FCC RF Test Report

APPLICANT : BLU Products, Inc.

EQUIPMENT: Mobile Phone

BRAND NAME : BLU

MODEL NAME : STUDIO 5.5 HD FCC ID : YHLBLUSTUD55HD

STANDARD : FCC 47 CFR Part 2, 22(H), 24(E), 27(L)

CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)

The product was received on Jan. 08, 2016 and testing was completed on Feb. 21, 2016. We, SPORTON INTERNATIONAL (SHENZHEN) INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA / EIA-603-D-2010 and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL (SHENZHEN) INC., the test report shall not be reproduced except in full.

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Approved by: Jones Tsai / Manager

SPORTON INTERNATIONAL (SHENZHEN) INC.

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TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : 1 of 24
Report Issued Date : Mar. 01, 2016

Testing Laboratory

Report No.: FG610801

Report Version : Rev. 01

TABLE OF CONTENTS

RE	VISIO	N HISTORY	3			
SU	MMA	RY OF TEST RESULT	4			
1	GEN	ERAL DESCRIPTION	6			
	1.1	Applicant	6			
	1.2	Manufacturer				
	1.3	Product Feature of Equipment Under Test				
	1.4	Product Specification of Equipment Under Test	7			
	1.5	Modification of EUT	7			
	1.6	Maximum ERP/EIRP Power, Frequency Tolerance, and Emission Designator	8			
	1.7	Testing Location	8			
	1.8	Applicable Standards	9			
2	TES	T CONFIGURATION OF EQUIPMENT UNDER TEST	10			
	2.1	Test Mode	10			
	2.2	Connection Diagram of Test System	11			
	2.3	Support Unit used in test configuration	11			
	2.4	Measurement Results Explanation Example	11			
3	CONDUCTED TEST RESULT					
	3.1	Measuring Instruments	12			
	3.2	Test Setup	12			
	3.3	Test Result of Conducted Test	12			
	3.4	Conducted Output Power	13			
	3.5	Peak-to-Average Ratio				
	3.6	99% Occupied Bandwidth and 26dB Bandwidth Measurement				
	3.7	Conducted Band Edge				
	3.8	Conducted Spurious Emission				
	3.9	Frequency Stability				
4	RAD	IATED TEST ITEMS				
	4.1	Measuring Instruments				
	4.2	Test Setup				
	4.3	Test Result of Radiated Test				
	4.4	Effective Radiated Power and Effective Isotropic Radiated Power Measurement				
	4.5	Field Strength of Spurious Radiation Measurement	22			
5	LIST	OF MEASURING EQUIPMENT	23			
6	UNC	ERTAINTY OF EVALUATION	24			
ΑF	PEND	DIX A. TEST RESULTS OF CONDUCTED TEST				
ΑF	PEND	DIX B. TEST RESULTS OF RADIATED TEST				
ΑF	PEND	DIX C. TEST SETUP PHOTOGRAPHS				

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : 2 of 24
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No. : FG610801

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG610801	Rev. 01	Initial issue of report	Mar. 01, 2016

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : 3 of 24
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report Template No.: BU5-FG22/24/27 Version 1.1

Report No.: FG610801

SUMMARY OF TEST RESULT

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
3.4	§2.1046	RSS-132 (5.4) RSS-133 (6.4) RSS-139 (6.5)	Conducted Output Power	Reporting Only	PASS	-
3.5	§24.232(d)	RSS-132 (5.4) RSS-133 (6.4) RSS-139 (6.5)	Peak-to-Average Ratio	< 13 dB	PASS	-
3.6	§2.1049 §22.917(b) §24.238(b) §27.53(g)	RSS-GEN(6.6) RSS-132(3.1) RSS-133(3.1) RSS-139 (3.1)	Occupied Bandwidth	Reporting Only	PASS	1
3.7	§2.1051 §22.917(a) §24.238(a) §27.53(h)	RSS-132 (5.5) RSS-133 (6.5) RSS-139 (6.6)	Band Edge Measurement	< 43+10log10(P[Watts])	PASS	-
\$2.1051 \$22.917(a) 3.8 \$24.238(a)	RSS-132 (5.5) RSS-133 (6.5) RSS-139 (6.6)	Conducted Emission	< 43+10log10(P[Watts])	PASS	-	
	§2.1055 RSS-GEN(6.11) §22.355 RSS-132 (5.3)	Frequency Stability for	< 2.5 ppm for Part 22			
3.9	§2.1055 §24.235 §27.54	RSS-GEN(6.11) RSS-133 (6.3) RSS-139 (6.4)	Frequency Stability for Temperature & Voltage	Within Authorized Band	PASS	-

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : 4 of 24
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801

Report Section	FCC Rule	IC Rule	Description	Limit	Result	Remark
	§22.913(a)(2)	RSS-132(5.4) SRSP-503(5.1.3)	Effective Radiated Power	< 7 Watts	PASS	-
4.4	§24.232(c)	RSS-133 (6.4) SRSP-510(5.1.2)	Equivalent Isotropic Radiated Power	< 2 Watts	PASS	-
	§27.50(d)(4)	RSS-139 (6.5) SRSP-513(5.1.2)	Equivalent Isotropic Radiated Power	< 1 Watts	PASS	-
4.5	§2.1053 §22.917(a) §24.238(a) §27.53(h)	RSS-132 (5.5) RSS-133 (6.5) RSS-139 (6.6)	Field Strength of Spurious Radiation	< 43+10log10(P[Watts])	PASS	Under limit 8.02 dB at 7639.200 MHz

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : 5 of 24
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report Template No.: BU5-FG22/24/27 Version 1.1

Report No. : FG610801

1 General Description

1.1 Applicant

BLU Products, Inc.

10814 NW 33rd St # 100 Doral, FL 33172

1.2 Manufacturer

BLU Products, Inc.

10814 NW 33rd St # 100 Doral, FL 33172

1.3 Product Feature of Equipment Under Test

Product Feature				
Equipment	Mobile Phone			
Brand Name	BLU			
Model Name	STUDIO 5.5 HD			
FCC ID	YHLBLUSTUD55HD			
EUT supports Radios application	GSM/GPRS/ WCDMA/HSPA/HSPA+(16QAM uplink is not supported) WLAN2.4GHz 802.11b/g/n HT20 Bluetooth v3.0+EDR			
IMEI Code	Conducted:866689027958977/866689027959777 Radiation: 866689027958936/866689027959736			
HW Version	SW1511_MB_PCB_V1.0			
SW Version	BLU_S150U_V03_GENERIC			
EUT Stage	Production Unit			

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

SPORTON INTERNATIONAL (SHENZHEN) INC. TEL: 86-755-8637-9589

FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : 6 of 24
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801

1.4 Product Specification of Equipment Under Test

Standards	Standards-related Product Specification					
	GSM/GPRS					
	850:	824.2 MHz ~ 848.8 MHz				
	1900:	1850.2 MHz ~ 1909.8MHz				
Tx Frequency	WCDMA:					
	Band V:	826.4 MHz ~ 846.6 MHz				
	Band II:	1852.4 MHz ~ 1907.6 MHz				
	Band IV:	1712.4 MHz ~ 1752.6 MHz				
	GSM/GPF	RS				
	850:	869.2 MHz ~ 893.8 MHz				
	1900:	1930.2 MHz ~ 1989.8 MHz				
Rx Frequency	WCDMA:					
	Band V:	871.4 MHz ~ 891.6 MHz				
	Band II:	1932.4 MHz ~ 1987.6 MHz				
	Band IV:	2112.4 MHz ~ 2152.6 MHz				
	GSM/GPRS					
	850:	32.42 dBm				
	1900:	29.77 dBm				
Maximum Output Power to Antenna	WCDMA:					
	Band V:	21.20 dBm				
	Band II:	21.58 dBm				
	Band IV:	21.56 dBm				
Antenna Type	IFA Antenn	a				
	GSM: GMS					
	GPRS: GMSK					
Type of Modulation	WCDMA: QPSK (Uplink)					
l "	HSDPA: QPSK (Uplink)					
	HSUPA: QPSK (Uplink) HSPA+: 160AM (160AM uplink is not supported)					
	HSPA+ : 16QAM (16QAM uplink is not supported)					

1.5 Modification of EUT

No modifications are made to the EUT during all test items.

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TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : 7 of 24
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801

Report Version : Rev. 01

1.6 Maximum ERP/EIRP Power, Frequency Tolerance, and Emission Designator

FCC Rule	System	Type of Modulation	Maximum ERP/EIRP (W)	Frequency Tolerance (ppm)	Emission Designator
Part 22	GSM850 GSM	GMSK	0.1485	0.0610 ppm	244KGXW
Part 22	WCDMA Band V RMC 12.2Kbps	QPSK	0.0135	0.0347 ppm	4M10F9W
Part 24	GSM1900 GSM	GMSK	0.1281	0.0394 ppm	245KGXW
Part 24	WCDMA Band II RMC 12.2Kbps	QPSK	0.0218	0.0282 ppm	4M10F9W
Part 27	WCDMA Band IV RMC 12.2Kbps	QPSK	0.0263	0.0214 ppm	4M10F9W

1.7 Testing Location

Test Site	SPORTON INTERNATIONAL (SHENZHEN) INC.			
	1F & 2F,Building A, Morning Business Center, No. 4003 ShiGu Rd., Xili Town,			
	Nanshan District, Shenzhen, Guangdong, P. R. China			
Test Site Location	TEL: +86-755-8637-9589			
	FAX: +86-755-8637-9595			
Took Cita No	Sporton Site No.			
Test Site No.	TH01-SZ			

Test Site	SPORTON INTERNATIONAL (KUNSHAN) INC.			
	No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P. R. China			
Test Site Location	TEL: +86-0512-5790-0158			
	FAX: +86-0512-5790-0958			
Toot Site No.	Sporton Site No.	FCC/IC Registration No.		
Test Site No.	03CH03-KS	306251/4086E		

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : 8 of 24
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report Template No.: BU5-FG22/24/27 Version 1.1

Report No.: FG610801

1.8 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR Part 2, 22(H), 24(E), 27(L)
- ANSI / TIA / EIA-603-D-2010
- FCC KDB 971168 D01 Power Meas. License Digital Systems v02r02
- IC RSS-132 Issue 3
- IC RSS-133 Issue 6
- IC RSS-139 Issue 3
- IC RSS-Gen Issue 4

Remark:

- All test items were verified and recorded according to the standards and without any deviation during the test.
- 2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

SPORTON INTERNATIONAL (SHENZHEN) INC.

FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD

TEL: 86-755-8637-9589

Page Number : 9 of 24
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801

2 Test Configuration of Equipment Under Test

2.1 Test Mode

Antenna port conducted and radiated test items were performed according to KDB 971168 D01 Power Meas. License Digital Systems v02r02 with maximum output power.

Radiated measurements were performed with rotating EUT in different three orthogonal test planes to find the maximum emission.

Radiated emissions were investigated as following frequency range:

- 1. 30 MHz to 9000 MHz for GSM850 and WCDMA Band V.
- 2. 30 MHz to 18000 MHz for WCDMA Band IV.
- 3. 30 MHz to 19000 MHz for GSM1900 and WCDMA Band II.

All modes and data rates and positions were investigated.

Test modes are chosen to be reported as the worst case configuration below:

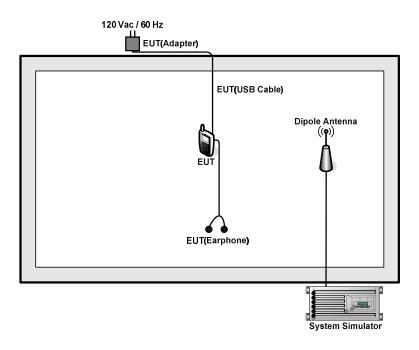
	Test Modes						
Band	Radiated TCs	Conducted TCs					
GSM 850	■ GSM Link	■ GSM Link					
GSM 1900	■ GSM Link	■ GSM Link					
WCDMA Band V	■ RMC 12.2Kbps Link	■ RMC 12.2Kbps Link					
WCDMA Band II	■ RMC 12.2Kbps Link	■ RMC 12.2Kbps Link					
WCDMA Band IV	■ RMC 12.2Kbps Link	■ RMC 12.2Kbps Link					

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : 10 of 24
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m
2.	DC Power Supply	GW INSTEK	GPS-3030D	N/A	N/A	Unshielded, 1.8 m

2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between RF conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level will be exactly the RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

The following shows an offset computation example with RF cable loss 4.5 dB and a 10dB attenuator.

Example:

 $Offset(dB) = RF \ cable \ loss(dB) + attenuator \ factor(dB).$ = 4.5 + 10 = 14.5 (dB)

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : 11 of 24
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801

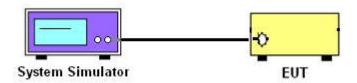
3 Conducted Test Result

3.1 Measuring Instruments

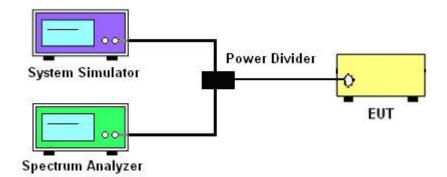
See list of measuring instruments of this test report.

3.2 Test Setup

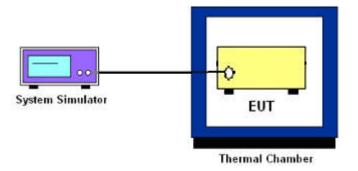
3.2.1 Conducted Output Power



3.2.2 Peak-to-Average Ratio, Occupied Bandwidth, Conducted Band-Edge and Conducted Spurious Emission



3.2.3 Frequency Stability



3.3 Test Result of Conducted Test

Please refer to Appendix A.

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : 12 of 24
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801

3.4 Conducted Output Power

3.4.1 Description of the Conducted Output Power

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

3.4.2 Test Procedures

- 1. The transmitter output port was connected to the system simulator.
- 2. Set EUT at maximum power through system simulator.
- 3. Select lowest, middle, and highest channels for each band and different modulation.
- 4. Measure the maximum burst average power for GSM and maximum average power for other modulation signal.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : 13 of 24
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801

3.5 Peak-to-Average Ratio

3.5.1 Description of the PAR Measurement

The peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

3.5.2 Test Procedures

- 1. The testing follows FCC KDB 971168 D01 v02r02 Section 5.7.1.
- 2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
- 3. Set EUT to transmit at maximum output power.
- 4. When the duty cycle is less than 98%, then signal gating will be implemented on the spectrum analyzer by triggering from the system simulator.
- 5. Set the CCDF (Complementary Cumulative Distribution Function) option of the spectrum analyzer. Record the maximum PAPR level associated with a probability of 0.1%.

SPORTON INTERNATIONAL (SHENZHEN) INC.

FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD

TEL: 86-755-8637-9589

Page Number : 14 of 24
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report Template No.: BU5-FG22/24/27 Version 1.1

Report No.: FG610801

3.6 99% Occupied Bandwidth and 26dB Bandwidth Measurement

3.6.1 Description of 99% Occupied Bandwidth and 26dB Bandwidth Measurement

The occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

The 26 dB emission bandwidth is defined as the frequency range between two points, one above and one below the carrier frequency, at which the spectral density of the emission is attenuated 26 dB below the maximum in-band spectral density of the modulated signal. Spectral density (power per unit bandwidth) is to be measured with a detector of resolution bandwidth equal to approximately 1.0% of the emission bandwidth.

3.6.2 Test Procedures

- 1. The testing follows FCC KDB 971168 v02r02 Section 4.2.
- 2. The EUT was connected to spectrum analyzer and system simulator via a power divider.
- The spectrum analyzer center frequency is set to the nominal EUT channel center frequency.
 The span range for the spectrum analyzer shall be between two and five times the anticipated OBW.
- 4. The nominal resolution bandwidth (RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
- 5. Set the detection mode to peak, and the trace mode to max hold.
- Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace.
 (this is the reference value)
- 7. Determine the "-26 dB down amplitude" as equal to (Reference Value X).
- 8. Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the "–X dB down amplitude" determined in step 6. If a marker is below this "-X dB down amplitude" value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.
- 9. Use the 99 % power bandwidth function of the spectrum analyzer and report the measured bandwidth.

Report No.: FG610801

3.7 Conducted Band Edge

3.7.1 Description of Conducted Band Edge Measurement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

3.7.2 Test Procedures

- 1. The testing follows FCC KDB 971168 D01 v02r02 Section 6.0.
- 2. The EUT was connected to the spectrum analyzer and system simulator via a power divider.
- The RF output of EUT was connected to the spectrum analyzer by an RF cable and attenuator.The path loss was compensated to the results for each measurement.
- 4. The band edges of low and high channels for the highest RF powers were measured.
- 5. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
- 6. The limit line is derived from 43 + 10log(P) dB below the transmitter power P(Watts)
 - = P(W) [43 + 10log(P)] (dB)
 - = [30 + 10log(P)] (dBm) [43 + 10log(P)] (dB)
 - = -13dBm.

SPORTON INTERNATIONAL (SHENZHEN) INC.

FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD

TEL: 86-755-8637-9589

Page Number : 16 of 24
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801

3.8 Conducted Spurious Emission

3.8.1 Description of Conducted Spurious Emission Measurement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

3.8.2 Test Procedures

- 1. The testing follows FCC KDB 971168 D01 v02r02 Section 6.0.
- 2. The EUT was connected to the spectrum analyzer and system simulator via a power divider.
- 3. The RF output of EUT was connected to the spectrum analyzer by an RF cable and attenuator. The path loss was compensated to the results for each measurement.
- 4. The middle channel for the highest RF power within the transmitting frequency was measured.
- 5. The conducted spurious emission for the whole frequency range was taken.
- 6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
- 7. The limit line is derived from 43 + 10log(P) dB below the transmitter power P(Watts)
 - = P(W) [43 + 10log(P)] (dB)
- = [30 + 10log(P)] (dBm) [43 + 10log(P)] (dB)
- = -13dBm.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : 17 of 24
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801

3.9 Frequency Stability

3.9.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5ppm) of the center frequency.

3.9.2 Test Procedures for Temperature Variation

- 1. The testing follows FCC KDB 971168 D01 v02r02 Section 9.0.
- 2. The EUT was set up in the thermal chamber and connected with the system simulator.
- 3. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
- 4. With power OFF, the temperature was raised in 10°C steps up to 50°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.

3.9.3 Test Procedures for Voltage Variation

- 1. The testing follows FCC KDB 971168 D01 v02r02 Section 9.0.
- 2. The EUT was placed in a temperature chamber at 25±5° C and connected with the system simulator.
- 3. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
- 4. The variation in frequency was measured for the worst case.

SPORTON INTERNATIONAL (SHENZHEN) INC.

FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD

TEL: 86-755-8637-9589

Page Number : 18 of 24
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801

4 Radiated Test Items

4.1 Measuring Instruments

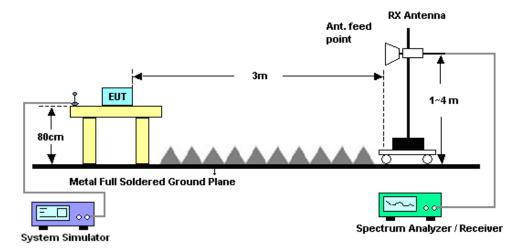
See list of measuring instruments of this test report.

4.2 Test Setup

4.2.1 For radiated test from 30MHz to 1GHz



4.2.2 For radiated test above 1GHz



4.3 Test Result of Radiated Test

Please refer to Appendix B.

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : 19 of 24
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801

4.4 Effective Radiated Power and Effective Isotropic Radiated Power Measurement

4.4.1 Description of the ERP/EIRP Measurement

The substitution method, in ANSI / TIA / EIA-603-D-2010, was used for ERP/EIRP measurement, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems v02r02. The ERP of mobile transmitters must not exceed 7 Watts (Cellular Band) and the EIRP of mobile transmitters are limited to 2 Watts (PCS Band) and 1 Watts (AWS Band).

4.4.2 Test Procedures

- The testing follows FCC KDB 971168 D01 v02r02 Section 5.2.1. (for CDMA/WCDMA), Section 5.2.2.2 (for GSM/GPRS/EDGE) and ANSI / TIA-603-D-2010 Section 2.2.17.
- The EUT was placed on a non-conductive rotating platform 0.8 meters high in a semi-anechoic chamber. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer with RMS detector per section 5. of KDB 971168 D01.
- 3. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power. The maximum emission was recorded from analyzer power level (LVL) from the 360 degrees rotation of the turntable and the test antenna raised and lowered over a range from 1 to 4 meters in both horizontally and vertically polarized orientations.
- 4. Effective Isotropic Radiated Power (EIRP) was measured by substitution method according to TIA/EIA-603-D. The EUT was replaced by the substitution antenna at same location, and then a known power from S.G. was applied into the dipole antenna through a Tx cable, and then recorded the maximum Analyzer reading through raised and lowered the test antenna. The correction factor (in dB) = S.G. Tx Cable loss + Substitution antenna gain Analyzer reading. Then the EUT's EIRP was calculated with the correction factor, EIRP = LVL + Correction factor and ERP = EIRP 2.15. Take the record of the output power at substitution antenna.

SPORTON INTERNATIONAL (SHENZHEN) INC.

FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD

TEL: 86-755-8637-9589

Page Number : 20 of 24
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801

	GSM/GPRS/EDGE	WCDMA/HSPA
SPAN	500kHz	10MHz
RBW	10kHz	100kHz
VBW	30kHz	300kHz
Detector	RMS	RMS
Trace	Average	Average
Average Type	Power	Power
Sweep Count	100	100

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : 21 of 24
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report Template No.: BU5-FG22/24/27 Version 1.1

Report No. : FG610801

4.5 Field Strength of Spurious Radiation Measurement

4.5.1 Description of Field Strength of Spurious Radiated Measurement

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

4.5.2 Test Procedures

- The testing follows FCC KDB 971168 D01 v02r02 Section 5.8 and ANSI / TIA-603-D-2010 Section 2.2.12.
- 2. The EUT was placed on a rotatable wooden table 0.8 meters above the ground.
- The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
- 4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
- 5. The height of the receiving antenna is varied between one meter and four meters to search for the maximum spurious emission for both horizontal and vertical polarizations.
- 6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking record of maximum spurious emission.
- 7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
- 8. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
- 9. Taking the record of output power at antenna port.
- 10. Repeat step 7 to step 8 for another polarization.
- 11. EIRP (dBm) = S.G. Power Tx Cable Loss + Tx Antenna Gain
- 12.ERP (dBm) = EIRP 2.15
- 13. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
- 14. The limit line is derived from 43 + 10log(P) dB below the transmitter power P(Watts)
 - = P(W) [43 + 10log(P)] (dB)
 - = [30 + 10log(P)] (dBm) [43 + 10log(P)] (dB)
 - = -13dBm.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : 22 of 24
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801

5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSP30	101400	9kHz~30GHz	Jan. 28, 2015	Jan. 16, 2016~ Jan. 23, 2016	Jan. 27, 2016	Conducted (TH01-SZ)
Thermal Chamber	Ten Billion Hongzhangroup	LP-150U	H2014081803	-40~+150°C	Aug. 07, 2015	Jan. 16, 2016~ Jan. 23, 2016	Aug. 06, 2016	Conducted (TH01-SZ)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz-44GHz	Jun. 05, 2015	Feb. 21, 2016	Jun. 04, 2016	Radiation (03CH03-KS)
Bilog Antenna	TeseQ	CBL6112D	23182	25MHz-2GHz	Jan. 16, 2016	Feb. 21, 2016	Jan. 15, 2017	Radiation (03CH03-KS)
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1356	1GHz~18GHz	Jun. 25, 2015	Feb. 21, 2016	Jun. 24, 2016	Radiation (03CH03-KS)
SHF-EHF Horn	Schwarzbeck	BBHA 9170	BBHA170249	15GHz ~40GHz	Mar. 03, 2015	Feb. 21, 2016	Mar. 02, 2016	Radiation (03CH03-KS)
Amplifier	Burgeon	BPA-530	102212	0.01MHz-3000MHz	Aug. 10, 2015	Feb. 21, 2016	Aug. 09, 2016	Radiation (03CH03-KS)
high gain Amplifier	MITEQ	AMF-7D-00 101800-30-1	1889560	1GHz-18GHz	Aug. 10, 2015	Feb. 21, 2016	Aug. 09, 2016	Radiation (03CH03-KS)
Amplifier	Agilent	8449B	3008A02370	1GHz~26.5GHz	Oct. 24, 2015	Feb. 21, 2016	Oct. 23, 2016	Radiation (03CH03-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Feb. 21, 2016	NCR	Radiation (03CH03-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Feb. 21, 2016	NCR	Radiation (03CH03-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Feb. 21, 2016	NCR	Radiation (03CH03-KS)

NCR: No Calibration Required

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : 23 of 24
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801

6 Uncertainty of Evaluation

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of	4.5 dB	
Confidence of 95% (U = 2Uc(y))	4.5 dB	

SPORTON INTERNATIONAL (SHENZHEN) INC.

FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD

TEL: 86-755-8637-9589

Page Number : 24 of 24
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report Template No.: BU5-FG22/24/27 Version 1.1

Report No.: FG610801

Appendix A. Test Results of Conducted Test

Conducted Output Power(Average power)

Conducted Power (*Unit: dBm)							
Band	GSM850			GSM1900			
Channel	128	189	251	512	661	810	
Frequency	824.2	836.4	848.8	1850.2	1880.0	1909.8	
GSM	32.19	32.25	32.42	29.22	29.55	<mark>29.77</mark>	
GPRS class 8	32.18	32.22	32.40	29.20	29.52	29.76	
GPRS class 10	29.93	29.87	29.81	26.72	26.90	27.00	
GPRS class 11	28.14	28.09	28.20	25.18	25.36	25.49	
GPRS class 12	26.14	26.11	26.04	23.17	23.32	23.46	

Conducted Power (*Unit: dBm)									
Band WCDMA Band V		WCDMA Band II			WCDMA Band IV				
Channel	4132	4182	4233	9262	9400	9538	1312	1413	1513
Frequency	826.4	836.4	846.6	1852.4	1880	1907.6	1712.4	1732.6	1752.6
AMR 12.2Kbps	21.18	21.07	21.13	21.10	21.12	21.56	21.54	21.47	21.32
RMC 12.2Kbps	<mark>21.20</mark>	21.10	21.15	21.11	21.15	<mark>21.58</mark>	<mark>21.56</mark>	21.48	21.34
HSDPA Subtest-1	20.16	20.16	20.17	20.19	20.20	20.95	20.81	20.52	20.80
HSDPA Subtest-2	19.99	20.09	19.96	20.26	20.23	20.98	20.80	20.55	20.76
HSDPA Subtest-3	19.95	20.08	19.99	20.39	20.36	21.02	20.83	20.57	20.81
HSDPA Subtest-4	19.96	20.08	19.94	20.34	20.30	21.03	20.80	20.56	20.75
HSUPA Subtest-1	18.78	18.75	18.60	18.80	18.65	19.42	19.22	19.12	19.21
HSUPA Subtest-2	19.26	19.33	19.27	19.86	19.61	20.36	20.14	19.92	20.13
HSUPA Subtest-3	19.31	19.37	18.86	19.54	19.65	20.33	20.00	20.14	20.05
HSUPA Subtest-4	19.22	19.29	19.58	19.64	19.90	20.36	20.38	20.10	20.09
HSUPA Subtest-5	20.50	20.50	20.50	20.80	20.90	21.40	21.20	21.10	21.20

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : A-1 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801

A1. GSM

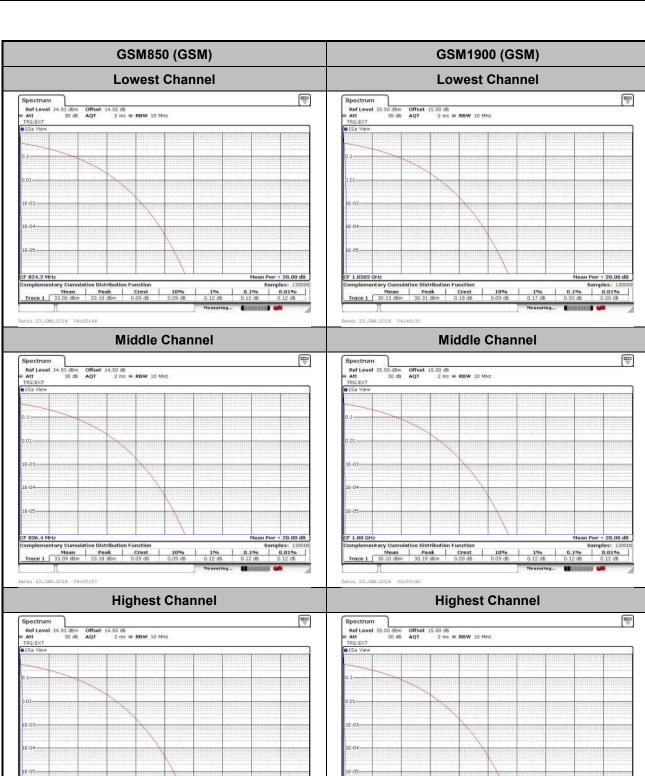
Peak-to-Average Ratio

Mode	GS	Limit: 13dB	
Mod.	GSM850	GSM1900	Result
Lowest CH	0.12	0.20	
Middle CH	0.12	0.12	PASS
Highest CH	0.17	0.12	

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : A-2 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801



| Samples: 13000 | 0.1% | 0.01% | | 0.17 dB | 0.17 dB

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : A-3 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801

26dB Bandwidth

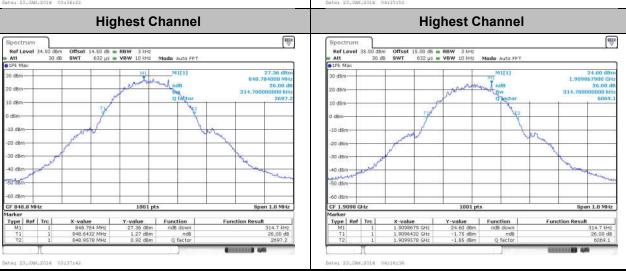
Mode	GSM			
Mod.	GSM850 GSM1900			
Lowest CH	0.314	0.316		
Middle CH	0.316	0.317		
Highest CH	0.315	0.315		

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TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : A-4 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801

Report No.: FG610801 **GSM850 (GSM) GSM1900 (GSM) Lowest Channel Lowest Channel** E V ₩ ∀ CF 1.8502 GHz Type Ref Tro Type Ref Trc Date: 23.JAN.2016 04:15:03 **Middle Channel Middle Channel** ₩ ∀ E ∀ 26.84 d8 836.417000 MP 26.00 d 315.700000000 kF Type | Ref | Trc | Type | Ref | Trc | **Highest Channel Highest Channel** (W)



TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : A-5 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

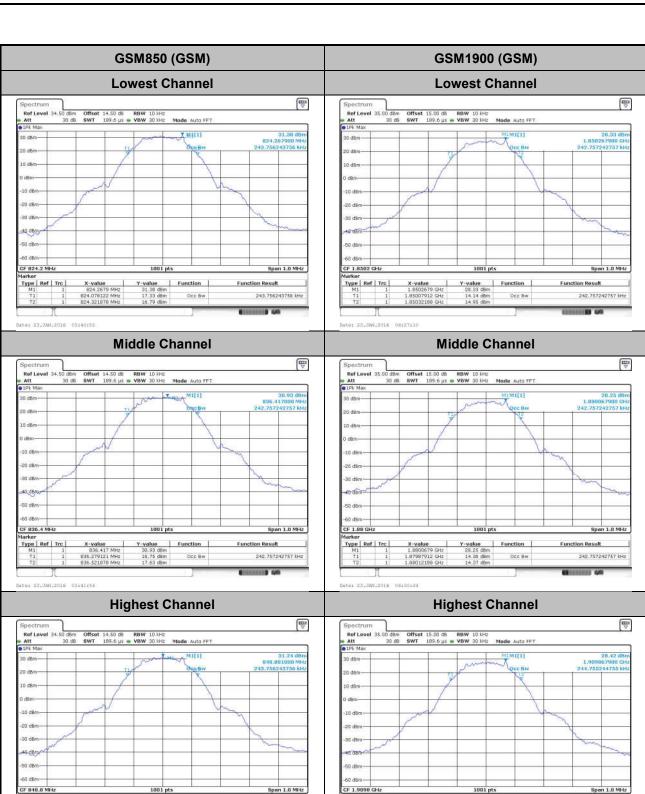
Occupied Bandwidth

Mode	GSM			
Mod.	GSM850	GSM1900		
Lowest CH	0.244	0.243		
Middle CH	0.243	0.243		
Highest CH	0.244	0.245		

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TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : A-6 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801



Type | Ref | Trc |

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD

Type | Ref | Trc |

Page Number : A-7 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801

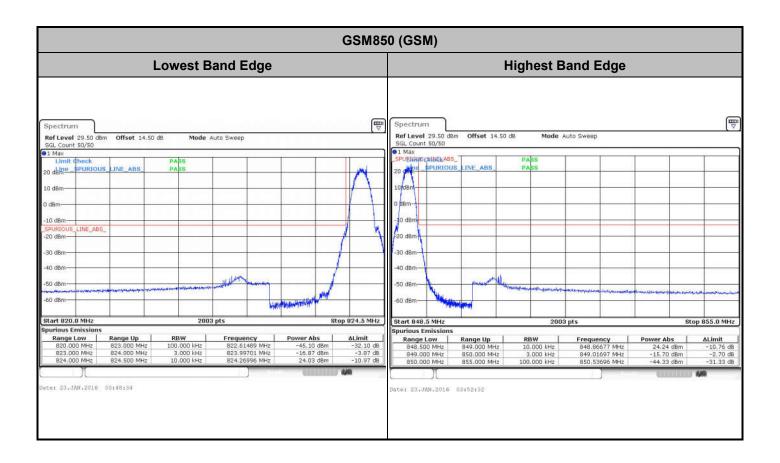
Conducted Band Edge

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : A-8 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

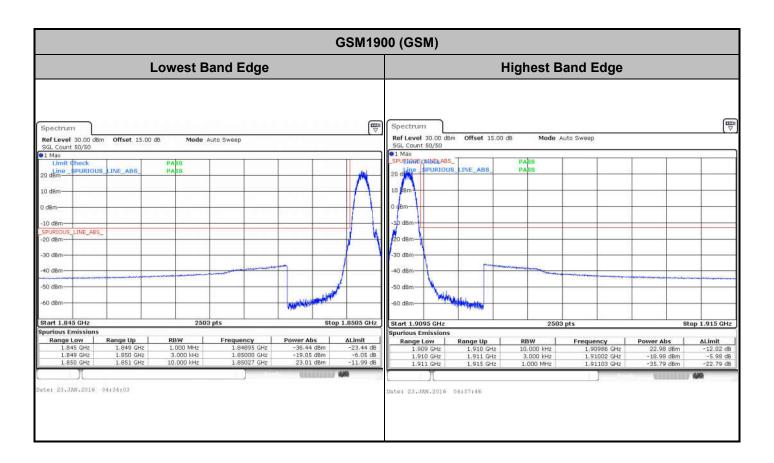
Report Template No.: BU5-FG22/24/27/90 Version 1.0

Report No.: FG610801



TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : A-9 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801



TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : A-10 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801

Conducted Spurious Emission

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : A-11 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report Template No.: BU5-FG22/24/27/90 Version 1.0

Report No.: FG610801

GSM850 (GSM) GSM1900 (GSM) Lowest Channel Lowest Channel E V ₩ ∀ Offset 14.50 dB Ref Level 25.00 dBm SGL Count 10/10 Start 30.0 MHz Stop 19.1 GHz Date: 23.32N.2016 03:56:19 Date: 23.JAN.2016 04:42:25 **Middle Channel Middle Channel** ₩ ∀ E ∀ Start 30.0 MHz Spurious Emissis **Highest Channel Highest Channel** (□ (High SGL Count 10/18

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : A-12 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801

Frequency Stability

Test Conditions	Middle Channel	GSM850 (GSM)	Limit 2.5ppm
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0574	
40	Normal Voltage	0.0550	
30	Normal Voltage	0.0036	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0012	
0	Normal Voltage	0.0550	
-10	Normal Voltage	0.0586	PASS
-20	Normal Voltage	0.0610	
-30	Normal Voltage	0.0096	
20	Maximum Voltage	0.0036	
20	Normal Voltage	0.0012	
20	Battery End Point	0.0000	

Test Conditions	Middle Channel	GSM1900 (GSM)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0032	
40	Normal Voltage	0.0367	
30	Normal Voltage	0.0356	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0016	
0	Normal Voltage	0.0346	
-10	Normal Voltage	0.0021	PASS
-20	Normal Voltage	0.0383	
-30	Normal Voltage	0.0394	
20	Maximum Voltage	0.0011	
20	Normal Voltage	0.0005	
20	Battery End Point	0.0000	

Note:

- 1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 4.35 V. ; Maximum Voltage =3.5 V
- **2.** The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.

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TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : A-13 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801

A2. WCDMA

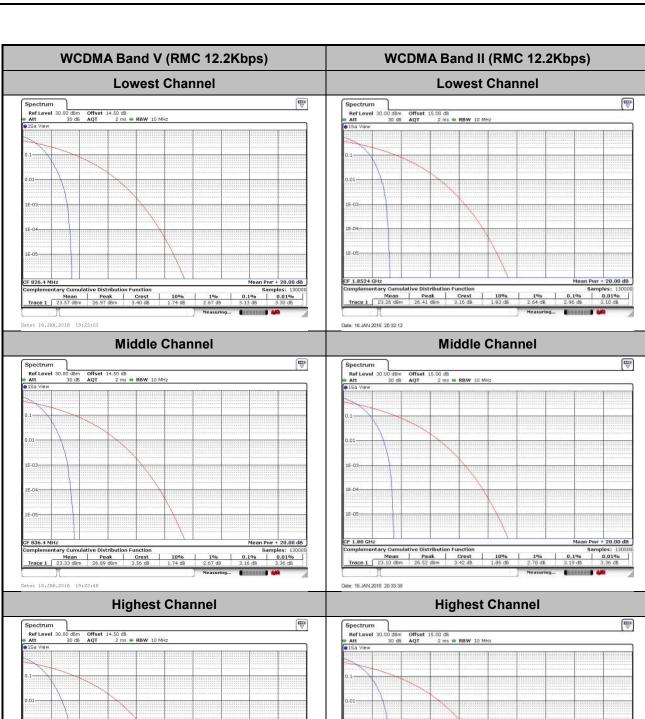
Peak-to-Average Ratio

Mode	WCDMA Band V	WCDMA Band II	WCDMA Band IV	Limit: 13dB
Mod.	RMC 12.2Kbps	RMC 12.2Kbps	RMC 12.2Kbps	Result
Lowest CH	3.13	2.96	3.51	
Middle CH	3.16	3.19	3.68	PASS
Highest CH	3.28	3.10	3.25	

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TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : A-14 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report Template No.: BU5-FG22/24/27/90 Version 1.0

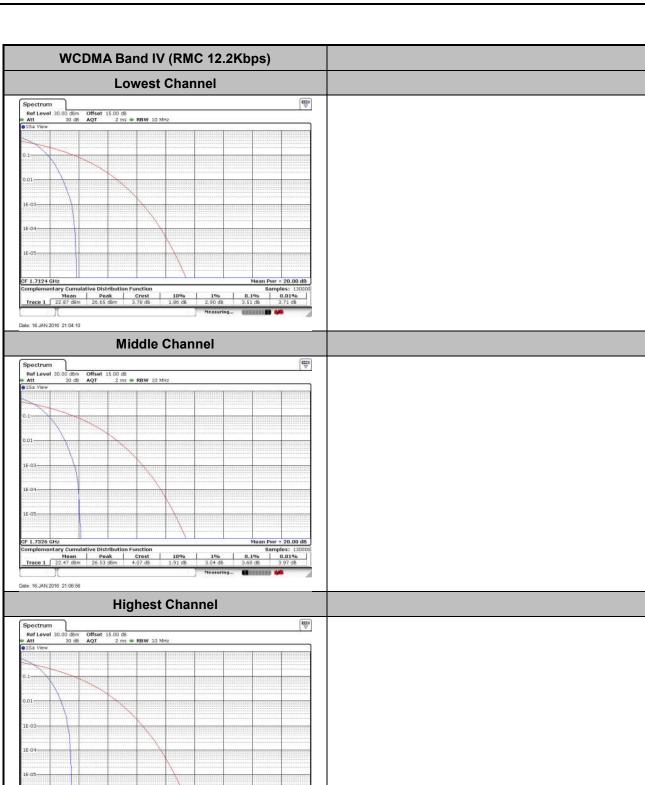


Samples: 130000 0.1% 0.01% 3.28 dB 3.51 dB



TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : A-15 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No. : FG610801



Page Number : A-16 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801

26dB Bandwidth

Mode	WCDMA Band V	WCDMA Band II	WCDMA Band IV
Mod.	RMC 12.2Kbps	RMC 12.2Kbps	RMC 12.2Kbps
Lowest CH	4.67	4.66	4.66
Middle CH	4.67	4.68	4.65
Highest CH	4.67	4.67	4.67

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TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : A-17 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801

WCDMA Band V (RMC 12.2Kbps) WCDMA Band II (RMC 12.2Kbps) **Lowest Channel Lowest Channel** ₩ ∀ n 10.0 MHz CF 1.8524 GHz Type Ref Trc Date: 16 JAN 2016 21:10:51 Date: 16.JAN.2016 20:19:54 **Middle Channel Middle Channel** ₩ ₩ ₩ ∀ 19.72 d8 835.53100 MP 26.00 d M1[1] M1[1] 179 Type Ref Trc Y-value 2 19.96 dBm 2 -6.36 dBm 2 -6.49 dBm Type | Ref | Trc | Function ndB down **Function Result** Date: 16.JAN 2016 21:11:39 Date: 16.JAN.2016 20:20:51 **Highest Channel Highest Channel** (W) ₩ V 19 µs - VBW 300 kHz Mode Auto FFT Mode Auto FFT 20.21 dBr 19.64 dBr 845.72100 MH -60 dBm

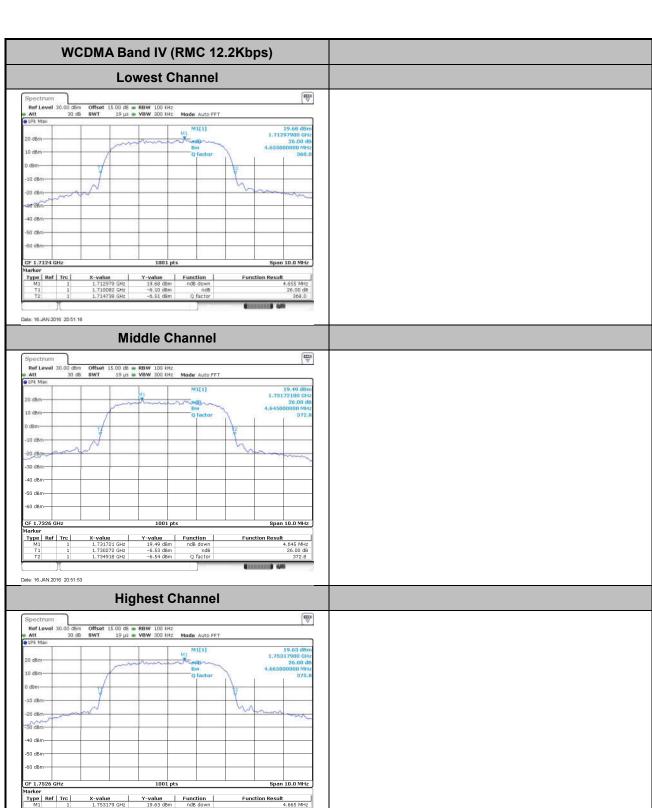
Type | Ref | Trc |

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD

Type | Ref | Tro

Page Number : A-18 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801



Page Number : A-19 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801

Occupied Bandwidth

Mode	WCDMA Band V	WCDMA Band II	WCDMA Band IV
Mod.	RMC 12.2Kbps	RMC 12.2Kbps	RMC 12.2Kbps
Lowest CH	4.10	4.09	4.10
Middle CH	4.09	4.10	4.10
Highest CH	4.10	4.10	4.09

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : A-20 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801

WCDMA Band V (RMC 12.2Kbps) WCDMA Band II (RMC 12.2Kbps) **Lowest Channel Lowest Channel** THE W Span 10.0 MHz CF 1.8524 GHz Type | Ref | Trc | Type | Ref | Trc | 4.095904096 MHz 4.085914086 MHz Date: 16 JAN 2016 21:13:18 Date: 16.JAN.2016 20:22:24 **Middle Channel Middle Channel** (₩ ₩ ∀ M1[1] Y-value 19,70 d8m 2 10,17 d8m 2 10,68 d8m
 X-value
 Y-value

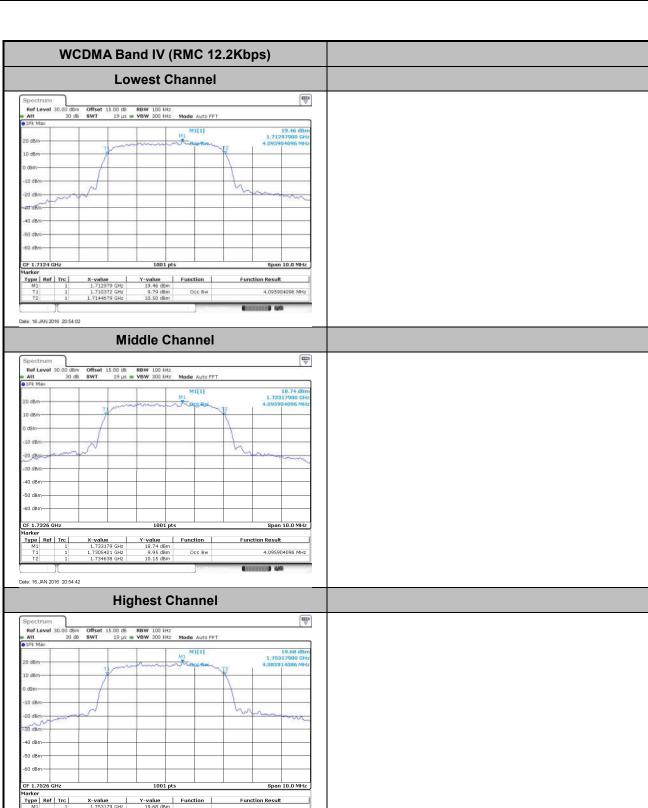
 1.879121 GHz
 20.07 dBm

 1.877952 GHz
 10.91 dBm

 1.882048 GHz
 10.76 dBm
 Type | Ref | Trc | Type Ref Trc | Function | Function **Function Result Function Result** Occ Bw 4.085914086 MHz 4.095904096 MHz Date: 16.JAN 2016 21:13:55 Date: 16.JAN.2016 20:23:18 **Highest Channel Highest Channel** ₩ ∀ 4.50 dB **RBW** 100 kHz 19 µs **• VBW** 300 kHz **Mode** Auto FFT 10 dBm -60 dBm-Type Ref Trc Type | Ref | Trc |

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : A-21 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801



Page Number : A-22 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

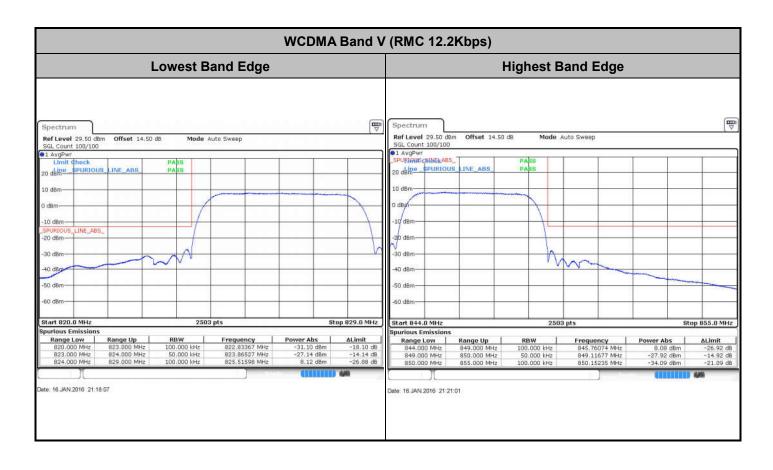
Report No.: FG610801

Conducted Band Edge

SPORTON INTERNATIONAL (SHENZHEN) INC.

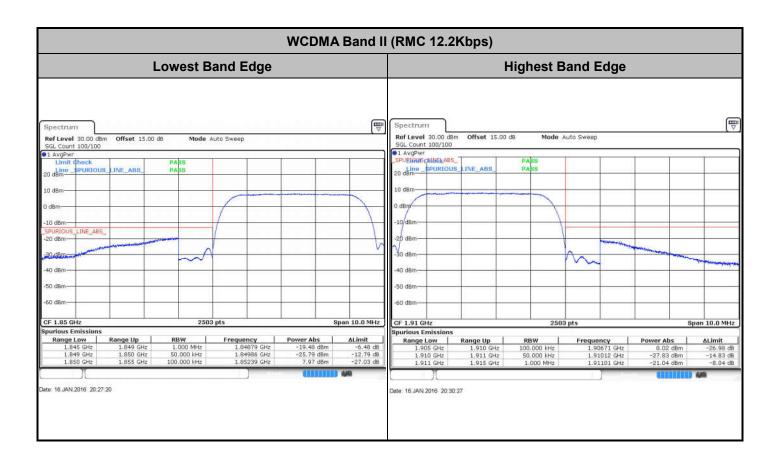
TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : A-23 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report Template No.: BU5-FG22/24/27/90 Version 1.0



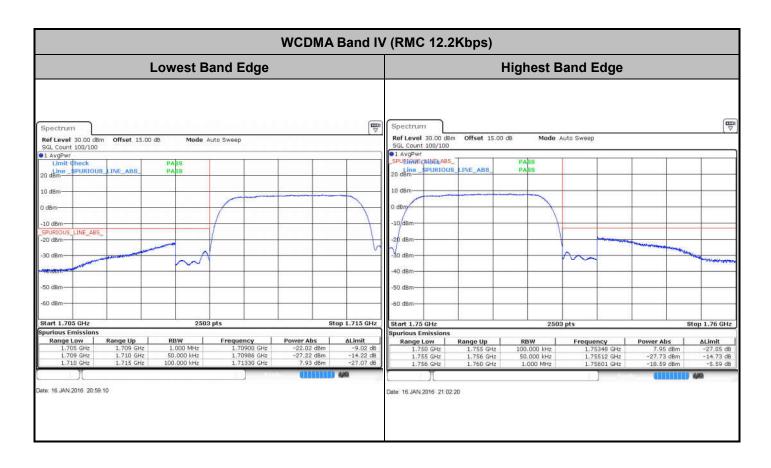
Page Number : A-24 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801



Page Number : A-25 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801



Page Number : A-26 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01
Report Template No.: BU5-FG22/24/27/90 Version 1.0

Conducted Spurious Emission

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : A-27 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report Template No.: BU5-FG22/24/27/90 Version 1.0

WCDMA Band V (RMC 12.2Kbps) WCDMA Band II (RMC 12.2Kbps) **Lowest Channel Lowest Channel** THE TOTAL PROPERTY. **#** Ref Level 25:00 dBm Offset 15:00 dB SGL Count 10/10 Offset 14.50 dB Start 30.0 MHz Stop 19.1 GHz Date: 16 JAN 2016 21:27:56 Date: 16 JAN 2016 21:46:20 **Middle Channel Middle Channel** ₩ ∀ EES ∀ Start 30.0 MHz Date: 16.JAN 2016 21.46.52 Date: 16.JAN 2016 21:29:23 **Highest Channel Highest Channel** EEEE W ... SGL Count 10/10

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : A-28 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801

WCDMA Band IV (RMC 12.2Kbps) **Lowest Channel** THE TOTAL PROPERTY. Offset 15.00 dB Date: 16 JAN 2016 20:46:00 **Middle Channel** ₩ ∀ Date: 16.JAN 2016 20:47.43 **Highest Channel** EEEE

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : A-29 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report Template No.: BU5-FG22/24/27/90 Version 1.0

Frequency Stability

Test Conditions	Middle Channel	WCDMA Band V (RMC 12.2KbpsRMC 12.2Kbps)	Limit 2.5ppm
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0072	
40	Normal Voltage	0.0311	
30	Normal Voltage	0.0012	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0024	
0	Normal Voltage	0.0048	
-10	Normal Voltage	0.0347	PASS
-20	Normal Voltage	0.0108	
-30	Normal Voltage	0.0132	
20	Maximum Voltage	0.0024	
20	Normal Voltage	0.0012	
20	Battery End Point	0.0000	

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : A-30 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801

Test Conditions	(RMC 12.2Kbps)		Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0037	
40	Normal Voltage	0.0271	
30	Normal Voltage	0.0011	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0016	
0	Normal Voltage	0.0021	
-10	Normal Voltage	0.0277	PASS
-20	Normal Voltage	0.0282	
-30	Normal Voltage	0.0048	
20	Maximum Voltage	0.0005	
20	Normal Voltage	0.0005	
20	Battery End Point	0.0011	

Note:

- 1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.5 V.; Maximum Voltage =4.35V
- **2.** The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : A-31 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report Template No.: BU5-FG22/24/27/90 Version 1.0

Test Conditions	Middle Channel	WCDMA Band IV (RMC 12.2Kbps)	Limit Note 2.
Temperature (°C)	Voltage (Volt)	Deviation (ppm)	Result
50	Normal Voltage	0.0190	
40	Normal Voltage	0.0006	
30	Normal Voltage	0.0185	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0012	
0	Normal Voltage	0.0196	
-10	Normal Voltage	0.0214	PASS
-20	Normal Voltage	0.0029	
-30	Normal Voltage	0.0046	
20	Maximum Voltage	0.0012	
20	Normal Voltage	0.0017	
20	Battery End Point	0.0000	

Note:

- 1. Normal Voltage = 3.8V. ; Battery End Point (BEP) = 3.5 V. ; Maximum Voltage =4.35 V
- **2.** The frequency fundamental emissions stay within the authorized frequency block based on the frequency deviation measured is small.

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : A-32 of 32
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801

Appendix B. Test Results of Radiated Test

ERP/EIRP

Channel	Mode	Horiz	ontal	Vertical		
Channel	Wiode	ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)	
Lowest	CCMOTO	21.72	0.1485	13.17	0.0207	
Middle	GSM850	20.71	0.1178	12.43	0.0175	
Highest	GSM	19.77	0.0948	11.95	0.0157	
Lowest	MCDMA Bond V	11.31	0.0135	3.35	0.0022	
Middle	WCDMA Band V	9.17	0.0083	1.42	0.0014	
Highest	RMC 12.2Kbps	10.01	0.0100	2.24	0.0017	
Limit	ERP < 7W	Re	sult	PASS		

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : B1 of B7
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report No.: FG610801

Channel	Mode	Horiz	ontal	Vertical		
Channel	Charmer Mode		EIRP(dBm) EIRP(W)		EIRP(W)	
Lowest	CCM4000	19.50	0.0891	20.25	0.1060	
Middle	GSM1900	20.45	0.1110	20.15	0.1035	
Highest	GSM	21.08	0.1281	20.54	0.1133	
Lowest	MCDMA Bond II	12.31	0.0170	13.17	0.0207	
Middle	WCDMA Band II	12.39	0.0173	12.39	0.0174	
Highest	RMC 12.2Kbps	13.39	0.0218	13.29	0.0213	
Limit	EIRP < 2W	Res	sult	PA	SS	

Channel	Made	Horizontal Vertical			tical
Channel	Mode	EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	WCDMA Dand IV	11.95	0.0157	11.81	0.0152
Middle	WCDMA Band IV	14.12	0.0258	14.20	0.0263
Highest	RMC 12.2Kbps	13.12	0.0205	13.01	0.0200
Limit	EIRP < 1W	Re	sult	PA	SS

Page Number : B2 of B7
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01
Report Template No.: BU5-FG22/24 Version 1.1

Radiated Spurious Emission

	GSM850 (GSM)								
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
	1648.4	-45.78	-13	-32.78	-50.82	-44.21	4.92	5.50	Н
	2472.6	-56.37	-13	-43.37	-62.66	-53.91	6.11	5.80	Н
Lowest	3296.8	-52.50	-13	-39.50	-61.22	-51.12	7.33	8.10	Н
Lowest	1648.4	-42.97	-13	-29.97	-48.81	-41.40	4.92	5.50	V
	2472.6	-58.04	-13	-45.04	-63.62	-55.58	6.11	5.80	V
	3296.8	-52.98	-13	-39.98	-61.21	-51.60	7.33	8.10	V
	1672	-56.92	-13	-43.92	-59.23	-55.35	4.92	5.50	Н
	2510	-58.44	-13	-45.44	-64.73	-55.98	6.11	5.80	Н
Middle	3346	-55.02	-13	-42.02	-63.74	-53.64	7.33	8.10	Н
Middle	1672	-52.80	-13	-39.80	-55.99	-51.23	4.92	5.50	V
	2510	-59.10	-13	-46.10	-64.68	-56.64	6.11	5.80	V
	3346	-50.77	-13	-37.77	-59.00	-49.39	7.33	8.10	V
	1697.6	-54.61	-13	-41.61	-56.92	-53.04	4.92	5.50	Н
	2546.4	-58.22	-13	-45.22	-64.51	-55.76	6.11	5.80	Н
l liada a c t	3395.2	-53.07	-13	-40.07	-61.79	-51.69	7.33	8.10	Н
Highest	1697.6	-51.58	-13	-38.58	-55.37	-50.01	4.92	5.50	V
	2546.4	-58.54	-13	-45.54	-64.12	-56.08	6.11	5.80	V
	3395.2	-52.43	-13	-39.43	-60.66	-51.05	7.33	8.10	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : B3 of B7
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report Template No.: BU5-FG22/24 Version 1.1

GSM1900 (GSM)										
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	
	3700.4	-40.83	-13	-27.83	-56.02	-41.20	7.73	8.10	Н	
	5550.6	-41.46	-13	-28.46	-59.47	-42.36	9.5	10.40	Н	
	7400.8	-40.44	-13	-27.44	-60.85	-41.06	11.08	11.70	Н	
Lowest	3700.4	-38.47	-13	-25.47	-54.64	-38.84	7.73	8.1	V	
	5550.6	-43.11	-13	-30.11	-61.38	-44.01	9.5	10.4	V	
	7400.8	-27.54	-13	-14.54	-52.92	-28.16	11.08	11.7	V	
	3760	-36.25	-13	-23.25	-52.48	-36.62	7.73	8.10	Н	
	5640	-42.69	-13	-29.69	-60.70	-43.59	9.5	10.40	Н	
Middle	7520	-33.60	-13	-20.60	-56.72	-34.22	11.08	11.70	Н	
Middle	3760	-35.31	-13	-22.31	-52.28	-35.68	7.73	8.1	V	
	5640	-45.23	-13	-32.23	-63.5	-46.13	9.5	10.4	V	
	7520	-21.84	-13	-8.84	-48.09	-22.46	11.08	11.7	V	
Highest	3819.6	-35.47	-13	-22.47	-51.75	-35.84	7.73	8.10	Н	
	5729.4	-46.10	-13	-33.10	-64.11	-47.00	9.5	10.40	Н	
	7639.2	-28.38	-13	-15.38	-53.07	-29.00	11.08	11.70	Н	
	3819.6	-34.39	-13	-21.39	-51.49	-34.76	7.73	8.1	V	
	5729.4	-46.25	-13	-33.25	-64.52	-47.15	9.5	10.4	V	
	7639.2	-21.02	-13	-8.02	-47.24	-21.64	11.08	11.7	V	

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : B4 of B7
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report Template No.: BU5-FG22/24 Version 1.1

WCDMA Band V(RMC 12.2Kbps)									
Channel	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
	1652.8	-61.36	-13	-48.36	-63.67	-59.79	4.92	5.50	Н
	2479.2	-58.25	-13	-45.25	-64.54	-55.79	6.11	5.80	Н
Lowoot	3305.6	-57.29	-13	-44.29	-66.01	-55.91	7.33	8.10	Н
Lowest	1652.8	-60.63	-13	-47.63	-63.11	-59.06	4.92	5.50	V
	2479.2	-59.22	-13	-46.22	-64.80	-56.76	6.11	5.80	V
	3305.6	-57.03	-13	-44.03	-65.26	-55.65	7.33	8.10	V
	1672	-62.07	-13	-49.07	-64.38	-60.50	4.92	5.50	Н
	2510	-58.57	-13	-45.57	-64.86	-56.11	6.11	5.80	Н
Middle	3346	-56.69	-13	-43.69	-65.41	-55.31	7.33	8.10	Н
Middle	1672	-61.43	-13	-48.43	-63.91	-59.86	4.92	5.50	V
	2510	-59.03	-13	-46.03	-64.61	-56.57	6.11	5.80	V
	3346	-57.41	-13	-44.41	-65.64	-56.03	7.33	8.10	V
Highest	1693.2	-61.57	-13	-48.57	-63.88	-60.00	4.92	5.50	Н
	2539.8	-58.53	-13	-45.53	-64.82	-56.07	6.11	5.80	Н
	3386.4	-56.68	-13	-43.68	-65.40	-55.30	7.33	8.10	Н
	1693.2	-60.72	-13	-47.72	-63.20	-59.15	4.92	5.50	V
	2539.8	-58.60	-13	-45.60	-64.18	-56.14	6.11	5.80	V
	3386.4	-57.30	-13	-44.30	-65.53	-55.92	7.33	8.10	V

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : B5 of B7
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report Template No.: BU5-FG22/24 Version 1.1

WCDMA Band II(RMC 12.2Kbps)									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
Laurant	3704.8	-24.61	-13	-11.61	-42.27	-24.98	7.73	8.10	Н
	5557.2	-38.33	-13	-25.33	-56.91	-39.23	9.5	10.40	Н
	7409.6	-44.55	-13	-31.55	-64.96	-45.17	11.08	11.70	Н
Lowest	3704.8	-25.07	-13	-12.07	-43.04	-25.44	7.73	8.1	V
	5557.2	-38.72	-13	-25.72	-57.64	-39.62	9.5	10.4	V
	7409.6	-42.78	-13	-29.78	-63.28	-43.40	11.08	11.7	V
	3760	-25.80	-13	-12.80	-43.41	-26.17	7.73	8.10	Н
	5640	-43.54	-13	-30.54	-61.55	-44.44	9.5	10.40	Н
Middle	7520	-45.17	-13	-32.17	-65.58	-45.79	11.08	11.70	Н
Middle	3760	-26.02	-13	-13.02	-43.95	-26.39	7.73	8.1	V
	5640	-43.83	-13	-30.83	-62.1	-44.73	9.5	10.4	V
	7520	-43.24	-13	-30.24	-63.74	-43.86	11.08	11.7	V
Highest	3815.2	-22.62	-13	-9.62	-40.42	-22.99	7.73	8.10	Н
	5722.8	-43.11	-13	-30.11	-61.12	-44.01	9.5	10.40	Н
	7630.4	-44.24	-13	-31.24	-64.65	-44.86	11.08	11.70	Н
	3815.2	-22.30	-13	-9.30	-40.52	-22.67	7.73	8.1	V
	5722.8	-43.91	-13	-30.91	-62.18	-44.81	9.5	10.4	V
	7630.4	-40.14	-13	-27.14	-60.64	-40.76	11.08	11.7	V

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : B6 of B7
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report Template No.: BU5-FG22/24 Version 1.1

WCDMA Band IV(RMC 12.2Kbps)									
Channel	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)
	3424.8	-50.50	-13	-37.50	-65.25	-55.77	7.33	12.60	Н
	5137.2	-48.90	-13	-35.90	-66.90	-52.45	9.15	12.70	Н
Lowoot	6849.6	-47.90	-13	-34.90	-66.71	-48.96	10.64	11.70	Н
Lowest	3424.8	-54.08	-13	-41.08	-65.66	-59.35	7.33	12.60	V
	5137.2	-52.74	-13	-39.74	-66.49	-56.29	9.15	12.70	V
	6849.6	-47.78	-13	-34.78	-65.87	-48.84	10.64	11.70	V
	3465.2	-50.82	-13	-37.82	-65.57	-56.09	7.33	12.60	Н
	5197.8	-48.42	-13	-35.42	-66.42	-51.97	9.15	12.70	Н
Middle	6930.4	-46.73	-13	-33.73	-65.54	-47.79	10.64	11.70	Н
Middle	3465.2	-53.97	-13	-40.97	-65.55	-59.24	7.33	12.60	V
	5197.8	-53.30	-13	-40.30	-67.05	-56.85	9.15	12.70	V
	6930.4	-48.11	-13	-35.11	-66.2	-49.17	10.64	11.70	V
	3505.2	-50.04	-13	-37.04	-64.79	-55.31	7.33	12.60	Н
Highest	5257.8	-48.64	-13	-35.64	-66.64	-52.19	9.15	12.70	Н
	7010.4	-46.60	-13	-33.60	-65.41	-47.66	10.64	11.70	Н
	3505.2	-53.00	-13	-40.00	-64.58	-58.27	7.33	12.60	V
	5257.8	-52.59	-13	-39.59	-66.34	-56.14	9.15	12.70	V
	7010.4	-48.74	-13	-35.74	-66.83	-49.80	10.64	11.70	V

SPORTON INTERNATIONAL (SHENZHEN) INC.

TEL: 86-755-8637-9589 FAX: 86-755-8637-9595 FCC ID: YHLBLUSTUD55HD Page Number : B7 of B7
Report Issued Date : Mar. 01, 2016
Report Version : Rev. 01

Report Template No.: BU5-FG22/24 Version 1.1