

# FCC PART 22H, PART 24E MEASUREMENT AND TEST REPORT

For

## **EVERBRILLIANT ENTERPRISE LIMITED**

ROOM 1701-2, 17/F., ING TOWER, 308 DES VOEUX ROAD, CENTRAL, HONG KONG

FCC ID: 2AAM5SW1502

Report Type: Original Report		Product Name: Smart Watch	
Test Engineer:	Lorin Biai	n	Lorin Diam
Report Number:	RDG1703	321004C	
Report Date:	2017-04-2	26	
	Henry Dir		Henry Ding
Reviewed By:	EMC Lea	der	
Test Laboratory:	No.5040, Jinniu Dis	Huilongwan Plaza, N strict, Chengdu, Sichu 65523123, Fax: 028-6	an, China

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## **TABLE OF CONTENTS**

GENERAL INFORMATION	4
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	4
Objective	
RELATED SUBMITTAL(S)/GRANT(S)	
Test Methodology	
TEST FACILITY	
SYSTEM TEST CONFIGURATION	6
JUSTIFICATION	
EQUIPMENT MODIFICATIONS	
SUPPORT EQUIPMENT LIST AND DETAILS	
CONFIGURATION OF TEST SETUP	
BLOCK DIAGRAM OF TEST SETUP	
SUMMARY OF TEST RESULTS	8
FCC §1.1310 & §2.1093- RF EXPOSURE	9
APPLICABLE STANDARD	
Test Result	
FCC §2.1047 - MODULATION CHARACTERISTIC	10
FCC § 2.1046, § 22.913 (A) & § 24.232 (C) - RF OUTPUT POWER	
APPLICABLE STANDARD	
TEST PROCEDURE	
TEST EQUIPMENT LIST AND DETAILSTEST DATA	
FCC §2.1049, §22.917, §22.905 & §24.238 - OCCUPIED BANDWIDTH	
APPLICABLE STANDARD	
TEST PROCEDURE TEST EQUIPMENT LIST AND DETAILS	
TEST DATA	
FCC §2.1051, §22.917(A) & §24.238(A) - SPURIOUS EMISSIONS AT ANTENNA TERMINALS	
APPLICABLE STANDARDTEST PROCEDURE	
TEST FROCEDURE  TEST EQUIPMENT LIST AND DETAILS	
TEST DATA	
FCC §2.1053, §22.917 & §24.238 - SPURIOUS RADIATED EMISSIONS	21
APPLICABLE STANDARD	
Test Procedure	
TEST EQUIPMENT LIST AND DETAILS	
Test Data	22
FCC §22.917(A) & §24.238(A) - BAND EDGES	24
APPLICABLE STANDARD	
Test Procedure	24
TEST EQUIPMENT LIST AND DETAILS	
TEST DATA	25

## Bay Area Compliance Laboratories Corp. (Chengdu)

FCC §2.1055, §22.355 & §24.235 - FREQUENCY STABILITY	28
APPLICABLE STANDARD	
Test Procedure	_
TEST EQUIPMENT LIST AND DETAILS	29
TEST DATA	29

Report No.: RDG170321004C Page 3 of 30

#### **GENERAL INFORMATION**

#### **Product Description for Equipment under Test (EUT)**

The **EVERBRILLIANT ENTERPRISE LIMITED**'s product, model number: **SW1502** (**FCC ID: 2AAM5SW1502**) (the "EUT") in this report was a **Smart Watch**, which was measured approximately: 28.8 cm (L) × 3.8 cm (W) × 1.2 cm (H), rated input voltage: DC3.7V rechargeable Li-ion battery or DC5V from USB Port.

\*All measurement and test data in this report was gathered from final production sample, serial number: 170321004 (assigned by the BACL, Chengdu). It may have deviation from any other sample. The EUT supplied by the applicant was received on 2017-03-21, and EUT conformed to test requirement.

#### **Objective**

This report is prepared on behalf of **EVERBRILLIANT ENTERPRISE LIMITED** in accordance with: Part 2-Subpart J, Part 22-Subpart H, and Part 24-Subpart E of the Federal Communications Commission's rules.

The objective is to determine compliance with FCC Rules for output power, modulation characteristic, occupied bandwidth, spurious emissions at antenna terminal, spurious radiated emission, frequency stability and band edge.

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

FCC Part 15B JBP submissions with FCC ID: 2AAM5SW1502. FCC Part 15C DSS submissions with FCC ID: 2AAM5SW1502.

Report No.: RDG170321004C Page 4 of 30

#### **Test Methodology**

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 2, Sub-part J, Part 22 Subpart H, Part 24 Subpart E.

Applicable Standards: TIA/EIA 603-D-2010.

All emissions measurement was performed and Bay Area Compliance Laboratories Corp. (Chengdu).

#### **Test Facility**

The test site used by BACL to collect test data is located in the No.5040, Huilongwan Plaza, No.1, Shawan Road, Jinniu District, Chengdu, Sichuan, China.

Test site at BACL has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on April 24, 2015. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2014.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 560332. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

Report No.: RDG170321004C Page 5 of 30

#### **SYSTEM TEST CONFIGURATION**

#### **Justification**

The EUT was configured for testing according to TIA/EIA-603-D 2010.

The test items were performed with the EUT operating at testing mode.

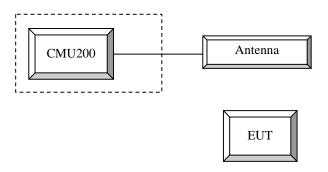
## **Equipment Modifications**

No modification was made to the EUT.

#### **Support Equipment List and Details**

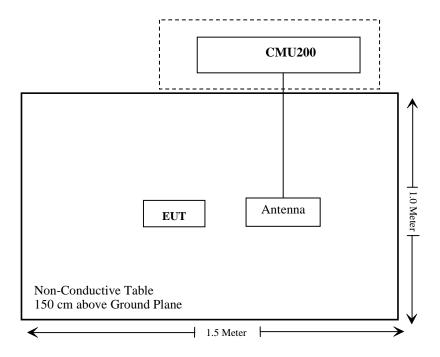
Manufacturer	Description	Model	Serial Number
R&S	Universial Radio Communication Tester	CMU200	11-9435686-111

#### **Configuration of Test Setup**



Report No.: RDG170321004C Page 6 of 30

## **Block Diagram of Test Setup**



Report No.: RDG170321004C Page 7 of 30

## **SUMMARY OF TEST RESULTS**

FCC Rules	Description of Test	Result
§1.1310, §2.1093	RF Exposure	Compliance
§2.1046; § 22.913 (a); § 24.232 (c)	RF Output Power	Compliance
§ 2.1047	Modulation Characteristics	Not Applicable
§ 2.1049; § 22.905 § 22.917; § 24.238	Occupied Bandwidth	Compliance
§ 2.1051, § 22.917 (a); § 24.238 (a)	Spurious Emissions at Antenna Terminal	Compliance
§ 2.1053 § 22.917 (a); § 24.238 (a)	Field Strength of Spurious Radiation	Compliance
§ 22.917 (a); § 24.238 (a)	Out of band emission, Band Edge	Compliance
§ 2.1055 § 22.355; § 24.235	Frequency stability vs. temperature Frequency stability vs. voltage	Compliance

Report No.: RDG170321004C Page 8 of 30

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## FCC §1.1310 & §2.1093- RF EXPOSURE

#### **Applicable Standard**

FCC§1.1310 and §2.1093.

#### **Test Result**

Compliant, please refer to the SAR report: RDG170321004-20.

Report No.: RDG170321004C Page 9 of 30

According to FCC § 2.1047(d), Part 22H & 24E, there is no specific requirement for digital modulation, therefore modulation characteristic is not presented.						

Report No.: RDG170321004C Page 10 of 30

#### FCC § 2.1046, § 22.913 (a) & § 24.232 (c) - RF OUTPUT POWER

#### **Applicable Standard**

According to FCC §2.1046 and §22.913 (a), the ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

According to FCC §2.1046 and §24.232 (C), mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications..

According to §24.232 (d) Power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with paragraph (e) of this section. In both instances, equipment employed must be authorized in accordance with the provisions of §24.51. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

#### **Test Procedure**

#### GSM/GPRS/EGPRS

Function: Menu select > GSM Mobile Station > GSM 850/1900

Press Connection control to choose the different menus

Press RESET > choose all the reset all settings

Connection Press Signal Off to turn off the signal and change settings

Network Support > GSM + GPRS or GSM + EGSM

Main Service > Packet Data

Service selection > Test Mode A – Auto Slot Config. off

MS Signal Press Slot Config Bottom on the right twice to select and change the number of time slots and power setting

- > Slot configuration > Uplink/Gamma
- > 33 dBm for GPRS 850
- > 30 dBm for GPRS 1900
- > 27 dBm for EGPRS 850
- > 26 dBm for EGPRS 1900

BS Signal Enter the same channel number for TCH channel (test channel) and BCCH

channel

Frequency Offset > + 0 Hz

Mode > BCCH and TCH

BCCH Level > -85 dBm (May need to adjust if link is not stable)

BCCH Channel > choose desire test channel [Enter the same channel number for TCH

channel (test channel) and BCCH channel]

Channel Type > Off

Report No.: RDG170321004C Page 11 of 30

#### Bay Area Compliance Laboratories Corp. (Chengdu)

P0 > 4 dB

Slot Config > Unchanged (if already set under MS signal)

TCH > choose desired test channel

Hopping > Off Main Timeslot > 3

Network Coding Scheme > CS4 (GPRS) and MCS5 (EGPRS)

Bit Stream > 2E9-1 PSR Bit Stream

AF/RF Enter appropriate offsets for Ext. Att. Output and Ext. Att. Input Connection Press Signal on to turn on the signal and change settings

Radiated method:

ANSI/TIA-603-D section 2.2.17

#### **Test Equipment List and Details**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESCI	100028	2016-12-02	2017-12-01
Sunol Sciences	Broadband Antenna	JB3	A121808	2016-04-10	2019-04-09
Rohde & Schwarz	Spectrum Analyzer	FSEM30	100018	2016-12-02	2017-12-01
ETS	Horn Antenna	3115	003-6076	2016-12-02	2017-12-01
ETS	Horn Antenna	3115	6751	2014-06-16	2017-06-15
EMCO	Adjustable Dipole Antenna	3121C	9109-258	N/A	N/A
HP	Signal Generator	8648C	3623A04150	2016-05-23	2017-05-22
WILTRON	SWEPT FREQUENCY SYNTHESIZER	6737	213001	2016-05-23	2017-05-22
EMCT	Semi-Anechoic Chamber	966	966-1	2015-04-24	2018-04-23
Unknown	RF Cable (below 1GHz)	Unknown	NO.1	2016-11-10	2017-11-09
Unknown	RF Cable (below 1GHz)	Unknown	NO.4	2016-11-10	2017-11-09
Unknown	RF Cable (above 1GHz)	Unknown	NO.2	2016-11-10	2017-11-09
R&S	Universal Radio Communication Tester	CMU200	11-9435686- 111	2016-07-28	2017-07-27

<sup>\*</sup> Statement of Traceability: BACL(Chengdu) attests that all of the calibrations on the equipment items listed above were traceable to NIM or to another internationally recognized National Metrology Institute (NMI), and were compliant with the NIST HB 150-2016 Normative Annex B "Implementation of traceability policy in accredited laboratories".

Report No.: RDG170321004C Page 12 of 30

#### **Test Data**

#### **Environmental Conditions**

Temperature:	23.7 °C
Relative Humidity:	44.3 %
ATM Pressure:	100.5 kPa

The testing was performed by Lorin Bian on 2017-04-17.

#### **Conducted Output Power**

#### Cellular Band (Part 22H) & PCS Band (Part 24E)

	Channel		Peak O	utput Power	(dBm)	
Band	No.	GSM	GPRS 1 TX Slot	GPRS 2 TX Slot	GPRS 3 TX Slot	GPRS 4 TX Slot
	128	32.41	32.19	31.86	31.43	30.98
Cellular	190	32.44	32.01	31.83	31.41	31.02
	251	32.42	31.95	31.46	30.95	30.73
	512	29.87	29.34	29.02	28.83	28.65
PCS	661	30.37	30.03	29.85	29.64	29.21
	810	30.79	30.23	29.97	29.74	29.48

#### EIRP/ERP:

		Bossiyer	Substituted Method		Absolute			
Frequency (MHz)	Polar (H/V)	Receiver Reading (dBµV)	S.G. Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)	Level (dBm)	Limit (dBm)	Margin (dB)
	GSM 850 Middle Channel							
836.600	Н	105.89	31	0.0	1	30.0	38.5	8.5
836.600	V	94.26	22.5	0.0	1	21.5	38.5	17.0
	PCS 1900 Middle Channel							
1880.000	Н	91.31	18.7	11.7	2.7	27.7	33.0	5.3
1880.000	V	83.52	11.1	11.7	2.7	20.1	33.0	12.9

#### Note:

- 1) The unit of Antenna Gain is dBd for frequency below 1GHz, and the unit of Antenna Gain is dBi for frequency above 1GHz.
- 2) Absolute Level = SG Level Cable loss + Antenna Gain
- 3) Margin = Limit-Absolute Level

Report No.: RDG170321004C Page 13 of 30

#### FCC §2.1049, §22.917, §22.905 & §24.238 - OCCUPIED BANDWIDTH

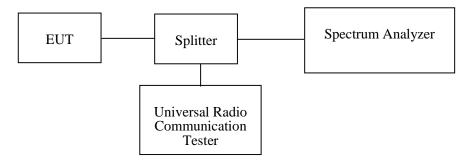
#### **Applicable Standard**

FCC §2.1049, §22.917 and §22.905, §24.238.

#### **Test Procedure**

The RF output of the transmitter was connected to the simulator and the spectrum analyzer through sufficient attenuation.

The 26 dB & 99% bandwidth was recorded.



#### **Test Equipment List and Details**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ26	831929/005	2016-09-21	2017-09-20
Unknown	RF Cable	Unknown	C-2	Each Time	/
Unknown	10dB Attenuator	Unknown	10dB	Each Time	/
Unknown	Two-way Spliter	Unknown	OE0120121	Each Time	/

<sup>\*</sup> Statement of Traceability: BACL(Chengdu) attests that all of the calibrations on the equipment items listed above were traceable to NIM or to another internationally recognized National Metrology Institute (NMI), and were compliant with the NIST HB 150-2016 Normative Annex B "Implementation of traceability policy in accredited laboratories".

Report No.: RDG170321004C Page 14 of 30

#### **Test Data**

#### **Environmental Conditions**

Temperature:	24.1 °C
Relative Humidity:	44.1 %
ATM Pressure:	100.7 kPa

The testing was performed by Lorin Bian on 2017-04-13.

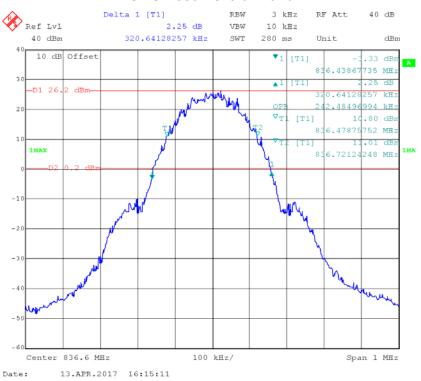
Test Mode: Transmitting

Test Result: Compliant. Please refer to the following table and plots.

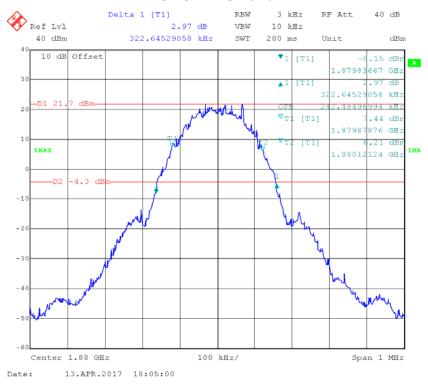
Band	Test Channel	Mode	99% Occupied Bandwidth (MHz)	26 dB Occupied Bandwidth (MHz)
Cellular		GSM	0.321	0.242
PCS	M	PCS	0.323	0.242

Report No.: RDG170321004C Page 15 of 30

#### **GMSK 850 Cellular Band**



#### **GMSK PCS Band**



Page 16 of 30

## FCC §2.1051, §22.917(a) & §24.238(a) - SPURIOUS EMISSIONS AT ANTENNA TERMINALS

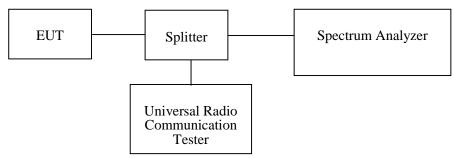
#### **Applicable Standard**

FCC §2.1051, §22.917(a) and §24.238(a).

The spectrum was to be investigated to the tenth harmonics of the highest fundamental frequency as specified in § 2.1051.

#### **Test Procedure**

The RF output of the transceiver was connected to a spectrum analyzer and simulator through appropriate attenuation. Sufficient scans were taken to show any out of band emissions up to 10<sup>th</sup> harmonic.



#### **Test Equipment List and Details**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ26	831929/005	2016-09-21	2017-09-20
Unknown	RF Cable	Unknown	C-2	Each Time	/
Unknown	10dB Attenuator	Unknown	10dB	Each Time	/
Unknown	Two-way Spliter	Unknown	OE0120121	Each Time	/

<sup>\*</sup> Statement of Traceability: BACL(Chengdu) attests that all of the calibrations on the equipment items listed above were traceable to NIM or to another internationally recognized National Metrology Institute (NMI), and were compliant with the NIST HB 150-2016 Normative Annex B "Implementation of traceability policy in accredited laboratories".

Report No.: RDG170321004C Page 17 of 30

#### **Test Data**

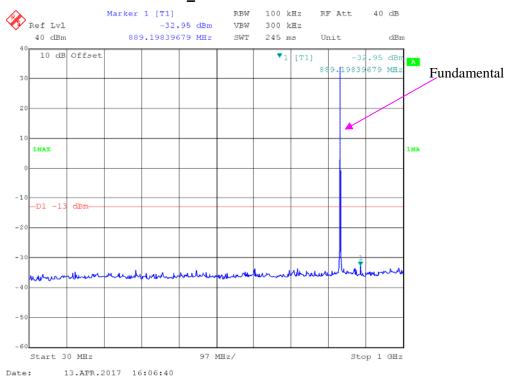
#### **Environmental Conditions**

Temperature:	24.1 °C
Relative Humidity:	44.1 %
ATM Pressure:	100.7 kPa

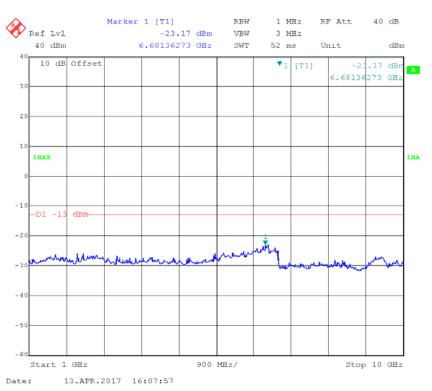
The testing was performed by Lorin Bian on 2017-04-13.

Please refer to the following plots.

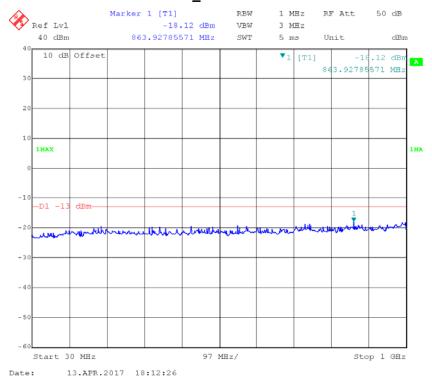
#### **GSM850\_Middle Channel**



Report No.: RDG170321004C Page 18 of 30

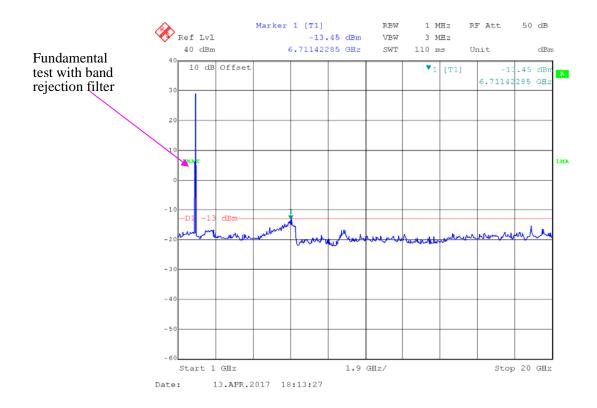


#### PCS 1900\_ Middle Channel



Page 19 of 30

#### Bay Area Compliance Laboratories Corp. (Chengdu)



Report No.: RDG170321004C Page 20 of 30

#### FCC §2.1053, §22.917 & §24.238 - SPURIOUS RADIATED EMISSIONS

#### **Applicable Standard**

FCC § 2.1053, §22.917 and § 24.238.

#### **Test Procedure**

The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load which was also placed on the turntable.

The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis.

The frequency range up to tenth harmonic of the fundamental frequency was investigated.

Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution.

Spurious emissions in dB = 10 lg (TXpwr in Watts/0.001) – the absolute level

Spurious attenuation limit in  $dB = 43 + 10 \text{ Log}_{10}$  (power out in Watts)

Report No.: RDG170321004C Page 21 of 30

#### **Test Equipment List and Details**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Agilent	Amplifier	8447D	2944A10442	2016-12-02	2017-12-01
Rohde & Schwarz	EMI Test Receiver	ESCI	100028	2016-12-02	2017-12-01
Sunol Sciences	Broadband Antenna	JB3	A121808	2016-04-10	2019-04-09
Rohde & Schwarz	Spectrum Analyzer	FSEM30	100018	2016-12-02	2017-12-01
ETS	Horn Antenna	3115	003-6076	2016-12-02	2017-12-01
ETS	Horn Antenna	3115	6751	2014-06-16	2017-06-15
EMCO	Adjustable Dipole Antenna	3121C	9109-258	N/A	N/A
HP	Signal Generator	8648C	3623A04150	2016-05-23	2017-05-22
WILTRON	SWEPT FREQUENCY SYNTHESIZER	6737	213001	2016-05-23	2017-05-22
Mini-circuits	Amplifier	ZVA-183-S+	771001215	2016-05-20	2017-05-19
HP	Amplifier	8449B	3008A00277	2016-12-02	2017-12-01
EMCT	Semi-Anechoic Chamber	966	966-1	2015-04-24	2018-04-23
Unknown	RF Cable (below 1GHz)	Unknown	NO.1	2016-11-10	2017-11-09
Unknown	RF Cable (below 1GHz)	Unknown	NO.4	2016-11-10	2017-11-09
Unknown	RF Cable (above 1GHz)	Unknown	NO.2	2016-11-10	2017-11-09
Ducommun Technolagies	Horn Antenna	ARH-4223- 02	1007726-01 1315	2016-08-18	2017-08-18
Ducommun Technolagies	Horn Antenna	ARH-2823- 02	1007726-01 1312	2016-08-18	2017-08-18

<sup>\*</sup> Statement of Traceability: BACL(Chengdu) attests that all of the calibrations on the equipment items listed above were traceable to NIM or to another internationally recognized National Metrology Institute (NMI), and were compliant with the NIST HB 150-2016 Normative Annex B "Implementation of traceability policy in accredited laboratories".

#### **Test Data**

#### **Environmental Conditions**

Temperature:	23.7 °C
Relative Humidity:	44.3 %
ATM Pressure:	100.5 kPa

The testing was performed by Lorin Bian on 2017-04-17.

Report No.: RDG170321004C Page 22 of 30

#### EUT Operation Mode: Transmitting

#### 30 MHz-10 GHz:

#### Cellular Band (PART 22H)

		Receiver	Su	bstituted Me	ethod	Absolute		
Frequency (MHz)	Polar (H/V)	Reading (dBµV)	S.G. Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)	Level (dBm)	Limit (dBm)	Margin (dB)
		GSM	1850 GMSK	, Frequency:8	336.600 MHz			
332.000	Н	43.28	-59.9	0.0	0.5	-60.4	-13.0	47.4
332.000	V	42.59	-62.5	0.0	0.5	-63.0	-13.0	50.0
1673.200	Η	59.46	-42.6	10.6	2.5	-34.5	-13.0	21.5
1673.200	<b>V</b>	62.35	-40	10.6	2.5	-31.9	-13.0	18.9
2509.800	Η	67.58	-31.8	13.1	3.1	-21.8	-13.0	8.8
2509.800	<b>V</b>	62.17	-36.3	13.1	3.1	-26.3	-13.0	13.3
3346.400	Η	63.24	-35.7	13.8	3.6	-25.5	-13.0	12.5
3346.400	<b>V</b>	52.67	-45.9	13.8	3.6	-35.7	-13.0	22.7
4183.000	Η	56.34	-41.5	13.9	4	-31.6	-13.0	18.6
4183.000	V	50.26	-47.3	13.9	4	-37.4	-13.0	24.4

#### PCS Band (PART 24E)

#### 30 MHz-20 GHz.

50 MHZ-20 GHZ.								
		Receiver	Su	bstituted Me	ethod	Absolute		
Frequency (MHz)	Polar (H/V)	Reading (dBµV)	S.G. Level (dBm)	Antenna Gain (dBd/dBi)	Cable Loss (dB)	Level (dBm)	Limit (dBm)	Margin (dB)
		GSM1	900 GMSK	, Frequency:	1880.000 MHz			
332.000	Н	42.18	-61	0.0	0.5	-61.5	-13.0	48.5
332.000	V	41.11	-64	0.0	0.5	-64.5	-13.0	51.5
3760.000	Н	55.29	-40.6	13.8	3.8	-30.6	-13.0	17.6
3760.000	V	54.38	-40.3	13.8	3.8	-30.3	-13.0	17.3
5640.000	Н	54.67	-39.7	14.0	4.6	-30.3	-13.0	17.3
5640.000	V	53.25	-41.1	14.0	4.6	-31.7	-13.0	18.7

#### Note:

- 1) The unit of Antenna Gain is dBd for frequency below 1GHz, and the unit of Antenna Gain is dBi for frequency above 1GHz.
- 2) Absolute Level = SG Level Cable loss + Antenna Gain 3) Margin = Limit-Absolute Level

Report No.: RDG170321004C Page 23 of 30

#### FCC §22.917(a) & §24.238(a) - BAND EDGES

#### **Applicable Standard**

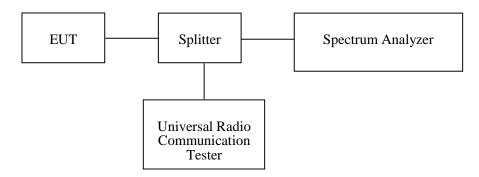
According to § 22.917(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

According to §24.238(a), the power of any emissions outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB.

#### **Test Procedure**

The RF output of the transmitter was connected to the input of the spectrum analyzer through sufficient attenuation.

The center of the spectrum analyzer was set to block edge frequency.



#### **Test Equipment List and Details**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ26	831929/005	2016-09-21	2017-09-20
Unknown	RF Cable	Unknown	C-2	Each Time	/
Unknown	10dB Attenuator	Unknown	10dB	Each Time	/
Unknown	Two-way Spliter	Unknown	OE0120121	Each Time	/

<sup>\*</sup> Statement of Traceability: BACL(Chengdu) attests that all of the calibrations on the equipment items listed above were traceable to NIM or to another internationally recognized National Metrology Institute (NMI), and were compliant with the NIST HB 150-2016 Normative Annex B "Implementation of traceability policy in accredited laboratories".

Report No.: RDG170321004C Page 24 of 30

#### **Test Data**

#### **Environmental Conditions**

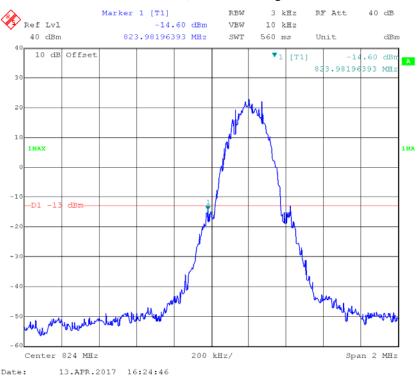
Temperature:	24.1 °C	
Relative Humidity:	44.1 %	
ATM Pressure:	100.7 kPa	

The testing was performed by Lorin Bian on 2017-04-13.

Test Mode: Transmitting

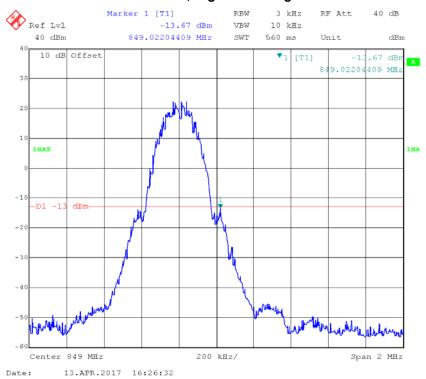
Test Result: Compliant. Please refer to the following plots.

#### GSM 850, Left Band Edge



Report No.: RDG170321004C Page 25 of 30

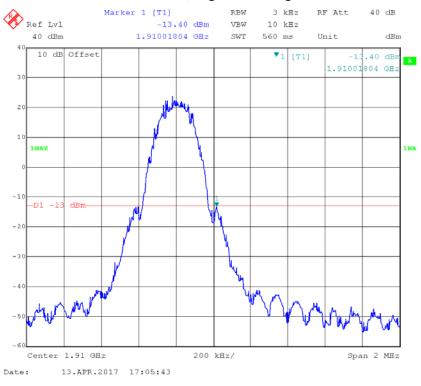
#### **GSM 850, Right Band Edge**



#### GSM 1900, Left Band Edge



#### GSM 1900, Right Band Edge



#### FCC §2.1055, §22.355 & §24.235 - FREQUENCY STABILITY

#### **Applicable Standard**

FCC § 2.1055 (a), § 2.1055 (d), §22.355, §24.235

According to §22.355, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table below:

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I ICUUCIICV	I DICIALICE IO	Hansiiiii		: Mobile Services

Frequency Range (MHz)	Base, fixed (ppm)	Mobile > 3 watts (ppm)	Mobile ≤ 3 watts (ppm)
25 to 50	20.0	20.0	50.0
50 to 450	5.0	5.0	50.0
450 to 512	2.5	5.0	5.0
821 to 896	1.5	2.5	2.5
928 to 929.	5.0	N/A	N/A
929 to 960.	1.5	N/A	N/A
2110 to 2220	10.0	N/A	N/A

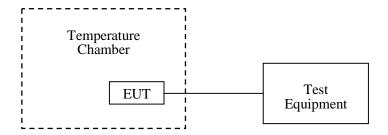
According to §24.235, the frequency stability shall be sufficient to ensure that the fundamental emissions stays within the authorized frequency block.

#### **Test Procedure**

Frequency Stability vs. Temperature: The equipment under test was connected to an external DC power supply and the RF output was connected to communication test set via feed-through attenuators. The EUT was placed inside the temperature chamber. The DC leads and RF output cable exited the chamber through an opening made for the purpose.

After the temperature stabilized for approximately 20 minutes, the frequency output was recorded from the communication test set.

Frequency Stability vs. Voltage: An external variable DC power supply was connected to the battery terminals of the equipment under test. The voltage was set from 85% to 115% of the nominal value and was then decreased until the transmitter light no longer illuminated; i.e., the battery end point. The output frequency was recorded for each battery voltage.



Report No.: RDG170321004C Page 28 of 30

#### **Test Equipment List and Details**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
FLUKE	Multimeter	1587	27870099	2016-12-30	2017-12-29
BACL	High Temperature Test Chamber	BTH-150	30024	2016-12-02	2017-12-01
R&S	Universal Radio Communication Tester	CMU200	11-9435686- 111	2016-07-28	2017-07-27
Unknown	10dB Attenuator	Unknown	10dB	Each Time	/
Unknown	RF Cable	Unknown	C-2	Each Time	/

<sup>\*</sup> Statement of Traceability: BACL(Chengdu) attests that all of the calibrations on the equipment items listed above were traceable to NIM or to another internationally recognized National Metrology Institute (NMI), and were compliant with the NIST HB 150-2016 Normative Annex B "Implementation of traceability policy in accredited laboratories".

#### **Test Data**

#### **Environmental Conditions**

Temperature:	23.7 °C	
Relative Humidity:	44.3 %	
ATM Pressure:	100.5 kPa	

The testing was performed by Lorin Bian on 2017-04-17.

Report No.: RDG170321004C Page 29 of 30

## Cellular Band (Part 22H)

GMSK, Middle Channel, f <sub>c</sub> = 836.6 MHz						
Temperature	Voltage	Frequency Error	Frequency Error	Limit		
℃	V <sub>DC</sub>	Hz	ppm	ppm		
-30		-11	-0.013			
-20		-6	-0.007			
-10		-9	-0.011			
0		-8	-0.010			
10	3.7	-15	-0.018			
20		-13	-0.016	2.5		
30		-10	-0.012			
40		-5	-0.006			
50		-2	-0.002			
20	3.5	-11	-0.013			
20	4.2	-6	-0.007			

## PCS Band (Part 24E)

GMSK, Middle Channel, f <sub>c</sub> = 1880.0 MHz						
Temperature	Voltage	Frequency Error	Frequency Error	Result		
°C	V <sub>DC</sub>	Hz	ppm			
-30	3.7	-13	-0.007			
-20		-16	-0.009			
-10		-20	-0.011			
0		-17	-0.009			
10		-22	-0.012			
20		-26	-0.014	Compliance		
30		-22	-0.012			
40		-13	-0.007			
50		-9	-0.005			
20	3.5	-24	-0.013			
20	4.2	-15	-0.008			

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

Report No.: RDG170321004C Page 30 of 30