

PCTEST Engineering Lab.

SPECTRUM ANALYZER PRESENTATION

FCC ID:A3LSPHN300

SAMSUNG Electronics

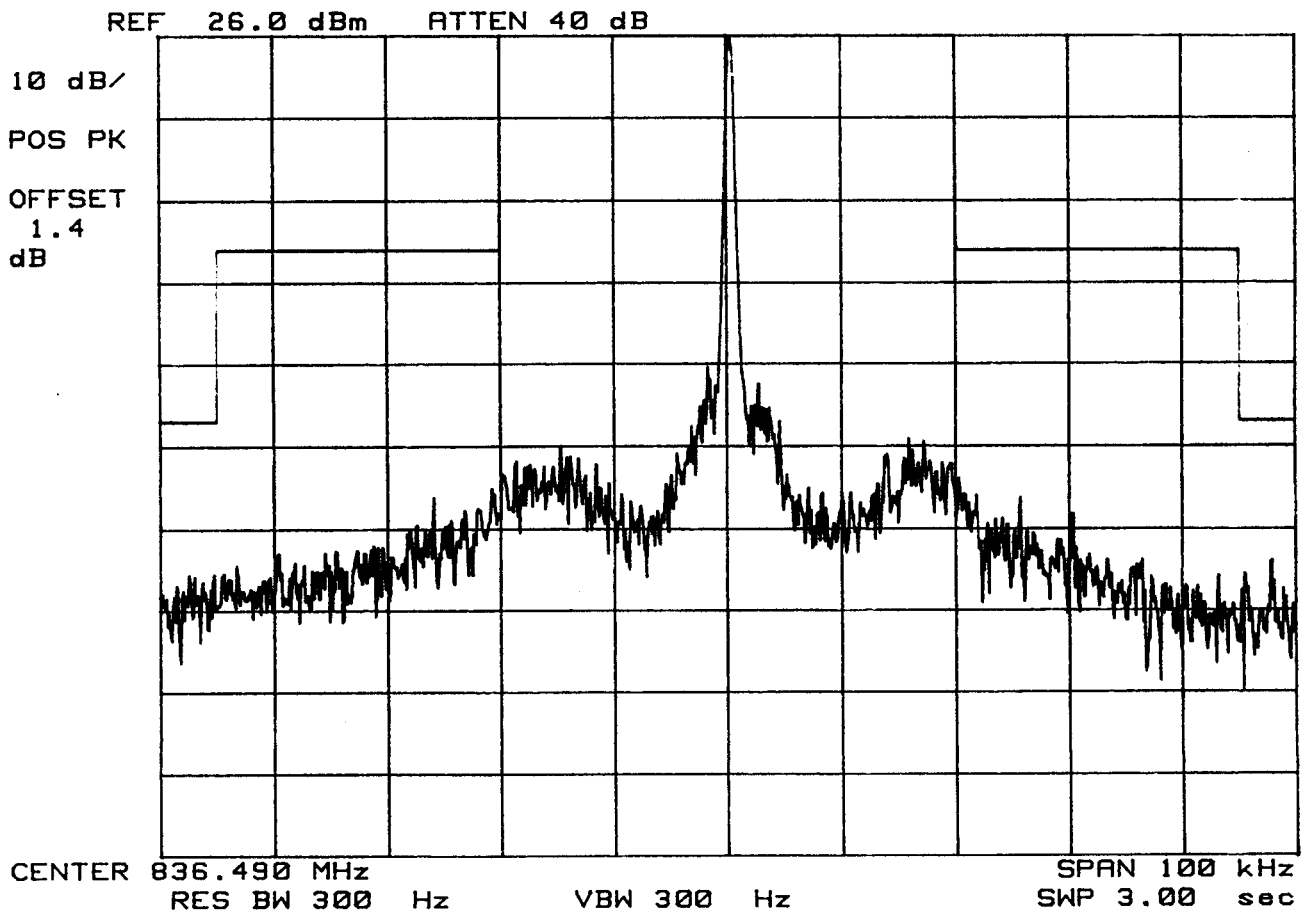
Tri Mode

FM Channel: 0383

Operating Frequency: 836.490 MHz

Output Power : 26.0 dBm

Test Mode:Unmodulated Signal



PCTEST Engineering Lab.

SPECTRUM ANALYZER PRESENTATION

FCC ID:A3LSPHN300

SAMSUNG Electronics

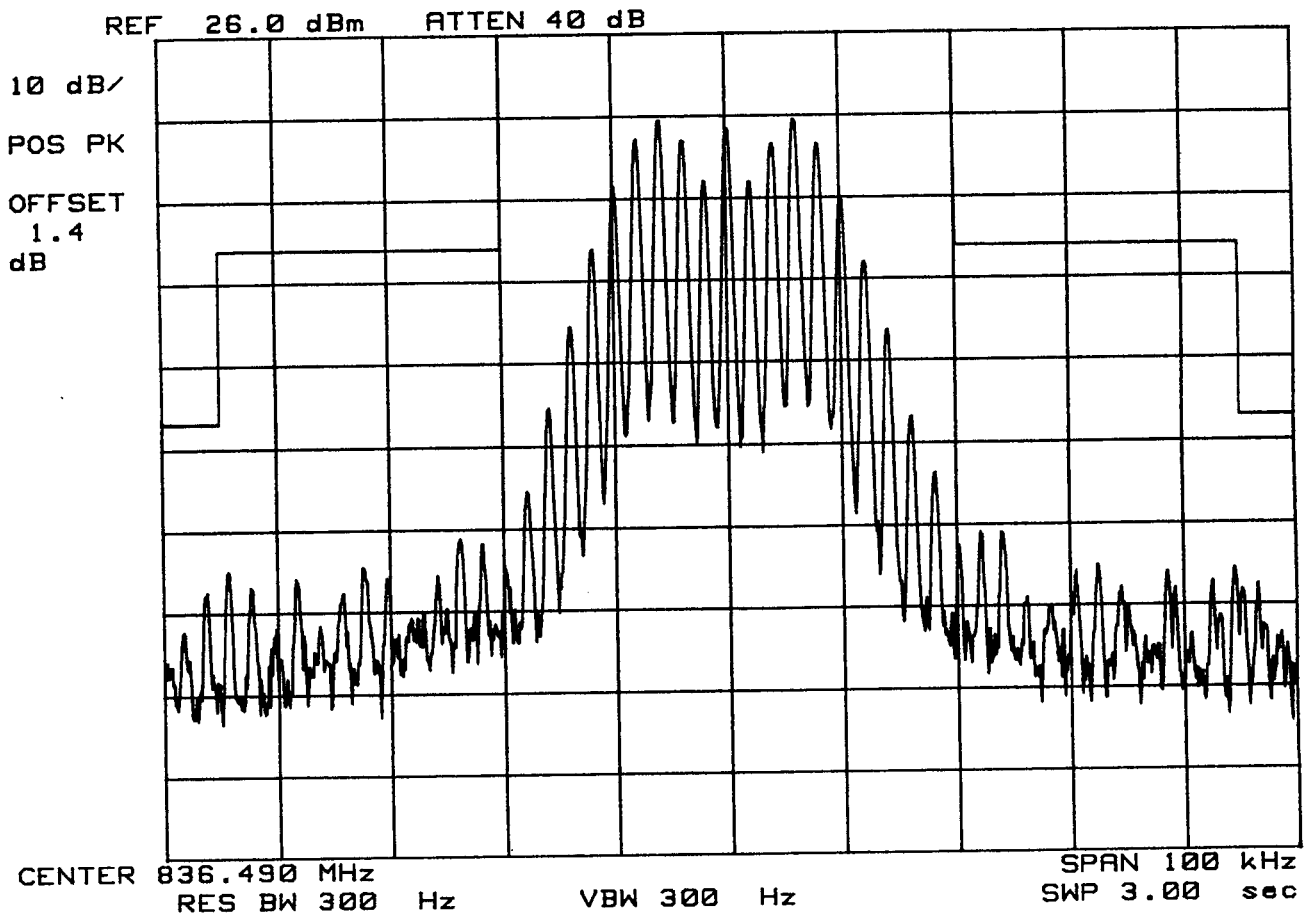
Tri-Mode Phone

FM Channel 0383

Operating Frequency: 836.490 MHz

Output Power : 26.0 dBm

Test Mode:Voice



PCTEST Engineering Lab.

SPECTRUM ANALYZER PRESENTATION

FCC ID:A3LSPHN300

SAMSUNG Electronics

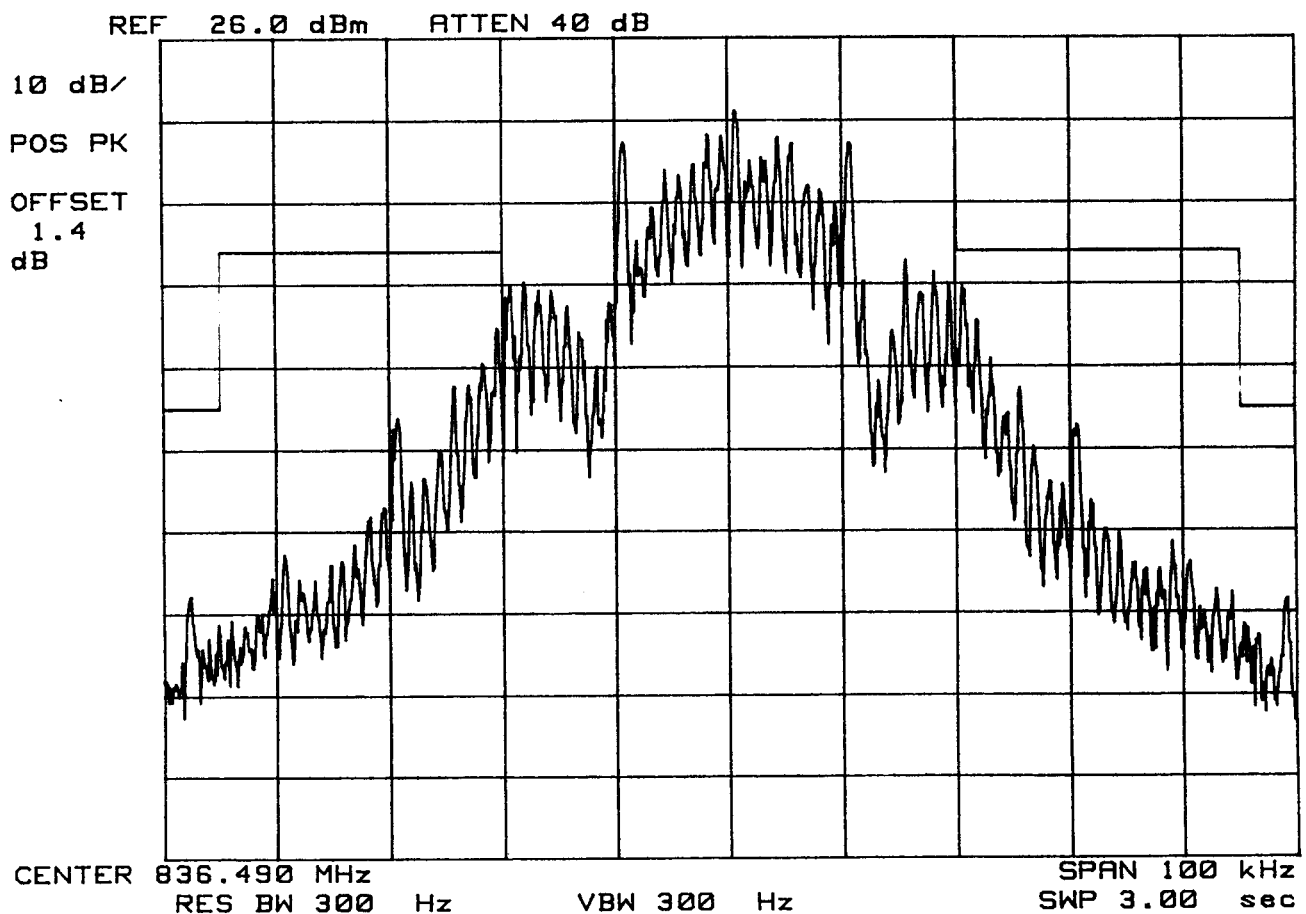
Tri Mode Phone

FM Channel: 0383

Operating Frequency: 836.490 MHz

Output Power : 26.0 dBm

Test Mode:Wide Band Data



PCTEST Engineering Lab.

SPECTRUM ANALYZER PRESENTATION

FCC ID:A3LSPHN300

SAMSUNG Electronics

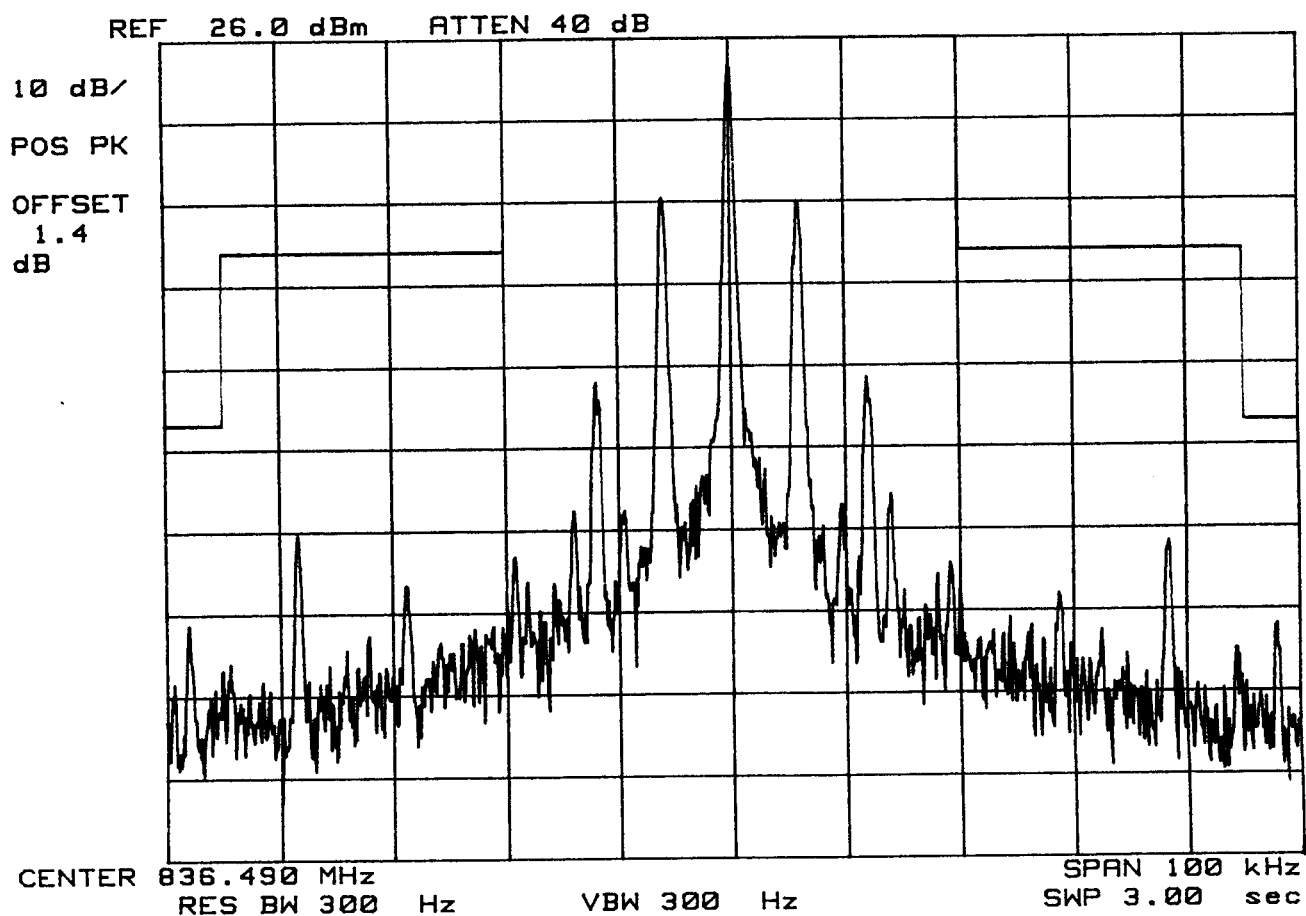
Tri Mode Phone

FM Channel: 0383

Operating Frequency: 836.490 MHz

Output Power : 26.0 dBm

Test Mode:SAT



PCTEST Engineering Lab.

SPECTRUM ANALYZER PRESENTATION

FCC ID:A3LSPHN300

SAMSUNG Electronics

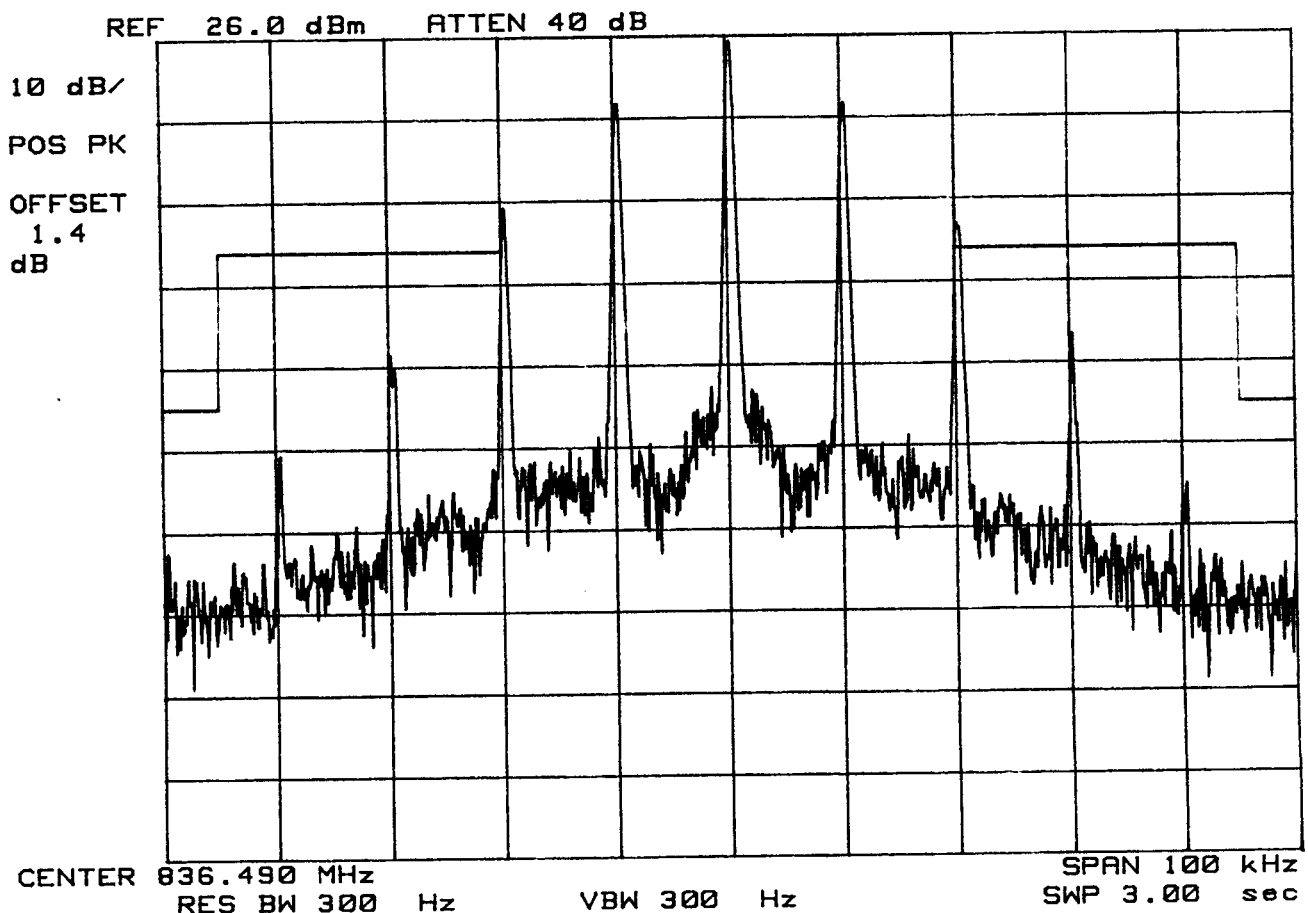
Tri Mode Phone

FM Channel: 0383

Operating Frequency: 836.490 MHz

Output Power : 26.0 dBm

Test Mode:ST



PCTEST Engineering Lab.

SPECTRUM ANALYZER PRESENTATION

FCC ID:A3LSPHN300

SAMSUNG Electronics

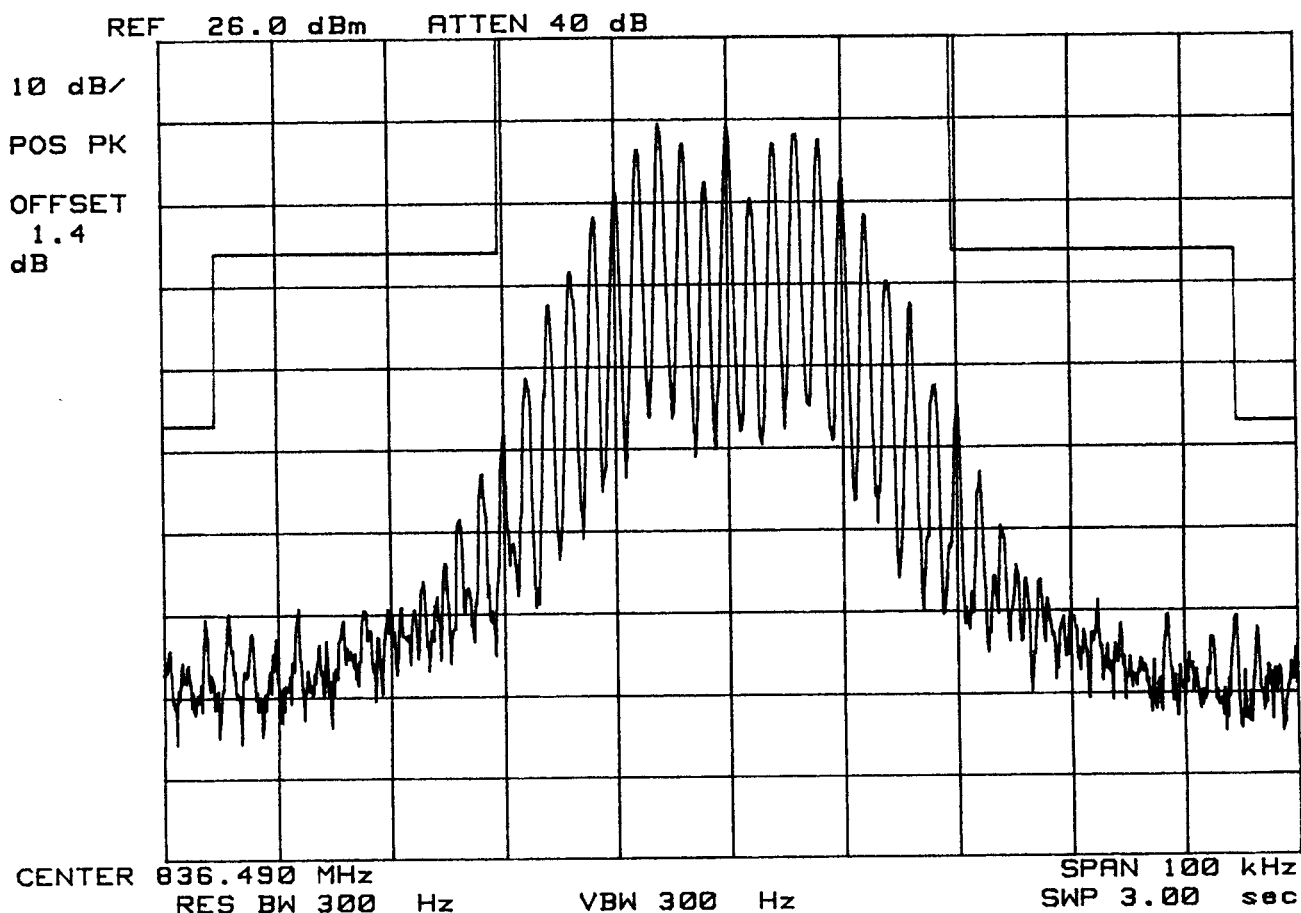
Tri Mode Phone

FM Channel: 0383

Operating Frequency: 836.490 MHz

Output Power : 26.0 dBm

Test Mode:SAT + Voice



PCTEST Engineering Lab.

SPECTRUM ANALYZER PRESENTATION

FCC ID:A3LSPHN300

SAMSUNG Electronics

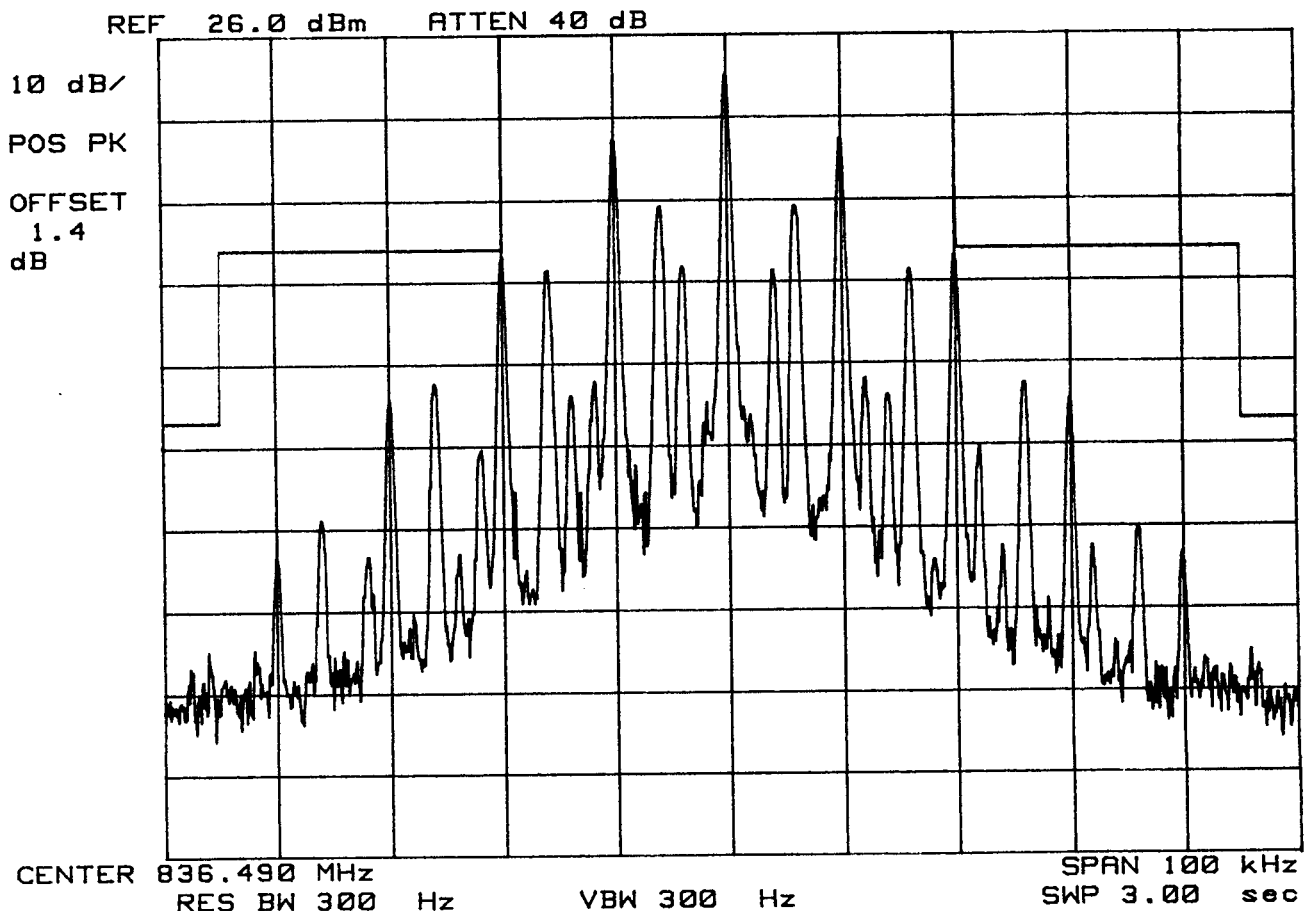
Tri Mode Phone

FM Channel: 0383

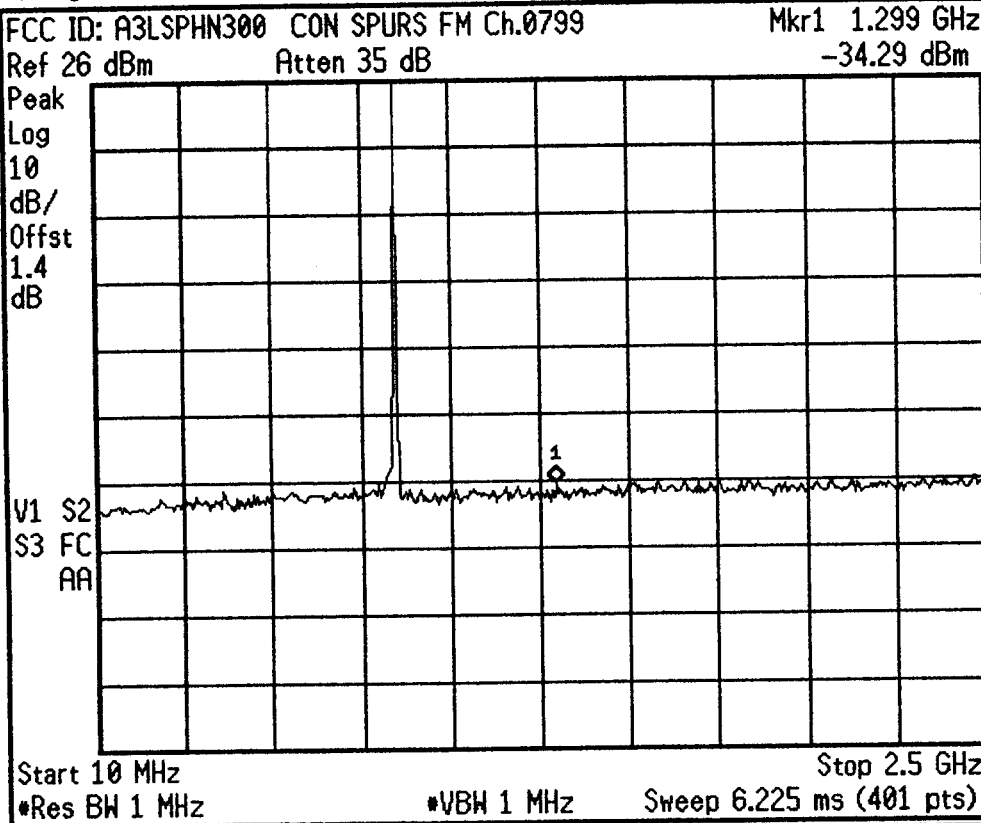
Operating Frequency: 836.490 MHz

Output Power : 26.0 dBm

Test Mode:SAT + ST

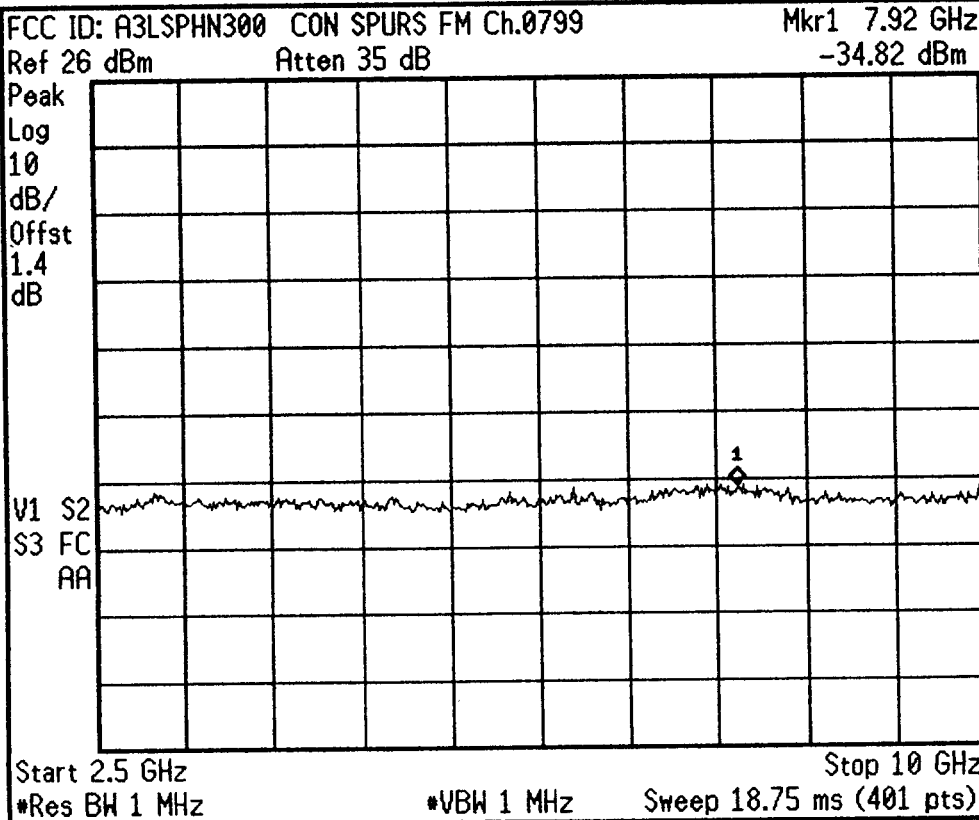


* Agilent 11:51:25 Aug 20, 2001



Freq/Channel
Center Freq 1.25500000 GHz
Start Freq 10.0000000 MHz
Stop Freq 2.50000000 GHz
CF Step 249.000000 MHz Auto Man
Freq Offset 0.00000000 Hz
Signal Track On Off

* Agilent 11:52:32 Aug 20, 2001



Freq/Channel
Center Freq 6.25000000 GHz
Start Freq 2.50000000 GHz
Stop Freq 10.0000000 GHz
CF Step 750.000000 MHz Auto Man
Freq Offset 0.00000000 Hz
Signal Track On Off

* Agilent 11:46:17 Aug 20, 2001

FCC ID: A3LSPHN300 CON SPURS FM Ch.0383

Mkr1 1.672 GHz

Ref 26 dBm

Atten 35 dB

-33.11 dBm

Peak

Log

10

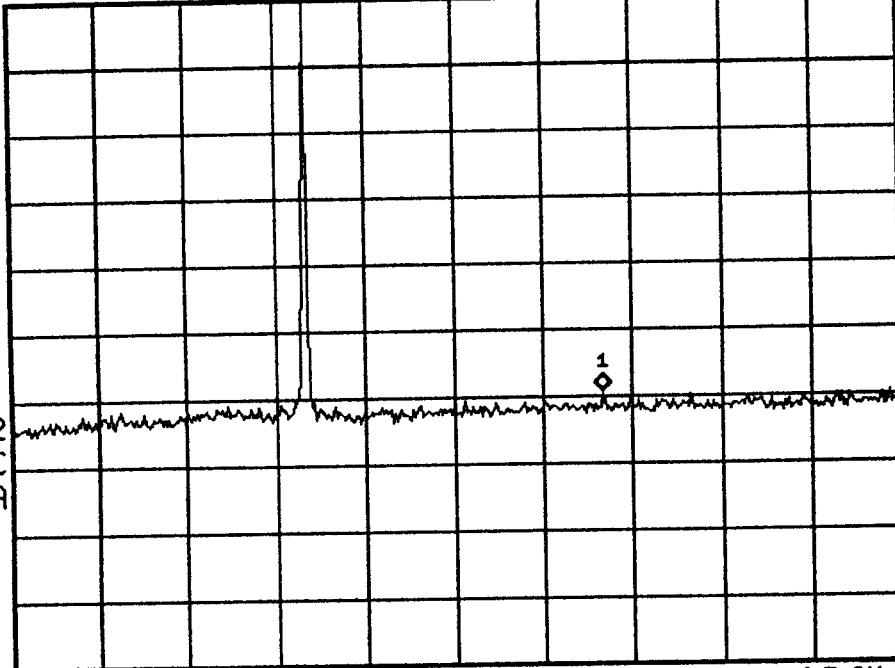
dB/

Offst

1.4

dB

V1 S2
S3 FC
AA



Start 10 MHz

*Res BW 1 MHz

*VBW 1 MHz

Stop 2.5 GHz

Sweep 6.225 ms (401 pts)

Freq/Channel

Center Freq

1.25500000 GHz

Start Freq

10.0000000 MHz

Stop Freq

2.50000000 GHz

CF Step

249.000000 MHz

Auto

Man

Freq Offset

0.00000000 Hz

Signal Track

On

Off

* Agilent 11:47:57 Aug 20, 2001

FCC ID: A3LSPHN300 CON SPURS FM Ch.0383

Mkr1 7.49 GHz

Ref 26 dBm

Atten 35 dB

-34.38 dBm

Peak

Log

10

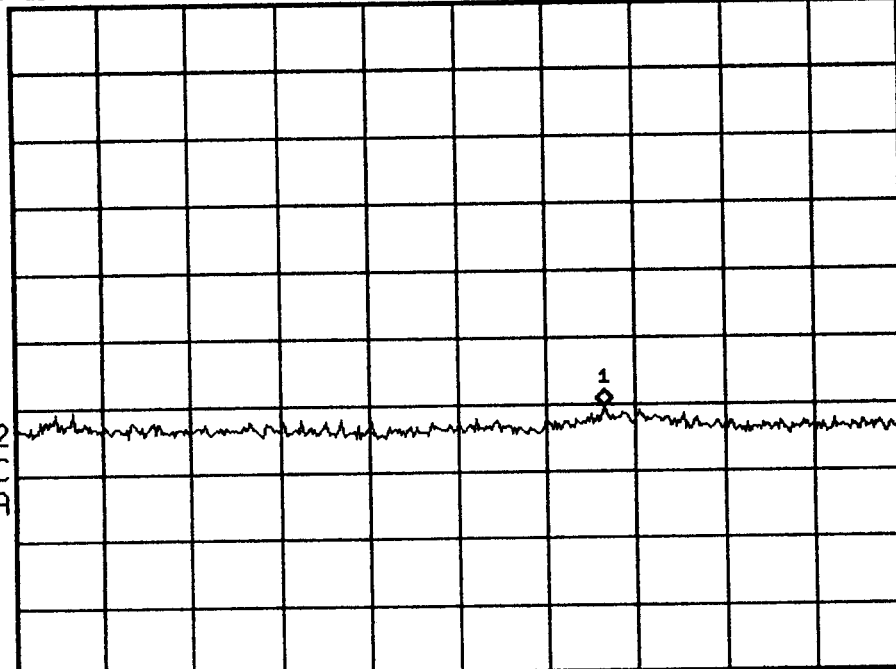
dB/

Offst

1.4

dB

V1 S2
S3 FC
AA



Start 2.5 GHz

*Res BW 1 MHz

*VBW 1 MHz

Stop 10 GHz

Sweep 18.75 ms (401 pts)

Freq/Channel

Center Freq

6.25000000 GHz

Start Freq

2.50000000 GHz

Stop Freq

10.0000000 GHz

CF Step

750.000000 MHz

Auto

Man

Freq Offset

0.00000000 Hz

Signal Track

On

Off

* Agilent 11:38:30 Aug 20, 2001

FCC ID: A3LSPHN300 CON SPURS FM Ch.0991

Mkr1 1.672 GHz

Ref 26 dBm

Atten 35 dB

-30.79 dBm

Peak

Log

10

dB/

Offst

1.4

dB

V1 S2
S3 FC
AA

Start 10 MHz

•Res BW 1 MHz

•VBW 1 MHz

Stop 2.5 GHz
Sweep 6.225 ms (401 pts)

Freq/Channel

Center Freq

1.25000000 GHz

Start Freq

10.00000000 MHz

Stop Freq

2.50000000 GHz

CF Step

249.000000 MHz

Auto

Man

Freq Offset

0.00000000 Hz

Signal Track

On

Off

* Agilent 11:39:43 Aug 20, 2001

FCC ID: A3LSPHN300 CON SPURS FM Ch.0991

Mkr1 7.23 GHz

Ref 26 dBm

Atten 35 dB

-34.03 dBm

Peak

Log

10

dB/

Offst

1.4

dB

V1 S2
S3 FC
AA

Start 2.5 GHz

•Res BW 1 MHz

•VBW 1 MHz

Stop 10 GHz
Sweep 18.75 ms (401 pts)

Freq/Channel

Center Freq

6.25000000 GHz

Start Freq

2.50000000 GHz

Stop Freq

10.00000000 GHz

CF Step

750.000000 MHz

Auto

Man

Freq Offset

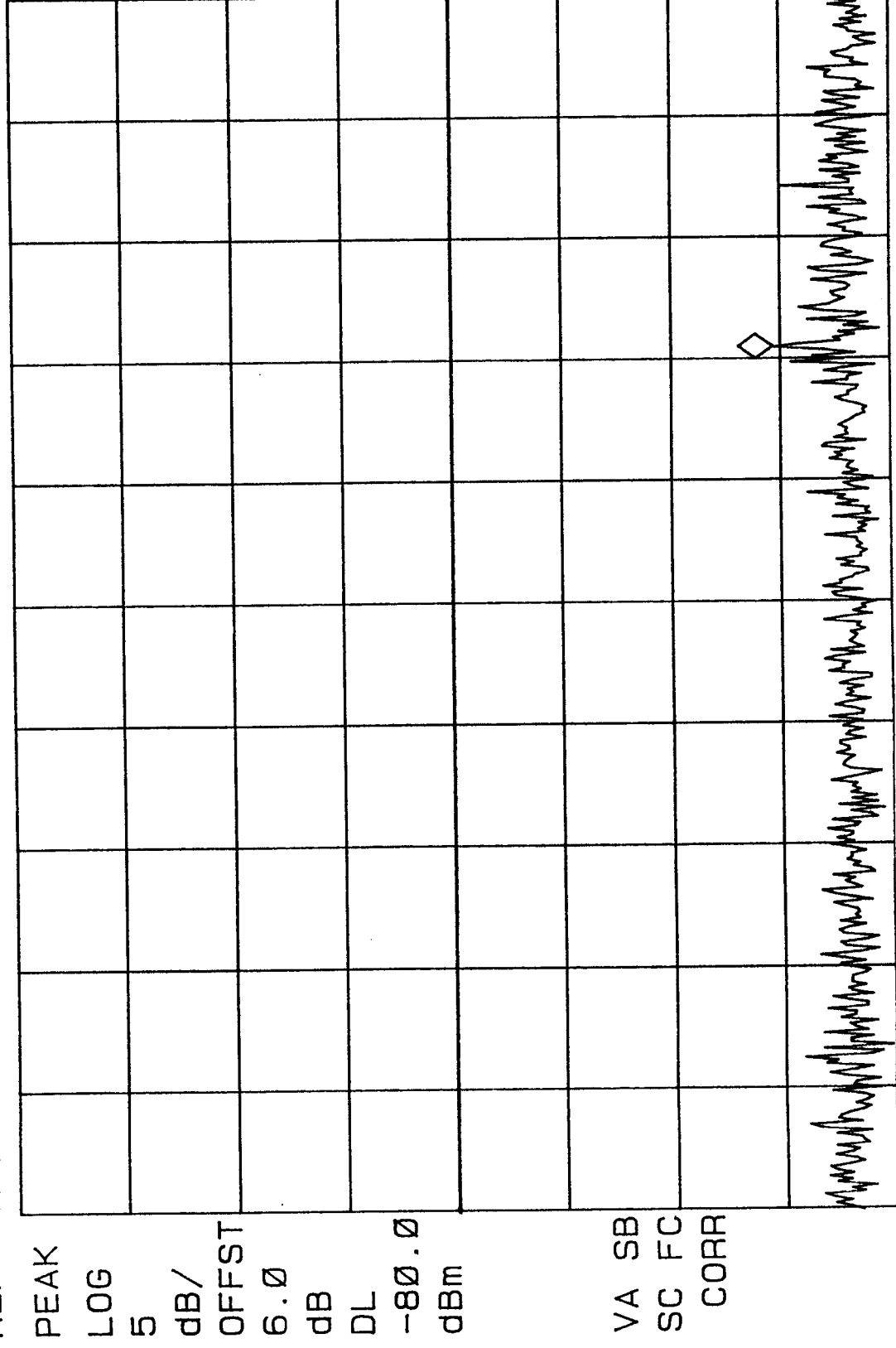
0.00000000 Hz

Signal Track

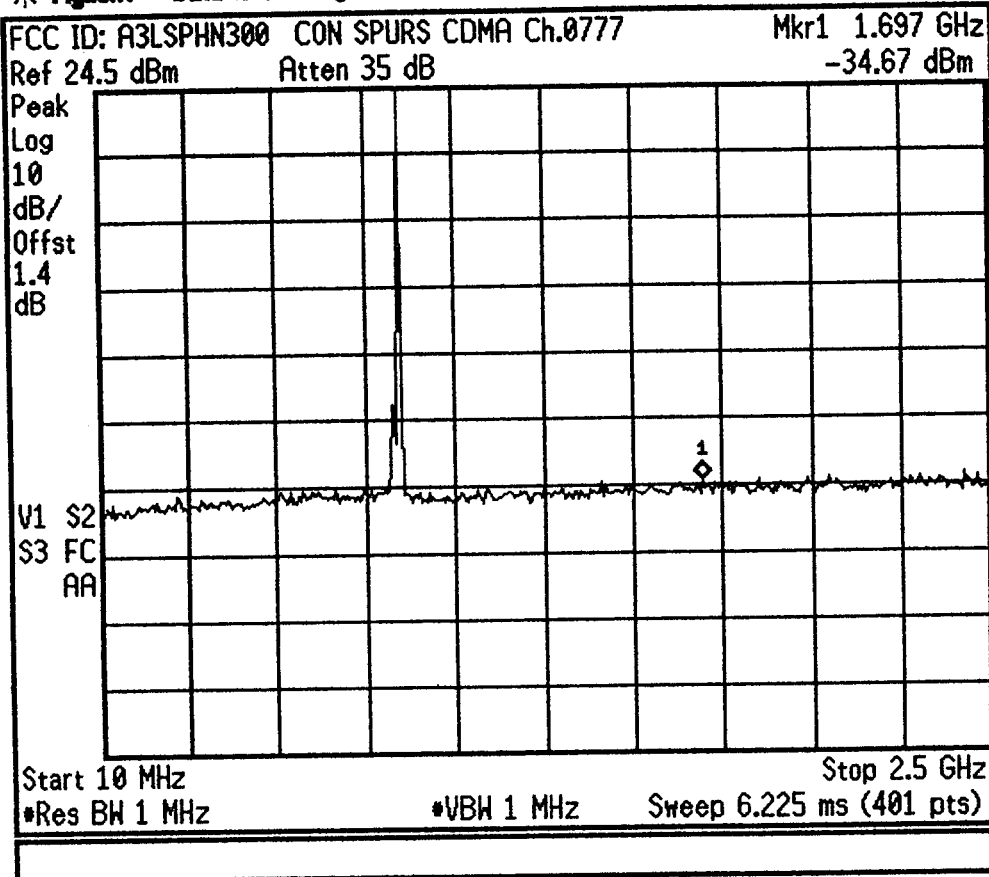
On

Off

FCC ID: A3LSPHN300 FM MODE MKR 886.75 MHz
REF -60.0 dBm ATTN 10 dB PG 25.0 dB -94.65 dBm



* Agilent 12:14:43 Aug 20, 2001



Freq/Channel

Center Freq
 1.25000000 GHz

Start Freq
 10.0000000 MHz

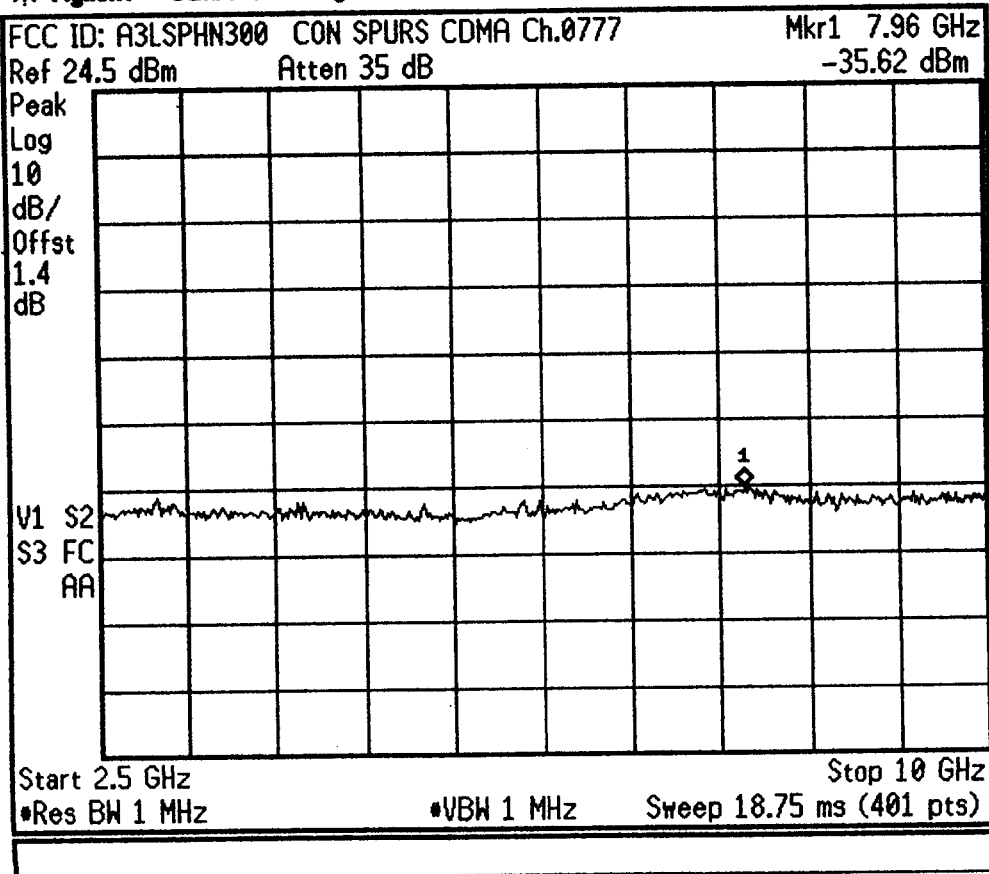
Stop Freq
 2.50000000 GHz

CF Step
 249.000000 MHz
 Auto Man

Freq Offset
 0.00000000 Hz

Signal Track
 On Off

* Agilent 12:15:54 Aug 20, 2001



Freq/Channel

Center Freq
 6.25000000 GHz

Start Freq
 2.50000000 GHz

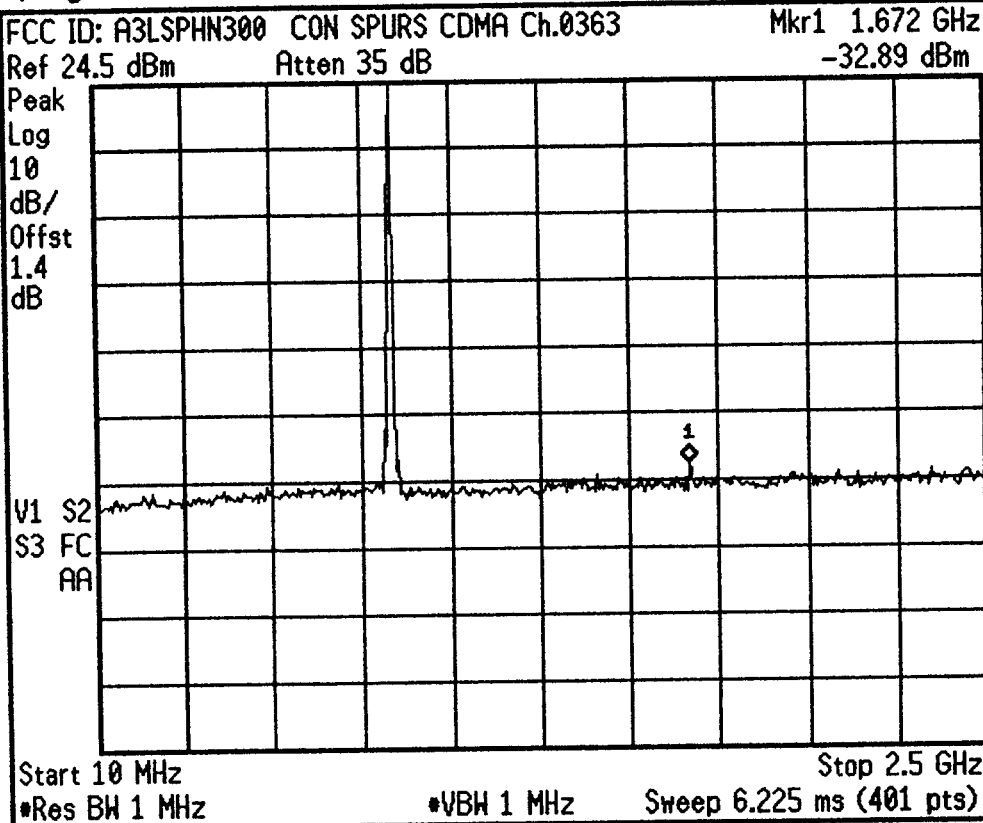
Stop Freq
 10.0000000 GHz

CF Step
 750.000000 MHz
 Auto Man

Freq Offset
 0.00000000 Hz

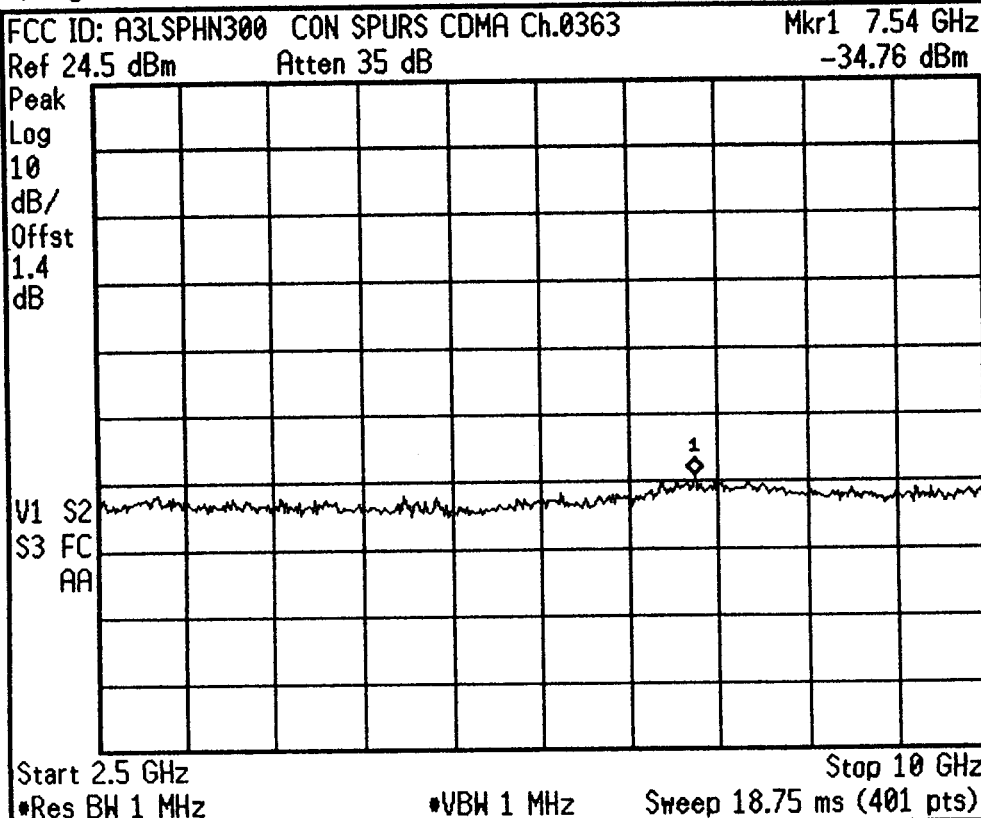
Signal Track
 On Off

* Agilent 12:10:23 Aug 20, 2001



Freq/Channel
Center Freq 1.25500000 GHz
Start Freq 10.0000000 MHz
Stop Freq 2.50000000 GHz
CF Step 249.000000 MHz Auto Man
Freq Offset 0.00000000 Hz
Signal Track On Off

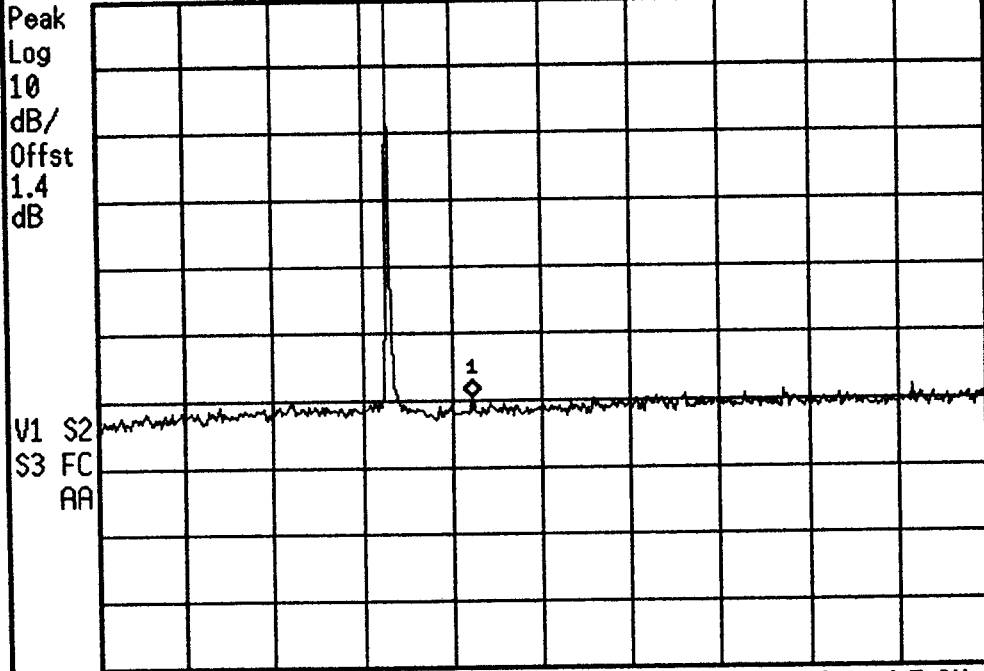
* Agilent 12:11:18 Aug 20, 2001



Freq/Channel
Center Freq 6.25000000 GHz
Start Freq 2.50000000 GHz
Stop Freq 10.0000000 GHz
CF Step 750.000000 MHz Auto Man
Freq Offset 0.00000000 Hz
Signal Track On Off

* Agilent 12:06:47 Aug 20, 2001

FCC ID: A3LSPHN300 CON SPURS CDMA Ch.1013 Mkr1 1.062 GHz
 Ref 24.5 dBm Atten 35 dB -34.95 dBm



Start 10 MHz Stop 2.5 GHz
 *Res BW 1 MHz *VBW 1 MHz Sweep 6.225 ms (401 pts)

Freq/Channel

Center Freq
1.25500000 GHz

Start Freq
10.0000000 MHz

Stop Freq
2.50000000 GHz

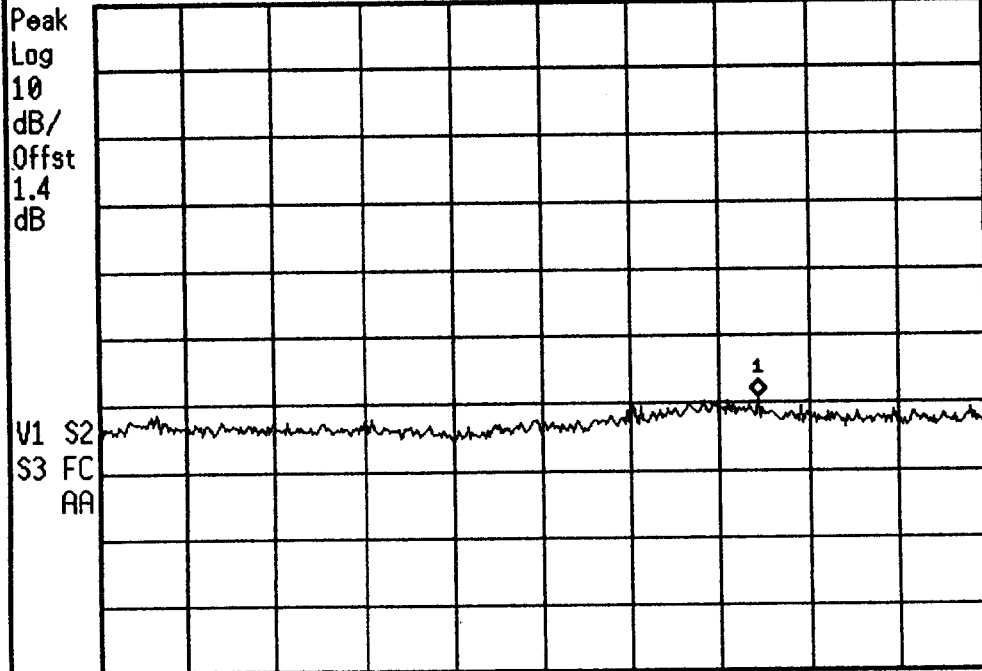
CF Step
249.000000 MHz
Auto Man

Freq Offset
0.00000000 Hz

Signal Track
On Off

* Agilent 12:07:45 Aug 20, 2001

FCC ID: A3LSPHN300 CON SPURS CDMA Ch.1013 Mkr1 8.07 GHz
 Ref 24.5 dBm Atten 35 dB -34.76 dBm



Start 2.5 GHz Stop 10 GHz
 *Res BW 1 MHz *VBW 1 MHz Sweep 18.75 ms (401 pts)

Freq/Channel

Center Freq
6.25000000 GHz

Start Freq
2.50000000 GHz

Stop Freq
10.0000000 GHz

CF Step
750.000000 MHz
Auto Man

Freq Offset
0.00000000 Hz

Signal Track
On Off

* Agilent 12:28:26 Aug 20, 2001

FCC ID: A3LSPHN300 PWR. OUT CDMA Ch.1013

Ref 24.5 dBm Atten 35 dB

Samp

Log

10

dB/

Offst

1.4

dB

VAvg

100

V1 S2

S3 FC

AA

Center 824.7 MHz

*Res BW 3 MHz

*VBW 3 MHz

Span 10 MHz
Sweep 5 ms (401 pts)

Freq/Channel

Center Freq

824.700000 MHz

Start Freq

819.700000 MHz

Stop Freq

829.700000 MHz

CF Step

1.00000000 MHz

Auto Man

Freq Offset

0.00000000 Hz

Signal Track

On Off

* Agilent 12:30:35 Aug 20, 2001

FCC ID: A3LSPHN300 PWR. OUT CDMA Ch.0777

Ref 24.5 dBm Atten 35 dB

Samp

Log

10

dB/

Offst

1.4

dB

VAvg

100

V1 S2

S3 FC

AA

Center 848.3 MHz

*Res BW 3 MHz

*VBW 3 MHz

Span 10 MHz
Sweep 5 ms (401 pts)

Freq/Channel

Center Freq

848.300000 MHz

Start Freq

843.300000 MHz

Stop Freq

853.300000 MHz

CF Step

1.00000000 MHz

Auto Man

Freq Offset

0.00000000 Hz

Signal Track

On Off

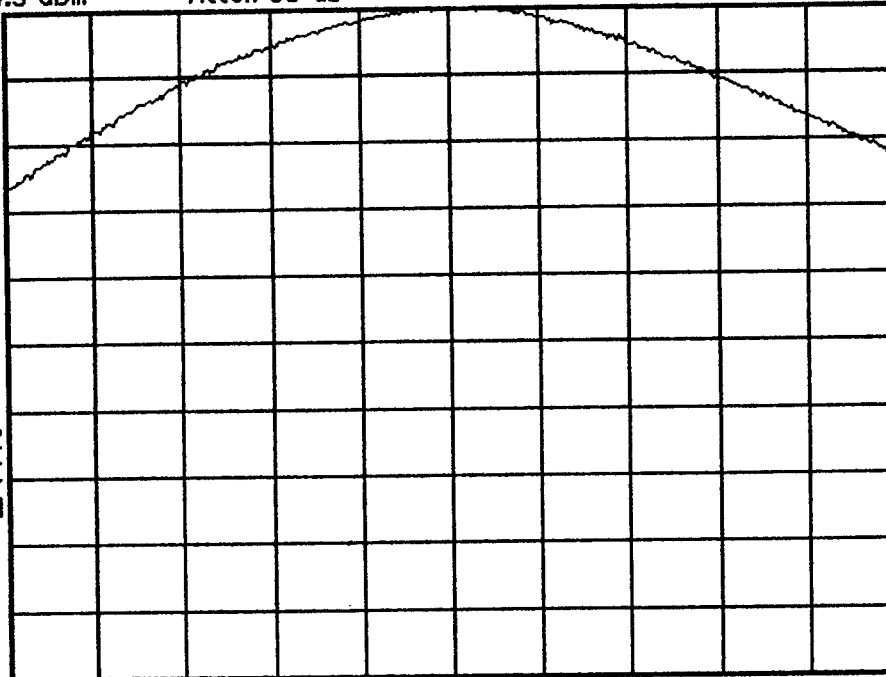
* Agilent 12:33:27 Aug 20, 2001

FCC ID: A3LSPHN300 PWR. OUT CDMA Ch.0363

Ref 24.5 dBm Atten 35 dB

Samp
Log
10
dB/
Offst
1.4
dB

VAvg
100
V1 S2
S3 FC
AA



Center 835.9 MHz

Span 10 MHz

*Res BW 3 MHz

*VBW 3 MHz

Sweep 5 ms (401 pts)

Freq/Channel

Center Freq
835.900000 MHz

Start Freq
830.900000 MHz

Stop Freq
840.900000 MHz

CF Step
1.00000000 MHz
Auto Man

Freq Offset
0.00000000 Hz

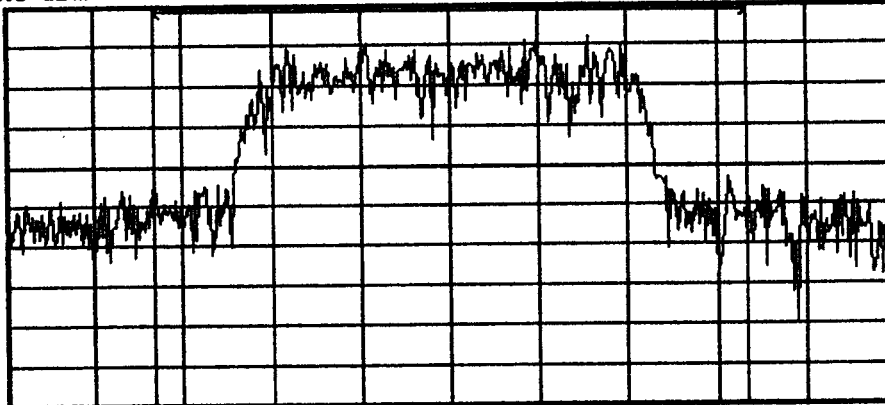
Signal Track
On Off

* Agilent 12:35:26 Aug 20, 2001

FCC ID: A3LSPHN300 PWR. OUT CDMA Ch.0363

Ref 24.5 dBm Atten 35 dB

Samp
Log
10
dB/
Offst
1.4
dB



Center 835.9 MHz

Span 3 MHz

*Res BW 30 kHz

*VBW 300 kHz

Sweep 9.167 ms (401 pts)

Measure

Meas Off

ACP

Channel Power

Occupied BW

Emission BW

Harmonic Dist

Channel Power Results (idle)

Channel Power
24.51 dBm

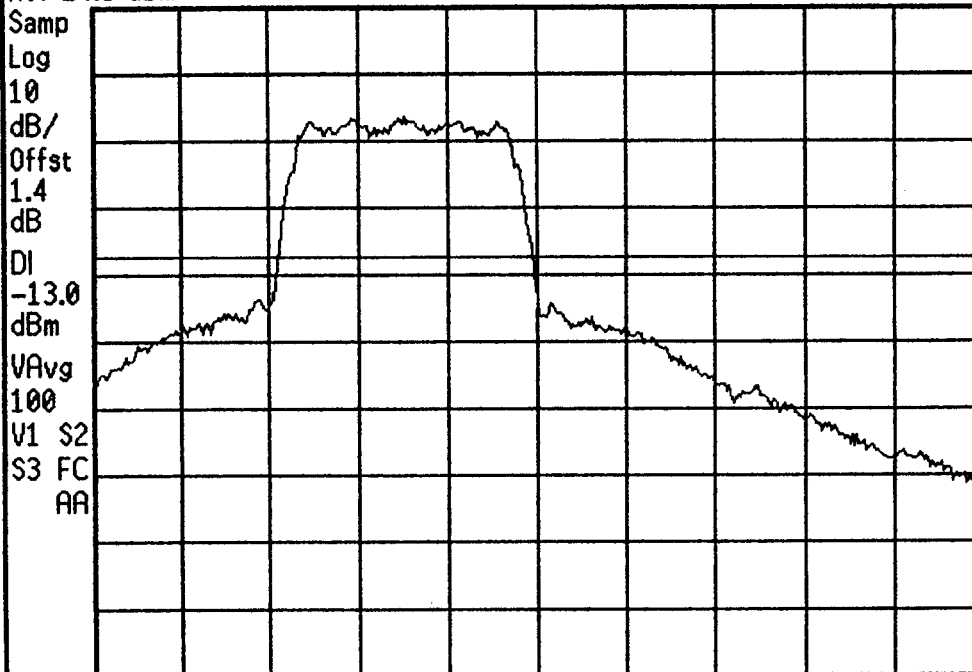
Integration BW 2.000 MHz

Density -38.50 dBm/Hz

* Agilent 12:47:37 Aug 20, 2001

FCC ID: A3LSPHN300 BAND EDGE CDMA Ch.0777

Ref 24.5 dBm Atten 35 dB



Center 849 MHz

Span 5 MHz

*Res BW 30 kHz

*VBW 30 kHz

Sweep 13.89 ms (401 pts)

Freq/Channel

Center Freq

849.000000 MHz

Start Freq

846.500000 MHz

Stop Freq

851.500000 MHz

CF Step

500.000000 kHz

Auto

Man

Freq Offset

0.00000000 Hz

Signal Track

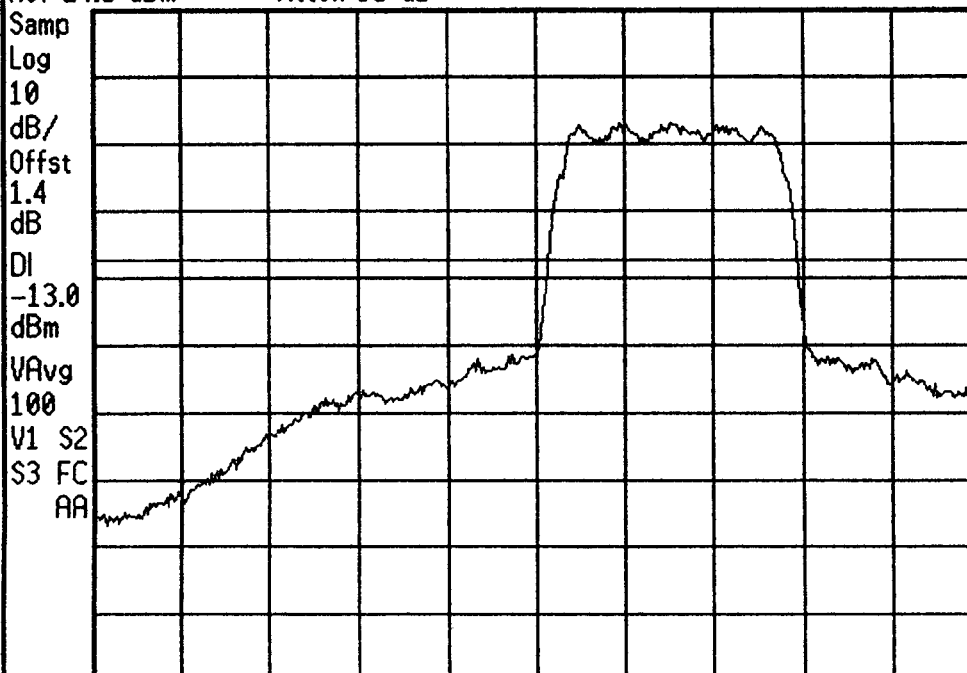
On

Off

* Agilent 12:50:46 Aug 20, 2001

FCC ID: A3LSPHN300 BAND EDGE CDMA Ch.1013

Ref 24.5 dBm Atten 35 dB



Center 824 MHz

Span 5 MHz

*Res BW 30 kHz

*VBW 30 kHz

Sweep 13.89 ms (401 pts)

Freq/Channel

Center Freq

824.000000 MHz

Start Freq

821.500000 MHz

Stop Freq

826.500000 MHz

CF Step

500.000000 kHz

Auto

Man

Freq Offset

0.00000000 Hz

Signal Track

On

Off

* Agilent 13:36:14 Aug 20, 2001

FCC ID: A3LSPHN300 CON SPURS PCS Ch.0025

Mkr1 1.585 GHz

Ref 24.5 dBm

Atten 35 dB

-28.25 dBm

Peak

Log

10

dB/

Offst

2.1

dB

DI

-13.0

dBm

V1 S2

S3 FC

AA

AA

AA

AA

AA

AA

AA

AA

AA

AA

AA

AA

AA

AA

AA

AA

AA

AA

AA

AA

AA

AA

AA

AA

AA

AA

AA

AA

AA

AA

AA

AA

AA

AA

AA

AA

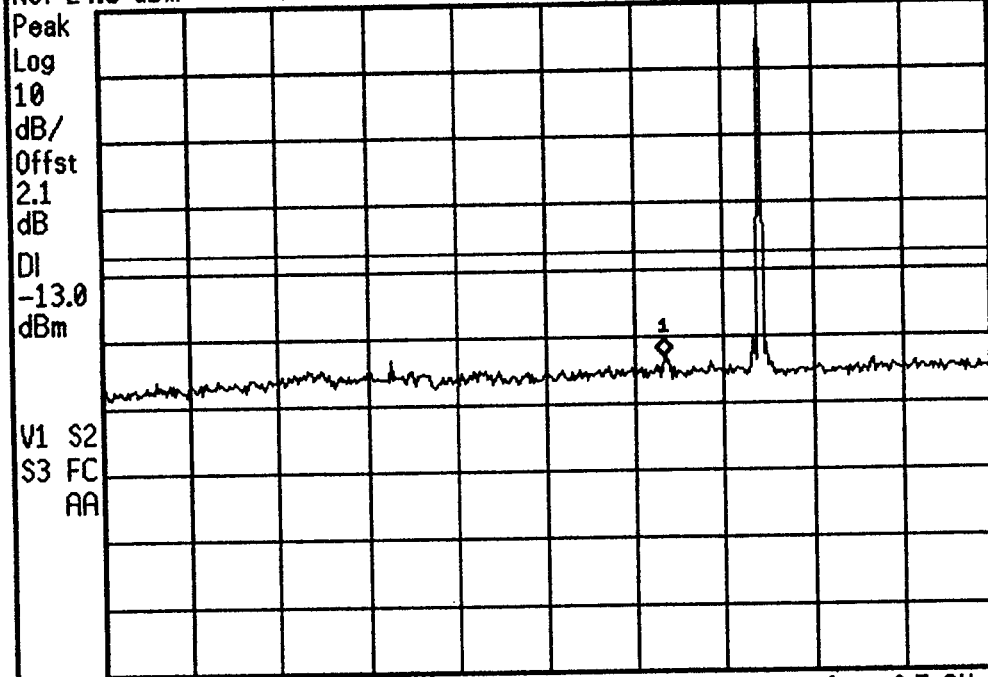
AA

AA

AA

AA

AA



Start 10 MHz

*Res BW 3 MHz

*VBW 3 MHz

Sweep 4.15 ms (401 pts)

Stop 2.5 GHz

Freq/Channel

Center Freq

1.25500000 GHz

Start Freq

10.0000000 MHz

Stop Freq

2.50000000 GHz

CF Step

249.000000 MHz

Auto Man

Freq Offset

0.00000000 Hz

Signal Track

On Off

* Agilent 13:37:06 Aug 20, 2001

FCC ID: A3LSPHN300 CON SPURS PCS Ch.0025

Mkr1 7.56 GHz

Ref 24.5 dBm

Atten 35 dB

-29.24 dBm

Peak

Log

10

dB/

Offst

2.1

dB

DI

-13.0

dBm

V1 S2

S3 FC

AA

AA

AA

AA

AA

AA

AA

AA

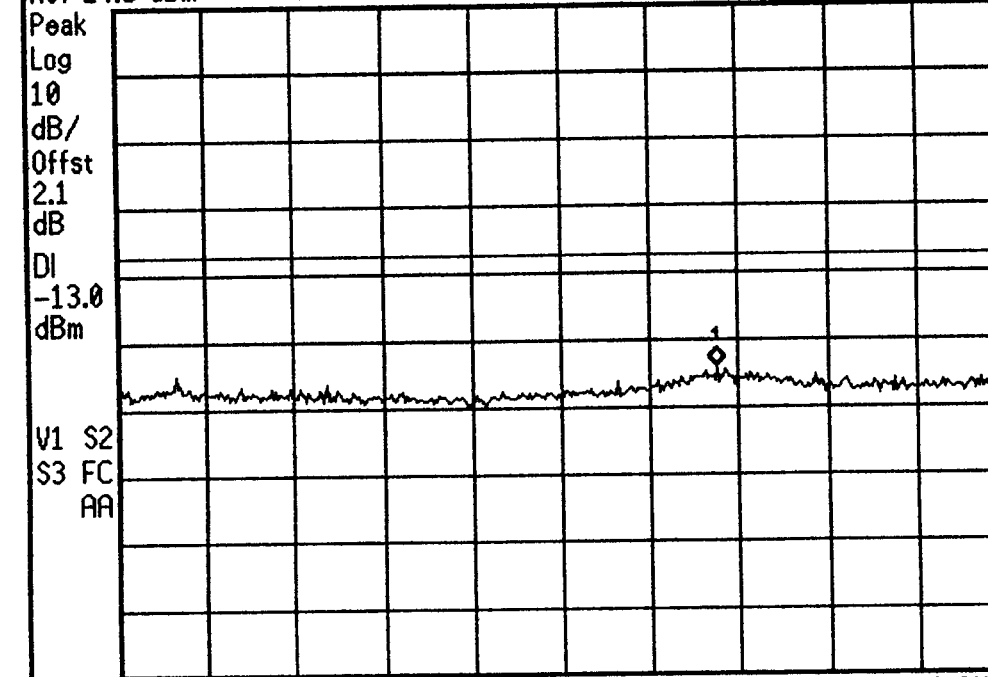
AA

AA

AA

AA

AA



Start 2.5 GHz

*Res BW 3 MHz

*VBW 3 MHz

Sweep 18.75 ms (401 pts)

Stop 10 GHz

Freq/Channel

Center Freq

6.25000000 GHz

Start Freq

2.50000000 GHz

Stop Freq

10.0000000 GHz

CF Step

750.000000 MHz

Auto Man

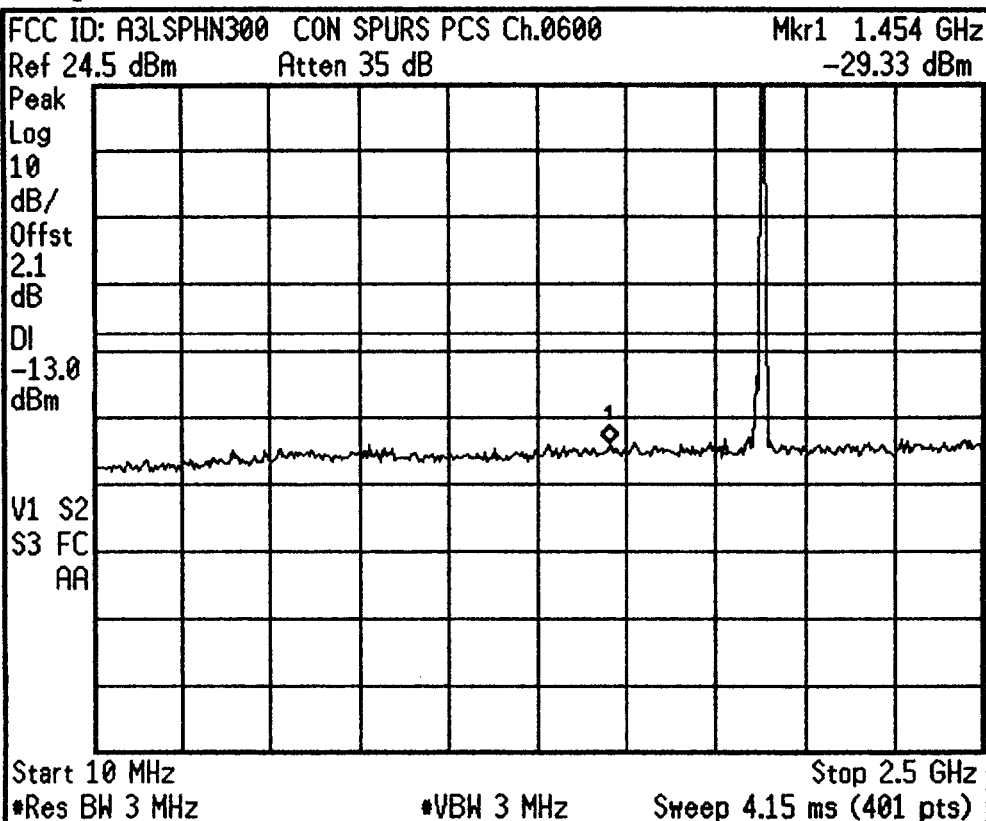
Freq Offset

0.00000000 Hz

Signal Track

On Off

* Agilent 13:33:21 Aug 20, 2001



Freq/Channel

Center Freq
 1.25500000 GHz

Start Freq
 10.0000000 MHz

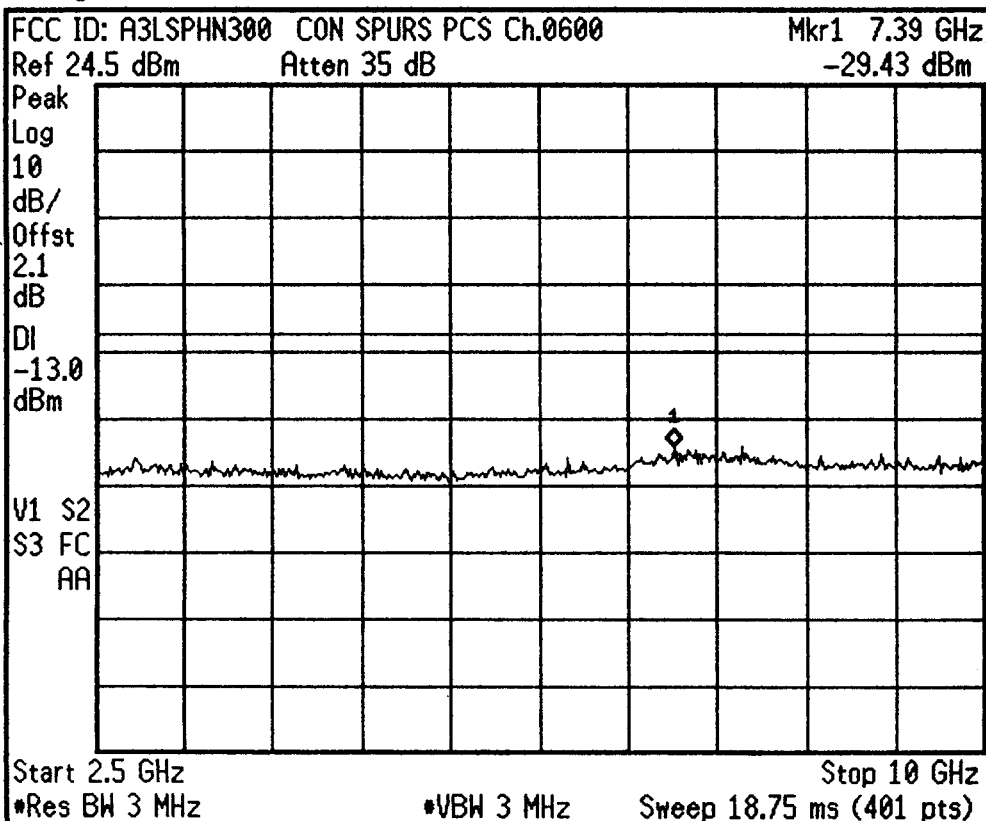
Stop Freq
 2.50000000 GHz

CF Step
 249.000000 MHz
 Auto Man

Freq Offset
 0.00000000 Hz

Signal Track
 On Off

* Agilent 13:34:21 Aug 20, 2001



Freq/Channel

Center Freq
 6.25000000 GHz

Start Freq
 2.50000000 GHz

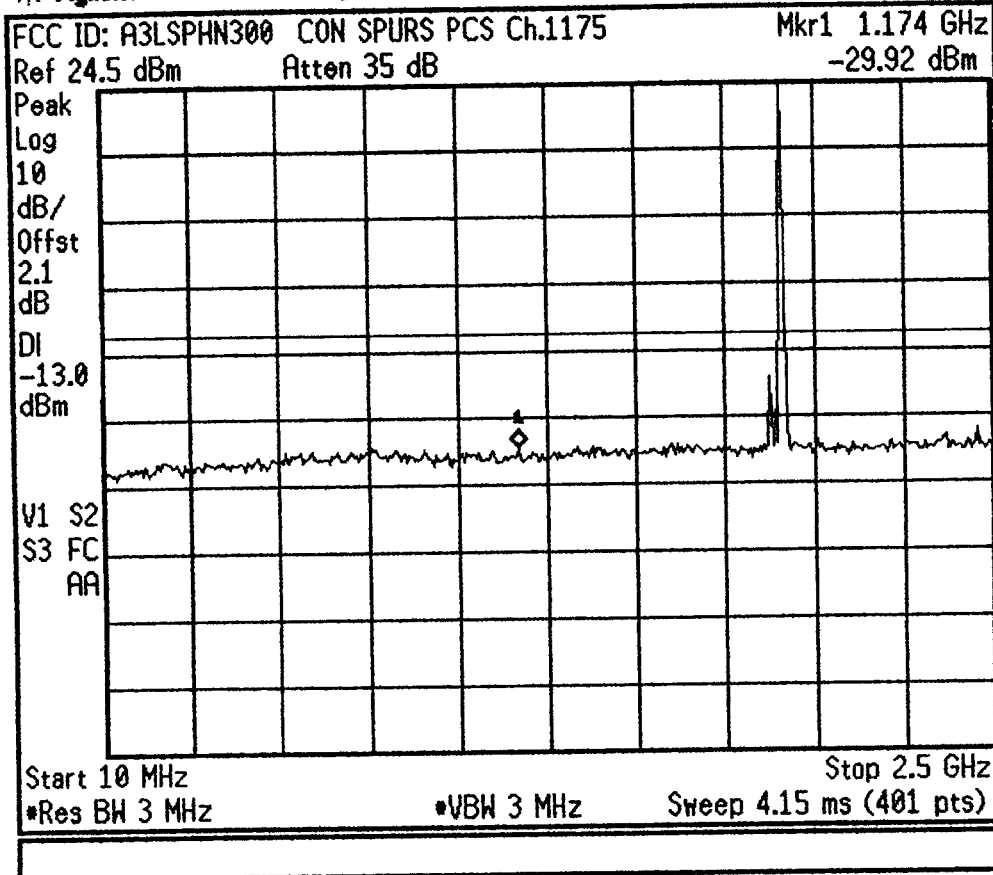
Stop Freq
 10.0000000 GHz

CF Step
 750.000000 MHz
 Auto Man

Freq Offset
 0.00000000 Hz

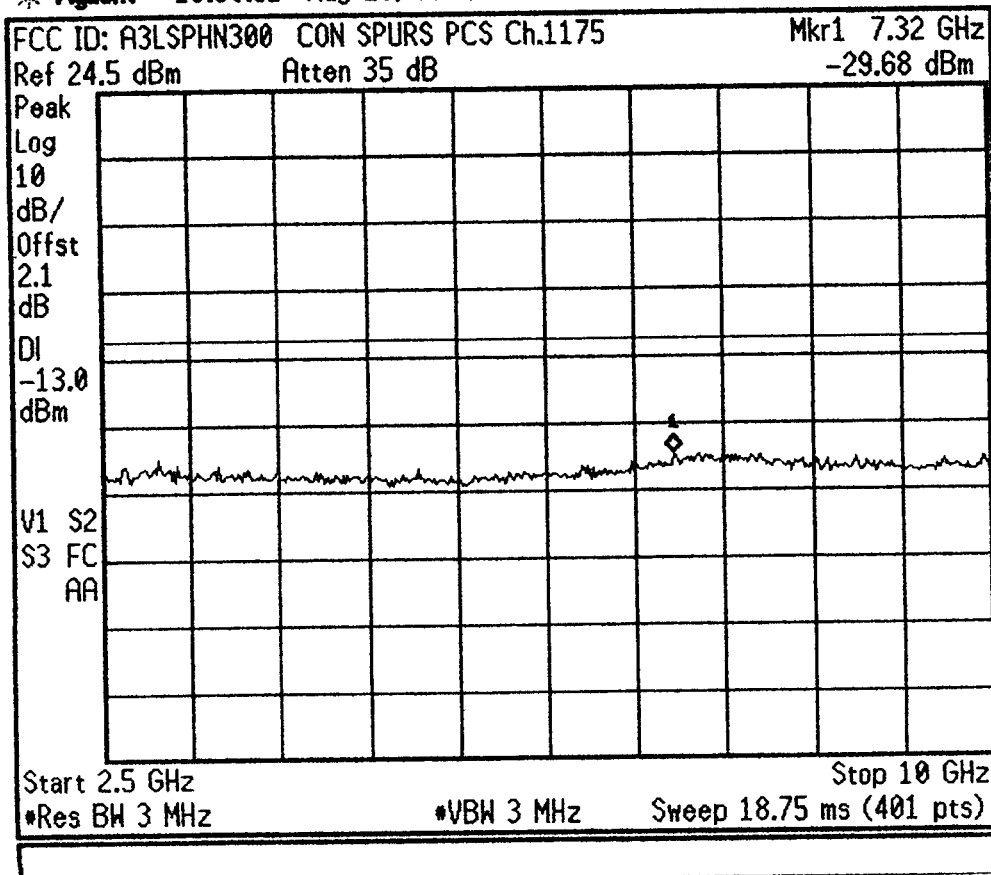
Signal Track
 On Off

* Agilent 13:38:56 Aug 20, 2001



Freq/Channel
Center Freq 1.25500000 GHz
Start Freq 10.0000000 MHz
Stop Freq 2.50000000 GHz
CF Step 249.000000 MHz Auto Man
Freq Offset 0.00000000 Hz
Signal Track On Off

* Agilent 13:39:51 Aug 20, 2001

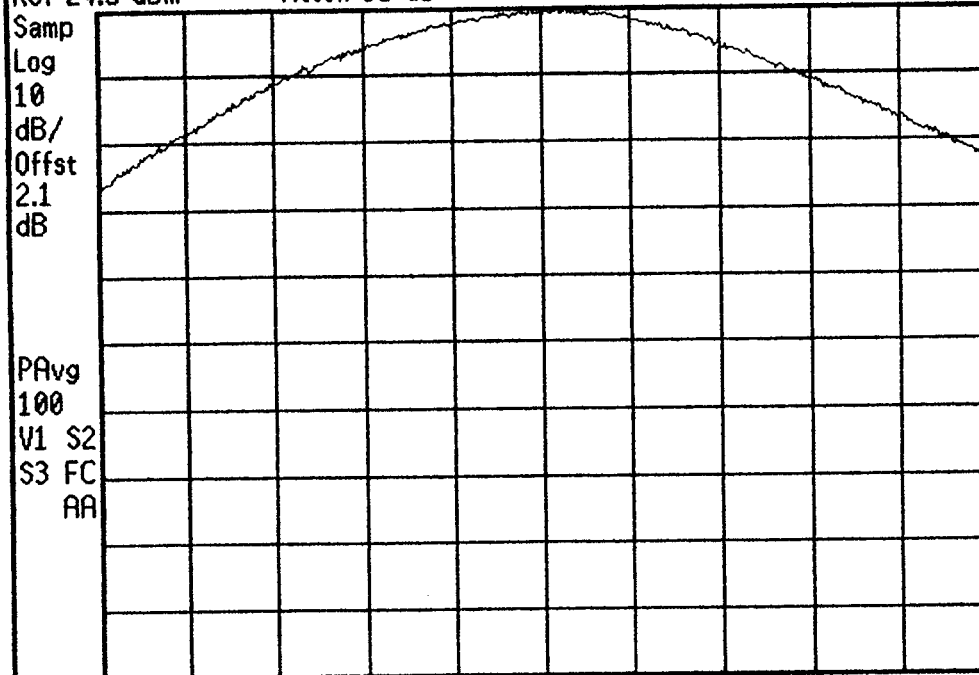


Freq/Channel
Center Freq 6.25000000 GHz
Start Freq 2.50000000 GHz
Stop Freq 10.0000000 GHz
CF Step 750.000000 MHz Auto Man
Freq Offset 0.00000000 Hz
Signal Track On Off

* Agilent 13:55:17 Aug 20, 2001

FCC ID: A3LSPHN300 PWR. OUT PCS Ch.0600

Ref 24.5 dBm Atten 35 dB



Center 1.88 GHz

Span 10 MHz

*Res BW 3 MHz

*VBW 3 MHz

Sweep 5 ms (401 pts)

Freq/Channel

Center Freq
1.88000000 GHz

Start Freq
1.87500000 GHz

Stop Freq
1.88500000 GHz

CF Step
1.00000000 MHz
Auto Man

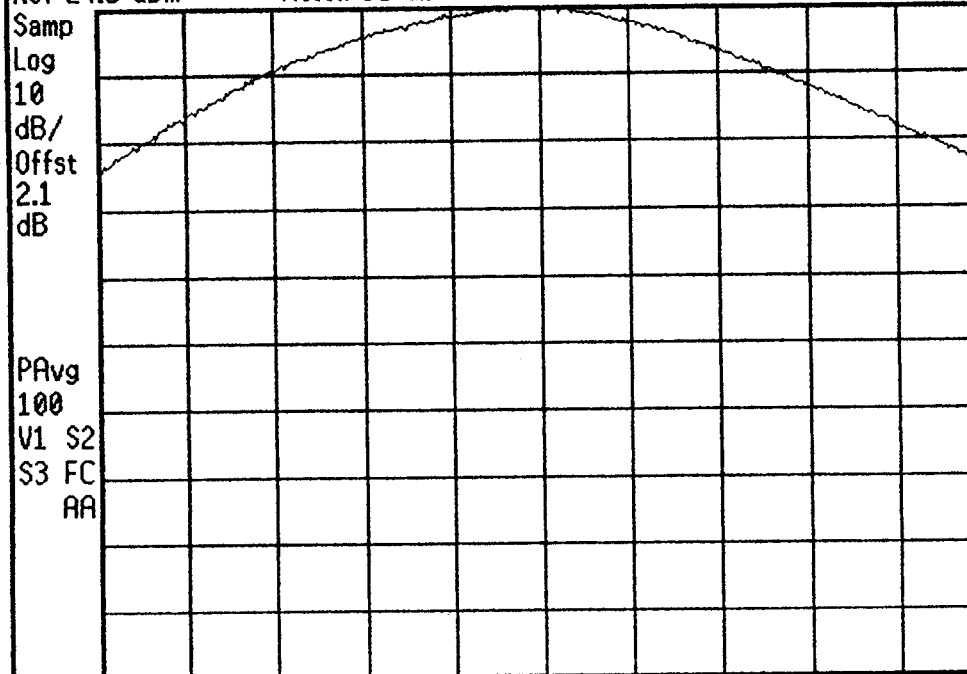
Freq Offset
0.00000000 Hz

Signal Track
On Off

* Agilent 13:57:57 Aug 20, 2001

FCC ID: A3LSPHN300 PWR. OUT PCS Ch.1175

Ref 24.5 dBm Atten 35 dB



Center 1.909 GHz

Span 10 MHz

*Res BW 3 MHz

*VBW 3 MHz

Sweep 5 ms (401 pts)

Freq/Channel

Center Freq
1.90900000 GHz

Start Freq
1.90400000 GHz

Stop Freq
1.91400000 GHz

CF Step
1.00000000 MHz
Auto Man

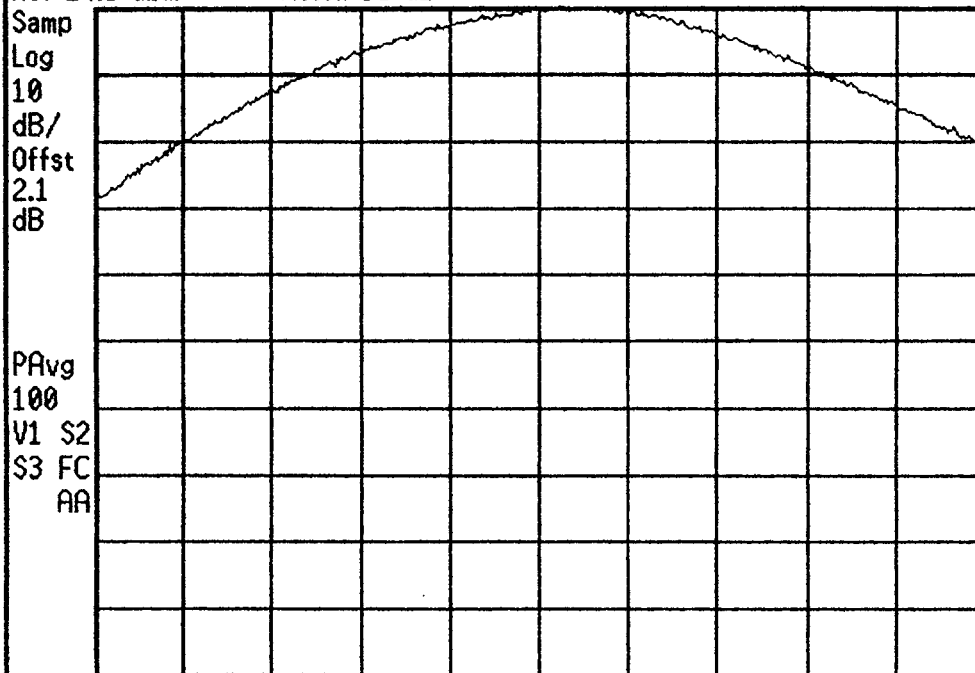
Freq Offset
0.00000000 Hz

Signal Track
On Off

* Agilent 14:00:34 Aug 20, 2001

FCC ID: A3LSPHN300 PWR. OUT PCS Ch.0025

Ref 24.5 dBm Atten 35 dB



Center 1.851 GHz

Span 10 MHz

*Res BW 3 MHz

*VBW 3 MHz

Sweep 5 ms (401 pts)

Freq/Channel

Center Freq
1.85100000 GHz

Start Freq
1.84600000 GHz

Stop Freq
1.85600000 GHz

CF Step
1.00000000 MHz
Auto Man

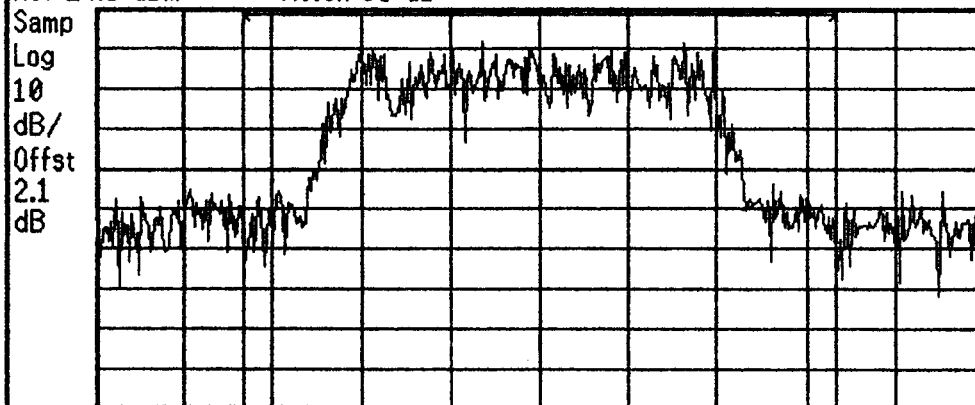
Freq Offset
0.00000000 Hz

Signal Track
On Off

* Agilent 14:05:28 Aug 20, 2001

FCC ID: A3LSPHN300 PWR. OUT PCS Ch.0025

Ref 24.5 dBm Atten 35 dB



Center 1.851 GHz

Span 3 MHz

*Res BW 30 kHz

*VBW 300 kHz

Sweep 9.167 ms (401 pts)

Print Setup

Printer Type
Auto

Define
Custom

Orientation
Portrait

Color
On Off

Prints/Page
1 2

Eject Page

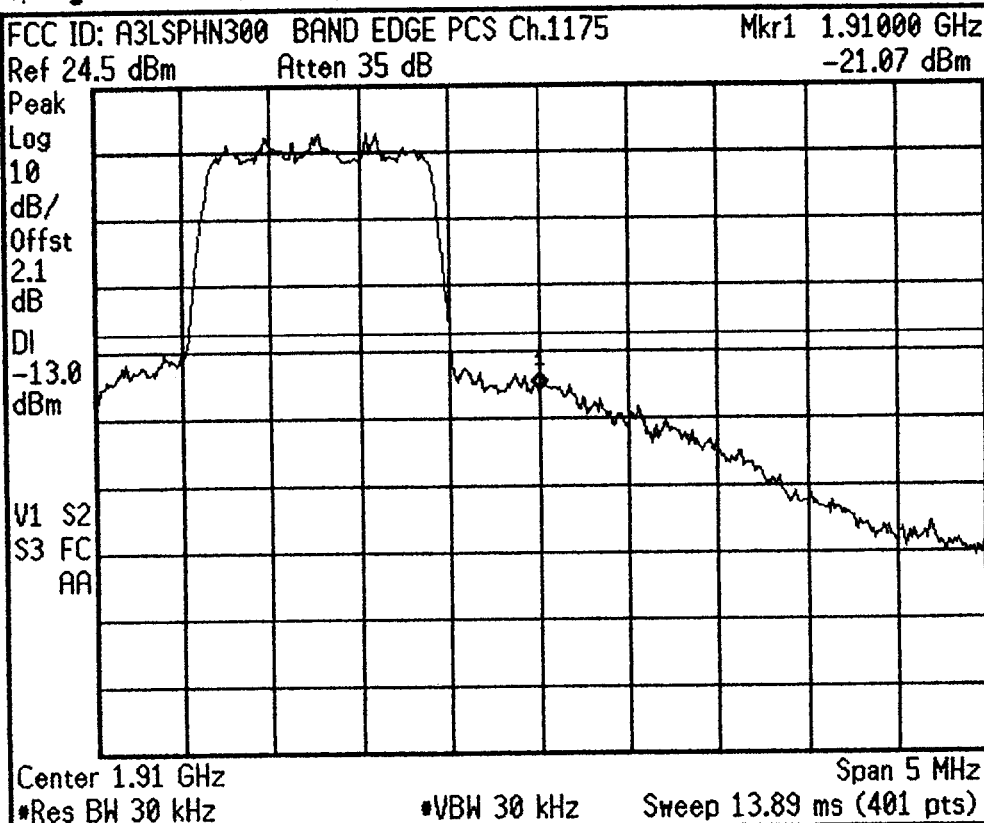
Channel Power Results (idle)

Channel Power
24.52 dBm

Integration BW 2.000 MHz

Density -38.49 dBm/Hz

* Agilent 14:17:36 Aug 20, 2001



Freq/Channel

Center Freq
 1.91000000 GHz

Start Freq
 1.90750000 GHz

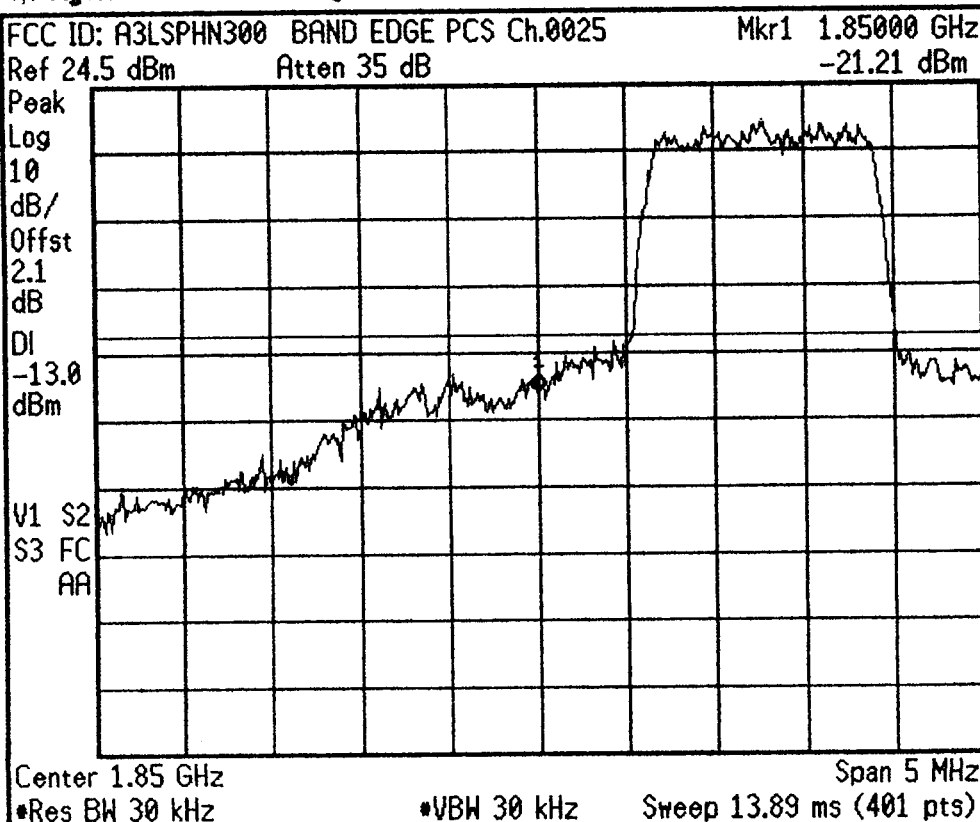
Stop Freq
 1.91250000 GHz

CF Step
 500.000000 kHz
 Auto Man

Freq Offset
 0.00000000 Hz

Signal Track
 On Off

* Agilent 14:20:20 Aug 20, 2001



Freq/Channel

Center Freq
 1.85000000 GHz

Start Freq
 1.84750000 GHz

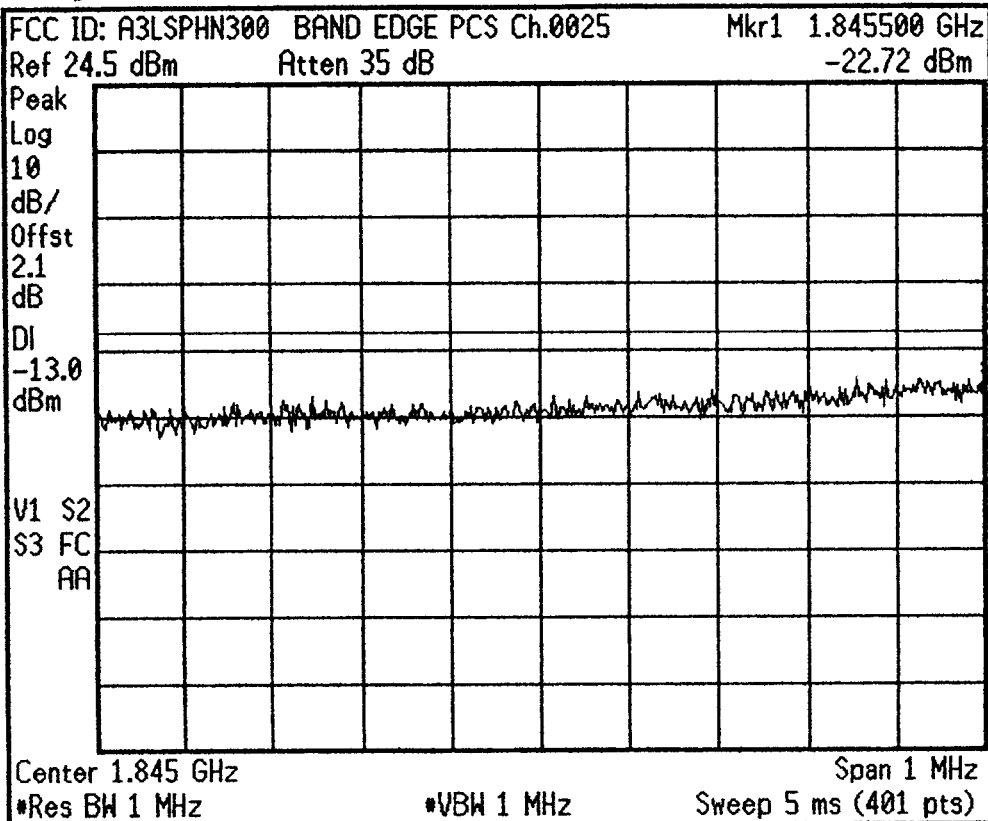
Stop Freq
 1.85250000 GHz

CF Step
 500.000000 kHz
 Auto Man

Freq Offset
 0.00000000 Hz

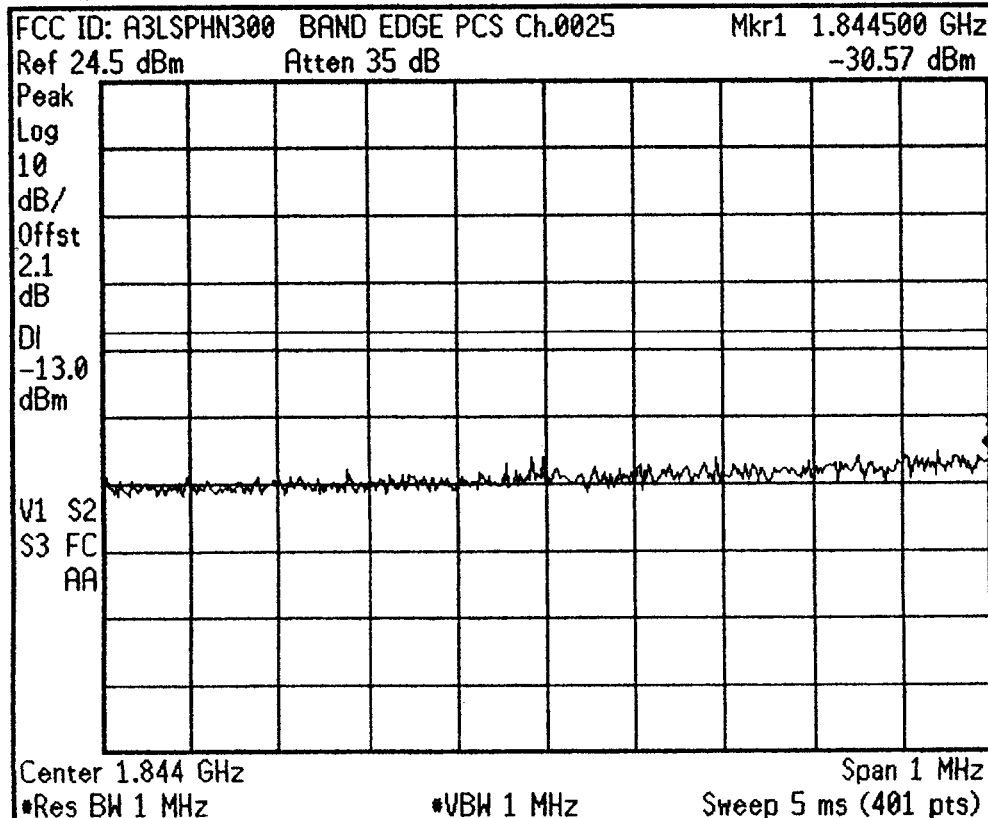
Signal Track
 On Off

Agilent 14:25:36 Aug 20, 2001



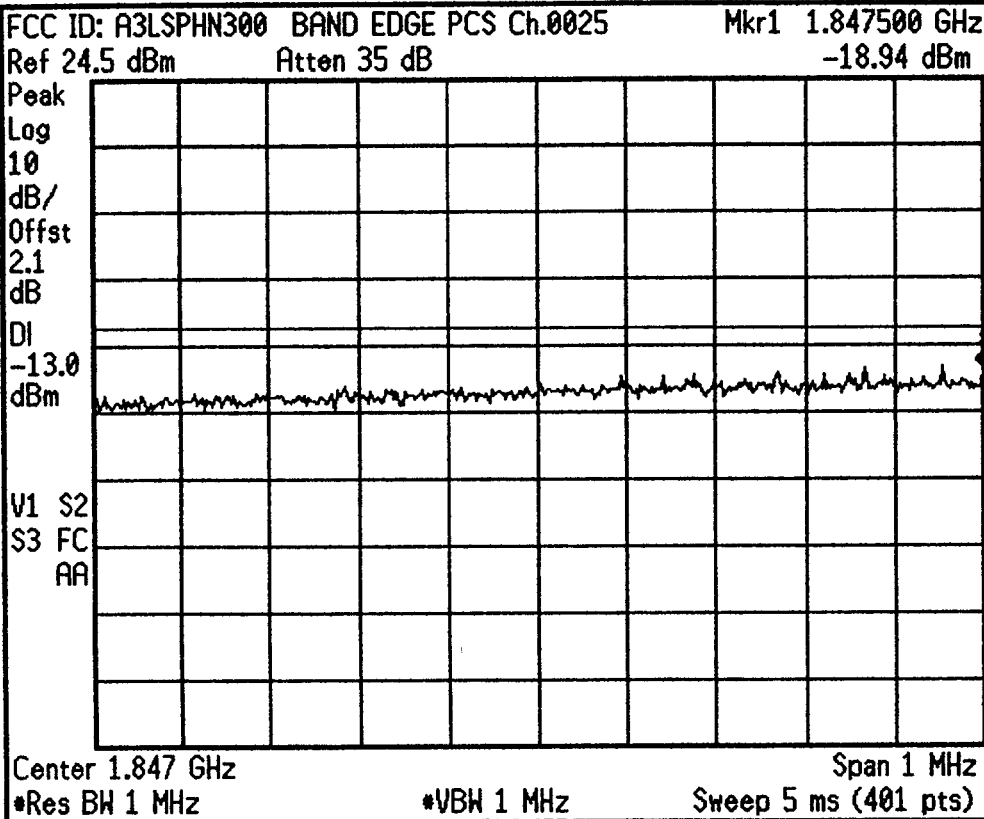
Freq/Channel
Center Freq 1.84500000 GHz
Start Freq 1.84450000 GHz
Stop Freq 1.84550000 GHz
CF Step 100.000000 kHz Auto Man
Freq Offset 0.00000000 Hz
Signal Track On Off

Agilent 14:28:11 Aug 20, 2001



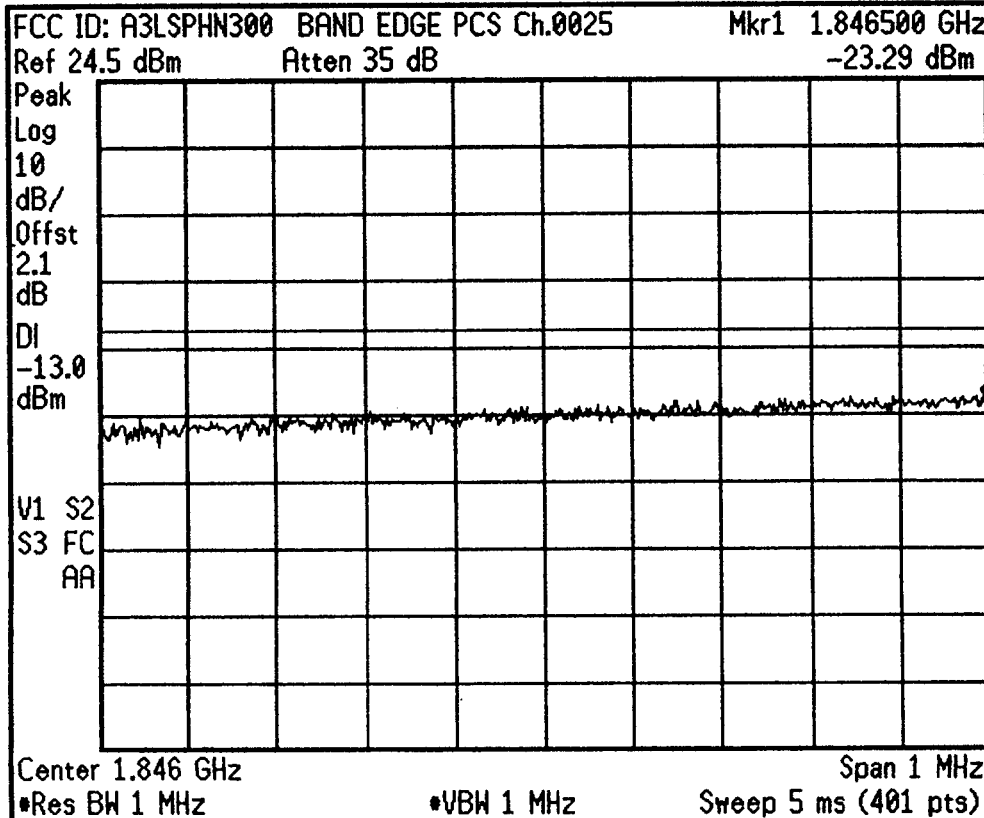
Freq/Channel
Center Freq 1.84400000 GHz
Start Freq 1.84350000 GHz
Stop Freq 1.84450000 GHz
CF Step 100.000000 kHz Auto Man
Freq Offset 0.00000000 Hz
Signal Track On Off

* Agilent 14:29:42 Aug 20, 2001



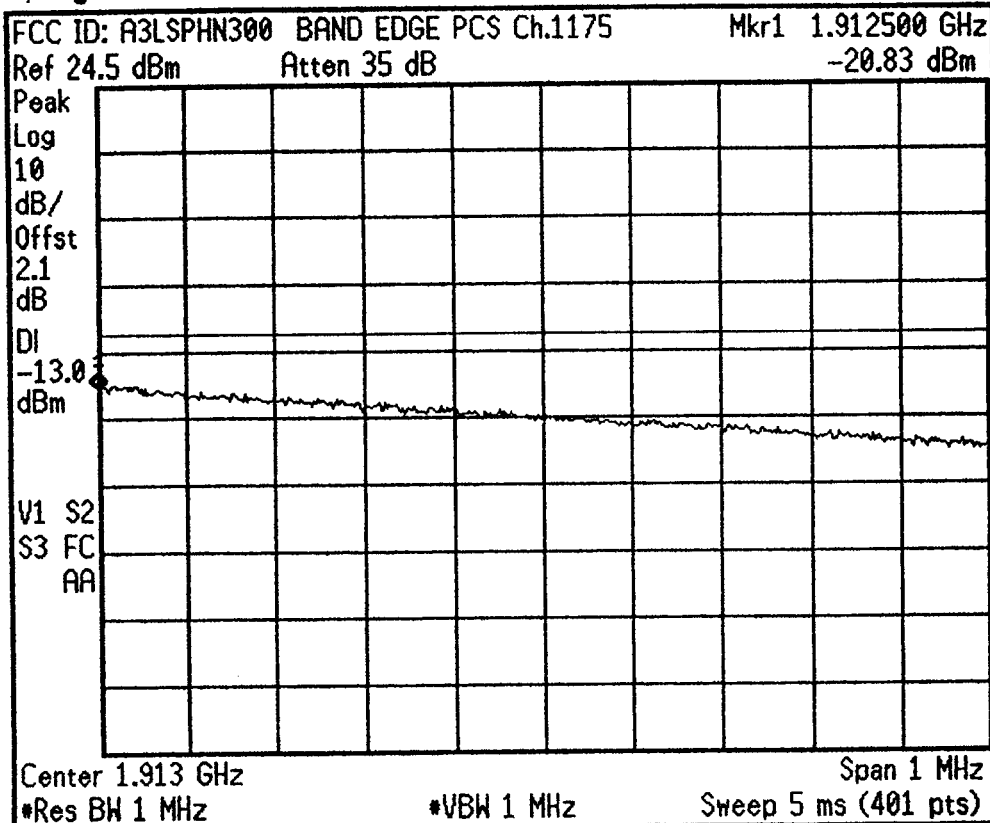
Freq/Channel
Center Freq 1.84700000 GHz
Start Freq 1.84650000 GHz
Stop Freq 1.84750000 GHz
CF Step 100.000000 kHz Auto Man
Freq Offset 0.00000000 Hz
Signal Track On Off

* Agilent 14:30:43 Aug 20, 2001



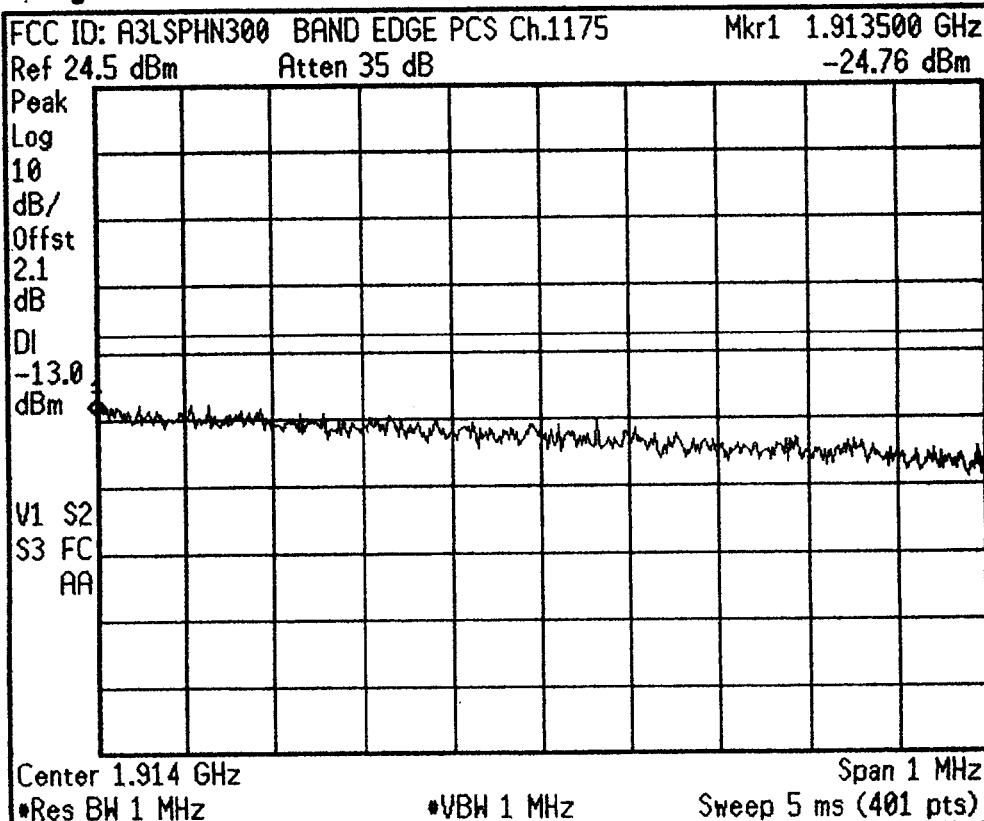
Freq/Channel
Center Freq 1.84600000 GHz
Start Freq 1.84550000 GHz
Stop Freq 1.84650000 GHz
CF Step 100.000000 kHz Auto Man
Freq Offset 0.00000000 Hz
Signal Track On Off

Agilent 14:32:54 Aug 20, 2001



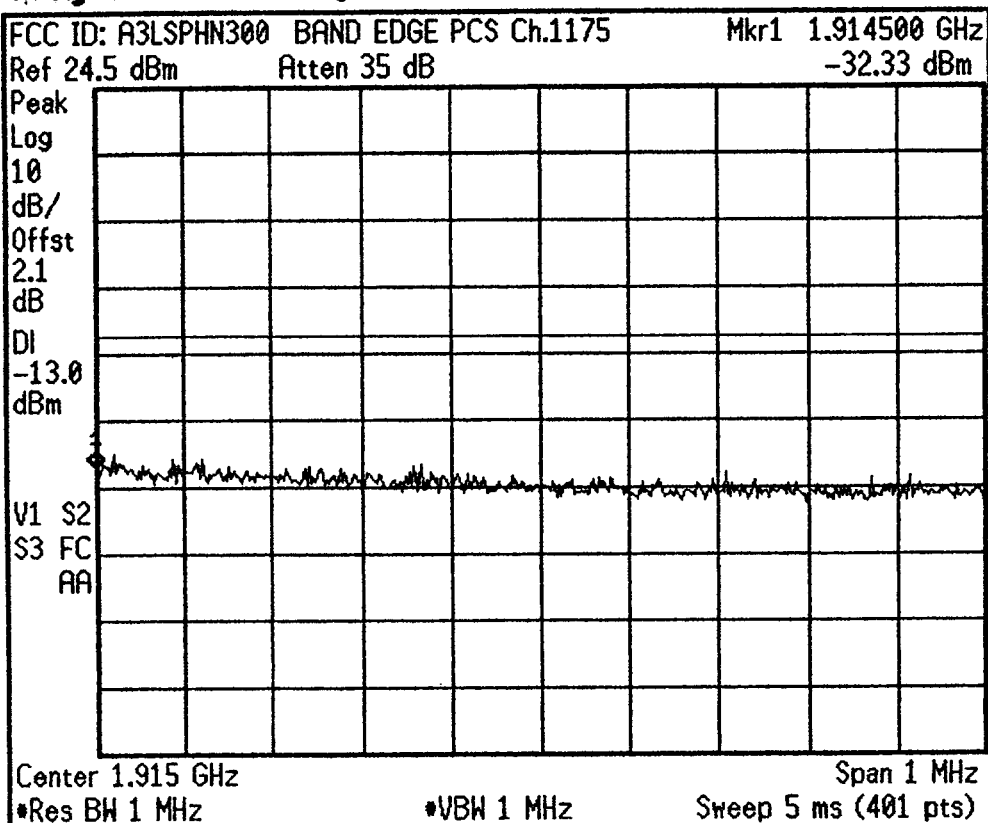
Freq/Channel
Center Freq 1.91300000 GHz
Start Freq 1.91250000 GHz
Stop Freq 1.91350000 GHz
CF Step 100.000000 kHz Auto Man
Freq Offset 0.00000000 Hz
Signal Track On Off

Agilent 14:33:53 Aug 20, 2001



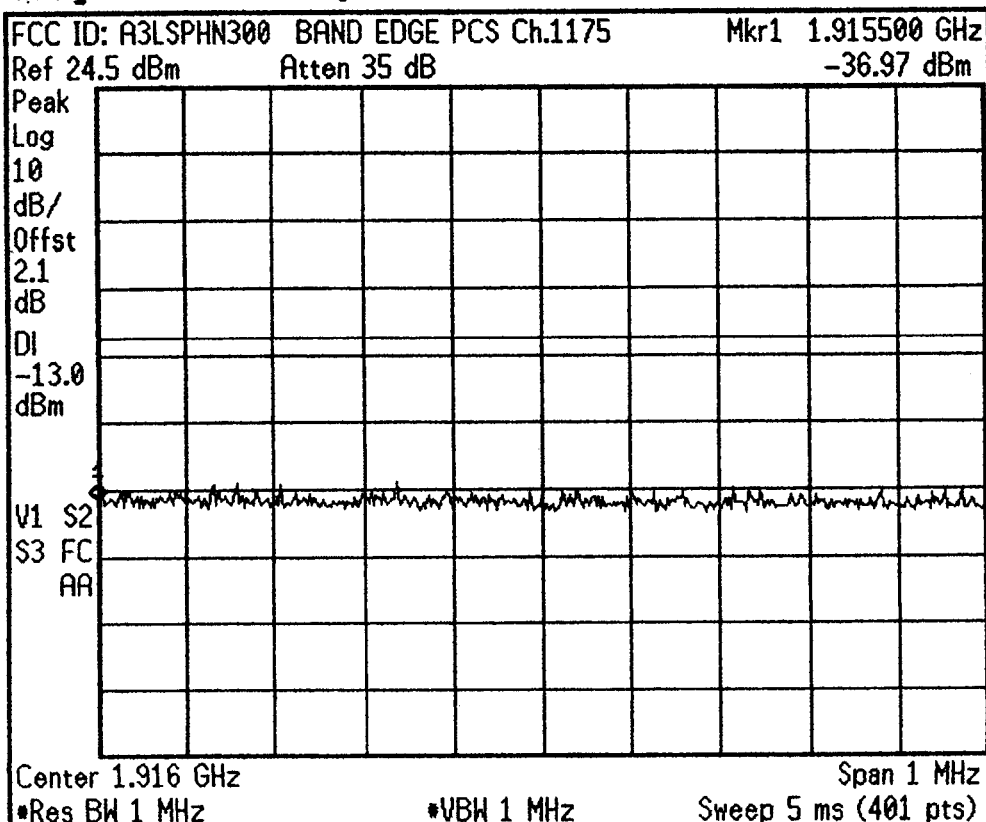
Freq/Channel
Center Freq 1.91400000 GHz
Start Freq 1.91350000 GHz
Stop Freq 1.91450000 GHz
CF Step 100.000000 kHz Auto Man
Freq Offset 0.00000000 Hz
Signal Track On Off

* Agilent 14:34:56 Aug 20, 2001



Freq/Channel	
Center Freq	1.91500000 GHz
Start Freq	1.91450000 GHz
Stop Freq	1.91550000 GHz
CF Step	100.000000 kHz Auto Man
Freq Offset	0.00000000 Hz
Signal Track	On Off

* Agilent 14:36:30 Aug 20, 2001



Freq/Channel	
Center Freq	1.91600000 GHz
Start Freq	1.91550000 GHz
Stop Freq	1.91650000 GHz
CF Step	100.000000 kHz Auto Man
Freq Offset	0.00000000 Hz
Signal Track	On Off

* Agilent 14:44:36 Aug 20, 2001

FCC ID: A3LSPHN300 PWR. OUT PCS Ch.0600

Ref 24.5 dBm Atten 35 dB

Samp

Log

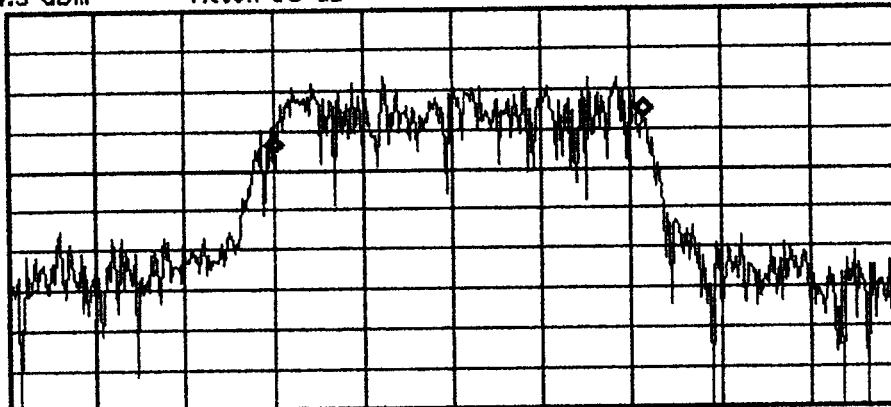
10

dB/

Offst

2.1

dB



Center 1.88 GHz

Span 3 MHz

*Res BW 30 kHz

*VBW 300 kHz

Sweep 9.167 ms (401 pts)

Occupied Bandwidth Results (idle)

Occupied Bandwidth

Occ BW % Pwr 99.00 %

1.248 MHz

Transmit Freq Error 20.80 kHz

Freq/Channel

Center Freq

1.88000000 GHz

Start Freq

1.87850000 GHz

Stop Freq

1.88150000 GHz

CF Step

300.000000 kHz

Auto

Man

Freq Offset

0.00000000 Hz

Signal Track

On

Off