

## FCC RADIO TEST REPORT

No. 150701-RF

For

**Bullitt Group** 

Product Name: Smartphone

Model Name: SP4

Trade Name: Kodak

Issued Date: 2015-07-10

#### Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of GCCT.

#### **Test Laboratory:**

GCCT, Guangdong Telecommunications Terminal Products Quality Supervision and Testing Center Technology Road, High-tech Zone, He Yuan, Guang Dong, PR China 517001

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#### **GENERAL SUMMARY**

<b>Product Name</b>	Smartphone
Model Name	SP4
Trade Name	Kodak
Applicant	Bullitt Group
Manufacturer	CK Telecom Limited
Test Laboratory	GCCT, Guangdong Telecommunications Terminal Products Quality Supervision and Testing Center
Reference Standards	FCC CFR 47 Part 22(H): "FCC CFR 47 Part 22:Public Mobile Services" FCC CFR 47 Part 24(E): "FCC CFR 47 Part 24:Radio Frequency Devices" ANSI-TIA-603-C-2004 "Land Mobile FM or PM Communications Equipment Measurement and Performance Standards" FCC KDB 971168 D01, "Power Meas.License Digital system"
<b>Test Conclusion</b>	This portable wireless equipment has been measured in all cases requested by the relevant standards. Test results in annex B of this test report are below limits specified in the relevant standards.  General Judgment: Pass  Date of issue:2015.07.10
Comment	The test results in this report apply only to the tested sample of the stated device/equipment.

Approved by:	Reviewed by:	Tested by:
luo jian	Xiasyong wen	xuan wu
LuoJian	Wen Xiaoyong	Wu Xuan
Manager	Deputy Manager	Test Engineer



## 1.Test Laboratory

## **1.1Testing Location**

Company Name:	GCCT, Guangdong Telecommunications Terminal Products Quality		
	Supervision and Testing Center		
CNAS Registration No.	L4992		
Address:	Technology Road, High-tech Zone, Heyuan, Guangdong Province, PR.China		
Postal Code:	517001		
Telephone:	+86-762-3607181		
Fax:	+86-762-3603336		

## **1.2 Testing Environment**

Environment Data	Temperature(°C)	Humidity(%)
Maximum Ambient	27.9	43
Minimum Ambient	22.9	26

EUT is under testing environment.

#### 1.3.Project Data

Project Leader:	Wen Xiaoyong
<b>Testing Start Date:</b>	2015-07-06
<b>Testing End Date:</b>	2015-07-10



## 2. Client Information

## 2.1 Applicant Information

<b>Company Name</b>	Bullitt Group		
Address	4 The Aquarium, 1-7 King Street, Reading, RG1 2AN, UK		
City	/		
Postal Code	/		
Country	UK		

#### 2.2 Manufacturer Information

<b>Company Name</b>	CK Telecom Limited		
Address	Technology Road.High-Tech Development Zone. Heyuan,		
Audress	Guangdong,P.R.China.		
City	Heyuan		
Postal Code	/		
Country	China		



## **3.**Equipment Under Test (EUT) and Ancillary Equipment (AE)

## 3.1 About EUT

Model Name	SP4
FCC ID	ZL5SP4
	GSM850:824~848 MHz
	UMTS Band V: 826~846MHz
	PCS1900: 1850~1909MHz
Tx Frequency	UMTS Band II: 1852~1907MHz
4.1.1	Bluetooth/BLE: 2402 ~ 2480 MHz
	WIFI(802.11b/g/n-20): 2412 ~ 2462 MHz
	WIFI(n-40): 2422 ~ 2452 MHz
	GSM850: 869~893 MHz
	UMTS Band V : 871~891 MHz
	PCS1900 : 1930~1989 MHz
Rx Frequency	UMTS Band II: 1932~1987 MHz
	Bluetooth/BLE: 2402 ~ 2480 MHz
	WIFI(802.11b/g/n-20): 2412 ~ 2462 MHz
	WIFI(n-40): 2422 ~ 2452 MHz
	GSM850&WCDMA Band V:25
	PCS1900&WCDMA Band II: 60
N I CCI I	Bluetooth:79
Number of Channels	WIFI(802.11b/g/n-20):11
	WIFI(n-40):7
	BLE:40
	GSM&DCS:GMSK
	WCDMA:BPSK/QPSK
Modulation	Bluetooth: GFSK&π/4-DQPSK&8DPSK
	WIFI:CCK/OFDM
	BLE:GFSK
	PIFA(GSM/DCS/WCDMA);
Antenna Type	MONOPOLE (Bluetooth/WIFI)
	GSM850:-0.5dBi
	DCS1900: -0.5dBi
Antenna Gain	WCDMA850: -1dBi
	WCDMA1900: -1dBi
	Bluetooth/BLE/WIFI: -1dBi
Normal Voltage	3.8V
Extreme Low Voltage	3.6V
Extreme High Voltage	4.2V
Extreme Low Temperature	0℃
Extreme High Temperature	40℃



Note: Photographs of EUT are shown in ANNEX A of this test report.

Note: high and low voltage values in extreme condition test are given by manufacturer

#### 3.2 Internal Identification of EUT

EUT ID*	IMEI	HW Version	SW Version
150701-M02	356092022307067	SLFQPLUS-V1.0	SLFQPLUS13B-S29A_BULLITT_L7EN_206
130/01-1002	356092022307075	SLFQPLUS-V1.0	_150127
150701 M02	356092022306986	SLFQPLUS-V1.0	SLFQPLUS15A-S00A_CKT_L2EN_102_150
150701-M03	356092022306994 SLFQPLUS		130

<sup>\*</sup> EUT ID: is used to identify the test sample in the lab internally.150701-M02 and 150701-M03 are the same mobile phone

#### 3.3 Internal Identification of AE

AE ID*	Description	Туре	SN
150701-C02	Battery	HD395759AR	/
150701-B02	Adapter	A8-510100	/
150701-C03	Battery	HD395759AR	/
150701-B03	Adapter	A8-510100	/

<sup>\*</sup> AE ID: is used to identify the test sample in the lab internally.150701-B02 and 150701-B03 are the same accessories, 150701-C02 and 150701-C03 are the same accessories.



#### **4.Test Results**

#### **4.1Summary of Test Results**

Items	List	Clause in FCC	Verdict
1	Output Power	22.913(a)/24.232(b)	Pass
2	Frequency Stability	22.355/24.235	Pass
3	Occupied Bandwidth	22.917(a)/24.238(b)	Pass
4	Emission Limit	22.917(b)/ 24.238(b)	Pass
5	Band Edge Compliance	22.917(b)/ 24.238	Pass
6	Conducted Spurious Emission	22.917(a)/24.238(a)	Pass
7	Peak-to-average ratio	24.232(d))	Pass

Note: please refer to Annex B in this test report for the detailed test results.

#### 4.2Statements

GCCT has evaluated the test cases requested by the applicant/manufacturer as listed in section 4.1 of this report, for the EUT specified in section 3, according to the standards or reference documents listed in general summary.



## **5.Test Equipments Utilized**

## **5.1 List of Measuring Equipment**

**Table 1.RF Test Equipments** 

No.	Name	Туре	SN	Manufacturer	Cal Date	Cal Due Date
1	Signaling Tester	E5515E	E0111-8	Agilent	2014.08.13	2015.08.13
2	Spectrum Analyzer	N9020A	E0111-9	Agilent	2014.08.13	2015.08.13
3	Switching Unit	/	E0112	/	/	

**Table 2. EMC Test Equipments** 

	Hardware								
No.	Name	Ту	pe	SN		Manufact	urer	Cal Date	Cal Due Date
1	Spectrum	E44	40A	MY48250	0641	Agilen	t	2014.08.13	2015.08.13
2	RF Preselector	N90	39A	MY48260	0024	Agilen	t	2014.08.13	2015.08.13
3	BiCoNilog	314	12E	001420	15	ETS-Lind	gren	2014.08.13	2015.08.13
4	Horn Antenna	31	17	001291	69	ETS-Lind	gren	2014.08.13	2015.08.13
5	RF Notch filter	/	/	/		ETS-Lind	gren	2014.08.13	2015.08.13
6	Power Meter	N19	13A	MY50000	0213	Agilen	t	2014.08.13	2015.08.13
7	Universal Radio Communication Tester	89	60	MY4836	7105	Agilen	t	2014.08.13	2015.08.13
	Software								
1	Software		TI	LE4.5		/	ETS	S-Lindgren	/

**Table 3. OTA Test Equipments** 

	Hardware								
No.	Name	Туре	SN	Manufacturer	Cal Date	Cal Due Date			
1	Spectrum	N9020A	MY49101012	Agilent	2014.08.13	2015.08.13			
2	Universal Radio	E5515C	MY48367103	Agilent	2014.08.13	2015.08.13			
3	Switch/Control Mainframe	3499C	MY42000534	Agilent	2014.08.13	2015.08.13			
4	Positioning	2090	00119389	ETS-Lindgren	2014.08.13	2015.08.13			



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Software						
1	Software	EMQuest <sup>TM</sup>	/	ETS-Lindgren	/	
2	Software	EMQ-108	/	ETS-Lindgren	/	

#### **5.2Climate Chamber**

No.	Name	Туре	SN	Manufacturer	Cal Date	Cal Due Date
1	Climate Chamber	MW3030	09114081	ESPEC	2014.08.13	2015.08.13



## **ANNEX A: EUT Photograph**

**EUT -Top View** 

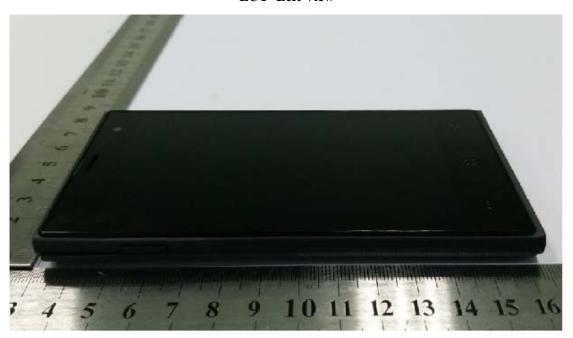


**EUT-Bottom View** 

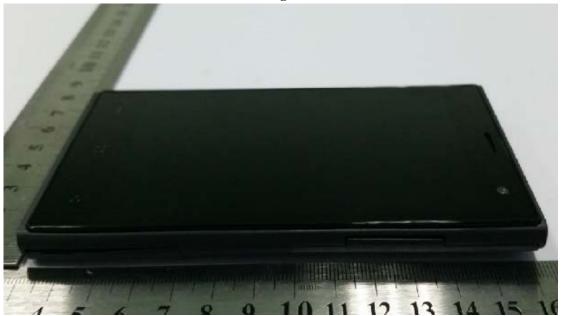




**EUT -Left View** 



**EUT -Right View** 





**EUT-Front View** 



**EUT -Rear View** 





**Cover off-Top view** 

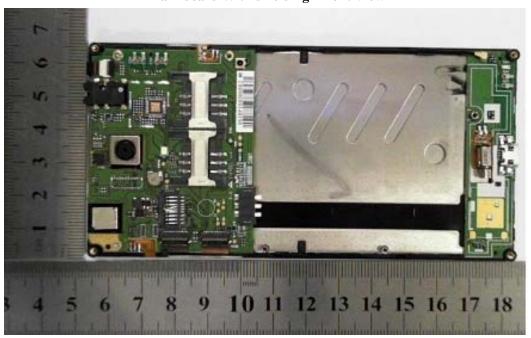


All

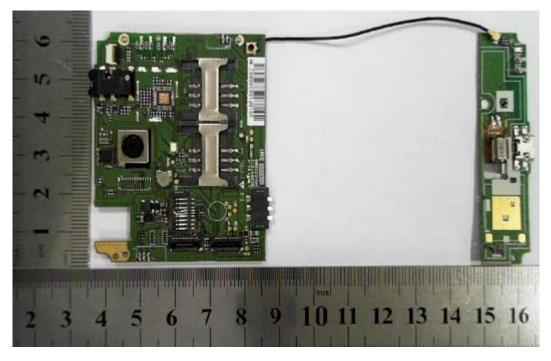




Main board With shielding -Front View

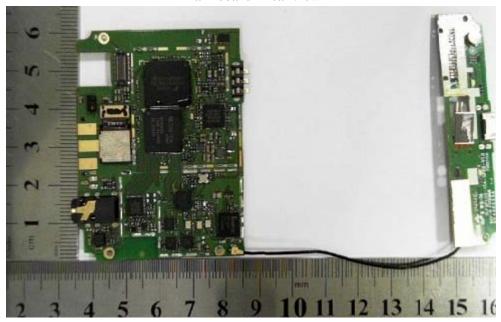


Main board Without shielding -Front View

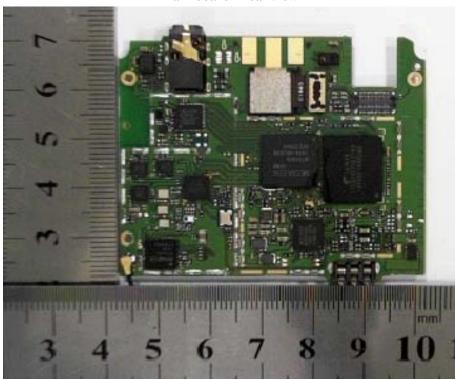




#### Main board- RearView



Main board- RearView



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#### Headset



**USB** cable





#### **GSM/DCS Antenna View**



**BT** Antenna View





#### **Battery View**



#### Adapter label view



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#### **ANNEX B: Detailed Test Results**

#### **B.1 Output Power(22.913(a)/24.232(b))**

#### **B.1.1** Conducted Output Power Measurement

#### **B.1.1.1 Description**

A base station simulator was used to establish communication with the EUT. Its parameters were set to transmit the maximum power on the EUT. The measured power in the radio frequency on the transmitter output terminals shall be reported.

#### **B. 1.1.2 Test Procedures**

- 1. The transmitter output port was connected to base station.
- 2. Set EUT as maximum power through base station.
- 3. There measurements were done at 3 frequencies,824.2MHz, 836.6MHz and 848.8MHz for GSM850 band;1850.2MHz, 1880.0MHz and 1909.8MHz for PCS1900 band.

#### **B.1.1.3** Test Setup



#### **B.1.1.4 Test Results**

#### **GSM850**

#### Limit

Power step	Peak output power(dBm)	Tolerance(dB)
5	≤33dBm(2W)	±2

#### Measurement result

#### **GSM**

Frequency(MHz)	Channel No.	Power Step	Peak output power(dBm)	Verdict
824.2	128		32.23	Pass
836.6	190	5	32.20	Pass
848.8	251		32.07	Pass

#### **GPRS**

Frequency(MHz)	Channel No.	Power Step	Peak output power(dBm)	Verdict
824.2	128		32.13	Pass
836.6	190	5	32.19	Pass
848.8	251		32.06	Pass

#### **PCS1900**

#### Limit

Power step	Peak output power(dBm)	Tolerance(dB)
0	≤30dBm(1W)	±2

#### Measurement result

**GSM** 



Frequency(MHz)	Channel No.	Power Step	Peak output	Verdict
			power(dBm)	
1850.2	512	0	30.32	Pass
1880.0	661	0	30.44	Pass
1909.8	810	0	30.33	Pass

#### **GPRS**

Frequency(MHz)	Channel No.	Power Step	Peak output power(dBm)	Verdict
1850.2	512		30.54	Pass
1880.0	661	5	30.39	Pass
1909.8	810		30.20	Pass

#### WCDMA Band V and Band II

#### Limit

Band	Power step	Peak output power(dBm)	Tolerance(dB)
II,V	3	≤24dBm(1W)	+1.7/-3.7

#### Band II

Band/Time slot	Frequency(	Channel	Power	Peak output	Verdict
configuration	MHz)	Chamiei	Class	power(dBm)	verdict
RMC	1852.6	9263		23.41	
(12.2kbps)	1880.0	9400		23.45	Pass
(12.2K0ps)	1907.6	9538		23.17	
HSDPA	1852.6	9263		22.48	
Subtest 1	1880.0	9400		22.22	Pass
Subtest 1	1907.6	9538		21.86	
HCDDA	1852.6	9263		22.6	
HSDPA Subtest 2	1880.0	9400		22.27	Pass
Subtest 2	1907.6	9538		21.87	
HCDDA	1852.6	9263		22.13	Pass
HSDPA Subtest 3	1880.0	9400		21.81	
Subtest 3	1907.6	9538		21.5	
HCDDA	1852.6	9263	3	22.14	Pass
HSDPA Subtest 4	1880.0	9400		21.83	
Subtest 4	1907.6	9538		21.49	
LICITOA	1852.6	9263		20.63	
HSUPA Subtest 1	1880.0	9400		20.36	Pass
Subtest 1	1907.6	9538		20.05	
LICLIDA	1852.6	9263		20.63	Pass
HSUPA	1880.0	9400		20.45	
Subtest 2	1907.6	9538		20.02	
LICIUDA	1852.6	9263		21.64	
HSUPA Subtest 3	1880.0	9400		21.48	Pass
Subjest 5	1907.6	9538		21	



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HCHDA	1852.6	9263	20.08	
HSUPA	1880.0	9400	19.83	Pass
Subtest 4	1907.6	9538	19.45	
HCHDA	1852.6	9263	22.51	
HSUPA	1880.0	9400	22.12	Pass
Subtest 5	1907.6	9538	21.19	

#### $Band \ V$

Band/Time slot configuration	Frequency( MHz)	Channel	Power Class	Peak output power(dBm)	Verdict
	826.6	4133	Cluss	22.83	
RMC	835.0	4175		22.95	Pass
(12.2kbps)	846.4	4232		22.42	1 455
	826.6	4133		21.86	
HSDPA	835.0	4175		22.05	Pass
Subtest 1	846.4	4232		21.38	
	826.6	4133		21.94	
HSDPA	835.0	4175		22.09	Pass
Subtest 2	846.4	4232		21.34	7
HGDD4	826.6	4133		21.48	
HSDPA	835.0	4175		21.64	Pass
Subtest 3	846.4	4232		20.99	
HCDDA	826.6	4133		21.48	Pass Pass
HSDPA	835.0	4175		21.65	
Subtest 4	846.4	4232		20.97	
HOLIDA	826.6	4133	3	20.35	
HSUPA	835.0	4175		19.92	
Subtest 1	846.4	4232		19.14	
HCLIDA	826.6	4133		20.41	
HSUPA Subtest 2	835.0	4175		19.9	Pass
Subtest 2	846.4	4232		19.1	
HSUPA	826.6	4133		20.39	
Subtest 3	835.0	4175		20.93	Pass
Subtest 5	846.4	4232		20.09	
HSUPA	826.6	4133		19.81	
Subtest 4	835.0	4175		19.31	Pass
Subtest 4	846.4	4232		19.53	
HSUPA	826.6	4133		22.27	
Subtest 5	835.0	4175		21.9	Pass
Subtest 3	846.4	4232		21.06	

#### **B.1.2 Radiated Power**

#### **B.1.2.1 Description**

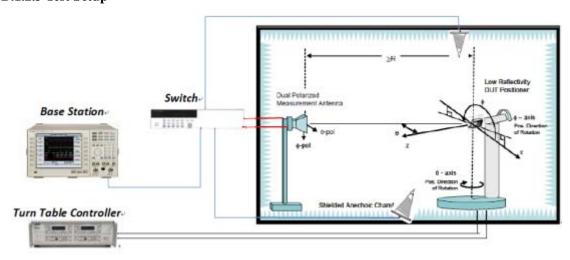


This is the test for the maximum radiated power from the EUT. Rule Part 24.232(b) specifies, "Mobile/portable stations are limited to 2 watts e.i.r.p. Peak power and 24.232(c) specifies that "Peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage."Rule Part 22.913(a) specifies "Maximum ERP. The effective radiated power (ERP) of base transmitters and cellular repeaters must not exceed 500 Watts. The ERP of mobile transmitter sand auxiliary test transmitters must not exceed 7 Watts."

#### **B.1.2.2 Test Procedures**

- 1. In an anechoic antenna test chamber, a half-wave dipole antenna for the frequency band of interest is placed at the reference centre of the chamber. An RF Signal source for the frequency band of interest is connected to the dipole with a cable that has been constructed to not interfere with the radiation pattern of the antenna. A known (measured) power (Pin) is applied to the input of the dipole, and the power received (Pr) at the chamber's probe antenna is recorded.
- 2. A "reference path loss" is established as Pin + 2.15 Pr.
- 3. The EUT is substituted for the dipole at the reference centre of the chamber and a scan is performed to obtain the radiation pattern.
- 4. From the radiation pattern, the co-ordinates where the maximum antenna gain occurs are identified.
- 5. The EUT is then put into pulse mode at its maximum power level (Power Step 0 for PCS1900,5 for GSM 850).
- 6. "Gated mode" power measurements are performed with the receiving antenna placed at the coordinates determined in Step 3 to determine the output power as defined in Rule 24.232 (b) and (c). The "reference path loss" from Step1 is added to this result.
- 7. This value is EIRP since the measurement is calibrated using a half-wave dipole antenna of known gain (2.15 dBi) and known input power (Pin).
- 8. ERP can be calculated from EIRP by subtracting the gain of the dipole, ERP = EIRP -2.15dBi.

#### **B.1.2.3** Test Setup



#### **B.1.2.4 Test Result of ERP**

#### **GSM850**

Frequency(MHz)	Channel No.	Power Step	ERP(dBm)	Verdict
824.2	128	5	29.81	Pass
836.6	190	5	29.67	Pass

848.8 251	5	29.58	Pass
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#### WCDMA Band V

Frequency(MHz)	Channel No.	Power Step	ERP(dBm)	Verdict
826.6	4133	3	21.09	Pass
835	4175	3	19.87	Pass
846.4	4232	3	20.36	Pass

#### **B1.2.4 Test Result of EIRP**

#### **GSM1900**

Frequency(MHz)	Channel	Power Step	EIRP(dBm)	Verdict
1850.2	512	0	30.38	Pass
1880.0	661	0	31.05	Pass
1909.8	810	0	30.87	Pass

#### **WCDMA Band II**

Frequency(MHz)	Channel	Power Class	EIRP(dBm)	Verdict
1852.6	9263	3	22.79	Pass
1880.0	9400	3	22.81	Pass
1907.6	9538	3	22.72	Pass

#### **B.2 Frequency Stability(22.355/24.235)**

#### **B.2.1 Description**

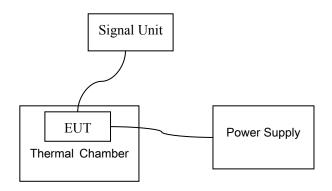
The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that fundamental emission stays within the authorized frequency block. The frequency stability of transmitter shall be maintained within  $\pm 0.00023\%$  ( $\pm 2.5$ ppm) of the center frequency.

#### **B.2.2 Test Procedure for Temperature Variation**

- 1. The EUT was set up in the thermal chamber and connected with the base station.
- 2. With power OFF, the temperature was decreased to -20°C and the EUT was stabilized for three hours. Power was applied and maximum change in frequency was recorded within one minute.
- 3. With power OFF, the temperature was raised in  $10^{\circ}$ C step to  $50^{\circ}$ C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute
- 4. if the EUT cannot be turned on at  $-30^{\circ}$ C, the testing lowest temperature will be raised in  $10^{\circ}$ C step until the EUT can be turned on.

#### **B.2.2.1 Test Setup**





#### **B.2.2.2 Test Results**

#### **GSM850**

<b>Temperature</b> (℃)	Frequency Error (Hz)	ppm	Limit	Verdict
-20	/	/		/
-10	/	/	≤±2.5ppm	/
0	-2.95	0.0035		Pass
10	7.41	0.0087		Pass
20	3.31	0.0039		Pass
30	3.07	0.0036		Pass
40	1.62	0.0020		Pass
50	/	/		/
55	/	/		/

#### **GSM1900**

Temperature (℃)	Frequency Error (Hz)	ppm	Limit	Verdict
-20	/	/		/
-10	/	/	≤±2.5ppm	/
0	2.59	0.0014		Pass
10	-5.60	0.0030		Pass
20	-16.70	0.0088		Pass
30	-15.83	0.0083		Pass
40	-16.78	0.0088		Pass
50	/	/		/
55	/			/

#### **WCDMA Band II**

Temperature (℃)	Frequency Error (Hz)	ppm	Limit	Verdict
-20	/	/		/
-10	/	/	≤±2.5ppm	/
0	3.56	0.0042		Pass
10	5.23	0.0062		Pass
20	2.66	0.0031		Pass
30	1.34	0.0016		Pass

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40	2.86	0.0034	Pass
50	/	/	/
55	/	/	/

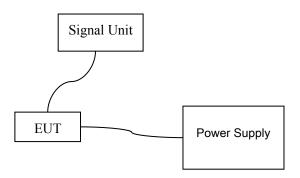
#### **WCDMA Band V**

Temperature (℃)	Frequency Error (Hz)	ppm	Limit	Verdict
-20	/	/		/
-10	/	/		/
0	20.15	0.0106		Pass
10	19.64	0.0103		Pass
20	18.35	0.0097	≤±2.5ppm	Pass
30	17.36	0.0091		Pass
40	15.33	0.0081		Pass
50	/	/		/
55	/	/		/

#### **B.2.3 Test Procedure for Voltage Variation**

- 1. The EUT was placed in a temperature chamber at  $25\pm5\,^{\circ}$ C and connected with the base station.
- 2. The power supply voltage to the EUT was varied from BEP to 115% of the nominal value measured at the input to the EUT.
  - 3. The variation in frequency was measured.

#### **B.2.3.1 Test Setup**



#### **B.2.3.2 Test Results:**

Band	Voltage (V)	Freq.Dev.(Hz)	Dev.(ppm)	Limit(ppm)	Verdict
GSM850	3.6	2.38	0.0013		Pass
	3.7	3.33	0.0018		Pass
	4.2	5.12	0.0027		Pass
GSM1900	3.6	16.22	0.0085	<12 5mmm	Pass
	3.7	15.36	0.0081	≤±2.5ppm	Pass
	4.2	17.32	0.0091		Pass
WCDMA	3.6	6.32	0.0033		Pass
Band II	3.7	5.78	0.0030		Pass

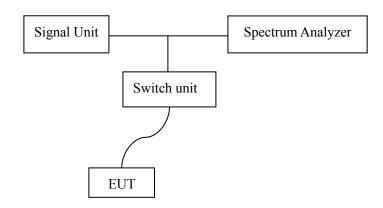
	4.2	4.33	0.0023	Pass
WCDMA	3.6	19.68	0.0104	Pass
	3.7	18.32	0.0096	Pass
Band V	4.2	17.22	0.0091	Pass

#### **B.3 Occupied Bandwidth(22.917(a)/24.238(b))**

#### **B.3.1 Description**

Similar to conducted emissions; occupied bandwidth measurements are only provided for selected frequencies in order to reduce the amount of submitted data. Data were taken at the extreme and mid frequencies of the USPCS frequency band. The table below lists the measured -20dBc BW(99%). Spectrum analyzer plots are included on the following pages.

#### **B.3.2** Test Setup



#### **B.3.3 Test Results**

Band	СН	Frequency(MHz)	Result	Verdict
	128	824.2	Fig.1	Pass
GSM850	190	836.6	Fig.2	Pass
	251	848.8	Fig.3	Pass
	512	1850.2	Fig.4	Pass
GSM1900	661	1880.0	Fig.5	Pass
	810	1909.8	Fig.6	Pass
	4133	824.2	Fig.7	Pass
WCDMA Band V	4175	835	Fig.8	Pass
	4233	848.8	Fig.9	Pass
WCDMA Band V	4133	824.2	Fig.10	Pass
HSDPA	4175	835	Fig.11	Pass
Subtest 1	4233	848.8	Fig.12	Pass
WCDMA Band V	4133	824.2	Fig.13	Pass
HSUPA	4175	835	Fig.14	Pass
Subtest 5	4233	848.8	Fig.15	Pass
WCDMA Band II	9263	1850.2	Fig.16	Pass



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	9400	1880.0	Fig.17	Pass
	9538	1909.8	Fig.18	Pass
WCDMA Band II	9263	1850.2	Fig.19	Pass
HSDPA	9400	1880.0	Fig.20	Pass
Subtest 1	9538	1909.8	Fig.21	Pass
WCDMA Band II	9263	1850.2	Fig.22	Pass
HSUPA	9400	1880.0	Fig.23	Pass
Subtest 5	9538	1909.8	Fig.24	Pass



Fig.1 GSM850-CH128 Occupied Bandwidth



Fig.2 GSM850-CH190 Occupied Bandwidth







Fig.3 GSM850-CH251 Occupied Bandwidth

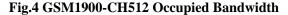






Fig.5 GSM1900-CH661 Occupied Bandwidth



Fig.6 GSM1900-CH810 Occupied Bandwidth





Fig.7 WCDMA Band V-CH4133 Occupied Bandwidth

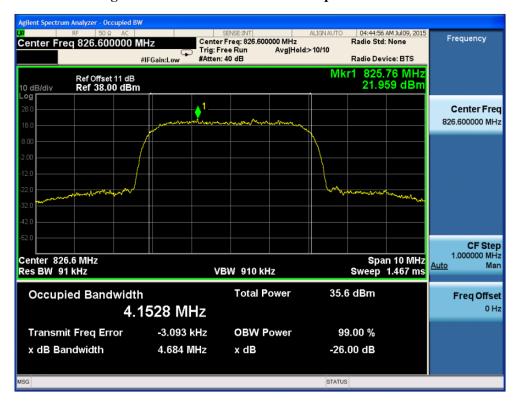


Fig.8 WCDMA Band V-CH4175 Occupied Bandwidth

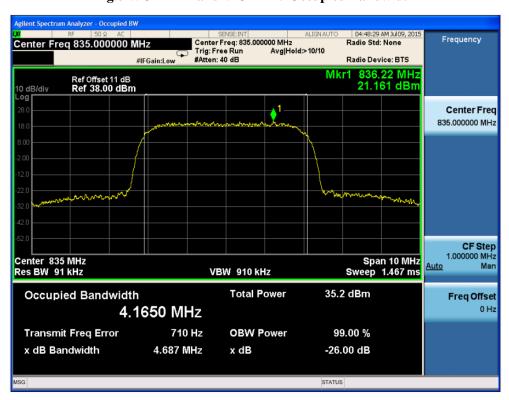




Fig.9 WCDMA Band V-CH4232 Occupied Bandwidth

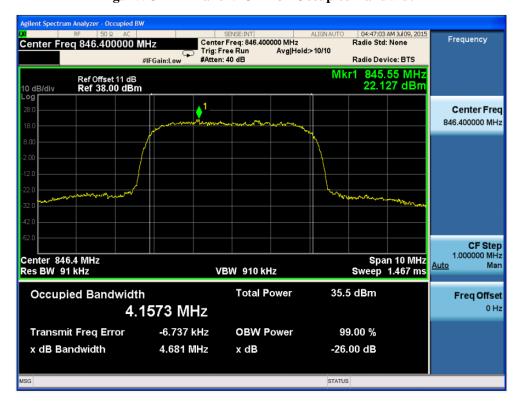


Fig.10 WCDMA Band V-CH4133 Occupied Bandwidth (HSDPA Subtest 1)

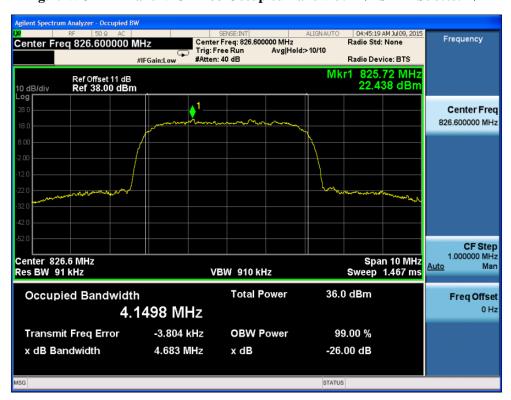




Fig.11 WCDMA Band V-CH4175 Occupied Bandwidth (HSDPA Subtest 1)

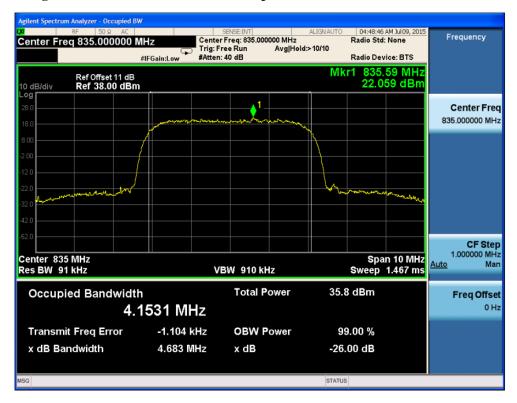


Fig.12 WCDMA Band V-CH4232 Occupied Bandwidth (HSDPA Subtest 1)

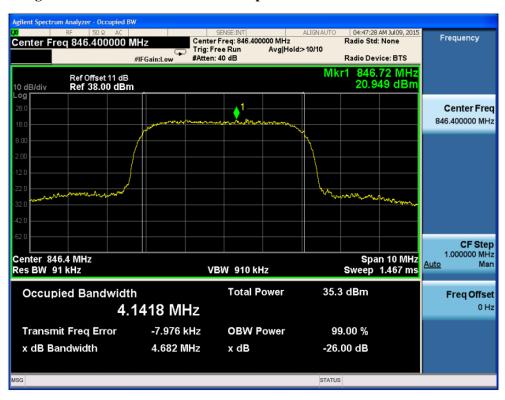




Fig.13 WCDMA Band V-CH4133 Occupied Bandwidth (HSUPA Subtest 5)

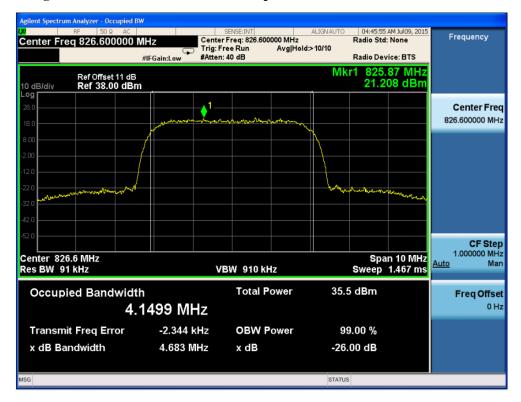


Fig.14 WCDMA Band V-CH4175 Occupied Bandwidth (HSUPA Subtest 5)

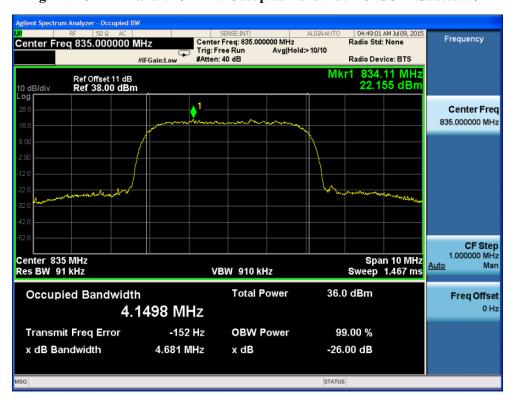




Fig.15 WCDMA Band V-CH4232 Occupied Bandwidth (HSUPA Subtest 5)

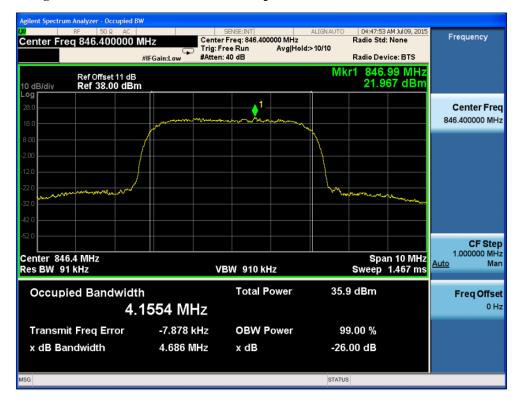


Fig.16 WCDMA Band II-CH9263 Occupied Bandwidth

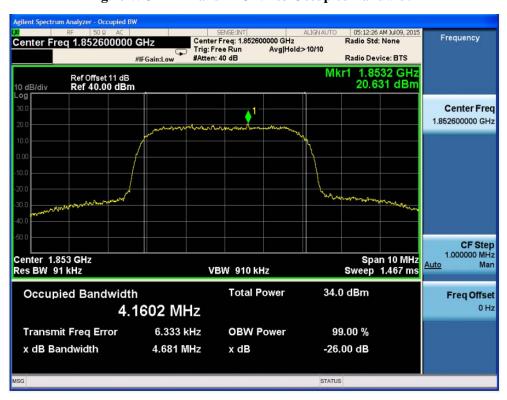




Fig.17 WCDMA Band II-CH9400 Occupied Bandwidth

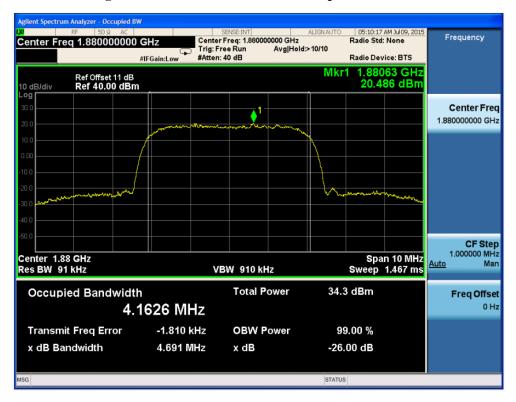


Fig.18 WCDMA Band II-CH9538 Occupied Bandwidth

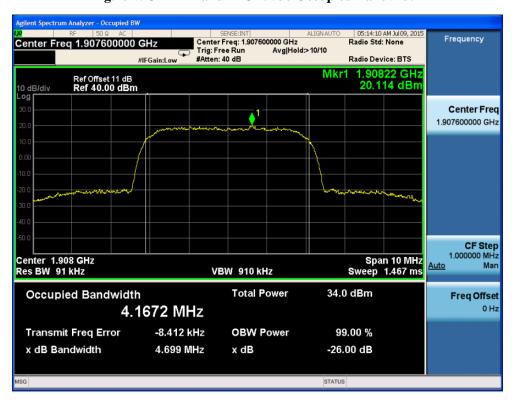




Fig.19 WCDMA Band II-CH9263 Occupied Bandwidth (HSDPA Subtest 1)

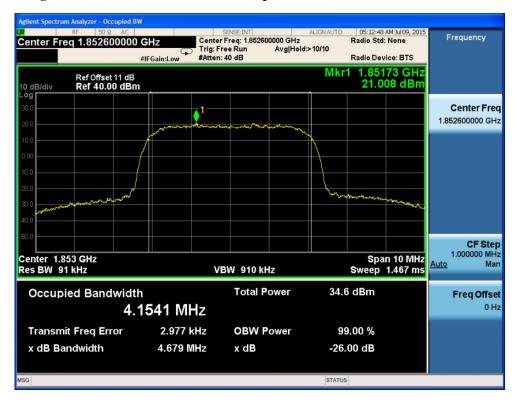


Fig.20 WCDMA Band II-CH9400 Occupied Bandwidth (HSDPA Subtest 1)

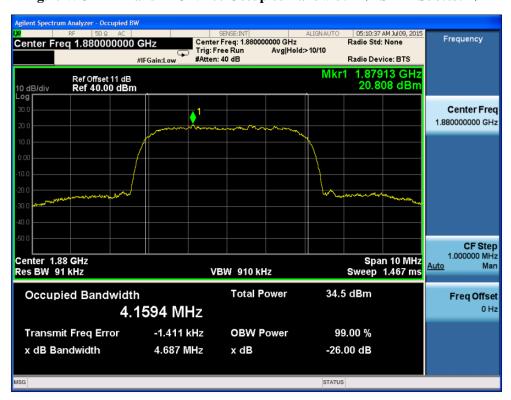




Fig.21 WCDMA Band II-CH9538 Occupied Bandwidth (HSDPA Subtest 1)

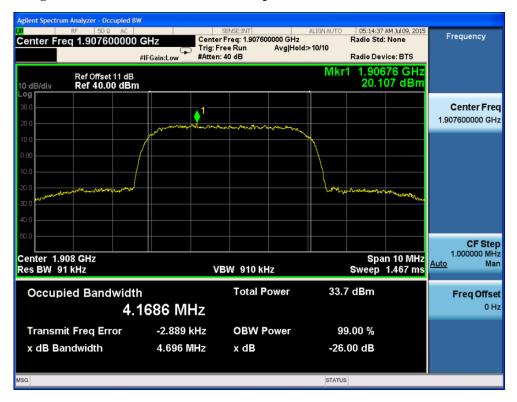


Fig.22 WCDMA Band II-CH92633 Occupied Bandwidth (HSUPA Subtest 5)

