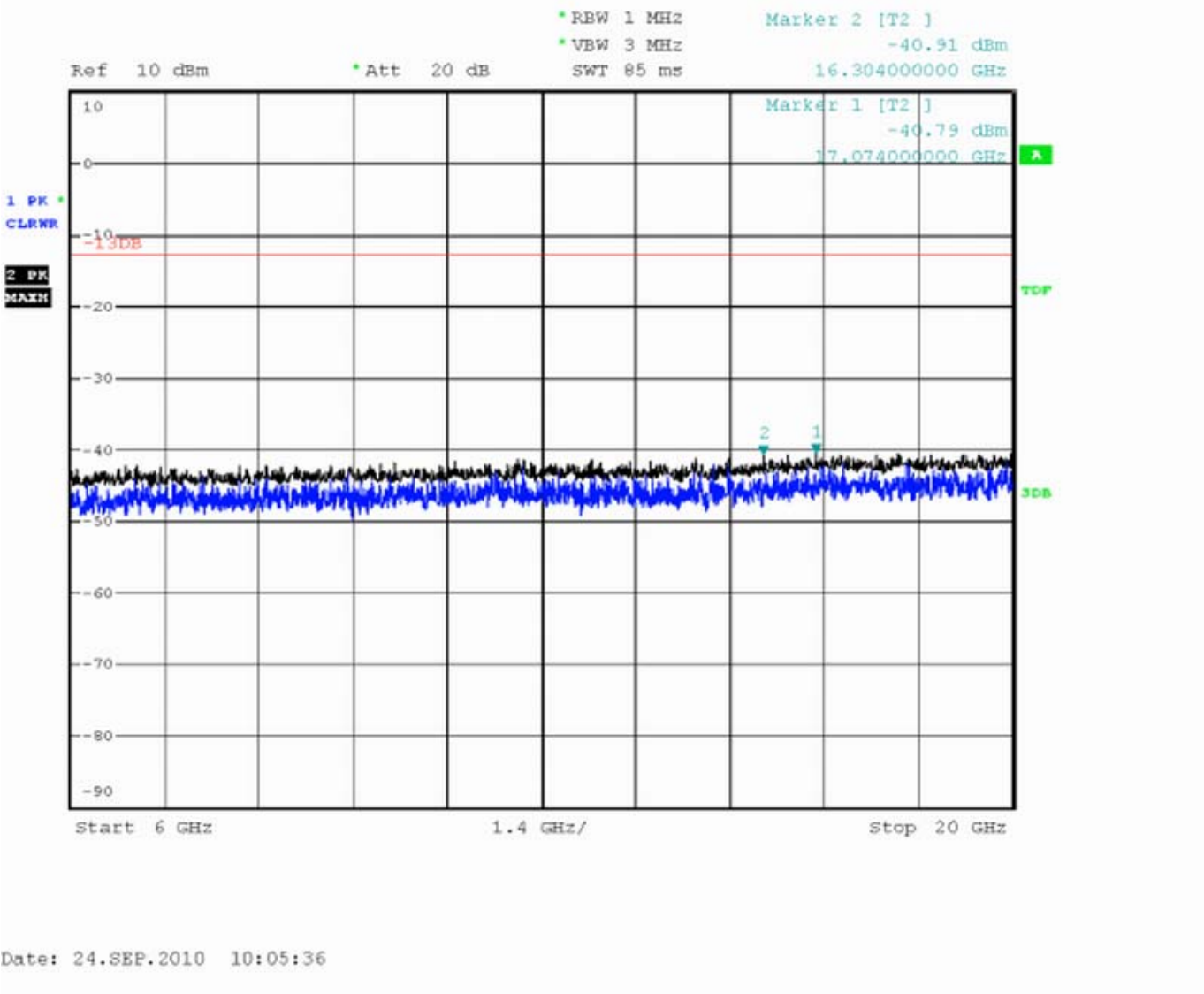


检测结果/说明 (续页):

Results of test and additional explanation (continued page)

848.8MHz (channel 251), 6000~20000MHz

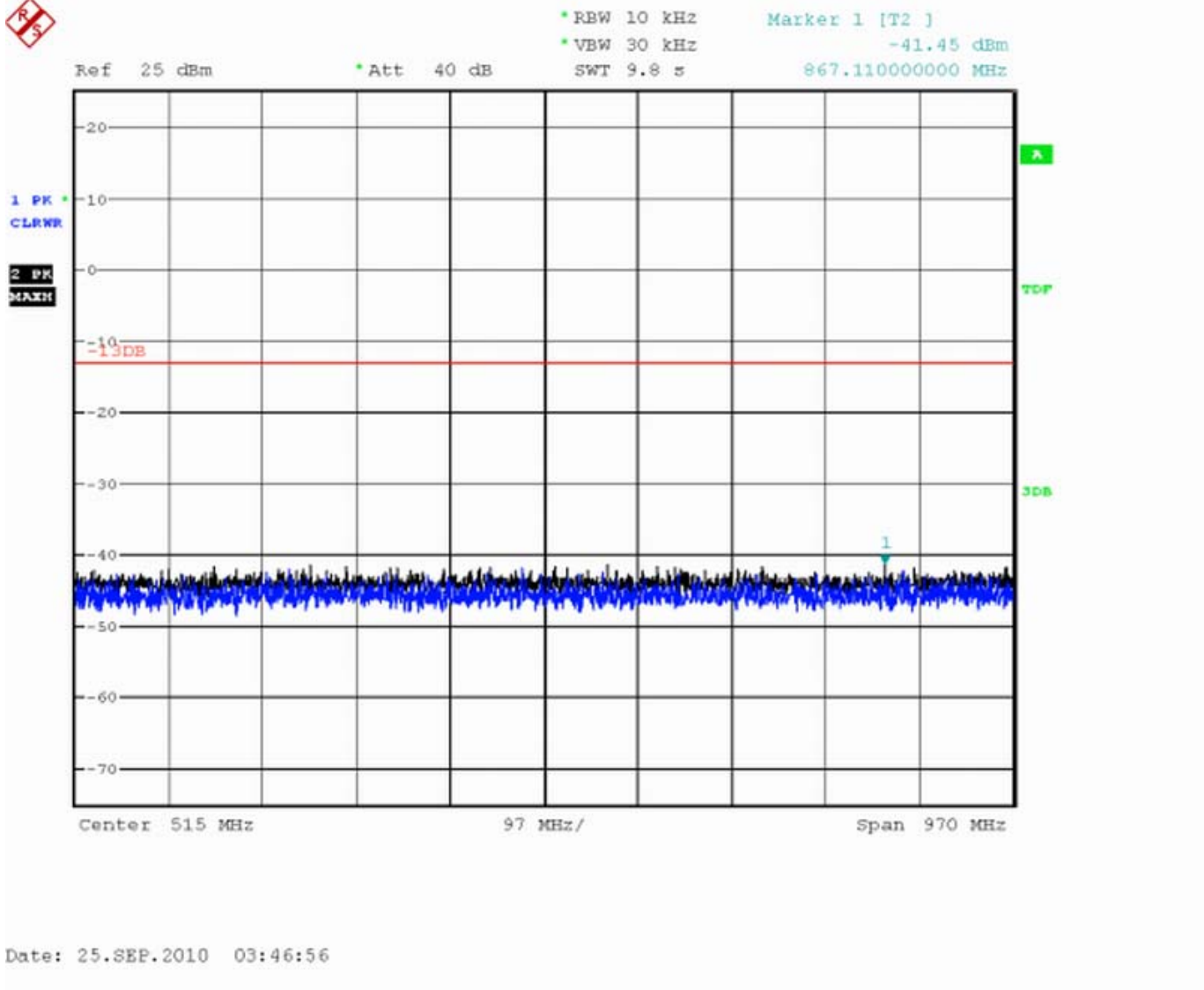


检测结果/说明 (续页):

Results of test and additional explanation (continued page)

7.4.2 Test mode: PCS 1900 + GPRS

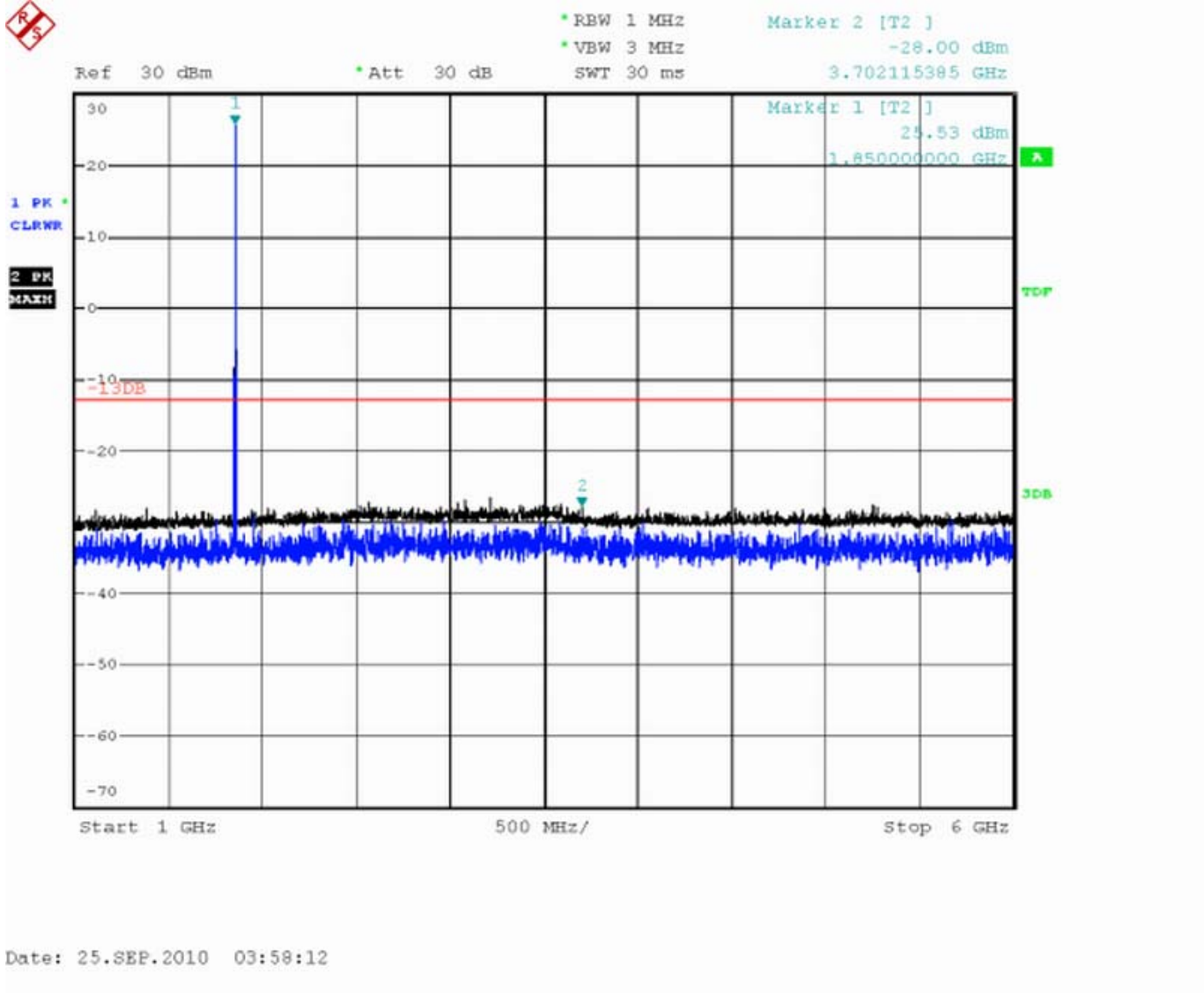
1850.2MHz (channel 512), 30~1000MHz



检测结果/说明 (续页):

Results of test and additional explanation (continued page)

1850.2MHz (channel 512), 1000~6000MHz

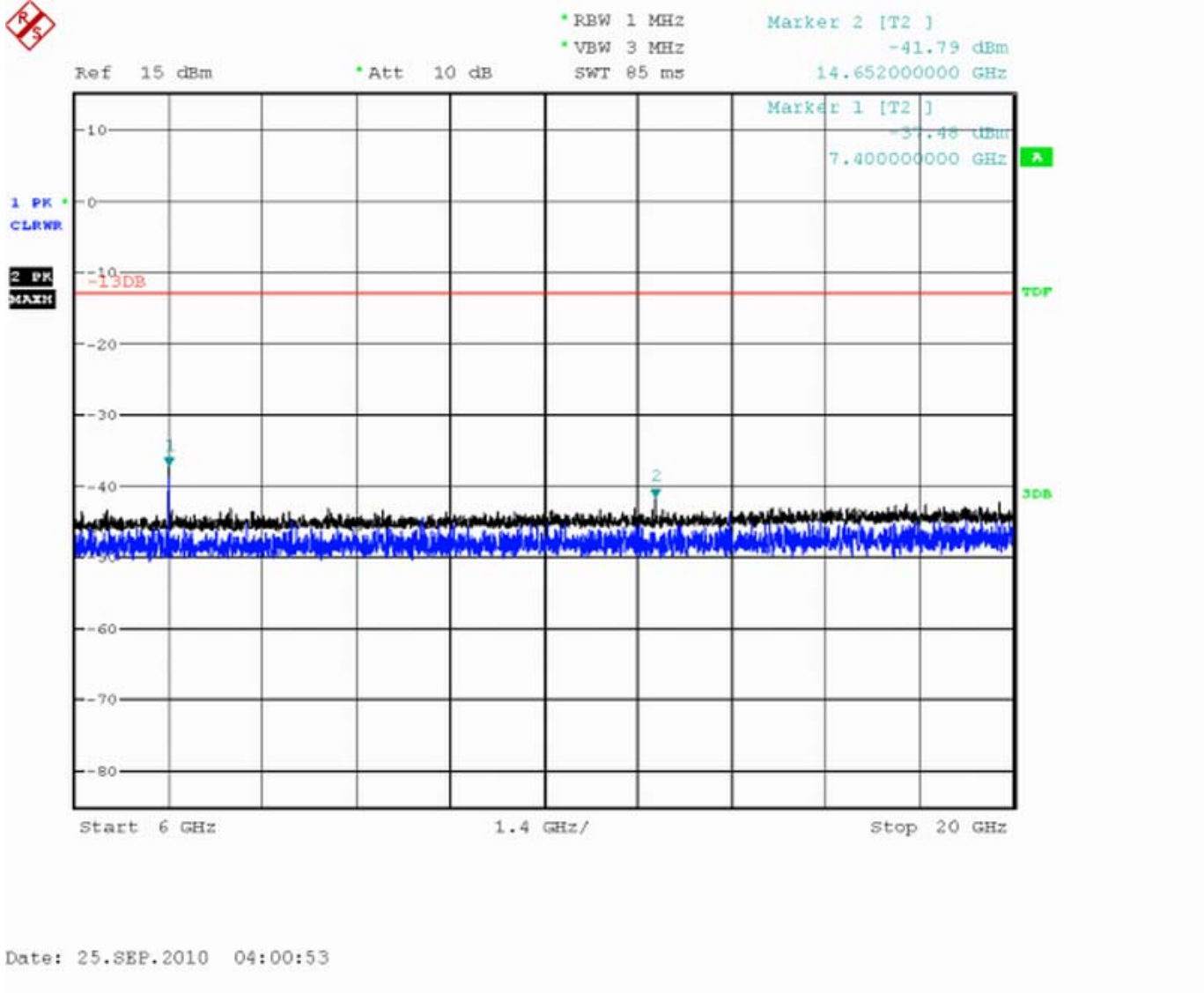


Note: The signal beyond the limit is carrier

检测结果/说明 (续页):

Results of test and additional explanation (continued page)

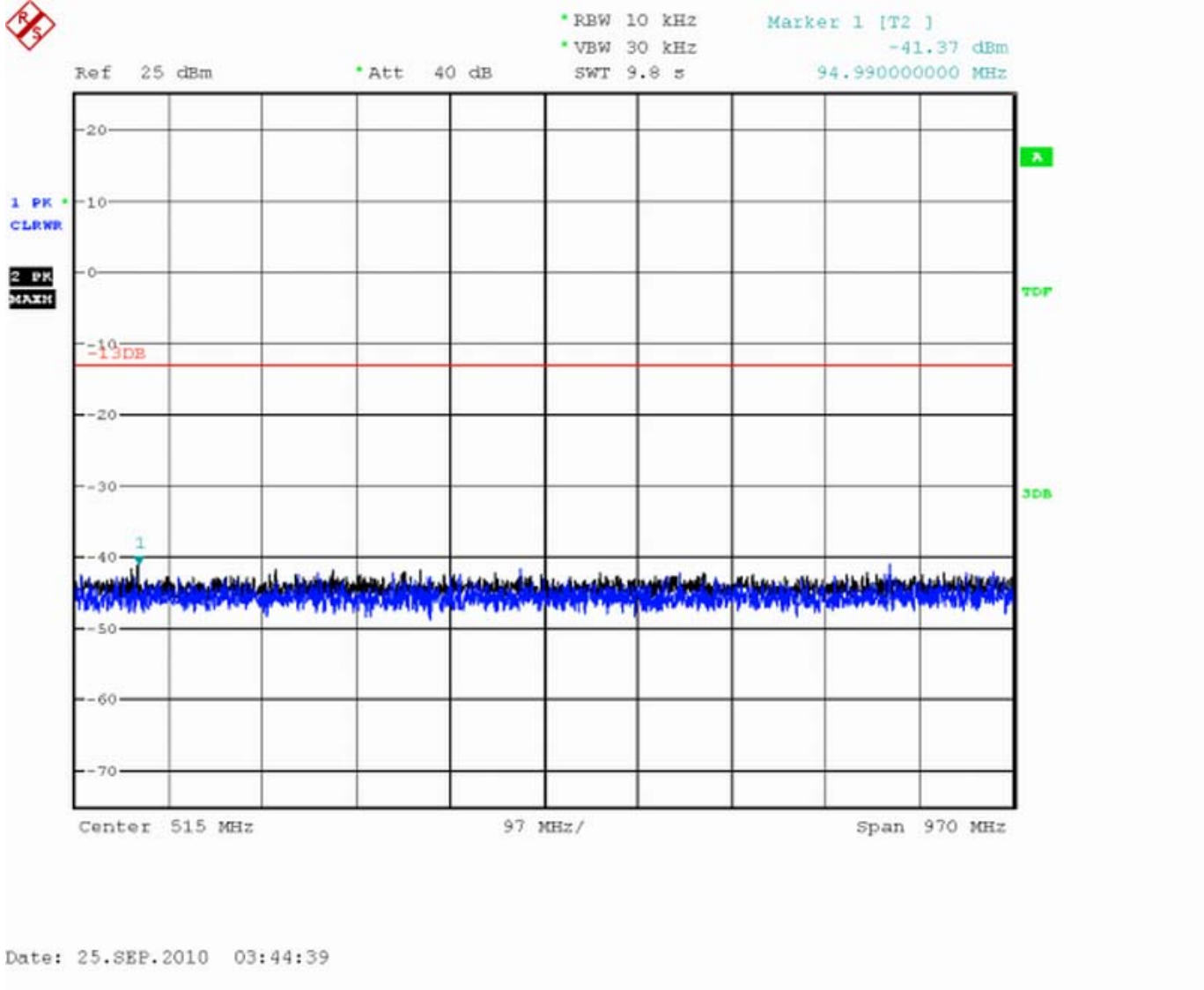
1850.2MHz (channel 512), 6000~20000MHz



检测结果/说明 (续页):

Results of test and additional explanation (continued page)

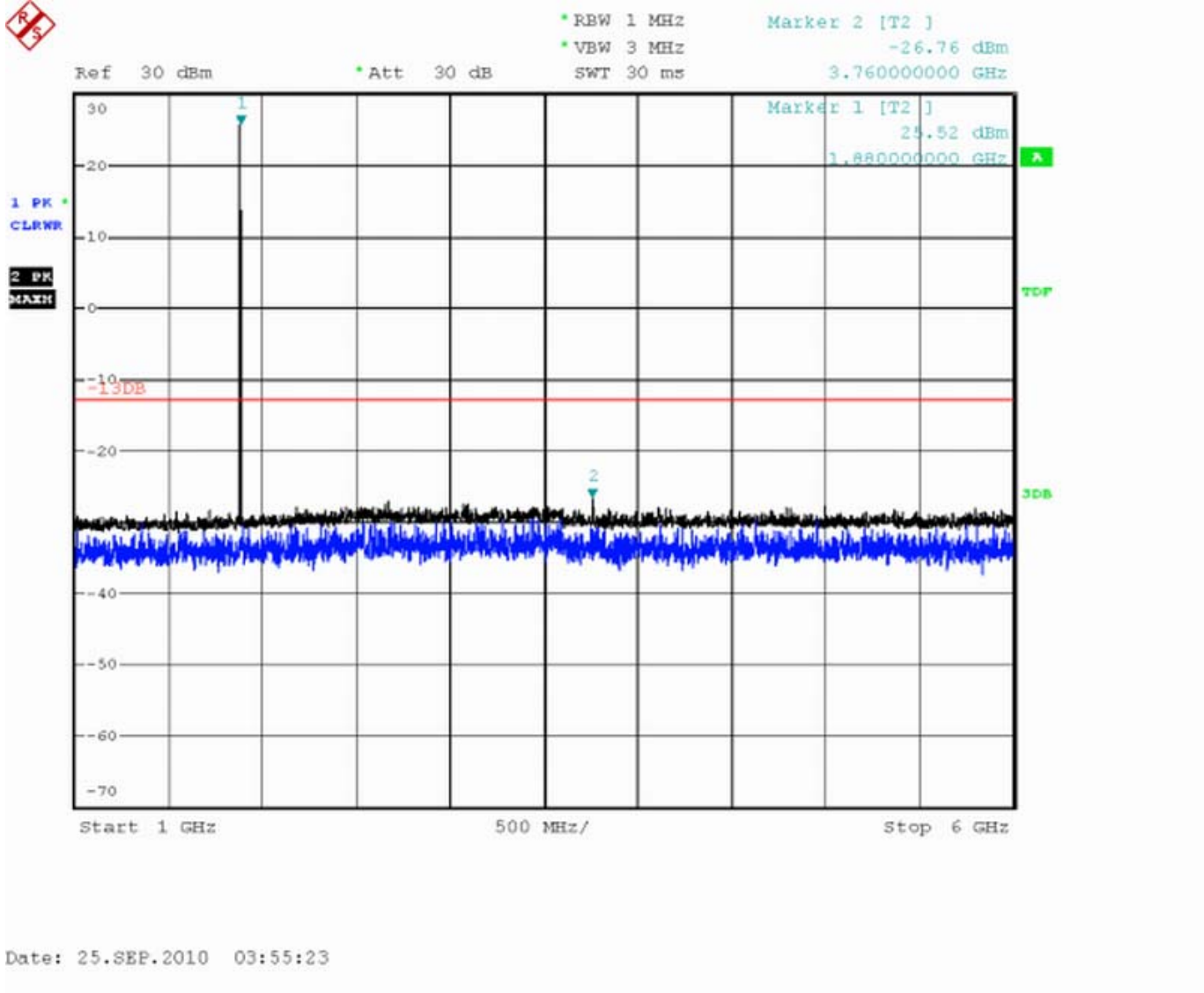
1880.0MHz (channel 661), 30~1000MHz



检测结果/说明 (续页):

Results of test and additional explanation (continued page)

1880.0MHz (channel 661), 1000~6000MHz

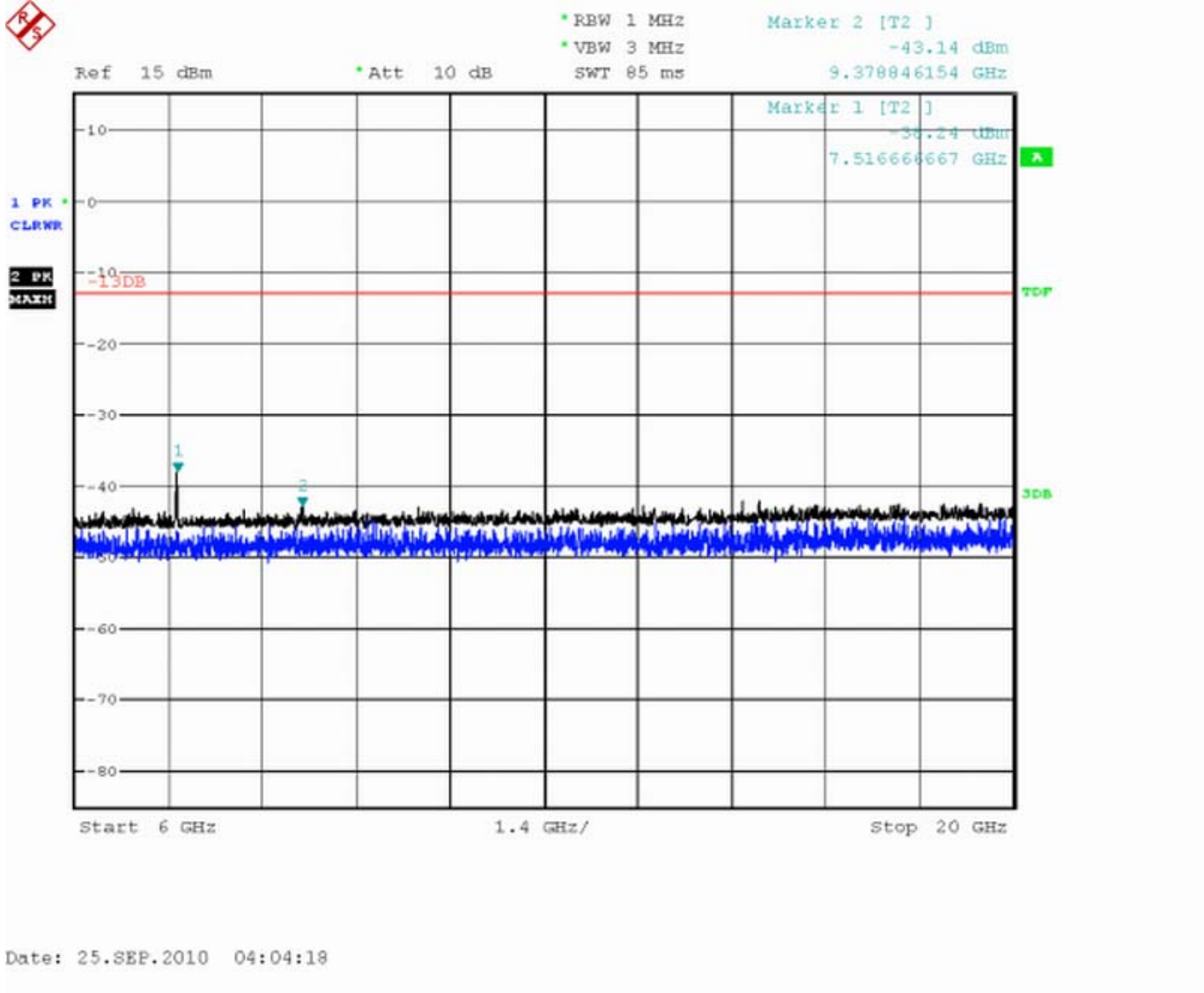


Note: The signal beyond the limit is carrier

检测结果/说明 (续页):

Results of test and additional explanation (continued page)

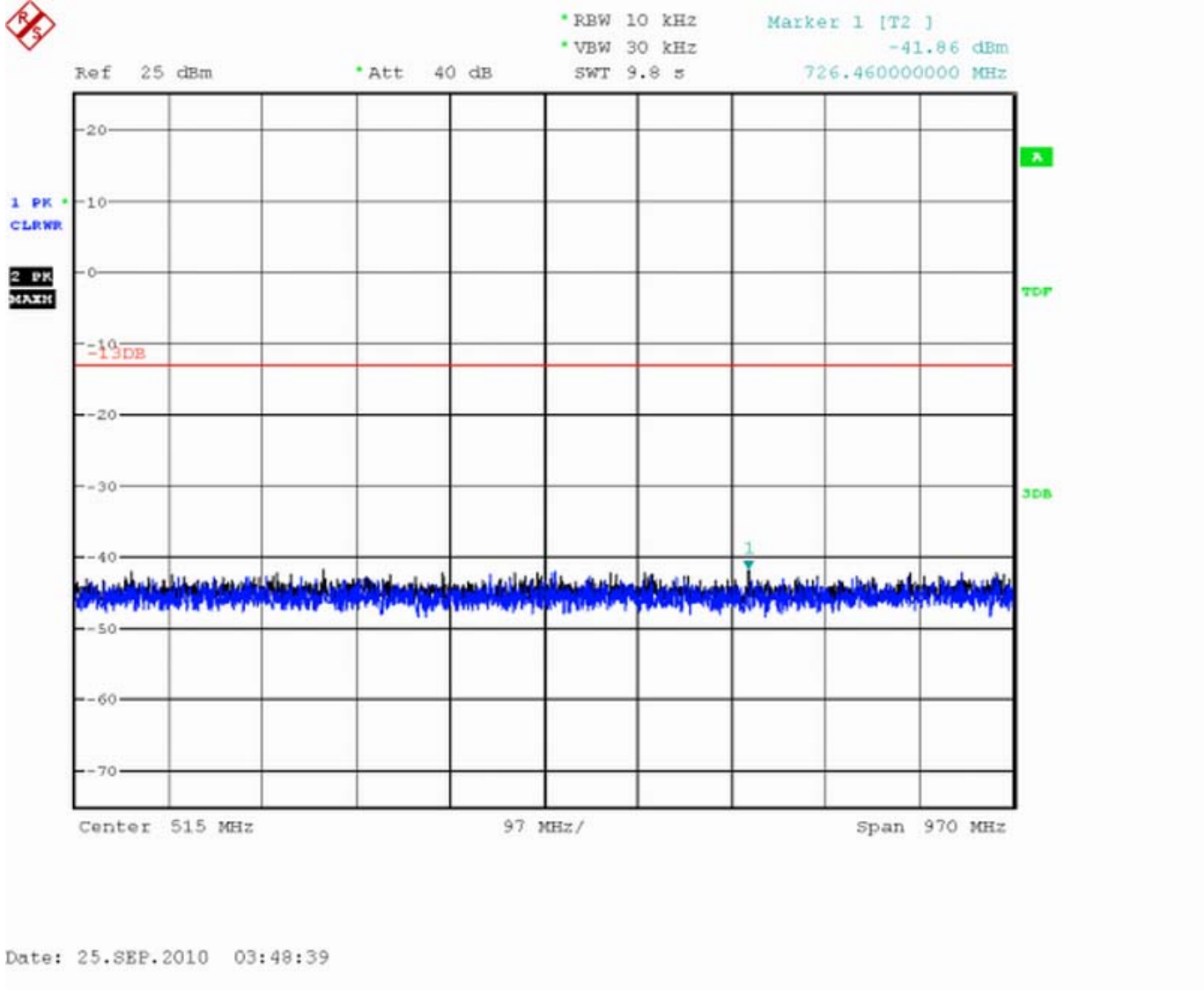
1880.0MHz (channel 661), 6000~20000MHz



检测结果/说明 (续页):

Results of test and additional explanation (continued page)

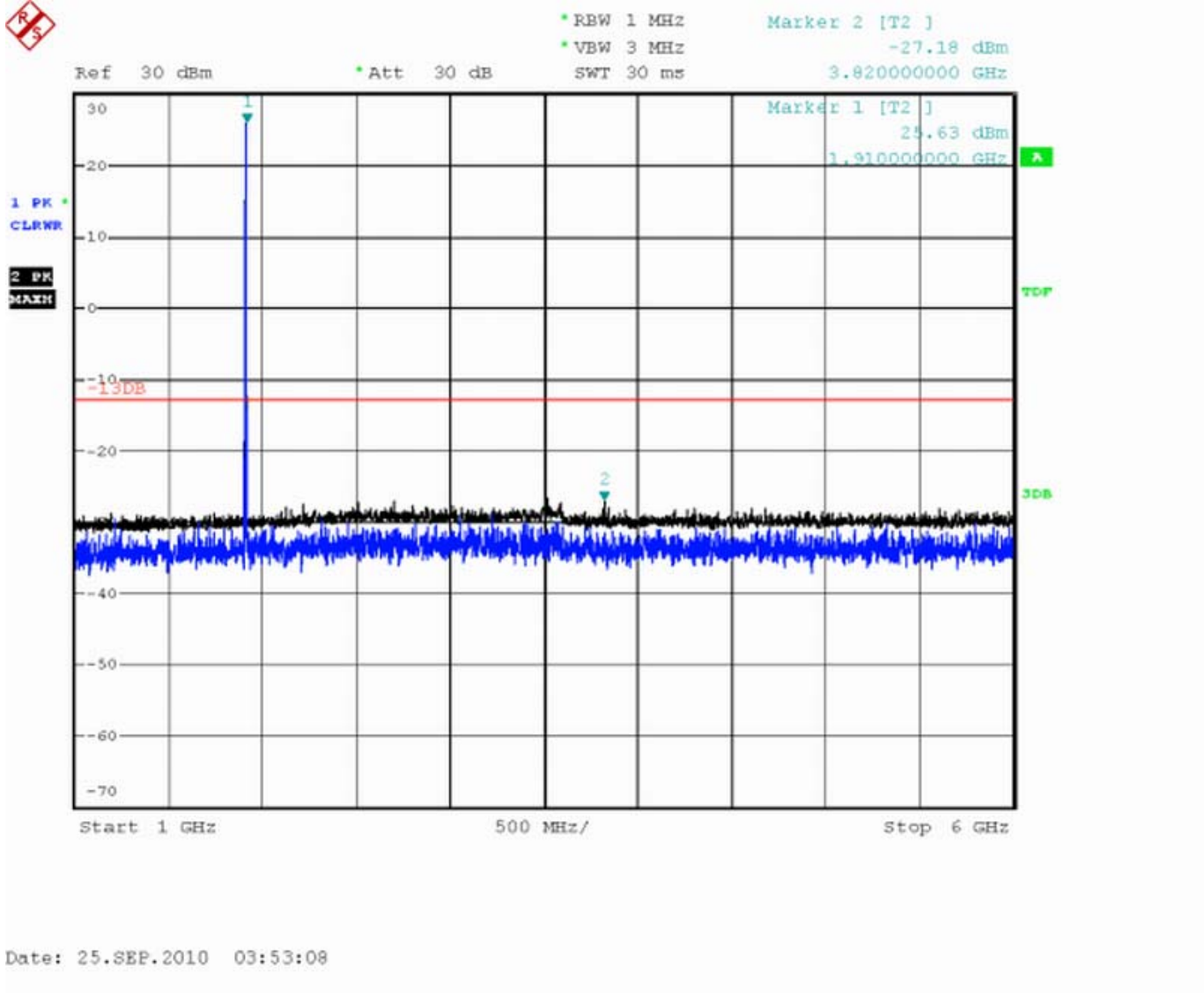
1909.8MHz (channel 810), 30~1000MHz



检测结果/说明 (续页):

Results of test and additional explanation (continued page)

1909.8MHz (channel 810), 1000~6000MHz



Note: The signal beyond the limit is carrier

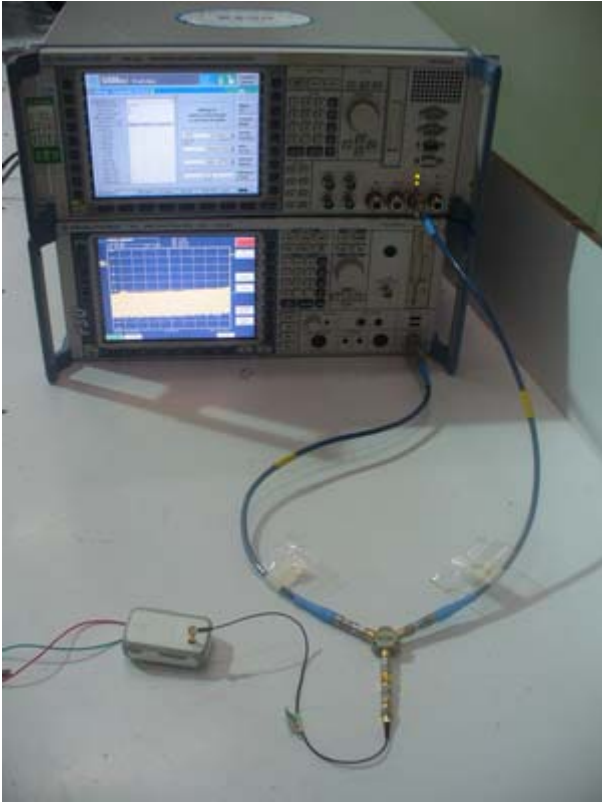
检测结果/说明（续页）：

Results of test and additional explanation (continued page)

7.5 Test Instrumentation (Test date: 2010.09.25)

Name/Model	Number	Due date
Spectrum Analyzer FSU 26	容-001-33	2011.06.24
Power Splitter 11667C	容-030-11	2011.07.21
Universal Radio Communication Tester CMU 200	容-026-01	2011.06.22

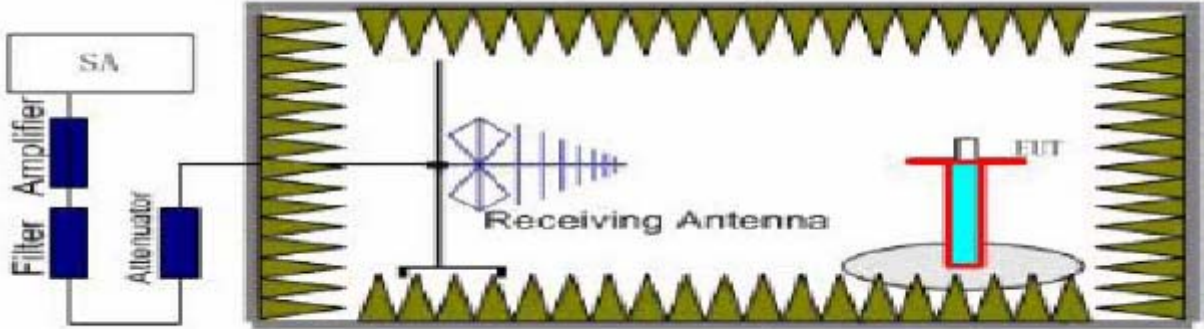
7.6 Test Photograph



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

8. Spurious Radiation Emission Test

8.1 Test setup



8.2 Limits

Limits	<-13dBm
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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 configurations of EUT (in X, Y and Z axis) have been investigated.

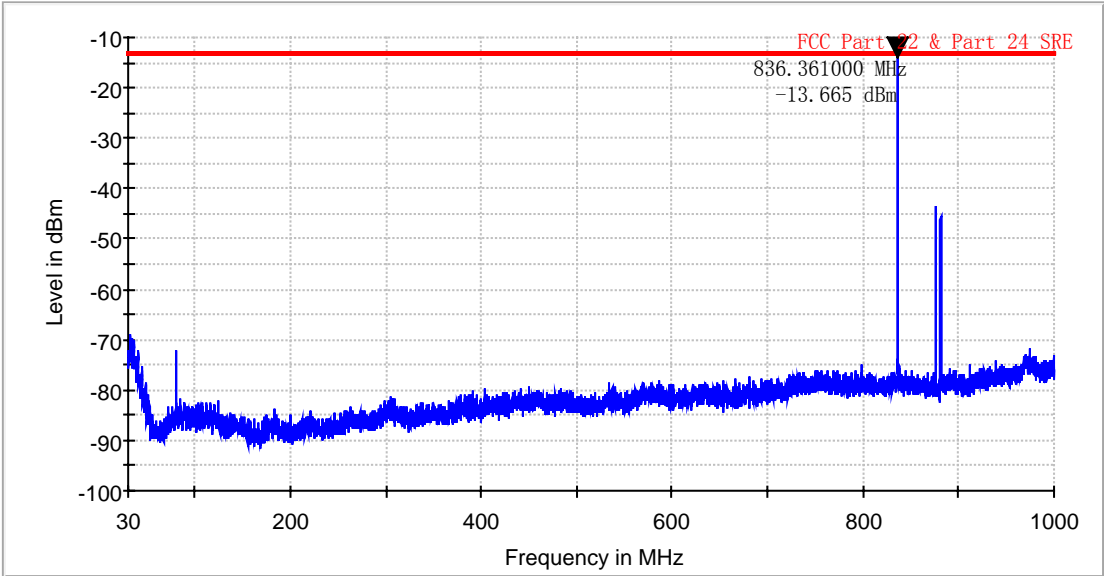
检测结果/说明 (续页):
Results of test and additional explanation (continued page)

8.4 Test results

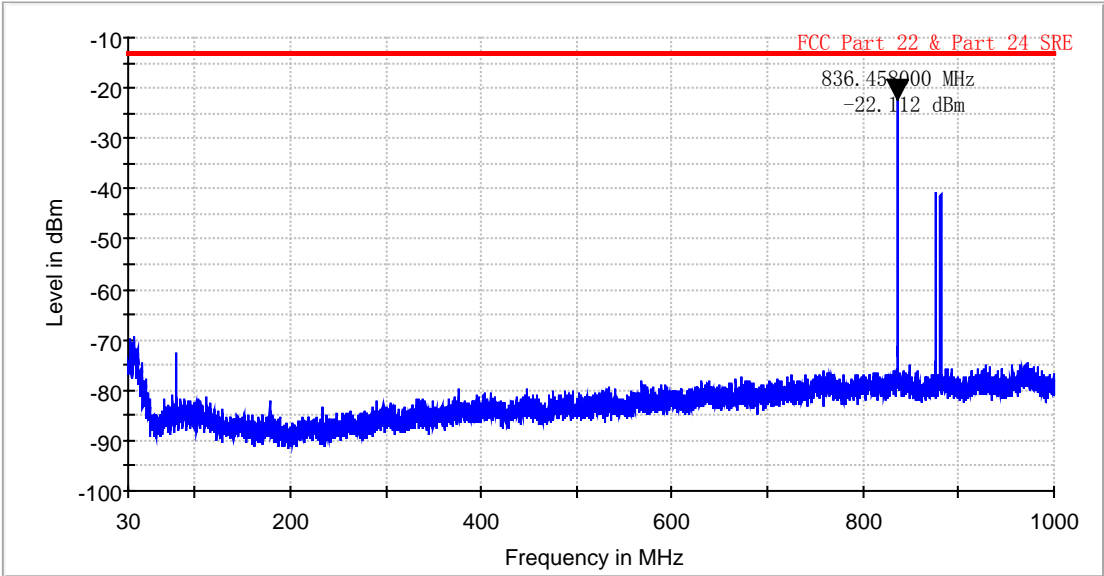
Power source: DC 3.7V

8.4.1 Test mode: GSM 850 + GPRS

836.4MHz (channel 189), X orientation, 30~1000MHz, Horizontal



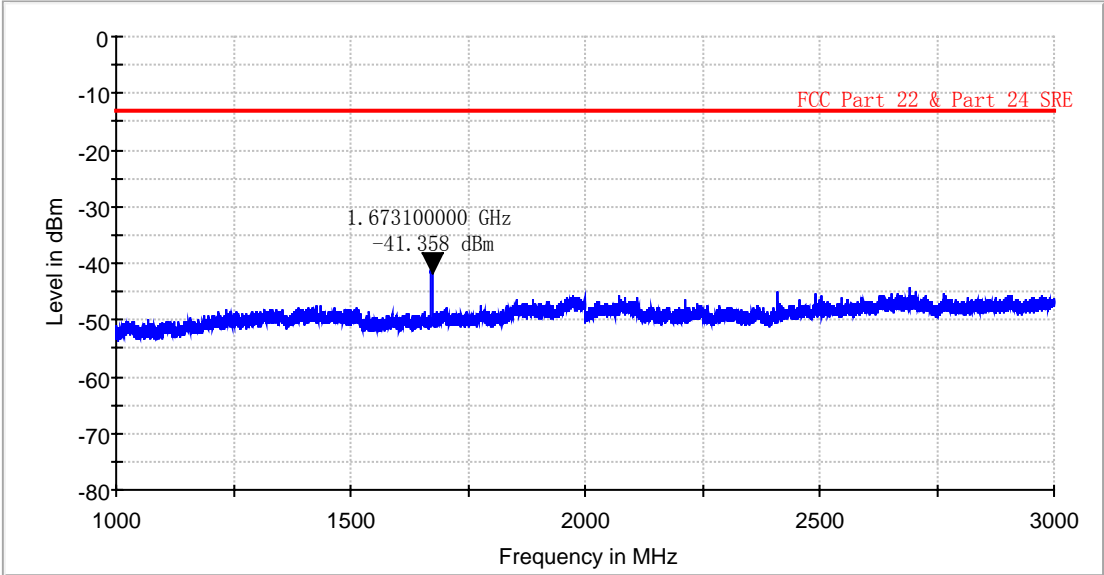
836.4MHz (channel 189), X orientation, 30~1000MHz, Vertical



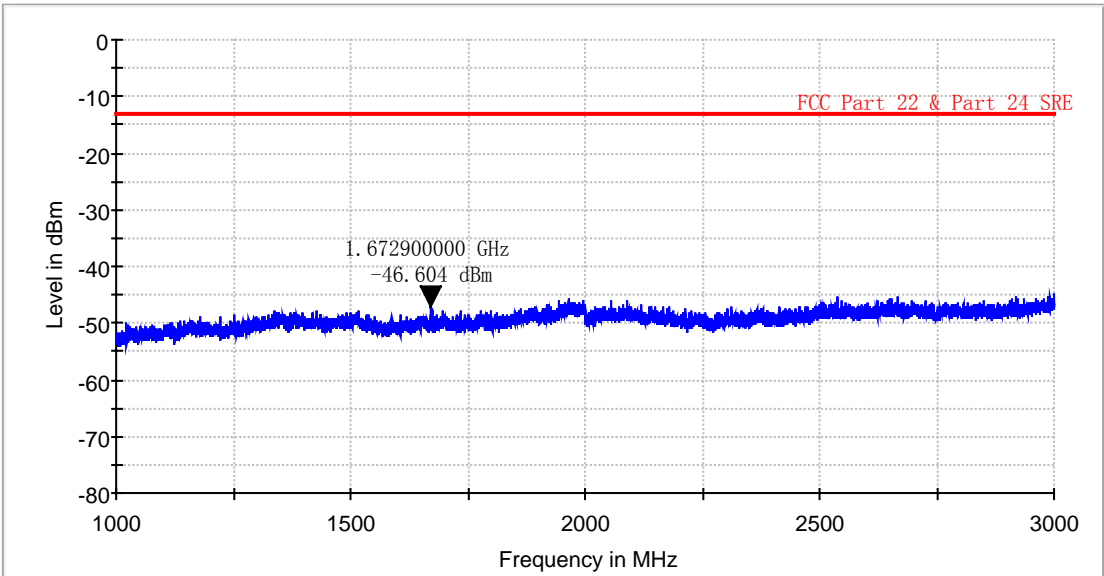
检测结果/说明 (续页):

Results of test and additional explanation (continued page)

836.4MHz (channel 189), X orientation, 1000~3000MHz, Horizontal



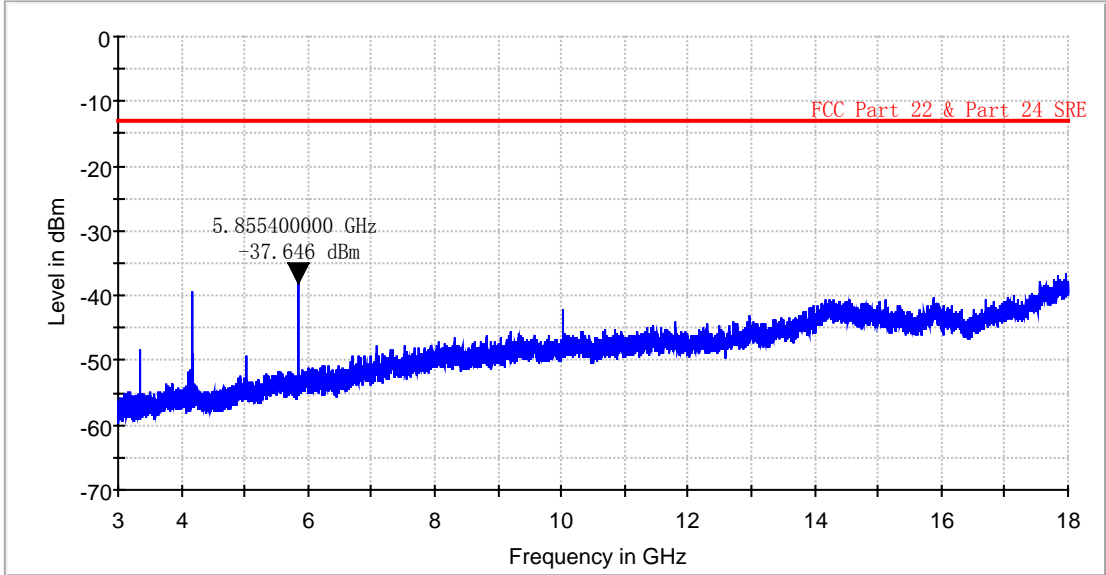
836.4MHz (channel 189), X orientation, 1000~3000MHz, Vertical



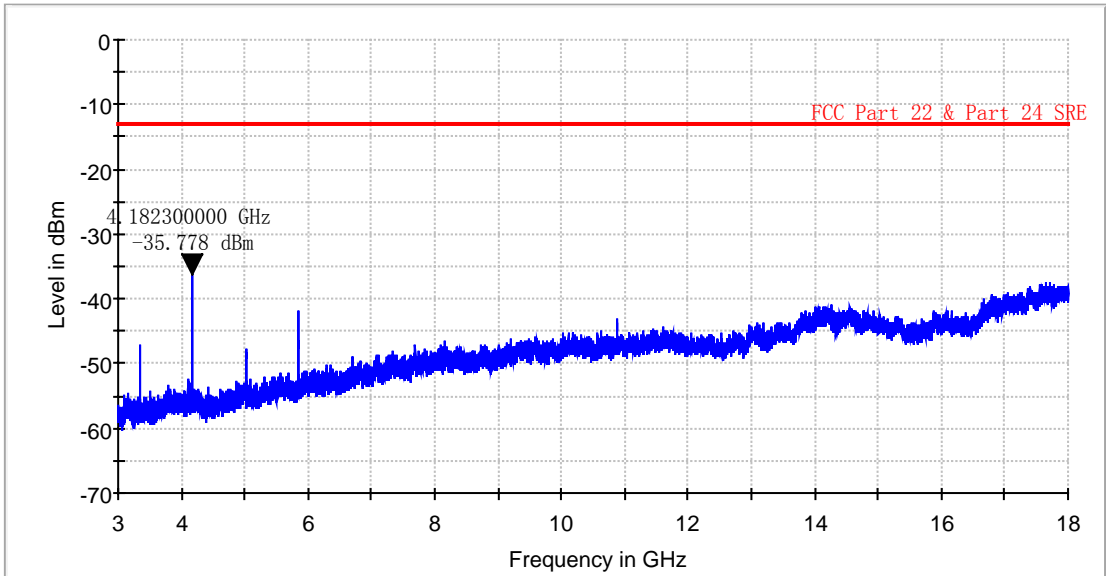
检测结果/说明 (续页):

Results of test and additional explanation (continued page)

836.4MHz (channel 189), X orientation, 3000~18000MHz, Horizontal



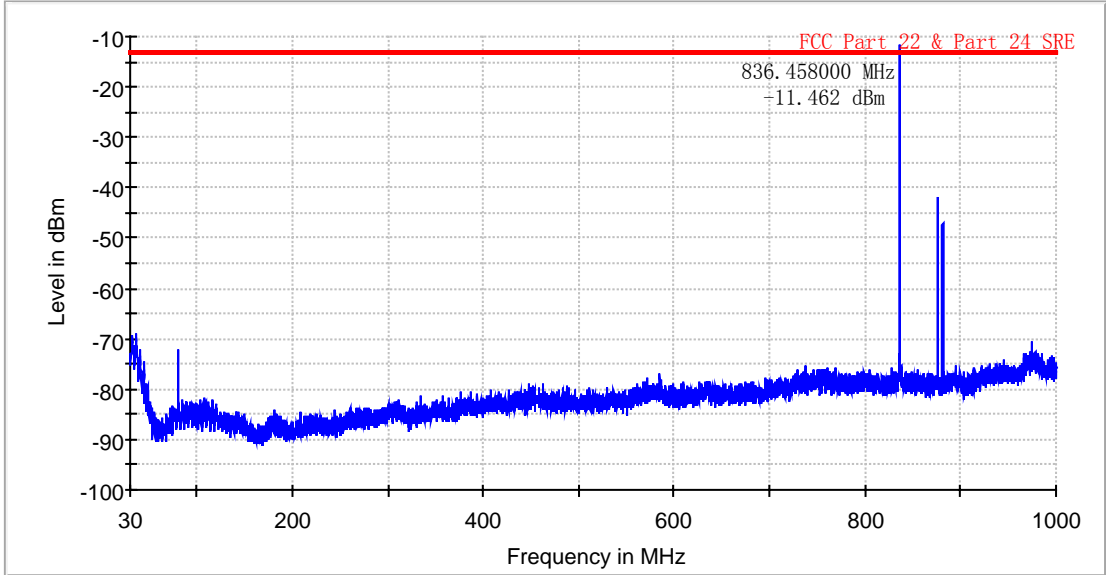
836.4MHz (channel 189), X orientation, 3000~18000MHz, Vertical



检测结果/说明 (续页):

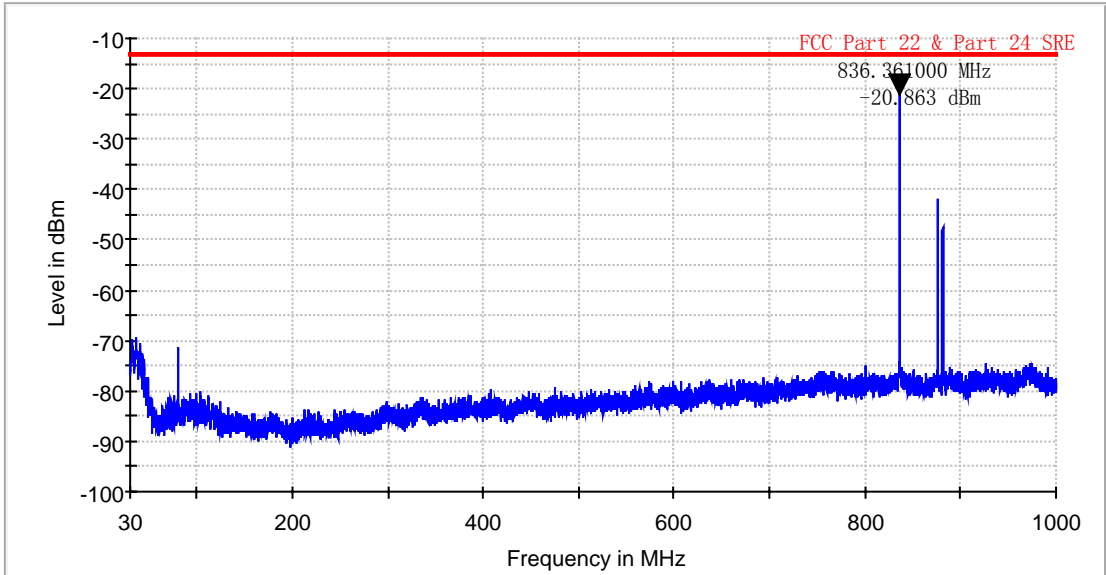
Results of test and additional explanation (continued page)

836.4MHz (channel 189), Y orientation, 30~1000MHz, Horizontal



Note: The signal beyond the limit is carrier

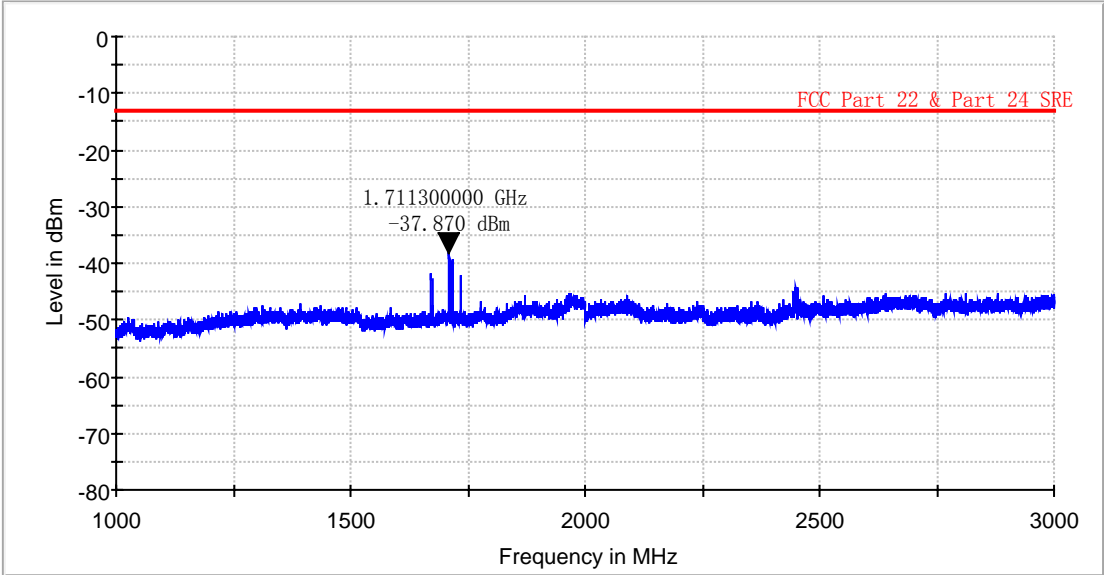
836.4MHz (channel 189), Y orientation, 30~1000MHz, Vertical



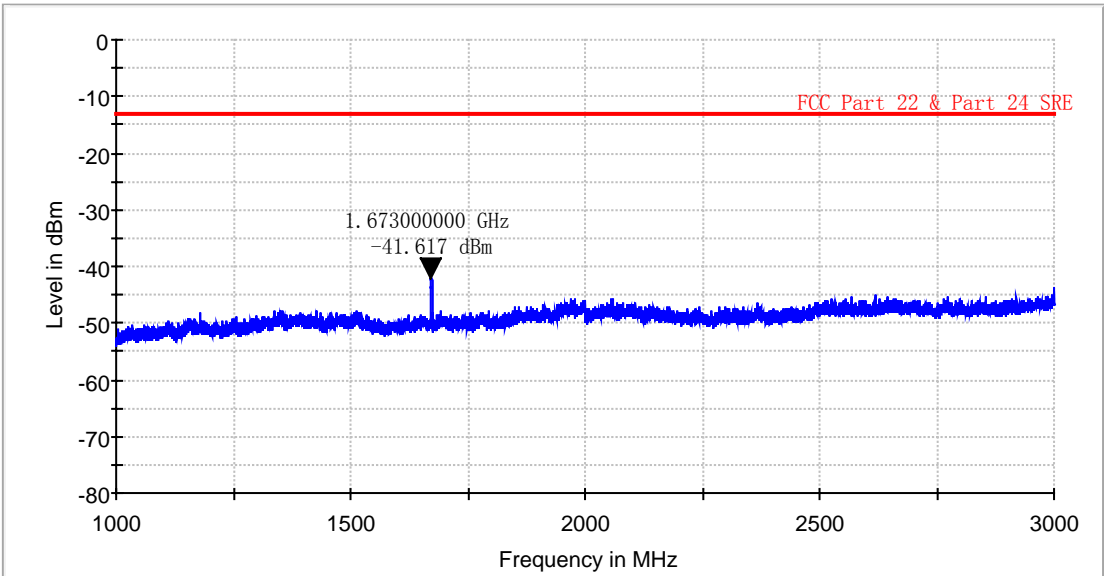
检测结果/说明 (续页):

Results of test and additional explanation (continued page)

836.4MHz (channel 189), Y orientation, 1000~3000MHz, Horizontal



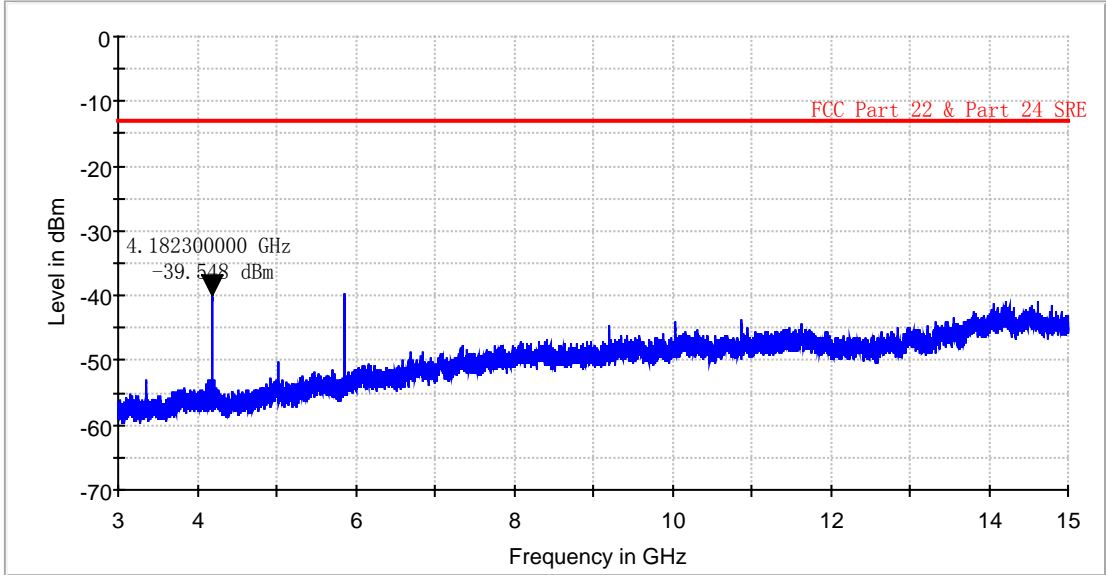
836.4MHz (channel 189), Y orientation, 1000~3000MHz, Vertical



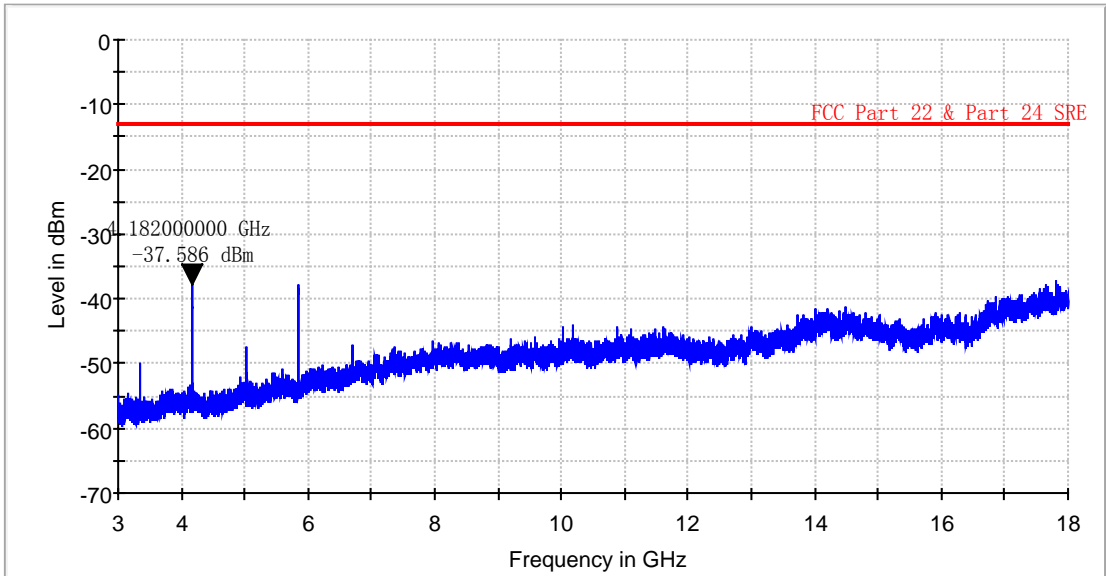
检测结果/说明 (续页):

Results of test and additional explanation (continued page)

836.4MHz (channel 189), Y orientation, 3000~18000MHz, Horizontal



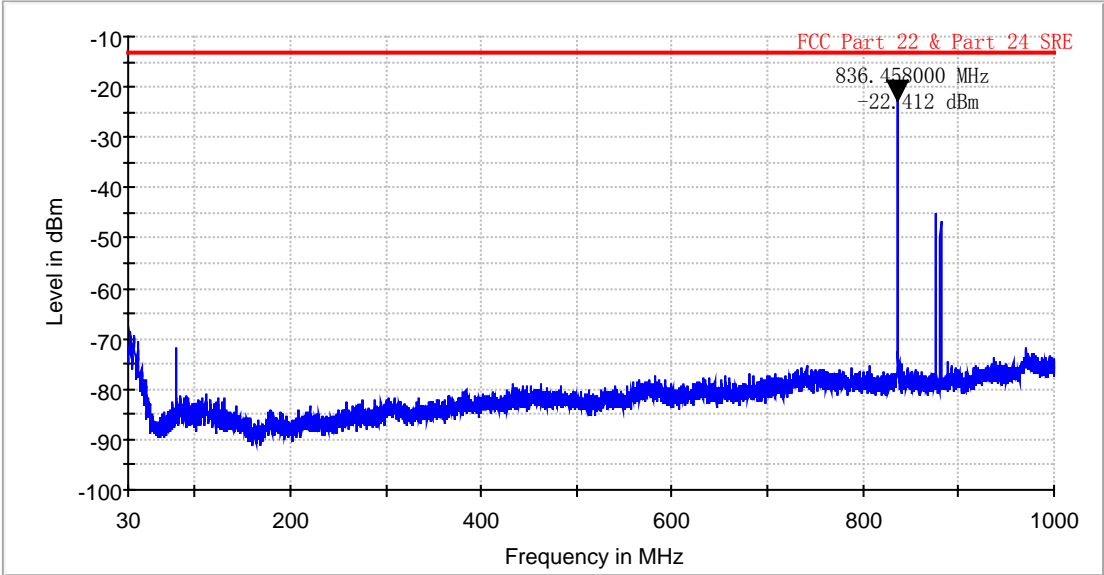
836.4MHz (channel 189), Y orientation, 3000~18000MHz, Vertical



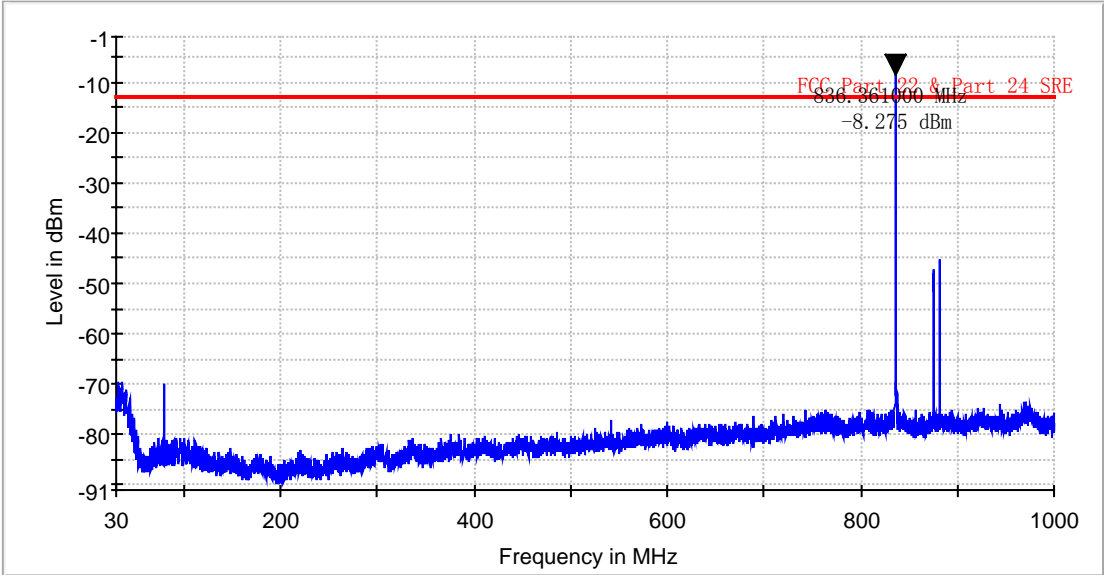
检测结果/说明 (续页):

Results of test and additional explanation (continued page)

836.4MHz (channel 189), Z orientation, 30~1000MHz, Horizontal



836.4MHz (channel 189), Z orientation, 30~1000MHz, Vertical

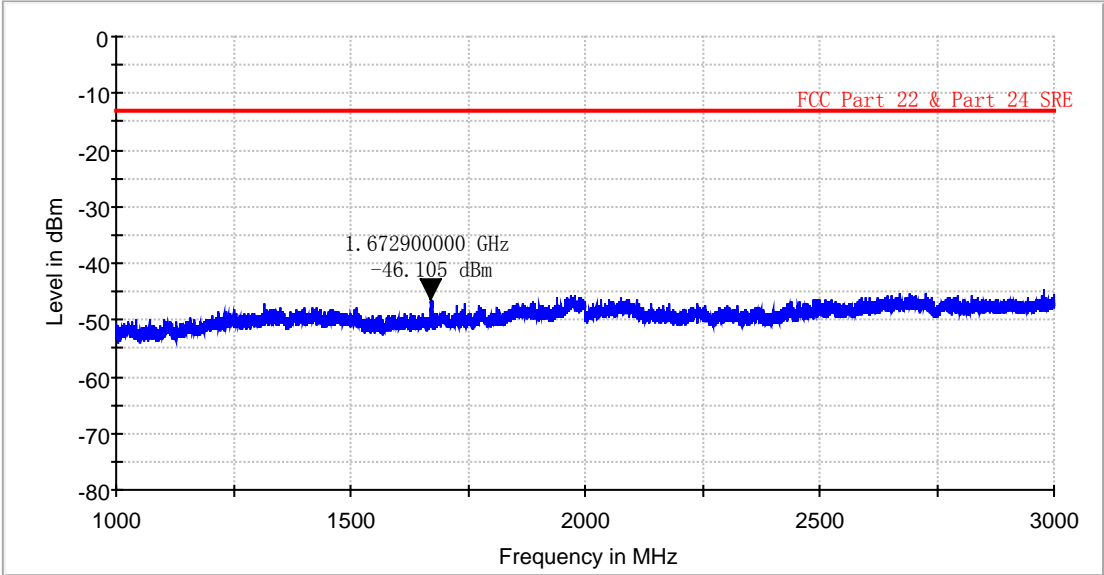


Note: The signal beyond the limit is carrier

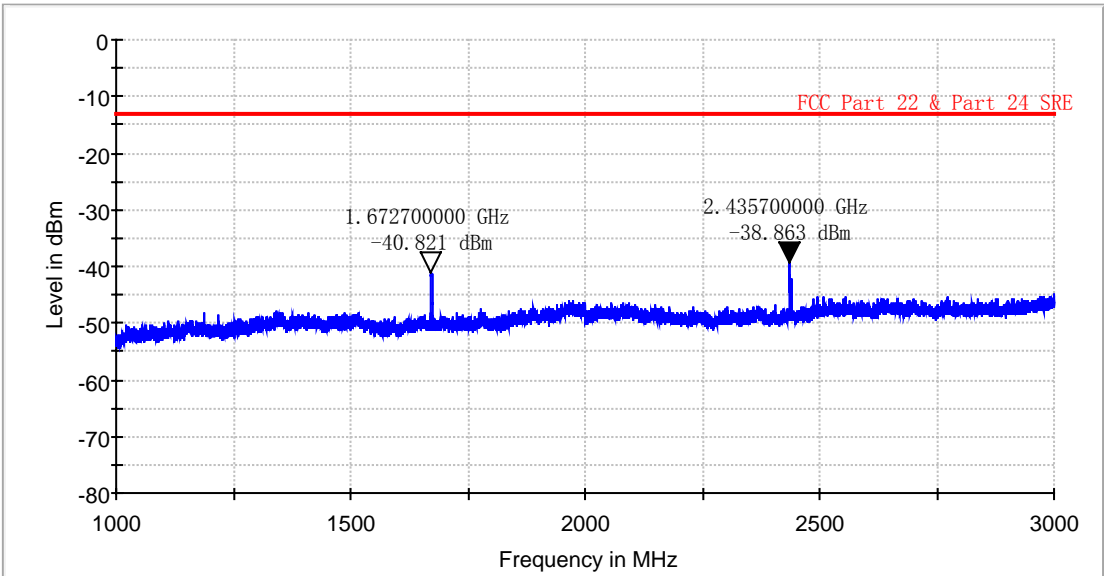
检测结果/说明 (续页):

Results of test and additional explanation (continued page)

836.4MHz (channel 189), Z orientation, 1000~3000MHz, Horizontal



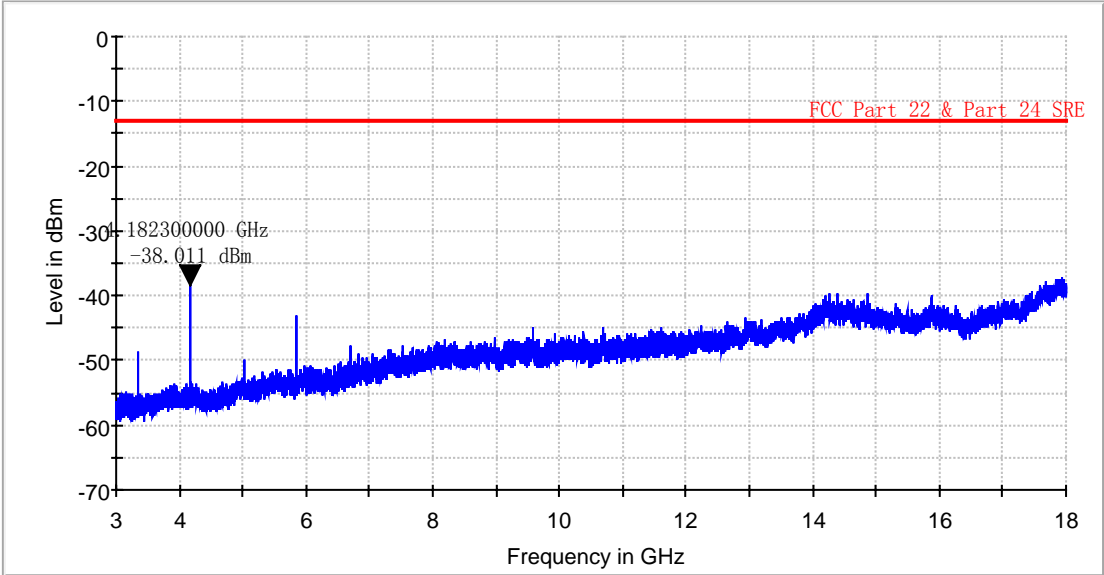
836.4MHz (channel 189), Z orientation, 1000~3000MHz, Vertical



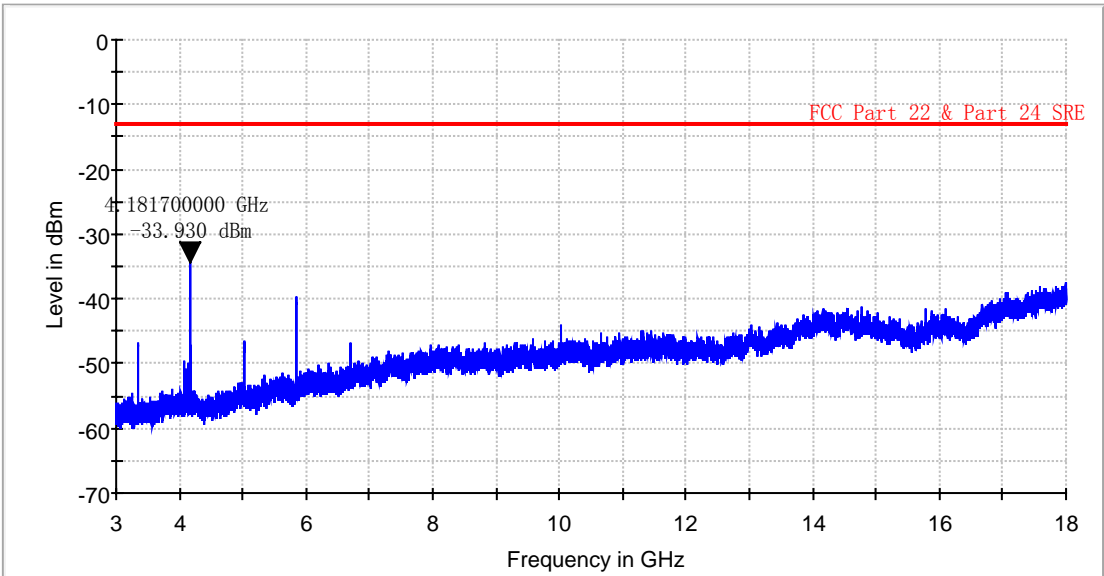
检测结果/说明 (续页):

Results of test and additional explanation (continued page)

836.4MHz (channel 189), Z orientation, 3000~18000MHz, Horizontal



836.4MHz (channel 189), Z orientation, 3000~18000MHz, Vertical

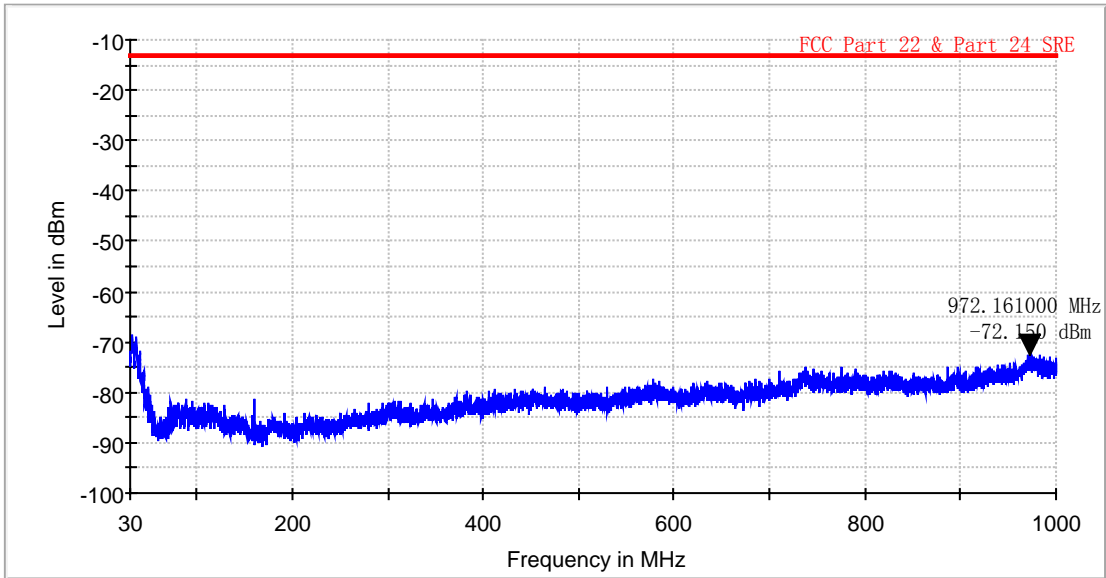


检测结果/说明 (续页):

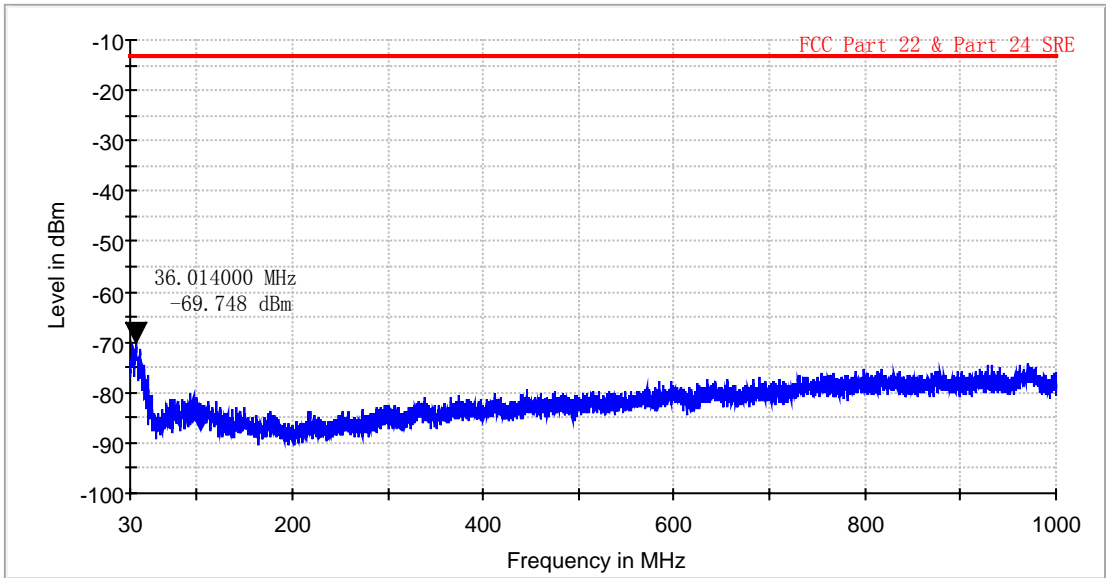
Results of test and additional explanation (continued page)

8.4.2 Test mode: PCS 1900 + GPRS

1880.0MHz (channel 661), X orientation, 30~1000MHz, Horizontal



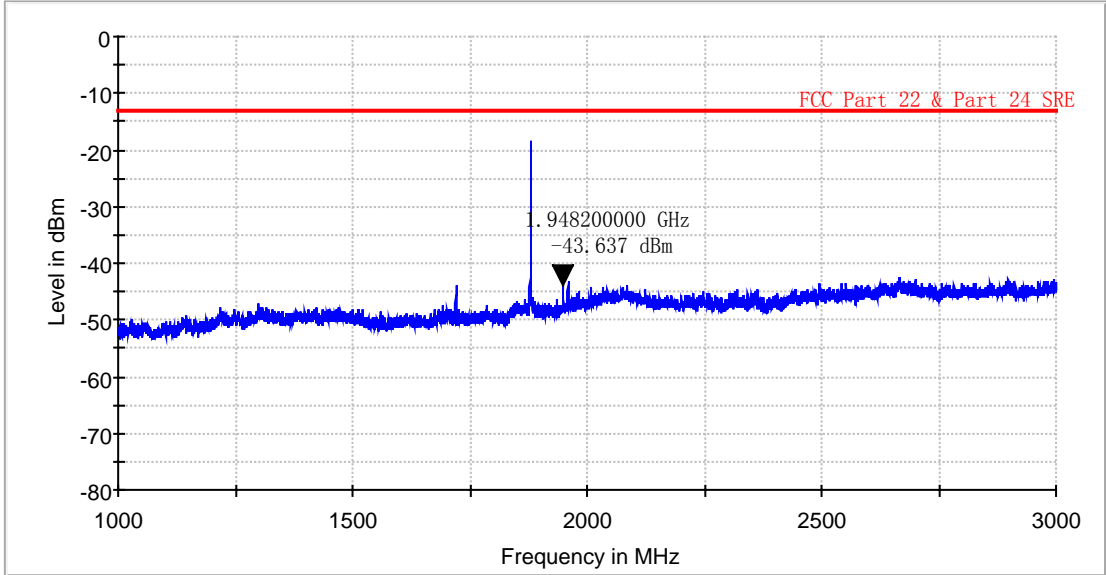
1880.0MHz (channel 661), X orientation, 30~1000MHz, Vertical



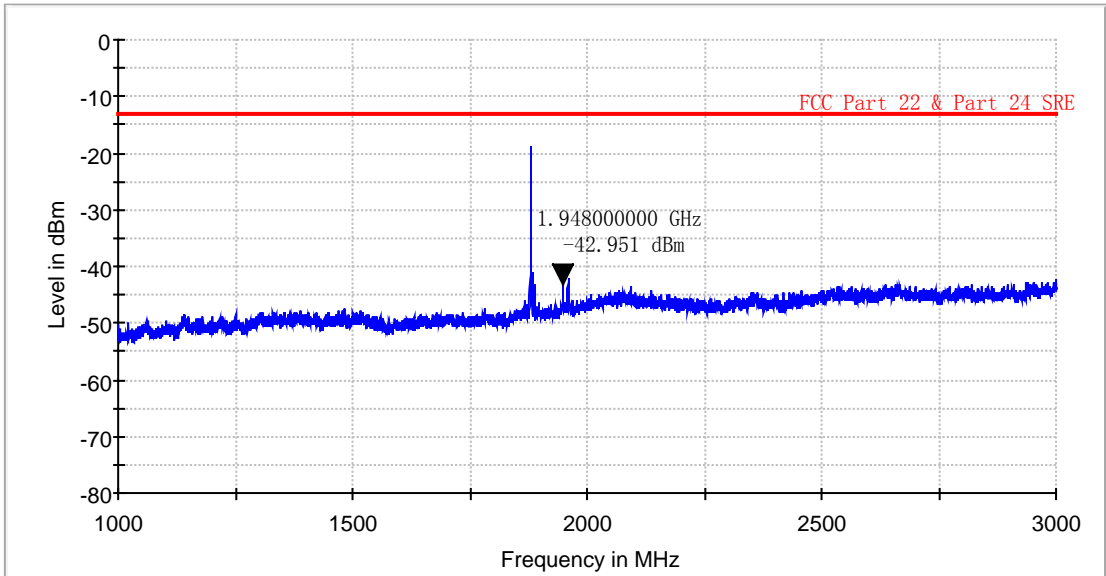
检测结果/说明 (续页):

Results of test and additional explanation (continued page)

1880.0MHz (channel 661), X orientation, 1000~3000MHz, Horizontal



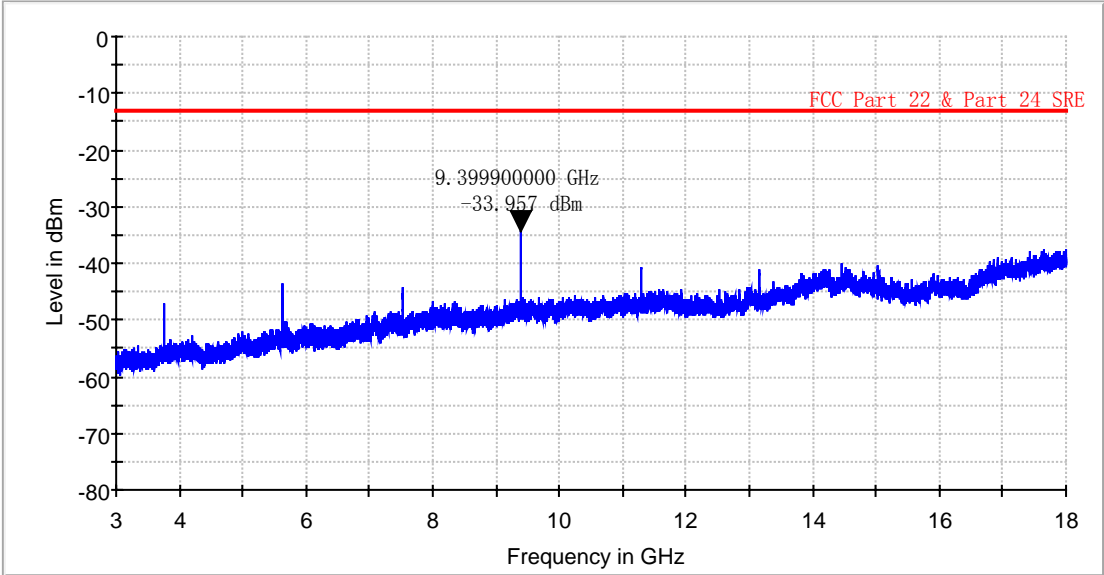
1880.0MHz (channel 661), X orientation, 1000~3000MHz, Vertical



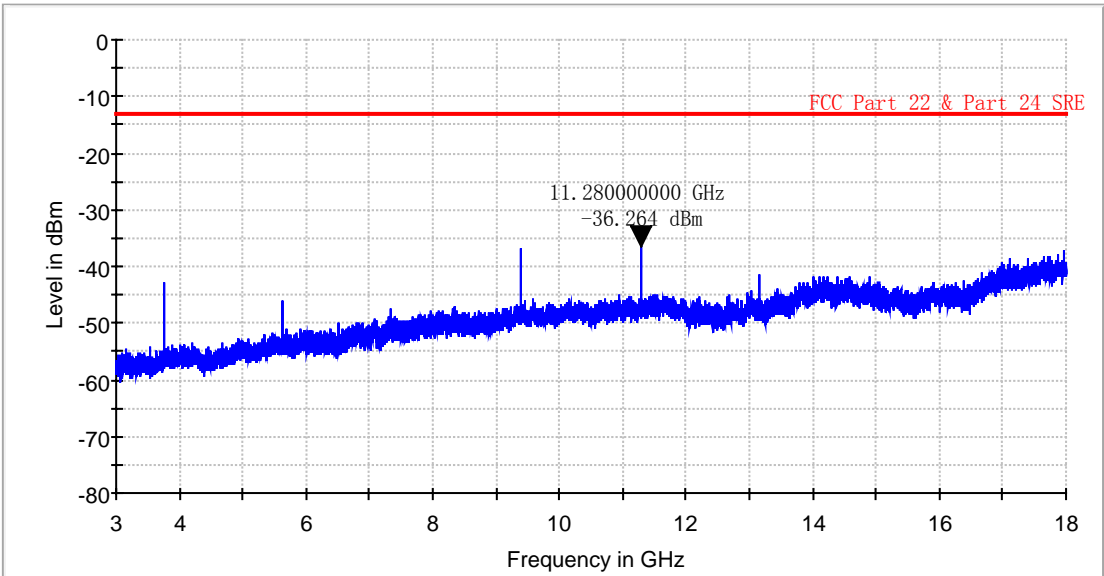
检测结果/说明 (续页):

Results of test and additional explanation (continued page)

1880.0MHz (channel 661), X orientation, 3000~18000MHz, Horizontal



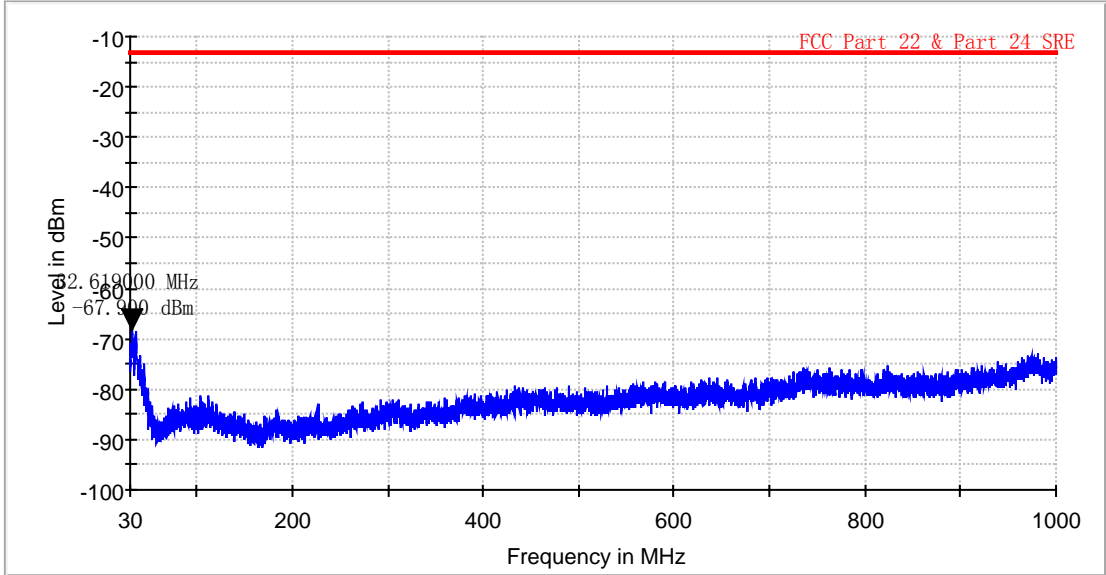
1880.0MHz (channel 661), X orientation, 3000~18000MHz, Vertical



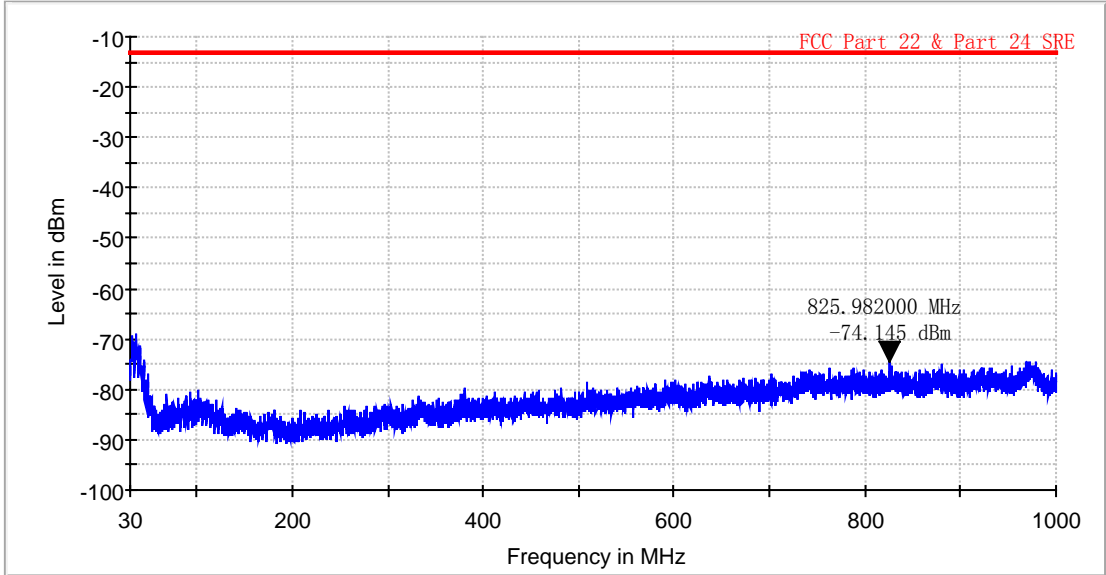
检测结果/说明 (续页):

Results of test and additional explanation (continued page)

1880.0MHz (channel 661), Y orientation, 30~1000MHz, Horizontal



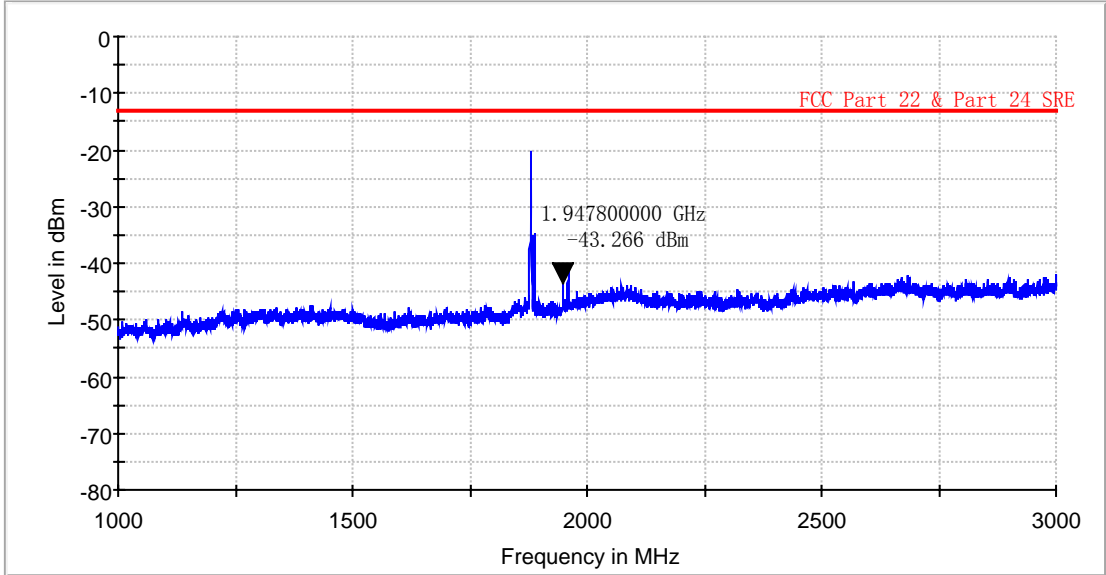
1880.0MHz (channel 661), Y orientation, 30~1000MHz, Vertical



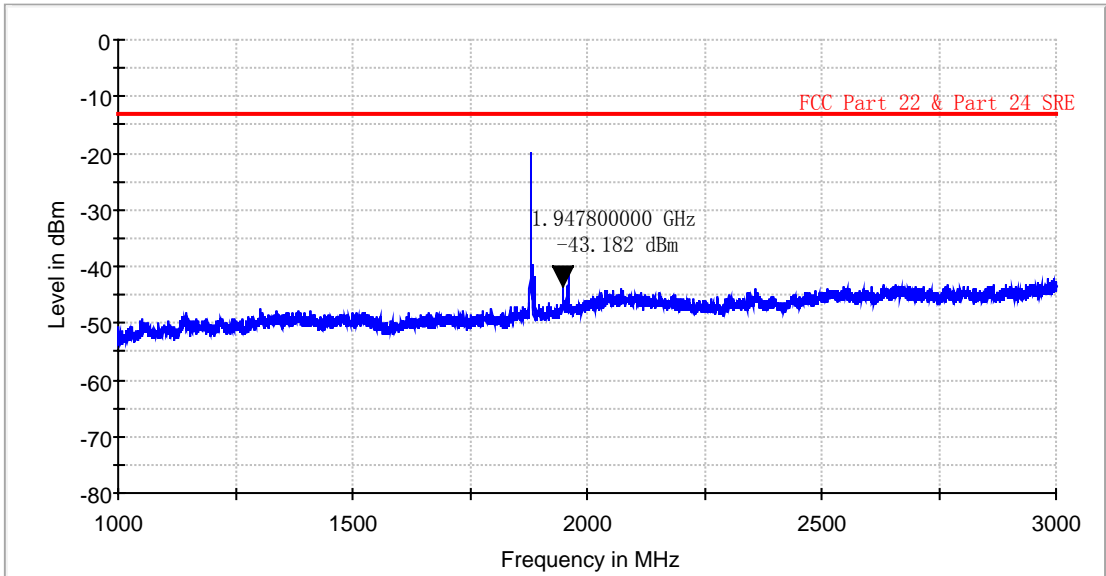
检测结果/说明 (续页):

Results of test and additional explanation (continued page)

1880.0MHz (channel 661), Y orientation, 1000~3000MHz, Horizontal



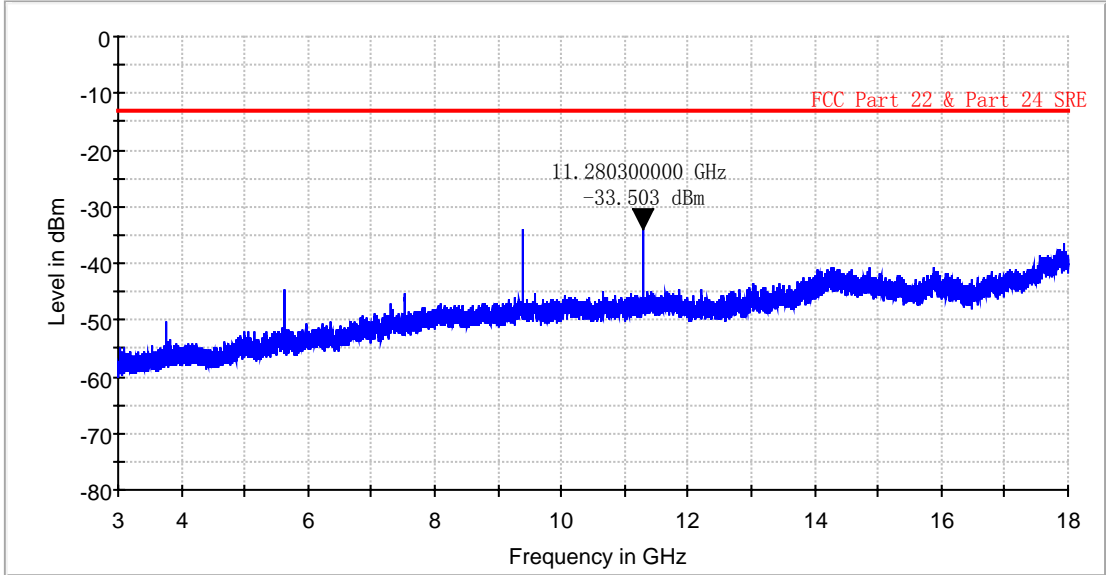
1880.0MHz (channel 661), Y orientation, 1000~3000MHz, Vertical



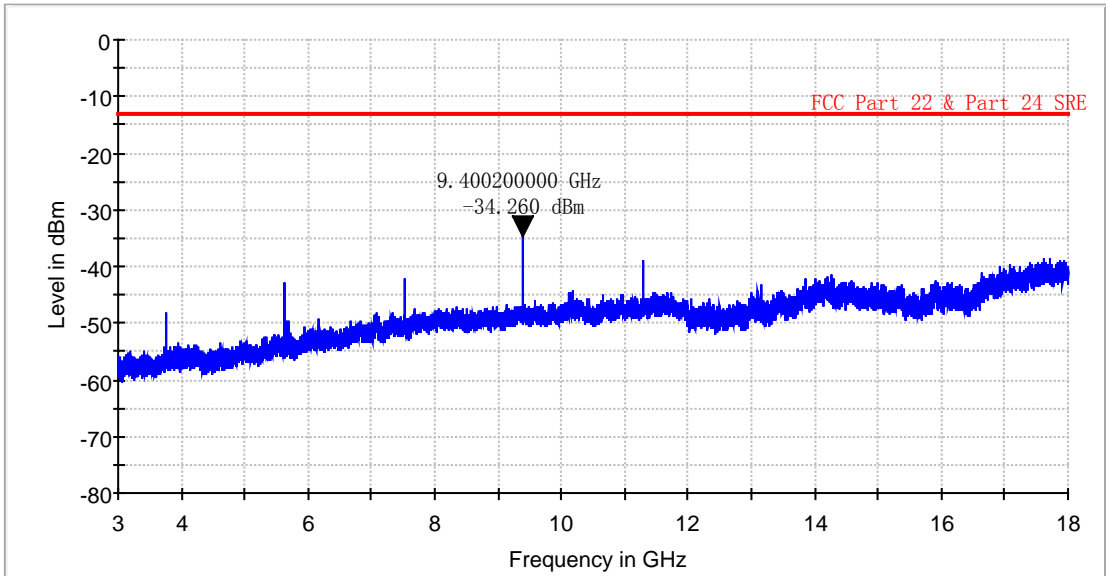
检测结果/说明 (续页):

Results of test and additional explanation (continued page)

1880.0MHz (channel 661), Y orientation, 3000~18000MHz, Horizontal



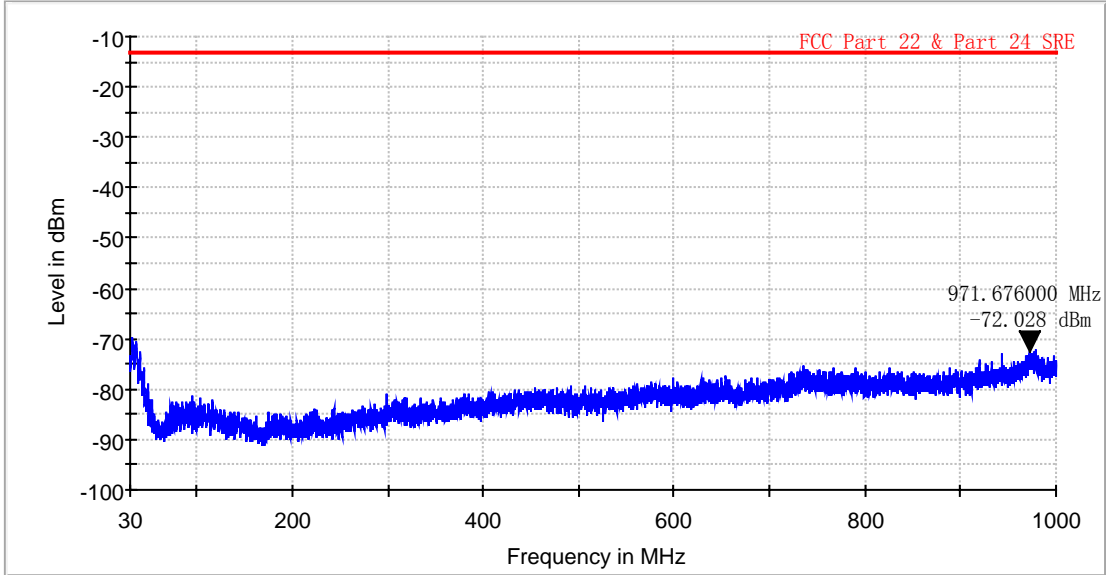
1880.0MHz (channel 661), Y orientation, 3000~18000MHz, Vertical



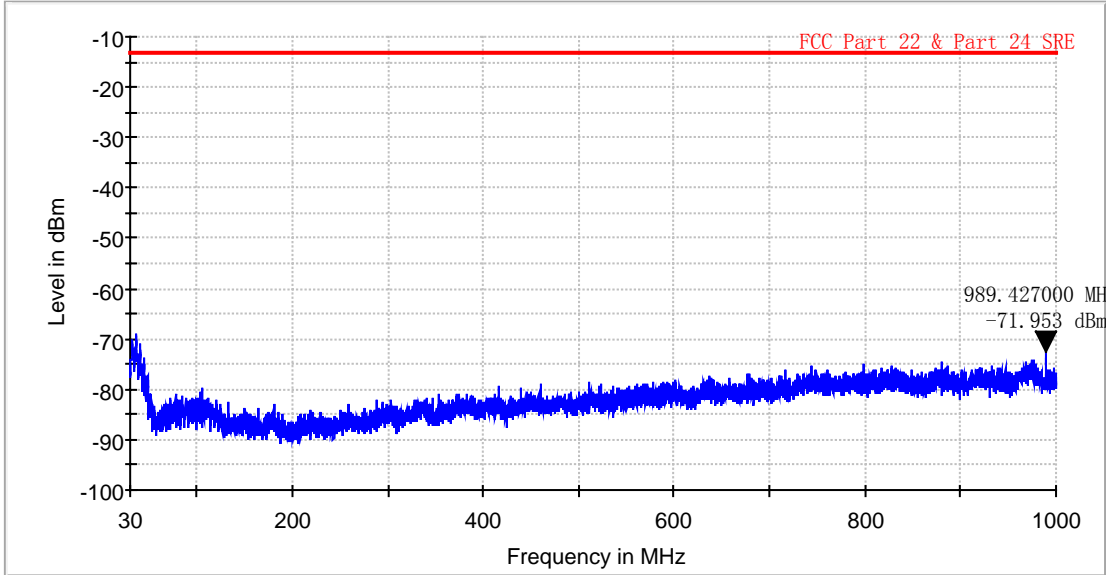
检测结果/说明 (续页):

Results of test and additional explanation (continued page)

1880.0MHz (channel 661), Z orientation, 30~1000MHz, Horizontal



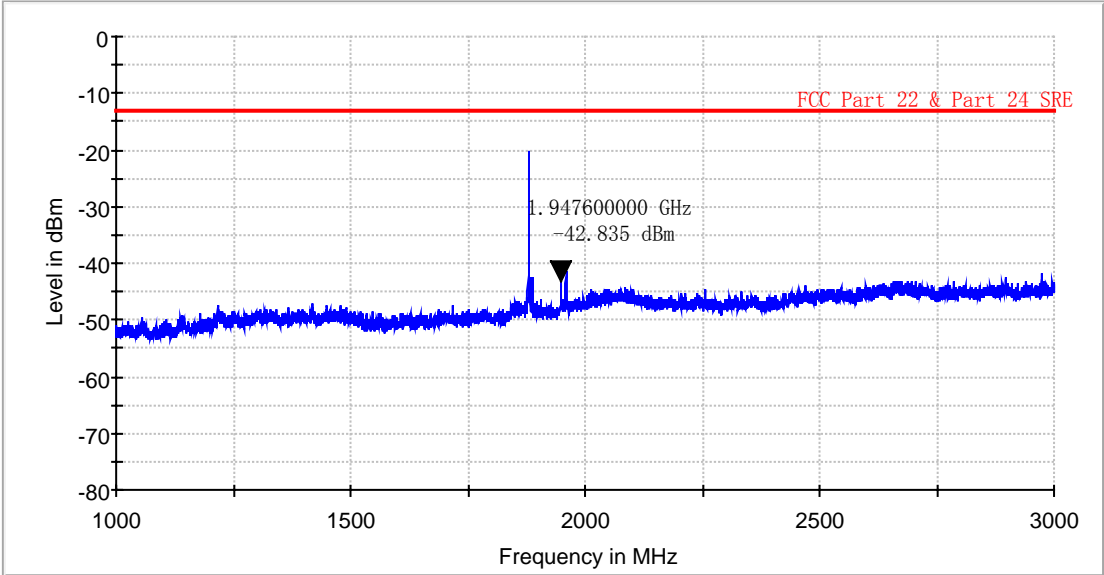
1880.0MHz (channel 661), Z orientation, 30~1000MHz, Vertical



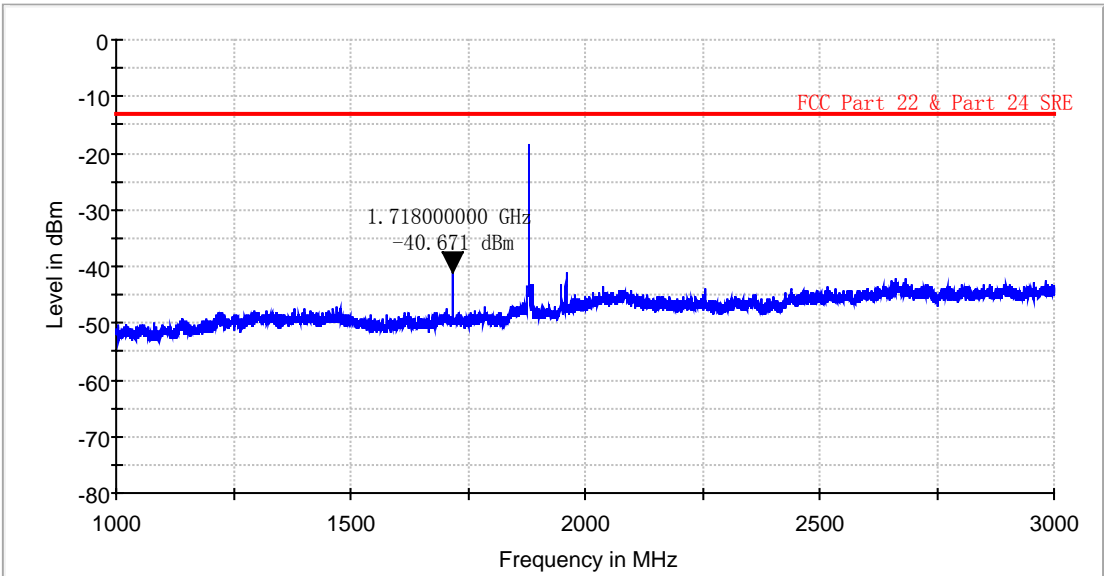
检测结果/说明 (续页):

Results of test and additional explanation (continued page)

1880.0MHz (channel 661), Z orientation, 1000~3000MHz, Horizontal



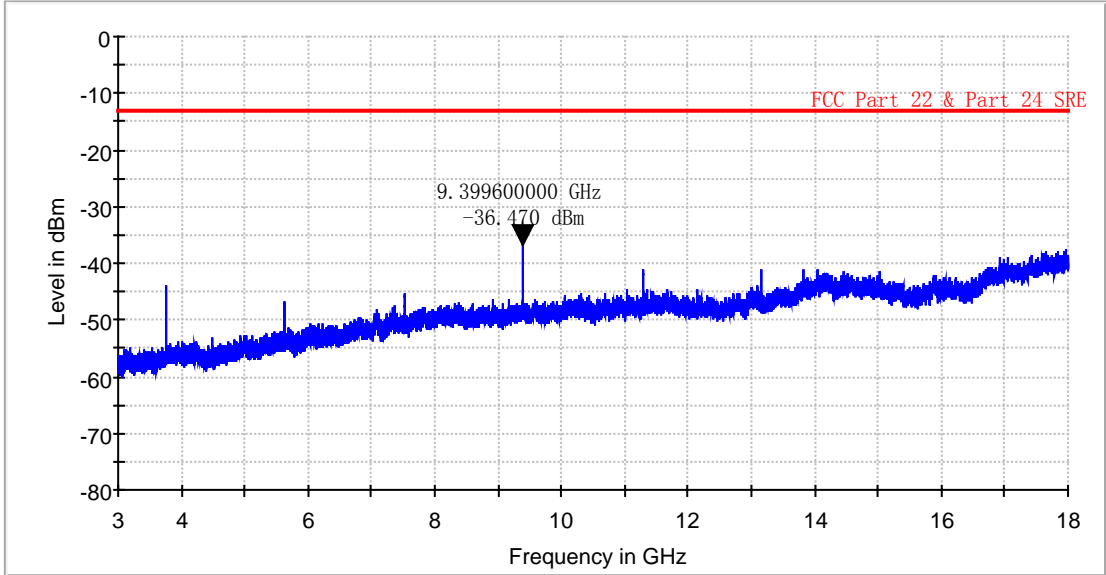
1880.0MHz (channel 661), Z orientation, 1000~3000MHz, Vertical



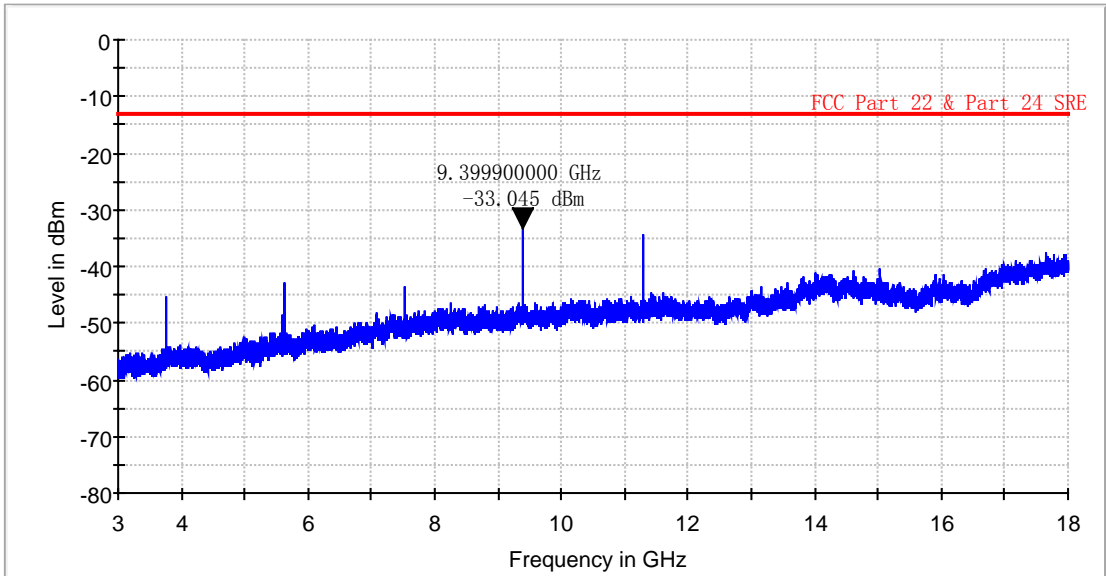
检测结果/说明 (续页):

Results of test and additional explanation (continued page)

1880.0MHz (channel 661), Z orientation, 3000~18000MHz, Horizontal



1880.0MHz (channel 661), Z orientation, 3000~18000MHz, Vertical



检测结果/说明（续页）：

Results of test and additional explanation (continued page)

8.5 Test Instrumentation (Test date: 2010.09.08-2010.09.15)

Name/Model	Number	Due date
Spectrum Analyzer FSU 26	容-001-33	2011.06.24
Universal Radio Communication Tester CMU 200	容-026-01	2011.06.22
Notch Filter GSM 1900 UL	容-026-25	2011.06.17
Notch Filter GSM 850	容-026-35	2011.06.17
Pre-Amplifier AFS42-00101800	容-026-19	2011.01.20
Ultra Broadband Antenna HL 562	容-001-03	2011.06.14
Double-Ridged Waveguide Horn Antenna HF 906	容-001-04	2011.06.17

8.6 Test Photographs



检测结果/说明（续页）：

Results of test and additional explanation (continued page)



X orientation



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

Y orientation



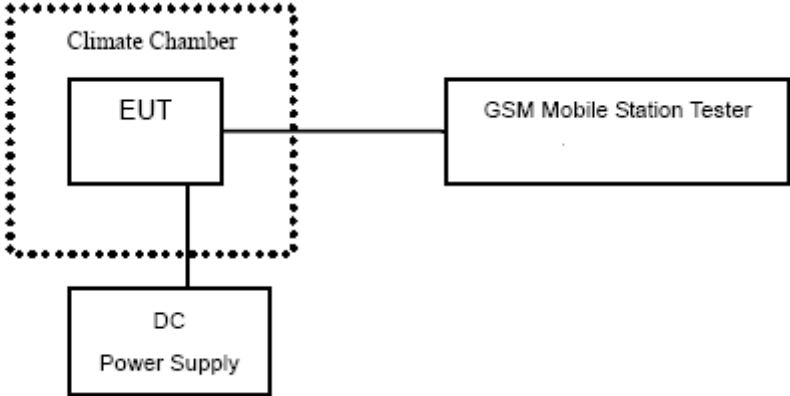
Z orientation



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

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.

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 $25\pm 5^{\circ}\text{C}$ 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.

检测结果/说明 (续页):

Results of test and additional explanation (continued page)

9.4 Test results

Test mode: GSM 850 + GPRS			Power source: DC 3.7V	
Temperature (°C)	Voltage (V)	Reference frequency (MHz)	Test level (ppm)	Test results
-30	3.7	824.2 (channel 128)	-2.80×10^{-2}	Pass
	3.7	836.4 (channel 189)	-3.10×10^{-2}	Pass
	3.7	848.8 (channel 251)	-1.80×10^{-2}	Pass
-20	3.7	824.2 (channel 128)	-3.30×10^{-2}	Pass
	3.7	836.4 (channel 189)	-3.70×10^{-2}	Pass
	3.7	848.8 (channel 251)	-3.90×10^{-2}	Pass
-10	3.7	824.2 (channel 128)	-4.40×10^{-2}	Pass
	3.7	836.4 (channel 189)	-4.40×10^{-2}	Pass
	3.7	848.8 (channel 251)	-3.40×10^{-2}	Pass
0	3.7	824.2 (channel 128)	-2.90×10^{-2}	Pass
	3.7	836.4 (channel 189)	-3.70×10^{-2}	Pass
	3.7	848.8 (channel 251)	-3.30×10^{-2}	Pass
10	3.7	824.2 (channel 128)	-4.00×10^{-2}	Pass
	3.7	836.4 (channel 189)	-3.30×10^{-2}	Pass
	3.7	848.8 (channel 251)	-3.10×10^{-2}	Pass
20	3.7	824.2 (channel 128)	-3.20×10^{-2}	Pass
	3.7	836.4 (channel 189)	-3.90×10^{-2}	Pass
	3.7	848.8 (channel 251)	-2.80×10^{-2}	Pass
30	3.7	824.2 (channel 128)	-3.50×10^{-2}	Pass
	3.7	836.4 (channel 189)	-3.00×10^{-2}	Pass
	3.7	848.8 (channel 251)	-4.40×10^{-2}	Pass
40	3.7	824.2 (channel 128)	-4.00×10^{-2}	Pass
	3.7	836.4 (channel 189)	-3.70×10^{-2}	Pass
	3.7	848.8 (channel 251)	-3.70×10^{-2}	Pass
50	3.7	824.2 (channel 128)	-4.20×10^{-2}	Pass
	3.7	836.4 (channel 189)	-3.60×10^{-2}	Pass
	3.7	848.8 (channel 251)	-2.60×10^{-2}	Pass
21	3.4	824.2 (channel 128)	-4.00×10^{-2}	Pass
	3.4	836.4 (channel 189)	-4.10×10^{-2}	Pass
	3.4	848.8 (channel 251)	-3.40×10^{-2}	Pass
21	4.2	824.2 (channel 128)	-2.60×10^{-2}	Pass
	4.2	836.4 (channel 189)	-4.10×10^{-2}	Pass
	4.2	848.8 (channel 251)	-3.60×10^{-2}	Pass

检测结果/说明 (续页):

Results of test and additional explanation (continued page)

Test mode: PCS 1900 + GPRS			Power source: DC 3.7V	
Temperature (°C)	Voltage (V)	Reference frequency (MHz)	Test level (ppm)	Test results
-30	3.7	1850.2 (channel 512)	-3.20×10^{-2}	Pass
	3.7	1880.0 (channel 661)	-3.50×10^{-2}	Pass
	3.7	1909.8 (channel 810)	-3.00×10^{-2}	Pass
-20	3.7	1850.2 (channel 512)	-3.10×10^{-2}	Pass
	3.7	1880.0 (channel 661)	-3.10×10^{-2}	Pass
	3.7	1909.8 (channel 810)	-3.60×10^{-2}	Pass
-10	3.7	1850.2 (channel 512)	-2.30×10^{-2}	Pass
	3.7	1880.0 (channel 661)	-2.70×10^{-2}	Pass
	3.7	1909.8 (channel 810)	-3.10×10^{-2}	Pass
0	3.7	1850.2 (channel 512)	-2.00×10^{-2}	Pass
	3.7	1880.0 (channel 661)	-2.90×10^{-2}	Pass
	3.7	1909.8 (channel 810)	-2.50×10^{-2}	Pass
10	3.7	1850.2 (channel 512)	-2.30×10^{-2}	Pass
	3.7	1880.0 (channel 661)	-2.40×10^{-2}	Pass
	3.7	1909.8 (channel 810)	-2.40×10^{-2}	Pass
20	3.7	1850.2 (channel 512)	-1.80×10^{-2}	Pass
	3.7	1880.0 (channel 661)	-2.60×10^{-2}	Pass
	3.7	1909.8 (channel 810)	-3.00×10^{-2}	Pass
30	3.7	1850.2 (channel 512)	-2.50×10^{-2}	Pass
	3.7	1880.0 (channel 661)	-3.20×10^{-2}	Pass
	3.7	1909.8 (channel 810)	-2.90×10^{-2}	Pass
40	3.7	1850.2 (channel 512)	-3.10×10^{-2}	Pass
	3.7	1880.0 (channel 661)	-3.60×10^{-2}	Pass
	3.7	1909.8 (channel 810)	-3.00×10^{-2}	Pass
50	3.7	1850.2 (channel 512)	-3.30×10^{-2}	Pass
	3.7	1880.0 (channel 661)	-3.00×10^{-2}	Pass
	3.7	1909.8 (channel 810)	-3.40×10^{-2}	Pass
21	3.4	1850.2 (channel 512)	-2.40×10^{-2}	Pass
	3.4	1880.0 (channel 661)	-2.80×10^{-2}	Pass
	3.4	1909.8 (channel 810)	-2.00×10^{-2}	Pass
21	4.2	1850.2 (channel 512)	-2.60×10^{-2}	Pass
	4.2	1880.0 (channel 661)	-2.40×10^{-2}	Pass
	4.2	1909.8 (channel 810)	-2.60×10^{-2}	Pass

检测结果/说明（续页）：

Results of test and additional explanation (continued page)

9.5 Test Instrumentation (Test date: 2010.09.25-2010.09.26)

Name/Model	Number	Due date
Universal Radio Communication Tester CMU 200	容-026-01	2011.06.22
Spectrum Analyzer FSU 26	容-001-33	2011.06.24
Power Splitter 11667C	容-030-11	2011.07.21
Cold-heat climate test chamber GDW-60B	容-011-44	2012.01.03
Voltage Drop Simulator 60V/100A VDS 200 B3	容-011-26	2011.06.14

9.6 Test Photographs



检测结果/说明（续页）：

Results of test and additional explanation (continued page)



检测结果/说明（续页）：

Results of test and additional explanation (continued page)

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
Universal Radio Communication Tester CMU 200	容-026-01	2010F44-10-000433 2011.06.22	100 kHz ~ 2700 MHz, Frequency resolution: 0.1 Hz
Spectrum Analyzer FSU 26	容-001-33	2010F33-10-001506 2011.06.24	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	2010J10-10-907001 2011.07.21	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
Double-Ridged Waveguide Horn Antenna HF 906	容-001-04	XDdj2010-1297 2011.06.17	1 GHz ~ 18 GHz, Nominal Impedance: 50 Ω, VSWR < 1.5,Gain : 7dB (typ.) ~ 14 dB (typ.) / Gain:7dB typ~14dB typ.
Ultra Broadband Antenna HL 562	容-001-03	XDdj2010-1295 2011.06.14	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	XDdj2010-1292 2011.06.14	250 MHz ~ 2.4 GHz; 1kW
Broad-band Horn Antenna BBHA 9120D	容-001-06	XDdj2010-1298 2011.06.17	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
Notch Filter GSM 1900 UL	容-026-25	2010F11-10-005101 2011.06.17	Notch Filter for GSM 1900 UL

检测结果/说明（续页）：

Results of test and additional explanation (continued page)

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
Notch Filter GSM 850	容-026-35	2010F11-10-005096 2011.06.17	Notch Filter for GSM 850
Pre-Amplifier AFS42-00101800	容-026-19	2010J10-10-901004 2011.01.20	1 GHz ~ 18 GHz,35 dB Gain,N.F: 2.5dB
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: $\leq \pm 2$ degree, Time Adjustment Range: 0 - 9999/H, Dimension: 400*400*375mm
Voltage Drop Simulator 60V/100A VDS 200 B3	容-011-26	XDDJ2010-1307 2011.06.14	60V/100A 150A for maximum 500ms.source impedance < 10m Ω , Ripple voltage: $U_r < 0.2V_{p-p}$,frequency min.400Hz, Voltage deviation:<1V at any load(including inrush current)recovering 63% of its maximum excursion within 100 μs , Bandwidth: V_{pp} Max 12V up to 10kHz; V_{pp} Max 10V up to 30kHz; V_{pp} Max 6V up to 50kHz

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

Attachment 2: EUT photographs



检测结果/说明 (续页):

Results of test and additional explanation (continued page)



检测结果/说明（续页）：

Results of test and additional explanation (continued page)



检测结果/说明（续页）：

Results of test and additional explanation (continued page)



End