

# FCC PART 22H, PART 24E TEST REPORT

For

# ANGEL TECHNOLOGY CO., LTD

10F, Yuelaishun Building, NO.90 Fuqian Road, Guanlan, Shenzhen, China

**FCC ID: 2AE43L706** 

Report Type: **Product Type:** Tablet PC Original Report Mile Un **Test Engineer:** Mike Hu **Report Number:** RSZ150616006-00D **Report Date:** 2015-07-07 Jimmy Xiao Jimmy xiao **Reviewed By:** RF Engineer **Prepared By:** Bay Area Compliance Laboratories Corp. (Shenzhen) 6/F, the 3rd Phase of WanLi Industrial Building ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China Tel: +86-755-33320018 Fax: +86-755-33320008 www.baclcorp.com.cn

**Note**: This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp.

# **TABLE OF CONTENTS**

GENERAL INFORMATION	3
PRODUCT DESCRIPTION FOR EQUIPMENT UNDER TEST (EUT)	
Objective	
RELATED SUBMITTAL(S)/GRANT(S)	
TEST METHODOLOGY TEST FACILITY	
SYSTEM TEST CONFIGURATION	
DESCRIPTION OF TEST CONFIGURATION	
SUPPORT EQUIPMENT LIST AND DETAILS	
BLOCK DIAGRAM OF TEST SETUP	
SUMMARY OF TEST RESULTS	6
FCC §1.1307 & §2.1093 - RF EXPOSURE	7
APPLICABLE STANDARD	
TEST RESULT	
FCC §2.1047 - MODULATION CHARACTERISTIC	8
FCC § 2.1046, § 22.913 (A) & § 24.232 (C) - RF OUTPUT POWER	9
APPLICABLE STANDARD	
TEST PROCEDURE	
TEST EQUIPMENT LIST AND DETAILS	9
TEST DATA	10
FCC §2.1049, §22.917, §22.905 & §24.238 - BANDWIDTH	12
APPLICABLE STANDARD	12
Test Procedure	
TEST EQUIPMENT LIST AND DETAILS	
FCC §2.1051, §22.917(A) & §24.238(A) - SPURIOUS EMISSIONS AT ANTENNA TERMINALS	
Applicable Standard	
TEST F ROCEDORE  TEST EQUIPMENT LIST AND DETAILS.	
TEST DATA	
FCC §2.1053, §22.917 & §24.238 - SPURIOUS RADIATED EMISSIONS	18
APPLICABLE STANDARD	
TEST PROCEDURE	
TEST EQUIPMENT LIST AND DETAILS	
TEST DATA	
FCC §22.917(A) & §24.238(A) - BAND EDGES	
APPLICABLE STANDARD	
TEST PROCEDURE TEST EQUIPMENT LIST AND DETAILS	
TEST DATA	
FCC §2.1055, §22.355 & §24.235 - FREQUENCY STABILITY	23
APPLICABLE STANDARD	
TEST PROCEDURE	
TEST EQUIPMENT LIST AND DETAILS	24
TEST DATA	
PRODUCT SIMILARITY DECLARATION LETTER	26

#### **GENERAL INFORMATION**

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

The ANGEL TECHNOLOGY CO., LTD 's product, model number: L706-2G-MTK8312D (FCC ID: 2AE43L706) or the "EUT" in this report was a Tablet PC, which was measured approximately: 188 mm (L) × 108 mm (W) × 12 mm (H), rated with input voltage: DC 3.7 V rechargeable Li-ion battery

Report No.: RSZ150616006-00D

Note: This series products model: FLIP SPEAKER and L706-2G-MTK8312D are identical schematics, the difference among them is just the model number due to marketing purpose, and model L706-2G-MTK8312D was selected for fully testing, the detailed information can be referred to the attached declaration letter that stated and guaranteed by the applicant.

\*All measurement and test data in this report was gathered from production sample serial number: 1505437 (Assigned by Shenzhen BACL). The EUT supplied by the applicant was received on 2015-06-16.

#### **Objective**

This test report is prepared on behalf of *ANGEL TECHNOLOGY CO.*, *LTD* in accordance with Part 2-Subpart J, Part 22-Subpart H and Part 24-Subpart E of the Federal Communication Commissions rules.

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

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

FCC Part 15.247 DTS&DSS and Part 15B JBP submissions with FCC ID: 2AE43L706

## **Test Methodology**

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 2-Subpart J as well as the following parts:

Part 22 Subpart H - Public Mobile Services

Part 24 Subpart E - Personal Communication Services

Applicable Standards: TIA/EIA 603-D, ANSI C63.4-2009.

All radiated and conducted emissions measurements were performed at Bay Area Compliance Laboratories Corp. The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Measurement uncertainty with radiated emission is 5.91 dB for 30MHz-1GHz.and 4.92 dB for above 1GHz, 1.95dB for conducted measurement.

FCC Part 22H/24E Page 3 of 26

#### **Test Facility**

The test site used by Bay Area Compliance Laboratories Corp.(Shenzhen) to collect test data is located on the 6/F, the 3rd Phase of WanLi Industrial Building, ShiHua Road, FuTian Free Trade Zone Shenzhen, Guangdong, China.

Report No.: RSZ150616006-00D

Test site at Bay Area Compliance Laboratories Corp. (Shenzhen) 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 December 06, 2010. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2009.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 382179. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

FCC Part 22H/24E Page 4 of 26

## **SYSTEM TEST CONFIGURATION**

## **Description of Test Configuration**

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

The final qualification test was performed with the EUT operating at normal mode.

## **Equipment Modifications**

No modification was made to the EUT.

## **Support Equipment List and Details**

Manufacturer	Description	Model	Serial Number
Rohde & Schwarz	Universal Radio Communication Tester	CMU200	106891

Report No.: RSZ150616006-00D

## **Block Diagram of Test Setup**



FCC Part 22H/24E Page 5 of 26

# SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
§1.1307, §2.1093	RF Exposure (SAR)	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	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.: RSZ150616006-00D

Note: \* Please refer to SAR report released by BACL, report number: RSZ150616006-20

FCC Part 22H/24E Page 6 of 26

# FCC §1.1307 & §2.1093 - RF EXPOSURE

Report No.: RSZ150616006-00D

## **Applicable Standard**

FCC§1.1307 and §2.1093.

## **Test Result**

Compliance, please refer to the SAR report RSZ150616006-20

FCC Part 22H/24E Page 7 of 26

# FCC §2.1047 - MODULATION CHARACTERISTIC

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

Report No.: RSZ150616006-00D

FCC Part 22H/24E Page 8 of 26

## 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.

Report No.: RSZ150616006-00D

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.

#### **Test Procedure**

Conducted method:

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



Radiated method:

TIA 603-D section 2.2.17

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

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Sunol Sciences	Horn Antenna	DRH-118	A052304	2014-11-01	2015-11-30
Rohde & Schwarz	Signal Analyzer	FSIQ26	837405/023	2014-08-22	2015-08-22
Rohde & Schwarz	EMI Test Receiver	ESCI	101120	2014-11-03	2015-11-03
Sunol Sciences	Broadband Antenna	JB3	A111513	2014-06-18	2017-06-17
HP	Signal Generator	8341B	2624A00116	2015-06-03	2016-06-03
COM POWER	COM POWER Dipole Antenna		041000	NCR	NCR
A.H. System	Horn Antenna	SAS-200/571	135	2013-02-10	2016-02-10
Rohde & Schwarz	Universal Radio Communication Tester	CMU200	106891	2014-11-23	2015-11-23

<sup>\*</sup> Statement of Traceability: Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC Part 22H/24E Page 9 of 26

## **Test Data**

## **Environmental Conditions**

Temperature:	26 ℃
Relative Humidity:	52 %
ATM Pressure:	101.0 kPa

The testing was performed by Mike Hu on 2015-07-04.

## **Conducted Power**

## Cellular Band (Part 22H)

Report No.: RSZ150616006-00D

Mode	Channel Frequency (MHz)		Average Output Power (dBm)	Limit (dBm)
GSM	128	824.2	31.84	38.45
	190	836.6	31.57	38.45
	251	848.8	31.28	38.45

Mode	Channel Frequency			Limit			
111040		(MHz)	1 slot	2 slots	3 slots	4 slots	(dBm)
	128	824.2	31.67	30.46	28.52	27.48	38.45
GPRS	190	836.6	31.64	30.39	28.48	27.44	38.45
	251	848.8	31.27	30.06	28.15	27.16	38.45

## PCS Band (Part 24E)

Mode	Channel Frequency (MHz) Average Outp Power (dBm)			Limit (dBm)
	512	1850.2	28.67	33
GSM	661	1880.0	29.15	33
	810	1909.8	29.74	33

Mode	Channel Frequency			Limit			
		(MHz)	1 slot	2 slots	3 slots	4 slots	(dBm)
	512	1850.2	28.12	27.42	25.43	24.63	33
GPRS	661	1880.0	29.00	28.01	26.20	25.29	33
	810	1909.8	29.87	28.82	27.07	26.15	33

FCC Part 22H/24E Page 10 of 26

## Peak-to-average ratio (PAR)

#### Cellular Band

Report No.: RSZ150616006-00D

Mode	Channel	PAR (dB)	Limit (dB)
GSM	Low	0.21	13
	Middle	0.20	13
	High	0.23	13

#### **PCS Band**

Mode	Channel	PAR (dB)	Limit (dB)
GSM	Low	0.24	13
	Middle	0.22	13
	High	0.23	13

## Radiated Power (Measured at Max. conducted power channel)

#### **GSM Mode:**

	Receiver Turntable		Rx Antenna		Substituted			Absolute	FCC Part 22H/24E	
Frequency (MHz)	luency Reading	Angle Degree	Height (m)	Polar (H/V)	S.G. Level (dBm)	Cable loss (dB)	Antenna Gain (dB)	Level (dBm)	Limit (dBm)	Margin (dB)
ERP for Cellular Band (Part 22H), Low Channel										
824.2	93.08	88	1.2	Н	27.6	0.69	0.0	26.91	38.45	11.54
824.2	98.47	225	1.3	V	28.4	0.69	0.0	27.71	38.45	10.74
	EIRP for PCS Band (Part 24E), high Channel									
1909.8	88.02	77	1.2	Н	17.9	1.40	7.30	23.80	33	9.20
1909.8	86.99	88	1.5	V	18.8	1.40	7.30	24.70	33	8.30

Note:

All above data were tested with no amplifier. Absolute Level = SG Level - Cable loss + Antenna Gain

Margin = Limit- Absolute Level

FCC Part 22H/24E Page 11 of 26

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

#### **Applicable Standard**

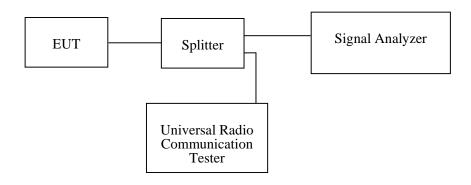
FCC §2.1049, §22.917, §22.905 and §24.238.

#### **Test Procedure**

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

The resolution bandwidth of the spectrum analyzer was set at 5 kHz (Cellular /PCS) & 100 kHz (WCDMA) and the 26 dB & 99% bandwidth was recorded.

Report No.: RSZ150616006-00D



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

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	Signal Analyzer	FSIQ26	837405/023	2014-08-22	2015-08-22
Rohde & Schwarz	Universal Radio Communication Tester	CMU200	106891	2014-11-23	2015-11-23

<sup>\*</sup> Statement of Traceability: Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

#### **Test Data**

#### **Environmental Conditions**

Temperature:	26 ℃
Relative Humidity:	52 %
ATM Pressure:	101.0 kPa

The testing was performed by Mike Hu on 2015-07-07.

FCC Part 22H/24E Page 12 of 26

EUT operation mode: Transmitting

Test Result: Compliance. Please refer to the following tables and plots.

## Cellular Band (Part 22H)

Report No.: RSZ150616006-00D

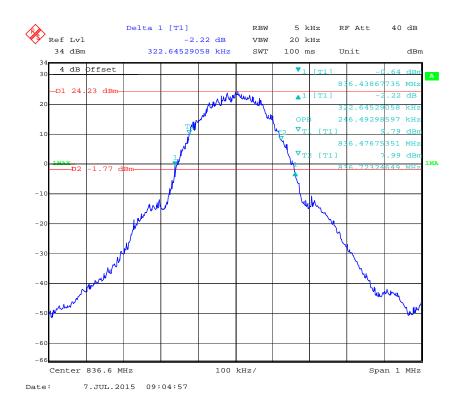
Mode	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Emission Bandwidth (kHz)
GSM(GMSK)	836.6	246.5	322.6

## PCS Band (Part 24E)

Mode	Frequency (MHz)	99% Occupied Bandwidth (kHz)	26 dB Emission Bandwidth (kHz)
GSM (GMSK)	1880.0	246.5	316.6

## Cellular Band (Part 22H)

## 99% Occupied Bandwidth for GSM (GMSK) Mode

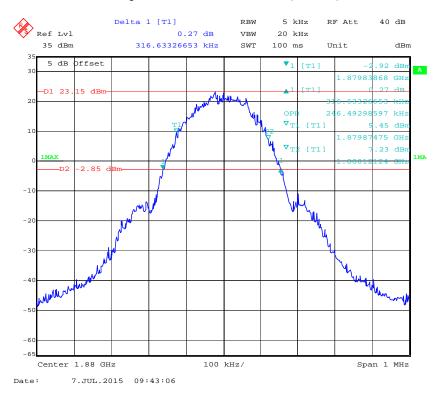


FCC Part 22H/24E Page 13 of 26

## PCS Band (Part 24E)

## 99% Occupied Bandwidth for GSM (GMSK) Mode

Report No.: RSZ150616006-00D



FCC Part 22H/24E Page 14 of 26

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

Report No.: RSZ150616006-00D

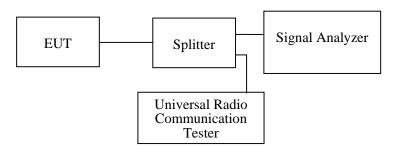
#### **Applicable Standard**

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. The resolution bandwidth of the spectrum analyzer was set at 1MHz. 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	837405/023	2014-08-22	2015-08-22
Rohde & Schwarz	Universal Radio Communication Tester	CMU200	106891	2014-11-23	2015-11-23

<sup>\*</sup> Statement of Traceability: Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

#### **Test Data**

#### **Environmental Conditions**

Temperature:	25 ℃
Relative Humidity:	52 %
ATM Pressure:	101.0 kPa

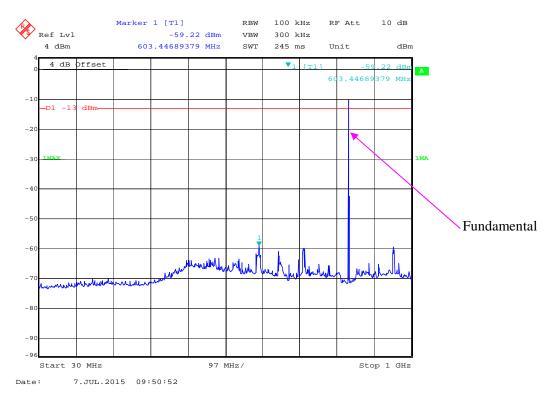
The testing was performed by Mike Hu on 2015-07-07.

Test result: Compliance, please refer to the following plots.

FCC Part 22H/24E Page 15 of 26

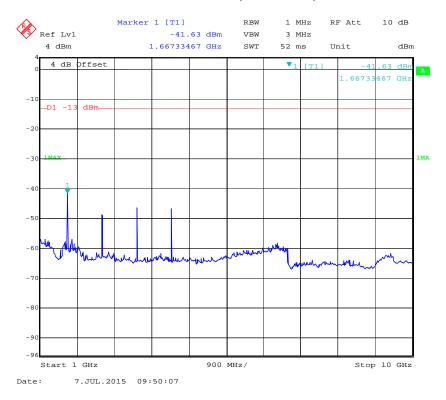
## Cellular Band (Part 22H)

#### 30 MHz - 1 GHz



Report No.: RSZ150616006-00D

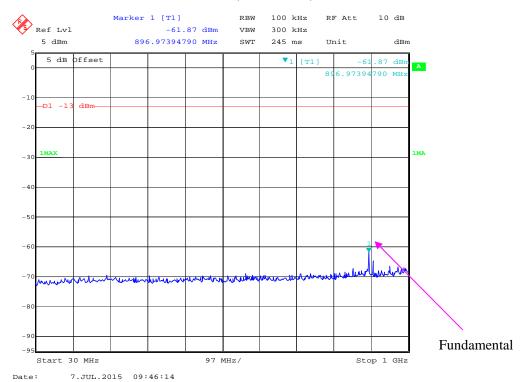
## 1 GHz – 10 GHz (GSM Mode)



FCC Part 22H/24E Page 16 of 26

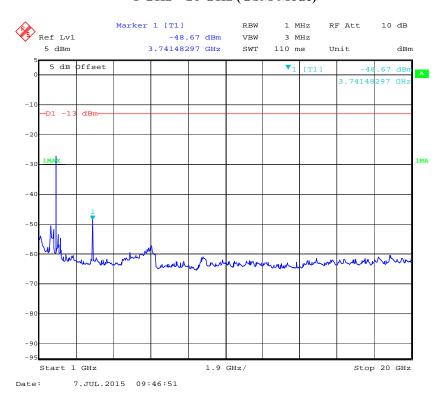
#### PCS Band (Part 24E)

#### 30 MHz – 1 GHz (GSM Mode)



Report No.: RSZ150616006-00D

## 1 GHz – 20 GHz (GSM Mode)



FCC Part 22H/24E Page 17 of 26

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

Report No.: RSZ150616006-00D

#### **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 receiving 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)

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

Manufacturer	Description Model Serial Number		Serial Number	Calibration Date	Calibration Due Date
Sunol Sciences	Horn Antenna	DRH-118	A052304	2014-11-01	2015-11-30
Sunol Sciences	Broadband Antenna	ЈВ3	A111513	2014-06-18	2017-06-17
Rohde & Schwarz	Signal Analyzer	FSIQ26	837405/023	2014-08-22	2015-08-22
Rohde & Schwarz	EMI Test Receiver	ESCI	101120	2014-11-03	2015-11-03
Mini	Pre-amplifier	ZVA-183-S+	5969001149	2015-04-23	2016-04-23
HP	Amplifier	8447E	1937A01046	2015-05-06	2016-05-06
HP	Signal Generator	8341B	2624A00116	2015-06-03	2016-06-03
COM POWER	Dipole Antenna	AD-100	041000	NCR	NCR
A.H. System	Horn Antenna	SAS-200/571	135	2013-02-11	2016-02-10
Electro-Mechanics	Horn Antenna	3116	9510-2270	2013-10-14	2016-10-13
Rohde & Schwarz	Universal Radio Communication Tester	CMU200	106891	2014-11-23	2015-11-23

<sup>\*</sup> Statement of Traceability: Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC Part 22H/24E Page 18 of 26

## **Test Data**

#### **Environmental Conditions**

Temperature:	26 ℃
Relative Humidity:	52 %
ATM Pressure:	101.0 kPa

The testing was performed by Mike Hu on 2015-06-30.

EUT operation mode: Transmitting (worst case)

#### **GSM Mode**

Report No.: RSZ150616006-00D

E	Receiver	Turntable	Rx An	tenna	,	Substitut	ed	Absolute		C Part I/24E
Frequency (MHz)	Reading (dBµV)	Angle Degree	Height (m)	Polar (H/V)	SG Level (dBm)	Cable Loss (dB)	Antenna Gain (dB)	Level (dBm)	Limit (dBm)	Margin (dB)
				GSM 850	), Low cha	nnel				
310.0	35.67	91	2.4	Н	-61.3	0.36	0	-61.66	-13	48.66
310.0	36.34	49	1.1	V	-60.7	0.36	0	-61.06	-13	48.06
1648.4	50.12	340	2.4	Н	-44.9	1.30	6.70	-39.50	-13	26.50
1648.4	53.27	101	1.5	V	-46.5	1.30	6.70	-41.10	-13	28.10
2472.6	39.84	108	1.0	Н	-54.7	1.70	8.60	-47.80	-13	34.80
2472.6	41.34	224	2.4	V	-53.3	1.70	8.60	-46.40	-13	33.40
3296.8	40.02	121	1.8	Н	-49.1	1.90	9.80	-41.20	-13	28.20
3296.8	38.57	133	1.3	V	-52.0	1.90	9.80	-44.10	-13	31.10
PCS 1900, high channel										
310.0	35.48	153	2.3	Н	-61.5	0.36	0	-61.86	-13	48.86
310.0	36.32	263	1.1	V	-60.7	0.36	0	-61.06	-13	48.06
3819.6	46.28	141	1.9	Н	-43.6	1.90	9.90	-35.60	-13	22.60
3819.6	45.70	33	2.3	V	-44.4	1.90	9.90	-36.40	-13	23.40

#### Note:

1) Absolute Level = SG Level - Cable loss + Antenna Gain

2) Margin = Limit- Absolute Level

FCC Part 22H/24E Page 19 of 26

# 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.

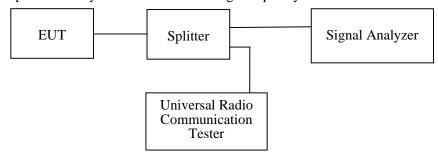
Report No.: RSZ150616006-00D

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	837405/023	2014-08-22	2015-08-22
Rohde & Schwarz	Universal Radio Communication Tester	CMU200	106891	2014-11-23	2015-11-23

<sup>\*</sup> Statement of Traceability: Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

#### **Test Data**

#### **Environmental Conditions**

Temperature:	25 ℃
Relative Humidity:	52 %
ATM Pressure:	101.0 kPa

The testing was performed by Mike Hu on 2015-07-07.

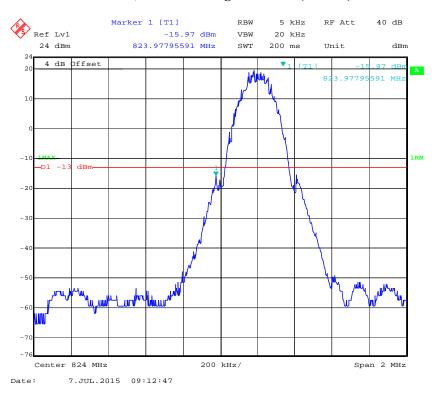
EUT operation mode: Transmitting

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

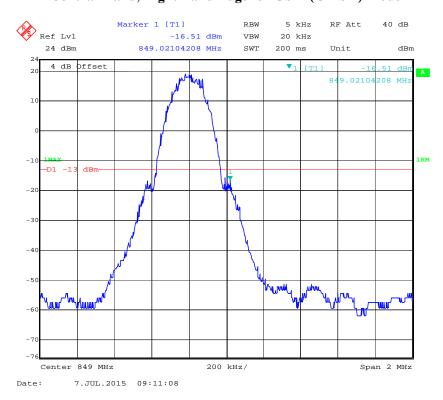
FCC Part 22H/24E Page 20 of 26

## Cellular Band, Left Band Edge for GSM (GMSK) Mode

Report No.: RSZ150616006-00D



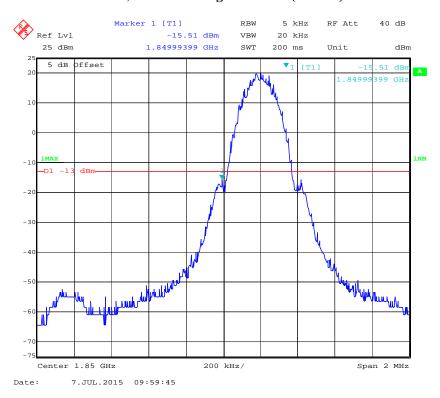
## Cellular Band, Right Band Edge for GSM (GMSK) Mode



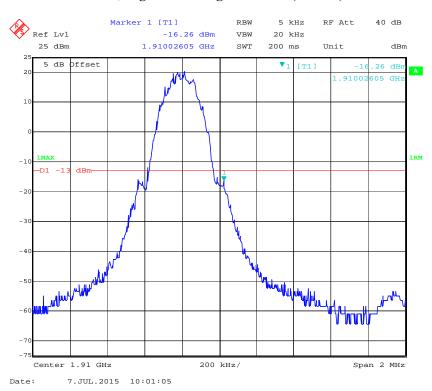
FCC Part 22H/24E Page 21 of 26

## PCS Band, Left Band Edge for GSM (GMSK) Mode

Report No.: RSZ150616006-00D



## PCS Band, Right Band Edge for GSM (GMSK) Mode



FCC Part 22H/24E Page 22 of 26

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

#### **Applicable Standard**

FCC § 2.1055, §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:

Report No.: RSZ150616006-00D

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

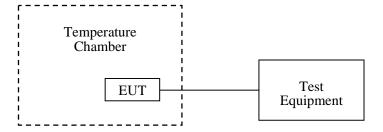
According to §24.235, the frequency stability shall be sufficient to ensure that the fundamental emissions stays within the authorized frequency block.

#### **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: For hand carried, battery powered equipment; reduce primary supply voltage to the battery operating end point which shall be specified by the manufacturer.



FCC Part 22H/24E Page 23 of 26

## **Test Equipment List and Details**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
ESPEC	Temperature & Humidity Chamber	EL-10KA	09107726	2014-11-01	2015-11-01
Rohde & Schwarz	Universal Radio Communication Tester	CMU200	106891	2014-11-23	2015-11-23

Report No.: RSZ150616006-00D

#### **Test Data**

#### **Environmental Conditions**

Temperature:	26 ℃	
Relative Humidity:	52 %	
ATM Pressure:	101.0 kPa	

The testing was performed by Mike Hu on 2015-07-04.

EUT operation mode: Transmitting

Test Result: Compliance. Please refer to the following tables.

## Cellular Band (Part 22H)

#### **GSM Mode**

Middle Channel, f <sub>o</sub> =836.6MHz				
Temperature (°C)	Power Supplied (V <sub>DC</sub> )	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-30		10	0.01195	2.5
-20		8	0.00956	2.5
-10		9	0.01076	2.5
0		10	0.01195	2.5
10	3.7	7	0.00837	2.5
20		6	0.00717	2.5
30		8	0.00956	2.5
40		10	0.01195	2.5
50		8	0.00956	2.5
25	V min.= 3.5	11	0.01315	2.5
25	V max.= 4.2	6	0.00717	2.5

FCC Part 22H/24E Page 24 of 26

<sup>\*</sup> Statement of Traceability: Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

## PCS Band (Part 24E)

Report No.: RSZ150616006-00D

## **GSM Mode**

Middle Channel, f <sub>o</sub> =1880.0 MHz				
Temperature (°C)	Power Supplied (V <sub>DC</sub> )	Frequency Error (Hz)	Frequency Error (ppm)	Result
-30		13	0.00691	pass
-20		14	0.00745	pass
-10		11	0.00585	pass
0		13	0.00691	pass
10	3.7	12	0.00638	pass
20		16	0.00851	pass
30		11	0.00585	pass
40		14	0.00745	pass
50		13	0.00691	pass
25	V min.= 3.5	10	0.00532	pass
25	V max.= 4.2	14	0.00745	pass

FCC Part 22H/24E Page 25 of 26

## PRODUCT SIMILARITY DECLARATION LETTER

ANGEL TECHNOLOGY CO., LTD.

Address: 10F, Yuelaishun Building, NO.90 Fuqian Road, Guanlan, Shenzhen, China

Tel: 0755-27808385

Fax: 0755-27804190

Report No.: RSZ150616006-00D

2015-07-20

## **Product Similarity Declaration**

To Whom It May Concern,

We, <u>ANGEL TECHNOLOGY CO., LTD.</u>, hereby declare that we have a product named as <u>Tablet PC (Model number: L706-2G-MTK8312D)</u> as tested by BACL, meanwhile, for our marketing purpose, we would like to list a series models (<u>FLIP SPEAKER</u>) on reports and certificate, all the models are identical schematics, only named differently. No other changes are made to them

We confirm that all information above is true, and we'll be responsible for all the consequences. Please contact me if you have any question.

Sincerely,

Signature

Lucky zhang

Sales Manage

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

FCC Part 22H/24E Page 26 of 26