

PCTEST Engineering Lab.

SPECTRUM ANALYZER PRESENTATION

FCC ID:CKLHGC-300E

HYUNDAI DUAL MODE PHONE

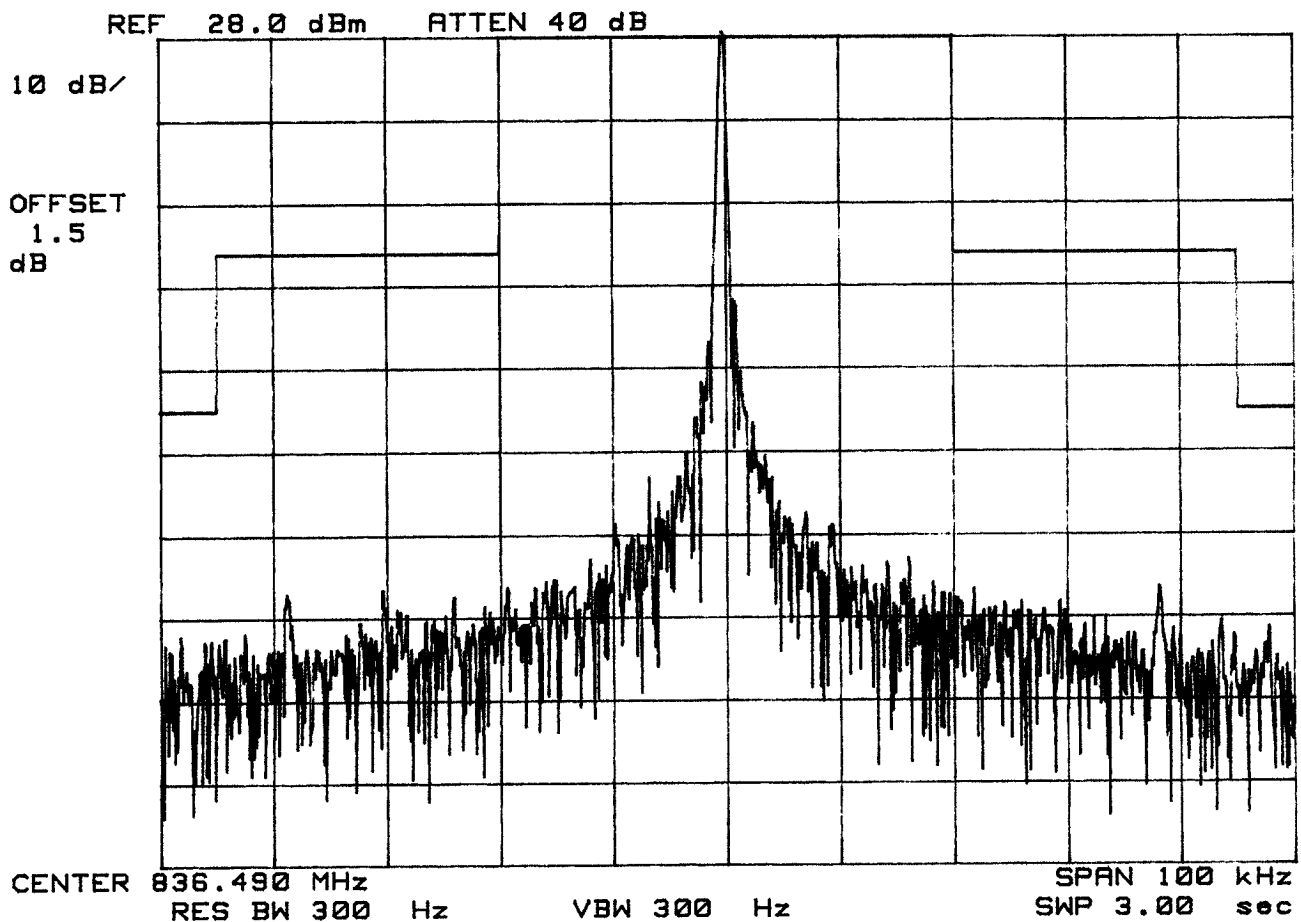
FM MODE

CHAN 383

Operating Frequency: 836.490 MHz

Output Power : 28.0 dBm

Test Mode:Unmodulated Signal



PCTEST Engineering Lab.

SPECTRUM ANALYZER PRESENTATION

FCC ID:CKLHGC-300E

HYUNDAI DUAL MODE PHONE

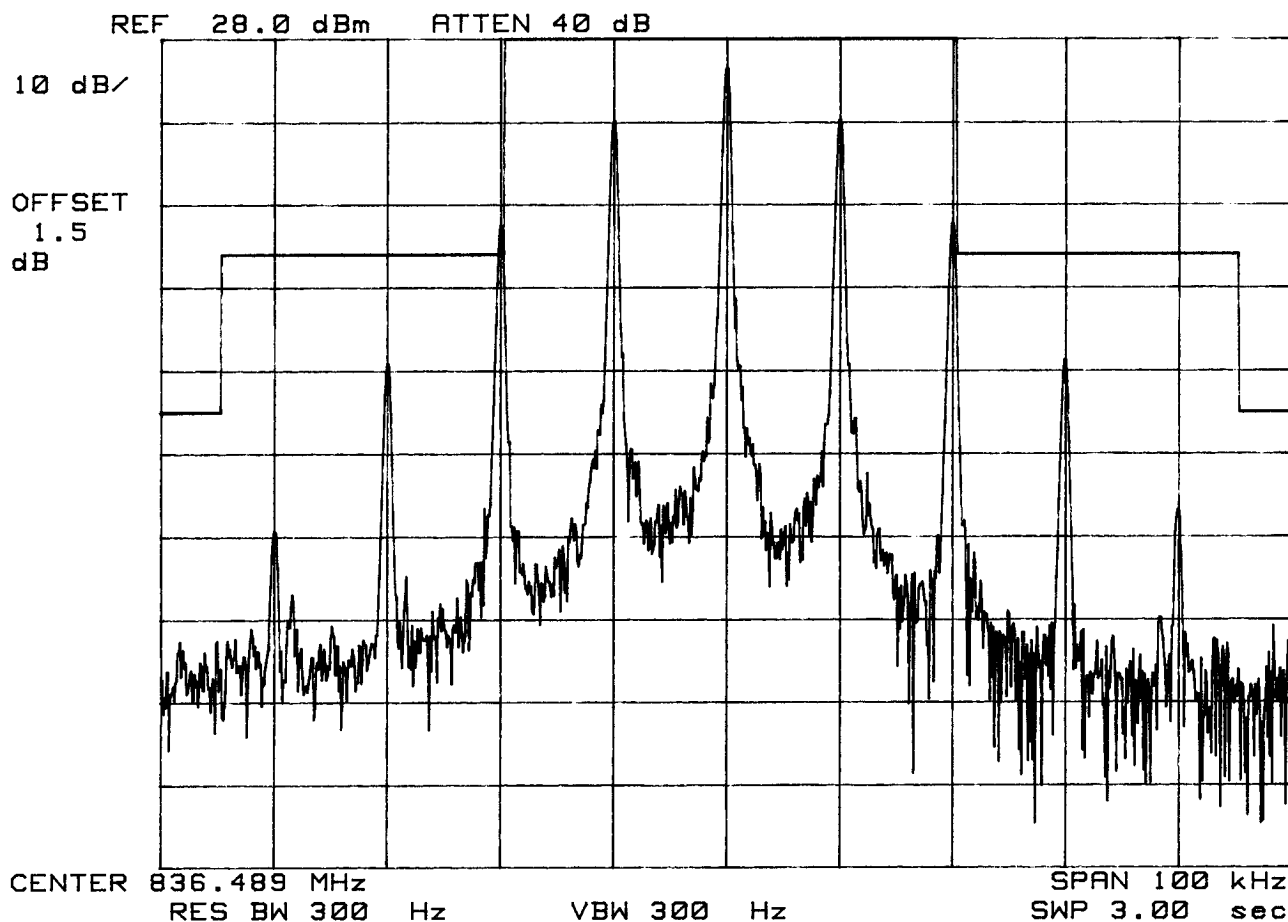
FM MODE

CHAN 383

Operating Frequency: 836.490 MHz

Output Power : 28.0 dBm

Test Mode:ST



PCTEST Engineering Lab.

SPECTRUM ANALYZER PRESENTATION

FCC ID:CKLHGC-300E

HYUNDAI DUAL MODE PHONE

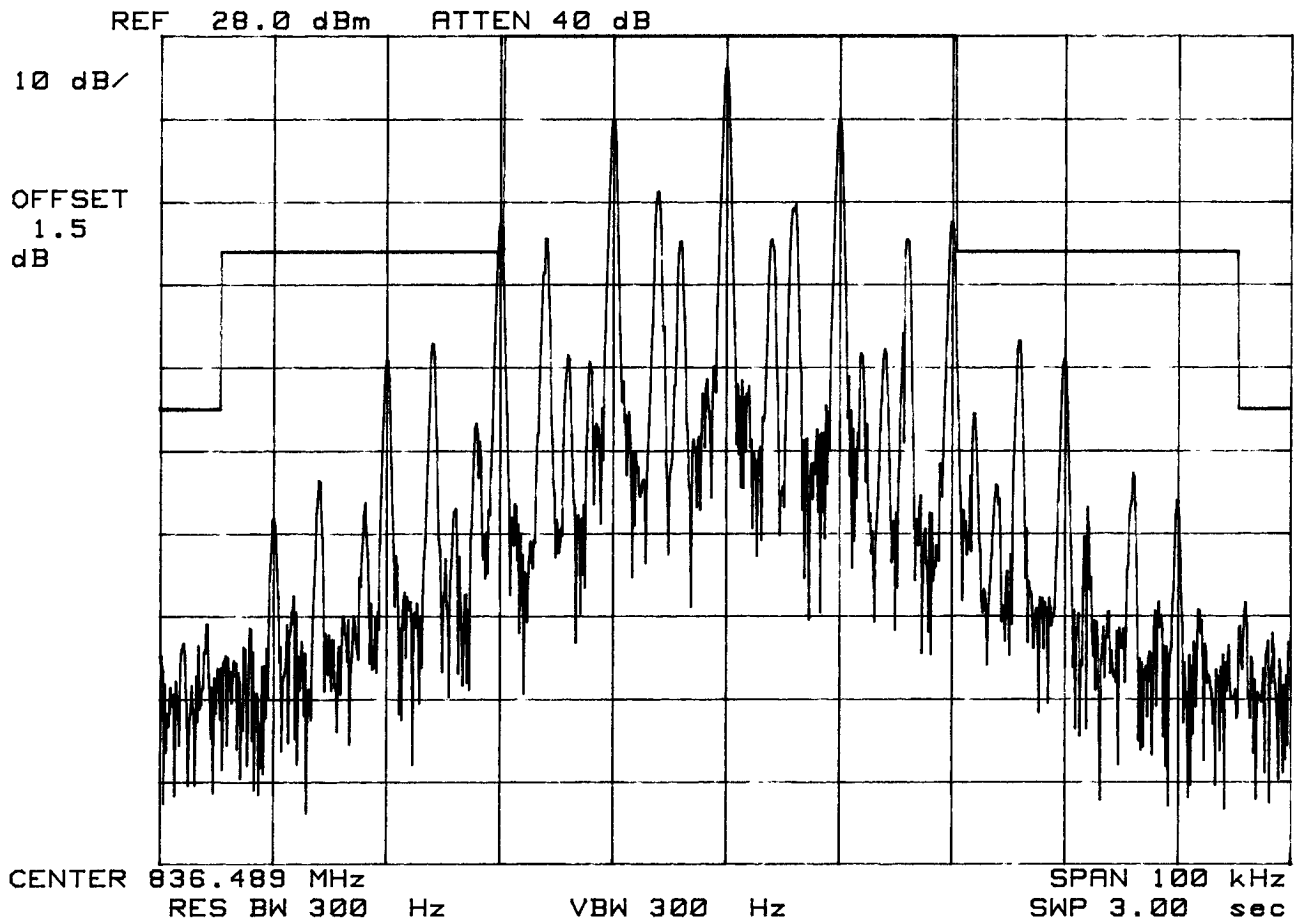
FM MODE

CHAN 383

Operating Frequency: 836.490 MHz

Output Power : 28.0 dBm

Test Mode:SAT + ST



PCTEST Engineering Lab.

SPECTRUM ANALYZER PRESENTATION

FCC ID:CKLHGC-300E

HYUNDAI DUAL MODE PHONE

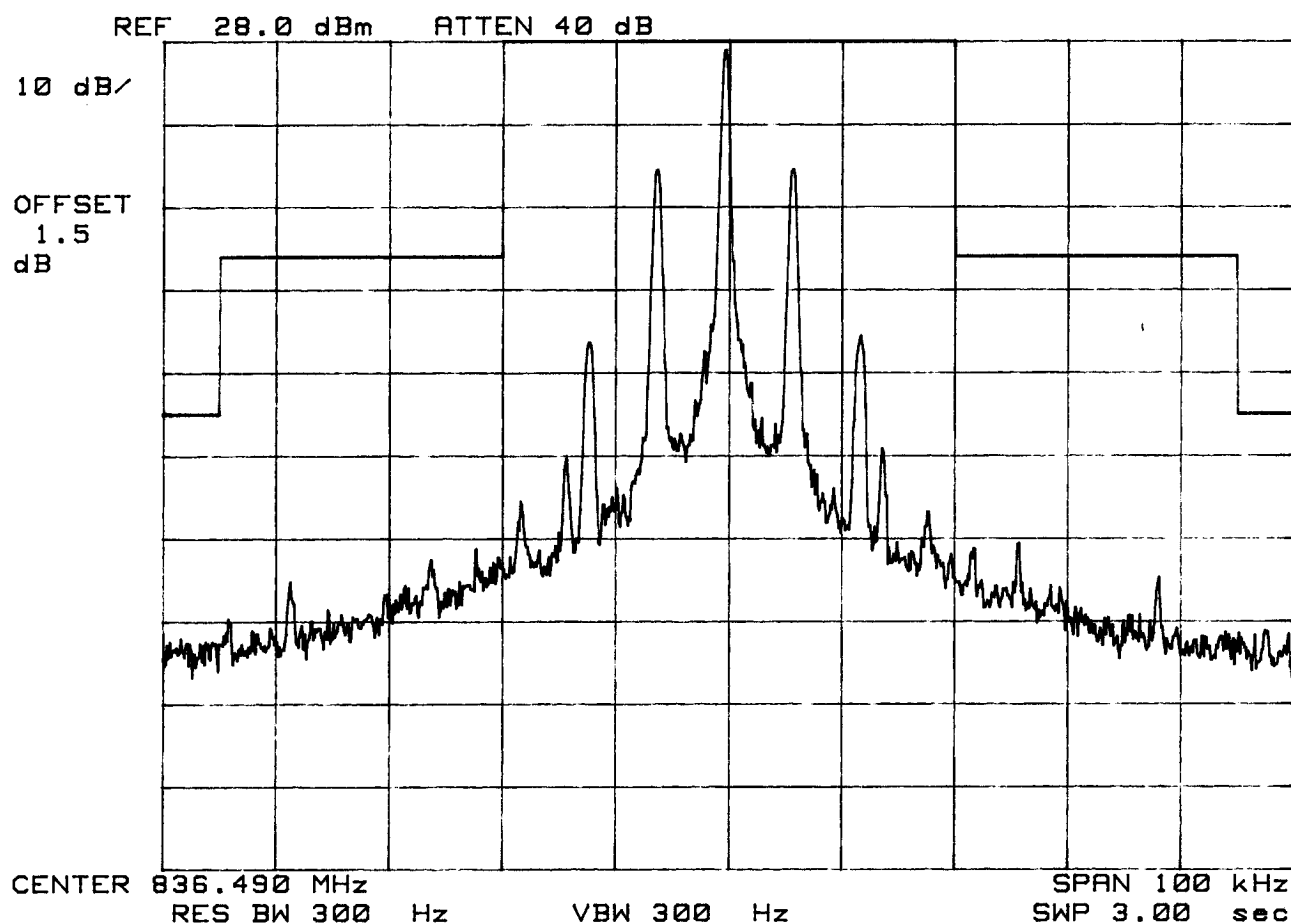
FM MODE

CHAN 383

Operating Frequency: 836.490 MHz

Output Power : 28.0 dBm

Test Mode:SAT



PCTEST Engineering Lab.

SPECTRUM ANALYZER PRESENTATION

FCC ID:CKLHGC-300E

HYUNDAI DUAL MODE PHONE

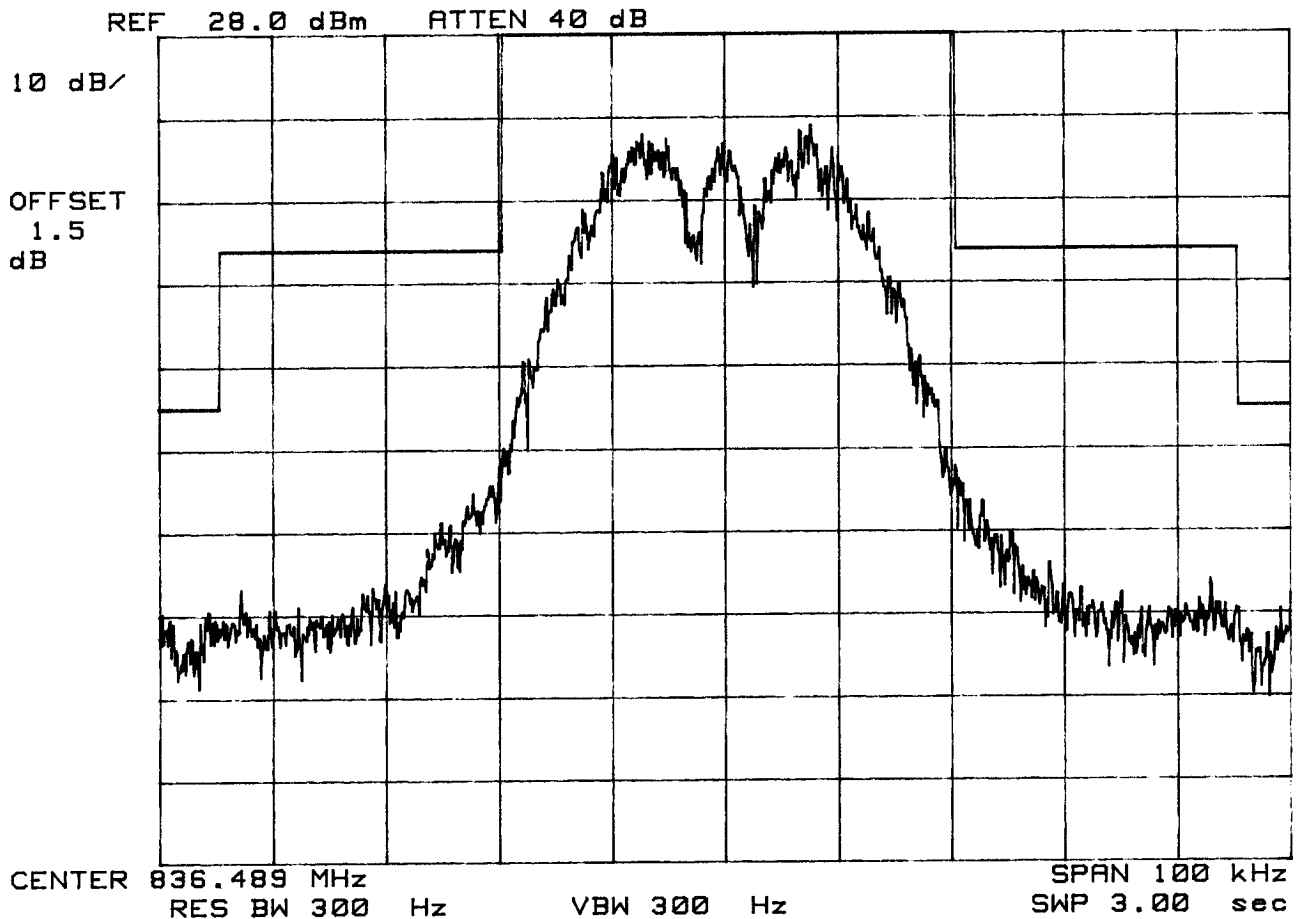
FM MODE

CHAN 383

Operating Frequency: 836.490 MHz

Output Power : 28.0 dBm

Test Mode:Voice



PCTEST Engineering Lab.

SPECTRUM ANALYZER PRESENTATION

FCC ID:CKLHGC-300E

HYUNDAI DUAL MODE PHONE

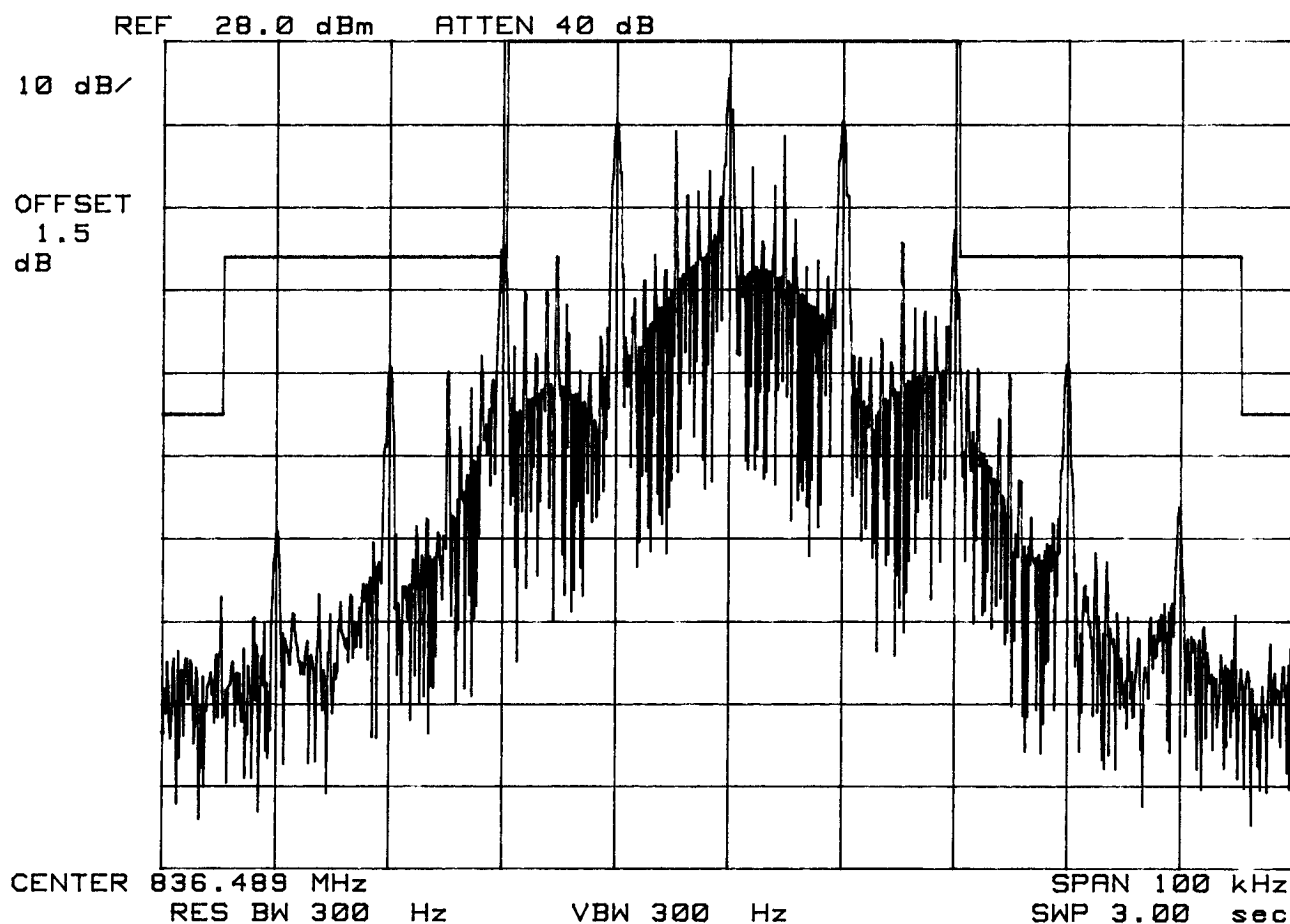
FM MODE

CHAN 383

Operating Frequency: 836.490 MHz

Output Power : 28.0 dBm

Test Mode:Wide Band Data



hp 13:32:26 Mar 15, 2000

FCC ID:CKLHGC-300E CON SPURS C-0383

Mkr1 1.601 GHz

Ref 28 dBm

Atten 40 dB

-30.96 dBm

Peak

Log

10

dB/

Offst

1.5

dB

DI

-13.0

dBm

V1 S2

S3 FC

AA

Start 20 MHz

*Res BW 1 MHz

VBW 1 MHz

Stop 2.5 GHz

Sweep 6.2 ms

Freq/Channel

Center Freq

1.26000000 GHz

Start Freq

20.0000000 MHz

Stop Freq

2.50000000 GHz

CF Step

248.000000 MHz

Auto Man

Freq Offset

0.00000000 Hz

Signal Track

On Off

hp 13:33:20 Mar 15, 2000

FCC ID:CKLHGC-300E CON SPURS C-0383

Mkr1 7.356 GHz

Ref 28 dBm

Atten 40 dB

-29.6 dBm

Peak

Log

10

dB/

Offst

1.5

dB

DI

-13.0

dBm

V1 S2

S3 FC

AA

Start 2.5 GHz

*Res BW 1 MHz

VBW 1 MHz

Stop 10 GHz

Sweep 18.75 ms

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

hp 13:59:13 Mar 15, 2000

FCC ID:CKLHGC-300E CON SPURS C-1013

Mkr1 1.576 GHz

Ref 25.8 dBm

Atten 35 dB

-33.04 dBm

Peak

Log

10

dB/

Offst

1.5

dB

DI

-13.0

dBm

V1 S2

S3 FC

AA

Start 20 MHz

*Res BW 1 MHz

VBW 1 MHz

Stop 2.5 GHz

Sweep 6.2 ms

Freq/Channel

Center Freq

1.26000000 GHz

Start Freq

20.0000000 MHz

Stop Freq

2.50000000 GHz

CF Step

248.000000 MHz

Auto Man

Freq Offset

0.00000000 Hz

Signal Track

On Off

hp 14:00:04 Mar 15, 2000

FCC ID:CKLHGC-300E CON SPURS C-1013

Mkr1 7.225 GHz

Ref 25.8 dBm

Atten 35 dB

-32.93 dBm

Peak

Log

10

dB/

Offst

1.5

dB

DI

-13.0

dBm

V1 S2

S3 FC

AA

Start 2.5 GHz

*Res BW 1 MHz

VBW 1 MHz

Stop 10 GHz

Sweep 18.75 ms

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

 07:34:54 Mar 16, 2000

Mkr1 1.570 GHz

Atten 35 dB

-33.94 dBm

Peak
Log
10
dB/
Offst
1.5
dB
DI
-13.0
dBm

V1	S2
S3	FC
	AA

#VBW 1 MHz

Stop 2.5 GHz
Sweep 6.2 ms

Freq/Channel	
1	144.000
2	144.010
3	144.020
4	144.030
5	144.040
6	144.050
7	144.060
8	144.070
9	144.080
10	144.090
11	144.100
12	144.110
13	144.120
14	144.130
15	144.140
16	144.150
17	144.160
18	144.170
19	144.180
20	144.190
21	144.200
22	144.210
23	144.220
24	144.230
25	144.240
26	144.250
27	144.260
28	144.270
29	144.280
30	144.290
31	144.300
32	144.310
33	144.320
34	144.330
35	144.340
36	144.350
37	144.360
38	144.370
39	144.380
40	144.390
41	144.400
42	144.410
43	144.420
44	144.430
45	144.440
46	144.450
47	144.460
48	144.470
49	144.480
50	144.490
51	144.500
52	144.510
53	144.520
54	144.530
55	144.540
56	144.550
57	144.560
58	144.570
59	144.580
60	144.590
61	144.600
62	144.610
63	144.620
64	144.630
65	144.640
66	144.650
67	144.660
68	144.670
69	144.680
70	144.690
71	144.700
72	144.710
73	144.720
74	144.730
75	144.740
76	144.750
77	144.760
78	144.770
79	144.780
80	144.790
81	144.800
82	144.810
83	144.820
84	144.830
85	144.840
86	144.850
87	144.860
88	144.870
89	144.880
90	144.890
91	144.900
92	144.910
93	144.920
94	144.930
95	144.940
96	144.950
97	144.960
98	144.970
99	144.980
100	144.990

Center Freq
1.26000000 GHz

Start Freq
20.0000000 MHz

Stop Freq
2.50000000 GHz

CF Step
849.000000 MHz
Auto Man

Freq Offset
0.00000000 Hz

Signal Track
On Off

hp 07:35:59 Mar 16, 2000

Mkr1 7.356 GHz

Atten 35 dB

-33.2 dBm

Peak
Log
10
dB/
Offst
1.5
dB
DI
-13.6
dBm

V1 S2
S3 FO
AA

#VBH 1 MHz

Stop 10 GHz
Sweep 18.75 ms

Freq/Channel	
1	12.5
2	12.5
3	12.5
4	12.5
5	12.5
6	12.5
7	12.5
8	12.5
9	12.5
10	12.5
11	12.5
12	12.5
13	12.5
14	12.5
15	12.5
16	12.5
17	12.5
18	12.5
19	12.5
20	12.5
21	12.5
22	12.5
23	12.5
24	12.5
25	12.5
26	12.5
27	12.5
28	12.5
29	12.5
30	12.5
31	12.5
32	12.5
33	12.5
34	12.5
35	12.5
36	12.5
37	12.5
38	12.5
39	12.5
40	12.5
41	12.5
42	12.5
43	12.5
44	12.5
45	12.5
46	12.5
47	12.5
48	12.5
49	12.5
50	12.5
51	12.5
52	12.5
53	12.5
54	12.5
55	12.5
56	12.5
57	12.5
58	12.5
59	12.5
60	12.5
61	12.5
62	12.5
63	12.5
64	12.5
65	12.5
66	12.5
67	12.5
68	12.5
69	12.5
70	12.5
71	12.5
72	12.5
73	12.5
74	12.5
75	12.5
76	12.5
77	12.5
78	12.5
79	12.5
80	12.5
81	12.5
82	12.5
83	12.5
84	12.5
85	12.5
86	12.5
87	12.5
88	12.5
89	12.5
90	12.5
91	12.5
92	12.5
93	12.5
94	12.5
95	12.5
96	12.5
97	12.5
98	12.5
99	12.5
100	12.5

Center Freq
6.25000000 GHz

Start Freq
2.50000000 GHz

Stop Freq
10.0000000 GHz

CF Step
849.000000 MHz
Auto Man

Freq Offset
0.00000000 Hz

Signal Track

hp 07:30:40 Mar 16, 2000

FCC ID: CKLHGC-300E CON SPURS C-0777

Ref 25.8 dBm Atten 35 dB

Peak

Log

10

dB/

Offst

1.5

dB

DI

-13.0

dBm

V1 S2

S3 FC

AA

Start 10 MHz

*Res BW 1 MHz

*VBW 1 MHz

Stop 2.5 GHz

Sweep 6.225 ms

Display

Full Screen>

Display Line

-13.00 dBm

On

Off

Limits>

Title>

Preferences>

hp 07:31:28 Mar 16, 2000

FCC ID: CKLHGC-300E CON SPURS C-0777

Ref 25.8 dBm Atten 35 dB

Mkr1 7.188 GHz

-32.57 dBm

Peak

Log

10

dB/

Offst

1.5

dB

DI

-13.0

dBm

V1 S2

S3 FC

AA

Start 2.5 GHz

*Res BW 1 MHz

*VBW 1 MHz

Stop 10 GHz

Sweep 18.75 ms

Freq/Channel

Center Freq

6.25000000 GHz

Start Freq

2.50000000 GHz

Stop Freq

10.00000000 GHz

CF Step

849.000000 MHz

Auto

Man

Freq Offset

0.00000000 Hz

Signal Track

On

Off

hp 06:59:16 Mar 16, 2000

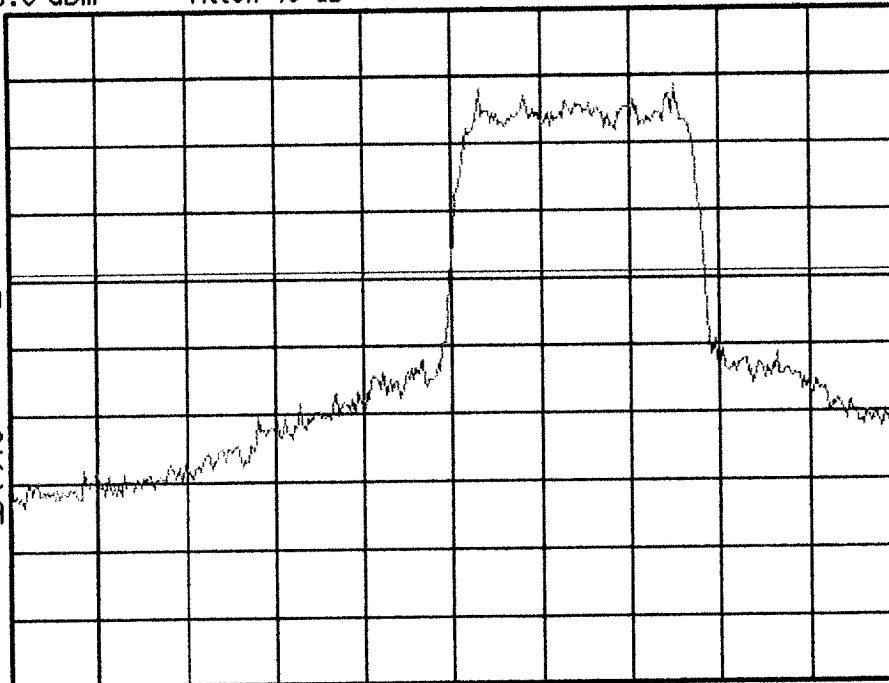
FCC ID: CKLHGC-300E BAND EDGE C-1013

Ref 25.8 dBm Atten 40 dB

Peak
Log
10
dB/

DI
-13.0
dBm

V1 S2
S3 FC
AA



Center 824 MHz

Res BW 30 kHz

VBW 30 kHz

Span 5 MHz

Sweep 13.89 ms

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

hp 07:03:44 Mar 16, 2000

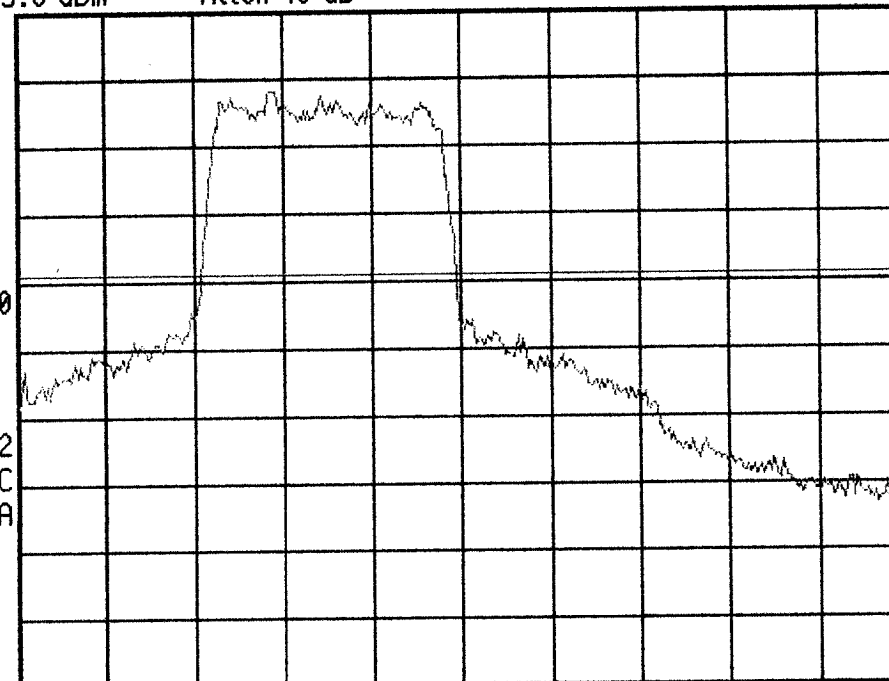
FCC ID: CKLHGC-300E BAND EDGE C-777

Ref 25.8 dBm Atten 40 dB

Peak
Log
10
dB/

DI
-13.0
dBm

V1 S2
S3 FC
AA



Center 849 MHz

Res BW 30 kHz

VBW 30 kHz

Span 5 MHz

Sweep 13.89 ms

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



07:08:32 Mar 16, 2000

FCC ID: CKLHGC-300E BAND EDGE C-777

Ref 25.8 dBm

Atten 35 dB

Peak

Log

10

dB/

Offst

1.5

dB

DI

-13.0

dBm

V1 S2

S3 FC

AA

Center 849 MHz

*Res BW 30 kHz

*VBW 30 kHz

Span 5 MHz

Sweep 13.89 ms

Trace

Trace

1

2

3

Clear Write

Max Hold

Min Hold

View

Blank

More

1 of 2



07:12:53 Mar 16, 2000

FCC ID: CKLHGC-300E BAND EDGE C-1013

Ref 25.8 dBm

Atten 35 dB

Peak

Log

10

dB/

Offst

1.5

dB

DI

-13.0

dBm

V1 S2

S3 FC

AA

Center 824 MHz

*Res BW 30 kHz

*VBW 30 kHz

Span 5 MHz

Sweep 13.89 ms

Freq/Channel

Center Freq

824.000000 MHz

Start Freq

821.500000 MHz

Stop Freq

826.500000 MHz

CF Step

849.000000 MHz

Auto Man

Freq Offset

0.00000000 Hz

Signal Track

On Off

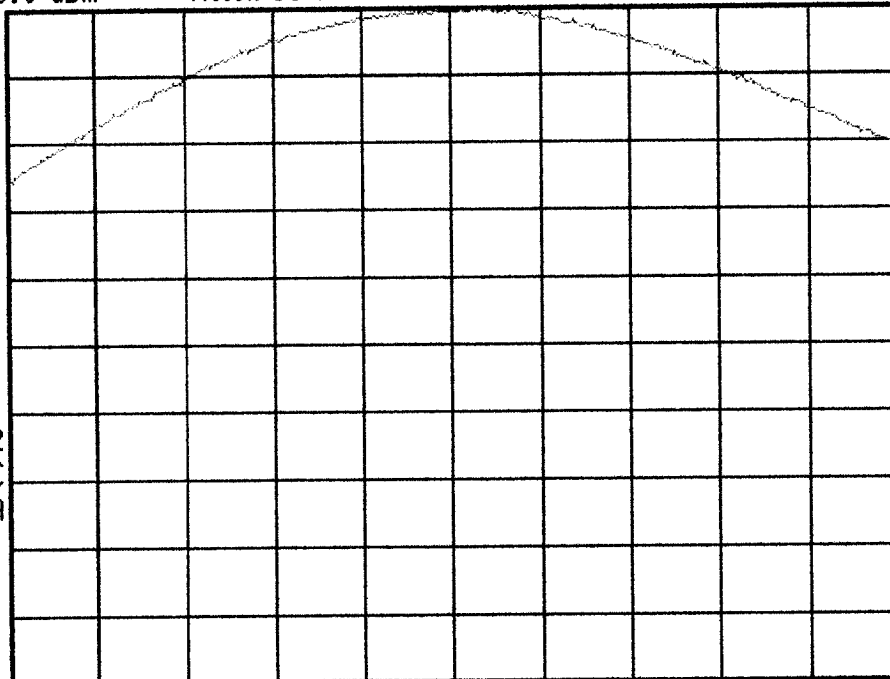
hp 07:16:26 Mar 16, 2000

FCC ID: CKLHGC-300E PWR OUT C-1013

Ref 25.8 dBm Atten 35 dB

Peak
Log
10
dB/
Offst
1.5
dB

V1 S2
S3 FC
AA



Center 824.7 MHz

*Res BW 3 MHz

*VBW 3 MHz

Span 10 MHz

Sweep 5 ms

Trace

Trace

1 2 3

Clear Write

Max Hold

Min Hold

View

Blank

More

1 of 2

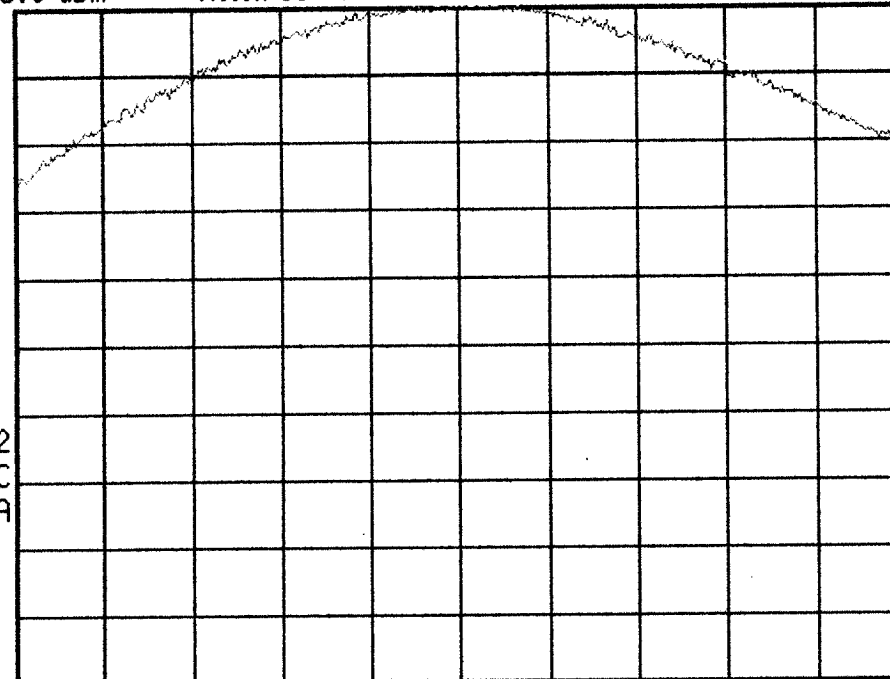
hp 07:19:35 Mar 16, 2000

FCC ID: CKLHGC-300E PWR OUT C-0363

Ref 25.8 dBm Atten 35 dB

Peak
Log
10
dB/
Offst
1.5
dB

V1 S2
S3 FC
AA



Center 835.9 MHz

*Res BW 3 MHz

*VBW 3 MHz

Span 10 MHz

Sweep 5 ms

Freq/Channel

Center Freq

835.890000 MHz

Start Freq

830.890000 MHz

Stop Freq

840.890000 MHz

CF Step

849.000000 MHz

Auto Man

Freq Offset

0.00000000 Hz

Signal Track

On Off

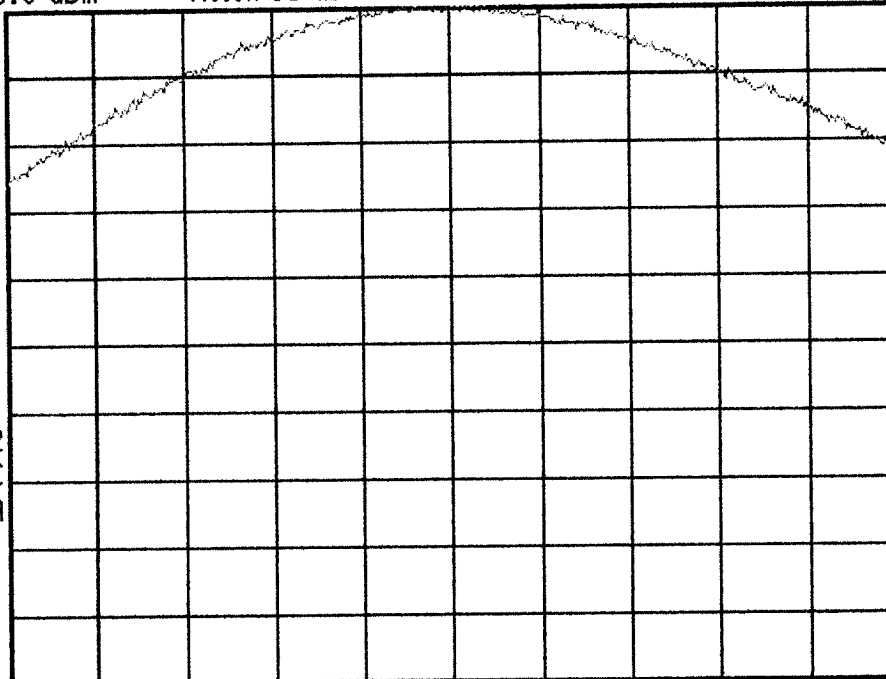
hp 07:21:53 Mar 16, 2000

FCC ID: CKLHGC-300E PWR OUT C-0363

Ref 25.8 dBm Atten 35 dB

Peak
Log
10
dB/
Offst
1.5
dB

V1 S2
S3 FC
AA



Center 848.3 MHz

*Res BW 3 MHz

*VBW 3 MHz

Span 10 MHz

Sweep 5 ms

Freq/Channel

Center Freq
848.310000 MHz

Start Freq
843.310000 MHz

Stop Freq
853.310000 MHz

CF Step
849.000000 MHz
Auto Man

Freq Offset
0.00000000 Hz

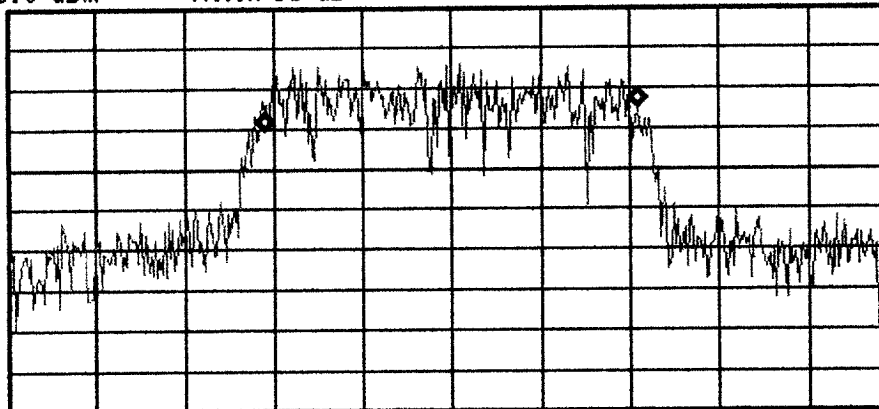
Signal Track
On Off

hp 07:25:25 Mar 16, 2000

FCC ID: CKLHGC-300E 99% BW C -0777

Ref 25.8 dBm Atten 35 dB

Samp
Log
10
dB/
Offst
1.5
dB



Center 848.3 MHz

*Res BW 30 kHz

*VBW 300 kHz

Span 3 MHz

Sweep 9.167 ms

Freq/Channel

Center Freq
848.310000 MHz

Start Freq
846.810000 MHz

Stop Freq
849.810000 MHz

CF Step
849.000000 MHz
Auto Man

Freq Offset
0.00000000 Hz

Signal Track
On Off

Occupied Bandwidth Results (idle)

Occupied Bandwidth

1.252 MHz

Occ BW % Pwr 99.00 %

Transmit Freq Error -7.083 kHz

hp FCC ID CKLHGC-300E RX

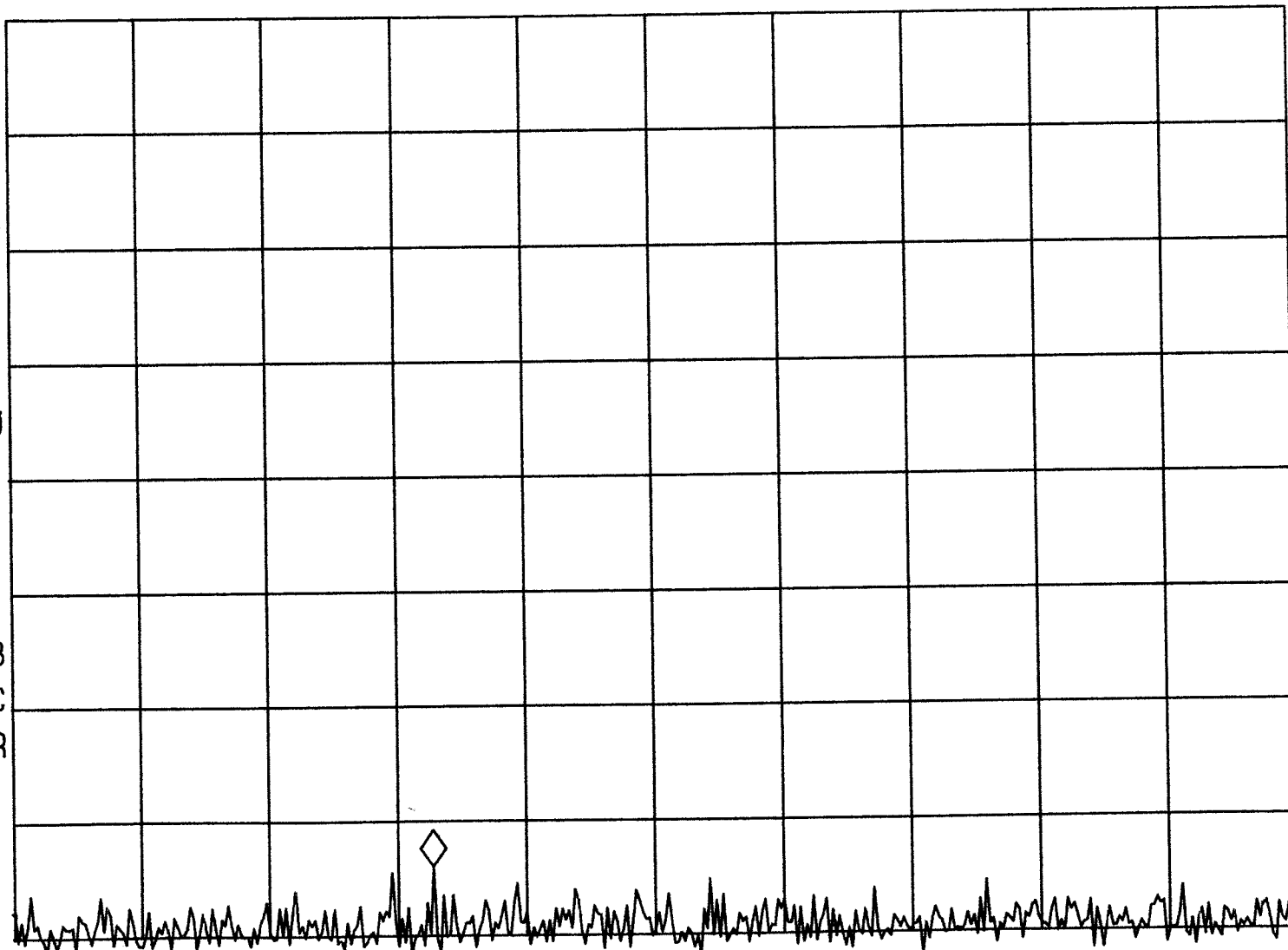
MKR 877.19 MHz

REF -60.0 dBm ATTEN 10 dB PG 26.0 dB

-96.98 dBm

PEAK
LOG
5
dB/
OFFST
6.0
dB
DL
-80.0
dBm

VA SB
SC FC
CORR



START 869.00 MHz

STOP 894.00 MHz

#RES BW 100 kHz

#VBW 300 kHz

#SWP 100 msec