



MT8820A WCDMA UE 测试应用

WCDMA 测试功能模块构成

MT8820A
无线综合测试仪



MT8820A-01
WCDMA Measurement unit



MX882000B WCDMA 测试软件

MX88200B-01 WCDMA 语音测试软件

MX88205XA-02 WCDMA 外部包测试软件

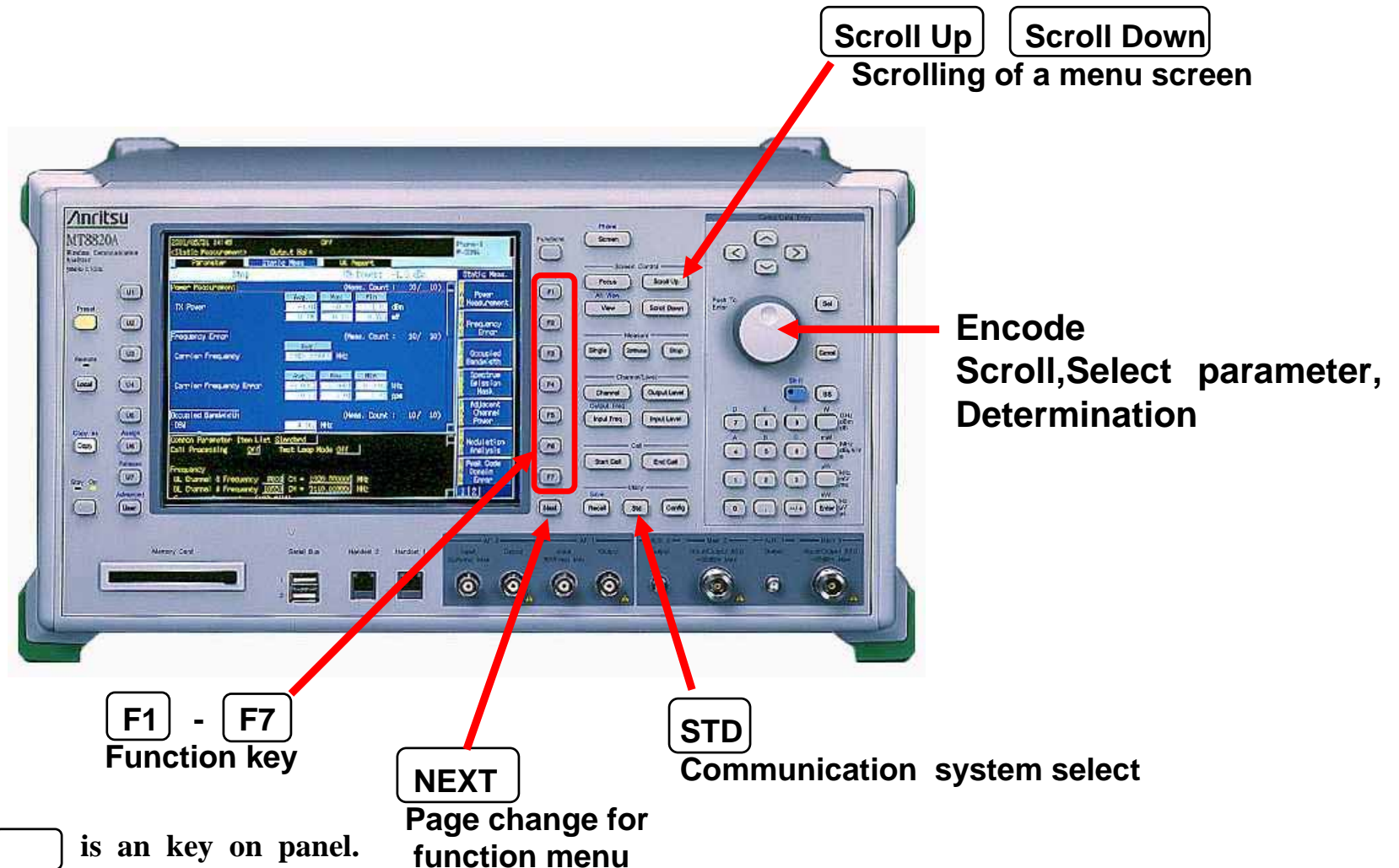
MX88205XA-03 WCDMA 视频终端测试软件

MT8820A WCDMA测试应用:

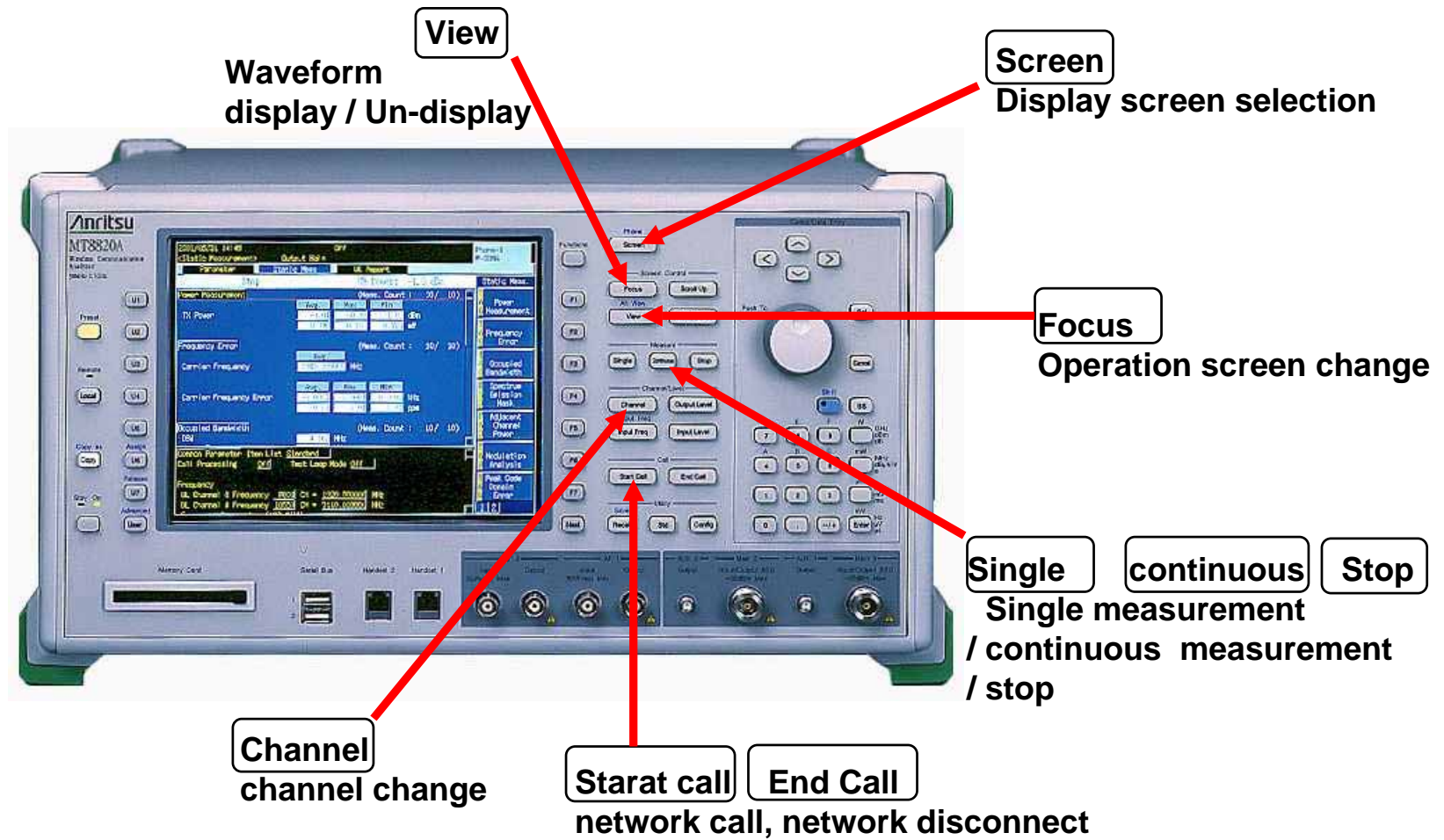
- MT8820A面板操作;
- MT8820A一般参数设置;
- MT8820A相关参数设置说明;
- MT8820A WCDMA测试步骤;

MT8820A面板操作

面板



面板



面板操作

Focus ---菜单切换

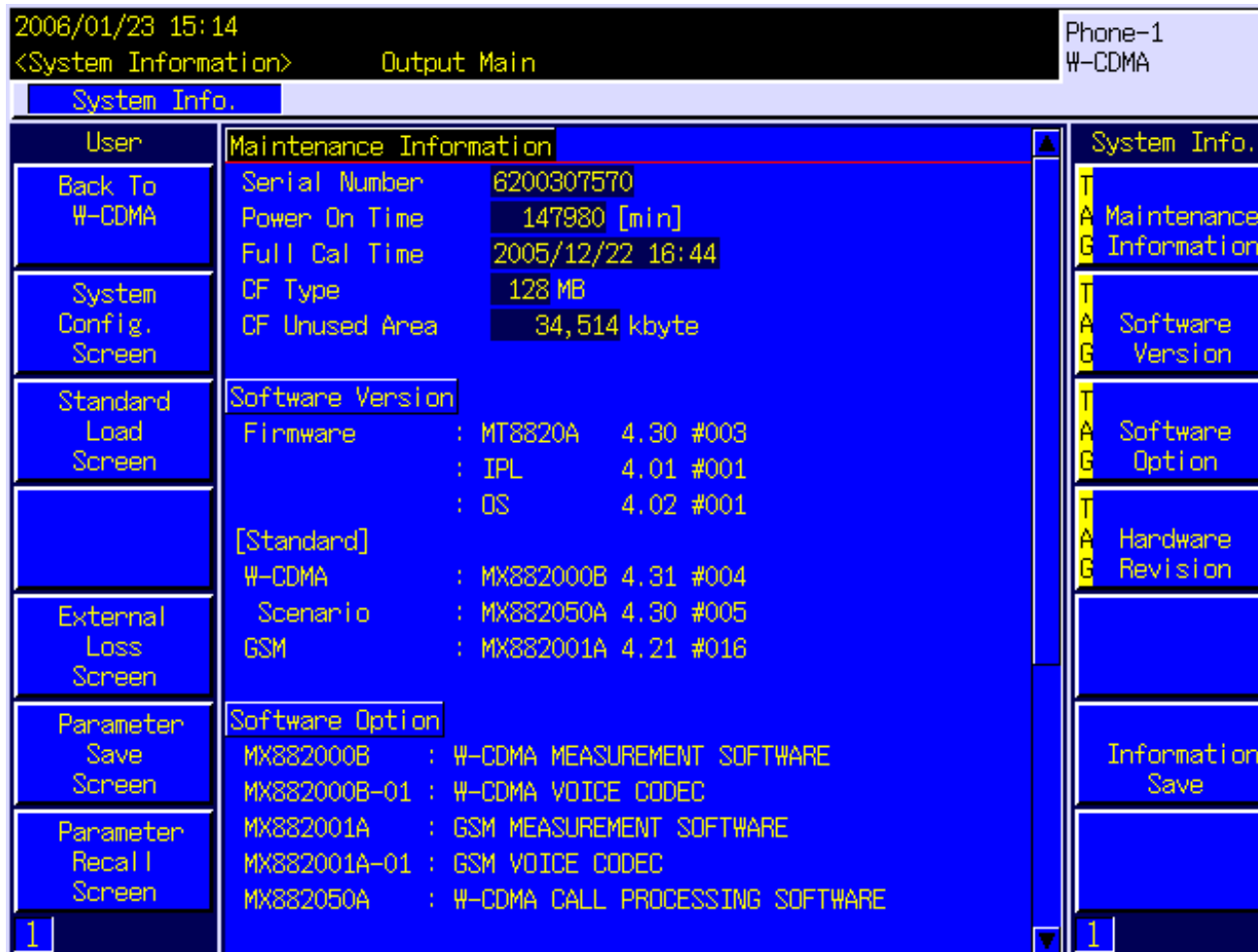
Parameter : 参数设置

Fundamental : 结果数据

UE report : 手机汇报

Sequence monitor : 呼叫监控

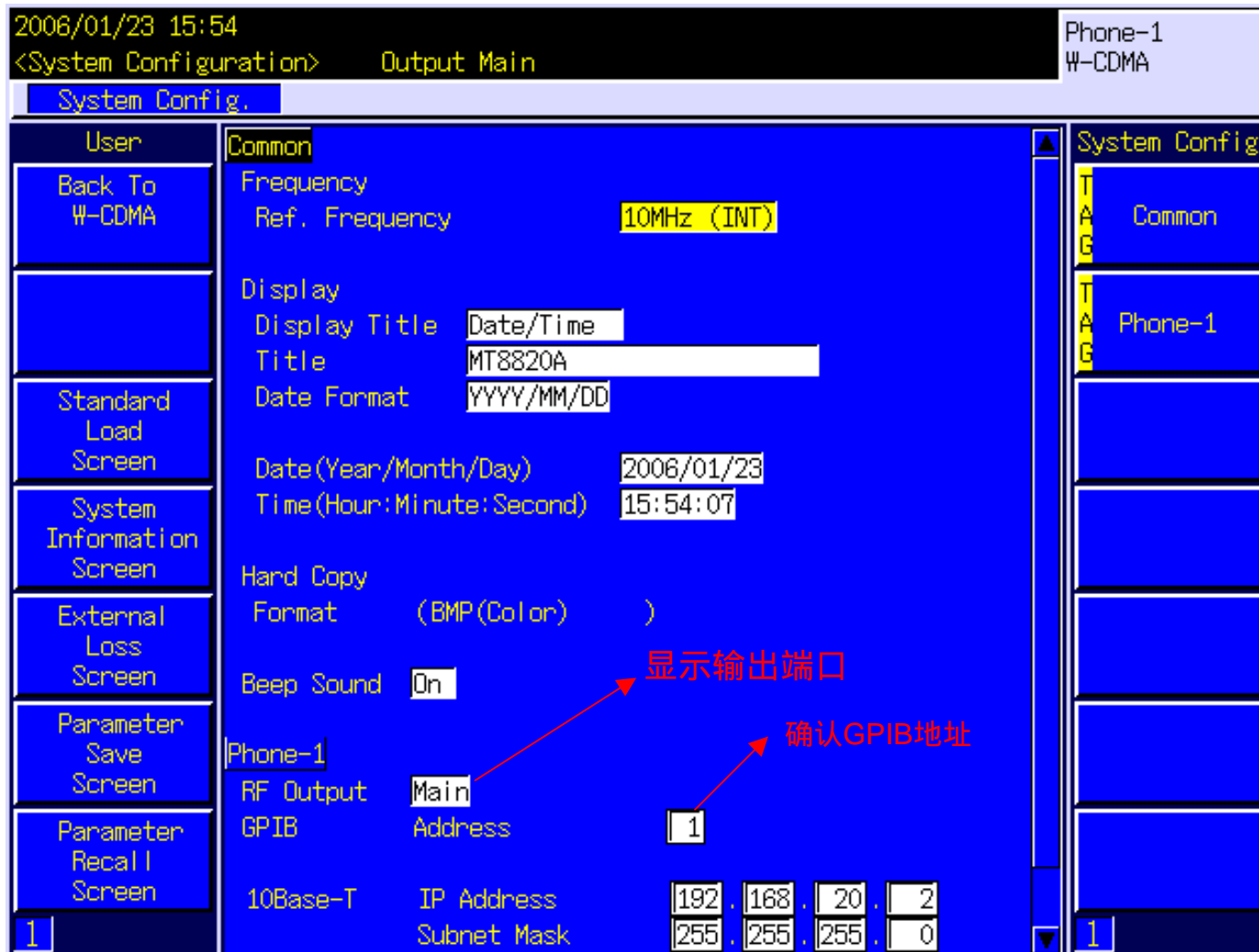
**Screen : 选择屏幕 , 同时有parameter/fundamental/PS report
或者parameter/sequence monitor/UE report**



查看系统的配置:

按Config→

System info



确认scenario 版本

2004/12/13 17:00		Phone-1
<System Information> Output Main		W-CDMA
System Info.		
User	Software Version	System Info.
Back To W-CDMA	Firmware : MT8820A 3.32 #002	
System Config. Screen	[Standard]	
Standard Load Screen	W-CDMA : MX882000B 3.50S#001	
	Scenario : MX882050A 3.50 #006_Q	
	GSM : MX882001A 3.41 #004	
	PHS : MX882005A 3.30 #006	
Parameter Save Screen		
Parameter Recall Screen	Other	
1	Serial Number 6200307566	
	Power On Time 13970 [min]	
	Full Cal Time 2004/12/07 14:03	
		1

升级:

- (1) 插入CF卡
- (2) 同时按set和开机键
- (3) 听到嘀声松手，系统会自动升级

MT8820A一般参数设置

线损设置

urement.

Viewing a parameter window

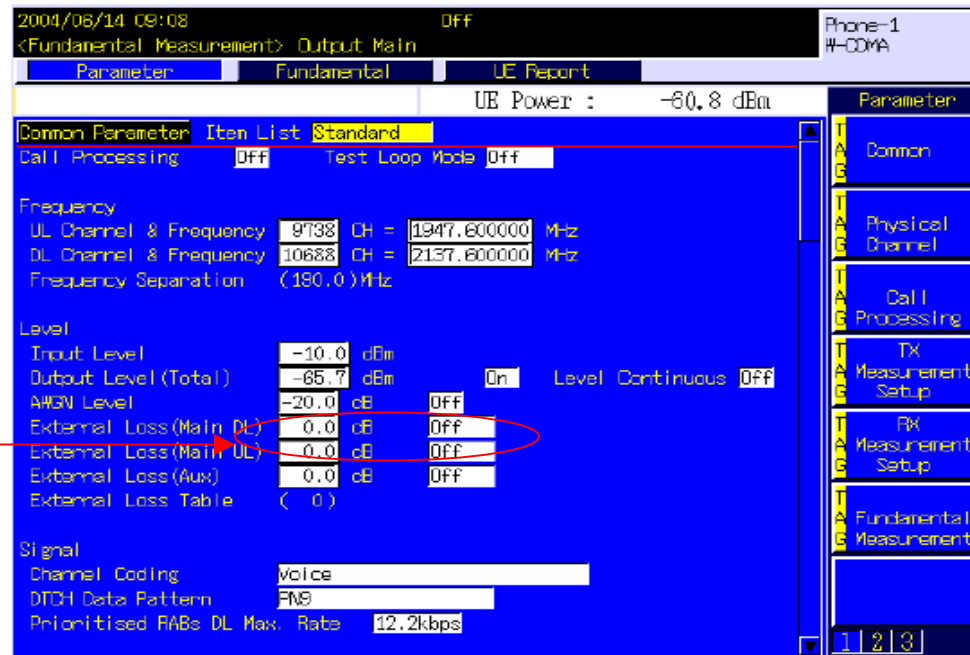


Fig. 3.2.1-1 Fundamental Measurement screen - Parameter window (Full Window)

参数 (1)

2004/11/07 14:52 Loop Mode 1 Phone-1 W-CDMA

<Fundamental Measurement> Output Main

Parameter Fundamental UE Report

UE Power : -2.7 dBm

Common Parameter Item List Standard

Call Processing On Test Loop Mode Mode 1

Frequency

UL Channel & Frequency 9738 CH = 1947.600000 MHz

DL Channel & Frequency 10688 CH = 2137.600000 MHz

Frequency Separation (190.0)MHz

Level

Input Level -15.0 dBm

Output Level (Total) -65.7 dBm On Level Continuous Off

AWGN Level -20.0 dB Off

External Loss (Main DL) -2.0 dB Off

External Loss (Main UL) 2.0 dB Off

External Loss (Aux) 0.0 dB Off

External Loss Table (0)

Signal

Channel Coding Reference Measurement Channel

DTCH Data Pattern PN9

Prioritised RABs DL Max. Rate 12.2kbps

Parameter

Common

Physical Channel

Call Processing

TX Measurement Setup

RX Measurement Setup

Fundamental Measurement

1 | 2 | 3

参数 (2)

2004/11/07 14:52 Loop Mode 1 Phone-1 W-CDMA

<Fundamental Measurement> Output Main

Parameter Fundamental UE Report

UE Power : -2.7 dBm

Parameter

Physical Channel Parameter Item List Standard

Downlink Physical Channel Total Power/Ior (0.0)dB

Channel Level Unit	Ior		
CPICH Power(CPICH_Ec/Ior)	-3.3	dB	On
P-CCPCH Power(P-CCPCH_Ec/Ior)	-5.3	dB	On
SCH Power(SCH_Ec/Ior)	-5.3	dB	On
PICH Power(PICH_Ec/Ior)	-8.3	dB	On
DPCH Power(DPCH_Ec/Ior)	-10.3	dB	On
OCNS Power(OCNS_Ec/Ior)	(-60.0)	dB (On)	
S-CCPCH Power(S-CCPCH_Ec/Ior)	-3.0	dB	On
AICH Power(AICH_Ec/Ior)	0.0	dB	On

Call Processing Parameter Item List Standard

Base Station ID

Location Area Identification

MCC	001
MNC	01
LAC	0080 H

Mobile Cell Identity

IMSI	001010000000010
------	-----------------

Parameter

- Common
- Physical Channel
- Call Processing
- TX Measurement Setup
- RX Measurement Setup
- Fundamental Measurement

1 2 3

参数 (3)

2004/11/07 14:52 Loop Mode 1 Phone-1 W-CDMA
<Fundamental Measurement> Output Main

Parameter Fundamental UE Report

UE Power : -2.7 dBm

Ciphering	Off
Integrity Protection	On
Authentication Key Ki	AAAAAAAA AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA
Registration Mode	Auto
Inner Loop Power Control	
Power Control Algorithm	Algorithm 1
TPC Step Size	1dB
Power Control Bit Pattern	Alternate
RACH Parameter	
Primary CPICH DL Tx Power	24 dBm
UL Interference Constant Value	-95 dBm
Constant Value	-10 dB
Packet Parameter	
Server IP Address	192 168 20 10
Client IP Address	192 168 20 11

TX Measurement Setup Parameter Item List Standard

Occupied Bandwidth

Parameter

- Common
- Physical Channel
- Call Processing
- TX Measurement Setup
- RX Measurement Setup
- Fundamental Measurement

1 2 3

参数 (4)

2004/11/07 14:53 Loop Mode 1 Phone-1
<Fundamental Measurement> Output Main W-CDMA

Parameter Fundamental UE Report

UE Power : -2.7 dBm

Detect Mode Average

OBW Ratio 99.0 %

Spectrum Emission Mask

Detect Mode Average

Template Template Setup

Additional Limit Non

Modulation Analysis

Storage Mode Latest

Long Span Code Search Off

Measuring Object W-CDMA

EVM include Origin Offset Off

RX Measurement Setup Parameter Item List Standard

Bit Error Rate

Number of Sample 10000 Bit

BER Upper Limit 10.0 %

Measurement Input RF Loopback

Ext. BER Input Polarity Positive

Ext. BER Input Clock Rise

Voice Channel Subflow 1

Parameter

- Common
- Physical Channel
- Call Processing
- TX Measurement Setup
- RX Measurement Setup
- Fundamental Measurement

1 | 2 | 3

参数 (5)

2004/11/07 14:53 Loop Mode 1 Phone-1
<Fundamental Measurement> Output Main W-CDMA

Parameter Fundamental UE Report

UE Power : -2.7 dBm

Ext. BER Input Polarity Positive
Ext. BER Input Clock Rise
Voice Channel Subflow 1

Block Error Rate
Number of Sample 50 Block
BLER Upper Limit 10.0 %

BER/BLER Timeout Length 10 sec

Fundamental Measurement-Parameter	Item List	Standard
Measurement Mode	Fast	
Power Measurement	On	Average Count 20
Frequency Error	On	Average Count 20
Occupied Bandwidth	On	Average Count 20
Spectrum Emission Mask	On	Average Count 20
Adjacent Channel Power	On	Average Count 20
Modulation Analysis	On	Average Count 20
Peak Code Domain Error	On	Average Count 20
BER	On	
BLER	On	

Parameter

- Common
- Physical Channel
- Call Processing
- TX Measurement Setup
- RX Measurement Setup
- Fundamental Measurement

1 | 2 | 3

MT8820A相关参数设置说明

输出CW信号:

2006/01/23 14:28 Off Phone-1 W-CDMA

<Fundamental Measurement> Output CW

Parameter Fundamental UE Report

UE Power : -60.6 dBm

Common Parameter Item List Standard

Call Processing Off Test Loop Mode Mode 1

Frequency

UL Channel & Frequency 9738 CH = 1947.600000 MHz

DL Channel & Frequency 10688 CH = 2137.600000 MHz

Frequency Separation (190.0)MHz

Band Indicator Off

Level

Input Level -10.0 dBm

Output Level (Total) -65.7 dBm On Level Continuous Off

AWGN Level -20.0 dB Off

External Loss (Main DL) 0.0 dB Off

External Loss (Main UL) 0.0 dB Off

External Loss (Aux) 0.0 dB Off

External Loss Table (0)

Signal

Channel Coding Reference Measurement Channel

DTCH Data Pattern PN9

Prioritised RABs DL Max. Rate 12.2kbps

Parameter

Window Size *

Color Setting *

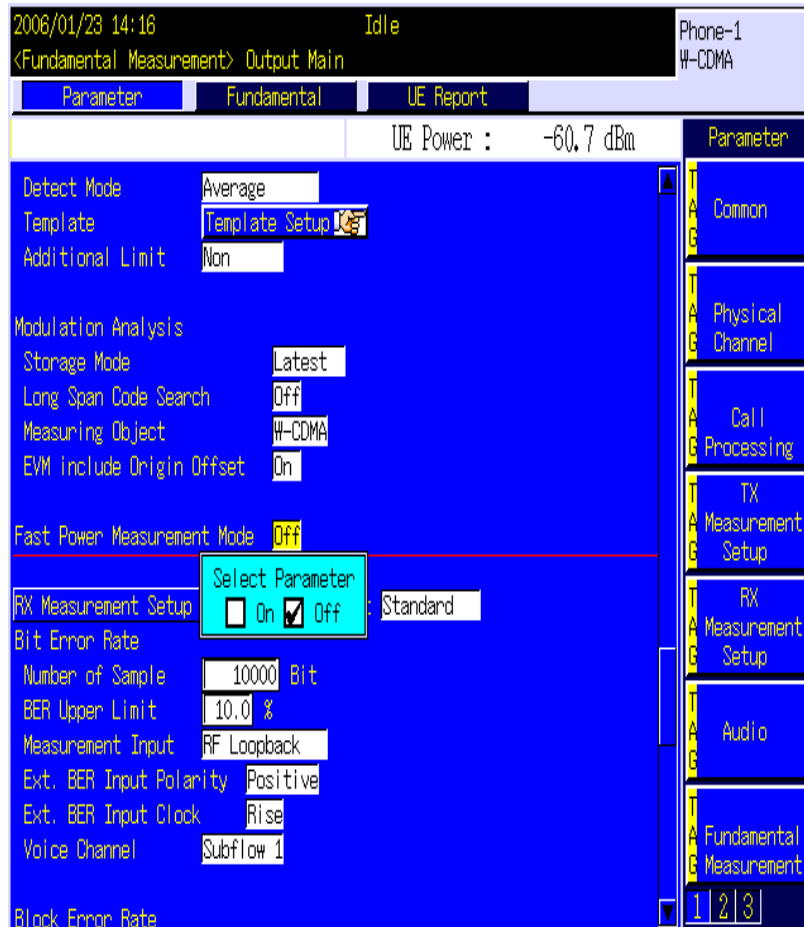
Modulation On Off

Band Calibration

Full Calibration

1 | 2 | 3

Fast Power Measurement Mode :



当 Fast Power Measurement Mode 被设成 On , 可以加快测量功率的速度 ;

但同时 , 其它的TX项目不可以被测量。

Basic Spectrum parameter Setting :

Spectrum Parameter	Item List	Standard
Trigger Source		(Free Run)
Frequency Span		30kHz
Detect Mode		100kHz
Display Offset		300kHz
RBW		30kHz

MT8820A WCDMA测试步骤

WCDMA 测试项目

- 1, 最大输出功率<TX>
- 2, 频率误差 <TX>
- 3, 占用带宽 <TX>
- 4, 频谱发射模板 <TX>
- 5, 邻信道功率泄漏比 <TX>
- 6, 矢量幅度误差 <TX>
- 7, 参考灵敏度<RX>
- 8, 最小输出功率 <TX>
- 9, 内环功率控制 <TX>
- 10, 最大输入电平<RX>

最大输出功率

push

Focus

Parameter

1. Connect to Test Loop Mode1.

The screenshot shows a mobile phone's test menu. At the top, it displays the date and time (2004/11/03 09:58) and the phone's status (Idle(Regist)). Below this, there are tabs for 'Parameter', 'Fundamental', and 'UE Report'. The 'UE Report' tab is selected, showing 'UE Power : -65.7 dBm'. The main menu is divided into several sections: 'Common Parameter', 'Item List', and 'Detail'. The 'Item List' section is currently selected, showing 'Call Processing' set to 'On' and 'Test Loop Mode' set to 'Mode 1'. The 'Frequency' section shows 'UL Channel & Frequency' at 9750 CH = 1950.000000 MHz and 'DL Channel & Frequency' at 10700 CH = 2140.000000 MHz, with a 'Frequency Separation' of (190.0)MHz. The 'Level' section shows 'Input Level' at -16.0 dBm, 'Output Level (Total)' at -59.7 dBm (with 'On' and 'Level Continuous' set to 'Off'), 'AWGN Level' at -20.0 dB (set to 'Off'), 'Sequential Output' at -1 dB/frame (with 'Length' set to 31 frame and 'Off'), 'External Loss(Main DL)' at 6.0 dB (set to 'Off'), 'External Loss(Main UL)' at 6.0 dB (set to 'Off'), and 'External Loss(Aux)' at 0.0 dB (set to 'Off'). The 'Signal' section shows 'Channel Coding' set to 'Reference Measurement Channel', 'DTCH Data Pattern' set to 'PN9', and 'DCH Data Pattern' set to 'Signaling'. On the right side, there is a vertical menu with options: 'Common', 'Physical Channel', 'Call Processing', 'TX Measurement Setup', 'RX Measurement Setup', and 'Fundamental Measurement'. At the bottom right, there are three buttons labeled '1', '2', and '3'.

最大输出功率

- 2 set Input Level to +35.0dBm.
- 3 set Output Level to -106.7dBm.

2004/11/03 10:02 Loop Mode 1 Phone-2 W-CDMA Phone-1 W-CDMA
<Fundamental Measurement> Output Main
Parameter Fundamental UE Report
UE Power : 18.6 dBm
Common Parameter Item List Detail
Call Processing On Test Loop Mode Mode 1
Frequency
UL Channel & Frequency 9750 CH = 1950.000000 MHz
DL Channel & Frequency 10700 CH = 2140.000000 MHz
Frequency Separation (190.0)MHz
Level
Input Level 35.0 dBm
Output Level (Total) -106.7 dBm On Level Continuous Off
AWGN Level -20.0 dB Off
Sequential Output -1 dB/frame Length 31 frame Off
External Loss(Main DL) 6.0 dB Off
External Loss(Main UL) 6.0 dB Off
External Loss(Aux) 0.0 dB Off
External Loss Table (0)
Signal
Channel Coding Reference Measurement Channel
DTCH Data Pattern PNG
DCCH Data Pattern Signaling
1 2 3

最大输出功率

4 set TPC Pattern to ALL1.

The screenshot shows a mobile phone's test mode interface. At the top, it displays the date and time '2004/11/03 10:04', 'Loop Mode 1', and 'Phone-2 W-CDMA' and 'Phone-1 W-CDMA'. Below this, there are tabs for 'Parameter', 'Fundamental', and 'UE Report'. The 'UE Report' tab is active, showing 'UE Power : 18.5 dBm'. The main area is a blue screen with various settings. The 'Power Control Bit Pattern' is set to 'All 1' and is highlighted with a yellow box. Other settings include 'Measurements Report' (Off), 'Ciphering' (Off), 'Integrity Protection' (On), 'Call Drop Threshold' (256 Frame, Off), 'Inner Loop Power Control' (Algorithm 1, 1dB), 'Compressed Mode' (Off), 'Pattern' (Set1), and 'GSM DL Signal' (Off). At the bottom, there are sections for 'Neighbour Cell Allocation' with 'Intra - Primary Scrambling Code' and 'Inter - DL UARFCN' all set to 'Off'. A vertical menu on the right side lists various test mode categories like 'Common', 'Physical Channel', 'Call Processing', 'TX Measurement Setup', 'RX Measurement Setup', and 'Fundamental Measurement'. The bottom right corner shows page numbers '1 | 2 | 3'.

最大输出功率

5. set Power Measurement to On.
- 6 set the average count of power measurement to 20 times.

2004/11/03 10:05 Loop Mode 1 Phone-2 W-CDMA Phone-1 W-CDMA
<Fundamental Measurement> Output Main

Parameter Fundamental UE Report

UE Power : 18.5 dBm

Ext. BER Input Polarity Positive
Ext. BER Input Clock Rise
Voice Channel Subflow 1

Block Error Rate
Number of Sample 50 Block
BLER Upper Limit 10.0 %
BER/BLER Timeout Length 10 sec

normal → Fundamental Measurement Parameter Item List Standard

Parameter	Value	Average Count
Measurement Mode	Fast	
Power Measurement	On	20
Frequency Error	On	20
Occupied Bandwidth	On	20
Spectrum Emission Mask	On	20
Adjacent Channel Power	On	20
Modulation Analysis	On	20
Peak Code Domain Error	On	20
BER	Off	
BLER	Off	

Parameter
Common
Physical Channel
Call Processing
TX Measurement Setup
RX Measurement Setup
Fundamental Measurement

1 2 3

最大输出功率

push

Focus

Single / continuous

7 perform power measurement.

8 read the result of power measurement.

Fundamental

Power Measurement		(Meas. Count : 20 / 20)		
	Avg.	Max	Min	
TX Power	23.16	23.18	23.14	dBm
	207.0	207.9	206.1	mW
Filtered Power	22.94	22.97	22.91	dBm
	197.0	198.3	195.6	mW

TX Power corresponds to Mean power (5MHz band), and Filtered Power corresponds to RRC filtered mean power.

频率误差

- 1 Test Loop Mode1.
- 2 set Input Level to +35.0dBm.
- 3 set Output Level to -106.7dBm.
- 4 set TPC Pattern to ALL1.
- 5 set Frequency Measurement to On.
- 6 set the average count of frequency measurement to 20 times.
- 7 perform frequency measurement.
- 8 read the result of frequency error measurement.

频率误差



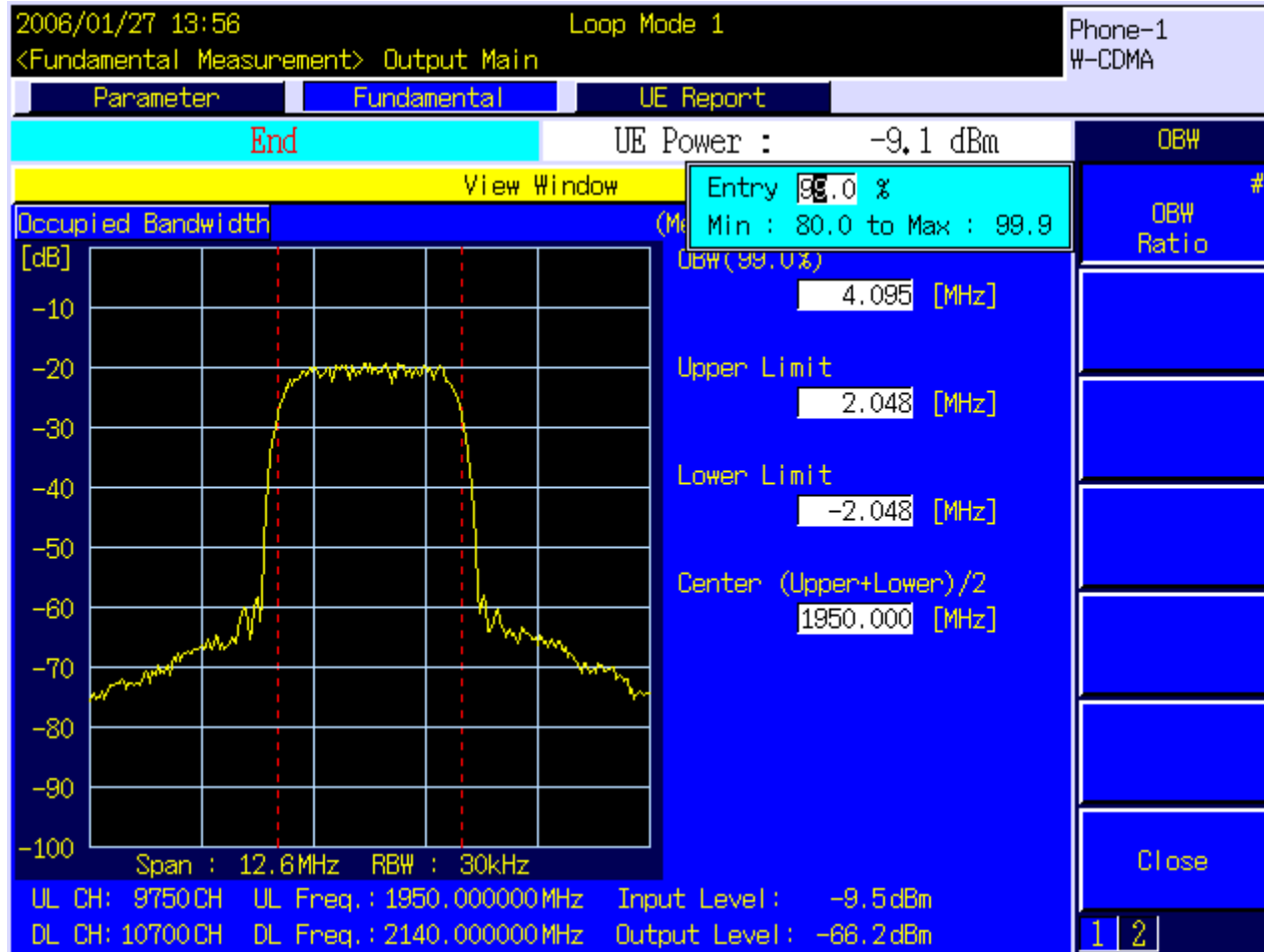
占用带宽

- 1 Test Loop Mode1.
- 2 set Input Level to +35.0dBm.
- 3 set Output Level to -106.7dBm.
- 4 set TPC Pattern to ALL1.
- 5 set OBW Measurement to On.
- 6 set the average count of OBW measurement to 20 times.
- 7 perform measurement.
- 8 read the result

占用带宽

Occupied Bandwidth	View	(Meas. Count : 20 / 20)
OBW	4.118 MHz	
Upper Frequency	2.059 MHz	
Lower Frequency	-2.059 MHz	
Center (Upper+Lower) / 2	1950.000 MHz	

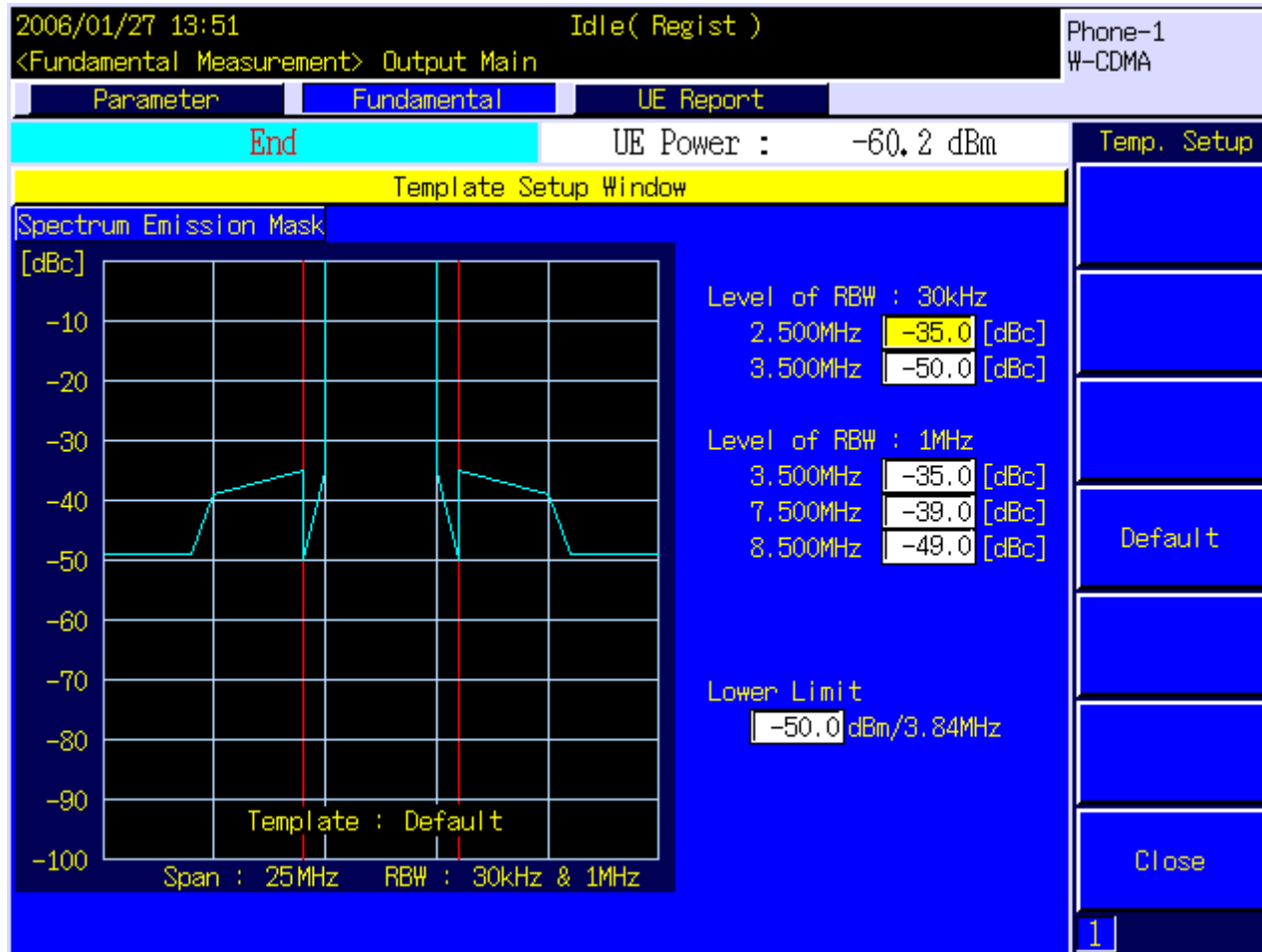
占用带宽--图形



频谱发射模板

- 1 Test Loop Mode1.
- 2 set Input Level to +35.0dBm.
- 3 set Output Level to -106.7dBm.
- 4 set TPC Pattern to ALL1.
- 5 set SEM Measurement to On.
- 6 set the average count of SEM measurement to 20 times.
- 7 perform measurement.
- 8 read the result .

频谱发射模板—图形

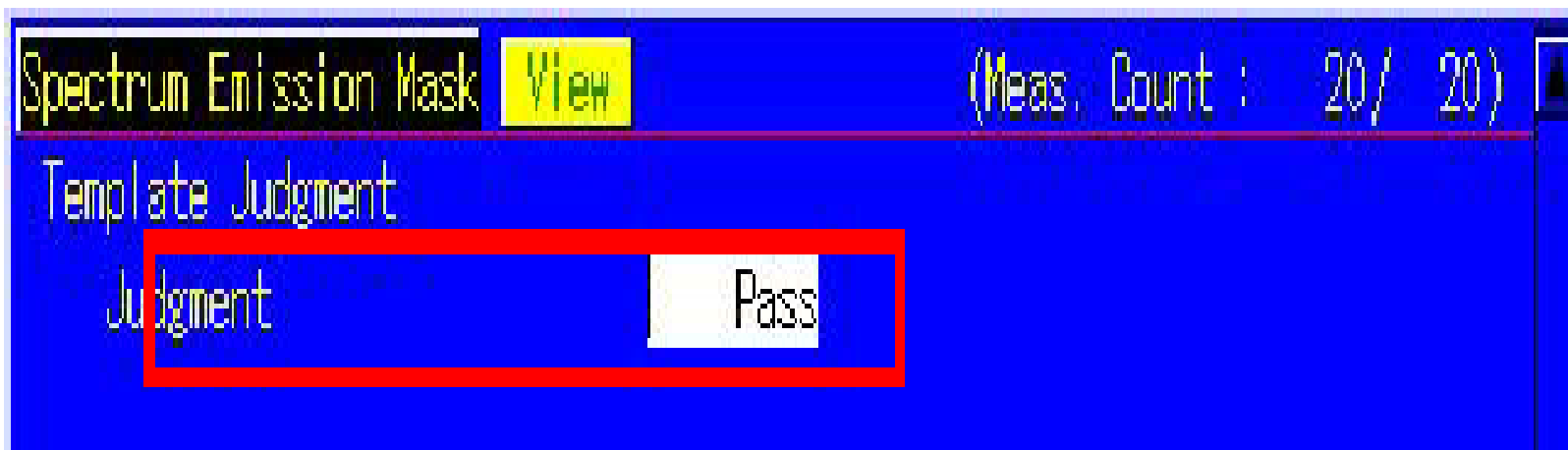


频谱发射模板—图形

Measured value shown in yellow, template shown in blue



频谱发射模板



邻信道功率泄漏比

- 1 Test Loop Mode1.
- 2 set Input Level to +35.0dBm.
- 3 set Output Level to -106.7dBm.
- 4 set TPC Pattern to ALL1.
- 5 set ACLR Measurement to On.
- 6 set the average count of ACLR measurement to 20 times.
- 7 perform Measurement .
- 8 read the result.

邻信道功率泄漏比

Adjacent Channel Power (Meas. Count : 20 / 20)

Leakage power due to Modulation

Offset Freq.	Power		
	Avg.	Max	Min
-10 MHz	-46.20	-46.00	-46.40 dB
-5 MHz	-37.31	-36.99	-37.68 dB
5 MHz	-36.50	-36.21	-36.80 dB
10 MHz	-48.25	-48.06	-48.38 dB

矢量幅度误差 (EVM)

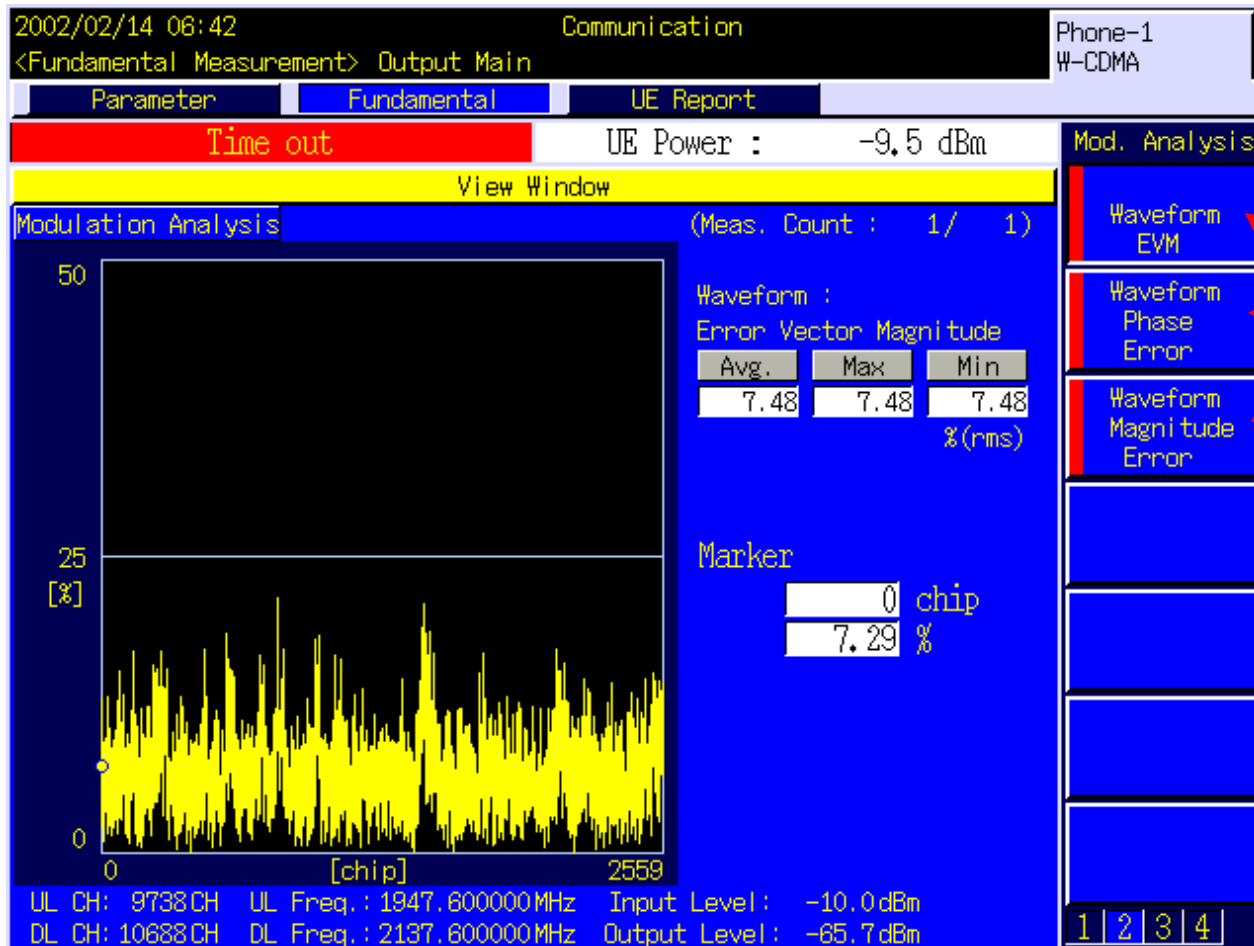
- 1 Test Loop Mode1.
- 2 set Input Level to +35.0dBm.
- 3 set Output Level to -106.7dBm.
- 4 set TPC Pattern to ALL1.
- 5 set EVM Measurement to On.
- 6 set the average count of EVM measurement to 20 times.
- 7 perform measurement.
- 8 read the result.

矢量幅度误差 (EVM)

Modulation Analysis View (Meas. Count : 20 / 20)

	Ave	Max	Min	
Error Vector Magnitude	7.31	7.44	7.13	%(rms)
Peak Vector Error	17.34	18.51	15.87	%
Phase Error	3.14	3.23	3.02	deg. (rms)
Magnitude Error	4.83	4.88	4.76	%(rms)
Origin Offset	-25.78	-25.52	-26.10	dB
IQ Imbalance	102.75	103.51	101.99	%(I/Q)
Timing Error	0.4	0.5	0.3	chip
DPCCH/DPDCH Power Ratio	-5.48	-5.44	-5.51	dB

调制精度—图形



Select modulation type to view

EVM

Phase

Magnitude

参考灵敏度测试

- 1 Test Loop Mode1.
- 2 set Input Level to +35.0dBm.
- 3 set Output Level to -106.7dBm.
- 4 set TPC Pattern to ALL1.
- 5 set BER Measurement to On.
- 6 set the number of BER measurement samples to 10000 bits.
- 7 perform measurement.
- 8 read the result.

参考灵敏度测试

The screenshot displays a software interface for a reference sensitivity test. At the top, it shows the date and time (2004/11/03 10:36), the device status (Idle), and the phone models (Phone-2 W-CDMA and Phone-1 W-CDMA). The main display area is divided into several sections:

- Parameter**: Shows "UE Power : -50.3 dBm".
- Template**: Set to "Template Setup User".
- Additional Limit**: Set to "Non".
- Modulation Analysis**: Includes "Storage Mode" (Latest), "Long Span Code Search" (Off), and "Measuring Object" (W-CDMA).
- RX Measurement Setup Parameter**: Includes "Item List" (Standard).
- Bit Error Rate**: Includes "Number of Sample" (10000 Bit), "BER Upper Limit" (10.0 %), "Measurement Input" (RF Loopback), "Ext. BER Input Polarity" (Positive), "Ext. BER Input Clock" (Rise), and "Voice Channel" (Subflow 1).
- Block Error Rate**: Includes "Number of Sample" (50 Block) and "BLER Upper Limit" (10.0 %).
- BER/BLER Timeout Length**: Set to 10 sec.

On the right side, there is a vertical menu with categories: Common, Physical Channel, Call Processing, TX Measurement Setup, RX Measurement Setup, and Fundamental Measurement. At the bottom right, there are page navigation buttons labeled 1, 2, and 3.

参考灵敏度测试

Bit Error Rate	0.0000 (= 0.00 %)	
Bit Error Rate	0.00E+00	
Error Count	0	
Transmitted/Sample	10717 /	10000 Bit
Judgment	Pass	

最小输出功率测试

1. Test Loop Mode1.
2. set Input Level to -20.0dBm.
3. set Output Level to -93dBm.
4. set TPC Pattern to ALL0.
5. set Power Measurement to On.
6. set the average count of power measurement to 20 times.
7. perform the measurement.
8. read the result of power measurement.

最小输出功率测试

Power Measurement (Meas. Count : 20 / 20)

	Avg.	Max	Min	
TX Power	-57.02	-58.93	-57.10	dBm
	1.985	2.025	1.950	nW
Filtered Power	-58.92	-58.78	-59.05	dBm
	1.282	1.325	1.244	nW

内环功率控制测试

1. display the Time Domain Measurement screen.
2. set Measurement Object to Inner Loop Power Control.
3. display a slot list.
4. register Slot0~Slot59 for the slot list.
5. set Time Span of Time Domain measurement to 40.0ms.
6. set TPC Algorithm to 2.
7. set TPC Step Size to 1dB.
8. set RRC Filter to Off.
9. Connect to Test Loop Mode1.

内环功率控制测试

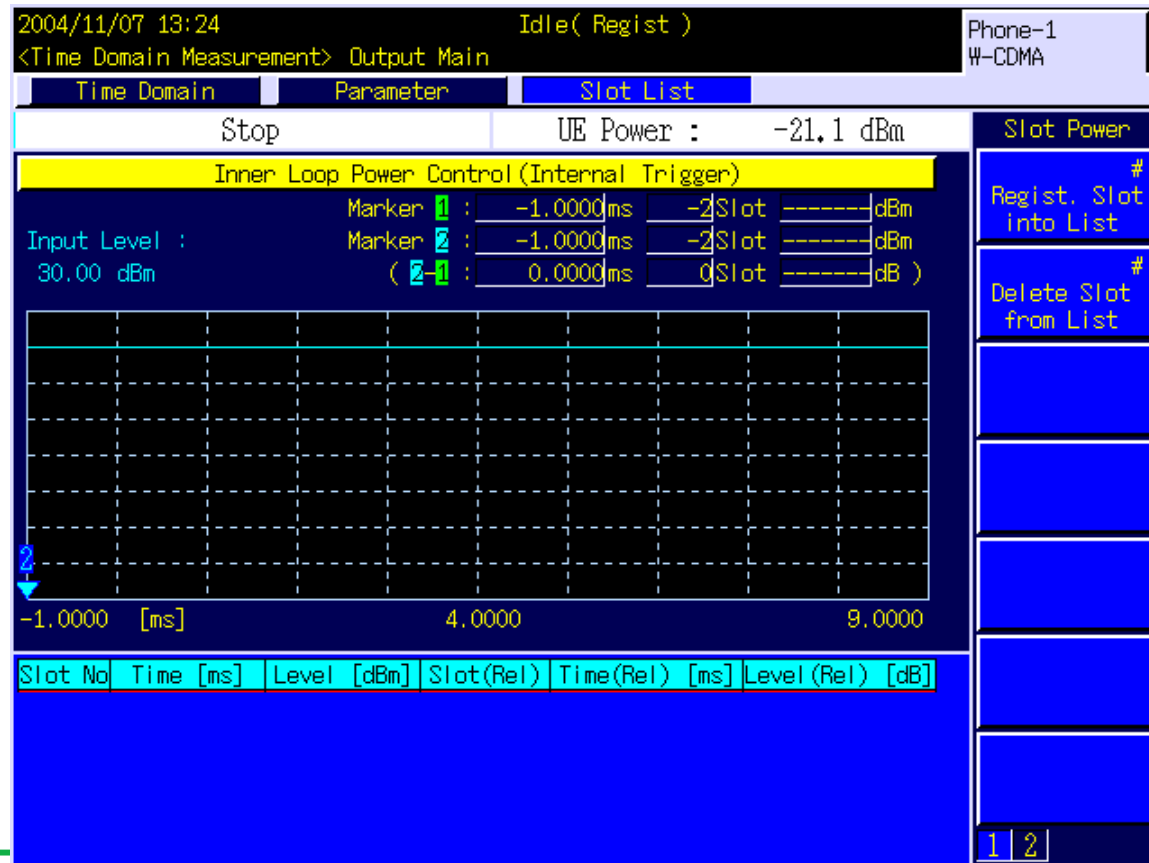
display a slot list.

The screenshot displays the 'Slot List' configuration screen of a test instrument. The interface is divided into several sections:

- Header:** Shows the date and time '2004/11/07 13:23', the state 'Idle(Regist)', and the device 'Phone-1 W-CDMA'.
- Navigation:** Tabs for 'Time Domain', 'Parameter', and 'Slot List' are visible. The 'Slot List' tab is active.
- Measurement Status:** 'Stop' and 'UE Power : -21.1 dBm' are displayed.
- Configuration:** 'Inner Loop Power Control (Internal Trigger)' is set to 'Marker Off'. 'Input Level : 30.00 dBm' is shown.
- Graph:** A time-domain plot area with a grid. The x-axis is labeled '-1.0000 [ms]' and has markers at '4.0000' and '9.0000'.
- Marker Settings:** A vertical menu on the right includes 'Slot List' (On Off), 'Marker-1' (On Off), and 'Marker-2' (On Off). The 'Slot List' option is circled in red.
- Measurement Parameters:** A table at the bottom lists parameters: S-CCPCH Power(S-CCPCH_Ec/Ior) at -3.0 dB (On) and AICH Power(AICH_Ec/Ior) at 0.0 dB (On).
- Call Processing:** A section for 'Call Processing Parameter Item List Standard' with fields for 'Base Station ID' and 'Location Area Identification'.
- Page Navigation:** A small box at the bottom right shows '1 | 2'.

内环功率控制测试

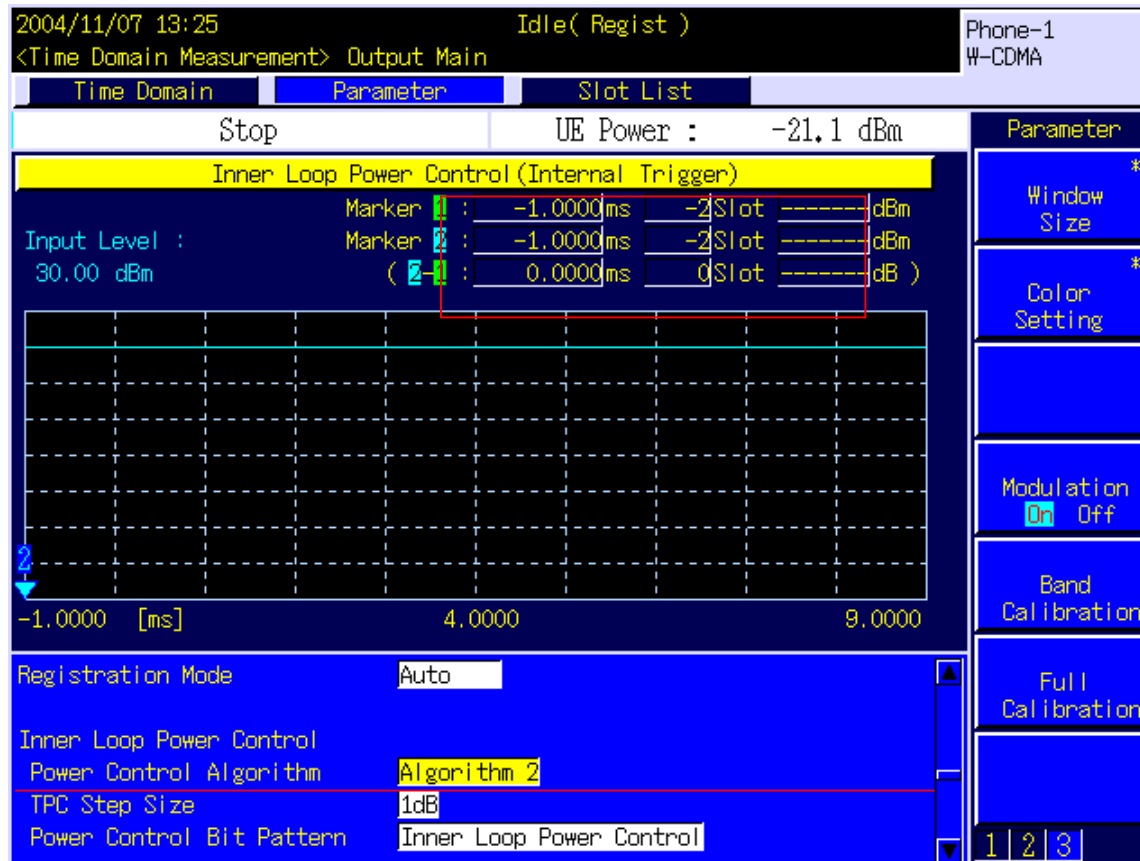
register Slot0~Slot59 for the slot list.



内环功率控制测试

set TPC Algorithm to 2.

set TPC Step Size to 1dB.



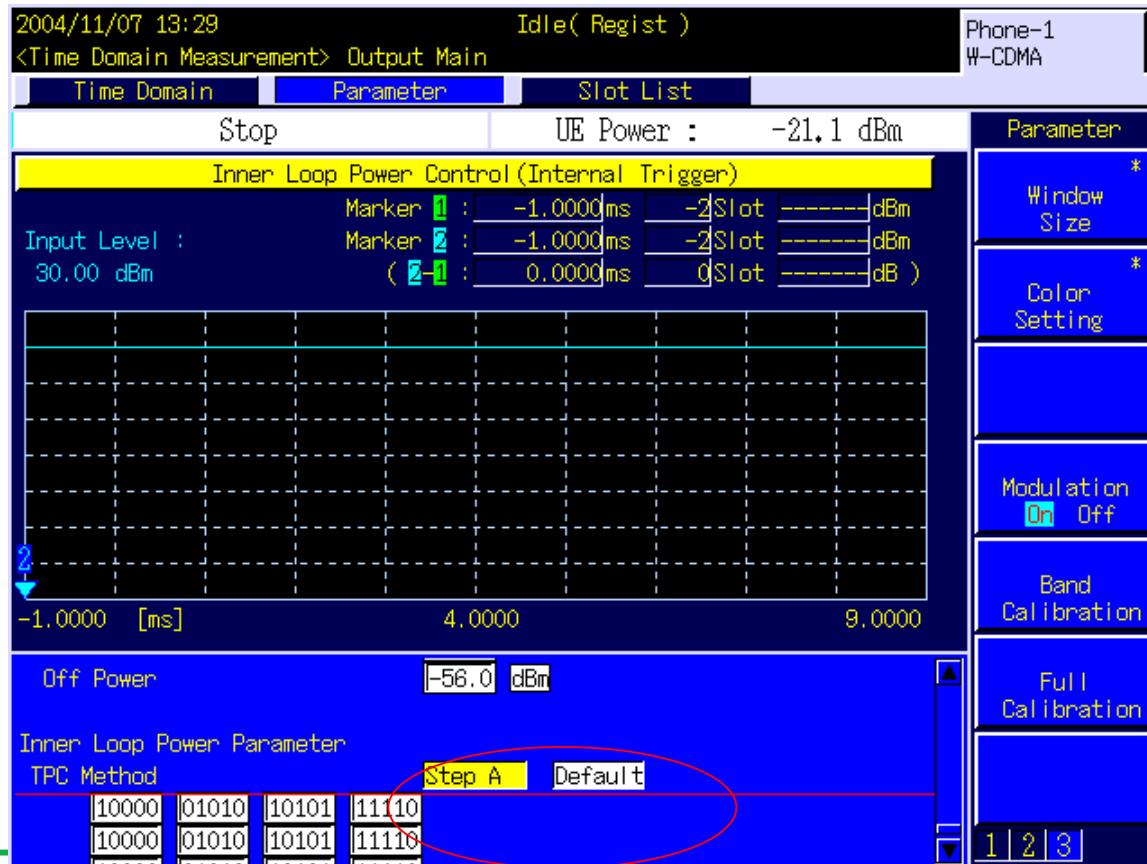
内环功率控制测试 (stepA)

1. set TPC Test Step to A.
2. set TPC Algorithm to 2.
3. set TPC Step Size to 1dB.
4. set TPC Pattern to Inner Loop Power Control.
- 5-1 set Output Level to -65.7dBm.
5. set Input Level to -10.0dBm.
6. set TPC Pattern to Alternate.
7. set Input Level to 0.0dBm.
8. perform the measurement.
9. read the measurement result.

** In some cases, several dBs lower/higher value from Input Level is required for UE output power before starting Inner Loop Power Control measurement.

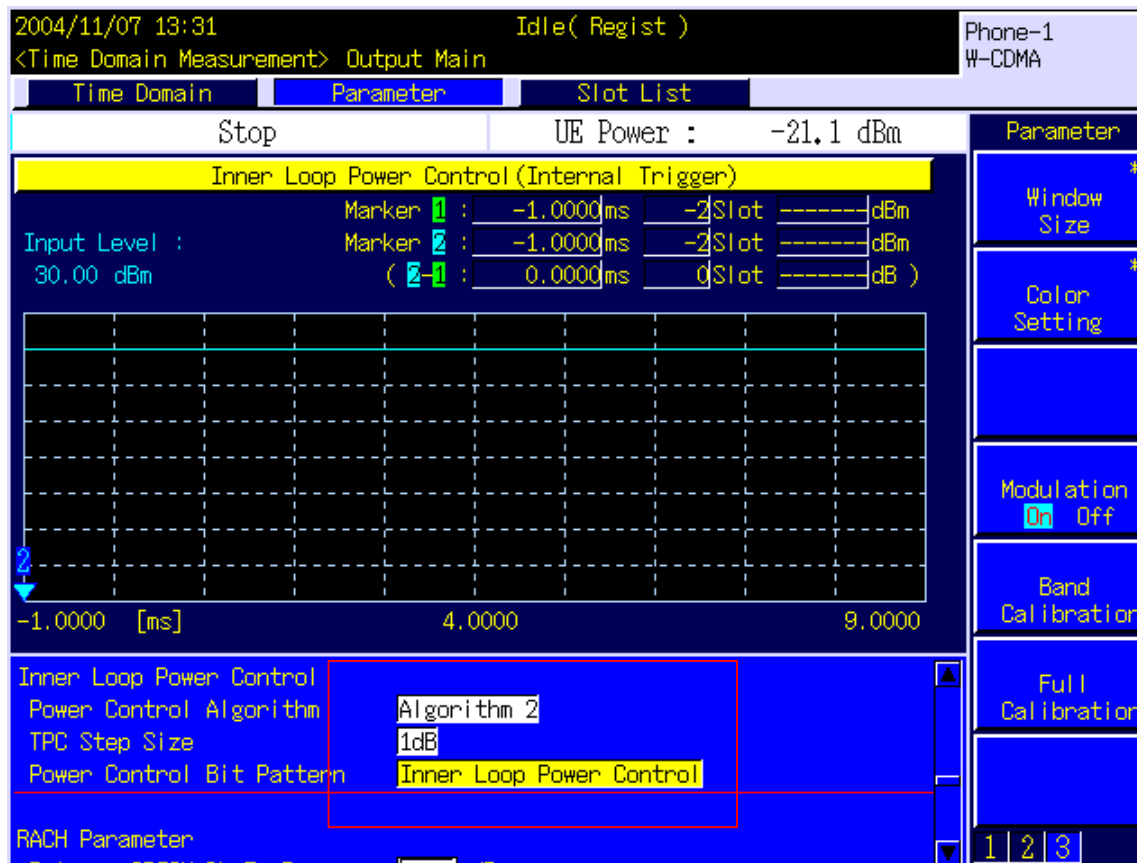
内环功率控制测试 (stepA)

set TPC Test Step to A

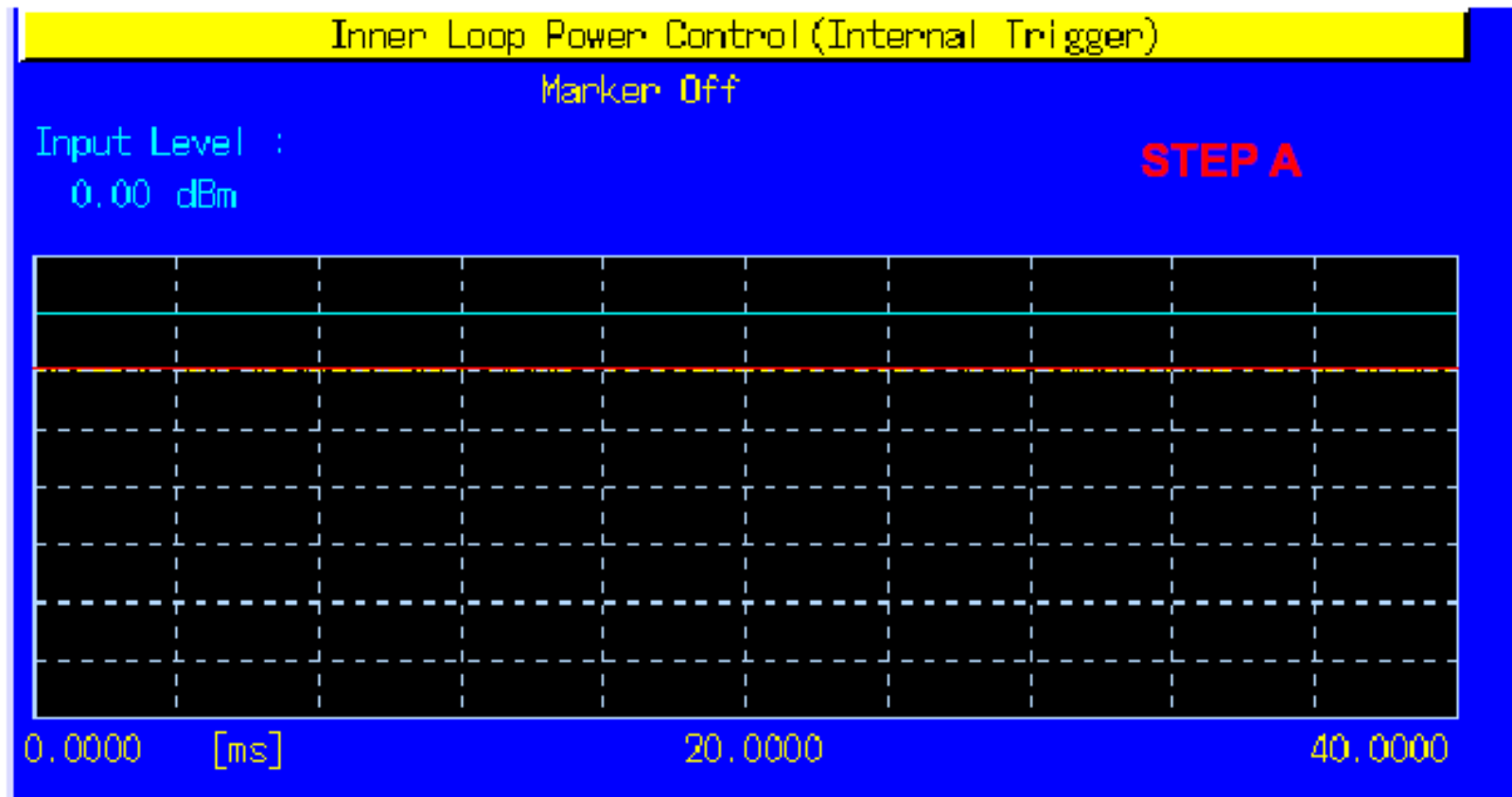


内环功率控制测试 (stepA)

set TPC Pattern to Inner Loop Power Control.



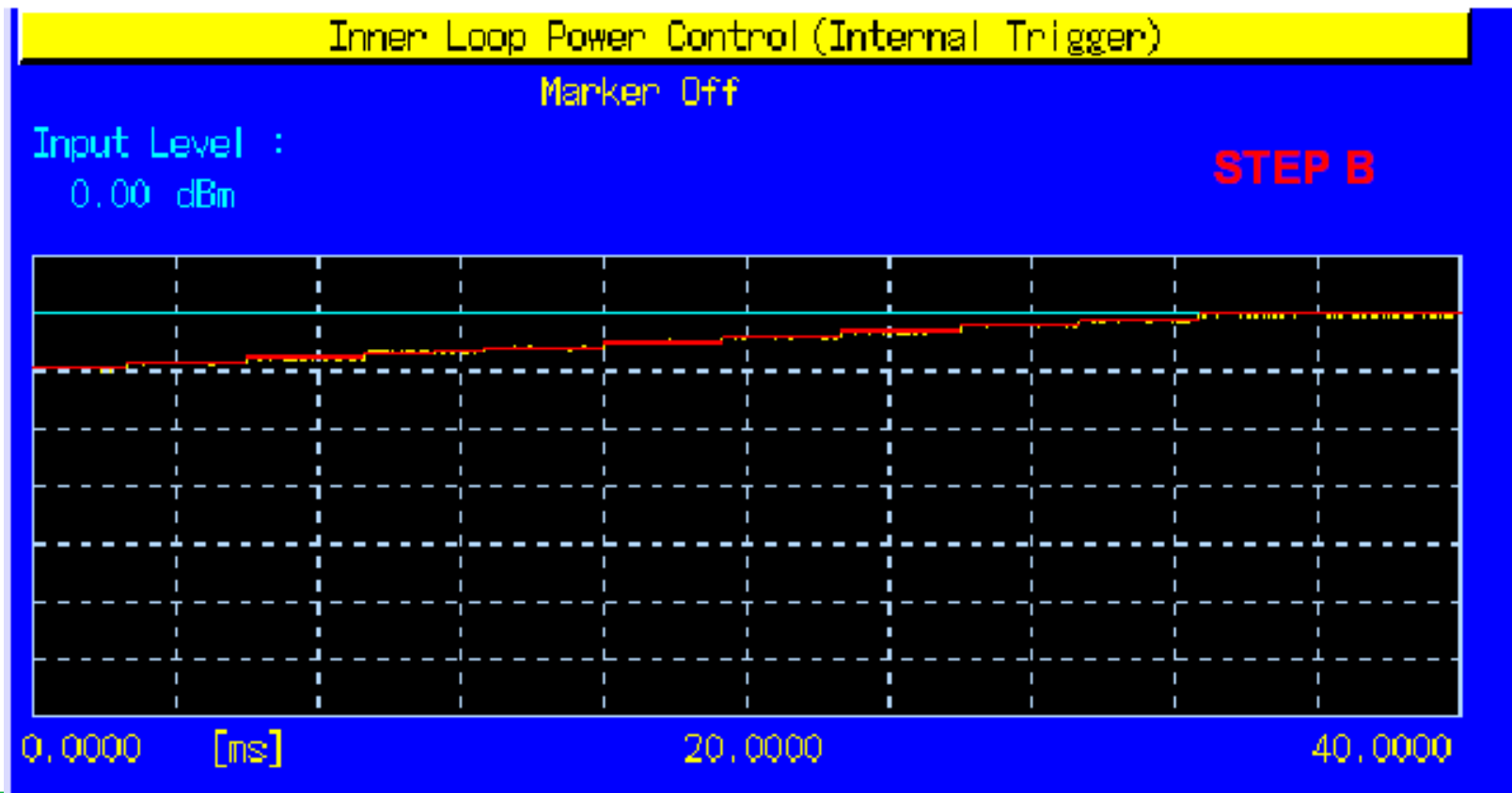
内环功率控制测试 (stepA)



内环功率控制测试 (stepB)

10. set TPC Test Step to B.
11. set TPC Algorithm to 2.
12. set TPC Step Size to 1dB.
13. set TPC Pattern to Alternate.
14. set Input Level to 0.0dBm.
15. perform the measurement.
16. read the measurement result.

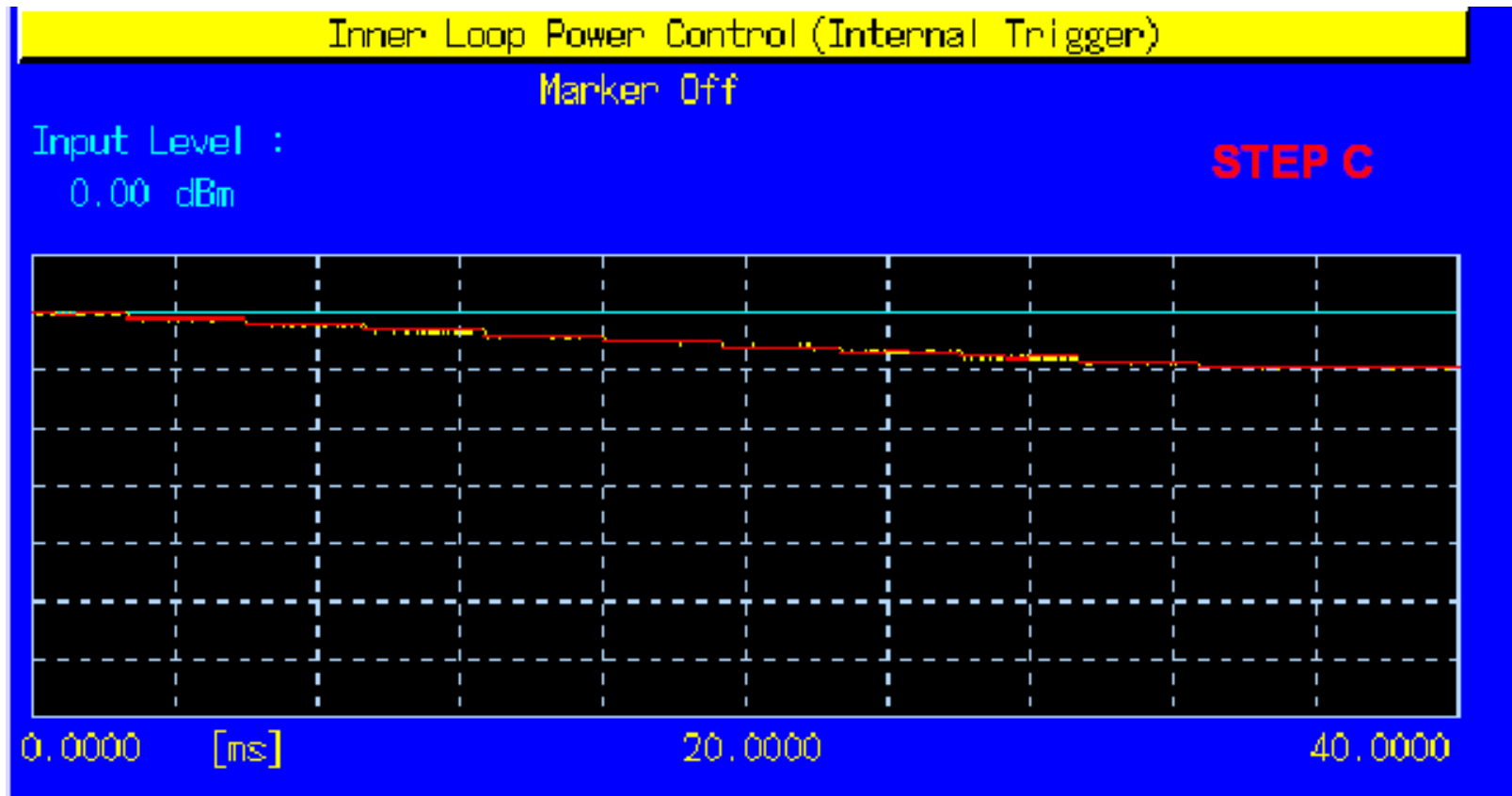
内环功率控制测试 (stepB)



内环功率控制测试 (stepC)

17. set TPC Test Step to C.
18. set TPC Algorithm to 2.
19. set TPC Step Size to 1dB.
20. set TPC Pattern to Alternate.
21. set Input Level to 0.0dBm.
22. perform the measurement.
23. read the measurement result.

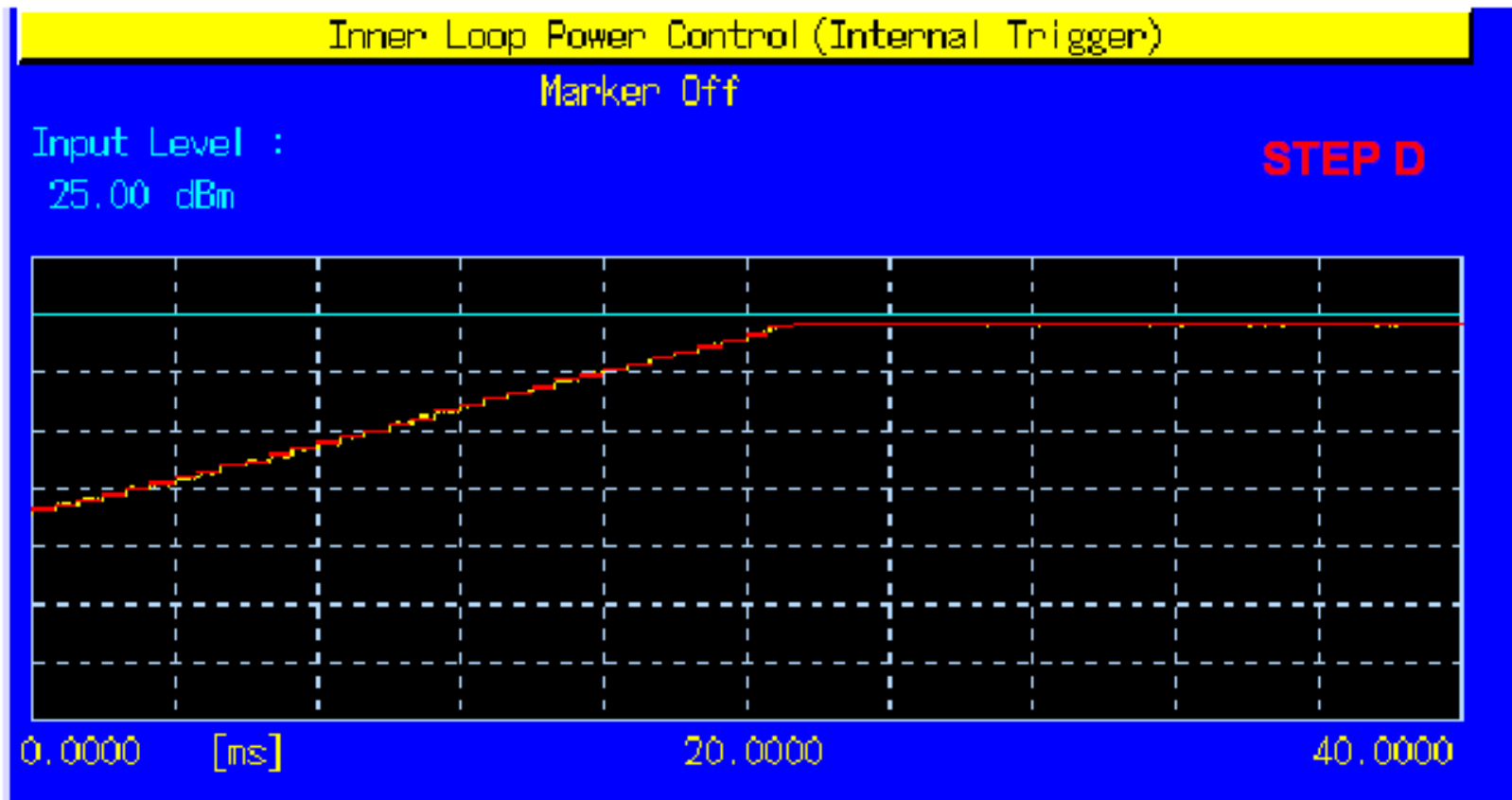
内环功率控制测试 (stepC)



内环功率控制测试 (stepD)

24. set TPC Test Step to D.
25. set TPC Algorithm to 1.
26. set TPC Step Size to 1dB.
27. set TPC Pattern to Alternate.
28. set Input Level to +25.0dBm.
29. perform the measurement.
30. read the measurement result.

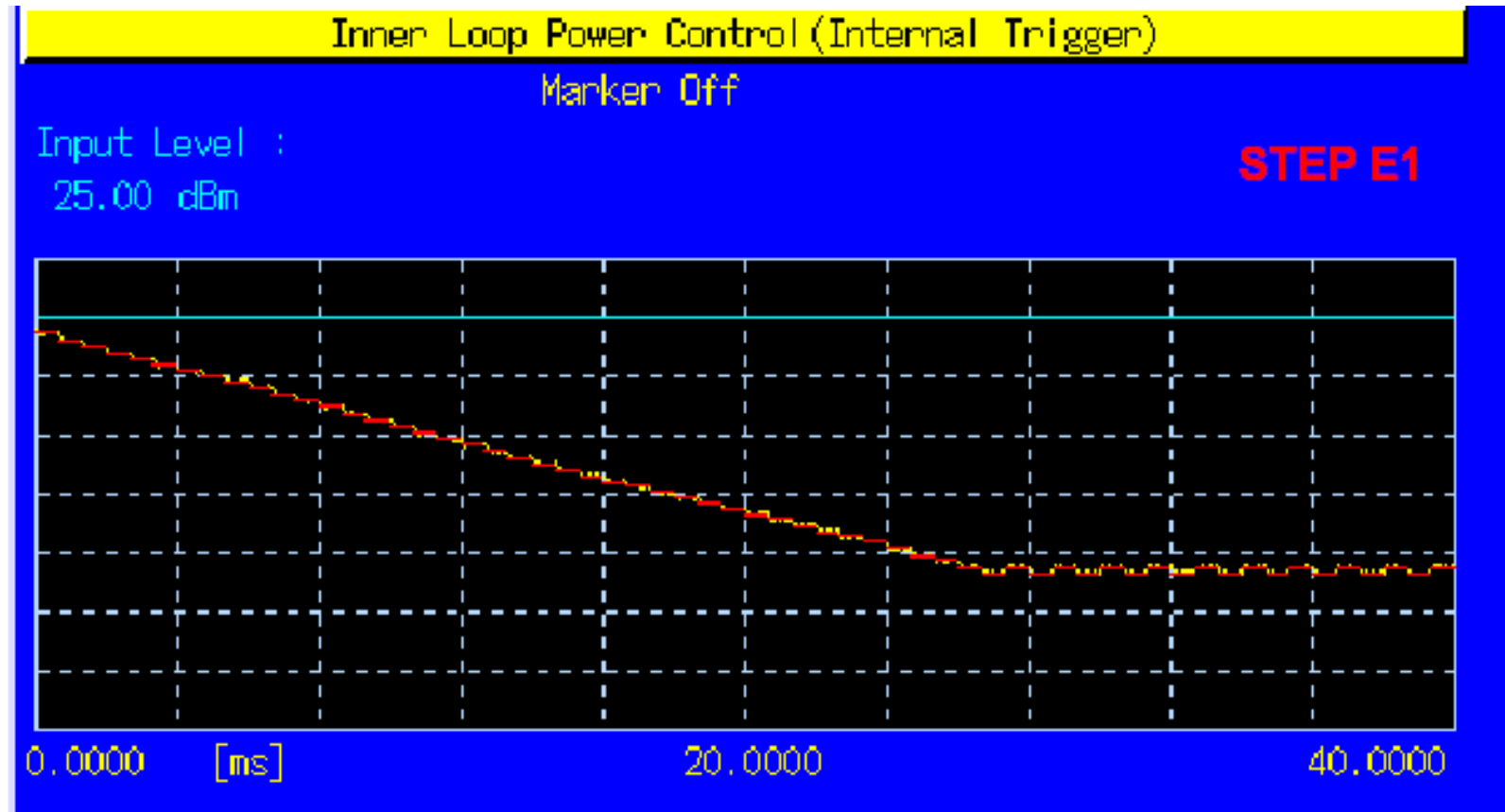
内环功率控制测试 (stepD)



内环功率控制测试(stepE1)

31. set TPC Test Step to E.
32. set the number of slots in Test Step E to 40.
33. set TPC Algorithm to 1.
34. set TPC Step Size to 1dB.
35. set TPC Pattern to Alternate.
36. set Input Level to +25.0dBm.
37. perform the measurement.
38. read the measurement result.

内环功率控制测试(stepE1)

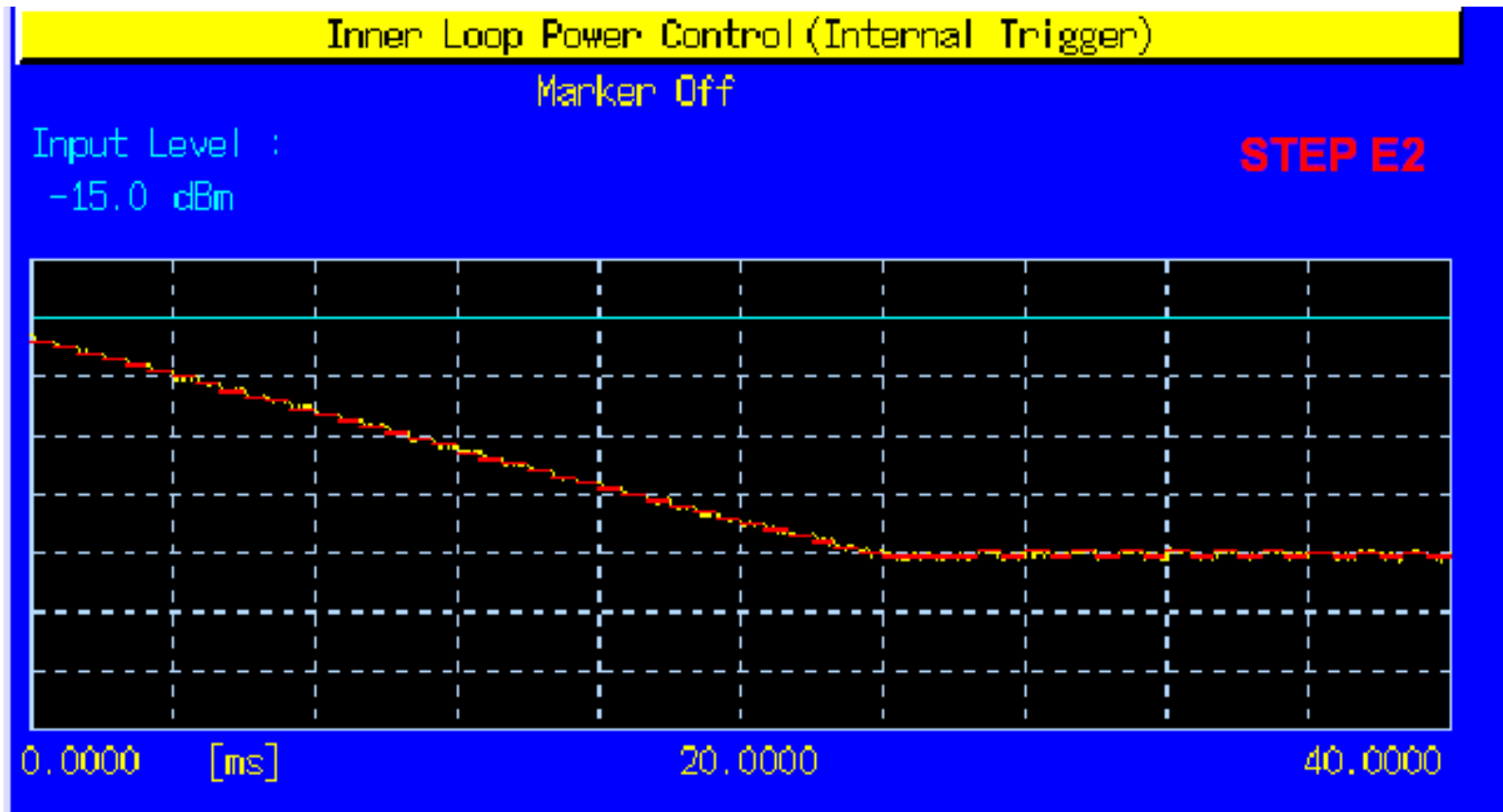


MT8820A's dynamic range (40dB) , segment the power control sequence into smaller subsequence

内环功率控制测试(stepE2)

39. set TPC Test Step to E.
40. set the number of slots in Test Step E to 40.
41. set TPC Algorithm to 1.
42. set TPC Step Size to 1dB.
43. set TPC Pattern to Alternate.
44. set Input Level to -15.0dBm.
45. perform the measurement.
46. read the measurement result.

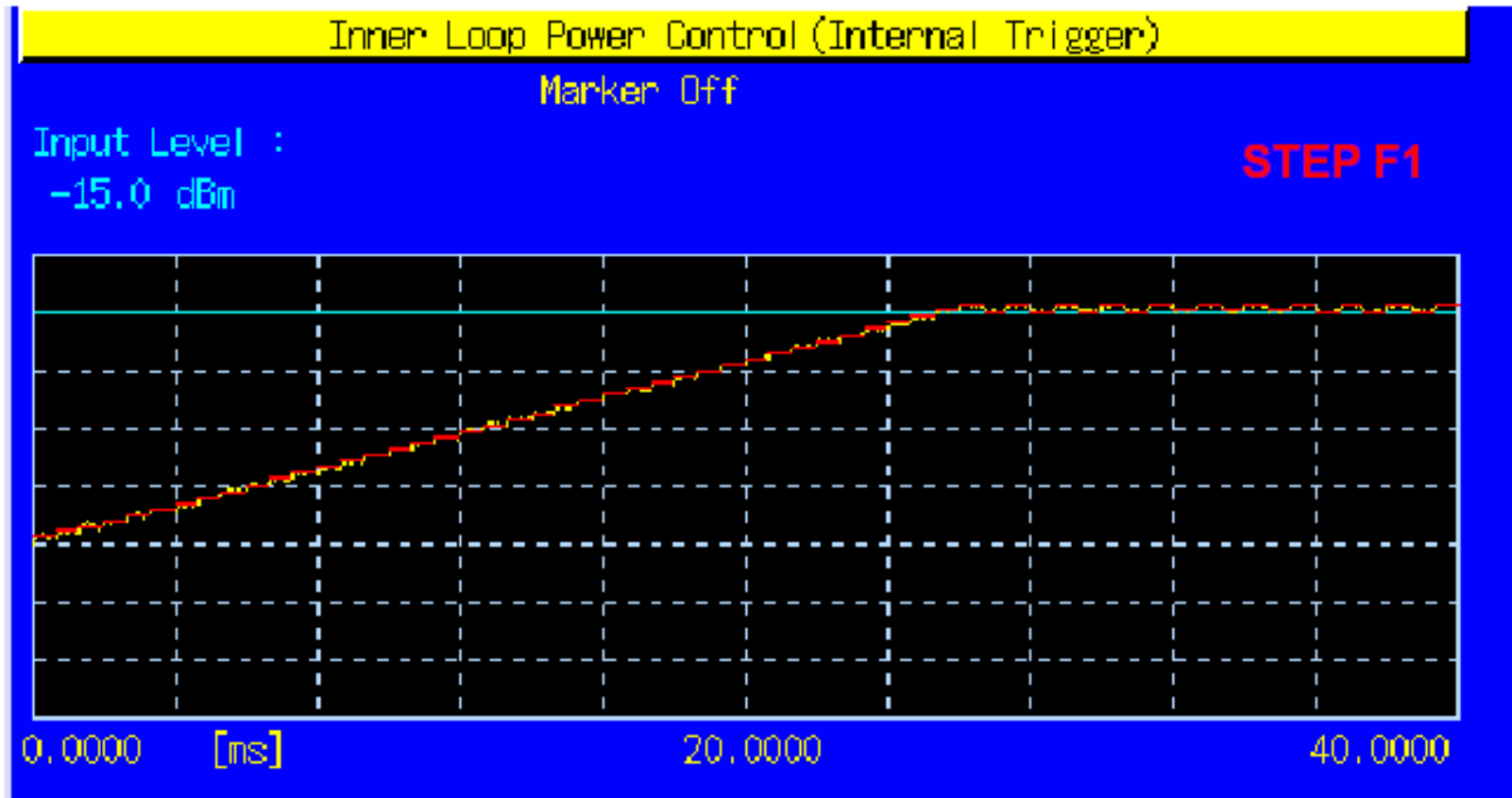
内环功率控制测试(stepE2)



内环功率控制测试(stepF1)

47. set TPC Test Step to F.
48. set the number of slots in Test Step F to 40.
49. set TPC Algorithm to 1.
50. set TPC Step Size to 1dB.
51. set TPC Pattern to Alternate.
52. set Input Level to -15.0dBm.
53. perform the measurement.
54. read the measurement result.

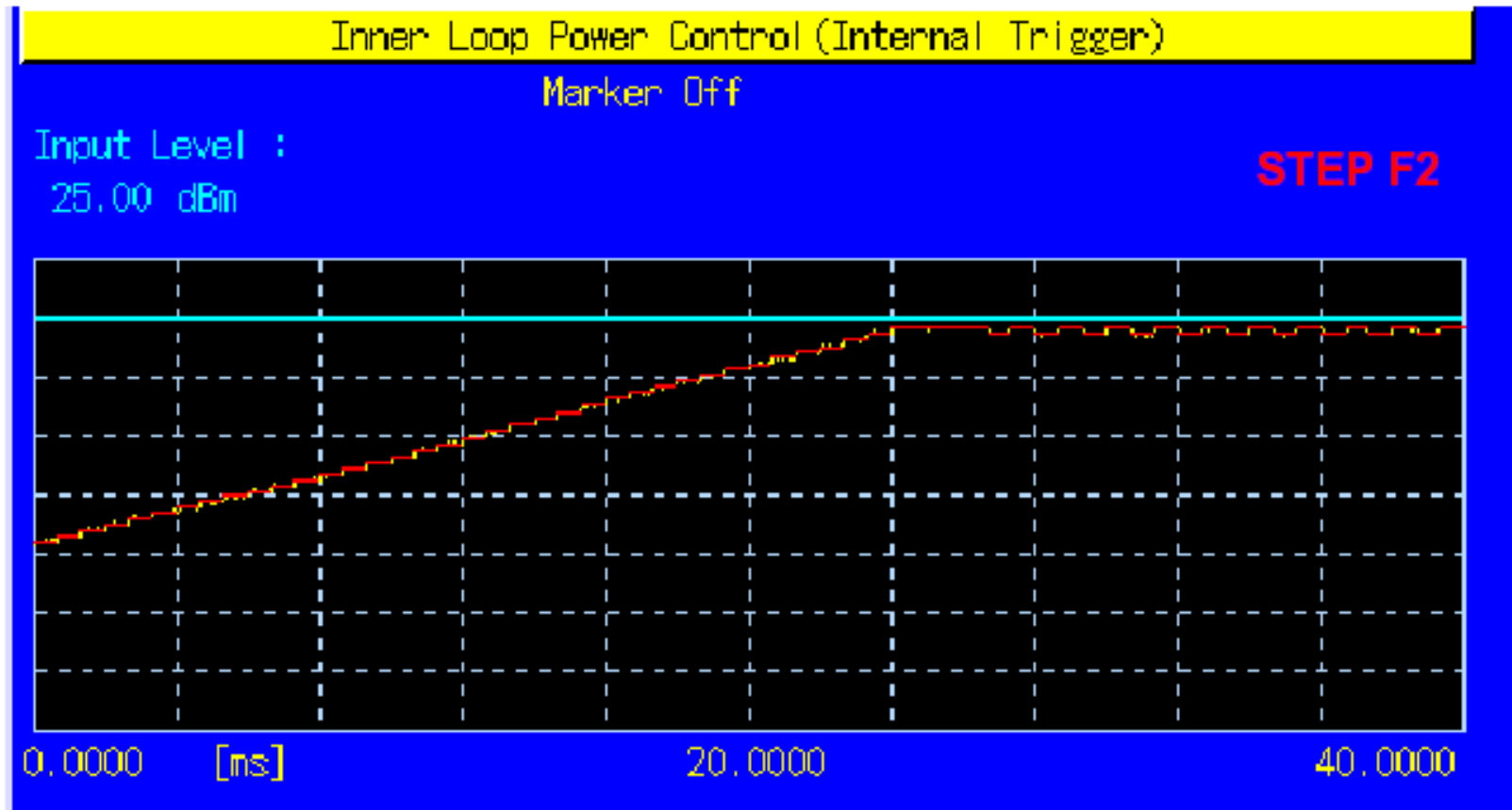
内环功率控制测试(stepF1)



内环功率控制测试(stepF2)

55. set TPC Test Step to F.
56. set the number of slots in Test Step F to 40.
57. set TPC Algorithm to 1.
58. set TPC Step Size to 1dB.
59. set TPC Pattern to Alternate.
60. set Input Level to +25.0dBm.
61. perform the measurement.
62. read the measurement result.

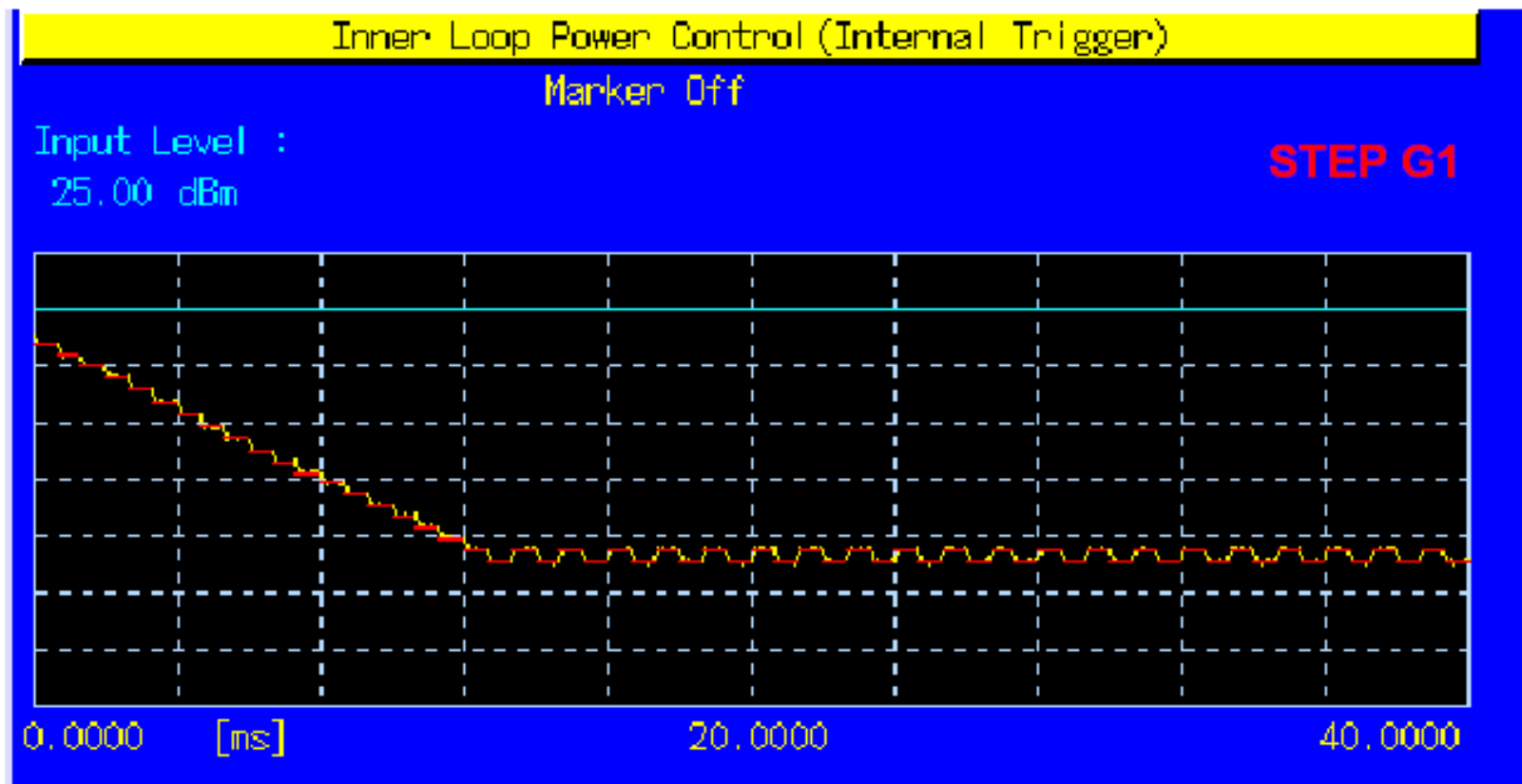
内环功率控制测试(stepF2)



内环功率控制测试(stepG1)

63. set TPC Test Step to G.
64. set the number of slots in Test Step G to 20.
65. set TPC Algorithm to 1.
66. set TPC Step Size to 2dB.
67. set TPC Pattern to Alternate.
68. set Input Level to +25.0dBm.
69. perform the measurement.
70. read the measurement result.

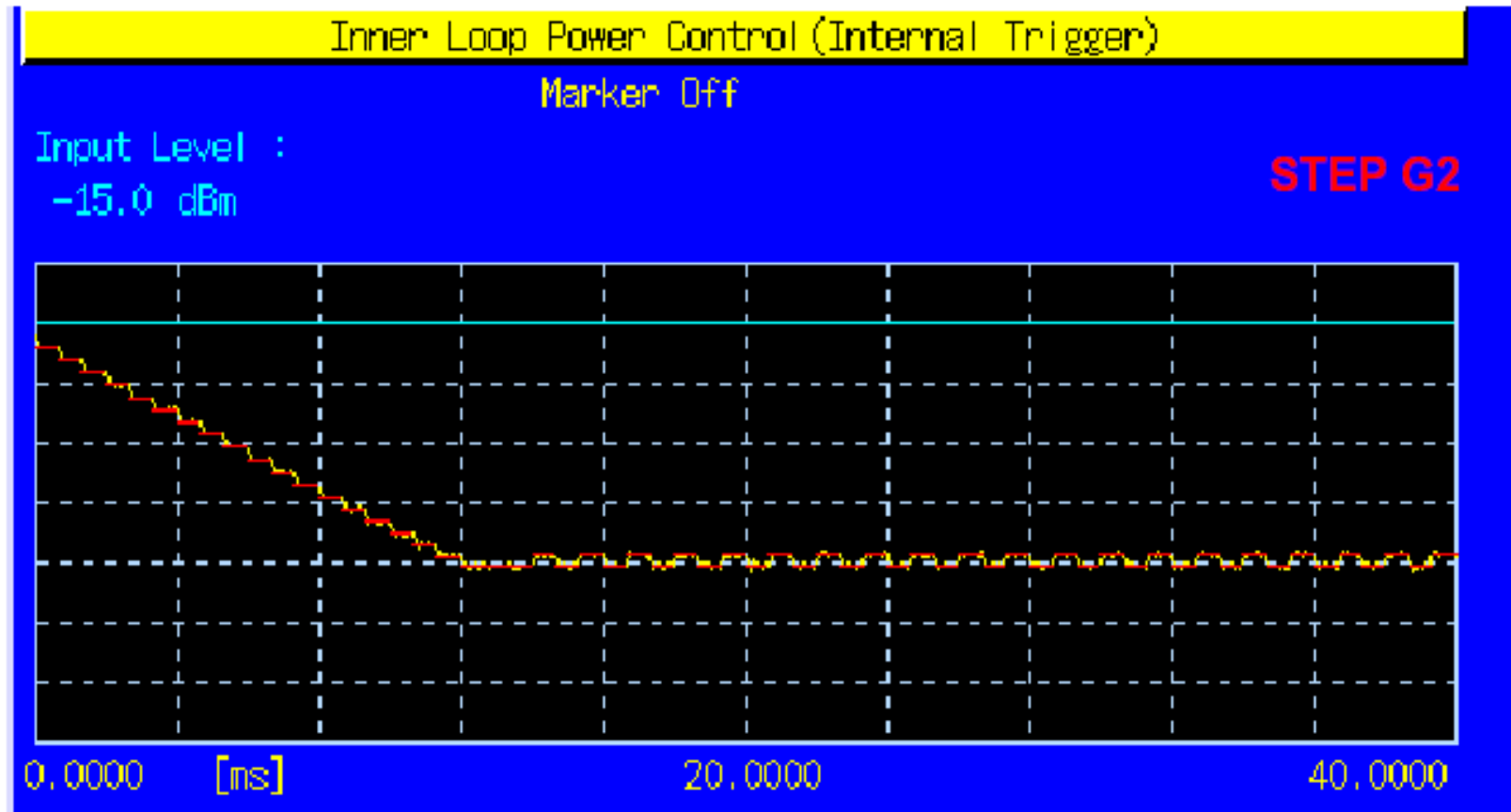
内环功率控制测试(stepG1)



内环功率控制测试(stepG2)

71. set TPC Test Step to G.
72. set the number of slots in Test Step G to 20.
73. set TPC Algorithm to 1.
74. set TPC Step Size to 2dB.
75. set TPC Pattern to Alternate.
76. set Input Level to -15.0dBm.
77. perform the measurement.
78. read the measurement result.

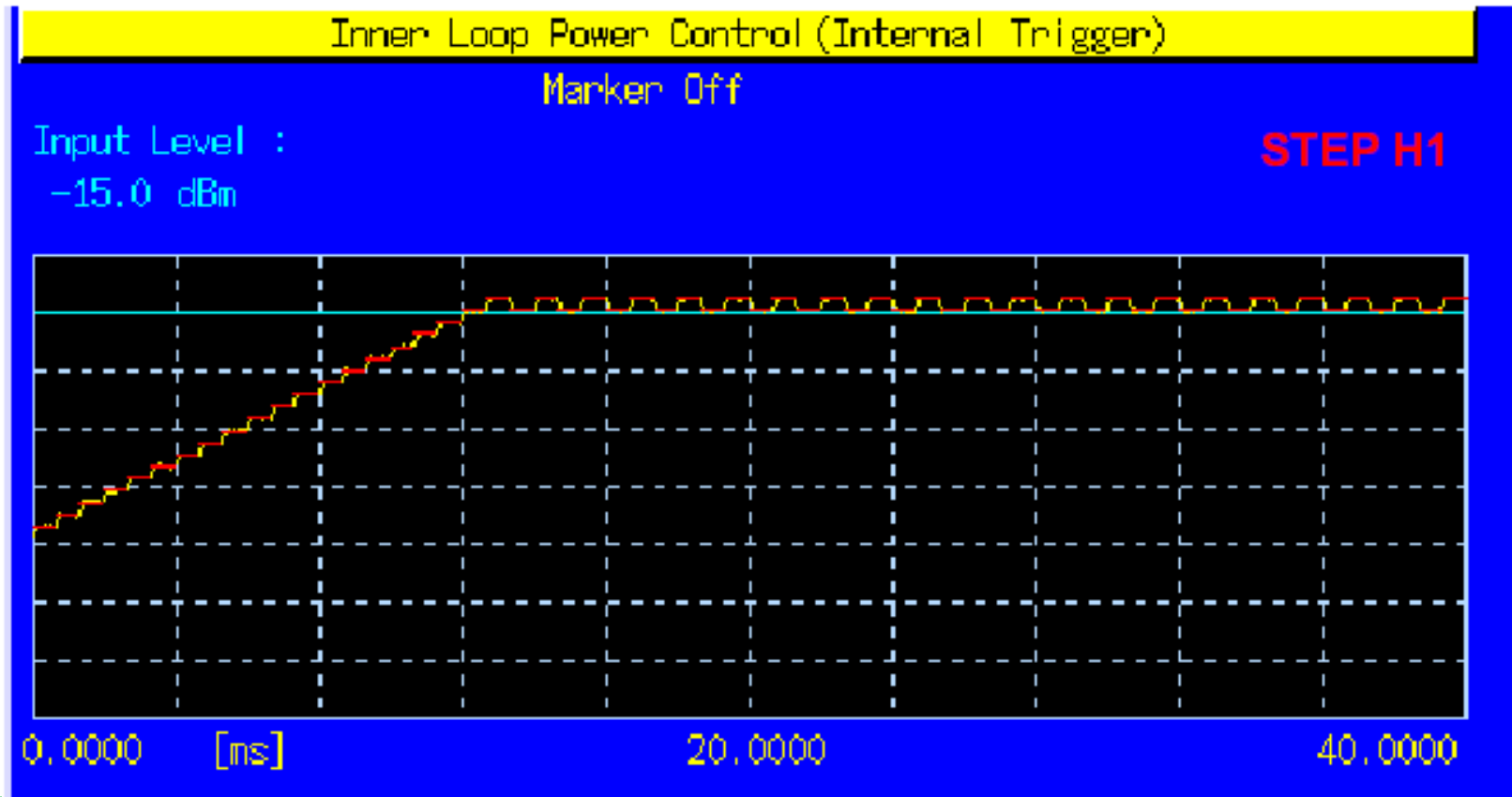
内环功率控制测试(stepG2)



内环功率控制测试(stepH1)

79. set TPC Test Step to H.
80. set the number of slots in Test Step H to 20.
81. set TPC Algorithm to 1.
82. set TPC Step Size to 2dB.
83. set TPC Pattern to Alternate.
84. set Input Level to -15.0dBm.
85. perform the measurement.
86. read the measurement result.

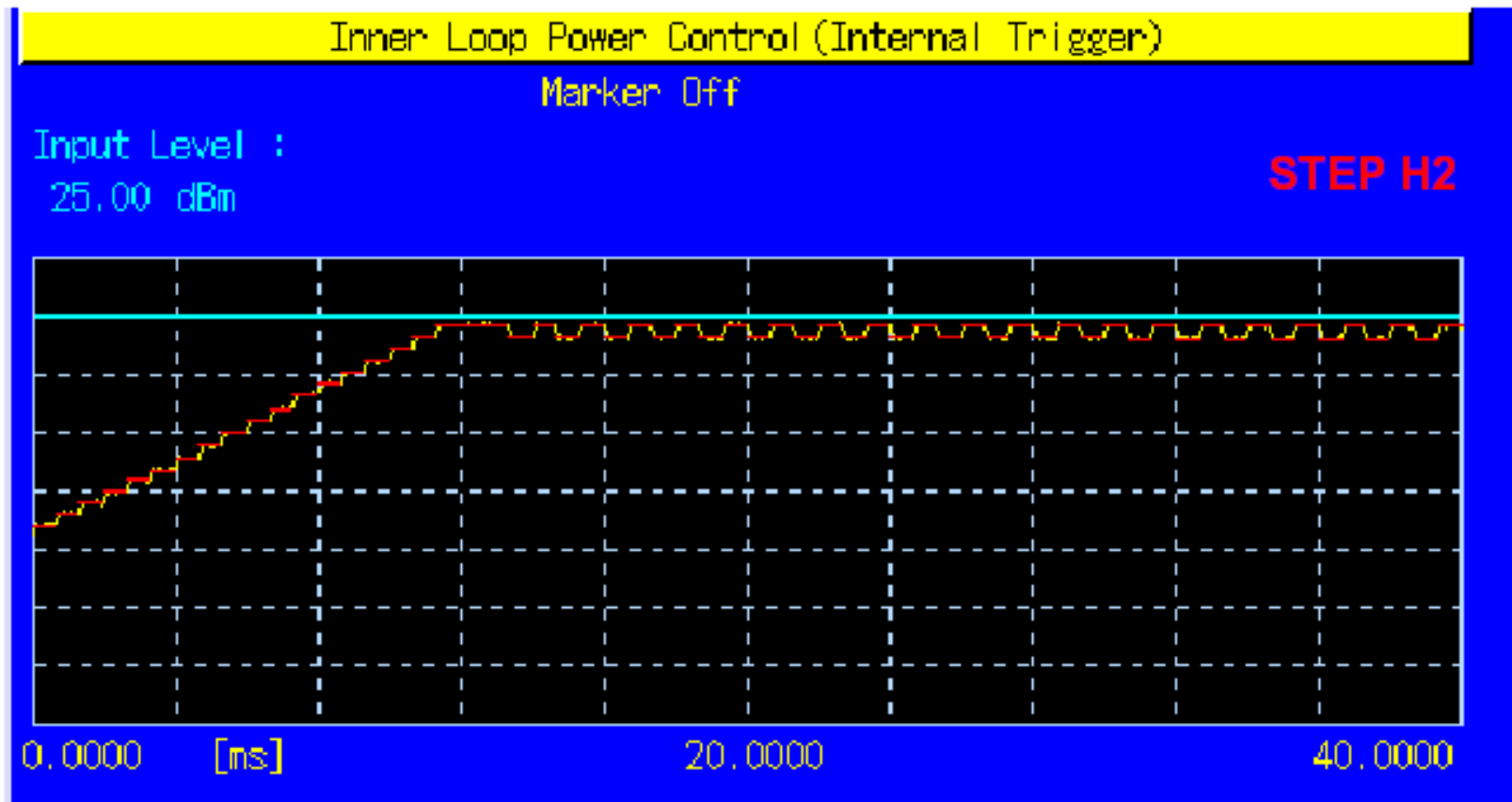
内环功率控制测试(stepH1)



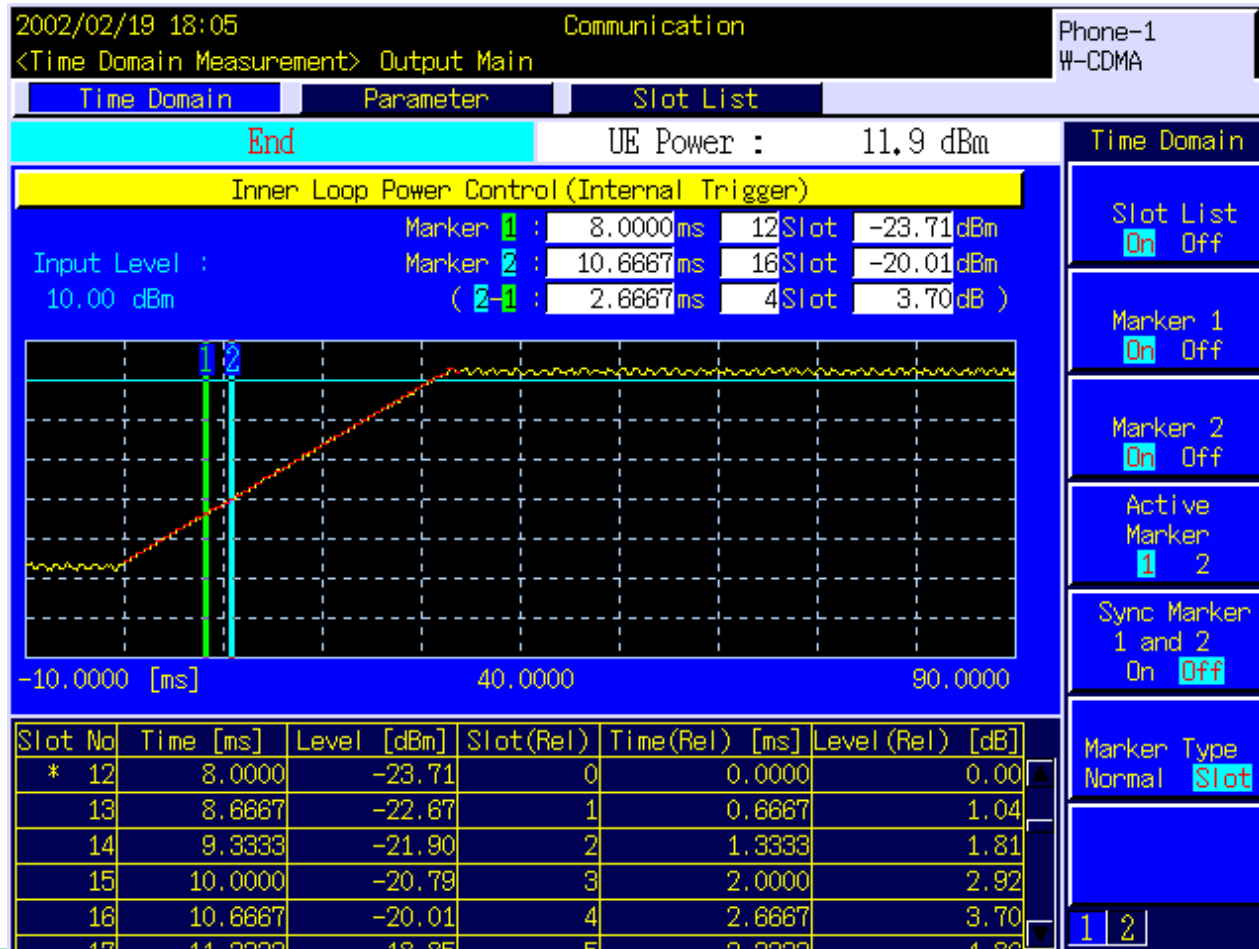
内环功率控制测试(stepH2)

87. set TPC Test Step to H.
88. set the number of slots in Test Step H to 75.
89. set TPC Algorithm to 1.
90. set TPC Step Size to 2dB.
91. set TPC Pattern to Alternate.
92. set Input Level to +25.0dBm.
93. perform the measurement.
94. read the measurement result.

内环功率控制测试(stepH2)



Slot list



最大输入电平测试 (RX)

1. set TPC Algorithm to 2.
2. set TPC Step Size to 1dB.
3. Connect to Test Loop Mode1.
4. set Output Level to -25.7dBm.
5. set DPCH_Ec/Ior to -19.0dB.
6. set Input Level to +20.0dBm.
7. set TPC Pattern to Inner Loop Power Control.
8. Set BER Measurement to On.
9. set the number of BER measurement samples to 10000 bits.
10. perform BER measurement.
11. read the result of BER measurement.

最大输入电平测试

Bit Error Rate	
Bit Error Rate	0.0000 (= 0.00 %)
	0.00E+00
Error Count	0
Transmitted/Sample	10717 / 10000 Bit
Judgment	Pass

从WCDMA切换到 GSM

2004/08/12 18:05 Loop Mode 1 Phone-1 W-CDMA
<Fundamental Measurement> Output Main

Parameter Fundamental UE Report

End UE Power : -10.1 dBm

Power Measurement (Meas. Count : 1/ 1)

	Avg.	Max	Min	
TX Power	-9.03	-9.03	-9.03	dBm
	124.9	124.9	124.9	uW
Filtered Power	-9.24	-9.24	-9.24	dBm
	119.2	119.2	119.2	uW

Frequency Error (Meas. Count : 1/ 1)

	Avg.
Carrier Frequency	1949.999999 MHz

	Avg.	Max	Min	
Carrier Frequency Error	-0.0010	-0.0010	-0.0010	kHz
	0.00	0.00	0.00	ppm

Common Parameter Item List Standard

Call Processing On Test Loop Mode Mode 1

Frequency

UL Channel & Frequency 9750 CH = 1950.000000 MHz

DL Channel & Frequency 10700 CH = 2140.000000 MHz

Parameter

Relative (AF)

Handover To GSM

Select Scenario

Load Scenario

Delete Scenario

1 | 2 | 3

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Thank You !