



# RADIO TEST REPORT

Report No: STS1506087F03

Issued for

**Datawind Inc** 

407 Blvd St-Laurent, suite 500, Montreal, Quebec, H2Y 2Y5

L A B

Product Name:	WCDMA Mobile phone
Brand Name:	POCKETSURFER3G5
Model No.:	3G5
Series Model:	DW-PS3G5
FCC ID:	2AE68-3G5-02
Test Standard:	FCC Part 15.247

Any reproduction of this document must be done in full. No single part of this document may be reproduced we permission from STS, All Test Data Presented in this report is only applicable to presented Test sample.

Shenzhen STS Test Services Co., Ltd.
1/F., Building B, Zhuoke Science Park, No.190, Chongqing Road,
Fuyong Street, Bao'an District, Shenzhen, Guangdong, China
TEL: +86-755 3688 6288 FAX: +86-755 3688 6277 E-mail:sts@stsapp.com



	TEST RESULT CERTIFICATION
Applicant'sname	Datawind Inc
Address	. 407 Blvd St-Laurent, suite 500, Montreal, Quebec, H2Y 2Y5
Manufacture's Name	. Shenzhen Langmei Technology Co.,Ltd.
Address	Langmei Technology Park, No. 2 Industrial Park, Fenghuang No. 3. Industrial Zone, Fuyong Sub-district, Bao'an District, Shenzhen City, Guangdong Province P.R. China.
Product description	
Product name	. WCDMA Mobile phone
Brand name	. POCKETSURFER3G5
Model and/or type reference	3G5
Ratings	. DC 5V/500mA
Standards	. FCC Part 15.247
Test procedure	. ANSI C63.10-2013
under test (EUT) is in complis sample identified in the repor This report shall not be re	produced except in full, without the written approval of STS, this revised by STS, personal only, and shall be noted in the revision of the
Date (s) of performance of tes	sts 17 June. 2015 ~25 June. 2015
Date of Issue	26 June. 2015
Test Result	Pass
Testing En	
Technical N	Manager : (Vita Li)
Authorized	Signatory: Thomas Young

(Bovey Yang)



Table of Contents	Page
1. SUMMARY OF TEST RESULTS	6
1.1 TEST FACILITY	7
1.2 MEASUREMENT UNCERTAINTY	7
2. GENERAL INFORMATION	8
2.1 GENERAL DESCRIPTION OF EUT	8
2.2 DESCRIPTION OF TEST MODES	10
2.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING	10
2.4 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	11
2.5 DESCRIPTION OF SUPPORT UNITS	12
2.6 EQUIPMENTS LIST FOR ALL TEST ITEMS	13
3. EMC EMISSION TEST	14
3.1 CONDUCTED EMISSION MEASUREMENT	14
3.1.1 POWER LINE CONDUCTED EMISSION LIMITS	14
3.1.2 TEST PROCEDURE	15
3.1.3 TEST SETUP 3.1.4 EUT OPERATING CONDITIONS	15 15
3.1.5 TEST RESULTS	16
3.2 RADIATED EMISSION MEASUREMENT	18
3.2.1 RADIATED EMISSION LIMITS	18
3.2.2 TEST PROCEDURE	19
3.2.3 DEVIATION FROM TEST STANDARD 3.2.4 TEST SETUP	19 20
3.2.5 EUT OPERATING CONDITIONS	21
3.2.6 TEST RESULTS	22
4. CONDUCTED SPURIOUS EMISSIONS	28
4.1 REQUIREMENT	28
4.2 TEST PROCEDURE	28
4.3 TEST SETUP	28
4.4 EUT OPERATION CONDITIONS	28
4.5 TEST RESULTS	29
5. NUMBER OF HOPPING CHANNEL	38
5.1 APPLIED PROCEDURES / LIMIT	38
5.2 TEST PROCEDURE	38
5.3 TEST SETUP	38
5.4 EUT OPERATION CONDITIONS	38



Table of Contents	Page
5.5 TEST RESULTS	39
6. AVERAGE TIME OF OCCUPANCY	40
6.1 APPLIED PROCEDURES / LIMIT	40
6.2 TEST PROCEDURE	40
6.3 TEST SETUP	40
6.4 EUT OPERATION CONDITIONS	40
6.5 TEST RESULTS	41
7. HOPPING CHANNEL SEPARATION MEASUREMEN	47
7.1 APPLIED PROCEDURES / LIMIT	47
7.2 TEST PROCEDURE	47
7.3 TEST SETUP	47
7.4 EUT OPERATION CONDITIONS	47
7.5 TEST RESULTS	48
8. BANDWIDTH TEST	54
8.1 APPLIED PROCEDURES / LIMIT	54
8.2 TEST PROCEDURE	54
8.3 TEST SETUP	54
8.4 EUT OPERATION CONDITIONS	54
8.5 TEST RESULTS	55
9. PEAK OUTPUT POWER TEST	61
9.1 APPLIED PROCEDURES / LIMIT	61
9.2 TEST PROCEDURE	61
9.3 TEST SETUP	61
9.4 EUT OPERATION CONDITIONS	61
9.5 TEST RESULTS	62
10. ANTENNA REQUIREMENT	68
10.1 STANDARD REQUIREMENT	68
10.2 EUT ANTENNA	68



Page 5 of 70 Report No.: STS1506087F03

## **Revision History**

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	26 June. 2015	STS1506087F03	ALL	Initial Issue





### 1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.247), Subpart C				
Standard Section	Test Item	Judgment	Remark	
15.207	Conducted Emission	PASS		
15.247(a)(1)	Hopping Channel Separation	PASS		
15.247(b)(1)	Peak Output Power	PASS		
15.247(c)	Radiated Spurious Emission	PASS		
15.247(d)	Conducted Spurious Emission	PASS		
15.247(a)(iii)	Number of Hopping Frequency	PASS		
15.247(a)(iii)	Dwell Time	PASS		
15.247(a)(1)	Bandwidth	PASS		
15.205	Band Edge Emission	PASS		
15.203	Antenna Requirement	PASS		

### NOTE:

(1)" N/A" denotes test is not applicable in this Test Report



### 1.1 TEST FACILITY

Shenzhen STS Test Services Co., Ltd.

Add.: 1/F., Building B, Zhuoke Science Park, No.190, Chongqing Road,

Fuyong Street, Bao'an District, Shenzhen, Guangdong, China

CNAS Registration No.: L7649;

FCC Registration No.: 842334; IC Registration No.: 12108A-1

### 1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement  $\mathbf{y} \pm \mathbf{U}$ , where expended uncertainty  $\mathbf{U}$  is based on a standard uncertainty multiplied by a coverage factor of  $\mathbf{k=2}$ , providing a level of confidence of approximately 95 %  $^{\circ}$ 

No.	Item	Uncertainty
1	Conducted Emission (9KHz-150KHz)	±2.88dB
2	Conducted Emission (150KHz-30MHz)	±2.67dB
3	RF power,conducted	±0.70dB
4	Spurious emissions,conducted	±1.19dB
5	All emissions,radiated(<1G) 30MHz-200MHz	±2.83dB
6	All emissions,radiated(<1G) 200MHz-1000MHz	±2.94dB
7	All emissions,radiated(>1G)	±3.03dB
8	Temperature	±0.5°C
9	Humidity	±2%



### 2. GENERAL INFORMATION

### 2.1 GENERAL DESCRIPTION OF EUT

Equipment	WCDMA Mobile phone
Trade Name	POCKETSURFER3G5
Model Name	3G5
Serial Model	DW-PS3G5
Model Difference	Only Different in model Name
Channel List	Please refer to the Note 2.
Bluetooth	Frequency:2402 – 2480 MHz Modulation: GFSK(1Mbps), π/4-DQPSK(2Mbps), 8-DPSK(3Mbps)
Adapter	Input:AC 100-240V,50/60Hz,200mA
Adapter	Output:DC 5V,500mA
Pottony	Rated Voltage: 3.7V
Battery	capacity :1600mAh
Hardware version number	98056_1_10
Software versioning number	
Connecting I/O Port(s)	Please refer to the User's Manual

### Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.



2.

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

### 3. Table for Filed Antenna

Ant	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
1	N/A	N/A	PIFA Antenna	N/A	0	BT Antenna

The EUT antenna is PIFA Antenna. no antenna other than that furnished by the responsible party shall be used with the device.



### 2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	CH00
Mode 2	CH39
Mode 3	CH78
Mode 4	Charging + Keeping TX mode

For Conducted Emission		
Final Test Mode	Description	
Mode 4	Charging + Keeping TX mode	

For Radiated Emission				
Final Test Mode Description				
Mode 1	CH00			
Mode 2	CH39			
Mode 3	CH78			
Mode 4	Charging + Keeping TX mode			

#### Note:

- (1) The measurements are performed at the highest, middle, lowest available channels.
- (2) We have be tested for all avaiable U.S. voltage and frequencies(For 120V,50/60Hz and 240V, 50/60Hz) for which the device is capable of operation.

### 2.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of FHSS

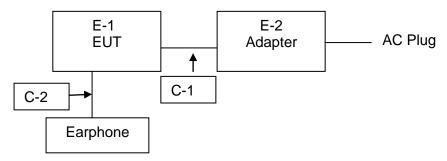
Test software Version	Test program: N/A			
Frequency	2402 MHz 2441 MHz 2480 MHz			
Parameters(1Mbps)	DEF	DEF	DEF	



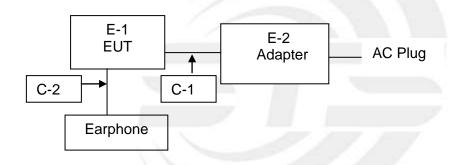
### 2.4 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of FHSS

### Radiated Spurious Emission Test



### Conducted Emission Test





### 2.5 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	WCDMA Mobile phone	POCKETSURFER3G5	3G5	N/A	EUT
E-2	Adapter	N/A	HT-001-050200	N/A	EUT
E-3	Earphone	N/A	N/A	N/A	EUT

Item	Shielded Type	Ferrite Core	Length	Note
C-1	unshielded	NO	100cm	N/A
C-2	unshielded	NO	103cm	N/A
	4			

### Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in <code>"Length\_"</code> column.
- (3) "YES" is means "shielded" "with core"; "NO" is means "unshielded" "without core".



### 2.6 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Spectrum Analyzer	Agilent	E4407B	MY50140340	2014.10.25	2015.10.24
Test Receiver	R&S	ESCI	101427	2014.10.25	2015.10.24
Bilog Antenna	TESEQ	CBL6111D	34678	2014.11.25	2015.11.24
Horn Antenna	Schwarzbeck	BBHA 9120D(1201)	9120D-1343	2015.03.06	2016.03.05
50Ω Coaxial Switch	Anritsu	MP59B	6200264416	2015.06.06	2016.06.05
PreAmplifier	Agilent	8449B	60538	2014.10.25	2015.10.24
Loop Antenna	ARA	PLA-1030/B	1029	2015.06.08	2016.06.07
USB RF power sensor	DARE	RPR3006W	15I00041SNO03	2014.10.25	2015.10.24

Conduction Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
EMI Test Receiver	R&S	ESPI	102086	2014.11.20	2015.11.19
LISN	R&S	ENV216	101242	2014.10.25	2015.10.24





### 3. EMC EMISSION TEST

### 3.1 CONDUCTED EMISSION MEASUREMENT

### 3.1.1 POWER LINE CONDUCTED EMISSION LIMITS

Operating frequency band. In case the emission fall within the restricted band specified on Part 15.247&207(a) limit in the table below has to be followed.

Class B	Standard	
Quasi-peak	Average	Standard
66 - 56 *	56 - 46 *	CISPR
56.00	46.00	CISPR
60.00	50.00	CISPR
	Quasi-peak 66 - 56 * 56.00	66 - 56 * 56 - 46 * 56.00 46.00

0.15 -0.5	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	56.00	46.00	FCC
5.0 -30.0	60.00	50.00	FCC

### Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " \* " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

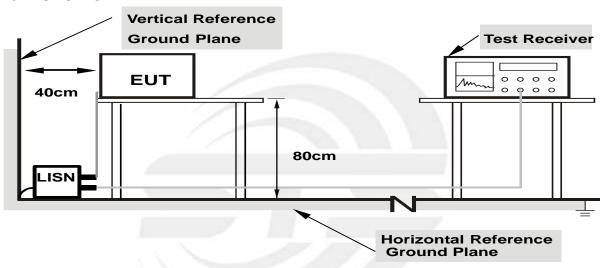
Receiver Parameters	Setting	
Attenuation	10 dB	
Start Frequency	0.15 MHz	
Stop Frequency	30 MHz	
IF Bandwidth	9 kHz	



#### 3.1.2 TEST PROCEDURE

- a. The EUT was placed 0.4 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item -EUT Test Photos.

### 3.1.3 TEST SETUP



Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

### 3.1.4 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.





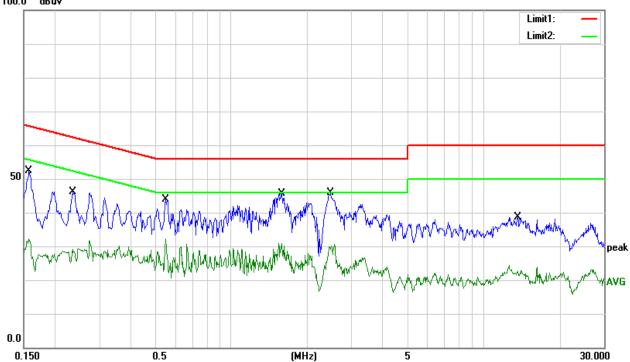
### 3.1.5 TEST RESULTS

EUT:	WCDMA Mobile phone	Model Name.:	3G5
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	1010hPa	Phase:	L
Test Voltage:	DC 5V from Adapter AC120V/60Hz	Test Mode:	Mode 4

Frequency	Reading	Correct	Result	Limit	Margin	Remark
(MHz)	(dBuV)	Factor(dB)	(dBuV)	(dBuV)	(dB)	Remark
0.1580	41.35	11.11	52.46	65.57	-13.11	QP
0.1580	20.94	11.11	32.05	55.57	-23.52	AVG
0.2341	35.38	10.84	46.22	62.30	-16.08	QP
0.2341	18.50	10.84	29.34	52.30	-22.96	AVG
0.5500	33.00	10.84	43.84	56.00	-12.16	QP
0.5500	21.38	10.84	32.22	46.00	-13.78	AVG
1.5900	34.79	10.85	45.64	56.00	-10.36	QP
1.5900	20.05	10.85	30.90	46.00	-15.10	AVG
2.4780	35.12	10.88	46.00	56.00	-10.00	QP
2.4780	19.16	10.88	30.04	46.00	-15.96	AVG
13.6260	27.21	11.54	38.75	60.00	-21.25	QP
13.6260	11.38	11.54	22.92	50.00	-27.08	AVG

### Remark:

1. Factor = Antenna Factor + Cable Loss - Pre-amplifier.





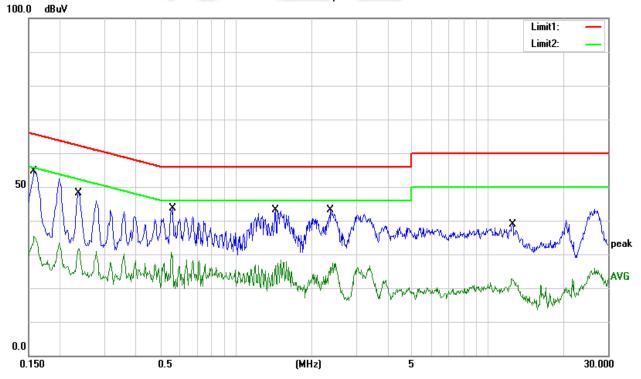


EUT:	WCDMA Mobile phone	Model Name.:	3G5
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	1010hPa	Phase:	N
Test Voltage:	DC 5V from Adapter AC120V/60Hz	Test Mode:	Mode 4

Frequency	Reading	Correct	Result	Limit	Margin	Remark
(MHz)	(dBuV)	Factor(dB)	(dBuV)	(dBuV)	(dB)	Remark
0.1580	43.54	11.10	54.64	65.57	-10.93	QP
0.1580	24.16	11.10	35.26	55.57	-20.31	AVG
0.2366	37.39	10.84	48.23	62.21	-13.98	QP
0.2366	20.80	10.84	31.64	52.21	-20.57	AVG
0.5620	32.68	10.82	43.50	56.00	-12.50	QP
0.5620	19.85	10.82	30.67	46.00	-15.33	AVG
1.4340	32.24	10.82	43.06	56.00	-12.94	QP
1.4340	15.77	10.82	26.59	46.00	-19.41	AVG
2.3780	32.31	10.84	43.15	56.00	-12.85	QP
2.3780	15.40	10.84	26.24	46.00	-19.76	AVG
12.5340	27.38	11.60	38.98	60.00	-21.02	QP
12.5340	11.24	11.60	22.84	50.00	-27.16	AVG

#### Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.





### 3.2 RADIATED EMISSION MEASUREMENT

### 3.2.1 RADIATED EMISSION LIMITS

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on Part 15247&205(a), then the Part 15 247&209(a) limit in the table below has to be followed.

LIMITS OF RADIATED EMISSION MEASUREMENT (30MHz - 1000MHz)

	·	,
Frequencies	Field Strength	Measurement Distance
(MHz)	(micorvolts/meter)	(meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

### LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

	Class B (dBuV/m) (at 3M)			
FREQUENCY (MHz)	PEAK	AVERAGE		
Above 1000	74	54		

#### Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

### FREQUENCY RANGE OF RADIATED MEASUREMENT (For unintentional radiators)

Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz)	Range (MHz)
Below 1.705	30
1.705 – 108	1000
108 – 500	2000
500 – 1000	5000
Above 1000	5 <sup>th</sup> harmonic of the highest frequency or 40 GHz, whichever is lower



Page 19 of 70 Report No.: STS1506087F03

Spectrum Parameter	Setting		
Attenuation	Auto		
Detector	Peak		
Start Frequency	1000 MHz(Peak/AV)		
Stop Frequency	10th carrier harmonic(Peak/AV)		
RB / VB (emission in restricted	1 MH= /1 MH= A\/ 1 MH= /10H=		
band)	1 MHz / 1 MHz, AV=1 MHz / 10Hz		

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

#### 3.2.2 TEST PROCEDURE

- a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- b. The EUT was placed on the top of a rotating table 0.8 meters(above 1GHz is 1.5 m) above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the equipment or of the substitution antenna shall be 0.8 m(above 1GHz is 1.5 m); the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos. Note:

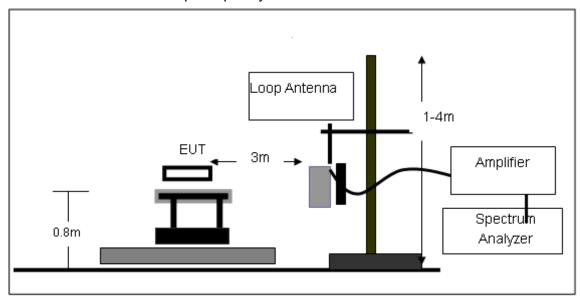
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

3.2.3 DEVIATION FROM TEST STANDARD No deviation

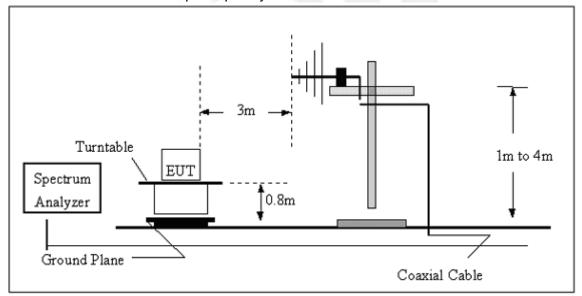


### 3.2.4 TEST SETUP

## (A) Radiated Emission Test-Up Frequency Below 30MHz

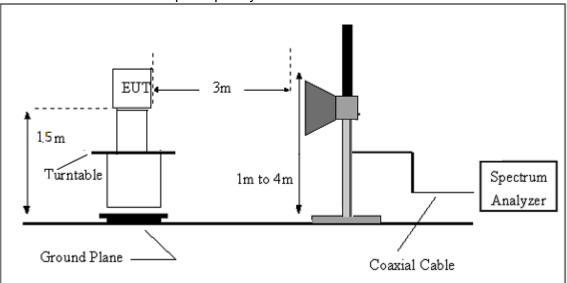


## (B) Radiated Emission Test-Up Frequency 30MHz~1GHz





(C) Radiated Emission Test-Up Frequency Above 1GHz



### 3.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.



### 3.2.6 TEST RESULTS

### Below 30MHz

EUT:	WCDMA Mobile phone	Model Name.:	3G5
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	1010hPa		
Test Voltage:	DC 5V from Adapter AC120V/60Hz		

Freq.	Reading	Limit	Margin	State	Test Result
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F	rest Result
					PASS
					PASS

### NOTE:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor =40 log (specific distance/test distance)(dB);

Limit line = specific limits(dBuv) + distance extrapolation factor.





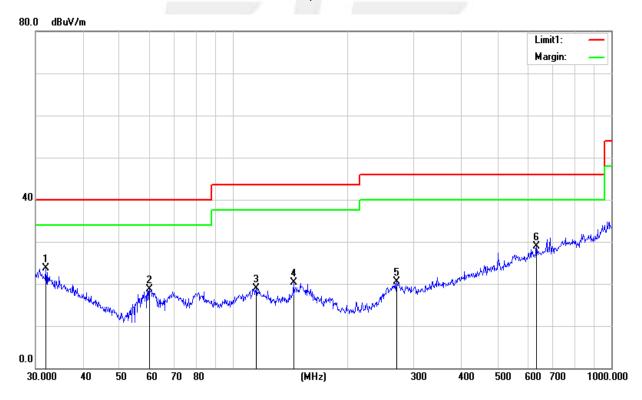
### Between 30-1000MHz

EUT:	WCDMA Mobile phone	Model Name.:	3G5
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	1010hPa	Phase:	Horizontal
Test Voltage:	DC 5V from Adapter AC 120V/60Hz	Test Mode:	Mode 4

Frequency	Reading	Correct	Result	Limit	Margin	Remark
(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
31.9546	6.05	17.69	23.74	40.00	-16.26	QP
60.0691	13.44	5.33	18.77	40.00	-21.23	QP
114.9170	7.53	11.39	18.92	43.50	-24.58	QP
144.3348	8.20	12.19	20.39	43.50	-23.11	QP
270.3748	6.04	14.37	20.41	46.00	-25.59	QP
633.9073	5.98	22.97	28.95	46.00	-17.05	QP

### Remark:

1. Factor = Antenna Factor + Cable Loss - Pre-amplifier.



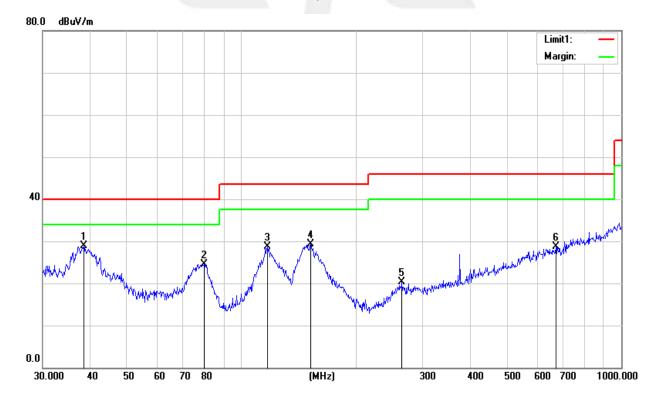


EUT:	WCDMA Mobile phone	Model Name.:	3G5
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	1010hPa	Phase:	Vertical
Test Voltage:	DC 5V from Adapter AC 120V/60Hz	Test Mode:	Mode 4

Frequency	Reading	Correct	Result	Limit	Margin	Remark
(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
38.4808	14.67	14.29	28.96	40.00	-11.04	QP
79.8002	16.49	8.01	24.50	40.00	-15.50	QP
117.3602	16.48	12.31	28.79	43.50	-14.71	QP
152.1297	17.44	11.92	29.36	43.50	-14.14	QP
264.7456	5.36	14.97	20.33	46.00	-25.67	QP
672.8444	5.37	23.28	28.65	46.00	-17.35	QP

#### Remark:

1. Factor = Antenna Factor + Cable Loss – Pre-amplifier.







### Above 1000 MHz

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector	0
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре	Comment
		Lo	ow Channel (2402	MHz)			
4804.20	66.25	-3.62	62.63	74	-11.37	PK	Vertical
4804.21	45.97	-3.62	42.35	54	-11.65	AV	Vertical
7206.13	61.77	-0.9	60.87	74	-13.13	PK	Vertical
7206.12	41.14	-0.9	40.24	54	-13.76	AV	Vertical
4803.99	61.61	-3.65	57.96	74	-16.04	PK	Horizontal
4803.99	44.34	-3.65	40.69	54	-13.31	AV	Horizontal
	Mid Channel (2441 MHz)						
4882.08	64.22	-3.65	60.57	74	-13.43	PK	Vertical
4882.07	49.12	-3.65	45.47	54	-8.53	AV	Vertical
7323.22	60.21	-0.84	59.37	74	-14.63	PK	Vertical
7323.21	43.85	-0.84	43.01	54	-10.99	AV	Vertical
4882.17	60.93	-3.68	57.25	74	-16.75	PK	Horizontal
4882.14	44.51	-3.68	40.83	54	-13.17	AV	Horizontal
	High Channel (2480 MHz)						
4960.26	60.65	-3.59	57.06	74	-16.94	PK	Vertical
4960.30	45.39	-3.59	41.8	54	-12.2	AV	Vertical
7440.33	60.40	-0.83	59.57	74	-14.43	PK	Vertical
7440.30	45.07	-0.83	44.24	54	-9.76	AV	Vertical
4960.32	60.42	-3.59	56.83	74	-17.17	PK	Horizontal
4960.30	44.98	-3.59	41.39	54	-12.61	AV	Horizontal

### Note:

- 1) 30MHz~25GHz:(Scan with GFSK, π/4-DQPSK,8DPSK, the worst casw is GFSK Mode)
- 2) Factor = Antenna Factor + Cable Loss Pre-amplifier.

Emission Level = Meter Reading + Factor

Margin = Limit - Emission Leve





### Band edge

Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре	Comment
(111112)	GFSK						
2399.9	68.56	-12.99	55.57	74	-18.43	PK	Vertical
2399.9	53.86	-12.99	40.87	54	-13.13	AV	Vertical
2399.9	68.98	-12.99	55.99	74	-18.01	PK	Horizontal
2399.9	52.93	-12.99	39.94	54	-14.06	AV	Horizontal
2483.6	70.14	-12.99	57.36	74	-16.64	PK	Vertical
2483.6	53.08	-12.78	40.3	54	-13.7	AV	Vertical
2483.6	70.19	-12.78	57.41	74	-16.59	PK	Horizontal
2483.6	53.37	-12.78	40.59	54	-13.41	AV	Horizontal
	π/4-DQPSK						
2399.9	70.14	-12.99	57.15	74	-16.85	PK	Vertical
2399.9	53.41	-12.99	40.42	54	-13.58	AV	Vertical
2399.9	69.12	-12.99	56.13	74	-17.87	PK	Horizontal
2399.9	53.96	-12.99	40.97	54	-13.03	AV	Horizontal
2483.6	70.35	-12.78	57.57	74	-16.43	PK	Vertical
2483.6	55.20	-12.78	42.42	54	-11.58	AV	Vertical
2483.6	69.94	-12.78	57.16	74	-16.84	PK	Horizontal
2483.6	53.47	-12.78	40.69	54	-13.31	AV	Horizontal
	//		8DPSK	AU			
2399.9	70.55	-12.99	57.56	74	-16.44	PK	Vertical
2399.9	54.12	-12.99	41.13	54	-12.87	AV	Vertical
2399.9	69.41	-12.99	56.42	74	-17.58	PK	Horizontal
2399.9	55.03	-12.99	42.04	54	-11.96	AV	Horizontal
2483.6	69.98	-12.78	57.2	74	-16.8	PK	Vertical
2483.6	54.02	-12.78	41.24	54	-12.76	AV	Vertical
2483.6	70.51	-12.78	57.73	74	-16.27	PK	Horizontal
2483.6	53.34	-12.78	40.56	54	-13.44	AV	Horizontal

Low measurement frequencies is range from 2310 to 2400 MHz, high measurement frequencies is range from 2483.5 to 2500 MHz.

Only show the worst point data of the emissions in the frequency 2310-2400 MHz and 2483.5-2500 MHz.





## Hopping

Fraguesa	Motor Booding	Footor	Emission Lovel	Limita	Morain	Dotootor		
Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Detector	Comment	
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)	Туре		
			GFSK		1			
2390	68.09	-12.99	55.1	74	-18.9	PK	Vertical	
2390	53.80	-12.99	40.81	54	-13.19	AV	Vertical	
2390	67.45	-12.99	54.46	74	-19.54	PK	Horizontal	
2390	52.82	-12.99	39.83	54	-14.17	AV	Horizontal	
2483.5	65.88	-12.78	53.1	74	-20.9	PK	Vertical	
2483.5	54.04	-12.78	41.26	54	-12.74	AV	Vertical	
2483.5	66.91	-12.78	54.13	74	-19.87	PK	Horizontal	
2483.5	53.74	-12.78	40.96	54	-13.04	AV	Horizontal	
	π/4-DQPSK							
2390	68.06	-12.99	55.07	74	-18.93	PK	Vertical	
2390	54.92	-12.99	41.93	54	-12.07	AV	Vertical	
2390	66.91	-12.99	53.92	74	-20.08	PK	Horizontal	
2390	52.91	-12.99	39.92	54	-14.08	AV	Horizontal	
2483.5	66.73	-12.78	53.95	74	-20.05	PK	Vertical	
2483.5	52.85	-12.78	40.07	54	-13.93	AV	Vertical	
2483.5	67.77	-12.78	54.99	74	-19.01	PK	Horizontal	
2483.5	53.95	-12.78	41.17	54	-12.83	AV	Horizontal	
	8DPSK							
2390	68.12	-12.99	55.13	74	-18.87	PK	Vertical	
2390	54.04	-12.99	41.05	54	-12.95	AV	Vertical	
2390	66.87	-12.99	53.88	74	-20.12	PK	Horizontal	
2390	53.87	-12.99	40.88	54	-13.12	AV	Horizontal	
2483.5	67.89	-12.78	55.11	74	-18.89	PK	Vertical	
2483.5	53.88	-12.78	41.1	54	-12.9	AV	Vertical	
2483.5	66.91	-12.78	54.13	74	-19.87	PK	Horizontal	
2483.5	54.14	-12.78	41.36	54	-12.64	AV	Horizontal	

Low measurement frequencies is range from 2310 to 2400 MHz, high measurement frequencies is range from 2483.5 to 2500 MHz.

Only show the worst point data of the emissions in the frequency 2310-2400 MHz and 2483.5-2500 MHz.



### 4. CONDUCTED SPURIOUS EMISSIONS

### 4.1 REQUIREMENT

According to FCC section 15.247(d), in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated 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, based on either an RF conducted or a radiated measurement.

#### **4.2 TEST PROCEDURE**

According to FCC section 15.247(d), in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated 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, based on either an RF conducted or a radiated measurement.

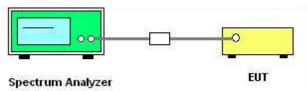
Spectrum Parameter	Setting		
Detector	Peak		
Start/Stop Frequency	30 MHz to 10th carrier harmonic		
RB / VB (emission in restricted band)	100 KHz/300 KHz		
Trace-Mode:	Max hold		

### For Band edge

Spectrum Parameter	Setting		
Detector	Peak		
Stort/Ston Fraguency	Lower Band Edge: 2310 – 2404 MHz		
Start/Stop Frequency	Upper Band Edge: 2478 – 2500 MHz		
RB / VB (emission in restricted band)	100 KHz/300 KHz		
Trace-Mode:	Max hold		

Remark: Hopping on and Hopping off mode all have been tested, only worst case hopping off is reported.

### 4.3 TEST SETUP



The EUT which is powered by the Battery, is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 500hm; the path loss as the factor is calibrated to correct the reading. Make the measurement with the spectrum analyzer's resolution bandwidth(RBW) = 100 kHz. In order to make an accurate measurement, set the span greater than RBW.

### 4.4 EUT OPERATION CONDITIONS

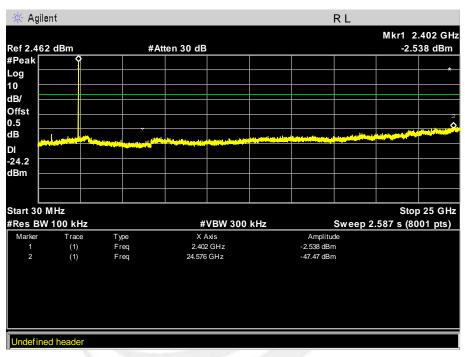
The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

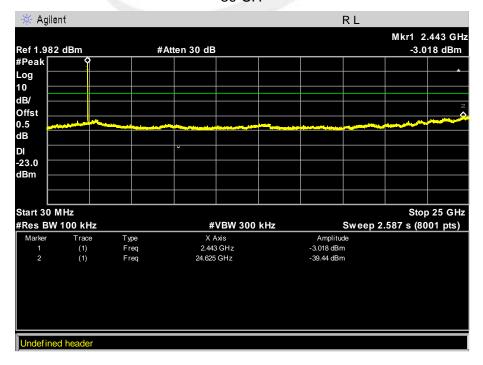


### 4.5 TEST RESULTS

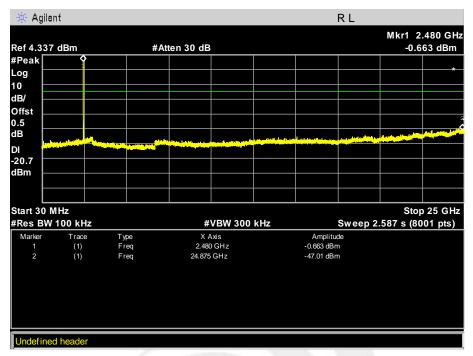
EUT:	WCDMA Mobile phone	Model Name :	3G5
Temperature :	25 ℃	Relative Humidity:	50%
Pressure :	1012 hPa	Test Voltage :	DC 3.7V
Test Mode :	GFSK(1Mbps)-00/39/78 CH		

### 00 CH







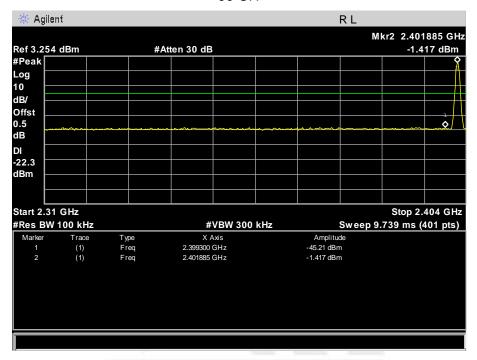


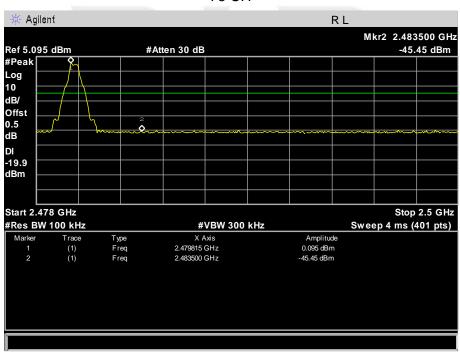




### For Band edge

### 00 CH



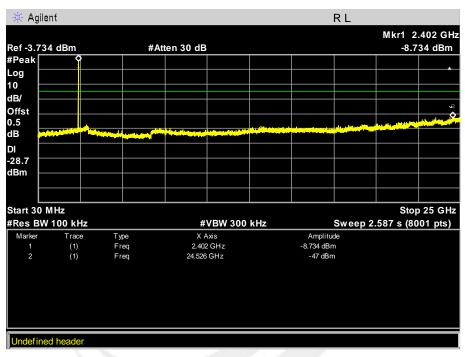


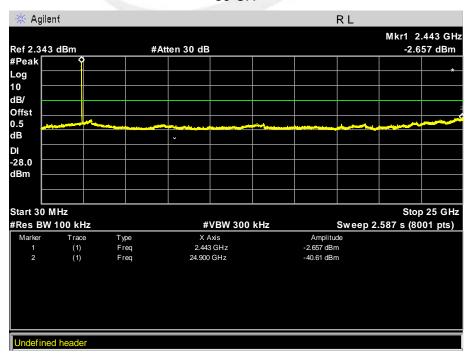


Page 32 of 70 Report No.: STS1506087F03

EUT:	WCDMA Mobile phone	Model Name :	3G5		
Temperature :	25 ℃	Relative Humidity:	50%		
Pressure :	1012 hPa	Test Voltage :	DC 3.7V		
Test Mode :	π/4-DQPSK(2Mbps) –00/39/78 CH				

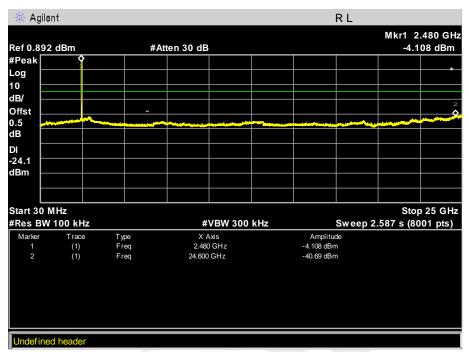
### 00 CH





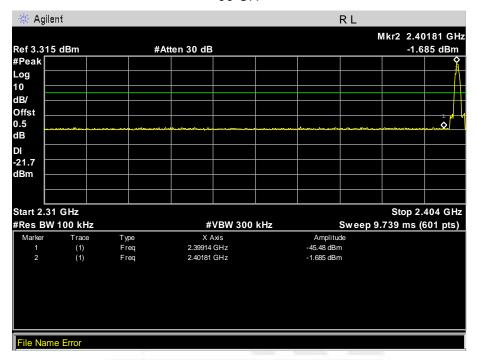


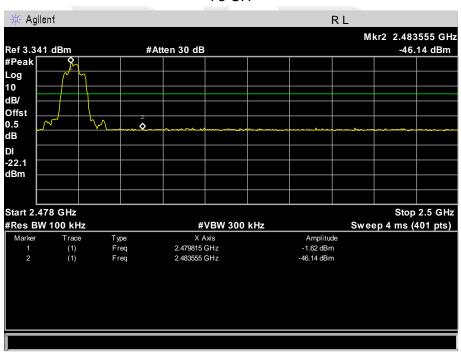






### 00 CH



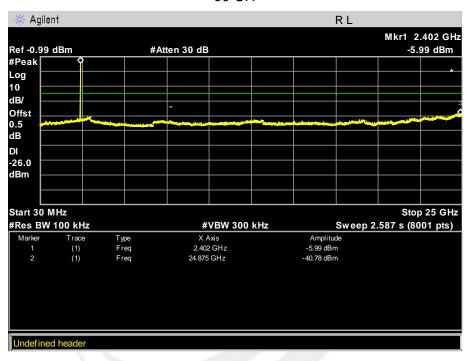


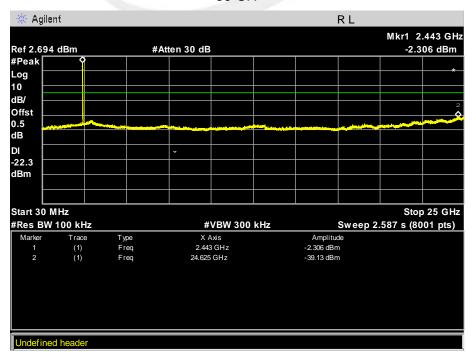


Page 35 of 70 Report No.: STS1506087F03

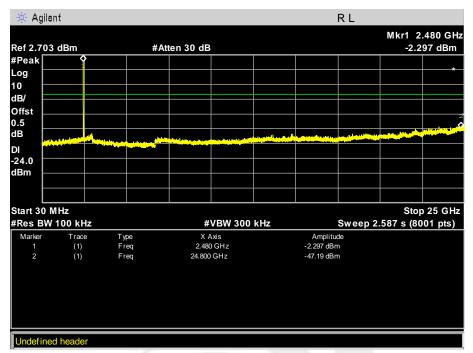
EUT:	WCDMA Mobile phone	Model Name :	3G5		
Temperature :	25 ℃	Relative Humidity:	50%		
Pressure :	1012 hPa	Test Voltage :	DC 3.7V		
Test Mode :	8-DPSK(3Mbps) -00/39/78 CH				

### 00 CH







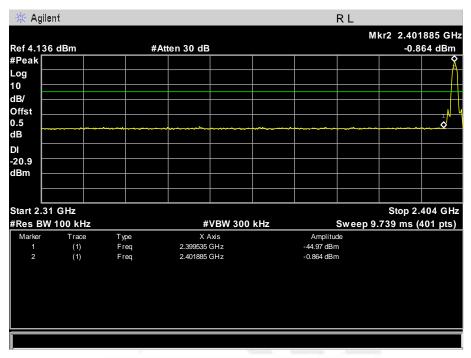




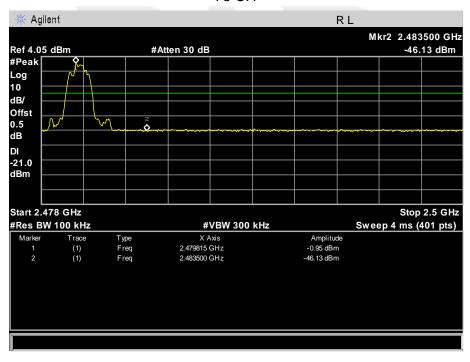


# For Band edge

#### 00 CH



#### 78 CH





# 5. NUMBER OF HOPPING CHANNEL

#### 5.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247), Subpart C					
Section Test Item Limit Frequency Range (MHz)				Result	
15.247 (a)(1)(iii)	Number of Hopping Channel	≥15	2400-2483.5	PASS	

Spectrum Parameters	Setting
Attenuation	Auto
Span Frequency	> Operating Frequency Range
RB	100 KHz
VB	100 KHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

#### 5.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW= 100K, VBW=100K, Sweep time = Auto.

#### 5.3 TEST SETUP

EUT	SPECTRUM
	ANALYZER

#### **5.4 EUT OPERATION CONDITIONS**

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.





5.5 TEST RESULTS

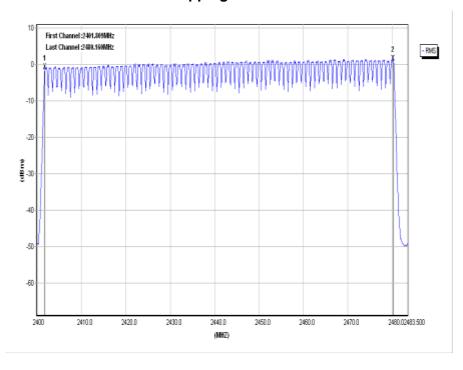
EUT:	WCDMA Mobile phone	Model Name :	3G5
Temperature :	25 ℃	Relative Humidity:	60%
Pressure :	1015 hPa	Test Voltage :	DC 3.7V
Test Mode :	Hopping Mode		

# Number of Hopping Channel

79

Report No.: STS1506087F03

# **Hopping channel**





Report No.: STS1506087F03

#### 6. AVERAGE TIME OF OCCUPANCY

#### 6.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C					
Section Test Item Limit Frequency Range (MHz) Result					
15.247 (a)(1)(iii)	Average Time of Occupancy				

#### **6.2 TEST PROCEDURE**

- a. The transmitter output (antenna port) was connected to the spectrum analyzer
- b. Set RBW of spectrum analyzer to 1MHz and VBW to 3MHz.
- c. Use a video trigger with the trigger level set to enable triggering only on full pulses.
- d. Sweep Time is more than once pulse time.
- Set the center frequency on any frequency would be measure and set the frequency span to e. zero span.
- f. Measure the maximum time duration of one single pulse.
- g. Set the EUT for DH5, DH3 and DH1 packet transmitting.
- h. Measure the maximum time duration of one single pulse.
- i. DH5 Packet permit maximum 1600/79 / 6 = 3.37 hops per second in each channel (5 time slots RX, 1 time slot TX). So, the dwell time is the time duration of the pulse times 3.37 x 31.6 = 106.6 within 31.6 seconds.
- j. DH3 Packet permit maximum 1600 / 79 / 4 = 5.06 hops per second in each channel (3 time slots RX, 1 time slot TX). So, the dwell time is the time duration of the pulse times  $5.06 \times 31.6 = 160$  within 31.6 seconds.
- k. DH1 Packet permit maximum 1600 / 79 /2 = 10.12 hops per second in each channel (1 time slot RX, 1 time slot TX). So, the dwell time is the time duration of the pulse times 10.12 x 31.6 = 320 within 31.6 seconds.

#### 6.3 TEST SETUP

EUT	SPECTRUM
	ANALYZER

#### 6.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

Report No.: STS1506087F03

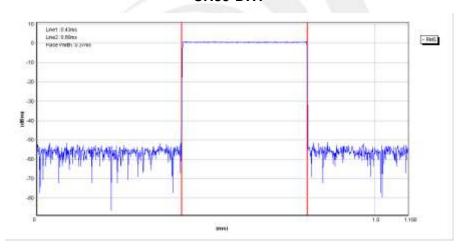


# 6.5 TEST RESULTS

EUT:	WCDMA Mobile phone	Model Name :	3G5	
Temperature :	25 ℃	Relative Humidity:	50%	
Pressure :	1012 hPa	Test Voltage :	DC 3.7V	
Test Mode :	GFSK(1Mbps)-DH1/DH3/DH5			

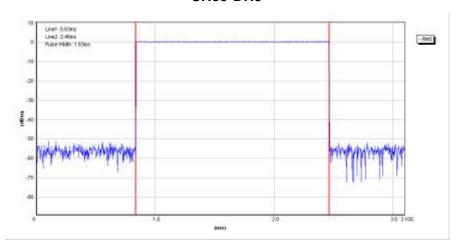
Data Packet	Frequency	Pulse Duration (ms)	Dwell Time (s)	Limits(s)
DH1	2441 MHz	0.370	0.118	0.4
DH3	2441 MHz	1.630	0.261	0.4
DH5	2441 MHz	2.880	0.307	0.4

# CH39-DH1

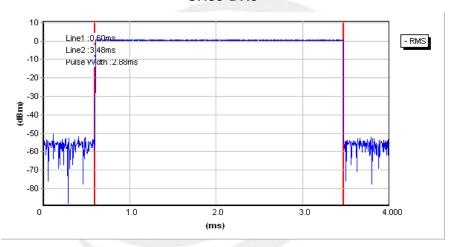




# CH39-DH3



# **CH39-DH5**



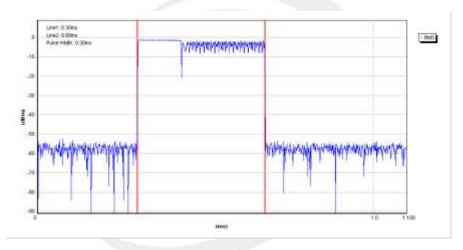


Page 43 of 70 Report No.: STS1506087F03

EUT:	WCDMA Mobile phone	Model Name :	3G5		
Temperature :	25 ℃	Relative Humidity:	50%		
Pressure :	1012 hPa	Test Voltage :	DC 3.7V		
Test Mode :	π/4-DQPSK(2Mbps) –2DH1/2DH3/2DH5				

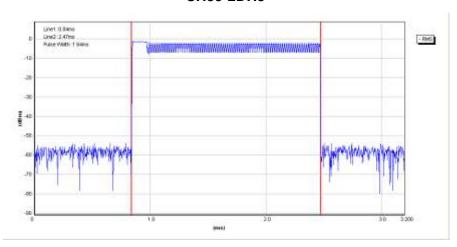
Data Packet	Frequency	Pulse Duration (ms)	Dwell Time (s)	Limits(s)
2DH1	2441 MHz	0.380	0.122	0.4
2DH3	2441 MHz	1.640	0.262	0.4
2DH5	2441 MHz	2.880	0.307	0.4

#### CH39-2DH1

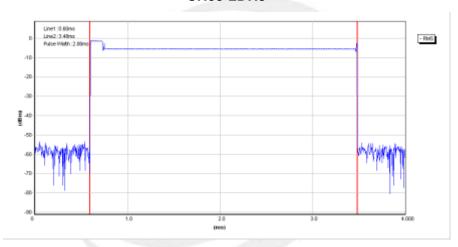




# CH39-2DH3



# CH39-2DH5



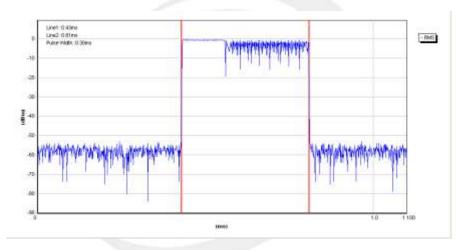


Page 45 of 70 Report No.: STS1506087F03

EUT:	WCDMA Mobile phone	Model Name :	3G5		
Temperature :	25 ℃	Relative Humidity:	50%		
Pressure :	1012 hPa Test Voltage : DC 3.7V				
Test Mode :	8DPSK(3Mbps) -3DH1/3DH3/3DH5				

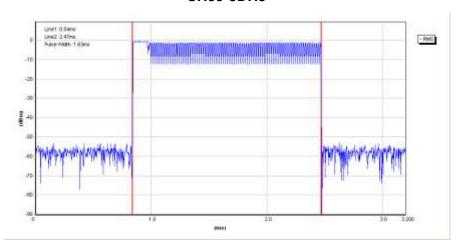
Data Packet	Frequency	Pulse Duration (ms)	Dwell Time (s)	Limits(s)
3DH1	2441 MHz	0.380	0.122	0.4
3DH3	2441 MHz	1.630	0.261	0.4
3DH5	2441 MHz	2.880	0.307	0.4

# CH39-3DH1

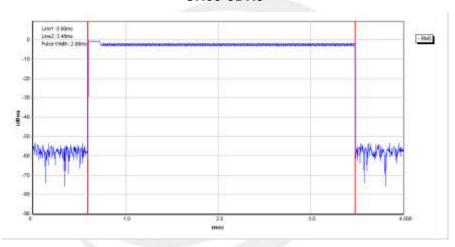




#### CH39-3DH3



# CH39-3DH5





#### 7. HOPPING CHANNEL SEPARATION MEASUREMEN

#### 7.1 APPLIED PROCEDURES / LIMIT

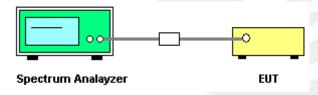
Frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 20 dB bandwidth of the hopping channel, whichever is greater.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	> Measurement Bandwidth or Channel Separation
RB	30 kHz (20dB Bandwidth) / 30 kHz (Channel Separation)
VB	100 kHz (20dB Bandwidth) / 100 kHz (Channel Separation)
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

#### 7.2 TEST PROCEDURE

- a. The transmitter output (antenna port) was connected to the spectrum analyser in peak hold mode.
- b. The resolution bandwidth of 30 kHz and the video bandwidth of 100 kHz were utilised for 20 dB bandwidth measurement.
- c. The resolution bandwidth of 30 kHz and the video bandwidth of 100 kHz were utilised for channel separation measurement.

#### 7.3 TEST SETUP



#### 7.4 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

Report No.: STS1506087F03



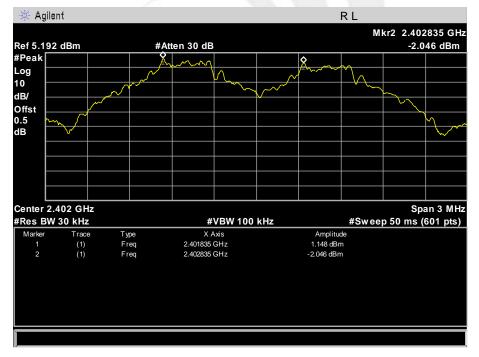
# 7.5 TEST RESULTS

EUT:	WCDMA Mobile phone	Model Name :	3G5
Temperature :	25 ℃	Relative Humidity:	50%
Pressure :	1012 hPa	Test Voltage :	DC 3.7V
Test Mode :	CH00 / CH39 /CH78 (GFSK(1Mbps) Mode)		

Frequency	Ch. Separation (MHz)	Limit	Result
2402 MHz	≥1.000	0.911	Complies
2441 MHz	≥1.000	0.877	Complies
2480 MHz	≥1.000	0.899	Complies

For GFSK: Ch. Separation Limits: >20dB bandwidth

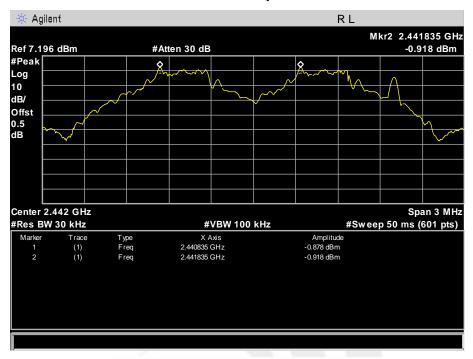
# CH00 -1Mbps



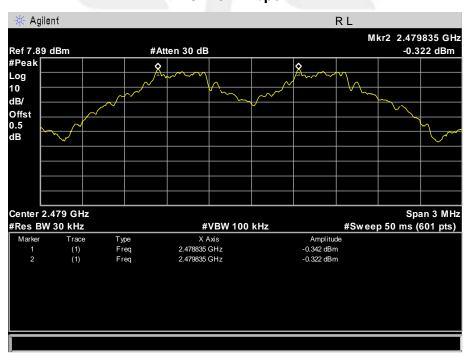




# CH39 -1Mbps



# CH78 -1Mbps





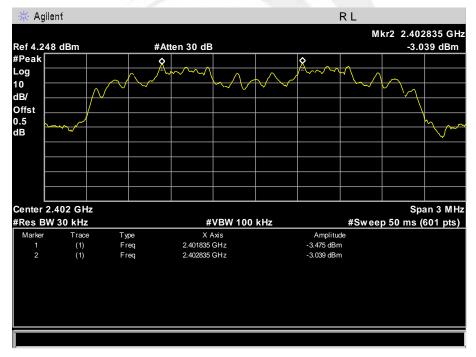
Page 50 of 70 Report No.: STS1506087F03

EUT:	WCDMA Mobile phone	Model Name :	3G5
Temperature:	<b>25</b> ℃	Relative Humidity:	50%
Pressure :	1012 hPa	Test Voltage :	DC 3.7V
Test Mode :	CH00 / CH39 /CH78 (π/4-DQPSK(2Mbps) Mode)		

Frequency	Ch. Separation (MHz)	Limit	Result
2402 MHz	≥1.000	0.861	Complies
2441 MHz	≥1.000	0.859	Complies
2480 MHz	≥1.000	0.862	Complies

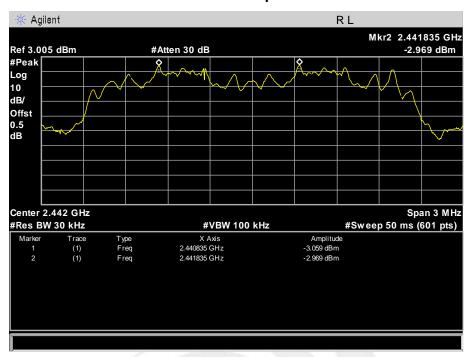
For  $\pi/4$ -DQPSK(2Mbps): Ch. Separation Limits: > two-thirds 20dB bandwidth

# CH00 -2Mbps

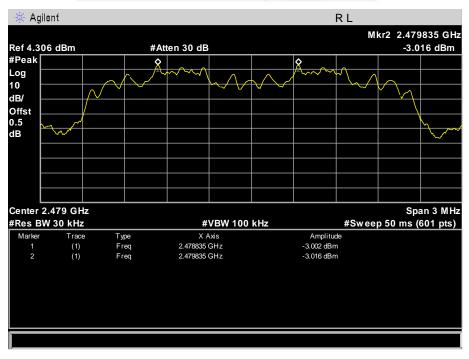




#### CH39 -2Mbps



# CH78 -2Mbps





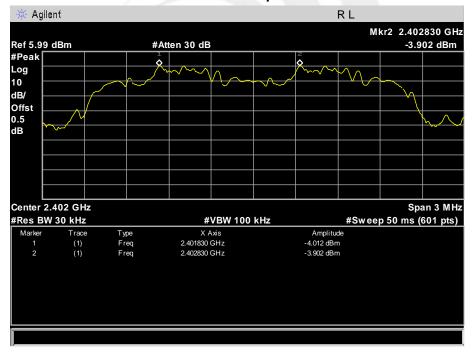
Page 52 of 70 Report No.: STS1506087F03

EUT:	WCDMA Mobile phone	Model Name :	3G5
Temperature :	<b>25</b> ℃	Relative Humidity:	50%
Pressure :	1012 hPa	Test Voltage :	DC 3.7V
Test Mode :	CH00 / CH39 /CH78 (8-DPSK(3Mbps)Mode)		

Frequency	Ch. Separation (MHz)	Limit	Result
2402 MHz	≥1.000	0.848	Complies
2441 MHz	0.995	0.849	Complies
2480 MHz	0.995	0.855	Complies

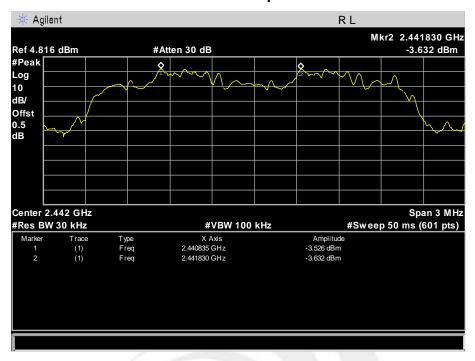
# For 8-DPSK(3Mbps):

# Ch. Separation Limits: > two-thirds 20dB bandwidth CH00 -3Mbps

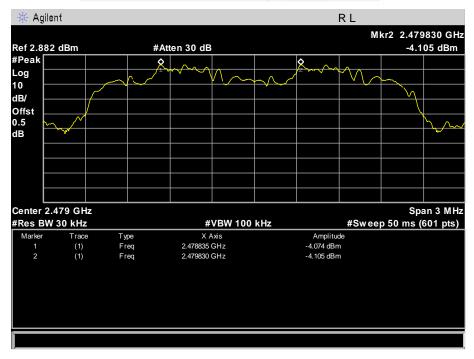




#### CH39 -3Mbps



# CH78 -3Mbps





Report No.: STS1506087F03

**PASS** 

#### 8. BANDWIDTH TEST

Section

15.247

(a)(1)

#### 8.1 APPLIED PROCEDURES / LIMIT

Bandwidth

FCC Part15 (15.247) , Subpart C			
Test Item	Limit	Frequency Range (MHz)	Result

2400-2483.5

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	> Measurement Bandwidth or Channel Separation
RB	30 kHz (20dB Bandwidth) / 30 kHz (Channel Separation)
VB	100 kHz (20dB Bandwidth) / 100 kHz (Channel Separation)
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

(20dB bandwidth)

#### 8.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW= 30KHz, VBW=100KHz, Sweep time = Auto.

#### 8.3 TEST SETUP

EUT	SPECTRUM
	ANALYZER

#### 8.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

Report No.: STS1506087F03

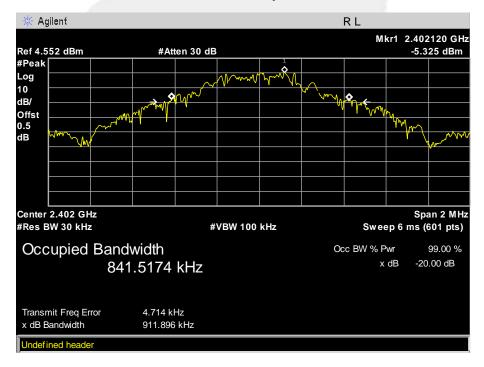


# 8.5 TEST RESULTS

EUT:	WCDMA Mobile phone	Model Name :	3G5
Temperature :	25 ℃	Relative Humidity:	50%
Pressure :	1012 hPa	Test Voltage :	DC 3.7V
Test Mode :	GFSK(1Mbps)CH00 / CH39 /C78		

Frequency	20dB Bandwidth (MHz)	Result
2402 MHz	0.911	PASS
2441 MHz	0.877	PASS
2480 MHz	0.899	PASS

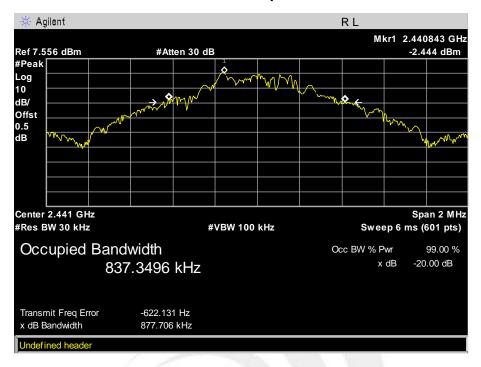
# CH00 -1Mbps



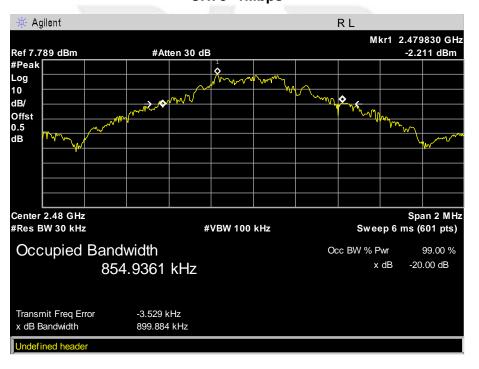




# CH39 -1Mbps



#### CH78 -1Mbps



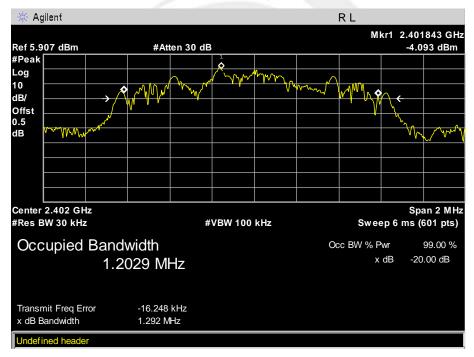


Page 57 of 70 Report No.: STS1506087F03

EUT:	WCDMA Mobile phone	Model Name :	3G5
Temperature :	25 ℃	Relative Humidity:	50%
Pressure :	1012 hPa	Test Voltage :	DC 3.7V
Test Mode :	π/4-DQPSK(2Mbps)CH00 / CH	I39 /C78	

Frequency	20dB Bandwidth(MHz)	Result
2402 MHz	1.292	PASS
2441 MHz	1.289	PASS
2480 MHz	1.293	PASS

# CH00 -2Mbps

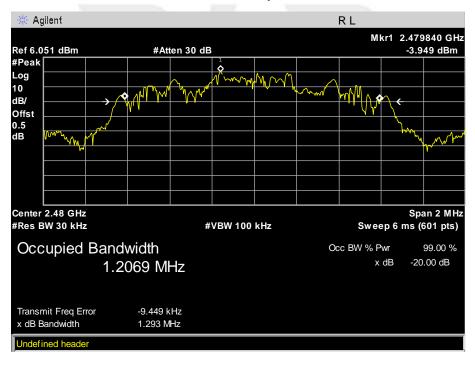




#### CH39 -2Mbps



# CH78 -2Mbps



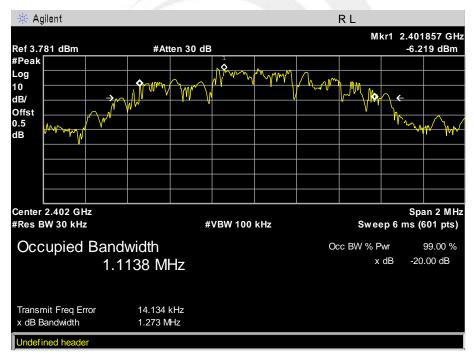


Page 59 of 70 Report No.: STS1506087F03

EUT:	WCDMA Mobile phone	Model Name :	3G5
Temperature :	25 ℃	Relative Humidity:	50%
Pressure :	1012 hPa	Test Voltage :	DC 3.7V
Test Mode :	8DPSK(3Mbps)CH00 / CH39 /0	C78	

Frequency	20dB Bandwidth (MHz)	Result
2402 MHz	1.273	PASS
2441 MHz	1.274	PASS
2480 MHz	1.283	PASS

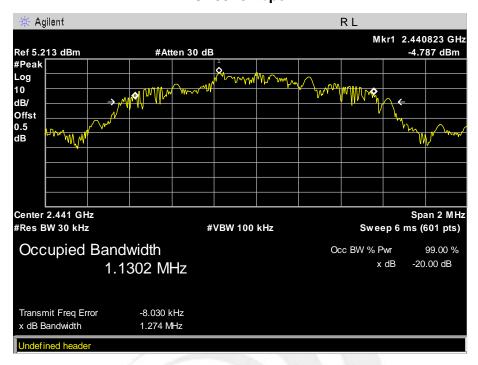
# CH00 -3Mbps



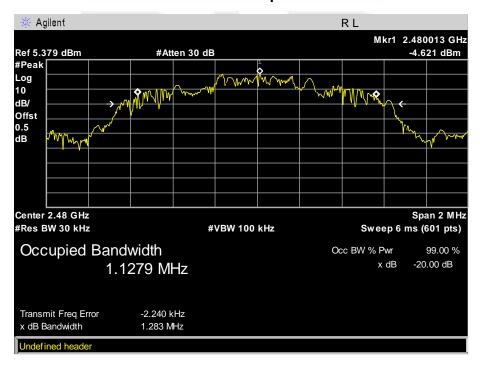




# CH39 -3Mbps



#### CH78 -3Mbps







#### 9. PEAK OUTPUT POWER TEST

#### 9.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247), Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247	Peak	1 W or 0.125W		
(b)(i)	Output Power	Or if channel separation > 2/3 bandwidthprovided the systems operatewith an output power no greater than125 mW(20.96dBm)	2400-2483.5	PASS

#### 9.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: GFSK(1Mbps):RBW= 1MHz, VBW= 3MHz, Sweep time = Auto.
- c. Spectrum Setting:  $\pi/4$ -DQPSK(2Mbps):RBW= 3MHz, VBW= 3MHz, Sweep time = Auto.
- d. Spectrum Setting: 8-DPSK(3Mbps):RBW= 3MHz, VBW= 3MHz, Sweep time = Auto.

#### 9.3 TEST SETUP

EUT	SPECTRUM
	ANALYZER

#### 9.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

Report No.: STS1506087F03



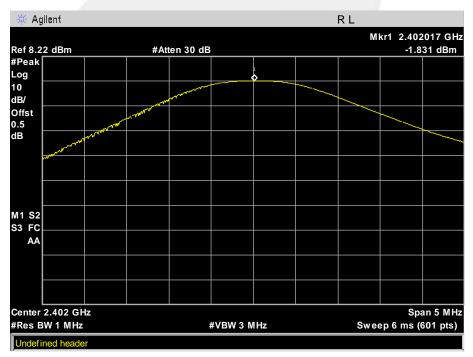
# 9.5 TEST RESULTS

EUT:	WCDMA Mobile phone	Model Name :	3G5
Temperature :	25 ℃	Relative Humidity:	60%
Pressure :	1012 hPa	Test Voltage :	DC 3.7V
Test Mode :	CH00/ CH39 /CH78 GFSK(1Mb	ops)	

Test Channel	Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)
CH00	2402	-1.831	30
CH39	2441	-0.220	30
CH78	2480	0.312	30

Note: the channel separation > bandwidth

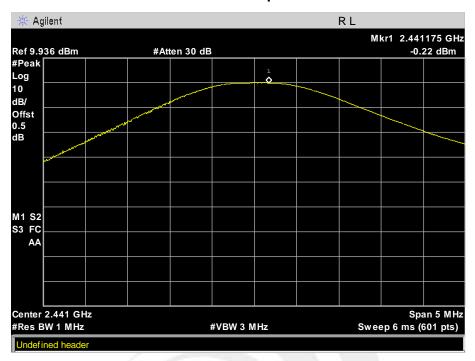
CH00 -1Mbps



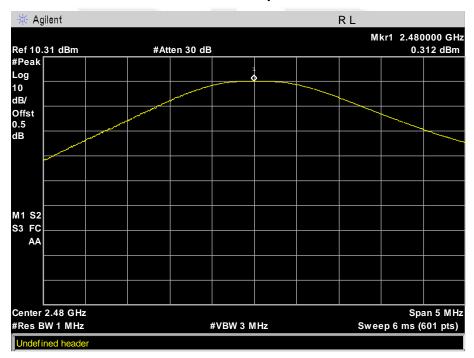




# CH39 -1Mbps



# CH78 -1Mbps





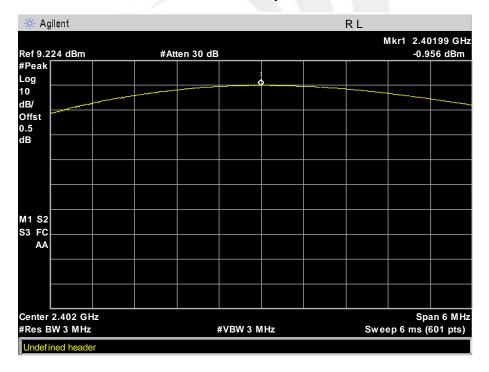
Page 64 of 70 Report No.: STS1506087F03

EUT:	WCDMA Mobile phone	Model Name :	3G5
Temperature :	<b>25</b> ℃	Relative Humidity:	60%
Pressure :	1012 hPa	Test Voltage :	DC 3.7V
Test Mode :	CH00/ CH39 /CH78 π/4-DQPSK(2Mbps)		

Test Channel	Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)
CH00	2402	-0.956	20.96
CH39	2441	-0.605	20.96
CH78	2480	-0.995	20.96

Note: the channel separation >2/3 bandwidth

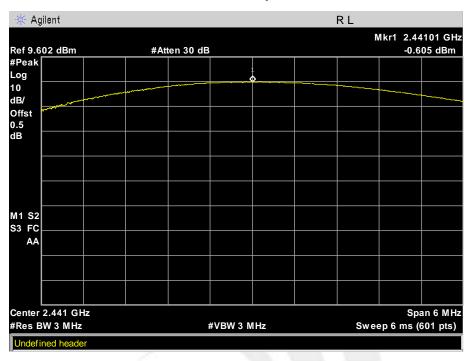
CH00 -2Mbps



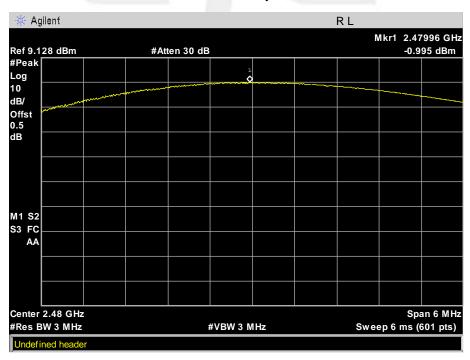




#### CH39 -2Mbps



# CH78 -2Mbps





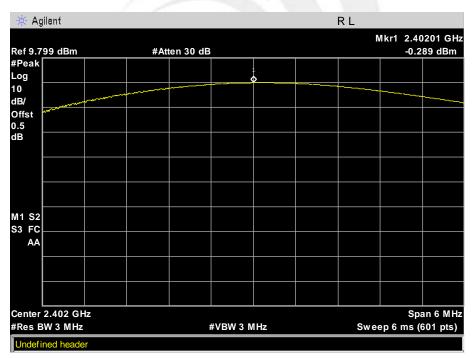
Page 66 of 70 Report No.: STS1506087F03

EUT:	WCDMA Mobile phone	Model Name :	3G5
Temperature :	<b>25</b> ℃	Relative Humidity:	60%
Pressure :	1012 hPa	Test Voltage :	DC 3.7V
Test Mode :	CH00/ CH39 /CH78 8-DPSK(3Mbps)		

Test Channel	Frequency (MHz)	Peak Output Power (dBm)	LIMIT (dBm)
CH00	2402	-0.289	20.96
CH39	2441	0.137	20.96
CH78	2480	-0.278	20.96

Note: the channel separation >2/3 bandwidth

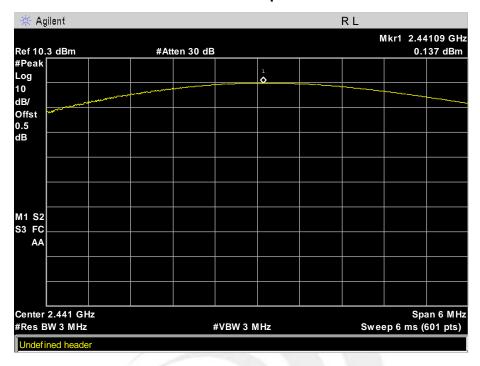
CH00 -3Mbps



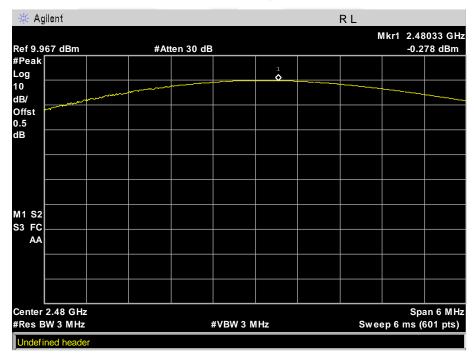




# CH39 -3Mbps



# CH78 -3Mbps







# 10. ANTENNA REQUIREMENT

#### 10.1 STANDARD REQUIREMENT

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

#### 10.2 EUT ANTENNA

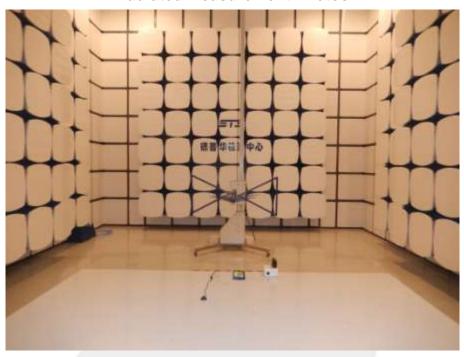
The EUT antenna is permanent attach Antenna. It comply with the standard requirement.





# **APPENDIX- PHOTOS OF TEST SETUP**









# **Conducted Measurement Photos**



\* \* \* \* \* END OF THE REPORT \* \* \* \*