

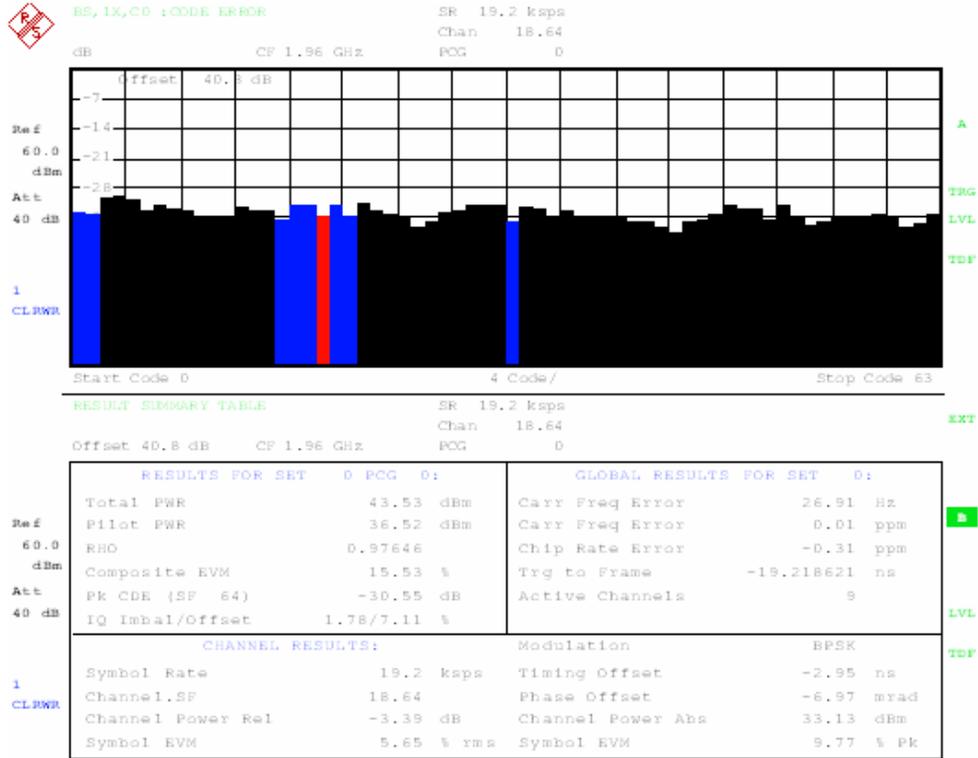
Appendix A

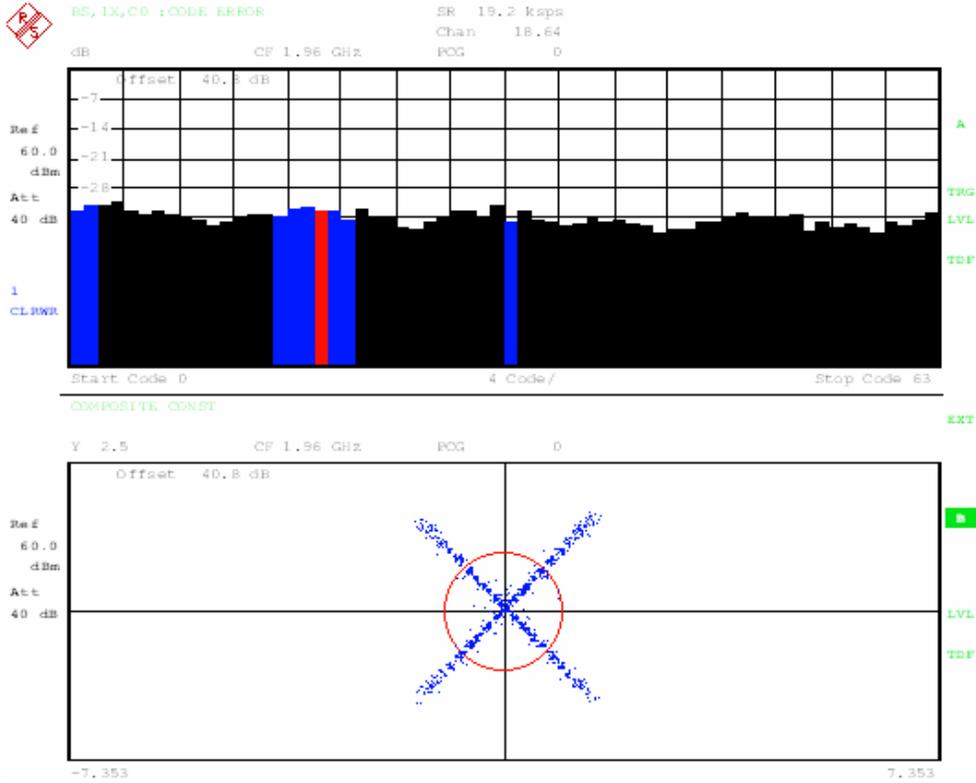
Modulation Characteristic Measurement According to CFR 47 (FCC) part 2.1047

Measurement Result

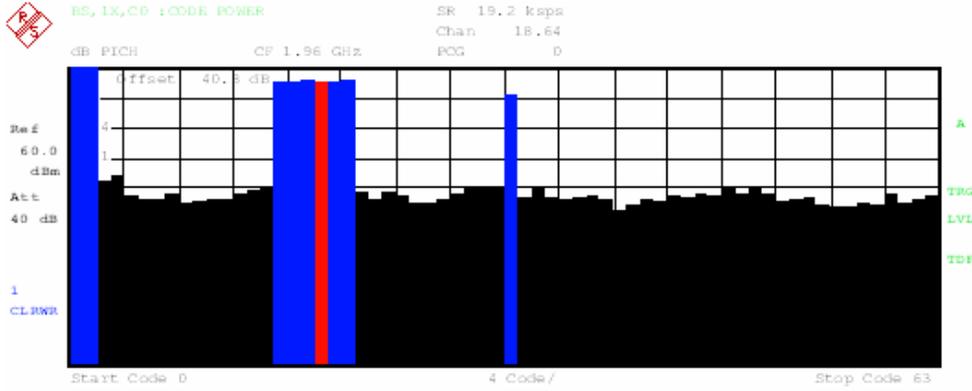
CDMA2000 1X:

Channel 600
RC1





Channel 600 RC3



RESULT SUMMARY TABLE
SR 19.2 kspss
Chan 18.64
Offset 40.8 dB CF 1.96 GHz PCH 0

| RESULTS FOR SET 0 PCH 0: | | GLOBAL RESULTS FOR SET 0: | |
|--------------------------|-------------|---------------------------|---------------|
| Total PWR | 43.47 dBm | Carr Freq Error | 7.70 Hz |
| Pilot PWR | 36.45 dBm | Carr Freq Error | 0.00 ppm |
| RHO | 0.98745 | Chip Rate Error | -0.11 ppm |
| Composite EVM | 11.27 % | Trg to Frame | -46.928626 ns |
| Pk CDE (SF 64) | -32.73 dB | Active Channels | 9 |
| IQ Imbal/Offset | 2.20/6.90 % | | |
| CHANNEL RESULTS: | | Modulation | |
| Symbol Rate | 19.2 kspss | Timing Offset | -0.26 ns |
| Channel.SF | 18.64 | Phase Offset | -16.72 mrad |
| Channel Power Rel | -3.32 dB | Channel Power Abs | 33.13 dBm |
| Symbol EVM | 5.55 % rms | Symbol EVM | 12.60 % Pk |



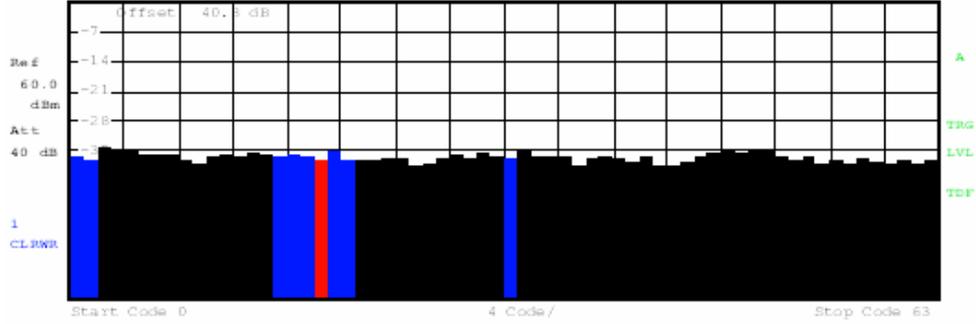
BS, IX, CD : CODE ERROR

SR 19.2 kbps

Chan 18.64

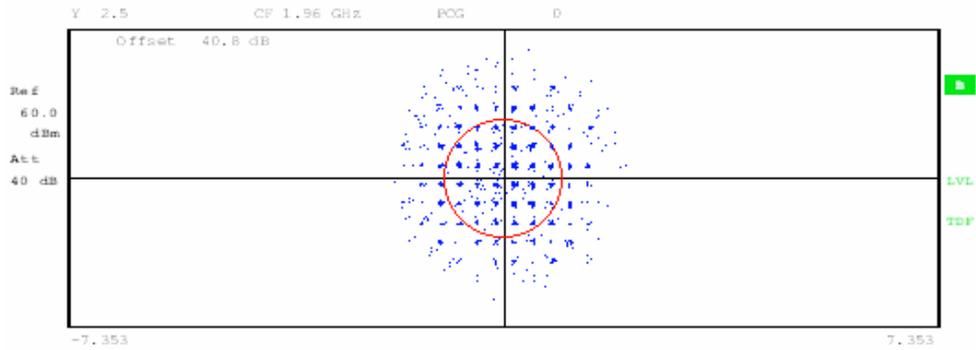
dB CF 1.96 GHz

POG 0



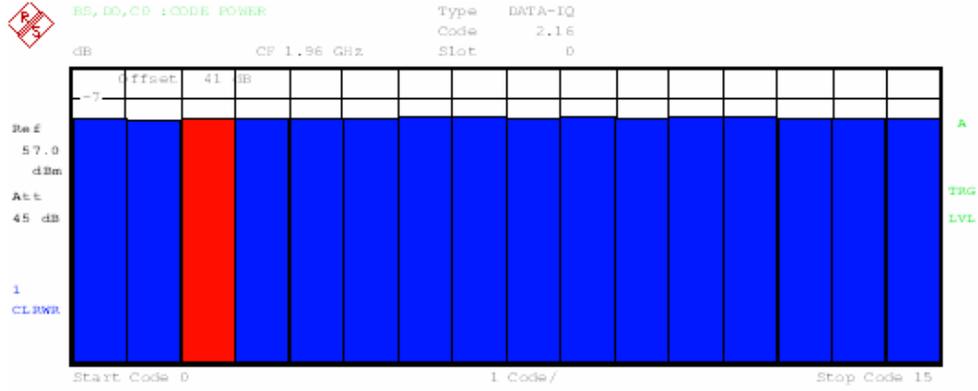
COMPOSITE CONST

EXT



CDMA2000 1X EV-DO

Channel 600



GENERAL RESULTS Type ALL

Offset 41 dB CF 1.96 GHz

| Global Results for Set 0: | | | |
|-----------------------------|-----------------|---------------|-------------------------------|
| Ref | Carr Freq Error | -3.28 Hz | RHO Pilot 0.99843 |
| | Carr Freq Error | -0.00 ppm | RHO ov-1/-2 0.99343/0.99377 |
| 57.0 dBm | Chip Rate Error | 0.07 ppm | RHO MAC 0.99182 |
| | Trg to Frame | 360.960144 ns | RHO DATA 0.99335 |
| Results for Set 0 / Slot 0: | | | |
| Att 45 dB | Power PILOT | 42.78 dBm | Data Modulation Type 16-QAM |
| | Power MAC | 41.18 dBm | Act. MAC Channels 54 |
| | Power DATA | 42.56 dBm | Act. DATA Channels 16 |
| 1 CLRWR | Power PREAMBLE | 42.84 dBm | Preamble Length 64 Chips |
| | Composite EVM | 8.91 % | RHO 0.99213 |
| | Max. Pwr DATA | -14.42 dB | Max. Inact. Pwr MAC -33.47 dB |
| | Min. Pwr DATA | -15.86 dB | |



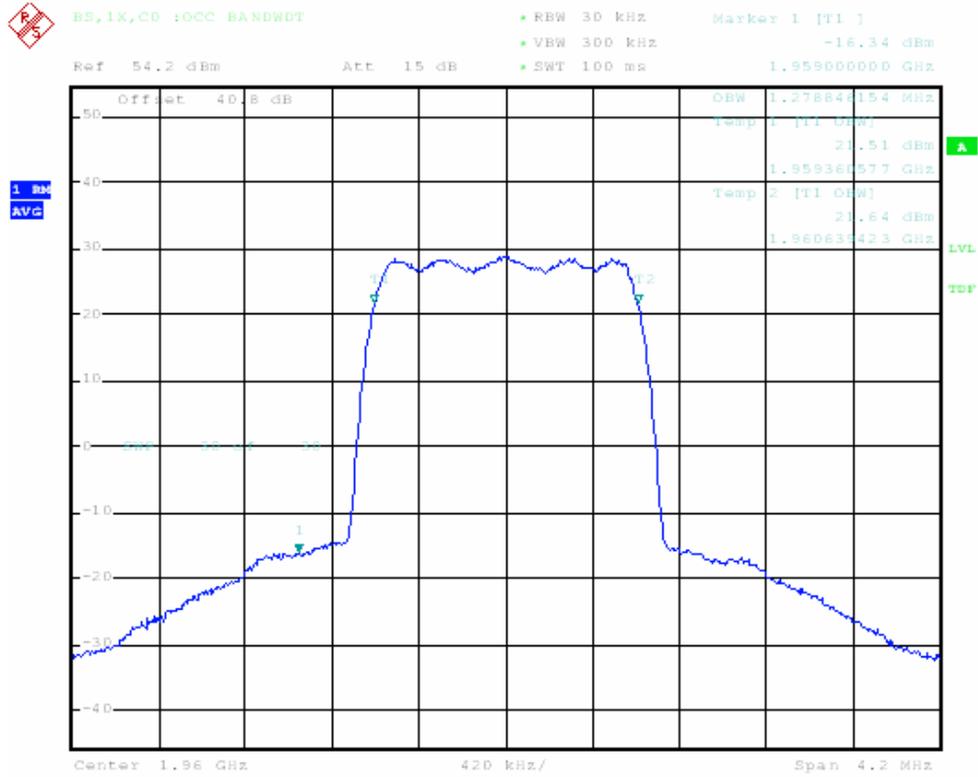
Appendix B

Occupied Bandwidth Measurement

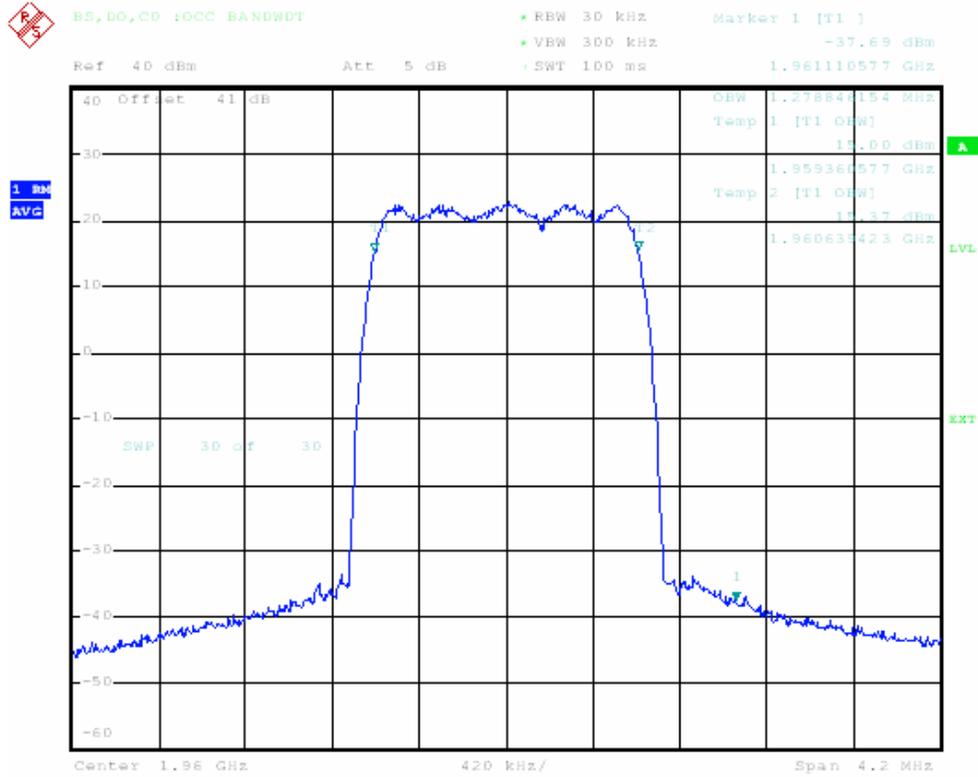
According to CFR 47 (FCC) part 2.1049

Measurement Result CDMA2000 1X

Channel 600



CDMA2000 1X EV-DO Channel 600





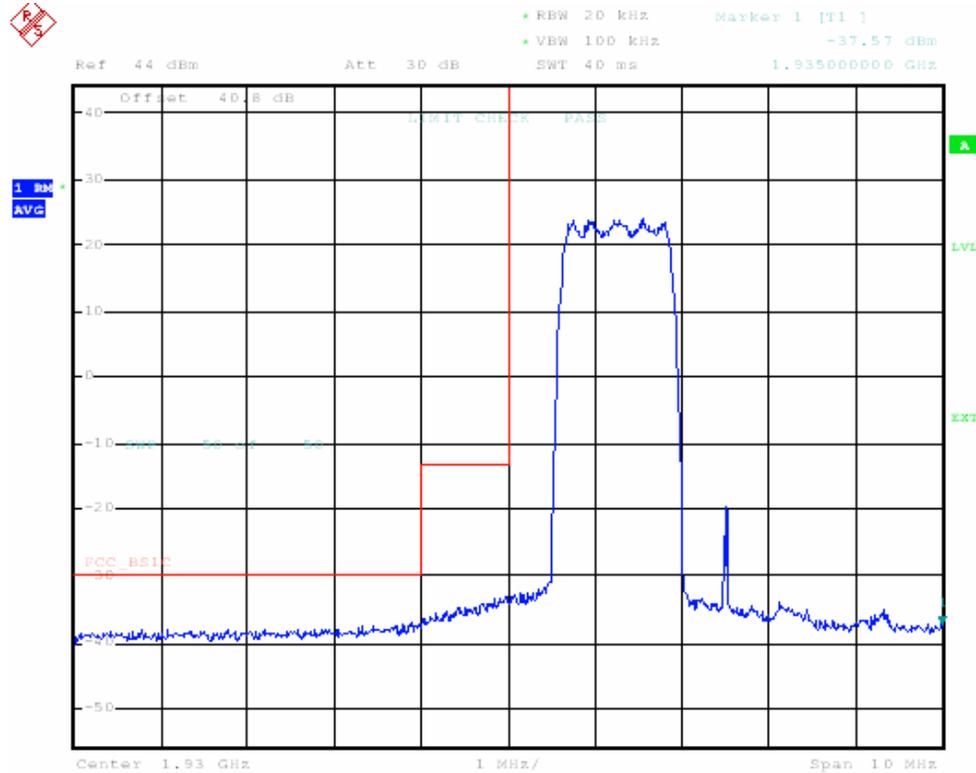
Appendix C

Band Edge Measurement

According to FCC Part 2.1051 & 24.238

Measurement Result
CDMA2000 1X:
A. Single Carrier:

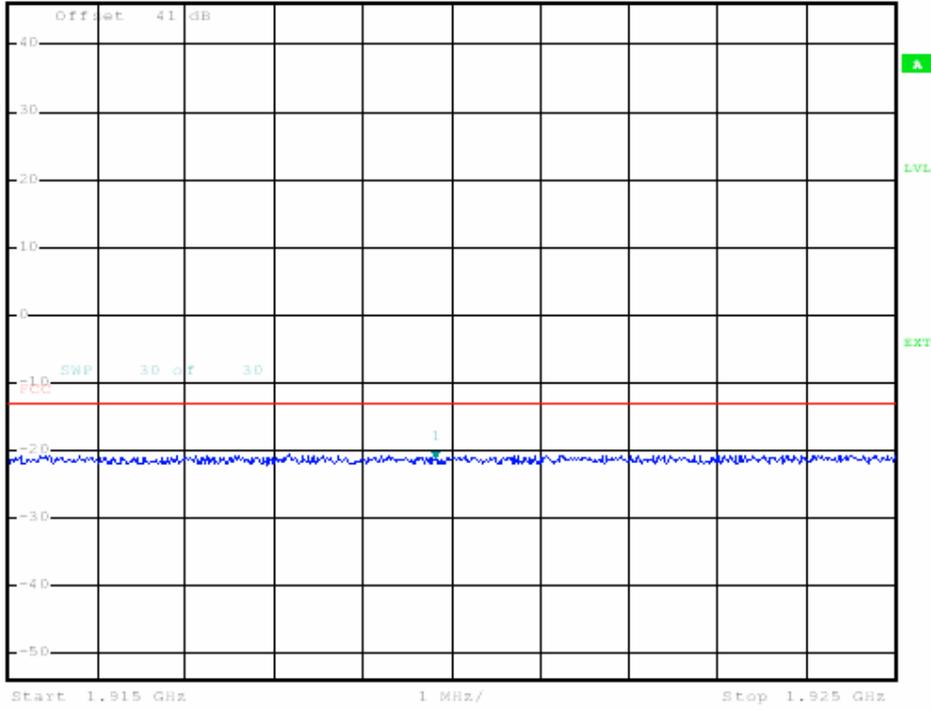
Channel Number: 25



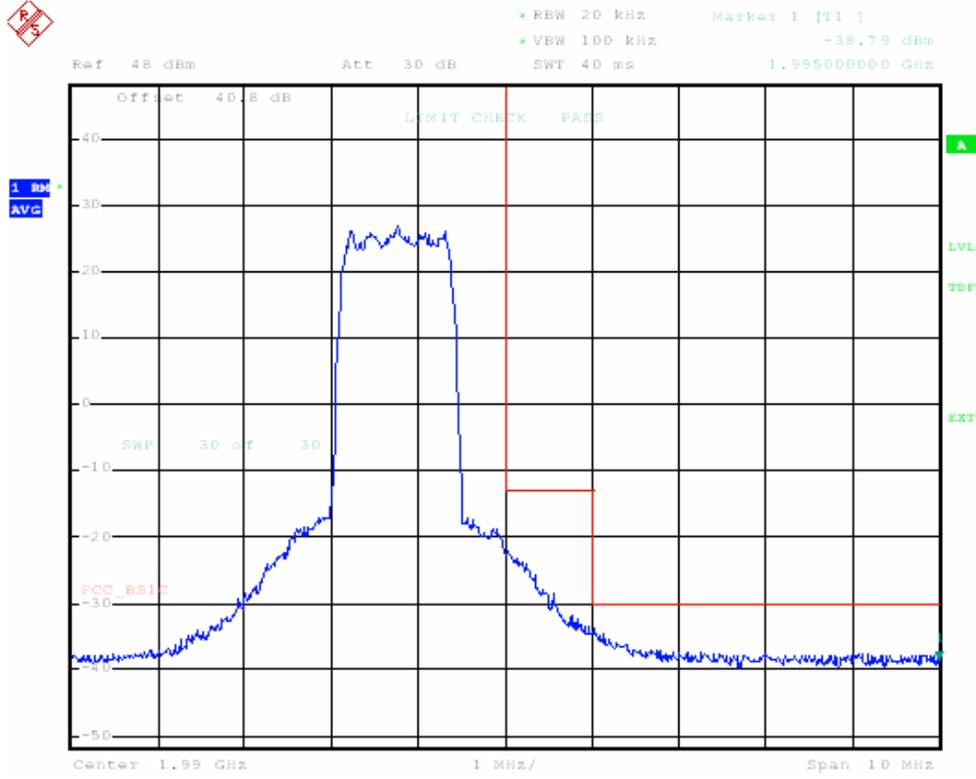


• RBW 1 MHz Marker 1 [T1]
• VBW 3 MHz -21.53 dBm
Ref 46 dBm Att 30 dB SWT 2.5 ms 1.919807692 GHz

1 MHz
AVG



Channel Number:1175

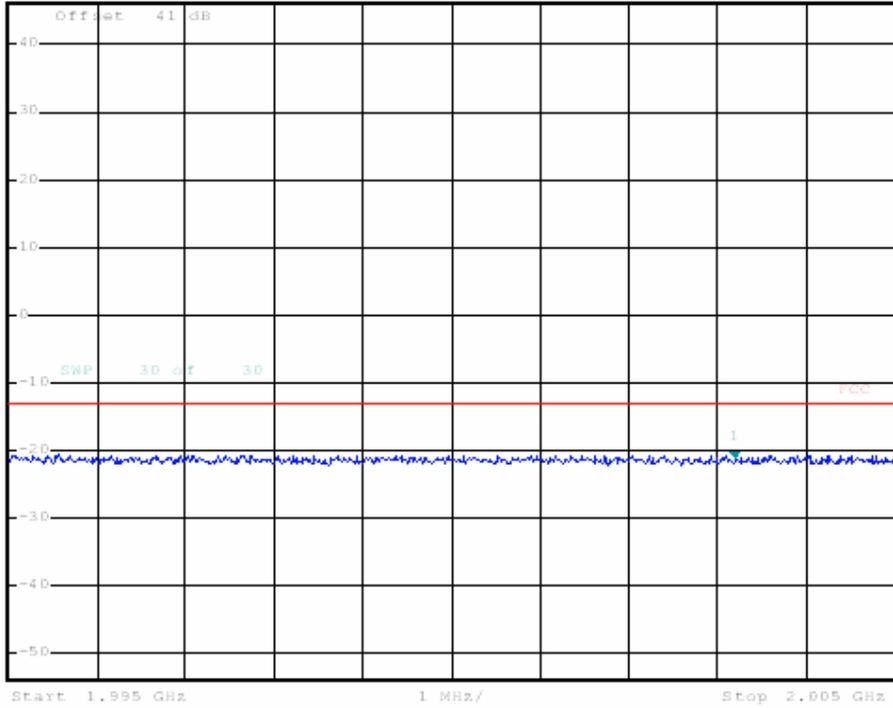




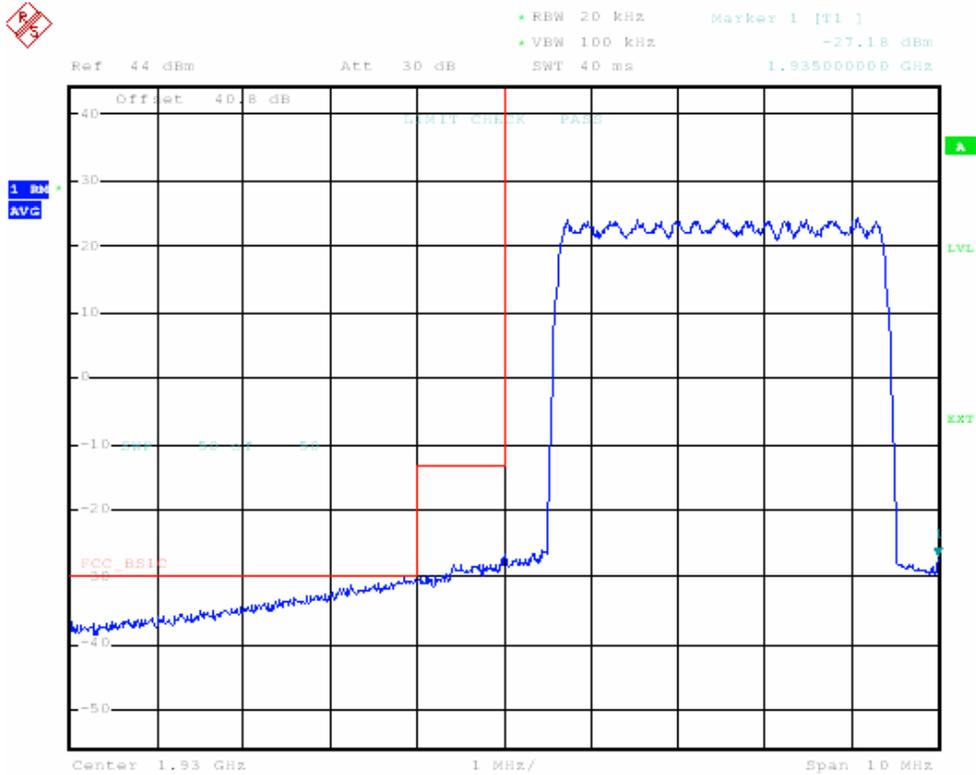
RBW 1 MHz Marker 1 [T1]
VBW 3 MHz -21.48 dBm
SWT 2.5 ms 2.003189103 GHz

Ref 46 dBm Att 30 dB

1 MHz
AVG

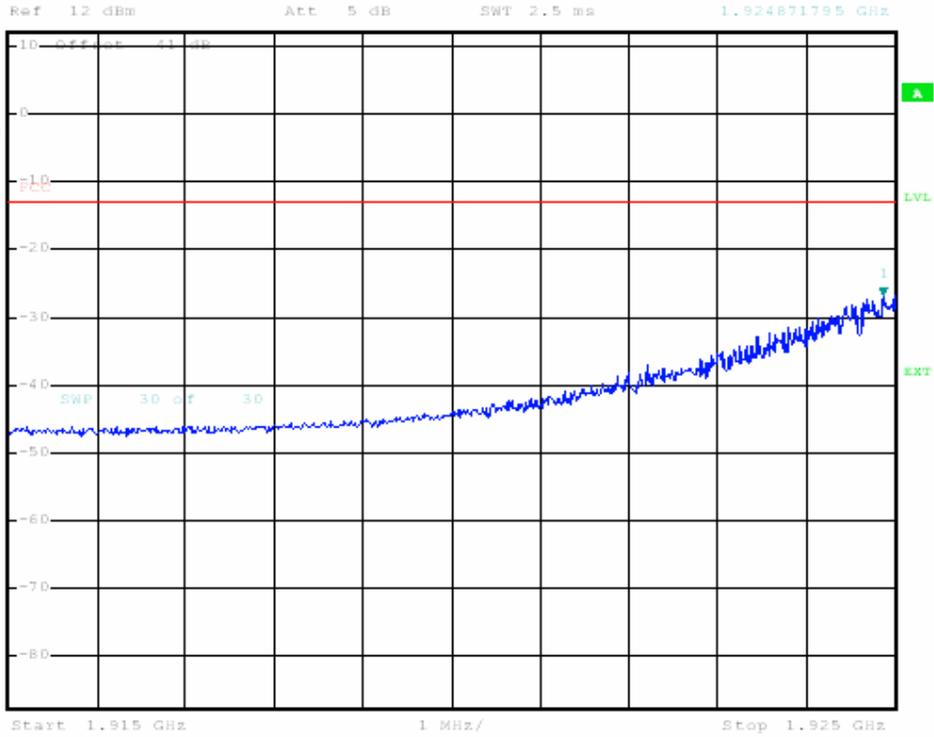


B. Multiple Carriers: Channel Number:25/50/75

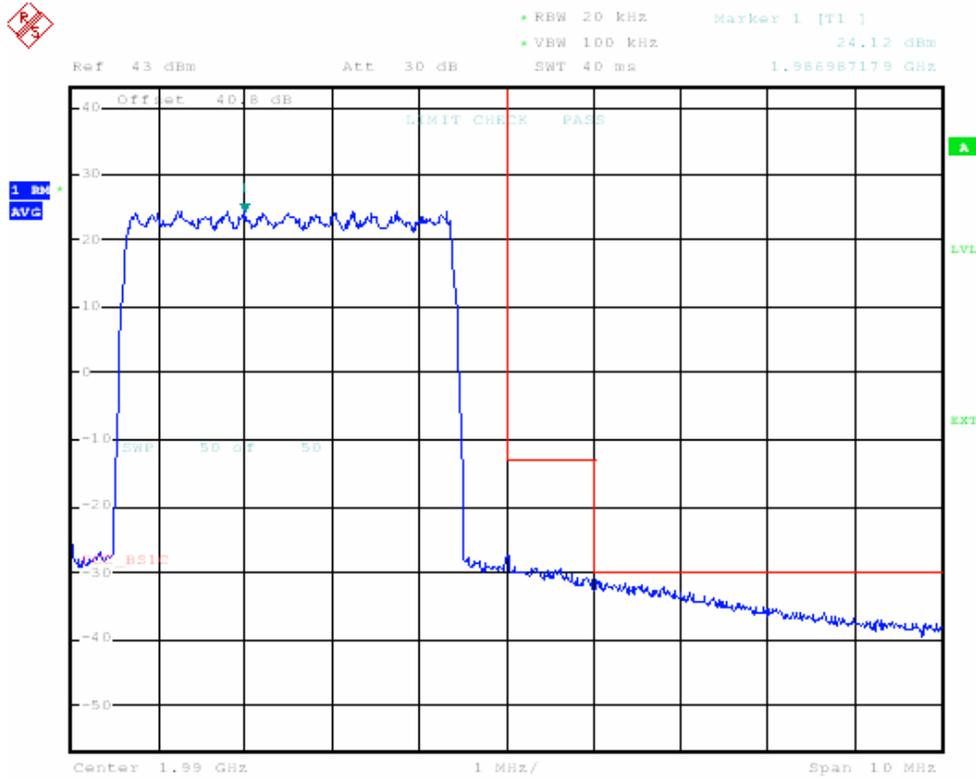




• RBW 1 MHz Marker 1 [T1]
• VBW 3 MHz -27.11 dBm
SWT 2.5 ms 1.924871795 GHz



Channel Number:1125/1150/1175

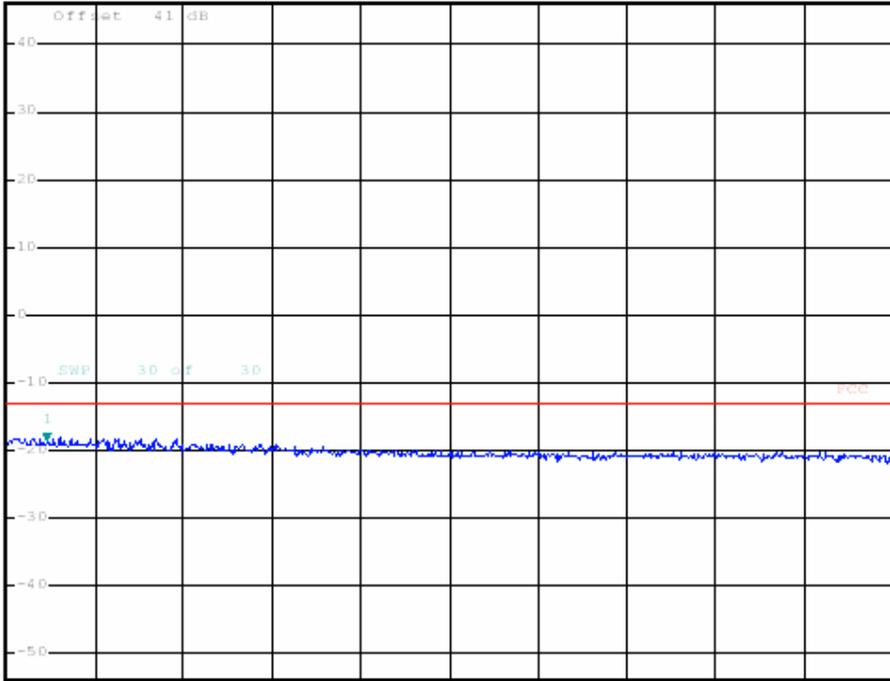




• RBW 1 MHz Marker 1 [T1]
• VBW 3 MHz -18.93 dBm
SWT 2.5 ms 1.995448718 GHz

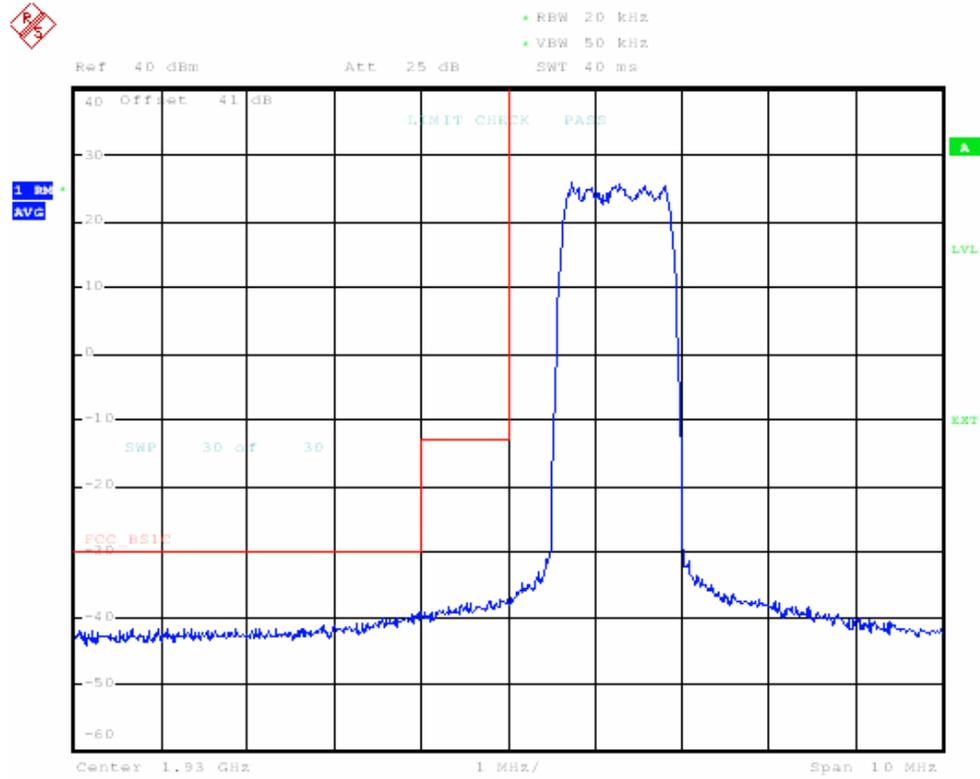
Ref 46 dBm Att 30 dB

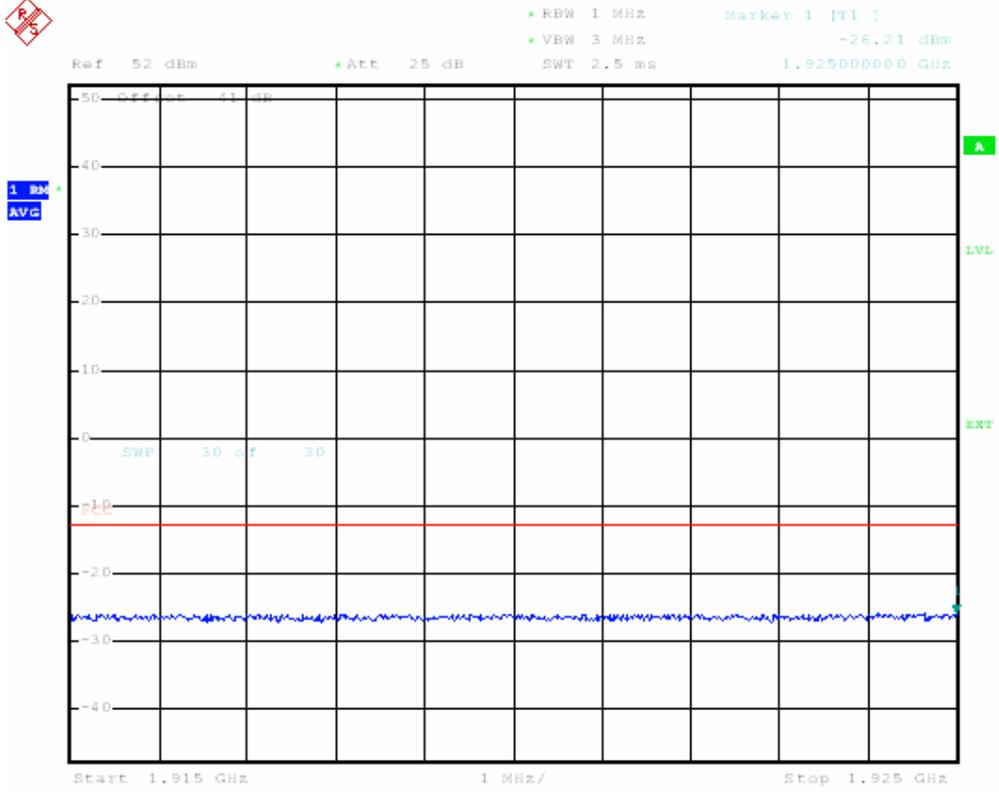
1 MHz
AVG



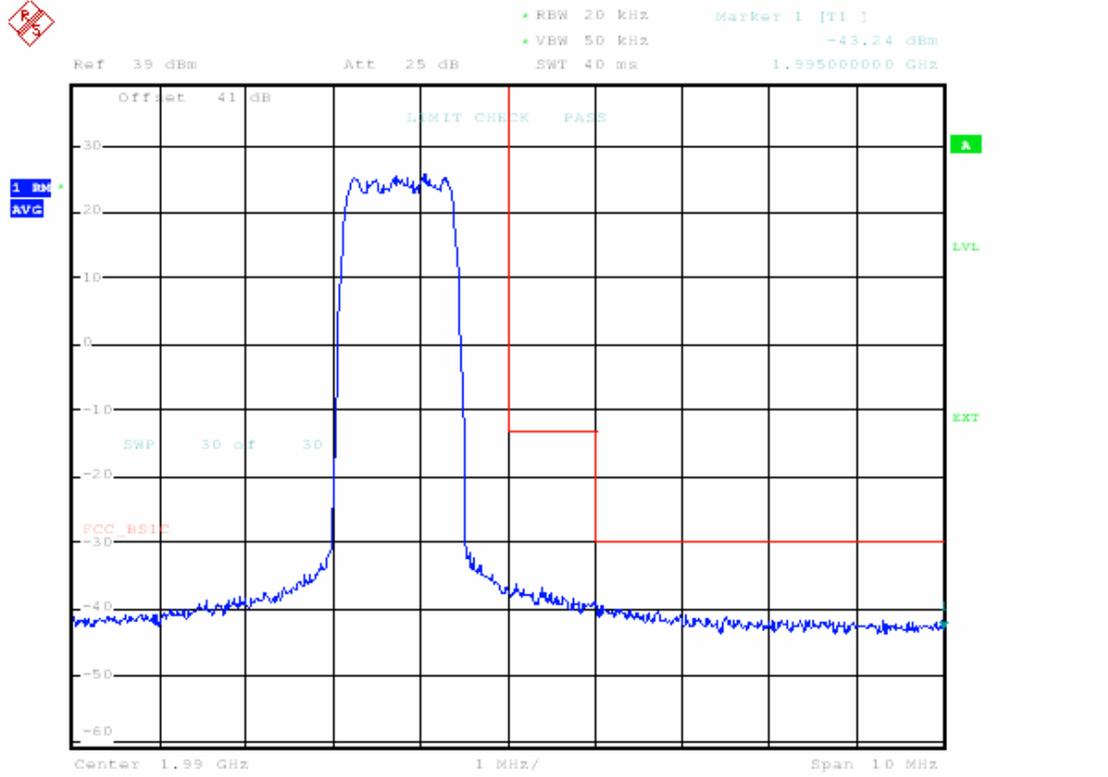
CDMA2000 1X EV-DO:

Channel Number:25





Channel Number:1175

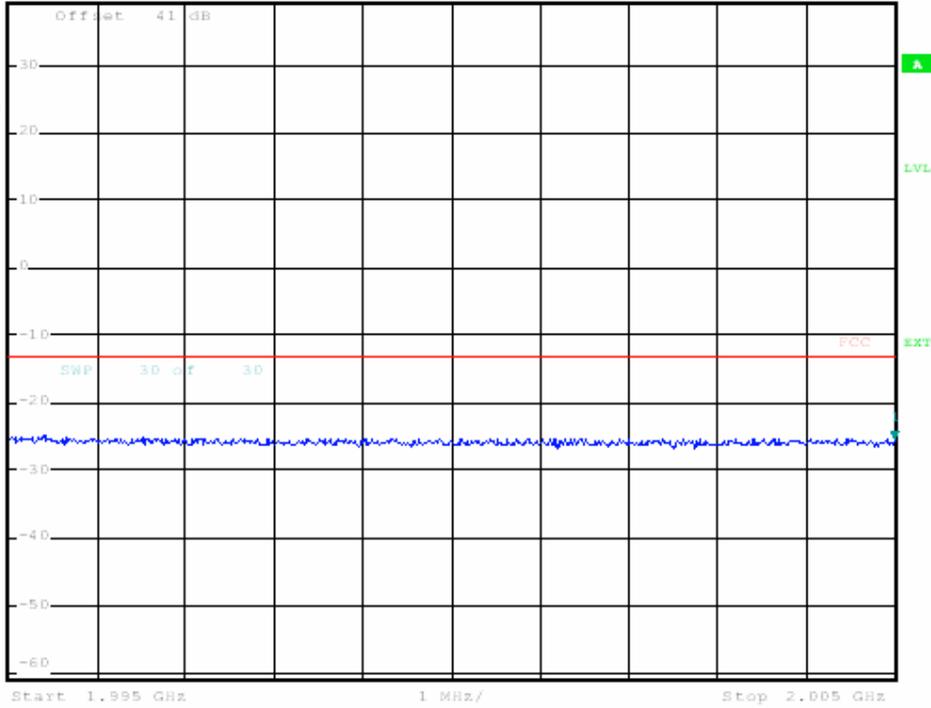




• RBW 1 MHz Marker 1 [T1]
• VBW 3 MHz -25.58 dBm
SWT 2.5 ms 2.005000000 GHz

Ref 39 dBm Att 25 dB

1 Trace
AVG



Appendix D

Spurious Emission at Antenna Terminal

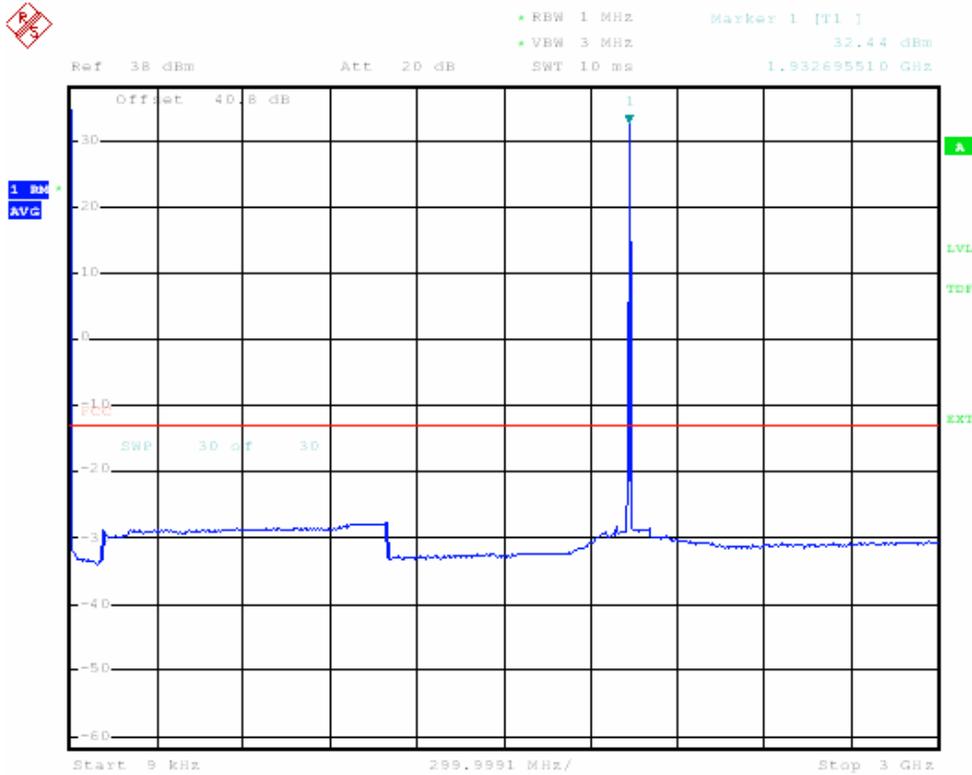
According to FCC Part 2.1051 & 24.238

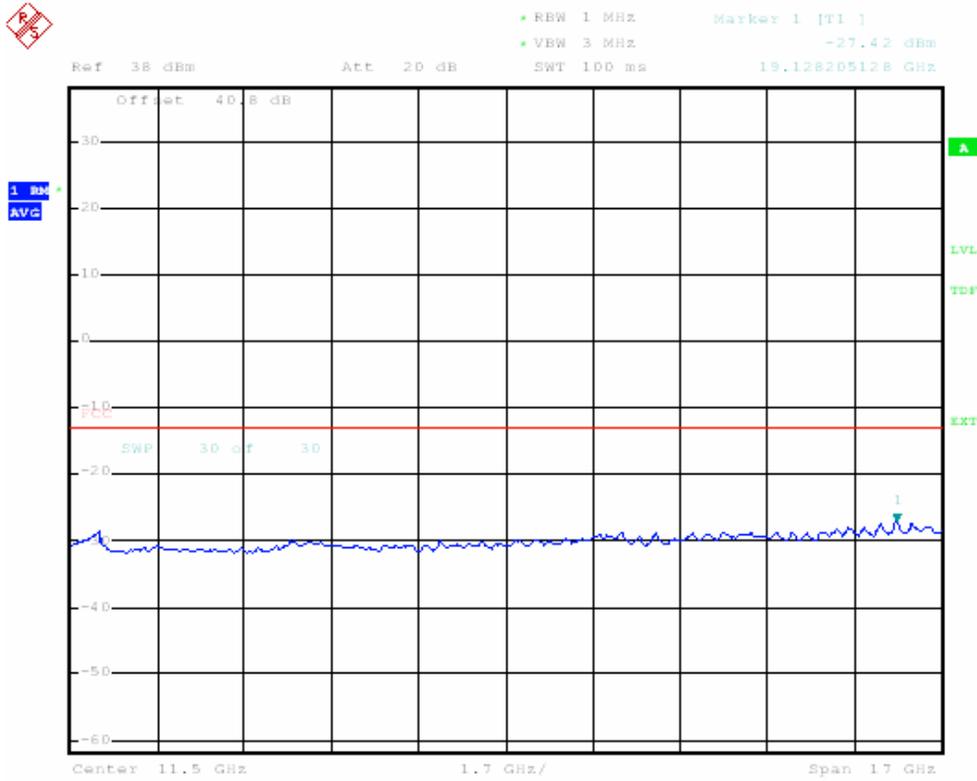
Measurement Result

CDMA2000 1X

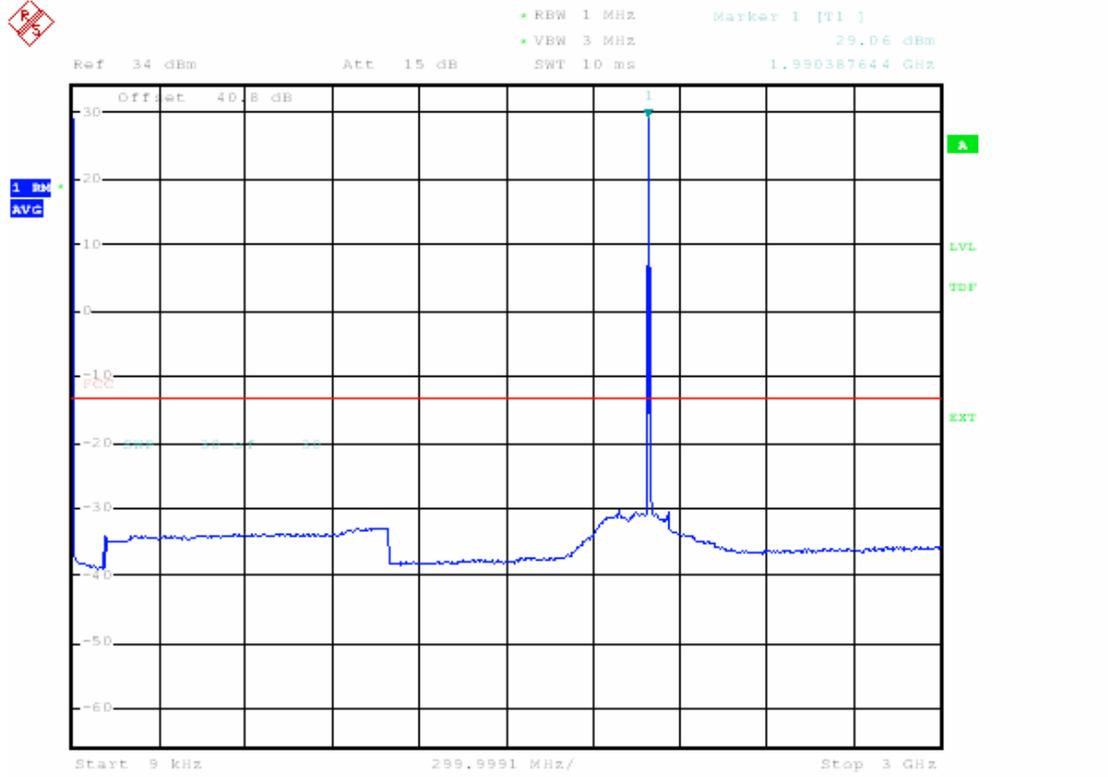
A. Single Carrier

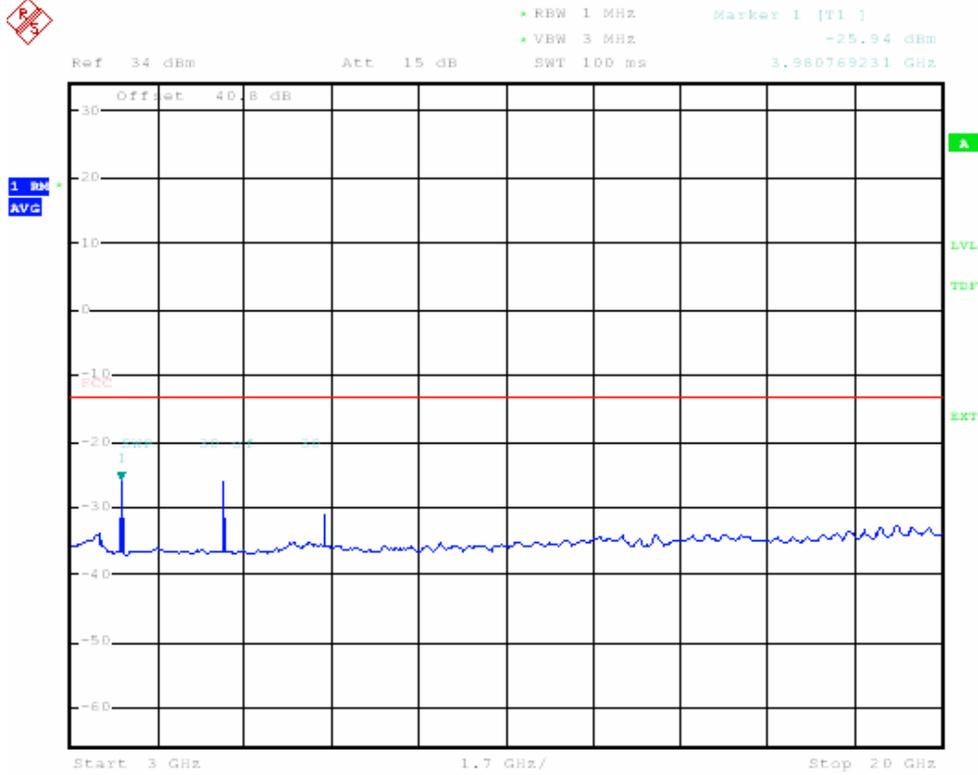
Channel Number: 25



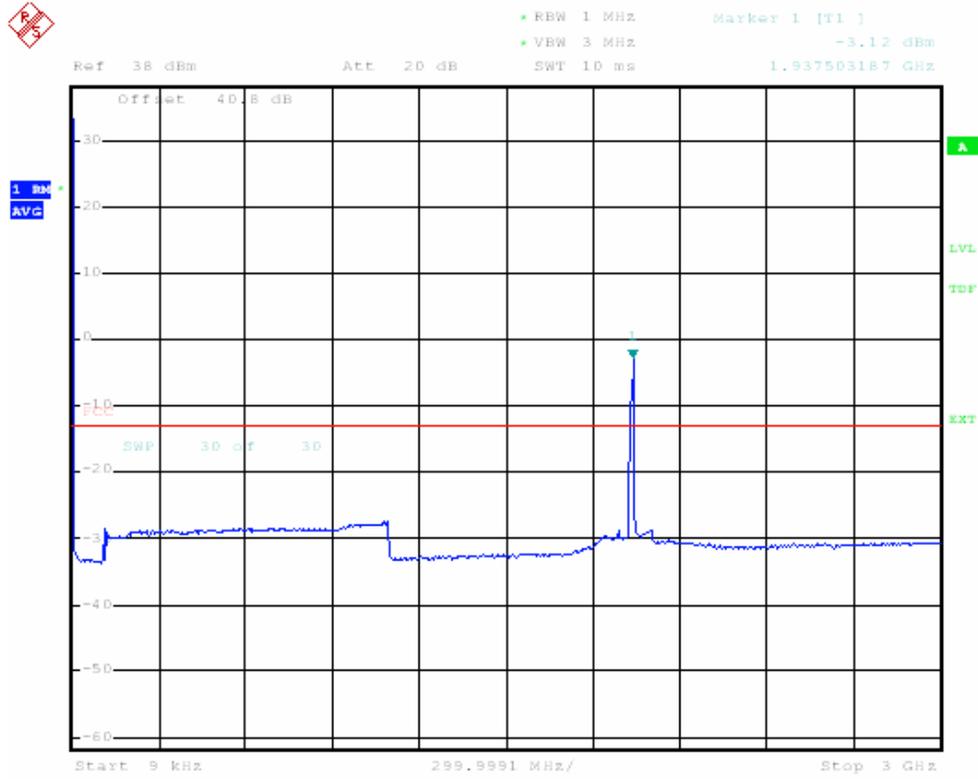


Channel Number:1175



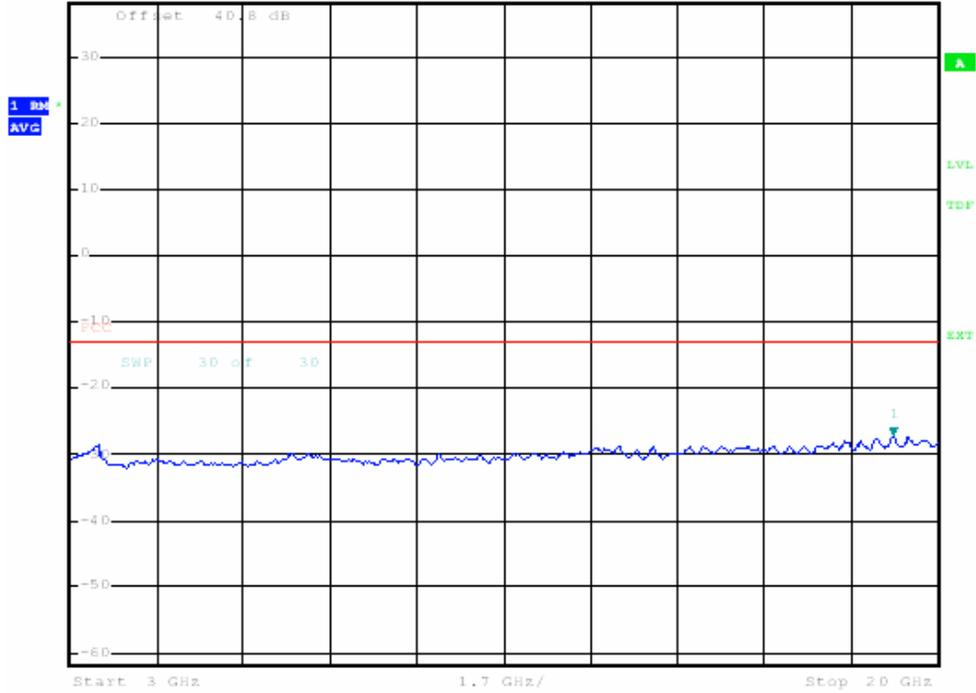


B. Multiple Carriers: Channel Number:25/50/75

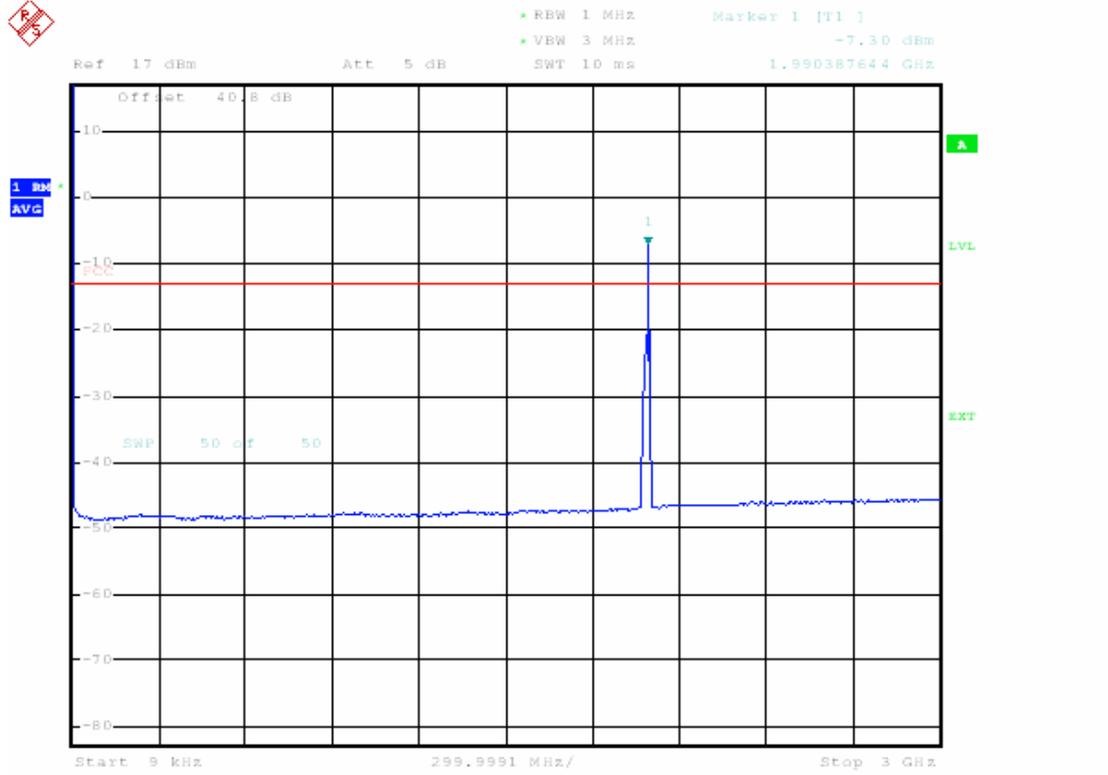




• RBW 1 MHz Marker 1 [T1]
• VBW 3 MHz -27.41 dBm
Ref 38 dBm Att 20 dB SWT 100 ms 19.128205128 GHz

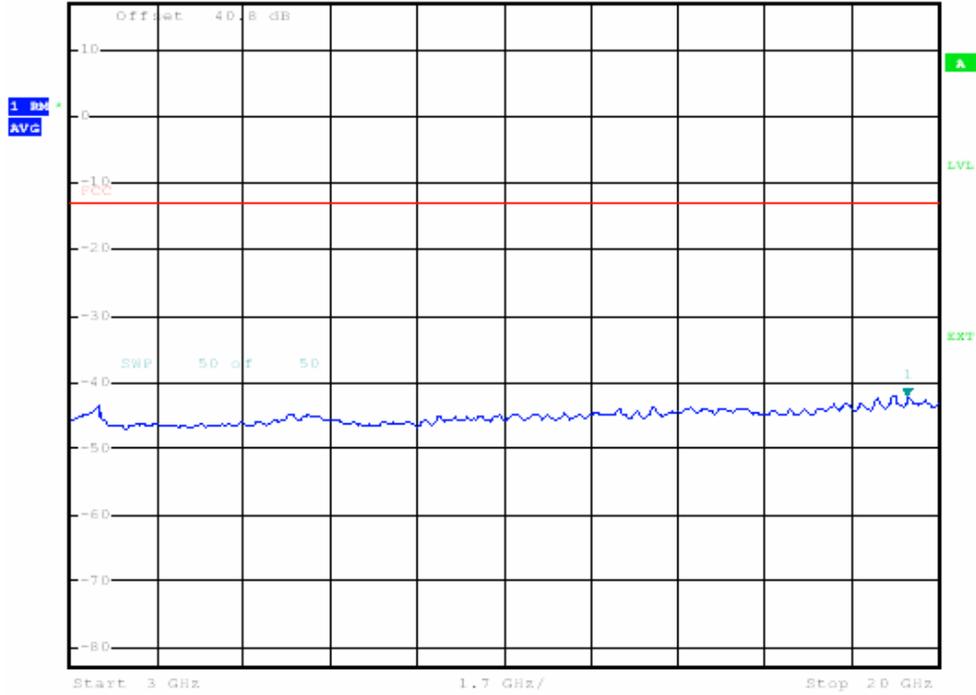


Channel Number:1125/1150/1175

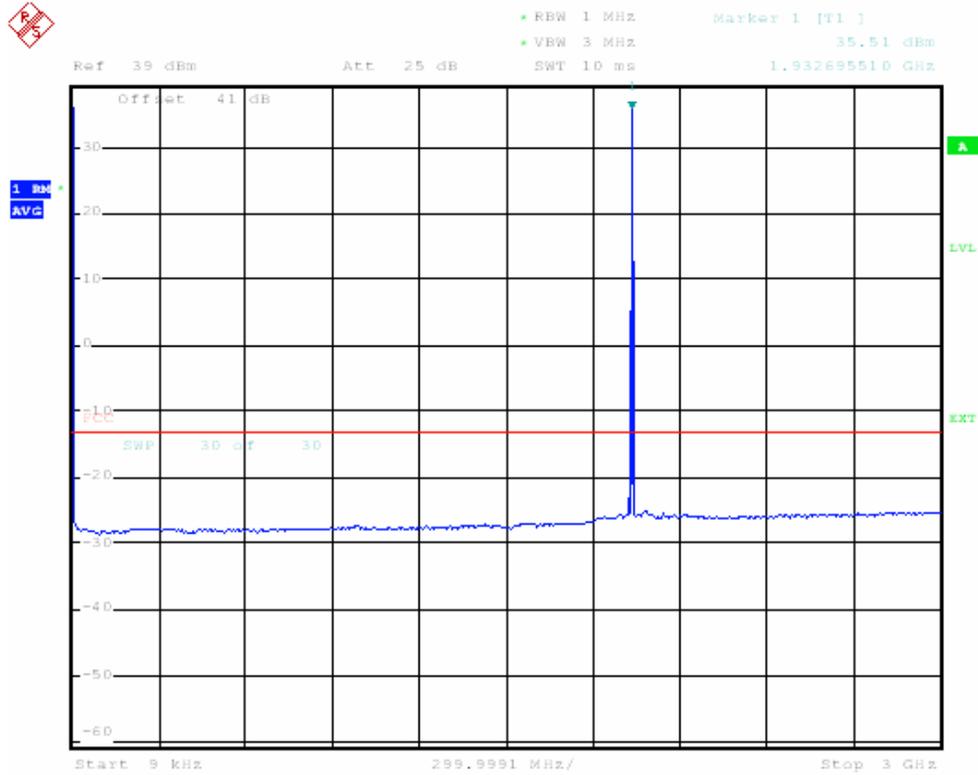




• RBW 1 MHz Marker 1 [T1]
• VBW 3 MHz -42.42 dBm
Ref 17 dBm Att 5 dB SWT 100 ms 19.400641026 GHz

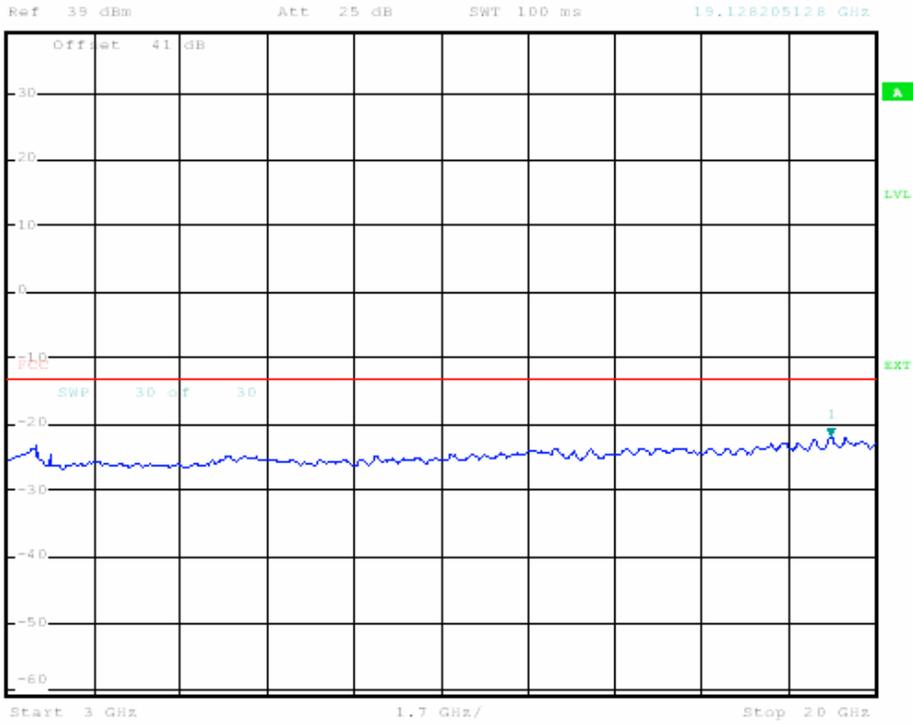


CDMA2000 1X EV-DO: Channel Number:25



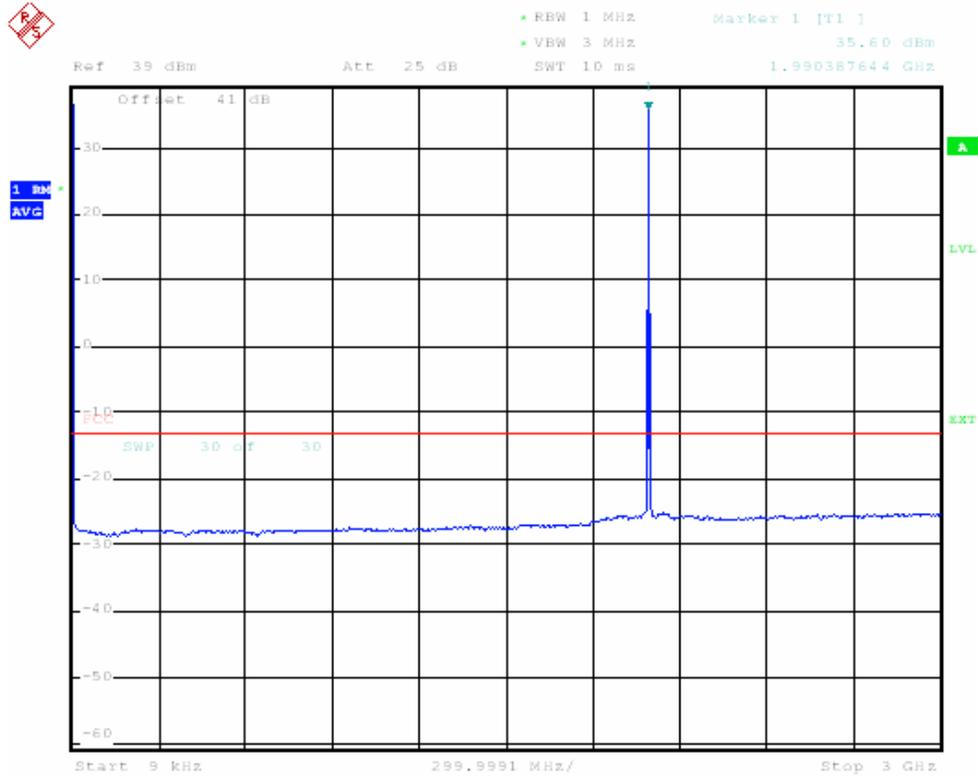


• RBW 1 MHz Marker 1 [T1]
• VBW 3 MHz -22.03 dBm
SWT 100 ms 19.128205128 GHz



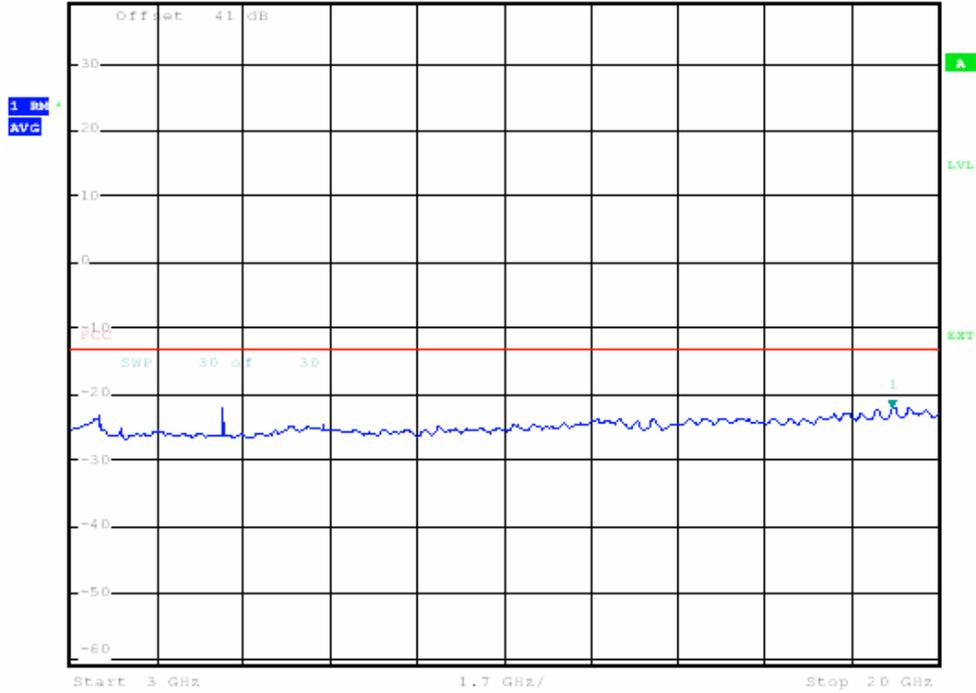


Channel Number:1175





• RBW 1 MHz Marker 1 [T1]
• VBW 3 MHz -22.14 dBm
Ref 39 dBm Att 25 dB SWT 100 ms 19.100961538 GHz



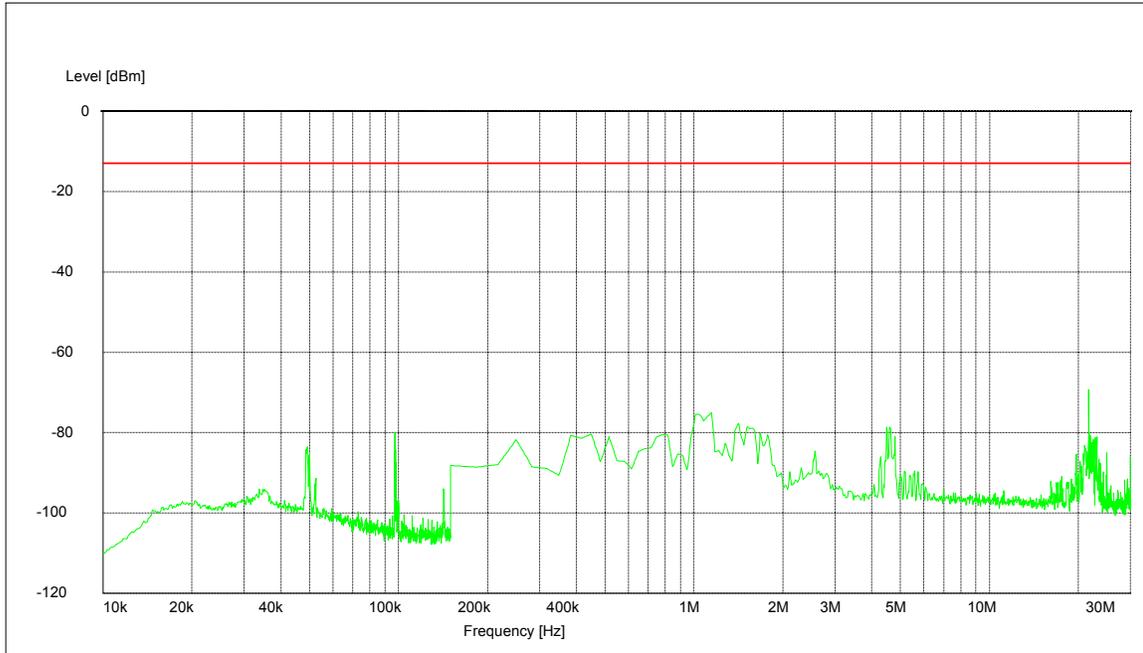
Appendix E

Field Strength of Spurious Radiation

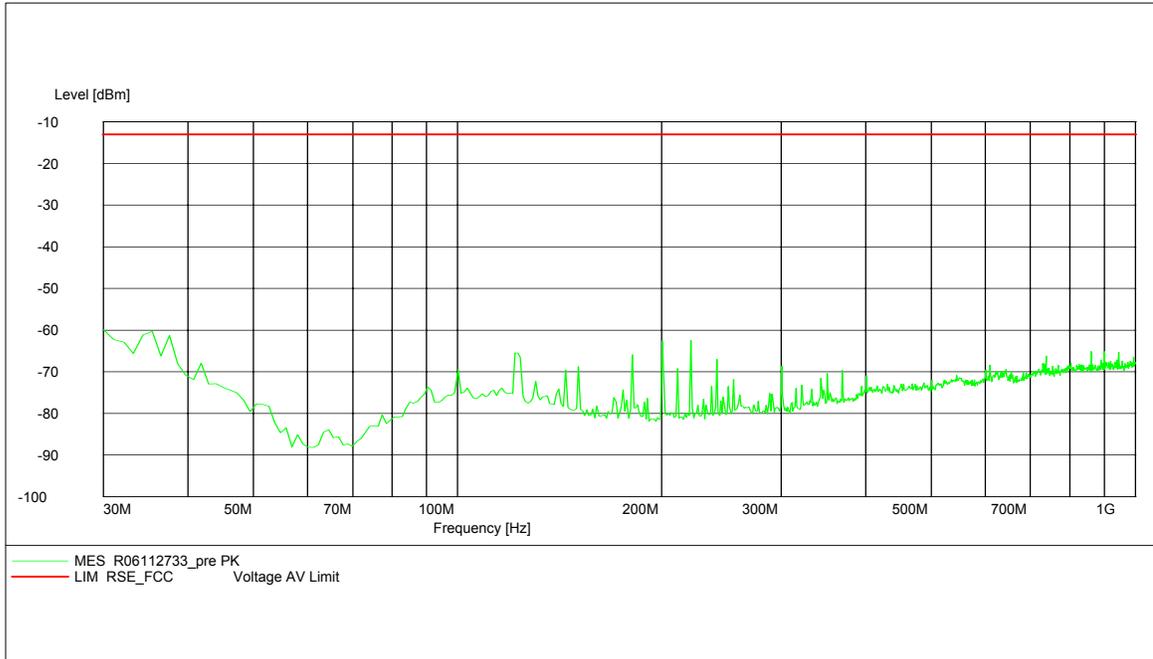
According to FCC Part 2.1053 & 24.238

Measurement Result

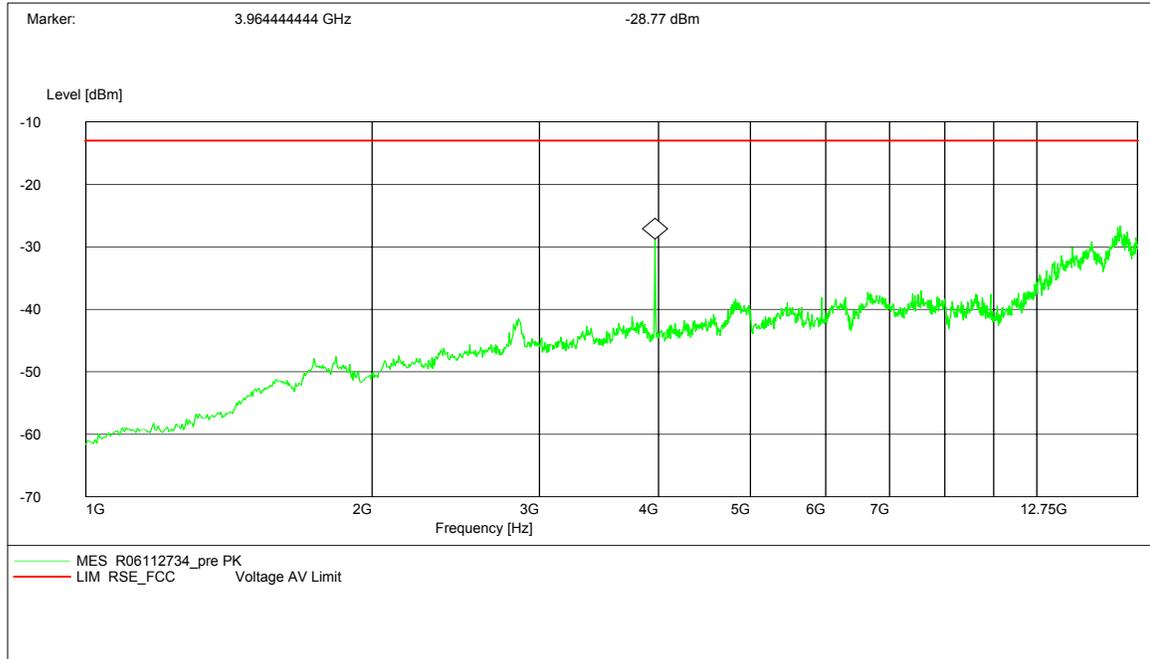
9kHz-30MHz



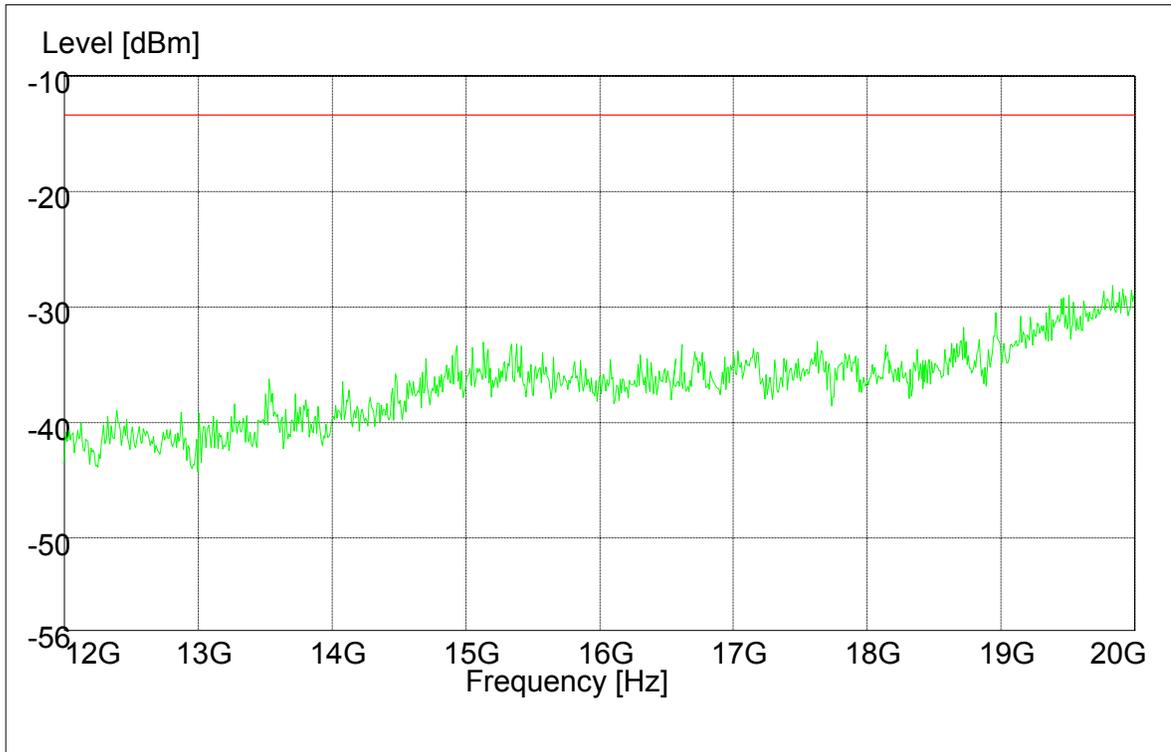
30MHz-1GHz



1GHz-12.75GHz



12GHz-20GHz



Appendix F

Frequency Stability Measurements

According to CFR 47 (FCC) part 2.1055

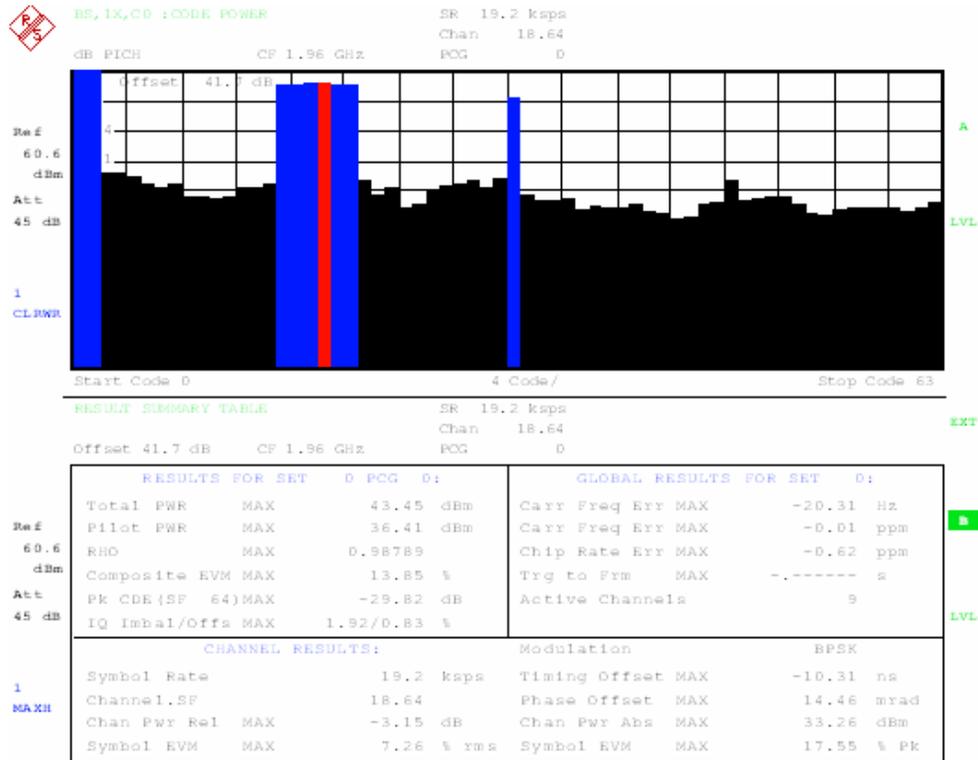
1. Frequency Stability versus Temperature

CDMA2000 1X :

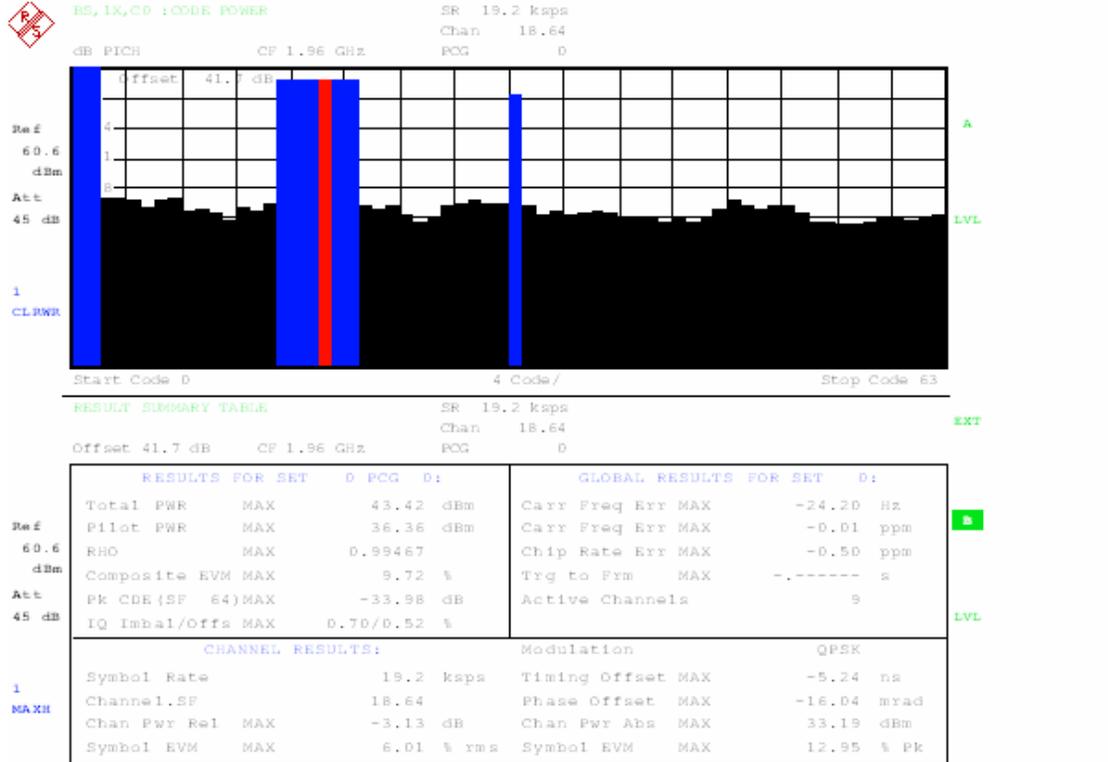
TRX1: Channel No. 600(1960MHz)

Temperature = - 30°C

RC1:

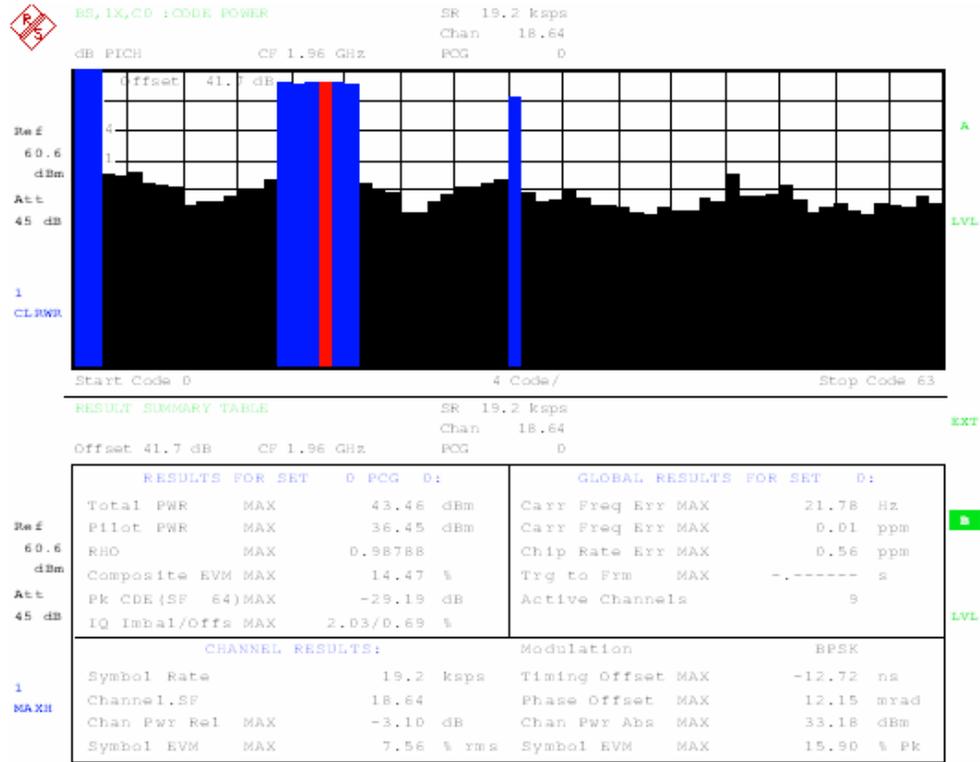


RC3:

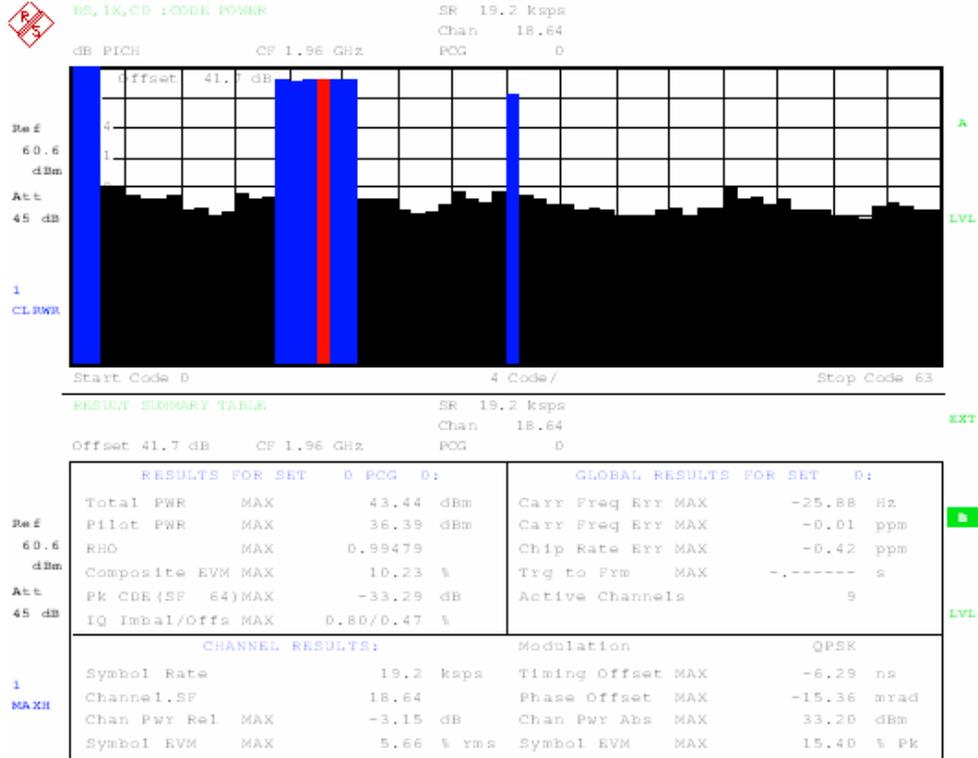


Temperature = - 20°C

RC1:

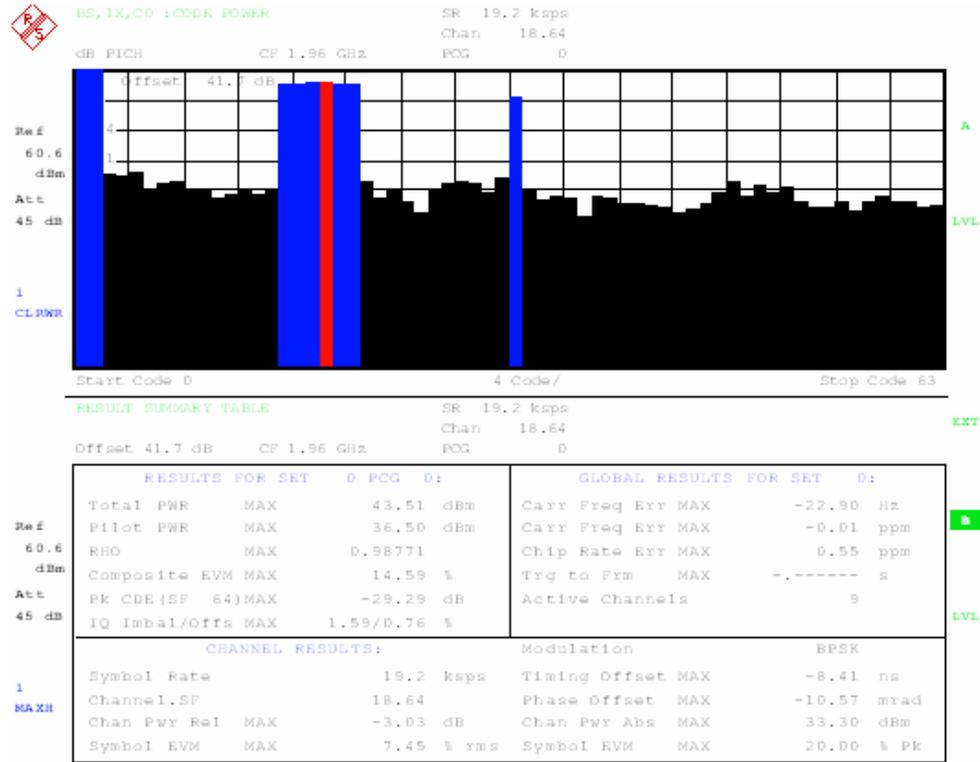


RC3:

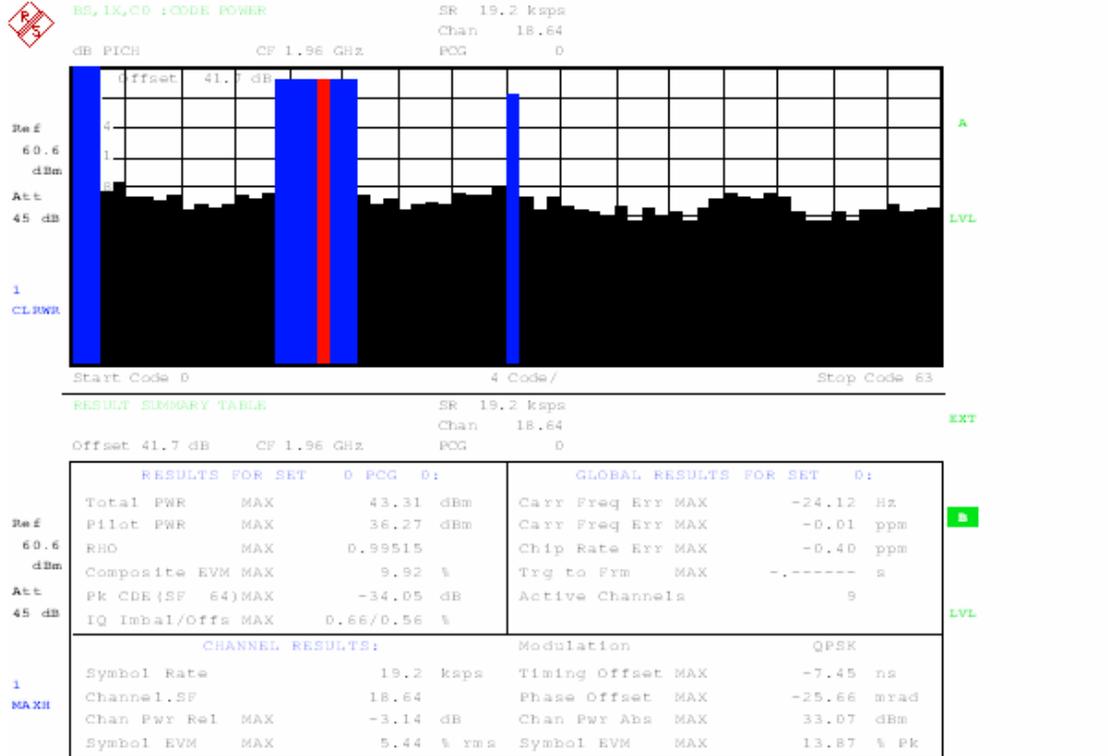


Temperature = - 10°C

RC1:

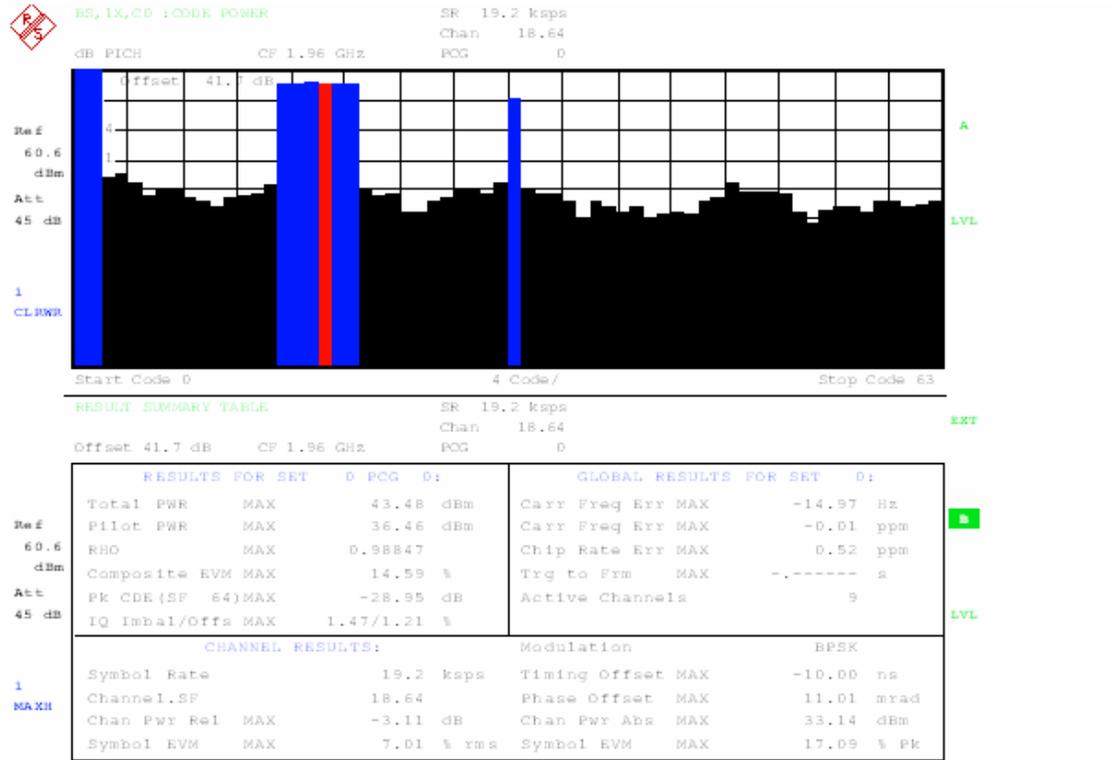


RC3:

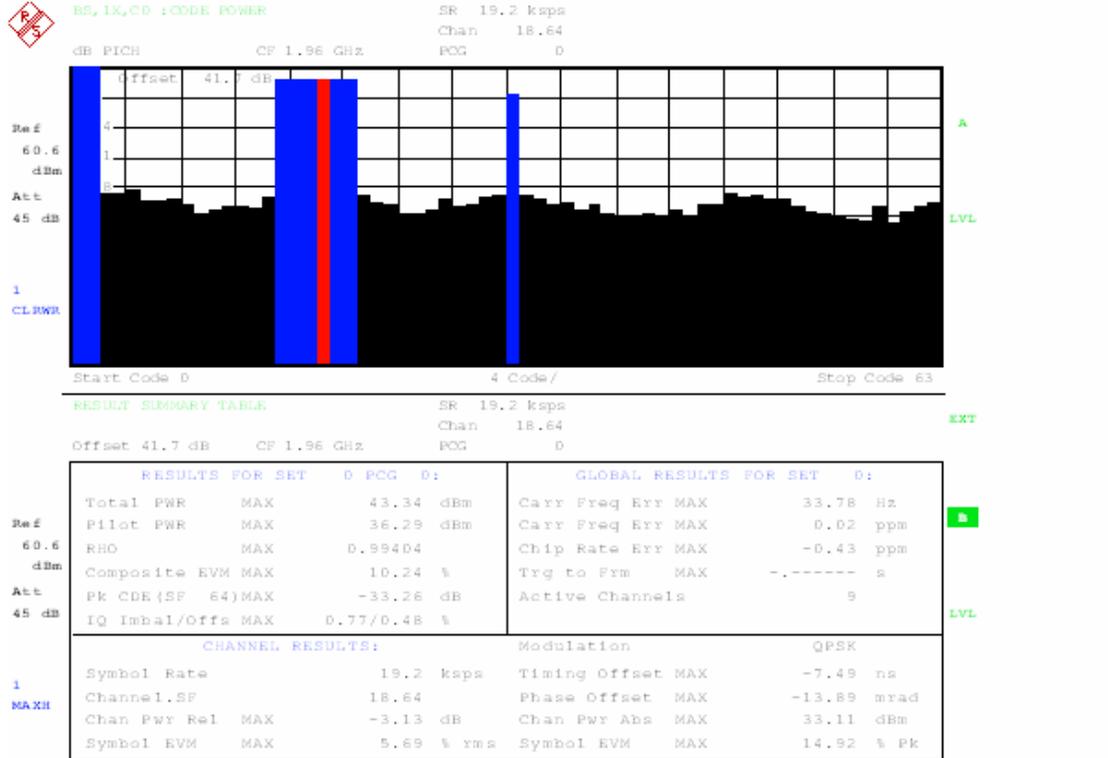


Temperature = 0°C

RC1:

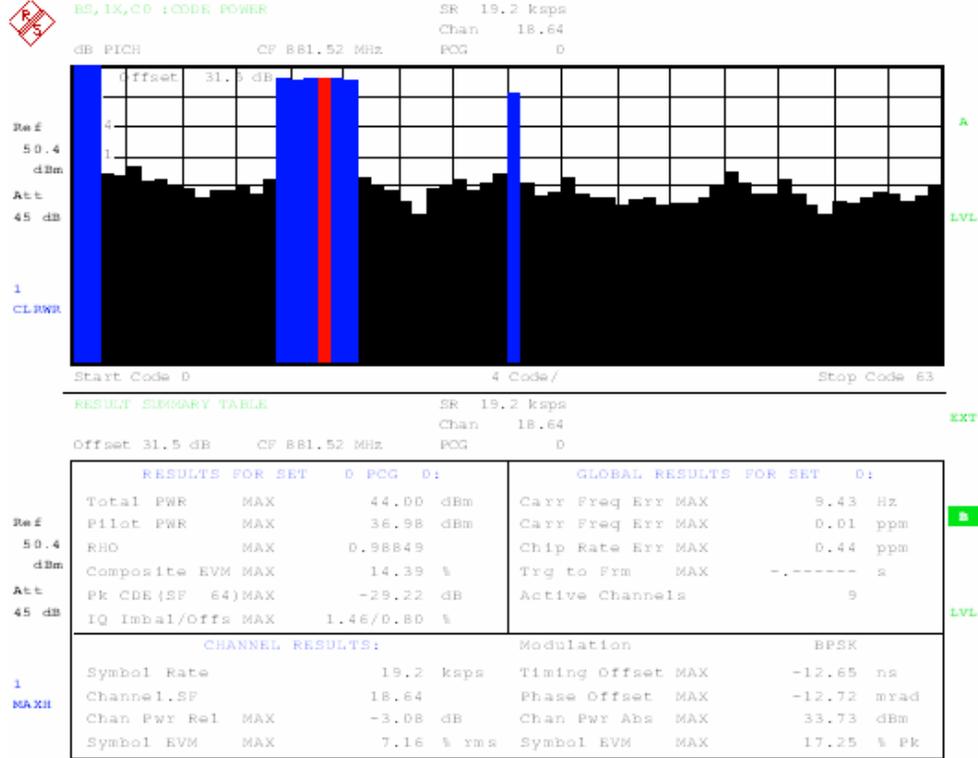


RC3:

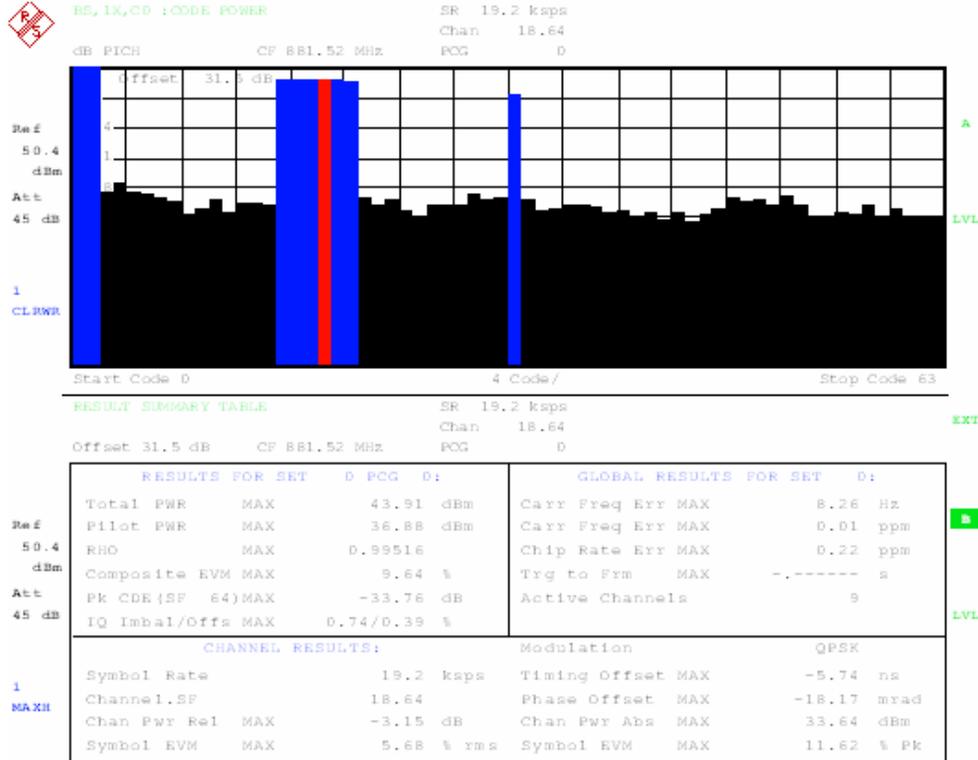


Temperature = 10°C

RC1:

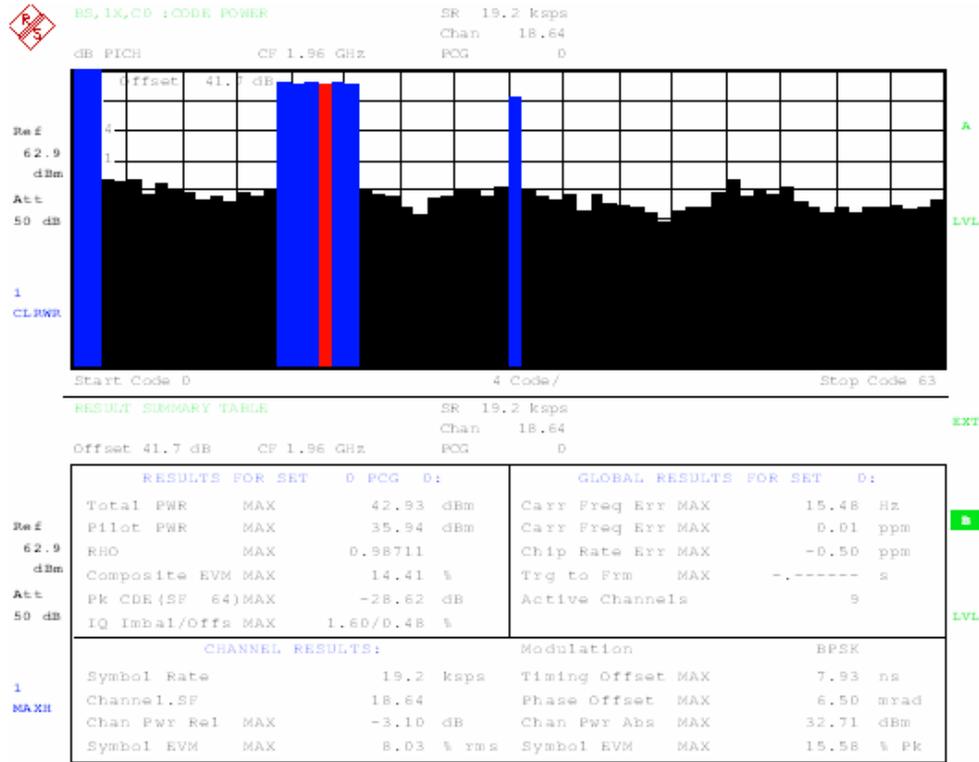


RC3:

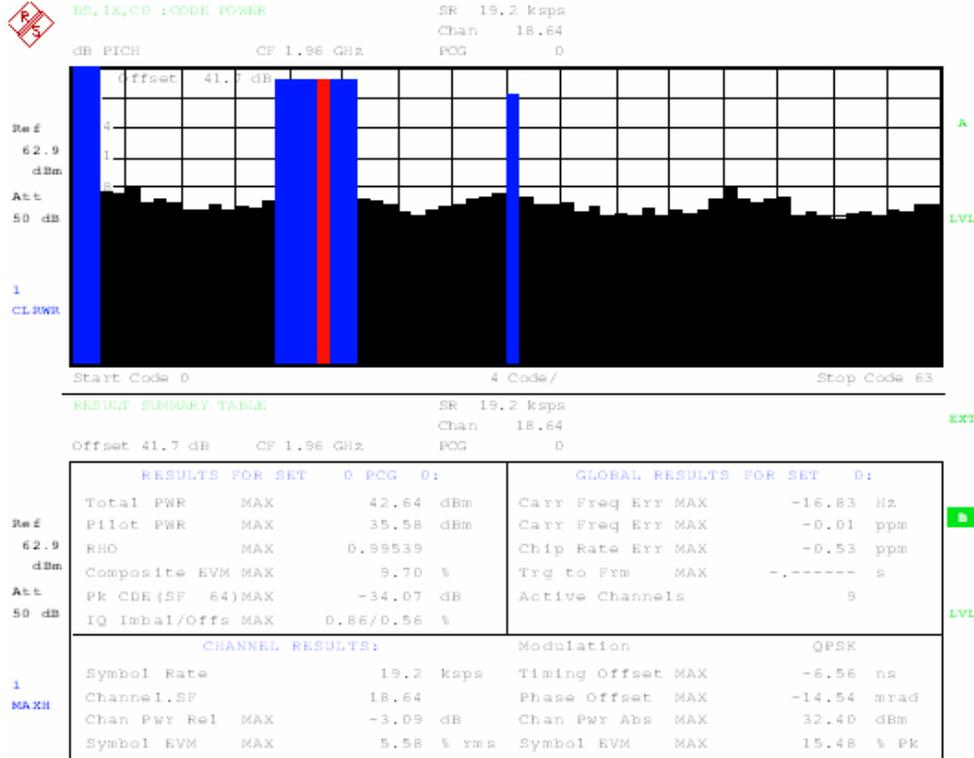


Temperature = 20°C

RC1:

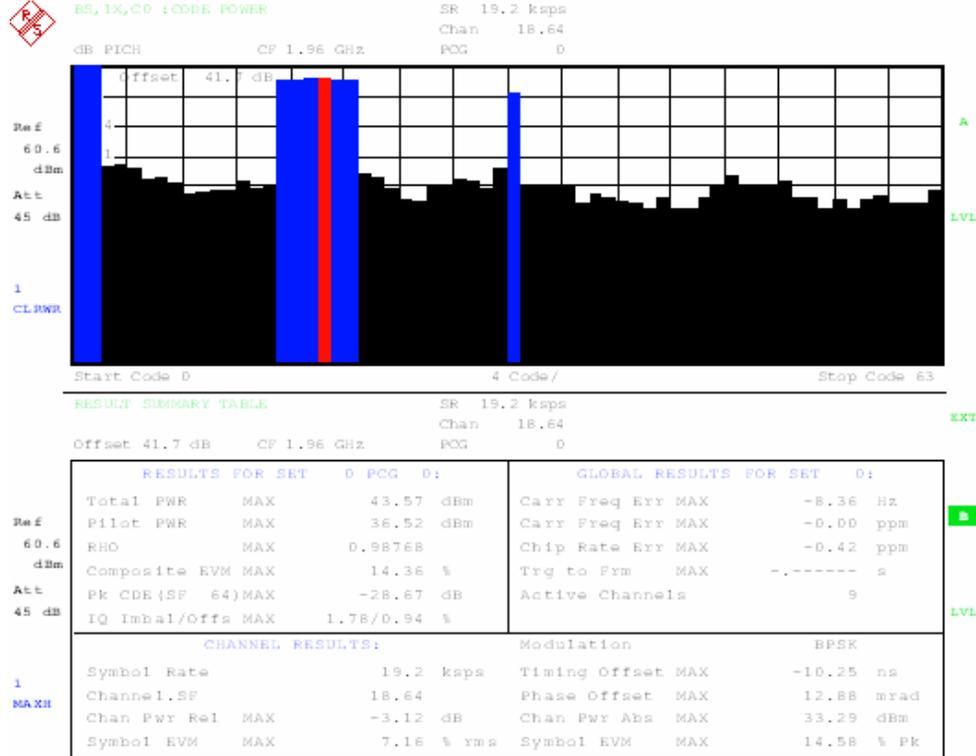


RC3:

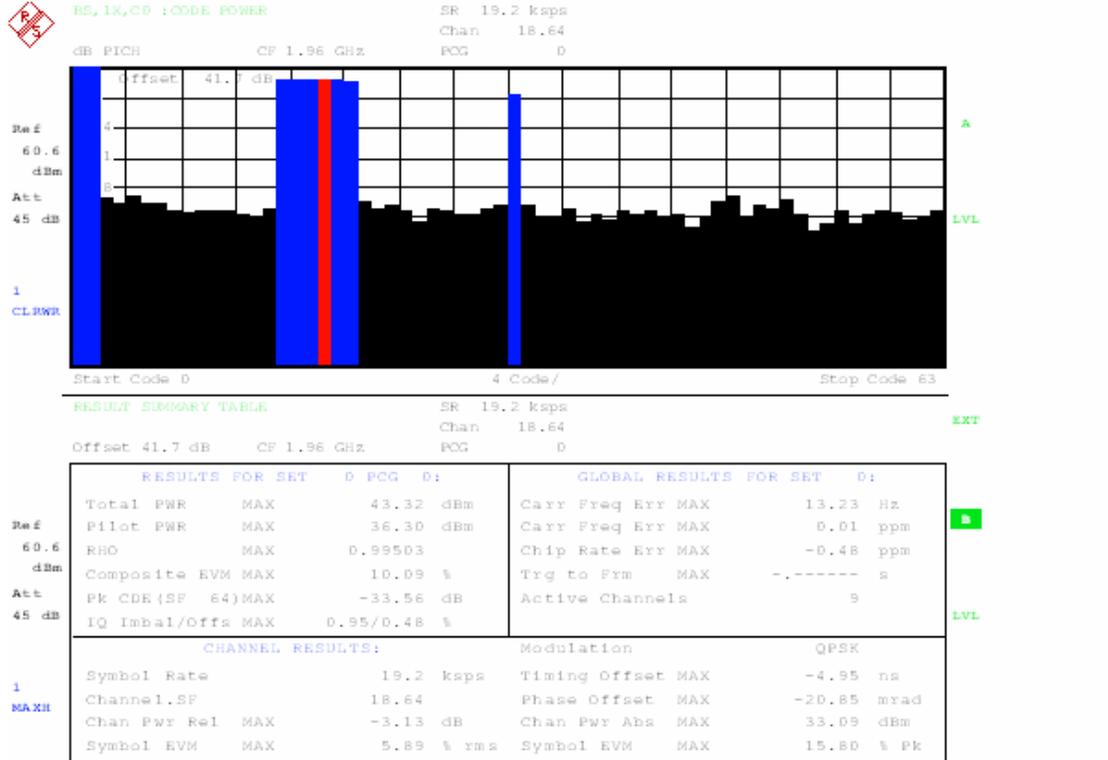


Temperature = 30°C

RC1:

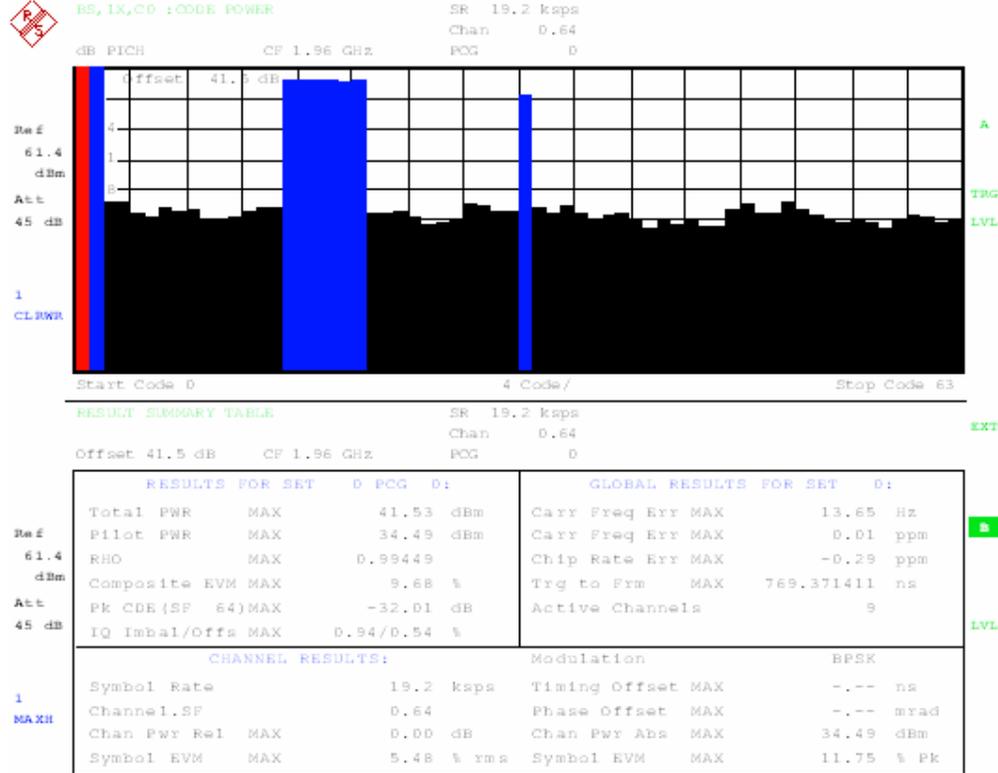


RC3:

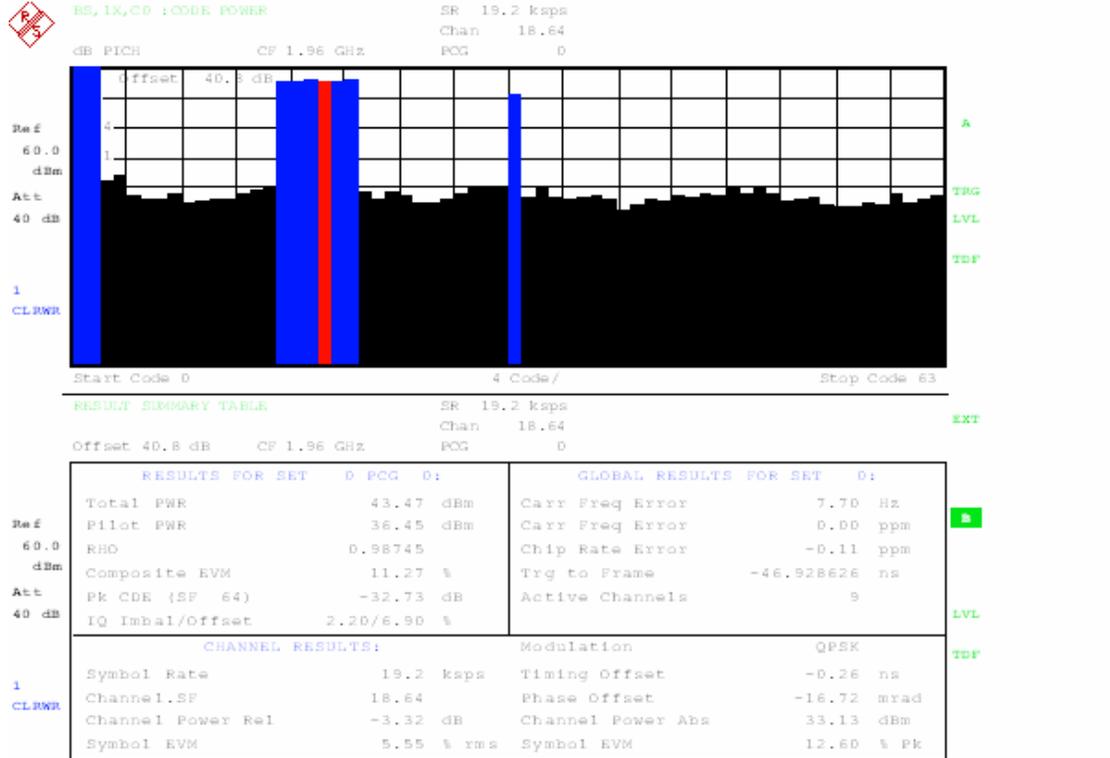


Temperature = 40°C

RC1:

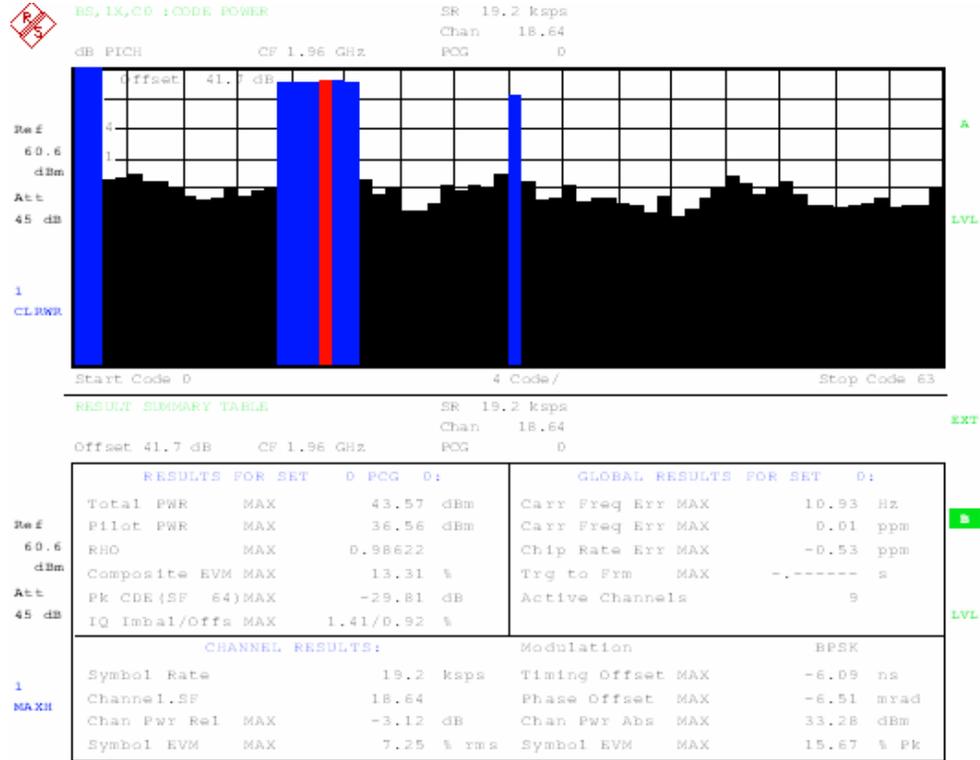


RC3:

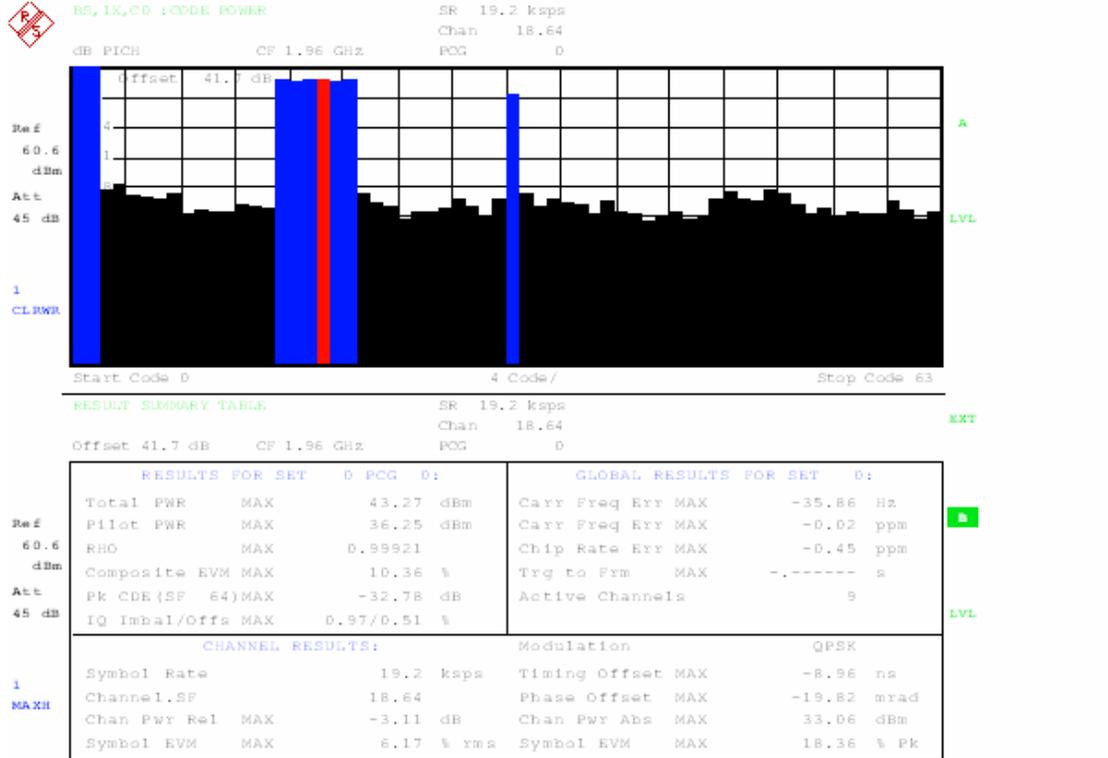


Temperature = 50°C

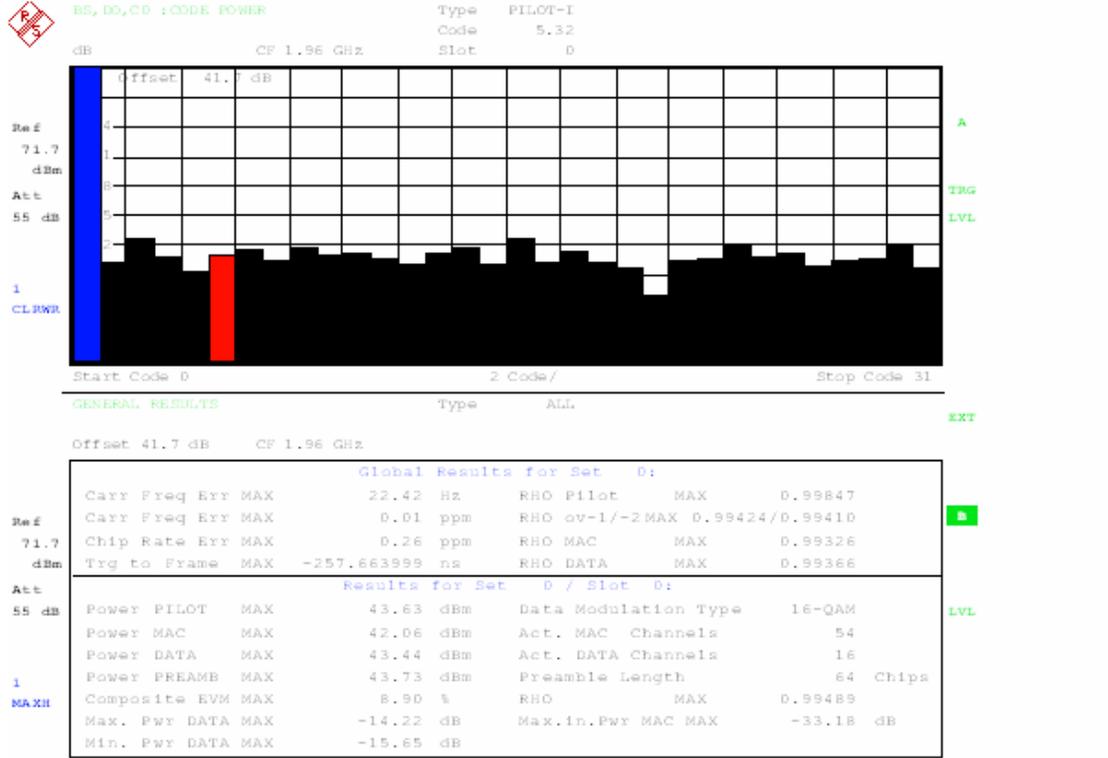
RC1:



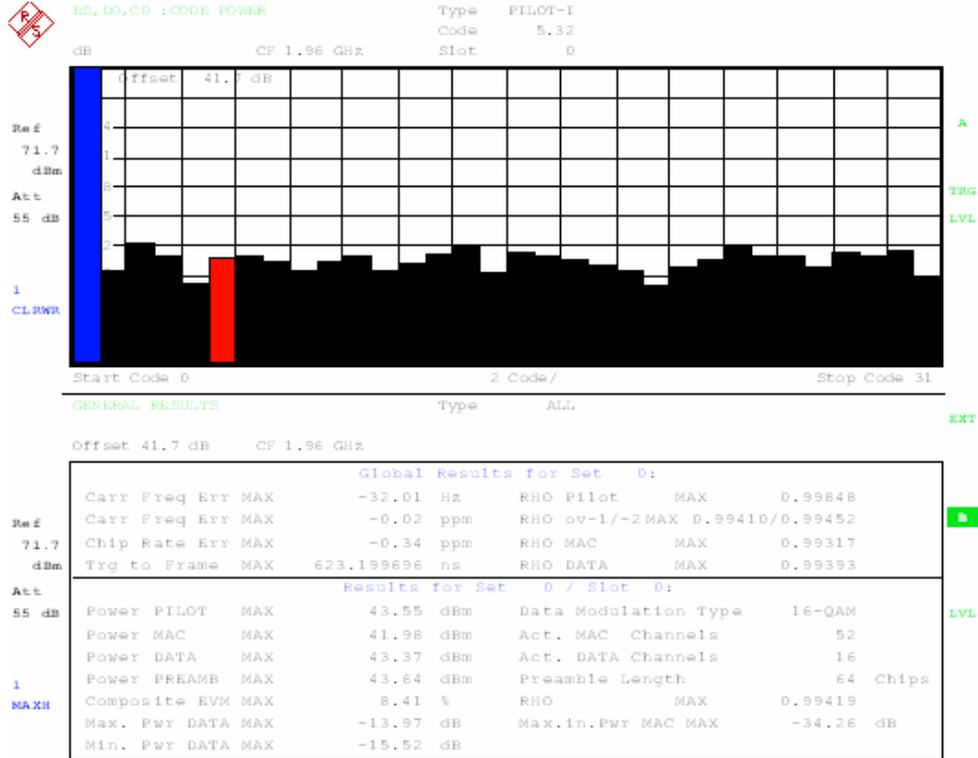
RC3:



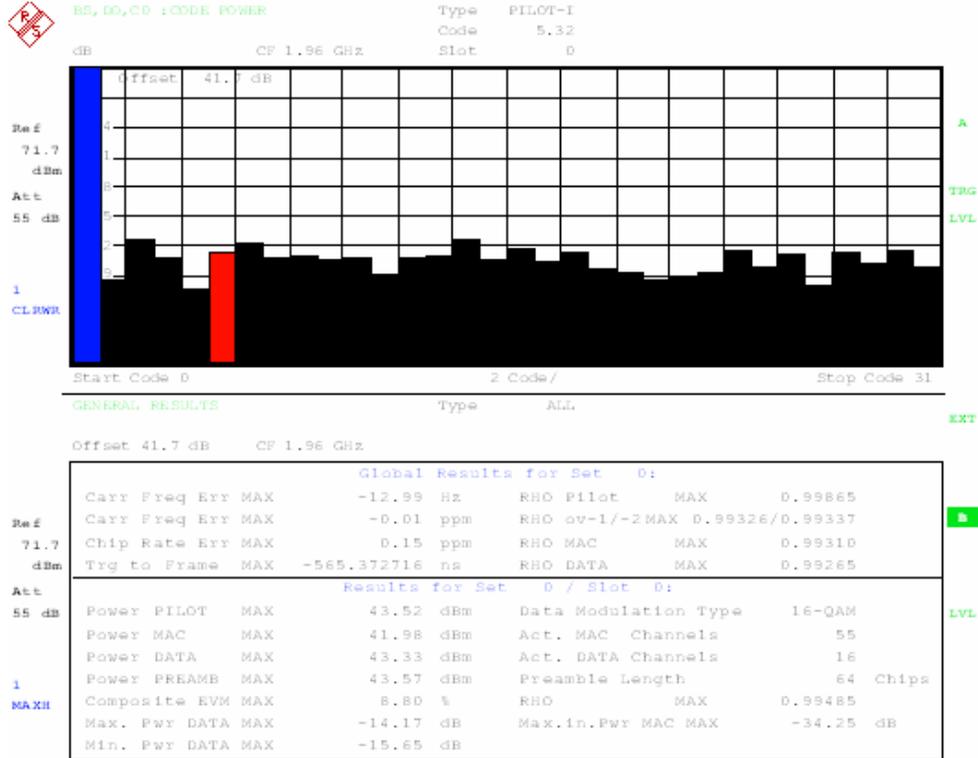
CDMA2000 1X EV-DO:
Temperature = -30°C



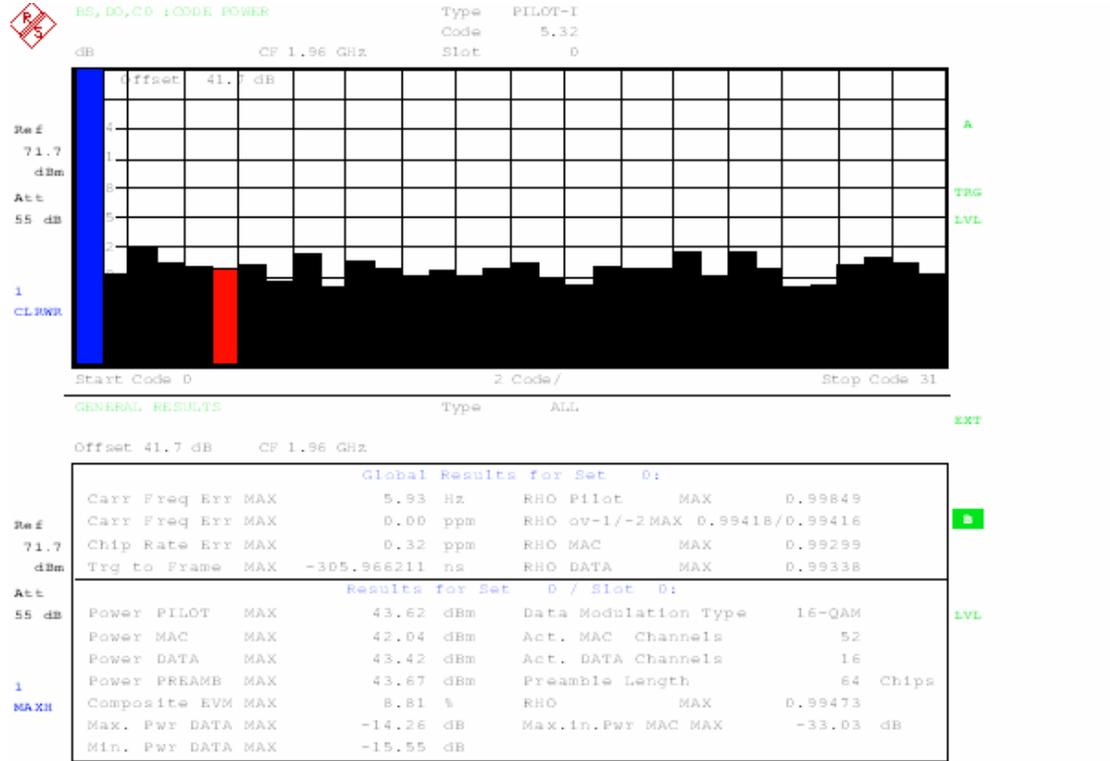
Temperature = -20°C



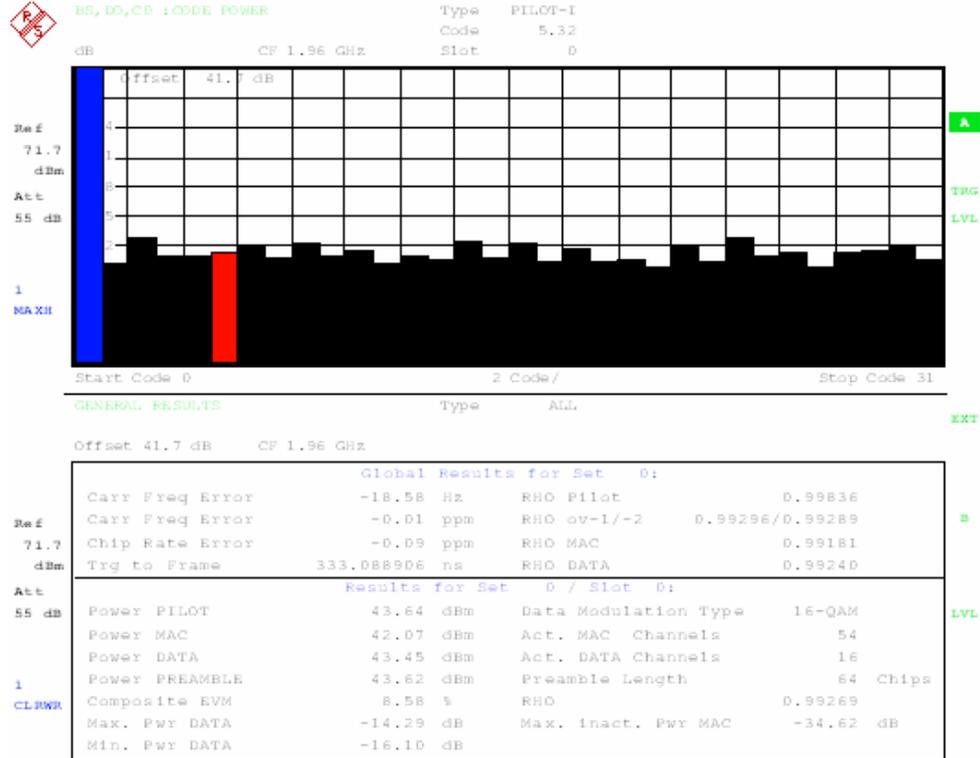
Temperature = -10°C



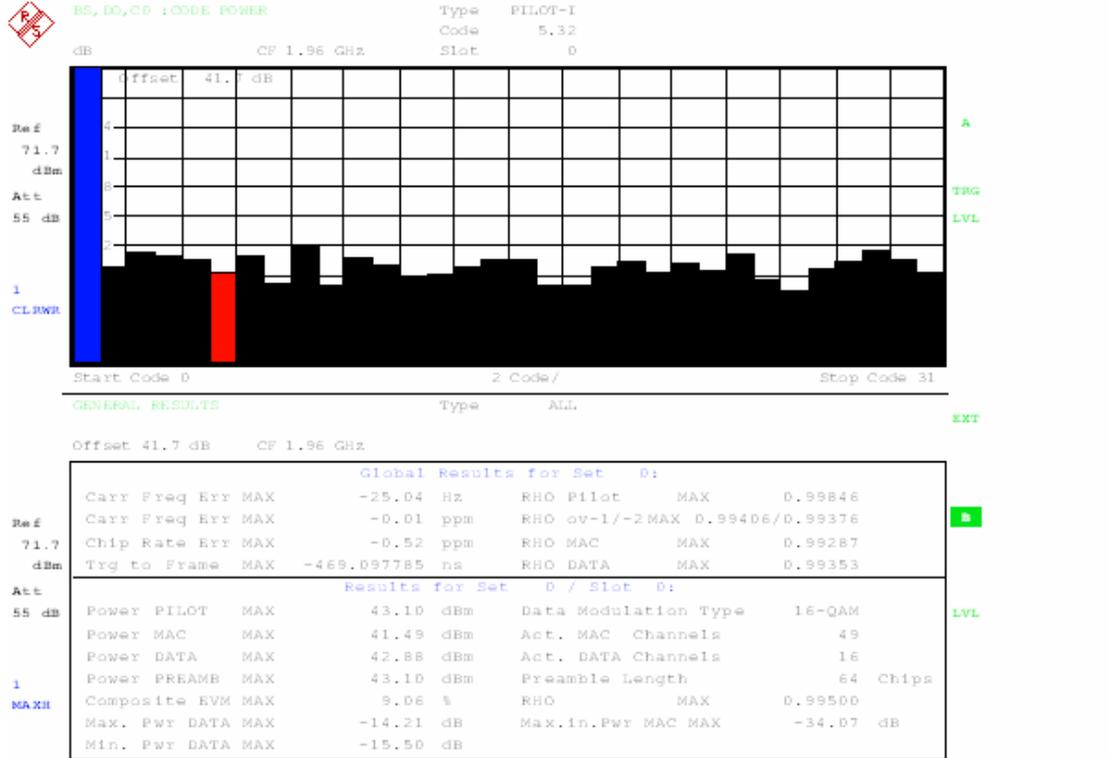
Temperature = 0°C



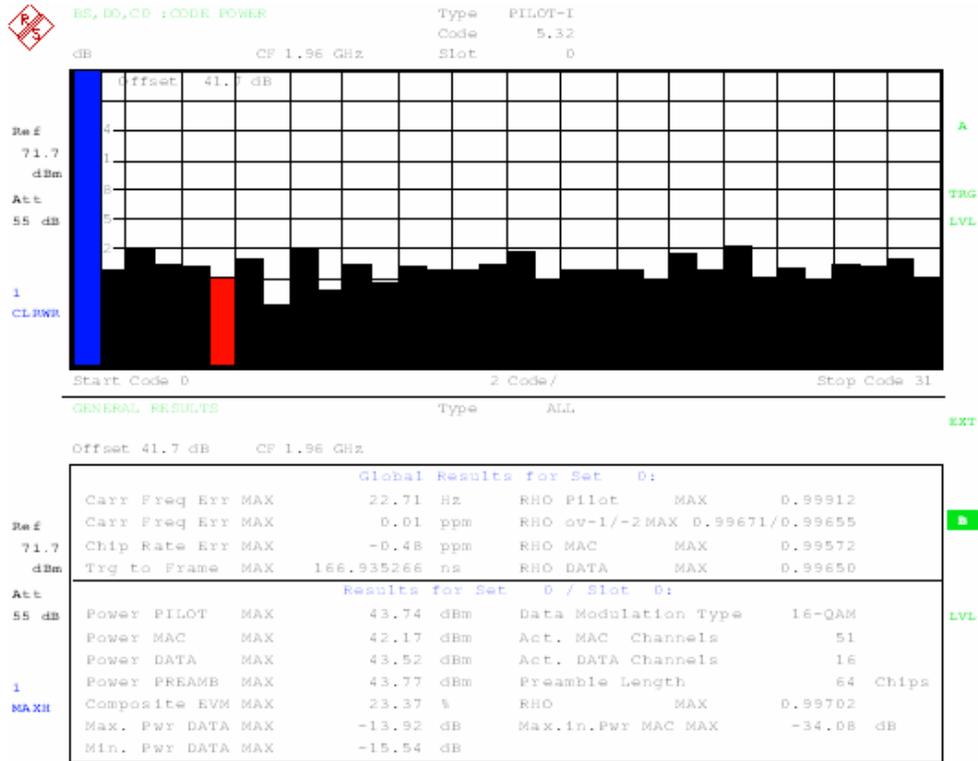
Temperature = +10°C



Temperature = +20°C



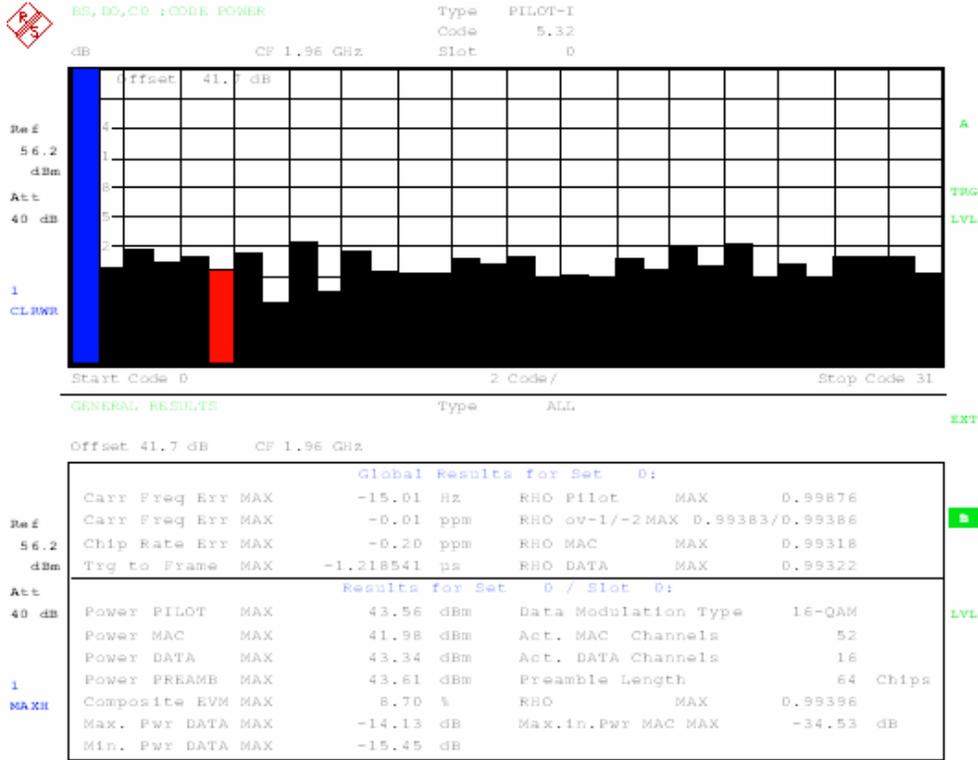
Temperature = +30°C



Temperature = +40°C

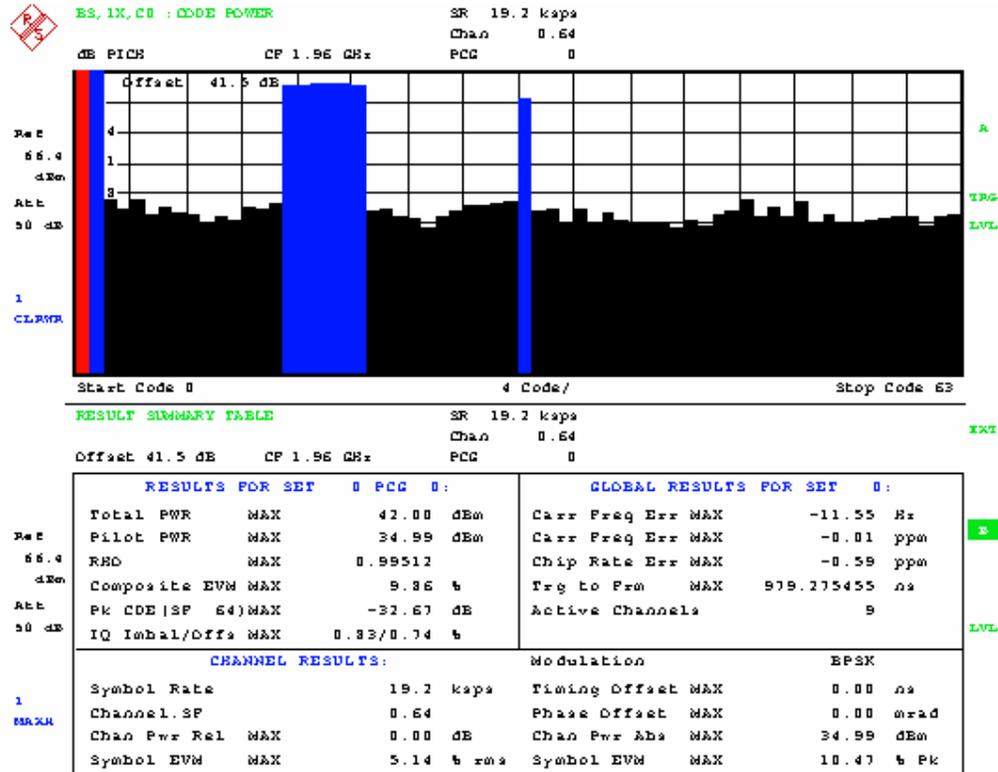


Temperature = +50°C

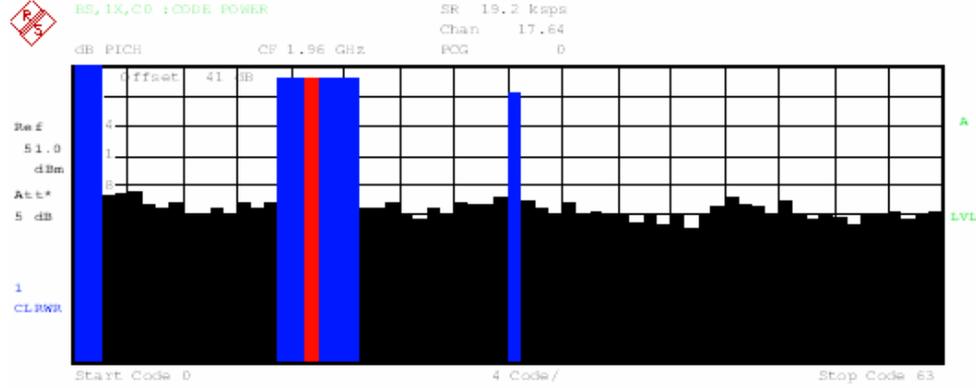


2. Frequency Stability versus Voltages
 CDMA2000 1X :
 TRX1: Channel No. 600(1960MHz)
 Voltage=+20.4V

RC1:



RC3:

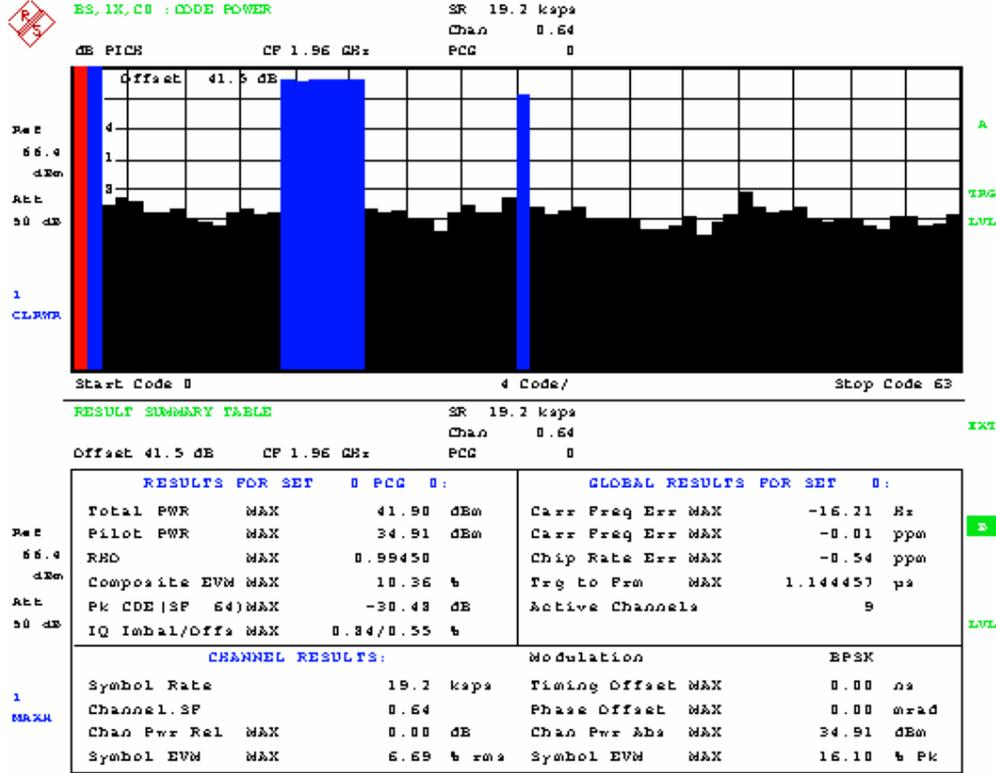


RESULT SUMMARY TABLE SR 19.2 kbps
Chan 17.64
Offset 41 dB CF 1.96 GHz PCG 0

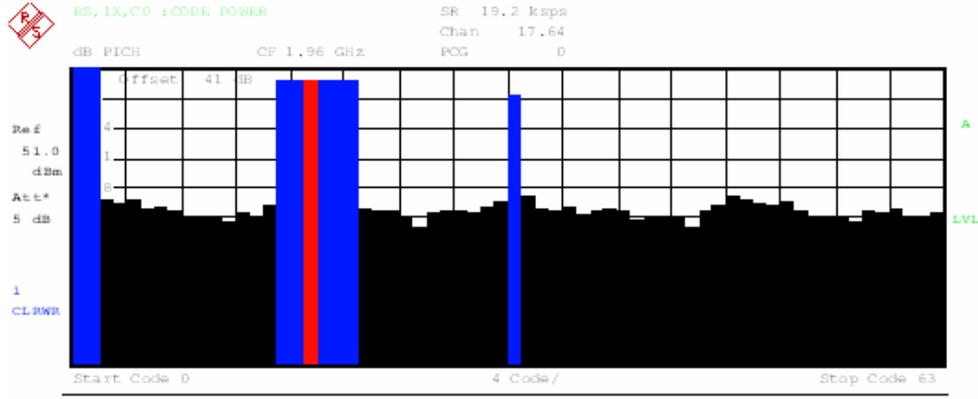
| RESULTS FOR SET D PCG D: | | | GLOBAL RESULTS FOR SET D: | | |
|--------------------------|-----|-------------|---------------------------|-----|-------------|
| Total PWR | MAX | 42.85 dBm | Carr Freq Err | MAX | 46.83 Hz |
| Pilot PWR | MAX | 35.82 dBm | Carr Freq Err | MAX | 0.02 ppm |
| RHO | MAX | 0.99475 | Chip Rate Err | MAX | 0.46 ppm |
| Composite EVM | MAX | 10.26 % | Trg to Frm | MAX | ----- s |
| Pk CDE (SF 64) MAX | | -32.54 dB | Active Channels | | 9 |
| IQ Imbal/Offs | MAX | 1.10/0.53 % | | | |
| CHANNEL RESULTS: | | | Modulation QPSK | | |
| Symbol Rate | | 19.2 kbps | Timing Offset | MAX | 6.79 ns |
| Channel.SP | | 17.64 | Phase Offset | MAX | -22.58 mrad |
| Chan Pwr Rel | MAX | -3.13 dB | Chan Pwr Abs | MAX | 32.62 dBm |
| Symbol EVM | MAX | 6.51 % rms | Symbol EVM | MAX | 13.42 % Pk |

Voltage= +24V

RC1:



RC3:

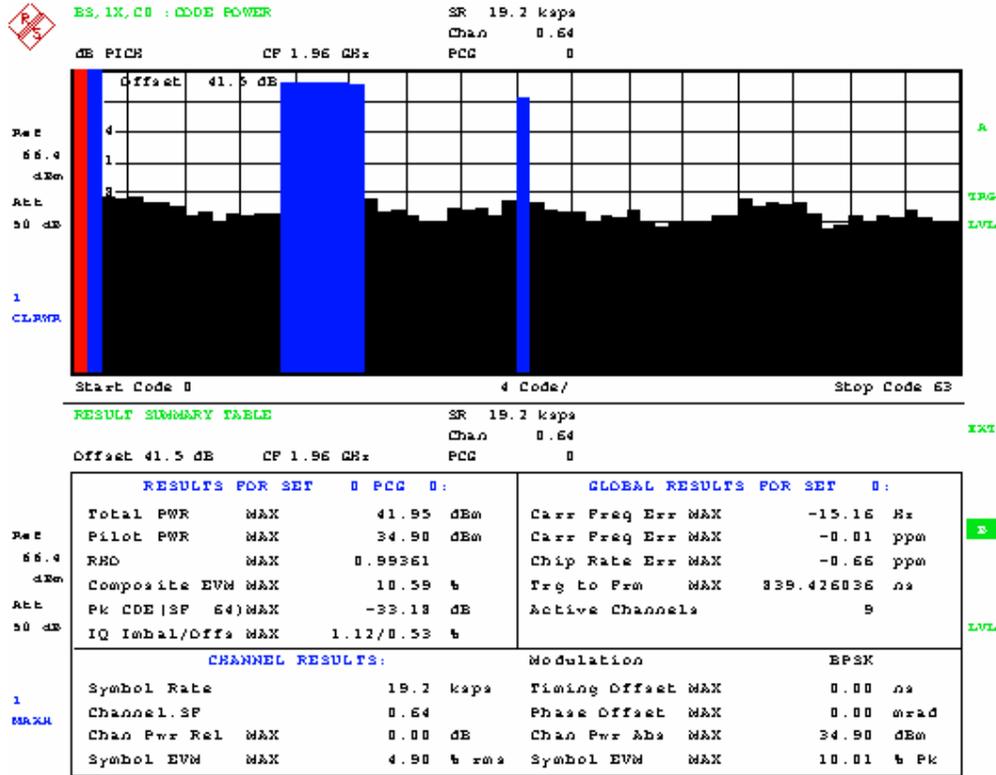


RESULT SUMMARY TABLE SR 19.2 kbps
 Chan 17.64
 Offset 41 dB CF 1.96 GHz PCG 0

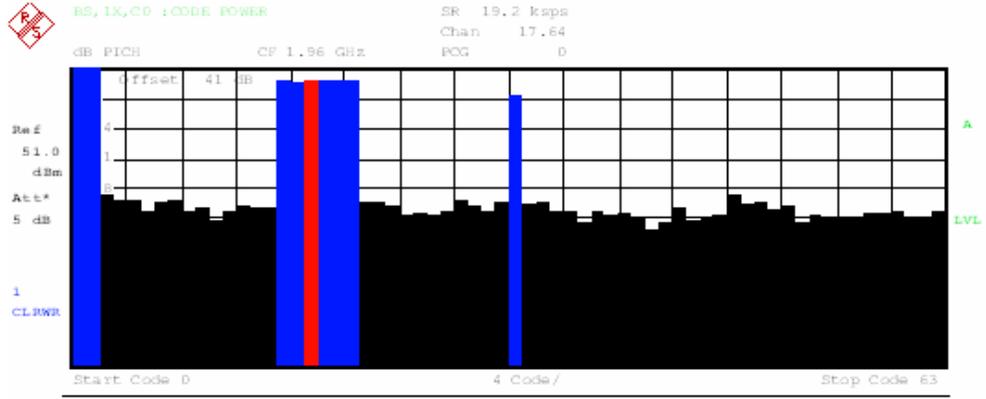
| RESULTS FOR SET D PCG D: | | | | GLOBAL RESULTS FOR SET D: | | | |
|--------------------------|-----|-----------|-------|---------------------------|-----|--------|------|
| Total PWR | MAX | 42.78 | dBm | Carr Freq Err | MAX | -29.86 | Hz |
| Pilot PWR | MAX | 35.74 | dBm | Carr Freq Err | MAX | -0.02 | ppm |
| RBO | MAX | 0.99553 | | Chip Rate Err | MAX | -0.45 | ppm |
| Composite EVM | MAX | 9.80 | % | Trg to Frm | MAX | - | s |
| Pk CDE(SF 64)MAX | | -33.61 | dB | Active Channels | | 9 | |
| IQ Imbal/Offs | MAX | 1.03/0.63 | % | | | | |
| CHANNEL RESULTS: | | | | Modulation QPSK | | | |
| Symbol Rate | | 19.2 | ksps | Timing Offset | MAX | 7.74 | ns |
| Channel.SF | | 17.64 | | Phase Offset | MAX | -32.11 | mrad |
| Chan Pwr Rel | MAX | -3.13 | dB | Chan Pwr Abs | MAX | 32.57 | dBm |
| Symbol EVM | MAX | 6.24 | % rms | Symbol EVM | MAX | 15.33 | % Pk |

Voltage= +27.6V

RC1:



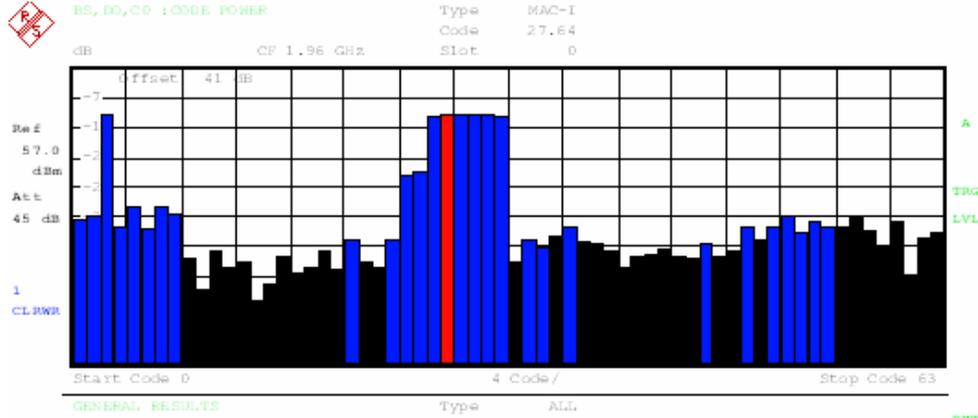
RC3:



RESULT SUMMARY TABLE SR 19.2 kbps
 Chan 17.64
 Offset 41 dB CP 1.96 GHz PCG 0

| RESULTS FOR SET D PCG 0: | | | GLOBAL RESULTS FOR SET D: | | |
|--------------------------|-----|-------------|---------------------------|-----|------------|
| Total PWR | MAX | 42.67 dBm | Carr Freq Err | MAX | 33.08 Hz |
| Pilot PWR | MAX | 35.64 dBm | Carr Freq Err | MAX | 0.02 ppm |
| RHO | MAX | 0.99504 | Chip Rate Err | MAX | 0.46 ppm |
| Composite EVM | MAX | 10.37 % | Trg to Frm | MAX | -.----- s |
| Pk CDE(SF 64)MAX | | -32.84 dB | Active Channels | | 9 |
| IQ Imbal/Offs | MAX | 0.83/0.45 % | | | |
| CHANNEL RESULTS: | | | Modulation QPSK | | |
| Symbol Rate | | 19.2 kbps | Timing Offset | MAX | -8.44 ns |
| Channel.SF | | 17.64 | Phase Offset | MAX | 16.18 mrad |
| Chan Pwr Rel | MAX | -3.11 dB | Chan Pwr Abs | MAX | 32.40 dBm |
| Symbol EVM | MAX | 6.46 % rms | Symbol EVM | MAX | 14.79 % PK |

CDMA2000 1X EV-DO:
 TRX1: Channel No. 600(1960MHz)
 Voltage= +20.4V



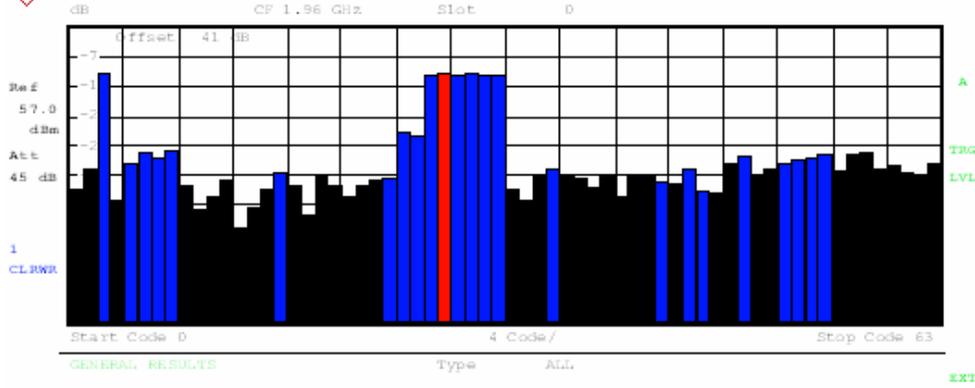
Offset 41 dB CF 1.96 GHz

| Global Results for Set 0: | | | | | | | |
|---------------------------|-----------------------------|-----|------------|-----|----------------------|----------|-----------------|
| Ref | Carr Freq Err | MAX | -18.03 | Hz | RHO Pilot | MAX | 0.99880 |
| 57.0 | Carr Freq Err | MAX | -0.01 | ppm | RHO cv-1/-2 | MAX | 0.99471/0.99472 |
| dBm | Chip Rate Err | MAX | -0.23 | ppm | RHO MAC | MAX | 0.99346 |
| Att | Trg to Frame | MAX | 355.541346 | ns | RHO DATA | MAX | 0.99429 |
| 45 dB | Results for Set 0 / Slot 0: | | | | | | |
| 1 | Power PILOT | MAX | 42.93 | dBm | Data Modulation Type | 16-QAM | |
| MAXII | Power MAC | MAX | 41.36 | dBm | Act. MAC Channels | 51 | |
| | Power DATA | MAX | 42.68 | dBm | Act. DATA Channels | 16 | |
| | Power PREAMB | MAX | 42.92 | dBm | Preamble Length | 64 Chips | |
| | Composite EVM | MAX | 9.15 | % | RHO | MAX | 0.99448 |
| | Max. Pwr DATA | MAX | -14.14 | dB | Max.in.Pwr MAC | MAX | -34.25 dB |
| | Min. Pwr DATA | MAX | -15.52 | dB | | | |

Voltage= +24V



BS, DO, CD : CODE POWER Type MAC-I
Code 27.64
Slot 0



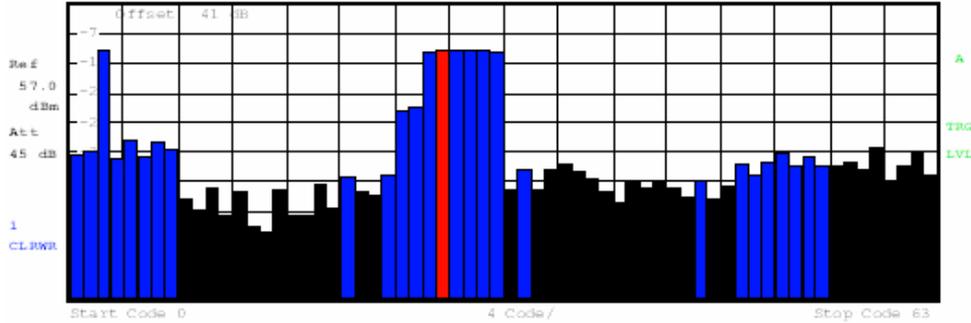
Offset 41 dB CF 1.96 GHz

| Global Results for Set 0: | | | | | |
|-----------------------------|----------------|-----|-------------|----------------------|---------------------|
| Ref | Carry Freq Err | MAX | -11.29 Hz | RHO Pilot | MAX 0.97106 |
| | Carry Freq Err | MAX | -0.01 ppm | RHO ov-1/-2 | MAX 0.96867/0.96856 |
| | Chip Rate Err | MAX | -3.13 ppm | RHO MAC | MAX 0.97498 |
| | Trg to Frame | MAX | 1.246513 us | RHO DATA | MAX 0.96758 |
| Results for Set 0 / Slot 0: | | | | | |
| Att | Power PILOT | MAX | 14.40 dBm | Data Modulation Type | 16-QAM |
| | Power MAC | MAX | 12.70 dBm | Act. MAC Channels | 64 |
| | Power DATA | MAX | 14.04 dBm | Act. DATA Channels | 16 |
| | Power PREAMB | MAX | 14.33 dBm | Preamble Length | 64 Chips |
| | Composite EVM | MAX | 19.04 % | RHO | MAX 0.96860 |
| | Max. Pwr DATA | MAX | -14.02 dB | Max.in.Pwr MAC | MAX -28.19 dB |
| | Min. Pwr DATA | MAX | -15.60 dB | | |

Voltage= +27.6V



BS, DS, CD : CODE POWER Type MAC-I
Code 27.64
Slot 0



GENERAL RESULTS Type ALL EXT

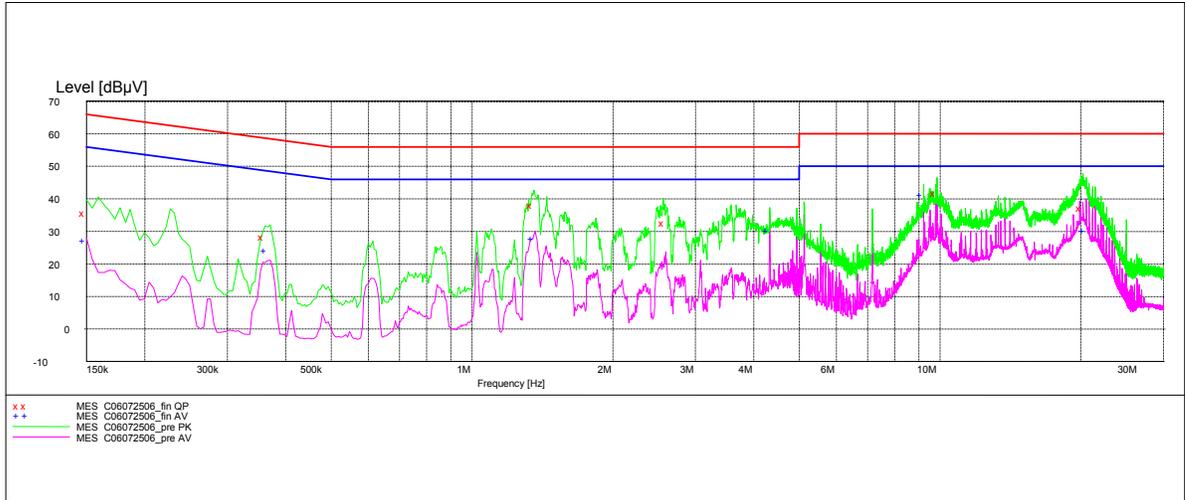
| | | Global Results for Set 0: | | | |
|-------|--------------------|-----------------------------|-----|----------------------|-----------------|
| Ref | Carry Freq Err MAX | 12.20 | Hz | RHO Pilot | MAX 0.99880 |
| | Carry Freq Err MAX | 0.01 | ppm | RHO ov-1/-2 MAX | 0.99456/0.99477 |
| | Chip Rate Err MAX | -0.14 | ppm | RHO MAC | MAX 0.99349 |
| | Trg to Frame MAX | 347.134346 | ns | RHO DATA | MAX 0.99417 |
| | | Results for Set 0 / Slot 0: | | | |
| Att | Power PILOT MAX | 42.81 | dBm | Data Modulation Type | 16-QAM |
| | Power MAC MAX | 41.19 | dBm | Act. MAC Channels | 49 |
| | Power DATA MAX | 42.62 | dBm | Act. DATA Channels | 16 |
| | Power PREAMB MAX | 42.89 | dBm | Preamble Length | 64 Chips |
| 1 | Composite EVM MAX | 8.51 | % | RHO | MAX 0.99511 |
| MAXII | Max. Pwr DATA MAX | -14.22 | dB | Max.in.Pwr MAC MAX | -34.15 dB |
| | Min. Pwr DATA MAX | -15.71 | dB | | |

Appendix G

Conducted Emission at Power Port

According to CFR 47 (FCC) part 15.107

Measurement result



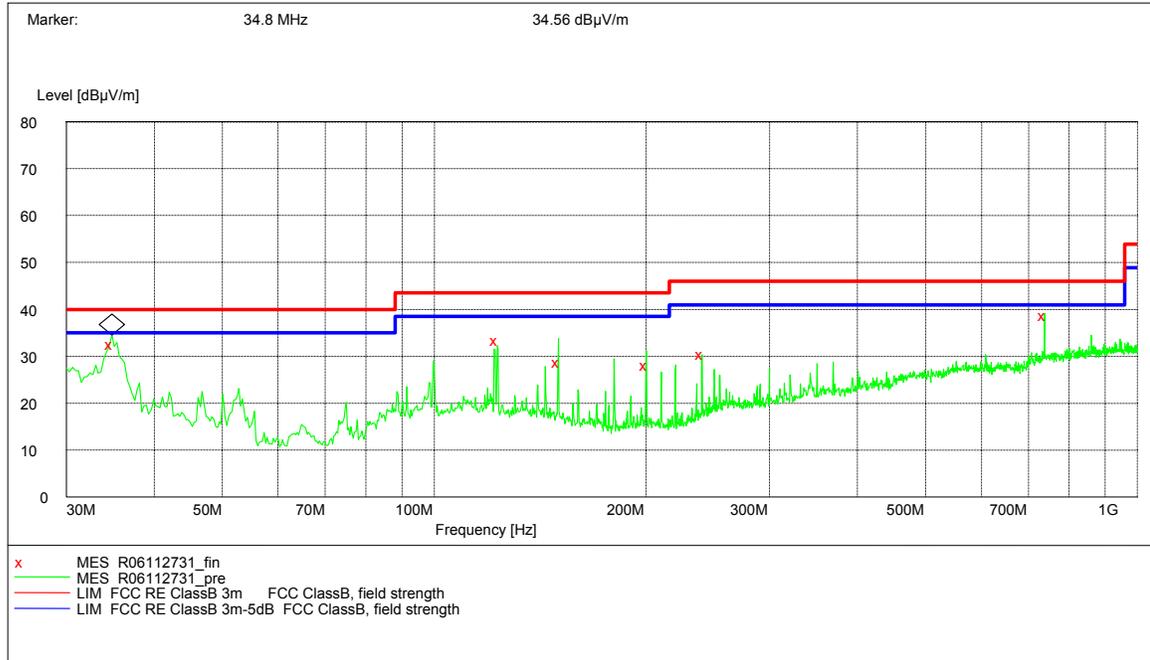
Appendix H

Radiated Emission of Enclosure in Idle Mode

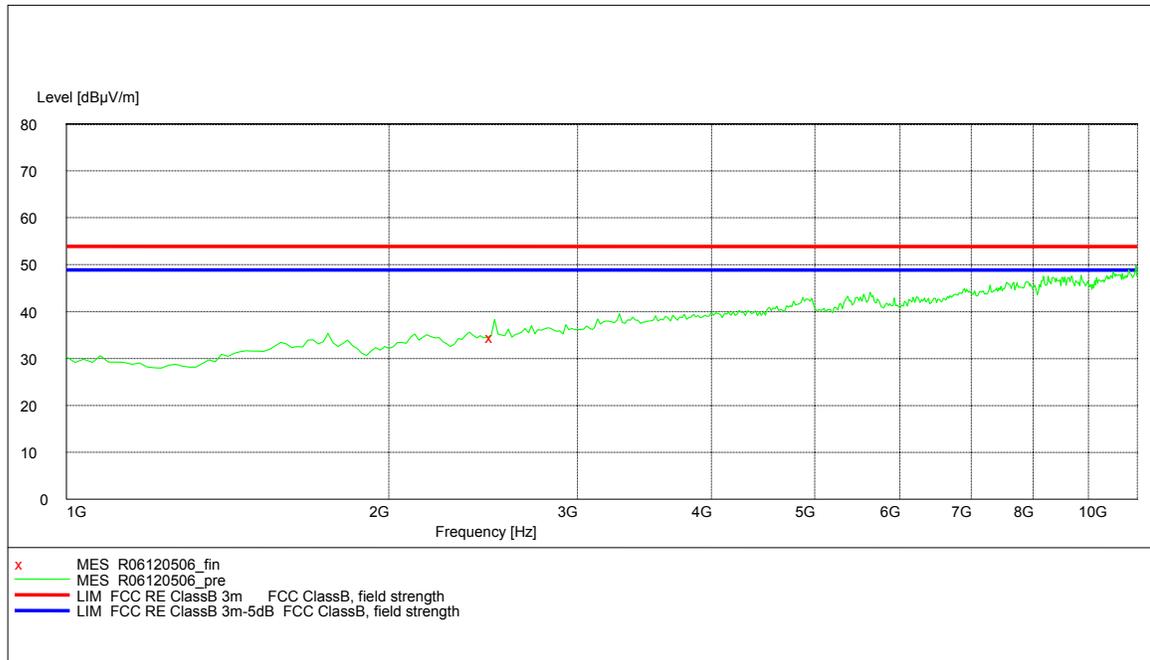
According to CFR 47 (FCC) part 15.107

Measurement result

30M~1GHz:



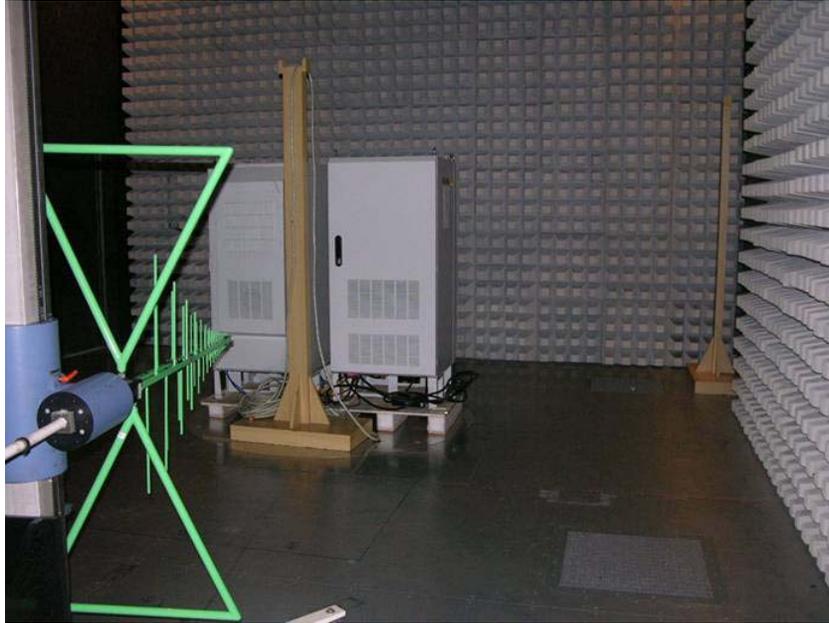
1GHz~12.75GHz:



Appendix I

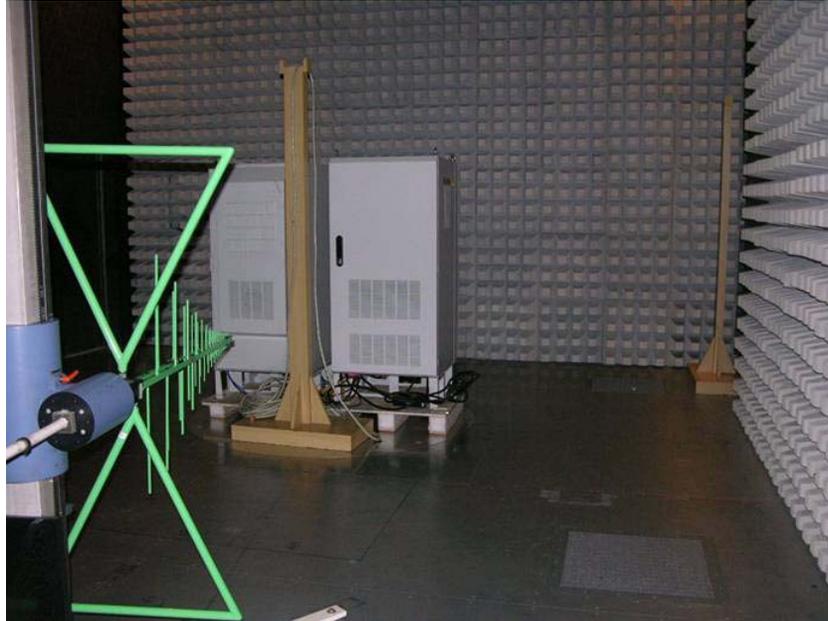
Photos of Test Setup

1 Radiated Emissions

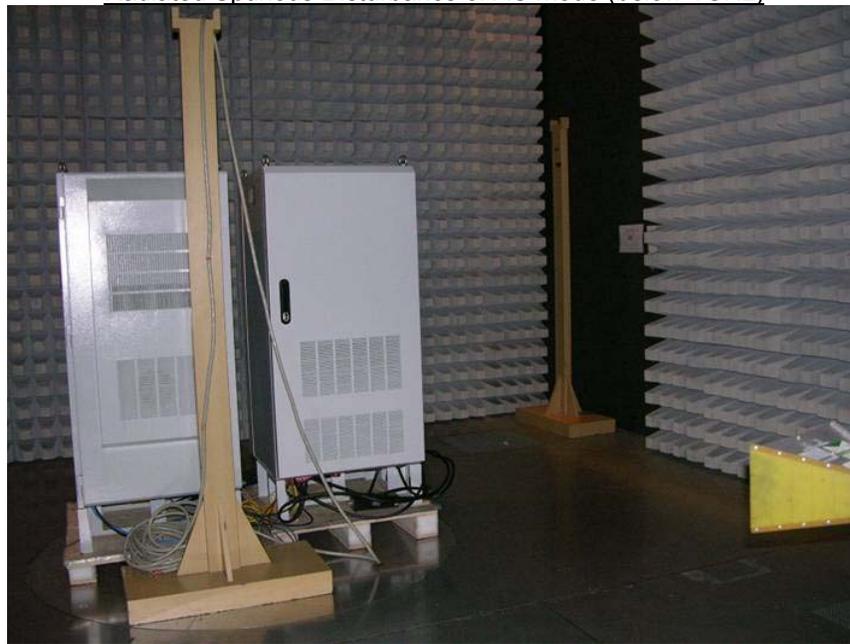


Radiated Disturbance of AC mode (below 1GHz)

2 Radiated Spurious Emissions



Radiated Spurious Disturbance of AC mode (below 1GHz)



Radiated Spurious Disturbance of AC mode (above 1GHz)

3 Conducted Emissions

