



Test Report

Product Name : Philips 900/1800/1900

Model No. : Xenium9@9m

FCC ID No. : T38CT9A9M

Applicant : Cellon Communications Technology (Shenzhen) Co.,Ltd.

Address : 13/F, Skyworth C Building, Gaoxin S.Ave1, Hi-Tech
Industrial Park, Nanshan, Shenzhen, China

Date of Receipt : 2006/09/18

Issued Date : 2006/09/28

Report No. : 069S017-HP-US-P05V01

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by CNLA, NVLAP or any agency of the Government.
The test report shall not be reproduced except in full without the written approval of QuieTek Corporation.

Test Report Certification

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Industrial Park, Nanshan, Shenzhen, China

Manufacturer : Cellon Communications Technology (Shenzhen) Co.,Ltd.

Model No. : Xenium9@9m

FCC ID No. : T38CT9A9M

Rated Voltage : AC 120V/60Hz

EUT Voltage : DC 3.7V

Trade Name : Philips

Applicable Standard : FCC CFR Title 47 Part 2 and Part 24E

Test Result : Complied

Performed Location : SuZhou EMC Laboratory
No.99 Hongye Rd., Suzhou Industrial Park Loufeng
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(Gene Chang)

Laboratory Information

We , **Quietek Corporation**, are an independent EMC and safety consultancy that was established the whole facility in our laboratories. The test facility has been accredited by the following accreditation Bodies in compliance with ISO 17025, EN 45001 and Guide 25:

Taiwan R.O.C.	:	BSMI, DGT, CNLA
Germany	:	TUV Rheinland
Norway	:	Nemko, DNV
USA	:	FCC, NVLAP
Japan	:	VCCI

The related certificate for our laboratories about the test site and management system can be downloaded from Quietek Corporation's Web Site : <http://tw.quietek.com/modules/myalbum/>

The address and introduction of Quietek Corporation's laboratories can be founded in our Web site : <http://www.quietek.com/>

If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

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TABLE OF CONTENTS

Description	Page
1. General Information	6
1.1. EUT Description	6
1.2. Operational Description	6
1.3. Mode of Operation	7
1.4. Tested System Details	8
1.5. Configuration of Tested System	9
1.6. EUT Exercise Software	10
2. Technical Test	11
2.1. Summary of Test Result	11
2.2. List of Test Equipment	12
2.3. Measurement Uncertainty	14
2.4. Test Environment	15
3. Peak Output Power	16
3.1. Test Specification	16
3.2. Test Setup	16
3.3. Limit	17
3.4. Test Procedure	17
3.5. Deviation from Test Standard	17
3.6. Test Result	18
3.7. Test Photograph	24
4. Modulation Characteristic	25
4.1. Test Specification	25
4.2. Test Setup	25
4.3. Limit	25
4.4. Test Procedure	25
4.5. Deviation from Test Standard	26
4.6. Test Result	27
5. Occupied Bandwidth	29
5.1. Test Specification	29
5.2. Test Setup	29
5.3. Limit	29
5.4. Test Procedure	29
5.5. Deviation from Test Standard	29
5.6. Test Result	30

6.	Spurious Emission At Antenna Terminals (+/- 1MHz).....	34
6.1.	Test Specification	34
6.2.	Test Setup	34
6.3.	Limit.....	34
6.4.	Test Procedure	34
6.5.	Deviation from Test Standard	34
6.6.	Test Result	35
7.	Spurious Emission	37
7.1.	Test Specification	37
7.2.	Test Setup	37
7.3.	Limit.....	37
7.4.	Test Procedure	38
7.5.	Deviation from Test Standard	38
7.6.	Test Result	39
7.7.	Test Photograph	45
8.	Frequency Stability Under Temperature & Voltage Variations	47
8.1.	Test Specification	47
8.2.	Test Setup	47
8.3.	Limit.....	47
8.4.	Test Procedure	47
8.5.	Deviation from Test Standard	48
8.6.	Test Result	49
9.	Attachment.....	50
	EUT Photograph	50

1. General Information

1.1. EUT Description

Product Name	Philips 900/1800/1900
Trade Name	Philips
Model No.	Xenium9@9m
FCC ID No.	T38CT9A9M
Tx Frequency	1850MHz ~ 1910MHz
Rx Frequency	1930MHz ~ 1990MHz
Hardware version	X-Tablet PR2
Software version	0846020206030000
Antenna Type	PIFA
Antenna Gain	0.87dBi

Component	
Power Adapter	M/N: DSA-5W-05FEU 051072 Input: AC 100-240V, 50-60Hz, 0.2A Output: DC 5.1V, 0.72A Cable Out: Non-Shielded, 1.2m

1.2. Operational Description

The information contained within this report is intended to show verification of compliance of the 1900MHz Mobile Phone to the requirements of 47CFR2 and CFR 24.

The EUT operates from a 120Vac/60Hz adapter where GSM is power Class 1, Operating with a maximum output power of 1 watt and GPRS is Multislot Class 10.

1.3. Mode of Operation

Quietek 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:

Pre-Test Mode
Mode 1: PCS1900 GSM
Mode 2: PCS1900 GPRS
Final Test Mode
Mode 1: PCS1900 GSM
Mode 2: PCS1900 GPRS

Note:

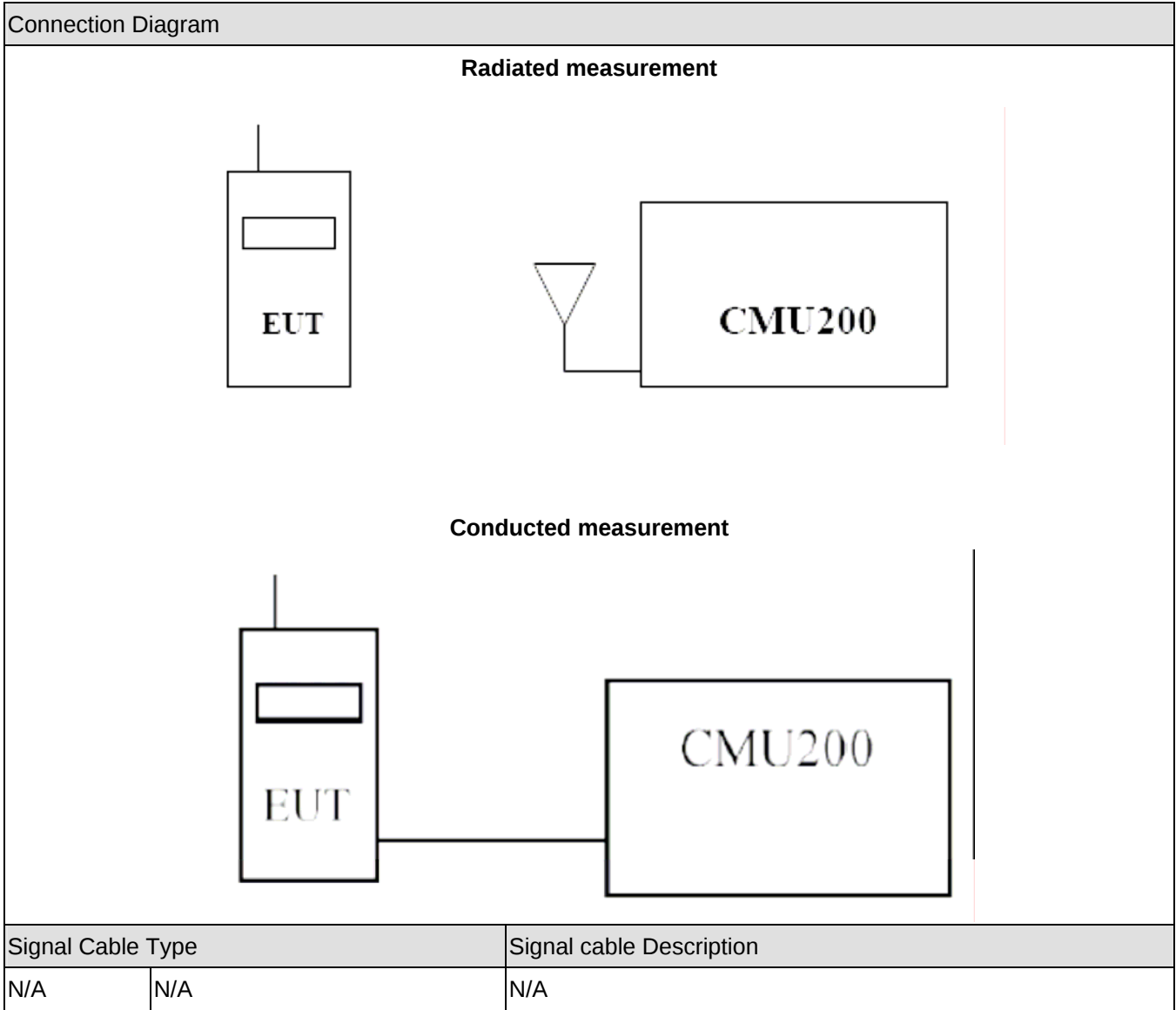
This device is a composite device in accordance with Part 15 Subpart B regulations. The function for the receiver was measured and made a test report that the report number is 069S017-HP-US-P01V01, certified under Declaration of Conformity.

1.4. Tested System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Radio Communication Tester	R&S	CMU 200	106388	Non-Shielded 1.8m

1.5. Configuration of Tested System



1.6. EUT Exercise Software

1	Setup the EUT and simulators as shown on 1.5;
2	Turn on the power of EUT;
3	EUT Communicate with CMU200

2. Technical Test

2.1. Summary of Test Result

- ☒ No deviations from the test standards
☐ Deviations from the test standards as below description:

For PCS1900 (FCC Part 24E &Part 2)

Emission			
Performed Item	Normative References	Test Performed	Deviation
Peak Output Power	FCC Part 24.232(b) and Part 2.1046	Yes	No
Modulation Characteristic	FCC Part 2.1047(d)	Yes	No
Occupied Bandwidth	FCC Part 24.238(b) and Part 2.1049	Yes	No
Spurious Emission At Antenna Terminals (+/- 1MHz)	FCC Part 24.238(a) and Part 2.1049	Yes	No
Spurious Emission	FCC Part 24.238(b) and Part 2.1051, 2.1053	Yes	No
Frequency Stability Under Temperature & Voltage Variations	FCC Part 24.235 and 2.1055	Yes	No

2.2. List of Test Equipment

Peak Output Power / AC-3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2006/03/11
Radio Communication Tester	R&S	CMU 200	106388	2005/10/23
Directional Couple	Agilent	87300C	3239A01864	N/A
PSG Analog S.G.	Agilent	E8257D	MY44321116	2005/11/23
Preamplifier	Agilent	87405B	MY39500331	2005/11/23
RF Preamplifier	Quietek	QTK-AMP-180	0001	2006/03/21
Bilog Type Antenna	Schaffner	CBL6141A	4278	2005/11/25
Dipole Antenna	Schwarzbeck	UHA 9105	UHA 91052260	2005/09/30
Dipole Antenna	Schwarzbeck	VHA 9103	VHA 91032145	2005/09/30
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	496	2005/11/25
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	499	2005/11/25
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2005/11/25
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	295	2005/11/25
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH003	2006/03/30

Modulation Characteristic / AC-3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Radio Communication Tester	R&S	CMU 200	106388	2005/10/23
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH003	2006/03/30

Occupied Bandwidth / AC-3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2006/03/11
Radio Communication Tester	R&S	CMU 200	106388	2005/10/23
Directional Couple	Agilent	87300C	3239A01864	N/A
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH003	2006/03/30

Spurious Emission At Antenna Terminals (+/- 1MHz) / AC-3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2006/03/11
Radio Communication Tester	R&S	CMU 200	106388	2005/10/23
Directional Couple	Agilent	87300C	3239A01864	N/A
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH003	2006/03/30

Spurious Emission / AC-2

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2006/03/11
EMI Test Receiver	R&S	ESCI	100175	2005/11/25
Radio Communication Tester	R&S	CMU 200	106388	2005/10/23
Directional Couple	Agilent	87300C	3239A01864	N/A
Preamplifier	Quietek	AP-025C	QT-AP003	2005/11/25
Preamplifier	Quietek	AP-180C	CHM-0602013	2006/03/20
Bilog Type Antenna	Schaffner	CBL6112B	2932	2005/10/26
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	499	2005/09/30
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH002	2006/03/30

Frequency Stability Under Temperature & Voltage Variations / AC-3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2006/03/11
Radio Communication Tester	R&S	CMU 200	106388	2005/10/23
Directional Couple	Agilent	87300C	3239A01864	N/A
AC Power Supply	IDRC	CF-500TP	979422	2006/03/15
DC Power Supply	IDRC	CD-035-020PR	977272	2006/02/17
Programmable Temperature & Humidity Chamber	Gaoyu	TH-1P-B	WIT-05121302	2006/01/24
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH003	2006/03/30

2.3. Measurement Uncertainty

Conducted Emission

The measurement uncertainty is evaluated as ± 2.26 dB.

Radiated Emission

The measurement uncertainty is evaluated as ± 3.19 dB.

2.4. Test Environment

Ambient conditions in the laboratory:

Items	Test Item	Required	Actual
Temperature (°C)	FCC Part 24E	15-35	23
Humidity (%RH)		20-75	52
Barometric pressure (mbar)		860-1060	950-1000

Site Description: April 28, 2006 Accreditation on NVLAP
NVLAP Lab Code: 200743-0

Accredited by CNLA
Accredited Number: 1596



Site Name: Quietek Corporation

Site Address: No.99 Hongye Rd., Suzhou Industrial Park Loufeng
Hi-Tech Development Zone., Suzhou, China
TEL: +86-6251-5088 / FAX: +86-6251-5098
E-Mail : service@quietek.com



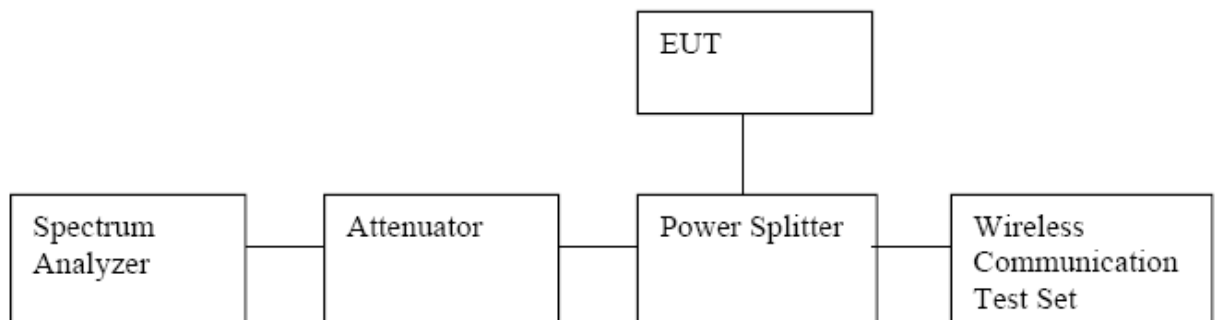
3. Peak Output Power

3.1. Test Specification

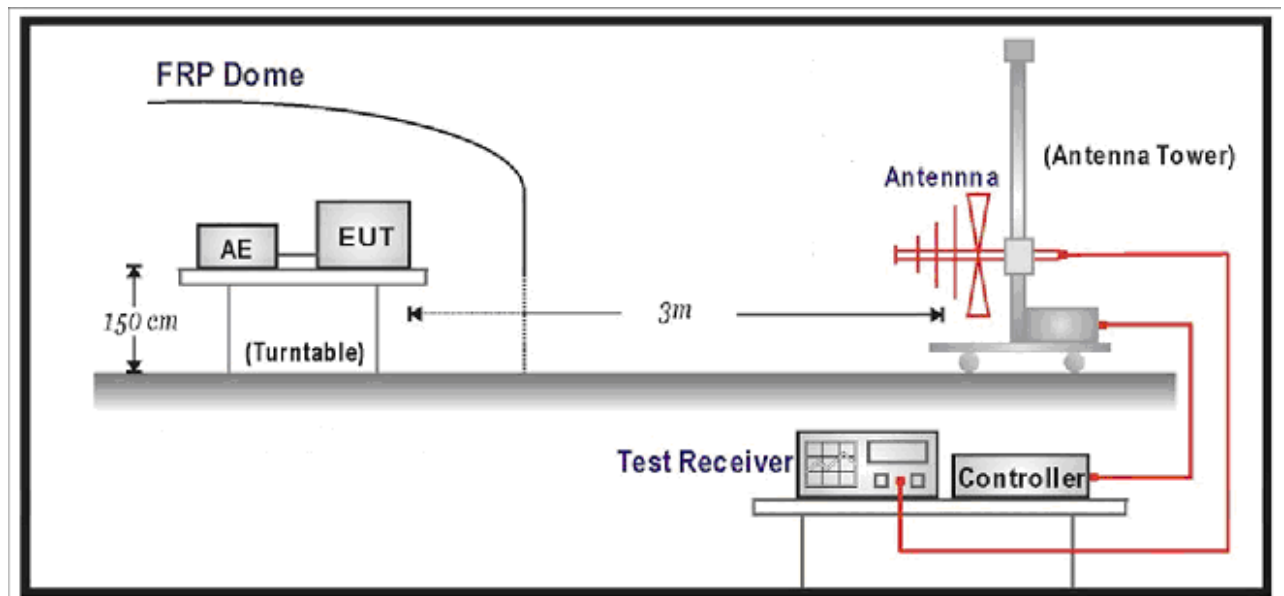
According to Part 24.232(b), 2.1046

3.2. Test Setup

Conducted Power Measurement



Radiated Power Measurement



3.3. Limit

The maximum peak power shall be less 2 Watt (33dBm).

3.4. Test Procedure

RF Out Power (Conducted)

Using a spectrum analyser and attenuator(s), the output power of the EUT was measured at the antenna terminals. The EUT supports both GSM and GPRS. The device is a class 0 module. The carrier was modulated by it's normal GMSK modulation and measurements performed with Timeslot 3(TS3) active.

RF Out Power (Radiated)

The Spectrum Analyzer was tuned to the test frequency. The device was put into Transmit mode then rotated through 360 degrees until the highest power level was observed in both horizontal and vertical polarization. The device was then replaced with a substitution antenna, which input signal was adjusted until the received level matched that of the previously detected emission.

3.5. Deviation from Test Standard

No deviation.

3.6. Test Result

Product	Philips 900/1800/1900		
Test Item	Peak Output Power		
Test Mode	Mode 1: PCS1900 GSM		
Date of Test	2006/09/25	Test Site	AC-3

Frequency (MHz)	Modulation	Conducted Peak Output Power Measurement (dBm)	Radiated Peak Output Power Measurement (dBm)	Limit (dBm)	Result
1850.2	GSM	28.65	30.7	33	Pass
1800.0	GSM	28.65	31.6	33	Pass
1909.8	GSM	28.60	31.5	33	Pass

Figure Channel 512 (1850.2 MHz)

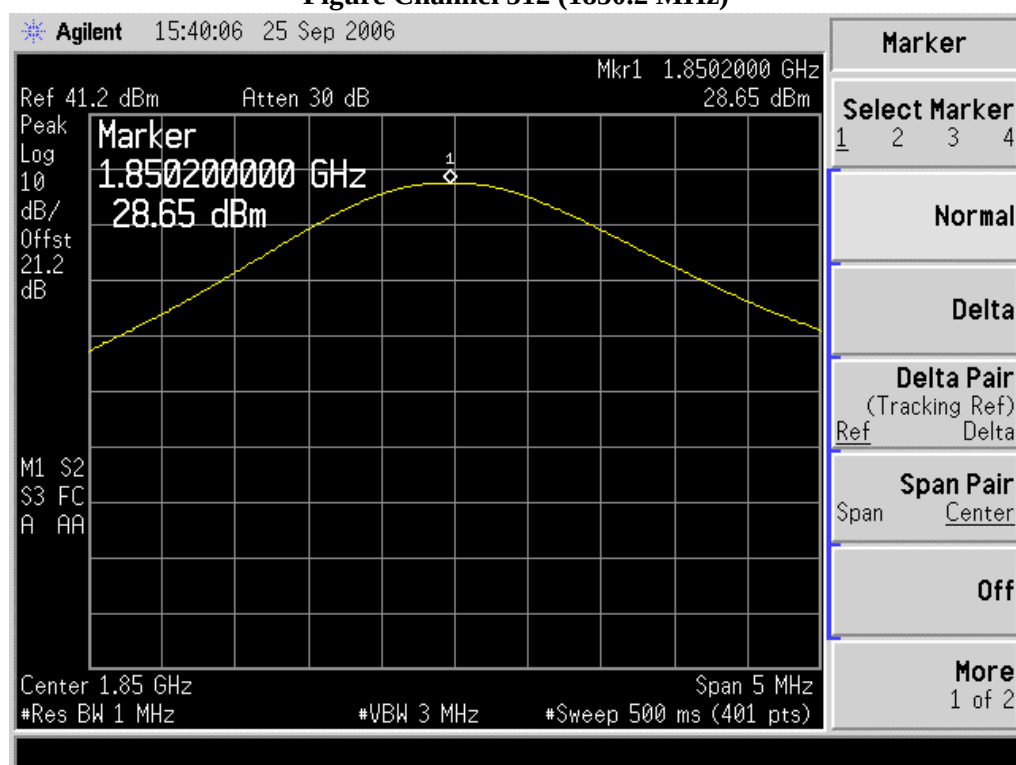


Figure Channel 661 (1800.0MHz)

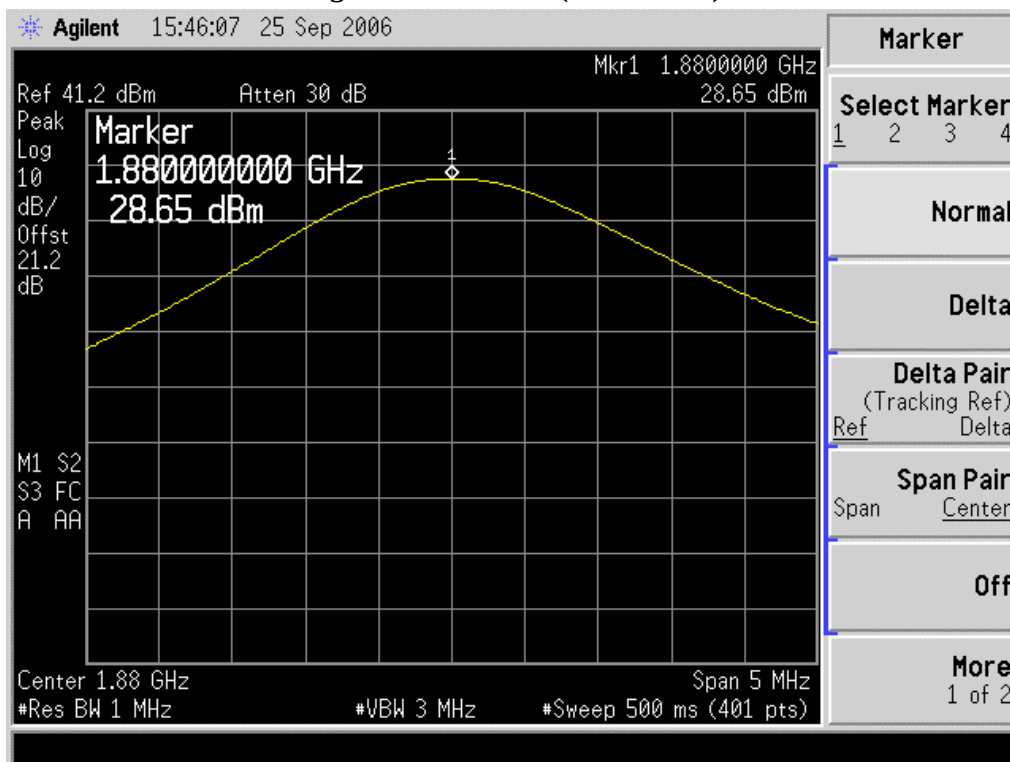
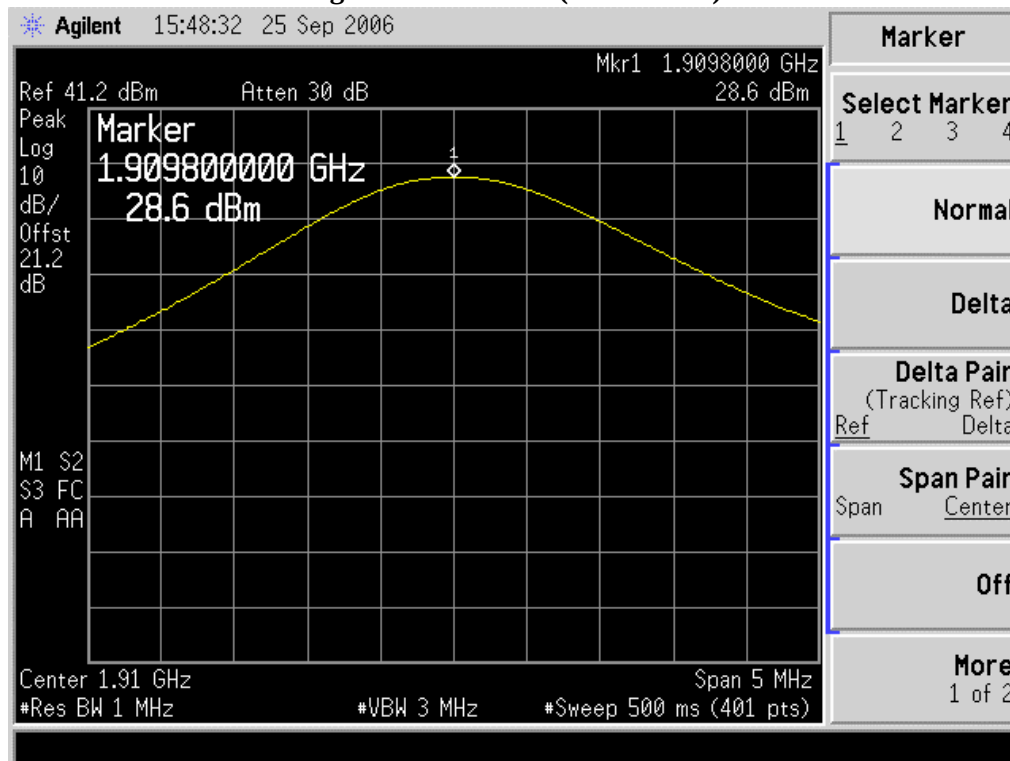


Figure Channel 810 (1909.8MHz)



Radiated Measurement

Frequency (MHz)	SA Reading (dBuV/m)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Low Channel (1850.2MHz)								
1850.2	100.5	H	23.3	0.9	8.3	30.7	33.0	-2.3
1850.2	95.6	V	18.2	0.9	8.3	25.6	33.0	-7.4
Middle Channel (1880.0MHz)								
1880.0	101.0	H	24.1	0.9	8.3	31.6	33.0	-1.4
1880.0	96.0	V	18.3	0.9	8.3	25.8	33.0	-7.3
Middle Channel (1880.0MHz)								
1909.8	100.6	H	24.0	0.9	8.3	31.5	33.0	-1.5
1909.8	93.5	V	16.5	0.9	8.3	24.0	33.0	-9.0

Product	Philips 900/1800/1900		
Test Item	Peak Output Power		
Test Mode	Mode 2: PCS1900 GPRS		
Date of Test	2006/09/25	Test Site	AC-3

Frequency (MHz)	Modulation	Conducted Peak Output Power Measurement (dBm)	Radiated Peak Output Power Measurement (dBm)	Limit (dBm)	Result
1850.2	GPRS	28.66	30.5	33	Pass
1880.0	GPRS	28.66	31.2	33	Pass
1909.8	GPRS	28.62	31.5	33	Pass

Figure Channel 512 (1850.2 MHz)

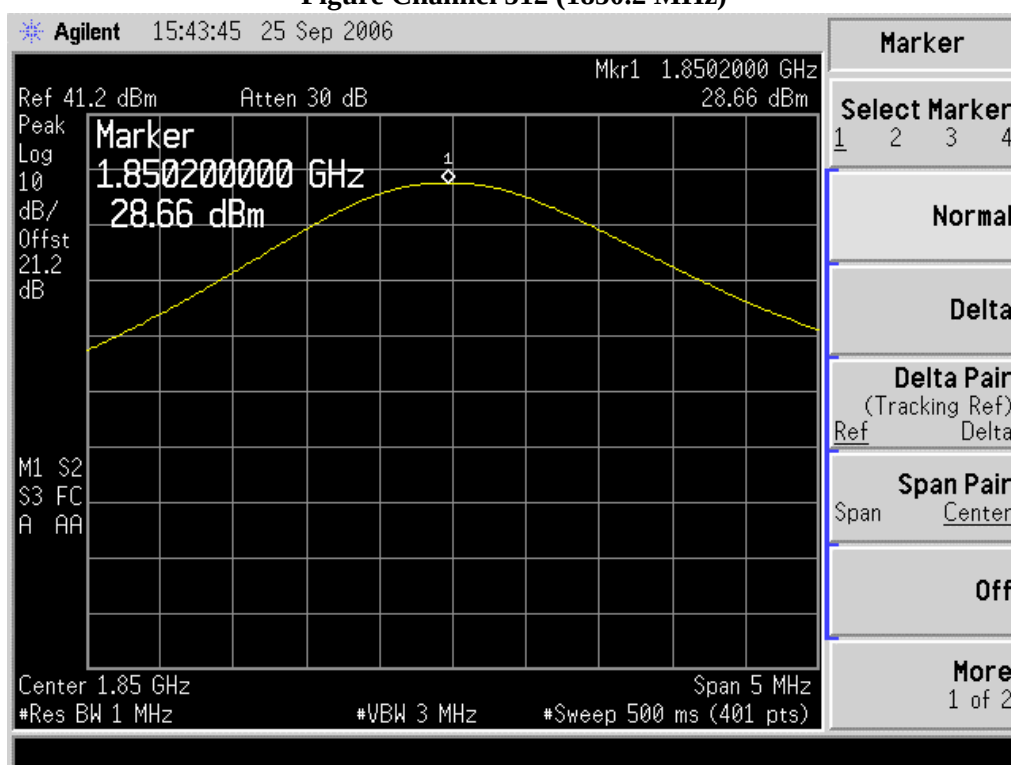


Figure Channel 661 (1800.0MHz)

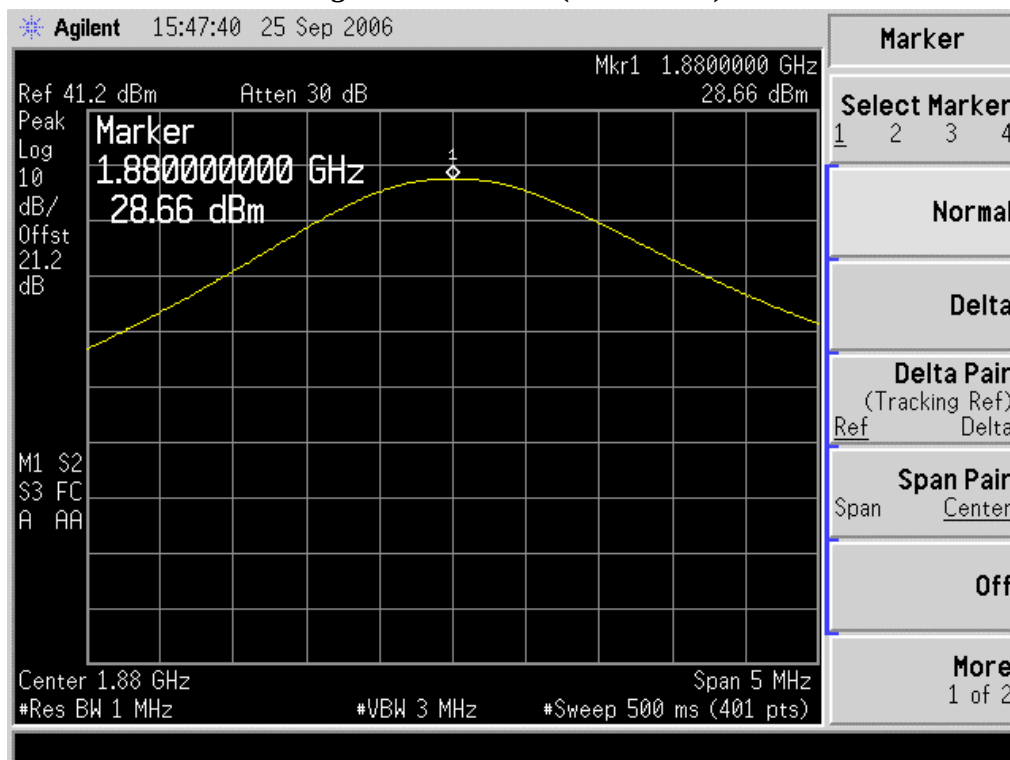
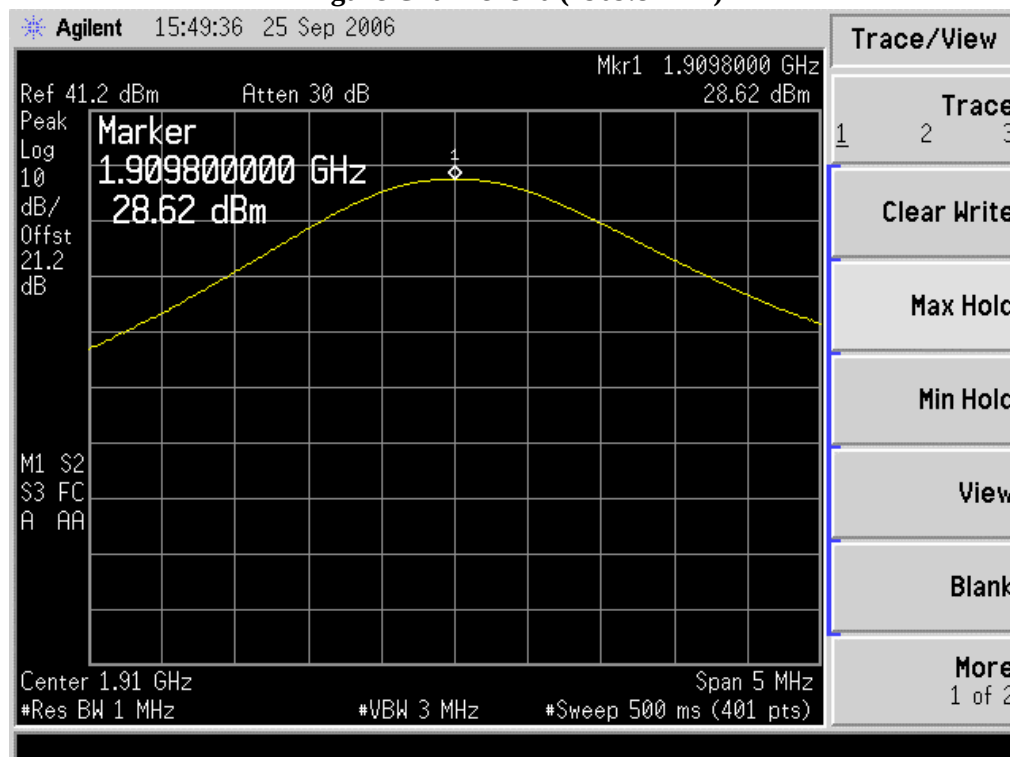


Figure Channel 810 (1909.8MHz)



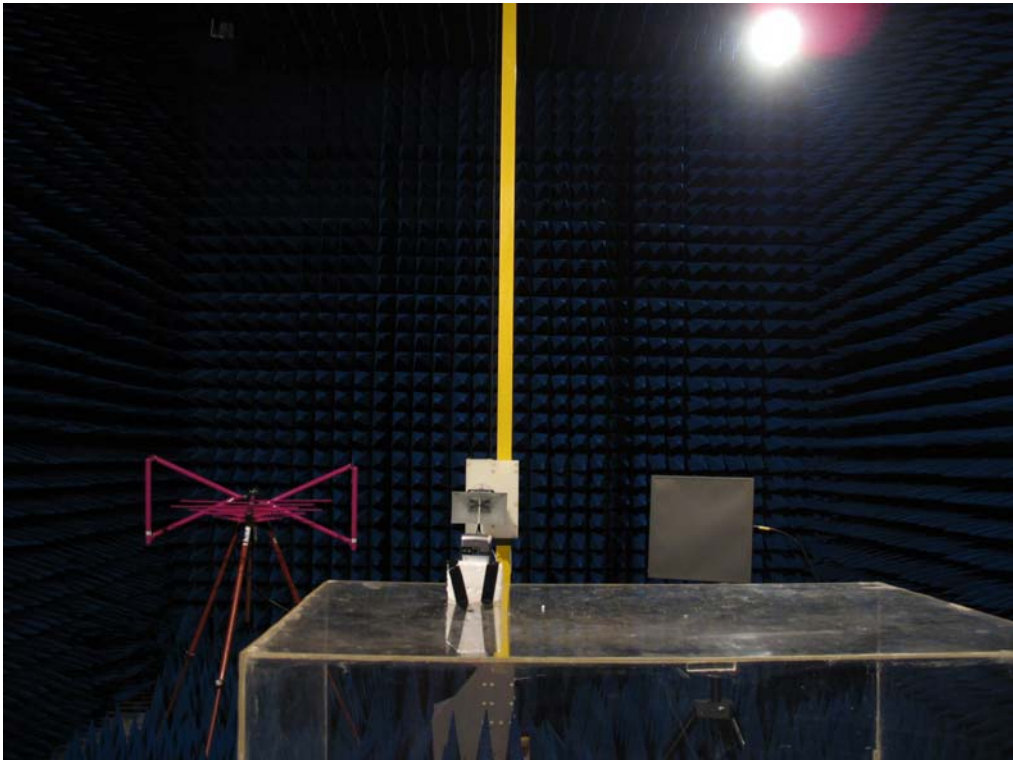
Radiated Measurement

Frequency (MHz)	SA Reading (dBuV/m)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Low Channel (1850.2MHz)								
1850.2	100.3	H	23.1	0.9	8.3	30.5	33.0	-2.5
1850.2	95.4	V	18.0	0.9	8.3	25.4	33.0	-7.6
Middle Channel (1880.0MHz)								
1880.0	100.6	H	23.7	0.9	8.3	31.2	33.0	-7.8
1880.0	94.0	V	16.3	0.9	8.3	23.8	33.0	-9.2
Middle Channel (1880.0MHz)								
1909.8	100.6	H	24.0	0.9	8.3	31.5	33.0	-1.5
1909.8	93.7	V	16.7	0.9	8.3	24.2	33.0	-8.8

3.7. Test Photograph

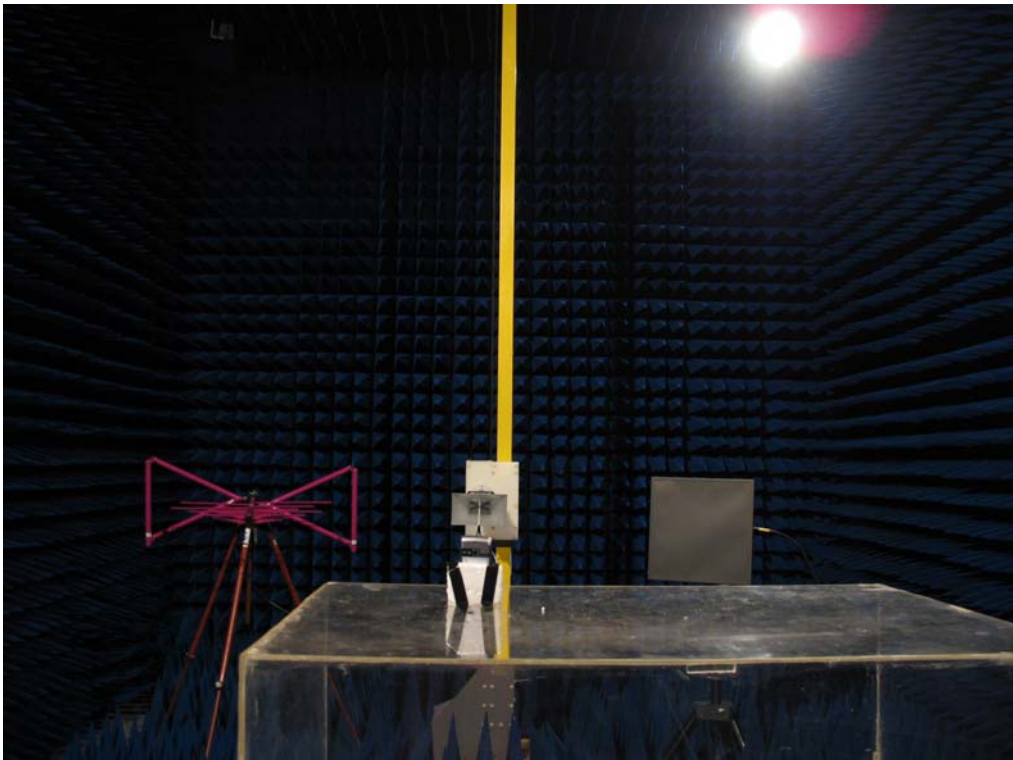
Test Mode : Mode 1: PCS1900 GSM

Description : Peak Output Power for Radiated Test



Test Mode : Mode 2: PCS1900 GPRS

Description : Peak Output Power for Radiated Test

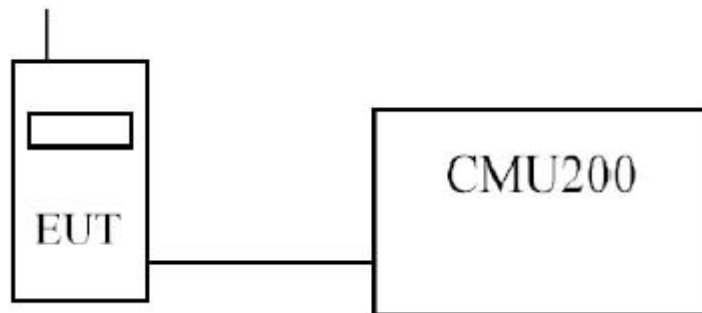


4. Modulation Characteristic

4.1. Test Specification

According to Part 2.1047(d)

4.2. Test Setup



4.3. Limit

N/A

4.4. Test Procedure

GMSK is a form of binary signaling schemes which represent digital states as a shift between discrete sinusoidal frequencies called Frequency Shift Keying (FSK). Minimum Shift Keying (MSK) is continuous phase FSK with the smallest possible modulation index h . Modulation index is defined as: $h = 2 \cdot F \cdot T_b$ where F = Peak frequency deviation in Hz and T_b = Bit period in seconds

Two discrete frequencies, representing two distinct digital states, with equal phases at switch time $t = 0$ requires a minimum value of $h = 0.5$. The Gaussian part of GMSK describes the fact that the digital pulses are filtered in the time domain. This results in bits which are sinusoidal rather than square. The effective spectrum is then compressed with the average carrier frequency in the center of the passband. This is a great advantage because of the significantly reduced bandwidth. GMSK is utilized because of these bandwidth conservation properties.

The bandwidth for GSM is a 60 MHz up-link at 1850-1910 MHz and down-link at 1930-1990 MHz. The 65 MHz is divided into 299 channels, each of which is 200 kHz wide. Slight spectral spillage is allowed into neighboring channels (which is minimized by GMSK). This

separated transmit/receive frequencies scheme under GSM enables easier duplex filtering.

Within the bandwidth, individual channels are subdivided into multiframes (made of 26 frames), frames (made of 8 time slots), and time slots (made of 8 fields). The time slots are 0.57 ms long allowing 156.25 bits of information including overhead.

The modulation used in GPRS is the same used in GSM. A GSM channel contains eight timeslots, each timeslot is dedicated to one circuit switched call. For GPRS the timeslots are assigned on an as needed basis, and more than one timeslot can be assigned for a particular transmission depending on the network and the device.

4.5. Deviation from Test Standard

No deviation.

4.6. Test Result

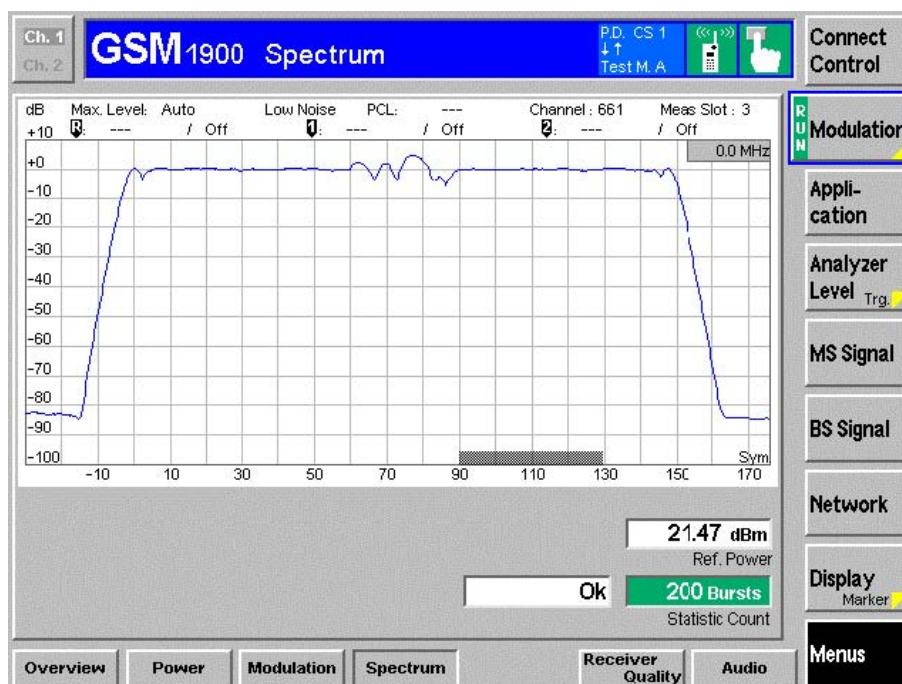
Product	Philips 900/1800/1900		
Test Item	Modulation Characteristic		
Test Mode	Mode 1: PCS1900 GSM		
Date of Test	2006/09/25	Test Site	AC-3

Figure (GSM)



Product	Philips 900/1800/1900		
Test Item	Modulation Characteristic		
Test Mode	Mode 2: PCS1900 GPRS		
Date of Test	2006/09/25	Test Site	AC-3

Figure (GPRS)

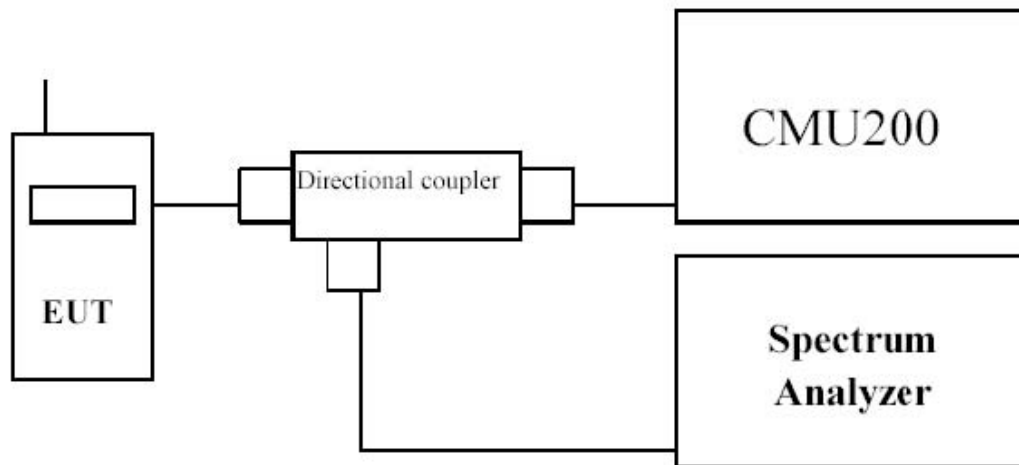


5. Occupied Bandwidth

5.1. Test Specification

According to Part 24.238(b), 2.1049

5.2. Test Setup



5.3. Limit

N/A

5.4. Test Procedure

For GSM

The EUT was set to transmit on maximum power and measurements were made on Timeslot 3.

For GPRS

The EUT was set to transmit on maximum power, (timeslots 3 and 4 active), and measurements were made on Timeslot 3.

Using a resolution bandwidth of 30kHz and a video bandwidth of 100kHz, the -26dBc points were established and the emission bandwidth determined. The plots below show the resultant display from the Spectrum Analyser.

5.5. Deviation from Test Standard

No deviation.

5.6. Test Result

Product	Philips 900/1800/1900		
Test Item	Occupied Bandwidth		
Test Mode	Mode 1: PCS1900 GSM		
Date of Test	2006/09/25	Date of Test	2006/09/25

Channel No.	Frequency (MHz)	Bandwidth (kHz)
512	1850.2	284.3
661	1880.0	289.3
810	1909.8	269.3

Figure Channel 512(1850.2MHz)

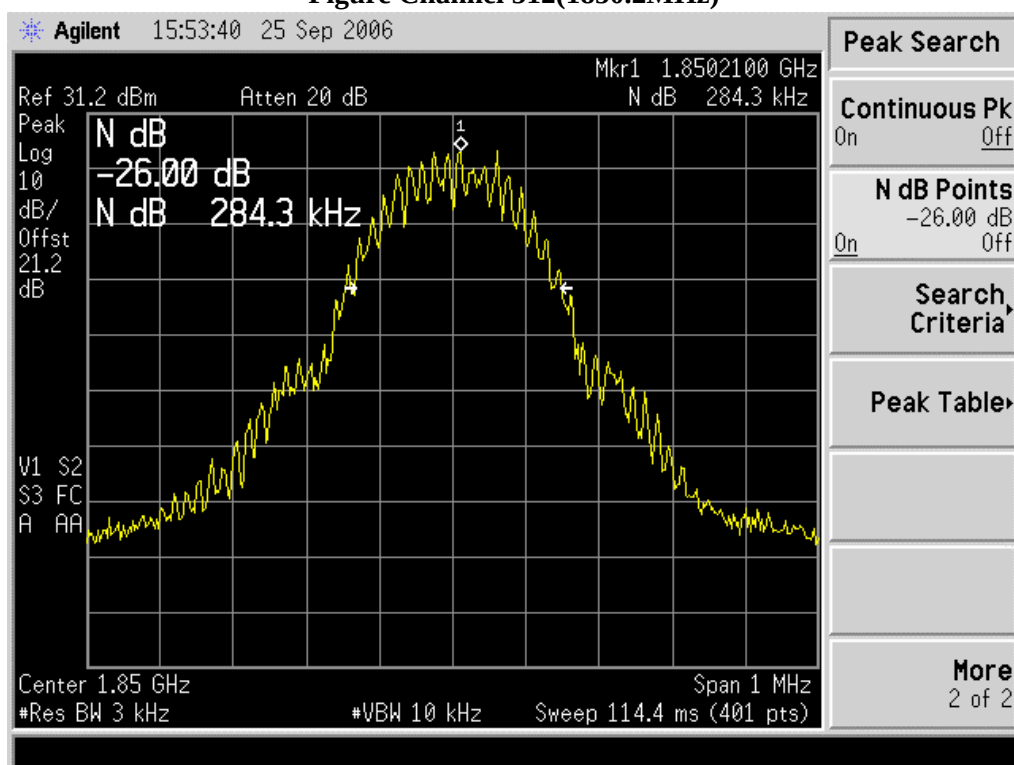


Figure Channel 661(1880.0MHz)

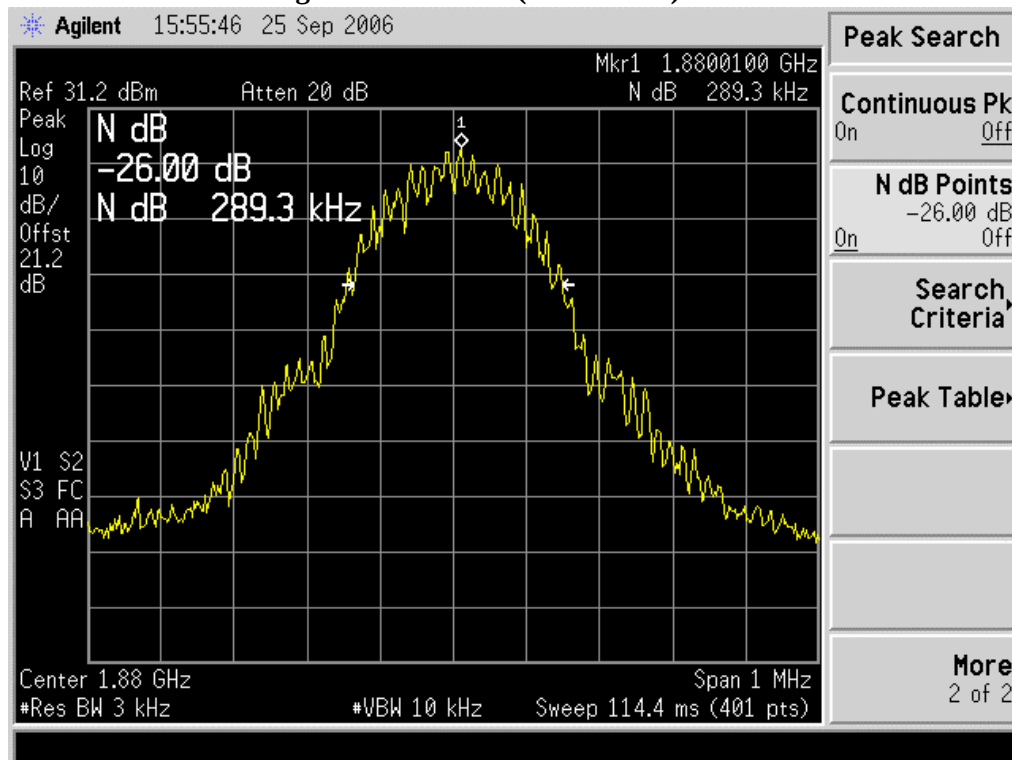
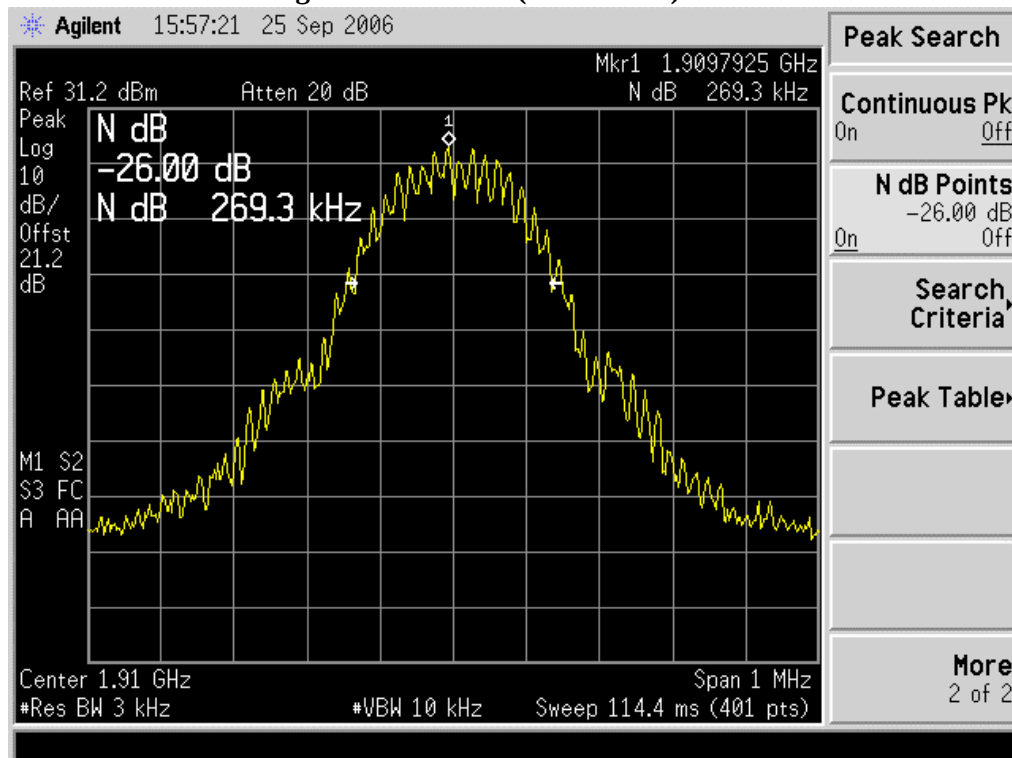


Figure Channel 810(1909.8MHz)



Product	Philips 900/1800/1900		
Test Item	Occupied Bandwidth		
Test Mode	Mode 2: PCS1900 GPRS		
Date of Test	2006/09/25	Date of Test	2006/09/25

Channel No.	Frequency (MHz)	Bandwidth (kHz)
512	1850.2	299.3
661	1880.0	284.3
810	1909.8	301.7

Figure Channel 512(1850.2MHz)

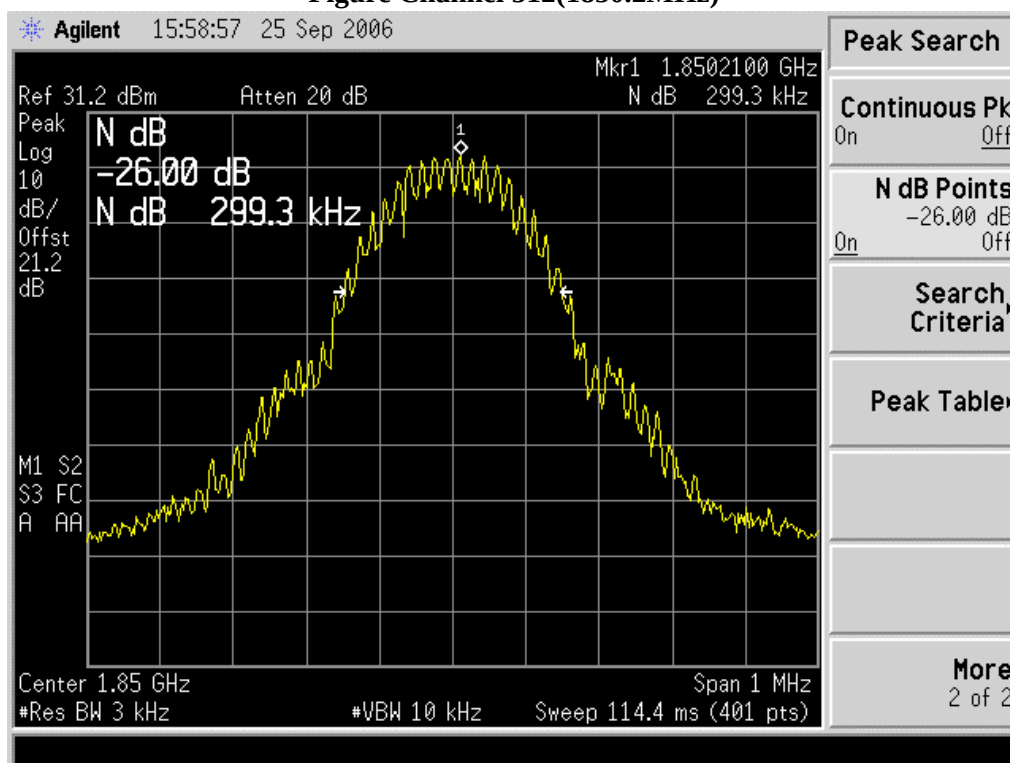


Figure Channel 661(1880.0MHz)

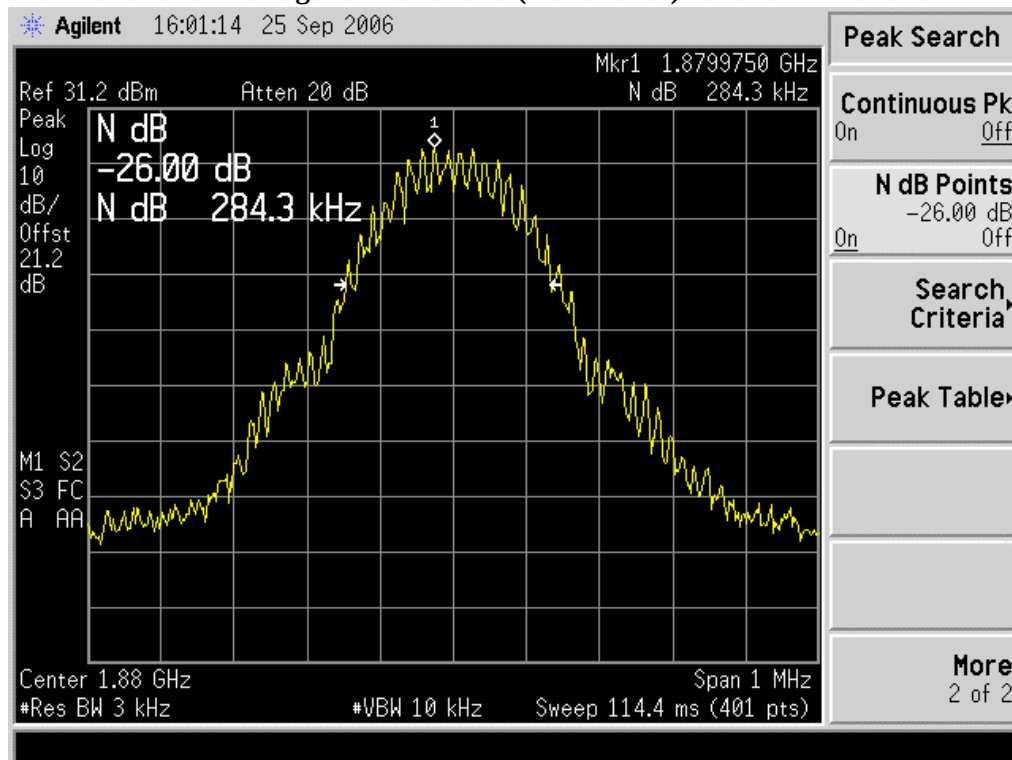
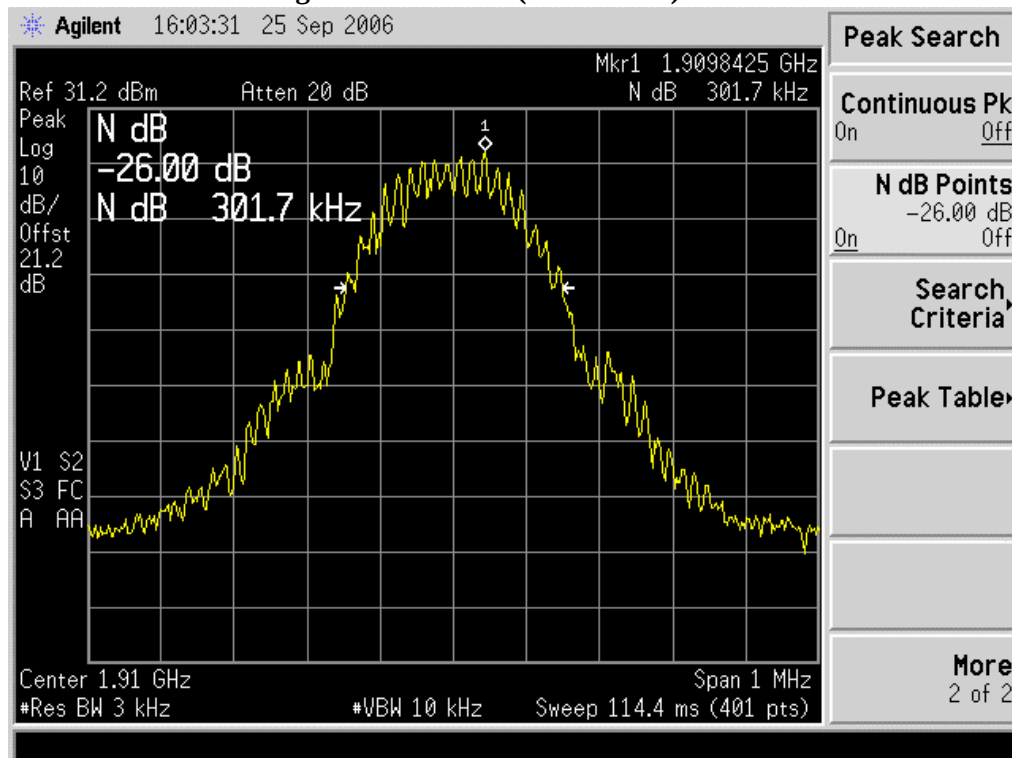


Figure Channel 810(1909.8MHz)

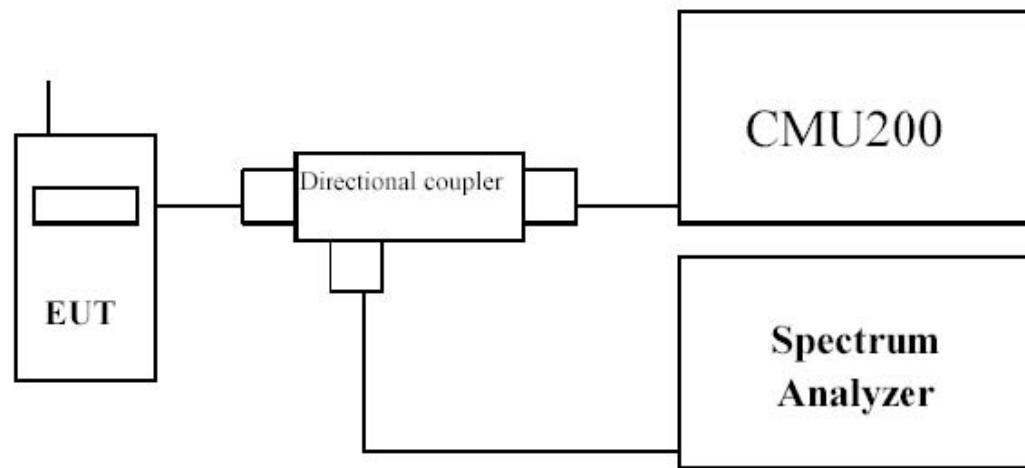


6. Spurious Emission At Antenna Terminals (+/- 1MHz)

6.1. Test Specification

According to Part 24.238, 2.1049

6.2. Test Setup



6.3. Limit

Transmitter limits for narrowband spurious emission

Lower Block Edge Test Channels / Frequencies	Upper Block Edge Test Channels / Frequencies
Block A Channel: 512 Frequency: 1850.2 MHz	Block C Channel: 810 Frequency: 1909.8MHz

6.4. Test Procedure

In accordance with Part 24.238, at least 1% of the emission bandwidth was used for the resolution and video bandwidths up to 1MHz away from the Block Edge. At greater than 1MHz, the resolution and video bandwidth were increased to 1MHz. The reference power and path losses of all channels used for testing in each frequency block were measured.

6.5. Deviation from Test Standard

No deviation.

6.6. Test Result

Product	Philips 900/1800/1900		
Test Item	Spurious Emission At Antenna Terminals (+/- 1MHz)		
Test Mode	Mode 1: PCS1900 GSM		
Date of Test	2006/09/25	Date of Test	2006/09/25

Figure Channel 512 (1850.2MHz)

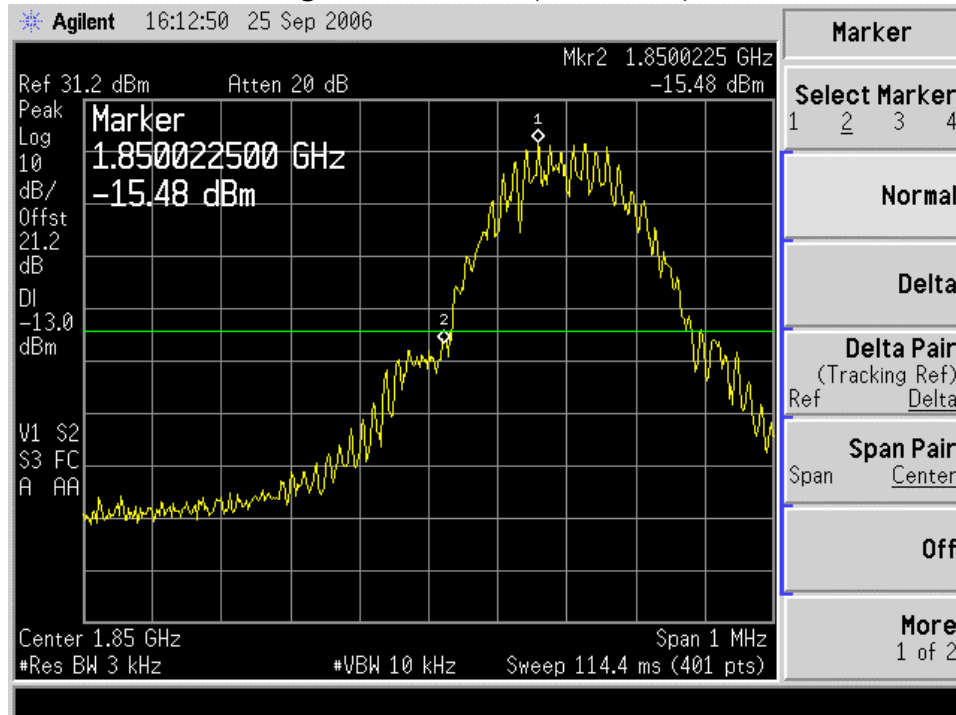
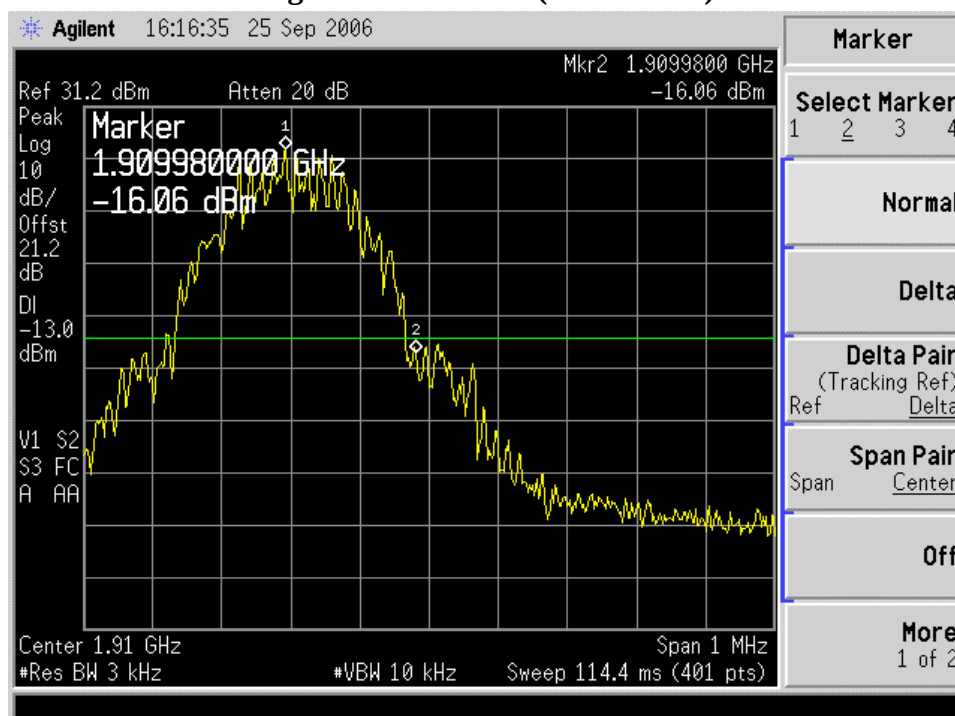


Figure Channel 810 (1909.8MHz)



Product	Philips 900/1800/1900		
Test Item	Spurious Emission At Antenna Terminals (+/- 1MHz)		
Test Mode	Mode 2: PCS1900 GPRS		
Date of Test	2006/09/25	Date of Test	2006/09/25

Figure Channel 512 (1850.2MHz)

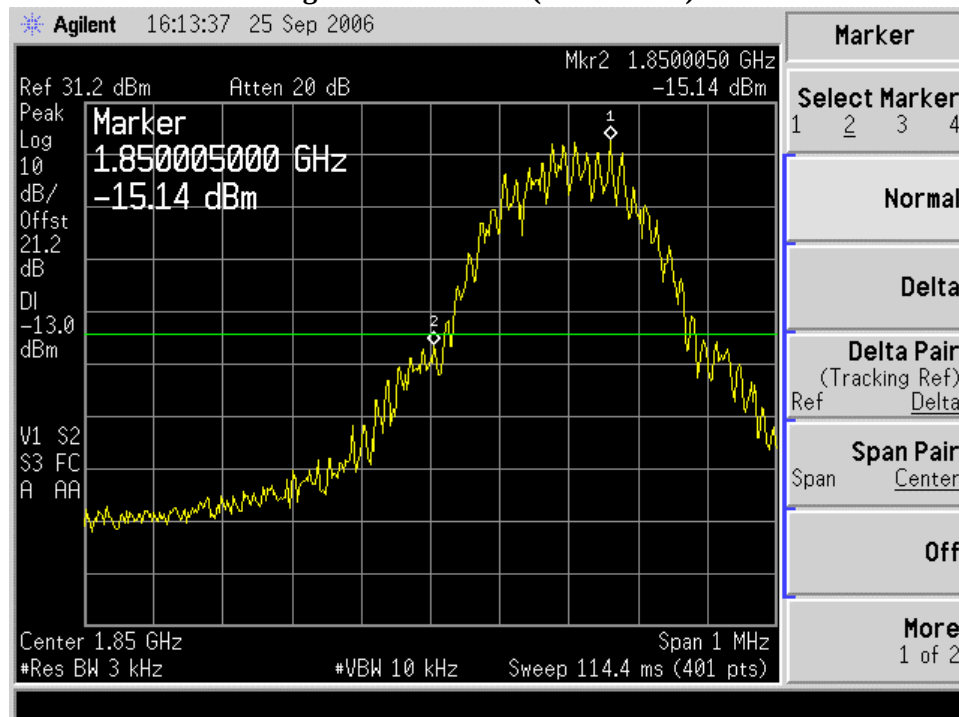
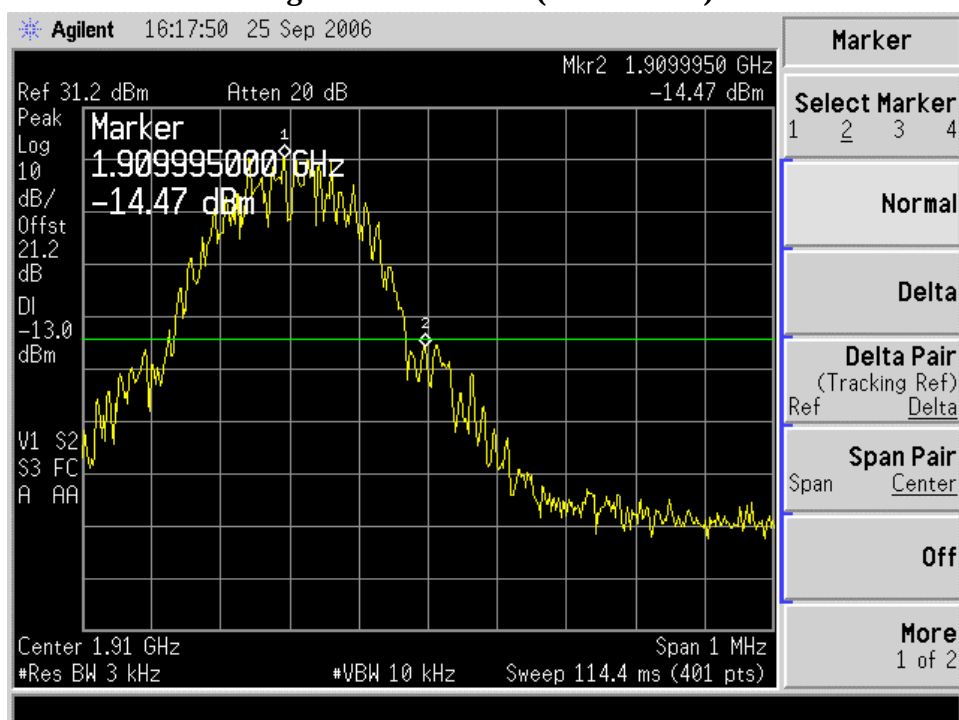


Figure Channel 810 (1909.8MHz)



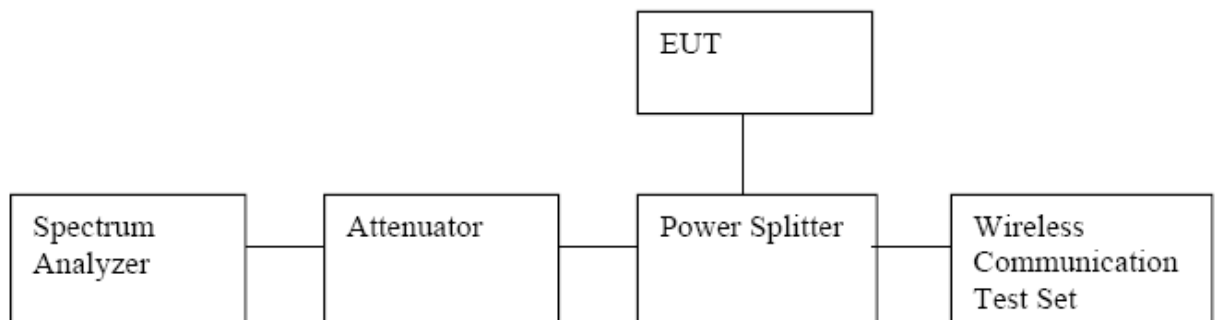
7. Spurious Emission

7.1. Test Specification

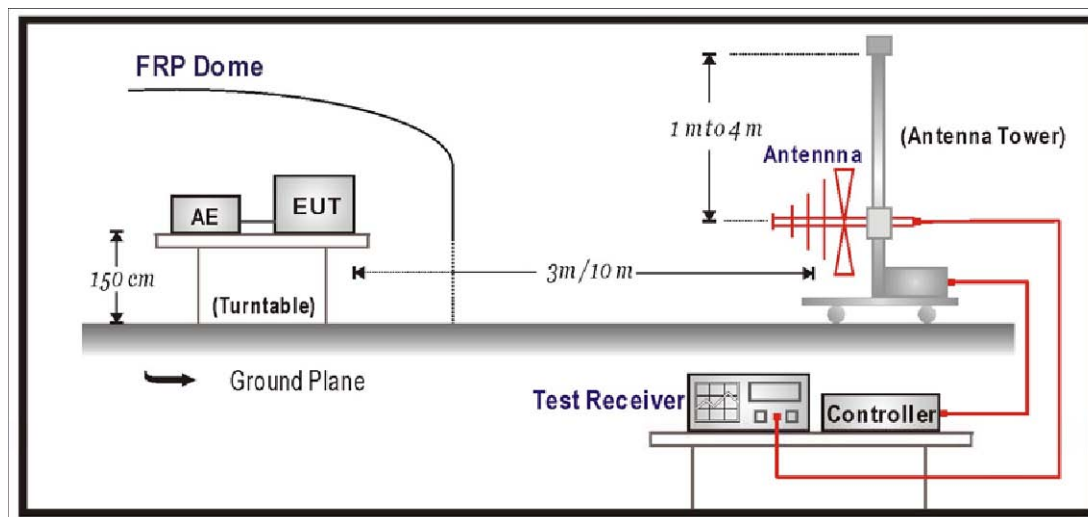
According to Part 24.238(b), 2.1051, 2.1053

7.2. Test Setup

Conducted Power Measurement



Radiated Power Measurement



7.3. Limit

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (p) by a factor of at least $43 + 10 \log(p)$ dB.

7.4. Test Procedure

In accordance with Part 2.1051, the spurious emissions from the antenna terminal were measured. The transmitter output power was attenuated using a combination of filters and attenuators and the frequency spectrum investigated from 9kHz to 20GHz. The EUT was set to transmit on full power. The EUT was tested on bottom, middle and top channels for both power levels. The resolution and video bandwidth was set to 1MHz in accordance with Part 24.238. The spectrum analyzer detector was set to Max Hold.

In addition, measurements were made up to the 10th harmonic of the fundamental.

The EUT is placed on a turn table which is 1.5 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to TIA/EIA 603-A on radiated measurement.

7.5. Deviation from Test Standard

No deviation.

7.6. Test Result

Product	Philips 900/1800/1900		
Test Item	Spurious Emission (Conducted)		
Test Mode	Mode 1: PCS1900 GSM		
Date of Test	2006/09/25	Date of Test	2006/09/25

Figure Channel 512 (1850.2MHz)

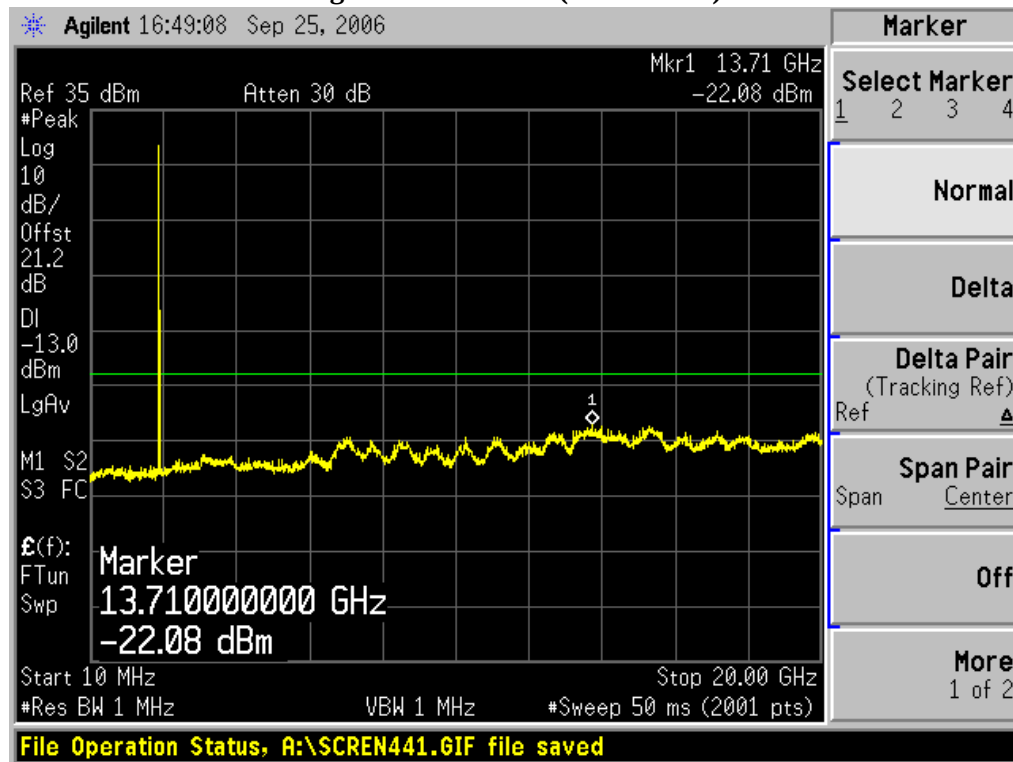


Figure Channel 661 (1880.0MHz)

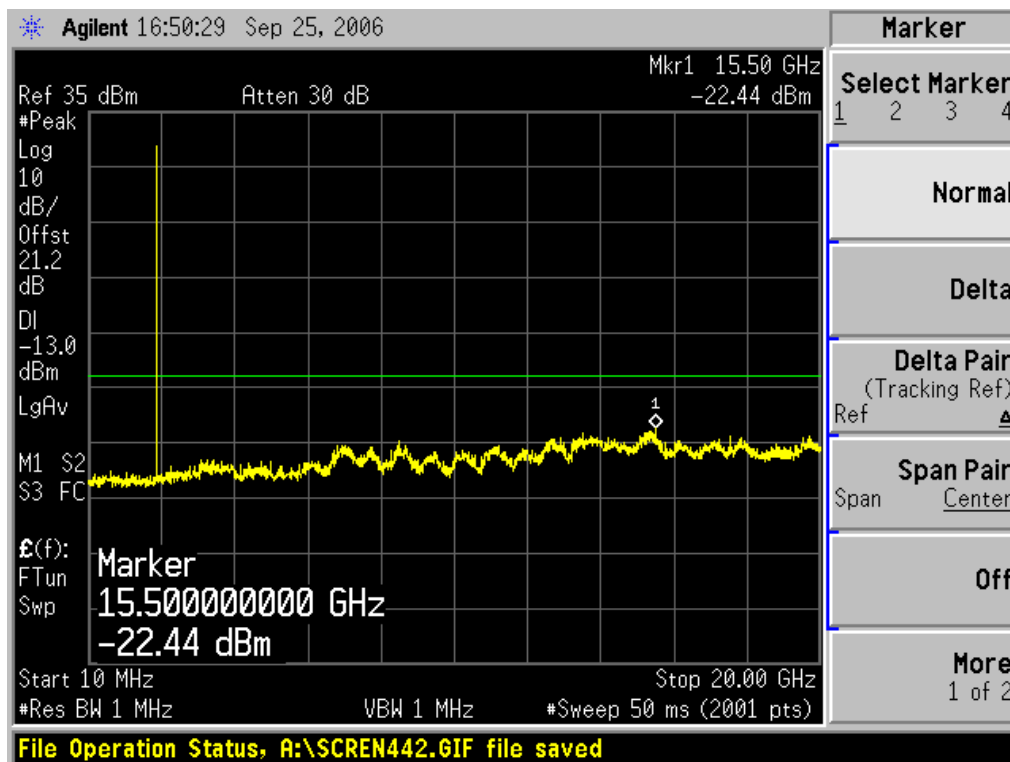
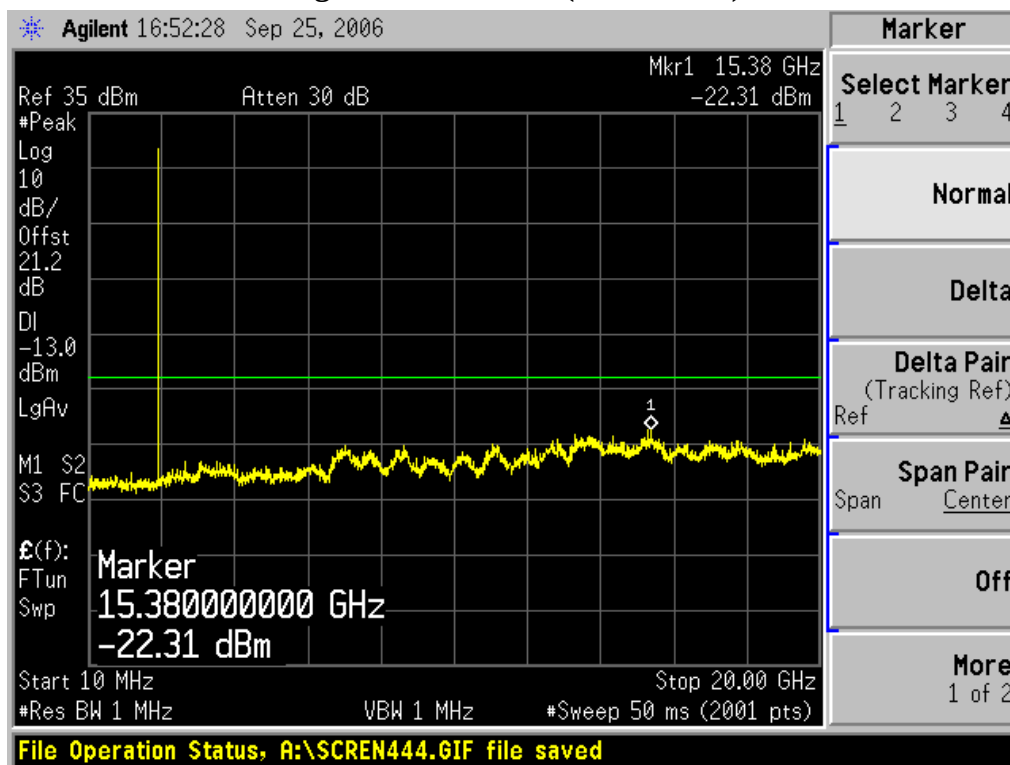


Figure Channel 810 (1909.8MHz)



Product	Philips 900/1800/1900		
Test Item	Spurious Emission (Conducted)		
Test Mode	Mode 2: PCS1900 GPRS		
Date of Test	2006/09/25	Date of Test	2006/09/25

Figure Channel 512 (1850.2MHz)

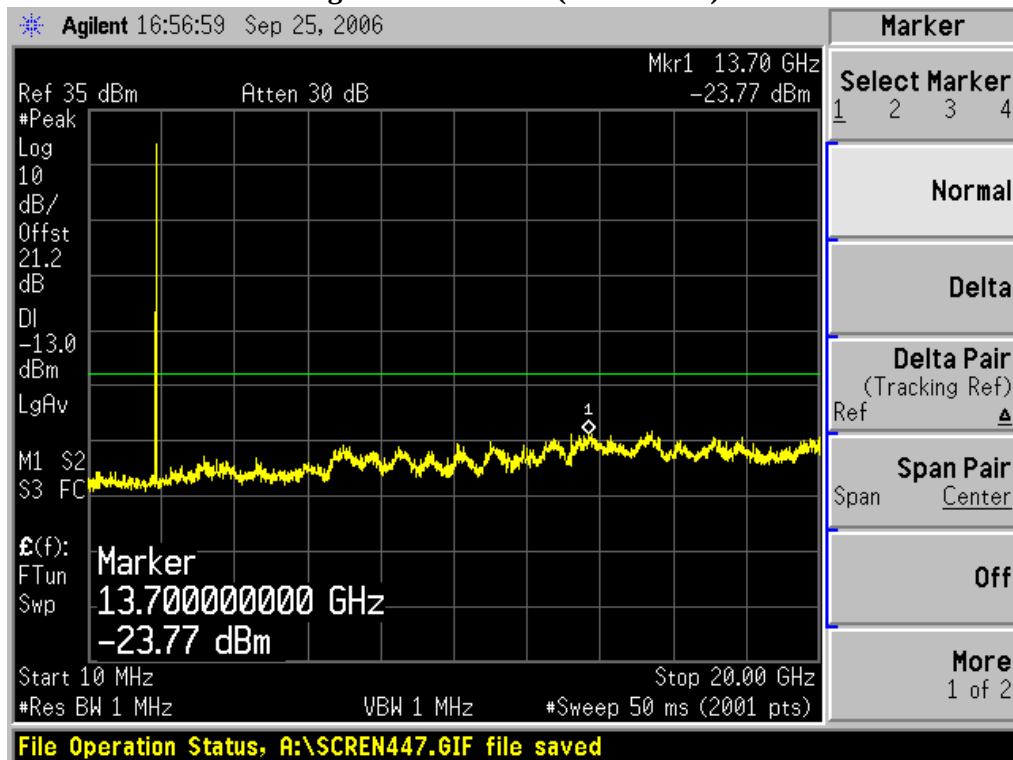


Figure Channel 661 (1880.0MHz)

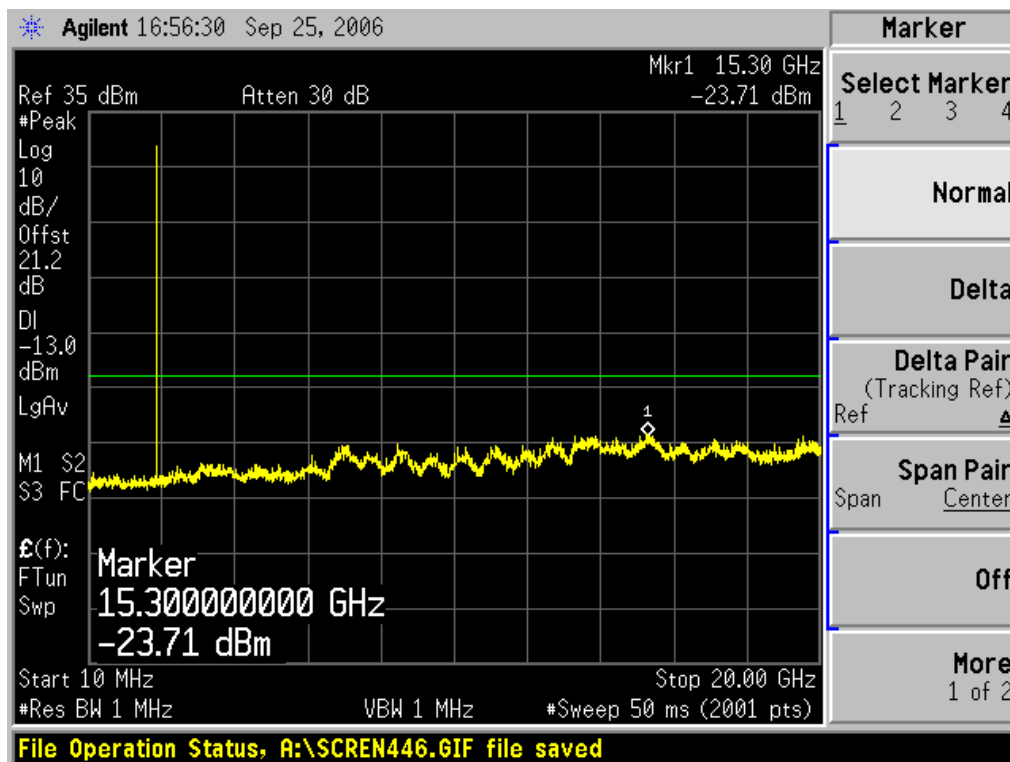
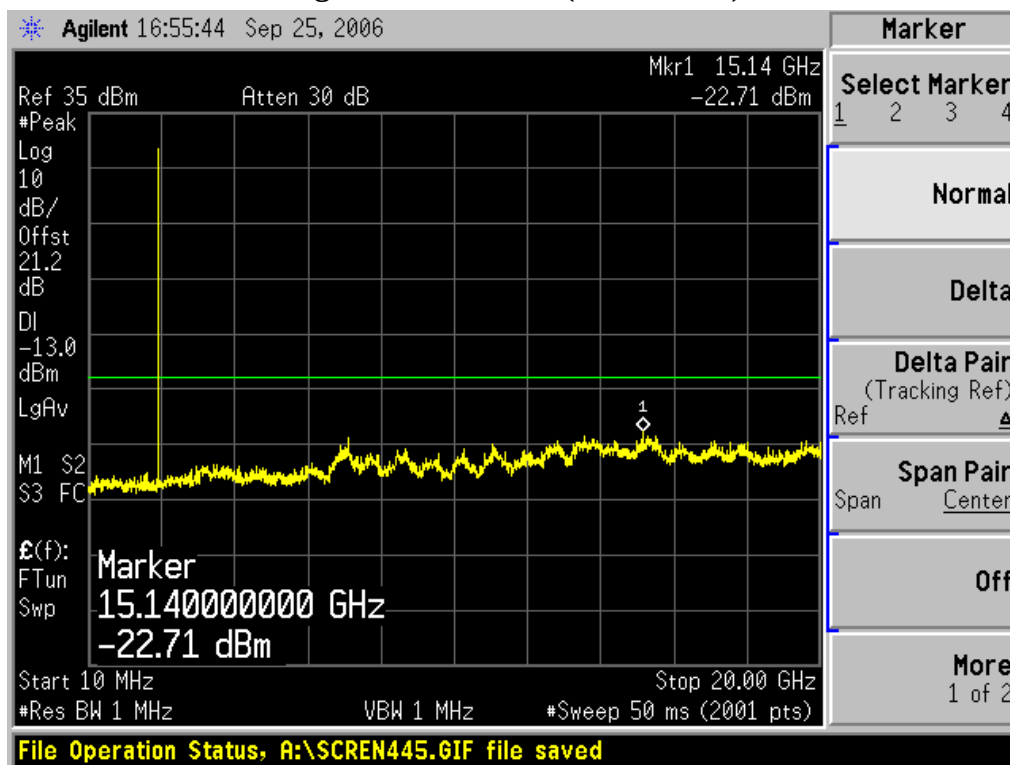


Figure Channel 810 (1909.8MHz)



Product	Philips 900/1800/1900		
Test Item	Spurious Emission (Radiated)		
Test Mode	Mode 1: PCS1900 GSM		
Date of Test	2006/09/25	Date of Test	2006/09/25

Frequency (MHz)	SA Reading (dBuV/m)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Low Channel (1850.2MHz)								
3703	66.3	V	-38.7	1.2	9.7	-30.3	-13.0	-17.3
5554	55.5	V	-47.0	1.6	11.0	-37.6	-13.0	-24.6
7405	46.8	V	-52.8	1.9	12.0	-42.7	-13.0	-29.7
9256	48.6	V	-49.2	2.1	12.7	-38.6	-13.0	-25.6
3703	69.3	H	-37.2	1.2	9.7	-28.8	-13.0	-15.8
5554	56.0	H	-46.0	1.6	11.0	-36.6	-13.0	-23.6
7405	48.5	H	-50.2	1.9	12.0	-40.1	-13.0	-27.1
9256	50.0	H	-46.7	2.1	12.7	-36.0	-13.0	-23.0
Middle Channel (1880.0MHz)-36.0								
3760	67.8	V	-36.7	1.3	9.7	-28.3	-13.0	-15.3
5640	56.5	V	-46.3	1.7	11.2	-36.8	-13.0	-23.8
7520	47.8	V	-51.8	2.1	12.7	-37.0	-13.0	-24.0
9400	48.0	V	-48.5	2.1	12.7	-37.9	-13.0	-24.9
3760	70.4	H	-35.7	1.3	9.7	-27.2	-13.0	-14.2
5640	53.0	H	-48.9	1.7	11.2	-39.4	-13.0	-26.4
7520	49.0	H	-50.0	1.9	12.0	-36.1	-13.0	-23.1
9400	47.0	H	-48.8	2.1	12.7	-38.1	-13.0	-25.1
High Channel (1909.8MHz)								
3818	67.2	V	-37.0	1.3	9.7	-28.6	-13.0	-15.6
5726	55.7	V	-46.8	1.7	11.3	-37.2	-13.0	-24.2
7635	48.4	V	-51.6	1.9	12.0	-41.4	-13.0	-28.4
9544	47.6	V	-48.0	2.1	12.7	-37.4	-13.0	-24.4
3818	69.0	H	-36.4	1.3	9.7	-27.9	-13.0	-27.1
5726	52.5	H	-49.7	1.7	11.3	-40.1	-13.0	-28.0
7635	47.8	H	-51.1	1.9	12.0	-41.0	-13.0	-21.0
9544	51.0	H	-44.6	2.1	12.7	-34.0	-13.0	-14.6

Product	Philips 900/1800/1900		
Test Item	Spurious Emission (Radiated)		
Test Mode	Mode 2: PCS1900 GPRS		
Date of Test	2006/09/25	Date of Test	2006/09/25

Frequency (MHz)	SA Reading (dBuV/m)	Ant.Pol. (H/V)	SG Reading (dBm)	Cable Loss (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)
Low Channel (1850.2MHz)								
3700	54.8	V	-50.2	1.2	9.7	-41.8	-13.0	-28.8
5554	52.0	V	50.5	1.6	11.0	-41.1	-13.0	-28.1
7405	46.2	V	-53.4	1.9	12.0	-43.3	-13.0	-30.3
9256	47.0	V	-50.8	2.1	12.7	-40.2	-13.0	-27.2
3703	57.0	H	-49.5	1.2	9.7	-41.1	-13.0	-28.1
5554	49.0	H	-53.0	1.6	11.0	-43.6	-13.0	-30.6
7405	46.8	H	-51.9	1.9	12.0	-41.8	-13.0	-28.8
9251	45.3	H	-51.4	2.1	12.7	-40.7	-13.0	-27.7
Middle Channel (1880.0MHz)								
3760	58.0	V	-46.5	1.3	9.7	-38.1	-13.0	-25.1
5640	49.4	V	-53.4	1.7	11.2	-43.9	-13.0	-30.9
7520	50.0	V	-46.5	2.1	12.7	-35.9	-13.0	-22.9
9400	48.7	V	-47.8	2.1	12.7	-37.2	-13.0	-24.2
3760	60.0	H	-46.1	1.3	9.7	-37.6	-13.0	-24.6
5640	54.0	H	-50.9	1.7	11.2	-41.4	-13.0	-28.4
7520	46.0	H	-51.0	1.9	12.0	-41.0	-13.0	-28.0
9400	44.1	H	-51.7	2.1	12.7	-41.0	-13.0	-28.0
High Channel (1909.8MHz)								
3818	57.4	V	-46.8	1.3	9.7	-38.4	-13.0	-25.4
5726	48.3	V	-54.2	1.7	11.3	-44.6	-13.0	-31.6
7639	47.4	V	-52.6	1.9	12.0	-42.4	-13.0	-29.4
9544	46.5	V	-49.1	2.1	12.7	-38.5	-13.0	-25.5
3818	59.0	H	-46.4	1.3	9.7	-37.9	-13.0	-24.9
5726	52.0	H	-50.2	1.7	11.3	-40.6	-13.0	-27.6
7639	52.1	H	-46.8	1.9	12.0	-36.7	-13.0	-23.7
9544	46.6	H	-49.0	2.1	12.7	-38.4	-13.0	-25.4

7.7. Test Photograph

Test Mode : Mode 1: PCS1900 GSM

Description : Spurious Emission for Radiated Test Under 1GHz



Test Mode : Mode 1: PCS1900 GSM

Description : Spurious Emission for Radiated Test Above 1GHz



Test Mode : Mode 2: PCS1900 GPRS

Description : Spurious Emission for Radiated Test Under 1GHz



Test Mode : Mode 2: PCS1900 GPRS

Description : Spurious Emission for Radiated Test Above 1GHz

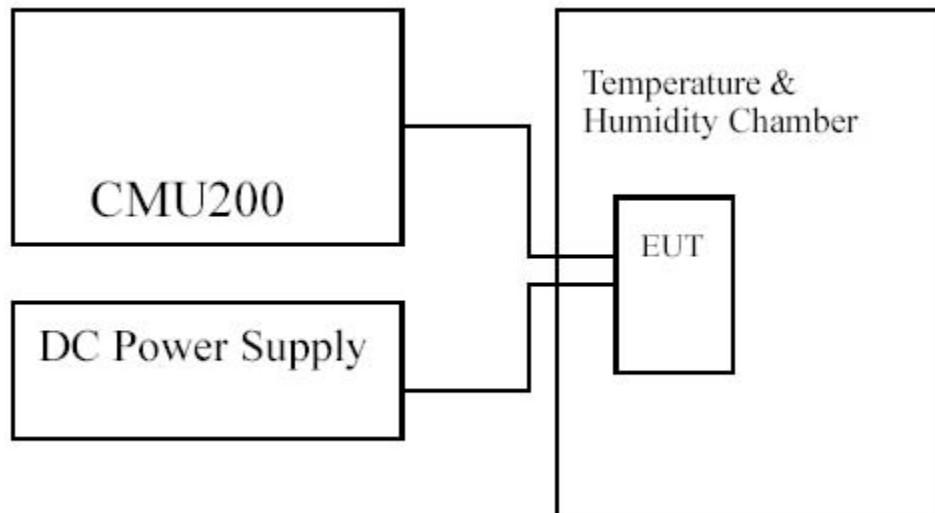


8. Frequency Stability Under Temperature & Voltage Variations

8.1. Test Specification

According to Part 24.235, 2.1055

8.2. Test Setup



8.3. Limit

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

Limit	< ± 1 ppm
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8.4. Test Procedure

For GSM

The EUT was set to transmit on maximum power and measurements were made on Timeslot3. Universal Radio Communication Tester, (CMU200), was used to measure The Frequency Error. The maximum result of measurements made over 200 bursts was recorded.

For GPRS

The EUT was set to transmit on maximum power, (timeslots 3 and 4 active), and measurements performed on Timeslot 3. A Universal Radio Communication Tester, (CMU200), was used to measure the frequency error. The maximum result of measurements made over 200 bursts was recorded.

8.5. Deviation from Test Standard

No deviation.

8.6. Test Result

Product	Philips 900/1800/1900		
Test Item	Frequency Stability Under Temperature & Voltage Variations		
Test Mode	Mode 1: PCS1900 GSM		
Date of Test	2006/09/25	Date of Test	2006/09/25

Frequency Stability Under Temperature

Temperature Interval(°C)	Test Frequency (MHz)	Deviation (Hz)	Limit (KHz)
-30	1880.0	-37	±1.88
-20	1880.0	40	±1.88
-10	1880.0	44	±1.88
0	1880.0	47	±1.88
10	1880.0	55	±1.88
20	1880.0	57	±1.88
30	1880.0	45	±1.88
40	1880.0	-58	±1.88
50	1880.0	-51	±1.88

Frequency Stability Under Voltage

DC Voltage (V)	Test Frequency (MHz)	Deviation (Hz)	Limit (KHz)
3.52	1880.0	-56	±1.88
3.7	1880.0	-54	±1.88
4.225	1880.0	-54	±1.88

9. Attachment

➤ EUT Photograph

(1) EUT Photo



(2) EUT Photo



(3) EUT Photo



(4) EUT Photo



(5) EUT Photo



(6) EUT Photo



(7) EUT Photo



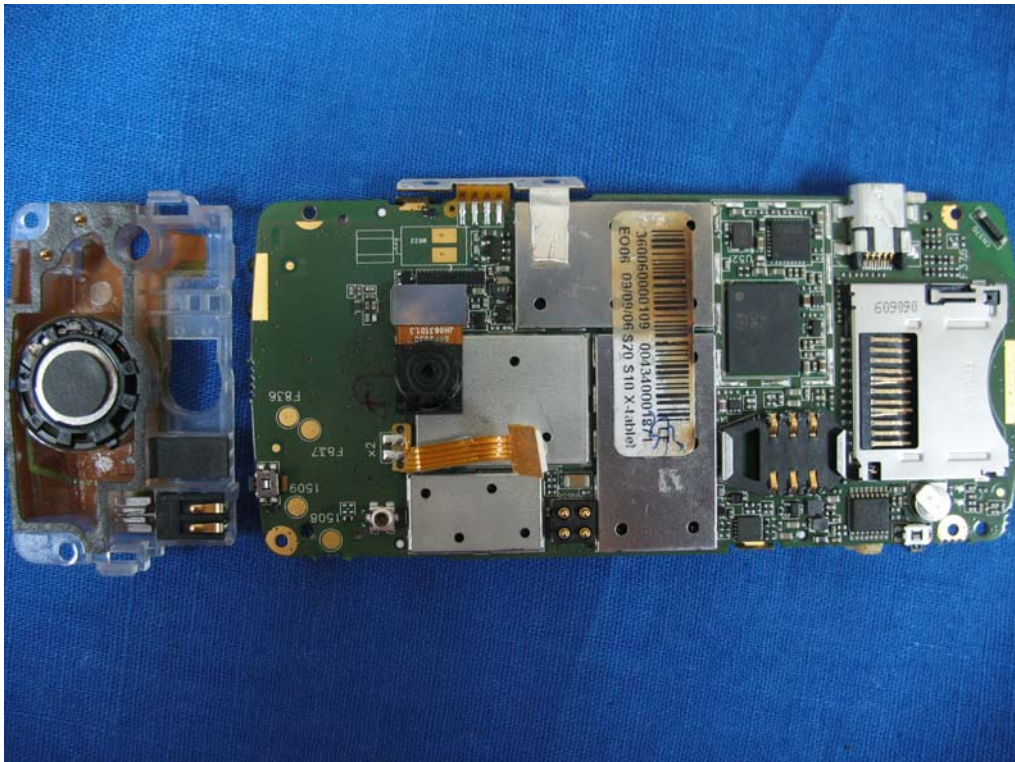
(8) EUT Photo



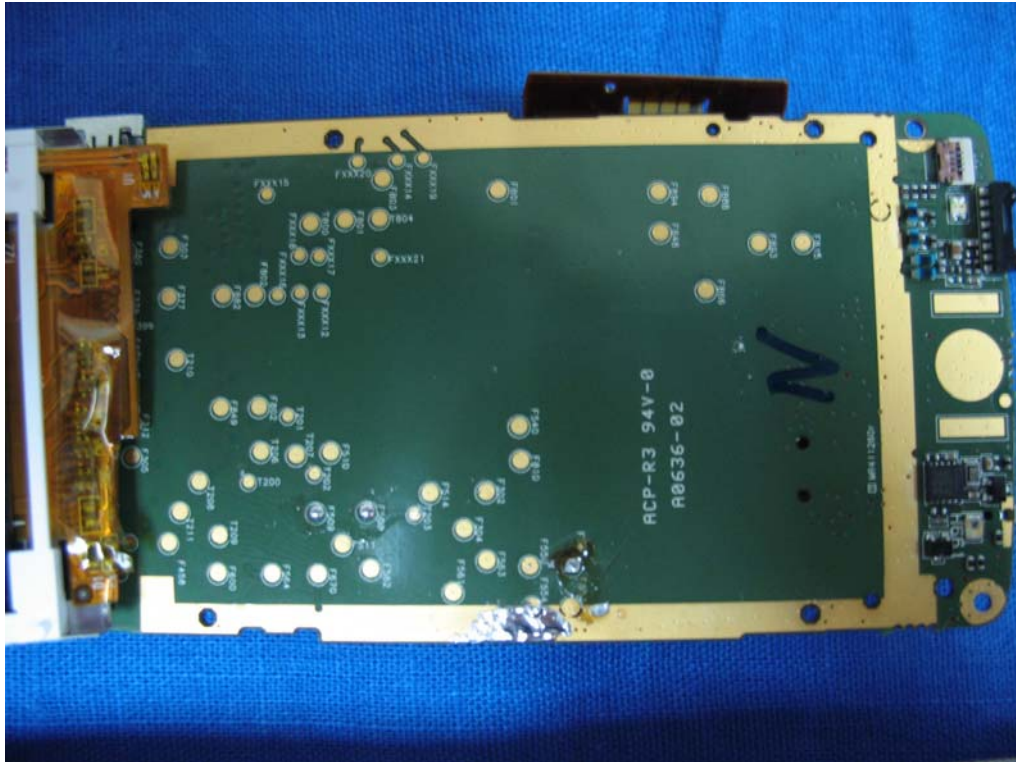
(9) EUT Photo



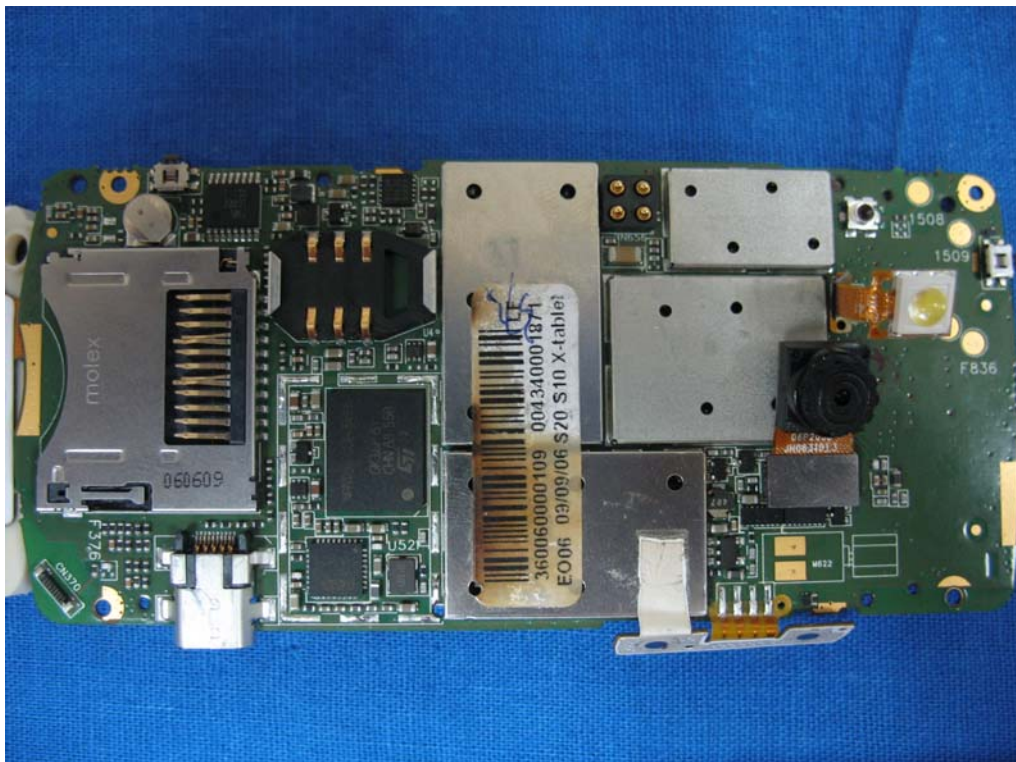
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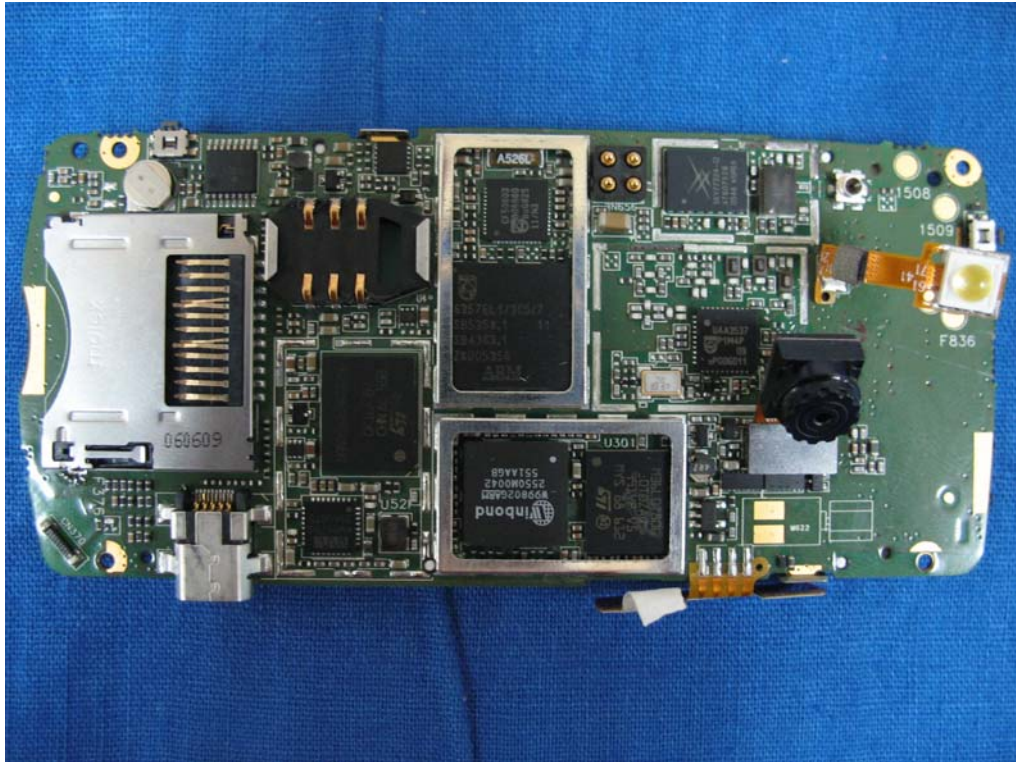
(11) EUT Photo



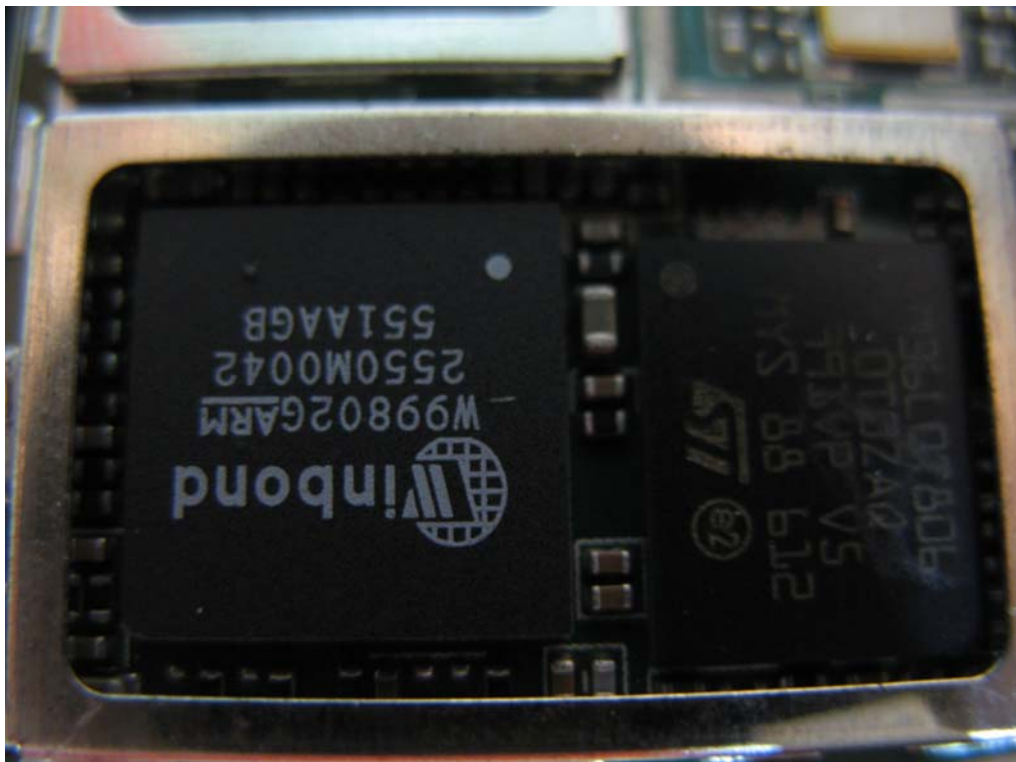
(12) EUT Photo



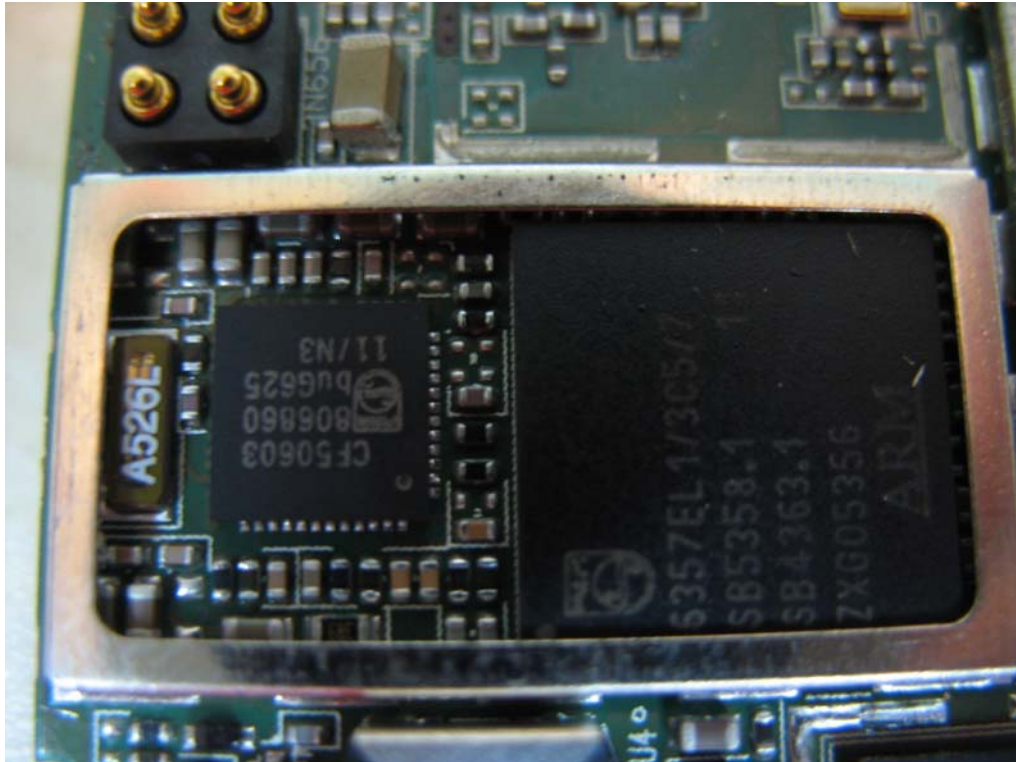
(13) EUT Photo



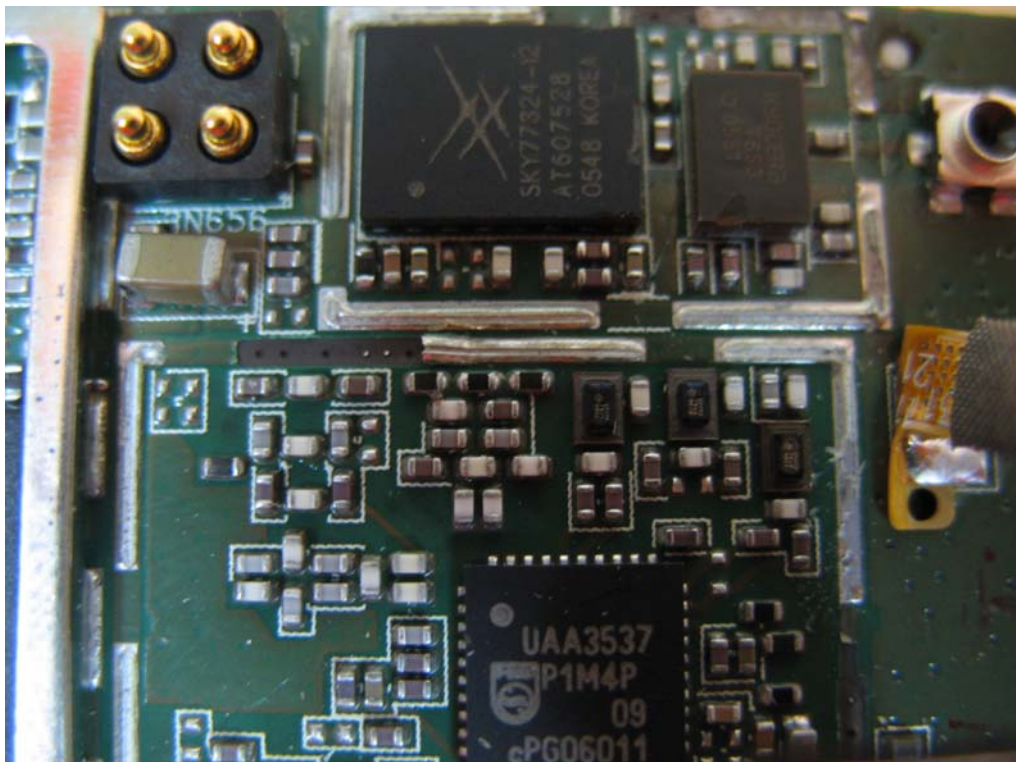
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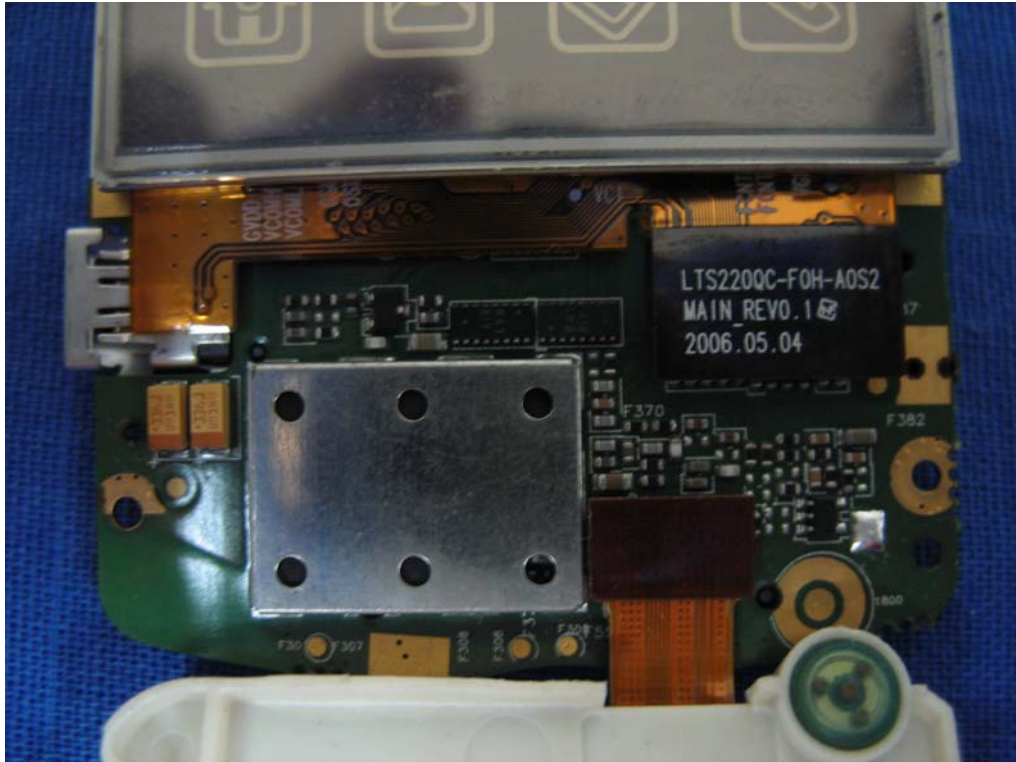
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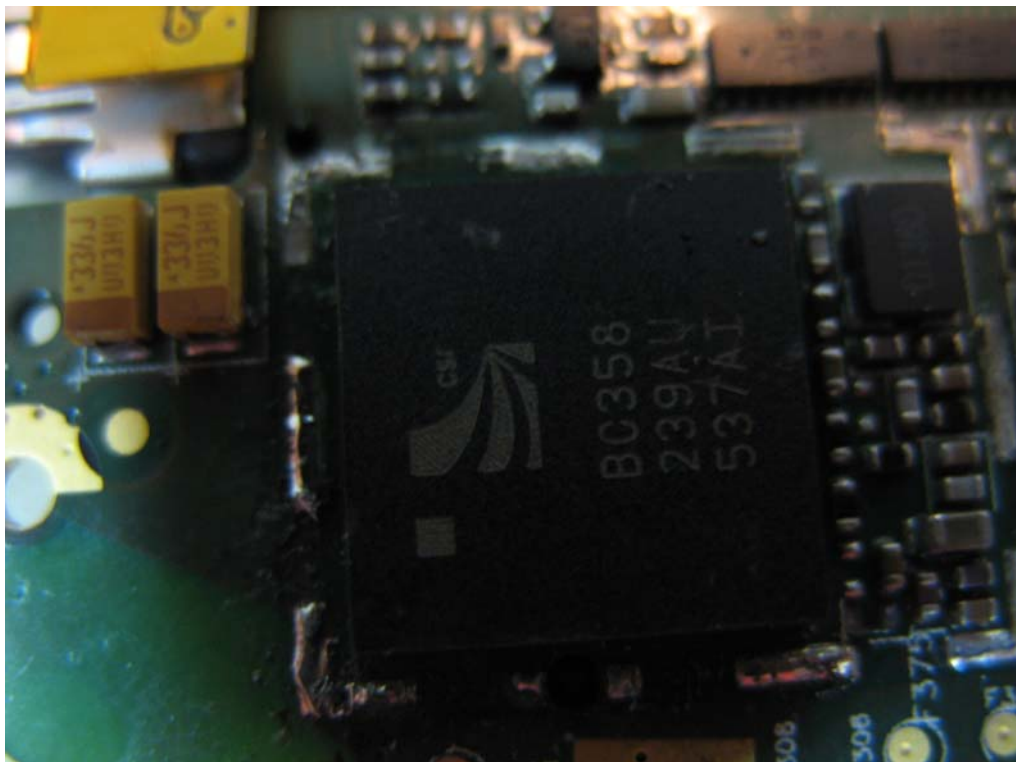
(16) EUT Photo



(17) EUT Photo



(18) EUT Photo



(19) EUT Photo



(20) EUT Photo



(21) EUT Photo



(22) EUT Photo

