



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-RF-US-P06V01

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

Issued Date : 2006/09/28

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

Address : 13/F, Skyworth C Building, Gaoxin S.Ave1, Hi-Tech 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 15 Subpart C: 2005
ANSI C63.4: 2003
CISPR 22: 2005

Test Result : Complied

Performed Location : SuZhou EMC Laboratory
No.99 Hongye Rd., Suzhou Industrial Park Loufeng
Hi-Tech Development Zone., SuZhou, China
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Reviewed By : 
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Approved By : 
(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/>
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No.99 Hongye Rd., Suzhou Industrial Park Loufeng Hi-Tech Development Zone., SuZhou, China

TEL : +86-512-6251-5088 / FAX : 86-512-6251-5098

E-Mail : service@quietek.com



TABLE OF CONTENTS

Description	Page
1. General Information.....	6
1.1. EUT Description	6
1.2. Operational Description.....	8
1.3. Mode of Operation.....	9
1.4. Tested System Details	10
1.5. Configuration of Tested System.....	11
1.6. EUT Exercise Software.....	12
2. Technical Test.....	13
2.1. Summary of Test Result.....	13
2.2. List of Test Equipment.....	14
2.3. Measurement Uncertainty	16
2.4. Test Environment	17
3. Conducted Emission	18
3.1. Test Specification.....	18
3.2. Test Setup.....	18
3.3. Limit.....	18
3.4. Test Procedure.....	19
3.5. Deviation from Test Standard	19
3.6. Test Result.....	20
3.7. Test Photograph	26
4. Radiated Emission	27
4.1. Test Specification.....	27
4.2. Test Setup.....	27
4.3. Limit.....	28
4.4. Test Procedure.....	28
4.5. Deviation from Test Standard	28
4.6. Test Result.....	29
4.7. Test Photograph	49
5. Peak Power Output	51
5.1. Test Specification.....	51
5.2. Test Setup.....	51
5.3. Limit.....	51
5.4. Deviation from Test Standard	51
5.5. Test Result.....	52
6. Band Edge.....	54
6.1. Test Specification.....	54
6.2. Test Setup.....	54
6.3. Limit.....	55

6.4.	Test Procedure.....	55
6.5.	Deviation from Test Standard	55
6.6.	Test Result.....	56
7.	Channel Number	60
7.1.	Test Specification.....	60
7.2.	Test Setup.....	60
7.3.	Limit.....	60
7.4.	Deviation from Test Standard	60
7.5.	Test Result.....	61
8.	Channel Separation	64
8.1.	Test Specification.....	64
8.2.	Test Setup.....	64
8.3.	Limit.....	64
8.4.	Deviation from Test Standard	64
8.5.	Test Result.....	65
9.	Dwell Time.....	67
9.1.	Test Specification.....	67
9.2.	Test Setup.....	67
9.3.	Limit.....	67
9.4.	Deviation from Test Standard	67
9.5.	Test Result.....	68
10.	Occupied Bandwidth.....	73
10.1.	Test Specification.....	73
10.2.	Test Setup.....	73
10.3.	Limit.....	73
10.4.	Deviation from Test Standard	73
10.5.	Test Result.....	74
11.	Attachment	76
	EUT Photograph	76

1. General Information

1.1. EUT Description

Product Name	Philips 900/1800/1900
Trade Name	Philips
Model No.	Xenium9@9m
FCC ID No.	T38CT9A9M
Frequency Range	2400 - 2483.5MHz
Channel Number	79
Antenna Gain	-5.7dBi
Type of Modulation	Frequency Hopping Spread Spectrum
Channel Control	Auto
Antenna type	Printed

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

Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 00:	2402 MHz	Channel 01:	2403 MHz	Channel 02:	2404 MHz	Channel 03:	2405 MHz
Channel 04:	2406 MHz	Channel 05:	2407 MHz	Channel 06:	2408 MHz	Channel 07:	2409 MHz
Channel 08:	2410 MHz	Channel 09:	2411 MHz	Channel 10:	2412 MHz	Channel 11:	2413 MHz
Channel 12:	2414 MHz	Channel 13:	2415 MHz	Channel 14:	2416 MHz	Channel 15:	2417 MHz
Channel 16:	2418 MHz	Channel 17:	2419 MHz	Channel 18:	2420 MHz	Channel 19:	2421 MHz
Channel 20:	2422 MHz	Channel 21:	2423 MHz	Channel 22:	2424 MHz	Channel 23:	2425 MHz
Channel 24:	2426 MHz	Channel 25:	2427 MHz	Channel 26:	2428 MHz	Channel 27:	2429 MHz
Channel 28:	2430 MHz	Channel 29:	2431 MHz	Channel 30:	2432 MHz	Channel 31:	2433 MHz
Channel 32:	2434 MHz	Channel 33:	2435 MHz	Channel 34:	2436 MHz	Channel 35:	2437 MHz
Channel 36:	2438 MHz	Channel 37:	2439 MHz	Channel 38:	2440 MHz	Channel 39:	2441 MHz
Channel 40:	2442 MHz	Channel 41:	2443 MHz	Channel 42:	2444 MHz	Channel 43:	2445 MHz
Channel 44:	2446 MHz	Channel 45:	2447 MHz	Channel 46:	2448 MHz	Channel 47:	2449 MHz
Channel 48:	2450 MHz	Channel 49:	2451 MHz	Channel 50:	2452 MHz	Channel 51:	2453 MHz
Channel 52:	2454 MHz	Channel 53:	2455 MHz	Channel 54:	2456 MHz	Channel 55:	2457 MHz
Channel 56:	2458 MHz	Channel 57:	2459 MHz	Channel 58:	2460 MHz	Channel 59:	2461 MHz
Channel 60:	2462 MHz	Channel 61:	2463 MHz	Channel 62:	2464 MHz	Channel 63:	2465 MHz
Channel 64:	2466 MHz	Channel 65:	2467 MHz	Channel 66:	2468 MHz	Channel 67:	2469 MHz
Channel 68:	2470 MHz	Channel 69:	2471 MHz	Channel 70:	2472 MHz	Channel 71:	2473 MHz
Channel 72:	2474 MHz	Channel 73:	2475 MHz	Channel 74:	2476 MHz	Channel 75:	2477 MHz
Channel 76:	2478 MHz	Channel 77:	2479 MHz	Channel 78:	2480 MHz		

The system receivers have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shift frequencies in synchronization with the transmitted signals.

Frequency hopping spread spectrum systems are not required to employ all available hopping channels during each transmission. The transmitter is presented with a continuous data stream. In addition, a system employing short transmission bursts must comply with the definition of a frequency hopping system and must distribute its 79 channels and over the minimum number of hopping channels (75 channels).

The incorporation of intelligence within a frequency hopping spread spectrum system that permits the system to recognize other users within the spectrum band so that it individually and independently chooses and adapts its hopsets to avoid hopping on occupied channels is permitted. The coordination of frequency hopping systems in any other manner for the express purpose of avoiding the simultaneous occupancy of individual hopping frequencies by multiple transmitters is not permitted.

Note:

1. This device is a Bluetooth Headset including a 2.4GHz transceiver.
2. These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with Part 15 Subpart C Paragraph 15.247 for spread spectrum devices.
3. Regards to the frequency band operation; the lowest 、 middle and highest frequency of channel were selected to perform the test, then shown on this report.
4. 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-RF-US-P01V02, certified under Declaration of Conformity.
5. QuietTek verified among construction and function in typical operation, then shown in this test report.

1.2. Operational Description

The EUT is a GSM900/DCS1800/PCS1900 GSM/GPRS Mobile Phone include a Bluetooth Function with 79 channels.

This device provides wireless technology that revolutionizes personal connectivity. It is the solution for the seamless integration of Bluetooth technology into personal computer enabling short-range wireless connections between desktop/laptop computers, Bluetooth-enabled peripherals, and portable handheld devices.

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: Transmit
Final Test Mode
Mode 1: Transmit

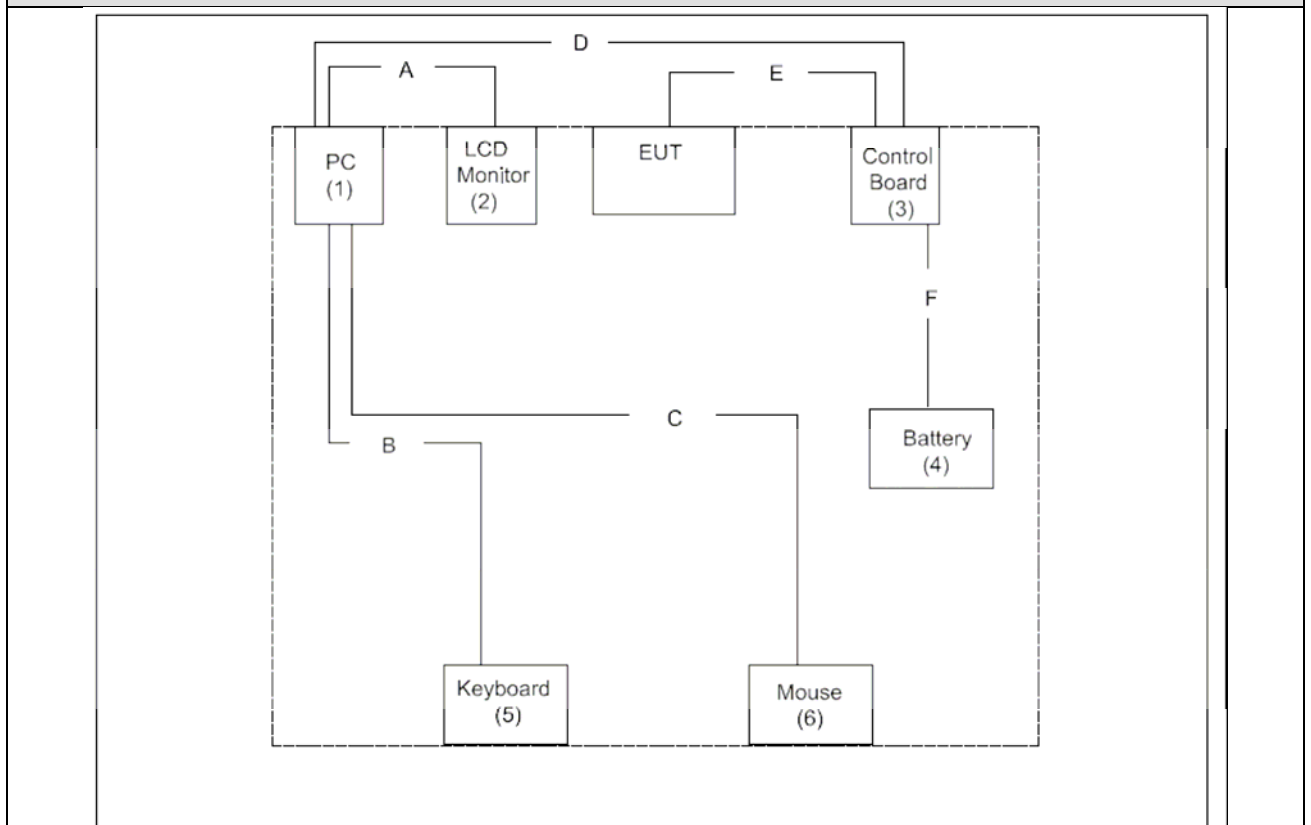
1.4. Tested System Details

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)	PC	HP	DC7600CMT	CNG5460DC6	Non-Shielded, 1.8m
(2)	LCD Monitor	CHIMEI	A170E1-03	36C112338M41164	Non-Shielded, 1.8m
(3)	Control Board	CEC	N/A	N/A	N/A
(4)	Battery	PHILIPS	4339 008 73501	XWN 000824	N/A
(5)	Keyboard	HP	KB-0316	B94330AUBSD01K	N/A
(6)	Mouse	HP	M-UV96	F93A90AN3SB1XRT	N/A

1.5. Configuration of Tested System

Connection Diagram



Signal Cable Type		Signal cable Description
A	VGA Cable	Shielded, 1.5m with two Core bounded
B	P/S Keyboard Cable	Non-Shielded, 1.5m
C	USB Mouse Cable	Non-Shielded, 1.5m
D	RS-232 Control Cable	Non-Shielded, 1.0m
E	Control Cable	Shielded, 0.1m
F	Battery Output Cable	Shielded, 0.2m

1.6. EUT Exercise Software

- (1) Setup the EUT as shown in Section 1.5.
- (2) Connect the EUT to PC via a control board and a RS232 cable.
- (3) Execute the BlueTest program on the PC.
- (4) Setup the test channel and the data mode.
- (5) Press OK to start the continuous transmission.
- (6) Verify the EUT operation properly.

2. Technical Test

2.1. Summary of Test Result

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

For Bluetooth (FCC Part 15C)

Emission			
Performed Item	Normative References	Test Performed	Deviation
Conducted Emission	FCC Part 15.207	Yes	No
Radiated Emission	FCC Part 15.209	Yes	No
Peak Power Output	FCC Part 15.247(b)	Yes	No
Band Edge	FCC Part 15.247(d)	Yes	No
Channel Number	FCC Part 15.247(a)	Yes	No
Channel Separation	FCC Part 15.247(a)	Yes	No
Dwell Time	FCC Part 15.247(a)	Yes	No
Occupied Bandwidth	FCC Part 15.247	Yes	No

2.2. List of Test Equipment

Conducted Emission / SR-1

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
EMI Test Receiver	R&S	ESCI	100175	2005/11/25
Two-Line V-Network	R&S	ENV216	100013	2005/11/25
Two-Line V-Network	R&S	ENV216	100014	2005/11/25
V-Network	R&S	ESH3-Z6	100248	2005/11/25
V-Network	R&S	ESH3-Z6	100249	2005/11/25
ISN	Schaffner	ISN T400	21648	2005/11/25
Current Probe	R&S	EZ-17	100252	2006/04/18
50ohm Coaxial Switch	ANRITSU	MP59B	6200447305	2005/11/25
50ohm Impedance	SHX	50ohmI	QT-IM001	2006/03/20
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH004	2006/03/30

Radiated 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
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
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2005/11/25
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH002	2006/03/30

Peak Power Output / AC-3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2006/03/23
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH003	2006/03/30

Band Edge / 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
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
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	294	2005/11/25
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH002	2006/03/30

Channel Number / AC-3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2006/03/23
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH003	2006/03/30

Channel Separation / AC-3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2006/03/23
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH003	2006/03/30

Channel Separation / AC-3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2006/03/23
Temperature/Humidity Meter	zhicheng	ZC1-2	QT-TH003	2006/03/30

Dwell Time / AC-3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer	Agilent	E4446A	MY45300103	2006/03/23
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	2006/03/23
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 ± 3.2 dB for under 1GHz.

The measurement uncertainty is evaluated as ± 3.9 dB for above 1GHz

Peak Power Output

The measurement uncertainty is defined as ± 1.27 dB

Band Edge

The measurement uncertainty is evaluated as ± 3.2 dB for under 1GHz.

The measurement uncertainty is evaluated as ± 3.9 dB for above 1GHz

Channel Number

The measurement uncertainty is defined as ± 200 kHz

Channel Separation

The measurement uncertainty is defined as ± 150 Hz

Dwell Time

The measurement uncertainty is defined as ± 25 msec

Occupied Bandwidth

The measurement uncertainty is defined ± 1.27 dB

2.4. Test Environment

Ambient conditions in the laboratory:

Items	Test Item	Required	Actual
Temperature (°C)	FCC Part 15C	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
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E-Mail : service@quietek.com

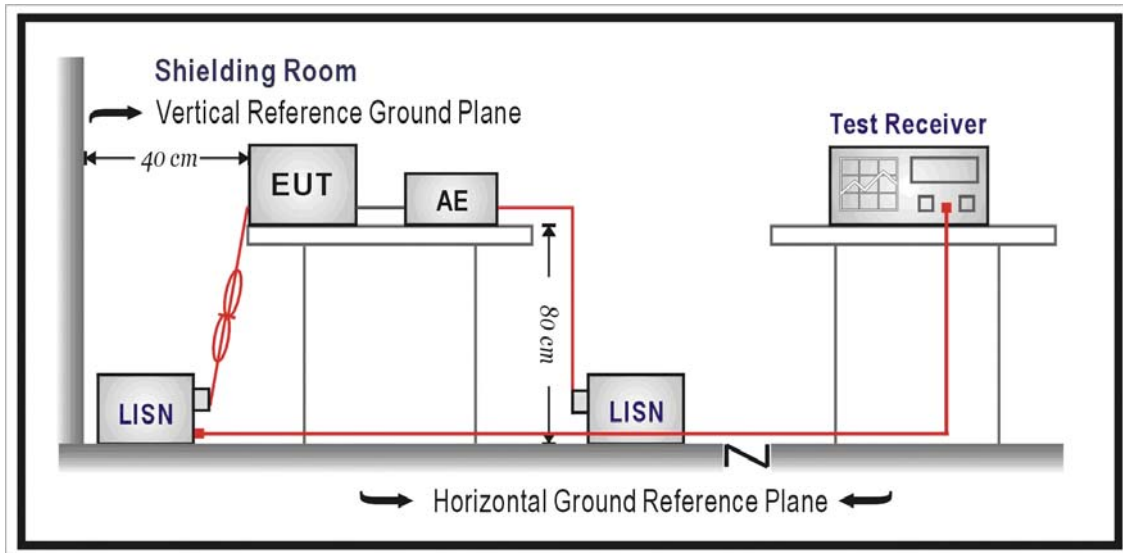


3. Conducted Emission

3.1. Test Specification

According to Part 15.207

3.2. Test Setup



3.3. Limit

FCC Part 15 Subpart C Paragraph 15.207 (dBuV) Limit		
Frequency MHz	Limits	
	QP	AV
0.15 - 0.50	66-56	56-46
0.50-5.0	56	46
5.0 - 30	60	50

Remarks: In the above table, the tighter limit applies at the band edges

3.4. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2003 on conducted measurement.

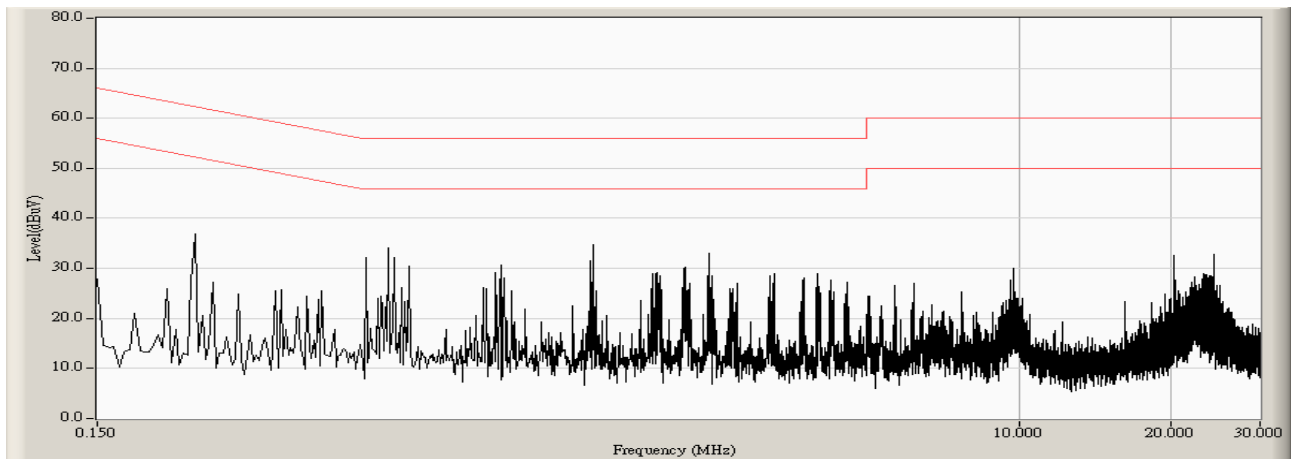
Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

3.5. Deviation from Test Standard

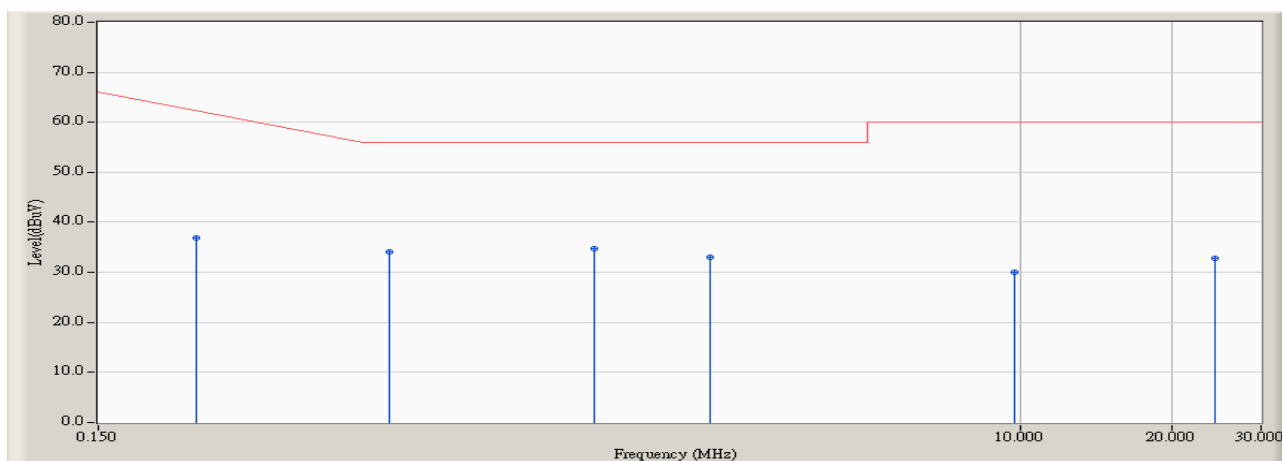
No deviation.

3.6. Test Result

Engineer : Johnwang	
Site : SR-1 (Conducted Emission and Power Test)	Time : 2006/09/27 - 13:11
Limit : FCC_Part15_C_00M_QP	Margin : 0
EUT : Philips 900/1800/1900	Probe : ENV216 - Line1
Power : AC 120V/60Hz	Note : Mode1: Transmit (2441MHz)



Engineer : Johnwang	
Site : SR-1 (Conducted Emission and Power Test)	Time : 2006/09/27 - 13:11
Limit : FCC_Part15_C_00M_QP	Margin : 0
EUT : Philips 900/1800/1900	Probe : ENV216 - Line1
Power : AC 120V/60Hz	Note : Mode1: Transmit (2441MHz)

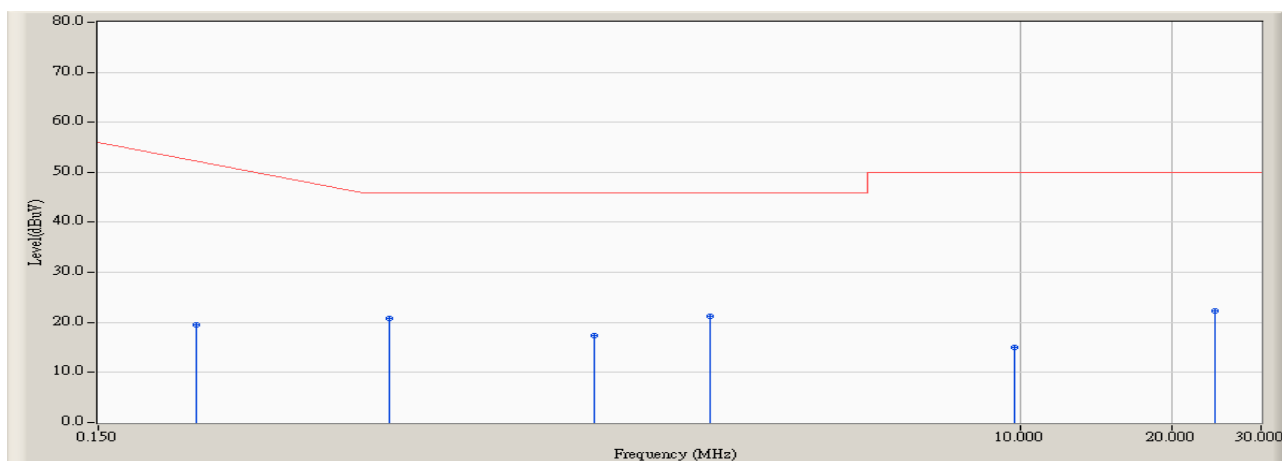


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.234	9.320	27.525	36.845	-26.755	63.600	QUASIPeAK
2		0.566	9.646	24.473	34.119	-21.881	56.000	QUASIPeAK
3	*	1.442	9.718	25.104	34.822	-21.178	56.000	QUASIPeAK
4		2.442	9.830	23.253	33.083	-22.917	56.000	QUASIPeAK
5		9.777	9.940	20.006	29.946	-30.054	60.000	QUASIPeAK
6		24.392	10.300	22.453	32.753	-27.247	60.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : SR-1 (Conducted Emission and Power Test)	Time : 2006/09/27 - 13:11
Limit : FCC_Part15_C_00M_QP	Margin : 0
EUT : Philips 900/1800/1900	Probe : ENV216 - Line1
Power : AC 120V/60Hz	Note : Mode1: Transmit (2441MHz)

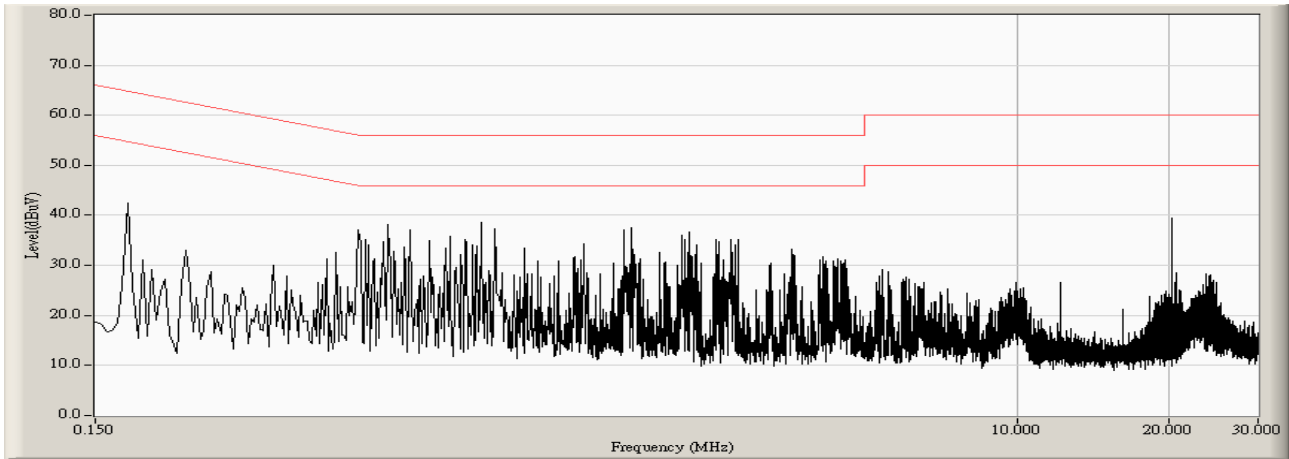


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.234	9.320	10.100	19.420	-34.180	53.600	AVERAGE
2		0.566	9.646	11.200	20.846	-25.154	46.000	AVERAGE
3		1.442	9.718	7.700	17.418	-28.582	46.000	AVERAGE
4	*	2.442	9.830	11.400	21.230	-24.770	46.000	AVERAGE
5		9.777	9.940	5.100	15.040	-34.960	50.000	AVERAGE
6		24.392	10.300	12.000	22.300	-27.700	50.000	AVERAGE

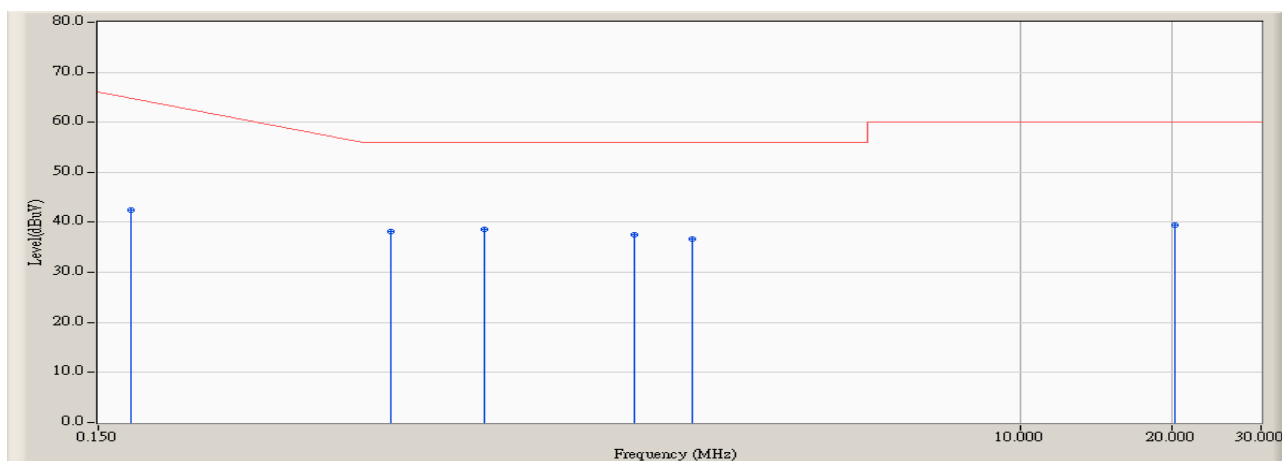
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : SR-1 (Conducted Emission and Power Test)	Time : 2006/09/27 - 13:15
Limit : FCC_Part15_C_00M_QP	Margin : 0
EUT : Philips 900/1800/1900	Probe : ENV216 - Line2
Power : AC 120V/60Hz	Note : Mode1: Transmit (2441MHz)



Engineer : Johnwang	
Site : SR-1 (Conducted Emission and Power Test)	Time : 2006/09/27 - 13:15
Limit : FCC_Part15_C_00M_QP	Margin : 0
EUT : Philips 900/1800/1900	Probe : ENV216 - Line2
Power : AC 120V/60Hz	Note : Mode1: Transmit (2441MHz)

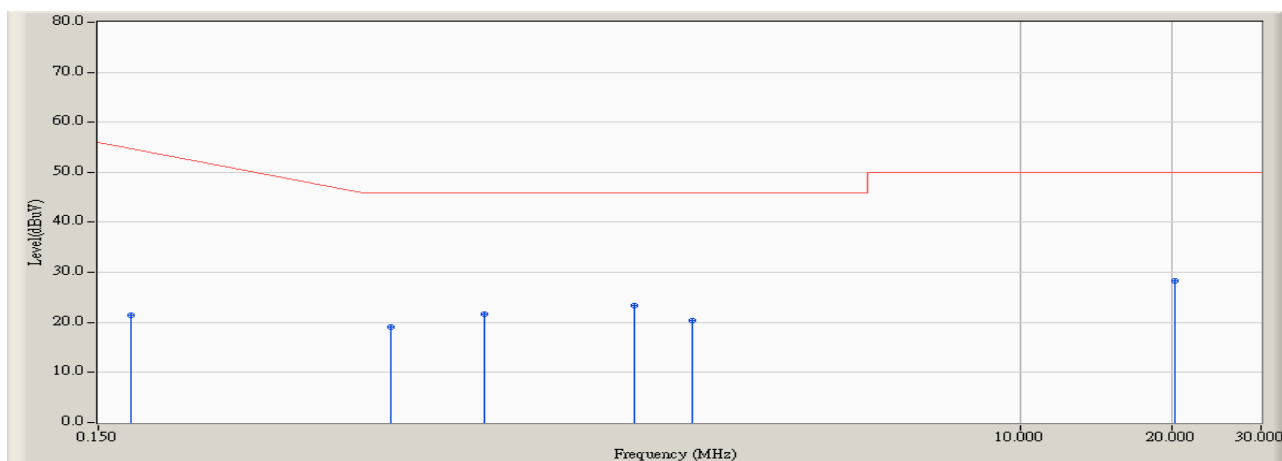


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.174	9.565	32.958	42.523	-22.791	65.314	QUASIPeAK
2		0.570	9.686	28.558	38.244	-17.756	56.000	QUASIPeAK
3	*	0.870	9.697	28.821	38.518	-17.482	56.000	QUASIPeAK
4		1.730	9.770	27.762	37.532	-18.468	56.000	QUASIPeAK
5		2.254	9.780	26.975	36.755	-19.245	56.000	QUASIPeAK
6		20.317	10.100	29.459	39.559	-20.441	60.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : SR-1 (Conducted Emission and Power Test)	Time : 2006/09/27 - 13:15
Limit : FCC_Part15_C_00M_QP	Margin : 0
EUT : Philips 900/1800/1900	Probe : ENV216 - Line2
Power : AC 120V/60Hz	Note : Mode1: Transmit (2441MHz)



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.174	9.565	11.800	21.365	-33.949	55.314	AVERAGE
2		0.570	9.686	9.400	19.086	-26.914	46.000	AVERAGE
3		0.870	9.697	12.000	21.697	-24.303	46.000	AVERAGE
4		1.730	9.770	13.700	23.470	-22.530	46.000	AVERAGE
5		2.254	9.780	10.700	20.480	-25.520	46.000	AVERAGE
6	*	20.317	10.100	18.200	28.300	-21.700	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

3.7. Test Photograph

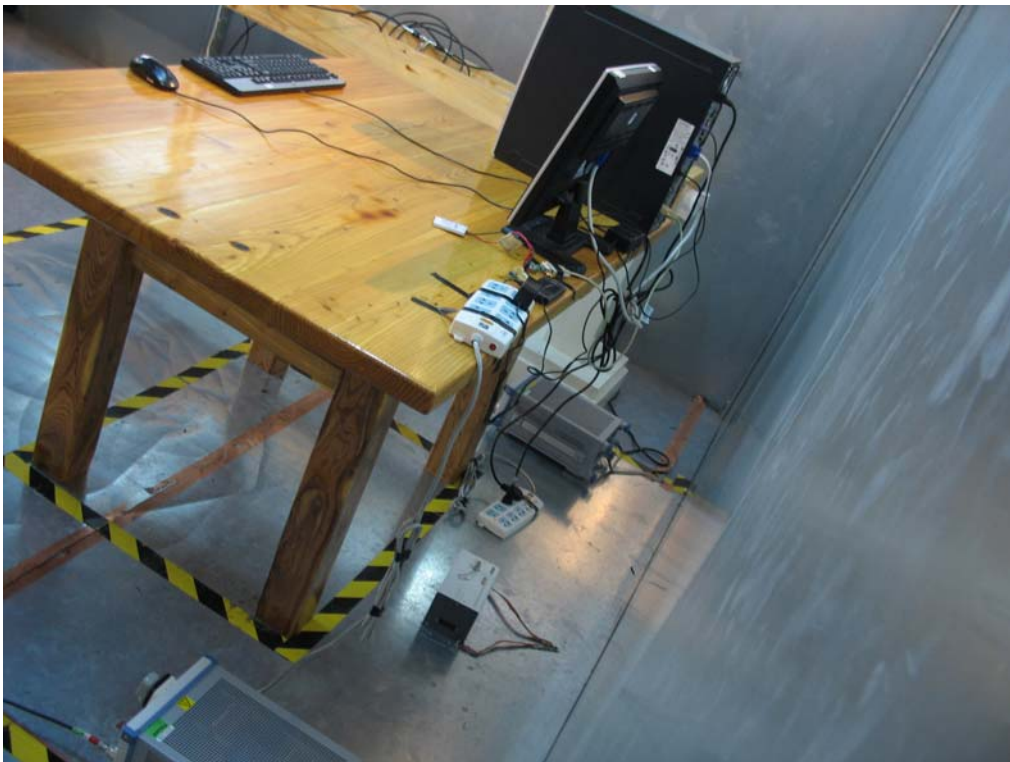
Test Mode : Mode 1: Transmit

Description : Front View of Conducted Test



Test Mode : Mode 1: Transmit

Description : Back View of Conducted Test



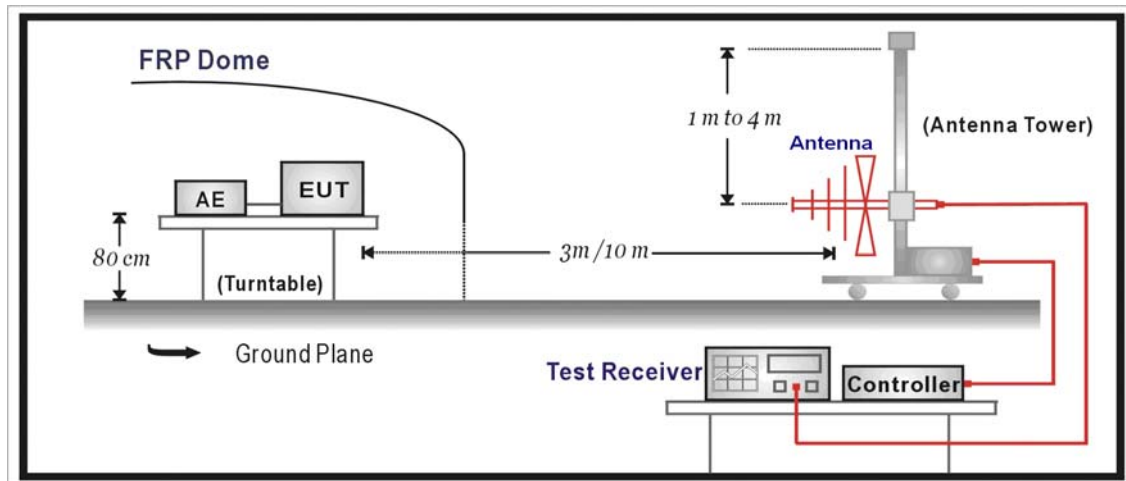
4. Radiated Emission

4.1. Test Specification

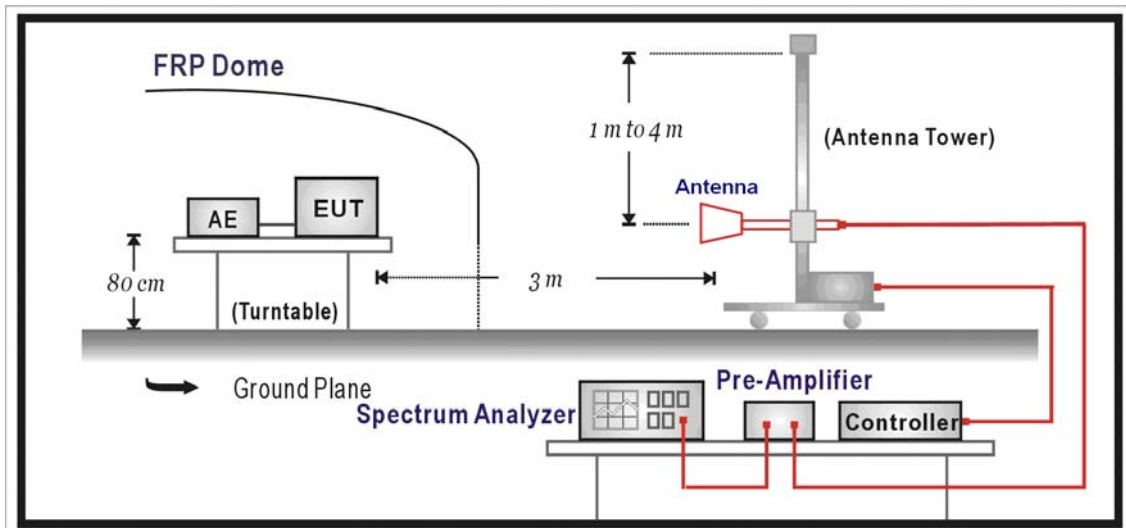
According to Part 15.209

4.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



4.3. Limit

➤ General Radiated Emission Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209 Limits		
Frequency MHz	uV/m @3m	dBuV/m@3m
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Remarks: 1. RF Voltage (dBuV) = 20 log RF Voltage (uV)

2. In the Above Table, the tighter limit applies at the band edges.

3. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

4.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 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 ANSI C63.4: 2003 on radiated measurement.

The additional latch filter below 1GHz was used to measure the level of harmonics radiated emission during field strength of harmonics measurement.

The bandwidth below 1GHz setting on the field strength meter (R&S Test Receiver ESCS 30)is 120 kHz, above 1GHz are 1 MHz.

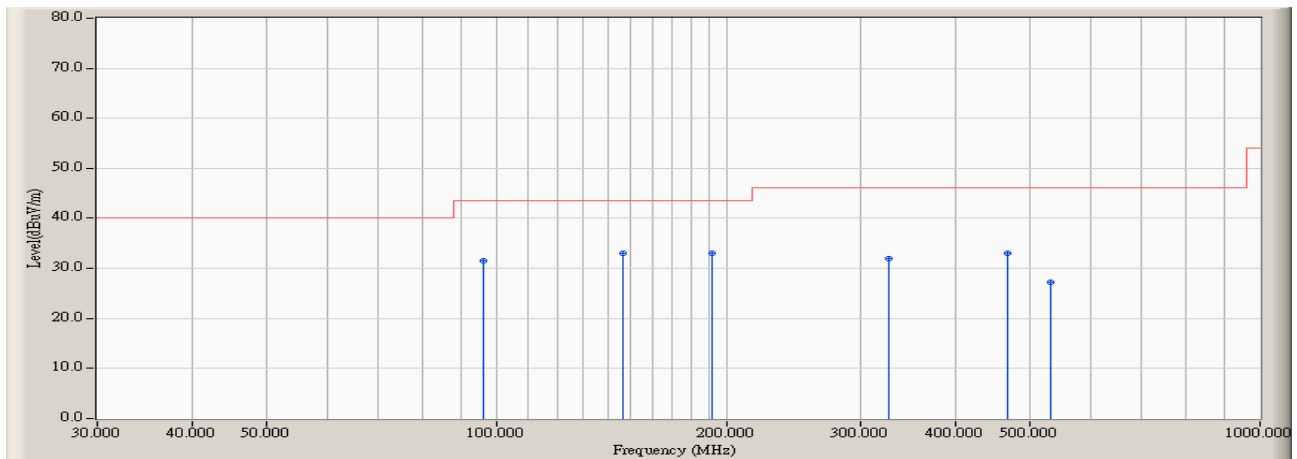
The frequency range from 30MHz to 10th harmonics is checked.

4.5. Deviation from Test Standard

No deviation.

4.6. Test Result

Engineer : Johnwang	
Site : AC-2	Time : 2006/09/22 - 18:31
Limit : FCC_SpartC_15.209_03M_QP	Margin : 0
EUT : Philips 900/1800/1900	Probe : CBL6141A_4278(30-2000MHz) - HORIZONTAL
Power : AC 120V/60Hz	Note : Mode1: Transmit (2402MHz)

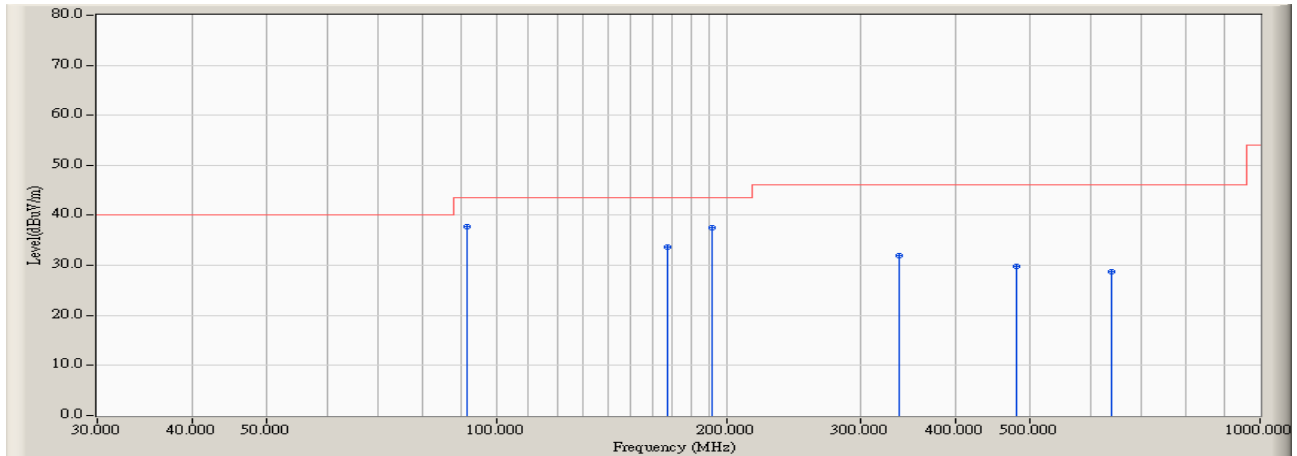


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		96.283	-14.519	46.146	31.627	-11.893	43.520	QUASIPeAK
2	*	146.400	-11.650	44.585	32.935	-10.585	43.520	QUASIPeAK
3		191.667	-13.654	46.588	32.934	-10.586	43.520	QUASIPeAK
4		325.850	-9.086	41.073	31.987	-14.033	46.020	QUASIPeAK
5		466.500	-6.297	39.425	33.128	-12.892	46.020	QUASIPeAK
6		532.783	-5.321	32.602	27.281	-18.739	46.020	QUASIPeAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-2	Time : 2006/09/22 - 18:32
Limit : FCC_SpartC_15.209_03M_QP	Margin : 0
EUT : Philips 900/1800/1900	Probe : CBL6141A_4278(30-2000MHz) - VERTICAL
Power : AC 120V/60Hz	Note : Mode1: Transmit (2402MHz)

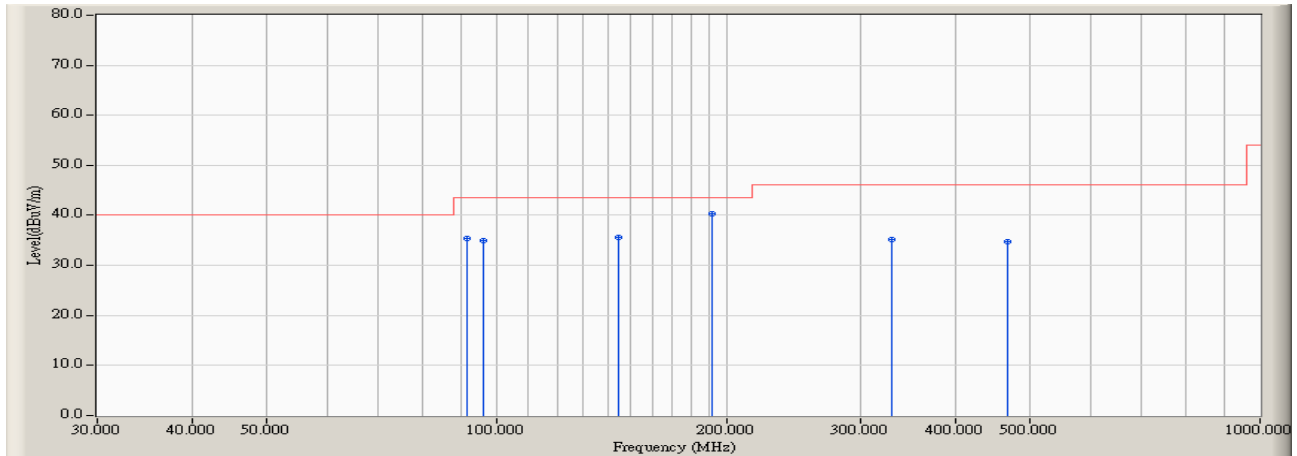


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	91.433	-15.001	52.759	37.758	-5.762	43.520	QUASIPeAK
2		167.417	-12.893	46.576	33.683	-9.837	43.520	QUASIPeAK
3		191.667	-13.654	51.233	37.579	-5.941	43.520	QUASIPeAK
4		337.167	-8.687	40.722	32.035	-13.985	46.020	QUASIPeAK
5		479.433	-5.961	35.830	29.869	-16.151	46.020	QUASIPeAK
6		639.483	-2.513	31.178	28.665	-17.355	46.020	QUASIPeAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-2	Time : 2006/09/22 - 19:28
Limit : FCC_SpartC_15.209_03M_QP	Margin : 0
EUT : Philips 900/1800/1900	Probe : CBL6141A_4278(30-2000MHz) - HORIZONTAL
Power : AC 120V/60Hz	Note : Mode1: Transmit (2441MHz)

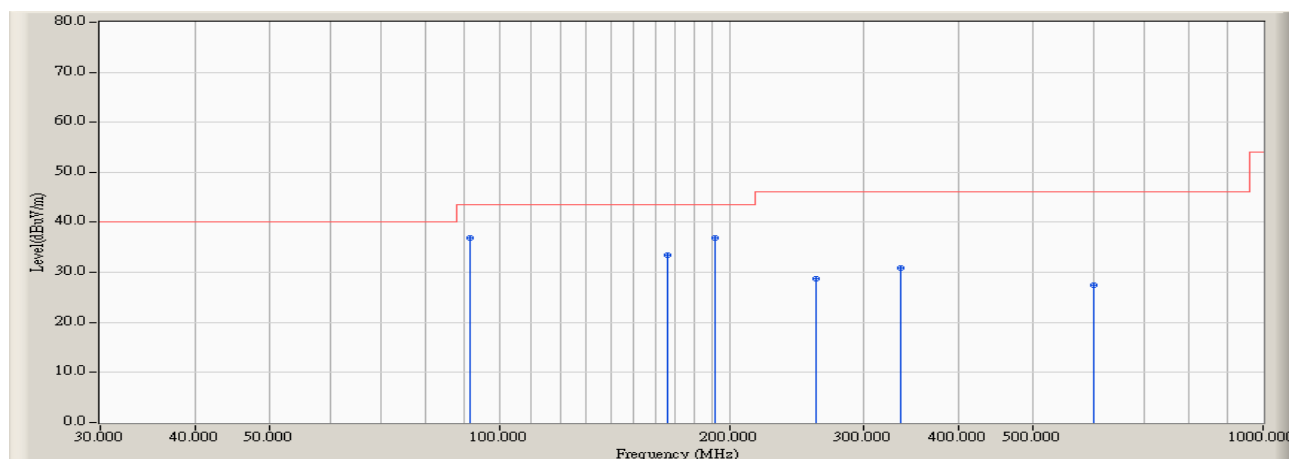


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		91.433	-15.001	50.418	35.417	-8.103	43.520	QUASIPeAK
2		96.283	-14.519	49.430	34.911	-8.609	43.520	QUASIPeAK
3		144.783	-11.616	47.131	35.515	-8.005	43.520	QUASIPeAK
4	*	191.667	-13.654	53.874	40.220	-3.300	43.520	QUASIPeAK
5		329.083	-8.943	44.057	35.114	-10.906	46.020	QUASIPeAK
6		466.500	-6.297	40.950	34.653	-11.367	46.020	QUASIPeAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-2	Time : 2006/09/22 - 19:29
Limit : FCC_SpartC_15.209_03M_QP	Margin : 0
EUT : Philips 900/1800/1900	Probe : CBL6141A_4278(30-2000MHz) - VERTICAL
Power : AC 120V/60Hz	Note : Mode1: Transmit (2441MHz)

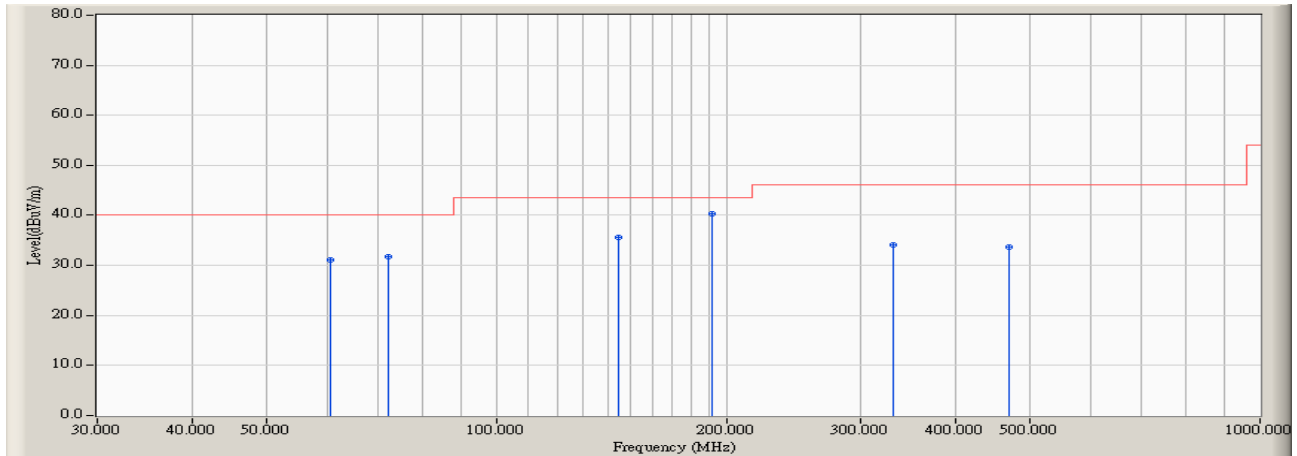


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	91.433	-15.001	51.834	36.833	-6.687	43.520	QUASIPeAK
2		165.800	-12.739	46.180	33.441	-10.079	43.520	QUASIPeAK
3		191.667	-13.654	50.454	36.800	-6.720	43.520	QUASIPeAK
4		259.567	-10.868	39.607	28.738	-17.282	46.020	QUASIPeAK
5		335.550	-8.735	39.678	30.943	-15.077	46.020	QUASIPeAK
6		599.067	-3.790	31.332	27.542	-18.478	46.020	QUASIPeAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-2	Time : 2006/09/22 - 19:29
Limit : FCC_SpartC_15.209_03M_QP	Margin : 0
EUT : Philips 900/1800/1900	Probe : CBL6141A_4278(30-2000MHz) - HORIZONTAL
Power : AC 120V/60Hz	Note : Mode1: Transmit (2480MHz)

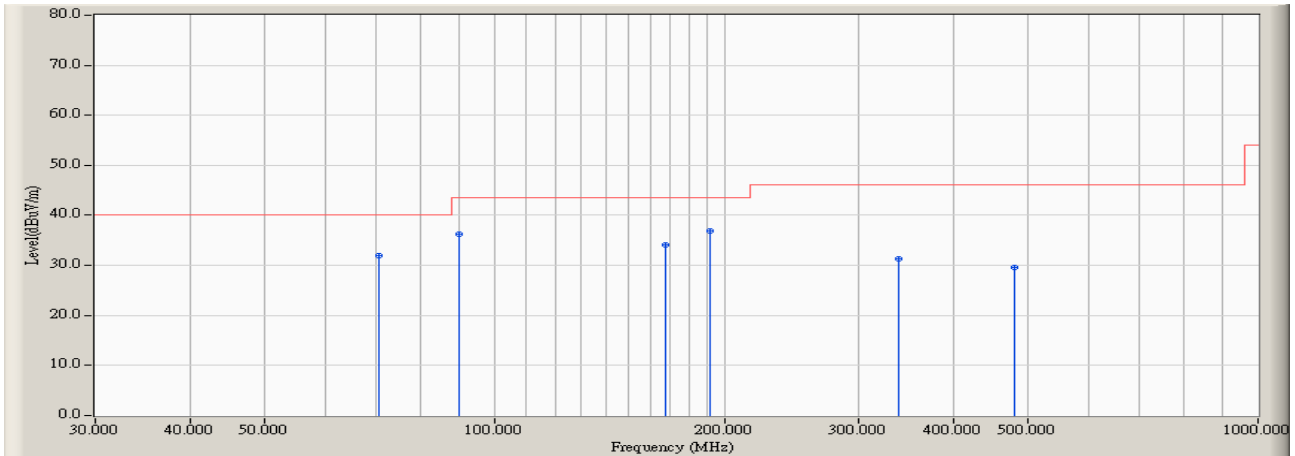


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		60.717	-15.655	46.659	31.003	-8.997	40.000	QUASIPeAK
2		72.033	-17.063	48.875	31.812	-8.188	40.000	QUASIPeAK
3		144.783	-11.616	47.131	35.515	-8.005	43.520	QUASIPeAK
4	*	191.667	-13.654	53.874	40.220	-3.300	43.520	QUASIPeAK
5		330.700	-8.892	43.009	34.117	-11.903	46.020	QUASIPeAK
6		468.117	-6.233	39.953	33.719	-12.301	46.020	QUASIPeAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-2	Time : 2006/09/22 - 19:31
Limit : FCC_SpartC_15.209_03M_QP	Margin : 0
EUT : Philips 900/1800/1900	Probe : CBL6141A_4278(30-2000MHz) - VERTICAL
Power : AC 120V/60Hz	Note : Mode1: Transmit (2480MHz)

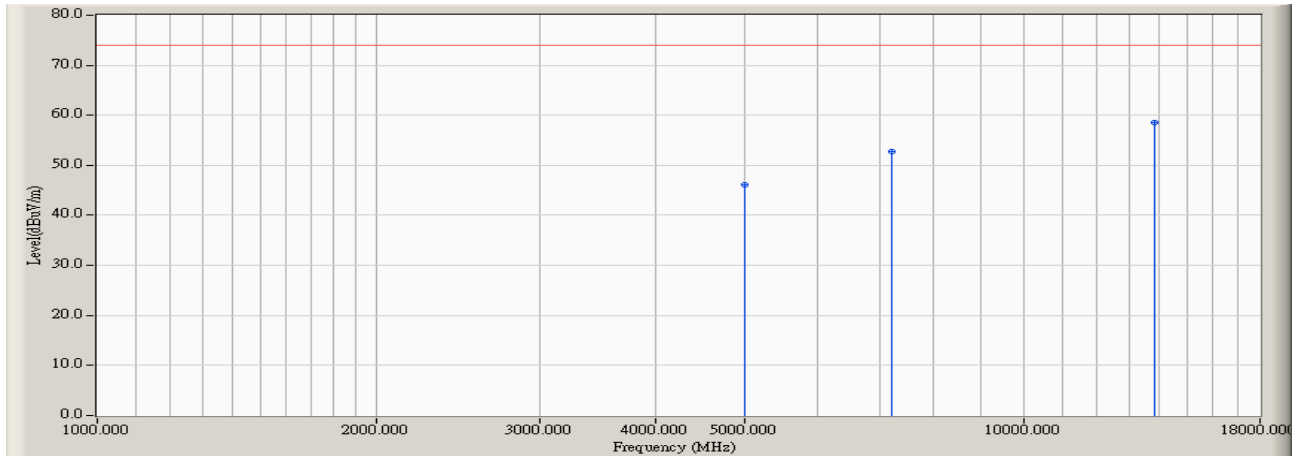


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		70.417	-17.052	48.997	31.945	-8.055	40.000	QUASIPeAK
2		89.817	-15.206	51.529	36.323	-7.197	43.520	QUASIPeAK
3		167.417	-12.893	46.990	34.097	-9.423	43.520	QUASIPeAK
4	*	191.667	-13.654	50.454	36.800	-6.720	43.520	QUASIPeAK
5		338.783	-8.637	40.055	31.419	-14.601	46.020	QUASIPeAK
6		479.433	-5.961	35.657	29.696	-16.324	46.020	QUASIPeAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-2	Time : 2006/09/24 - 11:29
Limit : FCC_SpartC_15.209_03M_PK	Margin : 0
EUT : Philips 900/1800/1900	Probe : 9120D_(1G-18G) - HORIZONTAL
Power : AC 120V/60Hz	Note : Mode1: Transmit (2402MHz)

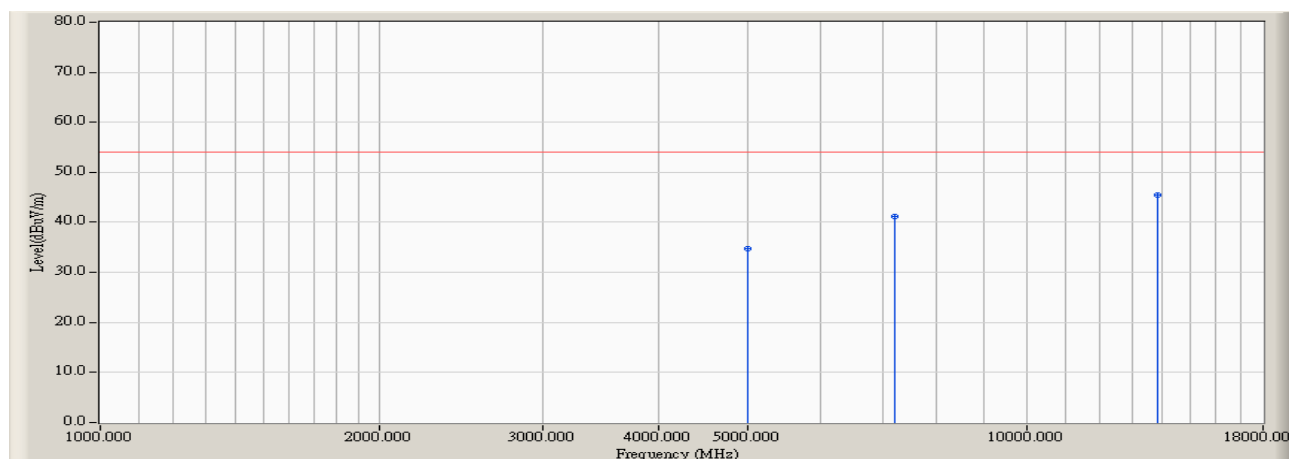


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4995.000	5.290	40.918	46.208	-27.762	73.970	PEAK
2		7205.000	15.430	37.260	52.690	-21.280	73.970	PEAK
3	*	13863.333	24.276	34.278	58.555	-15.415	73.970	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-2	Time : 2006/09/24 - 11:29
Limit : FCC_SpartC_15.209_03M_AV	Margin : 0
EUT : Philips 900/1800/1900	Probe : 9120D_(1G-18G) - HORIZONTAL
Power : AC 120V/60Hz	Note : Mode1: Transmit (2402MHz)

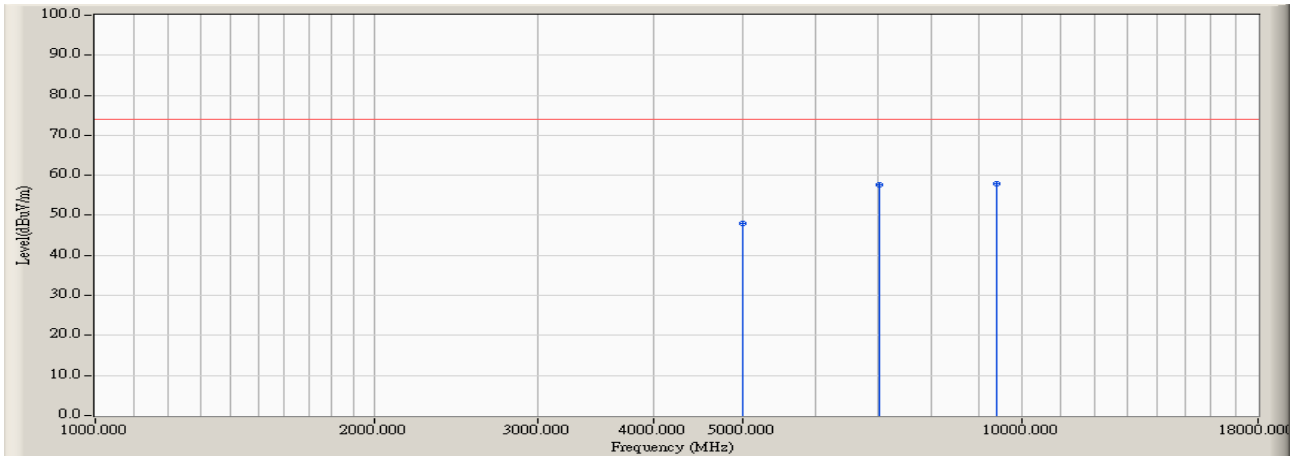


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4995.000	5.290	29.540	34.830	-19.140	53.970	AVERAGE
2		7205.000	15.430	25.660	41.090	-12.880	53.970	AVERAGE
3	*	13863.333	24.276	21.170	45.447	-8.523	53.970	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-2	Time : 2006/09/24 - 11:35
Limit : FCC_SpartC_15.209_03M_PK	Margin : 0
EUT : Philips 900/1800/1900	Probe : 9120D_(1G-18G) - VERTICAL
Power : AC 120V/60Hz	Note : Mode1: Transmit (2402MHz)

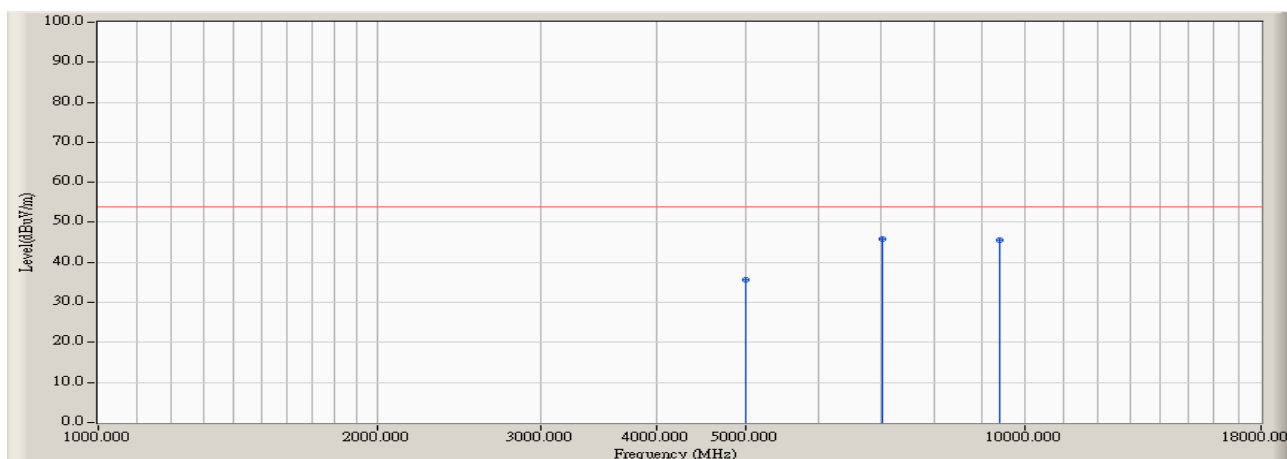


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4995.000	5.290	42.705	47.995	-25.975	73.970	PEAK
2		7035.000	14.790	42.953	57.743	-16.227	73.970	PEAK
3	*	9386.667	16.717	41.100	57.817	-16.153	73.970	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-2	Time : 2006/09/24 - 11:35
Limit : FCC_SpartC_15.209_03M_AV	Margin : 0
EUT : Philips 900/1800/1900	Probe : 9120D_(1G-18G) - VERTICAL
Power : AC 120V/60Hz	Note : Mode1: Transmit (2402MHz)

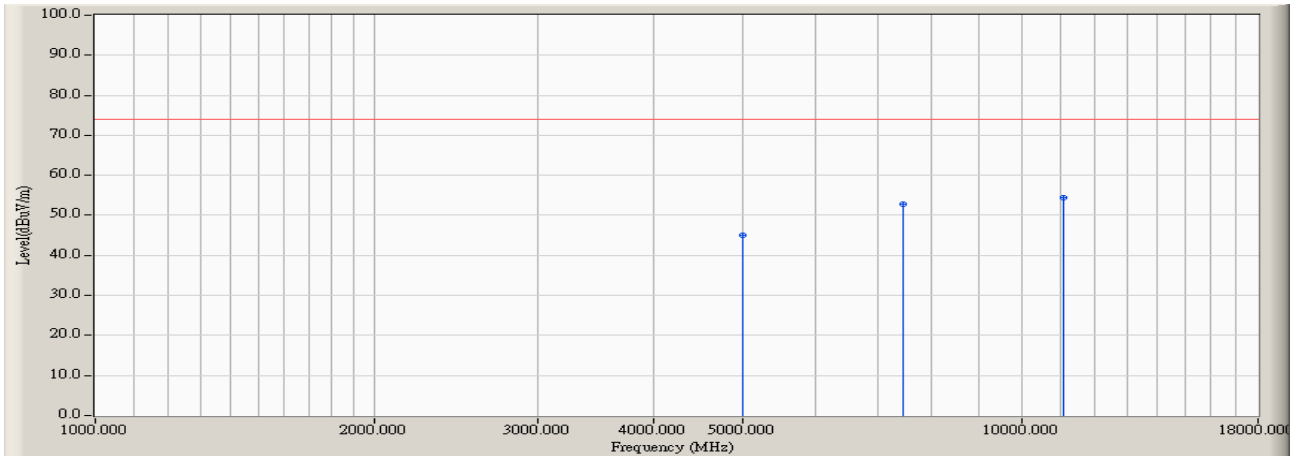


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4995.000	5.290	30.250	35.540	-18.430	53.970	AVERAGE
2	*	7035.000	14.790	31.160	45.950	-8.020	53.970	AVERAGE
3		9386.667	16.717	28.990	45.707	-8.263	53.970	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-2	Time : 2006/09/24 - 11:38
Limit : FCC_SpartC_15.209_03M_PK	Margin : 0
EUT : Philips 900/1800/1900	Probe : 9120D_(1G-18G) - HORIZONTAL
Power : AC 120V/60Hz	Note : Mode1: Transmit (2441MHz)

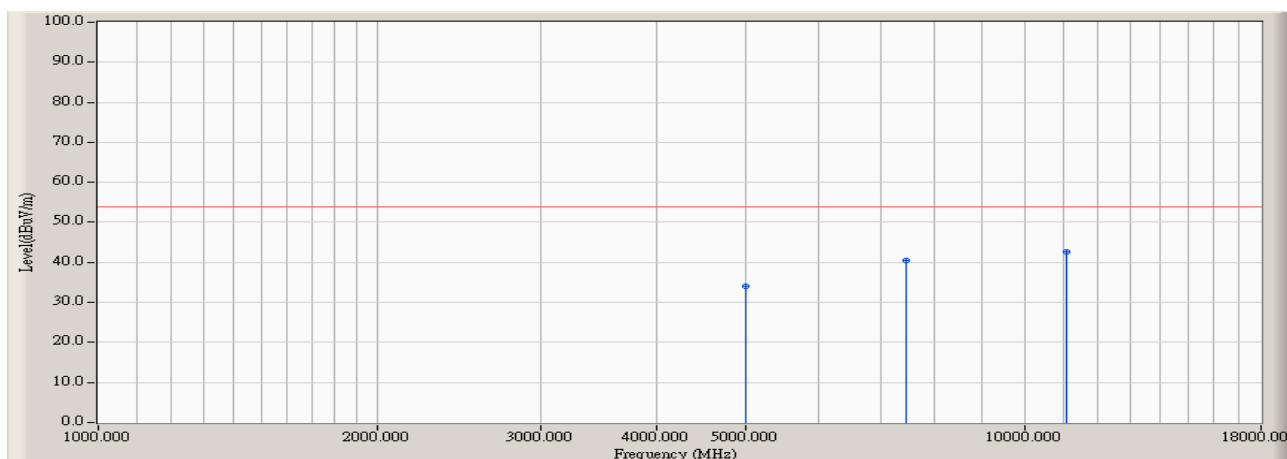


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4995.000	5.290	39.791	45.081	-28.889	73.970	PEAK
2		7460.000	15.090	37.623	52.713	-21.257	73.970	PEAK
3	*	11115.000	20.080	34.288	54.368	-19.602	73.970	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-2	Time : 2006/09/24 - 11:38
Limit : FCC_SpartC_15.209_03M_AV	Margin : 0
EUT : Philips 900/1800/1900	Probe : 9120D_(1G-18G) - HORIZONTAL
Power : AC 120V/60Hz	Note : Mode1: Transmit (2441MHz)

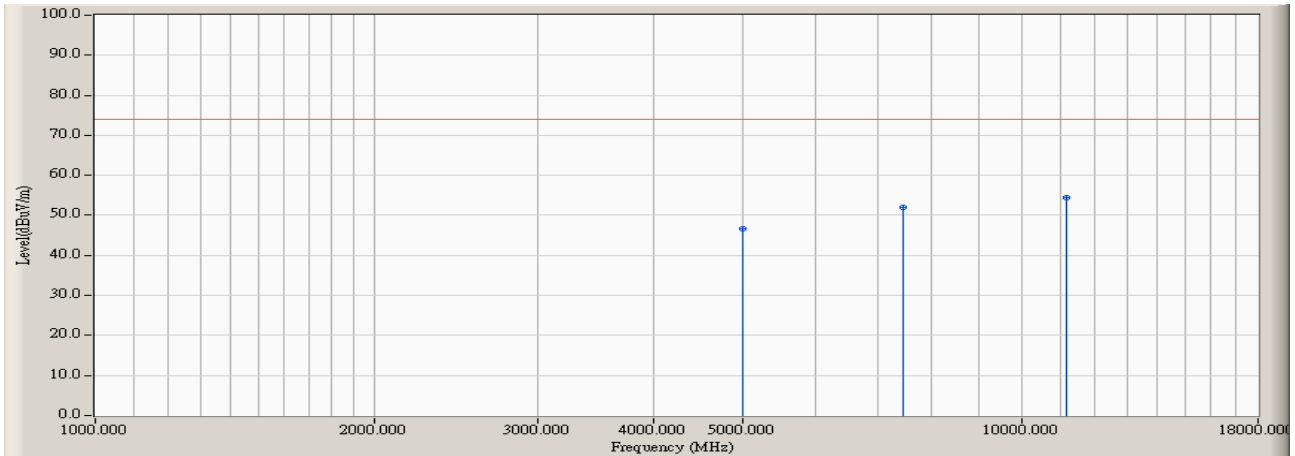


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4995.000	5.290	28.660	33.950	-20.020	53.970	AVERAGE
2		7460.000	15.090	25.340	40.430	-13.540	53.970	AVERAGE
3	*	11115.000	20.080	22.540	42.620	-11.350	53.970	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-2	Time : 2006/09/24 - 11:43
Limit : FCC_SpartC_15.209_03M_PK	Margin : 0
EUT : Philips 900/1800/1900	Probe : 9120D_(1G-18G) - VERTICAL
Power : AC 120V/60Hz	Note : Mode1: Transmit (2441MHz)

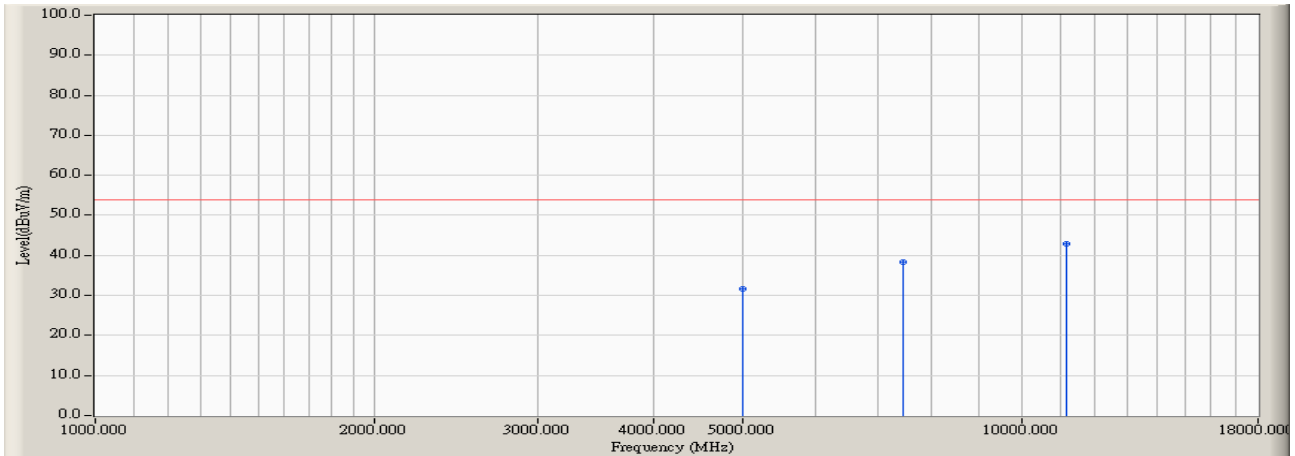


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4995.000	5.290	41.430	46.720	-27.250	73.970	PEAK
2		7460.000	15.090	37.007	52.097	-21.873	73.970	PEAK
3	*	11171.667	20.000	34.500	54.500	-19.470	73.970	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-2	Time : 2006/09/24 - 11:45
Limit : FCC_SpartC_15.209_03M_AV	Margin : 0
EUT : Philips 900/1800/1900	Probe : 9120D_(1G-18G) - VERTICAL
Power : AC 120V/60Hz	Note : Mode1: Transmit (2441MHz)

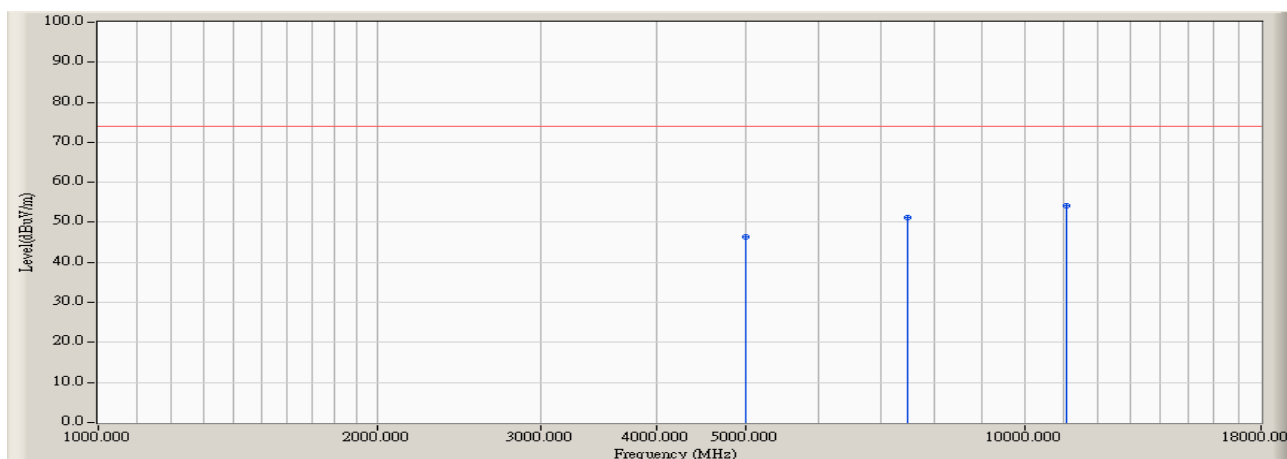


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4995.000	5.290	26.241	31.531	-22.439	53.970	AVERAGE
2		7460.000	15.090	23.144	38.234	-15.736	53.970	AVERAGE
3	*	11171.667	20.000	22.786	42.786	-11.184	53.970	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-2	Time : 2006/09/24 - 11:51
Limit : FCC_SpartC_15.209_03M_PK	Margin : 0
EUT : Philips 900/1800/1900	Probe : 9120D_(1G-18G) - HORIZONTAL
Power : AC 120V/60Hz	Note : Mode1: Transmit (2480MHz)

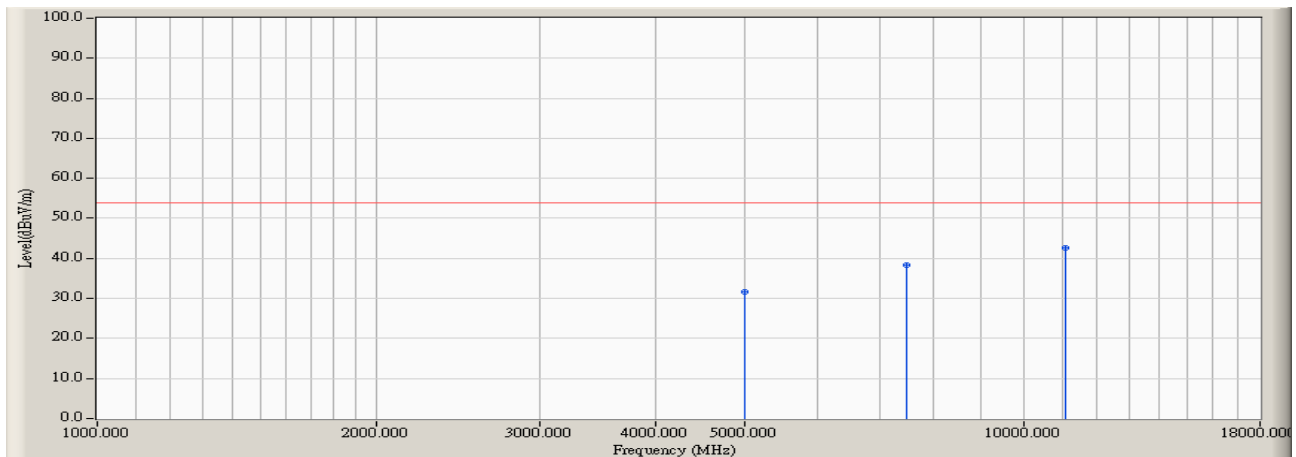


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4995.000	5.290	40.997	46.287	-27.683	73.970	PEAK
2		7488.333	15.017	36.058	51.075	-22.895	73.970	PEAK
3	*	11086.667	20.130	33.898	54.028	-19.942	73.970	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-2	Time : 2006/09/24 - 11:55
Limit : FCC_SpartC_15.209_03M_AV	Margin : 0
EUT : Philips 900/1800/1900	Probe : 9120D_(1G-18G) - HORIZONTAL
Power : AC 120V/60Hz	Note : Mode1: Transmit (2480MHz)

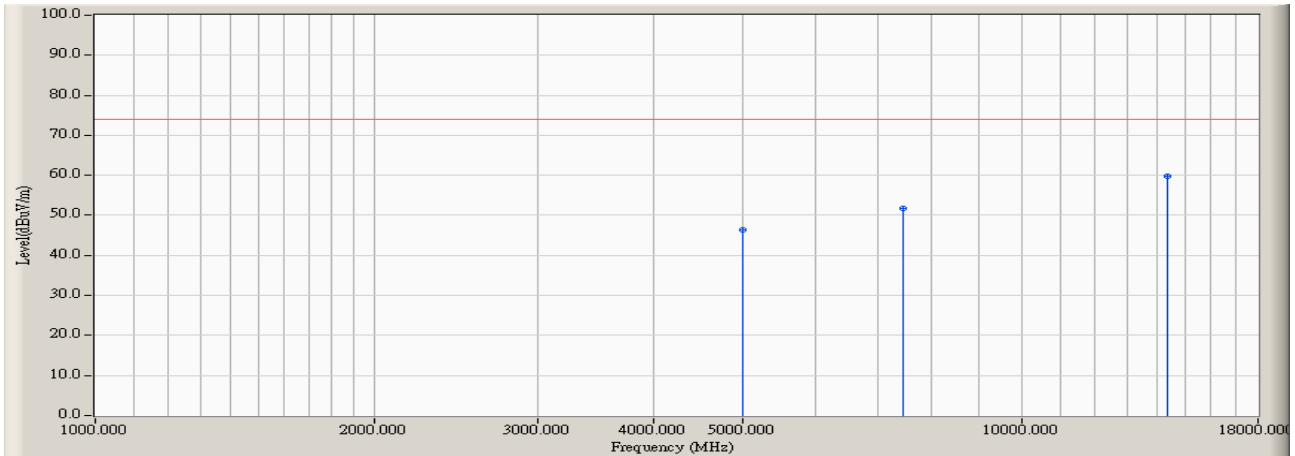


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4995.000	5.290	26.388	31.678	-22.292	53.970	AVERAGE
2		7488.333	15.017	23.213	38.230	-15.740	53.970	AVERAGE
3	*	11086.667	20.130	22.545	42.675	-11.295	53.970	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-2	Time : 2006/09/24 - 11:58
Limit : FCC_SpartC_15.209_03M_PK	Margin : 0
EUT : Philips 900/1800/1900	Probe : 9120D_(1G-18G) - VERTICAL
Power : AC 120V/60Hz	Note : Mode1: Transmit (2480MHz)

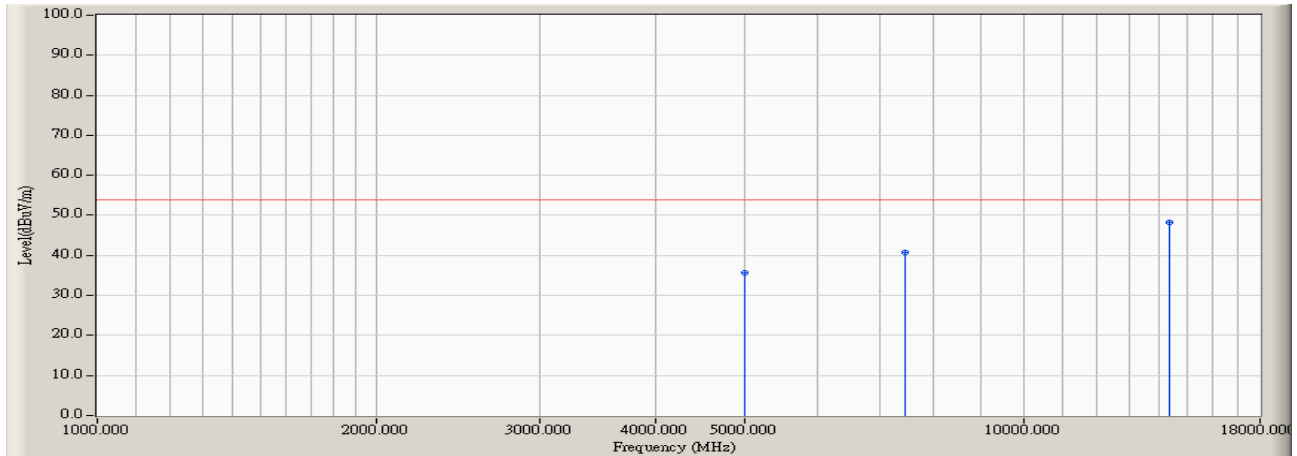


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4995.000	5.290	41.151	46.441	-27.529	73.970	PEAK
2		7460.000	15.090	36.740	51.830	-22.140	73.970	PEAK
3	*	14345.000	25.740	34.132	59.872	-14.098	73.970	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Engineer : Johnwang	
Site : AC-2	Time : 2006/09/24 - 11:58
Limit : FCC_SpartC_15.209_03M_AV	Margin : 0
EUT : Philips 900/1800/1900	Probe : 9120D_(1G-18G) - VERTICAL
Power : AC 120V/60Hz	Note : Mode1: Transmit (2480MHz)

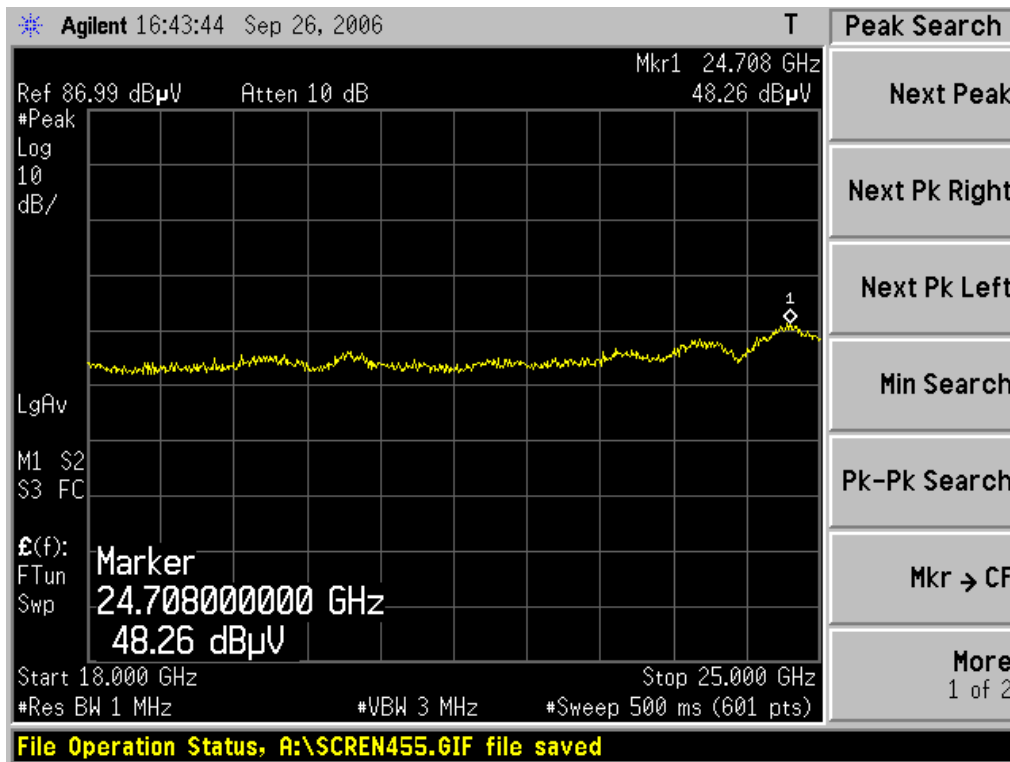


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		4995.000	5.290	30.240	35.530	-18.440	53.970	AVERAGE
2		7460.000	15.090	25.580	40.670	-13.300	53.970	AVERAGE
3	*	14345.000	25.740	22.570	48.310	-5.660	53.970	AVERAGE

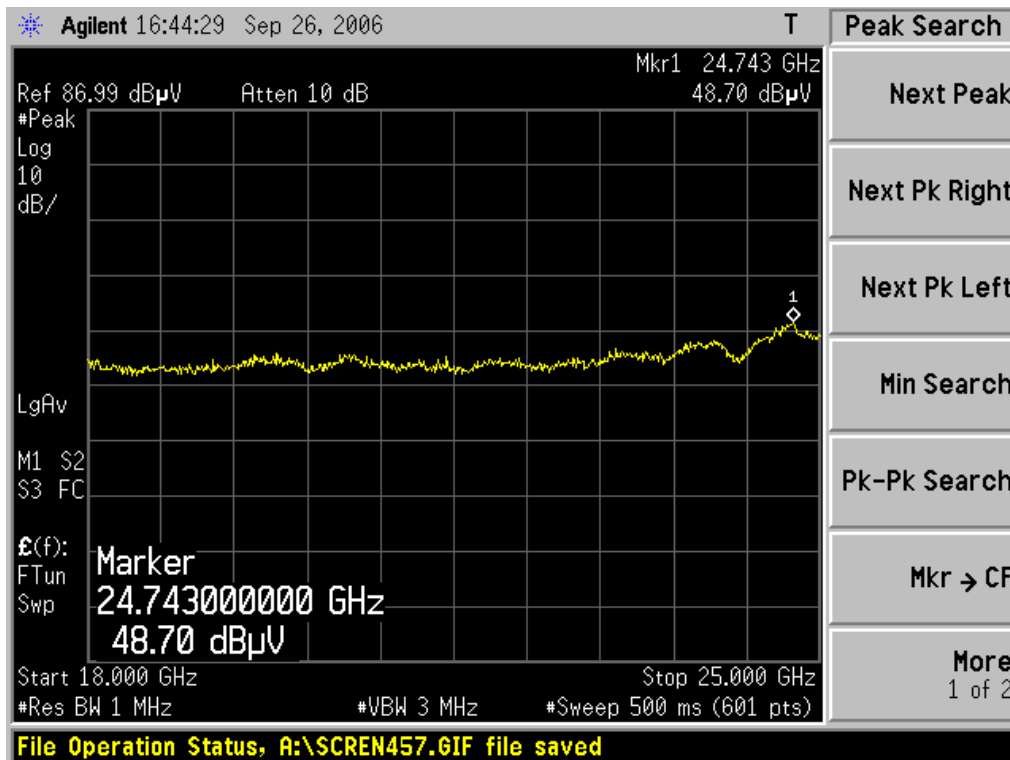
Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

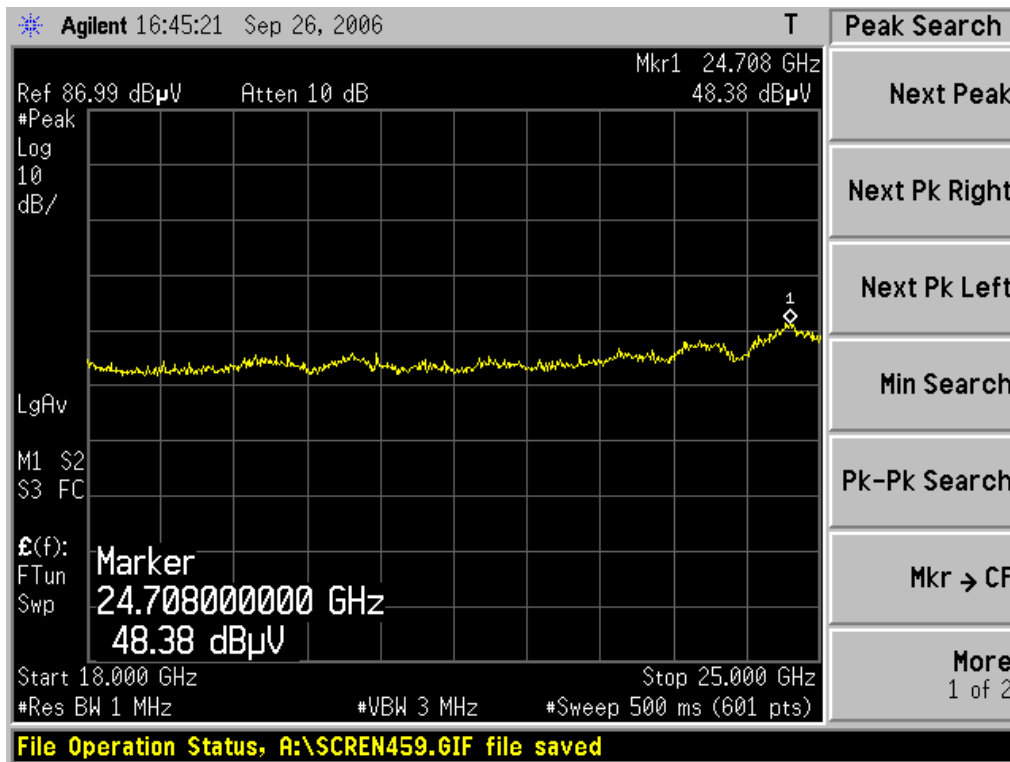
Conducted Spurious Test - Figure Channel 00 (2402MHz)



Conducted Spurious Test - Figure Channel 39 (2441MHz)



Conducted Spurious Test - Figure Channel 78 (2480MHz)



4.7. Test Photograph

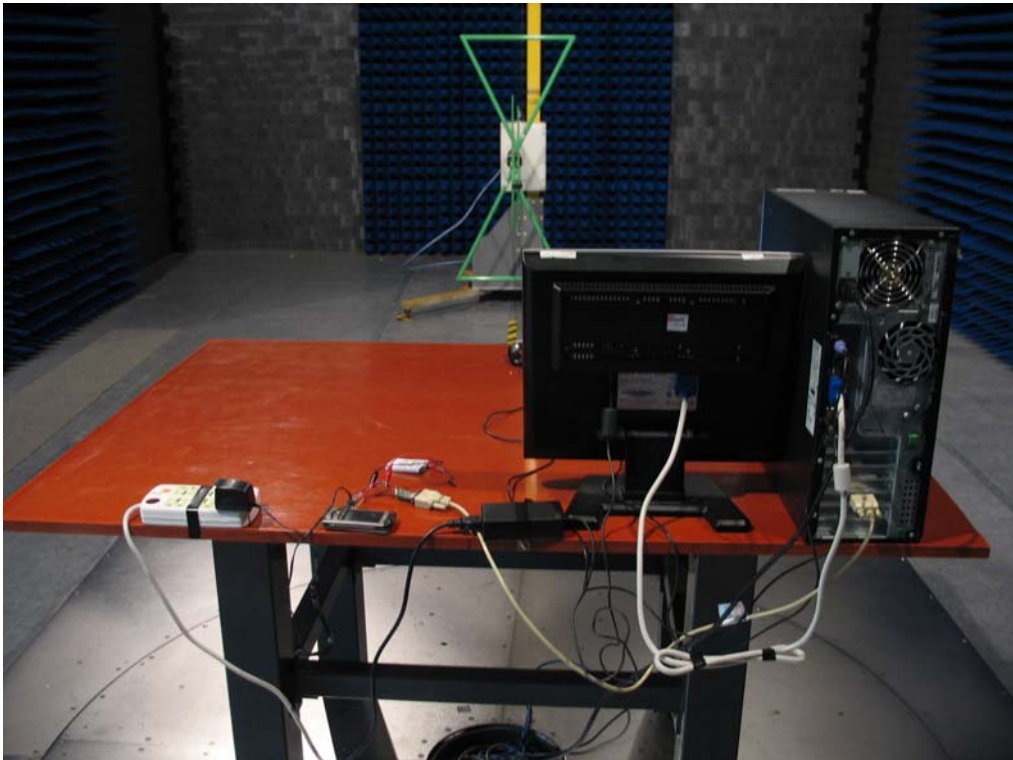
Test Mode: Mode1: Transmit

Description: Front View of Radiated Test for Under 1GHz



Test Mode: Mode1: Transmit

Description: Back View of Radiated Test for Under 1GHz



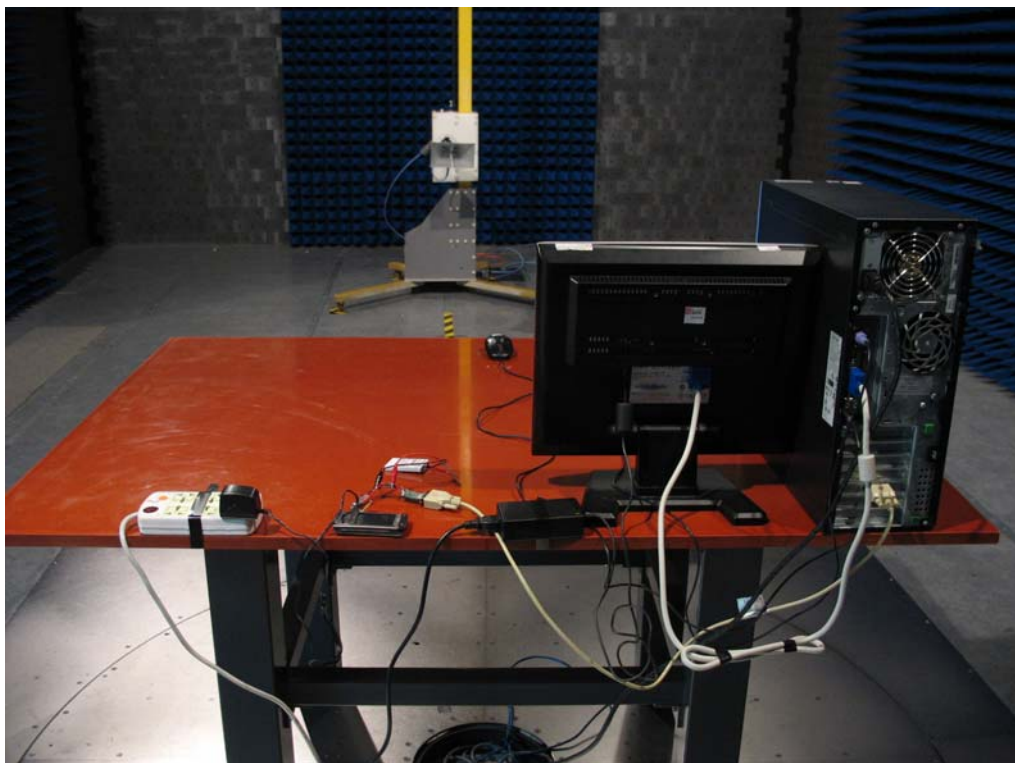
Test Mode: Mode1: Transmit

Description: Front View of Radiated Test for Above 1GHz



Test Mode: Mode1: Transmit

Description: Back View of Radiated Test for Above 1GHz

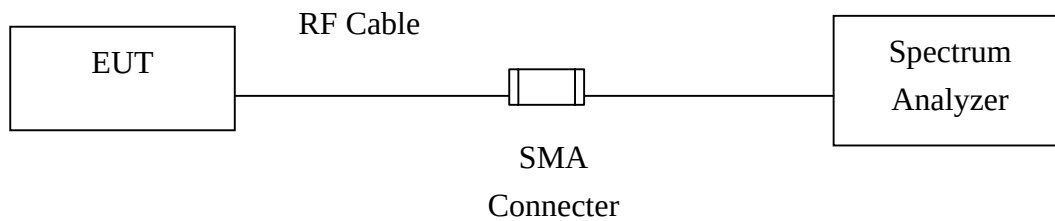


5. Peak Power Output

5.1. Test Specification

According to Part 15.247(b)

5.2. Test Setup



5.3. Limit

The maximum peak power shall be less 1Watt.

5.4. Deviation from Test Standard

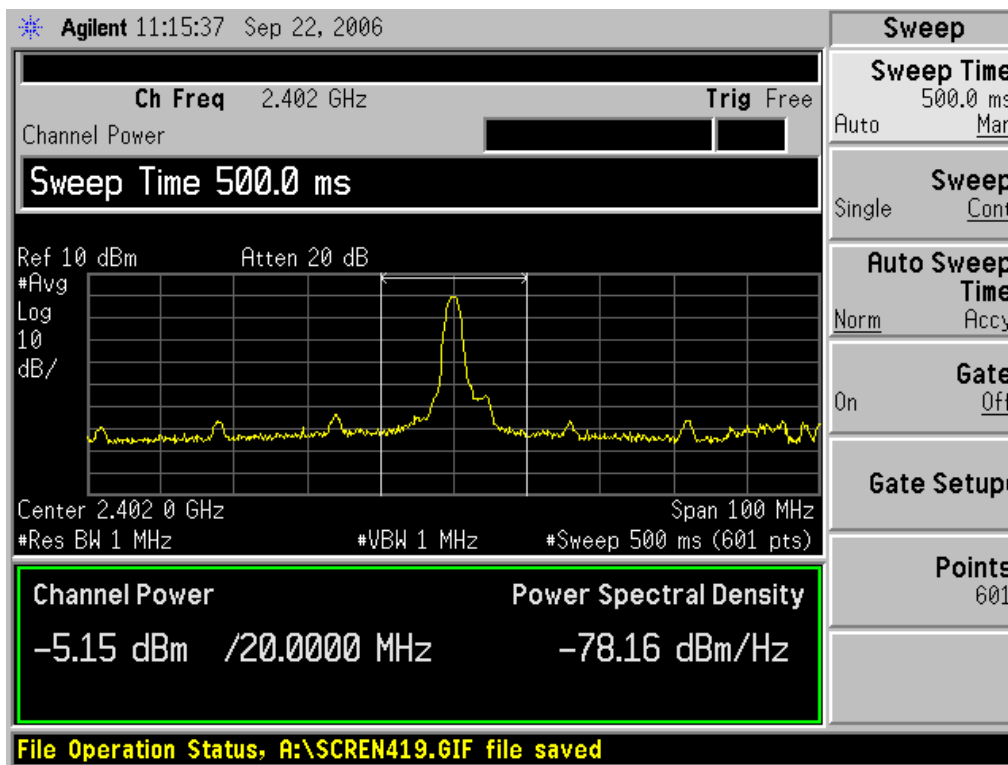
No deviation.

5.5. Test Result

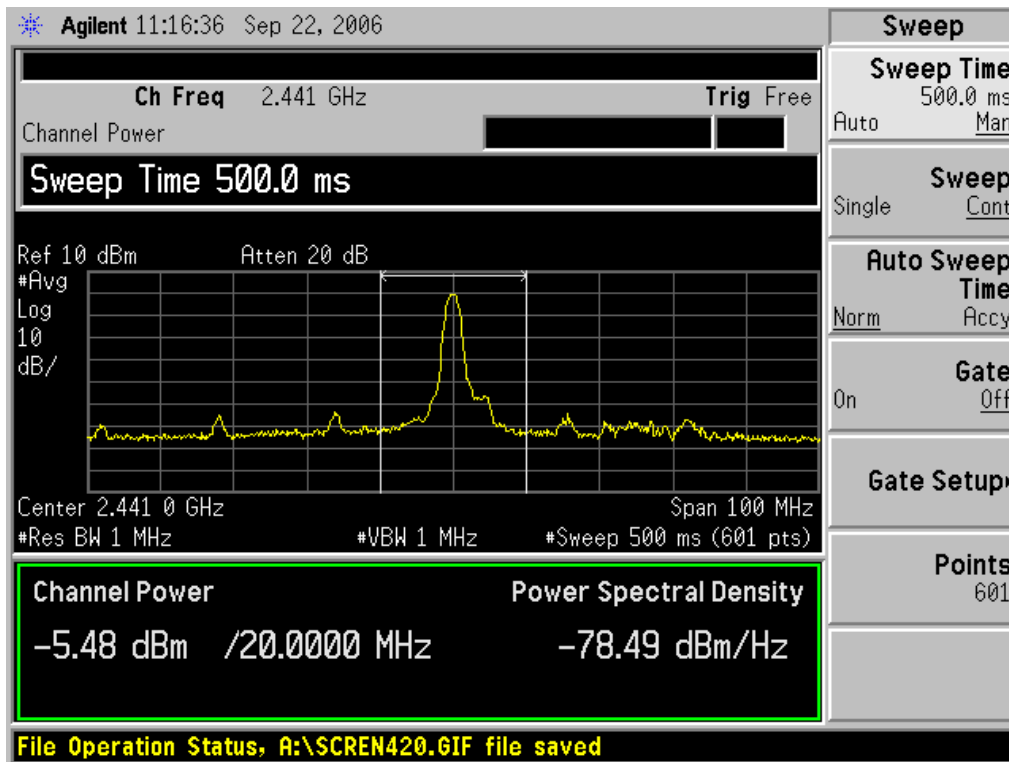
Product	Philips 900/1800/1900
Test Item	Peak Power Output
Test Mode	Mode 1: Transmit
Date of Test	2006/09/22

Channel No.	Frequency (MHz)	Measurement (dBm)	Required Limit (dBm)	Result
Channel 00	2402.00	-5.15	1 Watt= 30 dBm	Pass
Channel 39	2441.00	-5.48	1 Watt= 30 dBm	Pass
Channel 78	2480.00	-5.89	1 Watt= 30 dBm	Pass

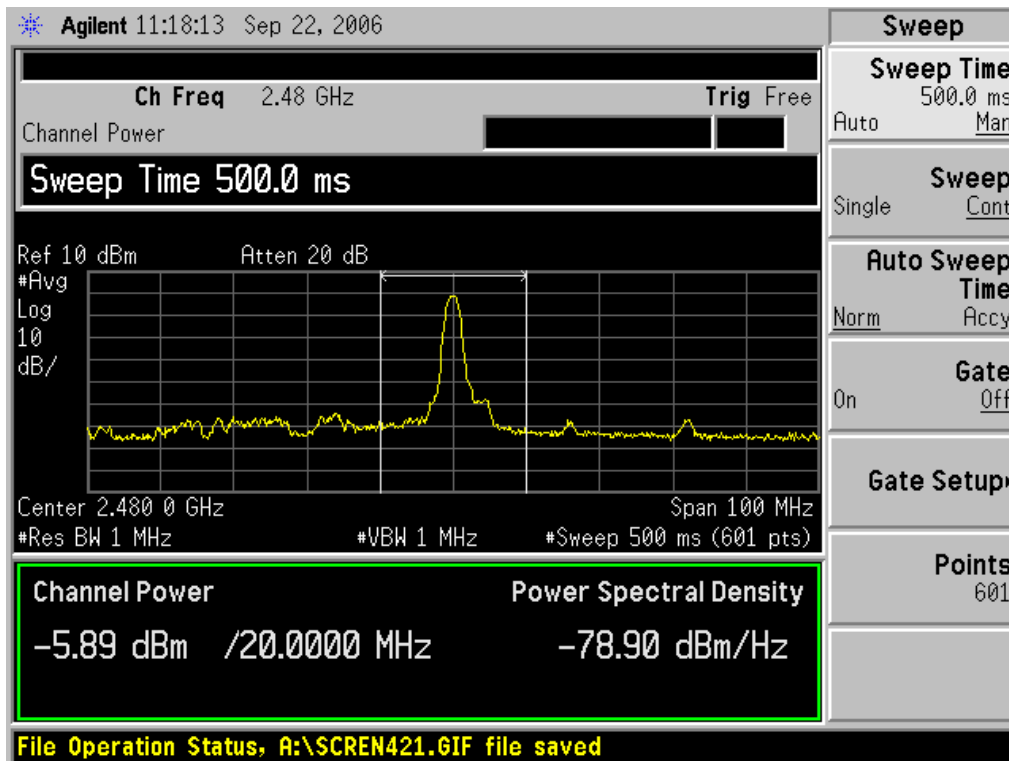
Channel 00 (2402MHz)



Channel 39 (2441MHz)



Channel 78 (2480MHz)



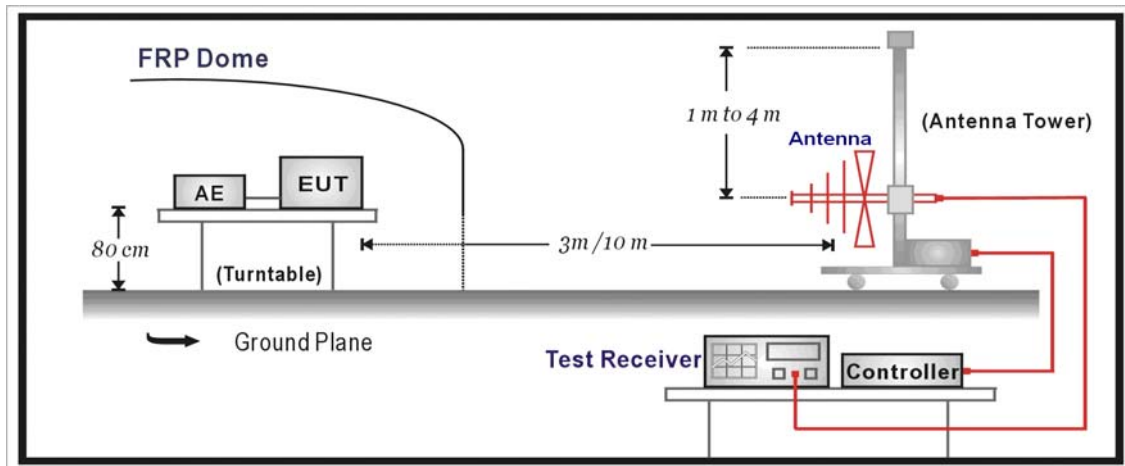
6. Band Edge

6.1. Test Specification

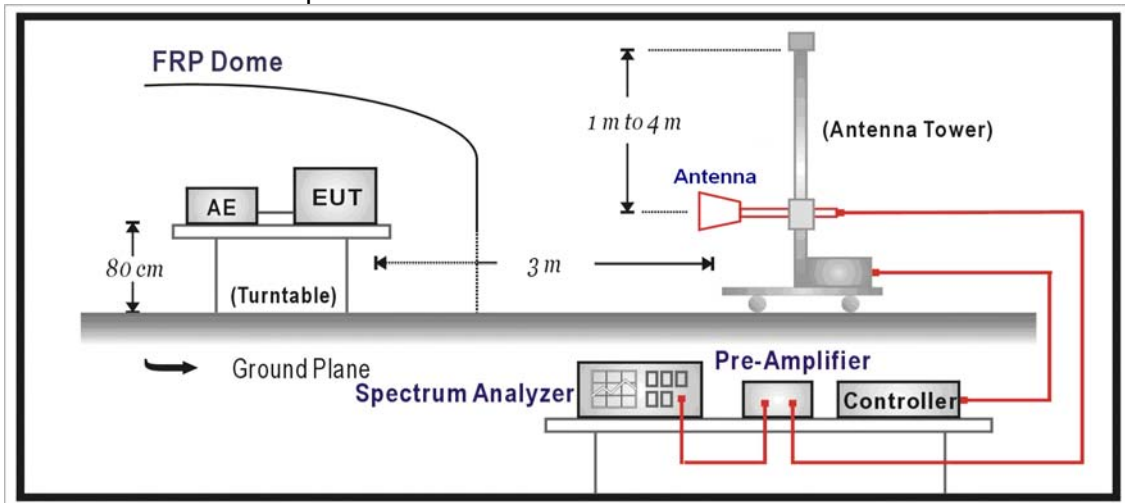
According to Part 15.247(d)

6.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



6.3. Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

6.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 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 ANSI C63.4:2003 on radiated measurement.

The bandwidth below 1GHz setting on the field strength meter (R&S Test Receiver ESCS 30)is 120 kHz, above 1GHz are 1 MHz.

6.5. Deviation from Test Standard

No deviation.

6.6. Test Result

Product	Philips 900/1800/1900
Test Item	Band Edge
Test Mode	Mode 1: Transmit (2402MHz)
Date of Test	2006/09/22

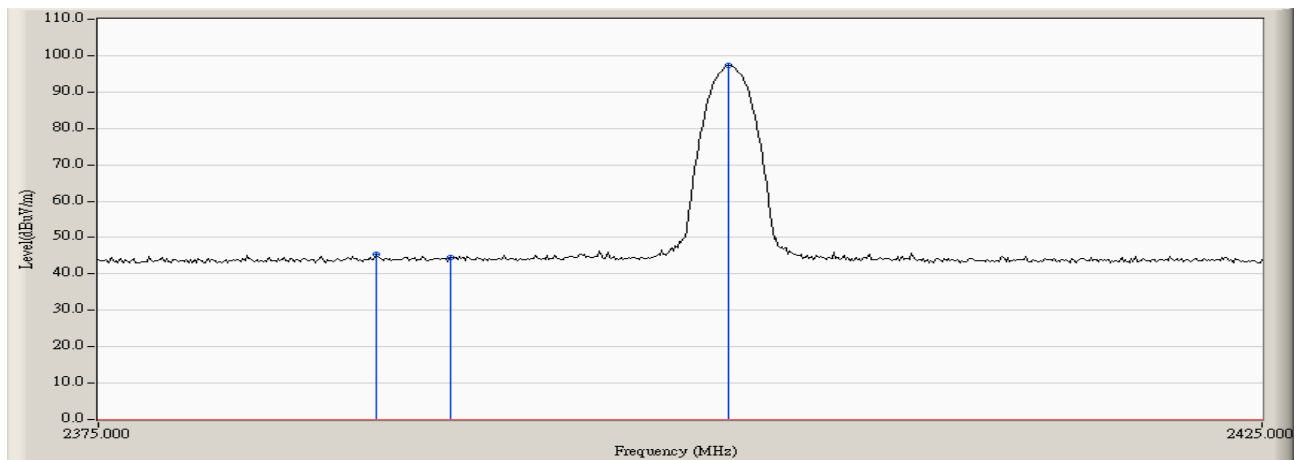
RF Radiated Measurement:

Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
00	<2400	>20	Pass

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
00 (Peak)	2386.833	48.982	45.275	74.00	54.00	Pass
00 (Average)	--	--	--	74.00	54.00	Pass

Figure Channel 00: (Horizontal)



Note:

RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

Note: The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	Philips 900/1800/1900
Test Item	Band Edge
Test Mode	Mode 1: Transmit (2402MHz)
Date of Test	2006/09/22

RF Radiated Measurement:

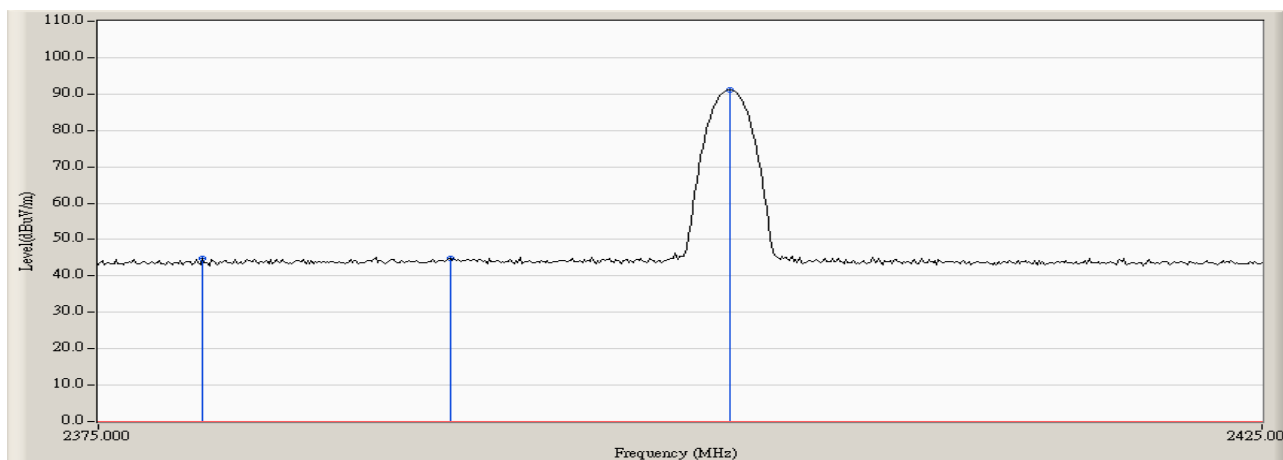
Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
00	<2400	>20	Pass

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
00 (Peak)	2379.417	48.459	44.765	74.00	54.00	Pass
00(Average)	--	--	--	74.00	54.00	Pass

Figure Channel 00:

(Vertical)



Note:

RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

Note: The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	Philips 900/1800/1900
Test Item	Band Edge
Test Mode	Mode 1: Transmit (2480MHz)
Date of Test	2006/09/22

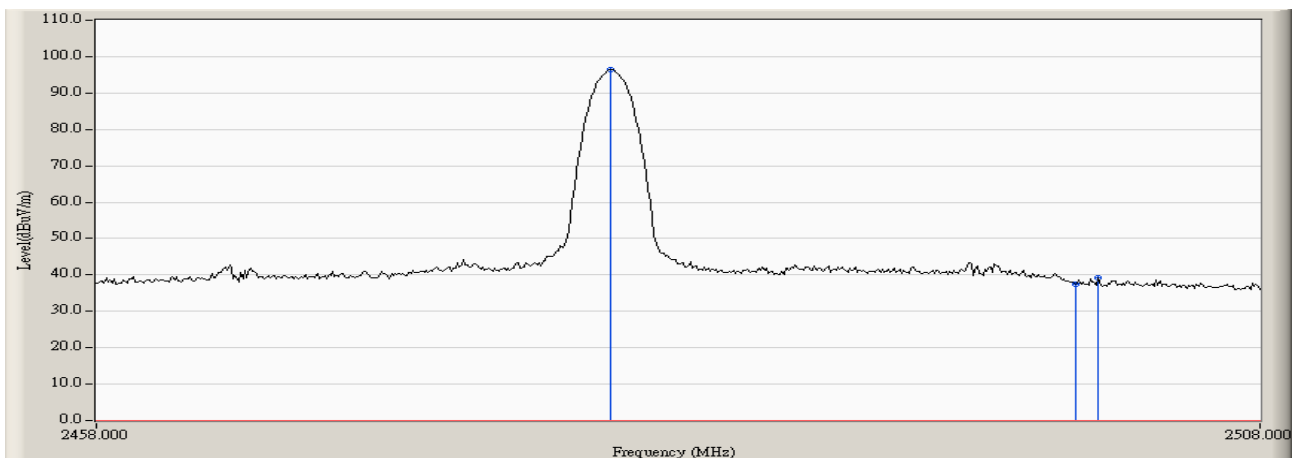
RF Radiated Measurement:

Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
78	>2483.5	>20	Pass

RF Radiated Measurement (Horizontal):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
78(Peak)	2500.000	41.108	37.395	74.00	54.00	Pass
78(Average)	--	--	--	74.00	54.00	Pass

Figure Channel 78: (Horizontal)



Note:

RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

Note: The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

Product	Philips 900/1800/1900
Test Item	Band Edge
Test Mode	Mode 1: Transmit (2480MHz)
Date of Test	2006/09/22

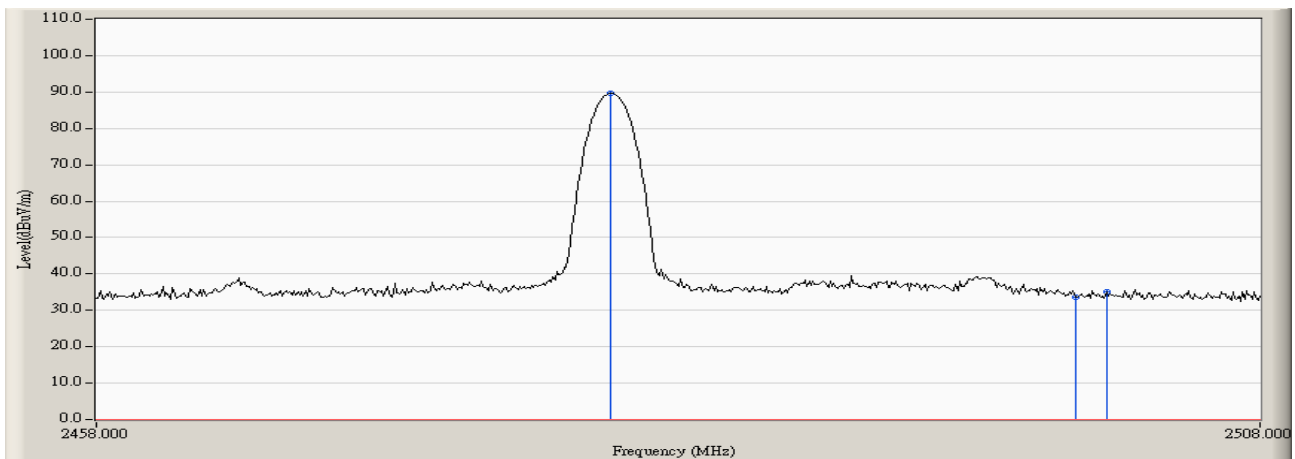
RF Radiated Measurement:

Channel No.	Frequency (MHz)	Required Limit (dBc)	Result
78	>2483.5	>20	Pass

RF Radiated Measurement (Vertical):

Channel No.	Frequency (MHz)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
78(Peak)	2500.000	37.345	33.632	74.00	54.00	Pass
78(Average)	--	--	--	74.00	54.00	Pass

Figure Channel 78: (Vertical)



Note:

RBW=1MHz, VBW=1MHz, Sweep Time=500ms.

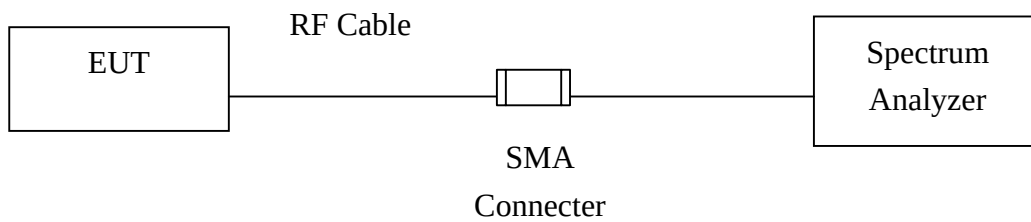
Note: The average measurement was not performed when the peak measured data under the limit of average detection. If the readings given are average, peak measurement should also be supplied.

7. Channel Number

7.1. Test Specification

According to Part 15.247(a)

7.2. Test Setup



7.3. Limit

Frequency hopping systems operating in the 2400-2483.5 MHz bands shall use at least 75 hopping frequencies.

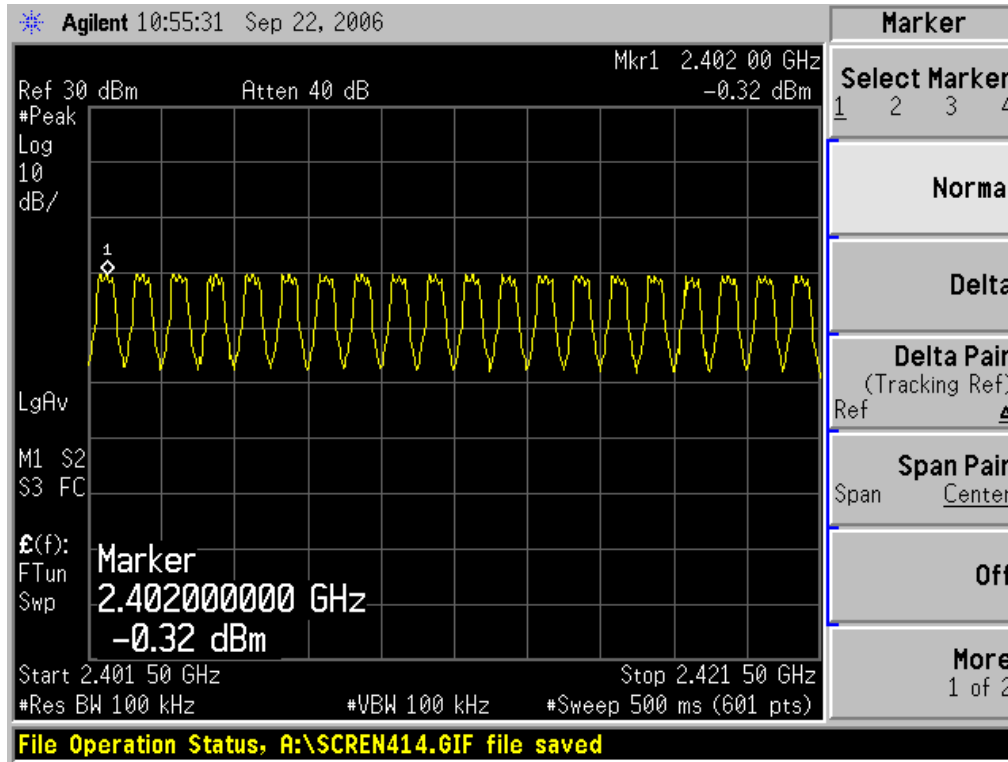
7.4. Deviation from Test Standard

No deviation.

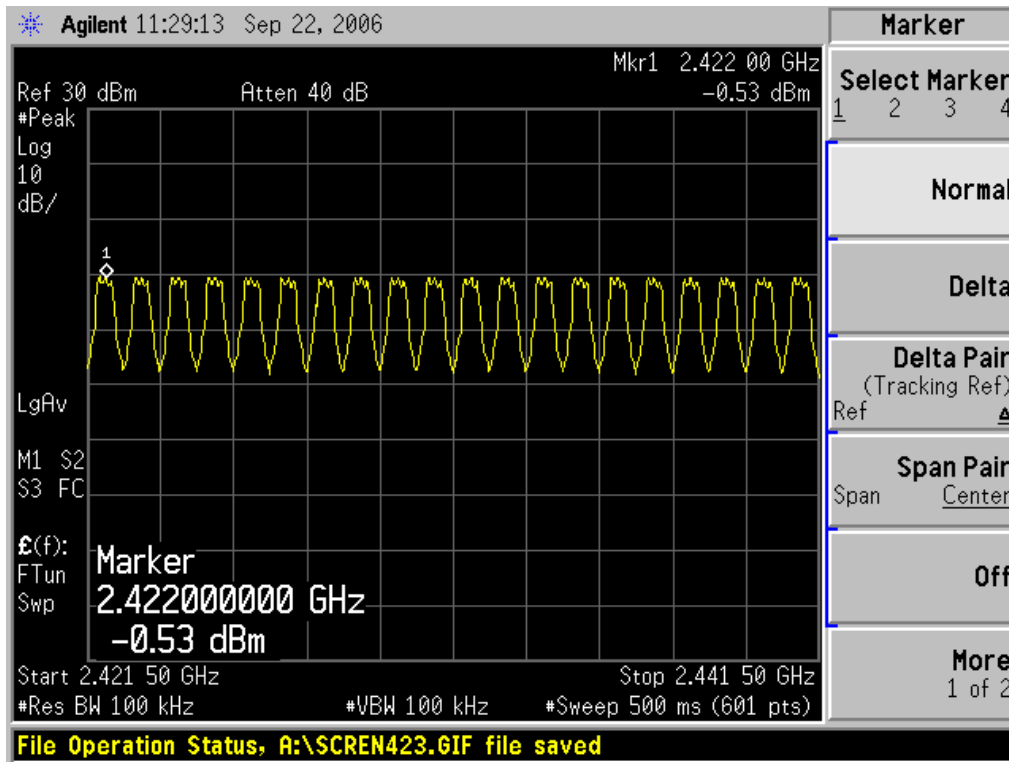
7.5. Test Result

Product	Philips 900/1800/1900
Test Item	Channel Number
Test Mode	Mode 1: Transmit
Date of Test	2006/09/22

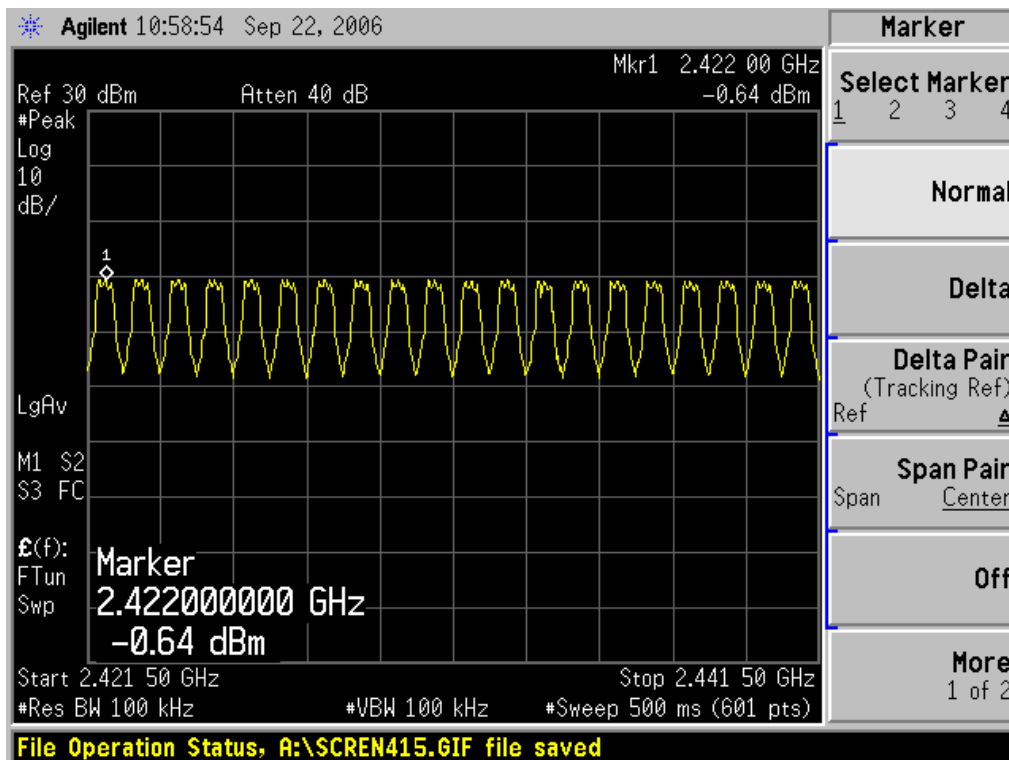
Frequency (2402-2421MHz)



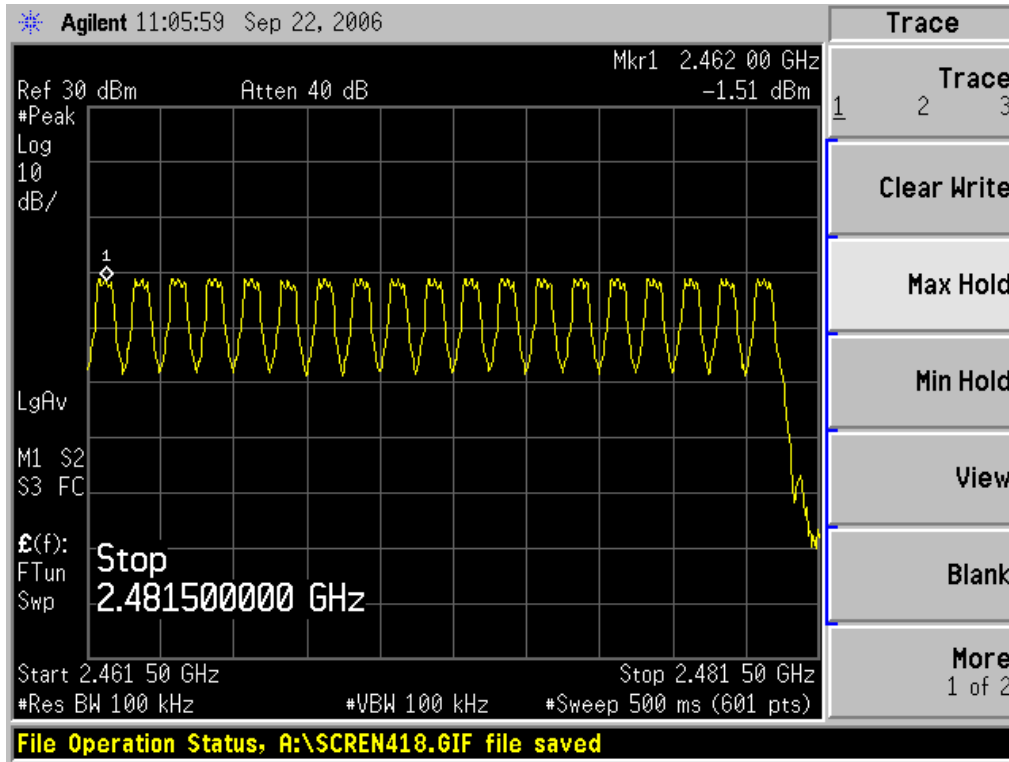
Frequency (2422-2441MHz)



Frequency (2442-2471MHz)



Frequency (2472-2480MHz)

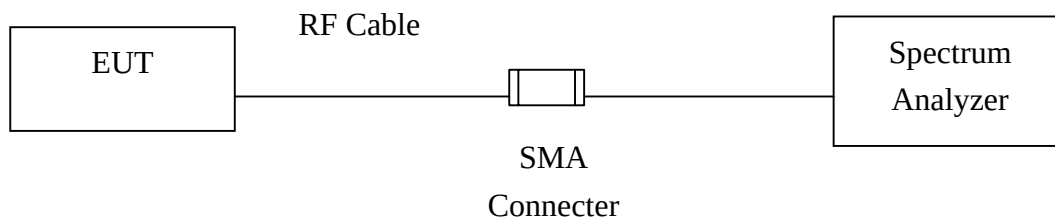


8. Channel Separation

8.1. Test Specification

According to Part 15.247(a)

8.2. Test Setup



8.3. Limit

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 KHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

8.4. Deviation from Test Standard

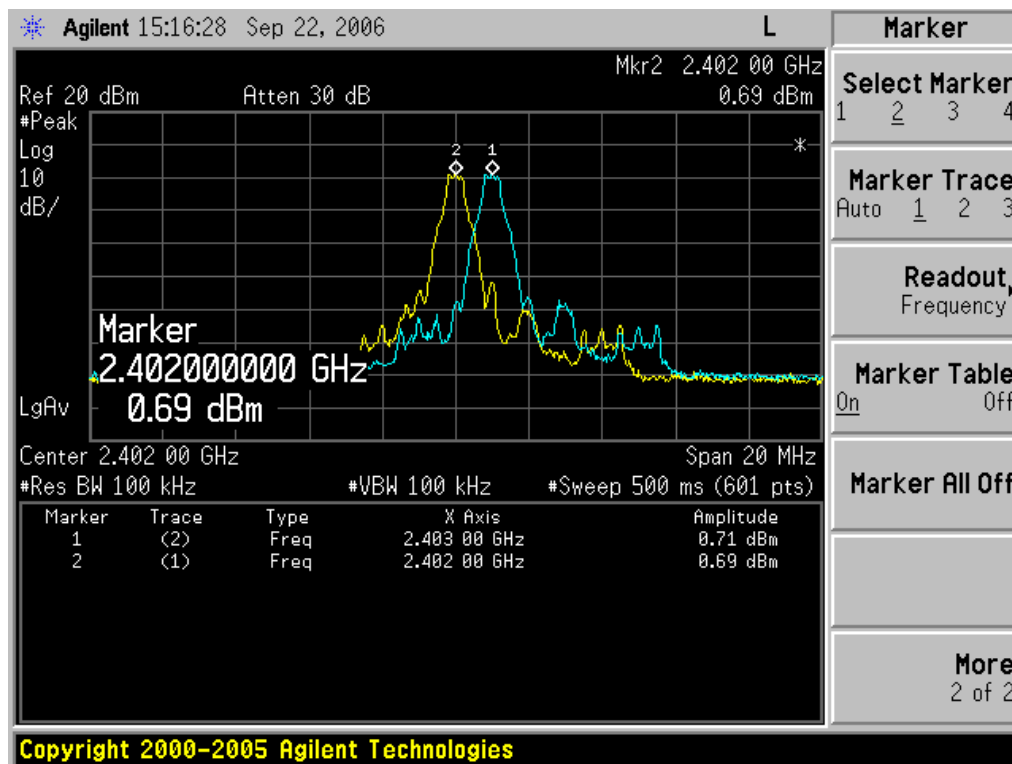
No deviation.

8.5. Test Result

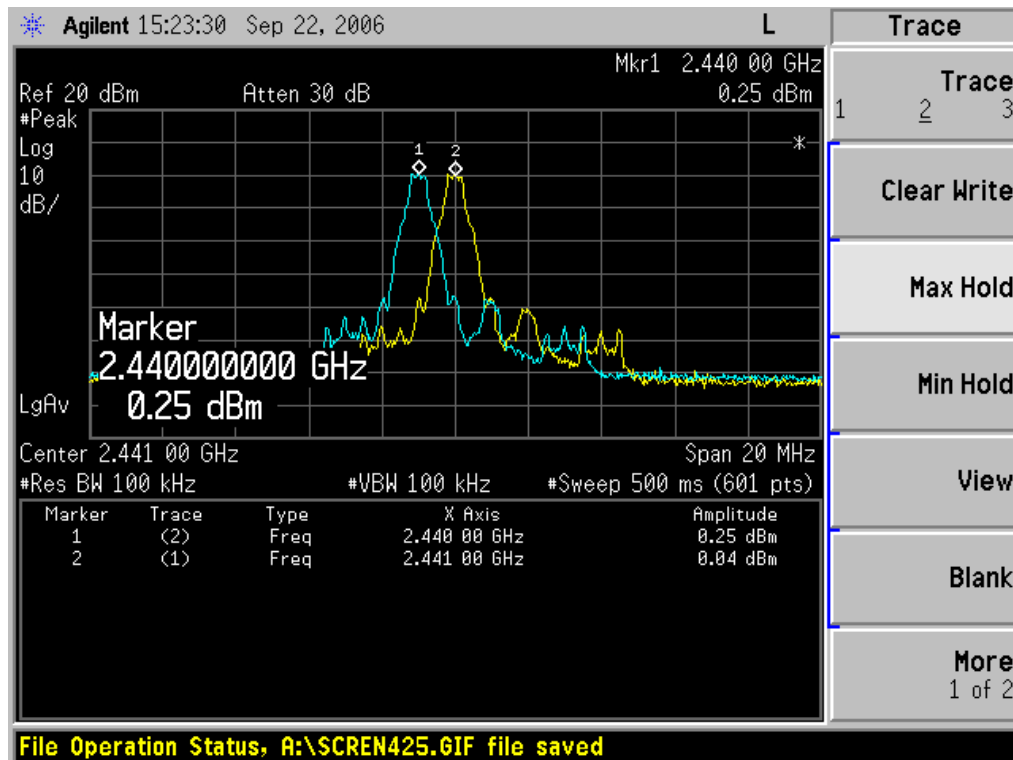
Product	Philips 900/1800/1900
Test Item	Channel Separation
Test Mode	Mode 1: Transmit
Date of Test	2006/09/22

Frequency (MHz)	Measurement Level (MHz)	Required Limit	Result
2402	1.00	>25 kHz or 2/3 * 20 dB BW	Pass
2441	1.00	>25 kHz or 2/3 * 20 dB BW	Pass
2480	1.00	>25 kHz or 2/3 * 20 dB BW	Pass

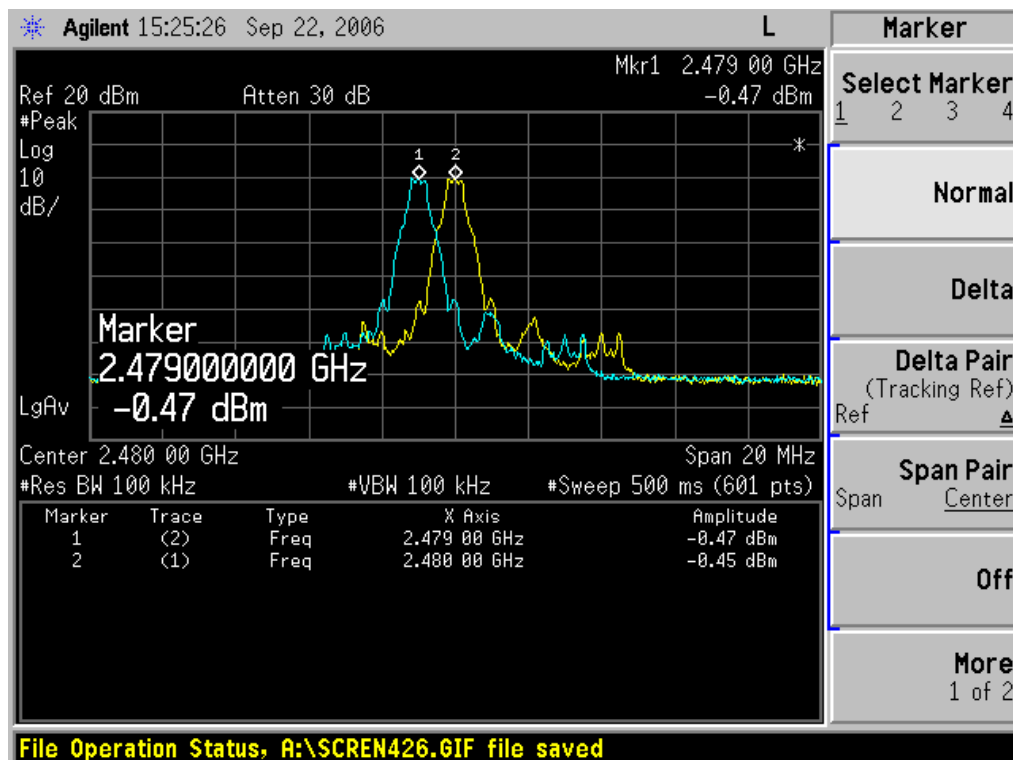
Channel 00 (2402MHz)



Channel 39 (2441MHz)



Channel 78 (2480MHz)

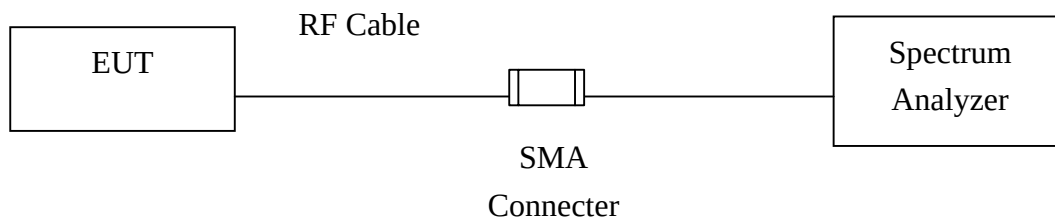


9. Dwell Time

9.1. Test Specification

According to Part 15.247(a)

9.2. Test Setup



9.3. Limit

The dwell time shall be the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

9.4. Deviation from Test Standard

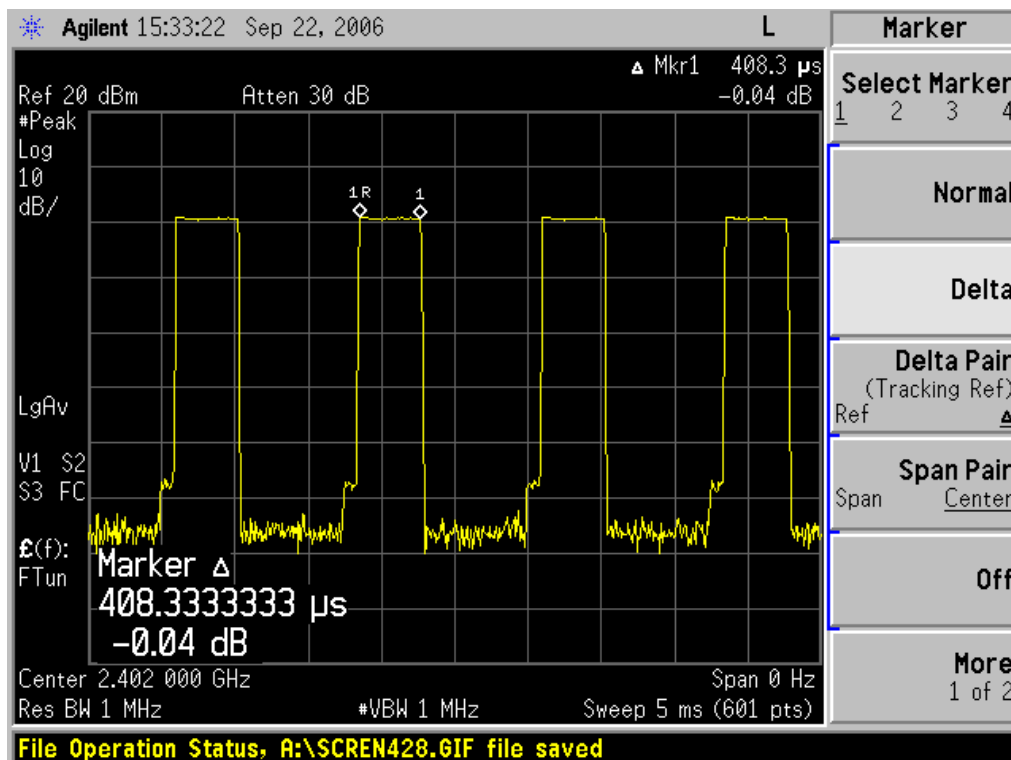
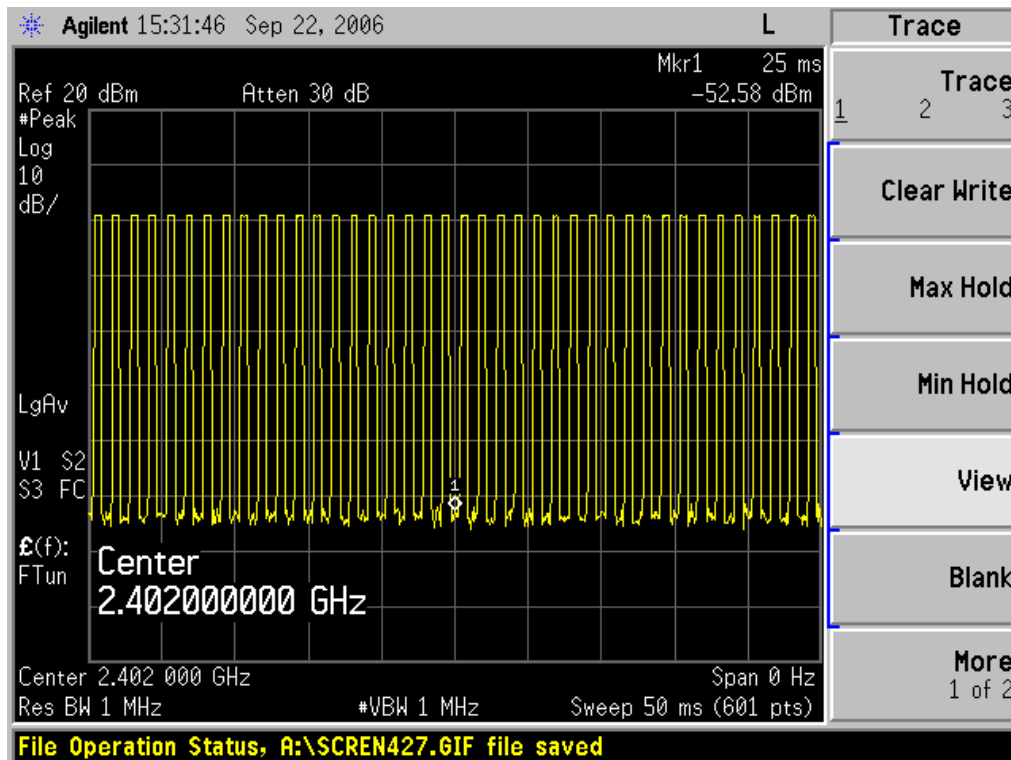
No deviation.

9.5. Test Result

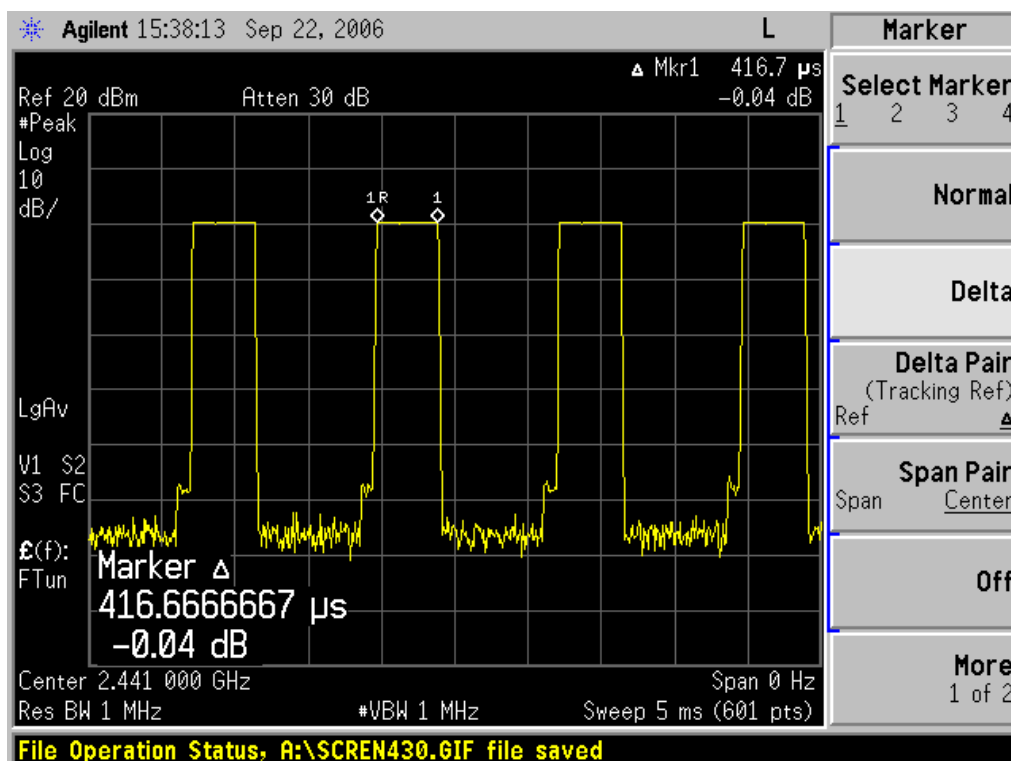
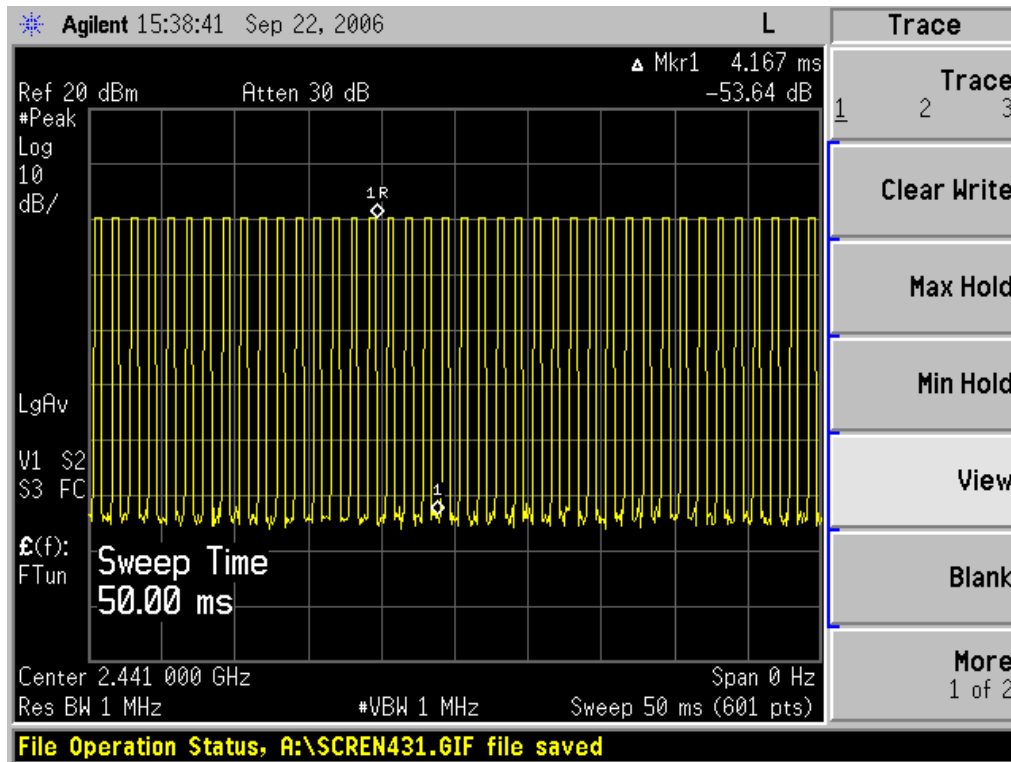
Product	Philips 900/1800/1900
Test Item	Dwell Time
Test Mode	Mode 1: Transmit
Date of Test	2006/09/22

Frequency (MHz)	Measurement Level (ms)	Required Limit (second)	Result
2402	130.800	< 0.4	Pass
2441	133.536	< 0.4	Pass
2480	130.800	< 0.4	Pass

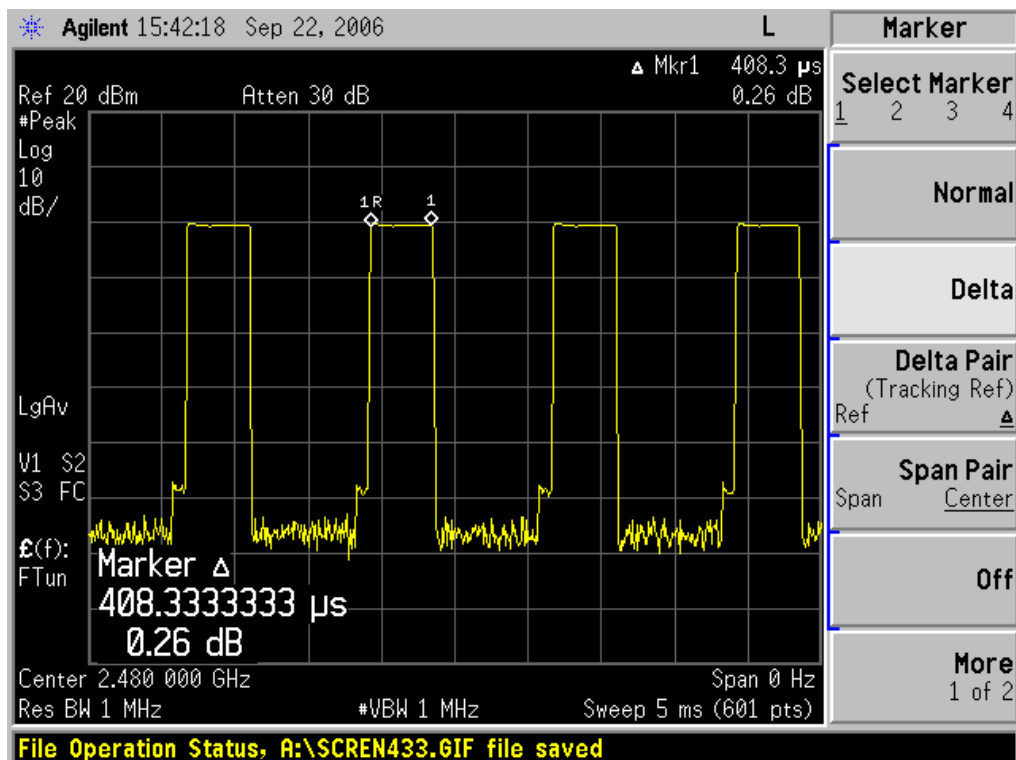
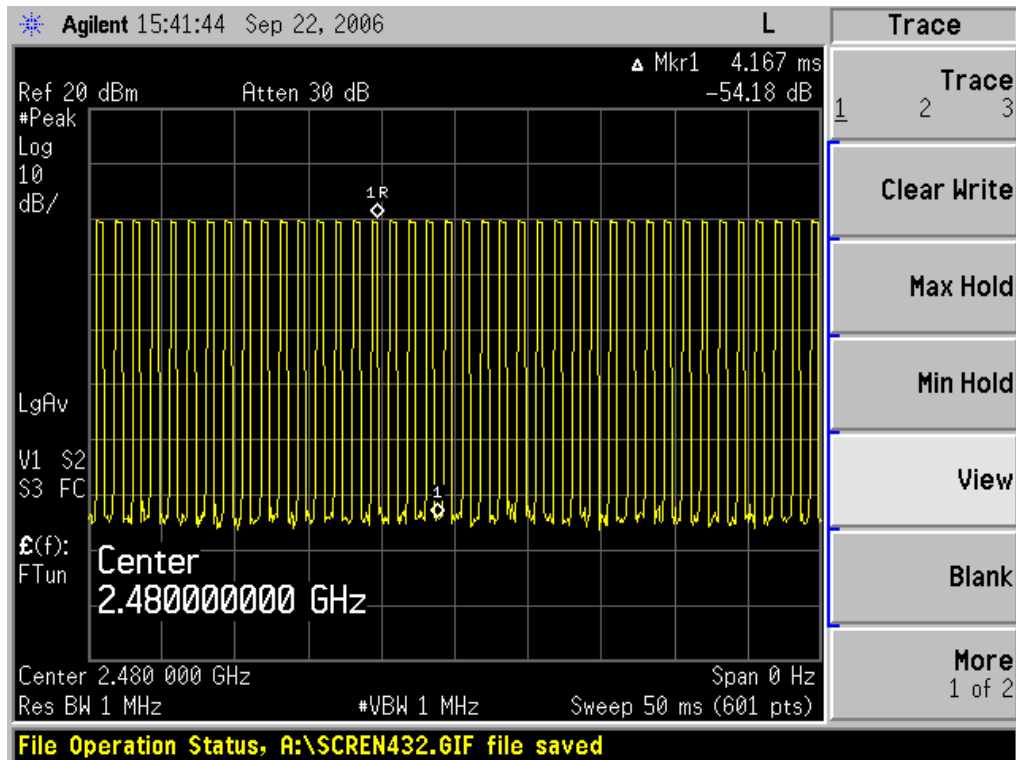
CH 00 (2402MHz)



CH 39 (2441MHz)



CH 78 (2480MHz)



Note: Dwell time = time slot length * hop rate / number of hopping channels * period

Occupancy Time of Frequency Hopping System

Test Time Period: $0.4 \times 79 = 31.6\text{sec}$, Hopping Times Within 1sec: $40/50\text{msec} = 800\text{ hops/sec}$.

A) 2402MHz The Maximum Occupancy Time Within 31.6sec: $(408.3 \mu\text{s} \times 800) / 79 \times 31.6 = 130.800\text{msec}$ °

B) 2441MHz The Maximum Occupancy Time Within 31.6sec: $(416.7 \mu\text{s} \times 800) / 79 \times 31.6 = 133.536\text{msec}$ °

C) 2480MHz The Maximum Occupancy Time Within 31.6sec: $(408.3 \mu\text{s} \times 800) / 79 \times 31.6 = 130.800\text{msec}$ °

Test Result: The Average Occupancy Time of Each Highest , Middle and Lowest Channel Is Less Than 0.4sec , And Corresponds to The Standard °

PS: (1) From Bluetooth Specification , It Hops 1640 Times in 1sec ° The Average Occupancy Time of Each 79 Channels is $1640/79$ Times , Therefore , We Calculate The Maximum Occupancy Time (worse cars) As Below:

A) 2402Mhz The Occupancy Time of Each Pulse is 0.4msec , The Maximum Occupancy Time within 31.6sec is $0.4\text{msec} \times 1640 / 79 \times 31.6 = 289.056\text{msec}$

B) 2441MHz The Occupancy Time of Each Pulse is 0.4msec , The Maximum Occupancy Time within 31.6sec is $0.4\text{msec} \times 1640 / 79 \times 31.6 = 289.056\text{msec}$

C) 2480MHz The Occupancy Time of Each Pulse is 0.4msec , The Maximum Occupancy Time within 31.6sec is $0.4\text{msec} \times 1640 / 79 \times 31.6 = 289.056\text{msec}$

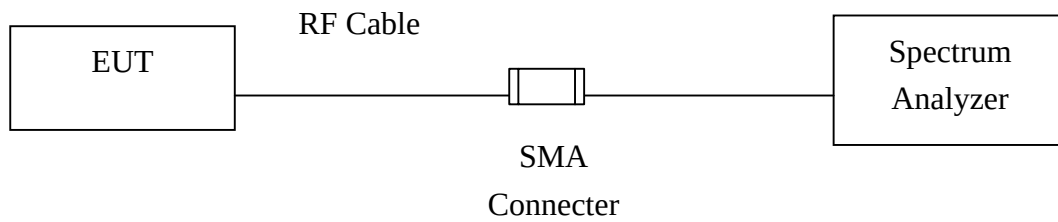
Test Result: The Maximum Occupancy Time of Each Highest , Middle and Lowest Channel Is Less Than 0.4sec , And Corresponds to The Standard °

10. Occupied Bandwidth

10.1. Test Specification

According to Part 15.247

10.2. Test Setup



10.3. Limit

N/A

10.4. Deviation from Test Standard

No deviation.

10.5. Test Result

Product	Philips 900/1800/1900
Test Item	Occupied Bandwidth
Test Mode	Mode 1: Transmit
Date of Test	2006/09/22

Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
2402	1150	--	Pass
2441	1120	--	Pass
2480	1120	--	Pass

Figure Channel 00 (2402MHz)

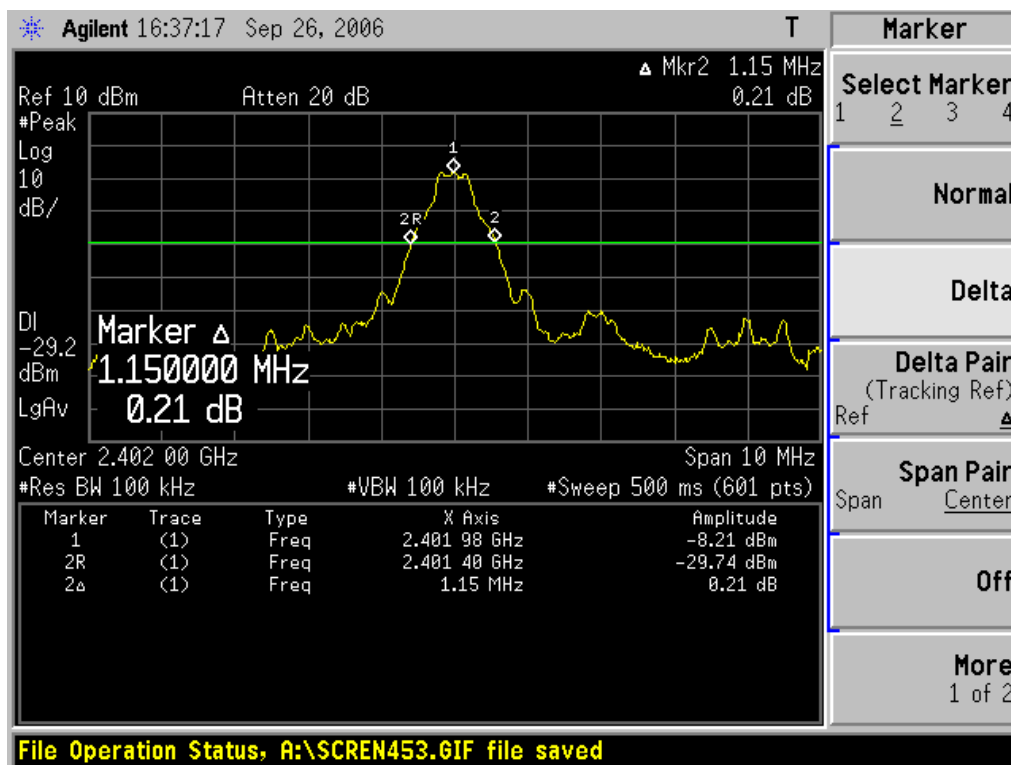


Figure Channel 39 (2402MHz)

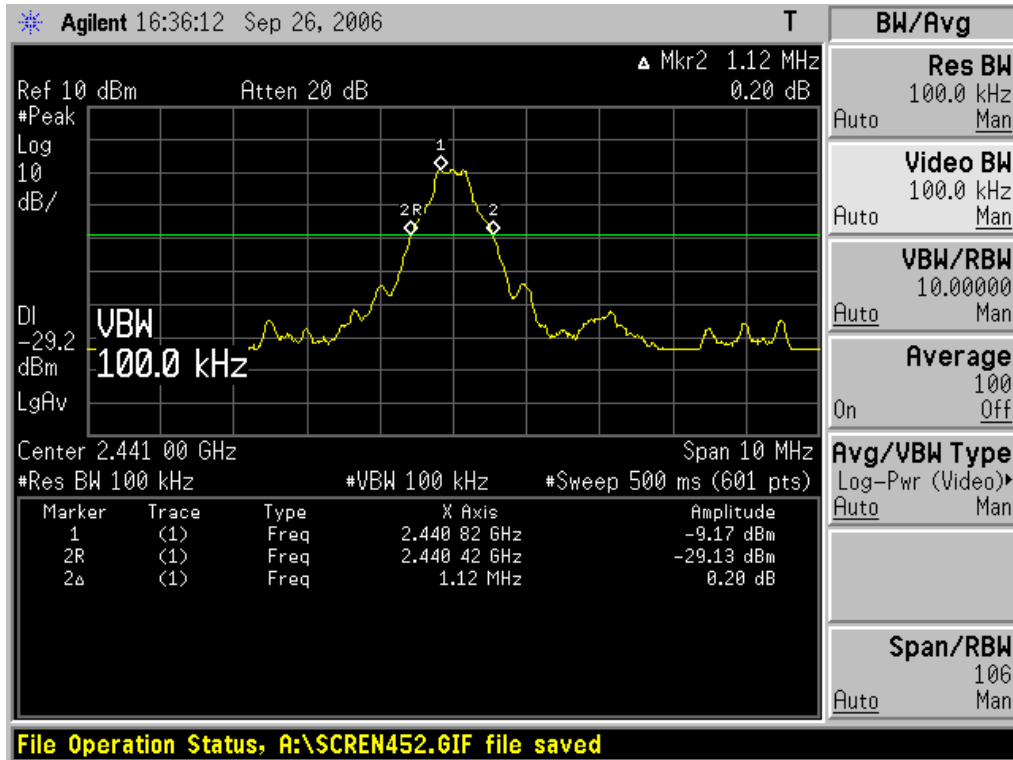
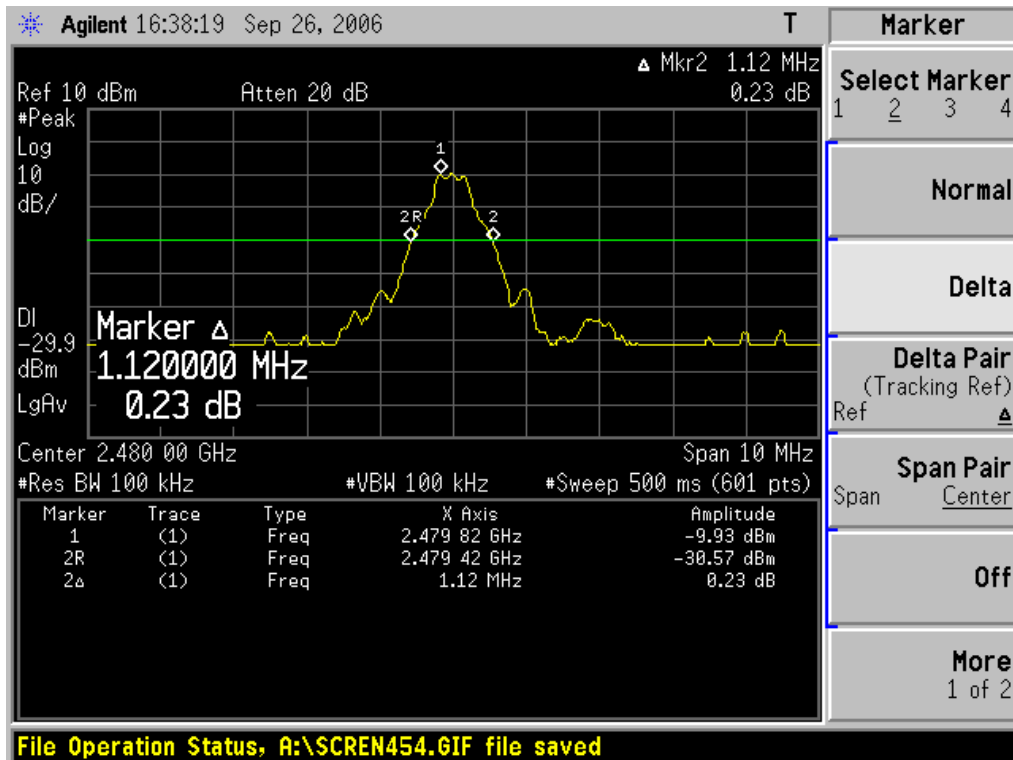


Figure Channel 78 (2480MHz)



11. Attachment

➤ EUT Photograph

(1) EUT Photo



(2) EUT Photo



(3) EUT Photo



(4) EUT Photo



(5) EUT Photo



(6) EUT Photo



(7) EUT Photo



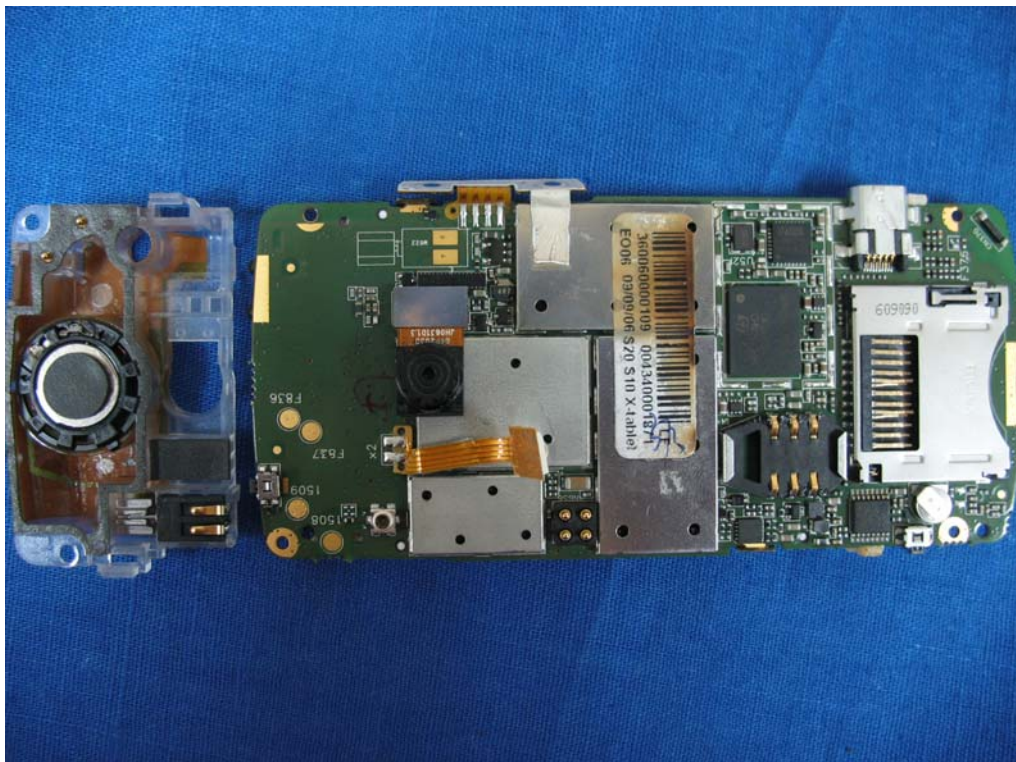
(8) EUT Photo



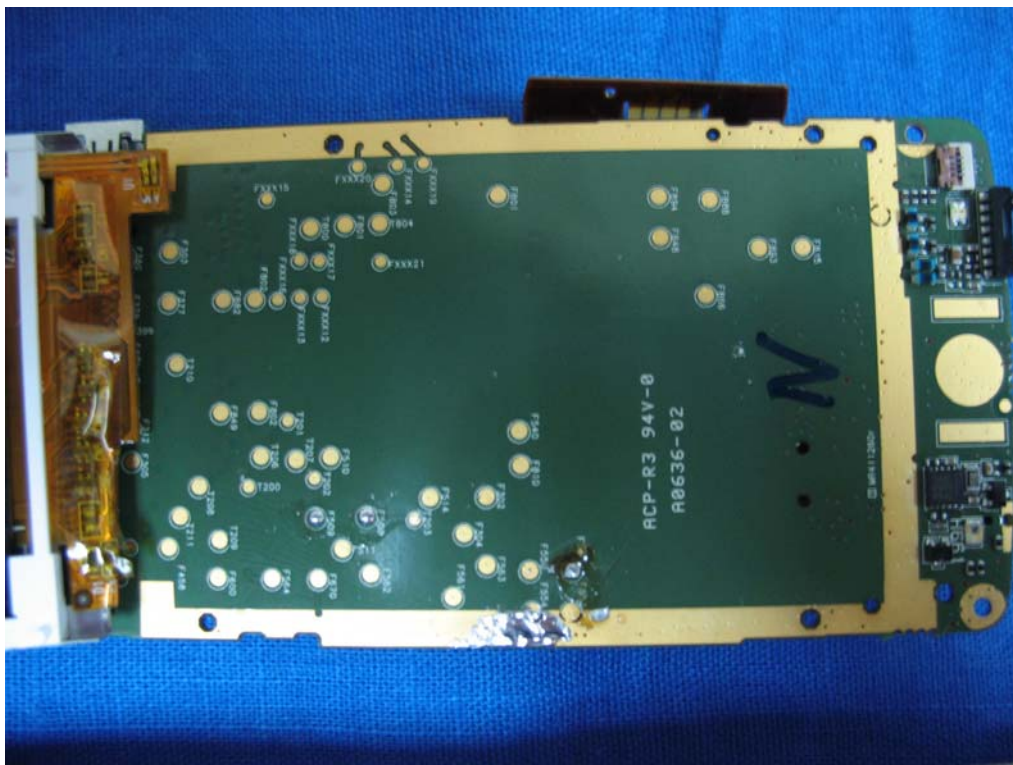
(9) EUT Photo



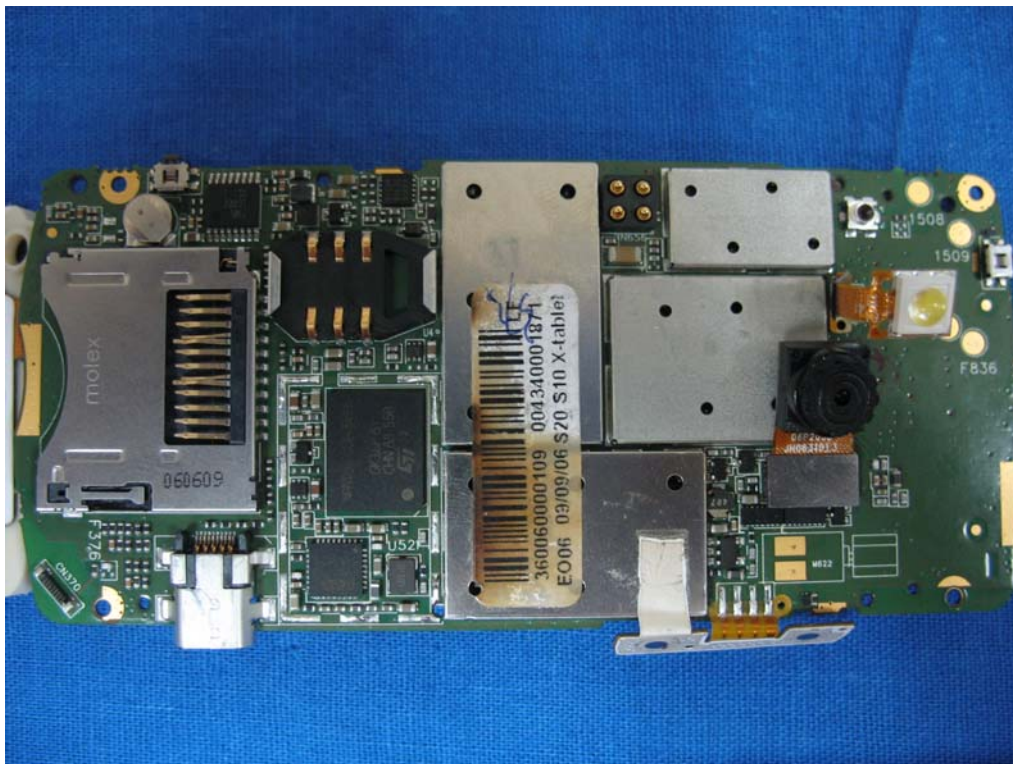
(10) EUT Photo



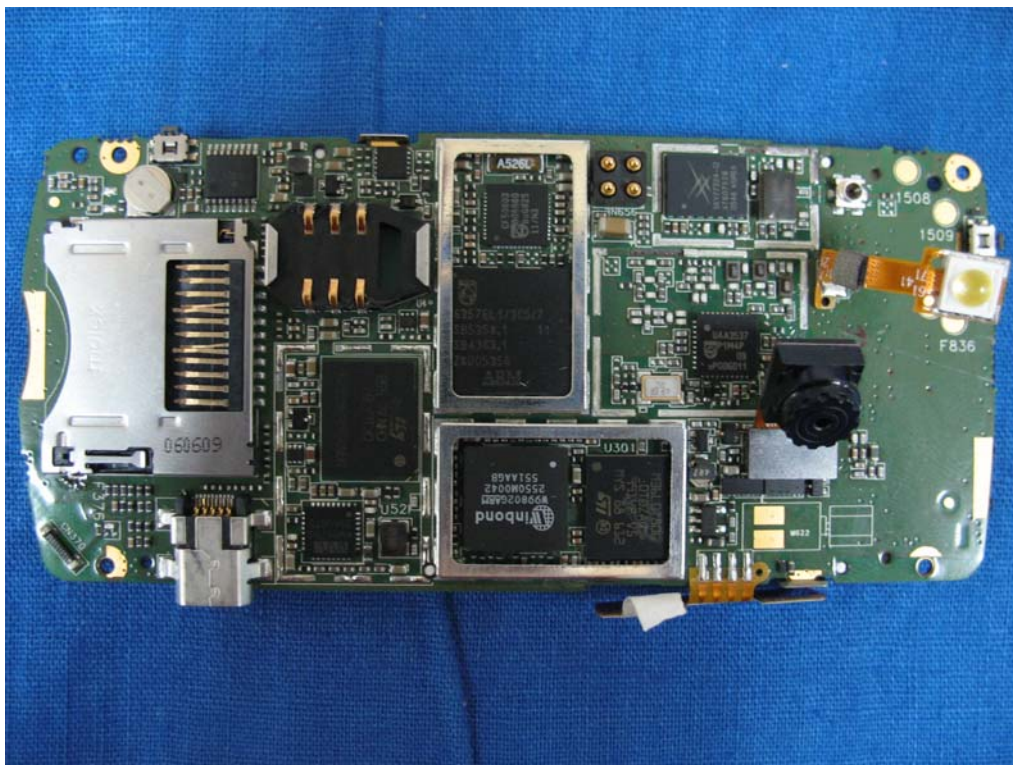
(11) EUT Photo



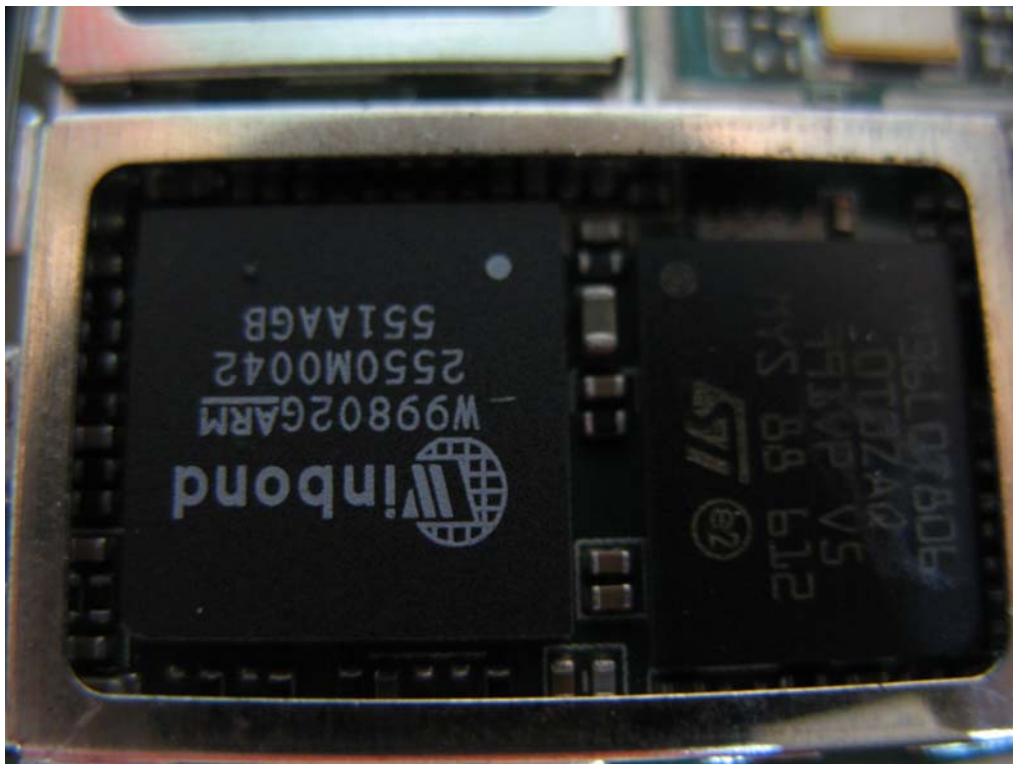
(12) EUT Photo



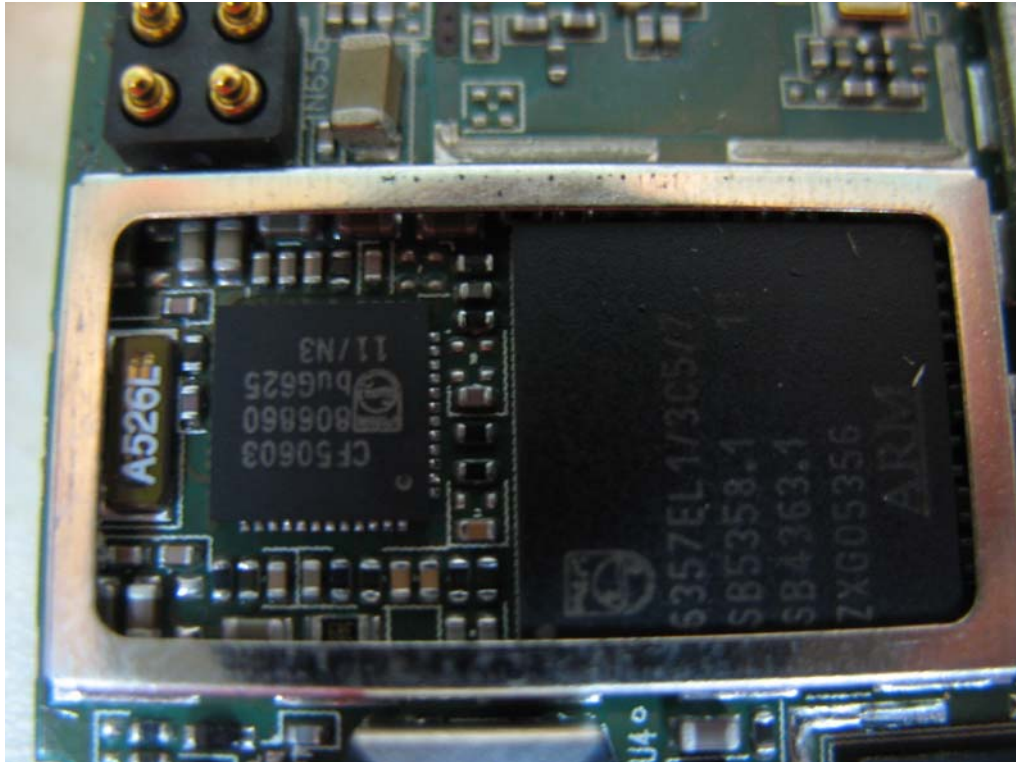
(13) EUT Photo



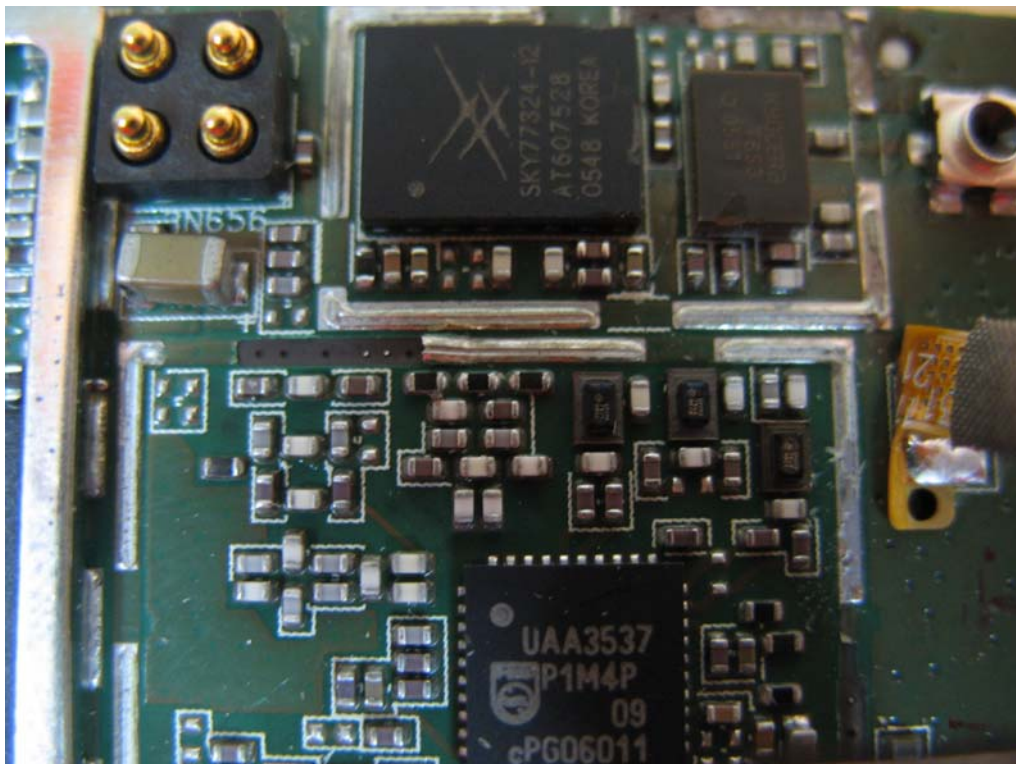
(14) EUT Photo



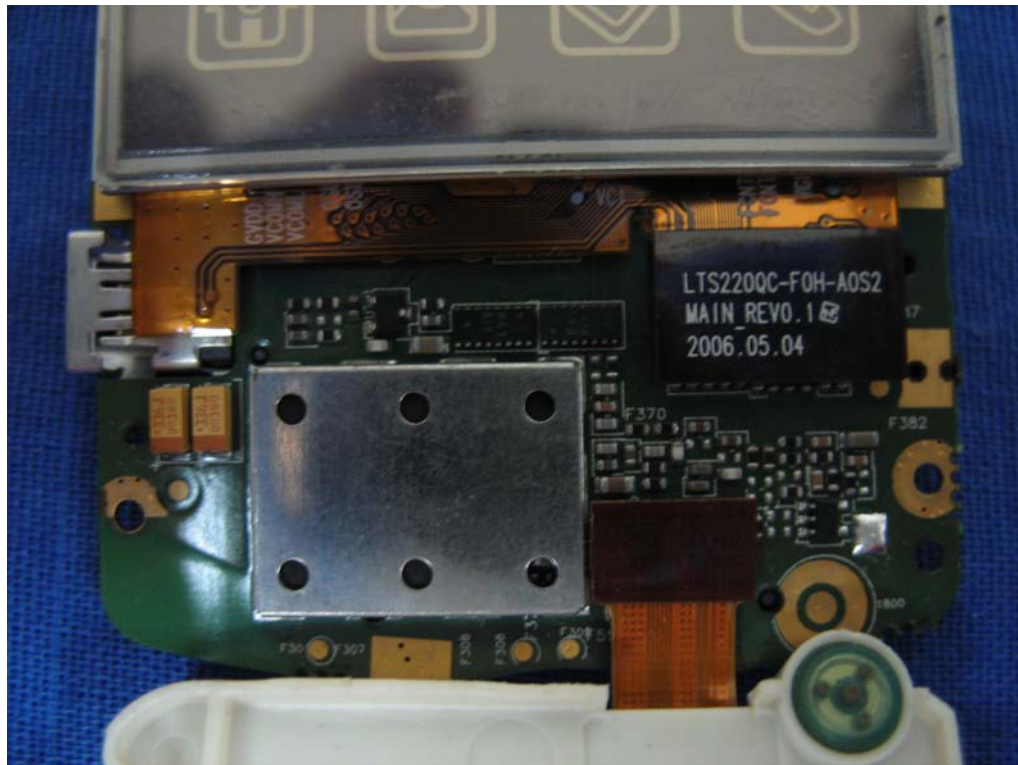
(15) EUT Photo



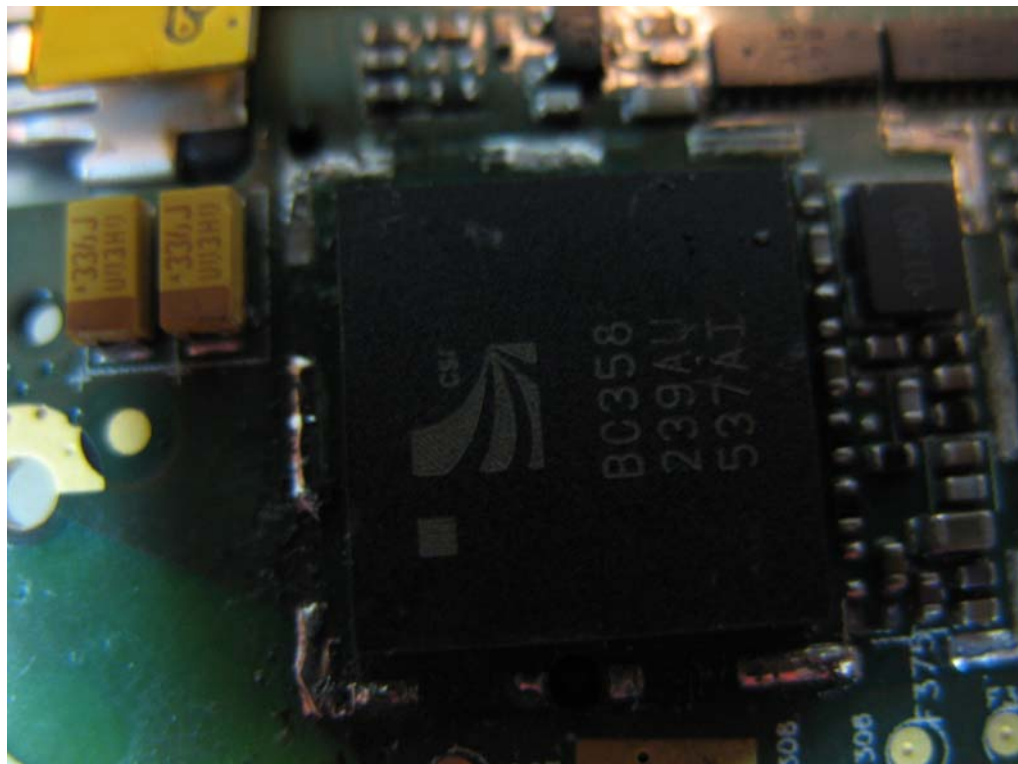
(16) EUT Photo



(17) EUT Photo



(18) EUT Photo



(19) EUT Photo



(20) EUT Photo



(21) EUT Photo



(22) EUT Photo

