

S3 FC

AA



Center 836 MHz

*Res BW 3 kHz

VBW 3 kHz

Span 100 kHz

*Sweep 500 ms



11:16:05 Feb 14, 2003

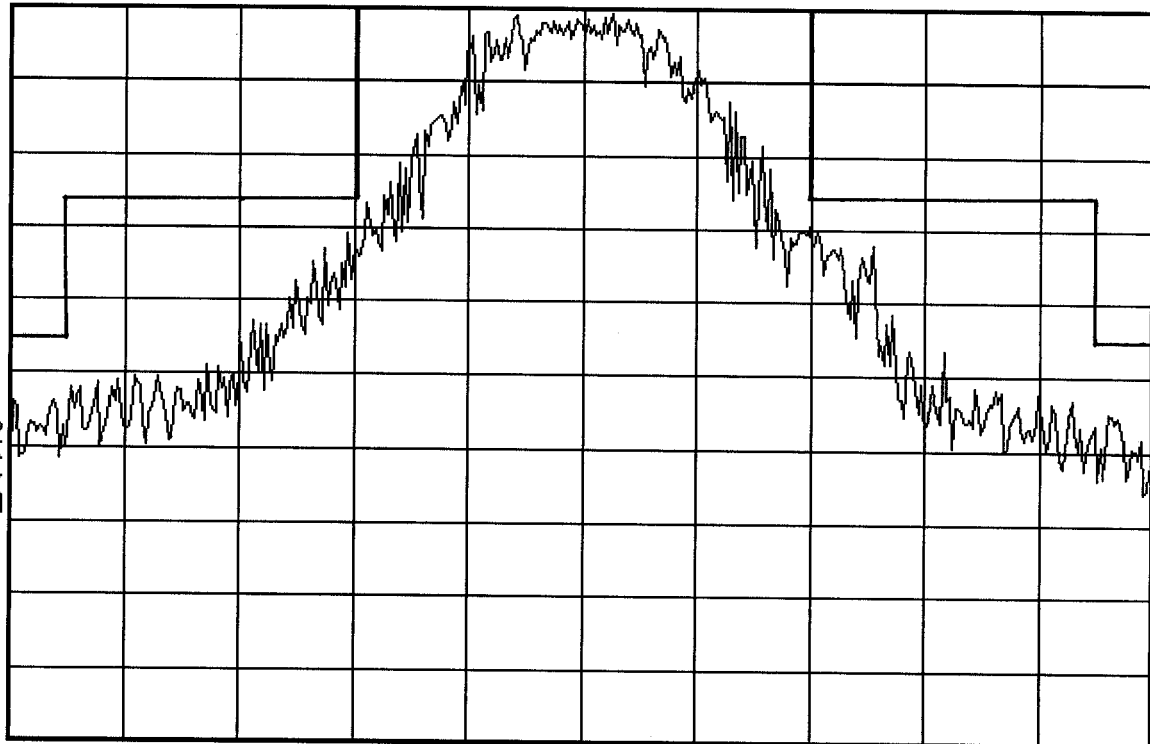
COMMERCIAL OCCUPIED BANDWIDTH

Ref 28 dBm

Atten 10 dB

Peak
Log
10
dB/
Offst
30
dB

W1 S2
S3 FC
AA



Center 824 MHz

#Res BW 3 kHz

VBW 3 kHz

Span 100 kHz

#Sweep 500 ms



11:04:00 Feb 14, 2003

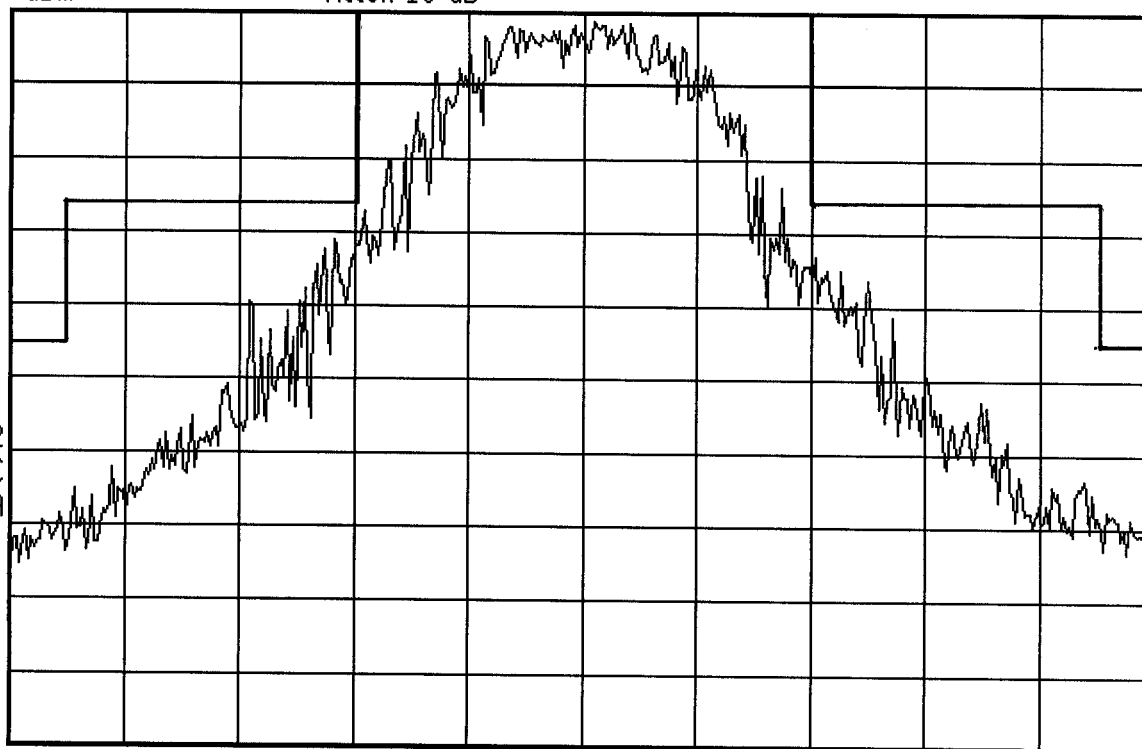
COMMERCIAL OCCUPIED BANDWIDTH

Ref 28 dBm

Atten 10 dB

Peak
Log
10
dB/
Offst
30
dB

W1 S2
S3 FC
AA



Center 836 MHz

*Res BW 3 kHz

VBW 3 kHz

Span 100 kHz

*Sweep 500 ms



11:20:06 Feb 14, 2003

COMMERCIAL OCCUPIED BANDWIDTH

Ref 28 dBm

Atten 10 dB

Peak

Log

10

dB/

Offst

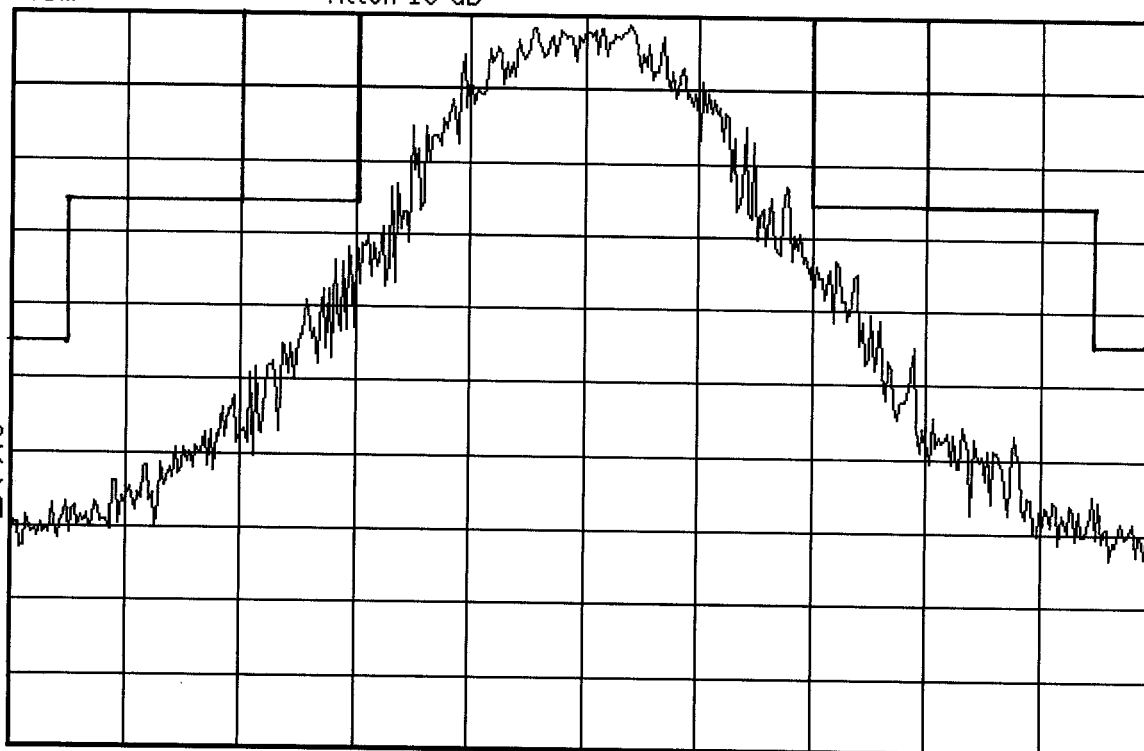
30

dB

W1 S2

S3 FC

AA



Center 849 MHz

*Res BW 3 kHz

VBW 3 kHz

Span 100 kHz

*Sweep 500 ms

APPENDIX B - RADIATED TEST SETUP PHOTOGRAPHS

RADIATED TEST SETUP PHOTOGRAPHS

Vertical Polarization



RADIATED TEST SETUP PHOTOGRAPHS

Horizontal Polarization

