

# ELECTROMAGNETIC EMISSIONS COMPLIANCE REPORT

## INTENTIONAL RADIATOR CERTIFICATION TO FCC PART 15 SUBPART C REQUIREMENT

OF

**Product Name:** GSM 850/1900 mobile phone with BT

**Brand Name:** Alcatel

**Model Name:** C7Ca

**Market Name:** OT-C701a

**FCC ID:** RAD054

**Report No.:** ER/2007/10008

**Issue Date:** Jan. 23, 2007

**FCC Rule Part:** §15.247

**Prepared for** T&A Mobile Phones  
4/F, No.2966, Jinke Rd, Zhangjiang  
High-Tech Park, Pudong Shanghai 201203.  
P. R. China

**Prepared by:** SGS Taiwan Ltd.  
No. 134, Wu Kung Rd., Wuku Industrial  
Zone, Taipei County, Taiwan.



*Note: This report shall not be reproduced except in full, without the written approval of SGS Taiwan Ltd. This document may be altered or revised by SGS Taiwan Ltd. personnel only, and shall be noted in the revision section of the document.*

## VERIFICATION OF COMPLIANCE

**Applicant:** T&A Mobile Phones  
4/F, No.2966, Jinke Rd, Zhangjiang High-Tech Park, Pudong Shanghai  
201203. P. R. China

**Equipment Under Test:** GSM 850/1900 mobile phone with BT

**Brand Name:** Alcatel

**FCC ID Number:** RAD054

**Model No.:** C7Ca

**Market name:** OT-C701a

**Model Difference:** N/A

**File Number:** ER/2007/10008

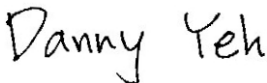


**Date of test:** Jan. 15, 2007 ~ Jan. 22, 2007

**Date of EUT Received:** Jan. 15, 2007

**We hereby certify that:**

The above equipment was tested by SGS Taiwan Ltd. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4 (2003) and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits of FCC Rules Part 15.247.

The test results of this report relate only to the tested sample identified in this report.

<b>Test By:</b>		<b>Date</b>	Jan. 23, 2007
	<hr/>		<hr/>
	Danny Yeh / Engineer		
<b>Prepared By:</b>		<b>Date</b>	Jan. 23, 2007
	<hr/>		<hr/>
	Eva Kao / St. Engineer		
<b>Approved By:</b>		<b>Date</b>	Jan. 23, 2007
	<hr/>		<hr/>
	Vincent Su / Manager		

**Version**

Version No.	Date
00	Jan. 23, 2007

This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，相關服務條款備索，或可在 [www.sgs.com](http://www.sgs.com) 中查閱，本公司之義務、免責、管轄權皆明確規範其中。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

## Table of Contents

<b>1. GENERAL INFORMATION .....</b>	<b>7</b>
1.1. Product Description .....	7
1.2. Related Submittal(s) / Grant (s) .....	8
1.3. Test Methodology .....	8
1.4. Test Facility.....	8
1.5. Special Accessories .....	8
1.6. Equipment Modifications.....	8
<b>2. SYSTEM TEST CONFIGURATION .....</b>	<b>9</b>
2.1. EUT Configuration .....	9
2.2. EUT Exercise .....	9
2.3. Test Procedure.....	9
2.4. Configuration of Tested System.....	10
<b>3. SUMMARY OF TEST RESULTS .....</b>	<b>11</b>
<b>4. DESCRIPTION OF TEST MODES .....</b>	<b>11</b>
<b>5. CONDUCTED EMISSION TEST .....</b>	<b>12</b>
5.1. Standard Applicable .....	12
5.2. EUT Setup.....	12
5.3. Measurement Procedure.....	12
5.4. Measurement Equipment Used: .....	13
5.5. Measurement Result.....	13
<b>6. PEAK OUTPUT POWER MEASUREMENT .....</b>	<b>16</b>
6.1. Standard Applicable .....	22
6.2. Measurement Procedure.....	22
6.3. Measurement Result.....	22
6.4. Measurement Equipment Used: .....	22
<b>7. 20dB BAND WIDTH .....</b>	<b>25</b>
7.1. Standard Applicable .....	25
7.2. Measurement Procedure.....	25
7.3. Measurement Result.....	25
7.4. Measurement Equipment Used: .....	25

<b>8. 100KHz BANDWIDTH OF BAND EDGES MEASUREMENT.....</b>	<b>28</b>
8.1. Standard Applicable .....	28
8.2. Measurement Procedure.....	28
8.3. Measurement Result.....	28
8.4. Measurement Equipment Used: .....	28
<b>9. SPURIOUS RADIATED EMISSION TEST.....</b>	<b>33</b>
9.1. Standard Applicable .....	37
9.2. EUT Setup.....	37
9.3. Measurement Procedure.....	37
9.4. Test SET-UP (Block Diagram of Configuration) .....	38
9.5. Measurement Equipment Used: .....	39
9.6. Field Strength Calculation .....	39
9.7. Measurement Result.....	39
<b>10. FREQUENCY SEPARATION .....</b>	<b>58</b>
10.1. Standard Applicable .....	58
10.2. Measurement Procedure.....	58
10.3. Measurement Result.....	58
10.4. Measurement Equipment Used: .....	58
<b>11. NUMBER OF HOPPING FREQUENCY .....</b>	<b>60</b>
11.1. Standard Applicable .....	60
11.2. Measurement Procedure.....	60
11.3. Measurement Result.....	60
11.4. Measurement Equipment Used: .....	60
<b>12. TIME OF OCCUPANCY (DWELL TIME) .....</b>	<b>62</b>
12.1. Standard Applicable .....	62
12.2. Measurement Procedure.....	62
12.3. Measurement Result.....	62
12.4. Measurement Equipment Used: .....	63
<b>13. Peak Power Spectral Density .....</b>	<b>68</b>
13.1. Standard Applicable .....	68
13.2. Measurement Procedure.....	68
13.3. Measurement Result.....	68
13.4. Measurement Equipment Used: .....	68

This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，相關服務條款備索，或可在 [www.sgs.com](http://www.sgs.com) 中查閱，本公司之義務、免責、管轄權皆明確規範其中。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

<b>14. ANTENNA REQUIREMENT .....</b>	<b>71</b>
14.1. Standard Applicable .....	71
14.2. Antenna Connected Construction .....	71
<b>APPENDIX 1 PHOTOGRPHS OF SET UP .....</b>	<b>72</b>
<b>APPENDIX 2 PHOTOGRPHS OF EUT .....</b>	<b>75</b>

# 1. GENERAL INFORMATION

## 1.1. Product Description

Product	GSM 850/1900 mobile phone with BT
Brand Name	Alcatel
Model Name	C7Ca
Market name:	OT-C701a
Model Difference:	N/A
Power Supply	3.7 Vdc re-chargeable battery, or 12Vdc car adaptor model: 3DS11023AAAA or Two 5Vdc by AC/DC power adapters, model S003FU0500040, S003FA0500040, Supplier: TENPAO

### GSM:

Frequency Range and Power	GSM 850: 824MHz –849MHz	33 dBm
	GSM 1900: 1850MHz –1910MHz	30 dBm
Type of Emission	300KGXW	
Software Version	N/A	
Hardware Version	N/A	
IMEI	011073000000145	

### Bluetooth:

Frequency Range	2402 – 2480MHz
Channel number	79 channels
Rated Power	1.56 dBm
Modulation type	Frequency Hopping Spread Spectrum (FHSS)(FGSK)
Antenna Designation	Chip Antenna, -1 dBi

The EUT is compliance with Bluetooth Standard.



## 1.2. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for **FCC ID: RAD054** filing to comply with Section 15.247 of the FCC Part 15, Subpart C Rules. The composite system (digital device) is compliance with Subpart B is authorized under a Doc procedure.

## 1.3. Test Methodology

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4 (2003). Radiated testing was performed at an antenna to EUT distance 3 meters.

## 1.4. Test Facility

The open area test site and conducted measurement facility used to collect the radiated data is located on the address of SGS Taiwan Ltd. No. 134, Wu Kung Rd., Wuku Industrial Zone, Taipei Country, Taiwan. The Open Area Test Sites and the Line Conducted labs are constructed and calibrated to meet the FCC requirements in documents ANSI C63.4: 2003 and CISPR 22/EN 55022 requirements. Site No. 1(3 &10 meters) Registration Number: 94644, Both OATS and Anechoic chamber (3 meters) was accredited by TAF (0513). Canada Registration Number: 4620A-1

## 1.5. Special Accessories

Not available for this EUT intended for grant.

## 1.6. Equipment Modifications

Not available for this EUT intended for grant.



## 2. SYSTEM TEST CONFIGURATION

### 2.1. EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

### 2.2. EUT Exercise

The EUT (Transmitter) was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements.

### 2.3. Test Procedure

#### 2.3.1 Conducted Emissions

The EUT is a placed on as turn table which is 0.8 m above ground plane. According to the requirements in Section 7 and 13 of ANSI C63.4-2003. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and Average detector mode.

#### 2.3.2 Radiated Emissions

The EUT is a placed on as turn table which is 0.8 m above ground plane. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter(EUT) was rotated through three orthogonal axes according to the requirements in Section 8 and 13 of ANSI C63.4-2003.

## 2.4. Configuration of Tested System

Fig. 2-1 Configuration of Tested System (Fixed Channel)

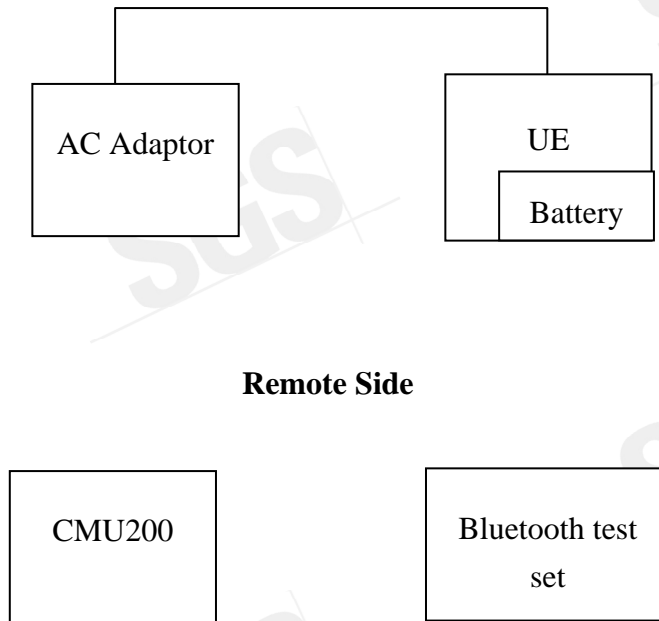


Table 2-1 Equipment Used in Tested System

Item	Equipment	Mfr/Brand	Model/ Type No.	Series No.	Data Cable	Power Cord
1	Universal Radio Communication Tester	R&S	CMU200	102189	shielded	Un-shielded
2	Bluetooth test set	Anritsu	MT8852A	6K00001436	shielded	Un-shielded

### 3. SUMMARY OF TEST RESULTS

FCC Rules	Description Of Test	Result
§15.207(a)	Conducted Emission	Compliant
§15.247(b)(1)	Peak Output Power	Compliant
§15.247(a)	20dB Bandwidth	No Limit
§15.247I	100 KHz Bandwidth Of Frequency Band Edges	Compliant
§15.209(a) (f)	Spurious Emission	Compliant
§15.247(a)(1)	Frequency Separation	Compliant
§15.247(a)(1)(iii)	Number of hopping frequency	Compliant
§15.247(a)(1)(iii)	Time of Occupancy	Compliant
§15.247	Peak Power Density	Compliant
§15.203, §15.247(b)(4)(i)	Antenna Requirement	Compliant

### 4. DESCRIPTION OF TEST MODES

The EUT has been tested under operating condition.

Test program used to control the EUT for staying in continuous transmitting and receiving mode is programmed.

Channel Low, Mid and High with highest rated data rate were chosen for full testing.

The field strength of spurious radiation emission was measured as EUT stand-up position (H mode) and lie down position (E1, E2 mode) for Bluetooth Transmitter for channel Low, Mid and High the worst case H mode was reported.

The field strength of co-located spurious radiation emission was measured as worst case of EUT at H position at Bluetooth with GSM 850 at channel high and GSM 1900 at channel Low mode was reported.

All tests were carried out for worst adaptor: S003FU0500040

## 5. CONDUCTED EMISSION TEST

### 5.1. Standard Applicable

According to §15.207. frequency within 150KHz to 30MHz shall not exceed the limit table as below.

Frequency range MHz	Limits dB(uV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

Note

- The lower limit shall apply at the transition frequencies
- The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

### 5.2. EUT Setup

- The conducted emission tests were performed in the test site, using the setup in accordance with the ANSI C63.4-2003.
- The EUT was plug-in the AC/DC Power adapter. The host system was placed on the center of the back edge on the test table. The peripherals was placed on the side of the host PC system. The rear of the EUT and peripherals were placed flushed with the rear of the tabletop.
- The spacing between the peripherals was 10 centimeters.
- External I/O cables were draped along the edge of the test table and bundle when necessary.
- The host system was connected with 110Vac/60Hz power source.

### 5.3. Measurement Procedure

- The EUT was placed on a table which is 0.8m above ground plane.
- Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- Repeat above procedures until all frequency measured were complete.

#### 5.4. Measurement Equipment Used:

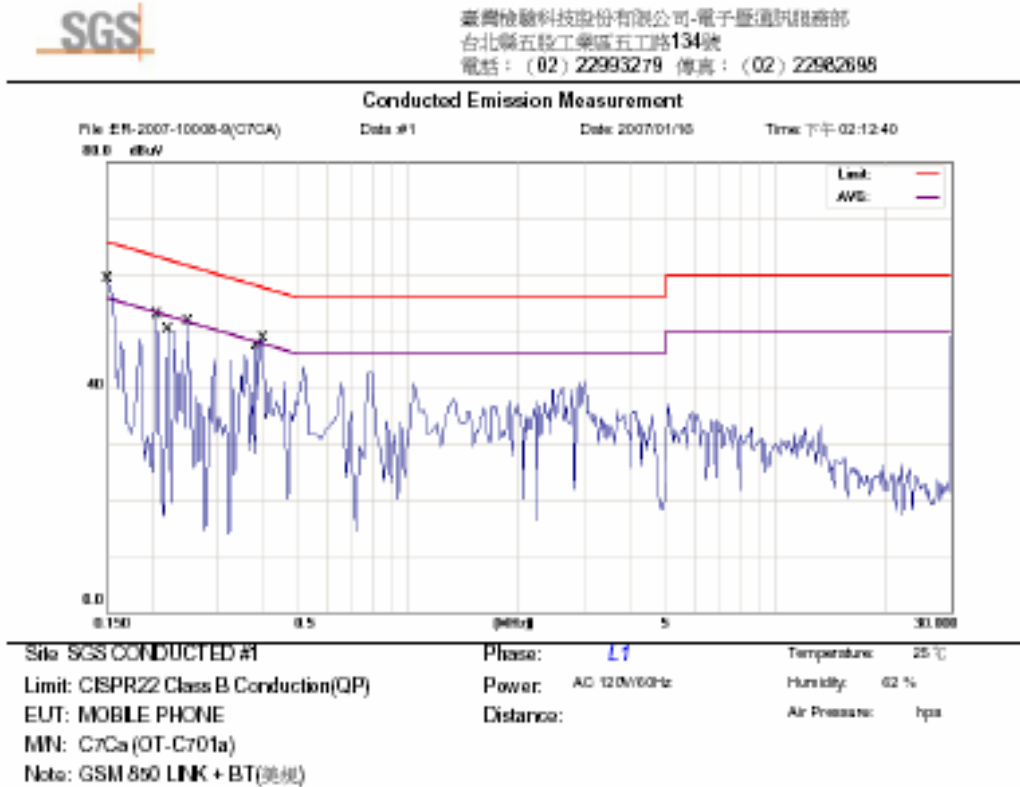
Conducted Emission Test Site					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
EMC Analyzer	HP	8594EM	3624A00203	09/02/2006	09/03/2007
EMI Test Receiver	R&S	ESCS30	828985/004	06/09/2006	06/10/2007
Transient Limiter	HP	11947A	3107A02062	09/02/2006	09/03/2007
LISN	Rolf-Heine	NNB-2/16Z	99012	12/31/2006	12/30/2007
LISN	Rolf-Heine	NNB-2/16Z	99013	01/10/2007	01/09/2008
Coaxial Cables	FCC	FCC-LISN-50/250-25-2-01	04034	01/11/2007	01/10/2008

#### 5.5. Measurement Result

The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range. Significant peaks are then marked as shown on the following data page, and these signals are then quasi-peaked.

## AC POWER LINE CONDUCTED EMISSION TEST DATA

Operation Mode:	GSM 850 +BT LINK		Test Date:	Jan. 15, 2007	
Temperature:	25 °C	Humidity:	62 %	Test By:	Denny
Adaptor:	S003FU0500040				



No.	Mk.	Freq.	Reading Level	Factor	Measurement	Limit	Over	Detector	Comment
		kHz	dBuV	dB	dBuV	dBuV	dB		
1		0.1500	49.92	0.45	60.37	66.00	-16.63	QP	
2		0.1500	26.30	0.45	26.75	66.00	-29.25	AVG	
3		0.2000	43.88	0.52	44.40	63.41	-19.01	QP	
4		0.2000	12.64	0.52	13.16	63.41	-40.25	AVG	
5		0.2200	43.08	0.53	43.61	62.82	-19.21	QP	
6		0.2200	18.67	0.53	19.20	62.82	-33.62	AVG	
7		0.2500	40.98	0.55	41.53	61.76	-20.23	QP	
8		0.2500	26.77	0.55	27.32	61.76	-24.44	AVG	
9		0.3800	43.91	0.61	44.52	58.17	-13.65	QP	
10		0.3800	22.00	0.61	22.61	48.17	-25.56	AVG	
11		0.4000	45.58	0.62	46.20	57.85	-11.65	QP	
12	*	0.4000	37.22	0.62	37.84	47.85	-10.01	AVG	

\*:Maximum data x:Over limit !:over margin

•Reference Only

This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，相關服務條款備索，或可在 [www.sgs.com](http://www.sgs.com) 中查閱，本公司之義務、免責、管轄權皆明確規範其中。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。



臺灣檢驗科技股份有限公司-電子暨資訊組業務部  
 台北縣五股工業區五工路134號  
 電話：(02) 22993279 傳真：(02) 22982698

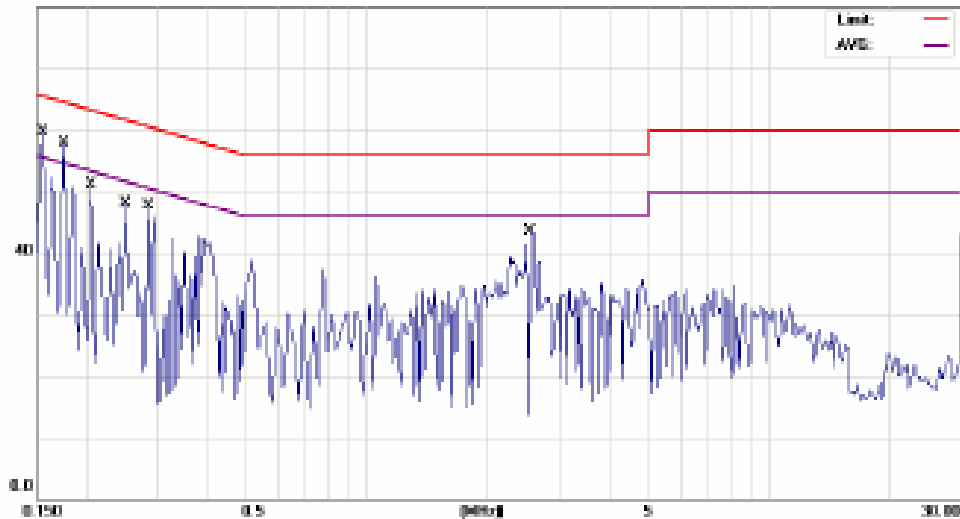
### Conducted Emission Measurement

File: ER-2007-10008-B(CFCA)  
 00 B dBuV

Data #2

Date: 2007/01/10

Time: 下午 02:17:25



Site: SGS CONDUCTED #1

Phase: N

Temperature: 25 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 120V/60Hz

Humidity: 62 %

EUT: MOBILE PHONE

Distance:

Air Pressure: hpa

MM: CrCa(OT-Cr01a)

Note: GSM 850 LINK + BT(測試)

No.	Mk.	Freq.	Reading Level	Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV	dBuV	dB		
1		0.1500	48.83	0.48	49.29	55.73	-16.44	QP	
2		0.1500	33.65	0.48	34.11	55.73	-21.62	AVG	
3		0.1700	47.05	0.48	47.53	64.72	-17.19	QP	
4		0.1700	26.52	0.48	27.00	64.72	-27.72	AVG	
5		0.2000	44.02	0.52	44.54	63.41	-18.87	QP	
6		0.2000	10.64	0.52	11.16	63.41	-42.25	AVG	
7		0.2500	40.49	0.55	41.04	61.76	-20.72	QP	
8		0.2500	23.84	0.55	24.39	61.76	-27.37	AVG	
9		0.2800	37.97	0.56	38.53	60.67	-22.14	QP	
10		0.2800	19.64	0.56	20.20	60.67	-30.47	AVG	
11		2.5200	37.77	0.87	38.64	56.00	-17.36	QP	
12	*	2.5200	28.72	0.87	29.59	46.00	-16.41	AVG	

\*Maximum data    xOver limit    | over margin

◆Reference Only

This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，相關服務條款備索，或可在 [www.sgs.com](http://www.sgs.com) 中查閱，本公司之義務、免責、管轄權皆明確規範其中。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。



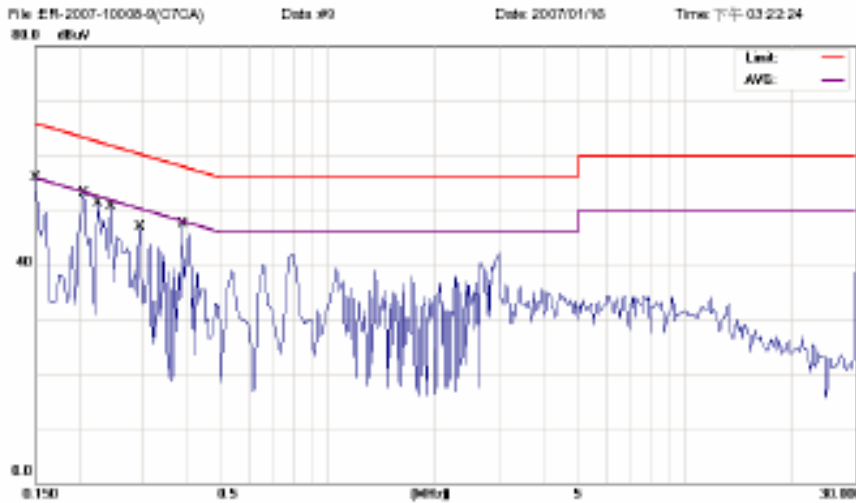
## AC POWER LINE CONDUCTED EMISSION TEST DATA

Operation Mode:	GSM 1900 +BT LINK		Test Date:	Jan. 15, 2007	
Temperature:	25 °C	Humidity:	62 %	Test By:	Denny
Adaptor:	S003FU0500040				



臺灣檢驗科技股份有限公司-電子暨資訊服務部  
台北縣五股工業區五工路134號  
電話：(02) 22993279 傳真：(02) 22982698

### Conducted Emission Measurement



Site: SGS CONDUCTED #1 Phase: L1 Temperature: 25 °C  
Limit: CISPR22 Class B Conduction(QP) Power: AC 120V/60Hz Humidity: 62 %  
EUT: MOBILE PHONE Distance: Air Pressure: hpa  
MN: CrCa (OT-C701a)  
Note: GSM 1900 LINK + BT(美規)

No.	Mk.	Freq.	Reading Level	Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBµV	dB	dBµV	dBµV	dB		
1		0.1500	49.54	0.45	49.99	66.00	-16.01	QP	
2		0.1500	30.48	0.45	30.93	66.00	-25.07	AVG	
3		0.2050	42.86	0.52	43.38	63.41	-20.03	QP	
4		0.2050	17.37	0.52	17.89	63.41	-35.52	AVG	
5		0.2250	41.52	0.53	42.05	62.63	-20.58	QP	
6		0.2250	24.85	0.53	25.38	62.63	-27.25	AVG	
7		0.2450	39.33	0.54	39.87	61.92	-22.05	QP	
8		0.2450	23.84	0.54	24.38	61.92	-27.54	AVG	
9		0.2950	36.64	0.57	37.21	60.38	-23.17	QP	
10		0.2950	25.93	0.57	26.50	60.38	-23.88	AVG	
11	*	0.3900	45.70	0.61	46.31	58.06	-11.75	QP	
12		0.3900	32.81	0.61	33.42	48.06	-14.64	AVG	

\*:Maximum data x:Over limit !:over margin

•Reference Only

This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，相關服務條款備索，或可在 [www.sgs.com](http://www.sgs.com) 中查閱，本公司之義務、免責、管轄權皆明確規範其中。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。



臺灣檢驗科技股份有限公司-電子暨資訊組  
 台北縣五股工業區五工路134號  
 電話: (02) 22993279 傳真: (02) 22982695

### Conducted Emission Measurement

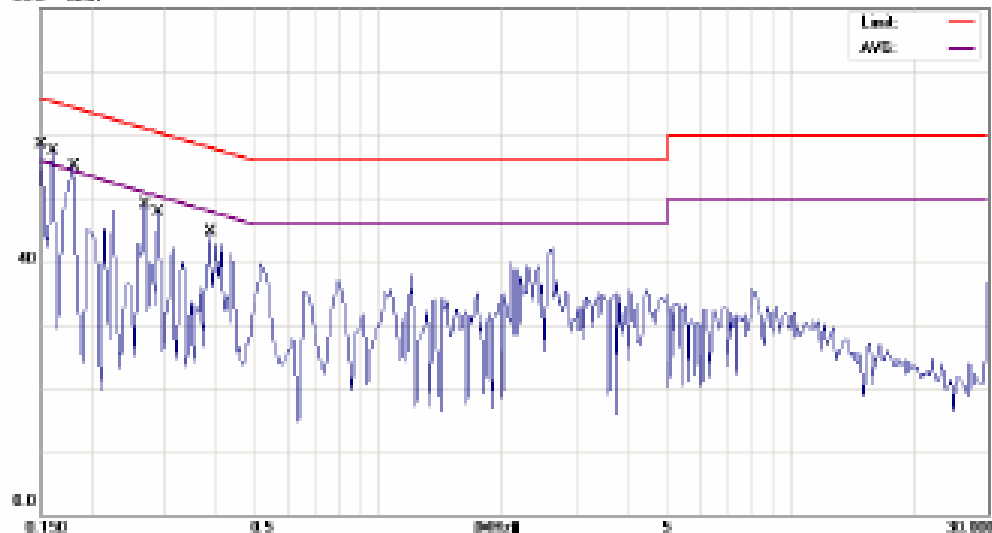
File: ER-2007-10008-9(C7CA)

Data #10

Date: 2007/01/16

Time: 下午 03:25:37

dBμV



Site: SGS CONDUCTED #1

Phase: N

Temperature: 25 °C

Limit: CISPR22 Class B Conduction(QP)

Power: AC 120V/60Hz

Humidity: 62 %

EUT: MOBILE PHONE

Distance:

Air Pressure: hpa

MN: CrCa(OT-Cr01a)

Note: GSM 1900 LINK + BT(美規)

No.	Mk.	Freq.	Reading	Factor	Measure-	Limit	Over	Detector	Comment
		MHz	dBμV	dB	ment	dBμV	dB		
1	*	0.1800	48.74	0.45	49.19	66.00	-16.81	QP	
2		0.1800	31.86	0.45	32.31	66.00	-33.69	AVG	
3		0.1800	47.22	0.46	47.88	65.46	-17.58	QP	
4		0.1800	12.35	0.46	12.81	65.46	-42.65	AVG	
5		0.1800	45.67	0.49	46.16	64.49	-18.33	QP	
6		0.1800	20.60	0.49	21.09	64.49	-33.40	AVG	
7		0.2700	38.76	0.56	39.32	61.12	-21.80	QP	
8		0.2700	24.14	0.56	24.70	61.12	-36.42	AVG	
9		0.2900	35.66	0.56	36.22	60.52	-24.30	QP	
10		0.2900	15.27	0.56	15.83	60.52	-34.69	AVG	
11		0.3900	40.21	0.61	40.82	58.06	-17.24	QP	
12		0.3900	13.51	0.61	14.12	48.06	-33.94	AVG	

\*:Maximum data    x:Over limit    |:over margin

•:Reference Only

This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，相關服務條款備索，或可在 [www.sgs.com](http://www.sgs.com) 中查閱，本公司之義務、免責、管轄權皆明確規範其中。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

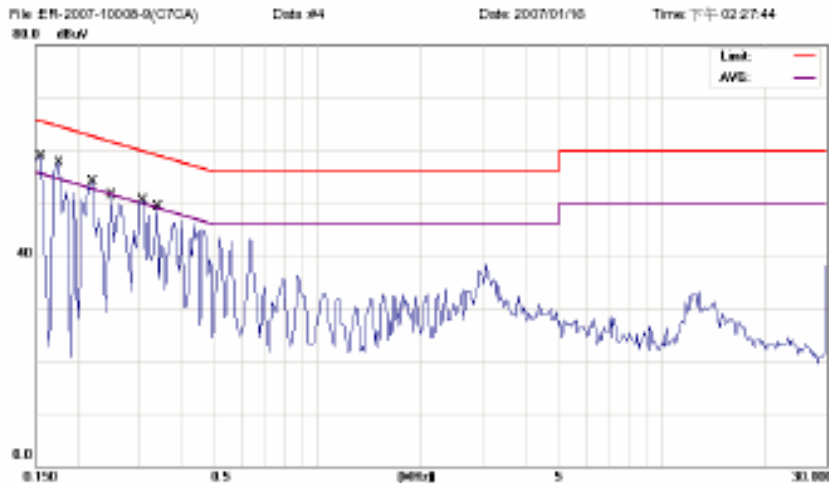
## AC POWER LINE CONDUCTED EMISSION TEST DATA

Operation Mode:	GSM 850 +BT LINK		Test Date:	Jan. 15, 2007	
Temperature:	25 °C	Humidity:	62 %	Test By:	Denny
Adaptor:	S003FA0500040				



臺灣檢驗科技股份有限公司-電子暨資訊組  
台北縣五股工業區五工路134號  
電話：(02) 22993279 傳真：(02) 22982698

### Conducted Emission Measurement



File: 2007-10008-0(C7CA) Date: #4 Date: 2007/01/05 Time: 下午 02:27:44

Site: SGS CONDUCTED #1 Phase: L7 Temperature: 25 °C  
 Limit: CISPR22 Class B Conduction(QP) Power: AC 120V/60Hz Humidity: 62 %  
 EUT: MOBILE PHONE Distance: Air Pressure: hpa  
 MN: CrCa (OT-Cr01a)  
 Note: GSM 850 LINK + BT(流規)

No.	Mk.	Freq.	Reading Level	Factor	Measurement	Limit	Over	Detector	Comment
		kHz	dBuV	dB	dBuV	dBuV	dB		
1	*	0.1500	60.69	0.46	61.05	65.73	-14.68	QP	
2		0.1500	21.97	0.46	22.43	65.73	-33.30	AVG	
3		0.1750	47.56	0.48	48.04	64.72	-16.68	QP	
4		0.1750	29.22	0.48	29.70	64.72	-25.02	AVG	
5		0.2200	42.29	0.53	42.82	62.82	-20.00	QP	
6		0.2200	19.50	0.53	20.03	62.82	-32.79	AVG	
7		0.2800	43.05	0.55	43.60	61.76	-18.16	QP	
8		0.2800	25.81	0.55	26.36	61.76	-25.40	AVG	
9		0.3100	39.43	0.57	40.00	59.97	-19.97	QP	
10		0.3100	9.52	0.57	10.09	49.97	-39.88	AVG	
11		0.3400	35.05	0.59	35.64	59.20	-20.56	QP	
12		0.3400	13.20	0.59	13.79	49.20	-35.41	AVG	

\*:Maximum data x:Over limit !:over margin

•Reference Only

This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，相關服務條款備索，或可在 [www.sgs.com](http://www.sgs.com) 中查閱，本公司之義務、免責、管轄權皆明確規範其中。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。



臺灣檢驗科技股份有限公司-電子暨資訊服務部  
台北縣五股工業區五工路134號  
電話: (02) 22993279 傳真: (02) 22982698

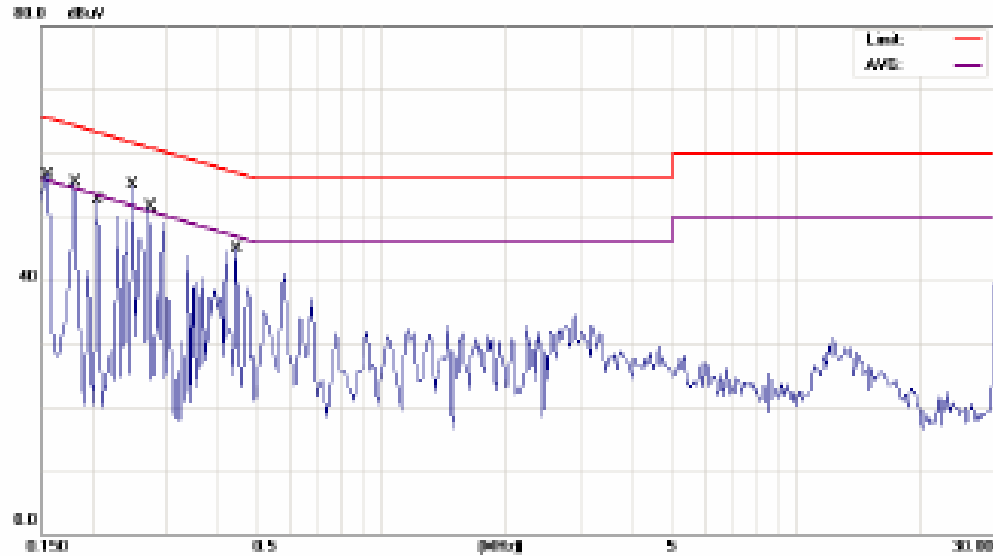
### Conducted Emission Measurement

File: ER-2007-10008-S(C7CA)

Data #3

Date: 2007/01/16

Time: 下午 02:21:18



Site: SGS CONDUCTED #1 Phase: **N** Temperature: 25 °C  
 Limit: CISPR22 Class B, Conduction(QP) Power: AC 120V/60Hz Humidity: 62 %  
 EUT: MOBILE PHONE Distance: Air Pressure: hpa  
 MN: C7Ca (QT-C701a)  
 Note: GSM 850 LINK + BT(遠端)

No.	Mk.	Freq.	Reading Level	Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBμV	dB	dBμV	dBμV	dB		
1		0.1500	49.17	0.46	49.63	65.73	-16.10	QP	
2		0.1500	30.28	0.46	30.74	65.73	-34.99	AVG	
3	*	0.1800	47.98	0.49	48.47	64.49	-16.02	QP	
4		0.1800	26.07	0.49	26.56	64.49	-37.93	AVG	
5		0.2000	45.04	0.52	45.56	63.41	-17.85	QP	
6		0.2000	16.79	0.52	17.31	63.41	-46.10	AVG	
7		0.2800	43.42	0.55	43.97	61.76	-17.79	QP	
8		0.2800	8.72	0.55	9.27	61.76	-52.49	AVG	
9		0.2700	42.90	0.56	43.46	60.97	-17.51	QP	
10		0.2700	30.60	0.56	31.16	60.97	-29.81	AVG	
11		0.4400	34.03	0.64	34.67	56.97	-22.30	QP	
12		0.4400	13.65	0.64	14.29	56.97	-42.68	AVG	

\*:Maximum data    x:Over limit    !:over margin

#:Reference Only

This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，相關服務條款備索，或可在 [www.sgs.com](http://www.sgs.com) 中查閱，本公司之義務、免責、管轄權皆明確規範其中。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

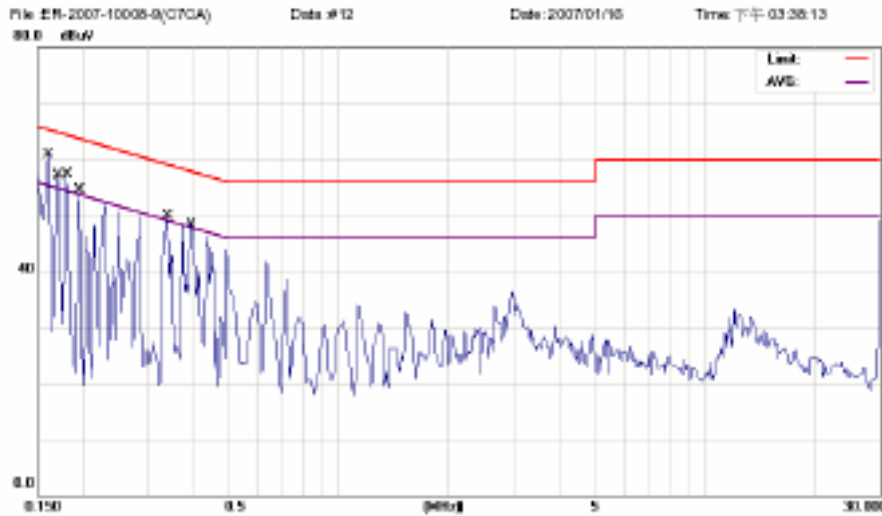
## AC POWER LINE CONDUCTED EMISSION TEST DATA

Operation Mode:	GSM 1900 +BT LINK		Test Date:	Jan. 15, 2007	
Temperature:	25 °C	Humidity:	62 %	Test By:	Denny
Adaptor:	S003FA0500040				



臺灣檢驗科技股份有限公司-電子暨資訊部  
台北縣五股工業區五工路134號  
電話: (02) 22993279 傳真: (02) 22982698

### Conducted Emission Measurement



Site: SGS CONDUCTED #1 Phase: LF Temperature: 25 °C  
Limit: CISPR22 Class B Conduction(QP) Power: AC 120V/60Hz Humidity: 62 %  
EUT: MOBILE PHONE Distance: Air Pressure: hpa  
MN: C7Ca (OT-C701a)  
Note: GSM 1900 LINK + BT(遠視)

No. Mk.	Freq. MHz	Reading Level dBµV	Factor dB	Measurement dBµV	Limit dBµV	Over dB	Detector	Comment
1 *	0.1600	49.98	0.46	49.98	65.46	-15.50	QP	
2	0.1600	21.85	0.46	22.31	65.46	-33.15	AVG	
3	0.1700	47.14	0.46	47.62	64.96	-17.34	QP	
4	0.1700	19.63	0.46	20.11	64.96	-34.85	AVG	
5	0.1800	47.74	0.49	48.23	64.49	-16.26	QP	
6	0.1800	17.91	0.49	18.40	64.49	-36.09	AVG	
7	0.1950	44.91	0.51	45.42	63.82	-18.40	QP	
8	0.1950	9.91	0.51	10.42	63.82	-43.40	AVG	
9	0.3400	37.87	0.59	38.46	69.20	-20.74	QP	
10	0.3400	11.97	0.59	12.56	49.20	-36.64	AVG	
11	0.3950	32.73	0.62	33.35	67.96	-24.61	QP	
12	0.3950	27.06	0.62	27.68	47.96	-20.28	AVG	

\*Maximum data xOver limit !over margin

\*Reference Only

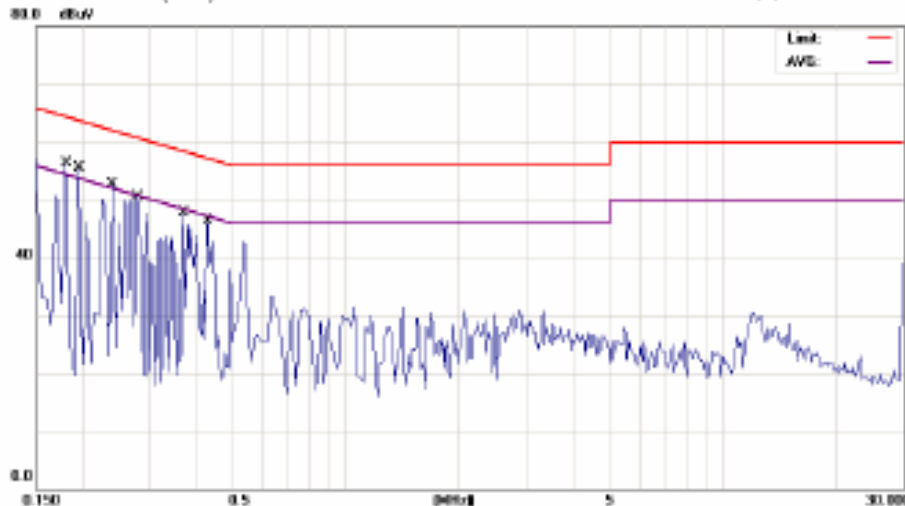
This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放, 相關服務條款備索, 或可在 [www.sgs.com](http://www.sgs.com) 中查閱, 本公司之義務、免責、管轄權皆明確規範其中。除非另有說明, 此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可, 不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法, 違犯者將會被依法追訴。



臺灣檢驗科技股份有限公司-電子暨資訊組  
台北縣五股工業區五工路134號  
電話: (02) 22993279 傳真: (02) 22982698

### Conducted Emission Measurement

File: ER-2007-10008-0(C7CA) Date: #14 Date: 2007/01/16 Time: 下午 03:47:22



Site: SCS CONDUCTED #1 Phase: **N** Temperature: 25 °C  
Limit: CISPR22 Class B Conduction(QP) Power: AC 120V/60Hz Humidity: 62 %  
EUT: MOBILE PHONE Distance: Air Pressure: hpa  
MN: CrCa (0T-Cr01a)  
Note: GSM 1900 IDLE + BT(演規)

No.	Mk.	Freq.	Reading Level	Factor	Measurement	Limit	Over	Detector	Comment
		MHz	dBuV	dB	dBuV	dBuV	dB		
1	*	0.1800	47.84	0.49	48.33	64.49	-16.16	QP	
2		0.1800	26.63	0.49	27.12	64.49	-27.37	AVG	
3		0.1950	45.36	0.51	45.87	63.82	-17.95	QP	
4		0.1950	10.91	0.51	11.42	63.82	-42.40	AVG	
5		0.2400	41.50	0.54	42.04	62.10	-20.06	QP	
6		0.2400	27.60	0.54	28.14	62.10	-23.96	AVG	
7		0.2800	41.02	0.56	41.58	60.82	-19.24	QP	
8		0.2800	18.90	0.56	19.48	60.82	-31.36	AVG	
9		0.3700	36.80	0.60	37.40	58.50	-21.10	QP	
10		0.3700	28.90	0.60	29.50	48.50	-19.00	AVG	
11		0.4300	33.83	0.63	34.46	57.25	-22.79	QP	
12		0.4300	17.46	0.63	18.09	47.25	-29.16	AVG	

\*:Maximum data x:Over limit !:over margin

◆Reference Only

This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，相關服務條款備索，或可在 [www.sgs.com](http://www.sgs.com) 中查閱，本公司之義務、免責、管轄權皆明確規範其中。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

## 6. PEAK OUTPUT POWER MEASUREMENT

### 6.1. Standard Applicable

For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 hopping channels, and all frequency hopping systems in the 5725-5850MHz band: 1Watt. For all other frequency hopping systems in the 2400 – 2483.5MHz band: 0.125 Watts.

### 6.2. Measurement Procedure

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the power meter or spectrum. (Channel power function, RBW, VBW = 1MHz)
3. Record the max. reading.
4. Repeat above procedures until all frequency measured were complete.

### 6.3. Measurement Result

Frequency (MHz)	Reading Power (dBm)	Cable Loss	Output Power (dBm)	Output Power (W)	Limit (W)
2402.00	1.56	0.00	1.56	0.00143	1
2441.00	0.33	0.00	0.33	0.00108	1
2480.00	-0.41	0.00	-0.41	0.00091	1

Note: This data was offset 7dB.

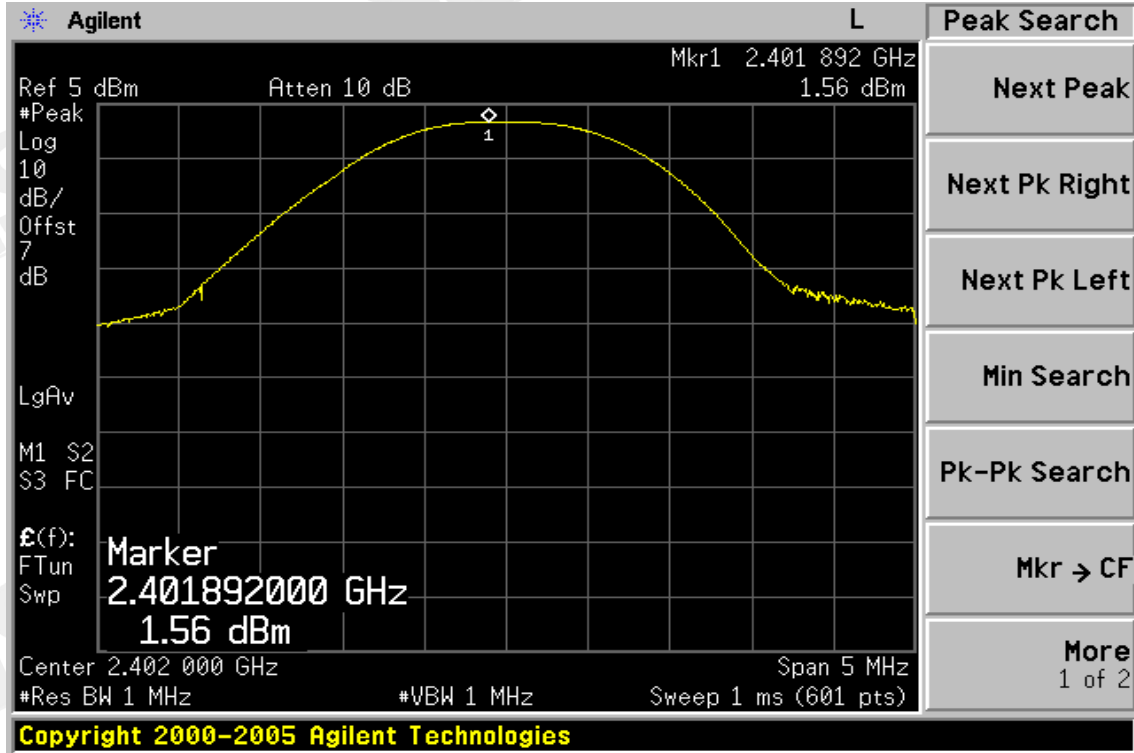
### 6.4. Measurement Equipment Used:

Conducted Emission Test Site					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	Agilent	E4446A	MY43360126	03/29/2006	03/28/2007
Spectrum Analyzer	Agilent	7405A	US41160416	06/28/2006	06/29/2007
Spectrum Analyzer	R&S	FSP 40	100034	11/09/2006	11/10/2007
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA	N/A	N/A	N/A
Attenuator	Mini-Circuit	BW-S10W5	N/A	10/07/2006	10/06/2007
Attenuator	Mini-Circuit	BW-S6W5	N/A	10/07/2006	10/06/2007
Splitter	Agilent	Power Biviber	51818	01/05/2007	01/04/2008

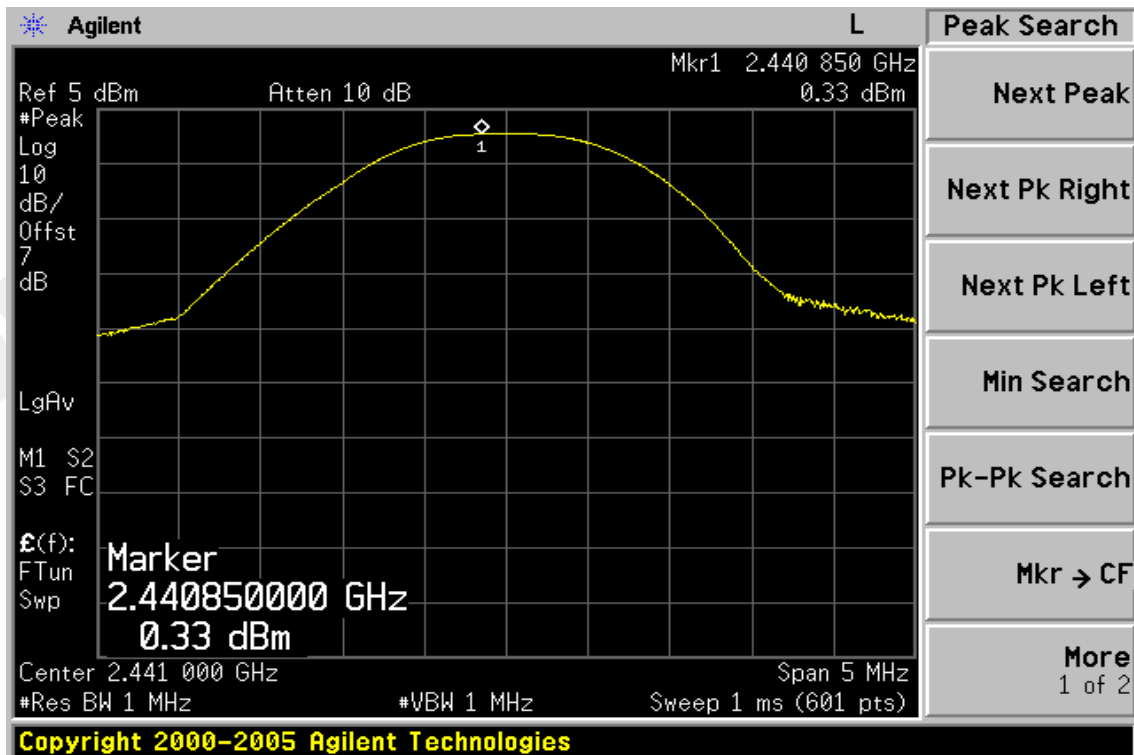
This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，相關服務條款備索，或可在 [www.sgs.com](http://www.sgs.com) 中查閱，本公司之義務、免責、管轄權皆明確規範其中。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。



## Peak Power Output Data Plot (CH Low)

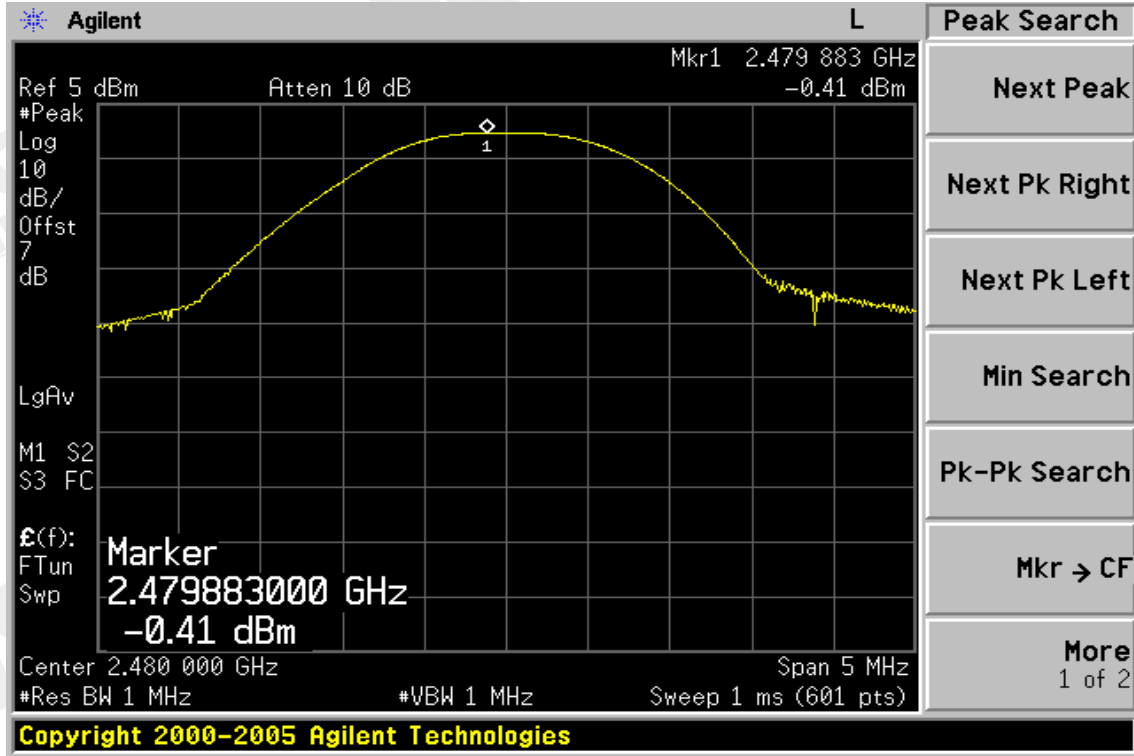


## Peak Power Output Data Plot (CH Mid)



This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，相關服務條款備索，或可在 [www.sgs.com](http://www.sgs.com) 中查閱，本公司之義務、免責、管轄權皆明確規範其中。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

## Peak Power Output Data Plot (CH High)



## 7. 20dB BAND WIDTH

### 7.1. Standard Applicable

For frequency hopping systems operating in the 2400MHz-2483.5 MHz no limit for 20dB bandwidth.

### 7.2. Measurement Procedure

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer as RBW=10KHz (1 % of Bandwidth.), Span= 3MHz, Sweep=auto
4. Mark the peak frequency and -20dB (upper and lower) frequency.
5. Repeat above procedures until all frequency measured were complete.

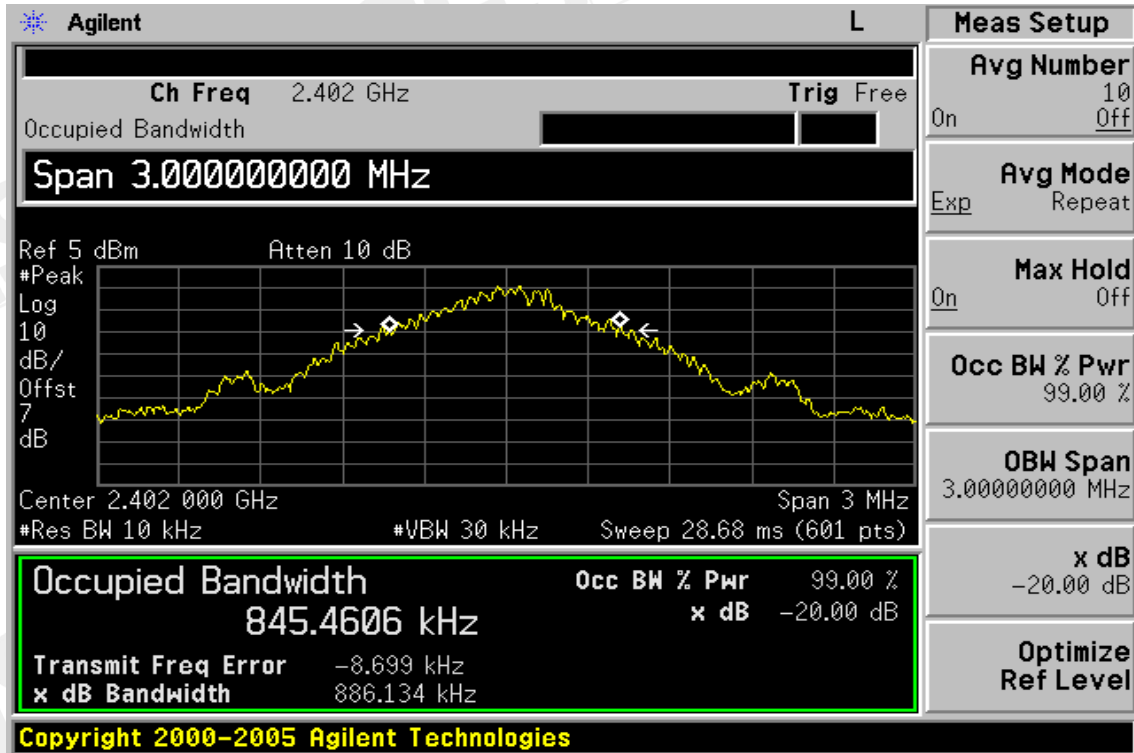
### 7.3. Measurement Result

CH	Bandwidth
	(kHz)
Lower	886.134
Mid	885.338
Higher	885.407

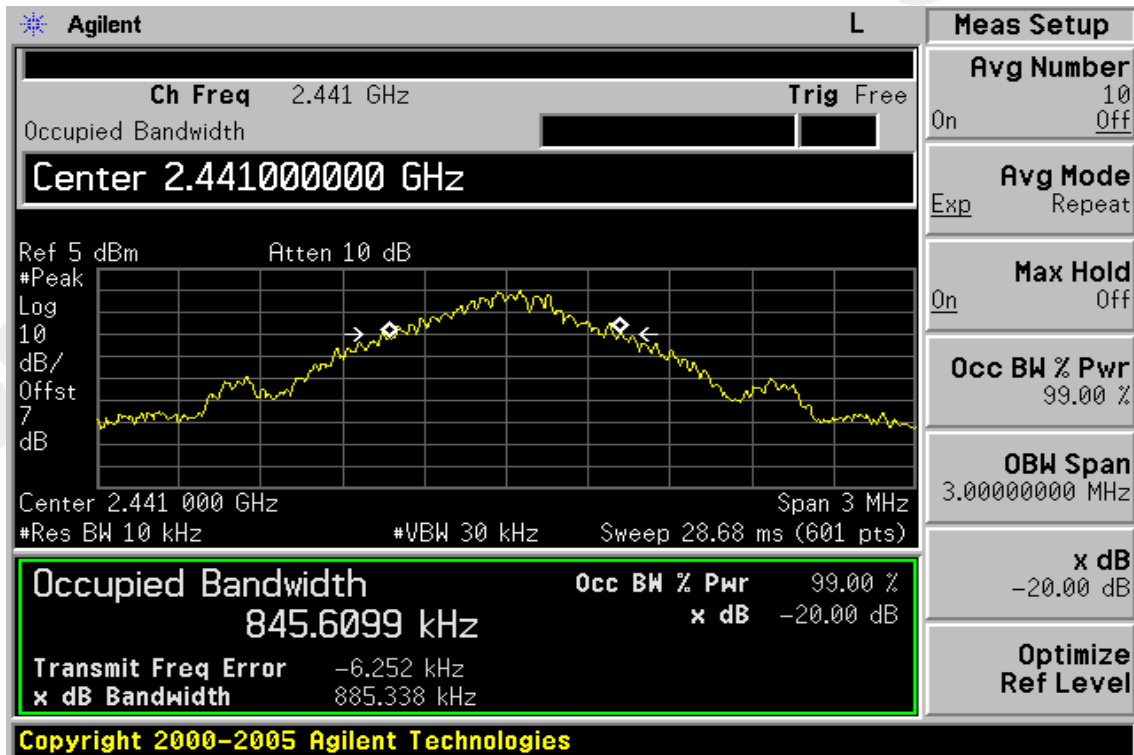
### 7.4. Measurement Equipment Used:

Conducted Emission Test Site					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	Agilent	E4446A	MY43360126	03/29/2006	03/28/2007
Spectrum Analyzer	Agilent	7405A	US41160416	06/28/2006	06/29/2007
Spectrum Analyzer	R&S	FSP 40	100034	11/09/2006	11/10/2007
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA	N/A	N/A	N/A
Attenuator	Mini-Circuit	BW-S10W5	N/A	10/07/2006	10/06/2007
Attenuator	Mini-Circuit	BW-S6W5	N/A	10/07/2006	10/06/2007
Splitter	Agilent	Power Biviber	51818	01/05/2007	01/04/2008

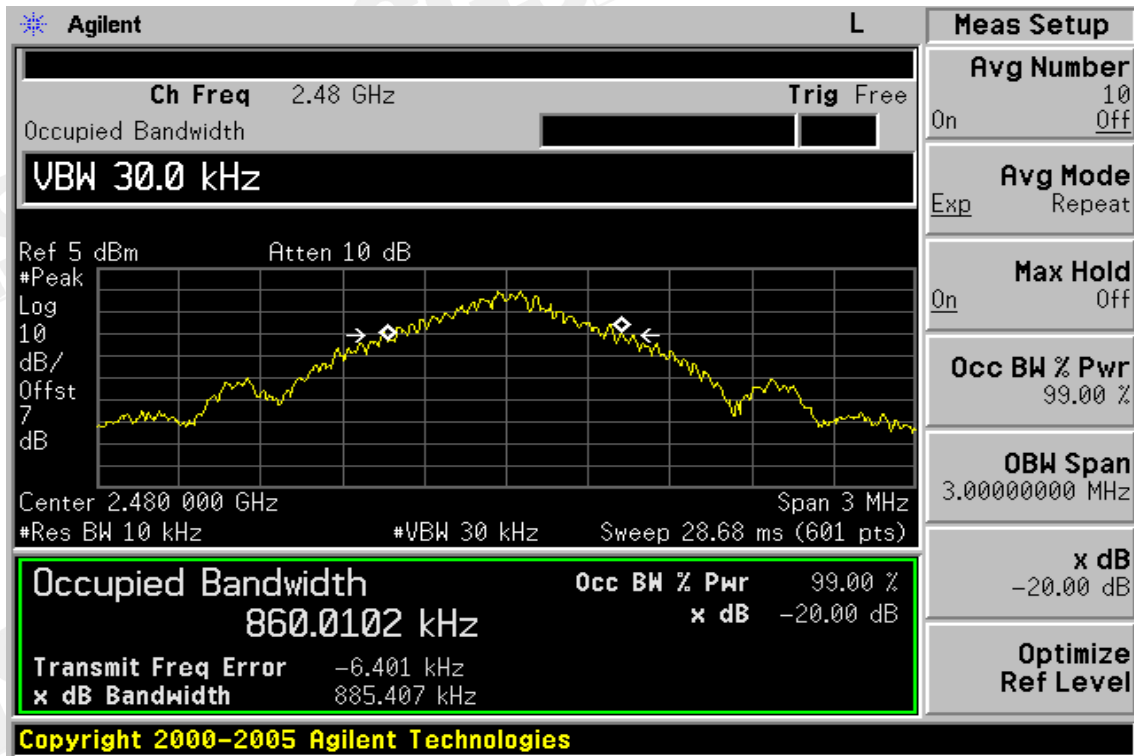
## 20dB Band Width Test Data CH-Low



## 20dB Band Width Test Data CH-Mid



## 20dB Band Width Test Data CH-High



## 8. 100KHz BANDWIDTH OF BAND EDGES MEASUREMENT

### 8.1. Standard Applicable

According to §15.247(c), in any 100 KHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100KHz bandwidth within the band that contains the highest level of the desired power, In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in 15.209(a).

### 8.2. Measurement Procedure

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set center frequency of spectrum analyzer = operating frequency.
4. Set the spectrum analyzer as RBW, VBW=100KHz, Span=25MHz, Sweep = auto
5. Mark Peak, 2.390GHz and 2.4835GHz and record the max. level.
6. Repeat above procedures until all frequency measured were complete.
7. Radiated Emission refer to section 9.

### 8.3. Measurement Result

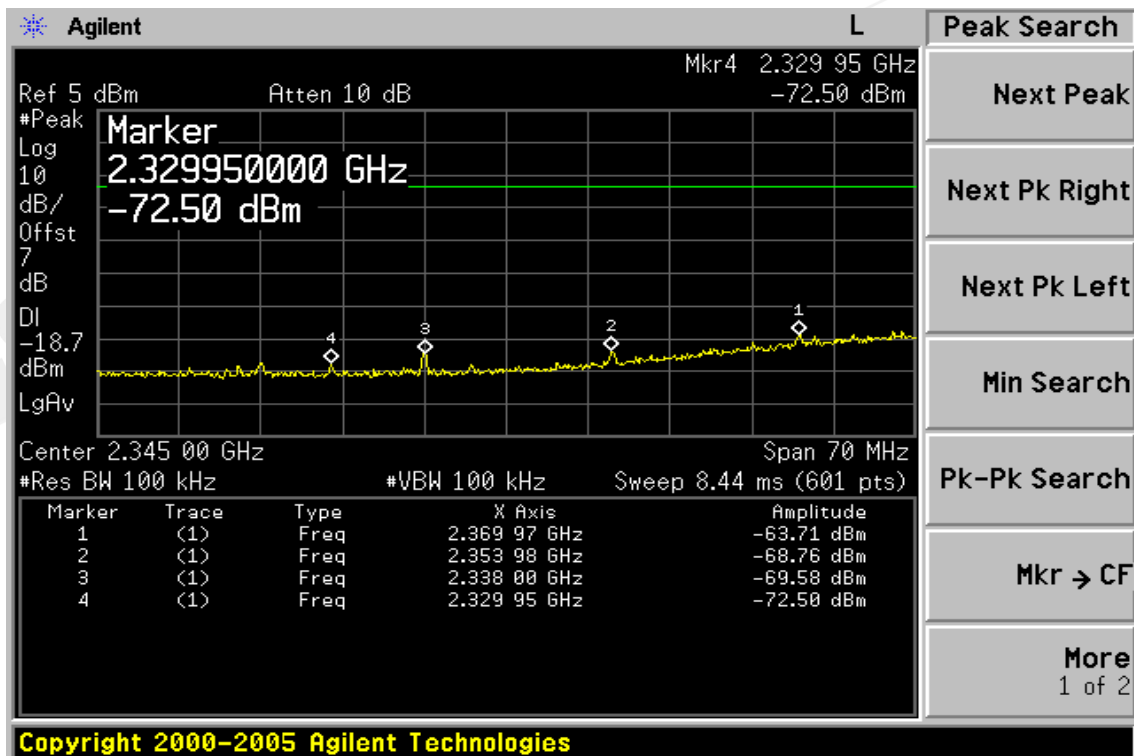
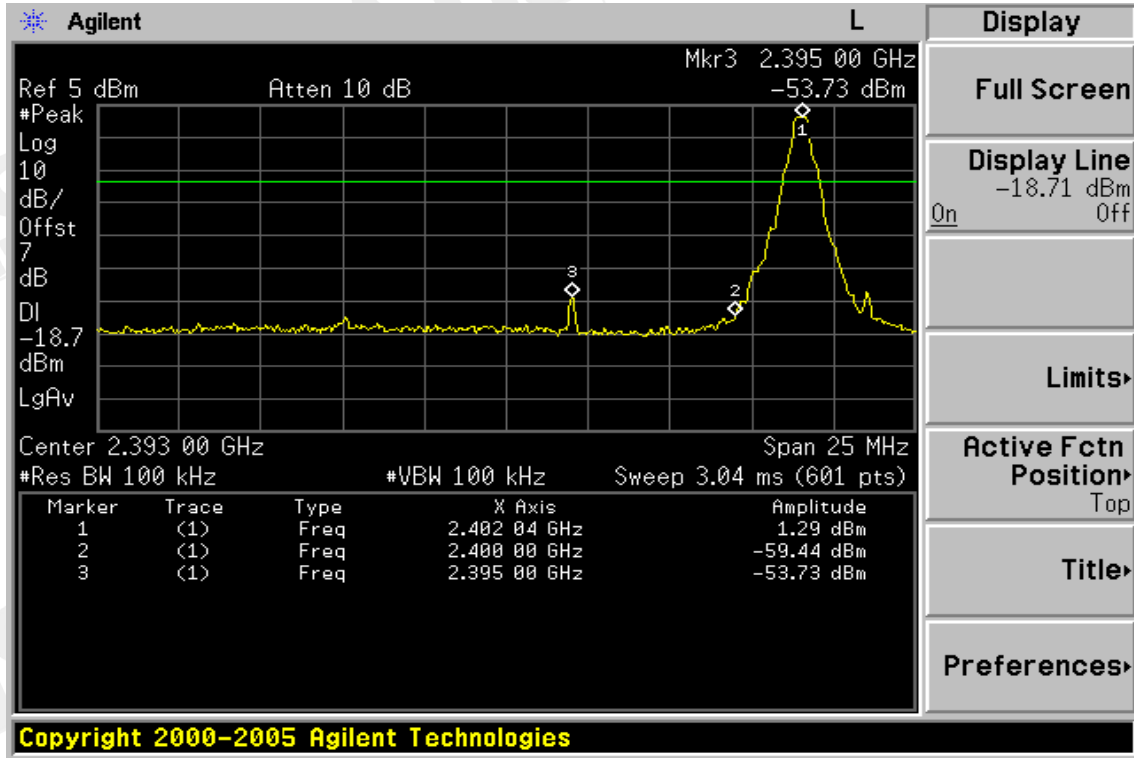
Refer to attach spectrum analyzer data chart.

### 8.4. Measurement Equipment Used:

Conducted Emission Test Site					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	Agilent	E4446A	MY43360126	03/29/2006	03/28/2007
Spectrum Analyzer	Agilent	7405A	US41160416	06/28/2006	06/29/2007
Spectrum Analyzer	R&S	FSP 40	100034	11/09/2006	11/10/2007
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA	N/A	N/A	N/A
Attenuator	Mini-Circuit	BW-S10W5	N/A	10/07/2006	10/06/2007
Attenuator	Mini-Circuit	BW-S6W5	N/A	10/07/2006	10/06/2007
Splitter	Agilent	Power Biviber	51818	01/05/2007	01/04/2008

Note: Measurement Equipment for radiated emission refers to section 9.

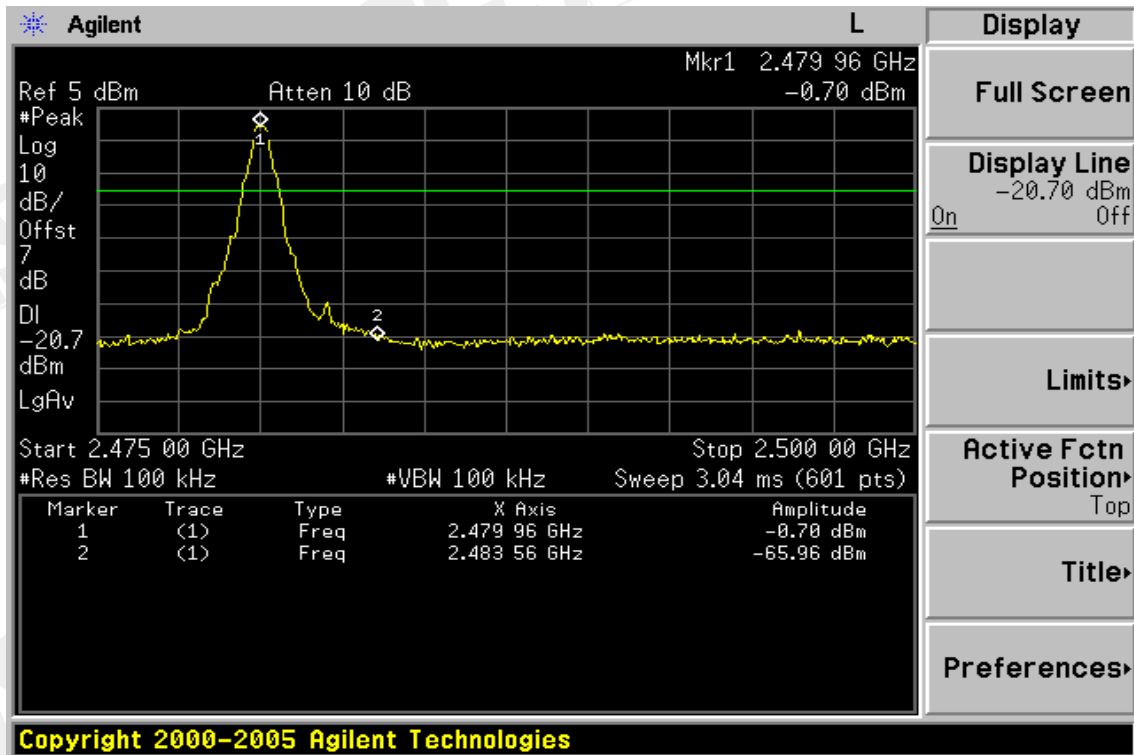
## Conducted Emission: Test Data CH-Low



This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，相關服務條款備索，或可在 [www.sgs.com](http://www.sgs.com) 中查閱，本公司之義務、免責、管轄權皆明確規範其中。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。



## Conducted Emission: Test Data CH-High



**Radiated Emission:**

Operation Mode	TX CH Low	Test Date	Jan. 18, 2007
Fundamental Frequency	2402 MHz	Test By	Danny
Temperature	25 °C	Pol	Ver.
Humidity	65 %		

Freq. (MHz)	Peak	AV	Actual FS	Peak	AV	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
	Reading (dBuV)	Reading (dBuV)		Ant./CL CF(dB)	Peak (dBuV/m)		AV (dBuV/m)		
2329.95	33.95	---	-1.73	32.22	---	74.00	54.00	-21.78	Peak
2369.97	33.81	---	-1.46	32.35	---	74.00	54.00	-21.65	Peak

Operation Mode	TX CH Low	Test Date	Jan. 18, 2007
Fundamental Frequency	2402 MHz	Test By	Danny
Temperature	25 °C	Pol	Hor.
Humidity	65 %		

Freq. (MHz)	Peak	AV	Actual FS	Peak	AV	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	Remark
	Reading (dBuV)	Reading (dBuV)		Ant./CL CF(dB)	Peak (dBuV/m)		AV (dBuV/m)		
2329.95	34.32	---	-1.73	32.59	---	74.00	54.00	-21.41	Peak
2369.97	36.26	---	-1.46	34.80	---	74.00	54.00	-19.20	Peak

**Remark :**

- (1) Datas of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (2) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column ◦
- (3) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.
- (4) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

**Radiated Emission:**

Operation Mode	TX CH High	Test Date	Jan. 18, 2007
Fundamental Frequency	2480 MHz	Test By	Danny
Temperature	25 °C	Pol	Ver.
Humidity	65 %		

Freq. (MHz)	Peak	AV	Ant./CL CF(dB)	Actual FS		Peak	AV	Margin (dB)	Remark
	Reading (dBuV)	Reading (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Limit (dBuV/m)	Limit (dBuV/m)		
2483.56	33.90	---	-0.92	32.98	---	74.00	54.00	-21.02	Peak

Operation Mode	TX CH High	Test Date	Jan. 18, 2007
Fundamental Frequency	2480 MHz	Test By	Danny
Temperature	25 °C	Pol	Hor.
Humidity	65 %		

Freq. (MHz)	Peak	AV	Ant./CL CF(dB)	Actual FS		Peak	AV	Margin (dB)	Remark
	Reading (dBuV)	Reading (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Limit (dBuV/m)	Limit (dBuV/m)		
2483.56	38.52	---	-0.92	37.60	---	74.00	54.00	-16.40	Peak

**Remark :**

- (1) Datas of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (2) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column ◦
- (3) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.
- (4) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

**Radiated Emission: (Co-Location BT H Plan CH Low / GSM 850 High)**

Operation Mode	BT H Plan CH Low / GSM 850 High	Test Date	Jan. 18, 2007
Fundamental Frequency	2402 MHz / 848.80MHz	Test By	Danny
Temperature	25 °C	Pol	Ver.
Humidity	65 %		

Freq. (MHz)	Peak	AV	Actual FS Ant./CL CF(dB)	Peak	AV	Peak Limit (dBuV/m)	AV	Margin (dB)	Remark
	Reading (dBuV)	Reading (dBuV)		Peak (dBuV/m)	AV (dBuV/m)		Limit (dBuV/m)		
2394.98	42.06	---	-1.36	40.70	---	74.00	54.00	-13.30	Peak

Operation Mode	BT H Plan CH Low / GSM 850 High	Test Date	Jan. 18, 2007
Fundamental Frequency	2402 MHz / 848.80MHz	Test By	Danny
Temperature	25 °C	Pol	Hor.
Humidity	65 %		

Freq. (MHz)	Peak	AV	Actual FS Ant./CL CF(dB)	Peak	AV	Peak Limit (dBuV/m)	AV	Margin (dB)	Remark
	Reading (dBuV)	Reading (dBuV)		Peak (dBuV/m)	AV (dBuV/m)		Limit (dBuV/m)		
2394.98	41.77	---	-1.36	40.41	---	74.00	54.00	-13.59	Peak

Remark :

- (1) Datas of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (2) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column °
- (3) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.
- (4) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

**Radiated Emission: (Co-Location BT H Plan CH High / GSM 850 High)**

Operation Mode	BT H Plan CH High / GSM 850 High	Test Date	Jan. 18, 2007
Fundamental Frequency	2480 MHz / 848.80MHz	Test By	Danny
Temperature	25 °C	Pol	Ver.
Humidity	65 %		

Freq. (MHz)	Peak	AV	Ant./CL CF(dB)	Actual FS		Peak	AV	Margin (dB)	Remark
	Reading (dBuV)	Reading (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Limit (dBuV/m)	Limit (dBuV/m)		
2483.56	33.48	---	-0.92	32.56	---	74.00	54.00	-21.44	Peak

Operation Mode	BT H Plan CH High / GSM 850 High	Test Date	Jan. 18, 2007
Fundamental Frequency	2480 MHz / 848.80MHz	Test By	Danny
Temperature	25 °C	Pol	Hor.
Humidity	65 %		

Freq. (MHz)	Peak	AV	Ant./CL CF(dB)	Actual FS		Peak	AV	Margin (dB)	Remark
	Reading (dBuV)	Reading (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Limit (dBuV/m)	Limit (dBuV/m)		
2483.56	34.50	---	-0.92	33.58	---	74.00	54.00	-20.42	Peak

Remark :

- (1) Datas of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (2) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column ◦
- (3) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.
- (4) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

**Radiated Emission: (Co-Location BT H Plan CH Low / GSM 1900 Low)**

Operation Mode	BT H Plan CH Low / GSM 1900 Low	Test Date	Jan. 18, 2007
Fundamental Frequency	2402MHz / 1850.20MHz	Test By	Danny
Temperature	25 °C	Pol	Ver.
Humidity	65 %		

Freq. (MHz)	Peak	AV	Actual FS Ant./CL CF(dB)	Peak	AV	Peak Limit (dBuV/m)	AV	Margin (dB)	Remark
	Reading (dBuV)	Reading (dBuV)		Peak (dBuV/m)	AV (dBuV/m)		Limit (dBuV/m)		
2394.98	42.37	---	-1.36	41.01	---	74.00	54.00	-12.99	Peak

Operation Mode	BT H Plan CH Low / GSM 1900 Low	Test Date	Jan. 18, 2007
Fundamental Frequency	2402MHz / 1850.20MHz	Test By	Danny
Temperature	25 °C	Pol	Hor.
Humidity	65 %		

Freq. (MHz)	Peak	AV	Actual FS Ant./CL CF(dB)	Peak	AV	Peak Limit (dBuV/m)	AV	Margin (dB)	Remark
	Reading (dBuV)	Reading (dBuV)		Peak (dBuV/m)	AV (dBuV/m)		Limit (dBuV/m)		
2394.98	44.64	---	-1.36	43.28	---	74.00	54.00	-10.72	Peak

Remark :

- (1) Datas of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (2) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column °
- (3) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.
- (4) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.



**Radiated Emission: (Co-Location BT H Plan CH High / GSM1900 Low)**

Operation Mode	BT H Plan CH High / GSM 1900 Low	Test Date	Jan. 18, 2007
Fundamental Frequency	2480 MHz / 1850.20MHz	Test By	Danny
Temperature	25 °C	Pol	Ver.
Humidity	65 %		

Freq. (MHz)	Peak	AV	Ant./CL CF(dB)	Actual FS		Peak	AV	Margin (dB)	Remark
	Reading (dBuV)	Reading (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Limit (dBuV/m)	Limit (dBuV/m)		
2483.56	34.67	---	-0.92	33.75	---	74.00	54.00	-20.25	Peak

Operation Mode	BT H Plan CH High / GSM 1900 Low	Test Date	Jan. 18, 2007
Fundamental Frequency	2480 MHz / 1850.20MHz	Test By	Danny
Temperature	25 °C	Pol	Hor.
Humidity	65 %		

Freq. (MHz)	Peak	AV	Ant./CL CF(dB)	Actual FS		Peak	AV	Margin (dB)	Remark
	Reading (dBuV)	Reading (dBuV)		Peak (dBuV/m)	AV (dBuV/m)	Limit (dBuV/m)	Limit (dBuV/m)		
2483.56	34.70	---	-0.92	33.78	---	74.00	54.00	-20.22	Peak

Remark :

- (1) Datas of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (2) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column ◦
- (3) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.
- (4) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.



## 9. SPURIOUS RADIATED EMISSION TEST

### 9.1. Standard Applicable

According to §15.247(c), all other emissions outside these bands shall not exceed the general radiated emission limits specified in §15.209(a). And according to §15.33(a)(1), for an intentional radiator operates below 10GHz, the frequency range of measurements: to the tenth harmonic of the highest fundamental frequency or to 40GHz, whichever is lower.

### 9.2. EUT Setup

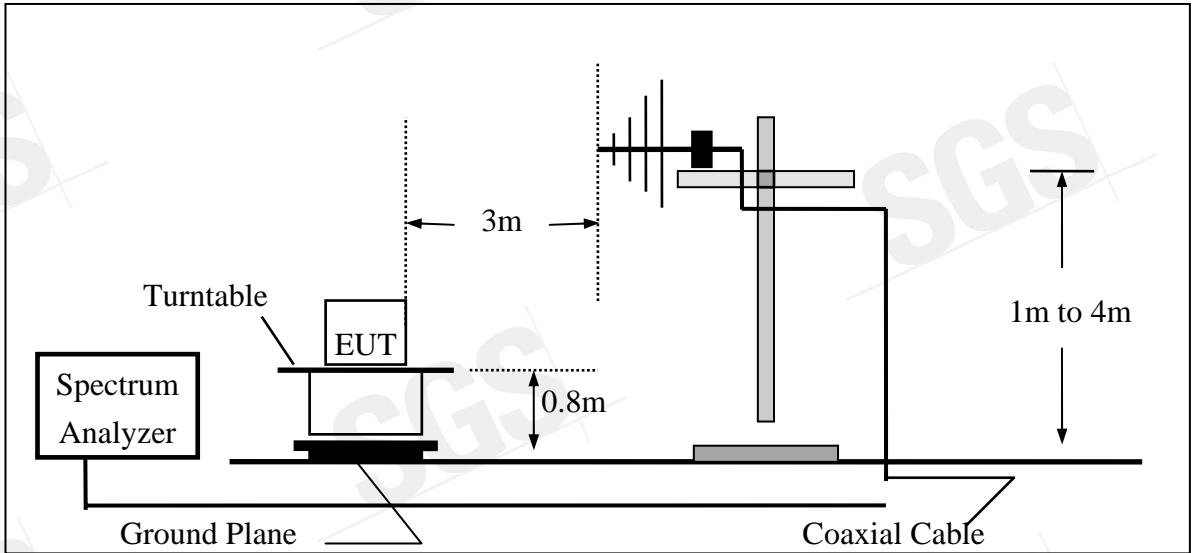
1. The radiated emission tests were performed in the 3 meter open-test site, using the setup in accordance with the ANSI C63.4-2003.
2. The EUT was put in the front of the test table. The peripherals was placed on the side of the host system. The rear of the EUT and peripherals were placed flushed with the rear of the tabletop.
3. The spacing between the peripherals was 10 centimeters.
4. External I/O cables were draped along the edge of the test table and bundle when necessary.
5. The host PC system was connected with 110Vac/60Hz power source.

### 9.3. Measurement Procedure

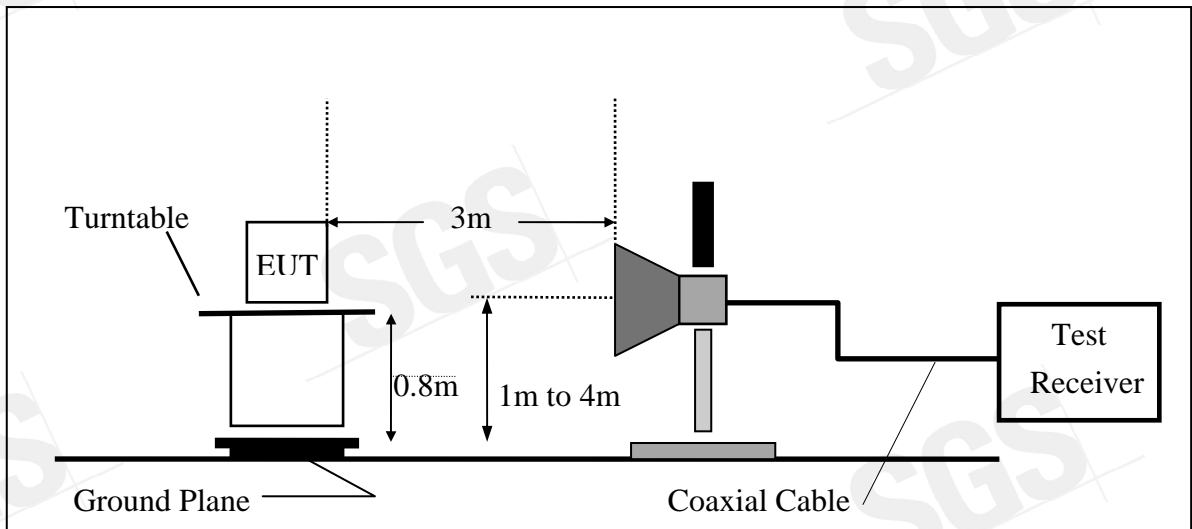
1. The EUT was placed on a turn table which is 0.8m above ground plane.
2. The turn table shall rotate 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emissions.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until all frequency measured were complete.

## 9.4. Test SET-UP (Block Diagram of Configuration)

(A) Radiated Emission Test Set-Up, Frequency Below 1GHz



(B) Radiated Emission Test Set-UP Frequency Over 1 GHz



### 9.5. Measurement Equipment Used:

966 Chamber					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	R&S	FSP 40	100034	05/27/2006	05/26/2007
Spectrum Analyzer	Agilent	E7405A	US41160416	08/27/2006	08/26/2007
Bilog Antenna	SCHWAZBECK	VULB9163	152	06/03/2006	06/02/2007
Horn antenna	Schwarzbeck	BBHA 9120D	309/320	08/16/2006	08/15/2007
Horn antenna	Schwarzbeck	BBHA 9170	184/185	07/04/2006	07/03/2007
Pre-Amplifier	HP	8447D	2944A09469	07/19/2006	07/18/2007
Pre-Amplifier	HP	8494B	3008A00578	02/26/2006	02/25/2007
Turn Table	HD	DT420	N/A	N.C.R	N.C.R
Antenna Tower	HD	MA240-N	240/657	N.C.R	N.C.R
Controller	HD	HD100	N/A	N.C.R	N.C.R
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA-10M	10m	10/09/2006	10/08/2007
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA-3M	3m	10/09/2006	10/08/2007
Site NSA	SGS	966 chamber	N/A	11/17/2006	11/16/2007

### 9.6. Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor(if any) from the measured reading. The basic equation with a sample calculation is as follows:

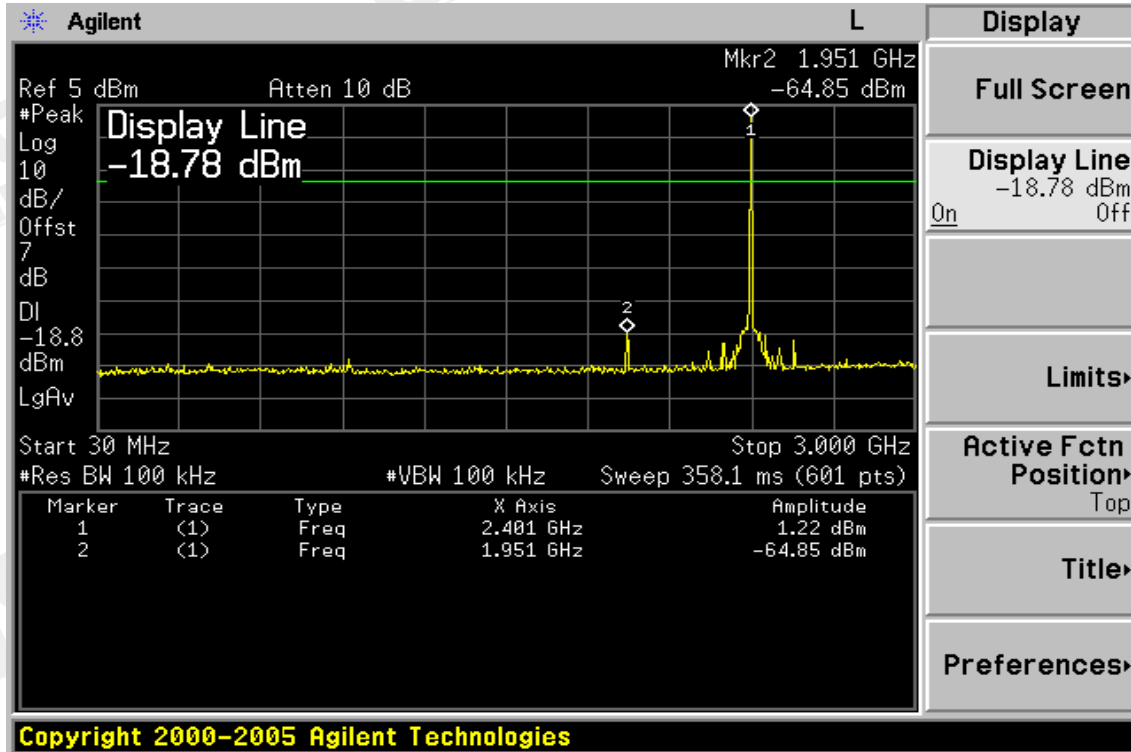
$$FS = RA + AF + CL - AG$$

Where	FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
	RA = Reading Amplitude	AG = Amplifier Gain
	AF = Antenna Factor	

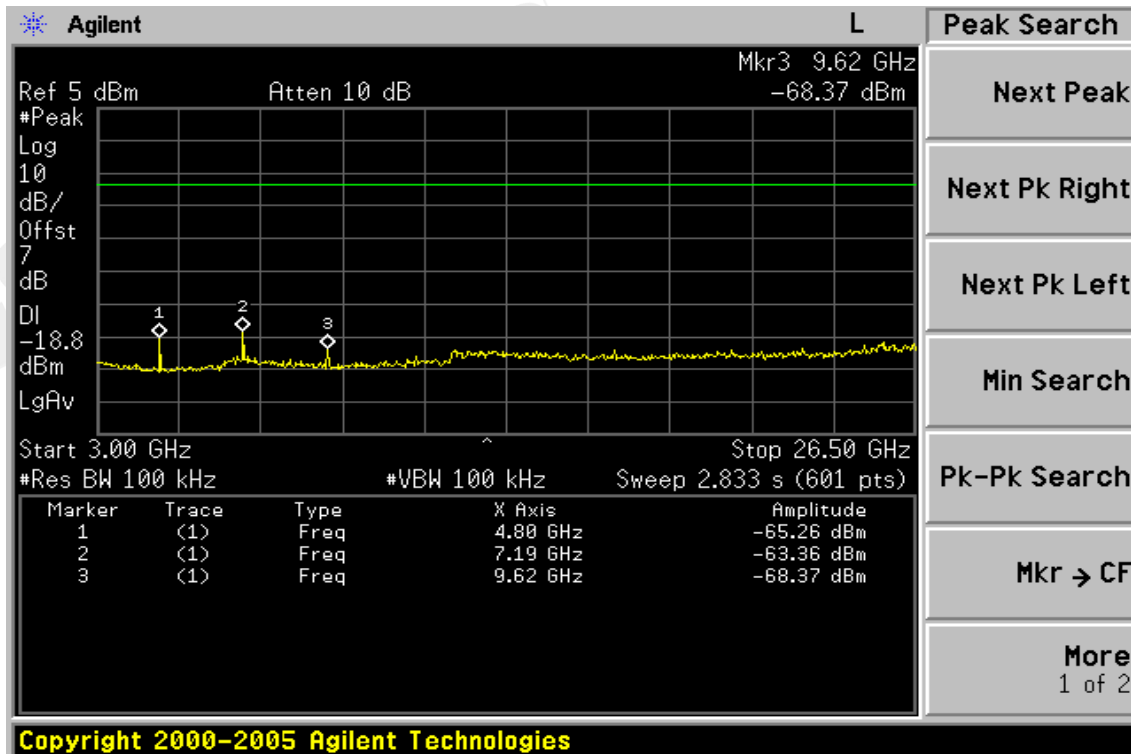
### 9.7. Measurement Result

Refer to attach tabular data sheets.

## Conducted Spurious Emission Measurement Result Ch Low 30MHz – 3GHz

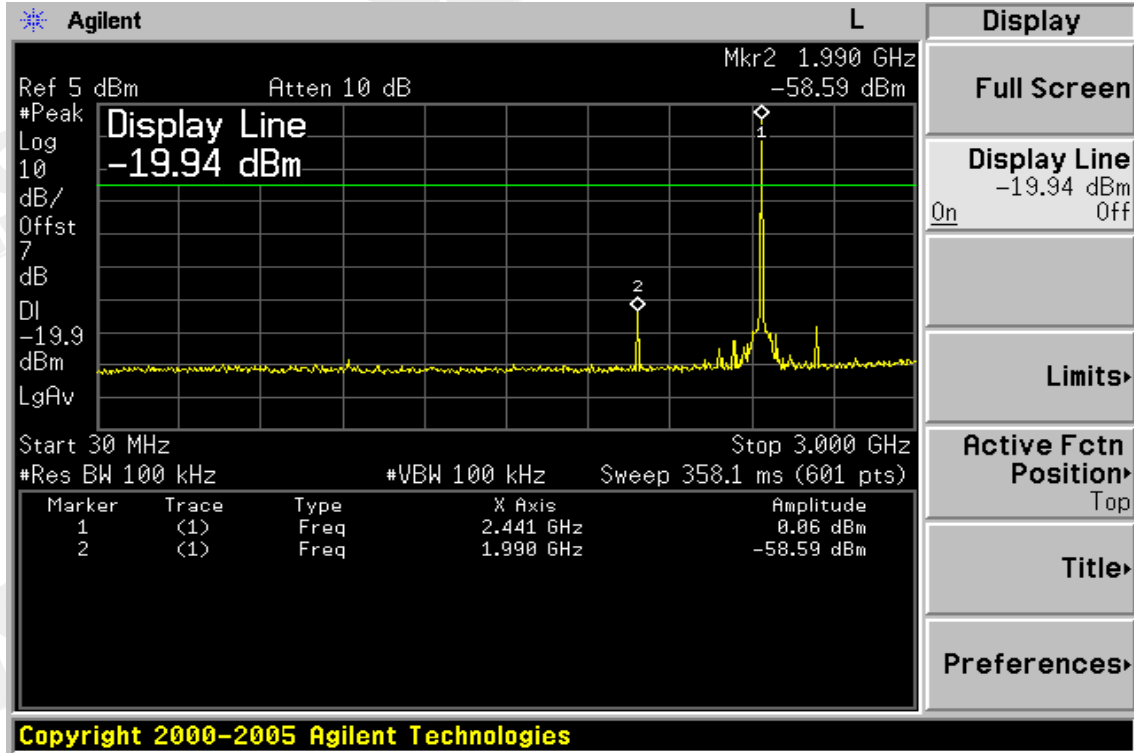


## Ch Low 3GHz – 26.5GHz

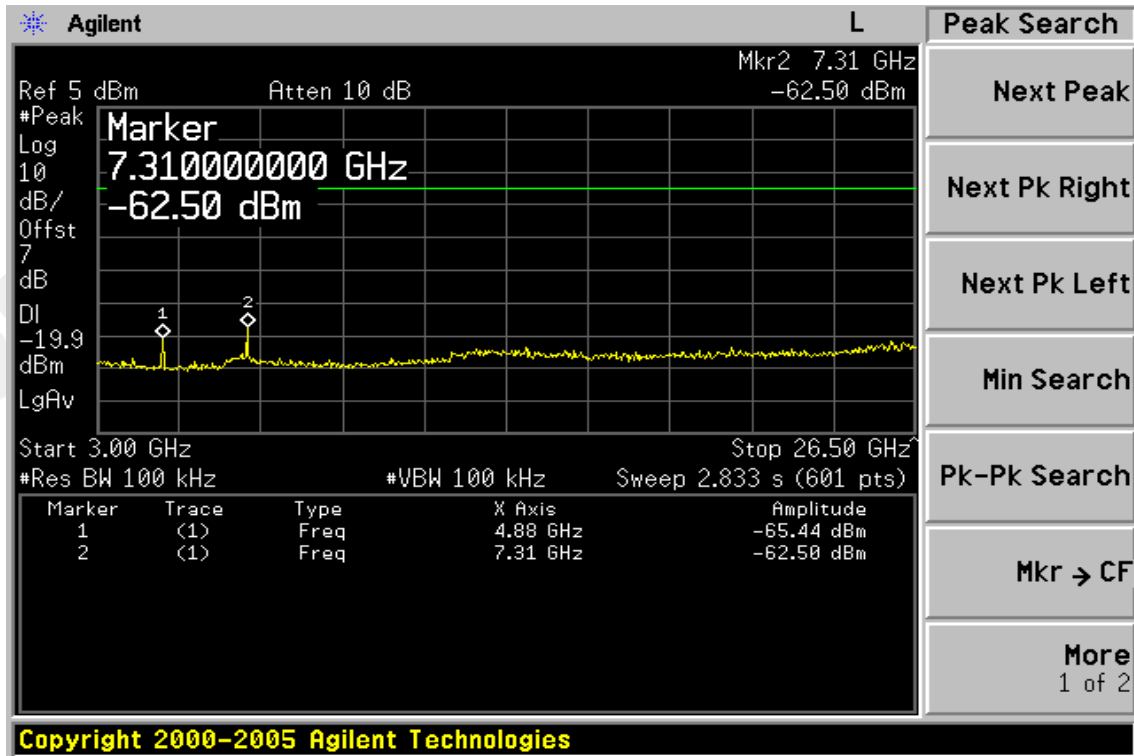


This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，相關服務條款備索，或可在 [www.sgs.com](http://www.sgs.com) 中查閱，本公司之義務、免責、管轄權皆明確規範其中。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

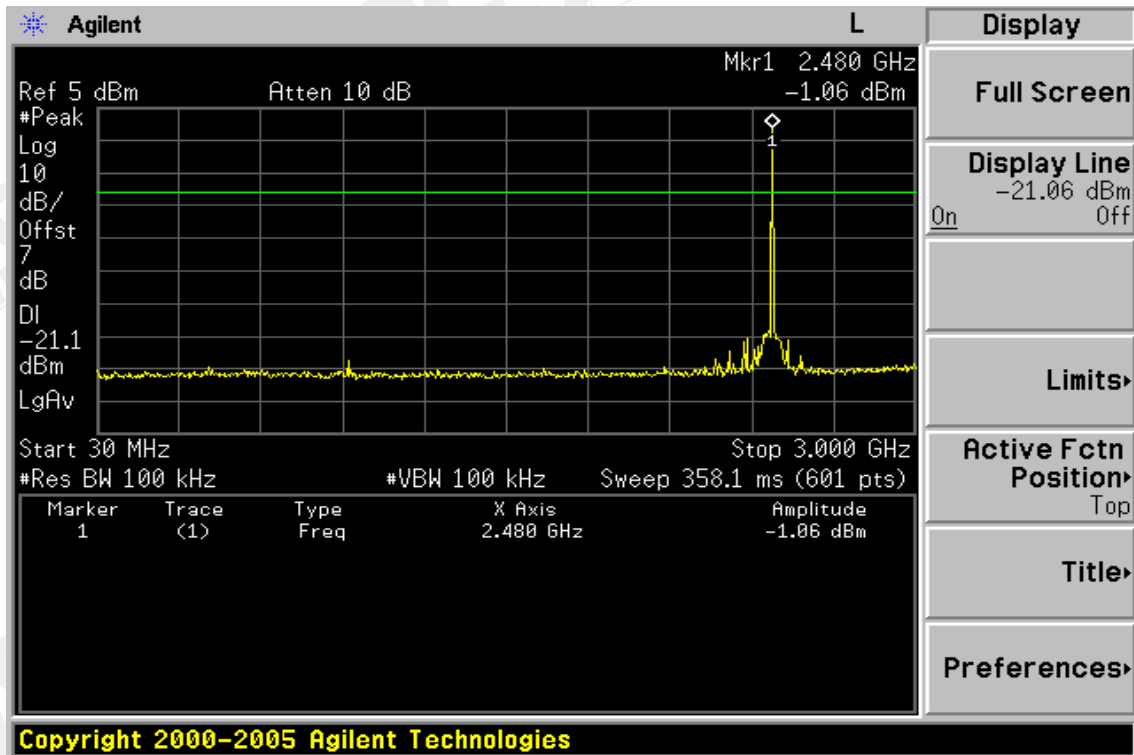
## Ch Mid 30MHz – 3GHz



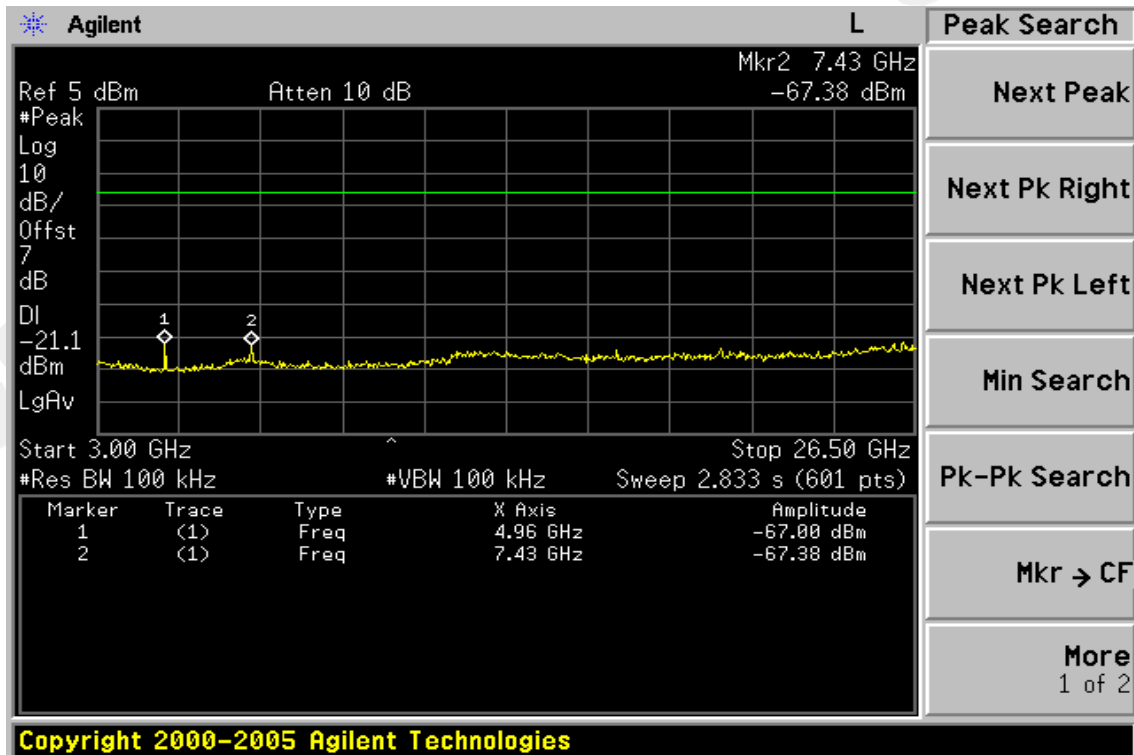
## Ch Mid 3GHz – 26.5GHz



## Ch High 30MHz – 3GHz



## Ch High 3GHz – 26.5GHz



**Radiated Spurious Emission Measurement Result (below 1GHz)**

Operation Mode	TX CH Low	Test Date	Jan. 18, 2007
Fundamental Frequency	2402MHz	Test By	Danny
Temperature	25 °C	Pol	Ver./Hor.
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
30.00	V	Peak	47.13	-15.04	32.09	40.00	-7.91
67.83	V	Peak	47.61	-15.90	31.71	40.00	-8.29
96.93	V	Peak	48.76	-17.50	31.26	43.50	-12.24
33.88	H	Peak	45.76	-14.71	31.05	40.00	-8.95
67.83	H	Peak	49.68	-15.90	33.78	40.00	-6.22
94.99	H	Peak	44.95	-17.61	27.34	43.50	-16.16

Remark :

- 1 Measuring frequencies from 30 MHz to the 1GHz .
- 2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- 3 Datas of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.



**Radiated Spurious Emission Measurement Result (below 1GHz)**

Operation Mode	TX CH Mid	Test Date	Jan. 18, 2007
Fundamental Frequency	2441MHz	Test By	Danny
Temperature	25 °C	Pol	Ver./Hor.
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
33.88	V	Peak	47.44	-14.71	32.73	40.00	-7.27
70.74	V	Peak	48.29	-16.56	31.73	40.00	-8.27
96.93	V	Peak	48.51	-17.50	31.01	43.50	-12.49
36.79	H	Peak	45.72	-14.41	31.31	40.00	-8.69
67.83	H	Peak	50.05	-15.90	34.15	40.00	-5.85
96.93	H	Peak	45.54	-17.50	28.04	43.50	-15.46

Remark :

- 1 Measuring frequencies from 30 MHz to the 1GHz .
- 2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- 3 Datas of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

**Radiated Spurious Emission Measurement Result (below 1GHz)**

Operation Mode	TX CH High	Test Date	Jan. 18, 2007
Fundamental Frequency	2480MHz	Test By	Danny
Temperature	25 °C	Pol	Ver./Hor.
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
33.88	V	Peak	47.67	-14.71	32.96	40.00	-7.04
67.83	V	Peak	47.09	-15.90	31.19	40.00	-8.81
104.69	V	Peak	47.57	-16.95	30.62	43.50	-12.88
36.79	H	Peak	45.86	-14.41	31.45	40.00	-8.55
67.83	H	Peak	49.57	-15.90	33.67	40.00	-6.33
96.93	H	Peak	44.88	-17.50	27.38	43.50	-16.12

Remark :

- 1 Measuring frequencies from 30 MHz to the 1GHz .
- 2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- 3 Datas of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

**Radiated Spurious Emission Measurement Result (below 1GHz) (Co-Location mode)**

Operation Mode	BT H Plan TX High / GSM 850 High	Test Date	Jan. 18, 2007
Fundamental Frequency	2480MHz / 848.8MHz	Test By	Danny
Temperature	25 °C	Pol	Ver./Hor.
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
33.88	V	Peak	47.81	-14.71	33.10	40.00	-6.90
67.83	V	Peak	47.19	-15.90	31.29	40.00	-8.71
104.69	V	Peak	47.60	-16.95	30.65	43.50	-12.85
36.79	H	Peak	45.96	-14.41	31.55	40.00	-8.45
67.83	H	Peak	49.72	-15.90	33.82	40.00	-6.18
96.93	H	Peak	45.18	-17.50	27.68	43.50	-15.82

Remark :

- 1 Measuring frequencies from 30 MHz to the 1GHz .
- 2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- 3 Datas of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

**Radiated Spurious Emission Measurement Result (below 1GHz) (Co-Location mode)**

Operation Mode	BT H Plan TX High / GSM 1900 Low	Test Date	Jan. 18, 2007
Fundamental Frequency	2480MHz / 1850.20MHz	Test By	Danny
Temperature	25 °C	Pol	Ver./Hor.
Humidity	65 %		

Freq. (MHz)	Ant.Pol. H/V	Detector Mode (PK/QP)	Reading (dBuV)	Factor (dB)	Actual FS (dBuV/m)	Limit3m (dBuV/m)	Safe Margin (dB)
33.88	V	Peak	47.83	-14.71	33.12	40.00	-6.88
67.83	V	Peak	48.03	-15.90	32.13	40.00	-7.87
104.69	V	Peak	47.42	-16.95	30.47	43.50	-13.03
36.79	H	Peak	45.32	-14.41	30.91	40.00	-9.09
67.83	H	Peak	49.95	-15.90	34.05	40.00	-5.95
96.93	H	Peak	45.43	-17.50	27.93	43.50	-15.57

Remark :

- 1 Measuring frequencies from 30 MHz to the 1GHz .
- 2 Radiated emissions measured in frequency range from 30 MHz to 1000MHz were made with an instrument using Peak/QP detector mode.
- 3 Datas of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 4 The IF bandwidth of SPA between 30MHz to 1GHz was 100KHz.

**Radiated Spurious Emission Measurement Result (above 1GHz)**

Operation Mode	TX CH Low	Test Date	Jan. 18, 2007
Fundamental Frequency	2402 MHz	Test By	Danny
Temperature	25 °C	Pol	Ver.
Humidity	65 %		

Freq. (MHz)	Peak	AV	Actual FS Ant./CL CF(dB)	Peak	AV	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)
	Reading (dBuV)	Reading (dBuV)		Reading (dBuV/m)	Reading (dBuV/m)			
4804.0	----			74.00	54.00			
7206.0	----			74.00	54.00			
9608.0	----			74.00	54.00			
12010.0	----			74.00	54.00			
14412.0	----			74.00	54.00			
16814.0	----			74.00	54.00			
19216.0	----			74.00	54.00			
21618.0	----			74.00	54.00			
24020.0	----			74.00	54.00			

Remark :

- (1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency °
- (2) Datas of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column °
- (4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.
- (5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

**Radiated Spurious Emission Measurement Result (above 1GHz)**

Operation Mode	TX CH Low	Test Date	Jan. 18, 2007
Fundamental Frequency	2402 MHz	Test By	Danny
Temperature	25 °C	Pol	Hor.
Humidity	65 %		

Freq. (MHz)	Peak	AV	Actual FS Ant./CL CF(dB)	Peak	AV	Peak Limit (dBuV/m)	AV	Margin (dB)	
	Reading (dBuV)	Reading (dBuV)		Peak (dBuV/m)	AV (dBuV/m)		Limit (dBuV/m)		
1793.0	40.12		-4.47	35.65		74.00	54.00	-18.35	Peak
4804.0	38.10		5.99	44.09		74.00	54.00	-9.91	Peak
7206.0	----					74.00	54.00		
9608.0	----					74.00	54.00		
12010.0	----					74.00	54.00		
14412.0	----					74.00	54.00		
16814.0	----					74.00	54.00		
19216.0	----					74.00	54.00		
21618.0	----					74.00	54.00		
24020.0	----					74.00	54.00		

Remark :

- (1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency °
- (2) Datas of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column °
- (4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.
- (5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.



**Radiated Spurious Emission Measurement Result (above 1GHz)**

Operation Mode	TX CH Mid	Test Date	Jan. 18, 2007
Fundamental Frequency	2441 MHz	Test By	Danny
Temperature	25 °C	Pol	Ver.
Humidity	65 %		

Freq. (MHz)	Peak	AV	Actual FS Ant./CL CF(dB)	Peak	AV	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)
	Reading (dBuV)	Reading (dBuV)		Reading (dBuV/m)	Reading (dBuV/m)			
4882.0	----			74.00	54.00			
7323.0	----			74.00	54.00			
9764.0	----			74.00	54.00			
12205.0	----			74.00	54.00			
14646.0	----			74.00	54.00			
17087.0	----			74.00	54.00			
19528.0	----			74.00	54.00			
21969.0	----			74.00	54.00			
24410.0	----			74.00	54.00			

Remark :

- (1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency °
- (2) Datas of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column °
- (4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.
- (5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.



**Radiated Spurious Emission Measurement Result (above 1GHz)**

Operation Mode	TX CH Mid	Test Date	Jan. 18, 2007
Fundamental Frequency	2441 MHz	Test By	Danny
Temperature	25 °C	Pol	Hor.
Humidity	65 %		

Freq. (MHz)	Peak	AV	Actual FS	Peak	AV	Margin (dB)
	Reading (dBuV)	Reading (dBuV)		Limit (dBuV/m)	Limit (dBuV/m)	
1793.0	39.54	-4.47	35.07	74.00	54.00	-18.93 Peak
4882.0	38.38	6.17	44.55	74.00	54.00	-9.45 Peak
7323.0	----			74.00	54.00	
9764.0	----			74.00	54.00	
12205.0	----			74.00	54.00	
14646.0	----			74.00	54.00	
17087.0	----			74.00	54.00	
19528.0	----			74.00	54.00	
21969.0	----			74.00	54.00	
24410.0	----			74.00	54.00	

Remark :

- (1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency ◦
- (2) Datas of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column ◦
- (4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.
- (5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

**Radiated Spurious Emission Measurement Result (above 1GHz)**

Operation Mode	TX CH High	Test Date	Jan. 18, 2007
Fundamental Frequency	2480 MHz	Test By	Danny
Temperature	25 °C	Pol	Ver.
Humidity	65 %		

Freq. (MHz)	Peak	AV	Actual FS Ant./CL CF(dB)	Peak	AV	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)
	Reading (dBuV)	Reading (dBuV)		Peak (dBuV/m)	AV (dBuV/m)			
4960.0	----					74.00	54.00	
7440.0	----					74.00	54.00	
9920.0	----					74.00	54.00	
12400.0	----					74.00	54.00	
14880.0	----					74.00	54.00	
17360.0	----					74.00	54.00	
19840.0	----					74.00	54.00	
22320.0	----					74.00	54.00	
24800.0	----					74.00	54.00	

Remark :

- (1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency °
- (2) Datas of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column °
- (4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.
- (5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

**Radiated Spurious Emission Measurement Result (above 1GHz)**

Operation Mode	TX CH High	Test Date	Jan. 18, 2007
Fundamental Frequency	2480 MHz	Test By	Danny
Temperature	25 °C	Pol	Hor.
Humidity	65 %		

Freq. (MHz)	Peak	AV	Actual FS		Peak	AV	Margin (dB)			
	Reading (dBuV)	Reading (dBuV)	Ant./CL CF (dB)	Peak (dBuV/m)	AV (dBuV/m)	Limit (dBuV/m)			Limit (dBuV/m)	
1793.0	40.56		-4.47	36.09			74.00	54.00	-17.91	Peak
4960.0	38.87		6.36	45.23			74.00	54.00	-8.77	Peak
7440.0	----						74.00	54.00		
9920.0	----						74.00	54.00		
12400.0	----						74.00	54.00		
14880.0	----						74.00	54.00		
17360.0	----						74.00	54.00		
19840.0	----						74.00	54.00		
22320.0	----						74.00	54.00		
24800.0	----						74.00	54.00		

**Remark :**

- (1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency °
- (2) Datas of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column °
- (4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 3MHz, Sweep time= 200 ms.
- (5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

**Radiated Spurious Emission Measurement Result (above 1GHz) (Co-Location)**

Operation Mode	BT H PLAN TX High / GSM 850 High	Test Date	Jan. 18, 2007
Fundamental Frequency	2480MHz / 848.80MHz	Test By	Danny
Temperature	25 °C	Pol	Ver.
Humidity	65 %		

Freq. (MHz)	Peak	AV	Actual FS Ant./CL CF(dB)	Peak	AV	Peak Limit (dBuV/m)	AV	Margin (dB)	
	Reading (dBuV)	Reading (dBuV)		Peak (dBuV/m)	AV (dBuV/m)		Limit (dBuV/m)		
3385.5	40.1		1.7	41.9		74.00	54.00	-12.2	Peak
4960.0	----					74.00	54.00		
7440.0	----					74.00	54.00		
9920.0	----					74.00	54.00		
12400.0	----					74.00	54.00		
14880.0	----					74.00	54.00		
17360.0	----					74.00	54.00		
19840.0	----					74.00	54.00		
22320.0	----					74.00	54.00		

Remark :

- (1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency ◦
- (2) Datas of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column ◦
- (4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.
- (5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

**Radiated Spurious Emission Measurement Result (above 1GHz) (Co-Location)**

Operation Mode	BT H PLAN TX High / GSM 850 High	Test Date	Jan. 18, 2007
Fundamental Frequency	2480MHz / 848.80MHz	Test By	Danny
Temperature	25 °C	Pol	Hor
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF(dB)	Actual FS		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
				Peak (dBuV/m)	AV (dBuV/m)				
2540.0	41.5		-0.7	40.8		74.00	54.00	-13.2	Peak
3385.5	43.0		1.7	44.7		74.00	54.00	-9.3	Peak
4960.0	----					74.00	54.00		
7440.0	----					74.00	54.00		
9920.0	----					74.00	54.00		
12400.0	----					74.00	54.00		
14880.0	----					74.00	54.00		
17360.0	----					74.00	54.00		
19840.0	----					74.00	54.00		

Remark :

- (1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency ◦
- (2) Datas of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column ◦
- (4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.
- (5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.

**Radiated Spurious Emission Measurement Result (above 1GHz) (Co-Location)**

Operation Mode	BT H PLAN TX High / GSM 1900 Low	Test Date	Jan. 18, 2007
Fundamental Frequency	2480MHz / 1850.20MHz	Test By	Danny
Temperature	25 °C	Pol	Ver.
Humidity	65 %		

Freq. (MHz)	Peak Reading (dBuV)	AV Reading (dBuV)	Ant./CL CF (dB)	Actual FS Peak (dBuV/m)	Actual FS AV (dBuV/m)	Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)	
4960.0	43.51		6.36	49.87		74.00	54.00	-4.13	Peak
7440.0	----					74.00	54.00		
9920.0	----					74.00	54.00		
12400.0	----					74.00	54.00		
14880.0	----					74.00	54.00		
17360.0	----					74.00	54.00		
19840.0	----					74.00	54.00		
22320.0	----					74.00	54.00		
24800.0	----					74.00	54.00		

**Remark :**

- (1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency ◦
- (2) Datas of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column ◦
- (4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.
- (5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.



**Radiated Spurious Emission Measurement Result (above 1GHz) (Co-Location)**

Operation Mode	BT H PLAN TX High / GSM 1900 Low	Test Date	Jan. 18, 2007
Fundamental Frequency	2480MHz / 1850.20MHz	Test By	Danny
Temperature	25 °C	Pol	Hor
Humidity	65 %		

Freq. (MHz)	Peak	AV	Actual FS Ant./CL CF(dB)	Peak	AV	Peak Limit (dBuV/m)	AV	Margin (dB)	
	Reading (dBuV)	Reading (dBuV)		Peak (dBuV/m)	AV (dBuV/m)		Limit (dBuV/m)		
1793.0	40.67		-4.47	36.20		74.00	54.00	-17.80	Peak
4960.0	45.23		6.36	51.59		74.00	54.00	-2.41	Peak
7440.0	----					74.00	54.00		
9920.0	----					74.00	54.00		
12400.0	----					74.00	54.00		
14880.0	----					74.00	54.00		
17360.0	----					74.00	54.00		
19840.0	----					74.00	54.00		
22320.0	----					74.00	54.00		
24800.0	----					74.00	54.00		

Remark :

- (1) Measuring frequencies from 1GHz to the 10th harmonic of highest fundamental frequency ◦
- (2) Datas of measurement within this frequency range shown “ - ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (3) Radiated emissions measured in frequency above 1000MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column ◦
- (4) Spectrum Peak Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 1MHz, Sweep time= 200 ms.
- (5) Spectrum AV Setting : 1GHz- 26GHz, RBW= 1MHz, VBW= 10Hz, Sweep time= 200 ms.



## 10. FREQUENCY SEPARATION

### 10.1. Standard Applicable

According to §15.247(a)(1), Frequency hopping systems shall have hopping channel carrier frequencies separated by minimum of 25KHz or the  $2/3 * 20\text{dB}$  bandwidth of the hopping channel, whichever is greater.

### 10.2. Measurement Procedure

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set center frequency of spectrum analyzer = middle of hopping channel .
4. Set the spectrum analyzer as RBW,VBW=100KHz, Adjust Span to 5 MHz, Sweep = auto.
5. Max hold. Mark 3 Peaks of hopping channel and record the 3 peaks frequency.

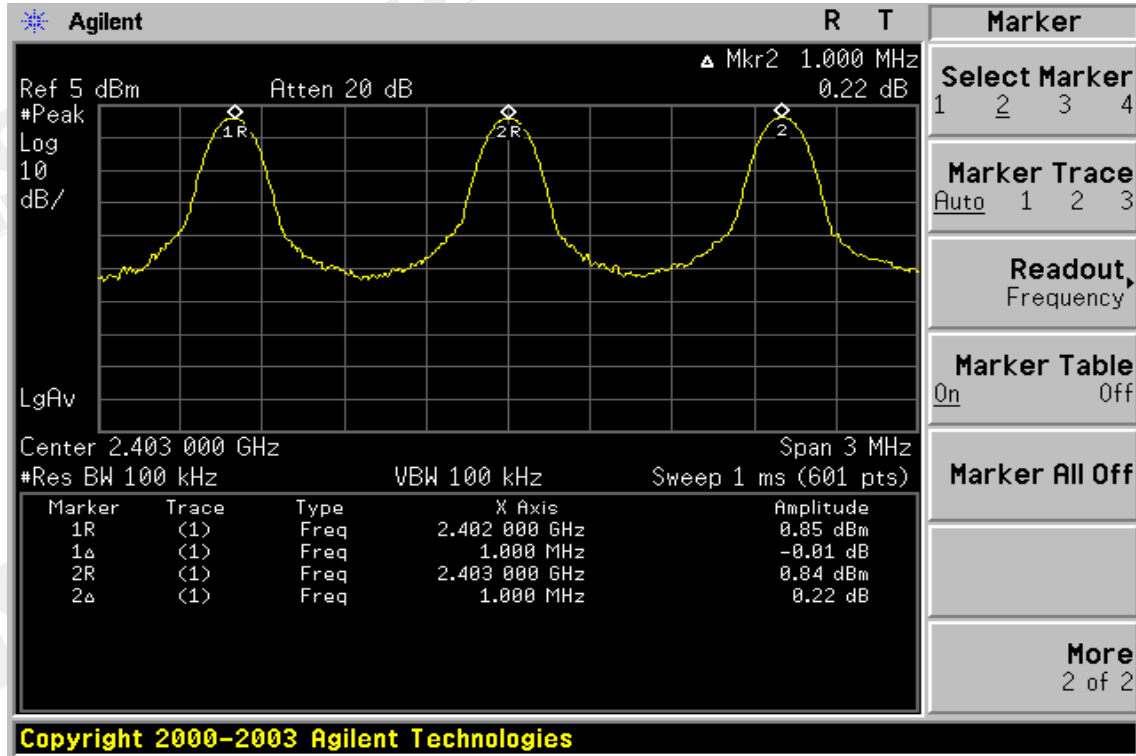
### 10.3. Measurement Result

Channel separation	Limit	Result
MHz	kHz	
1	$\geq 25\text{KHz}$ or $2/3 * 20\text{ dB bandwidth}$	PASS

### 10.4. Measurement Equipment Used:

Conducted Emission Test Site					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	Agilent	E4446A	MY43360126	03/29/2006	03/28/2007
Spectrum Analyzer	Agilent	7405A	US41160416	06/28/2006	06/29/2007
Spectrum Analyzer	R&S	FSP 40	100034	11/09/2006	11/10/2007
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA	N/A	N/A	N/A
Attenuator	Mini-Circuit	BW-S10W5	N/A	10/07/2006	10/06/2007
Attenuator	Mini-Circuit	BW-S6W5	N/A	10/07/2006	10/06/2007
Splitter	Agilent	Power Biviber	51818	01/05/2006	01/04/2007

## Frequency Separation Test Data



## 11. NUMBER OF HOPPING FREQUENCY

### 11.1. Standard Applicable

According to §15.247(a)(1)(iii), Frequency hopping systems operating in the 2400MHz-2483.5 MHz bands shall use at least 15 hopping frequencies.

### 11.2. Measurement Procedure

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set spectrum analyzer Start=2400MHz, Stop = 2483.5MHz, Sweep = auto.
4. Set the spectrum analyzer as RBW,VBW=100KHz,
5. Max hold, view and count how many channel in the band.

### 11.3. Measurement Result

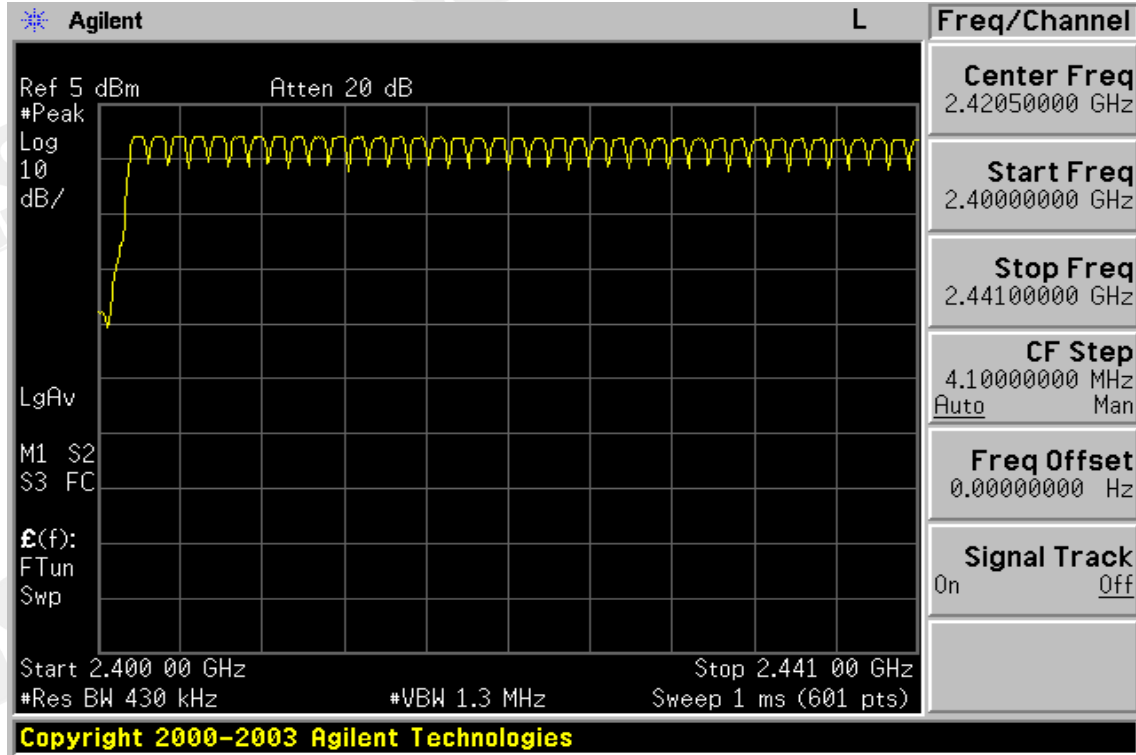
Total No of hopping channel	Limit (CH)	Measurement result (CH)	Result
	15	79	Pass

### 11.4. Measurement Equipment Used:

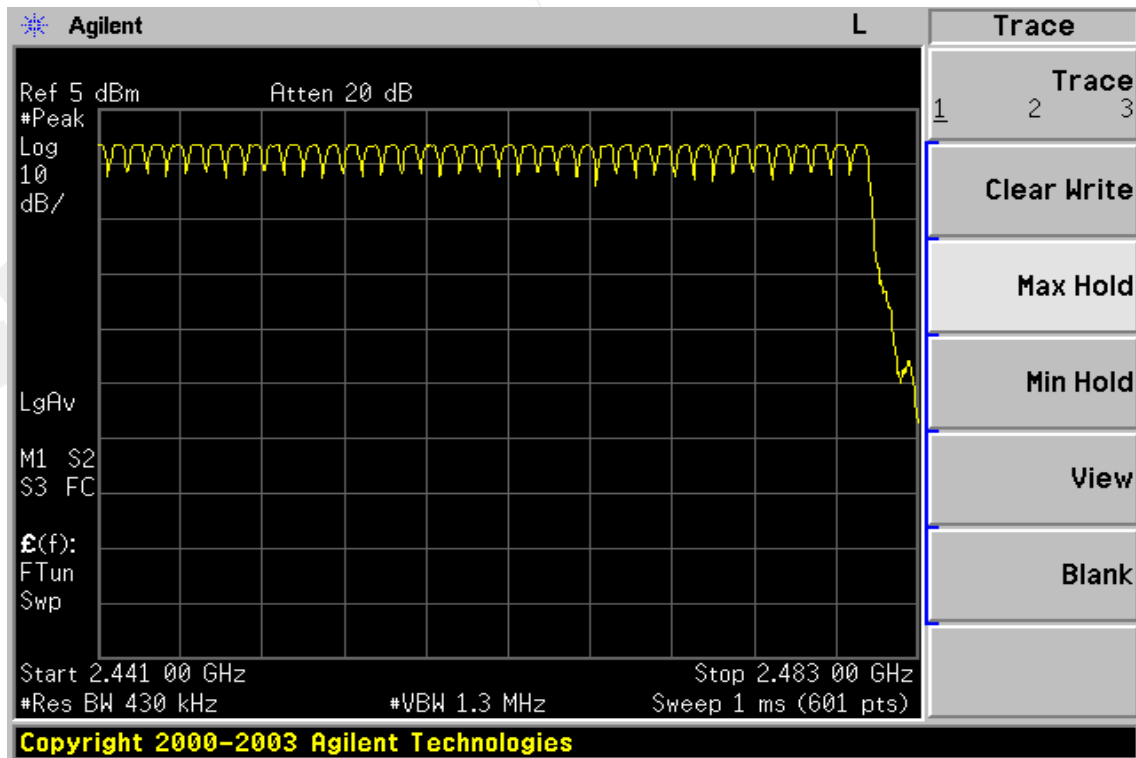
Conducted Emission Test Site					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	Agilent	E4446A	MY43360126	03/29/2006	03/28/2007
Spectrum Analyzer	Agilent	7405A	US41160416	06/28/2006	06/29/2007
Spectrum Analyzer	R&S	FSP 40	100034	11/09/2006	11/10/2007
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA	N/A	N/A	N/A
Attenuator	Mini-Circuit	BW-S10W5	N/A	10/07/2006	10/06/2007
Attenuator	Mini-Circuit	BW-S6W5	N/A	10/07/2006	10/06/2007
Splitter	Agilent	Power Biviber	51818	01/05/2007	01/04/2008

## Channel Number

2.4 GHz – 2.441GHz



2.441 GHz – 2.4835GHz



This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，相關服務條款備索，或可在 [www.sgs.com](http://www.sgs.com) 中查閱，本公司之義務、免責、管轄權皆明確規範其中。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

## 12. TIME OF OCCUPANCY (DWELL TIME)

### 12.1. Standard Applicable

According to §15.247(a)(1)(iii), Frequency hopping systems operating in the 2400MHz-2483.5 MHz. The average time of occupancy on any frequency shall not greater than 0.4 s within period of 0.4 seconds multiplied by the number of hopping channel employed.

### 12.2. Measurement Procedure

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set center frequency of spectrum analyzer = operating frequency.
4. Set the spectrum analyzer as RBW,VBW=100KHz, Span = 0Hz , Adjust Sweep = 30s.
5. Repeat above procedures until all frequency measured were complete.

### 12.3. Measurement Result

A period time = 0.4 (ms) \* 79 = 31.6 (s)

CH Low: DH1 time slot = 0.417 (ms) \* (1600/(1\*79)) \* 31.6 = 266.9 (ms)

DH3 time slot = 1.675 (ms) \* (1600/(3\*79)) \* 31.6 = 357.3 (ms)

DH5 time slot = 3.000 (ms) \* (1600/(5\*79)) \* 31.6 = 384.0 (ms)

CH Mid: DH1 time slot = 0.417 (ms) \* (1600/(1\*79)) \* 31.6 = 266.9 (ms)

DH3 time slot = 1.675 (ms) \* (1600/(3\*79)) \* 31.6 = 357.3 (ms)

DH5 time slot = 3.000 (ms) \* (1600/(5\*79)) \* 31.6 = 384.0 (ms)

CH High: DH1 time slot = 0.420 (ms) \* (1600/(1\*79)) \* 31.6 = 268.8 (ms)

DH3 time slot = 1.675 (ms) \* (1600/(3\*79)) \* 31.6 = 357.3 (ms)

DH5 time slot = 3.000 (ms) \* (1600/(5\*79)) \* 31.6 = 384.0 (ms)

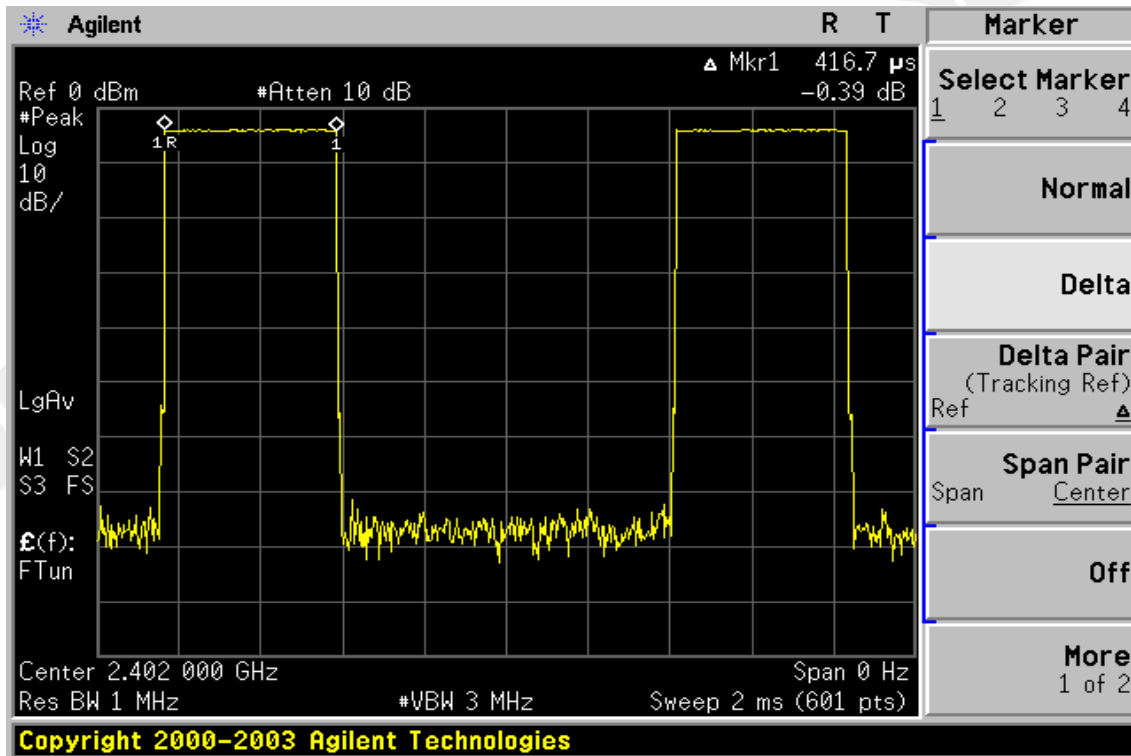
**12.4. Measurement Equipment Used:**

Conducted Emission Test Site					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	Agilent	E4446A	MY43360126	03/29/2006	03/28/2007
Spectrum Analyzer	Agilent	7405A	US41160416	06/28/2006	06/29/2007
Spectrum Analyzer	R&S	FSP 40	100034	11/09/2006	11/10/2007
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA	N/A	N/A	N/A
Attenuator	Mini-Circuit	BW-S10W5	N/A	10/07/2006	10/06/2007
Attenuator	Mini-Circuit	BW-S6W5	N/A	10/07/2006	10/06/2007
Splitter	Agilent	Power Biviber	51818	01/05/2007	01/04/2008

**Dwell Time Test Data**

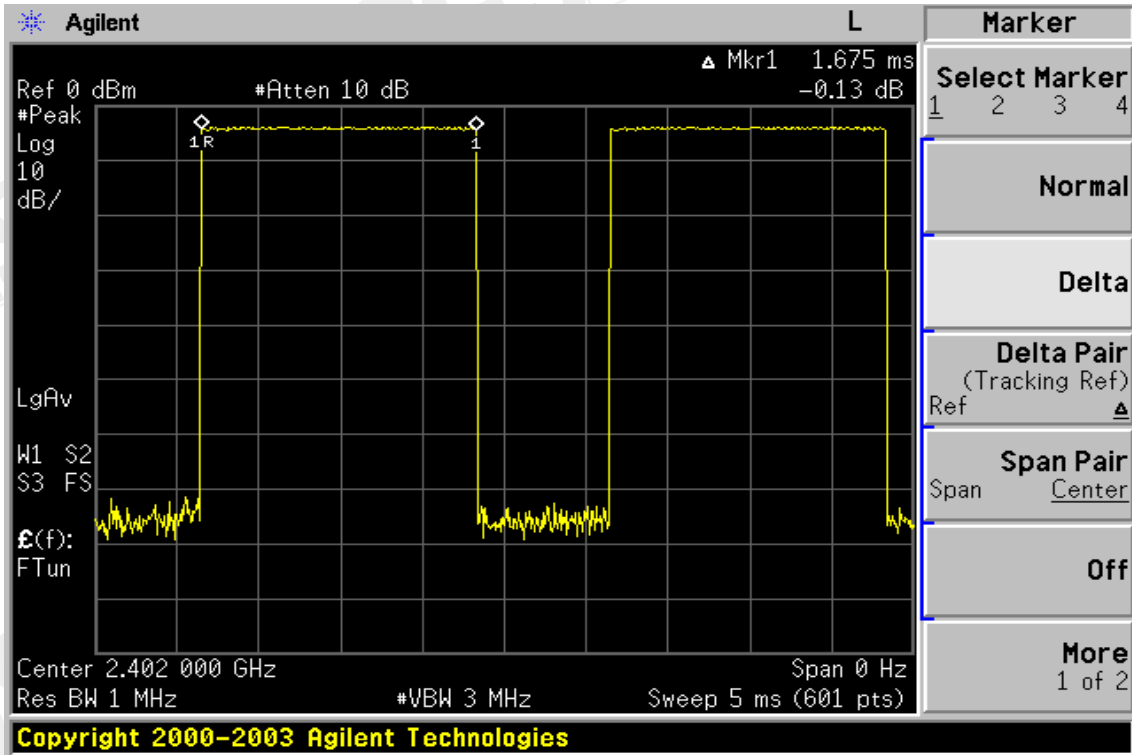
CH-Low

DH1

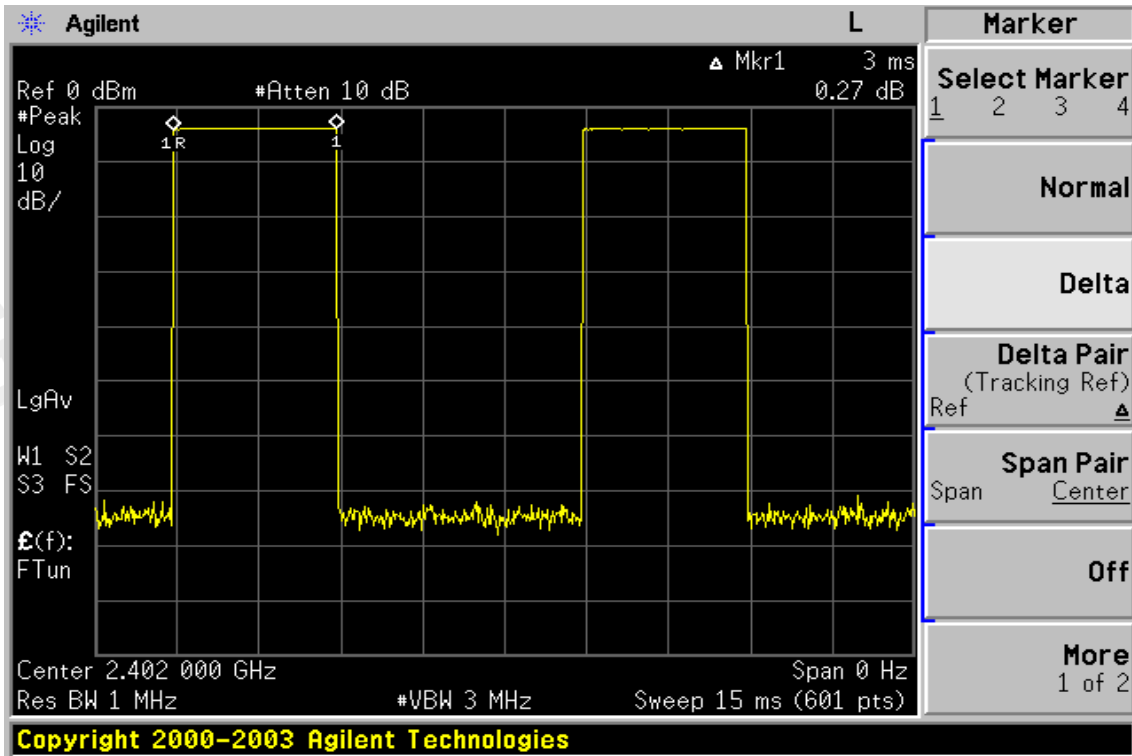


This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，相關服務條款備索，或可在 [www.sgs.com](http://www.sgs.com) 中查閱，本公司之義務、免責、管轄權皆明確規範其中。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

### DH3



### DH5

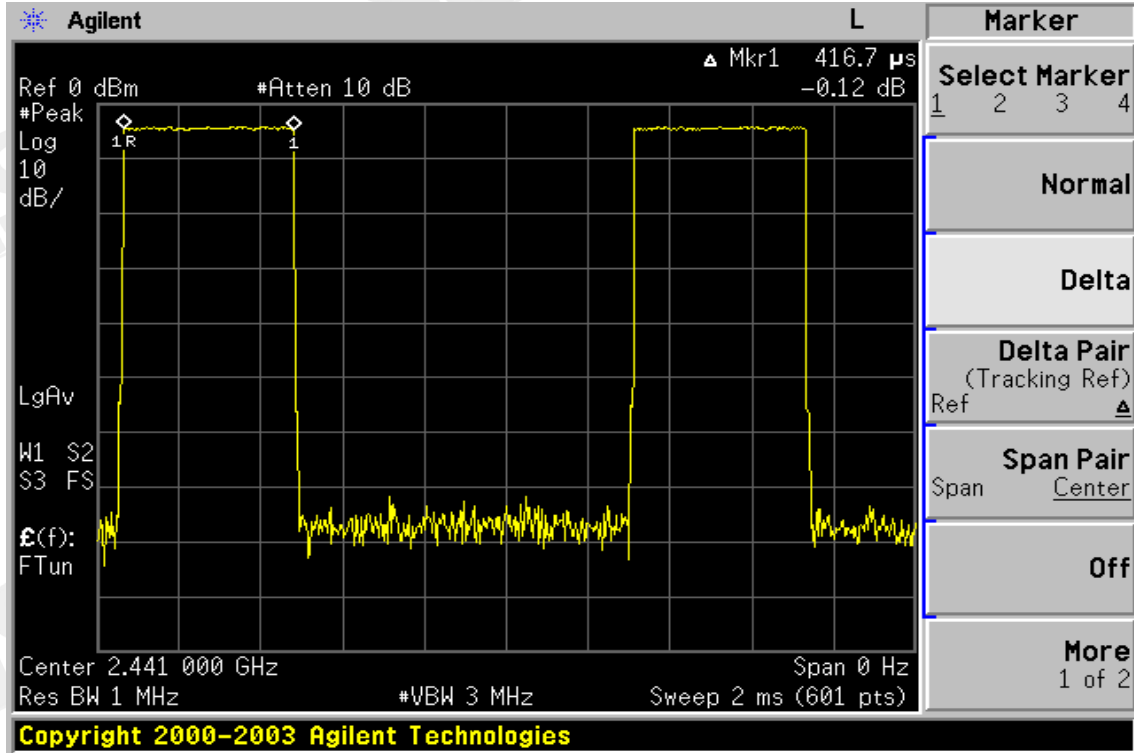


This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，相關服務條款備索，或可在 [www.sgs.com](http://www.sgs.com) 中查閱，本公司之義務、免責、管轄權皆明確規範其中。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

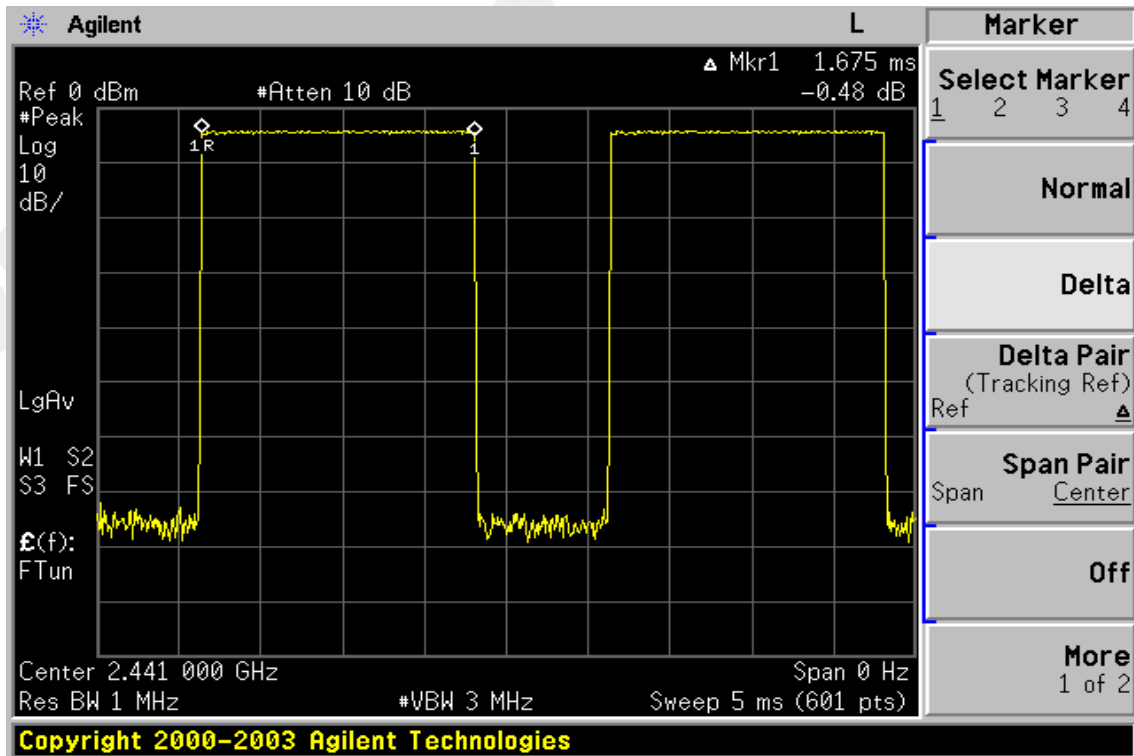


CH-Mid

DH1

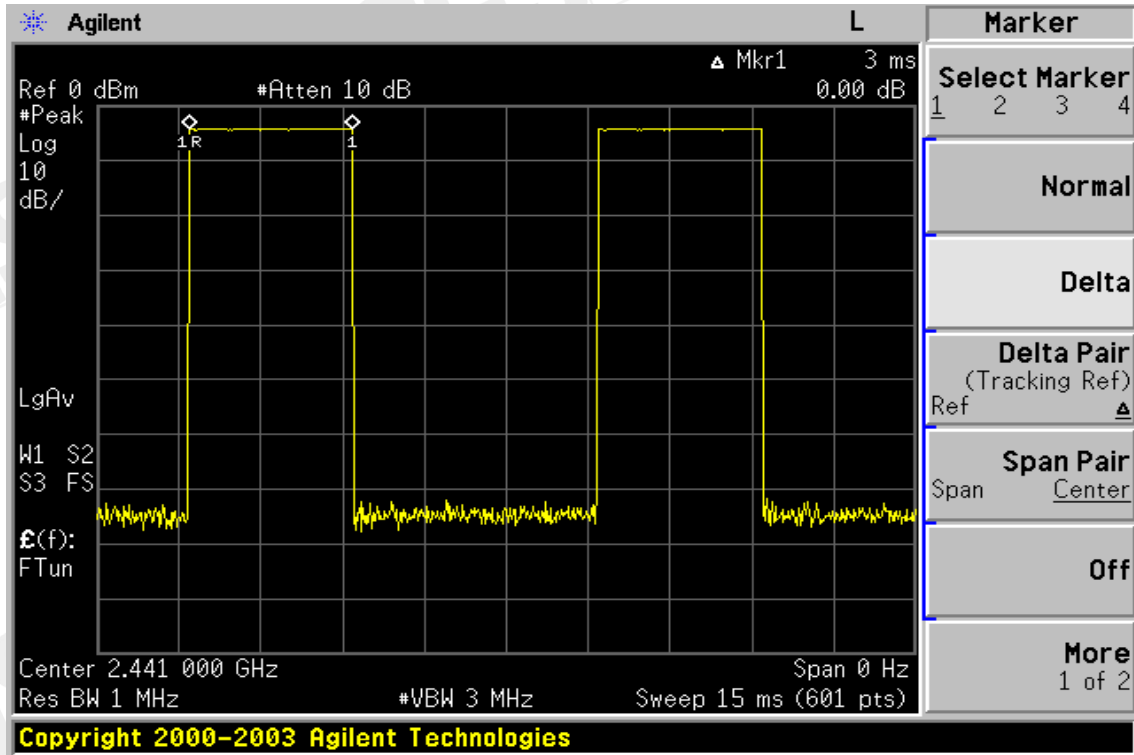


DH3



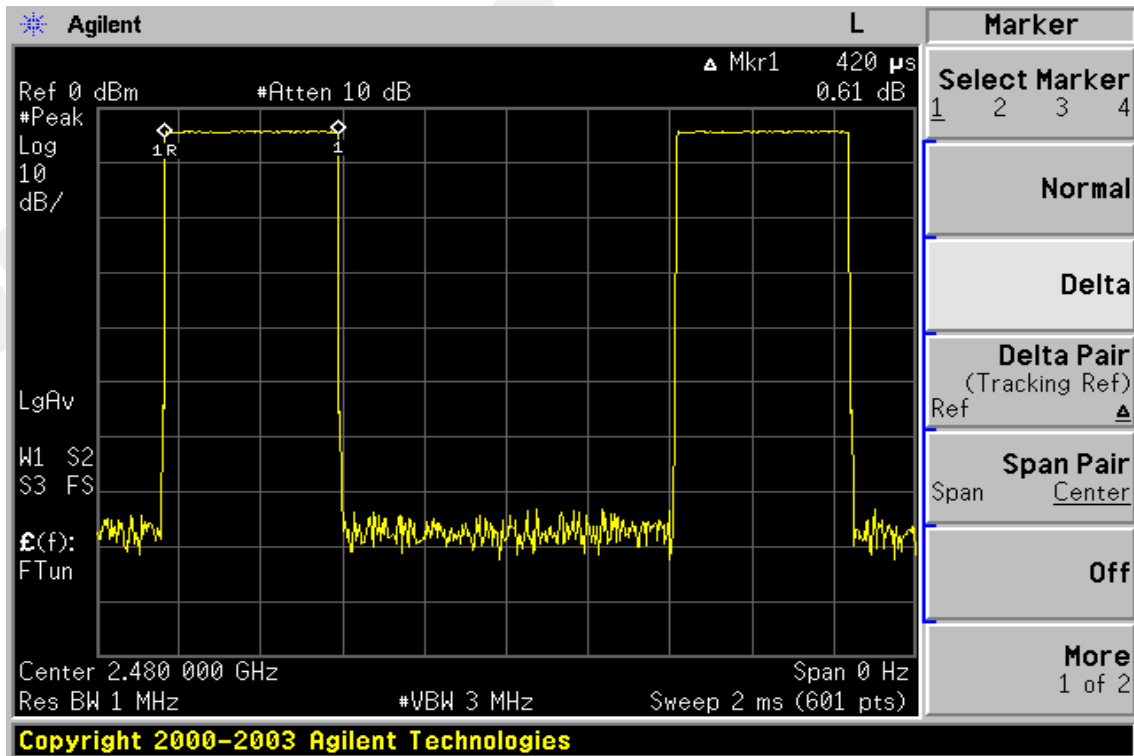
This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，相關服務條款備索，或可在 [www.sgs.com](http://www.sgs.com) 中查閱，本公司之義務、免責、管轄權皆明確規範其中。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

## DH5



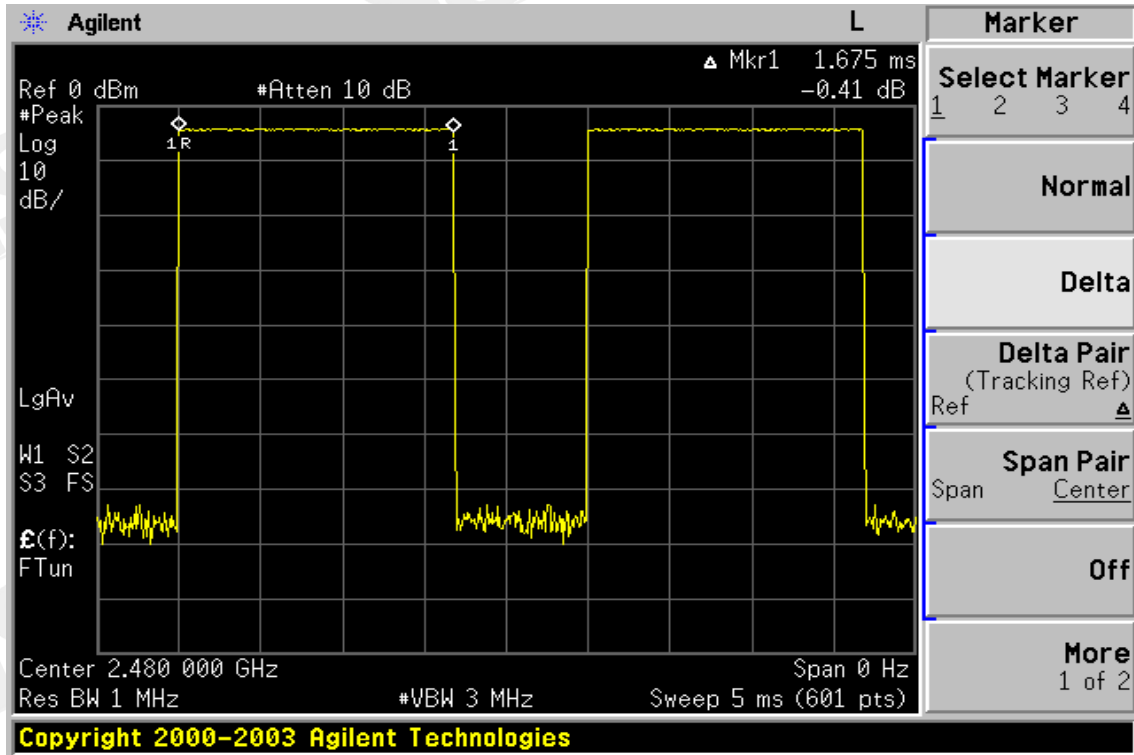
## CH-High

### DH1

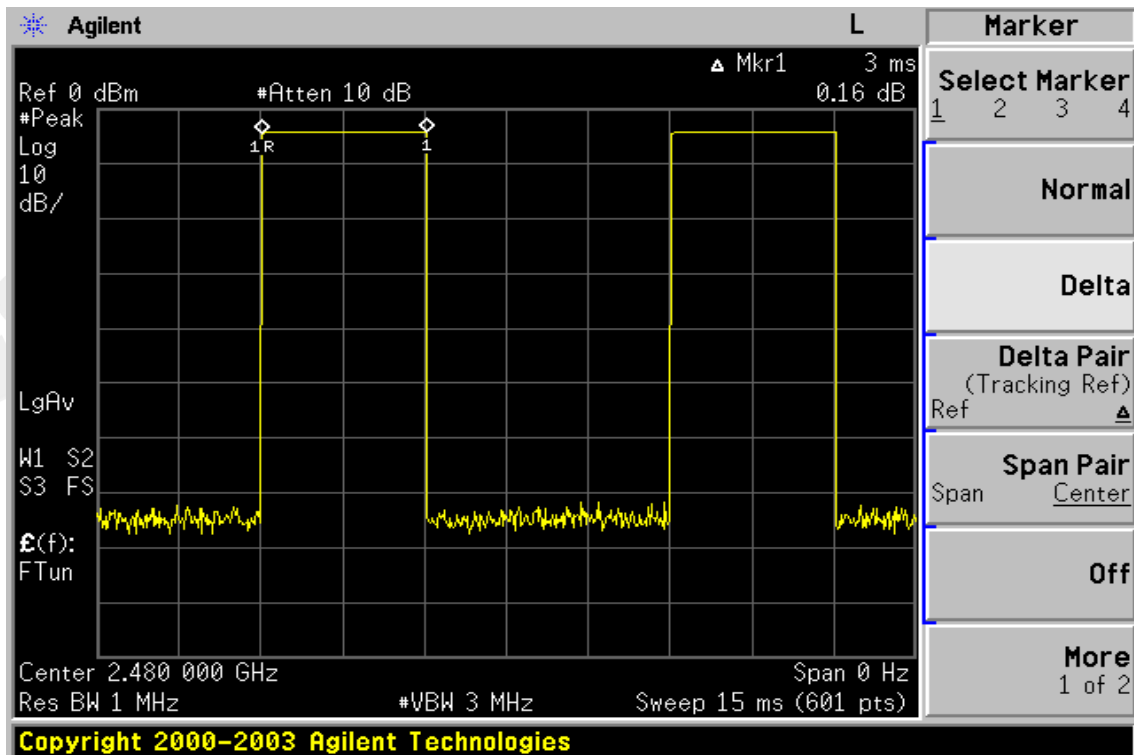


This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，相關服務條款備索，或可在 [www.sgs.com](http://www.sgs.com) 中查閱，本公司之義務、免責、管轄權皆明確規範其中。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

### DH3



### DH5



This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發給，相關服務條款備索，或可在 [www.sgs.com](http://www.sgs.com) 中查閱，本公司之義務、免責、管轄權皆明確規範其中。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

## Peak Power Spectral Density

### 13.1. Standard Applicable

According to §15.247(d), for direct sequence systems, the peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3kHz band during any time interval of continuous transmission.

### 13.2. Measurement Procedure

1. Place the EUT on the table and set it in transmitting mode.
2. Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.
3. Set the spectrum analyzer as RBW = 3KHz, VBW = 10KHz, Span = 300KHz, Sweep=100s
4. Record the max. reading.
5. Repeat above procedures until all frequency measured were complete.

### 13.3. Measurement Result

CH	RF Power Density Reading (dBm)	Cable loss (dB)	RF Power Density Level (dBm)	Maximum Limit (dBm)
Low	-9.22	0.00	-9.22	8
Mid	-10.42	0.00	-10.42	8
High	-11.19	0.00	-11.19	8

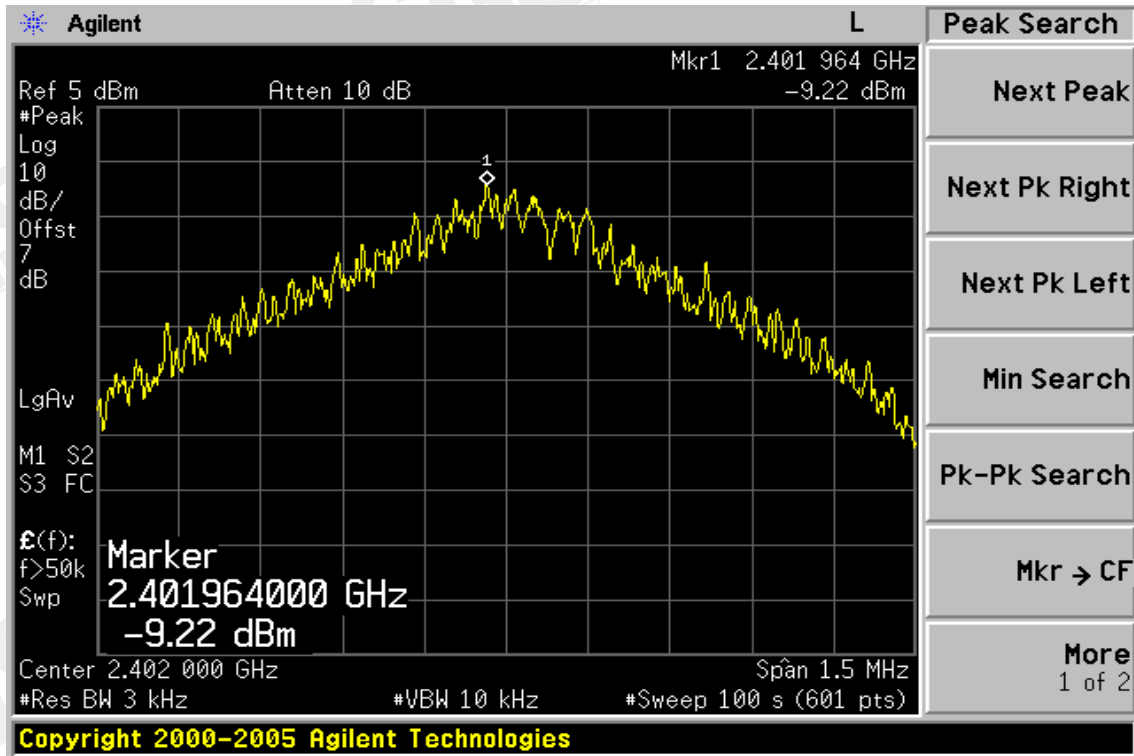
Note: This data was offset 7dB.

### 13.4. Measurement Equipment Used:

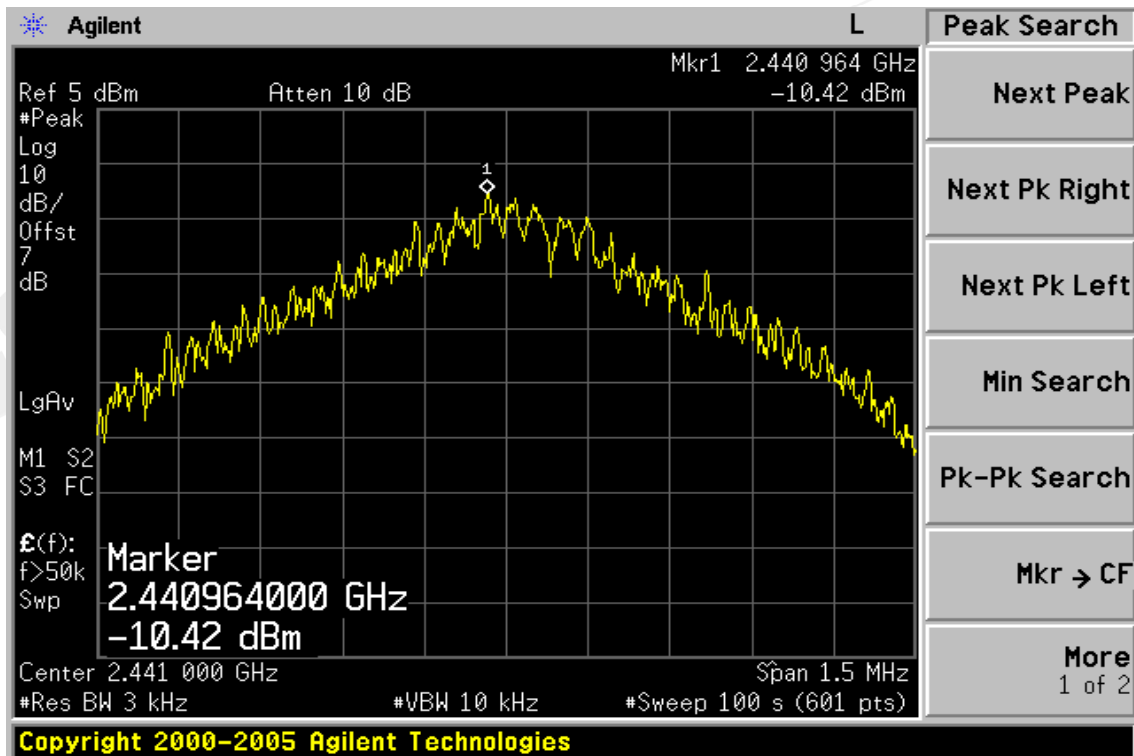
Conducted Emission Test Site					
EQUIPMENT TYPE	MFR	MODEL NUMBER	SERIAL NUMBER	LAST CAL.	CAL DUE.
Spectrum Analyzer	Agilent	E4446A	MY43360126	03/29/2006	03/28/2007
Spectrum Analyzer	Agilent	7405A	US41160416	06/28/2006	06/29/2007
Spectrum Analyzer	R&S	FSP 40	100034	11/09/2006	11/10/2007
Low Loss Cable	HUBER+SUHNER	SUCOFLEX 104PEA	N/A	N/A	N/A
Attenuator	Mini-Circuit	BW-S10W5	N/A	10/07/2006	10/06/2007
Attenuator	Mini-Circuit	BW-S6W5	N/A	10/07/2006	10/06/2007
Splitter	Agilent	Power Biviber	51818	01/05/2006	01/04/2007

This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，相關服務條款備索，或可在 [www.sgs.com](http://www.sgs.com) 中查閱，本公司之義務、免責、管轄權皆明確規範其中。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

## Power Spectral Density Test Plot (CH-Low)

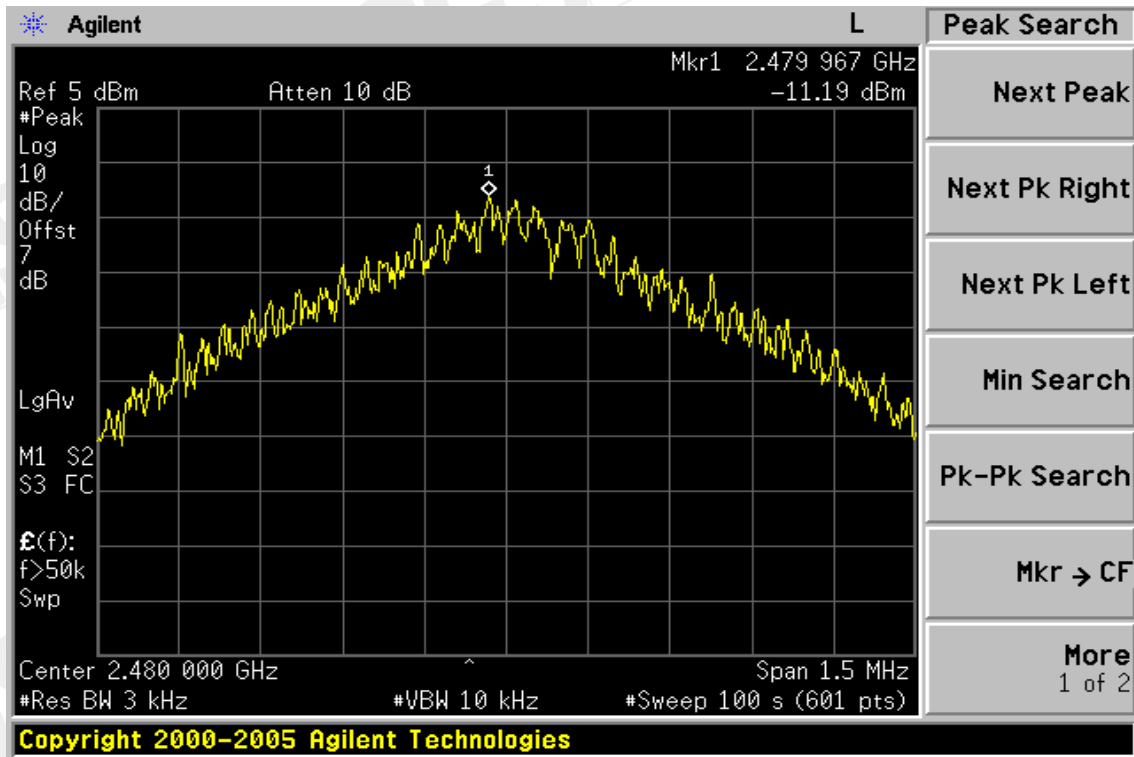


## Power Spectral Density Test Plot (CH-Mid)



This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，相關服務條款備索，或可在 [www.sgs.com](http://www.sgs.com) 中查閱，本公司之義務、免責、管轄權皆明確規範其中。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

## Power Spectral Density Test Plot (CH-High)



## 13. ANTENNA REQUIREMENT

### 14.1. Standard Applicable

For intentional device, according to §15.203, an intentional radiator shall be designed to ensure that no antenna other than furnished by the responsible party shall be used with the device.

And according to §15.247(4)(1), system operating in the 2400-2483.5MHz bands that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum peak output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

### 14.2. Antenna Connected Construction

The directional gains of antenna used for transmitting is -1 dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Please see EUT photo for details.

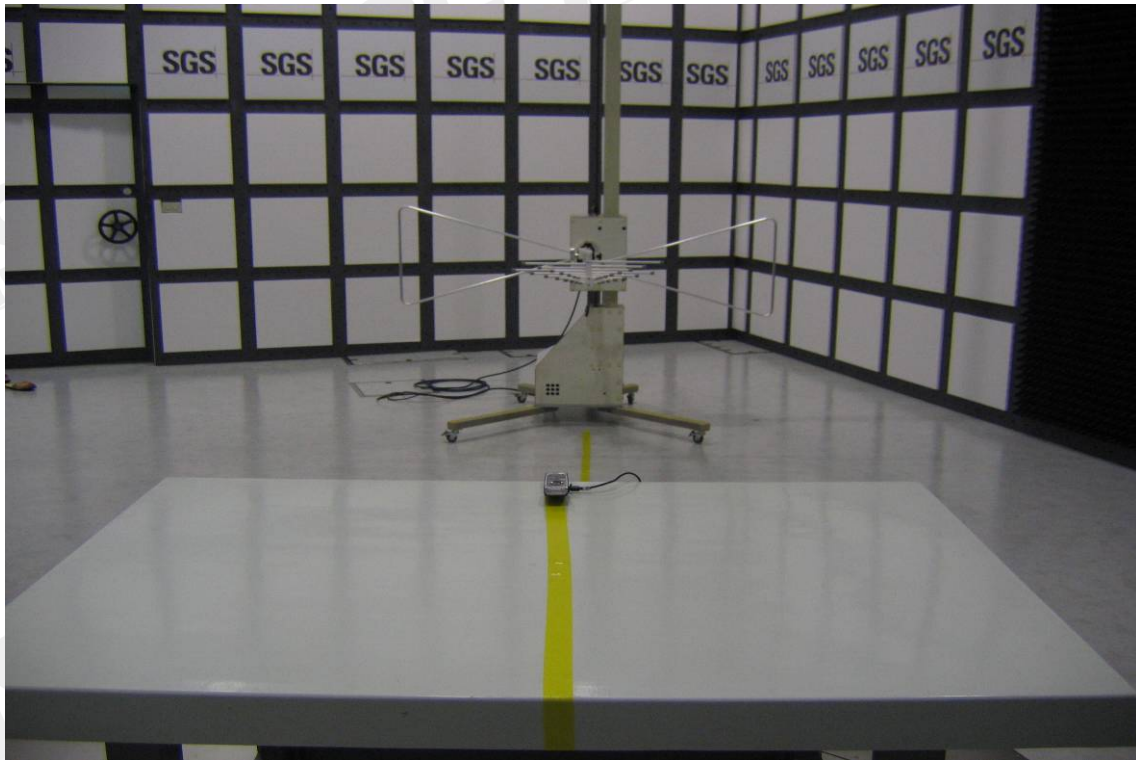


## APPENDIX 1

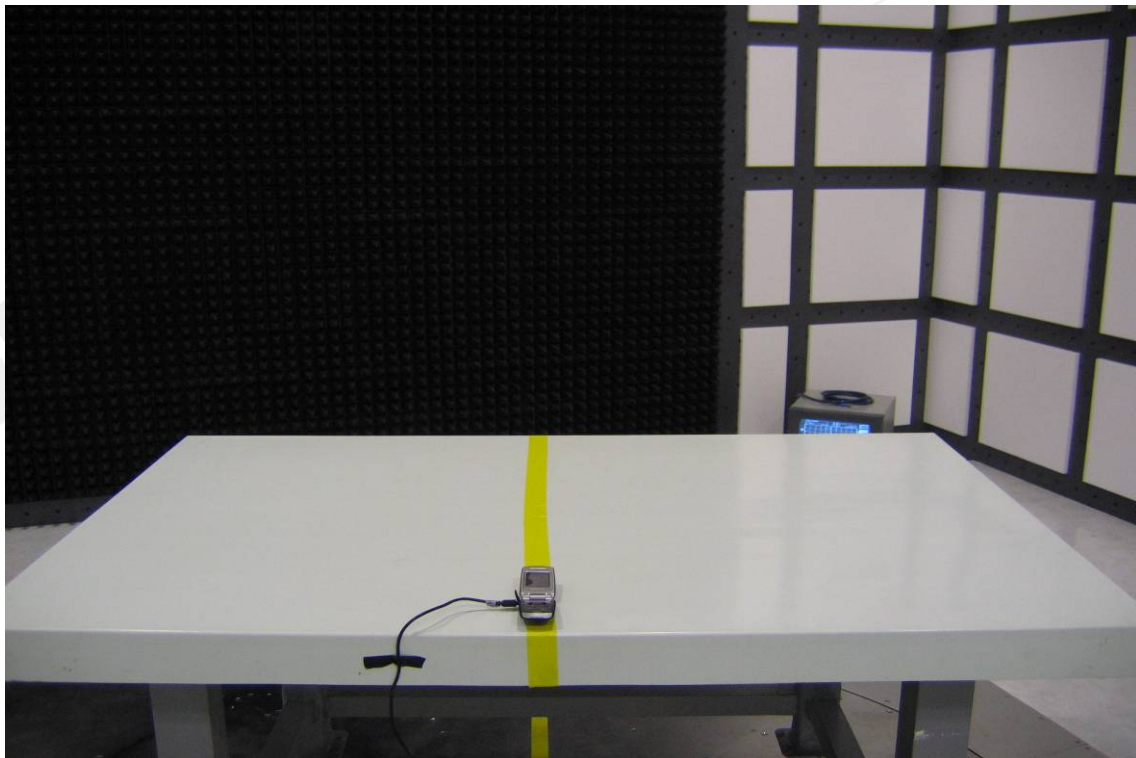
### PHOTOGRPHS OF SET UP

This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，相關服務條款備索，或可在 [www.sgs.com](http://www.sgs.com) 中查閱，本公司之義務、免責、管轄權皆明確規範其中。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

## Radiated Emission Set up Photo



## Radiated Emission Set up Photo



This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，相關服務條款備索，或可在 [www.sgs.com](http://www.sgs.com) 中查閱，本公司之義務、免責、管轄權皆明確規範其中。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

## Conducted Emission Set up Photo



This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，相關服務條款備索，或可在 [www.sgs.com](http://www.sgs.com) 中查閱，本公司之義務、免責、管轄權皆明確規範其中。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

## APPENDIX 2

### PHOTOGRPHS OF EUT

This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，相關服務條款備索，或可在 [www.sgs.com](http://www.sgs.com) 中查閱，本公司之義務、免責、管轄權皆明確規範其中。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。



### All View of EUT



### Front View of EUT - 1



This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，相關服務條款備索，或可在 [www.sgs.com](http://www.sgs.com) 中查閱，本公司之義務、免責、管轄權皆明確規範其中。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

### *Back View of EUT*



### *Site View of EUT - 1*



This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，相關服務條款備索，或可在 [www.sgs.com](http://www.sgs.com) 中查閱，本公司之義務、免責、管轄權皆明確規範其中。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

View of EUT - 5



Adapter - 1 (S003FU0500040)





*Adapter - 1 (S003FA0500040)*

This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，相關服務條款備索，或可在 [www.sgs.com](http://www.sgs.com) 中查閱，本公司之義務、免責、管轄權皆明確規範其中。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

### Open View of EUT

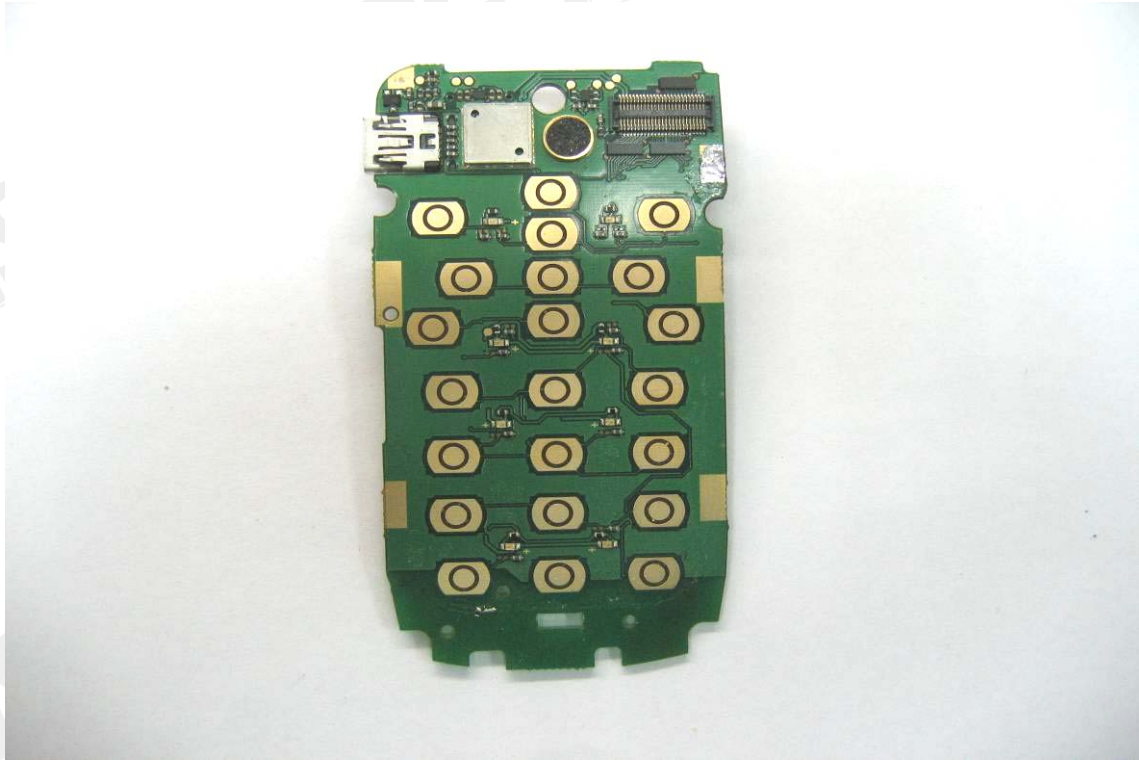


### Internal of EUT - 1

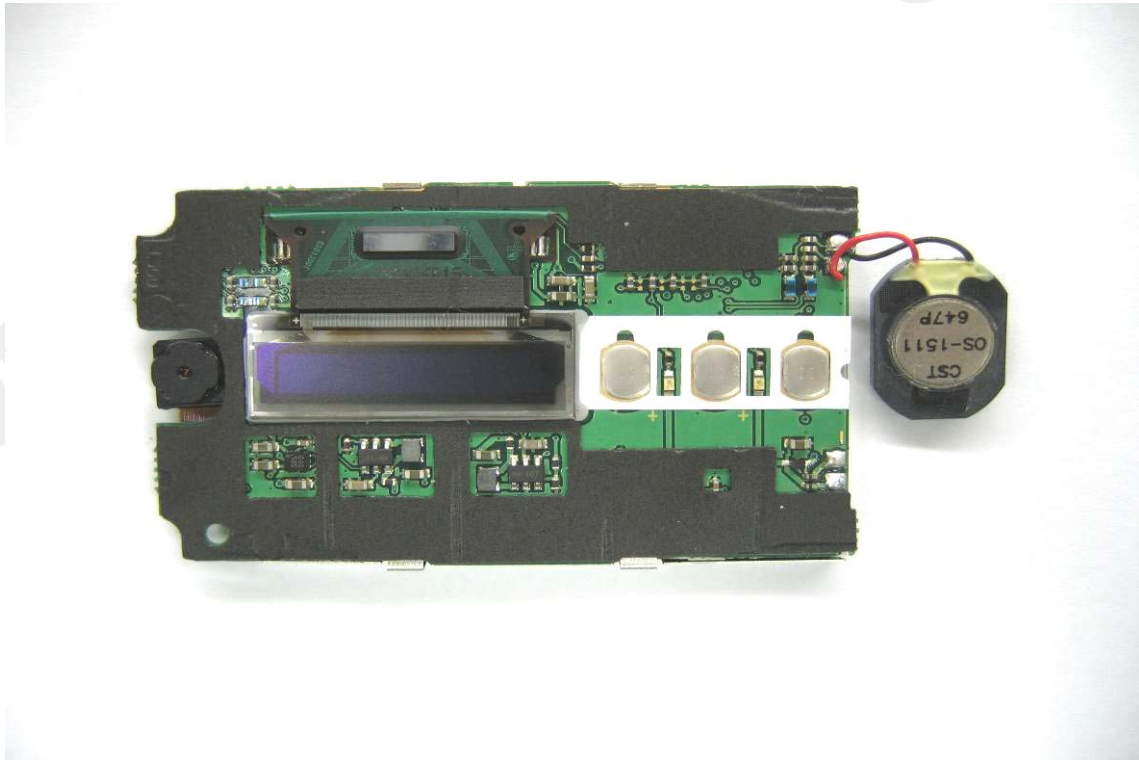


This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，相關服務條款備索，或可在 [www.sgs.com](http://www.sgs.com) 中查閱，本公司之義務、免責、管轄權皆明確規範其中。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。

*Internal of EUT - 2*



*Internal of EUT - 3*



This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，相關服務條款備索，或可在 [www.sgs.com](http://www.sgs.com) 中查閱，本公司之義務、免責、管轄權皆明確規範其中。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。



*Internal of EUT - 4*



*Internal of EUT - 5*



This document is issued by the Company subject to its General Conditions of Service which is available on request or accessible at [www.sgs.com](http://www.sgs.com). Attention is drawn to the limitations of liability, indemnification and jurisdictional issues defined therein. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested. This document cannot be reproduced except in full, without prior approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this report is unlawful and offenders may be prosecuted to the fullest extent of the law. 此報告是遵循本公司訂定之通用服務條款所製作發放，相關服務條款備索，或可在 [www.sgs.com](http://www.sgs.com) 中查閱，本公司之義務、免責、管轄權皆明確規範其中。除非另有說明，此報告結果僅對檢驗之樣品負責。本報告未經本公司書面許可，不可部份複製。對本報告內容或外觀之任何未經授權之變更、偽造、竄改皆屬非法，違犯者將會被依法追訴。