检测报告编号：2010J10-30-106052
Test report series No.

TEST REPORT

上海市计量测试技术研究院
华东国家计量测试中心
中国上海测试中心

检 测 报 告

委托者 Customer: SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

委托者地址 Address of customer: No. 588 West Jindu Road, Songjiang District, Shanghai, China 201612

样品名称 Name of sample: CDMA & GSM dual mode phone

制造厂 Manufacturer: Hisense Communication Co., Ltd

型号/规格 Model/Specification: EG59

样品编号 No. of sample: 1#

批准人/职务 Approved by / Functions: 主任

(机构检测专用章)

核验员 Checked by:

检测员 Tested by:

检测日期 Date for test: 2010 年 Year 06 月 Month 22 日 Day

投诉电话：021-50798262 Tel. For complaint

地址：上海市张衡路 1500 号(总部) Address No.1500 Zhangheng Road, Shanghai(headquarters) 电话：021-38839800 Tel. 传真：021-50798390 Fax. 邮编：201203 Post Code

上海市宜山路 716 号(分部) No. 716 Yishan Road, Shanghai(branch) 电话：021-64701390 Tel. 传真：021-64701810 Fax. 邮编：200233 Post Code

国家法定计量检定机构计量授权证书号（中心/院）：（国）法计（2007）01039 号/（2007）01019 号
The number of the Certificate of Metrological Authorization to The Legal Metrological Verification Institution is No.（2007）01039 / No.（2007）01019

中国合格评定国家认可委员会实验室认可证书号：No. CNAS L0134
The number of the certificate accredited by CNAS is No.L0134

中国国家认证认可监督管理委员会资质认定计量认证证书（CMA）号：2009000597E
The number of the metrology accreditation certificate by CNCA is No. 2009000597E

本次检测所依据的技术规范（代号、名称）：
Reference documents for the test (code 、name)

FCC part 22: 2009 Part 22: Public Mobile Services

本次检测所使用的主要测量仪器：
Main measuring instruments used in this test

Refer to Attachment 1

检测地点及环境条件：
Location and environmental condition for the test

地点：No. 716 Yishan Road
Location

温度：(21-22) ℃； 湿度：(51-58) %RH； 其它：/
Ambient temperature / Relative humidity / Others

检测结果/说明：
Results of test and additional explanation

The testing results are in compliance with FCC part 22: 2009 (see the continued pages)
(Test date: 2010.06.10-2010.06.22)

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1. Test Summary

FCC Rule	DESCRIPTION OF TEST	Result
§2.1046	Peak Output Power	Pass
§ 22.913	Carrier Radiated Power	Pass
§2.1049 §22.917	Occupied Bandwidth	Pass
§2.1049 §22.917	Band Edge	Pass
§2.1051	Spurious Conducted Emission	Pass
§2.1053	Spurious Radiated Emission	Pass
§2.1055 § 22.355	Frequency Deviation	Pass

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2. General Information

2.1 EUT Description

Product Name	CDMA & GSM dual mode phone
Trade Name	Hisense
Model No.	EG59
Type of modulation	OQPSK
Antenna type	Soldered on PCB
TX Frequency	824.70 MHz~848.31 MHz
Rx Frequency	869.00MHz~894.00MHz
Output power	23±2dBm Max
Channel bandwidth	1.23MHz
FCC ID	SARHISENSEEG59

2.2 Operational Description

SIMT EMC has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Test Mode	CDMA 800 RC11 SO2 (Loopback)
	CDMA 800 RC11 SO55 (Loopback)
	CDMA 800 RC22 SO9 (Loopback)
	CDMA 800 RC33 SO2 (Loopback)
	CDMA 800 RC33 TDSO SO32 (FCH+SCH0 9.6kpbs)
	CDMA 800 RC33 SO55 (Loopback)
	CDMA 800 RC43 SO2 (Loopback)
	CDMA 800 RC43 TDSO SO32 (FCH+SCH0 9.6kpbs)
	CDMA 800 RC43 SO55 (Loopback)
	CDMA 800 RC54 SO9 (Loopback)

检测结果/说明（续页）：
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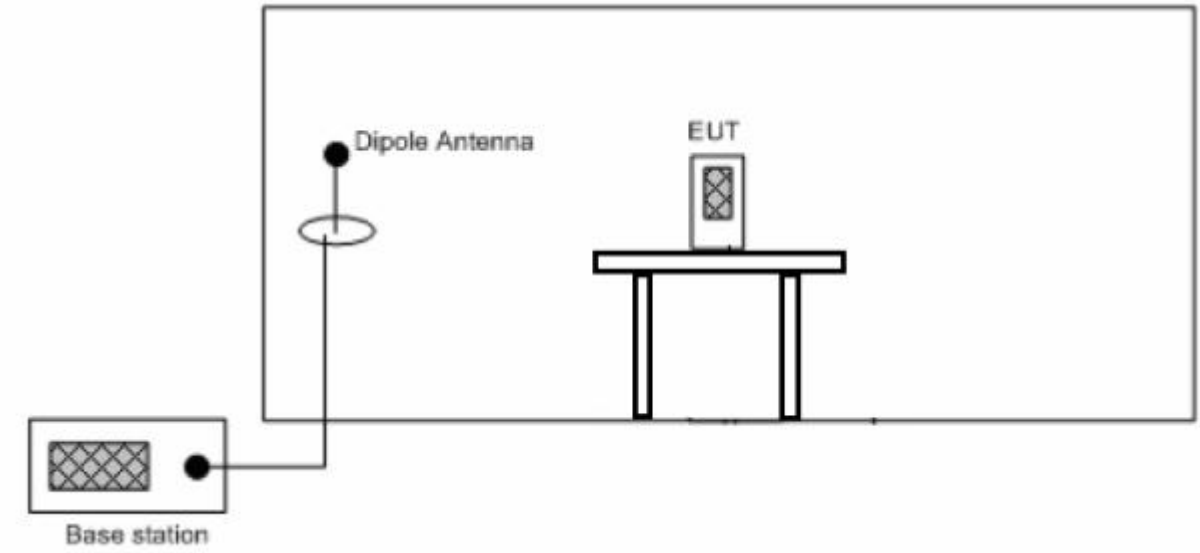
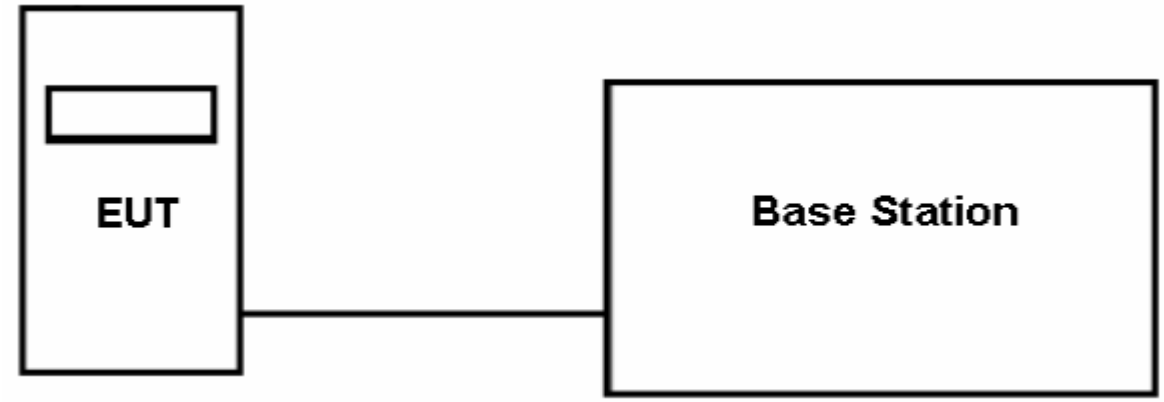
2.3 Configuration of Tested System

(1) Configuration of Radiated measurement



(2) Configuration of Conducted measurement



2.4 General Information of Test Site

Site Name: SIMT EMC Lab.

Site Address: 716 Yi Shan Road. Shanghai. China
Tel: 8621-6470-1390 / Fax: 8621-6451-4252
E-Mail: EMC@SIMT.com.cn

检测结果/说明（续页）：
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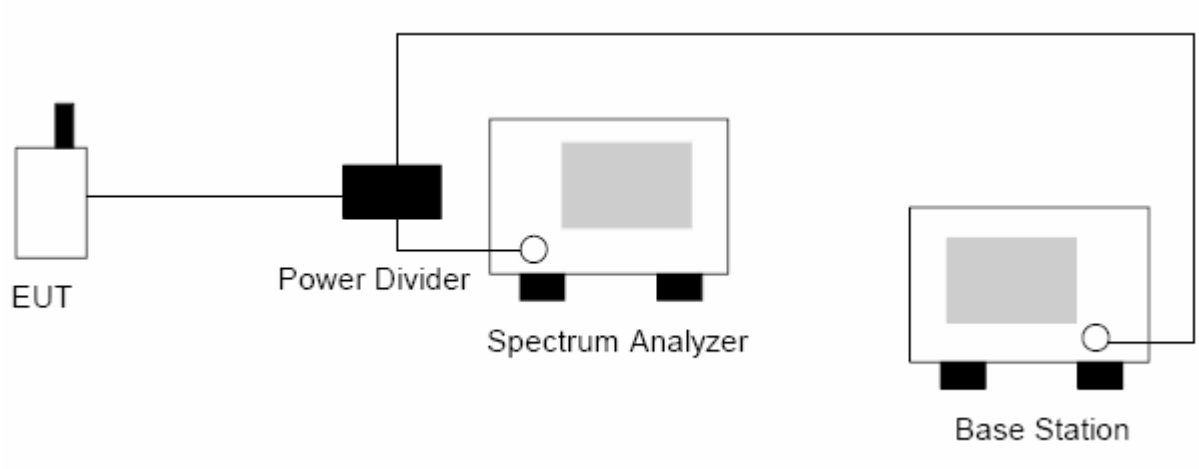
3. Peak Output Power Test

3.1 Test setup



3.2 Limits

No specific requirement.

3.3 Test procedure

After a radio link has been established between EUT and Base station, the output power of the cell signal of the testing equipment will be decreased until the output power of the EUT reach a maximum value. Then the test data can be read at the tester screen. The loss between RF output port of the EUT and the input port of the tester will be taken into consideration.

The measurement will be conducted at three channels Bottom, middle and top channels.

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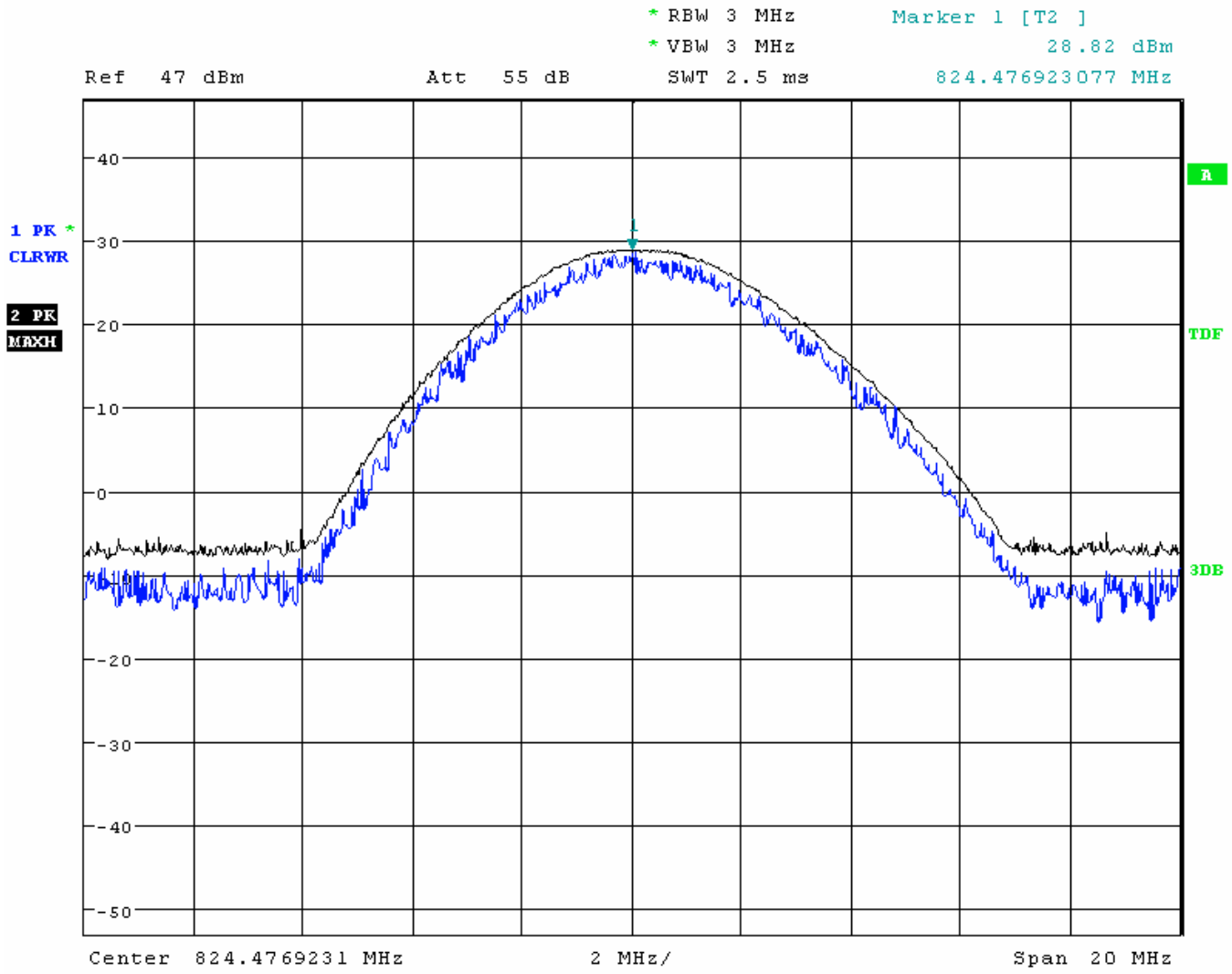
3.4 Test results

3.4.1 Test mode: CDMA 800 RC11 SO2 (Loopback)

Power source: DC: 3.7V				
Test Frequency (MHz)	Cable Loss (dB)	Test Level (dBm)	Carrier Power (dBm)	Test results
824.48 (1013 channel)	16.50	12.32	28.82	Pass
836.37 (384 channel)	16.70	11.91	28.61	Pass
848.46 (777 channel)	16.90	11.98	28.88	Pass

824.48MHz (1013 channel)



检测结果/说明（续页）：
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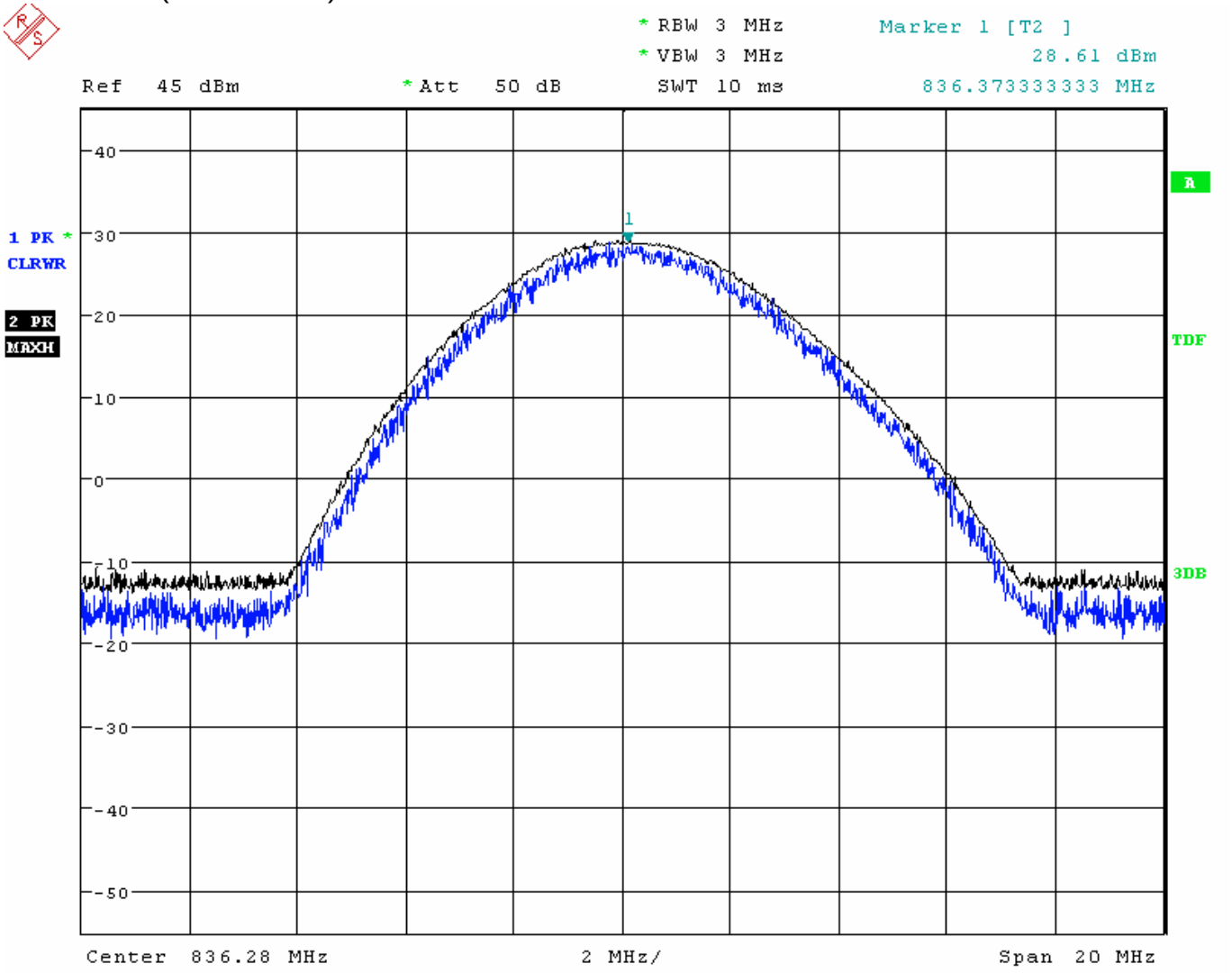
836.37MHz (384 channel)



检测结果/说明（续页）：
Results of test and additional explanation（continued page）
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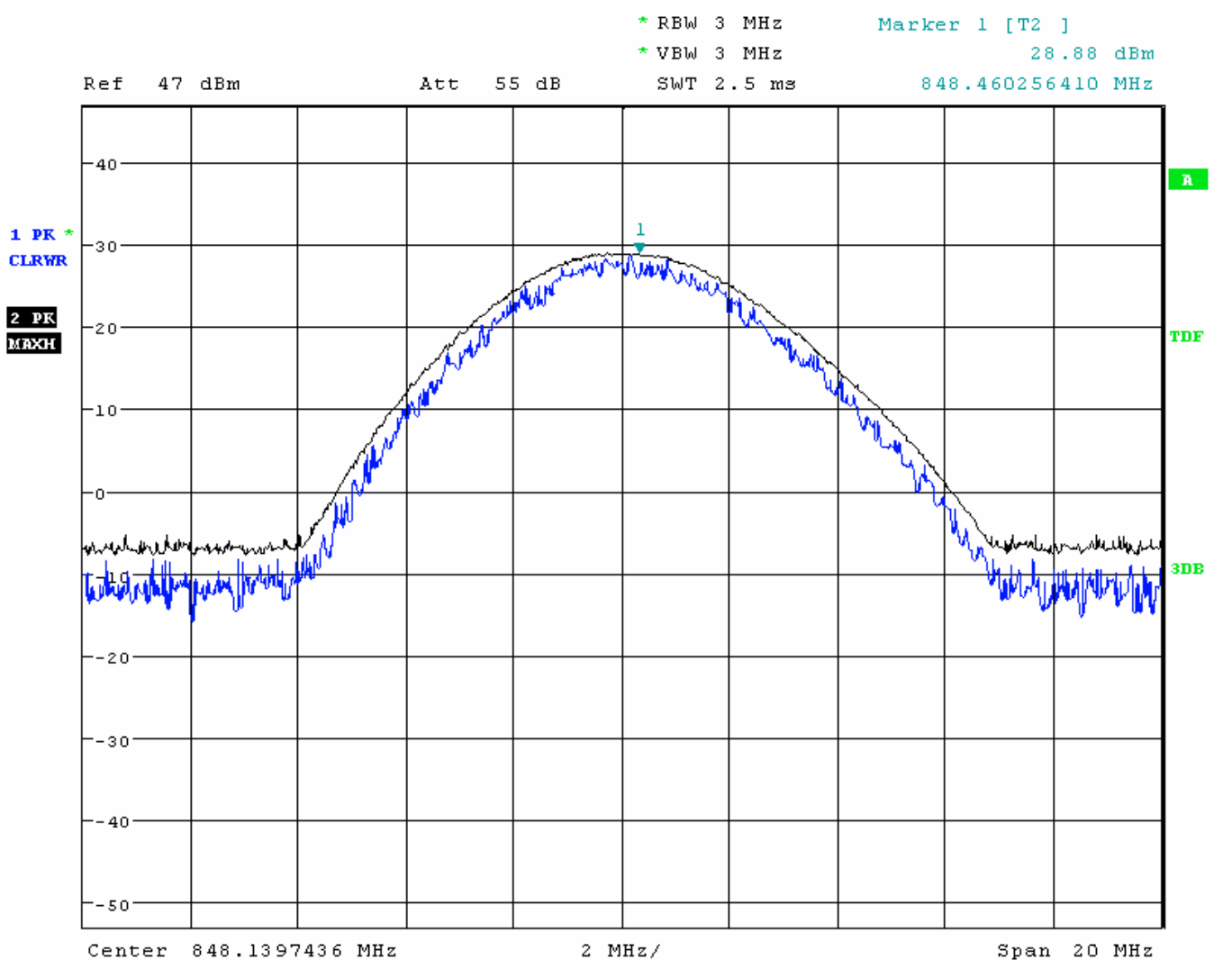
848.46MHz (777 channel)



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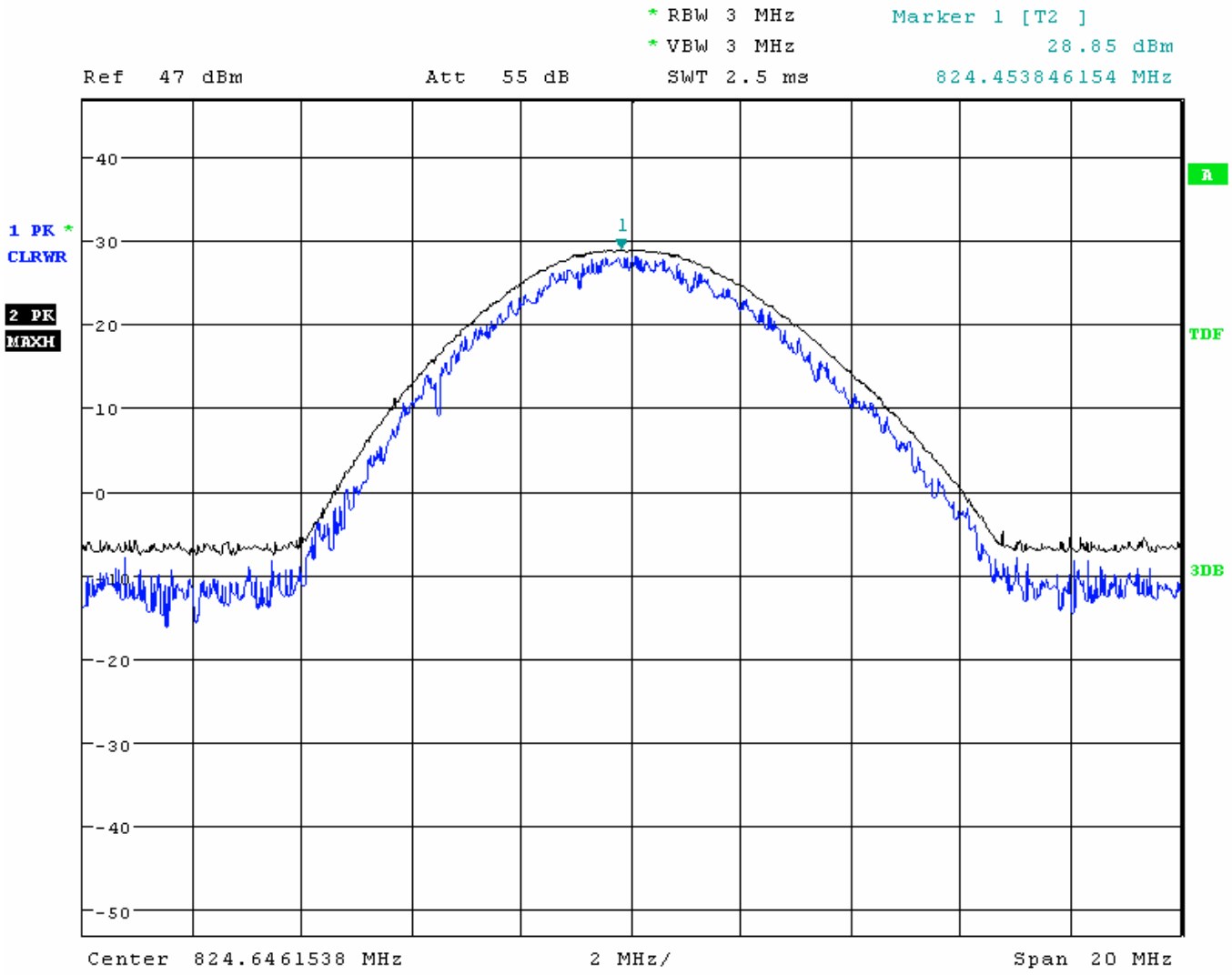
3.4.2 Test mode: CDMA 800 RC11 SO55 (Loopback)

Power source: DC: 3.7V				
Test Frequency (MHz)	Cable Loss (dB)	Test Level (dBm)	Carrier Power (dBm)	Test results
824.45 (1013 channel)	16.50	12.35	28.85	Pass
836.28 (384 channel)	16.70	11.89	28.59	Pass
848.01 (777 channel)	16.90	12.07	28.97	Pass

824.45MHz (1013 channel)



检测结果/说明（续页）：
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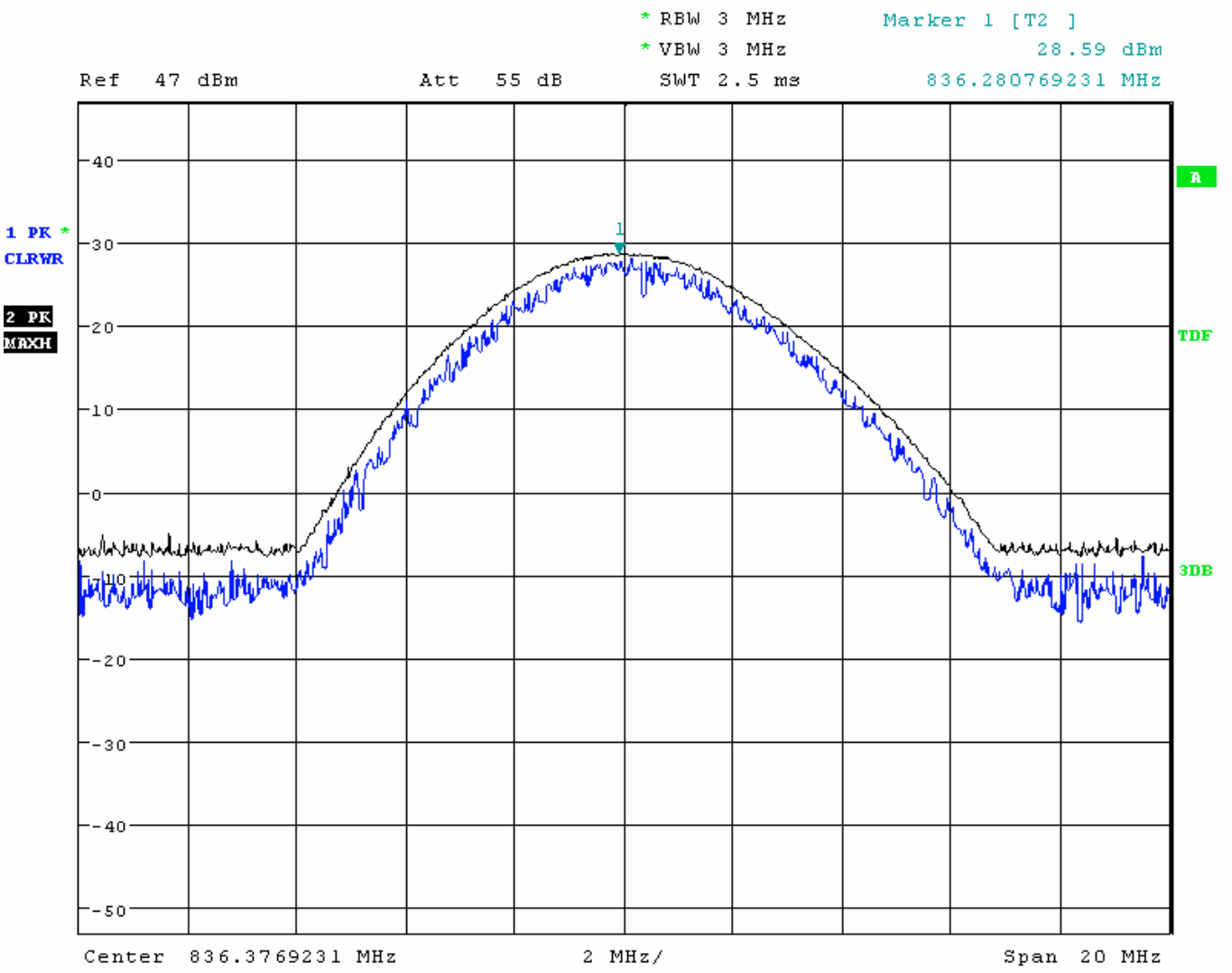
836.28MHz (384 channel)



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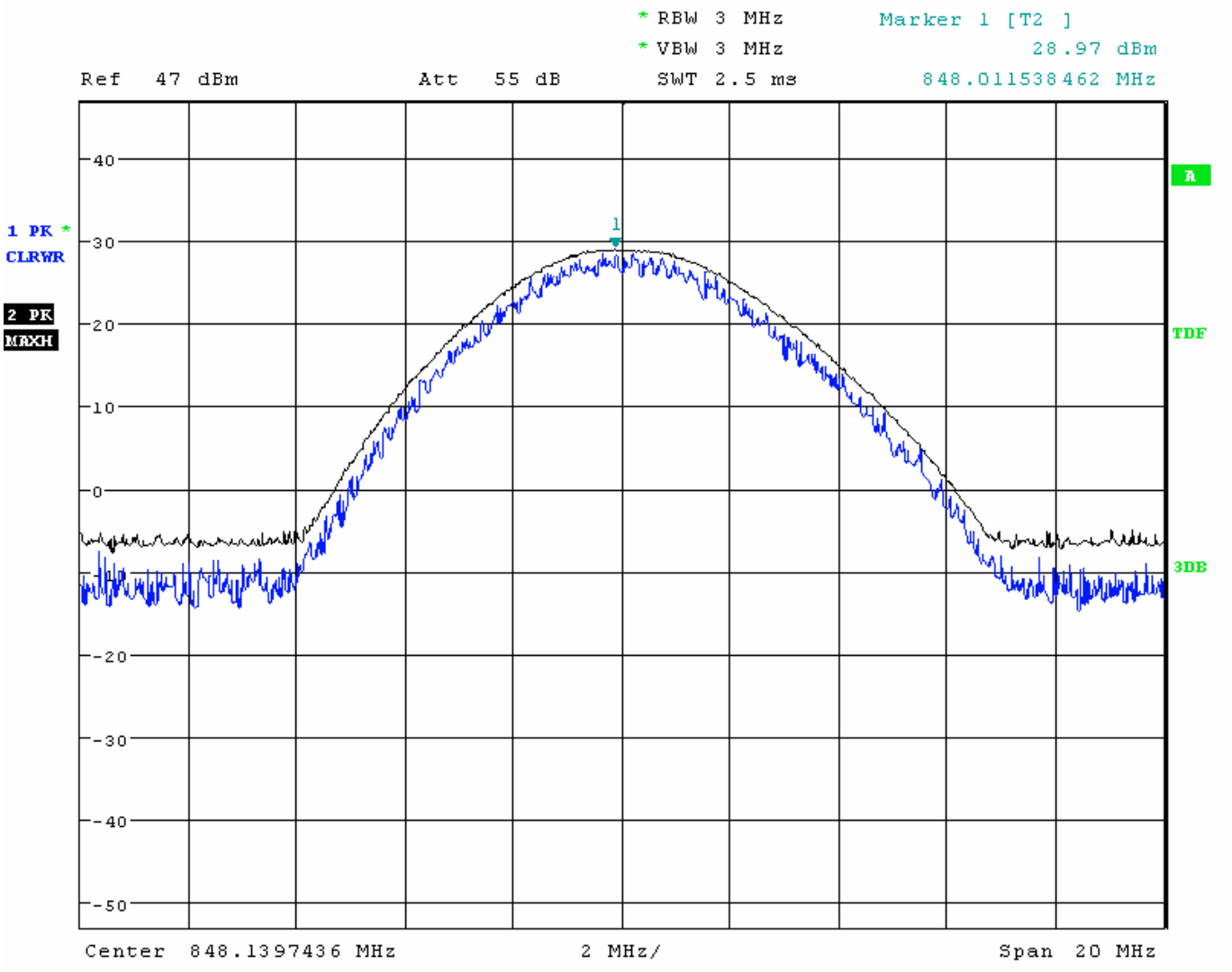
848.01MHz (777 channel)



检测结果/说明（续页）：
Results of test and additional explanation（continued page）
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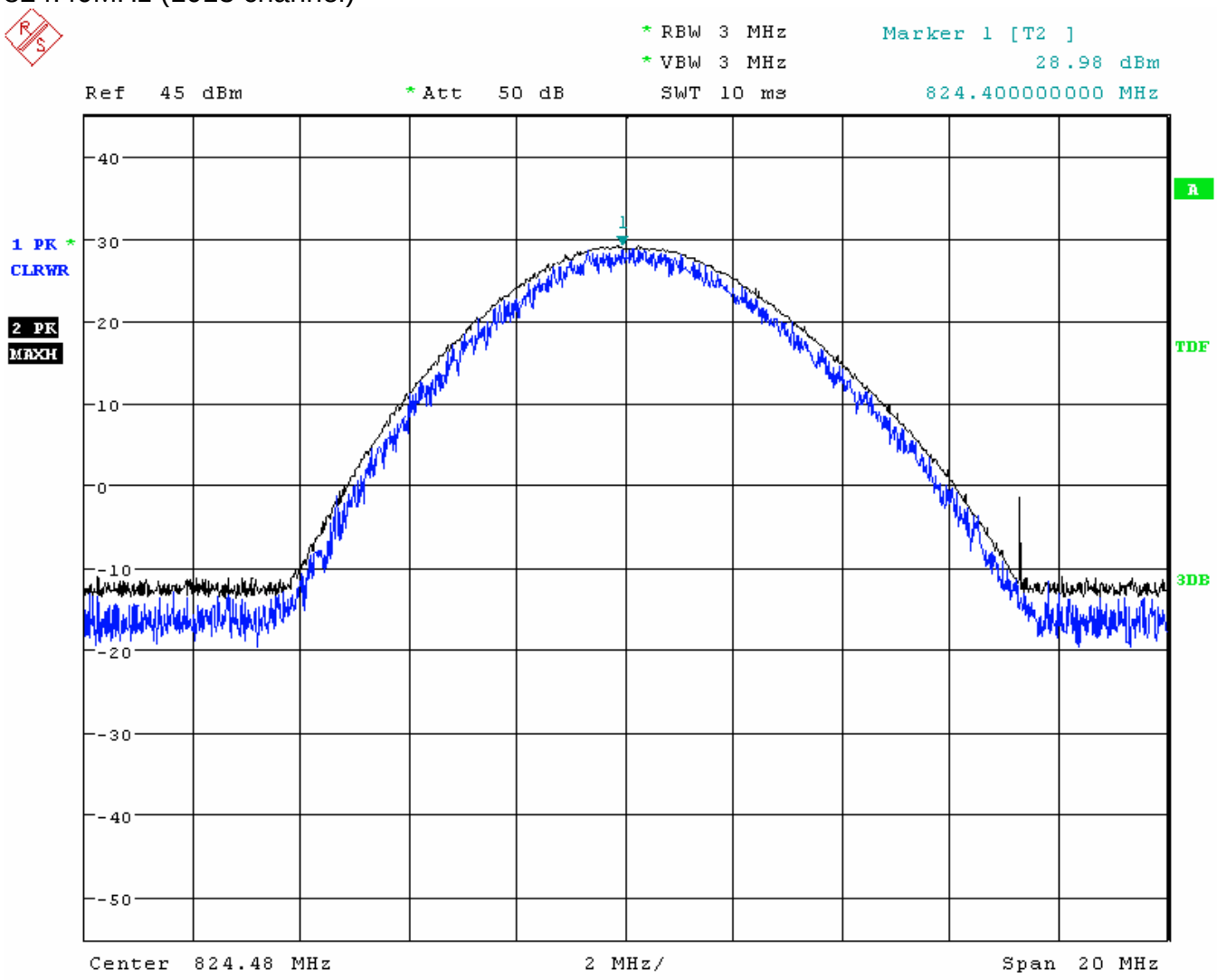
3.4.3 Test mode: CDMA 800 RC22 SO9 (Loopback)

Power source: DC: 3.7V				
Test Frequency (MHz)	Cable Loss (dB)	Test Level (dBm)	Carrier Power (dBm)	Test results
824.40 (1013 channel)	16.50	12.48	28.98	Pass
836.37 (384 channel)	16.70	12.00	28.70	Pass
848.32 (777 channel)	16.90	12.01	28.91	Pass

824.40MHz (1013 channel)



检测结果/说明（续页）：
Results of test and additional explanation（continued page）
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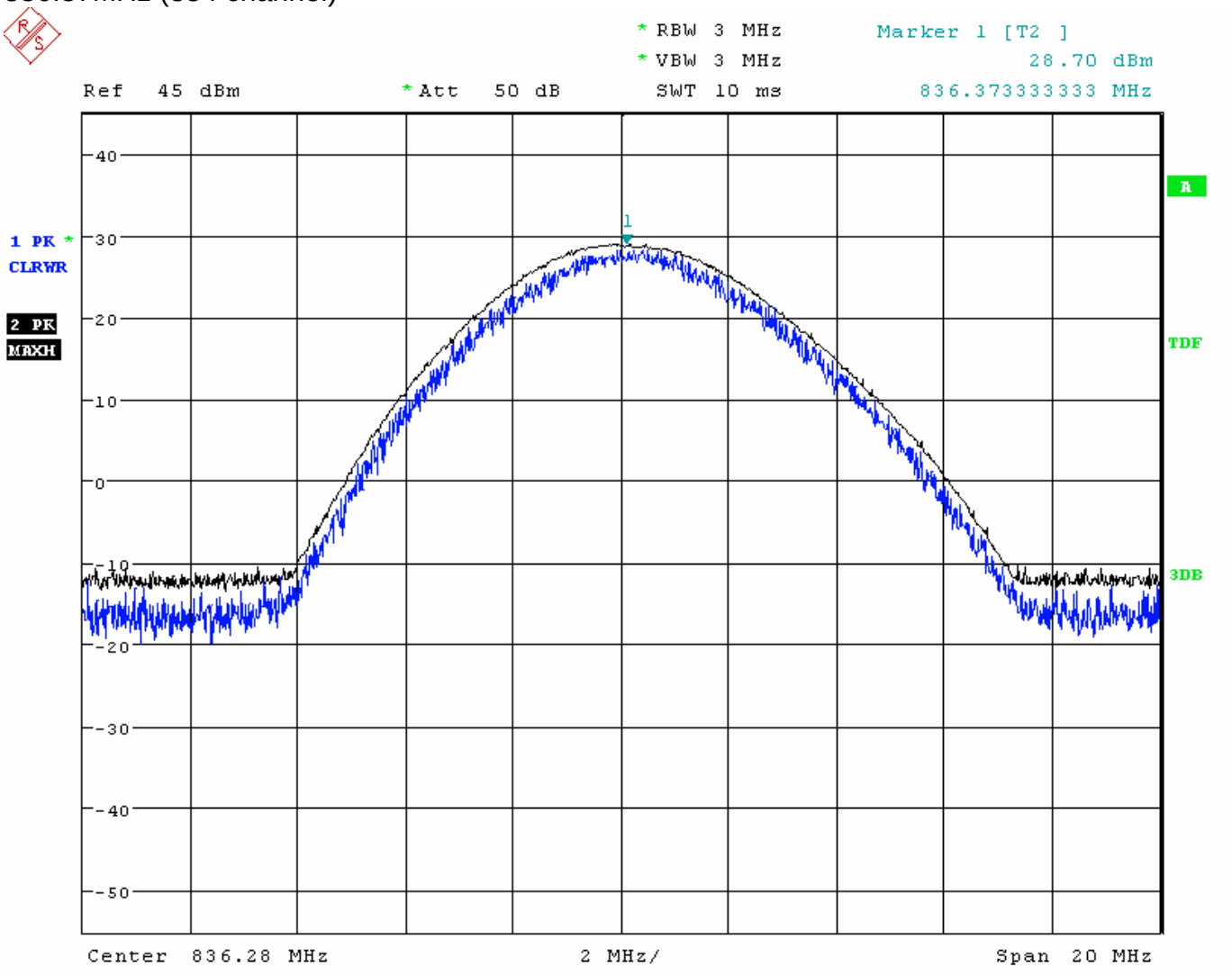
836.37MHz (384 channel)



检测结果/说明（续页）：
Results of test and additional explanation（continued page）
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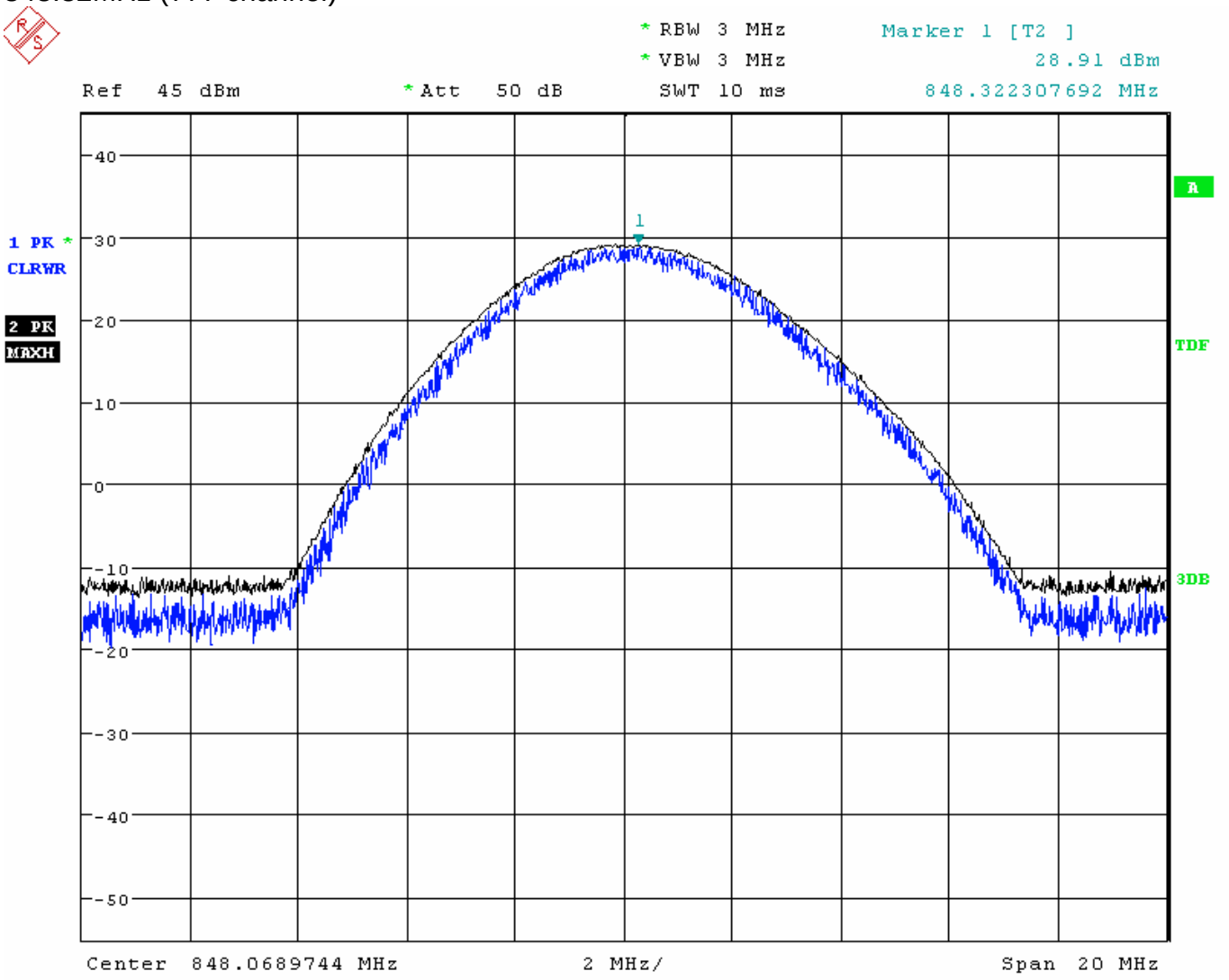
848.32MHz (777 channel)



检测结果/说明（续页）：
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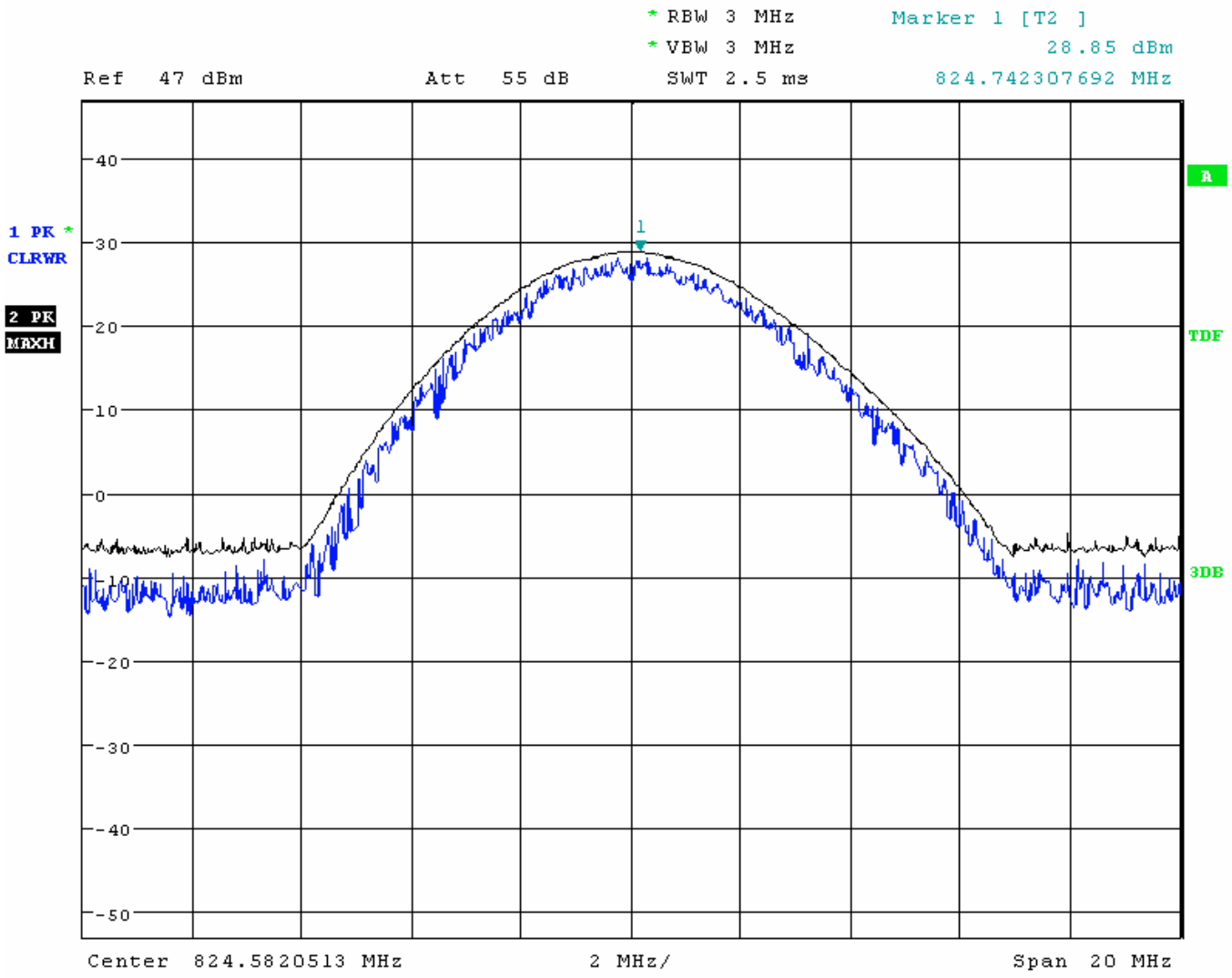
3.4.4 Test mode: CDMA 800 RC33 SO2 (Loopback)

Power source: DC: 3.7V				
Test Frequency (MHz)	Cable Loss (dB)	Test Level (dBm)	Carrier Power (dBm)	Test results
824.74 (1013 channel)	16.50	12.35	28.85	Pass
836.57 (384 channel)	16.70	11.87	28.57	Pass
848.24 (777 channel)	16.90	11.94	28.84	Pass

824.74MHz (1013 channel)



检测结果/说明（续页）：
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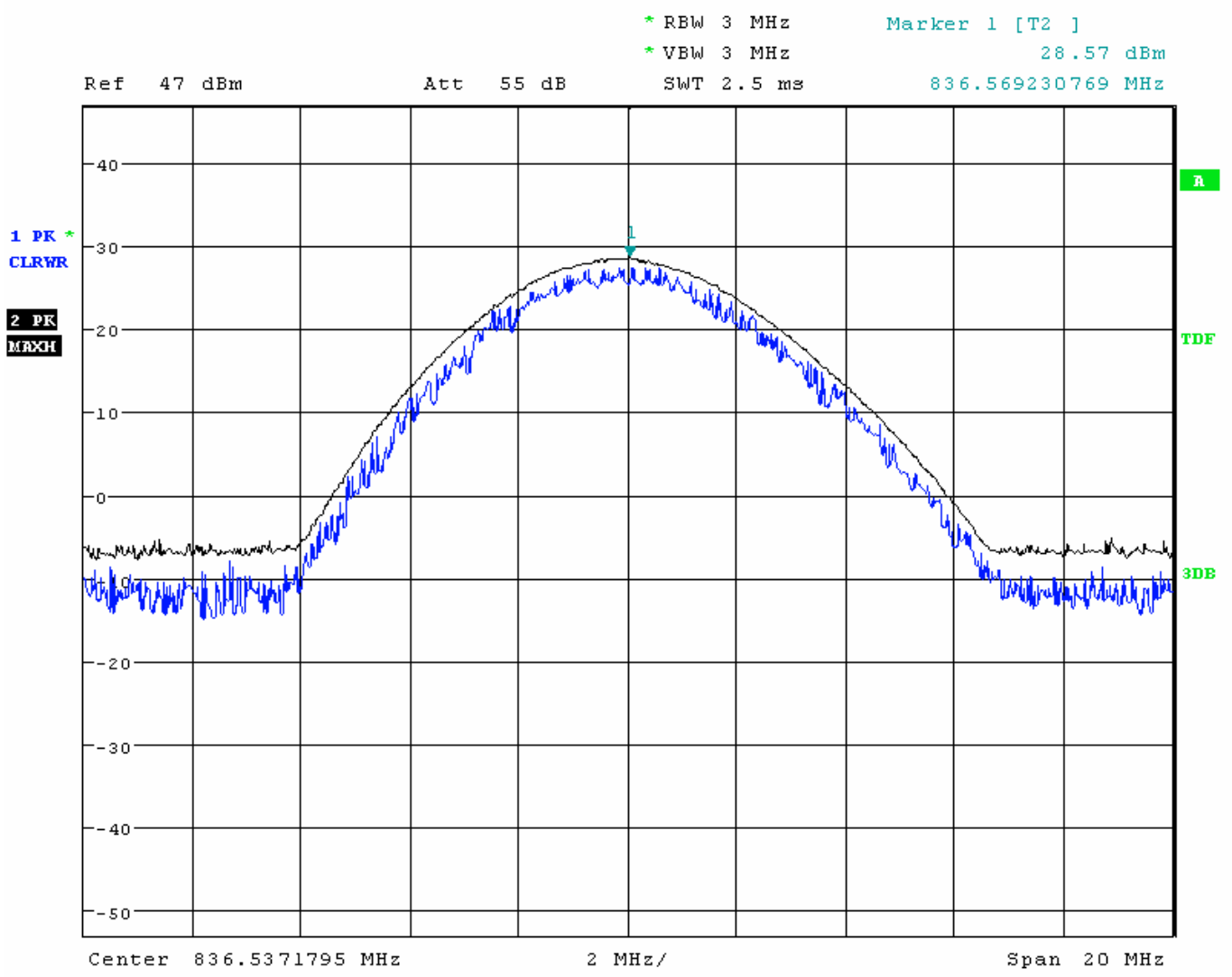
836.57MHz (384 channel)



检测结果/说明（续页）：
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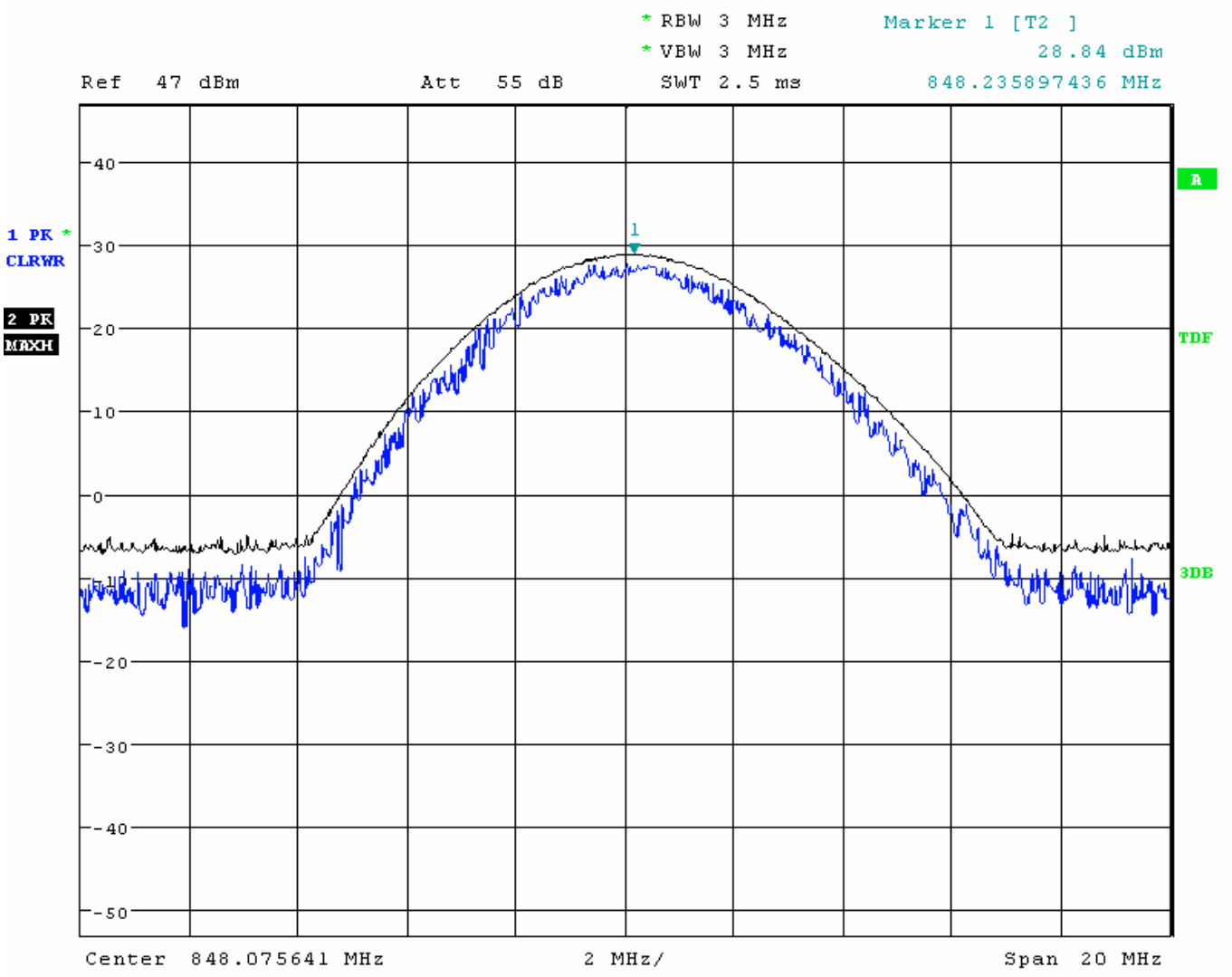
848.24MHz (777 channel)



检测结果/说明（续页）：
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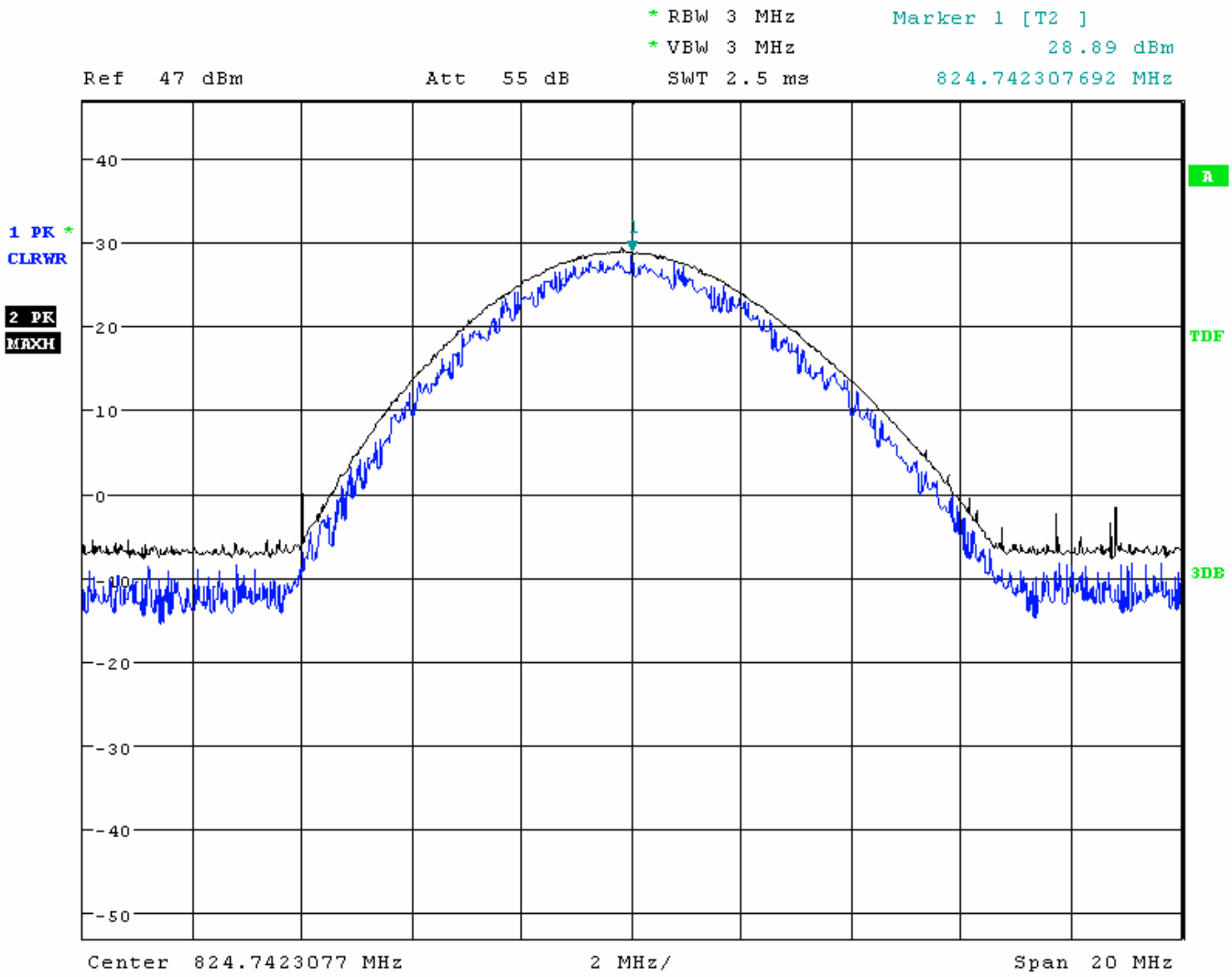
3.4.5 Test mode: CDMA 800 RC33 TDSO SO32 (FCH+SCH0 9.6kpbs)

Power source: DC: 3.7V				
Test Frequency (MHz)	Cable Loss (dB)	Test Level (dBm)	Carrier Power (dBm)	Test results
824.74 (1013 channel)	16.50	12.39	28.89	Pass
836.25 (384 channel)	16.70	11.90	28.60	Pass
848.11 (777 channel)	16.90	11.94	28.84	Pass

824.74MHz (1013 channel)



检测结果/说明（续页）：
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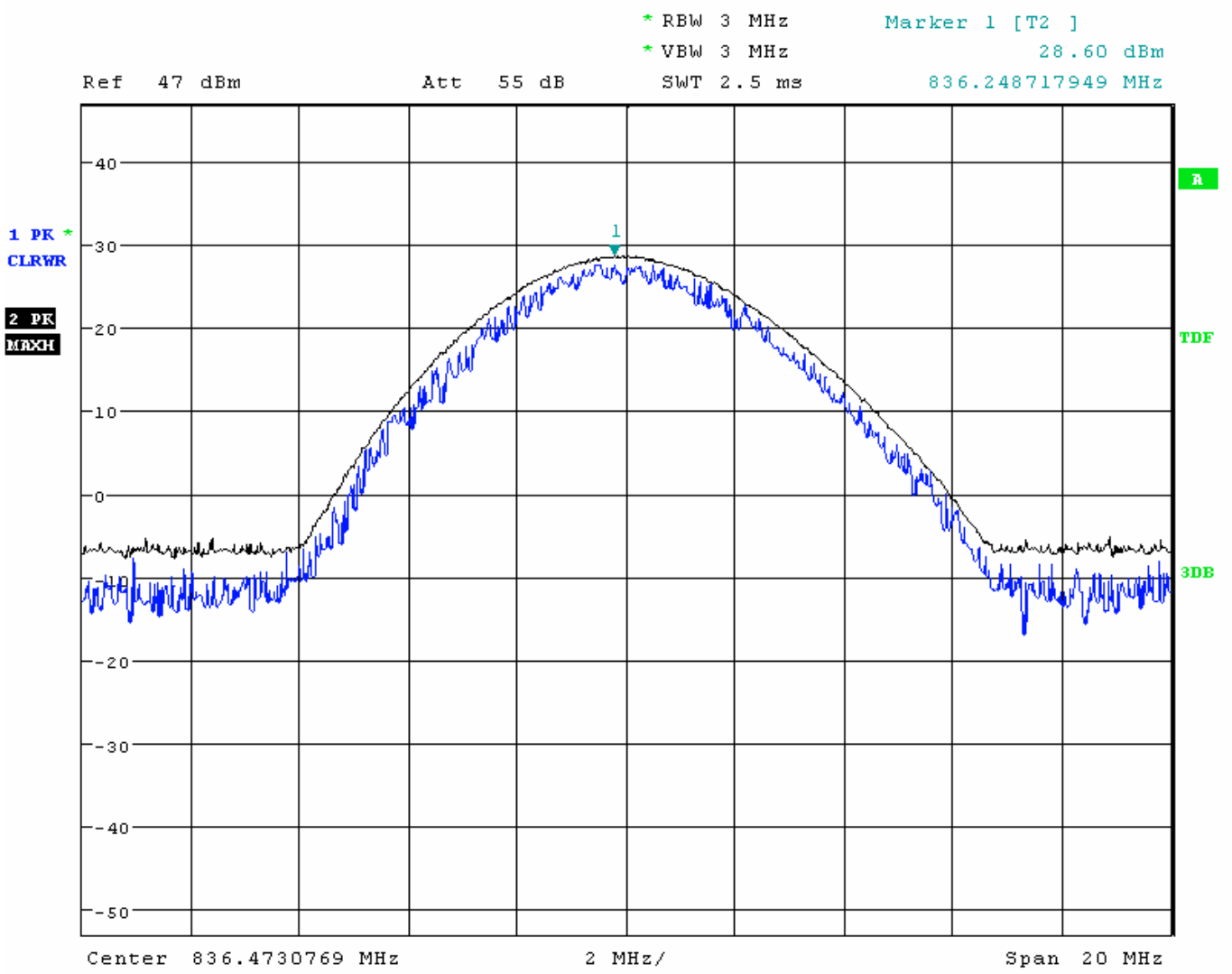
836.25MHz (384 channel)



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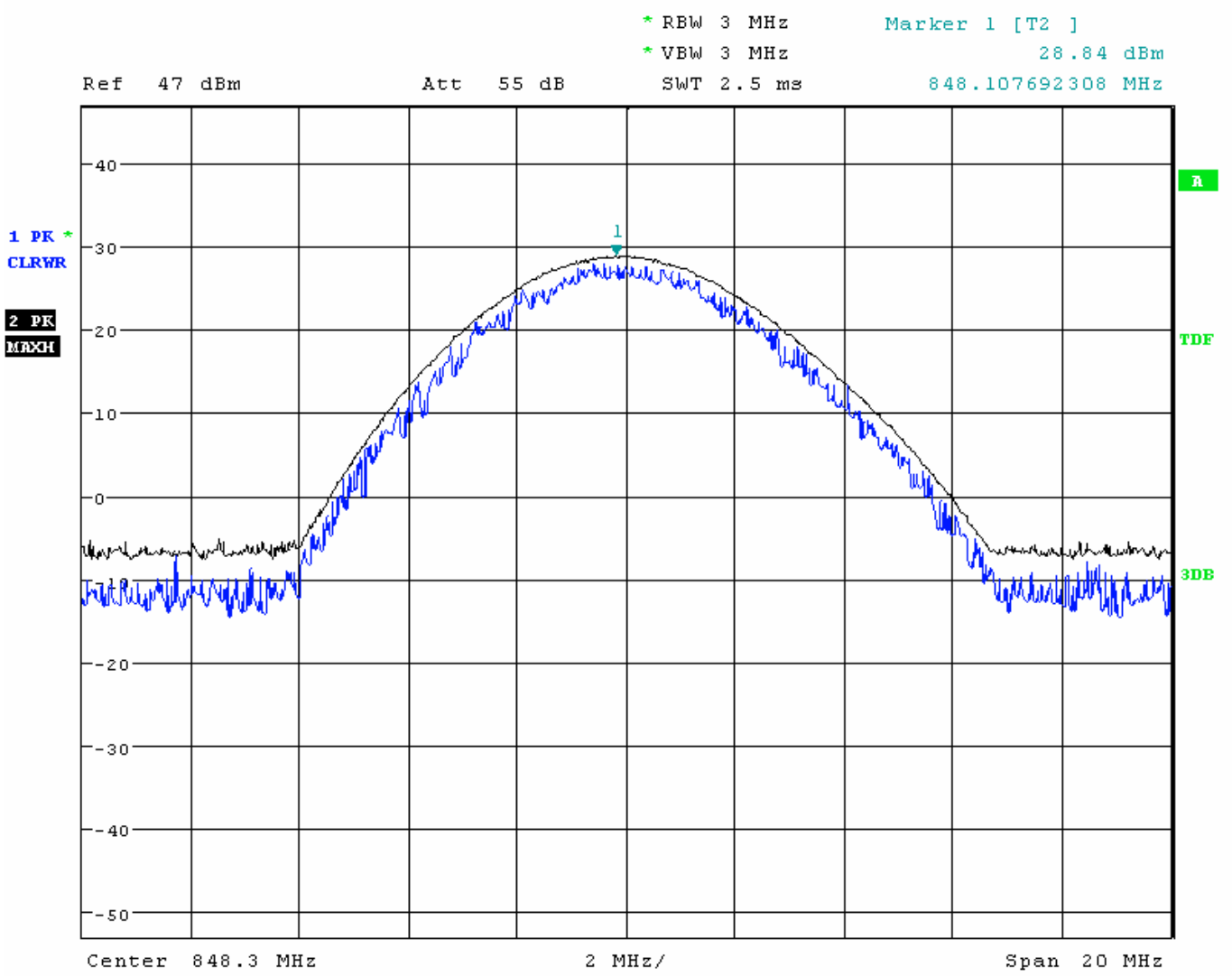
848.11MHz (777 channel)



检测结果/说明（续页）：
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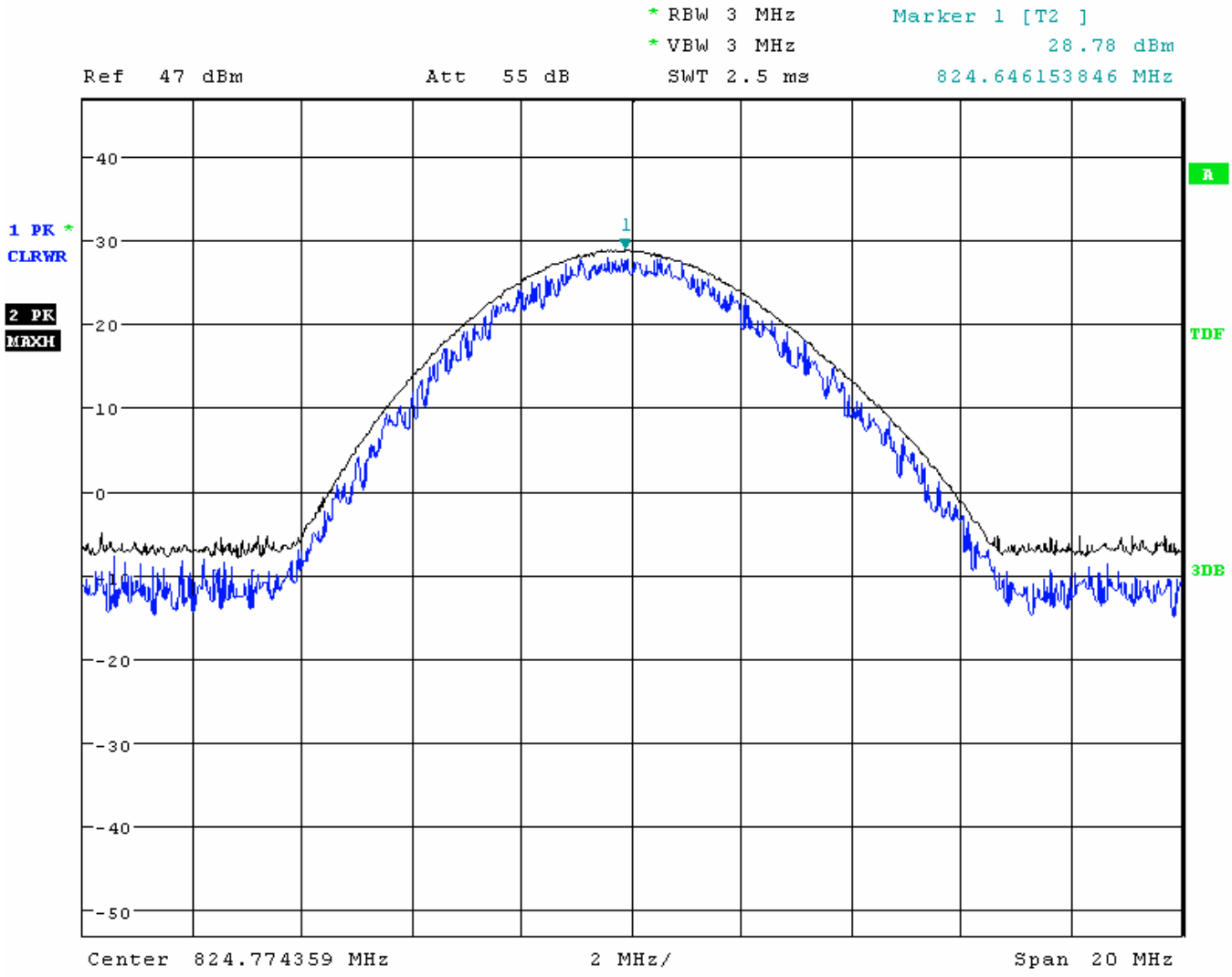
3.4.6 Test mode: CDMA 800 RC33 SO55 (Loopback)

Power source: DC: 3.7V				
Test Frequency (MHz)	Cable Loss (dB)	Test Level (dBm)	Carrier Power (dBm)	Test results
824.65 (1013 channel)	16.50	12.28	28.78	Pass
836.18 (384 channel)	16.70	11.82	28.52	Pass
848.14 (777 channel)	16.90	11.93	28.83	Pass

824.65MHz (1013 channel)



检测结果/说明（续页）：
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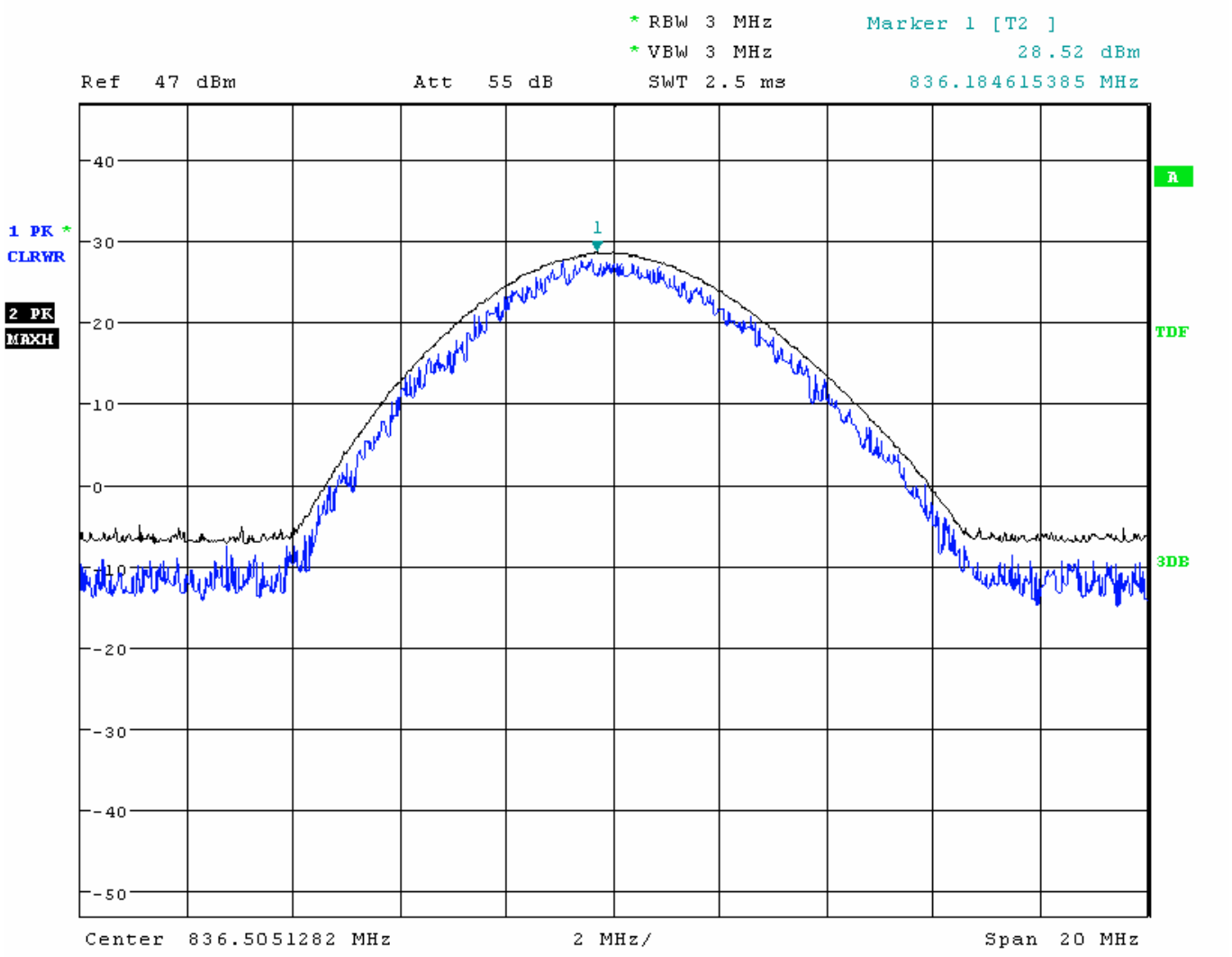
836.18MHz (384 channel)



检测结果/说明（续页）：
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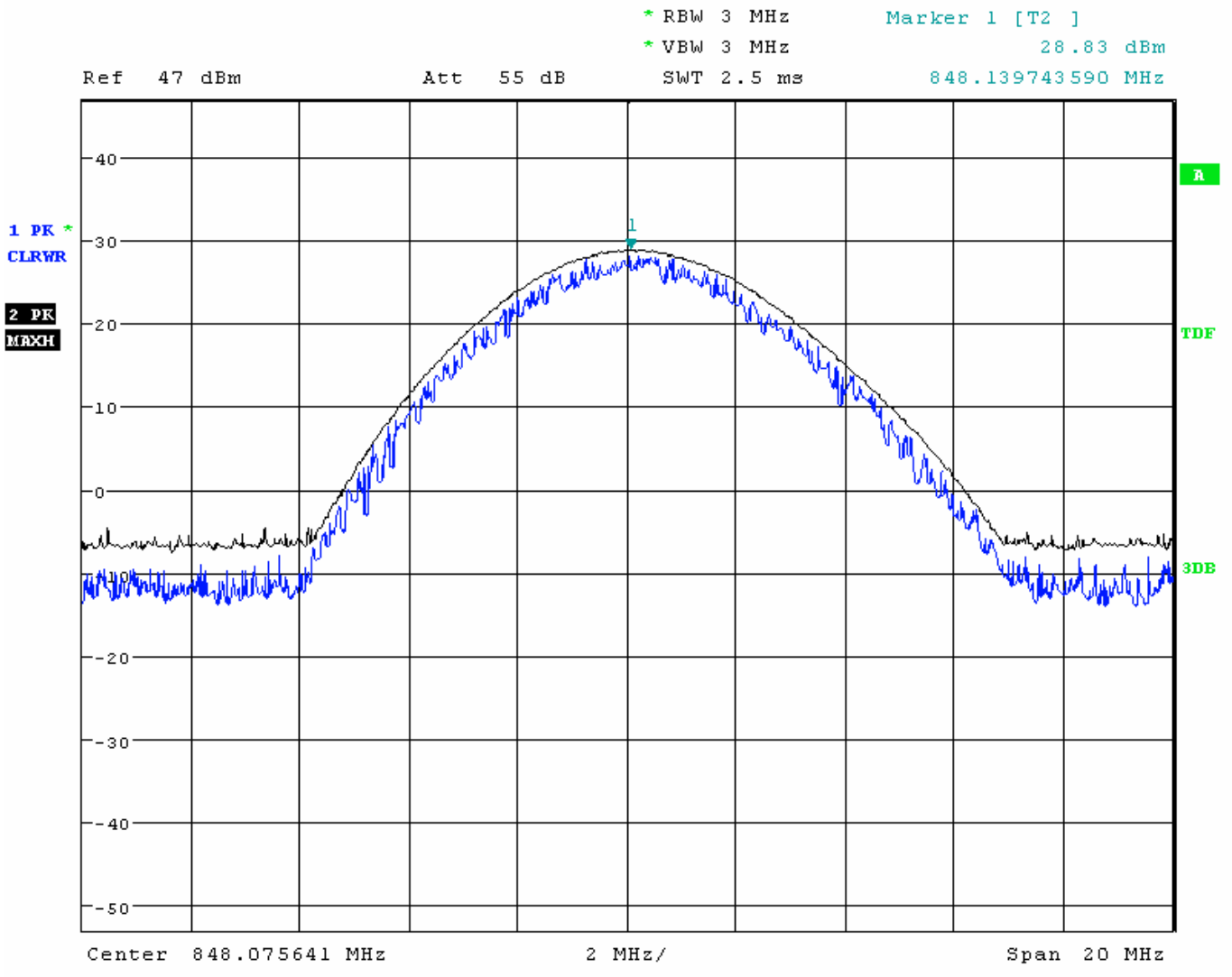
848.14MHz (777 channel)



检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

3.4.7 Test mode: CDMA 800 RC43 SO2 (Loopback)

Power source: DC: 3.7V				
Test Frequency (MHz)	Cable Loss (dB)	Test Level (dBm)	Carrier Power (dBm)	Test results
824.45 (1013 channel)	16.50	12.32	28.82	Pass
836.38 (384 channel)	16.70	11.92	28.62	Pass
848.14 (777 channel)	16.90	11.91	28.81	Pass

824.45MHz (1013 channel)

检测结果/说明（续页）：
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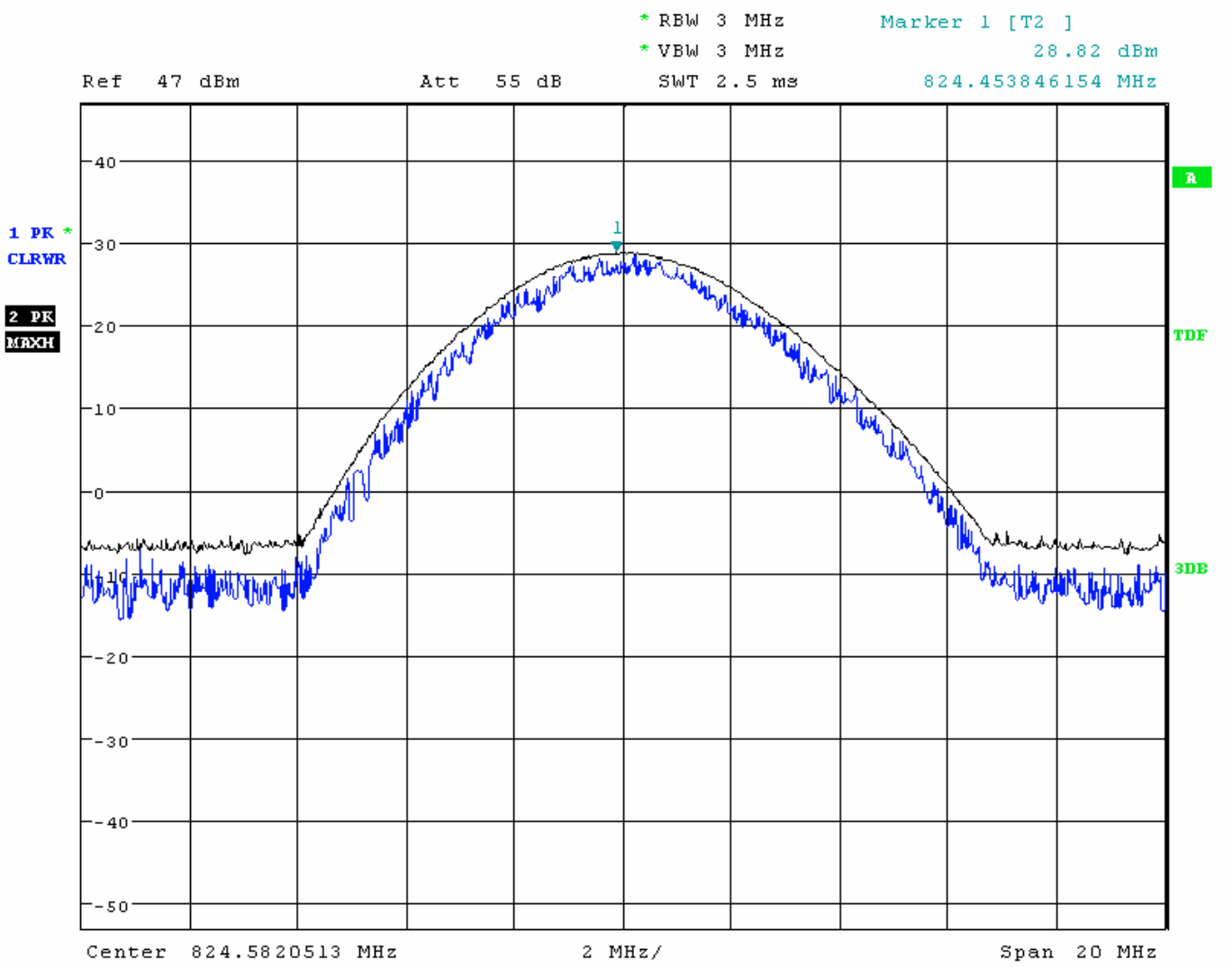

836.38MHz (384 channel)

检测结果/说明（续页）：
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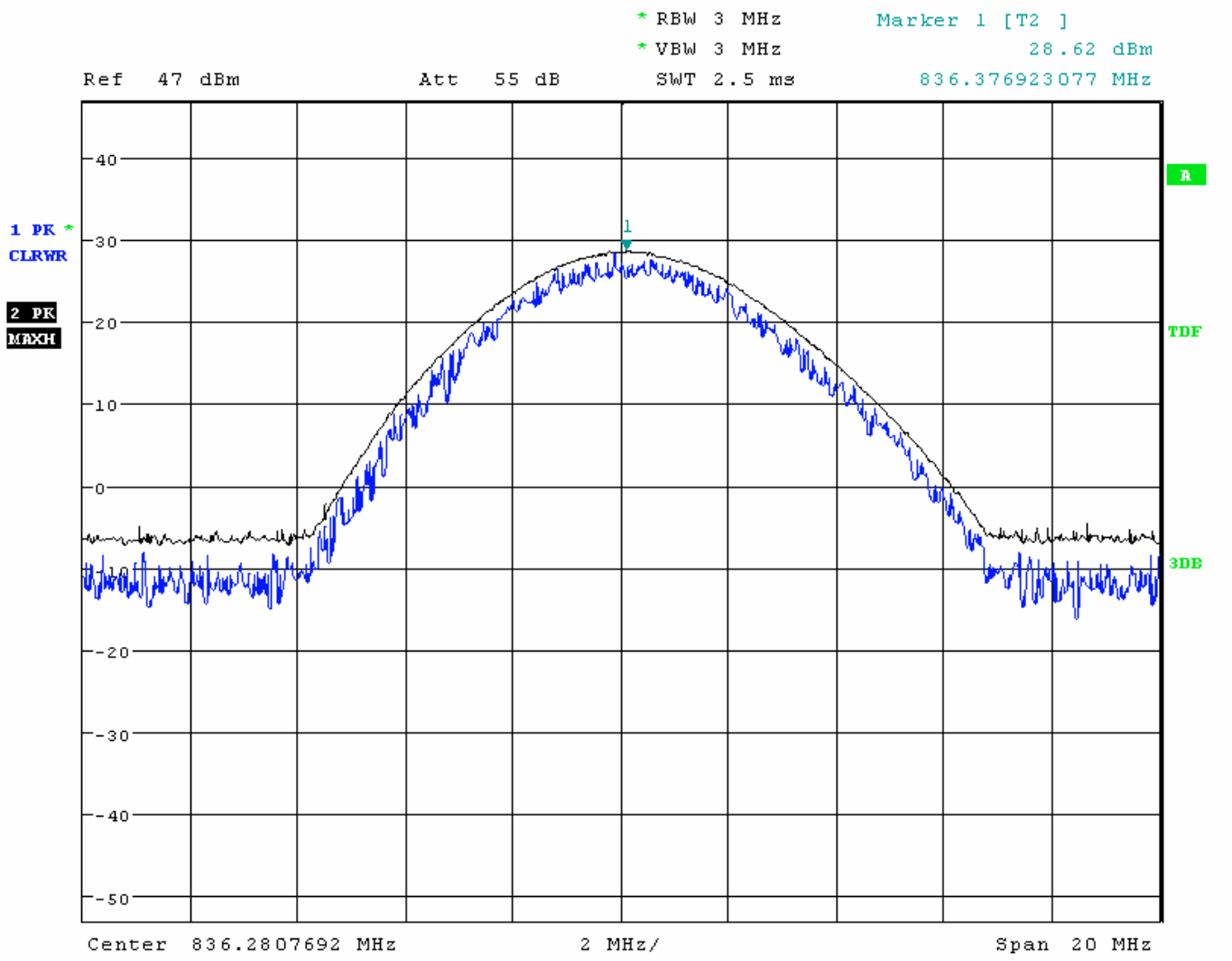

检测结果/说明（续页）：
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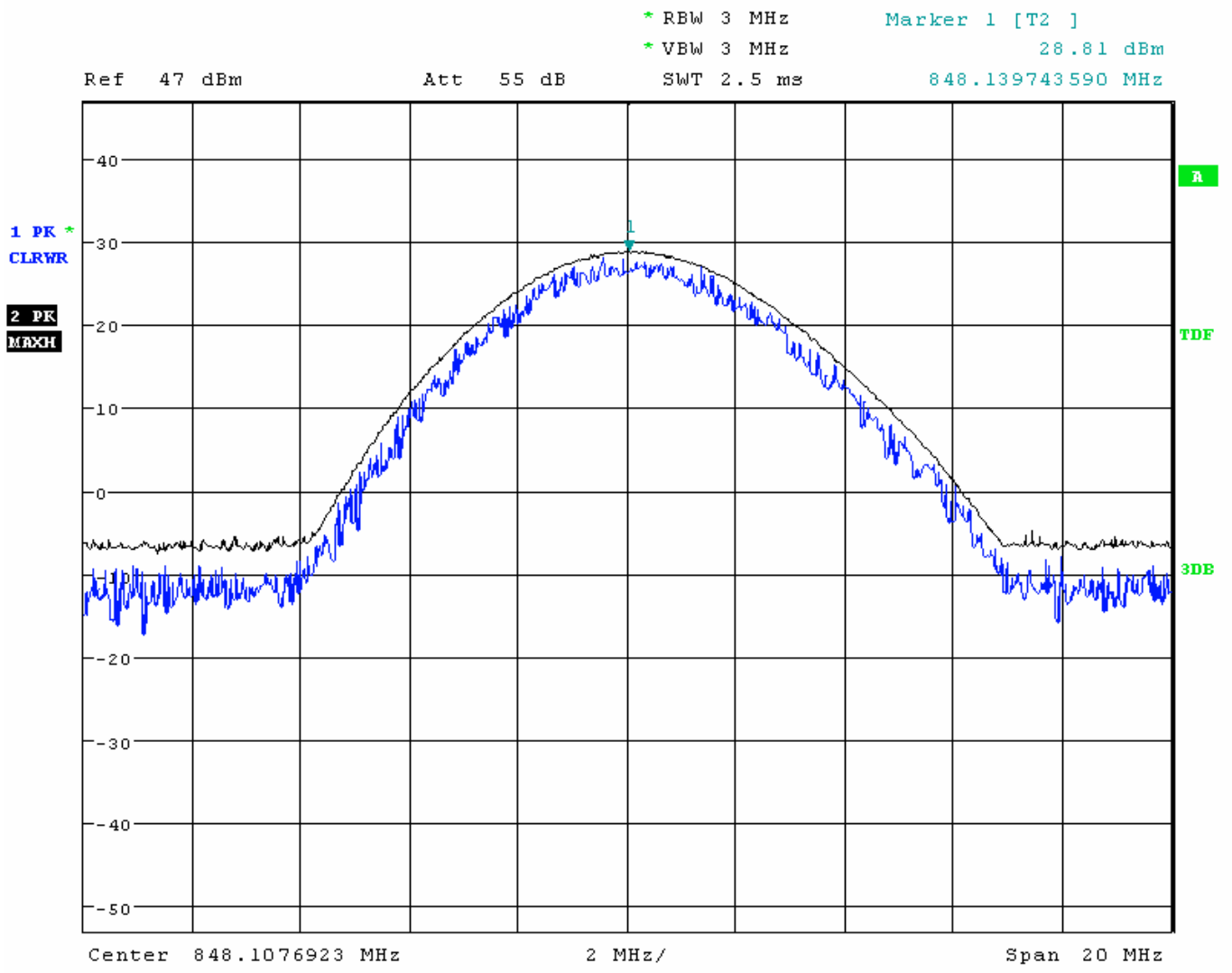
848.14MHz (777 channel)



检测结果/说明（续页）：
Results of test and additional explanation（continued page）
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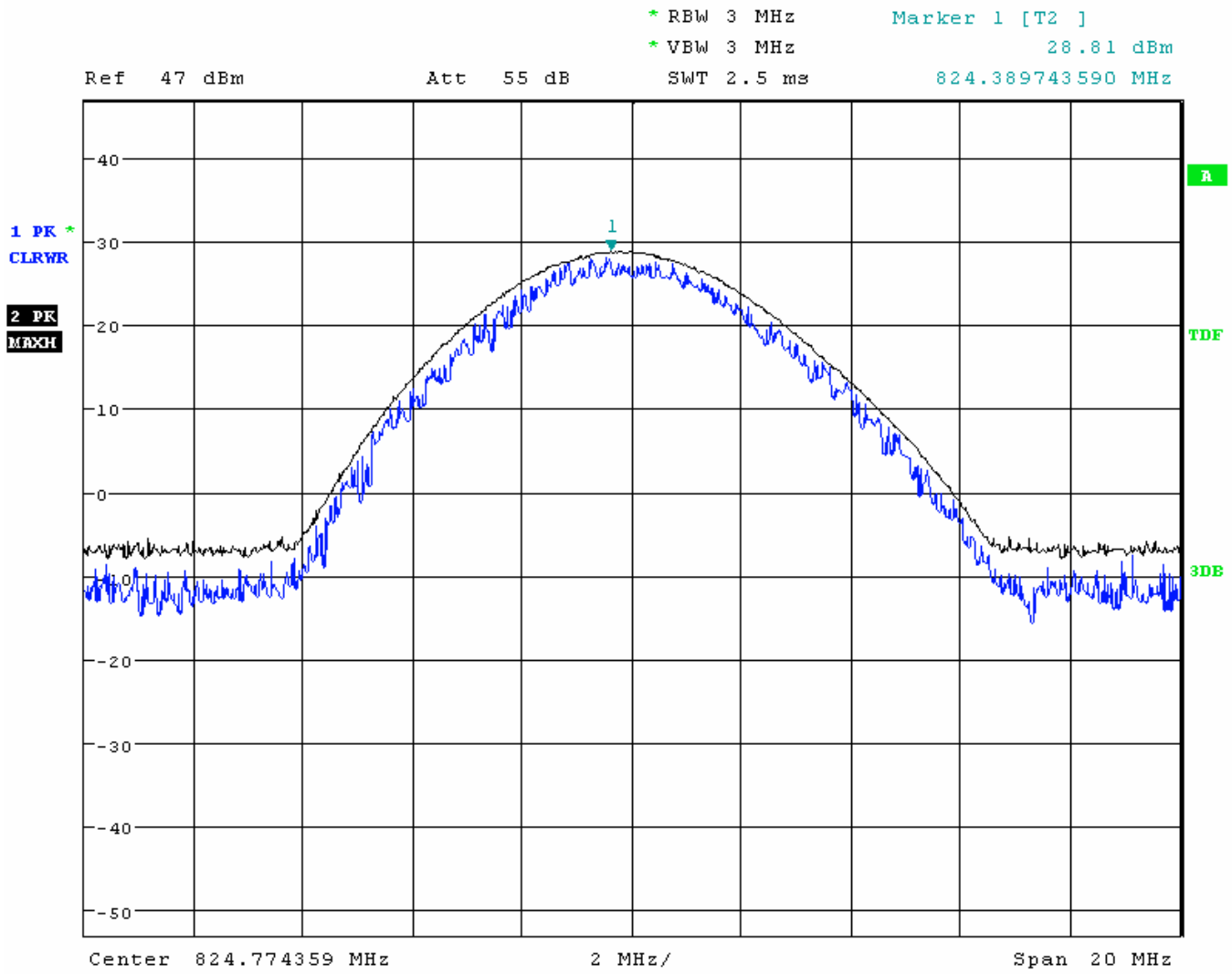
3.4.8 Test mode: CDMA 800 RC43 TDSO SO32 (FCH+SCH0 9.6kpbs)

Power source: DC: 3.7V				
Test Frequency (MHz)	Cable Loss (dB)	Test Level (dBm)	Carrier Power (dBm)	Test results
824.39 (1013 channel)	16.50	12.31	28.81	Pass
836.38 (384 channel)	16.70	11.89	28.59	Pass
848.17 (777 channel)	16.90	12.01	28.91	Pass

824.39MHz (1013 channel)



检测结果/说明（续页）：
Results of test and additional explanation（continued page）
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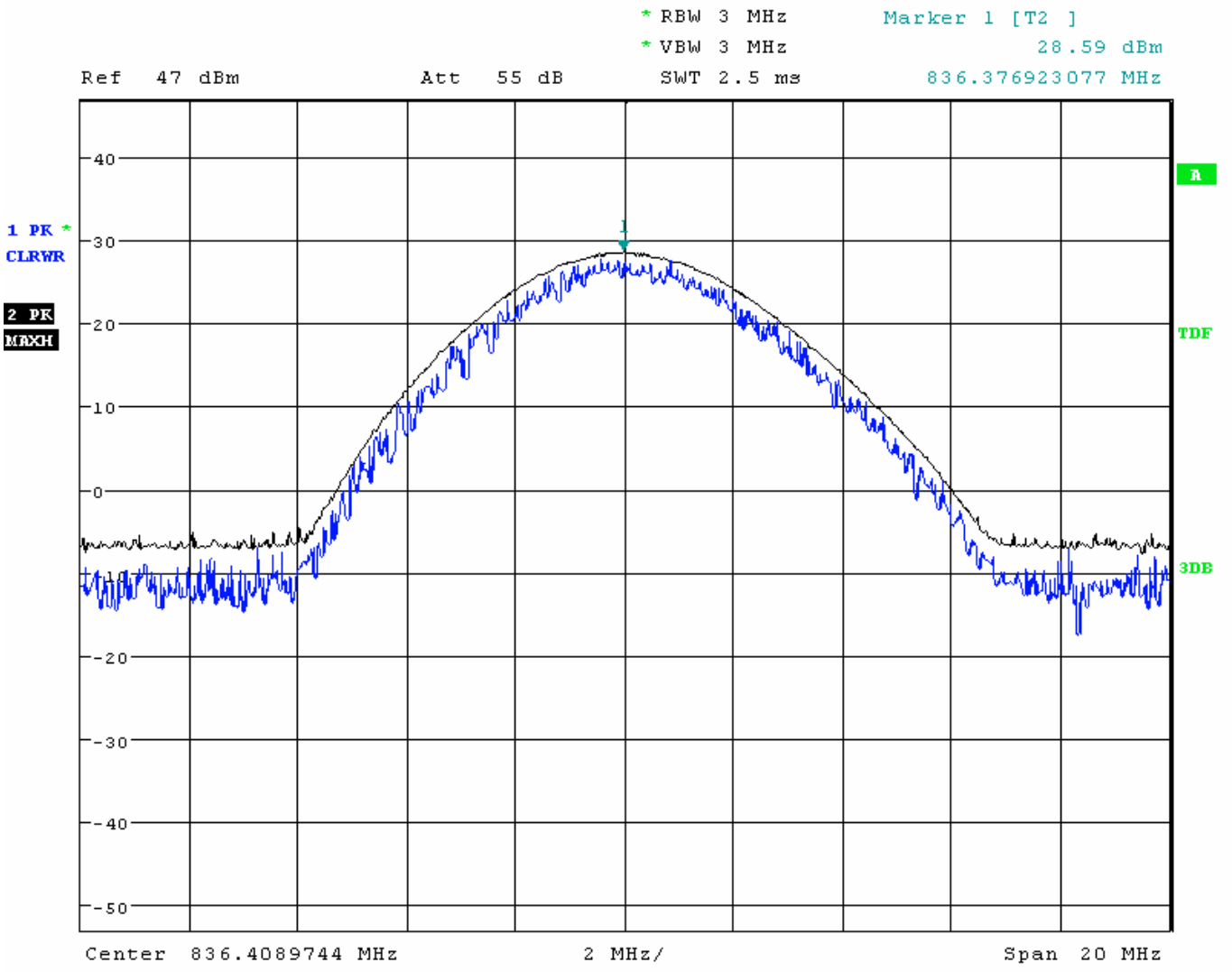
836.38MHz (384 channel)



检测结果/说明（续页）：
Results of test and additional explanation（continued page）
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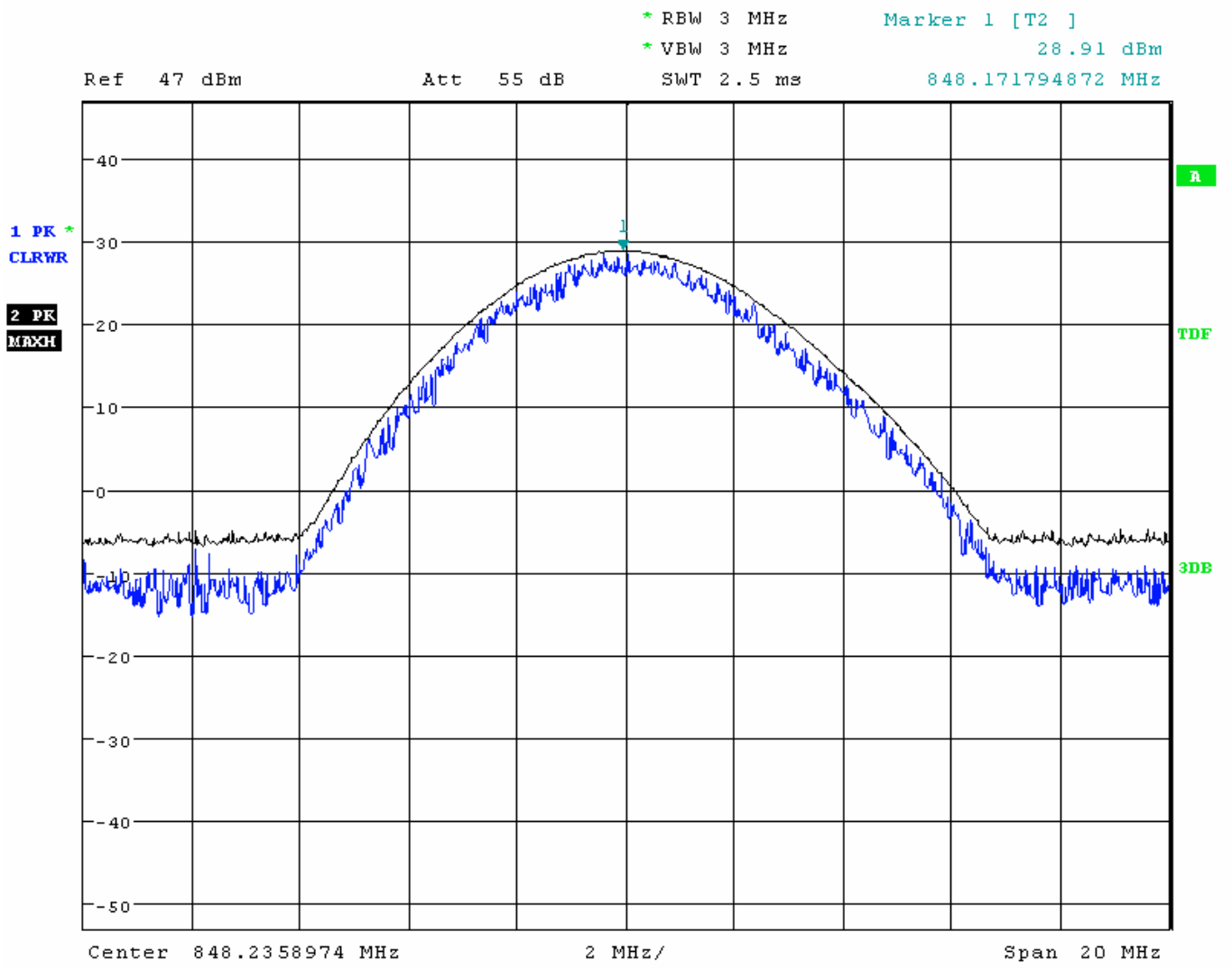
848.17MHz (777 channel)



检测结果/说明（续页）：
Results of test and additional explanation（continued page）
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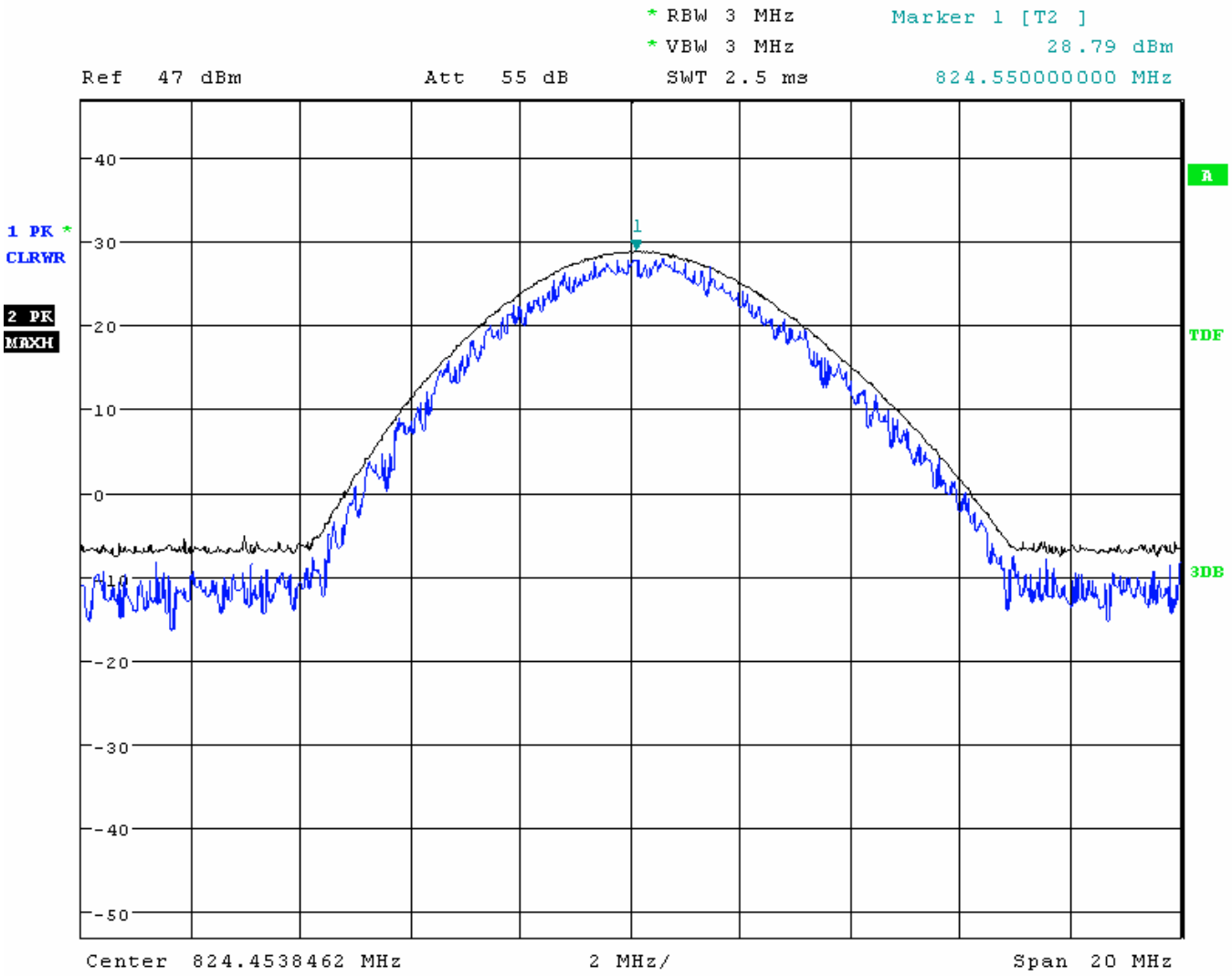
3.4.9 Test mode: CDMA 800 RC43 SO55 (Loopback)

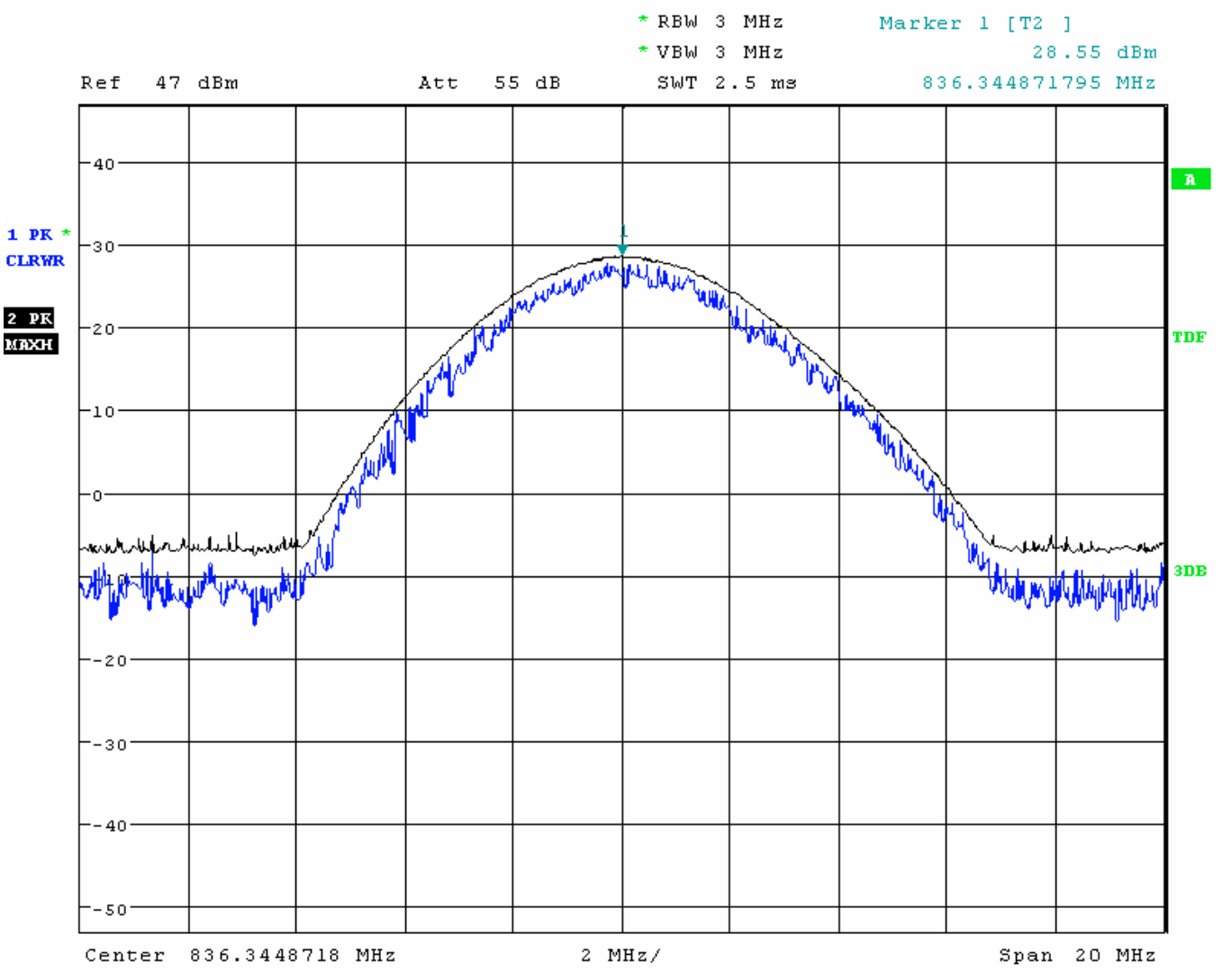
Power source: DC: 3.7V				
Test Frequency (MHz)	Cable Loss (dB)	Test Level (dBm)	Carrier Power (dBm)	Test results
824.55 (1013 channel)	16.50	12.29	28.79	Pass
836.34 (384 channel)	16.70	11.85	28.55	Pass
848.17 (777 channel)	16.90	11.92	28.82	Pass

824.55MHz (1013 channel)



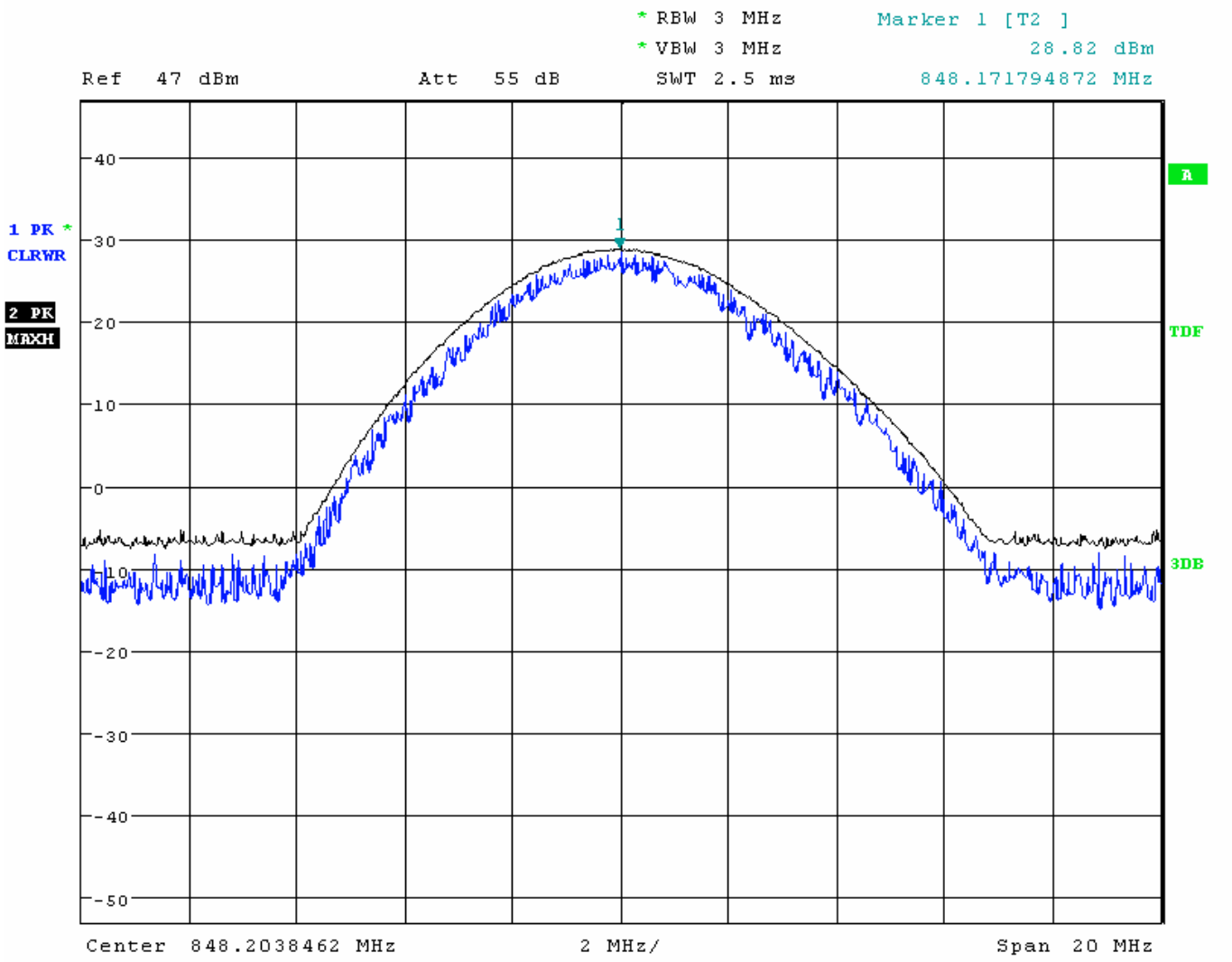
检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

836.34MHz (384 channel)



检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

848.17MHz (777 channel)

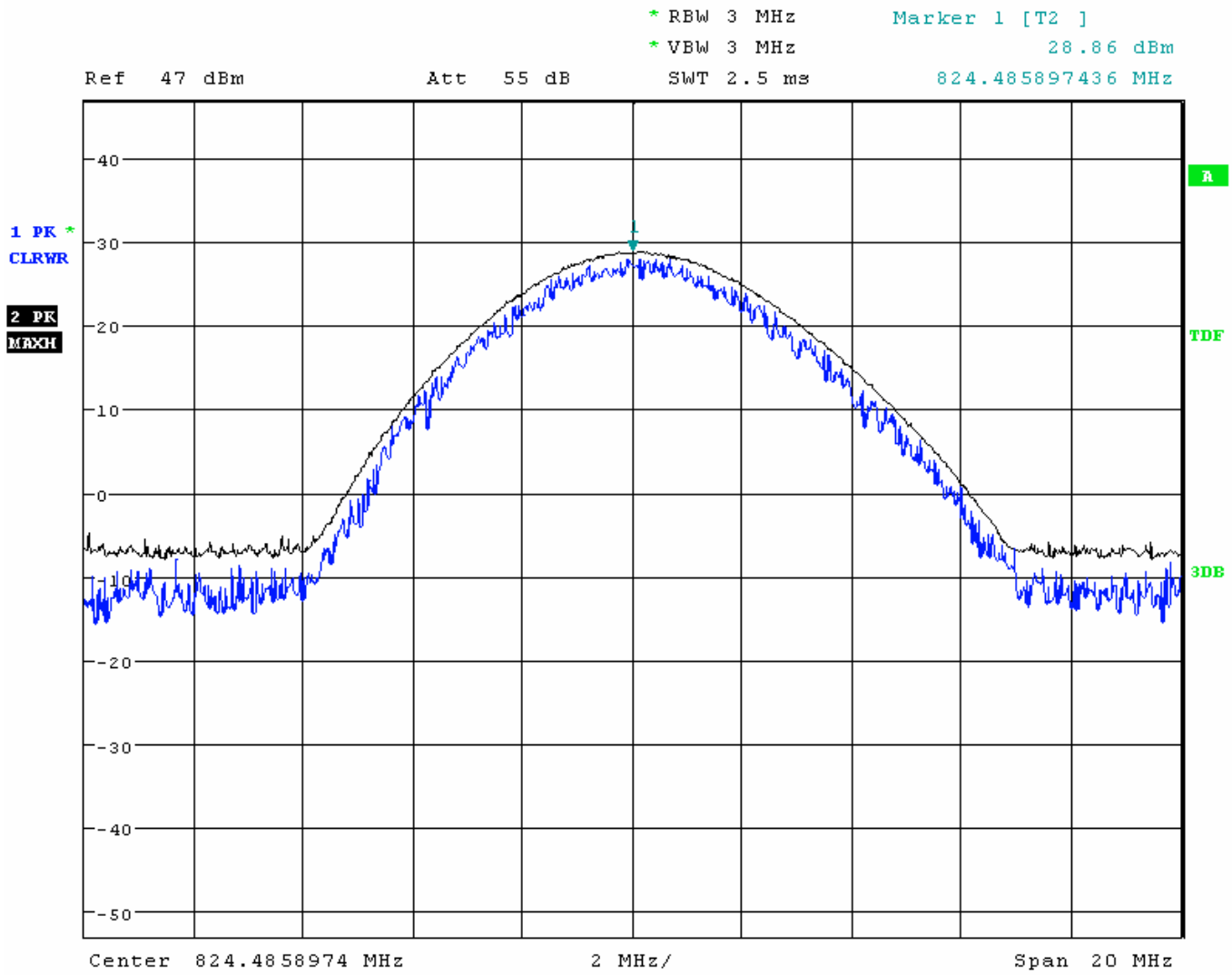


检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

3.4.10 Test mode: CDMA 800 RC54 SO9 (Loopback)

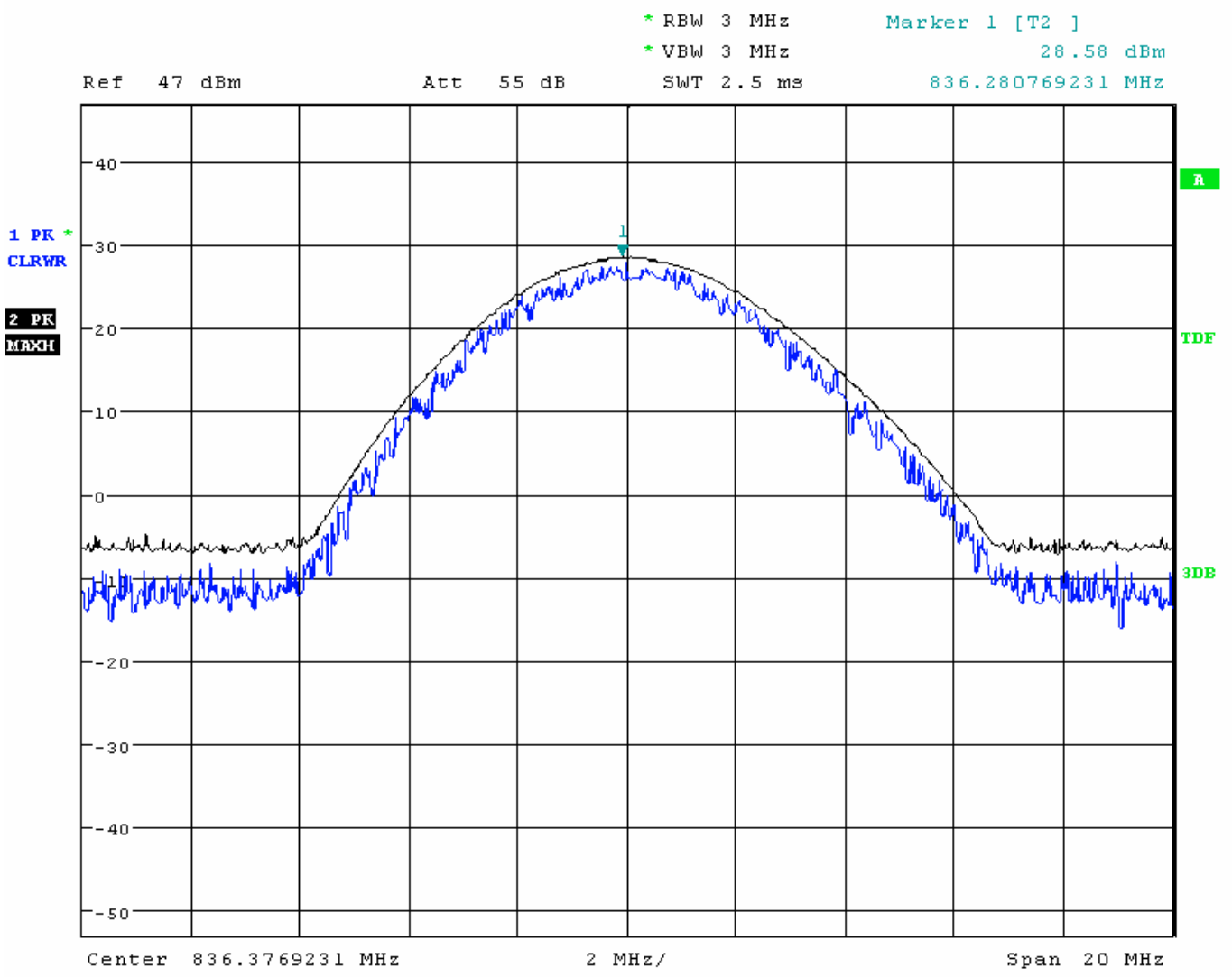
Power source: DC: 3.7V				
Test Frequency (MHz)	Cable Loss (dB)	Test Level (dBm)	Carrier Power (dBm)	Test results
824.49 (1013 channel)	16.50	12.36	28.86	Pass
836.28 (384 channel)	16.70	11.89	28.59	Pass
848.20 (777 channel)	16.90	11.91	28.81	Pass

824.49MHz (1013 channel)



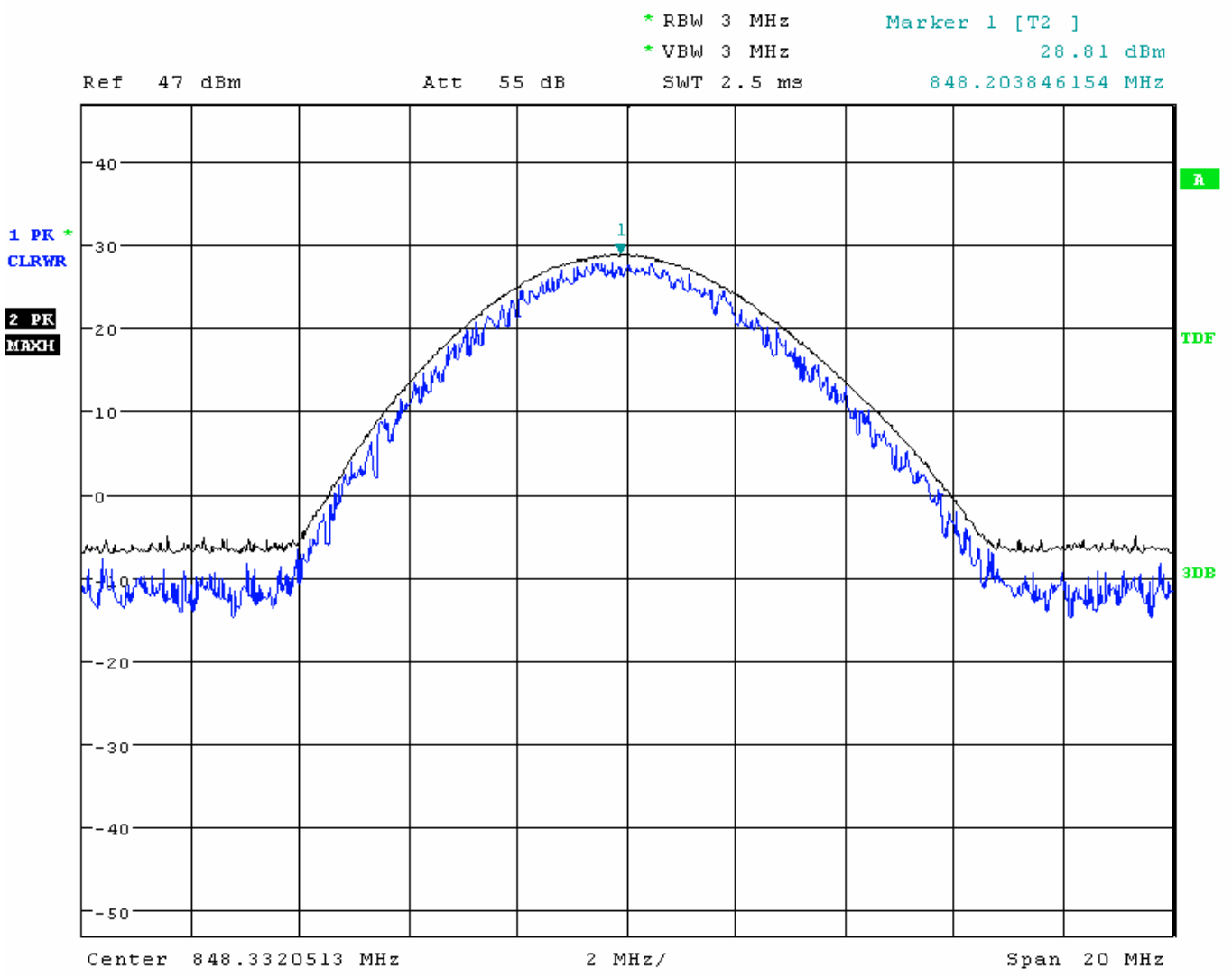
检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

836.28MHz (384 channel)



检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

848.20MHz (777 channel)



检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

3.5 Test Instrumentation (Test date: 2010.06.10)

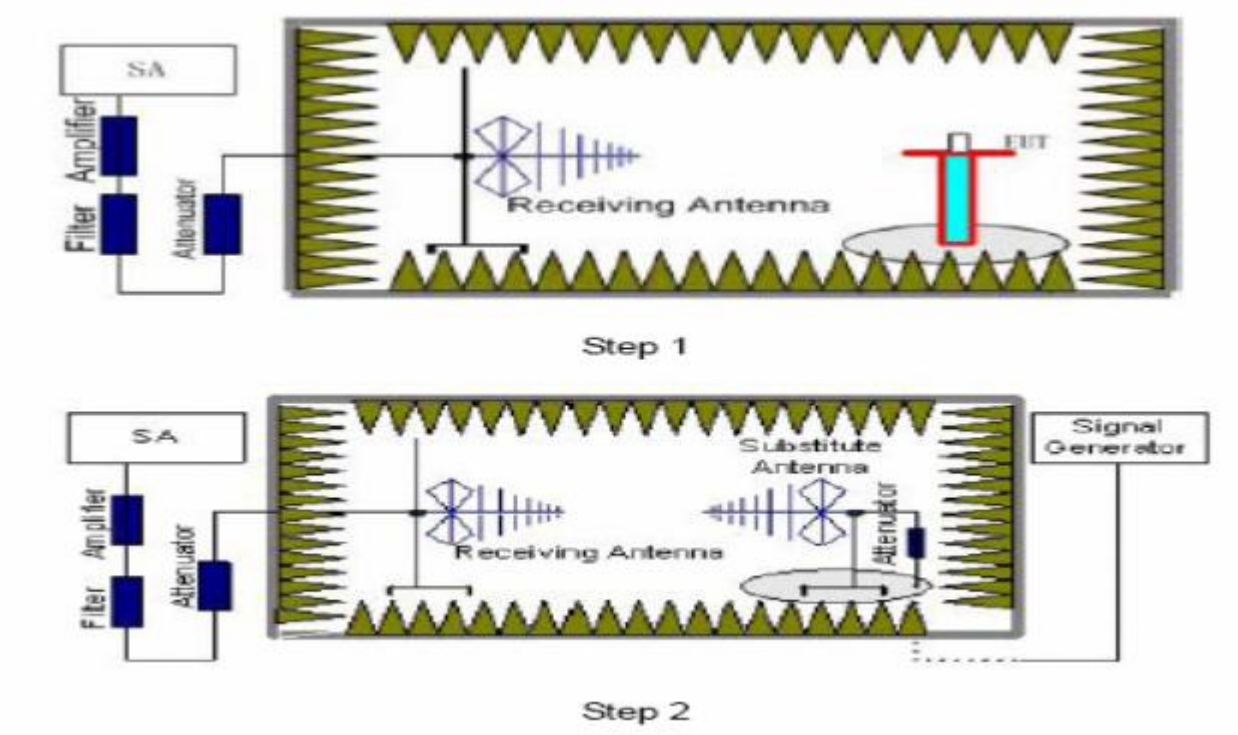
Name/Model	Number	Due date
Universal Radio Communication Tester CMU 200	容-026-01	2010.06.16
Spectrum Analyzer FSU 26	容-001-33	2010.06.25
Power Splitter 11667C	容-030-11	2010.07.22

3.6 Test Photograph

检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

4. Carrier Radiated Power Test

4.1 Test setup



4.2 Limits

Limits (CDMA 800)	E.R.P <38.5dBm

4.3 Test procedure

Step 1:
EUT was placed on a 1.5 meters high non-conductive table in a fully anechoic chamber. A receiving antenna was placed on the antenna mast 3 meters from the EUT. The height of receiving antenna is 1.5m. A radio link shall be established between EUT and Tester. The output power of the cell signal of the tester will be decreased until the output power of the EUT reach a maximum value. A Peak detector is used and RBW is set to 3MHz.Then turn table rotation is adjusted from 0 degree to 360 degree untill the maximum power value is founded on spectrum analyzer or receiver.

检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

Step 2:
A log-periodic antenna or double-ridged waveguide horn antenna shall be substituted in place of the EUT. The antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The EIRP or ERP of the EUT can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading value of the spectrum analyzer or receiver.
Step 3:
Calculation: ERP/EIRP = Ps + Et – Es + Gs = Ps + Rt – Rs + Gs

Ps (dBm)：Input power to substitution antenna.
Ps= PG-Lc
PG (dBm)：output level of Signal generator
Lc(dB) ：Loss of the cable from Signal generator to substitution antenna
Gs (dBi or dBd)：Substitution antenna Gain.
Et = Rt + AF
Es = Rs + AF
AF (dB/m)：Receive antenna factor
Rt：The highest received signal in Spectrum Analyzer for EUT.
Rs：The highest received signal in spectrum analyzer for substitution antenna.

According to the Step 1 and Step 2, Rt= Rs ERP/EIRP = PG-Lc + Gs

检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

4.4 Test results

Test mode: CDMA 800 RC22 SO9 (Loopback)				Power source: DC 3.7V	
Test Frequency (MHz)	Generator output (dBm)	Cable Loss (dB)	Antenna gain (dBd)	Carrier radiated power (dBm)	Test results
824.32 (1013 channel)	22.27	1.33	4.86	25.80	Pass
836.33 (384 channel)	19.52	1.23	4.88	23.17	Pass
848.81 (777 channel)	21.28	1.54	4.84	24.58	Pass

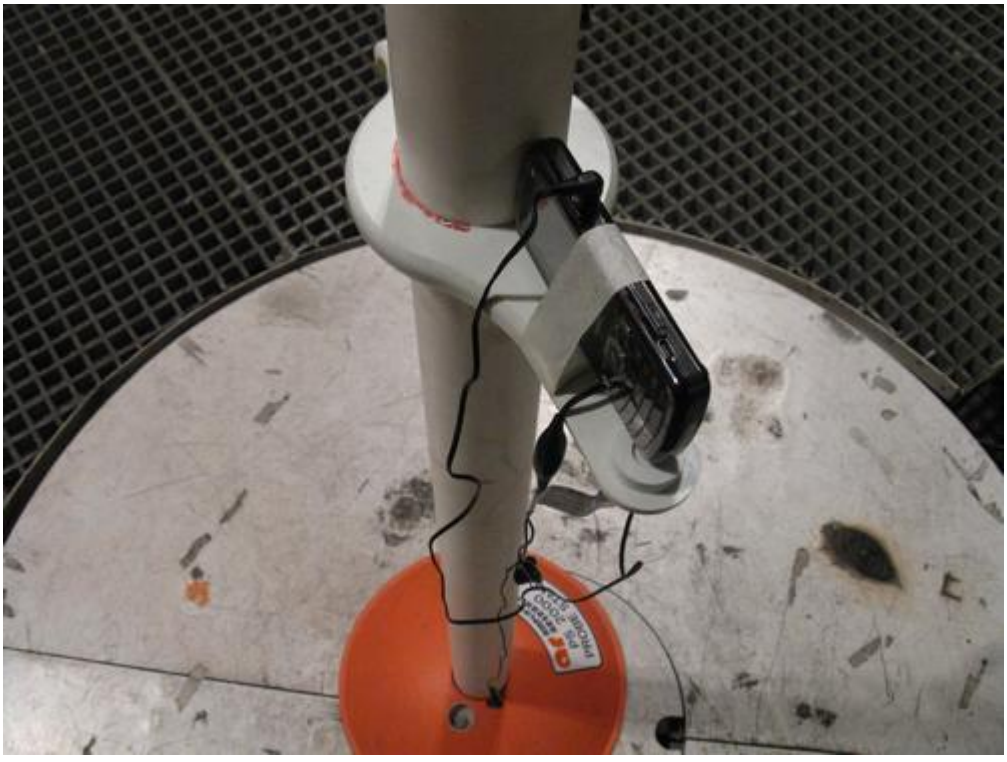
4.5 Test Instrumentation (Test date: 2010.06.21)

Name/Model	Number	Due date
Spectrum Analyzer FSU 26	容-001-33	2010.06.25
Microwave Signal Generator SMR 20	容-001-02	2011.02.02
Universal Radio Communication Tester CMU 200	容-026-01	2011.06.15
Ultra Broadband Antenna HL 562	容-001-03	2011.04.22
Logarithmic Periodic Broadband Antenna UHALP 9108 A	容-001-40	2011.04.22

检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

4.6 Test Photographs

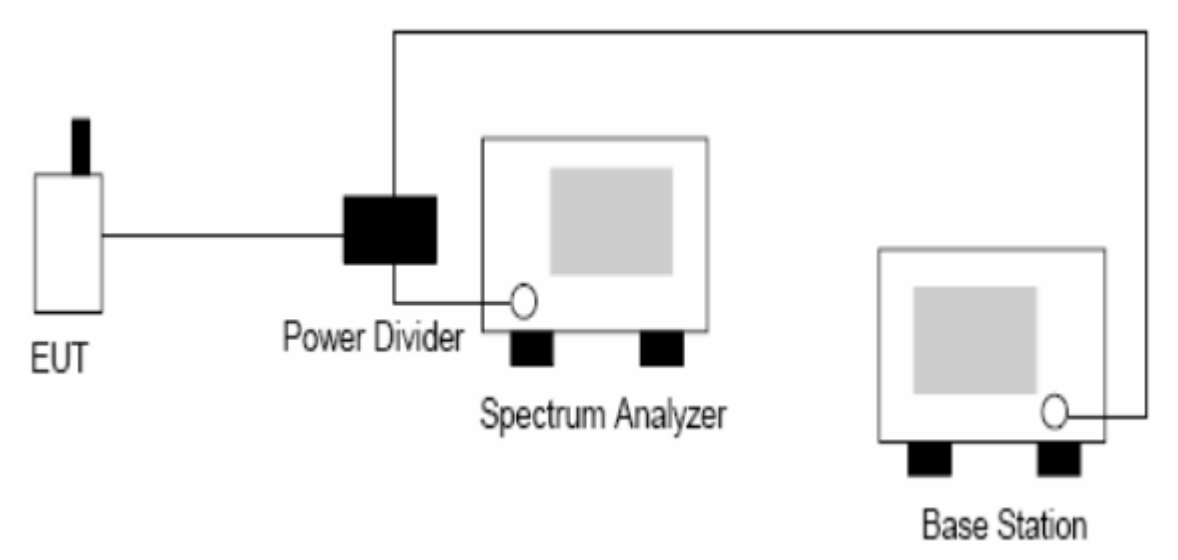
检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off



检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

5. Occupied Bandwidth Test

5.1 Test setup



检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

5.2 Limits

No specific occupied bandwidth requirements.

5.3 Test procedure

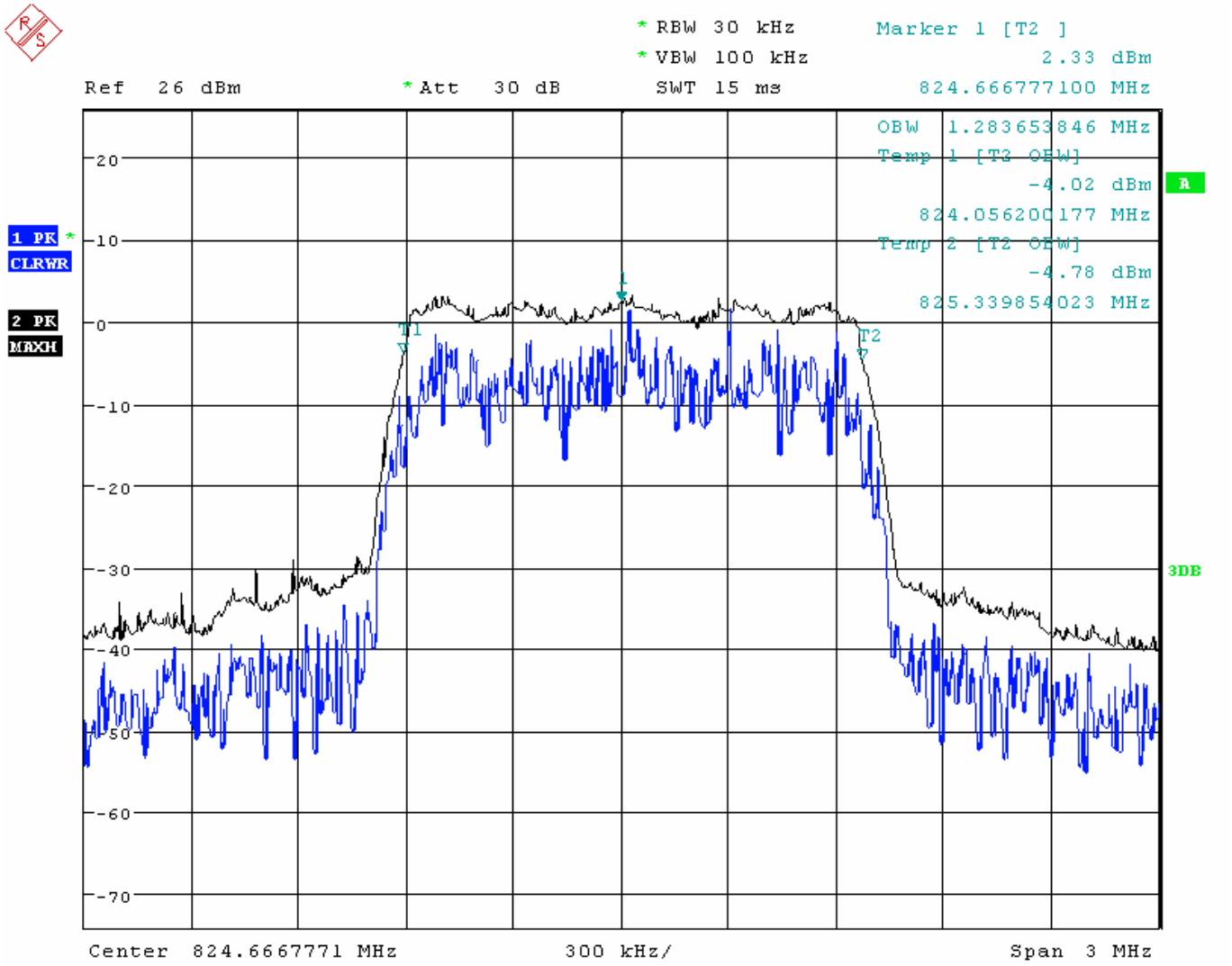
After a radio link has been established between EUT and Tester, the output power of the cell signal of the testing equipment will be decreased until the output power of the EUT reach a maximum value. The occupied bandwidth is measured using spectrum analyzer. RBW is set to more than 1% of the emission bandwidth on spectrum analyzer. The bandwidth of 99% power can be read on spectrum analyzer. The measurement will be conducted at Bottom, middle and top three channels

5.4 Test results

Test mode: CDMA 800 RC22 SO9 (Loopback)		
Power source: DC 3.7V		
Test Frequency (MHz)	Test level (MHz)	Test results
824.67 (1013 channel)	1.28	Pass
836.50 (384 channel)	1.28	Pass
848.31 (777 channel)	1.28	Pass

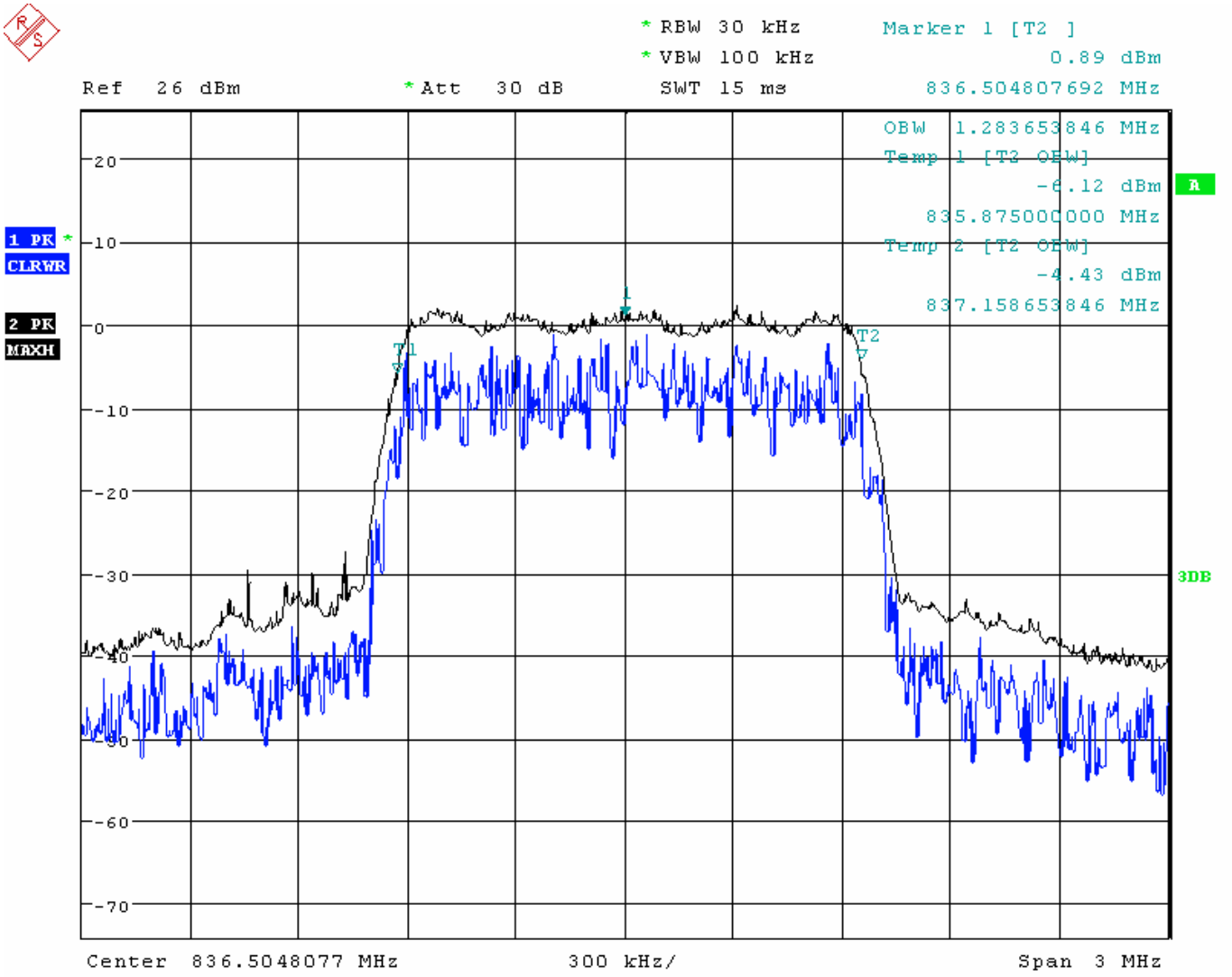
824.67MHz (1013 channel)

检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off



836.50MHz (384 channel)

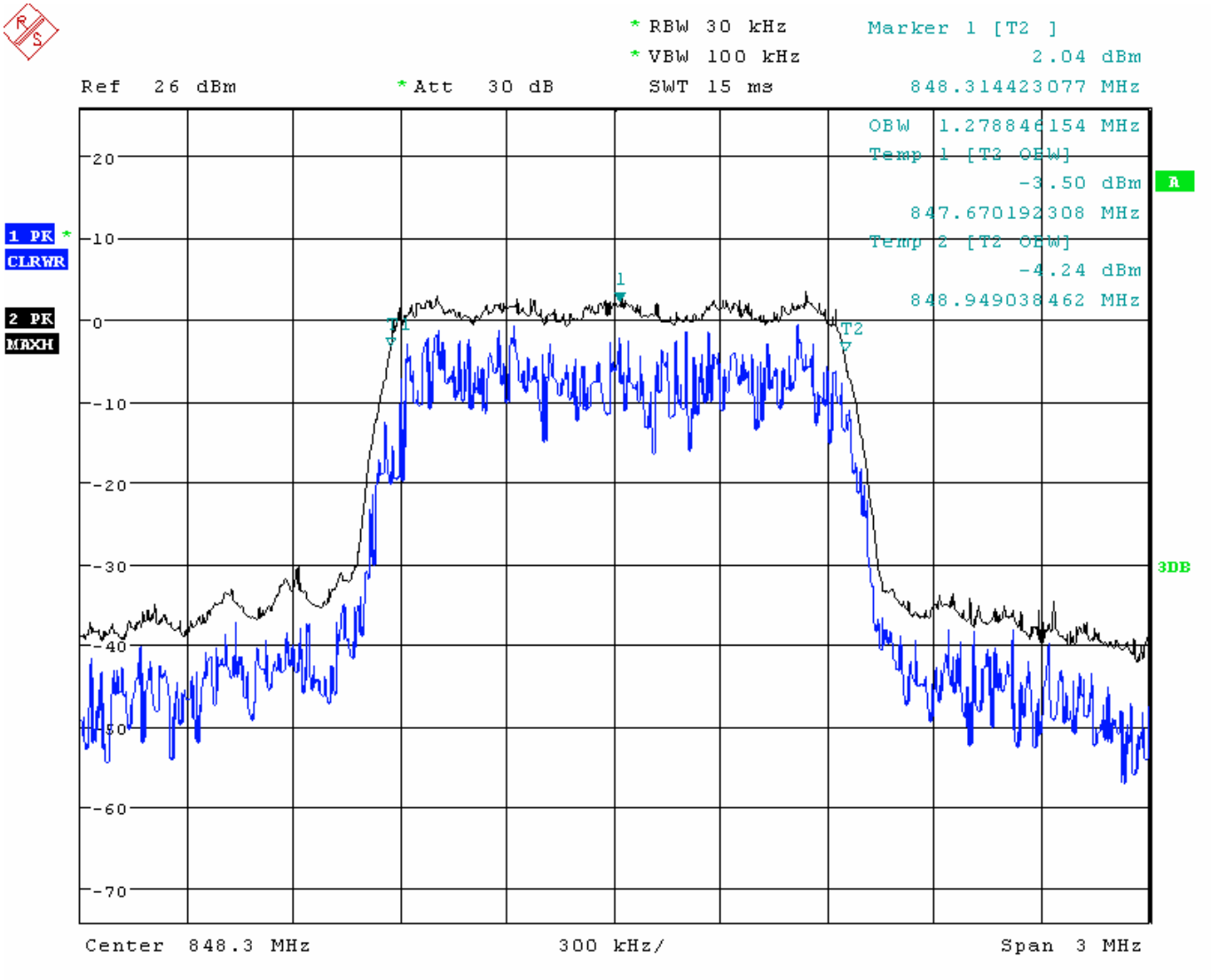
检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off



848.31MHz (777 channel)

检测结果/说明（续页）：

Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off



检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

5.5 Test Instrumentation (Test date: 2010.06.10)

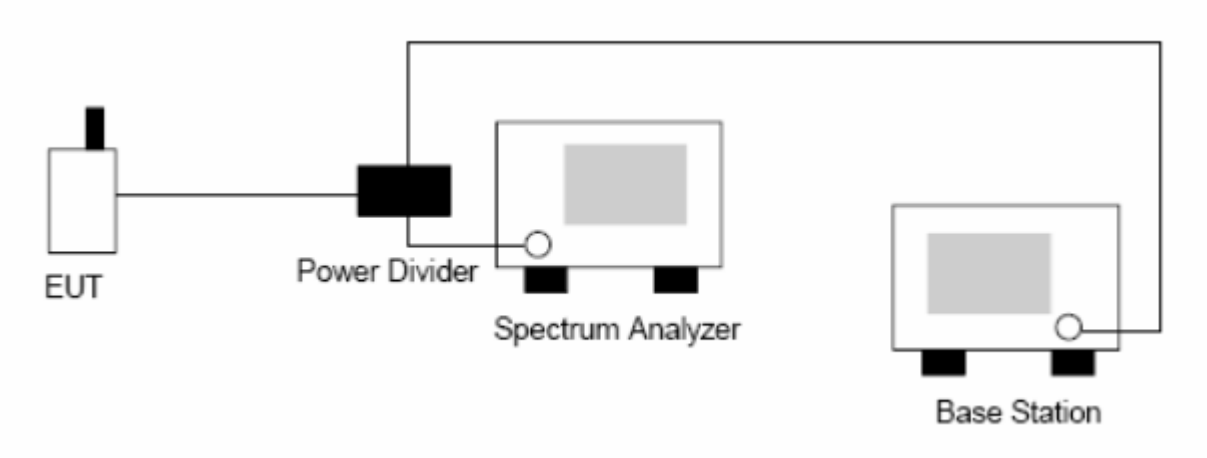
Name/Model	Number	Due date
Universal Radio Communication Tester CMU 200	容-026-01	2011.06.15
Spectrum Analyzer FSU 26	容-001-33	2010.06.25
Power Splitter 11667C	容-030-11	2010.07.22

5.6 Test Photograph

检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

6. Band Edge Test

6.1 Test setup



6.2 Limits

Limits	<-13dBm

6.3 Test procedure

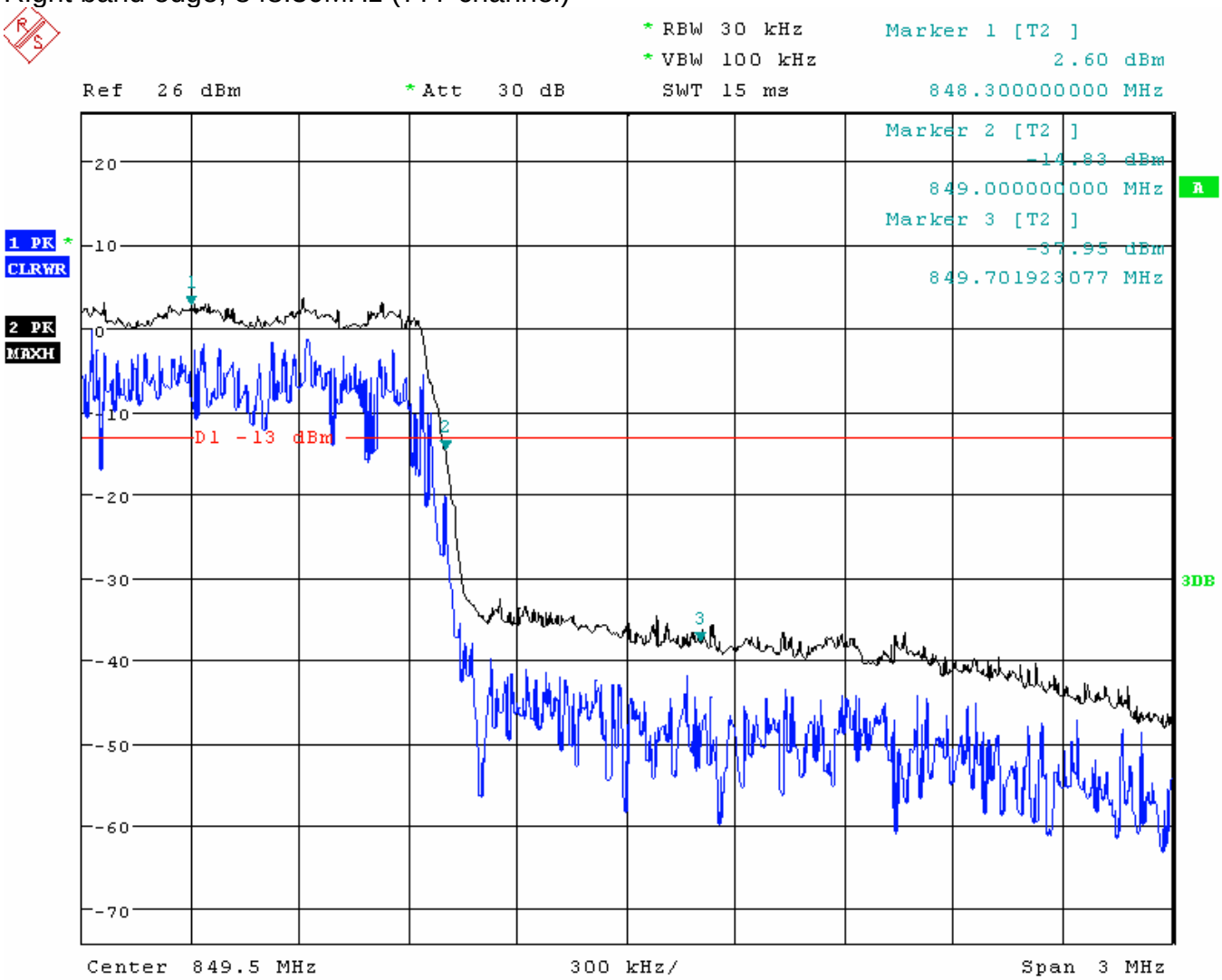
After a radio link has been established between EUT and Tester, the output power of the cell signal of the testing equipment will be increased until the output power of the EUT reach a maximum value. In the first 1.0 MHz band immediately outside and adjacent to the licensee’s frequency block, the power of emissions per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (in watts) by at least 43 + 10 log(P).

检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

6.4 Test results

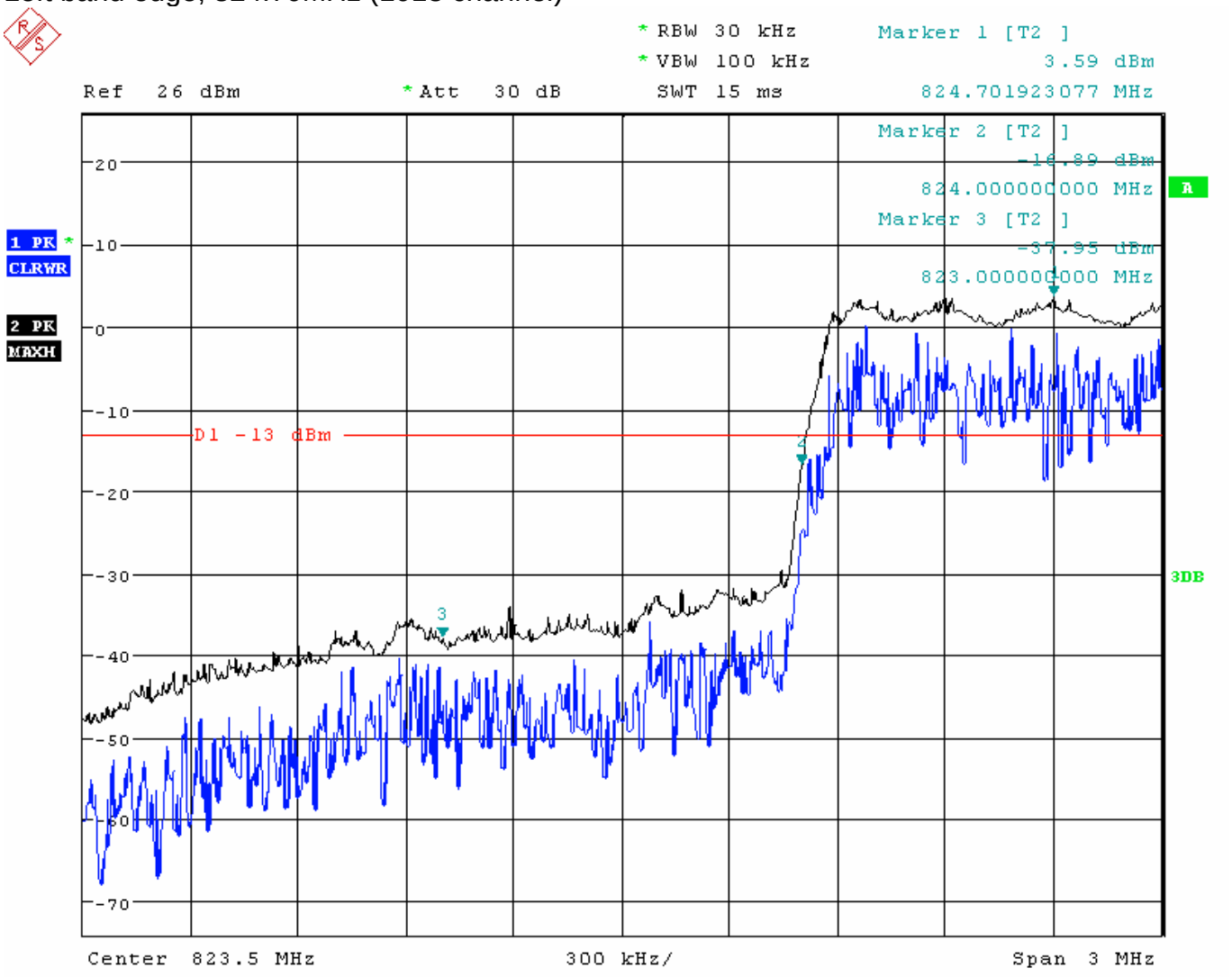
Test mode: CDMA 800 RC22 SO9 (Loopback)			
Power source: DC 3.7V			
Item	Test Frequency (MHz)	Test level (dBm)	Test results
Right band edge	848.30 (777 channel)	-14.83	Pass
Left band edge	824.70 (1013 channel)	-16.69	Pass

Right band edge, 848.30MHz (777 channel)



检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

Left band edge, 824.70MHz (1013 channel)



检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

6.5 Test Instrumentation (Test date: 2010.06.10)

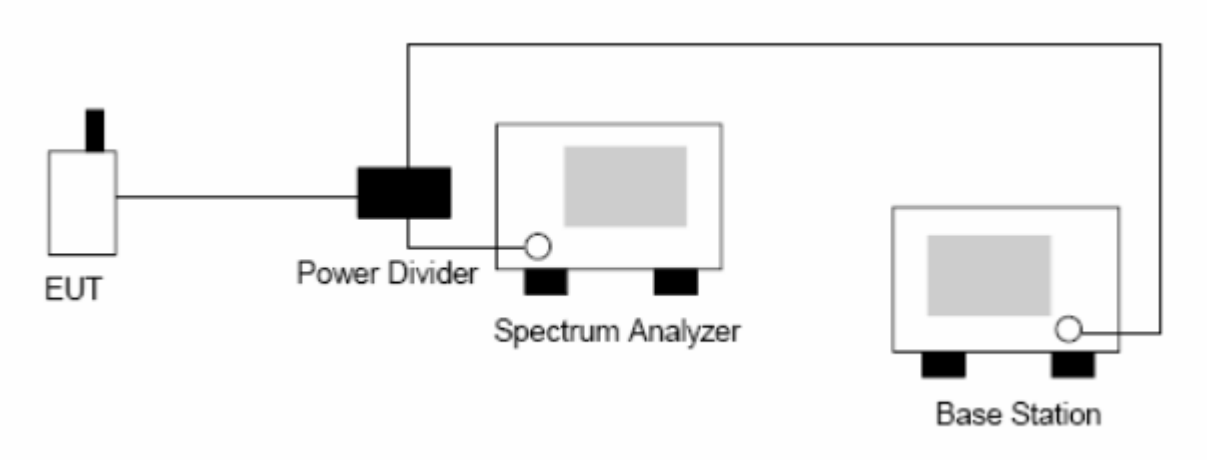
Name/Model	Number	Due date
Spectrum Analyzer FSU 26	容-001-33	2010.06.25
Power Splitter 11667C	容-030-11	2010.07.22
Universal Radio Communication Tester CMU 200	容-026-01	2010.06.16

6.6 Test Photograph

检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

7. Spurious Conducted Emission Test

7.1 Test setup



7.2 Limits

Limits	<-13dBm

Note: the signal beyond the limit is carrier.

7.3 Test procedure

The EUT was connected to Spectrum Analyzer and Base Station via power divider.
The middle channel for the highest RF power within the transmitting frequency was measured.
The conducted spurious emission for the whole frequency range was taken.

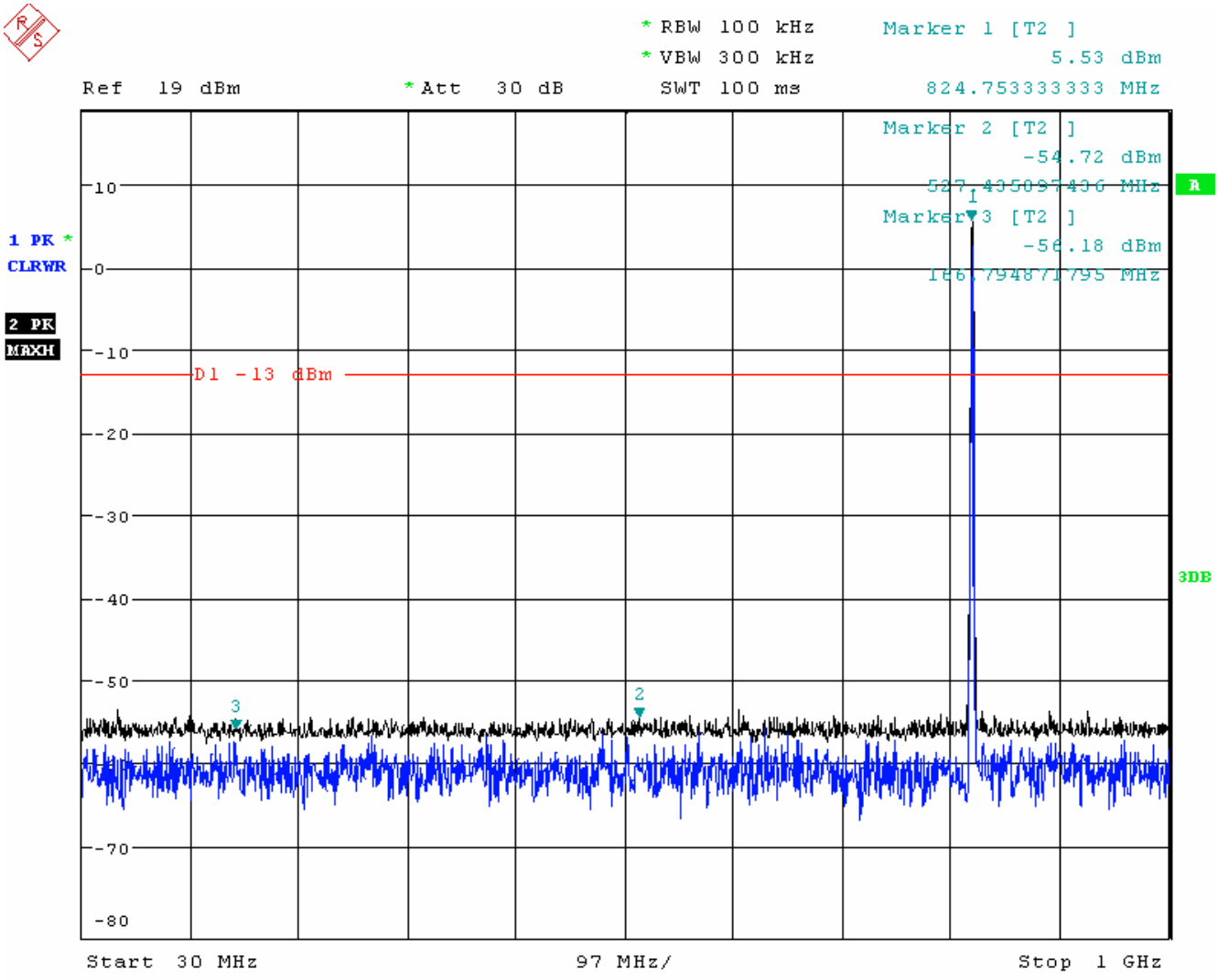
检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

7.4 Test results

Test mode: CDMA 800 RC22 SO9 (Loopback); Power source: DC 3.7V

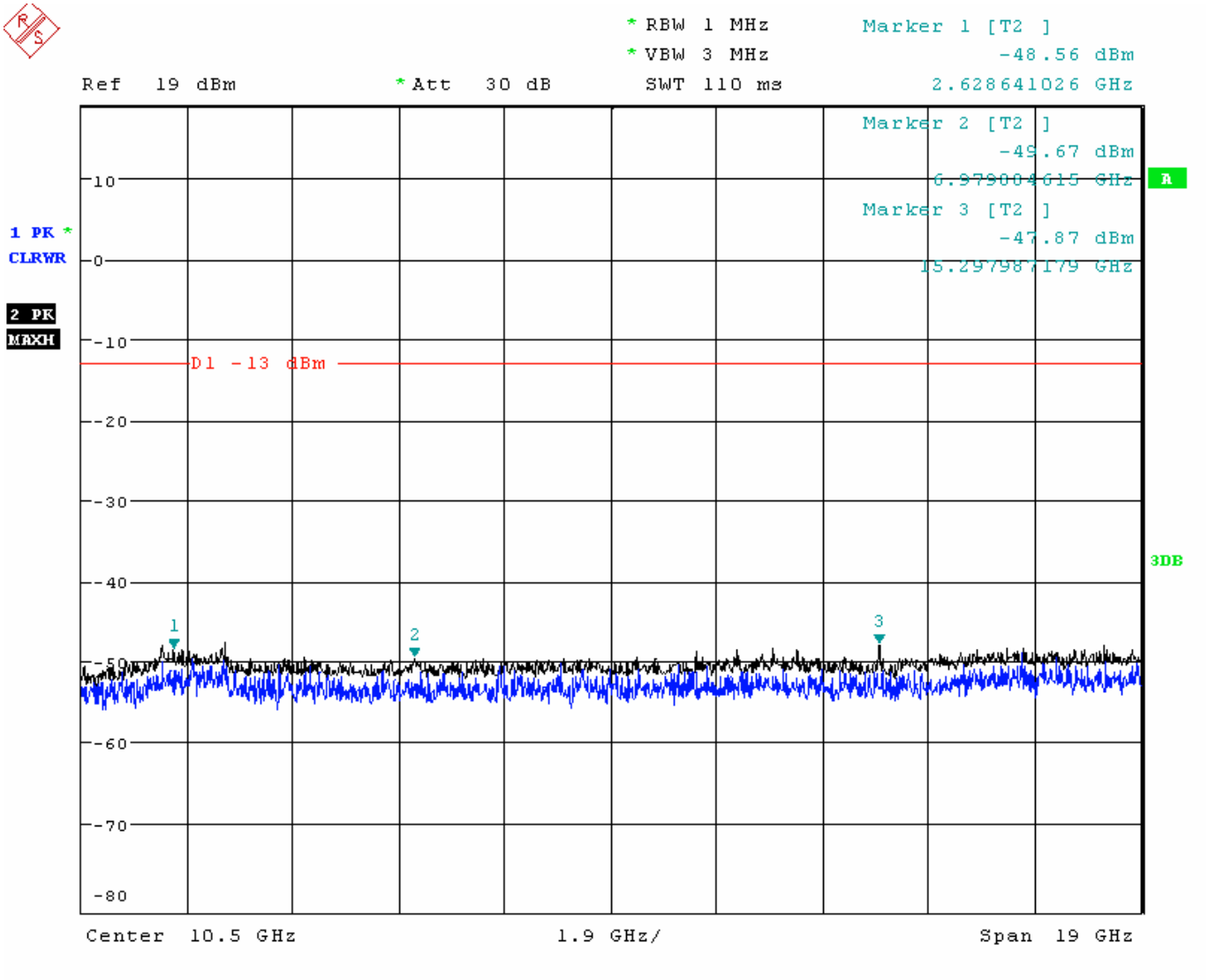
7.4.1 824.75MHz (1013 channel)

30~1000MHz



检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

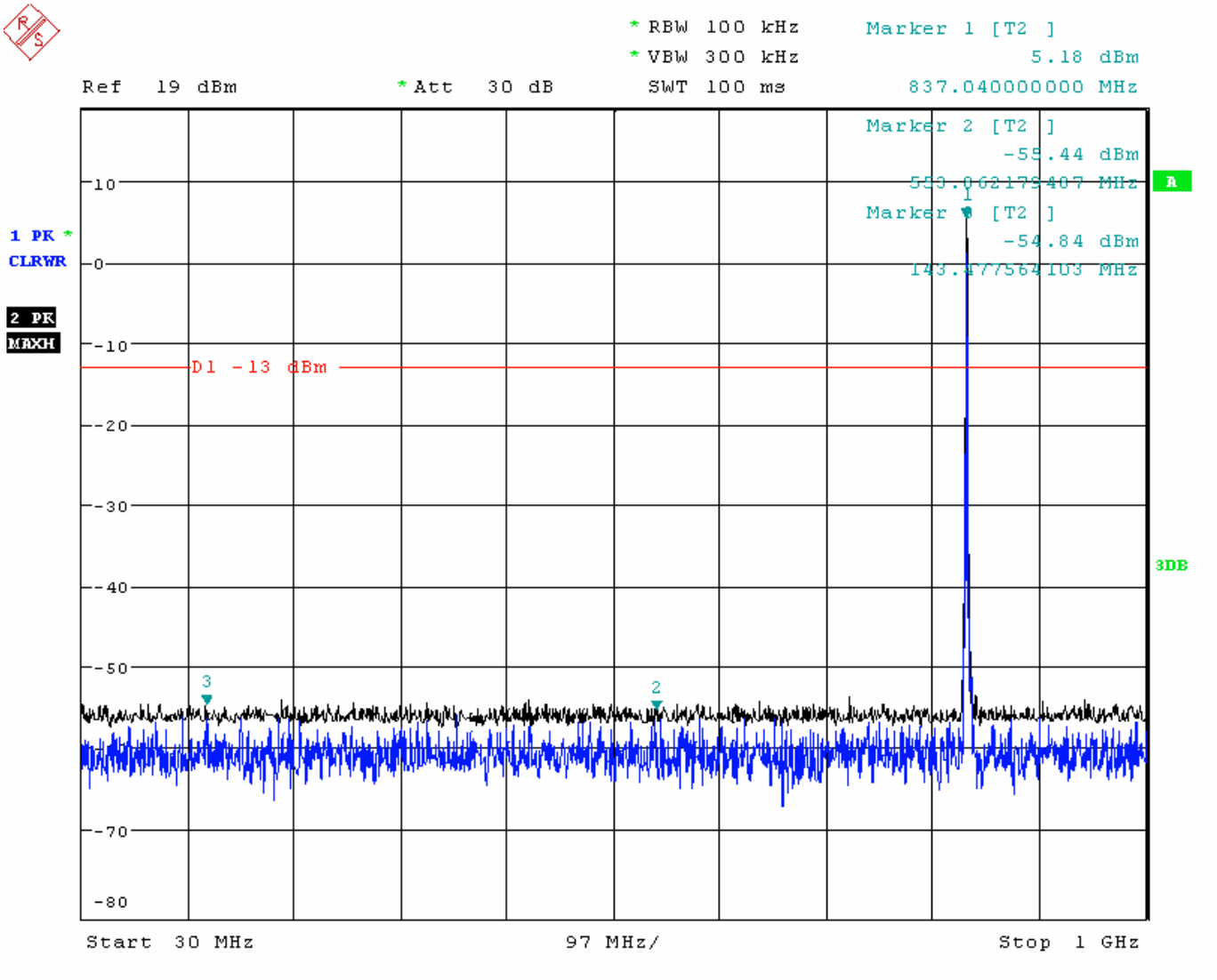
1000~20000MHz



检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

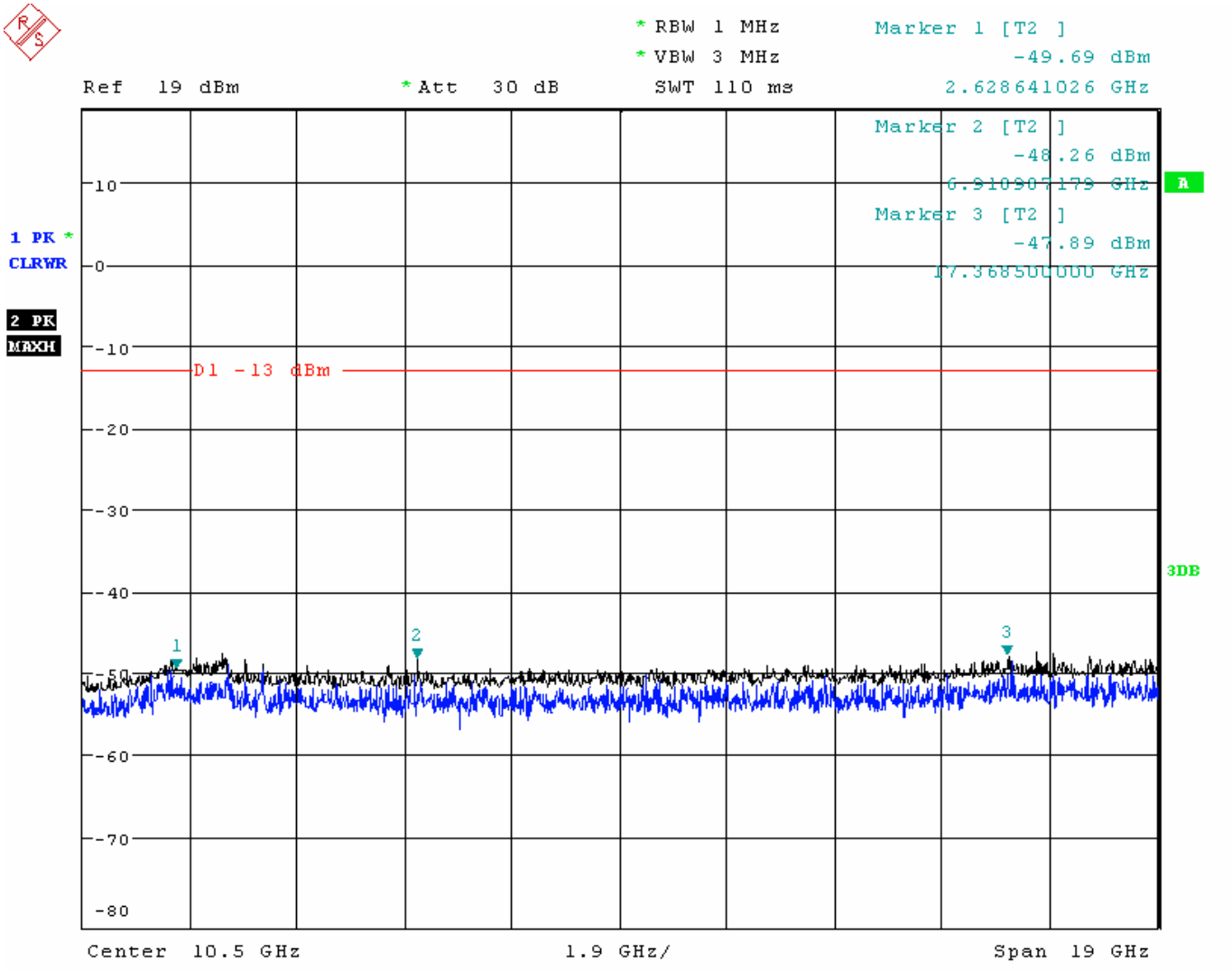
7.4.2 837.04MHz (384 channel)

30~1000MHz



检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

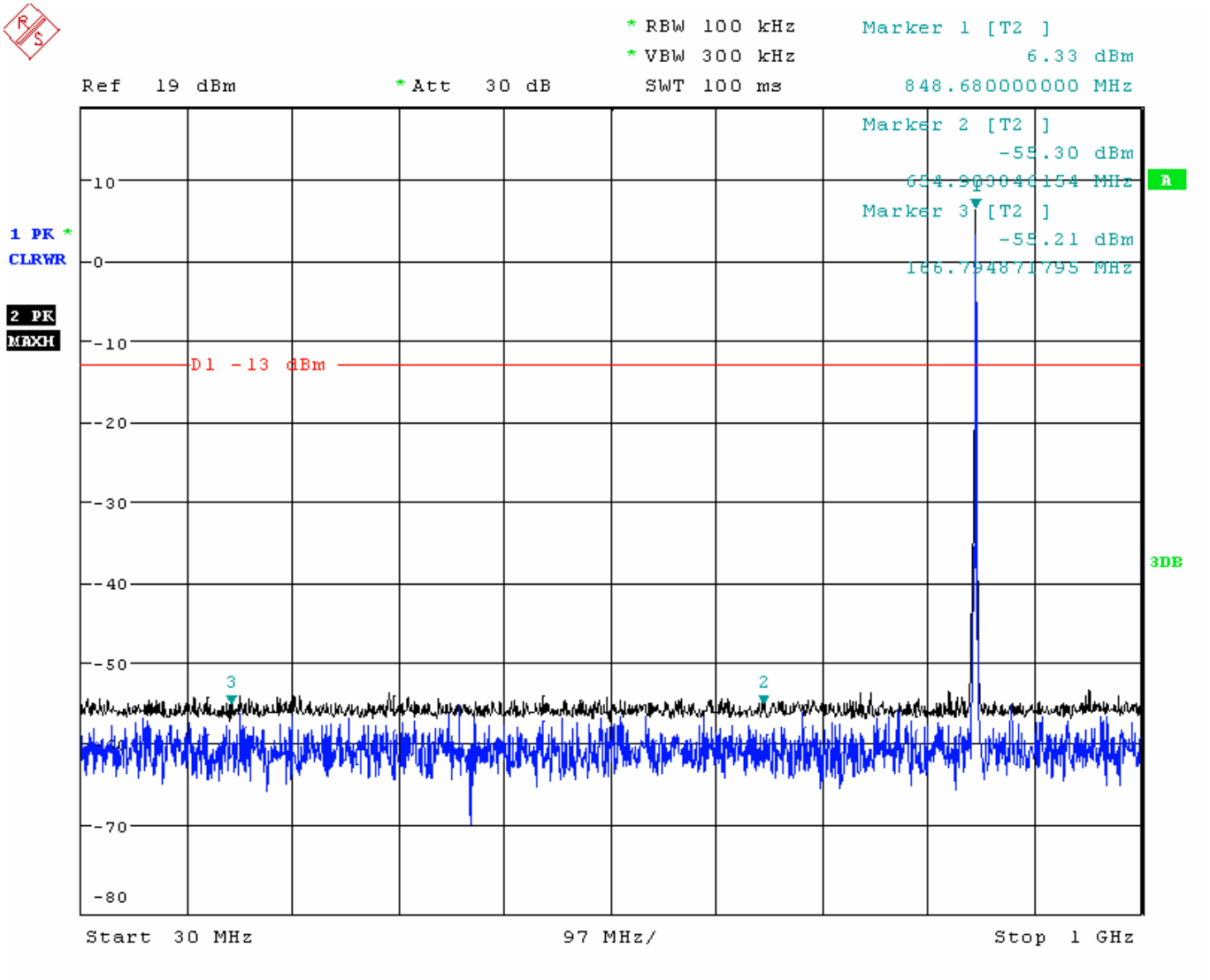
1000~20000MHz



检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

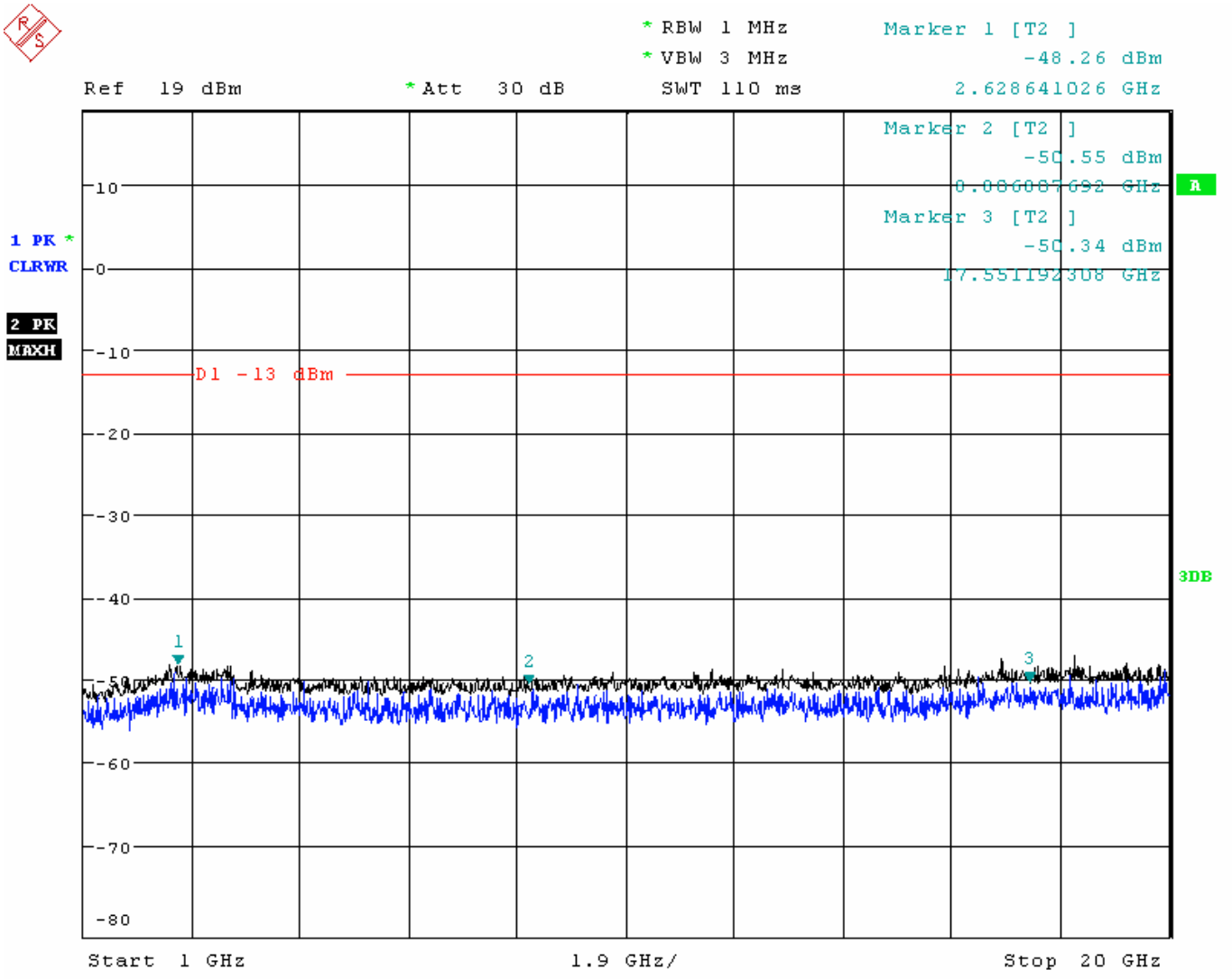
7.4.3 848.68MHz (777 channel)

30~1000MHz



检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

1000~20000MHz



检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

7.5 Test Instrumentation (Test date: 2010.06.10)

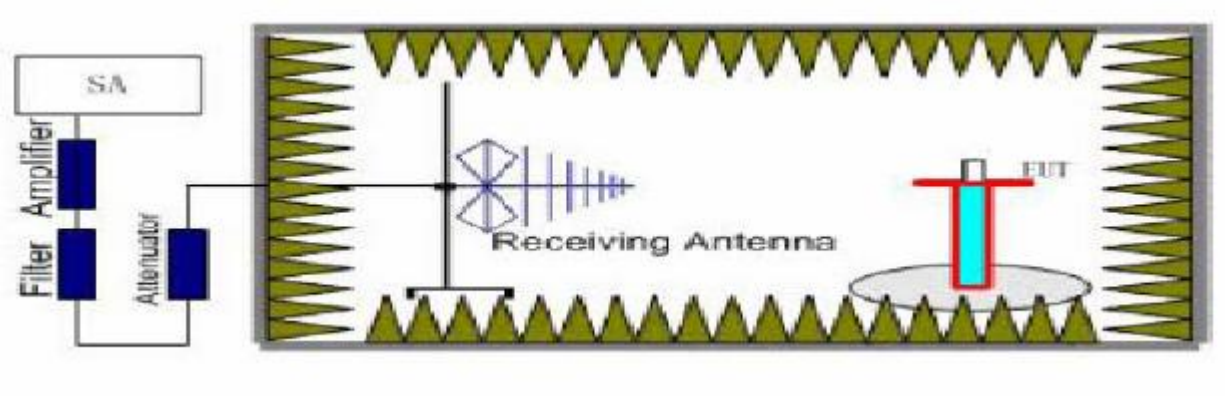
Name/Model	Number	Due date
Spectrum Analyzer FSU 26	容-001-33	2010.06.25
Power Splitter 11667C	容-030-11	2010.07.22
Universal Radio Communication Tester CMU 200	容-026-01	2010.06.16

7.6 Test Photograph

检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

8. Spurious Radiation Emission Test

8.1 Test setup



8.2 Limits

Limits	<-13dBm

8.3 Test procedure

EUT was placed on a 1.5 meter high non-conductive table at a 3 meter test distance from the test receive antenna. The height of receiving antenna is 1.5m. A radio link shall be established between EUT and Tester. The output power of the cell signal of the tester will be increased until the output power of the EUT reaching a maximum value. The measurement is carried out using a spectrum analyzer or receiver. Levels of EUT's transmitter harmonics and suspicious signals were recorded . The recorded levels were corrected in the automated test system with the correction factors given by a substitution calibration made before the measurement. The calibration was made separately for vertical and horizontal polarization and the system uses different correction factors depending on the measuring antenna polarization. The spectrum analyzer scans from 30MHz to the 10th harmonic of the carrier. The peak detector is used and RBW is set to 1MHz for more than 1GHz and 10KHz for less than 1GHz on spectrum analyzer. Then the antenna height and turn table rotation is adjusted until the maximum power value is founded on spectrum analyzer or receiver. A notch filter is necessary in the band near to the carrier frequency. A high pass filter is needed to avoid the distortion of the testing equipment in the band above the carrier frequency.

Note:
1. The corrected values of radiated spurious emissions indicated as ERP are reported.
2. The investigated ARFCNs are low channel 1013, middle channel 384, high channel 777 for CDMA 800.
3. The configurations of EUT (in X, Y and Z axis)have been investigated and the worst case

检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

mode has been listed.

8.4 Test results

Test mode: CDMA 800 RC22 SO9 (Loopback); Power source: DC 3.7V

8.4.1 Low channel 1013

Receiving antenna polarization	Frequency (MHz)	Signal generator level (dBm)	Cable loss (dB)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Test result
Horizontal	815.118	-58.96	2.55	5.22	-56.286	-13.00	Pass
	824.430	-44.11	2.57	5.20	-41.478	-13.00	Pass
	869.438	-59.88	2.70	5.19	-57.388	-13.00	Pass
	1485.8	-51.46	3.48	5.97	-48.968	-13.00	Pass
	1988.2	-51.21	3.95	7.77	-47.387	-13.00	Pass
	2584.6	-52.05	4.73	8.60	-48.179	-13.00	Pass
	3478.8	-53.44	5.40	10.40	-48.442	-13.00	Pass
	8088.6	-47.50	7.72	9.32	-45.895	-13.00	Pass
	9890.3	-46.08	8.73	9.96	-44.845	-13.00	Pass
Vertical	815.118	-59.66	2.55	5.22	-56.991	-13.00	Pass
	824.624	-43.23	2.57	5.20	-40.596	-13.00	Pass
	870.311	-57.66	2.70	5.19	-55.173	-13.00	Pass
	1986.3	-52.10	3.94	7.77	-48.272	-13.00	Pass
	2521.2	-52.07	4.46	8.49	-48.041	-13.00	Pass
	2797.7	-52.31	4.61	8.99	-47.925	-13.00	Pass
	3478.8	-52.68	5.40	10.40	-47.684	-13.00	Pass
	8375.4	-48.58	7.28	9.55	-46.312	-13.00	Pass
	9422.7	-47.73	7.06	10.01	-44.780	-13.00	Pass

检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

8.4.2 Middle channel 384

Receiving antenna polarization	Frequency (MHz)	Signal generator level (dBm)	Cable loss (dB)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Test result
Horizontal	33.201	-49.32	0.47	-20.94	-70.733	-13.00	Pass
	836.070	-50.68	2.58	5.18	-48.080	-13.00	Pass
	881.175	-57.24	2.74	5.21	-54.774	-13.00	Pass
	1380.3	-51.21	3.25	5.11	-49.353	-13.00	Pass
	1991.5	-51.63	3.95	7.76	-47.821	-13.00	Pass
	2615.6	-50.98	4.80	8.66	-47.123	-13.00	Pass
	3526.2	-52.66	5.45	10.46	-47.645	-13.00	Pass
	7206.0	-49.25	7.14	9.65	-46.736	-13.00	Pass
	9203.8	-45.52	7.25	10.03	-42.736	-13.00	Pass
Vertical	36.499	-51.58	0.51	-18.69	-70.783	-13.00	Pass
	836.070	-49.74	2.58	5.18	-47.143	-13.00	Pass
	881.272	-57.17	2.74	5.21	-54.696	-13.00	Pass
	1510.4	-52.63	3.57	6.20	-50.003	-13.00	Pass
	1995.4	-51.60	3.95	7.76	-47.790	-13.00	Pass
	2560.2	-51.79	4.68	8.56	-47.906	-13.00	Pass
	3525.9	-51.60	5.45	10.46	-46.590	-13.00	Pass
	7080.3	-49.60	7.15	9.71	-47.042	-13.00	Pass
	9204.5	-44.63	7.25	10.03	-41.846	-13.00	Pass

检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

8.4.3 High channel 777

Receiving antenna polarization	Frequency (MHz)	Signal generator level (dBm)	Cable loss (dB)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Test result
Horizontal	819.580	-55.88	2.56	5.21	-53.227	-13.00	Pass
	848.292	-41.96	2.60	5.15	-39.405	-13.00	Pass
	893.397	-57.80	2.78	5.24	-55.336	-13.00	Pass
	1440.8	-52.78	3.20	5.54	-50.441	-13.00	Pass
	2091.7	-51.26	4.22	7.88	-47.601	-13.00	Pass
	2770.6	-52.04	4.38	8.94	-47.484	-13.00	Pass
	3573.0	-53.34	5.17	10.46	-48.047	-13.00	Pass
	7316.4	-48.35	7.13	9.59	-45.885	-13.00	Pass
	9562.2	-46.02	8.26	9.99	-44.291	-13.00	Pass
Vertical	819.580	-54.81	2.56	5.21	-52.161	-13.00	Pass
	848.389	-90.12	2.60	5.15	-87.568	-13.00	Pass
	893.300	-59.61	2.78	5.24	-57.146	-13.00	Pass
	1383.3	-51.91	3.26	5.12	-50.048	-13.00	Pass
	1995.4	-51.66	3.95	7.76	-47.850	-13.00	Pass
	2654.3	-52.03	4.49	8.73	-47.793	-13.00	Pass
	3573.3	-52.27	5.17	10.46	-46.982	-13.00	Pass
	7085.1	-50.39	7.15	9.71	-47.826	-13.00	Pass
	9459.4	-47.00	8.12	10.00	-45.118	-13.00	Pass

检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

8.5 Test Instrumentation (Test date: 2010.06.17)

Name/Model	Number	Due date
Spectrum Analyzer FSU 26	容-001-33	2010.06.25
Microwave Signal Generator SMR 20	容-001-02	2011.02.02
Universal Radio Communication Tester CMU 200	容-026-01	2011.06.15
Pre-Amplifier AFS42-00101800	容-026-19	2011.01.20
Ultra Broadband Antenna HL 562	容-001-03	2011.04.22
Double-Ridged Waveguide Horn Antenna HF 906	容-001-04	2011.04.22
VHA 9103 without telescopic rods for use with biconical broad-band elements BBA 9106 BBA 9106 + VHA 9103	容-001-39	2011.04.22
Logarithmic Periodic Broadband Antenna UHALP 9108 A	容-001-40	2011.04.22
Broad-band Horn Antenna BBHA 9120D	容-001-06	2011.02.02

检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

8.6 Test Photographs

检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

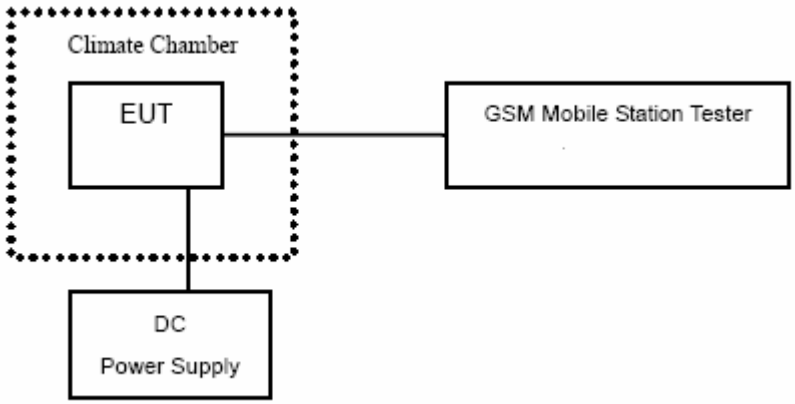
Below 1000MHz

检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

Above 1000MHz

9. Frequency Deviation Test

9.1 Test setup



9.2 Limits

The carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances±2.5ppm.

检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

9.3 Test procedure

Step 1: Frequency Stability vs. Temperature variations
The EUT and test equipment were set up as shown on the following section. With all power removed, the temperature was decreased to -30° C and permitted to stabilize for three hours. Power was applied and the maximum change in frequency was note within one minute. With power OFF, the temperature was raised in 10° C steps. The sample was permitted to stabilize at each step for at least one-half hour. Power was applied and the maximum frequency change was noted within one minute. The temperature tests were performed for the worst case.

Step 2: Frequency Stability vs. voltage variations
The EUT was placed in a temperature chamber at 25±5 ° C and connected as the following section. The power supply voltage to the EUT was varied from BEP to 115% of the nominal value measured at the input to the EUT. The variation in frequency was measured for the worst case.

9.4 Test results

Test mode: CDMA 800 RC22 SO9 (Loopback)			Power source: DC 3.7V	
Temperature (℃)	Voltage (V)	Reference frequency (MHz)	Test level (ppm)	Test results
-30	3.7	Low channel 1013	-0. 24 x10^{-2}	Pass
	3.7	Middle channel 384	0. 96 x10^{-2}	Pass
	3.7	High channel 777	-0.59 x10^{-2}	Pass
-20	3.7	Low channel 1013	-0. 36 x10^{-2}	Pass
	3.7	Middle channel 384	-0.24 x10^{-2}	Pass
	3.7	High channel 777	-0. 12 x10^{-2}	Pass
-10	3.7	Low channel 1013	0. 36 x10^{-2}	Pass
	3.7	Middle channel 384	-0. 36 x10^{-2}	Pass
	3.7	High channel 777	-0. 47 x10^{-2}	Pass
0	3.7	Low channel 1013	0. 24 x10^{-2}	Pass
	3.7	Middle channel 384	0. 24 x10^{-2}	Pass
	3.7	High channel 777	0. 71 x10^{-2}	Pass
10	3.7	Low channel 1013	-0. 036 x10^{-2}	Pass
	3.7	Middle channel 384	0. 60 x10^{-2}	Pass

检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

	3.7	High channel 777	-0. 71 x10^{-2}	Pass
20	3.7	Low channel 1013	-0. 49 x10^{-2}	Pass
	3.7	Middle channel 384	0. 72 x10^{-2}	Pass
	3.7	High channel 777	0. 47 x10^{-2}	Pass
30	3.7	Low channel 1013	0. 73 x10^{-2}	Pass
	3.7	Middle channel 384	0. 60 x10^{-2}	Pass
	3.7	High channel 777	0. 47 x10^{-2}	Pass
40	3.7	Low channel 1013	0. 97 x10^{-2}	Pass
	3.7	Middle channel 384	-0. 60 x10^{-2}	Pass
	3.7	High channel 777	-0. 83 x10^{-2}	Pass
50	3.7	Low channel 1013	0. 73 x10^{-2}	Pass
	3.7	Middle channel 384	-0. 84 x10^{-2}	Pass
	3.7	High channel 777	0. 94 x10^{-2}	Pass
20	3.5	Low channel 1013	-0. 97 x10^{-2}	Pass
	3.5	Middle channel 384	1.20 x10^{-2}	Pass
	3.5	High channel 777	-0. 47 x10^{-2}	Pass
20	4.2	Low channel 1013	0. 61 x10^{-2}	Pass
	4.2	Middle channel 384	-0. 489 x10^{-2}	Pass
	4.2	High channel 777	0. 35 x10^{-2}	Pass

9.5 Test Instrumentation (Test date: 2010.06.12)

Name/Model	Number	Due date
Universal Radio Communication Tester CMU 200	容-026-01	2010.06.16
Spectrum Analyzer FSU 26	容-001-33	2010.06.25
Power Splitter 11667C	容-030-11	2010.07.22
Cold-heat climate test chamber GDW-60B	容-011-44	2012.01.03
Voltage Drop Simulator 60V/100A VDS 200 B3	容-011-26	2011.04.21

检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

9.6 Test Photographs

检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

Attachment 1: Main measuring instruments used in this test

本次检测所使用的主要测量仪器：
Main measuring instruments used in this test

名称/型号 Name/Model	编号 Number	证书编号/有效期限 Certificate No./Due date	测量范围/准确度 Measuring range/accuracy

检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

Universal Radio Communication Tester CMU 200	容 -026-01	2011.06.15	100 kHz ～ 2700 MHz，Frequency resolution: 0.1 Hz
Spectrum Analyzer FSU 26	容 -001-33	2009F33-10-001675 2010.06.25	20 Hz ～ 26.5 GHz,1dB compression point(0 dB RF attenuaton):+13 dBm;Displayed average noise level with preamplifier ON,1GHz,10Hz RBW:<-152 dBm / Total measurement error, f<3.6 GHz:0.3 dB
Power Splitter 11667C	容 -030-11	2009J10-10-907001 2010.07.22	DC ～ 50 GHz，Maximum input power：+ 27 dBm，0.5W MAX.Input Return Loss（SWR）：12 dB（1.65），Equivalent Output SWR：1.65，Output Tracking：0.40 dB
Microwave Signal Generator SMR 20	容 -001-02	2010F33-10-000126 2011.02.02	10 MHz ～ 20 GHz，Frequency Resolution 1kHz，1GHz～18 GHz:> 10dBm,18GHz～20GHz:> 8dBm
Ultra Broadband Antenna HL 562	容 -001-03	2011.04.22	30 MHz ～ 3000 MHz，Cross Polarisation Suppression > 20dB,Input Impedance:50 Ω,VSWR typ.<2,GAIN:8dBi / Gain:8dBi(typ.)from 200 MHz
Logarithmic Periodic Broadband Antenna UHALP 9108 A	容 -001-40	2011.04.22	250 MHz ～ 2.4 GHz; 1kW
Pre-Amplifier AFS42-00101800	容 -026-19	2010J10-10-901004 2011.01.20	1 GHz ～ 18 GHz,35 dB Gain,N.F:2.5dB
Double-Ridged Waveguide Horn Antenna HF 906	容 -001-04	2011.04.22	1 GHz ～ 18 GHz，Nominal Impedance：50 Ω, VSWR < 1.5,Gain ：7dB（typ.） ～ 14 dB（typ.） / Gain:7dB typ～14dB typ.
Broad-band Horn Antenna BBHA 9120D	容 -001-06	2011.04.22	1 GHz ～ 18 GHz，GAIN ：6 dBi ～ 18 dBi, Antenna Factor：24dB/m ～ 42dB/m / f<10GHz:± 1.5 dB,10GHz～20GHz:± 2.0 dB

名称/型号 Name/Model	编号 Number	证书编号/有效期限 Certificate No./Due date	测量范围/准确度 Measuring range/accuracy

检测结果/说明（续页）：
Results of test and additional explanation（continued page）
Formal DV/PV Test Report, For Sign-off

VHA 9103 without telescopic rods for use with biconical broad-band elements BBA 9106 BBA 9106 + VHA 9103	容 -001-39	2011.04.22	30MHz ～ 300 MHz;max.power 15W(30W short-time);Element extension range:0.485m ～ 4.85 m balun;reflon coax/ferrite 1:1(50 Ω);Antenna factors(50 Ω):-1.9dB/m ～ 18.3 dB/m;Antenna Gain over Isotropic:ca.+1dBi
Cold-heat climate test chamber GDW-60B	容 -011-44	2010G40-10-400026 2012.01.03	Temperature Adjustment Range: -60 degree ～ +130 degree； Power Source: AC 380V, Total Power: 5.5 kW；Temperature Fluctuation: ±0.5 degree； Average Temperature Drop/Increase Rate: 0.7 degree ～ 1.0 degree/min, Temperature Deviation: ≤±2 degree, Time Adjustment Range: 0 ～ 9999/H, Dimension： 400*400*375mm
Voltage Drop Simulator 60V/100A VDS 200 B3	容 -011-26	2011.04.21	60V/100A 150A for maximum 500ms.source impedance < 10mΩ， Ripple voltage: Ur<0.2Vp-p,frequency min.400Hz，Voltage deviation:<1V at any load(including inrush current)recovering 63% of its maximum excursion within 100μs， Bandwidth: Vpp Max 12V up to 10kHz; Vpp Max 10V up to 30kHz; Vpp Max 6V up to 50kHz / ±10 %