

APPLICANT: MOTOROLA

TRANSCIVER TYPE: IHET6YZ1

SC4812ET @1.9 GHz CDMA BTS

TEST REPORT EXHIBIT

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Cellular Infrastructure Group

FCC ID: IHET6YZ1

SECTION A

SUMMARY OF RF MEASUREMENTS

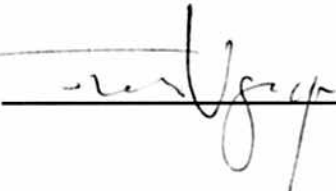
APPLICANT: MOTOROLA

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 (dBμV/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 ($10 \log_{10} (P_{\text{watt}})$) - (43 + $10 \log_{10} (P_{\text{watt}})$)dBW

“ = $10 \log_{10} (P_{\text{watt}})$ - (43 + $10 \log_{10} (P_{\text{watt}})$)dBW

“ =-43 dBW

“ =-13 dBm

Engineer:

 12-15-98

Date



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FCC ID: IHET6YZ1

SECTION B

MODULATION CHARACTERISTICS



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SECTION B

FCC ID: IHET6YZ1

MODULATION CHARACTERISTICS

Maximum Power

CDMA ANALYZER			
Rho 0.9761 Time Offset 1.13 us		Freq Err -3.7 Hz Carrier Feedthru -33.1 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 ms Gain Auto/Hold 12 dB Anl Dir End/Rev Anl Special Normal	Analyzer Arm Meas Single/Cont Disarm Qual Event None Trig Event 80 ms

Channel 25
Maximum Power

IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

CDMA ANALYZER			
Rho 0.9742 Time Offset 1.09 us		Freq Err -50 -0.2 50 Hz Carrier Feedthru -27.8 dB	
RF Channel 1175 N AMER PCS Input Atten Auto/Hold 5 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 12 dB Anl Dir End/Rep Anl Special Normal	Analyzer Arm Meas Single/Cont Disarm Qual Event None Trig Event 80 ms

Channel 1175
Maximum Power

IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS



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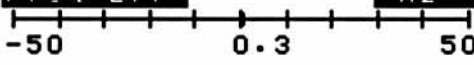
Cellular Infrastructure Group

SECTION B

FCC ID: IHET6YZ1

MODULATION CHARACTERISTICS

Minimum Power

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

Channel 25
Minimum Power

IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

CDMA ANALYZER			
Rho 0.9739 Time Offset 1.09 us		Freq Err -4.9 Hz Carrier Feedthru -28.3 dB	
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 Arm Meas Single/Cont Disarm Qual Event None Trig Event 80 ms

Channel 1175
Minimum Power

IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS



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FCC ID: IHET6YZ1

SECTION C

SPURIOUS & HARMONIC EMISSIONS RADIATED

APPLICANT: MOTOROLA

TRANSCIVER 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

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

$\text{Log}(3143.54 \text{ uV/m} / 57735) * 20 = -25.28 \text{ dBm}$

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



MOTOROLA

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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

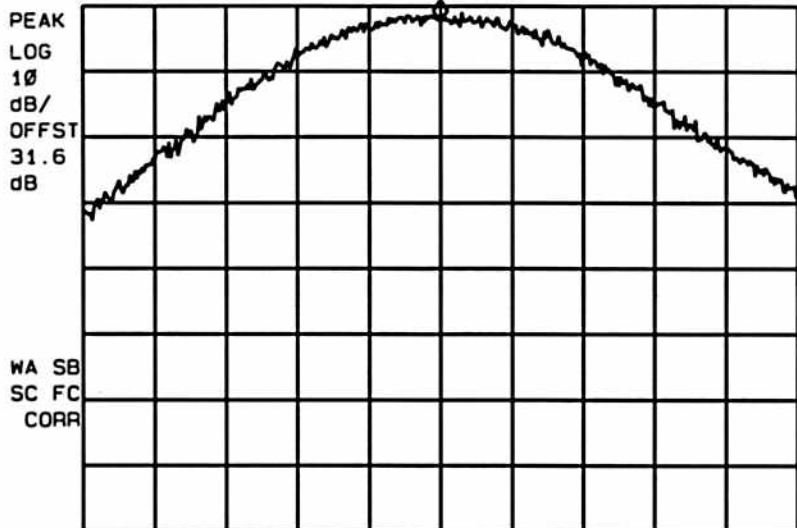
CDMA Transmitter Channel 25

Maximum Power

Channel 25 Maximum Power

10:12:32 DEC 16, 1998

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



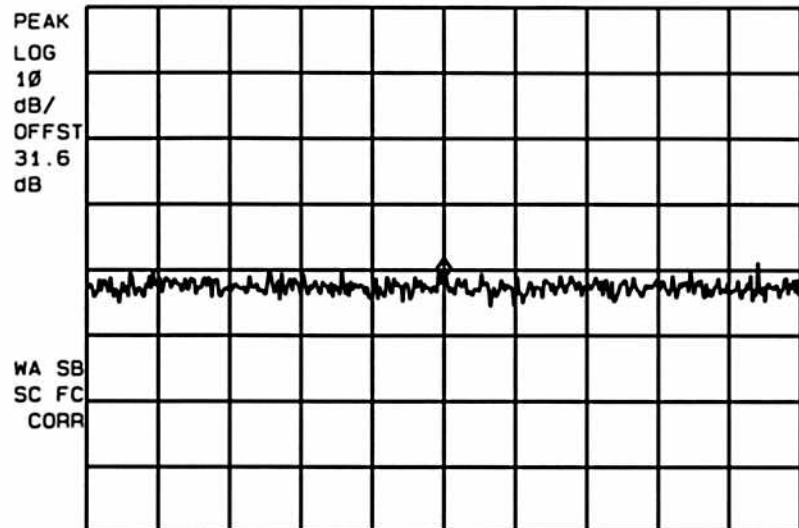
CENTER 1.931250 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

IHET6YZ1 SC4812ET 1.9 GHz CDMA BTS

btsate
12-16-98
11:25:12

10:18:20 DEC 16, 1998

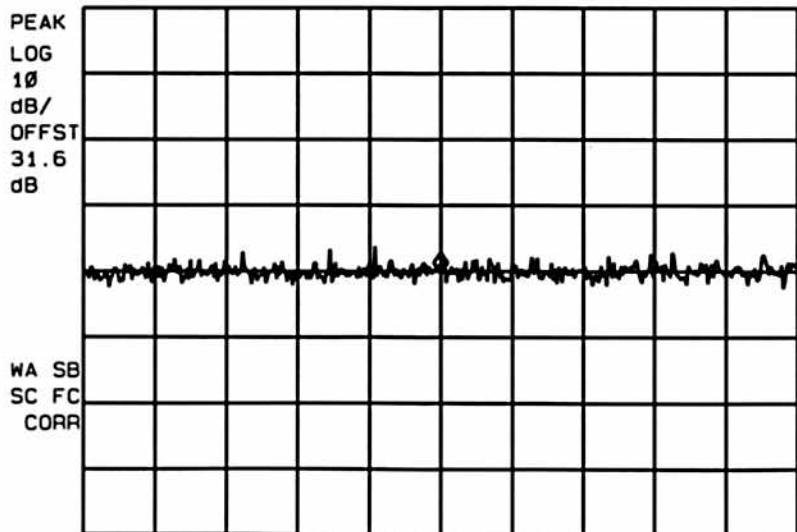
REF .0 dBm #AT 10 dB MKR 965.625 MHz -41.37 dBm



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

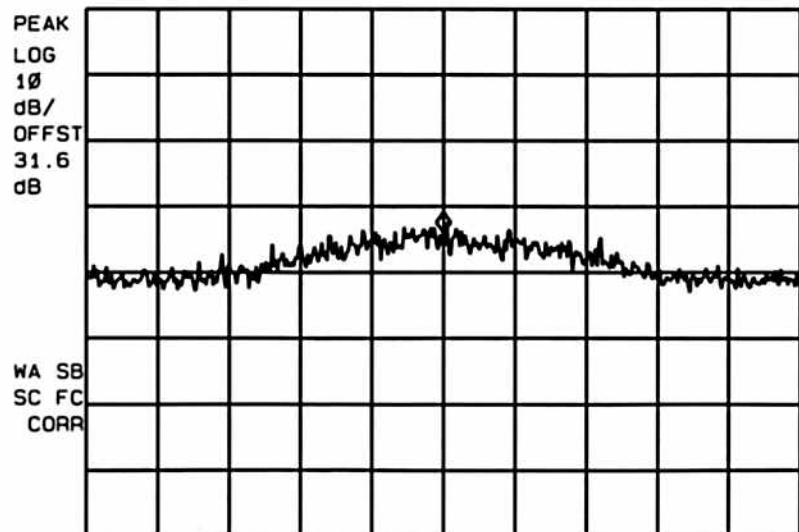
REF .0 dBm #AT 10 dB MKR 2.896875 GHz -40.34 dBm



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

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



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

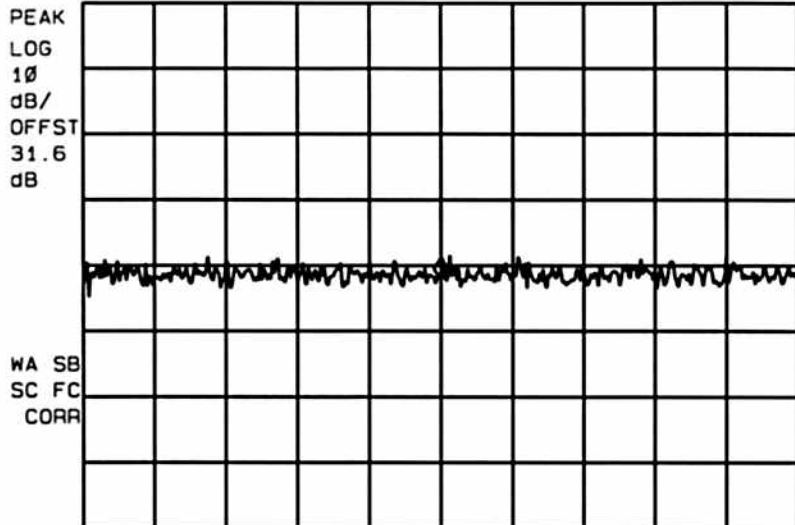
Channel 25 Maximum Power

10:25:24 DEC 16, 1998

MRK 4.828125 GHz
-42.08 dBm

REF -0.0 dBm

#AT 10 dB



CENTER 4.828125 GHz

SPAN 5.000 MHz

#RES BW 1.0 MHz

#VBW 1 MHz

SWP 20.0 msec

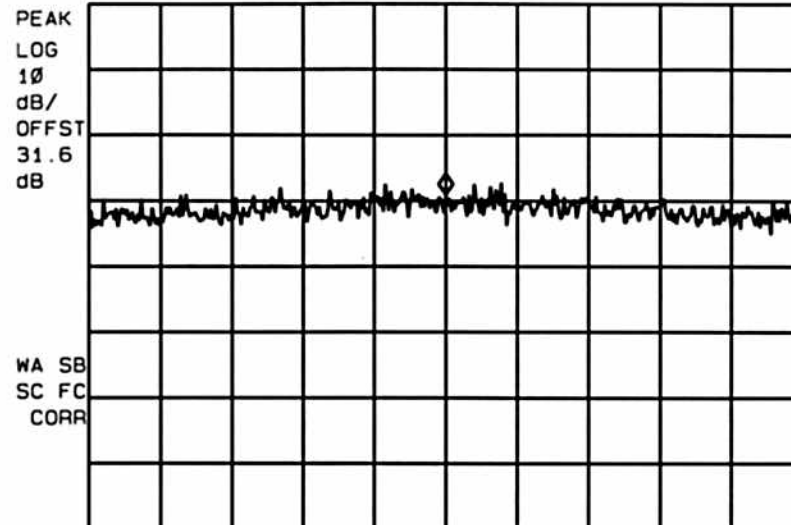
IHET6YZ1 SC4812ET 1.9 GHz CDMA BTS

10:34:18 DEC 16, 1998

MRK 5.793750 GHz
-30.05 dBm

REF -1.0 dBm

#AT 10 dB



CENTER 5.793750 GHz

SPAN 5.000 MHz

#RES BW 1.0 MHz

#VBW 1 MHz

SWP 20.0 msec

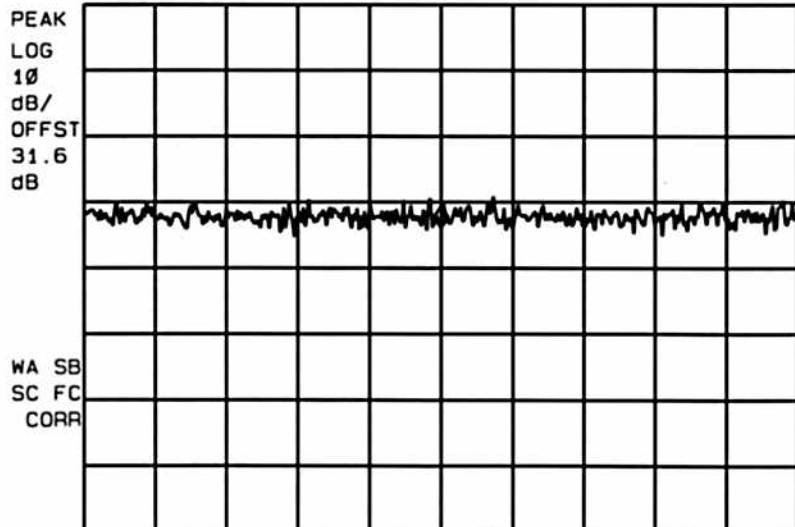
btsate
12-16-98
11:38:48

10:35:29 DEC 16, 1998

MRK 6.759375 GHz
-34.85 dBm

REF -1.0 dBm

#AT 10 dB



CENTER 6.759375 GHz

SPAN 5.000 MHz

#RES BW 1.0 MHz

#VBW 1 MHz

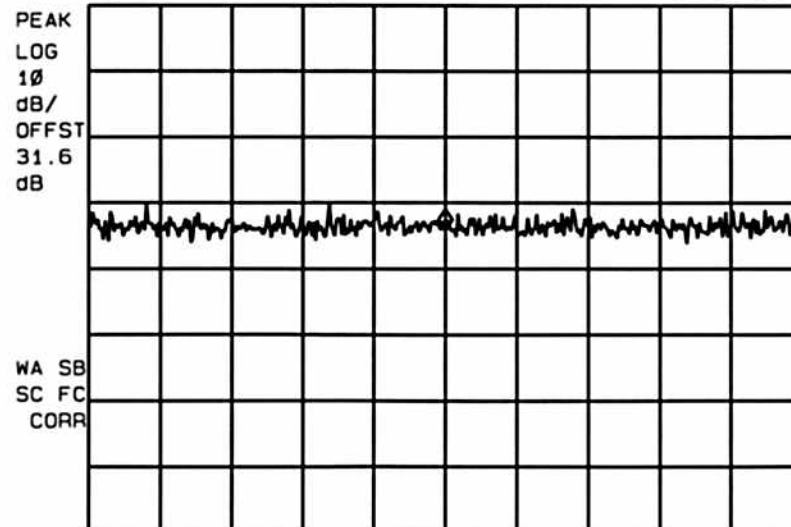
SWP 20.0 msec

10:35:44 DEC 16, 1998

MRK 7.725000 GHz
-35.18 dBm

REF -1.0 dBm

#AT 10 dB



CENTER 7.725000 GHz

SPAN 5.000 MHz

#RES BW 1.0 MHz

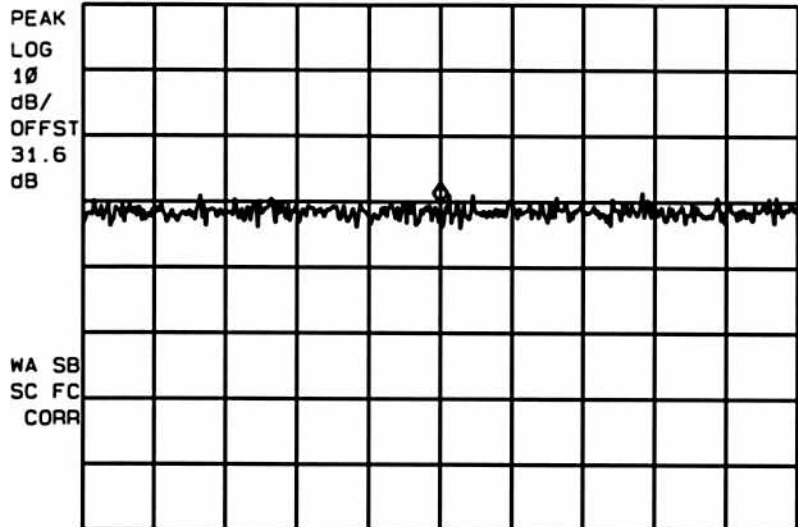
#VBW 1 MHz

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



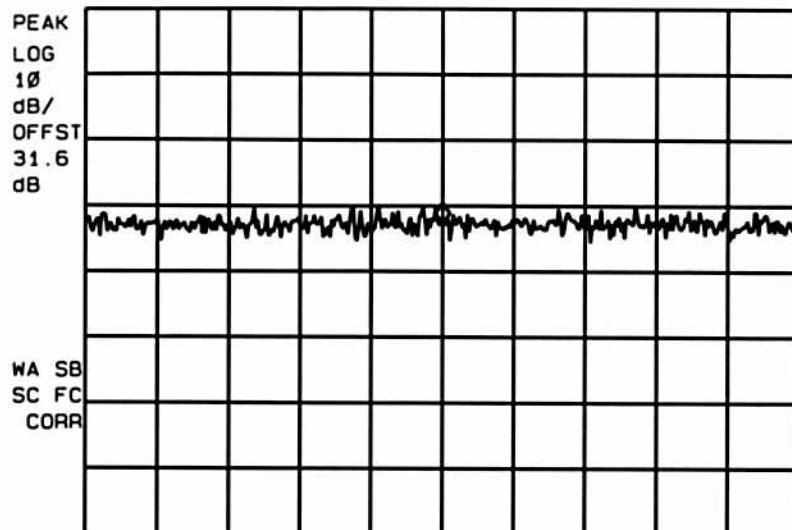
CENTER 8.690625 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

IHET6YZ1 SC4812ET 1.9 GHz CDMA BTS

btsate
12-16-98
11:39:59

10:36:13 DEC 16, 1998

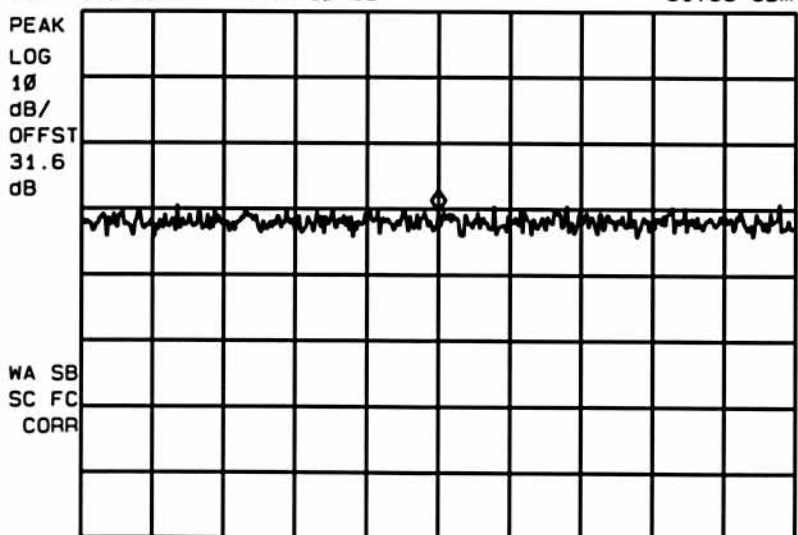
REF -1.0 dBm #AT 10 dB MKR 9.656250 GHz
-33.73 dBm



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

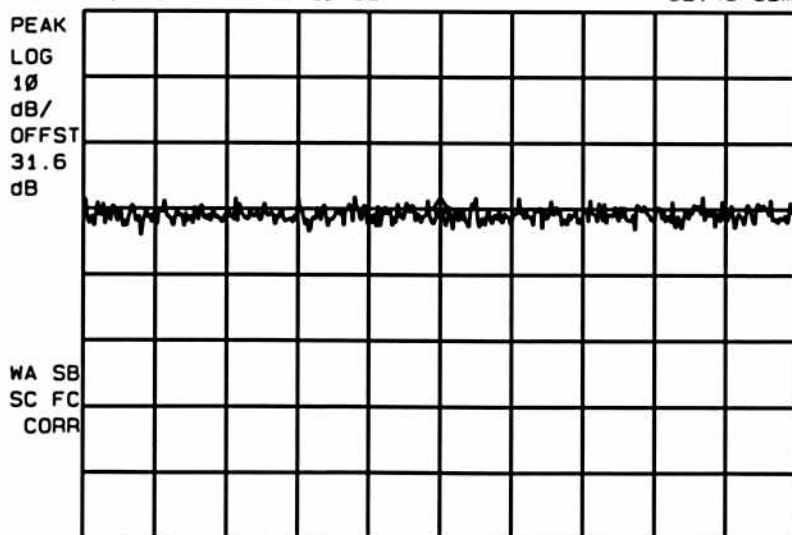
REF -1.0 dBm #AT 10 dB MKR 10.621875 GHz
-31.33 dBm



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

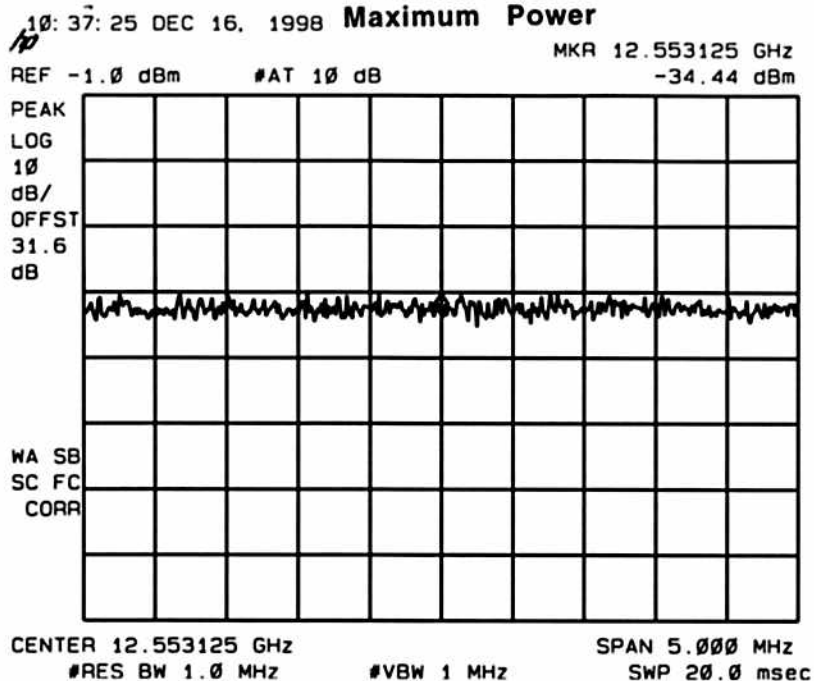
10:36:55 DEC 16, 1998

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



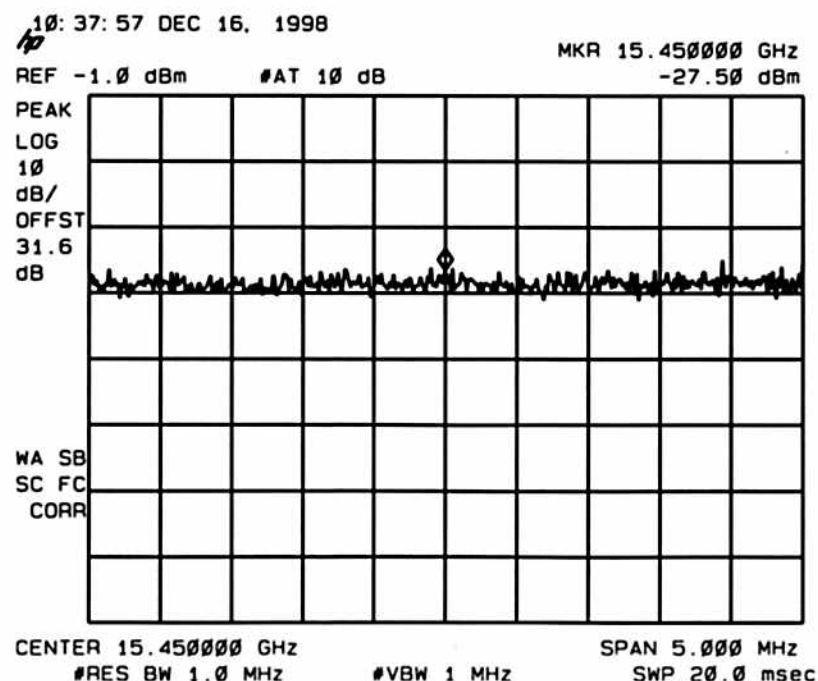
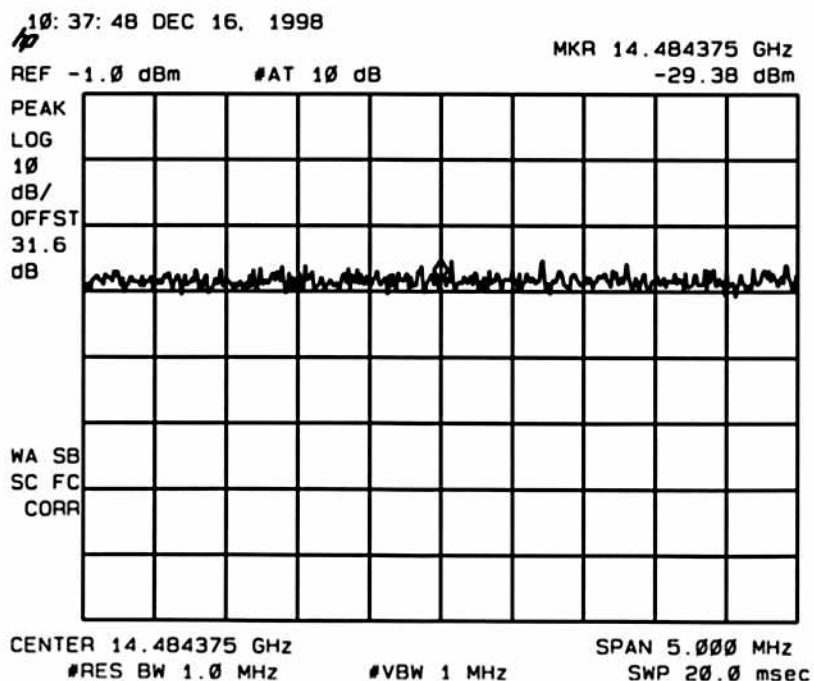
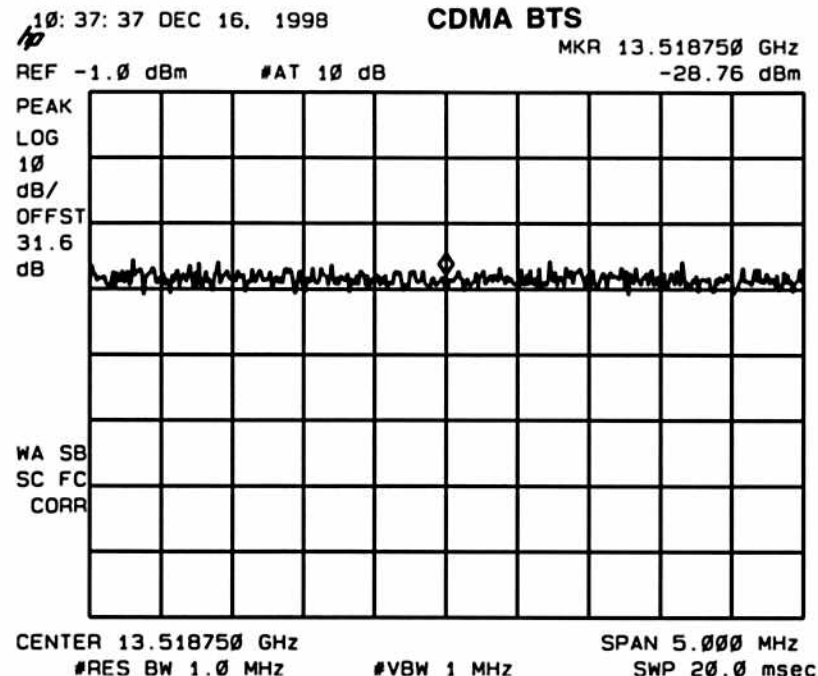
CENTER 11.587500 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

Channel 25 Maximum Power



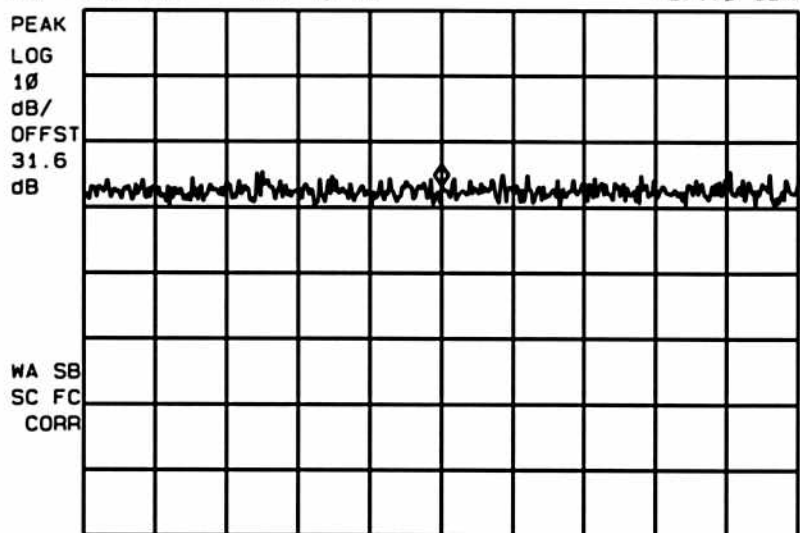
IHET6YZ1 SC4812ET 1.9 GHz CDMA BTS

btsate
12-16-98
11:41:01



Channel 25
Maximum Power

10:38:26 DEC 16, 1998
REF -1.0 dBm #AT 10 dB MKR 16.415625 GHz
-27.70 dBm

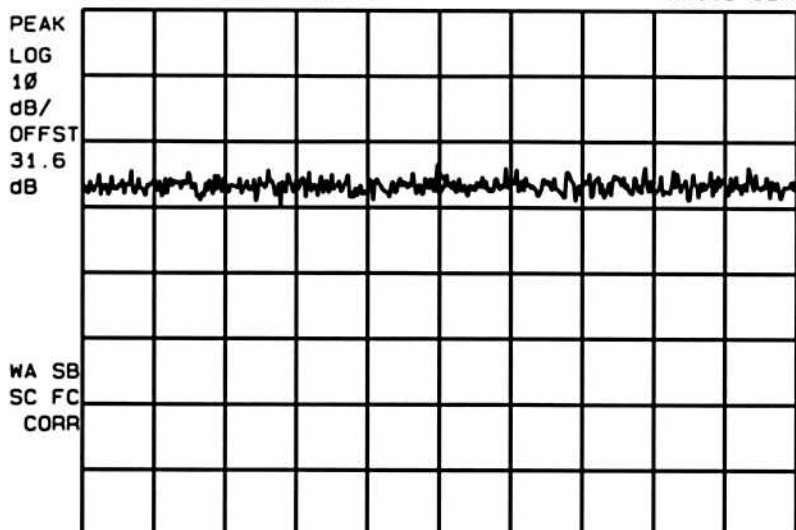


CENTER 16.415625 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

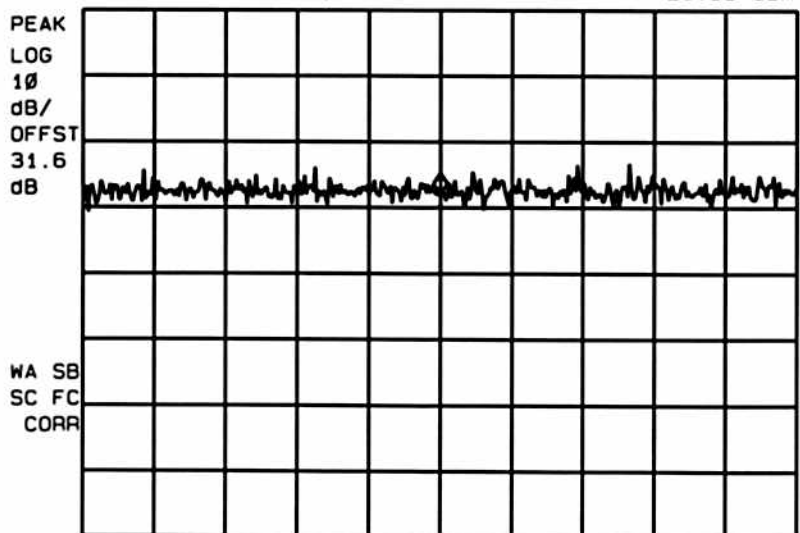
btsate
12-16-98
11:42:13

10:38:35 DEC 16, 1998
REF -1.0 dBm #AT 10 dB MKR 17.381250 GHz
-28.89 dBm



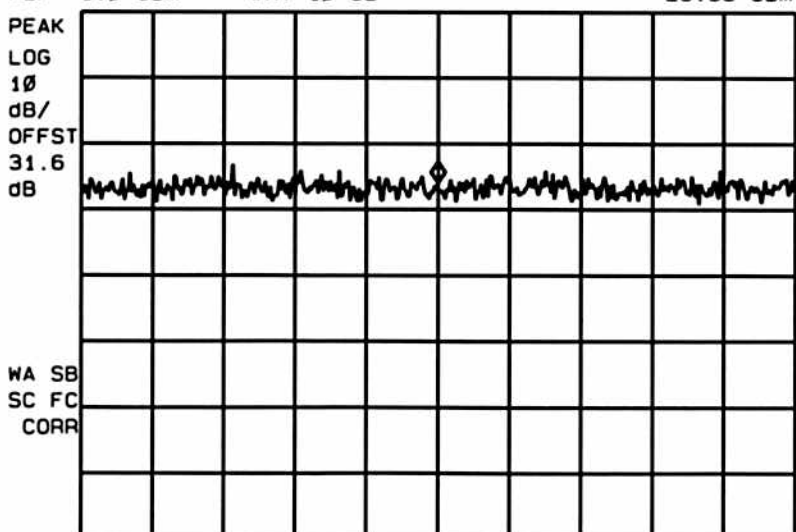
CENTER 17.381250 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

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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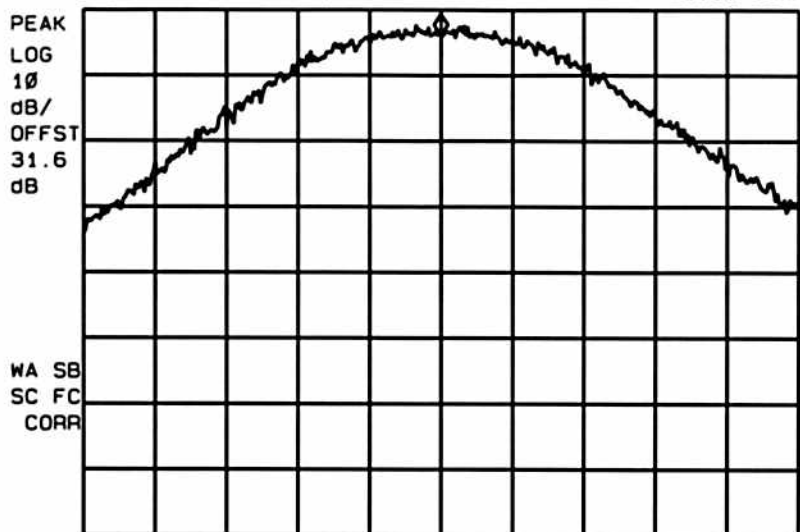
SPURIOUS & HARMONIC EMISSIONS CONDUCTED

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

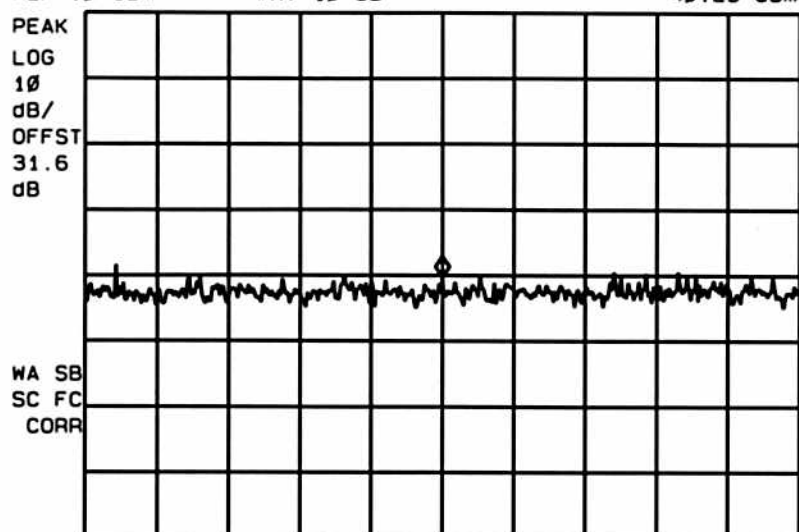


CENTER 1.931250 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

IHET6YZ1 SC4812ET 1.9 GHz CDMA BTS

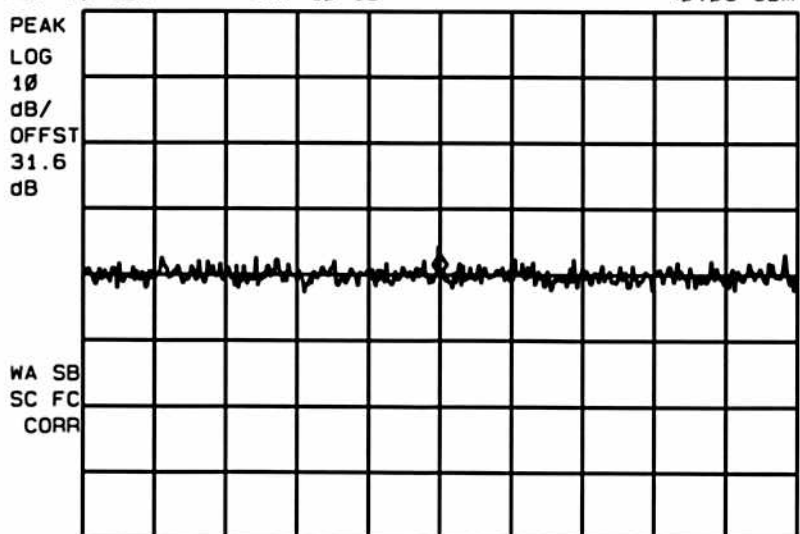
btsate
12-16-98
13:07:35

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



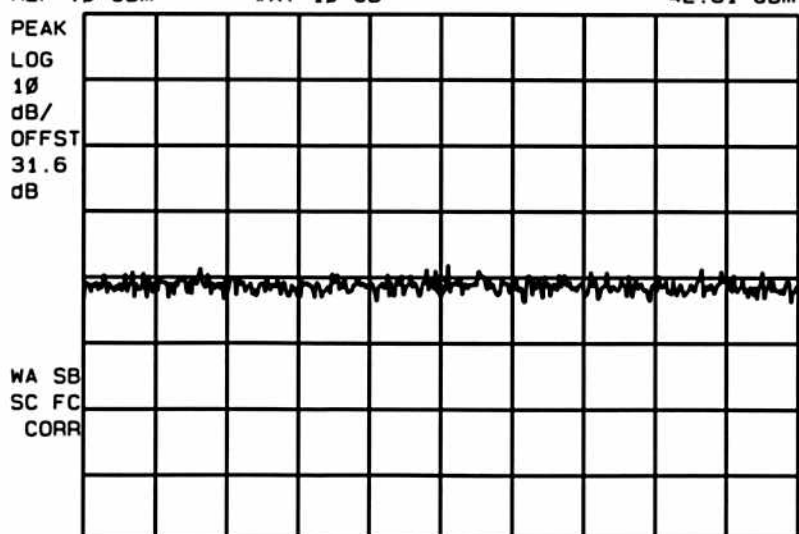
CENTER 965.625 MHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

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



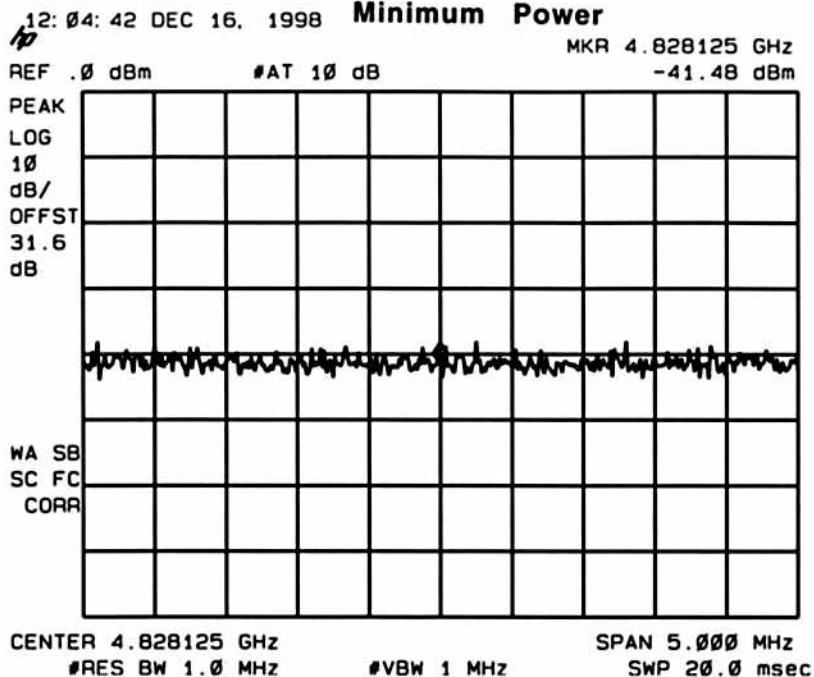
CENTER 2.896875 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

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



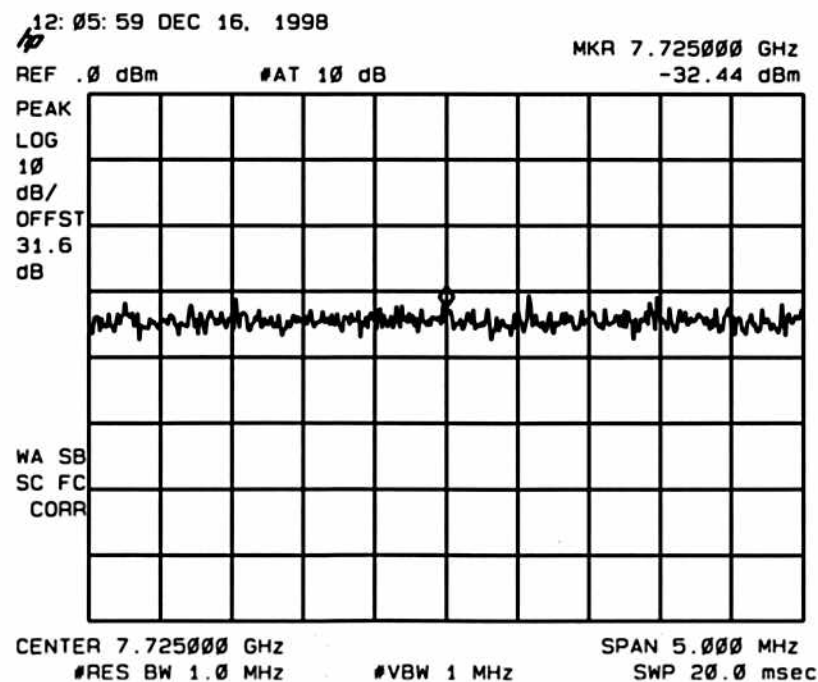
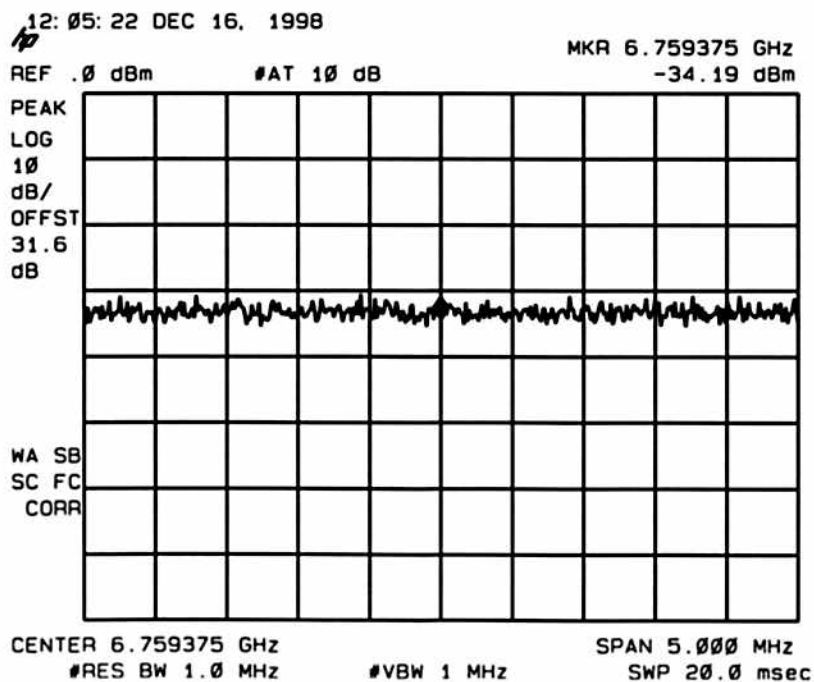
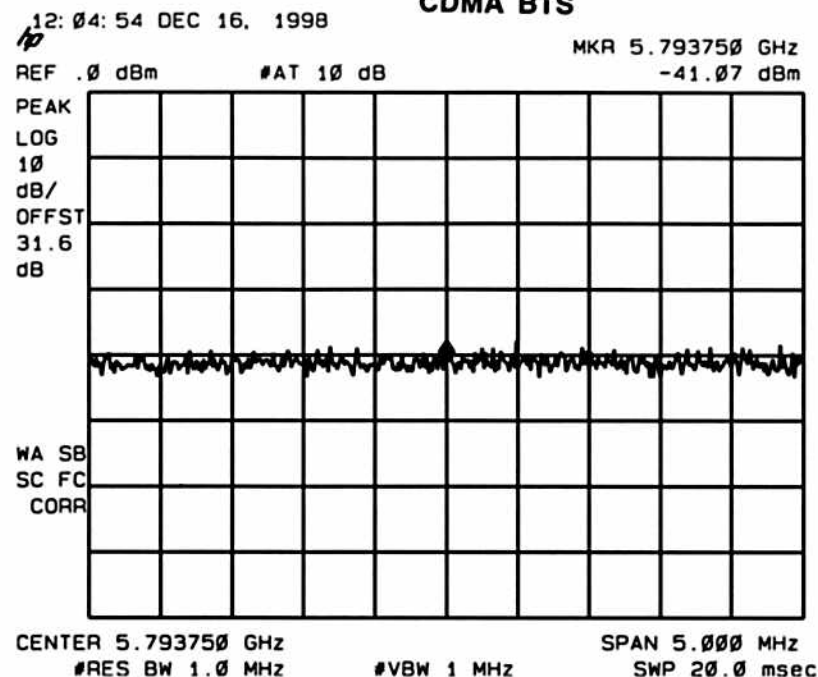
CENTER 3.862500 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

Channel 25 Minimum Power



IHET6YZ1 SC4812ET 1.9 GHz CDMA BTS

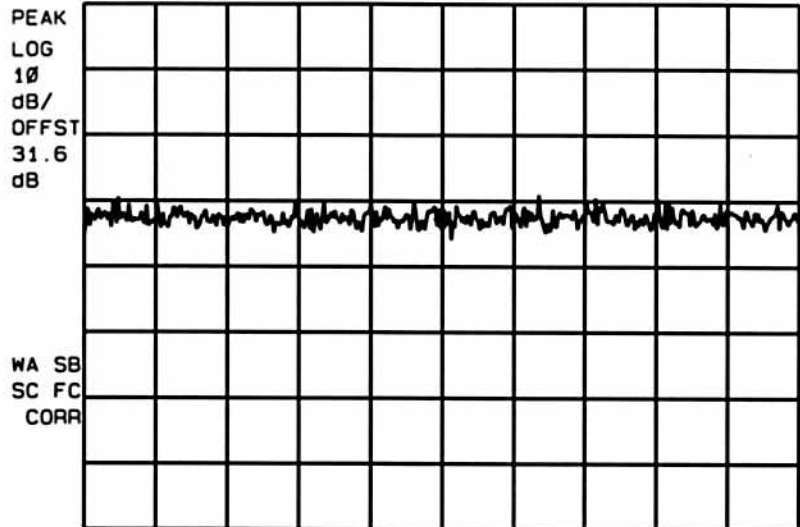
btsate
12-16-98
13:09:03



Channel 25 Minimum Power

12:06:59 DEC 16, 1998

REF .0 dBm #AT 10 dB MKR 8.690625 GHz
-34.32 dBm



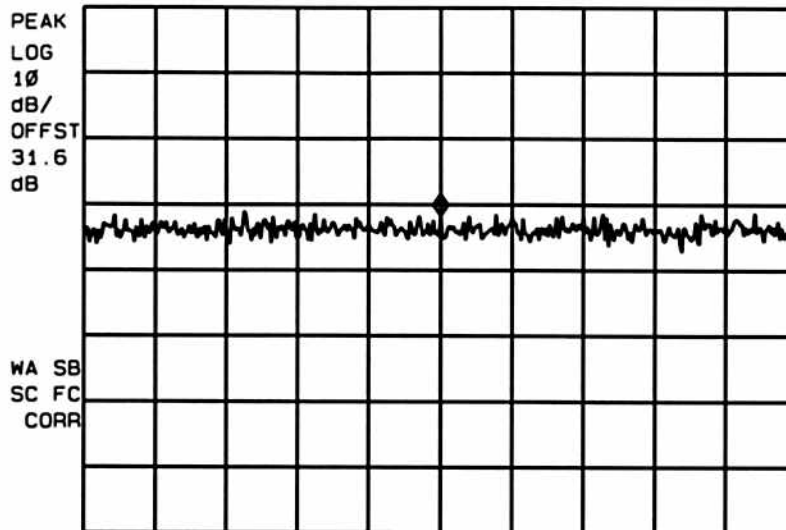
CENTER 8.690625 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

IHET6YZ1 SC4812ET 1.9 GHz CDMA BTS

btsate
12-16-98
13:10:34

12:07:11 DEC 16, 1998

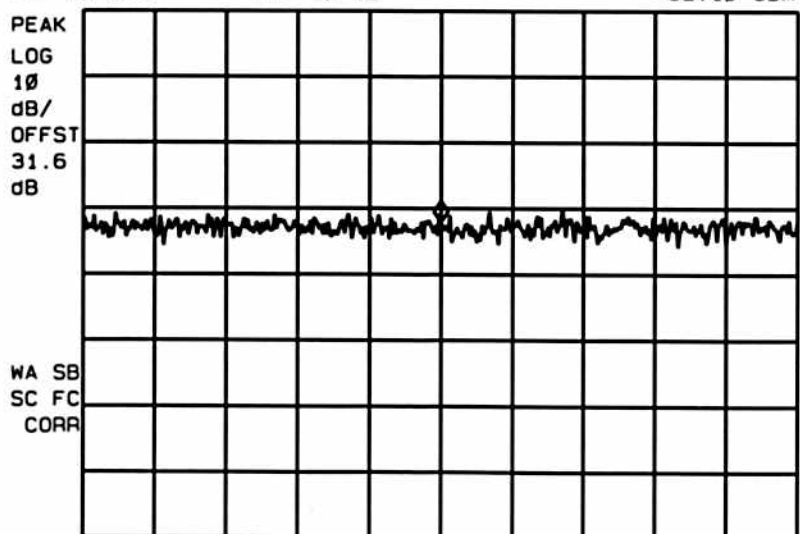
REF .0 dBm #AT 10 dB MKR 9.656250 GHz
-31.66 dBm



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

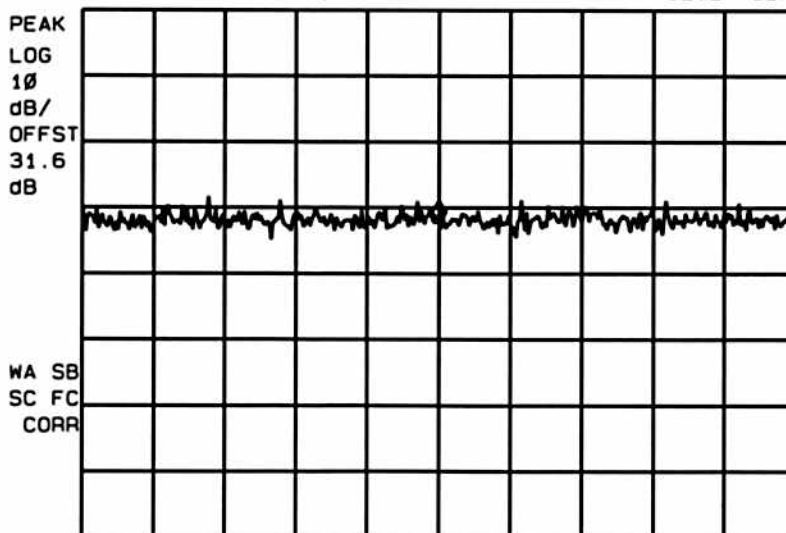
REF .0 dBm #AT 10 dB MKR 10.621875 GHz
-32.10 dBm



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

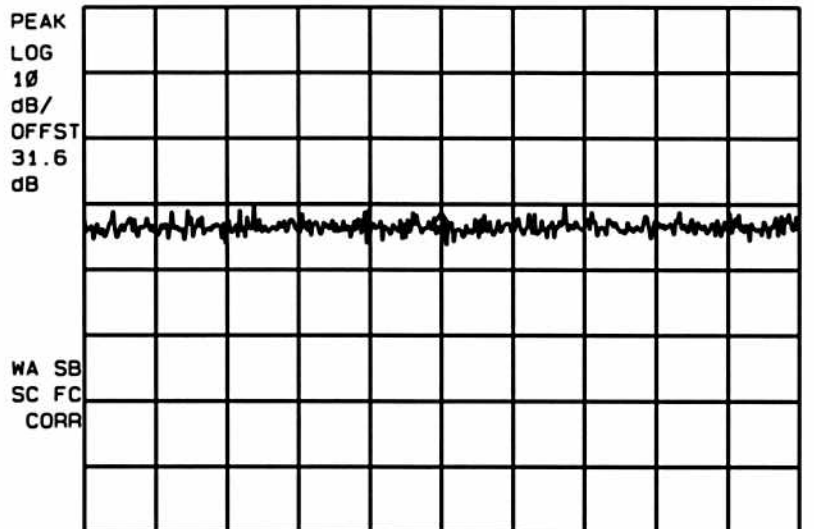
REF .0 dBm #AT 10 dB MKR 11.587500 GHz
-32.24 dBm



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
REF .0 dBm #AT 10 dB MKR 12.553125 GHz
-34.48 dBm

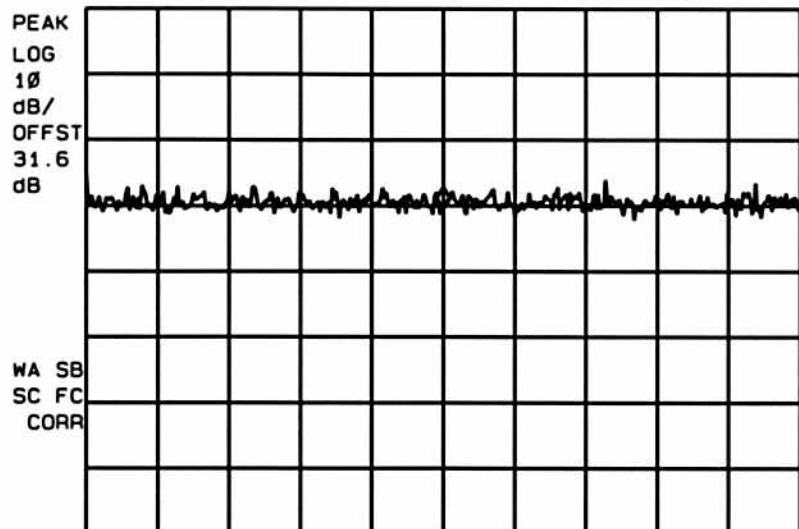


CENTER 12.553125 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

IHET6YZ1 SC4812ET 1.9 GHz CDMA BTS

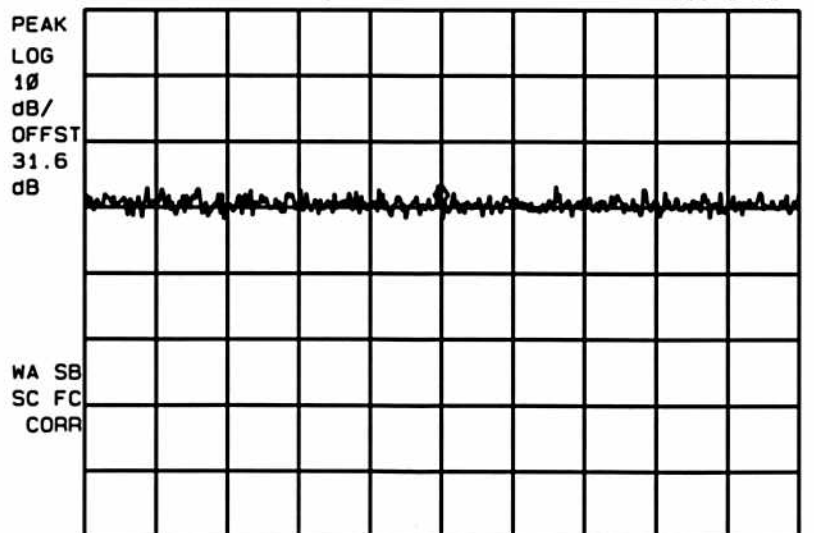
btsate
12-16-98
13:11:16

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



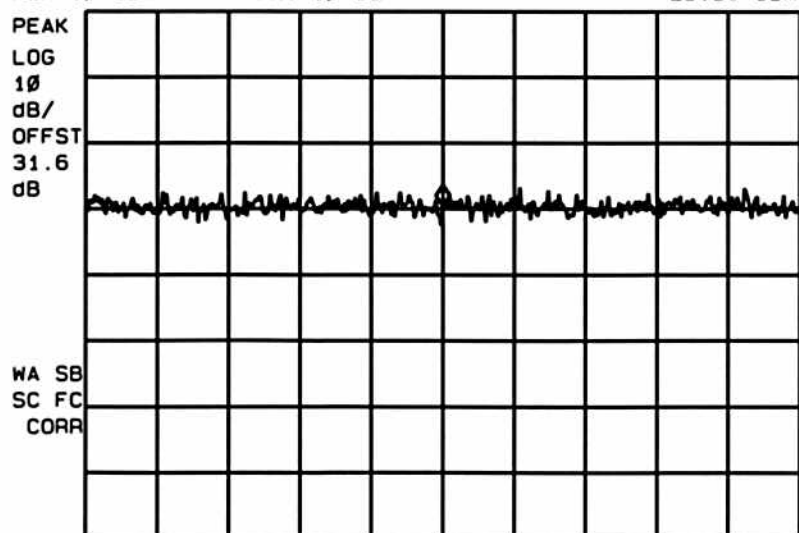
CENTER 13.518750 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

12:08:03 DEC 16, 1998
REF .0 dBm #AT 10 dB MKR 14.484375 GHz
-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
REF .0 dBm #AT 10 dB MKR 15.450000 GHz
-29.58 dBm

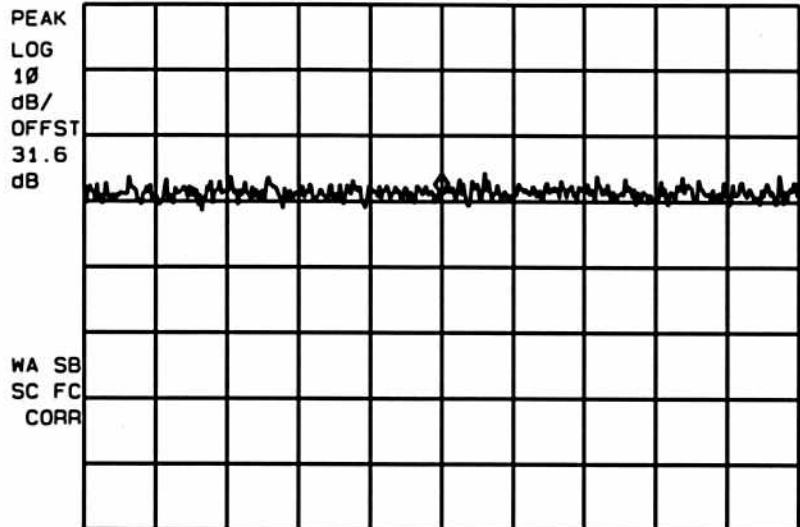


CENTER 15.450000 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

Channel 25
Minimum Power

12:09:14 DEC 16, 1998

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



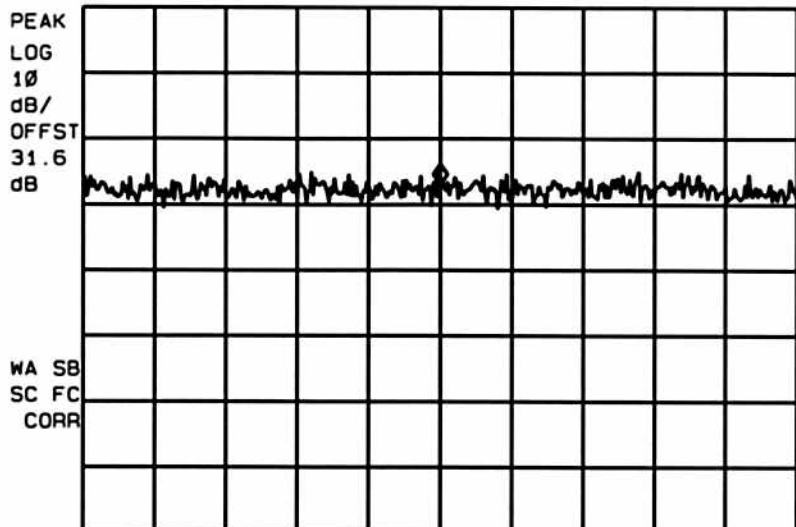
CENTER 16.415625 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

btsate
12-16-98
13:12:46

12:09:24 DEC 16, 1998

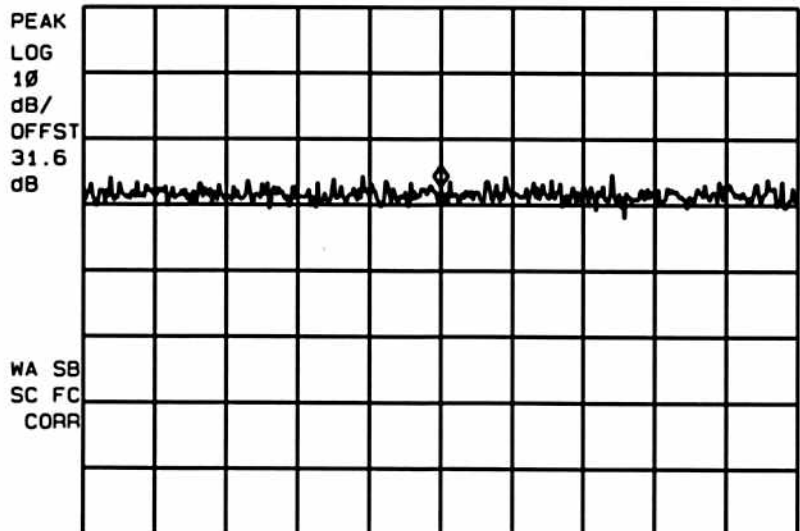
REF .0 dBm #AT 10 dB MKR 17.381250 GHz
-27.01 dBm



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

12:09:33 DEC 16, 1998

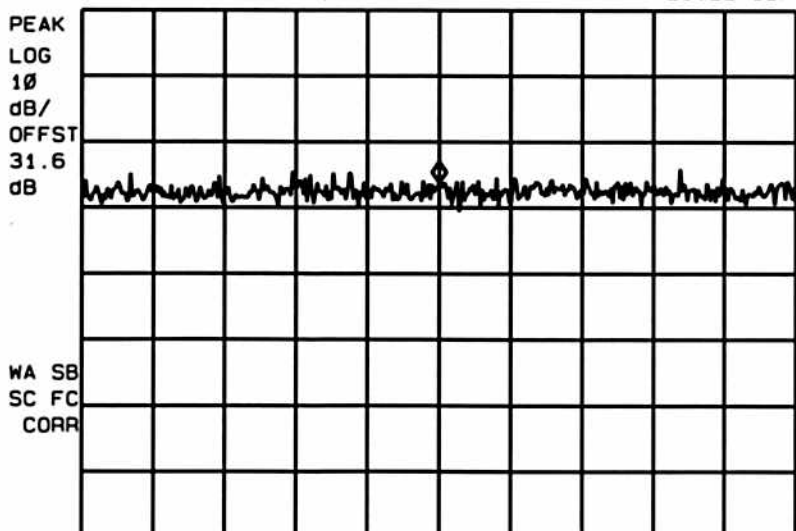
REF .0 dBm #AT 10 dB MKR 18.346875 GHz
-27.24 dBm



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



MOTOROLA

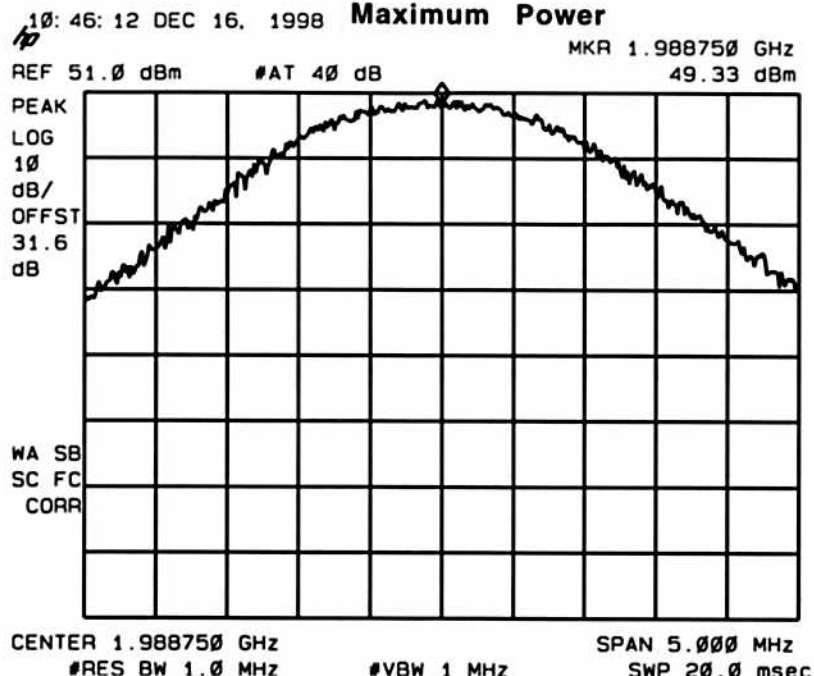
Cellular Infrastructure Group

SPURIOUS & HARMONIC EMISSIONS CONDUCTED

CDMA Transmitter Channel 1175

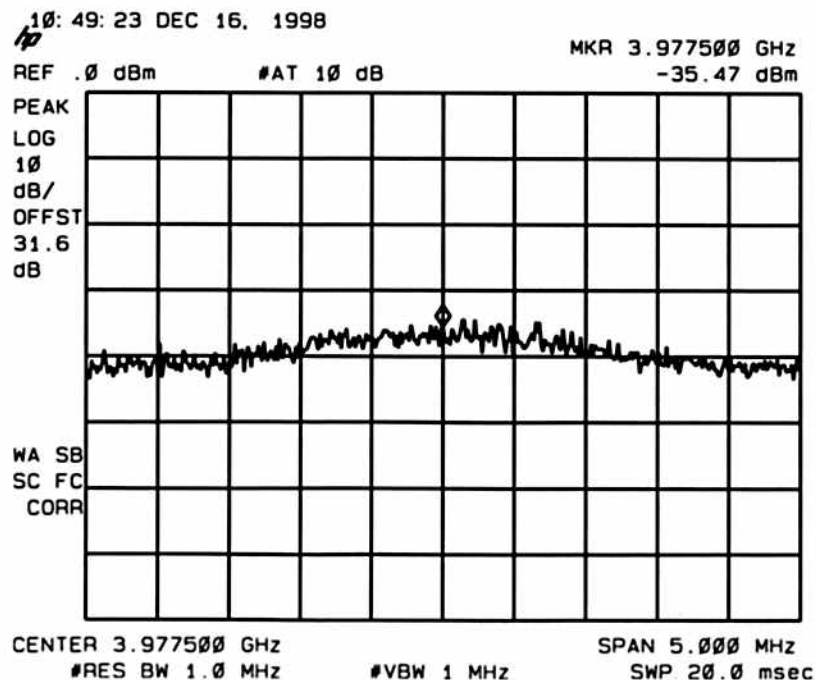
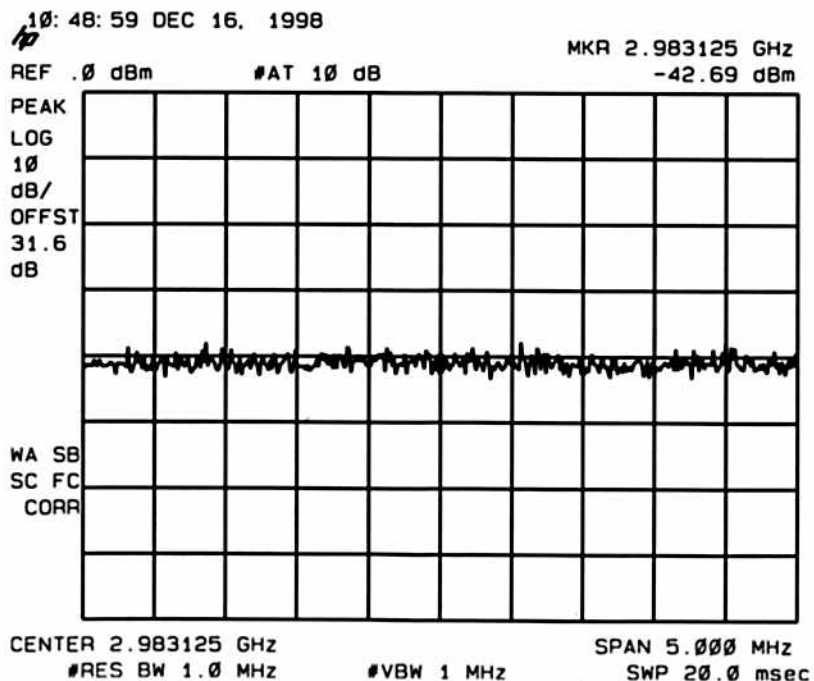
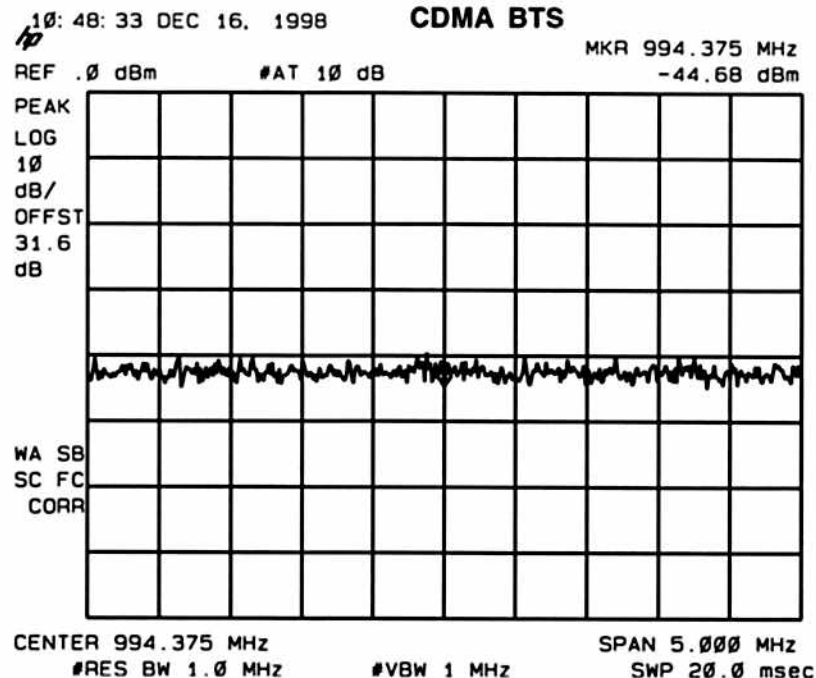
Maximum Power

Channel 1175 Maximum Power

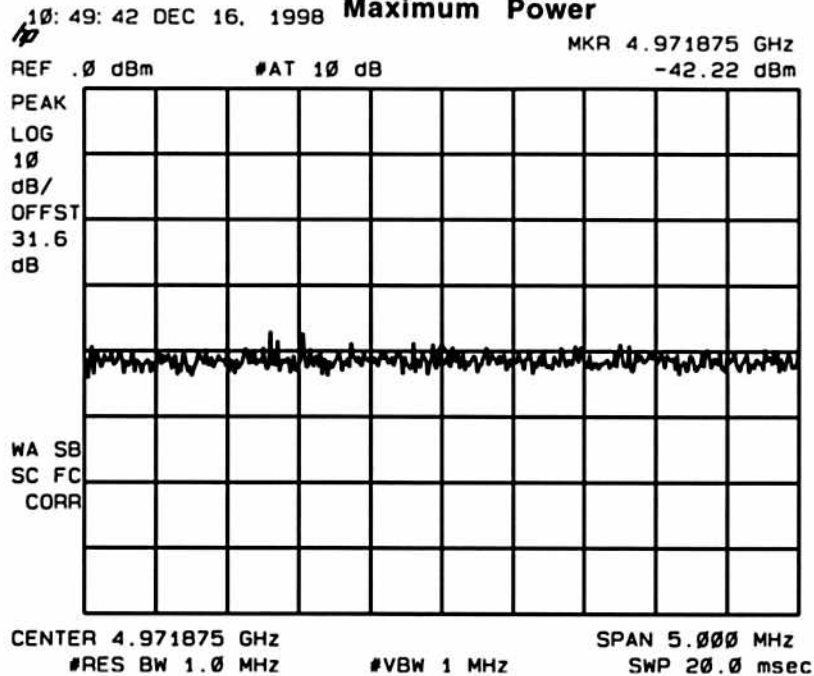


IHET6YZ1 SC4812ET 1.9 GHz CDMA BTS

btsate
12-16-98
11:52:27

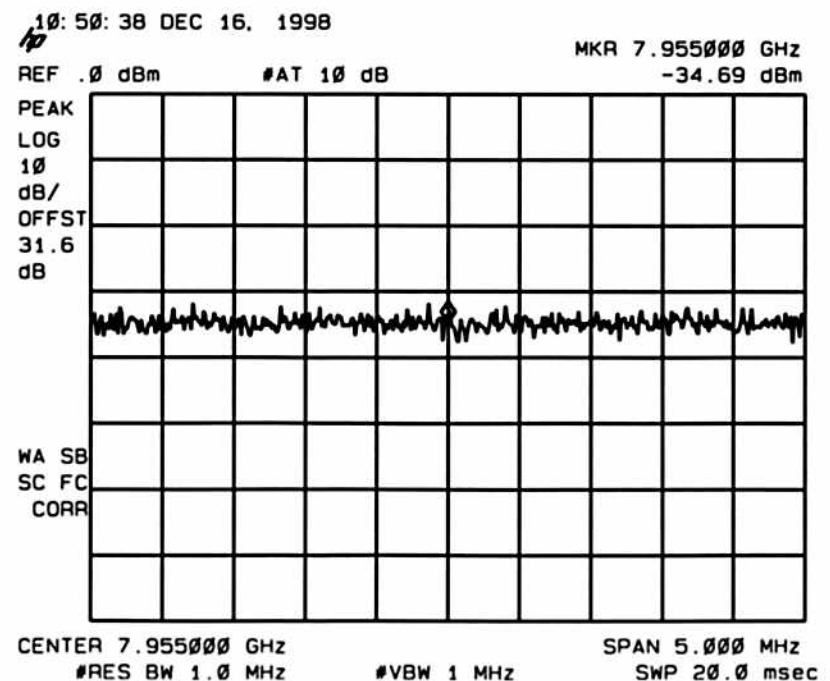
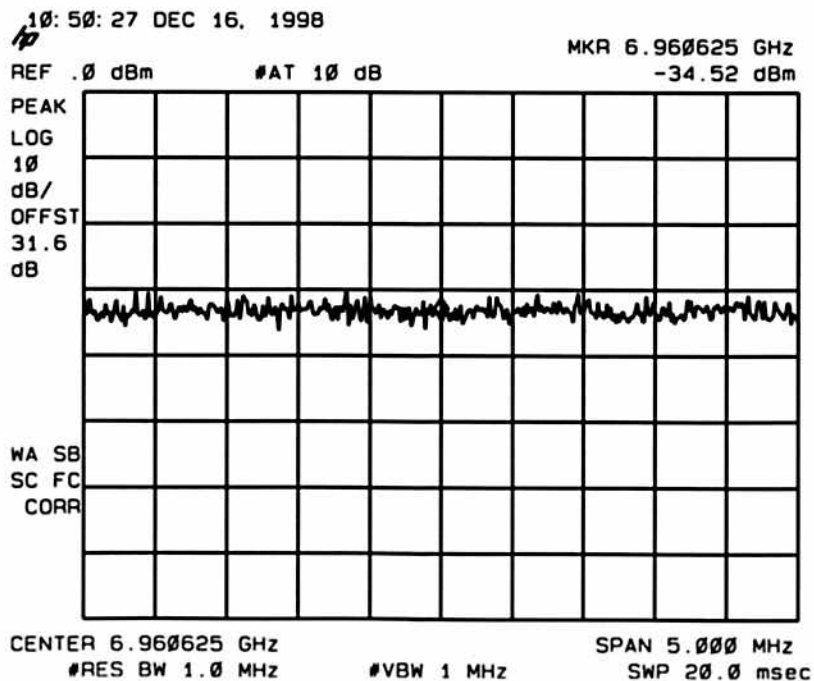
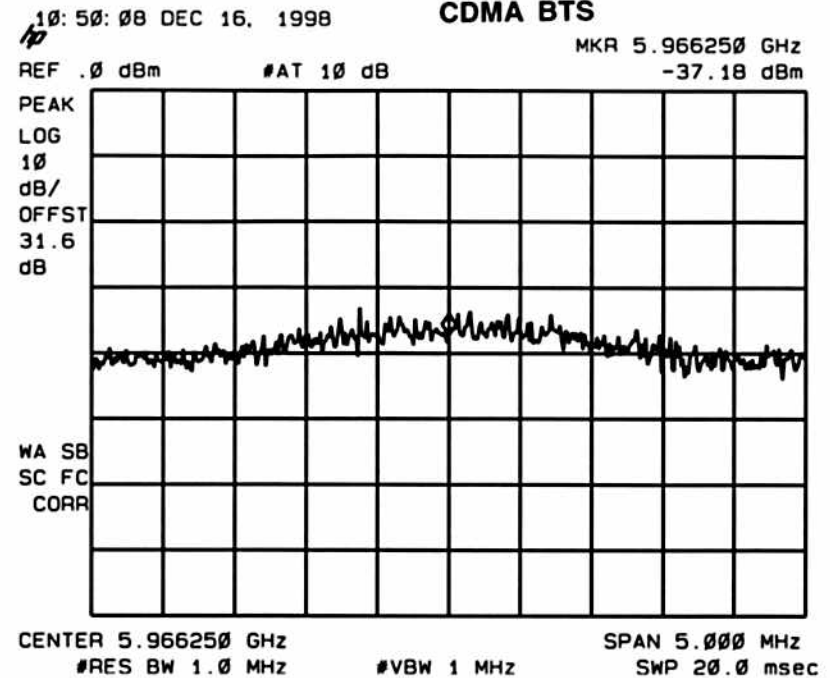


Channel 1175 Maximum Power



IHET6YZ1 SC4812ET 1.9 GHz CDMA BTS

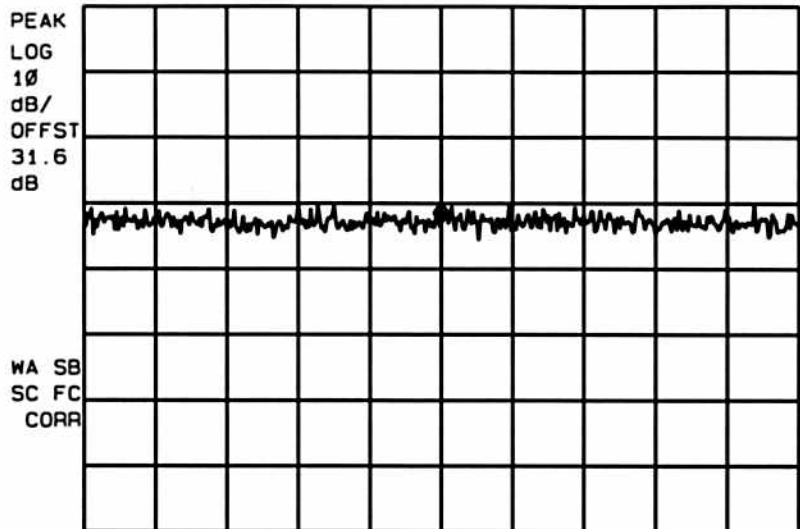
btsate
12-16-98
11:53:42



Channel 1175

10:51:05 DEC 16, 1998 Maximum Power

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



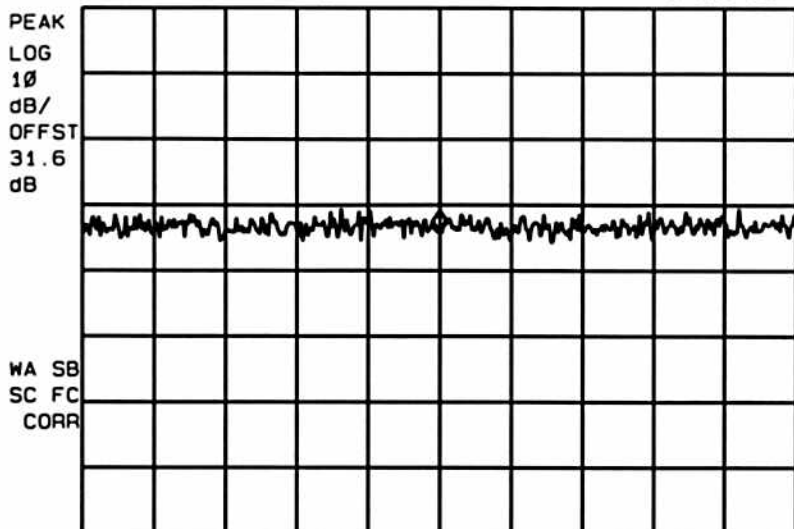
CENTER 8.949375 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

IHET6YZ1 SC4812ET 1.9 GHz CDMA BTS

btsate
12-16-98
11:55:04

10:51:20 DEC 16, 1998

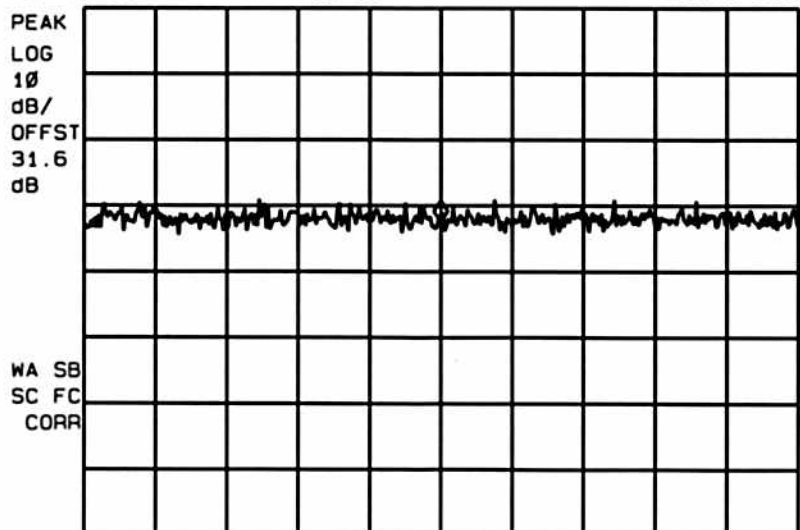
REF .0 dBm #AT 10 dB MKR 9.943750 GHz
-34.09 dBm



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

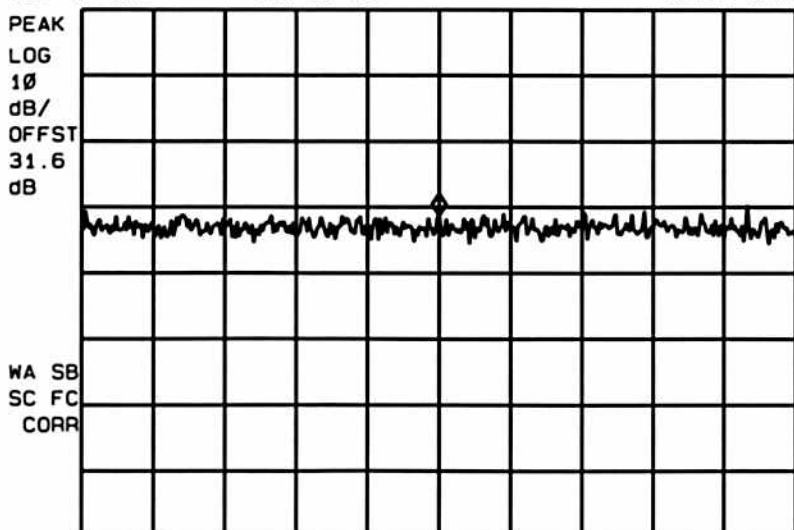
REF .0 dBm #AT 10 dB MKR 10.938125 GHz
-32.45 dBm



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

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



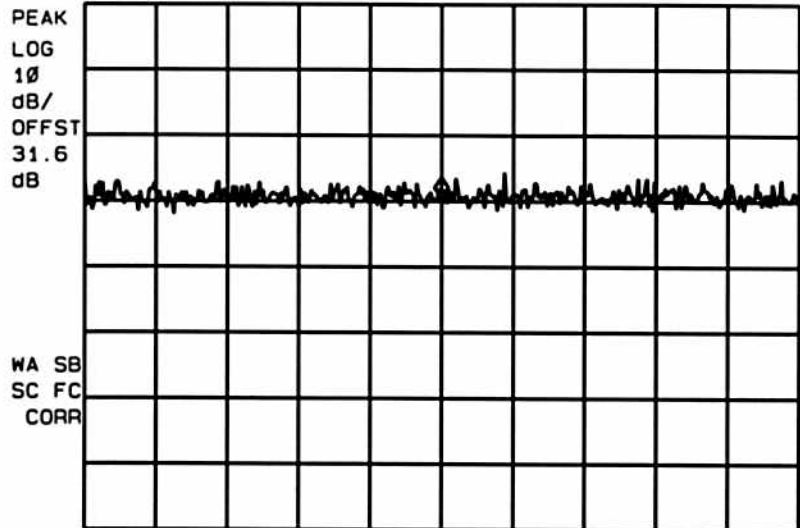
CENTER 11.932500 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

Channel 1175

10:52:17 DEC 16, 1998 Maximum Power

MRK 12.926875 GHz
-29.56 dBm

REF .0 dBm #AT 10 dB



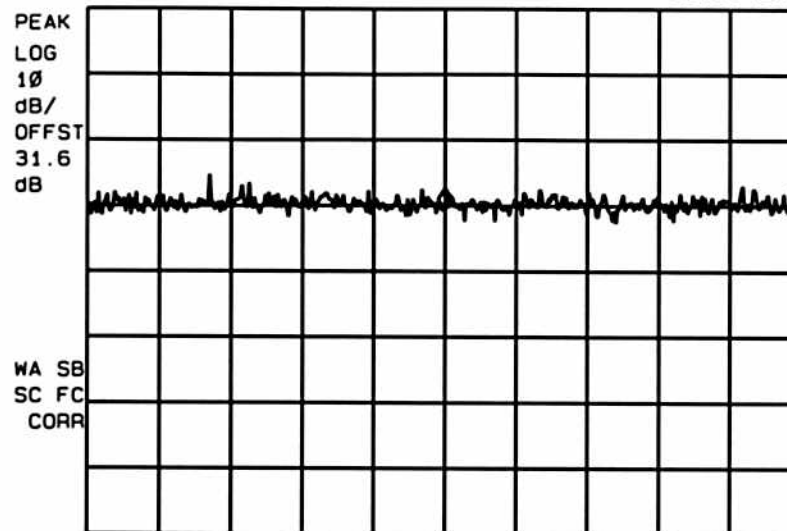
CENTER 12.926875 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

IHET6YZ1 SC4812ET 1.9 GHz CDMA BTS

10:52:51 DEC 16, 1998

MRK 13.921250 GHz
-30.61 dBm

REF .0 dBm #AT 10 dB



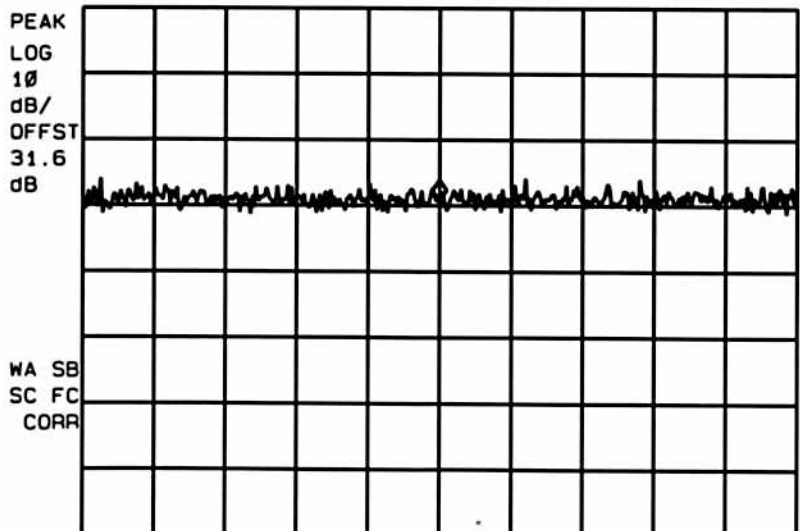
CENTER 13.921250 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

btsate
12-16-98
11:56:19

10:53:04 DEC 16, 1998

MRK 14.915625 GHz
-29.28 dBm

REF .0 dBm #AT 10 dB

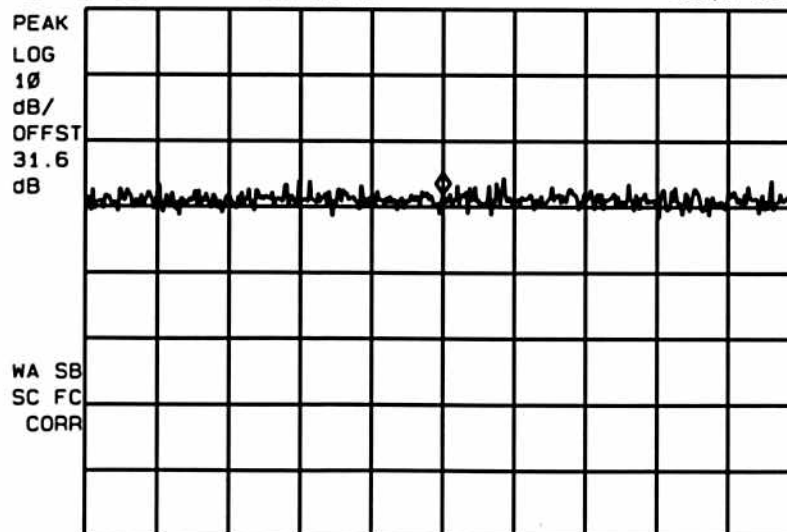


CENTER 14.915625 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

10:53:15 DEC 16, 1998

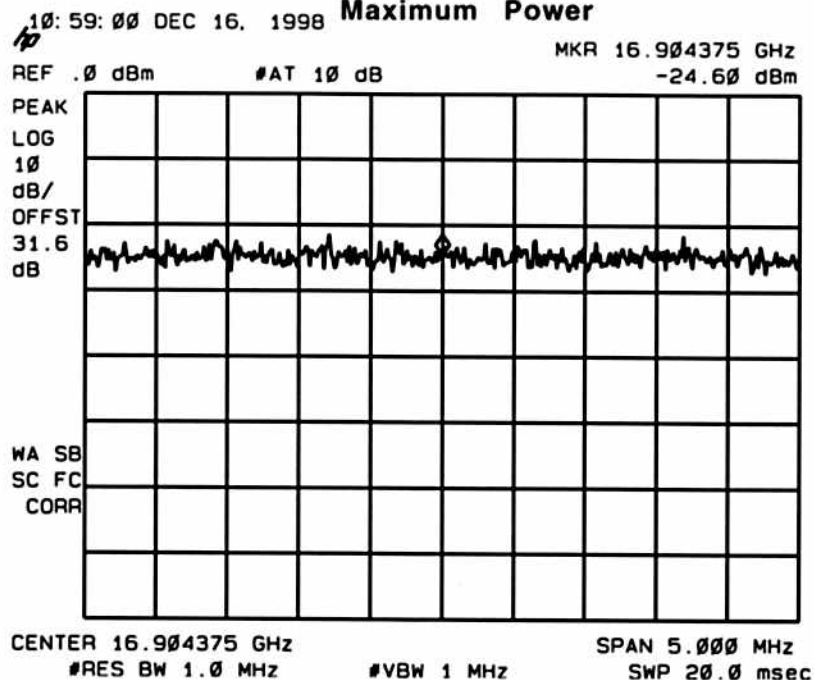
MRK 15.910000 GHz
-28.07 dBm

REF .0 dBm #AT 10 dB



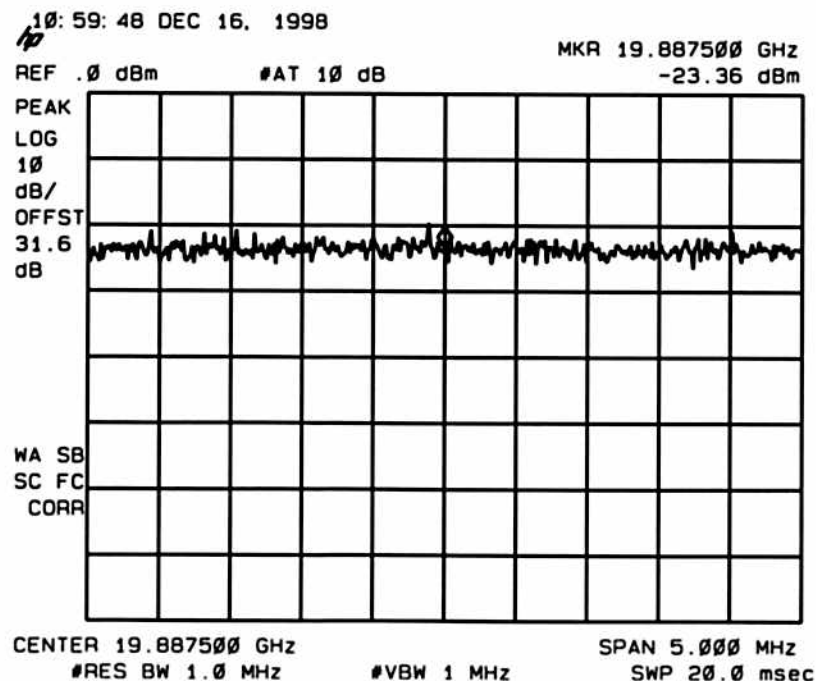
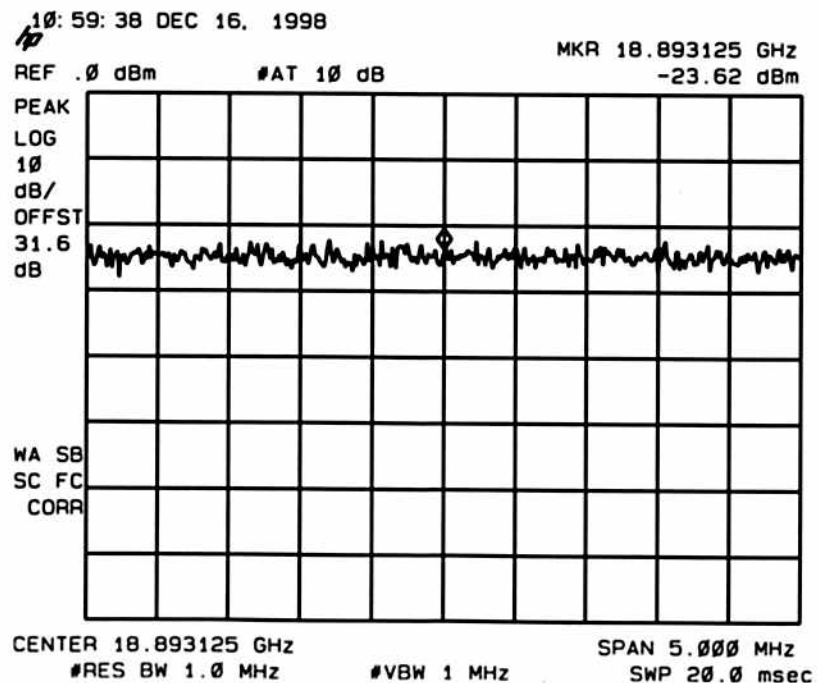
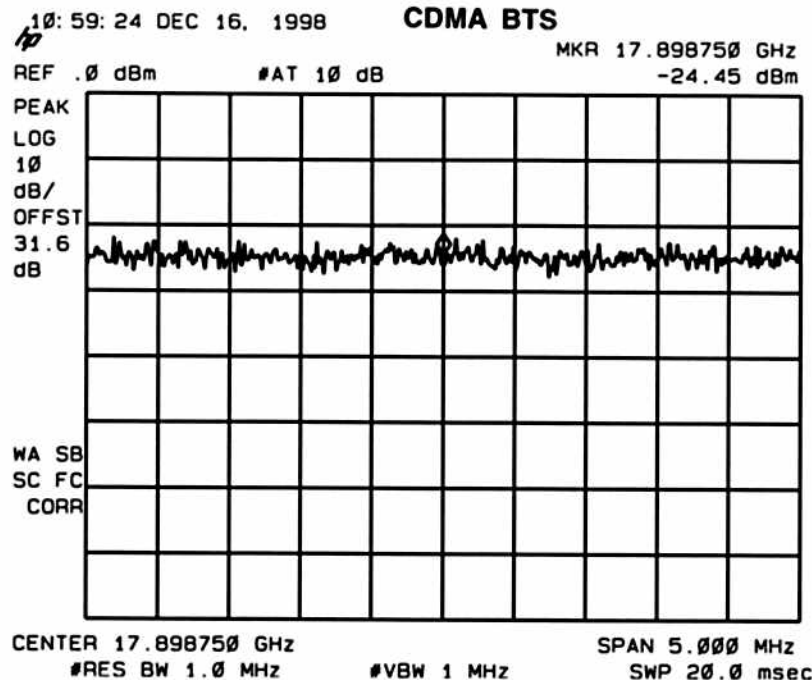
CENTER 15.910000 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

Channel 1175
Maximum Power



IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

btsate
12-16-98
12:02:52





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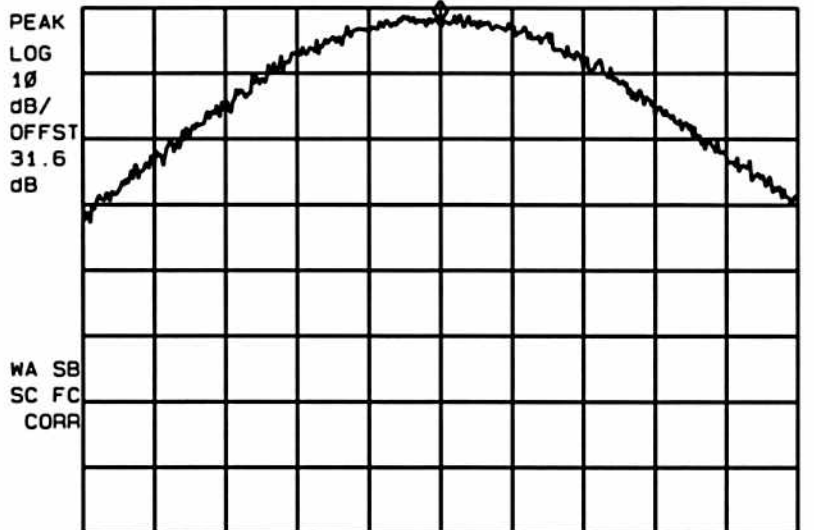
SPURIOUS & HARMONIC EMISSIONS CONDUCTED

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

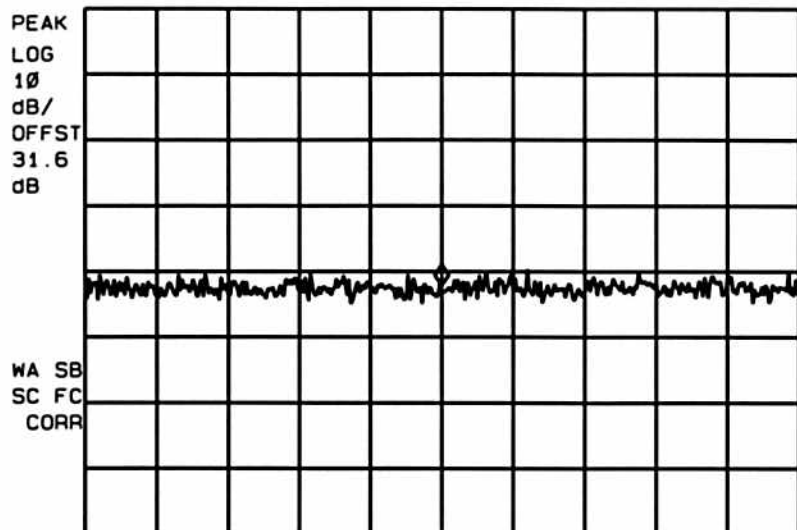


CENTER 1.988750 GHz SPAN 5.000 MHz
 #RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

IHET6YZ1 SC4812ET 1.9 GHz CDMA BTS

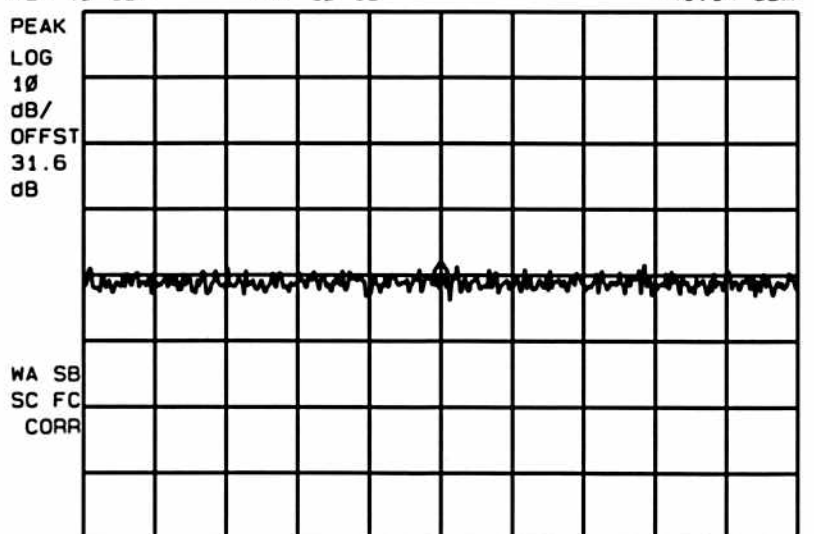
btsate
12-16-98
12:54:20

11:50:16 DEC 16, 1998
 REF .0 dBm #AT 10 dB MKR 994.375 MHz
 -42.14 dBm



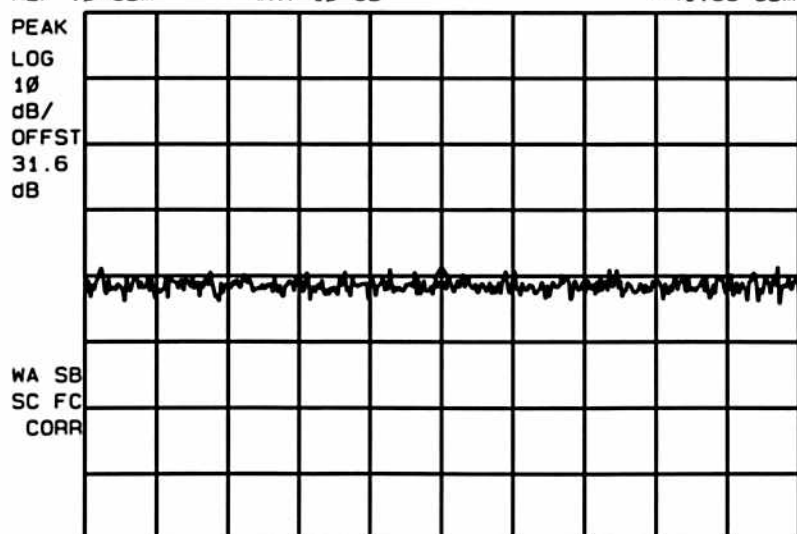
CENTER 994.375 MHz SPAN 5.000 MHz
 #RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

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

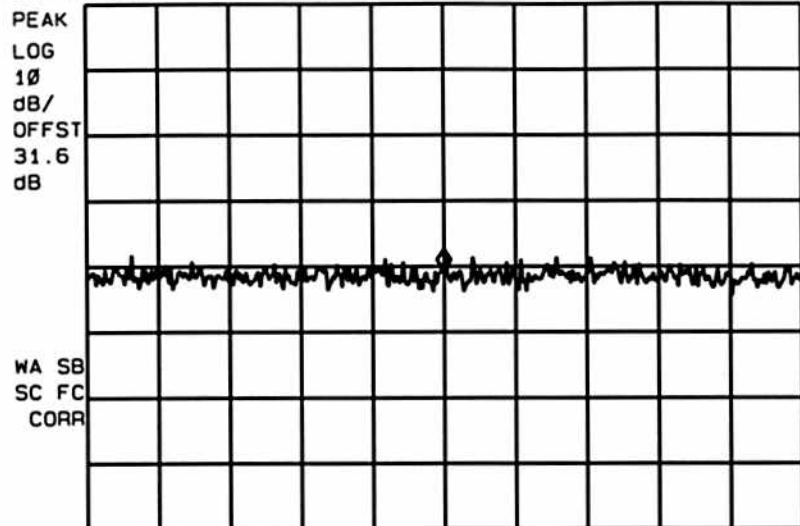


CENTER 3.977500 GHz SPAN 5.000 MHz
 #RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

Channel 1175 Minimum Power

11:51:34 DEC 16, 1998

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



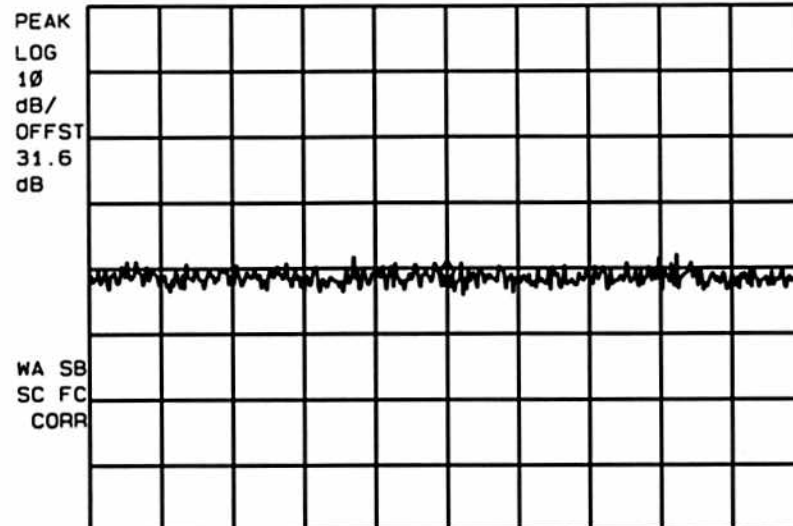
CENTER 4.971875 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

IHET6YZ1 SC4812ET 1.9 GHz CDMA BTS

btsate
12-16-98
12:55:17

11:51:46 DEC 16, 1998

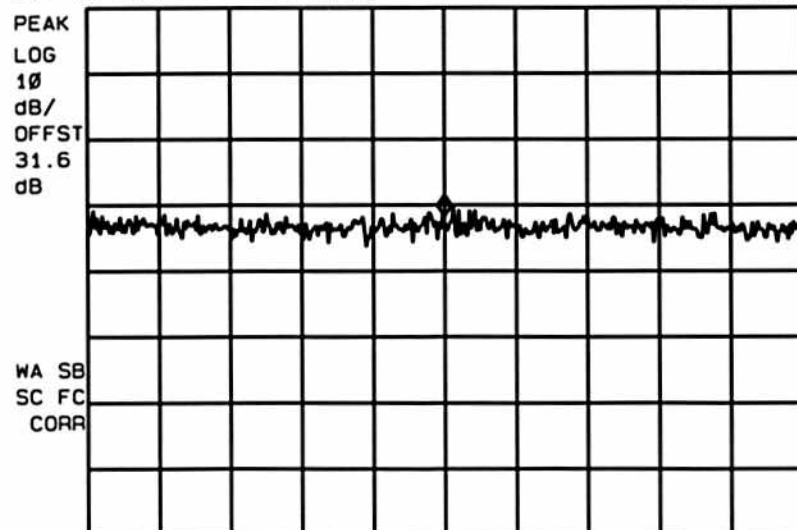
MKR 5.966250 GHz
REF .0 dBm #AT 10 dB -42.11 dBm



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

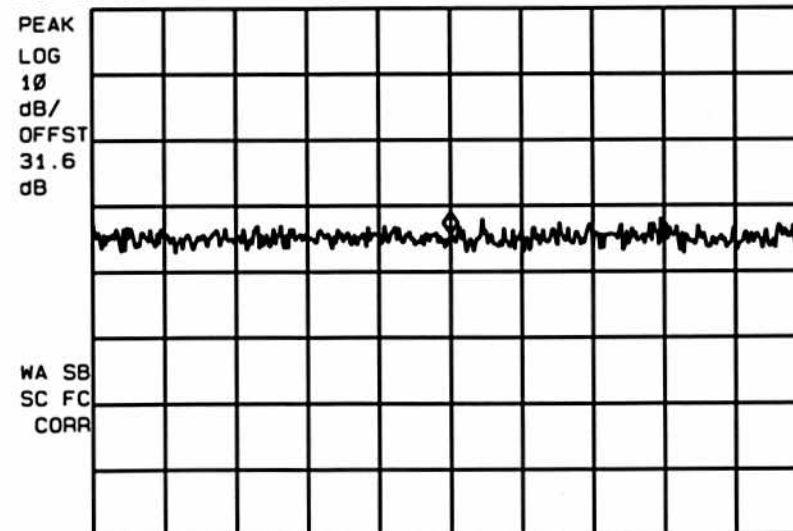
MKR 6.960625 GHz
REF .0 dBm #AT 10 dB -31.70 dBm



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

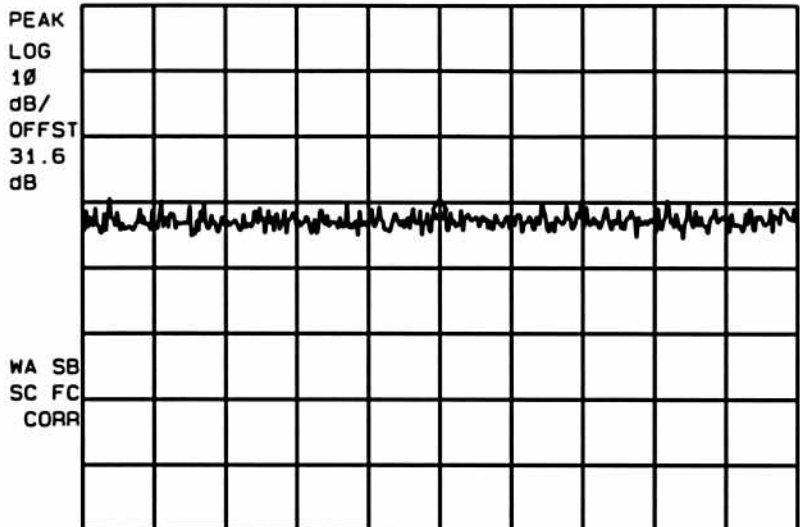


CENTER 7.955000 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

Channel 1175
Minimum Power

11:52:28 DEC 16, 1998

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



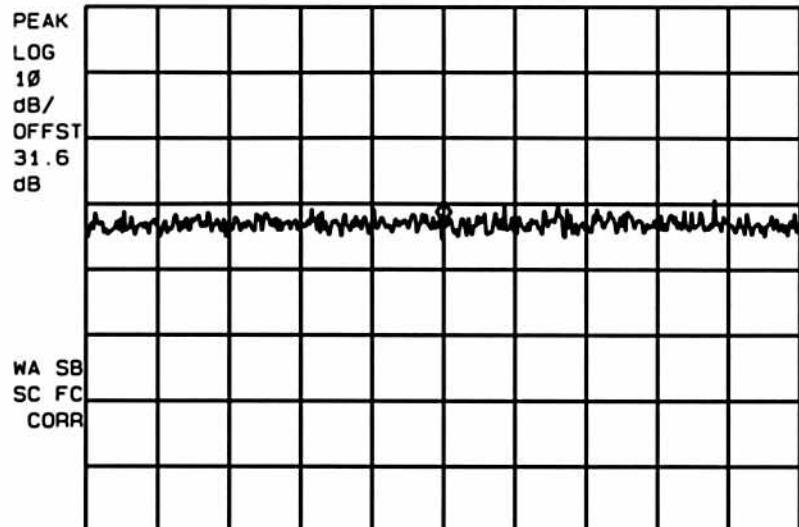
CENTER 8.949375 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

btsate
12-16-98
12:56:03

11:52:39 DEC 16, 1998

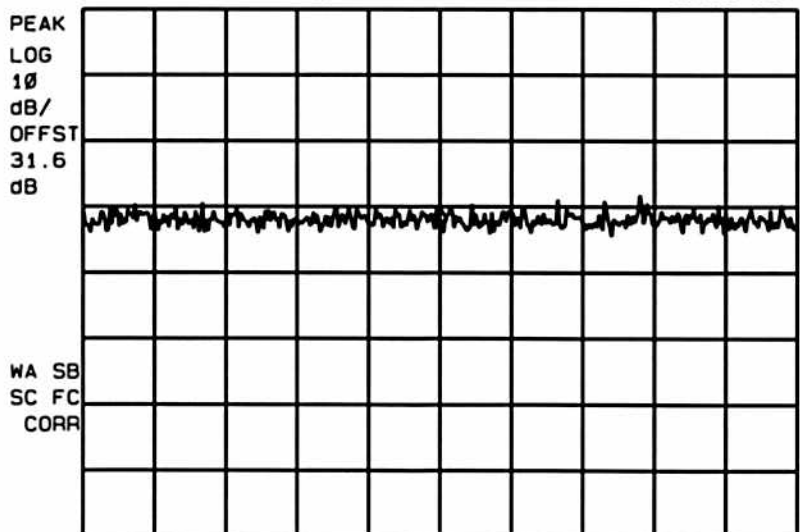
REF .0 dBm #AT 10 dB MKR 9.943750 GHz
-32.85 dBm



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

11:52:49 DEC 16, 1998

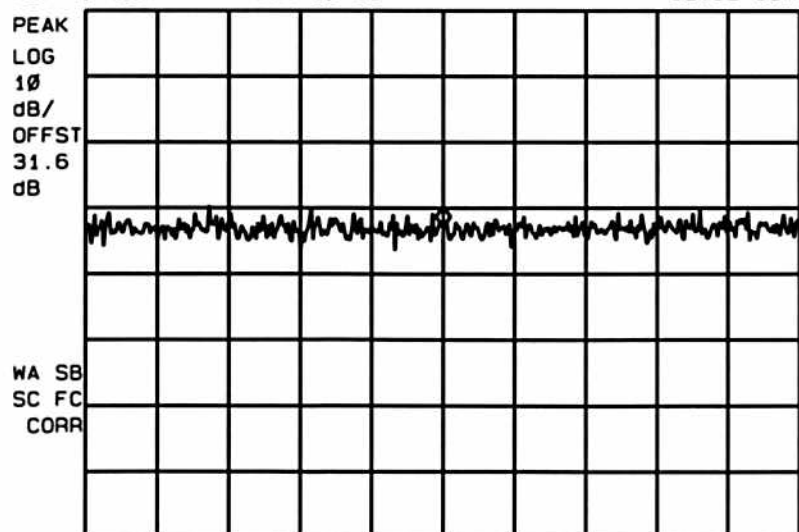
REF .0 dBm #AT 10 dB MKR 10.938125 GHz
-33.39 dBm



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

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

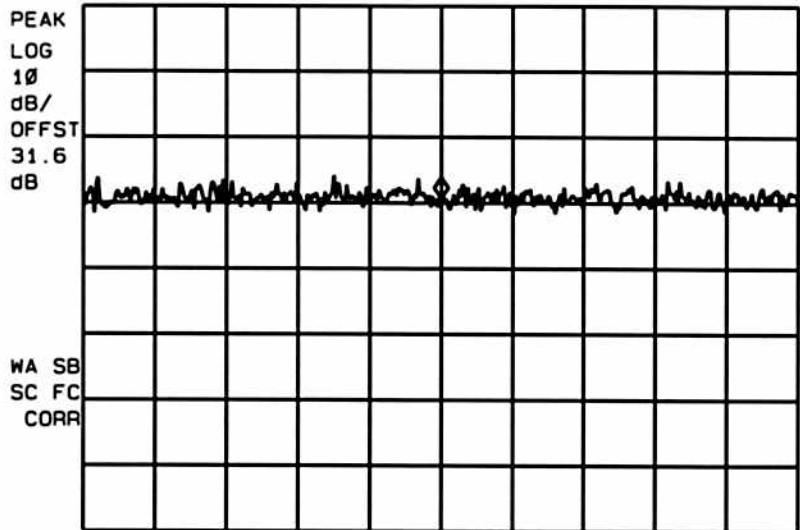


CENTER 11.932500 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

Channel 1175

11:53:12 DEC 16, 1998 Minimum Power

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



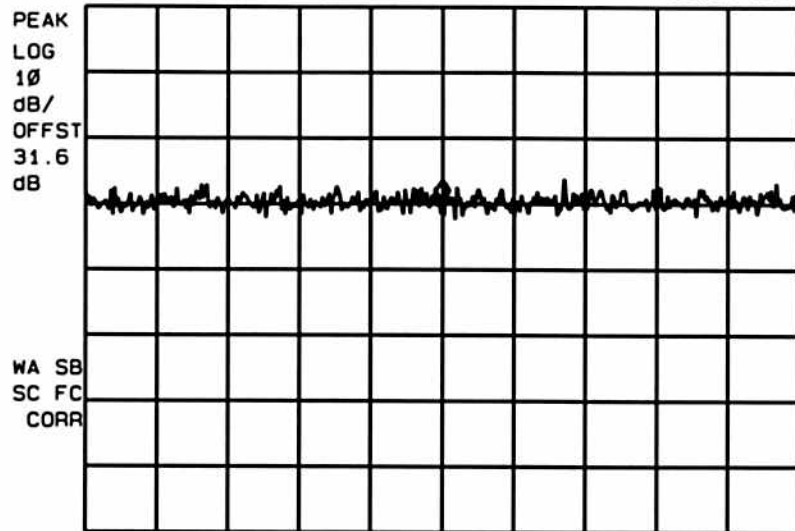
CENTER 12.926875 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

IHET6YZ1 SC4812ET 1.9 GHz CDMA BTS

btsate
12-16-98
12:56:52

11:53:23 DEC 16, 1998

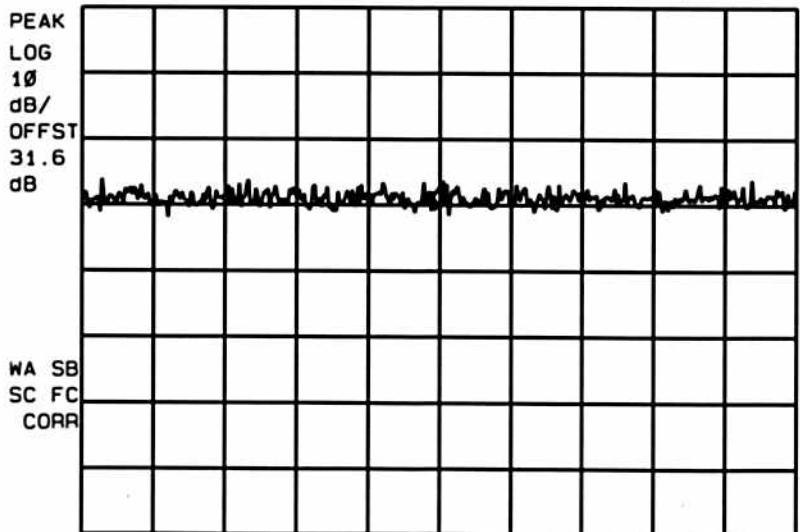
REF .0 dBm #AT 10 dB MKR 13.921250 GHz
-29.61 dBm



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

11:53:37 DEC 16, 1998

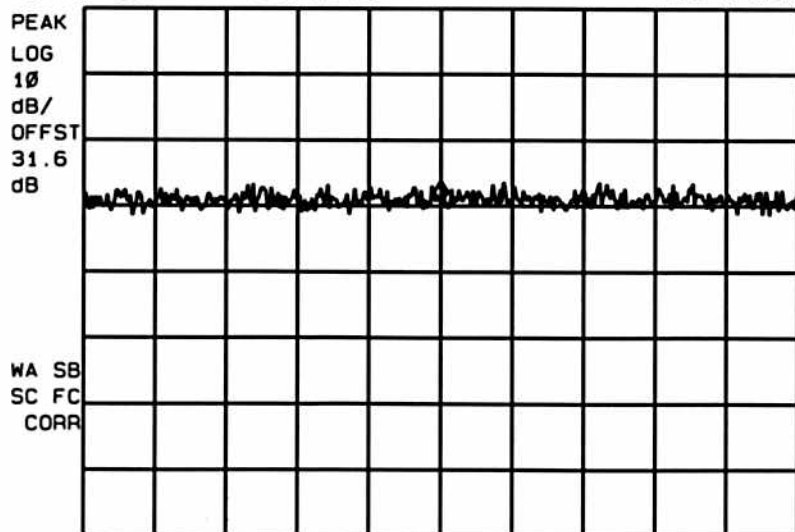
REF .0 dBm #AT 10 dB MKR 14.915625 GHz
-30.39 dBm



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

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

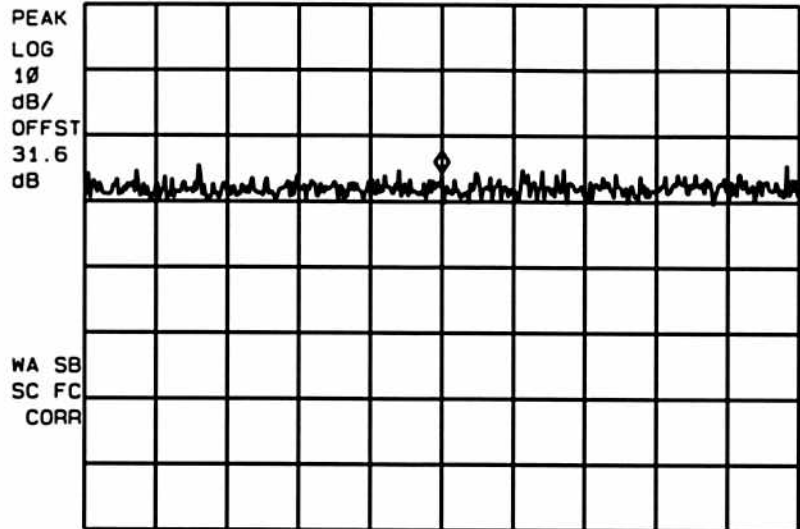


CENTER 15.910000 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

Channel 1175 Minimum Power

11:54:12 DEC 16, 1998

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



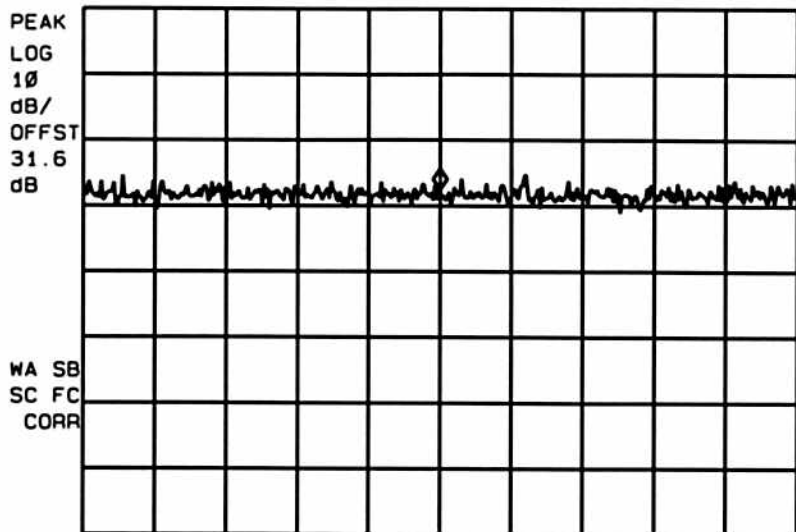
CENTER 16.904375 GHz SPAN 5.000 MHz
#RES BW 1.0 MHz #VBW 1 MHz SWP 20.0 msec

IHET6YZ1 SC4812ET 1.9 GHz CDMA BTS

btsate
12-16-98
12:57:49

11:54:25 DEC 16, 1998

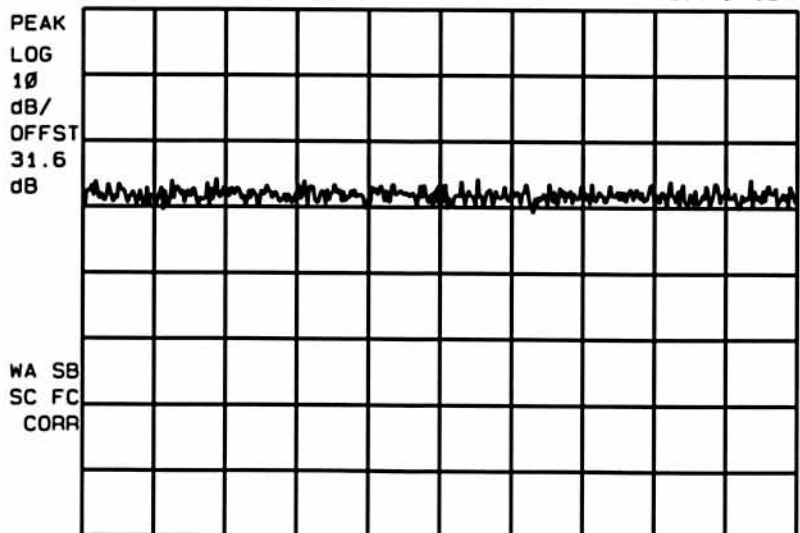
REF .0 dBm #AT 10 dB MKR 17.898750 GHz
-27.55 dBm



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

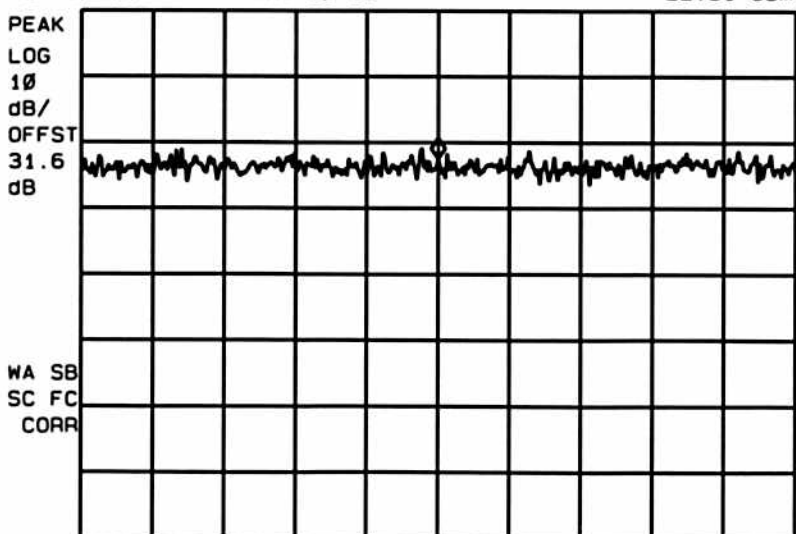
REF .0 dBm #AT 10 dB MKR 18.893125 GHz
-29.70 dBm



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



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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

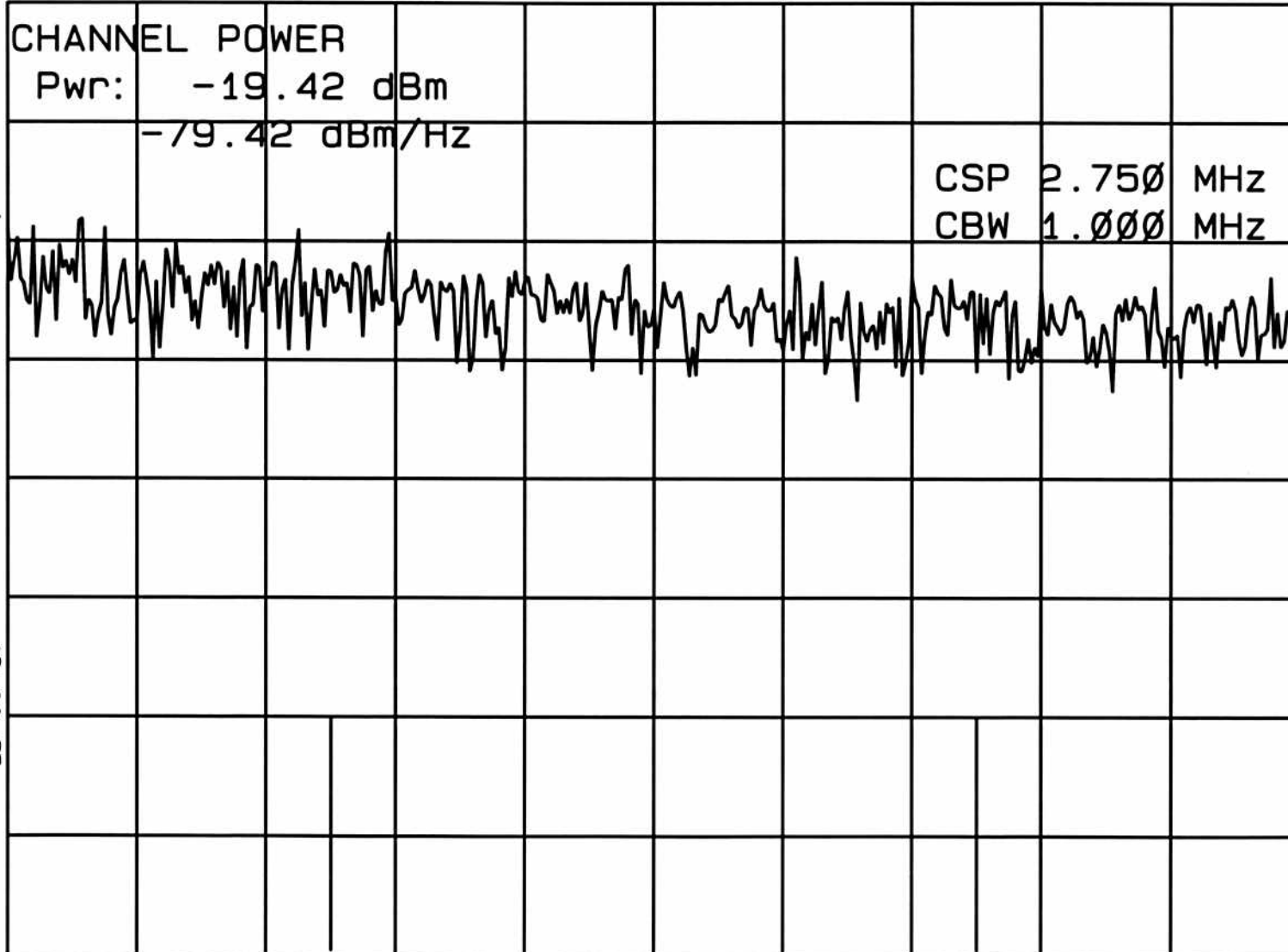
IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

btsate
12-16-98
14:46:13

13: 43: 10 DEC 16, 1998
hp

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



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*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.**

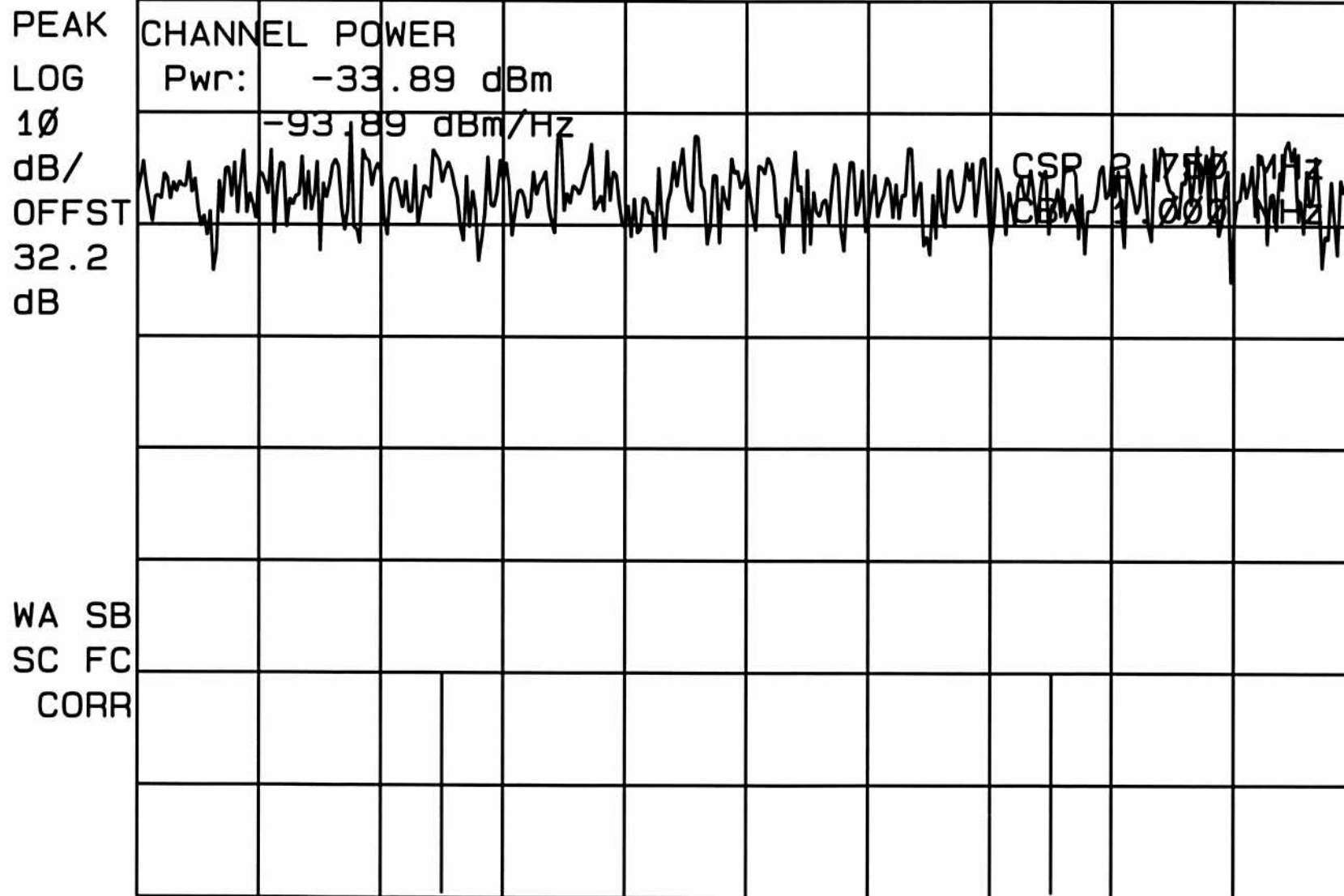
Channel 1175
Minimum Power

IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

btsate
12-16-98
14:43:34

13: 40: 31 DEC 16, 1998
hp

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

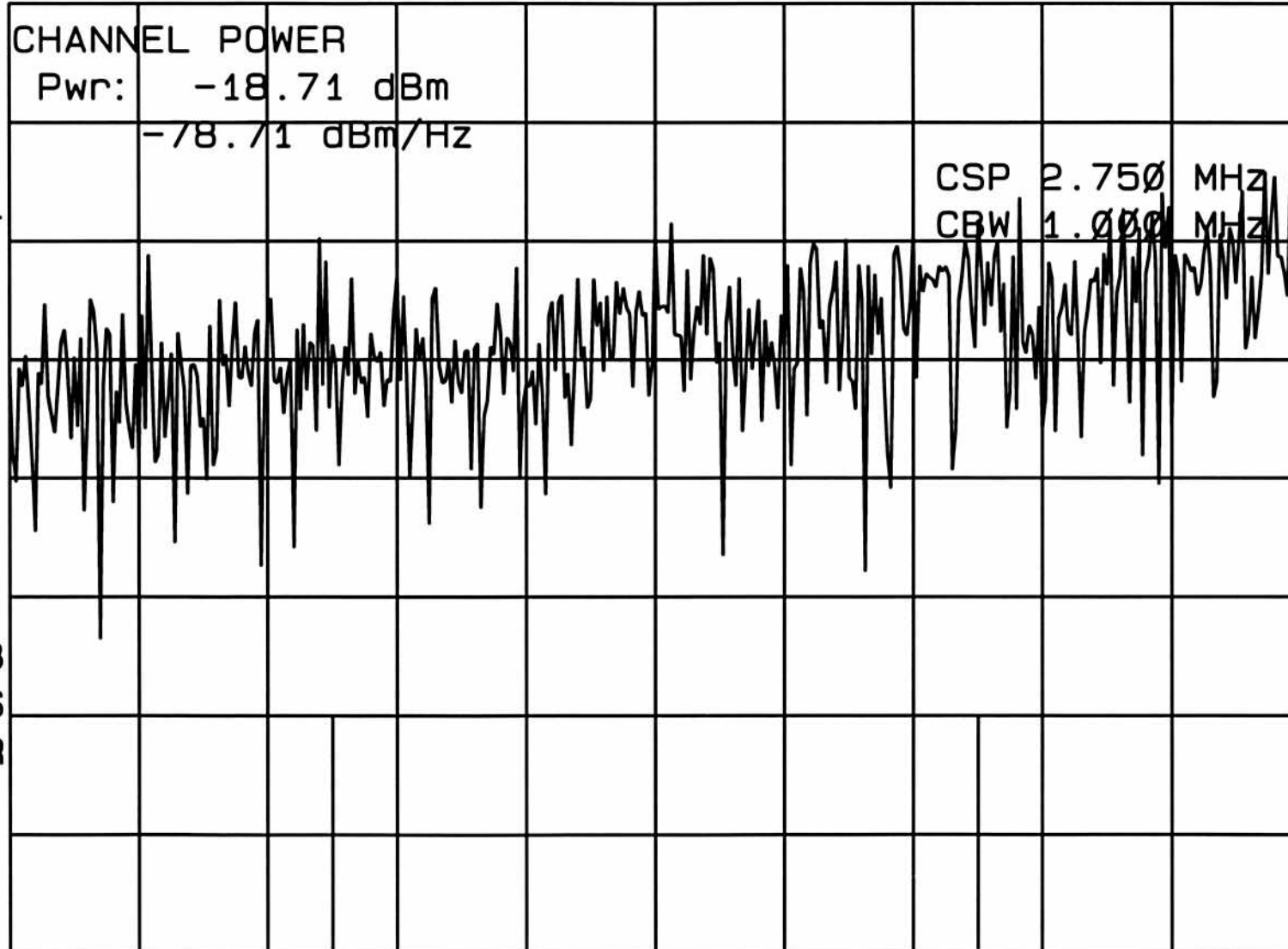
btsate
12-16-98
13:53:41

12: 50: 38 DEC 16, 1998

hp

REF -12.0 dBm #AT 30 dB

SMPL
LOG
10
dB/
OFFST
31.6
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.**

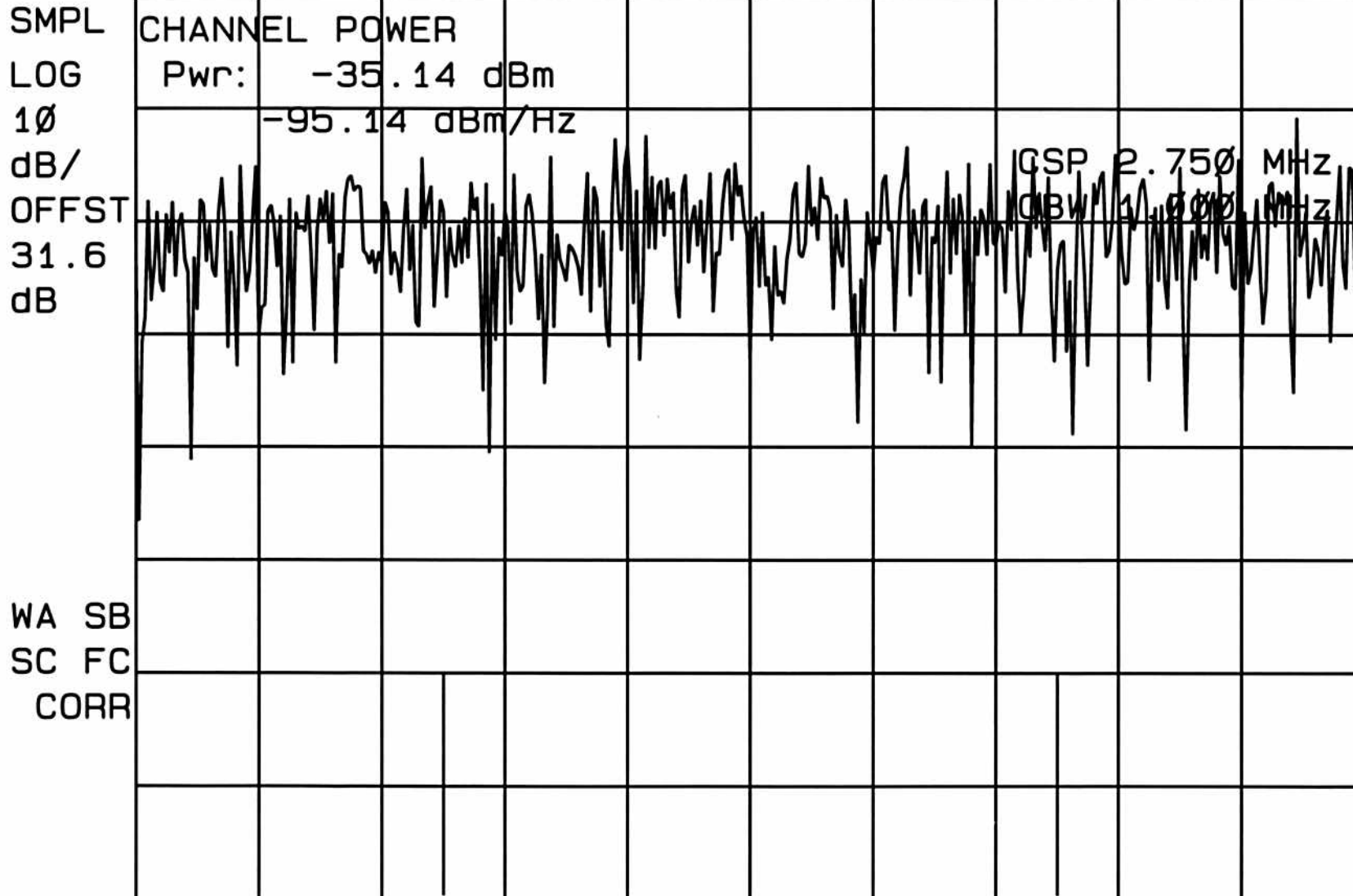
Channel 25
Minimum Power

IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

btsate
12-16-98
13:39:47

12:36:43 DEC 16, 1998

REF -35.0 dBm #AT 10 dB



CENTER 1.928500 GHz

SPAN 2.000 MHz

#RES BW 10 kHz

#VBW 100 kHz

SWP 60.0 msec



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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^a 46.0 dBm

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



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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

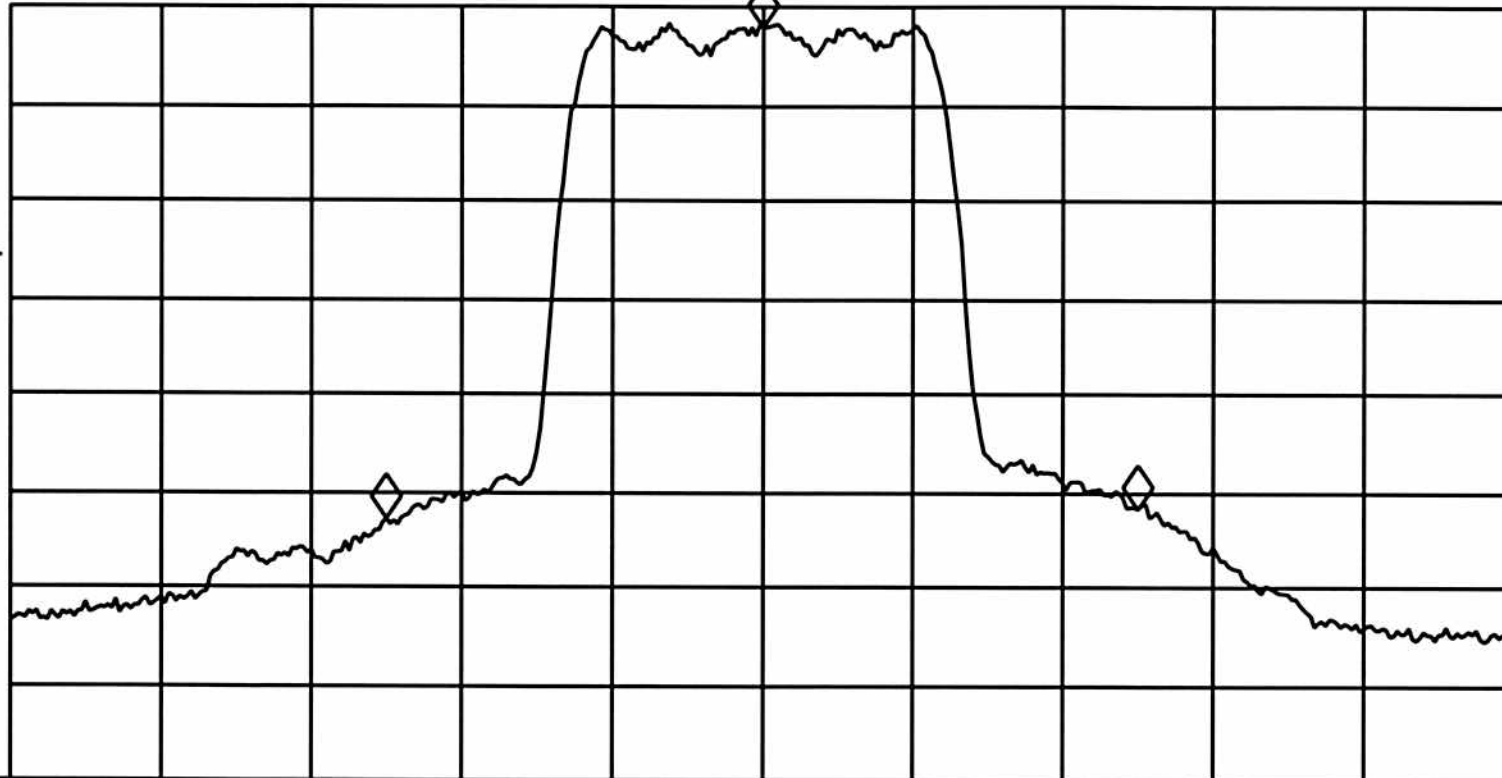
MKR 1.931250 GHz
30.48 dBm

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

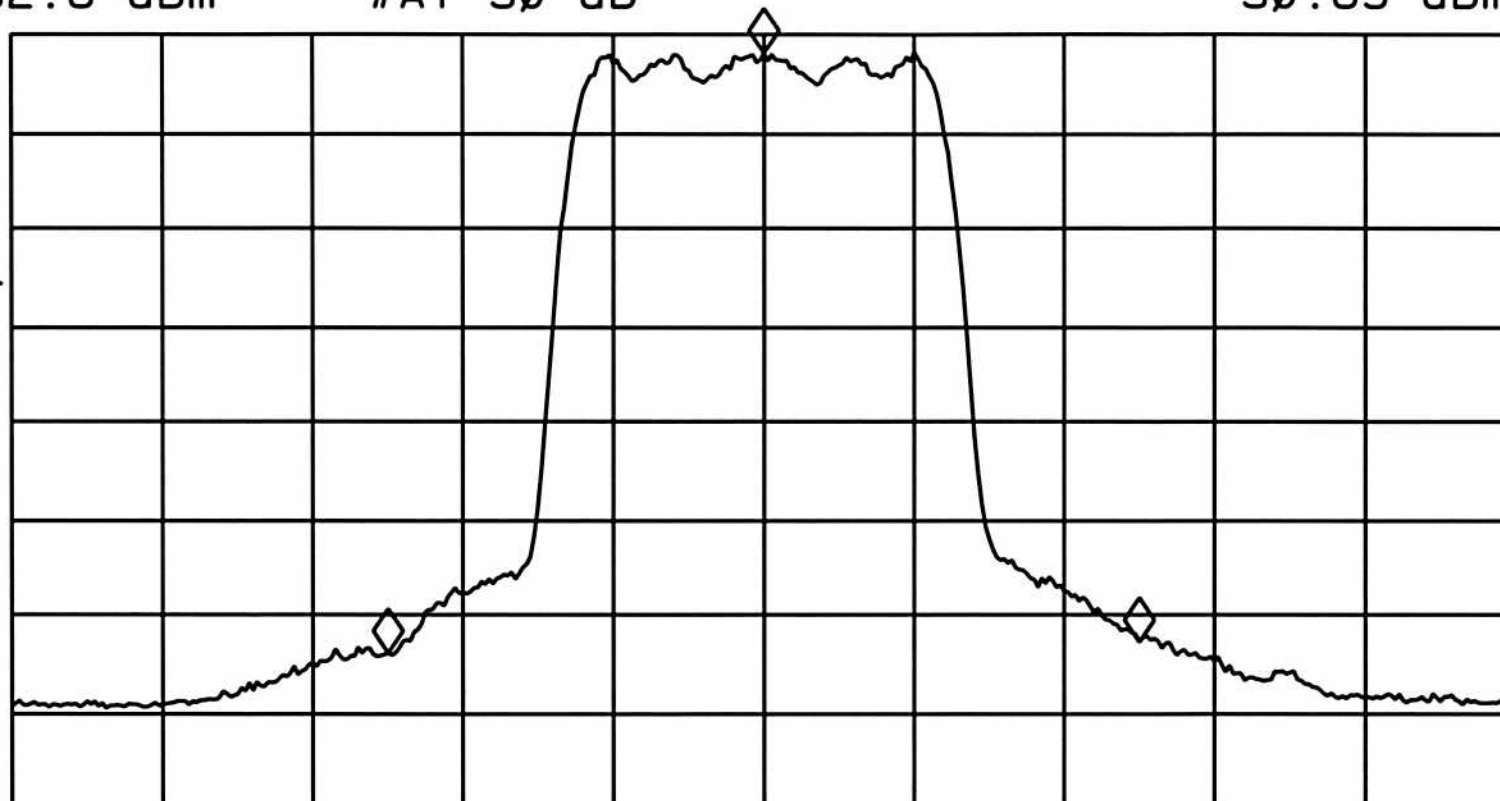
REF 32.6 dBm

#AT 30 dB

30.69 dBm

SMPL
LOG
10
dB/
OFFST
32.2
dB

AVG
200



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

MKR 1.931250 GHz

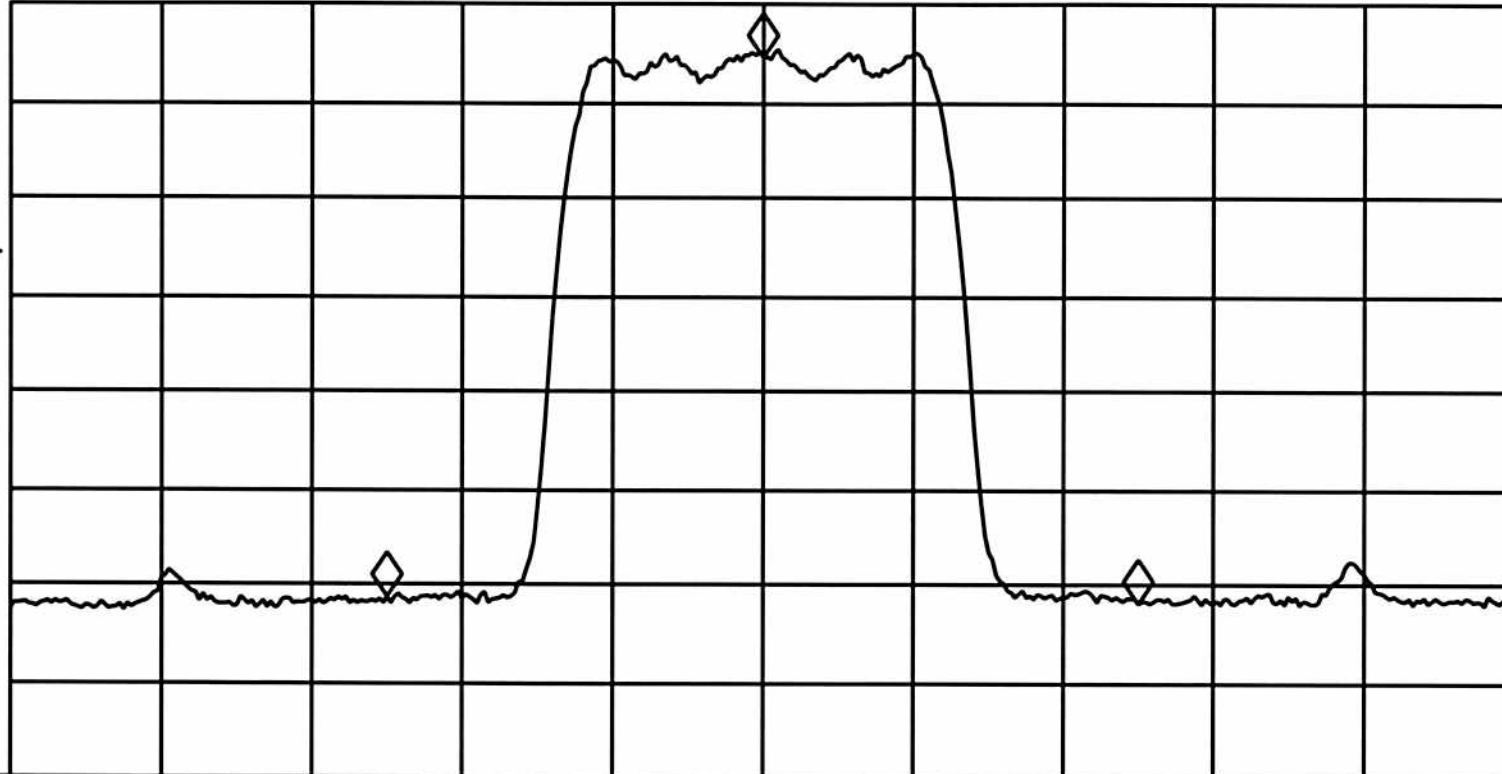
REF 12.6 dBm

#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

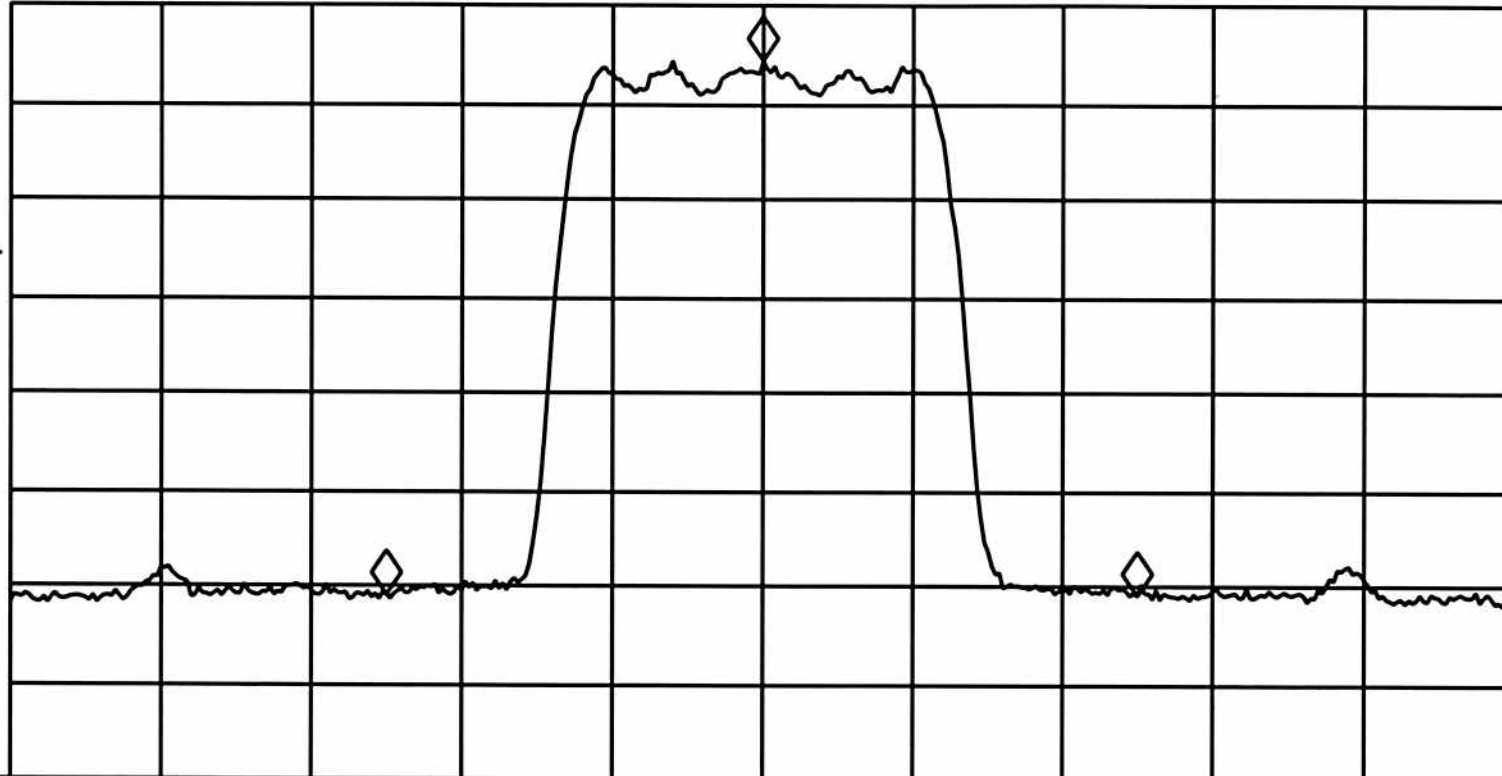
hp

MKR 1.988750 GHz
6.93 dBm

REF 12.6 dBm #AT 20 dB

SMPL
LOG
10
dB/
OFFST
32.2
dB

AVG
200



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
#RES BW 30 kHz

#VBW 100 kHz

SPAN 5.000 MHz
SWP 20.0 msec



MOTOROLA

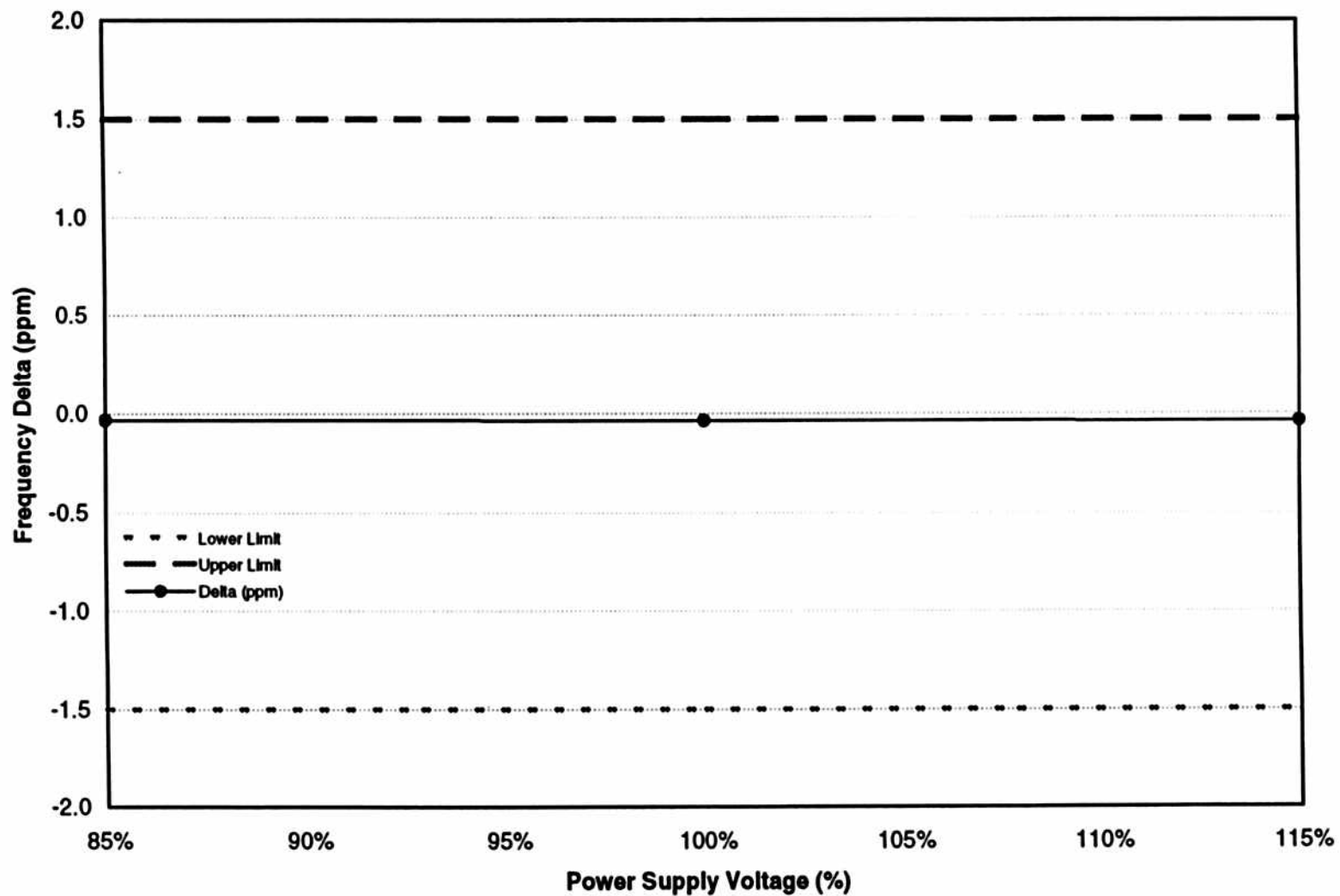
Cellular Infrastructure Group

FCC ID: IHET6YZ1

SECTION F

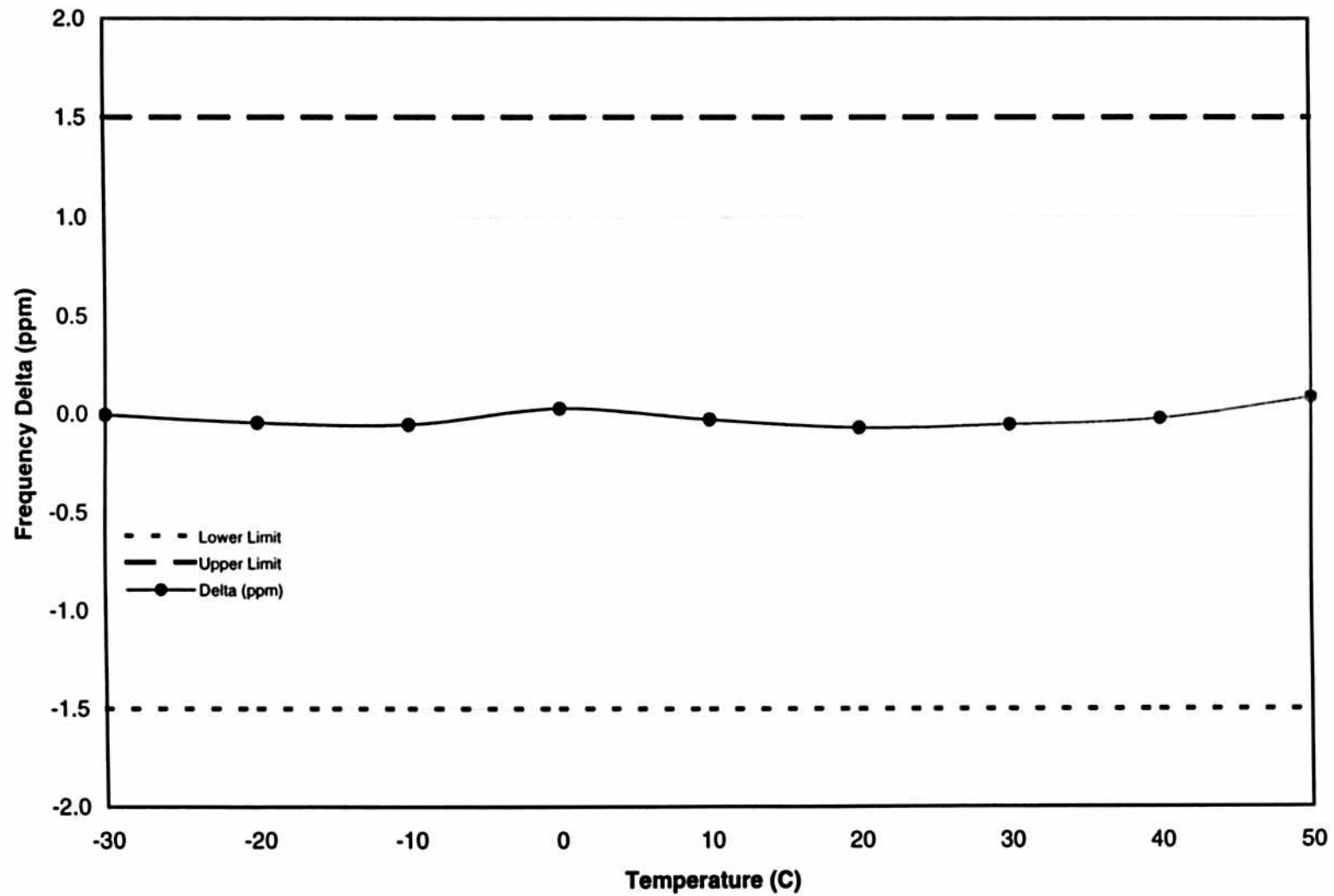
FREQUENCY STABILITY

Frequency Stability with Varying Supply Voltage - CSM1



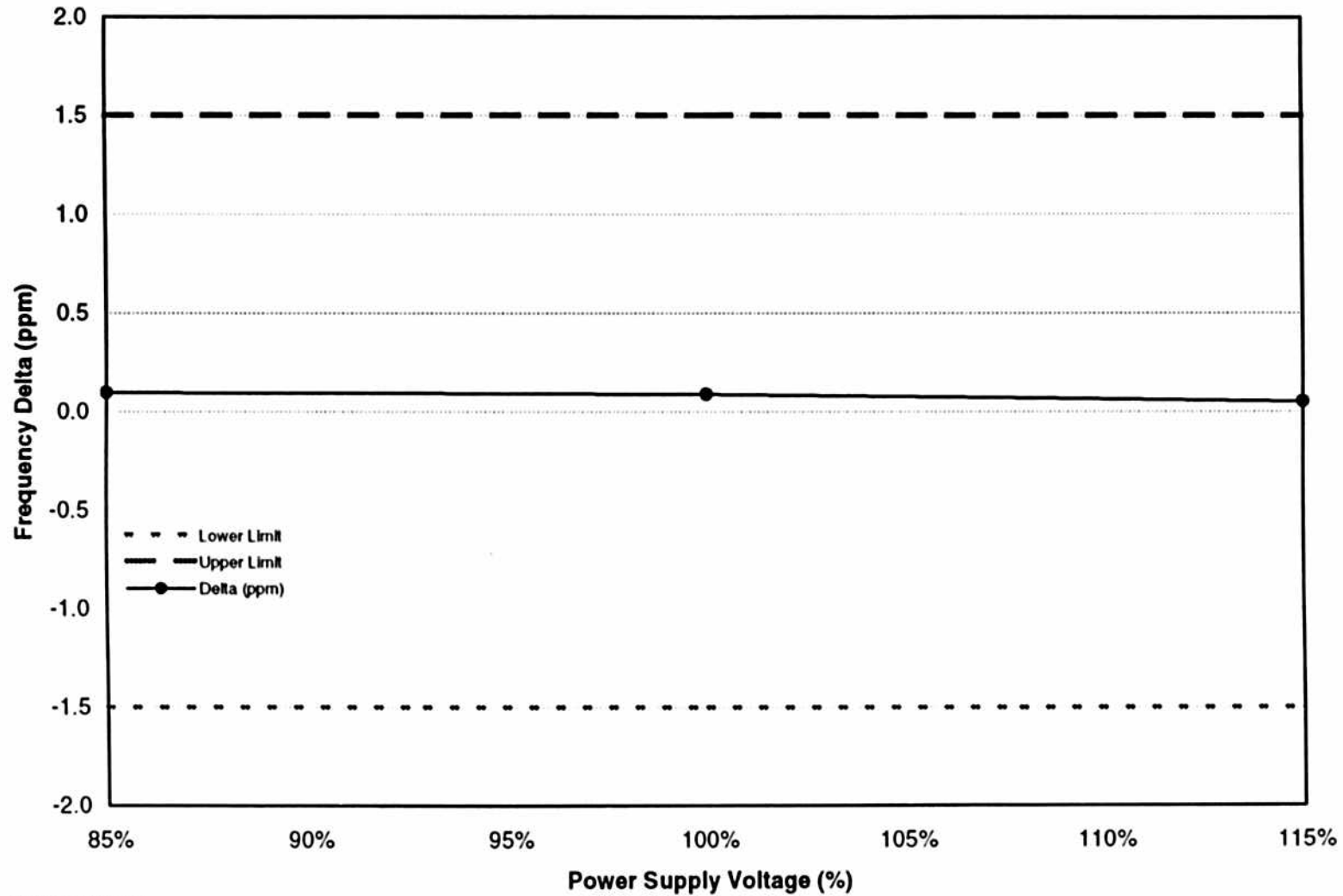
IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

Frequency Stability Over Temperature - CSM1



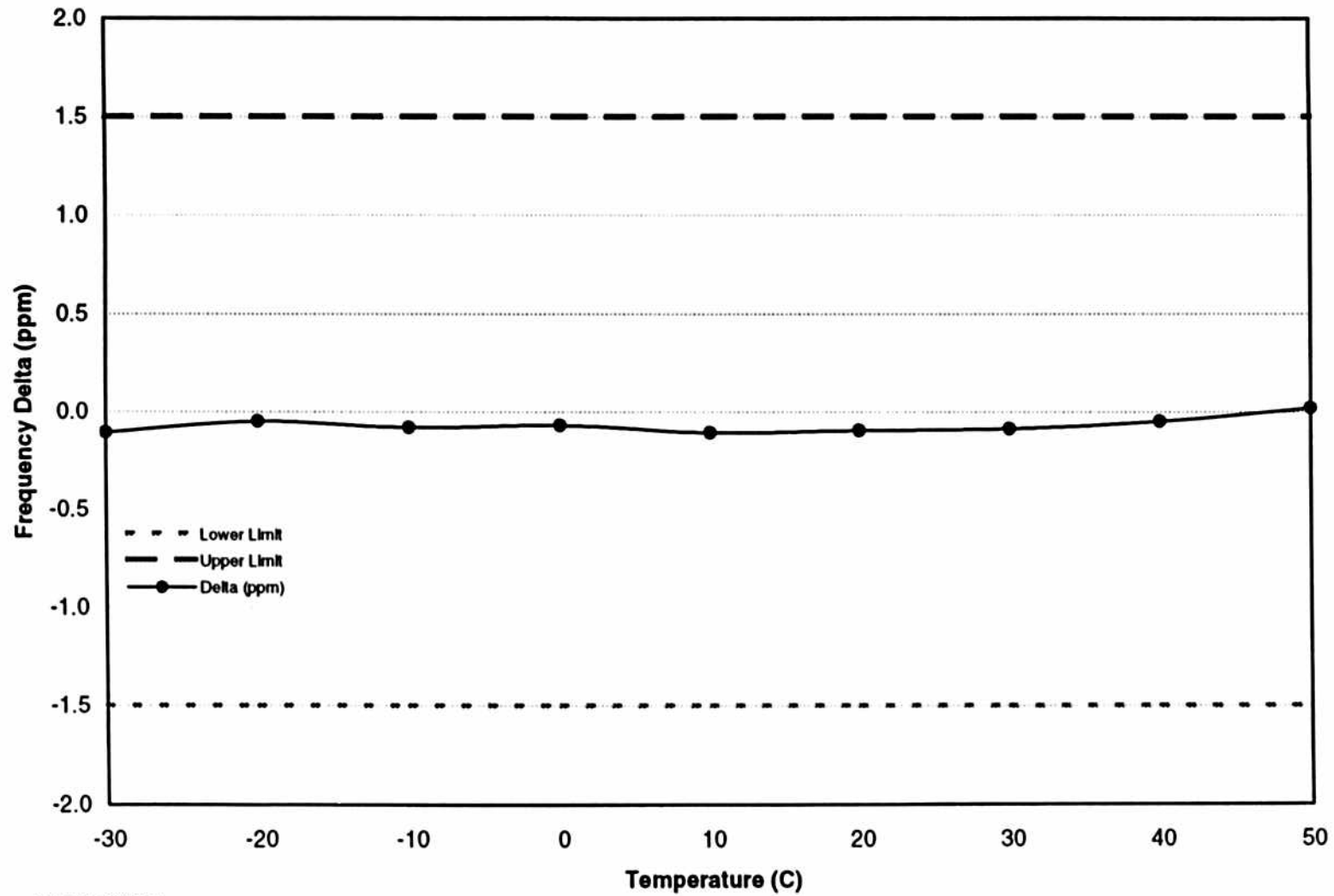
IHET6YZ1
SC4812ET 1.9 GHz
CDMA BTS

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