

APPLICANT: MOTOROLA

TRANSCEIVER TYPE: IHET6YZ1

SC4812ET @1.9 GHz CDMA BTS

TEST REPORT EXHIBIT

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B	Modulation Characteristics
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F	Frequency Stability



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Cellular Infrastructure Group

FCC ID: IHET6YZ1

SECTION A

**SUMMARY OF RF
MEASUREMENTS**

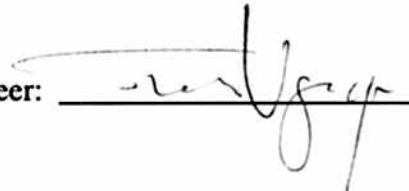
APPLICANT: MOTOROLA

TRANSCEIVER TYPE: IHET6YZ1

Summary of Conducted RF Measurements

SPUR LEVEL MEASURED (dBm)	FREQUENCY (GHz)	SPUR LEVEL SPEC (dBm Max)
-22.51	19.8875	-13.0

Engineer: _____

 12/16/98

Date

APPLICANT: MOTOROLA

TRANSCEIVER TYPE: IHET6YR1

Summary of Radiated RF Measurements

WORST TRANSMIT RADIATED RF SPUR LEVEL FOR SC4812ET @1.9 GHz BTS

SPUR FREQUENCY (GHz)	DISTANCE MEASURED (meters)	SPUR LEVEL MEASURED (dB μ V/meter)	SPUR LEVEL MEASURED (dBm)	FCC MAX LIMIT dBm
3.862	3	69.95	-25.28	-13

FCC Max. Limit Per 47 CFR 22.917:

“ =Transmitted Power (10 Log₁₀ (P_{watt})) - (43 + 10 Log₁₀ (P_{watt}))dBW

“ =10 Log₁₀ (P_{watt}) - (43 + 10 Log₁₀ (P_{watt}))dBW

“ =-43 dBW

“ =-13 dBm

Engineer: Sam J. Collins

12-15-98

Date



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FCC ID: IHET6YZ1

SECTION B

**MODULATION
CHARACTERISTICS**



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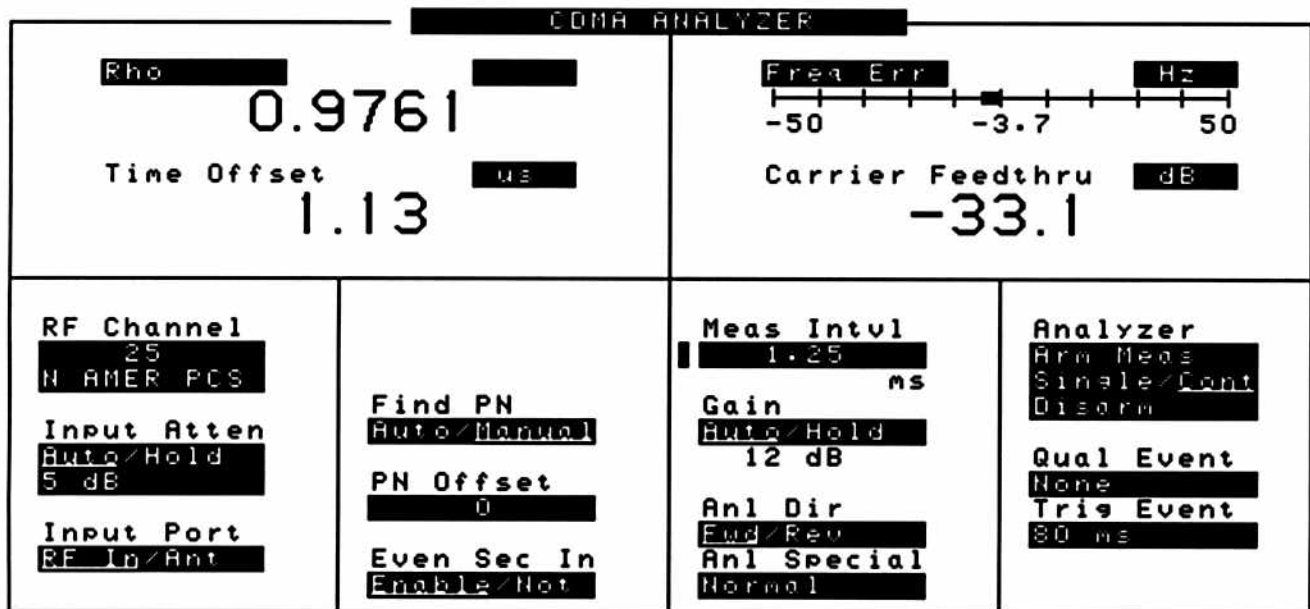
Cellular Infrastructure Group

SECTION B

FCC ID: IHET6YZ1

MODULATION CHARACTERISTICS

Maximum Power



Channel 25
Maximum Power

IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

CDMA ANALYZER			
Rho 0.9742		Frea Err -50 -0.2 50 Carrier Feedthru -27.8	
Time Offset 1.09 us			
RF Channel 1175 N AMER PCS	Find PN Auto/Manual	Meas Intvl 1.25 ms	Analyzer Arr Meas Single/Cont Disarm
Input Atten Auto/Hold 5 dB	PN Offset 20	Gain Auto/Hold 12 dB	Qual Event None
Input Port RF In/Ant	Even Sec In Enable/Not	Anl Dir End/Rep	Trig Event 30 ns
		Anl Special Normal	

Channel 1175
Maximum Power

IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS



MOTOROLA

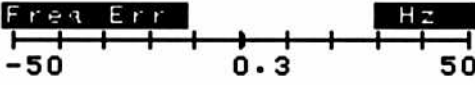
Cellular Infrastructure Group

SECTION B

FCC ID: IHET6YZ1

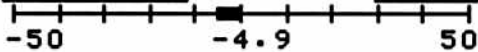
MODULATION CHARACTERISTICS

Minimum Power

CDMA ANALYZER			
Rho 0.9751 Time Offset 1.13 μ s		Freq Err  Carrier Feedthru -32.8 dB	
RF Channel 25 N AMER PCS Input Atten Auto/Hold 5 dB Input Port RF In/Ant	Find PN Auto/Manual PN Offset 0 Even Sec In Enable/Not	Meas Intvl 1.25 ns Gain Auto/Hold 12 dB Anl Dir End/Rev Anl Special Normal	Analyzer Arr Meas Single/Cont Disarm Qual Event None Trig Event 80 ns

Channel 25
Minimum Power

IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

CDMA ANALYZER			
Rho ████████ <div style="text-align: center; font-size: 24pt;">0.9739</div> Time Offset ██ US <div style="text-align: center; font-size: 24pt;">1.09</div>		<div style="text-align: center;"> Freq Err Hz  </div> Carrier Feedthru ██ dB <div style="text-align: center; font-size: 24pt;">-28.3</div>	
RF Channel 1175 N AMER PCS Input Atten Auto/Hold 0 dB Input Port RF In/Ant	Find PN Auto/Manual PN Offset 20 Even Sec In Enable/Not	Meas Intvl 1.25 ms Gain Auto/Hold 18 dB Anl Dir End/Rev Anl Special Normal	Analyzer Arr Meas Single/Cont Disorb Qual Event None Trig Event 80 ms

Channel 1175
Minimum Power

IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS



MOTOROLA

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FCC ID: IHET6YZ1

SECTION C

**SPURIOUS & HARMONIC
EMISSIONS RADIATED**

APPLICANT: MOTOROLA

TRANSCEIVER TYPE: IHET6YZ1

Radiated RF Measurements

WORST RADIATED RF SPUR LEVEL FOR SC4812ET @1.9 GHz

TRANSMIT CHANNEL	SPUR FREQUENCY (GHz)	MEASURED SIGNAL LEVEL dBuV/meter	MEASURED Signal Level (dBm)	FCC, Part 24 MAX LIMIT (dBm)
25V	3.862	69.95	-25.28	-13
25H	3.862	61.61	-33.62	-13
1175V	3.977	62.97	-32.26	-13
1175H	3.977	61.50	-33.73	-13

Converting dBuV/meter to dBm when Part 24 is done at 3 meters.

1. $(\text{dBuV/M} / 20) * (\text{Inverse Log}) = \text{uV/M}$

2. $\text{Log}(\text{uV/M} / 57735) * 20 = \text{dBm}$

Example 69.95 dBuV/m to dBm

$(69.95 \text{ dBuV/m} / 20) * (\text{Inverse Log}) = 3143.54 \text{ uV/M}$

$\text{Log}(6638.96 \text{ uV/m} / 57735) * 20 = -25.28 \text{ dBm}$

If the test is done at 10 meters, the first formula would remain the same. The 2nd is as follows

$\text{Log}[(\text{uV/m} * 1 / (3 * 57735) / 10)] * 20 \text{ dBm}$

Engineer: Sam J. Collins

12-15-98

Date



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FCC ID: IHET6YZ1

SECTION D

SPURIOUS & HARMONIC EMISSIONS CONDUCTED

NOTE: The plots for conducted spurious and harmonic emissions are measured in peak mode. The higher (than 40.0 watts) levels measured in peak mode are expected, due to typical CDMA peak to average performance. The average power level was set to 40.0 watts using an HP438A power meter.



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SPURIOUS & HARMONIC EMISSIONS CONDUCTED

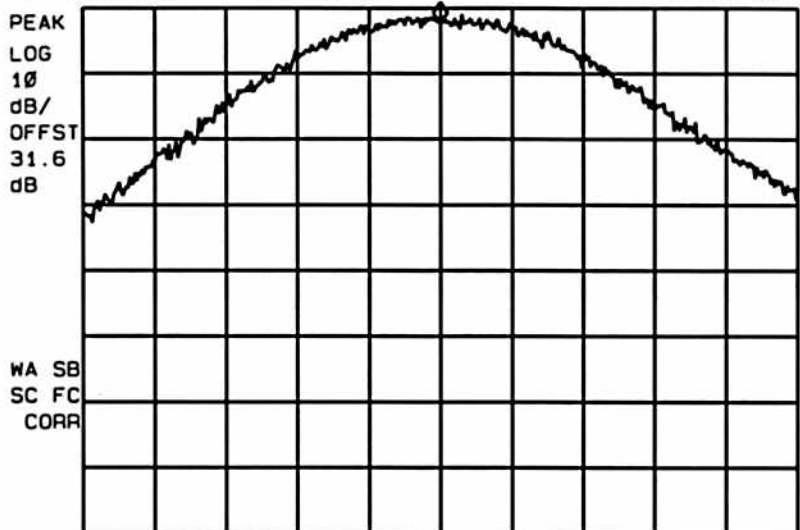
CDMA Transmitter Channel 25

Maximum Power

**Channel 25
Maximum Power**

10:12:32 DEC 16, 1998

MKR 1.931250 GHz
REF 52.0 dBm #AT 40 dB 49.67 dBm



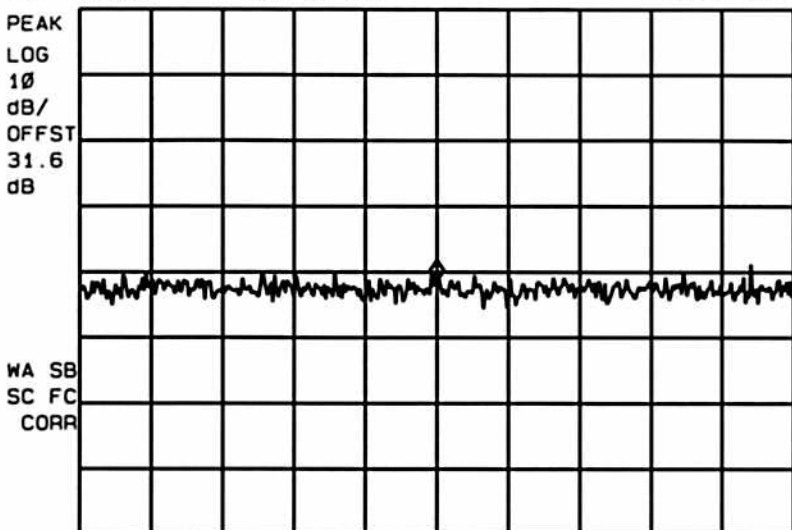
CENTER 1.931250 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

**IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS**

btsate
12-16-98
11:25:12

10:18:20 DEC 16, 1998

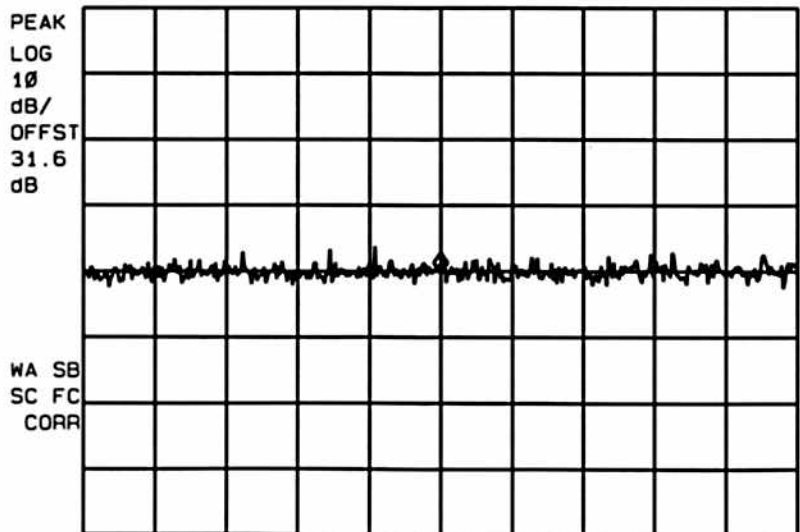
MKR 965.625 MHz
REF .0 dBm #AT 10 dB -41.37 dBm



CENTER 965.625 MHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

10:20:30 DEC 16, 1998

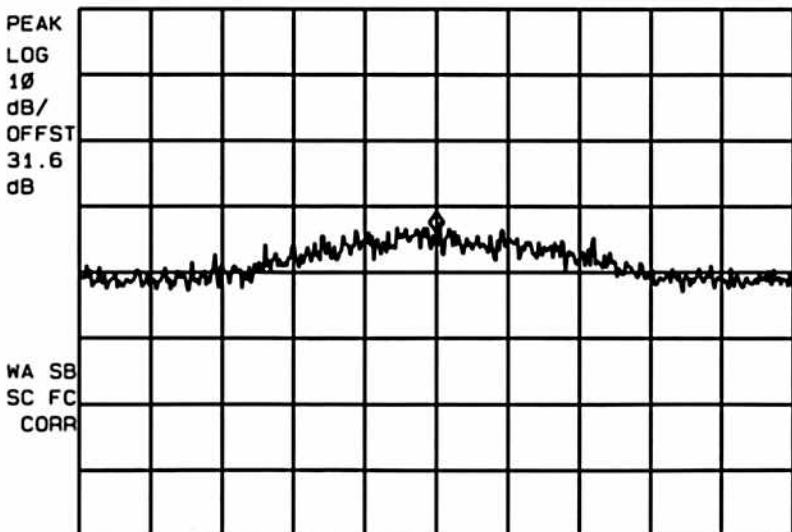
MKR 2.896875 GHz
REF .0 dBm #AT 10 dB -40.34 dBm



CENTER 2.896875 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

10:22:08 DEC 16, 1998

MKR 3.862500 GHz
REF .0 dBm #AT 10 dB -34.02 dBm

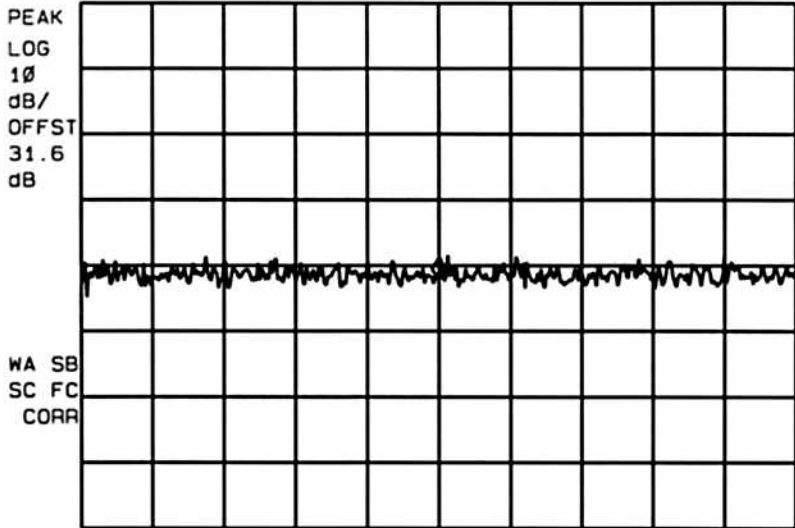


CENTER 3.862500 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

Channel 25
Maximum Power

10:25:24 DEC 16, 1998

MKR 4.828125 GHz
REF 0 dBm #AT 10 dB -42.08 dBm



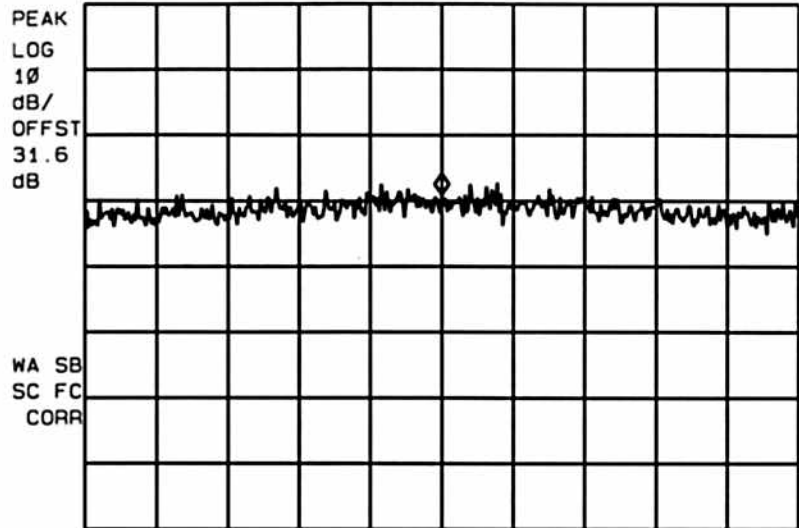
CENTER 4.828125 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

btsate
12-16-98
11:38:48

10:34:18 DEC 16, 1998

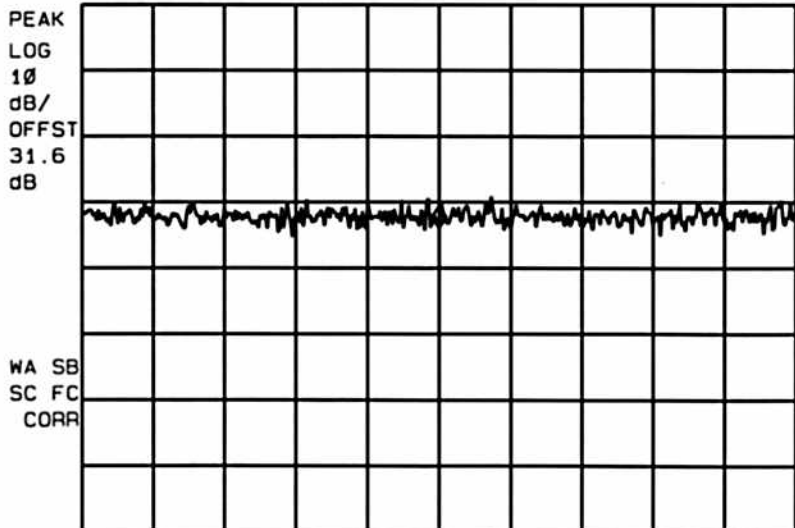
MKR 5.793750 GHz
REF -1.0 dBm #AT 10 dB -30.05 dBm



CENTER 5.793750 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

10:35:29 DEC 16, 1998

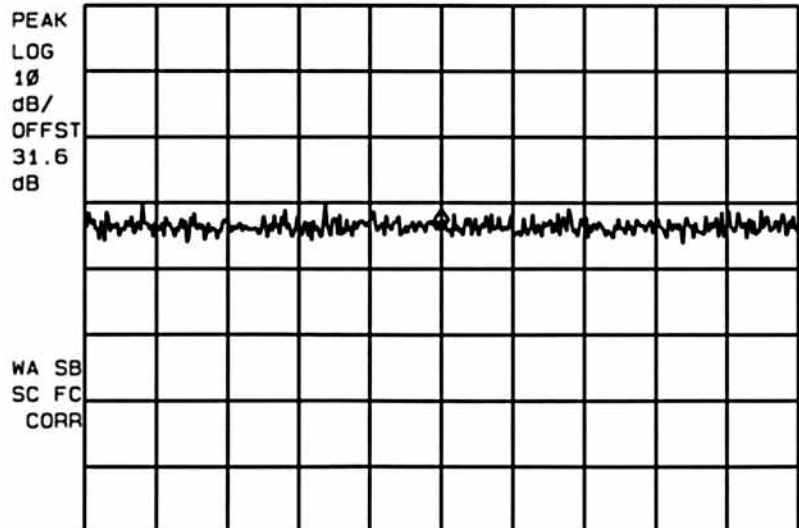
MKR 6.759375 GHz
REF -1.0 dBm #AT 10 dB -34.85 dBm



CENTER 6.759375 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

10:35:44 DEC 16, 1998

MKR 7.725000 GHz
REF -1.0 dBm #AT 10 dB -35.18 dBm

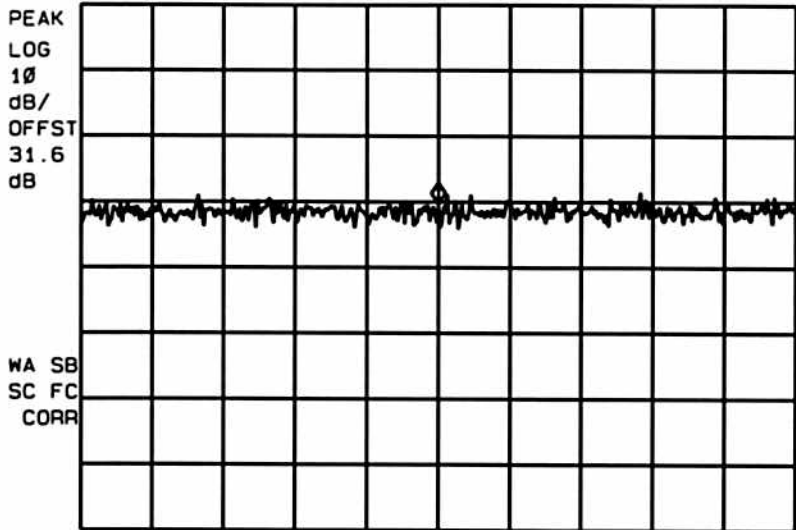


CENTER 7.725000 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

Channel 25
Maximum Power

10:35:56 DEC 16, 1998

REF -1.0 dBm #AT 10 dB MKR 8.690625 GHz
-31.30 dBm



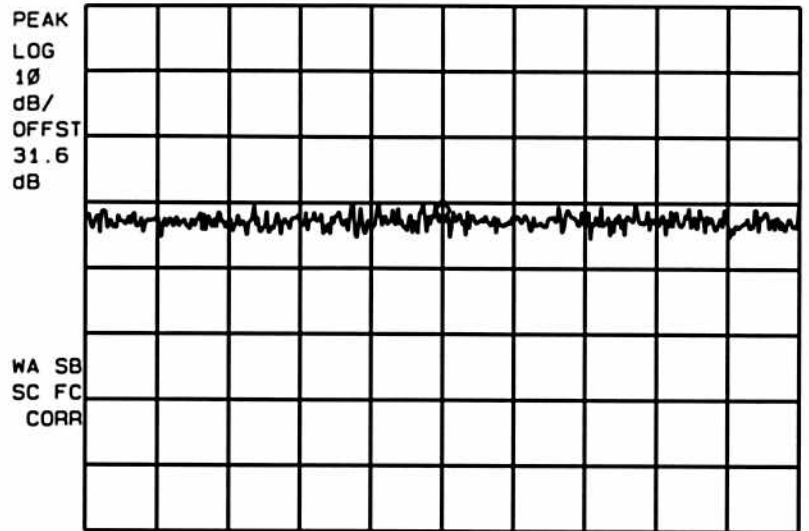
CENTER 8.690625 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

btsate
12-16-98
11:39:59

10:36:13 DEC 16, 1998

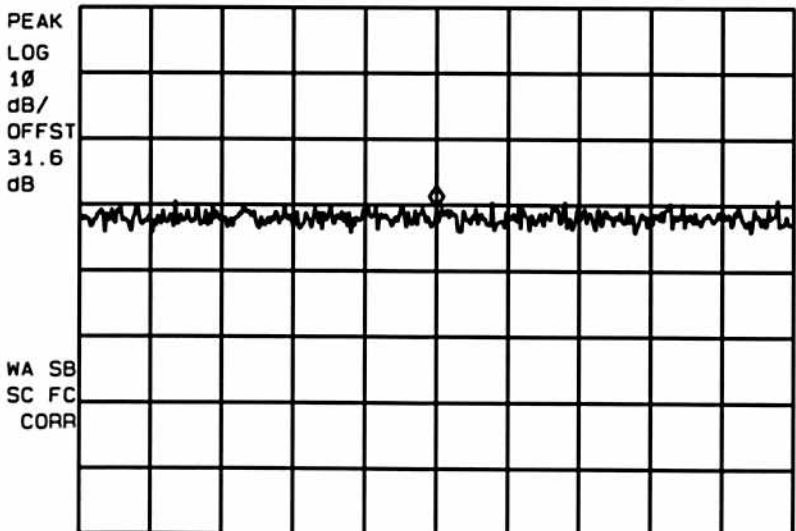
REF -1.0 dBm #AT 10 dB MKR 9.656250 GHz
-33.73 dBm



CENTER 9.656250 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

10:36:31 DEC 16, 1998

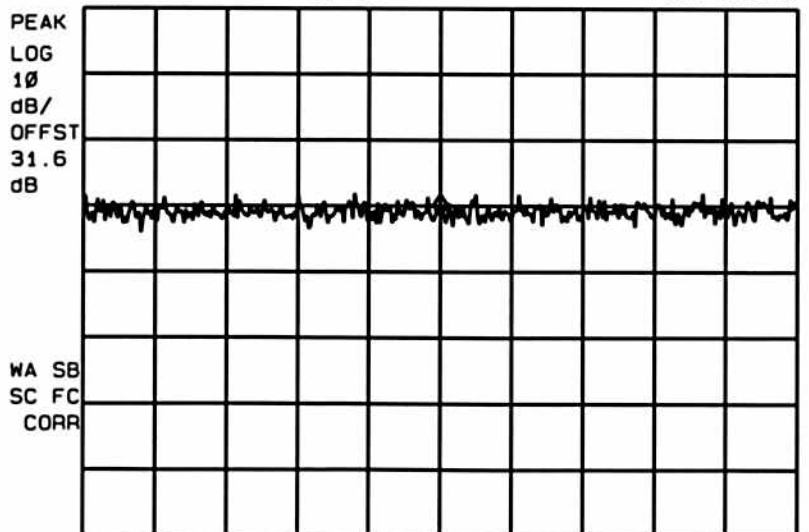
REF -1.0 dBm #AT 10 dB MKR 10.621875 GHz
-31.33 dBm



CENTER 10.621875 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

10:36:55 DEC 16, 1998

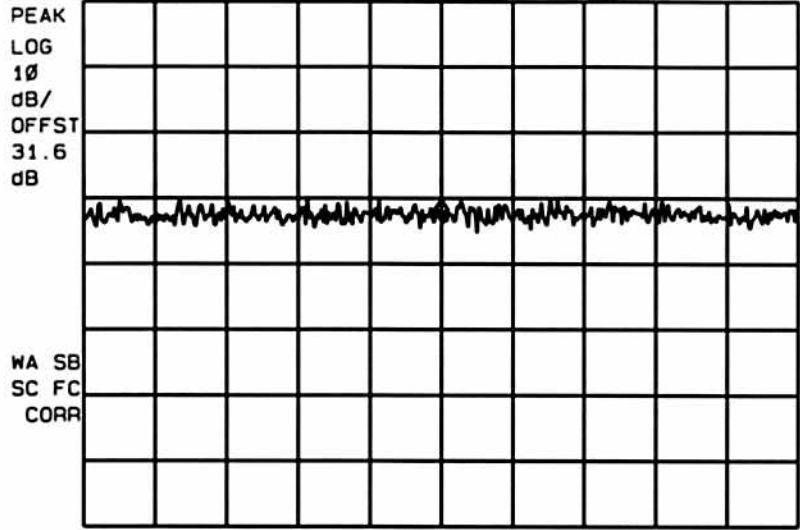
REF -1.0 dBm #AT 10 dB MKR 11.587500 GHz
-32.48 dBm



CENTER 11.587500 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

Channel 25
Maximum Power

10:37:25 DEC 16, 1998
MKR 12.553125 GHz
REF -1.0 dBm #AT 10 dB -34.44 dBm

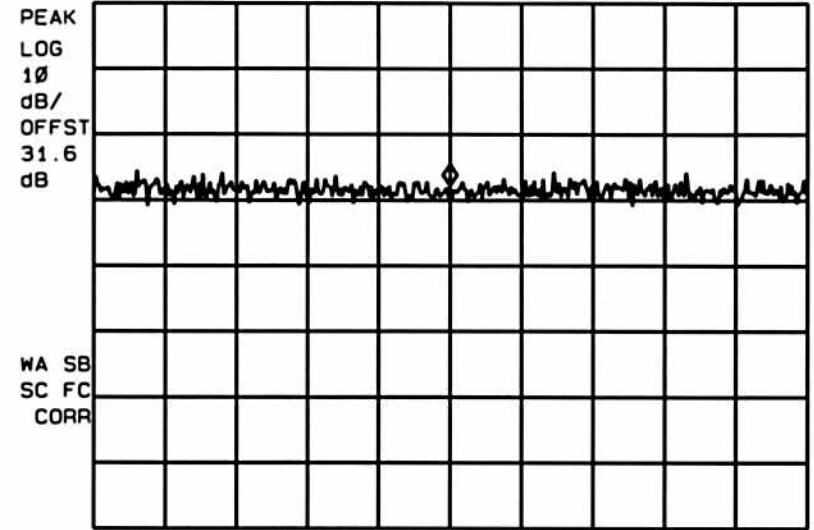


CENTER 12.553125 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

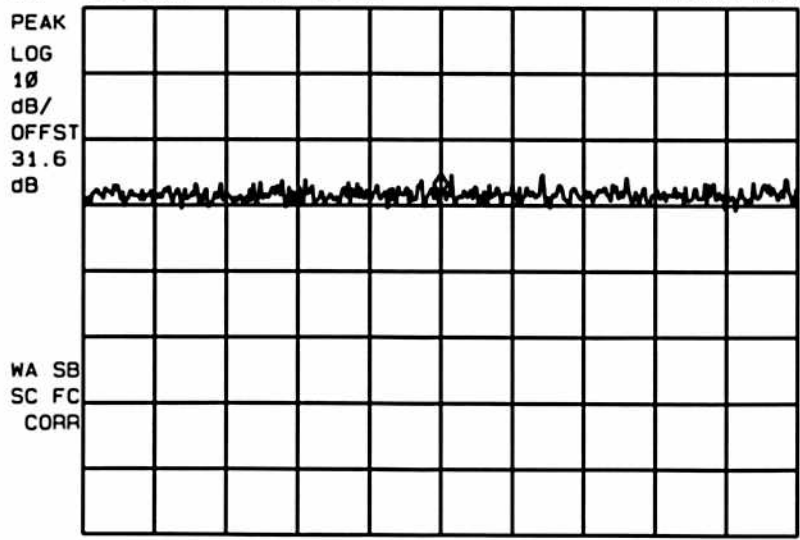
btsate
12-16-98
11:41:01

10:37:37 DEC 16, 1998
MKR 13.518750 GHz
REF -1.0 dBm #AT 10 dB -28.76 dBm



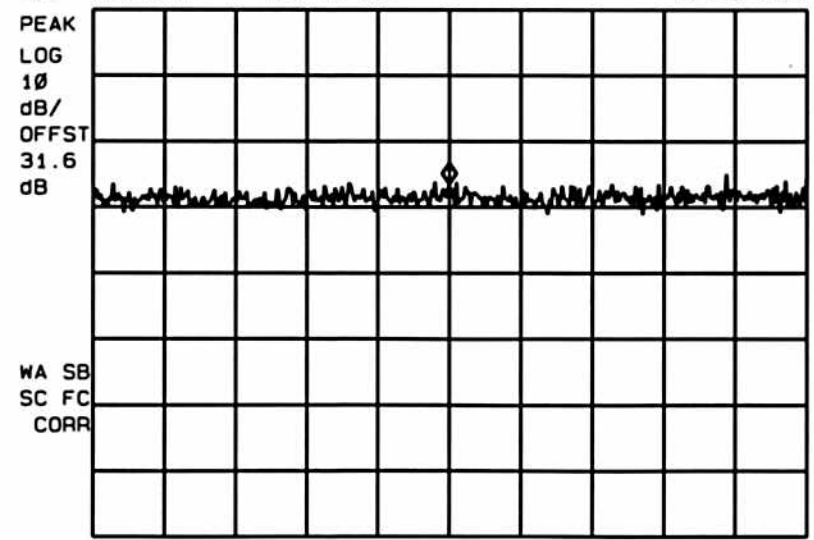
CENTER 13.518750 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

10:37:48 DEC 16, 1998
MKR 14.484375 GHz
REF -1.0 dBm #AT 10 dB -29.38 dBm



CENTER 14.484375 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

10:37:57 DEC 16, 1998
MKR 15.450000 GHz
REF -1.0 dBm #AT 10 dB -27.50 dBm

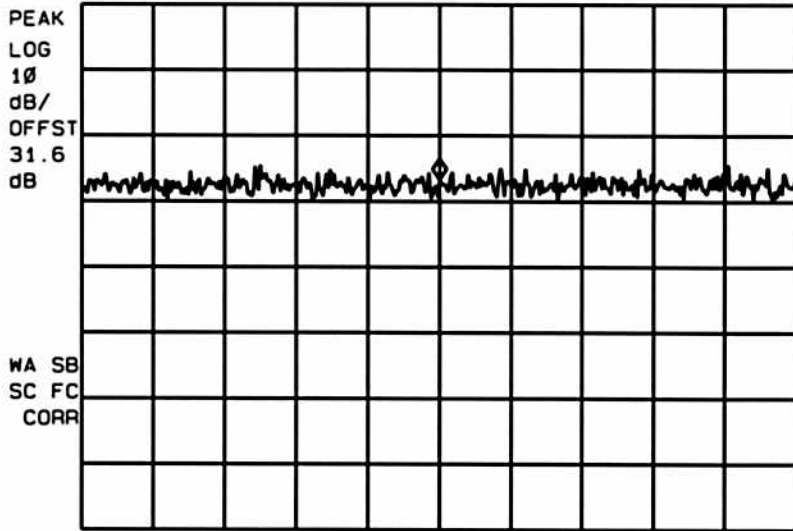


CENTER 15.450000 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

Channel 25
Maximum Power

10:38:26 DEC 16, 1998

REF -1.0 dBm #AT 10 dB MKR 16.415625 GHz
-27.70 dBm



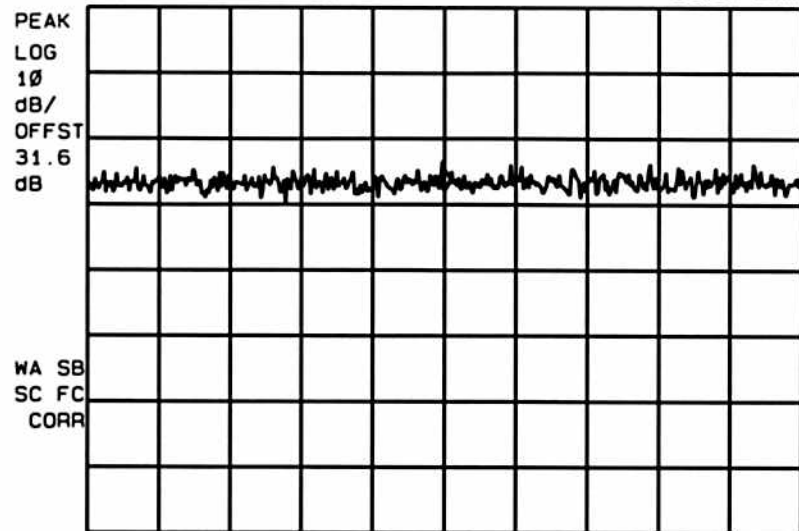
CENTER 16.415625 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

btsate
12-16-98
11:42:13

10:38:35 DEC 16, 1998

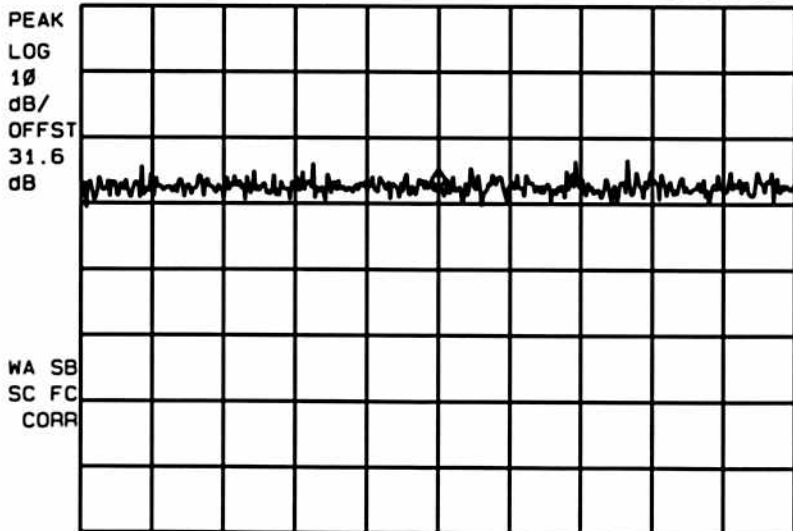
REF -1.0 dBm #AT 10 dB MKR 17.381250 GHz
-28.89 dBm



CENTER 17.381250 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

10:38:56 DEC 16, 1998

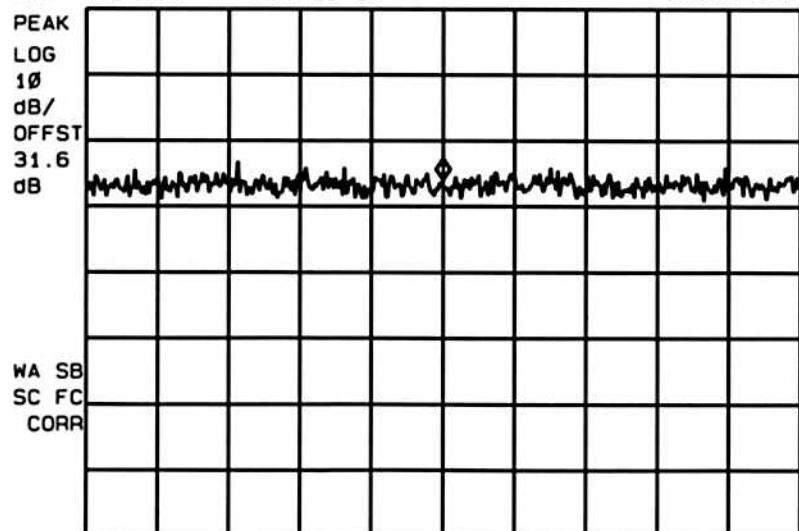
REF -1.0 dBm #AT 10 dB MKR 18.346875 GHz
-28.95 dBm



CENTER 18.346875 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

10:39:09 DEC 16, 1998

REF -1.0 dBm #AT 10 dB MKR 19.312500 GHz
-26.93 dBm



CENTER 19.312500 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec



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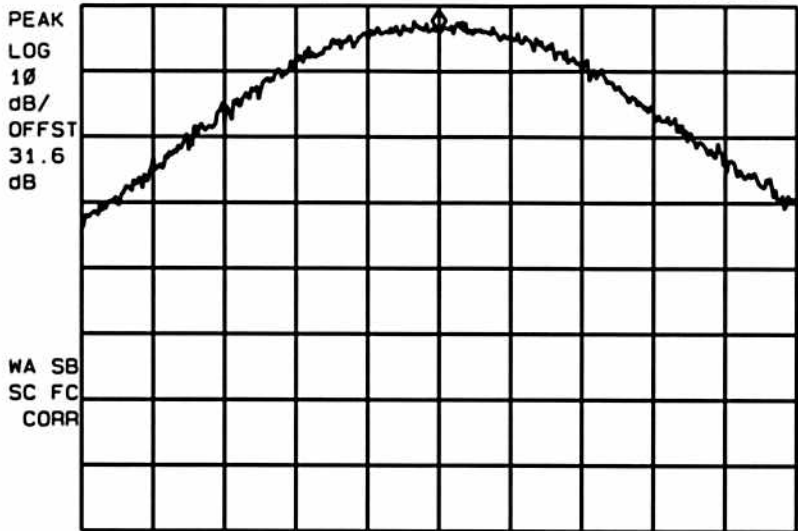
SPURIOUS & HARMONIC EMISSIONS CONDUCTED

CDMA Transmitter Channel 25

Minimum Power

**Channel 25
Minimum Power**

12:03:22 DEC 16, 1998
 REF 29.0 dBm #AT 40 dB MKR 1.931250 GHz
 25.11 dBm

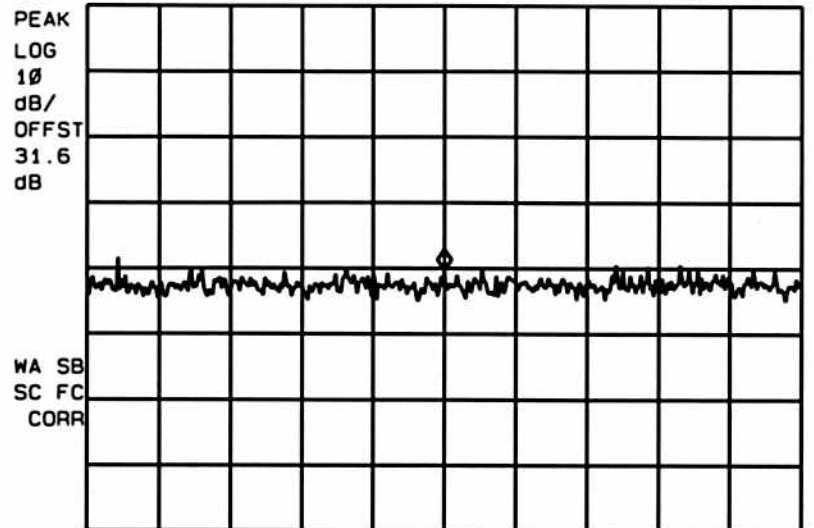


CENTER 1.931250 GHz SPAN 5.000 MHz
 #RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

**IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS**

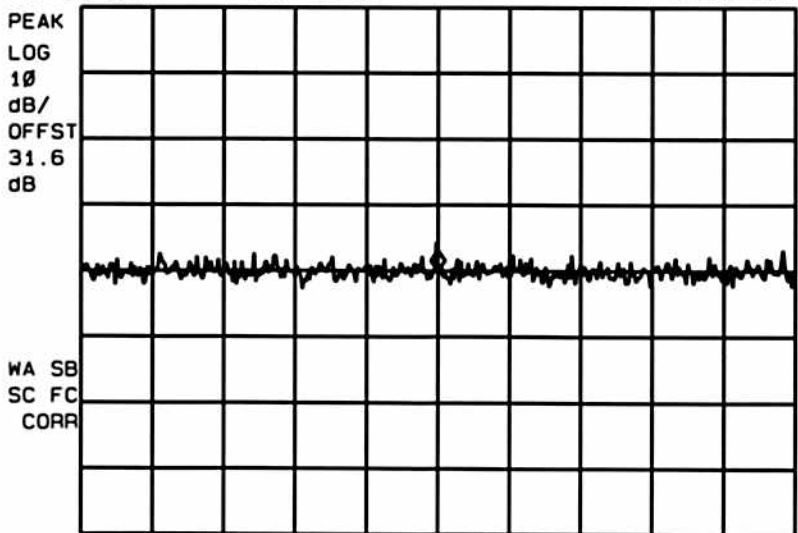
btsate
12-16-98
13:07:35

12:04:07 DEC 16, 1998
 REF .0 dBm #AT 10 dB MKR 965.625 MHz
 -40.29 dBm



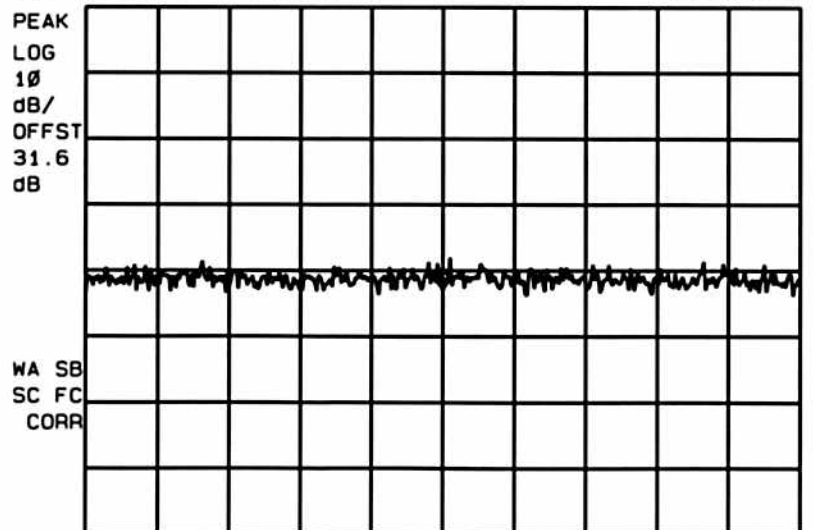
CENTER 965.625 MHz SPAN 5.000 MHz
 #RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

12:04:21 DEC 16, 1998
 REF .0 dBm #AT 10 dB MKR 2.896875 GHz
 -40.06 dBm



CENTER 2.896875 GHz SPAN 5.000 MHz
 #RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

12:04:31 DEC 16, 1998
 REF .0 dBm #AT 10 dB MKR 3.862500 GHz
 -42.81 dBm

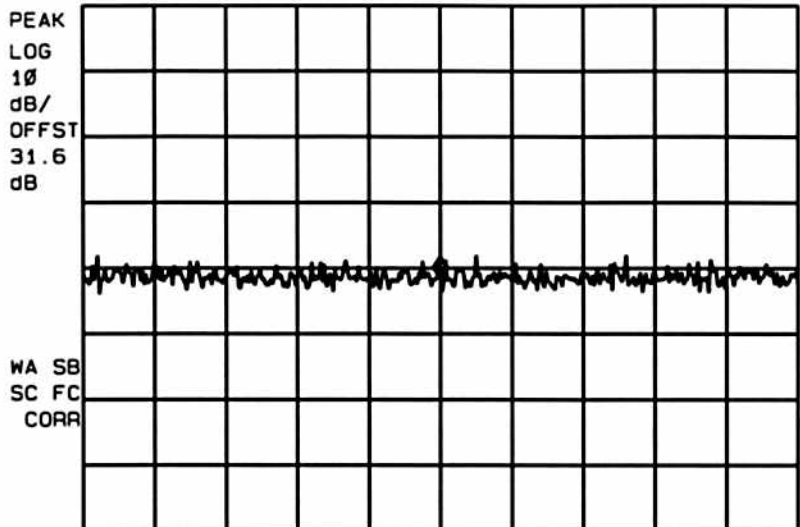


CENTER 3.862500 GHz SPAN 5.000 MHz
 #RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

Channel 25
Minimum Power

12:04:42 DEC 16, 1998

MKR 4.828125 GHz
REF .0 dBm #AT 10 dB -41.48 dBm



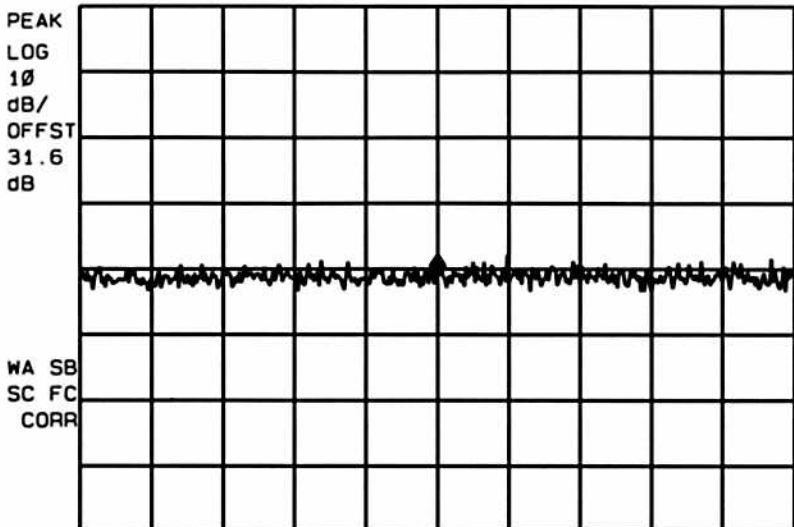
CENTER 4.828125 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

btsate
12-16-98
13:09:03

12:04:54 DEC 16, 1998

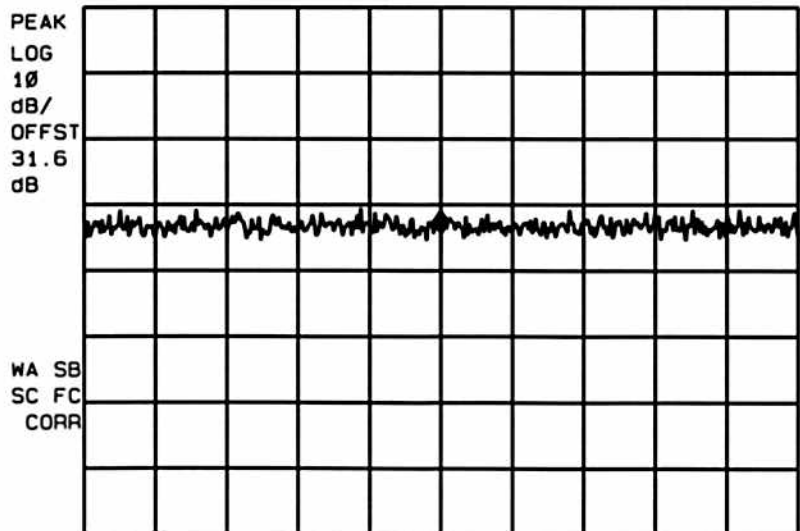
MKR 5.793750 GHz
REF .0 dBm #AT 10 dB -41.07 dBm



CENTER 5.793750 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

12:05:22 DEC 16, 1998

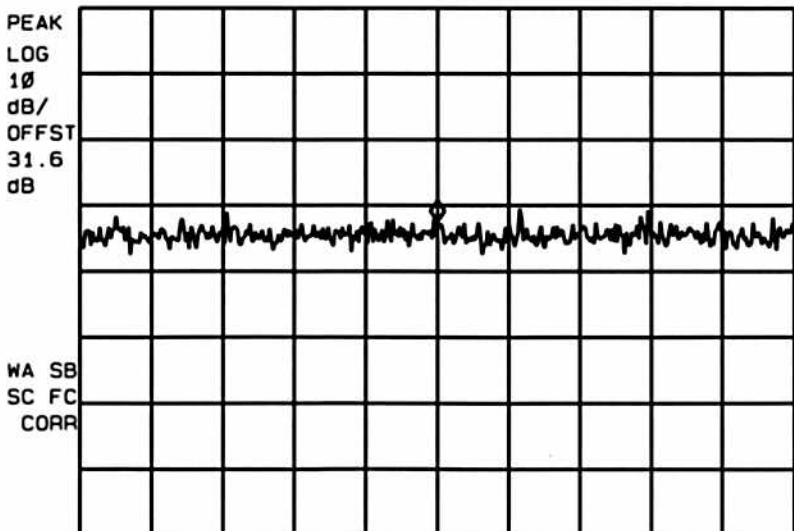
MKR 6.759375 GHz
REF .0 dBm #AT 10 dB -34.19 dBm



CENTER 6.759375 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

12:05:59 DEC 16, 1998

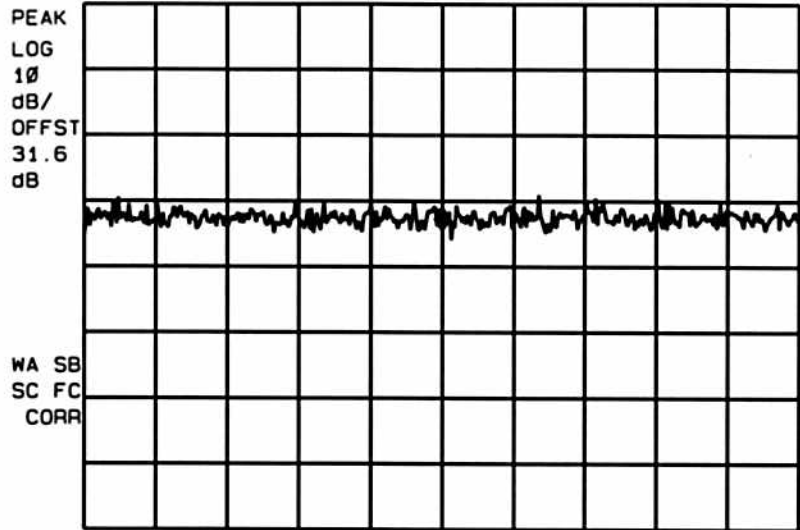
MKR 7.725000 GHz
REF .0 dBm #AT 10 dB -32.44 dBm



CENTER 7.725000 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

Channel 25
Minimum Power

12:06:59 DEC 16, 1998
 MKR 8.690625 GHz
 REF .0 dBm #AT 10 dB -34.32 dBm

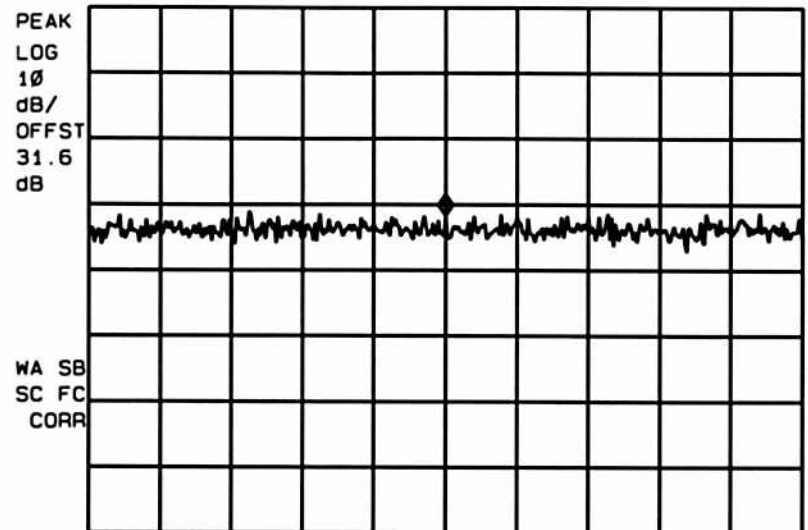


CENTER 8.690625 GHz SPAN 5.000 MHz
 #RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

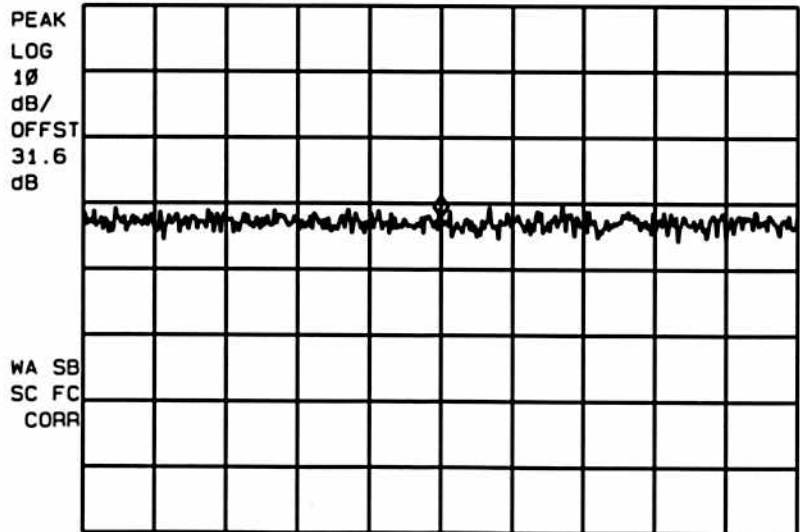
btsate
12-16-98
13:10:34

12:07:11 DEC 16, 1998
 MKR 9.656250 GHz
 REF .0 dBm #AT 10 dB -31.66 dBm



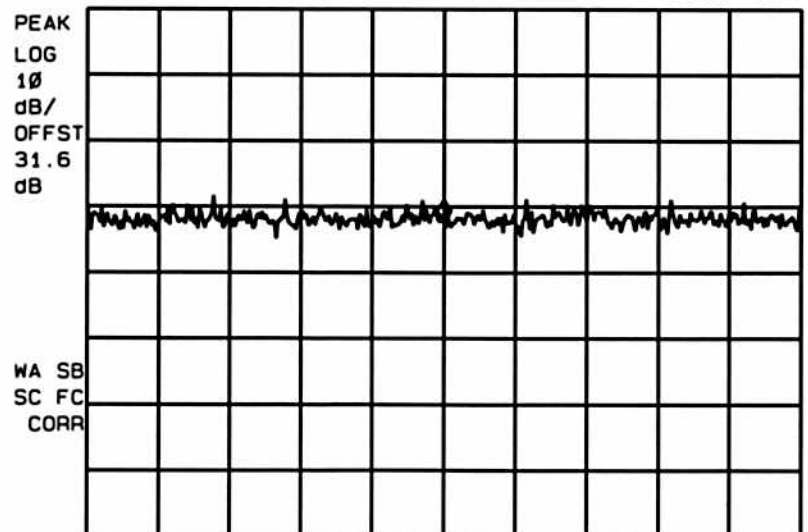
CENTER 9.656250 GHz SPAN 5.000 MHz
 #RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

12:07:20 DEC 16, 1998
 MKR 10.621875 GHz
 REF .0 dBm #AT 10 dB -32.10 dBm



CENTER 10.621875 GHz SPAN 5.000 MHz
 #RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

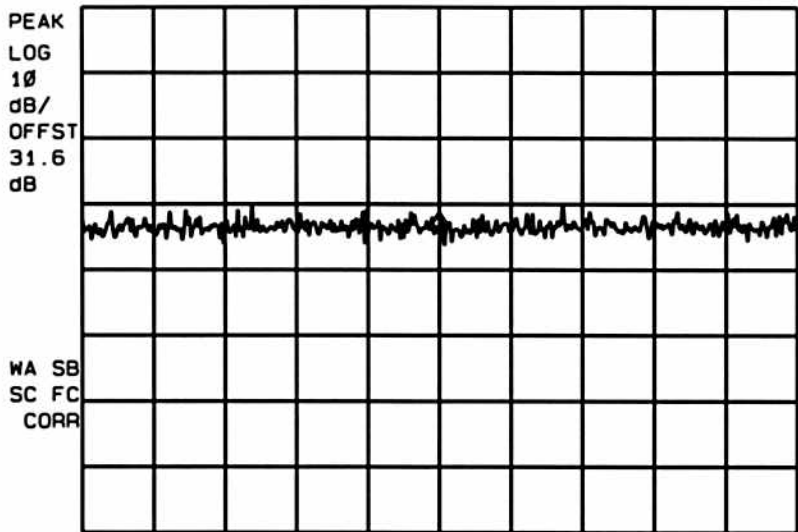
12:07:30 DEC 16, 1998
 MKR 11.587500 GHz
 REF .0 dBm #AT 10 dB -32.24 dBm



CENTER 11.587500 GHz SPAN 5.000 MHz
 #RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

**Channel 25
Minimum Power**

12:07:44 DEC 16, 1998
 MKR 12.553125 GHz
 REF .0 dBm #AT 10 dB -34.48 dBm

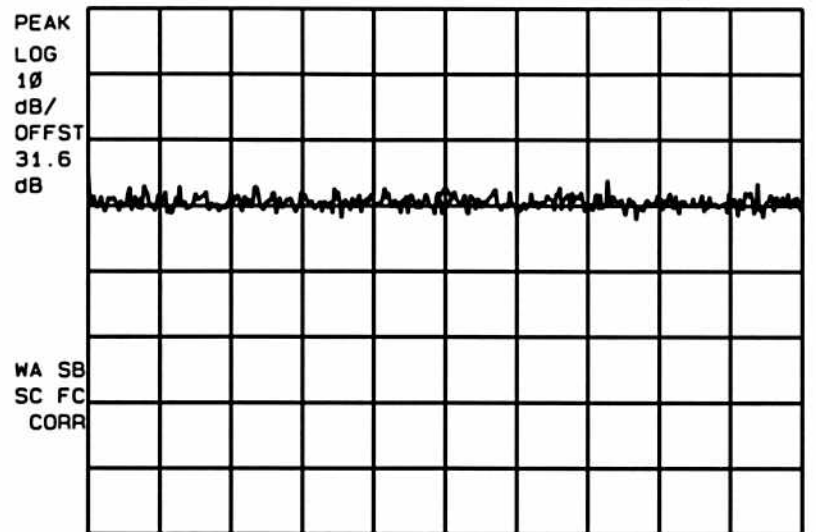


CENTER 12.553125 GHz SPAN 5.000 MHz
 #RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

**IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS**

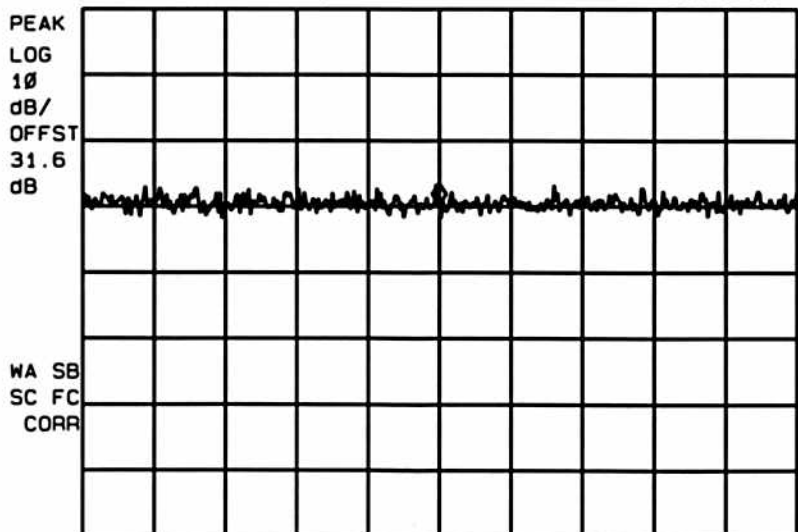
btsate
12-16-98
13:11:16

12:07:54 DEC 16, 1998
 MKR 13.518750 GHz
 REF .0 dBm #AT 10 dB -30.46 dBm



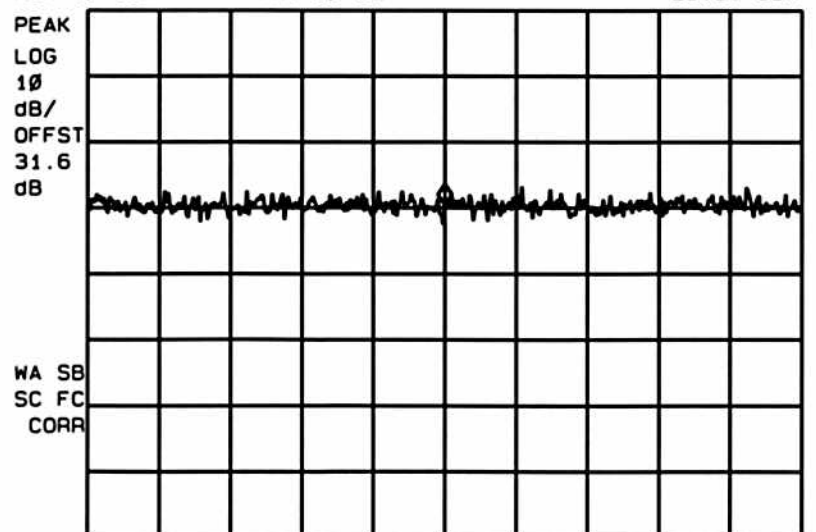
CENTER 13.518750 GHz SPAN 5.000 MHz
 #RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

12:08:03 DEC 16, 1998
 MKR 14.484375 GHz
 REF .0 dBm #AT 10 dB -29.71 dBm



CENTER 14.484375 GHz SPAN 5.000 MHz
 #RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

12:08:12 DEC 16, 1998
 MKR 15.450000 GHz
 REF .0 dBm #AT 10 dB -29.58 dBm

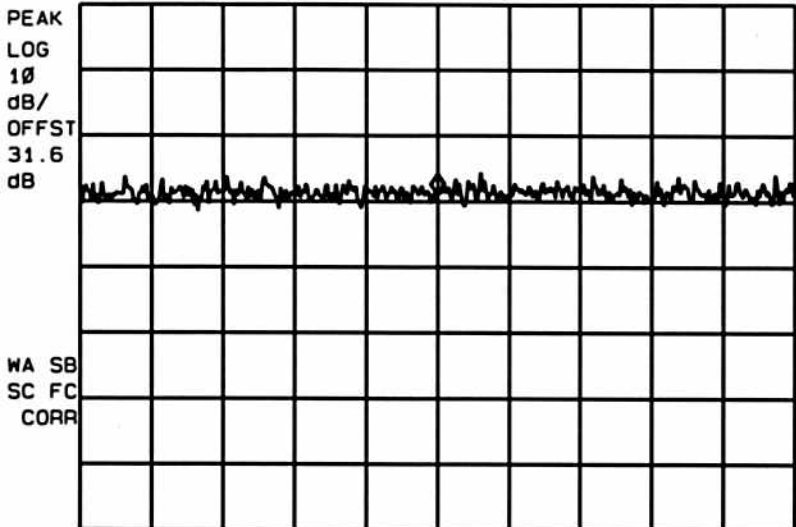


CENTER 15.450000 GHz SPAN 5.000 MHz
 #RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

**Channel 25
Minimum Power**

12:09:14 DEC 16, 1998

REF 0 dBm #AT 10 dB MKR 16.415625 GHz
-28.98 dBm

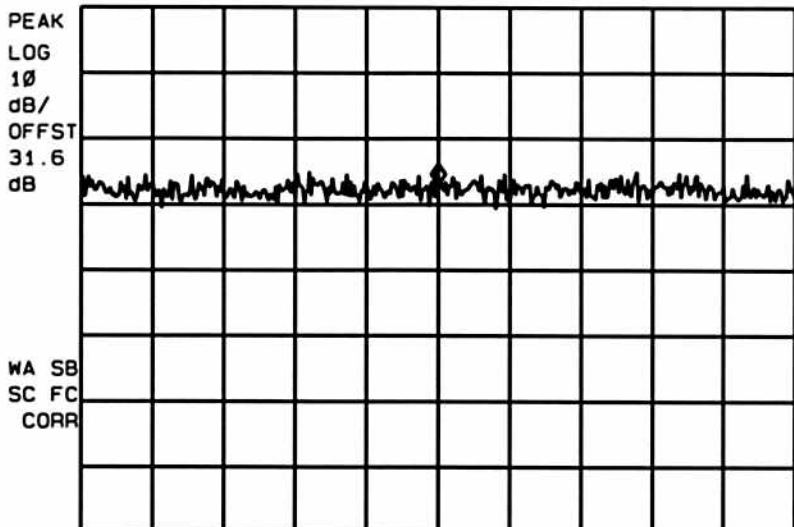


CENTER 16.415625 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

**IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS**

12:09:24 DEC 16, 1998

REF 0 dBm #AT 10 dB MKR 17.381250 GHz
-27.01 dBm

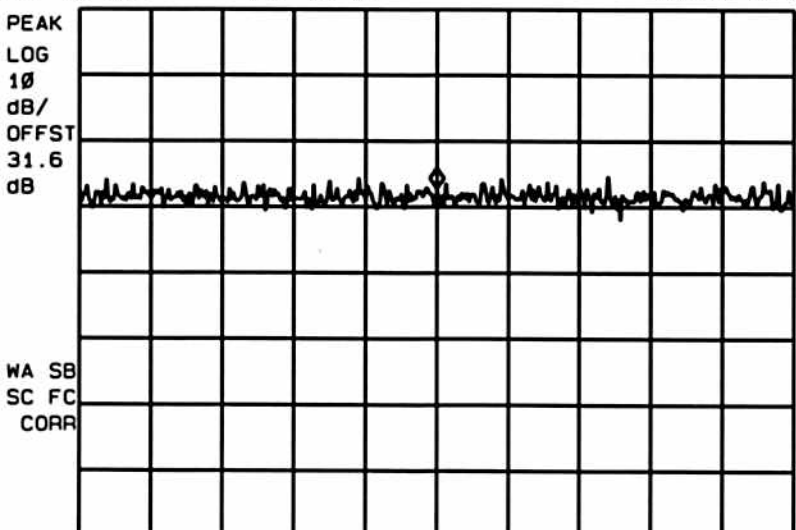


CENTER 17.381250 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

btsate
12-16-98
13:12:46

12:09:33 DEC 16, 1998

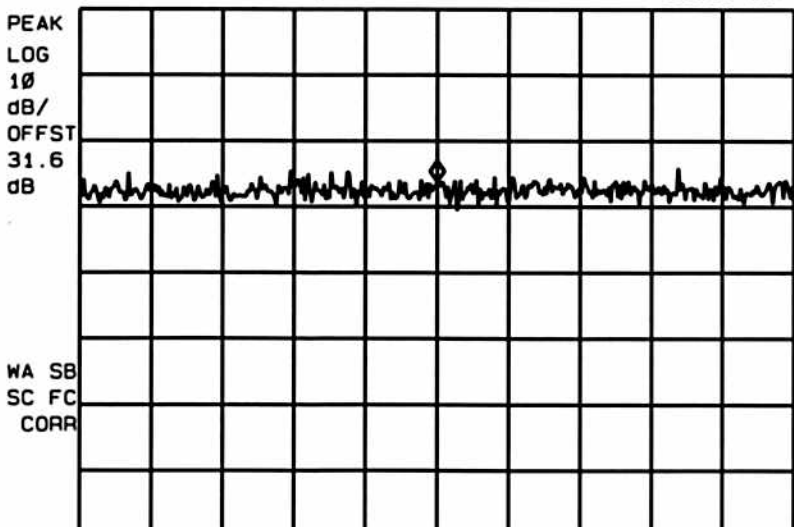
REF 0 dBm #AT 10 dB MKR 18.346875 GHz
-27.24 dBm



CENTER 18.346875 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

12:09:41 DEC 16, 1998

REF 0 dBm #AT 10 dB MKR 19.312500 GHz
-26.22 dBm



CENTER 19.312500 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec



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SPURIOUS & HARMONIC EMISSIONS CONDUCTED

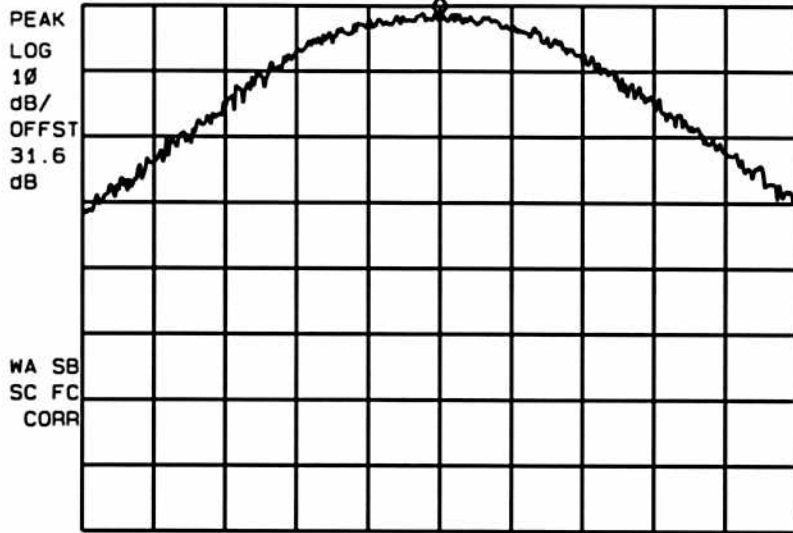
CDMA Transmitter Channel 1175

Maximum Power

**Channel 1175
Maximum Power**

10:46:12 DEC 16, 1998

REF 51.0 dBm #AT 40 dB MKR 1.988750 GHz 49.33 dBm



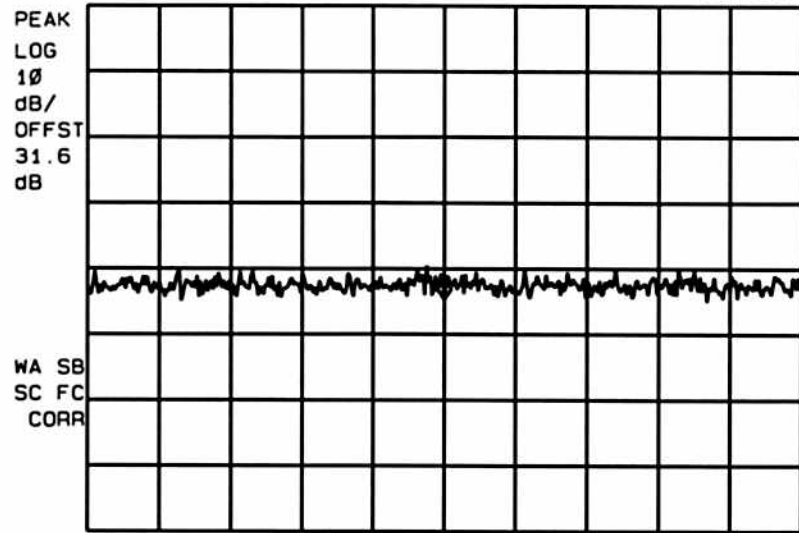
CENTER 1.988750 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

**IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS**

btsate
12-16-98
11:52:27

10:48:33 DEC 16, 1998

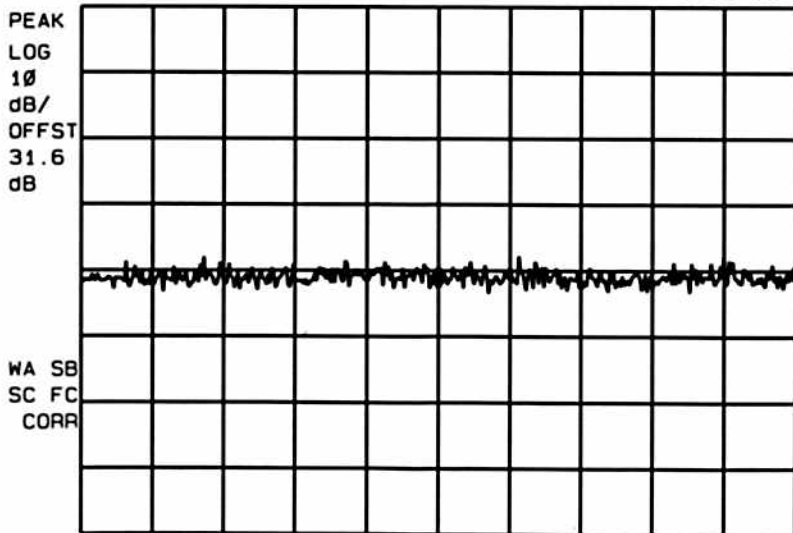
REF .0 dBm #AT 10 dB MKR 994.375 MHz -44.68 dBm



CENTER 994.375 MHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

10:48:59 DEC 16, 1998

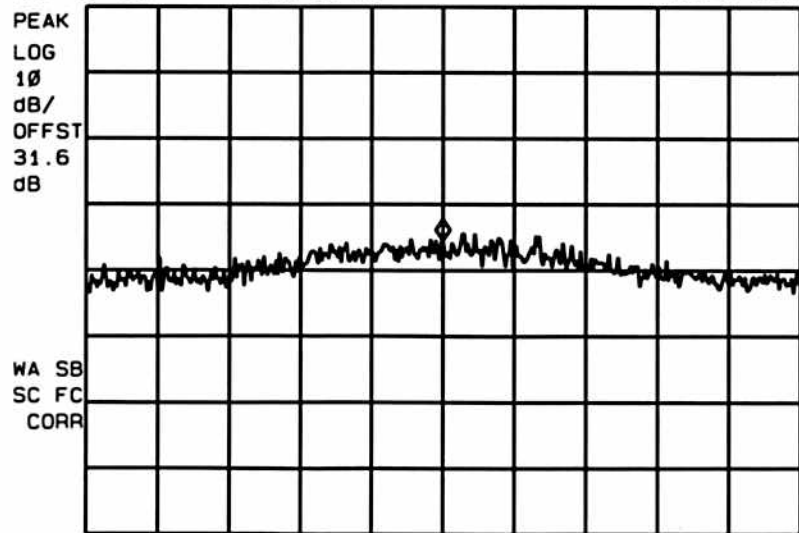
REF .0 dBm #AT 10 dB MKR 2.983125 GHz -42.69 dBm



CENTER 2.983125 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

10:49:23 DEC 16, 1998

REF .0 dBm #AT 10 dB MKR 3.977500 GHz -35.47 dBm

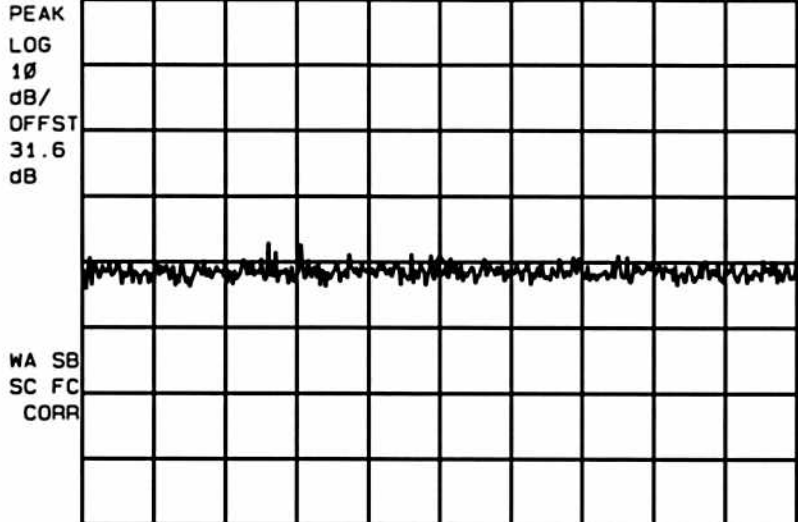


CENTER 3.977500 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

Channel 1175
Maximum Power

10:49:42 DEC 16, 1998

REF .0 dBm #AT 10 dB MKR 4.971875 GHz
-42.22 dBm



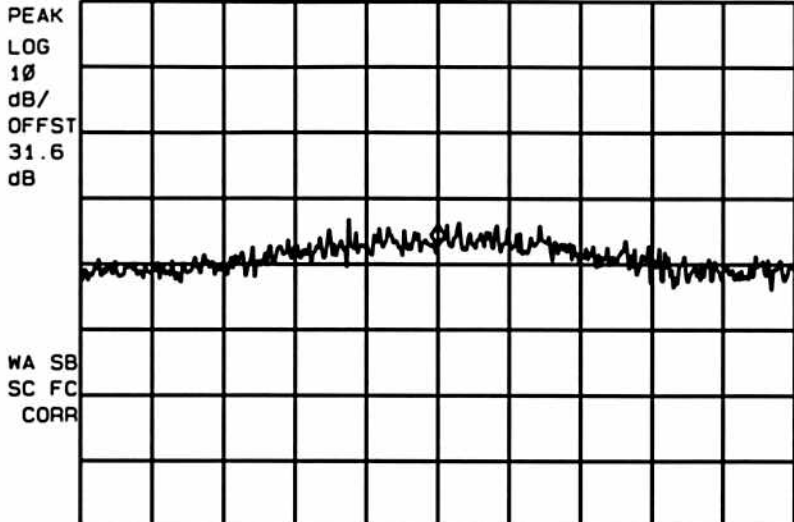
CENTER 4.971875 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

btsate
12-16-98
11:53:42

10:50:08 DEC 16, 1998

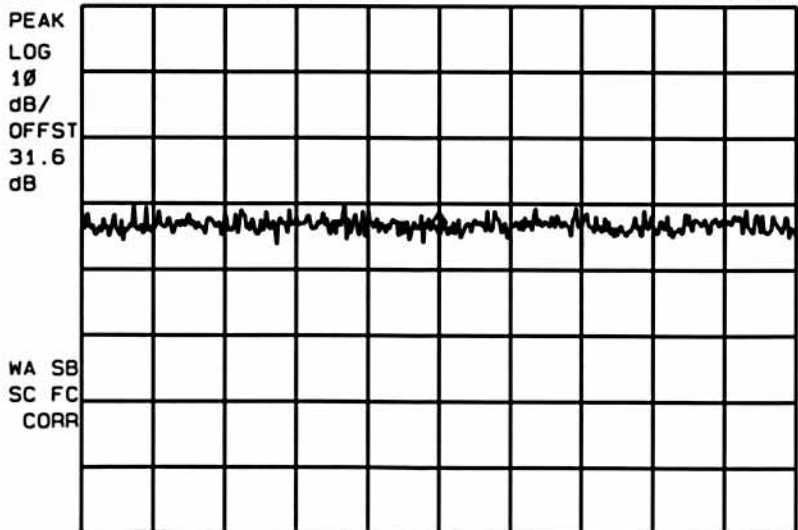
REF .0 dBm #AT 10 dB MKR 5.966250 GHz
-37.18 dBm



CENTER 5.966250 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

10:50:27 DEC 16, 1998

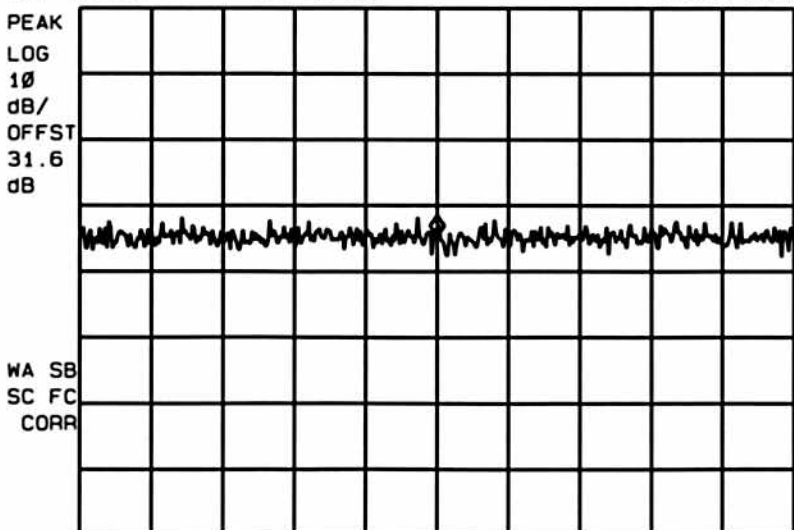
REF .0 dBm #AT 10 dB MKR 6.960625 GHz
-34.52 dBm



CENTER 6.960625 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

10:50:38 DEC 16, 1998

REF .0 dBm #AT 10 dB MKR 7.955000 GHz
-34.69 dBm

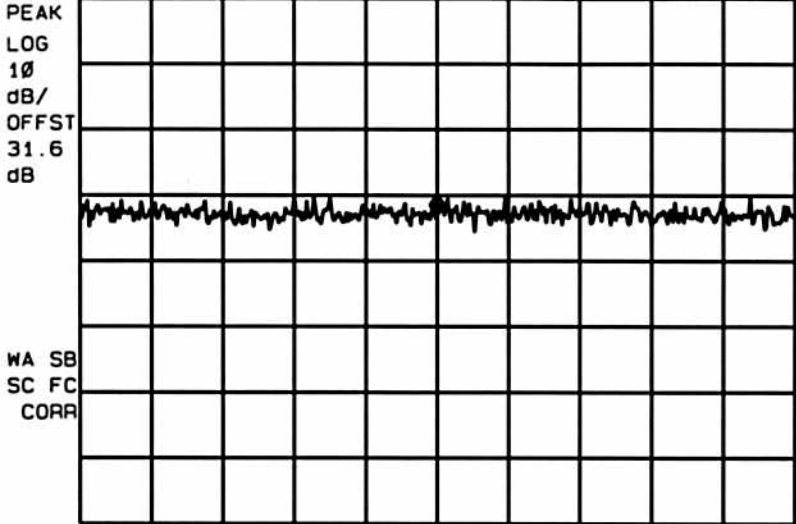


CENTER 7.955000 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

Channel 1175

10:51:05 DEC 16, 1998 Maximum Power

10 MKR 8.949375 GHz
REF .0 dBm #AT 10 dB -33.07 dBm



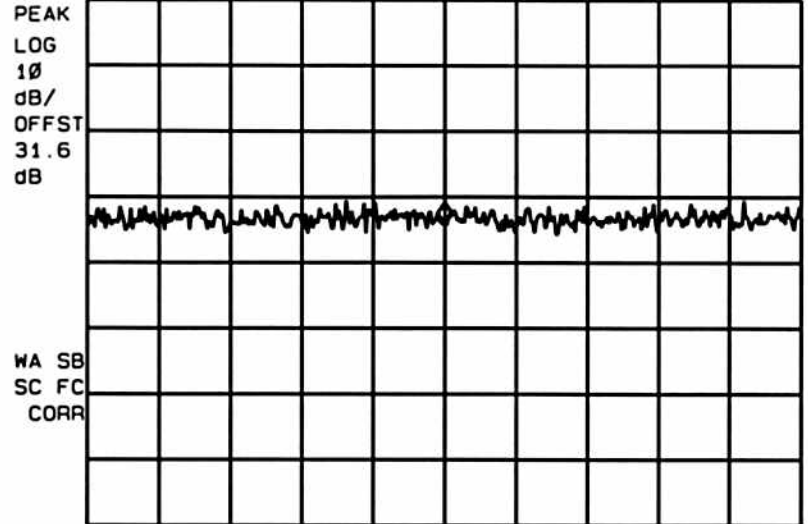
CENTER 8.949375 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

btsate
12-16-98
11:55:04

10:51:20 DEC 16, 1998

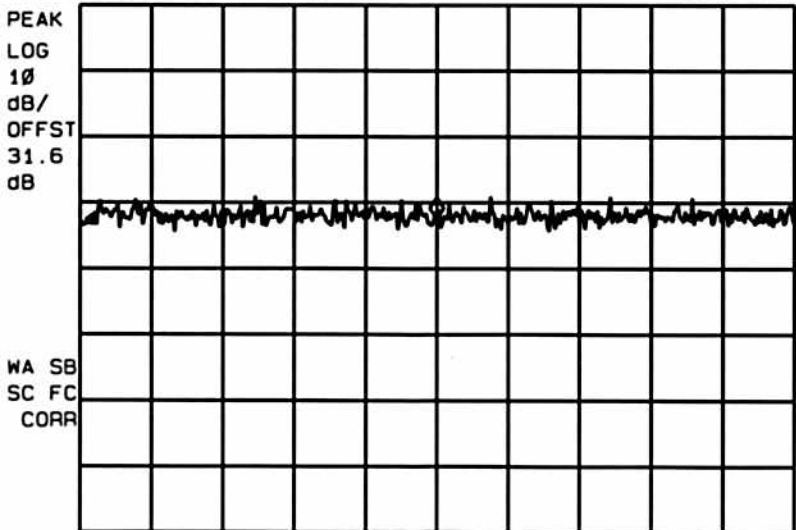
10 MKR 9.943750 GHz
REF .0 dBm #AT 10 dB -34.09 dBm



CENTER 9.943750 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

10:51:45 DEC 16, 1998

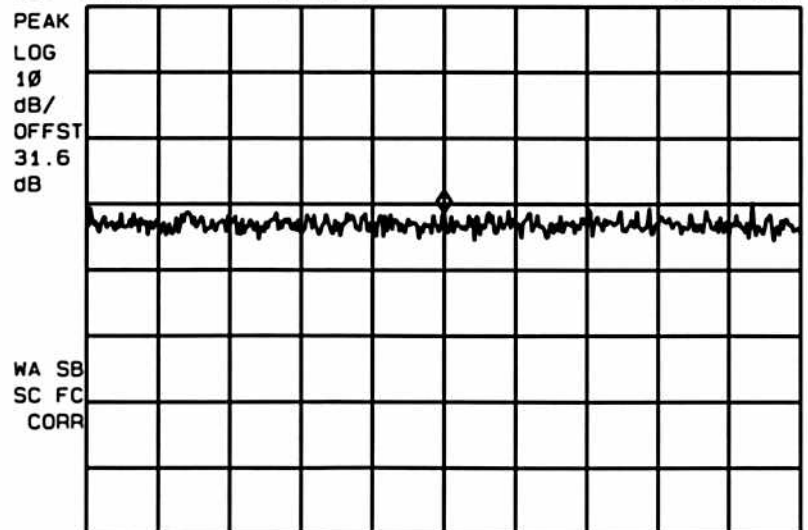
10 MKR 10.938125 GHz
REF .0 dBm #AT 10 dB -32.45 dBm



CENTER 10.938125 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

10:52:00 DEC 16, 1998

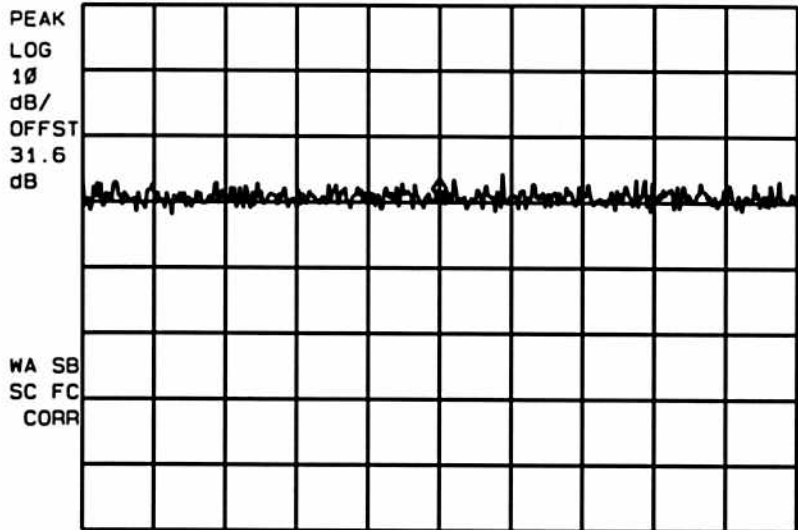
10 MKR 11.932500 GHz
REF .0 dBm #AT 10 dB -31.21 dBm



CENTER 11.932500 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

Channel 1175

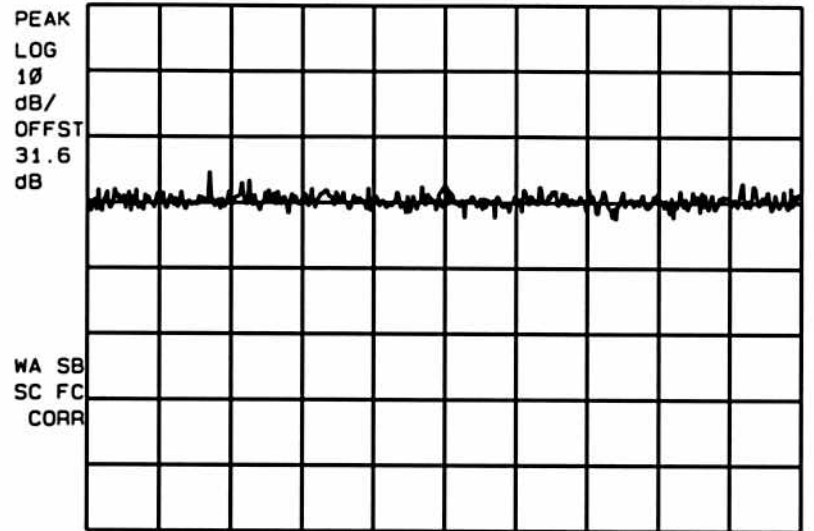
10:52:17 DEC 16, 1998 **Maximum Power**
MKR 12.926875 GHz
REF .0 dBm #AT 10 dB -29.56 dBm



CENTER 12.926875 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

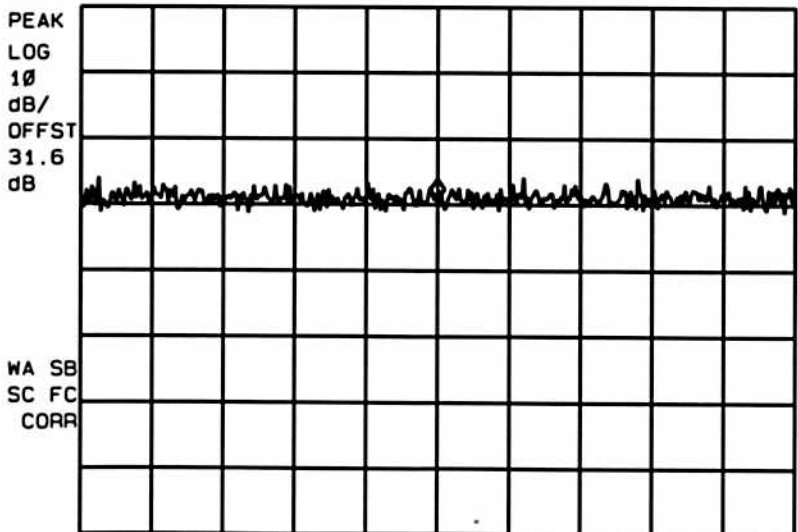
IHET6YZ1 SC4812ET 1.9 GHz CDMA BTS

10:52:51 DEC 16, 1998
MKR 13.921250 GHz
REF .0 dBm #AT 10 dB -30.61 dBm



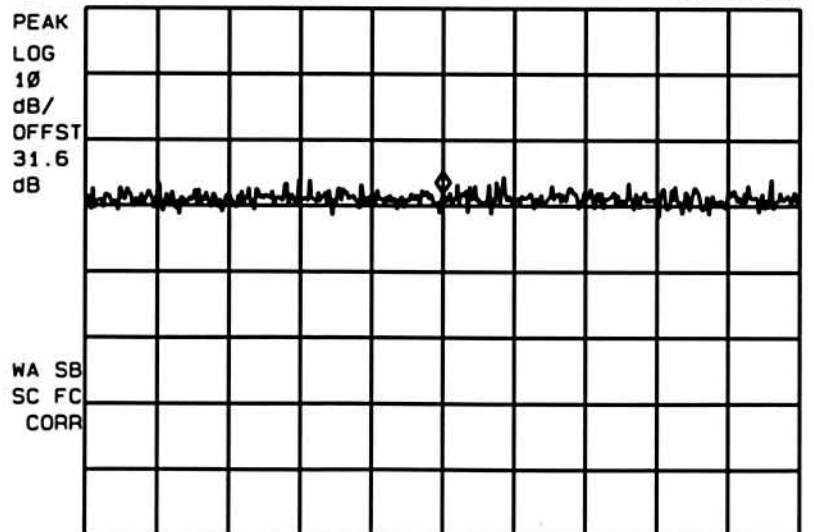
CENTER 13.921250 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

10:53:04 DEC 16, 1998
MKR 14.915625 GHz
REF .0 dBm #AT 10 dB -29.28 dBm



CENTER 14.915625 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

10:53:15 DEC 16, 1998
MKR 15.910000 GHz
REF .0 dBm #AT 10 dB -28.07 dBm

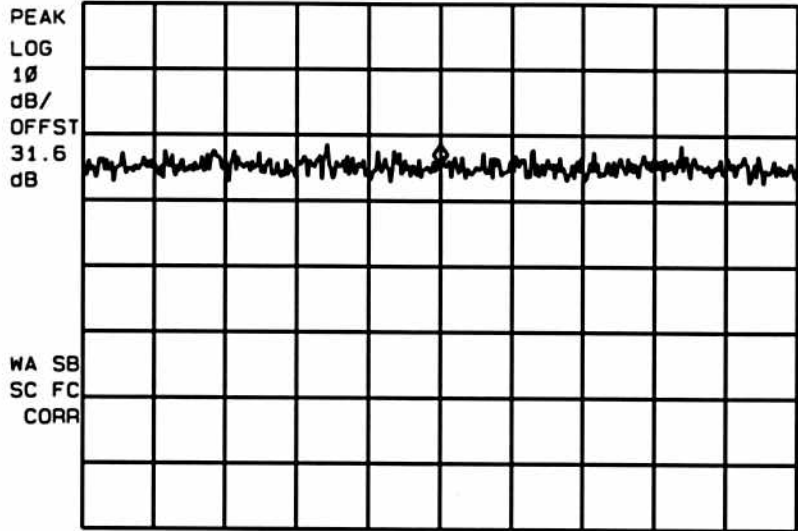


CENTER 15.910000 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

Channel 1175 Maximum Power

10:59:00 DEC 16, 1998

REF .0 dBm #AT 10 dB MKR 16.904375 GHz
-24.60 dBm

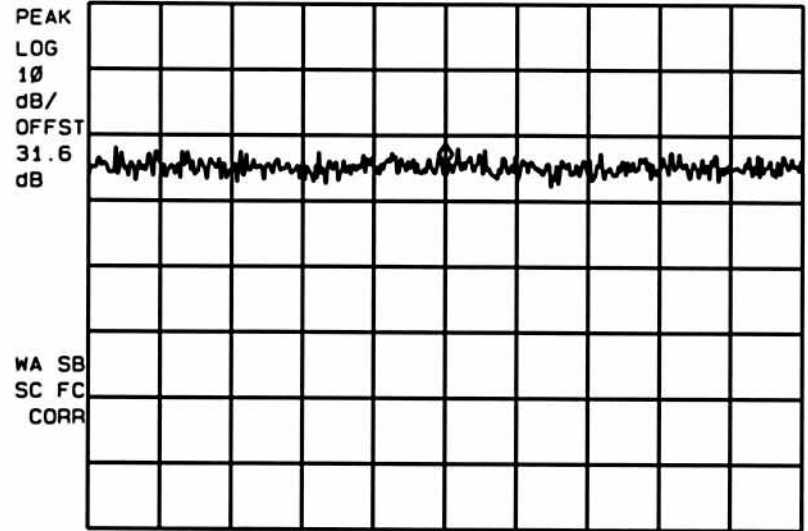


CENTER 16.904375 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

IHET6YZ1 SC4812ET 1.9 GHz CDMA BTS

10:59:24 DEC 16, 1998

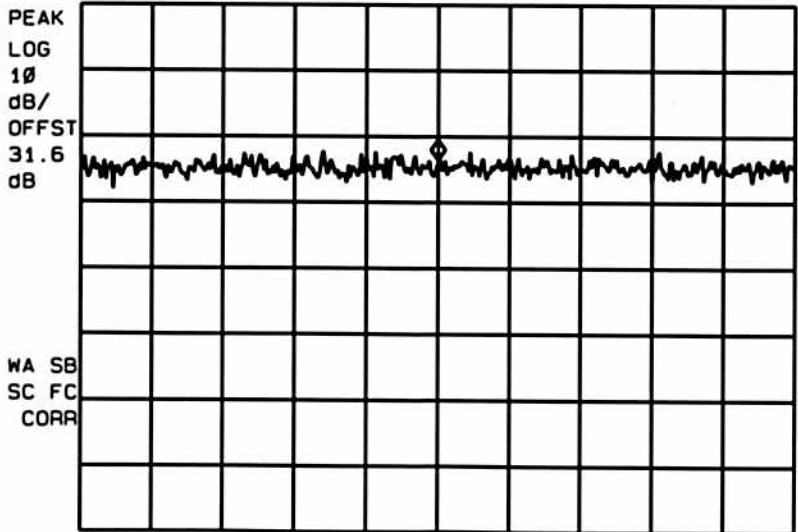
REF .0 dBm #AT 10 dB MKR 17.898750 GHz
-24.45 dBm



CENTER 17.898750 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

10:59:38 DEC 16, 1998

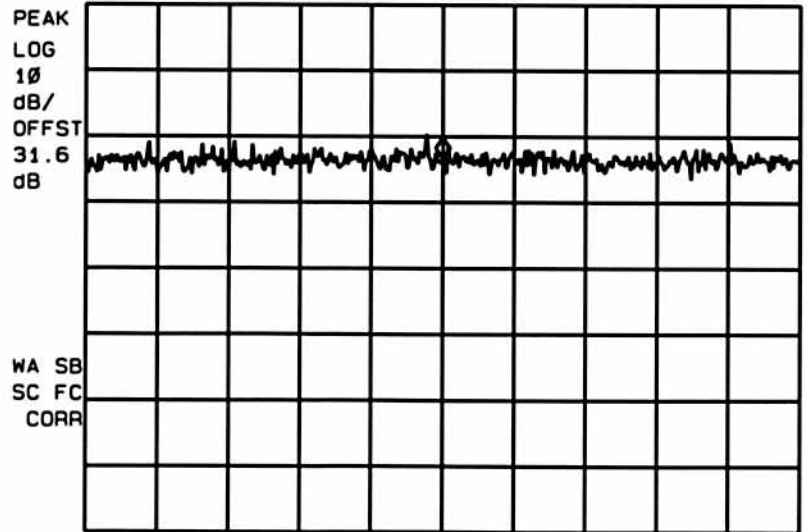
REF .0 dBm #AT 10 dB MKR 18.893125 GHz
-23.62 dBm



CENTER 18.893125 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

10:59:48 DEC 16, 1998

REF .0 dBm #AT 10 dB MKR 19.887500 GHz
-23.36 dBm



CENTER 19.887500 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec



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SPURIOUS & HARMONIC EMISSIONS CONDUCTED

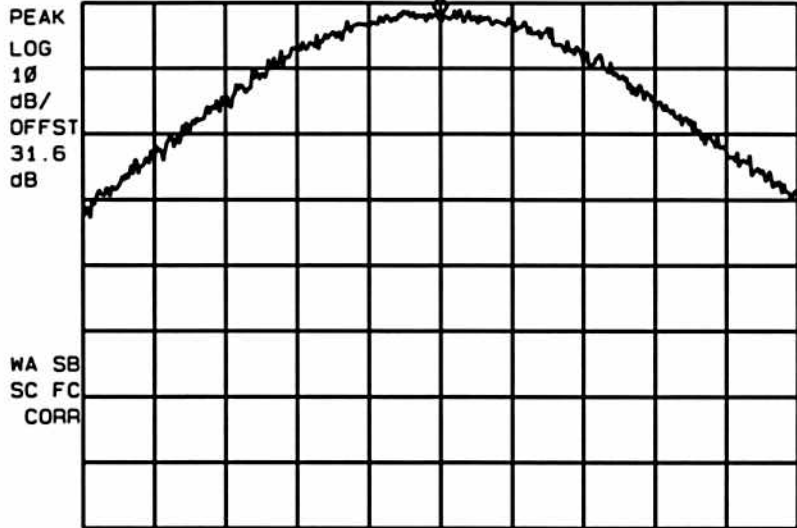
CDMA Transmitter Channel 1175

Minimum Power

Channel 1175
Minimum Power

11:49:35 DEC 16, 1998

REF 29.0 dBm #AT 40 dB MKR 1.988750 GHz
26.89 dBm



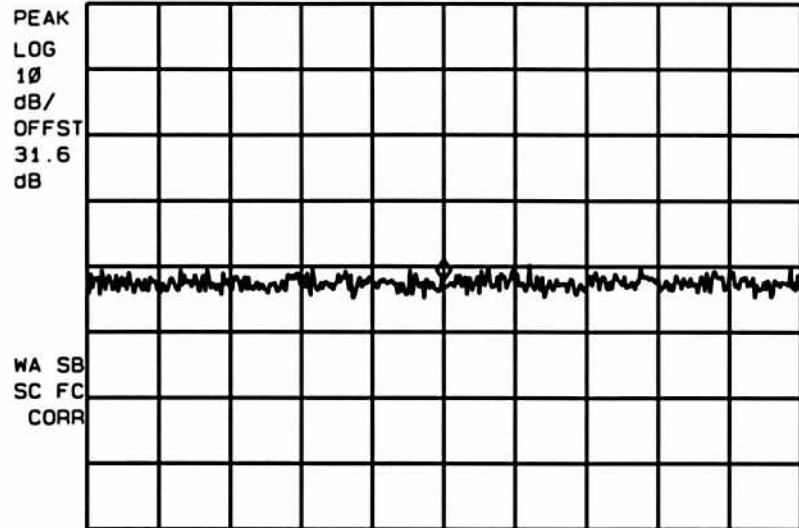
CENTER 1.988750 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

btsate
12-16-98
12:54:20

11:50:16 DEC 16, 1998

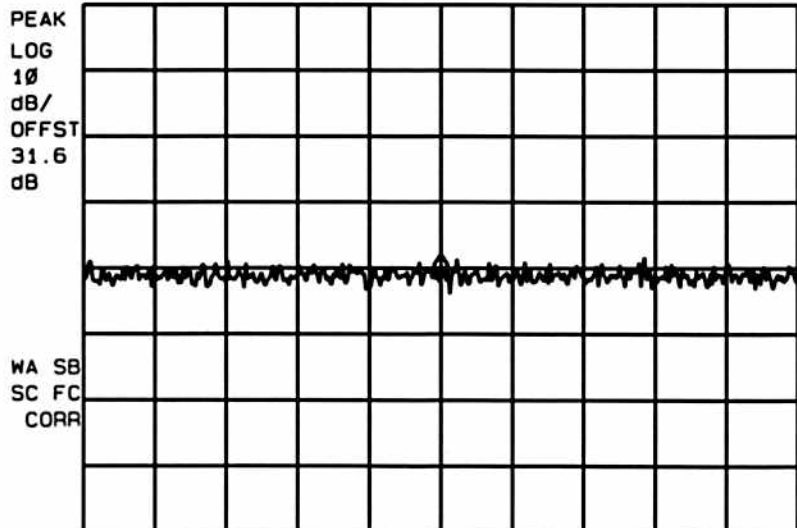
REF .0 dBm #AT 10 dB MKR 994.375 MHz
-42.14 dBm



CENTER 994.375 MHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

11:51:01 DEC 16, 1998

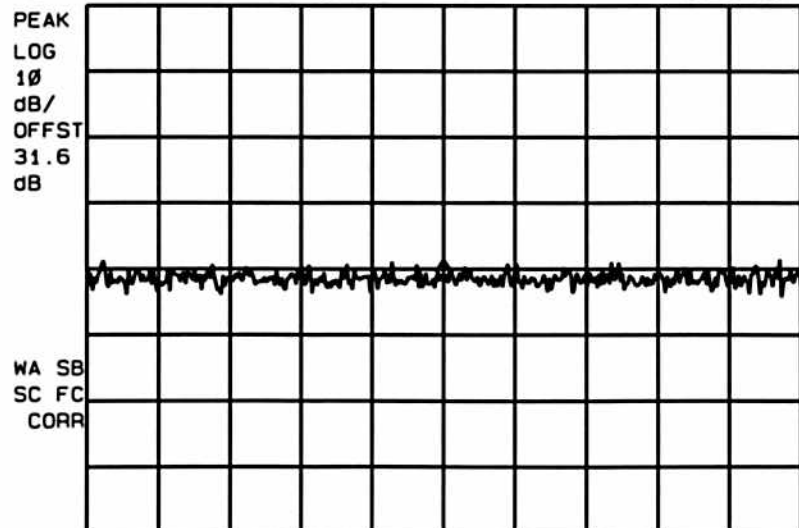
REF .0 dBm #AT 10 dB MKR 2.983125 GHz
-41.14 dBm



CENTER 2.983125 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

11:51:16 DEC 16, 1998

REF .0 dBm #AT 10 dB MKR 3.977500 GHz
-41.88 dBm

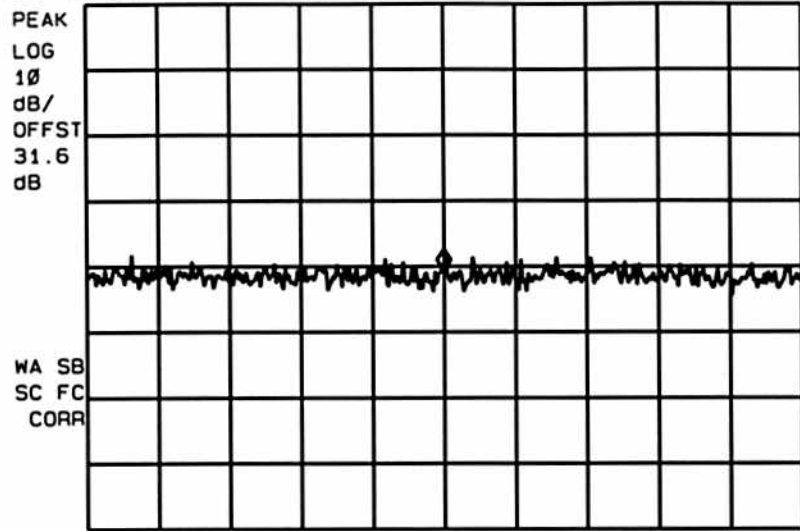


CENTER 3.977500 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

Channel 1175
Minimum Power

11:51:34 DEC 16, 1998

MKR 4.971875 GHz
REF .0 dBm #AT 10 dB
-40.58 dBm



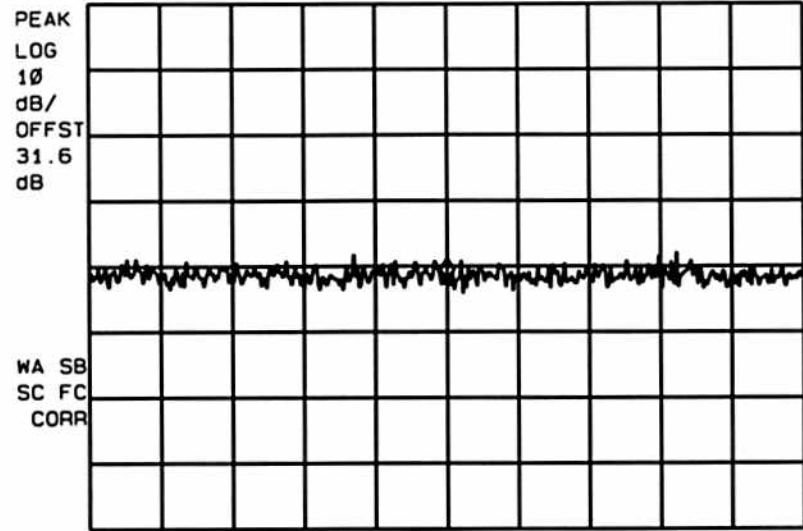
CENTER 4.971875 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

btsate
12-16-98
12:55:17

11:51:46 DEC 16, 1998

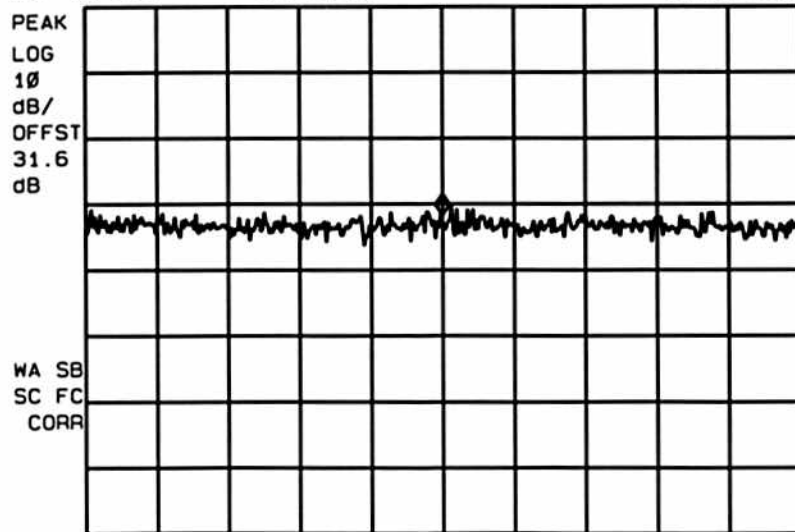
MKR 5.966250 GHz
REF .0 dBm #AT 10 dB
-42.11 dBm



CENTER 5.966250 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

11:51:57 DEC 16, 1998

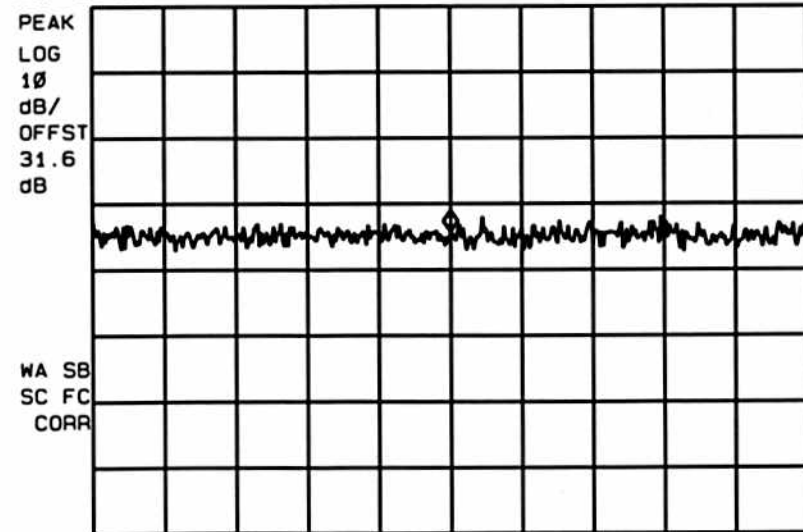
MKR 6.960625 GHz
REF .0 dBm #AT 10 dB
-31.70 dBm



CENTER 6.960625 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

11:52:12 DEC 16, 1998

MKR 7.955000 GHz
REF .0 dBm #AT 10 dB
-34.23 dBm

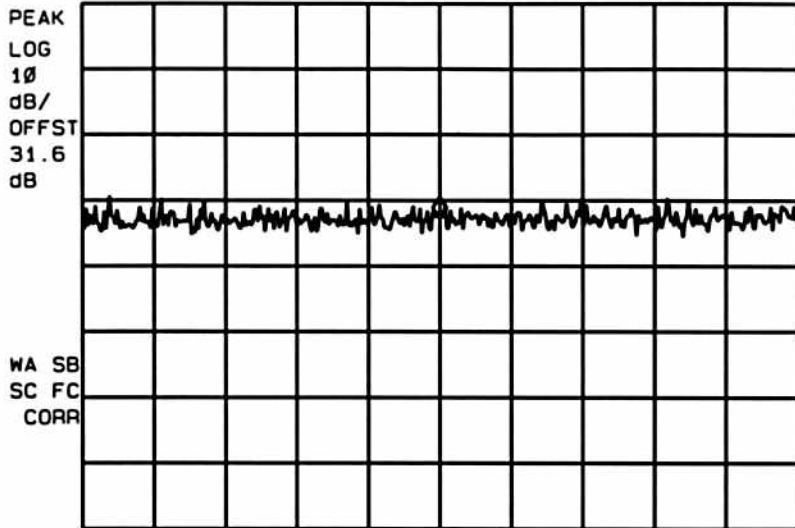


CENTER 7.955000 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

Channel 1175
Minimum Power

11:52:28 DEC 16, 1998

MKR 8.949375 GHz
REF .0 dBm #AT 10 dB -32.70 dBm

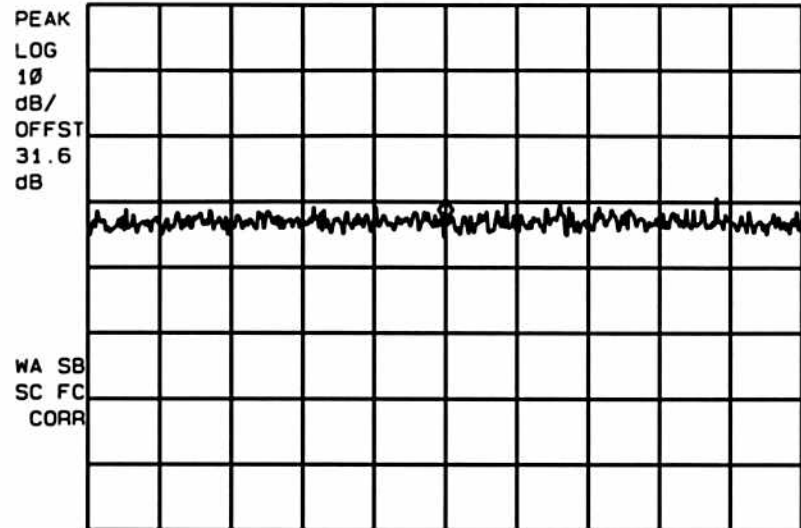


CENTER 8.949375 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

11:52:39 DEC 16, 1998

MKR 9.943750 GHz
REF .0 dBm #AT 10 dB -32.85 dBm

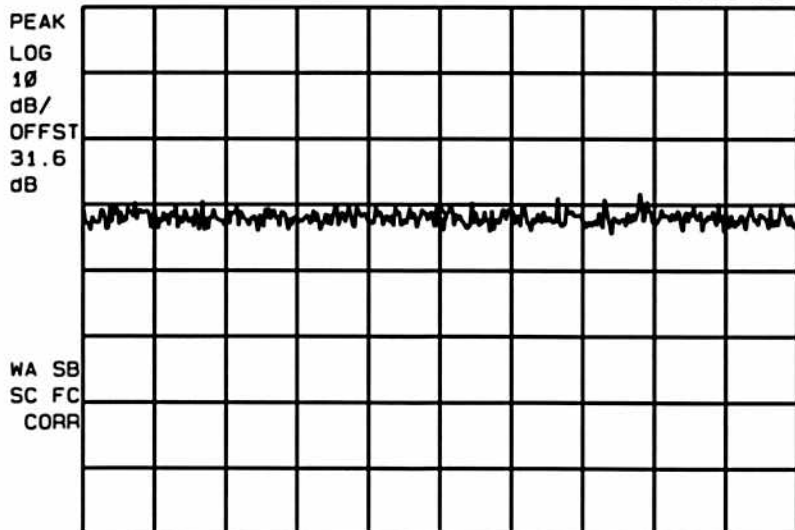


CENTER 9.943750 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

btsate
12-16-98
12:56:03

11:52:49 DEC 16, 1998

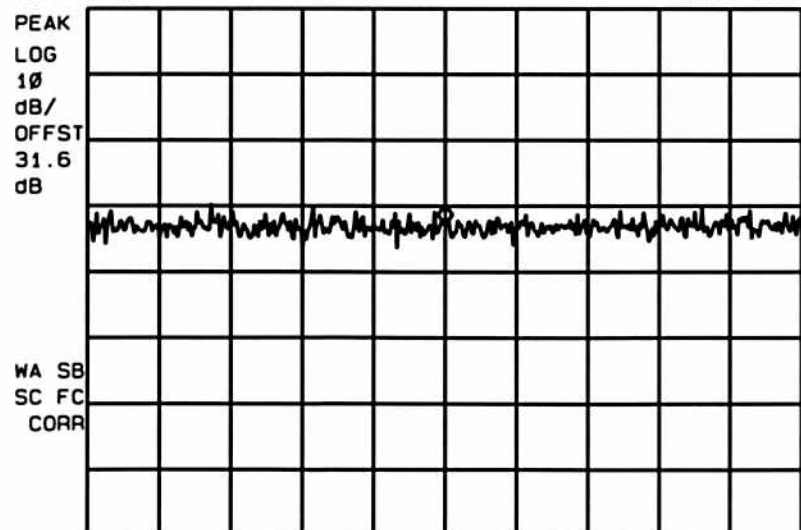
MKR 10.938125 GHz
REF .0 dBm #AT 10 dB -33.39 dBm



CENTER 10.938125 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

11:52:59 DEC 16, 1998

MKR 11.932500 GHz
REF .0 dBm #AT 10 dB -32.92 dBm

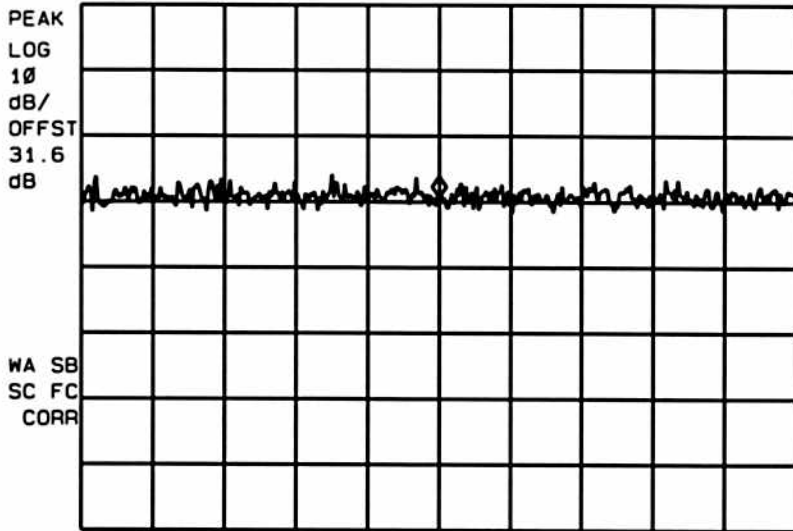


CENTER 11.932500 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

Channel 1175

11:53:12 DEC 16, 1998 Minimum Power

MKR 12.926875 GHz
REF .0 dBm #AT 10 dB -29.31 dBm

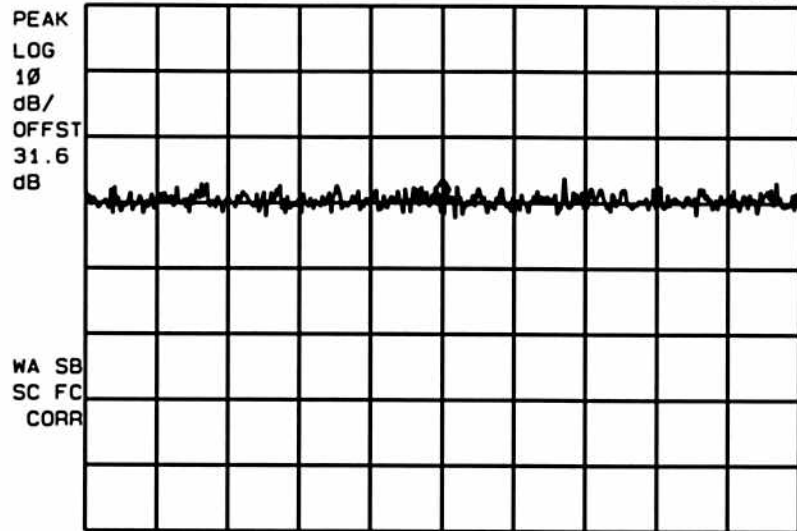


CENTER 12.926875 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

IHET6YZ1 SC4812ET 1.9 GHz CDMA BTS

11:53:23 DEC 16, 1998

MKR 13.921250 GHz
REF .0 dBm #AT 10 dB -29.61 dBm

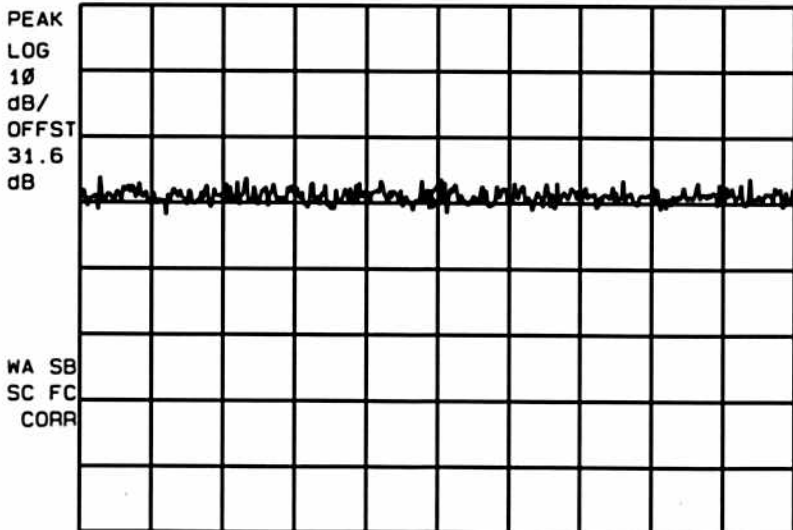


CENTER 13.921250 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

btsate
12-16-98
12:56:52

11:53:37 DEC 16, 1998

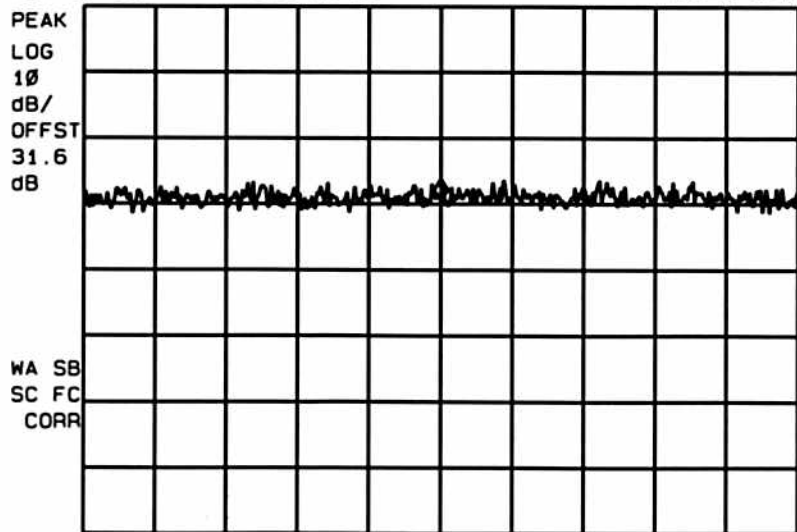
MKR 14.915625 GHz
REF .0 dBm #AT 10 dB -30.39 dBm



CENTER 14.915625 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

11:53:48 DEC 16, 1998

MKR 15.910000 GHz
REF .0 dBm #AT 10 dB -29.48 dBm

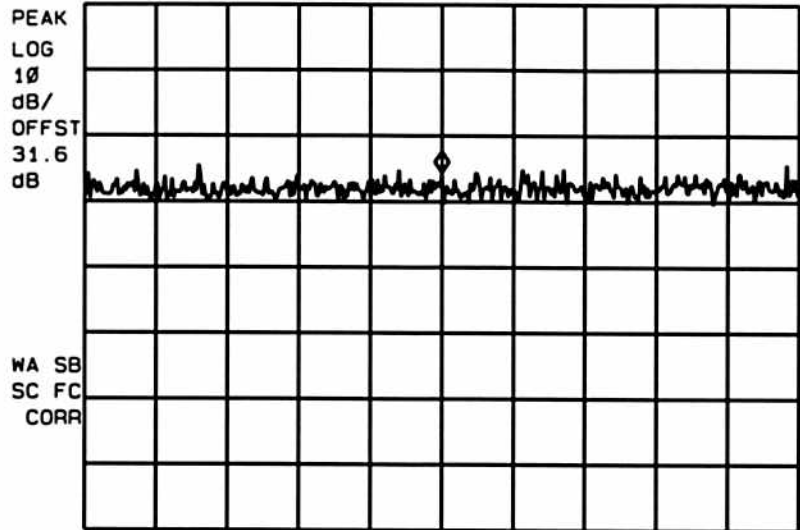


CENTER 15.910000 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

Channel 1175
Minimum Power

11:54:12 DEC 16, 1998

REF .0 dBm #AT 10 dB MKR 16.904375 GHz
-25.57 dBm



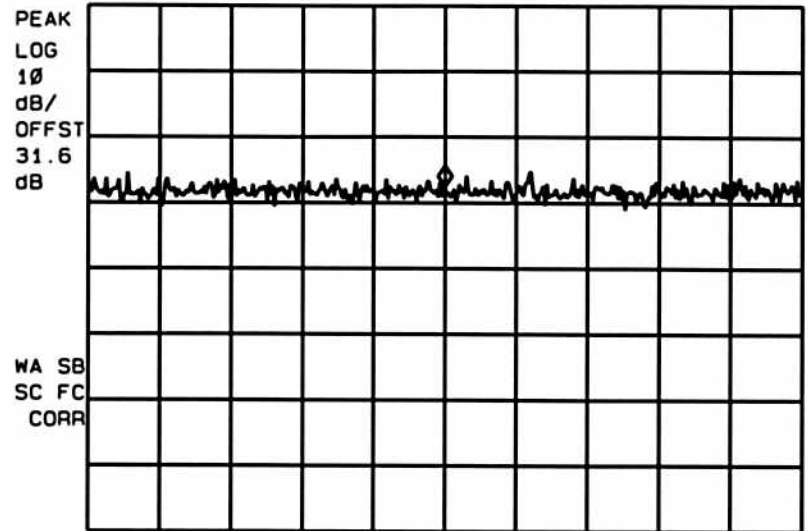
CENTER 16.904375 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

btsate
12-16-98
12:57:49

11:54:25 DEC 16, 1998

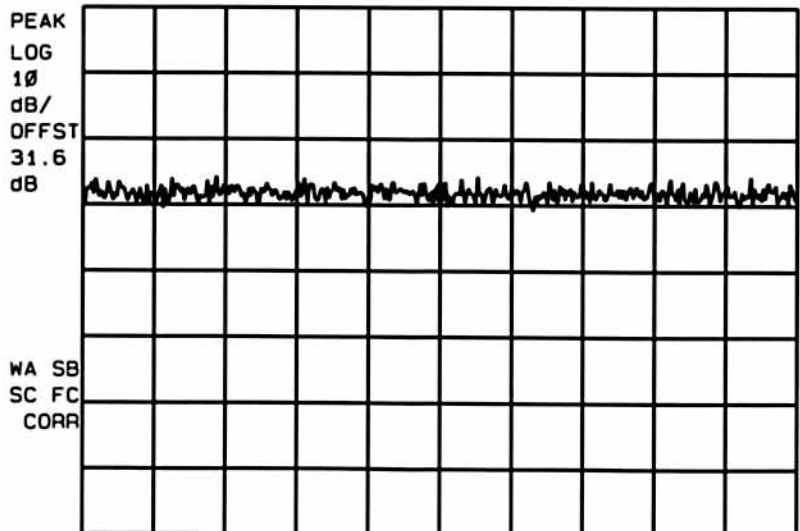
REF .0 dBm #AT 10 dB MKR 17.898750 GHz
-27.55 dBm



CENTER 17.898750 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

11:54:35 DEC 16, 1998

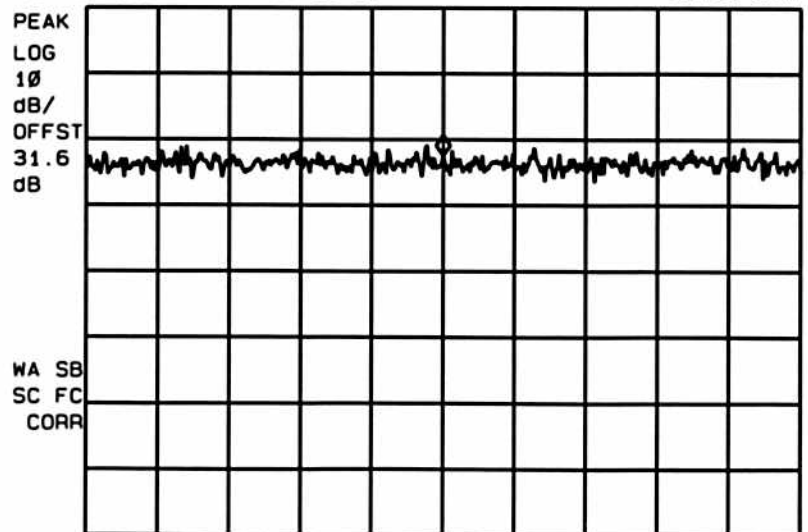
REF .0 dBm #AT 10 dB MKR 18.893125 GHz
-29.70 dBm



CENTER 18.893125 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

11:54:45 DEC 16, 1998

REF .0 dBm #AT 10 dB MKR 19.887500 GHz
-22.51 dBm



CENTER 19.887500 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec



MOTOROLA

*Cellular Infrastructure Group
Personal Communications Division*

FCC ID: IHET6YZ1

**SPURIOUS & HARMONIC
EMISSIONS CONDUCTED**

**EMISSIONS IN THE 1 MHz BW
LOCATED 1 MHz AWAY FROM
THE UPPER EDGE OF THE
FREQUENCY BLOCK AT
1991.5 MHz**

Maximum Power

**CDMA TX @ 46.0 dBm CH. 1175 at
(1988.75 MHz)**

**NOTE: The configuration which created the following plots
had 30.0 dB of attenuation from the SC4812ET 1.9 GHz CDMA
BTS output to the spectrum analyzer input.**

Channel 1175
Maximum Power

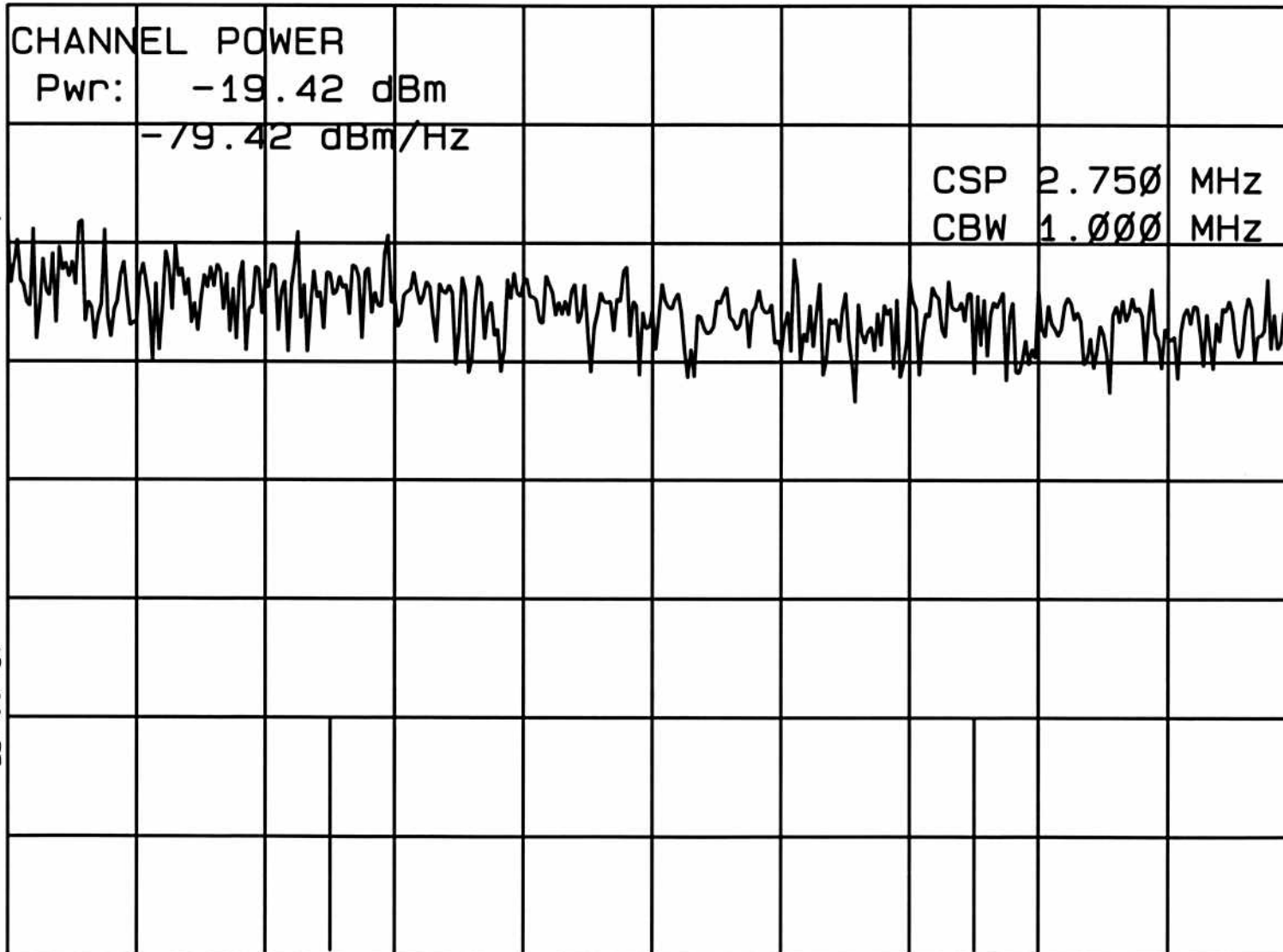
IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

btsate
12-16-98
14:46:13

hp
13:43:10 DEC 16, 1998

REF -12.0 dBm #AT 30 dB

PEAK
LOG
10
dB/
OFFST
32.2
dB



CENTER 1.991500 GHz
#RES BW 10 KHz

#VBW 100 KHz

SPAN 2.000 MHz
SWP 60.0 msec



MOTOROLA

*Cellular Infrastructure Group
Personal Communications Division*

FCC ID: IHET6YZ1

**SPURIOUS & HARMONIC
EMISSIONS CONDUCTED**

**EMISSIONS IN THE 1 MHz BW
LOCATED 1 MHz AWAY FROM
THE UPPER EDGE OF THE
FREQUENCY BLOCK AT
1991.5 MHz**

Minimum Power

**CDMA TX @ 23.0 dBm CH. 1175 at
(1988.75 MHz)**

NOTE: The configuration which created the following plots had 30.0 dB of attenuation from the SC4812ET 1.9 GHz CDMA BTS output to the spectrum analyzer input.

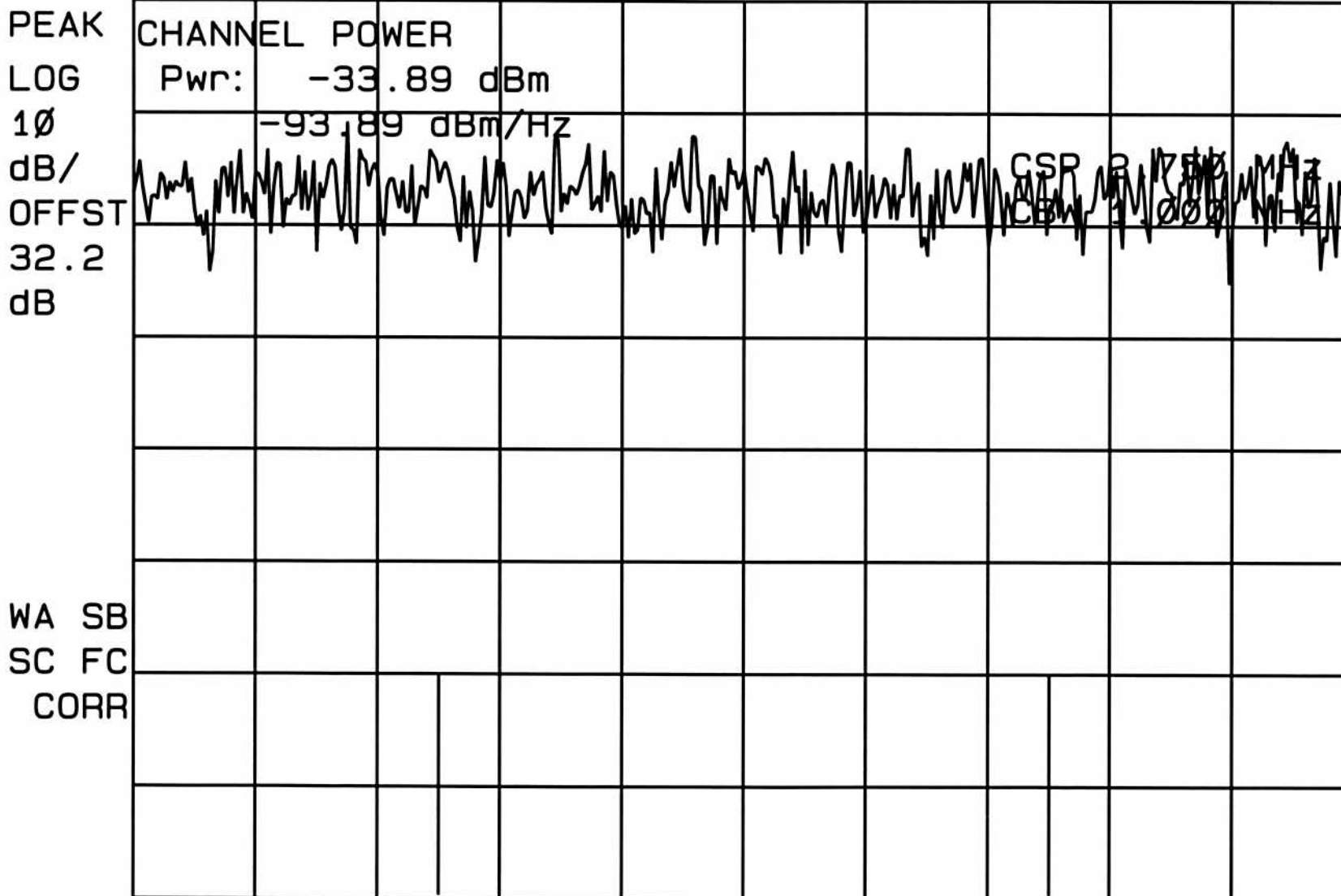
Channel 1175
Minimum Power

IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

btsate
12-16-98
14:43:34

13:40:31 DEC 16, 1998

REF -35.0 dBm #AT 10 dB



CENTER 1.991500 GHz
#RES BW 10 KHz

#VBW 100 KHz

SPAN 2.000 MHz
SWP 60.0 msec



MOTOROLA

*Cellular Infrastructure Group
Personal Communications Division*

FCC ID: IHET6YZ1

**SPURIOUS & HARMONIC
EMISSIONS CONDUCTED**

**EMISSIONS IN THE 1 MHz BW
LOCATED 1 MHz AWAY FROM
THE LOWER EDGE OF THE
FREQUENCY BLOCK AT
1928.5 MHz**

Maximum Power

**CDMA TX @ 46.0 dBm CH. 25 at
(1931.25 MHz)**

**NOTE: The configuration which created the following plots
had 30.0 dB of attenuation from the SC4812ET 1.9 GHz CDMA
BTS output to the spectrum analyzer input.**

Channel 25
Maximum Power

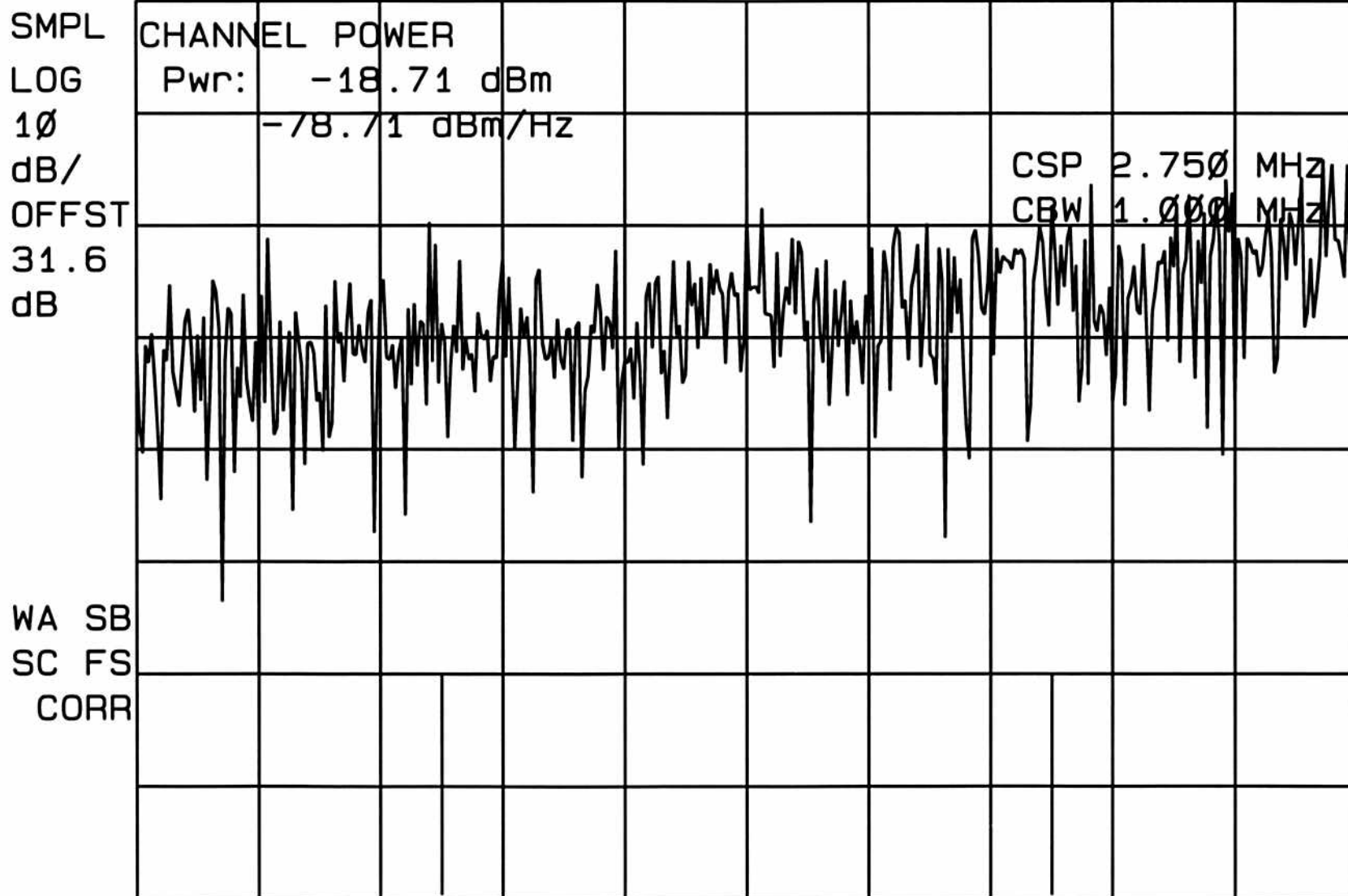
IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

btsate
12-16-98
13:53:41

12: 50: 38 DEC 16, 1998

hp

REF -12.0 dBm #AT 30 dB



CENTER 1.928500 GHz

SPAN 2.000 MHz

#RES BW 10 kHz

#VBW 100 kHz

SWP 60.0 msec



MOTOROLA

*Cellular Infrastructure Group
Personal Communications Division*

FCC ID: IHET6YZ1

**SPURIOUS & HARMONIC
EMISSIONS CONDUCTED**

**EMISSIONS IN THE 1 MHz BW
LOCATED 1 MHz AWAY FROM
THE LOWER EDGE OF THE
FREQUENCY BLOCK AT
1928.5 MHz**

Minimum Power

**CDMA TX @ 23.0 dBm CH. 25 at
(1931.25 MHz)**

**NOTE: The configuration which created the following plots
had 30.0 dB of attenuation from the SC4812ET 1.9 GHz CDMA
BTS output to the spectrum analyzer input.**

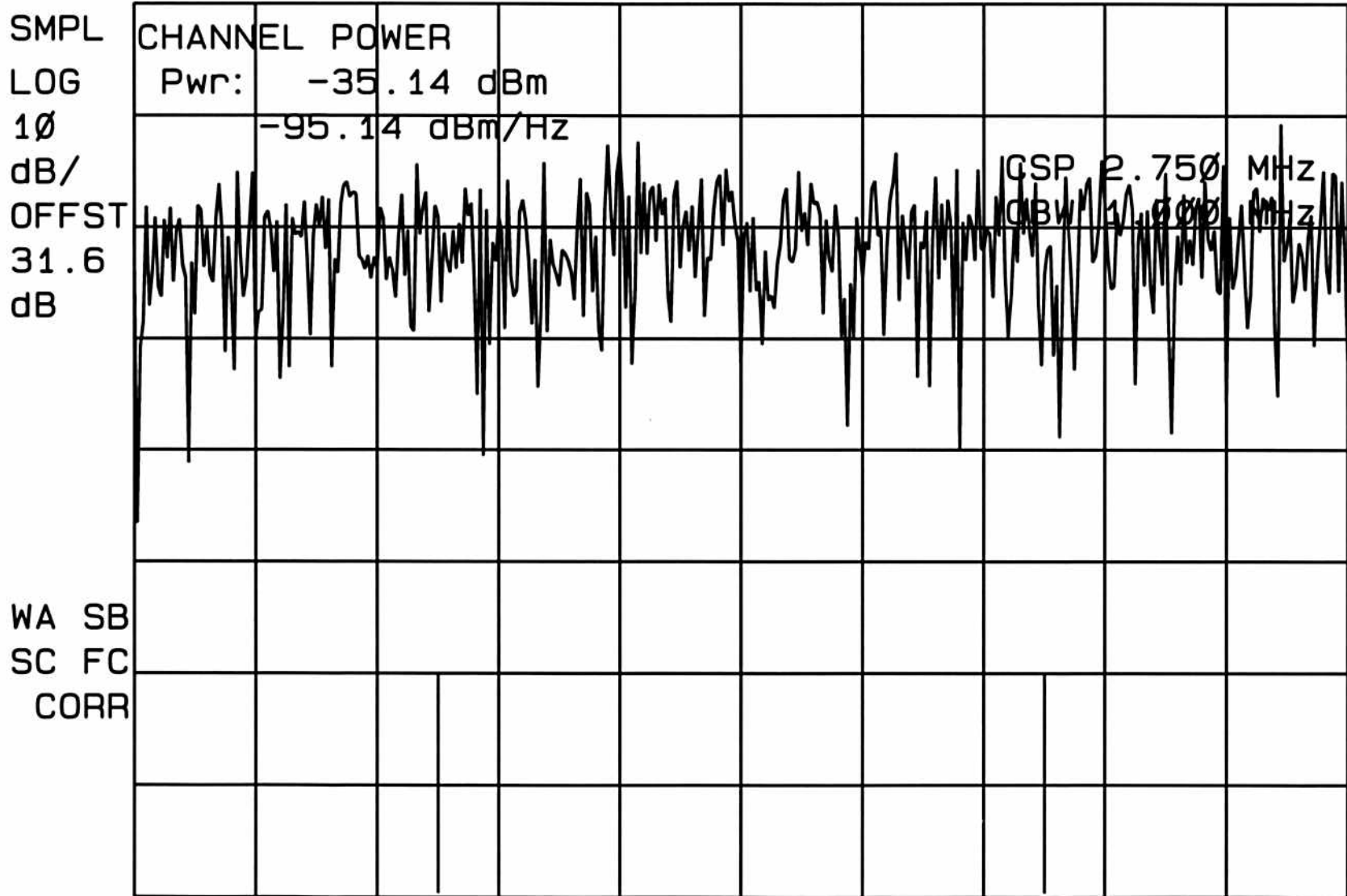
Channel 25
Minimum Power

IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

btsate
12-16-98
13:39:47

12:36:43 DEC 16, 1998
hp

REF -35.0 dBm #AT 10 dB



CENTER 1.928500 GHz
#RES BW 10 kHz

#VBW 100 kHz

SPAN 2.000 MHz
SWP 60.0 msec



MOTOROLA

Cellular Infrastructure Group

FCC ID: IHET6YZ1

SECTION E

OCCUPIED BANDWIDTH

NOTE: The occupied bandwidth plots are measured in a 30 kHz resolution bandwidth. The following formula is used to obtain the correct zero dB reference point relative to the bandwidth of the 1.2288 MHz CDMA signal.

$$\text{Power(measured in 30 kHz bandwidth)} + 10 \log \frac{1.2288\text{MHz}}{30\text{kHz}}$$

Example: 29.88 dBm + 16.12 dB = 46.0 dBm

The output power was set to 40.0 Watts using an HP438A power meter.



MOTOROLA

Cellular Infrastructure Group

SECTION E

FCC ID: IHET6YZ1

OCCUPIED BANDWIDTH

Maximum Power

Channel 25
Maximum Power

IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

btsate
12-16-98
14:04:26

13:01:23 DEC 16, 1998

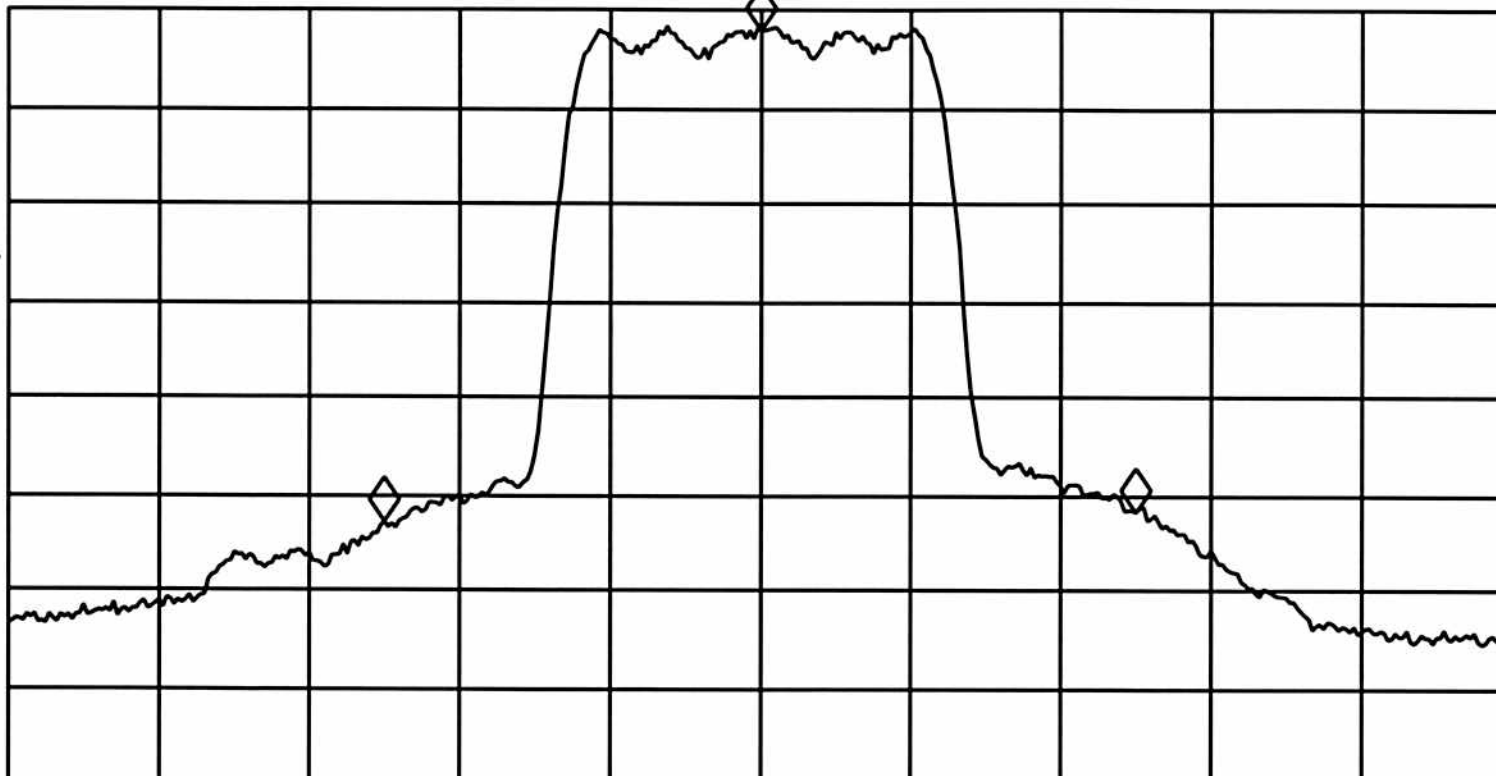
MKR 1.931250 GHz
30.48 dBm

REF 32.6 dBm

#AT 30 dB

SMPL
LOG
10
dB/
OFFST
32.2
dB

AVG
200



Marker	Trace	Type	Freq / Time	Amplitude
1:	(A)	Freq	1931.250 MHz	30.48 dBm
2:	(A)	Freq	1930.000 MHz	-20.31 dBm
3:	(A)	Freq	1932.500 MHz	-19.30 dBm
4:		Inactive		

CENTER 1.931250 GHz
#RES BW 30 KHz

#VBW 100 KHz

SPAN 5.000 MHz
SWP 20.0 msec

Channel 1175
Maximum Power

IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

btsate
12-16-98
14:35:33

13: 32: 29 DEC 16, 1998

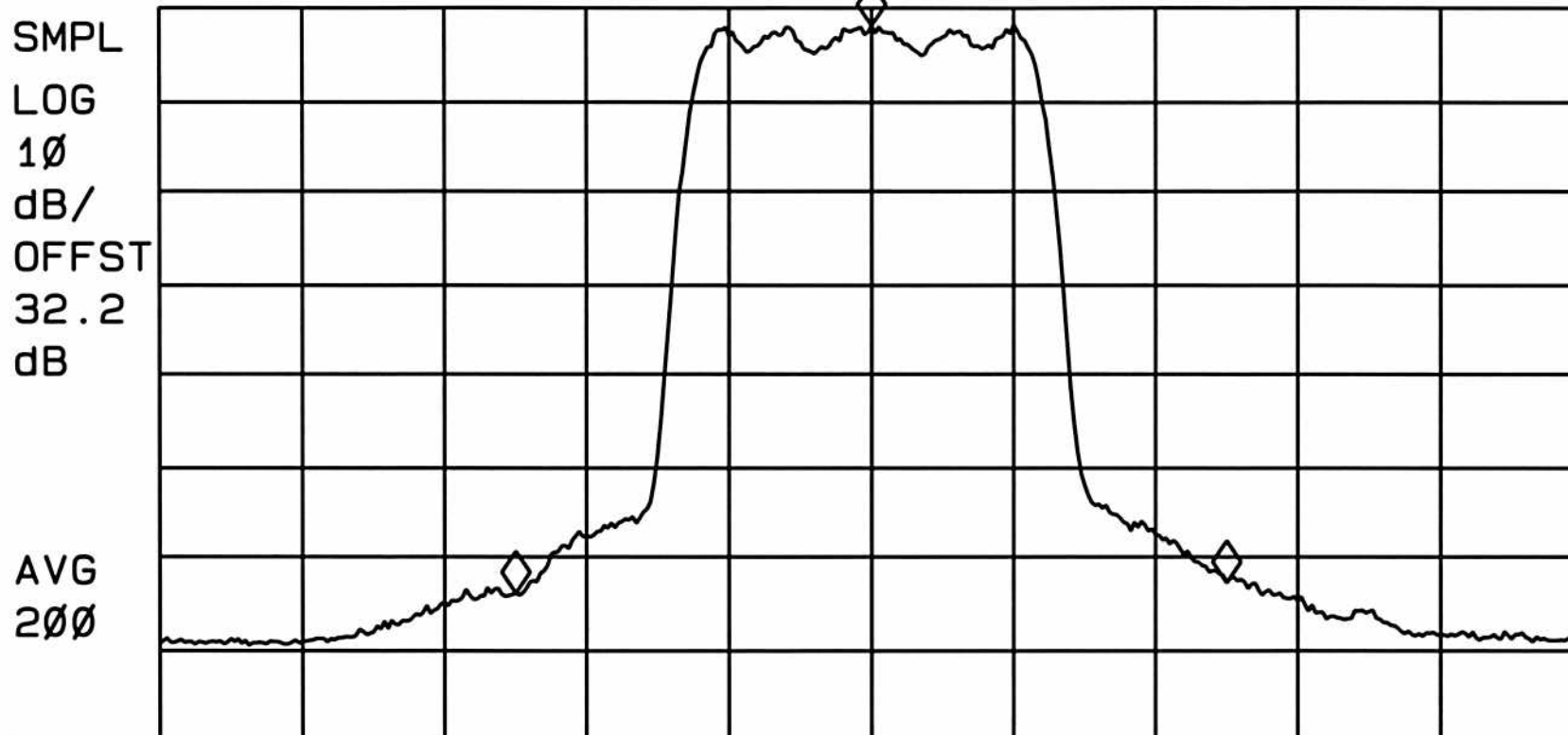
hp

MKR 1.988750 GHz

REF 32.6 dBm

#AT 30 dB

30.69 dBm



Marker	Trace	Type	Freq / Time	Amplitude
1:	(A)	Freq	1988.750 MHz	30.69 dBm
2:	(A)	Freq	1987.500 MHz	-31.37 dBm
3:	(A)	Freq	1990.000 MHz	-30.23 dBm
4:		Inactive		

CENTER 1.988750 GHz

SPAN 5.000 MHz

#RES BW 30 kHz

#VBW 100 kHz

SWP 20.0 msec



MOTOROLA

Cellular Infrastructure Group

SECTION E

FCC ID: IHET6YZ1

OCCUPIED BANDWIDTH

Minimum Power

Channel 25
Minimum Power

IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

btsate
12-16-98
14:16:27

13: 13: 23 DEC 16, 1998

hp

MKR 1.931250 GHz

REF 12.6 dBm

#AT 20 dB

7.09 dBm

SMPL

LOG

10

dB/

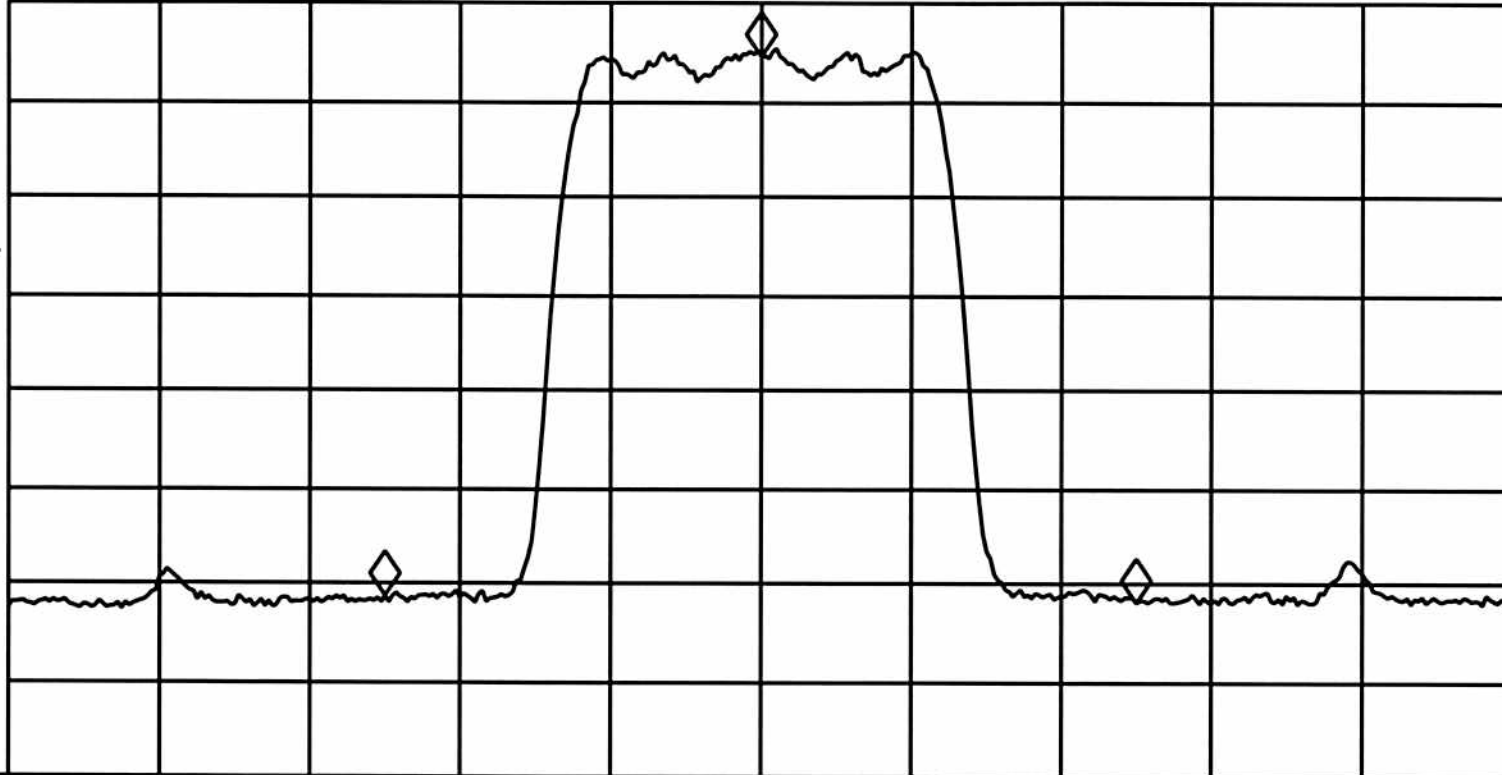
OFFST

32.2

dB

AVG

200



Marker	Trace	Type	Freq / Time	Amplitude
1:	(A)	Freq	1931.250 MHz	7.09 dBm
2:	(A)	Freq	1930.000 MHz	-48.70 dBm
3:	(A)	Freq	1932.500 MHz	-49.38 dBm
4:		Inactive		

CENTER 1.931250 GHz

SPAN 5.000 MHz

#RES BW 30 kHz

#VBW 100 kHz

SWP 20.0 msec

Channel 1175
Minimum Power

IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

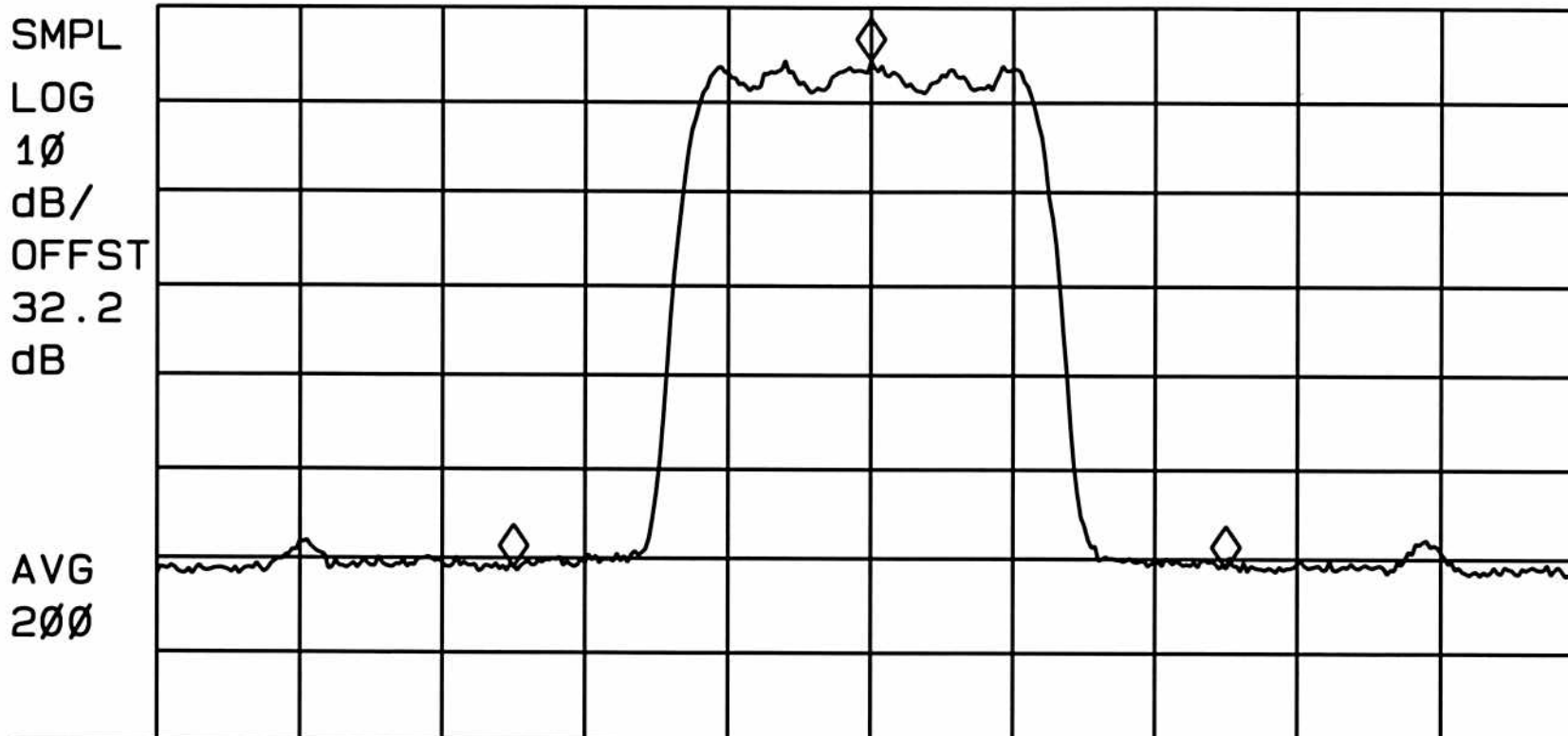
btsate
12-16-98
14:25:45

13: 22: 42 DEC 16, 1998

hp

MKR 1.988750 GHz
6.93 dBm

REF 12.6 dBm #AT 20 dB



Marker	Trace	Type	Freq / Time	Amplitude
1:	(A)	Freq	1988.750 MHz	6.93 dBm
2:	(A)	Freq	1987.500 MHz	-48.34 dBm
3:	(A)	Freq	1990.000 MHz	-48.38 dBm
4:		Inactive		

CENTER 1.988750 GHz

SPAN 5.000 MHz

#RES BW 30 kHz

#VBW 100 kHz

SWP 20.0 msec



MOTOROLA

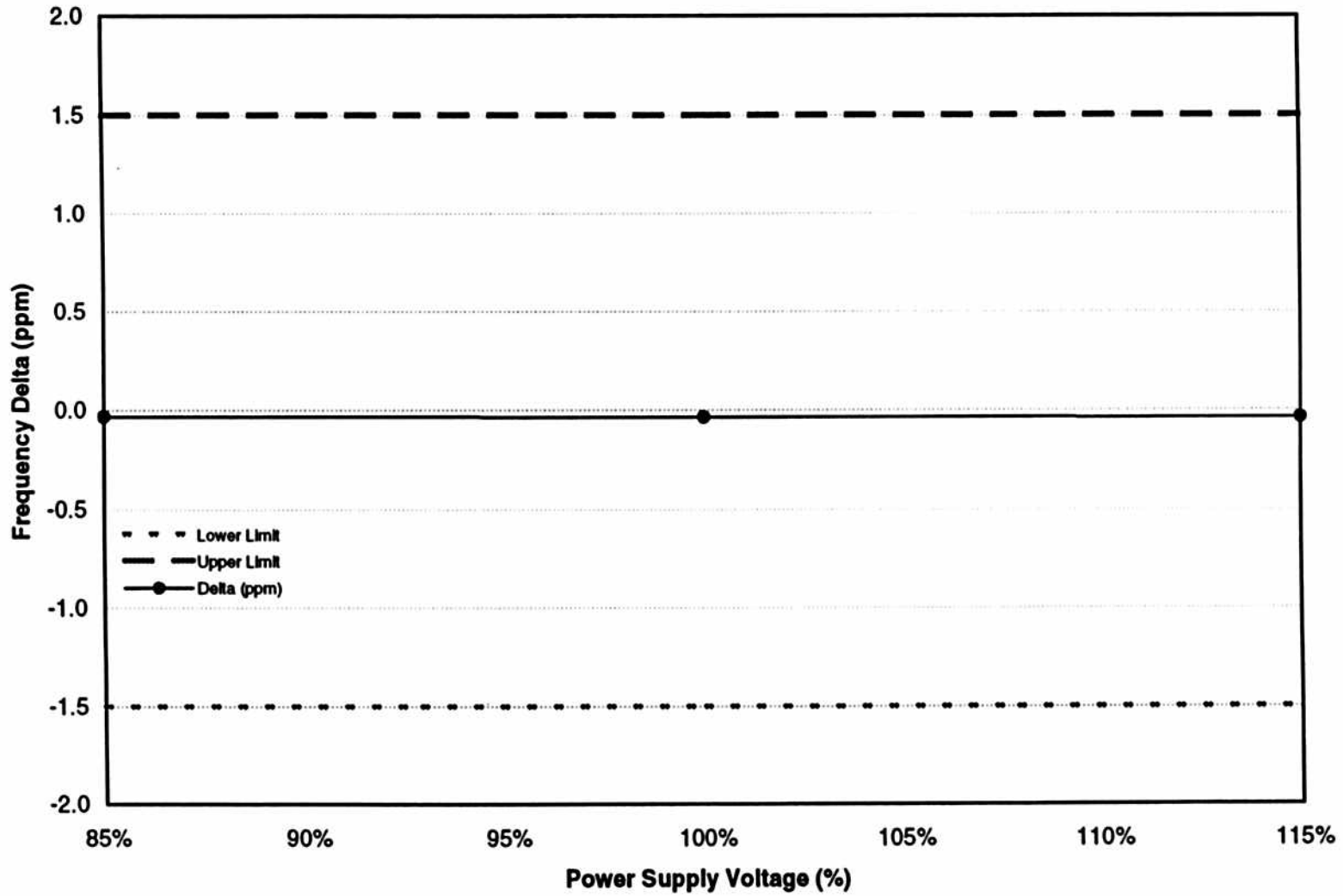
Cellular Infrastructure Group

FCC ID: IHET6YZ1

SECTION F

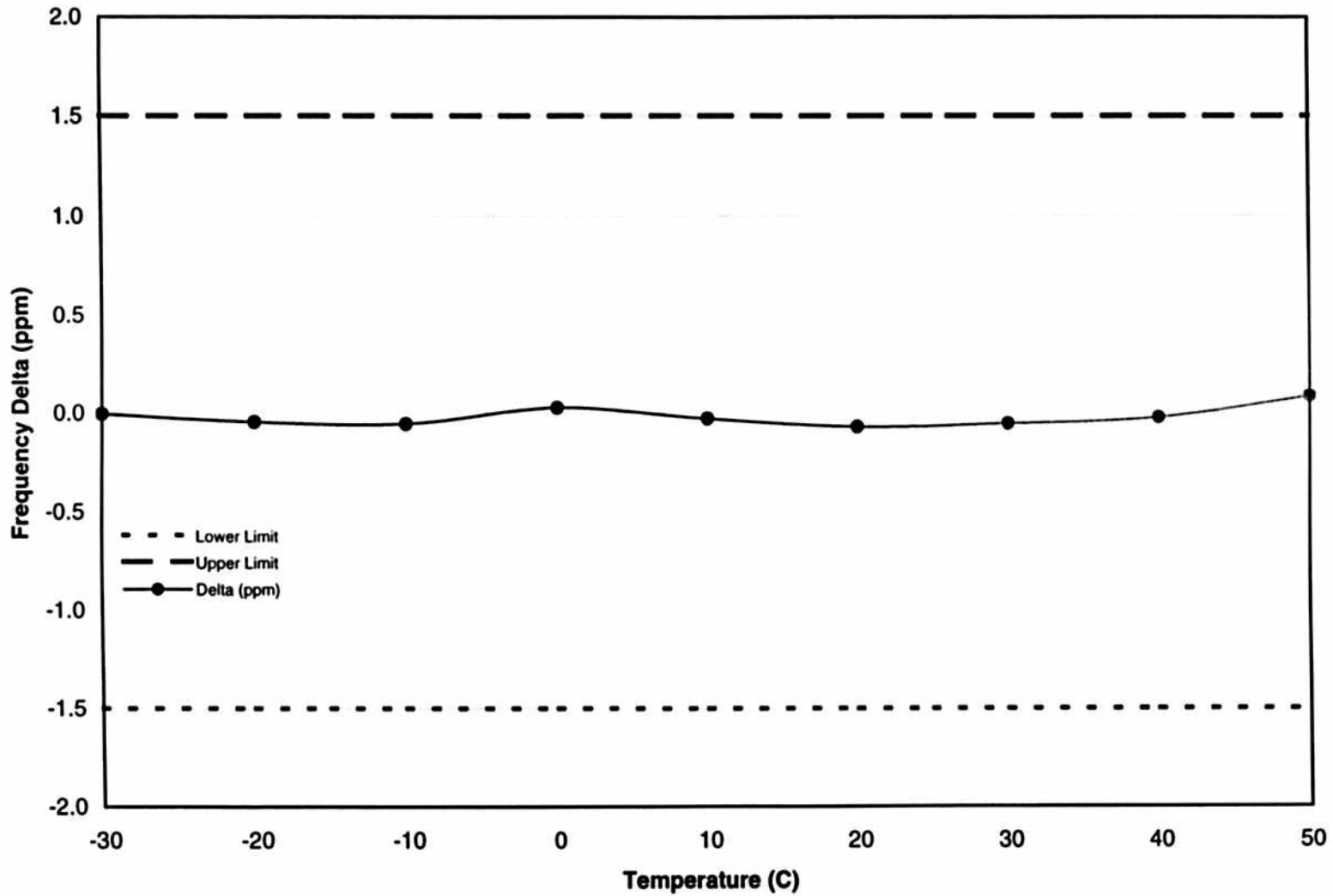
FREQUENCY STABILITY

Frequency Stability with Varying Supply Voltage - CSM1



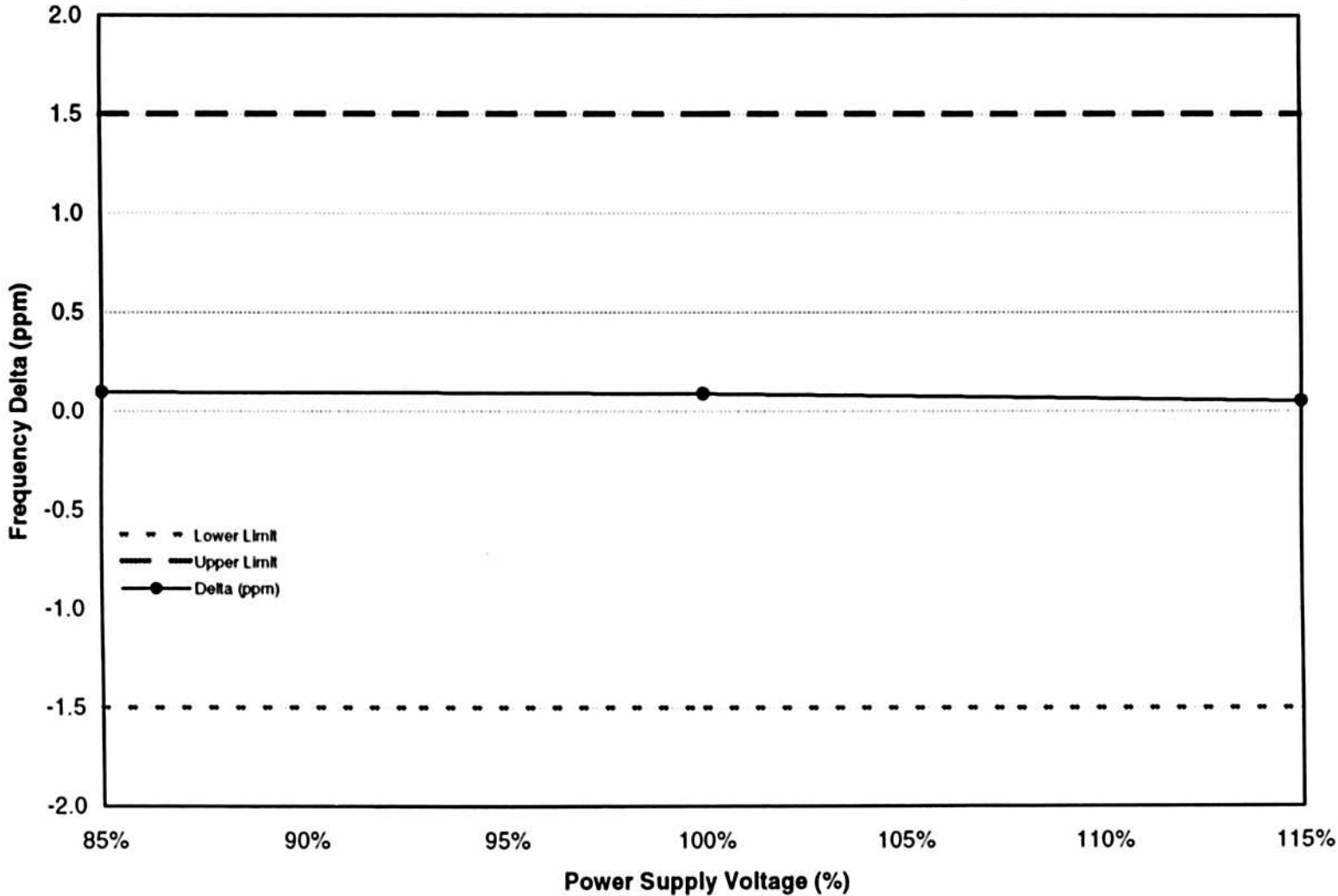
IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

Frequency Stability Over Temperature - CSM1



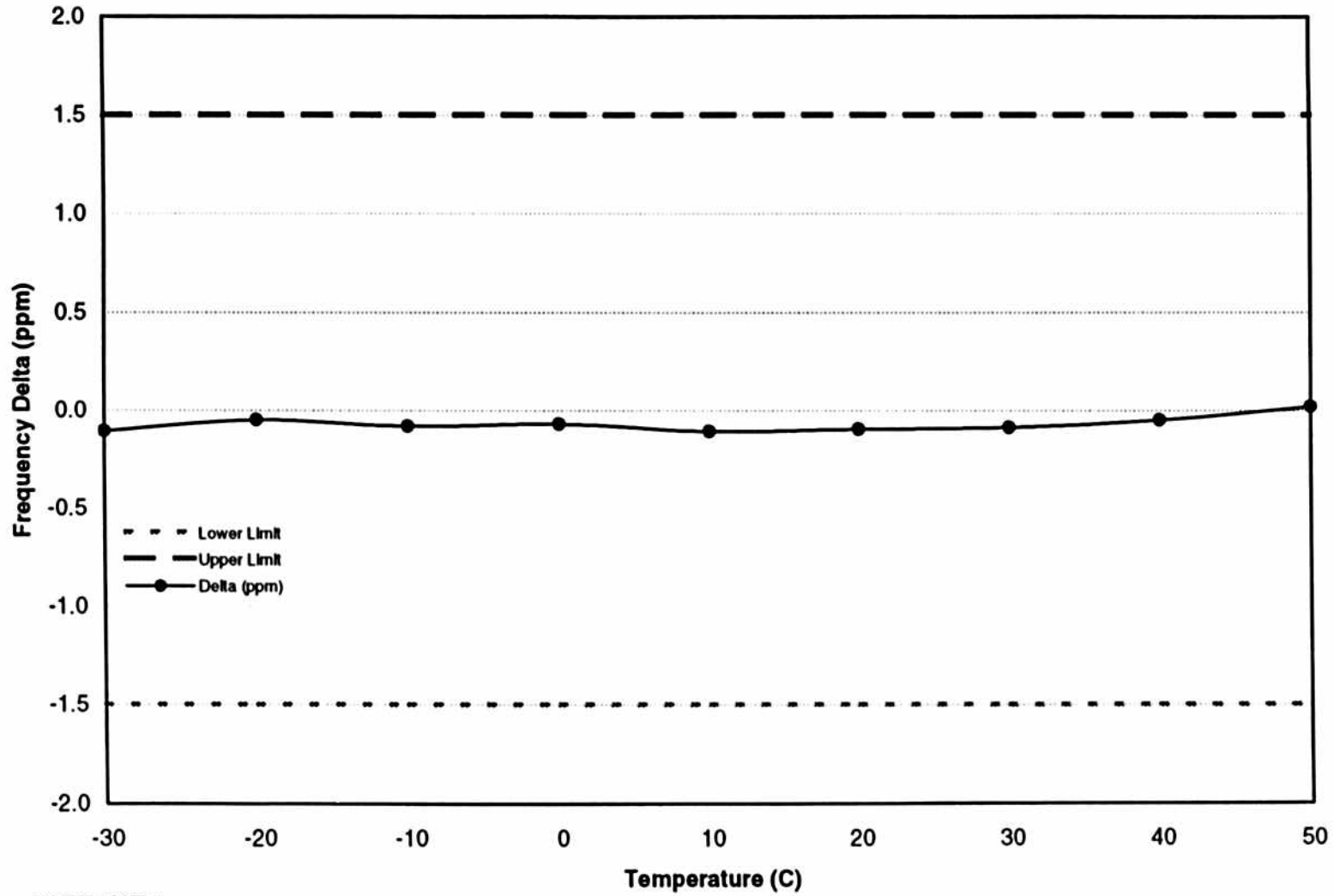
IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

Frequency Stability with Varying Supply Voltage - CSM2



IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

Frequency Stability Over Temperature - CSM2



IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS