

FCC REPORT

Applicant: Sky Phone LLC

Address of Applicant: 1348 Washington Av.Suite 350, Miami Beach, Florida, United States

Equipment Under Test (EUT)

Product Name: Feature Phone

Model No.: SKY MUSIC, SKY F2C

Trade mark: SKY DEVICES

FCC ID: 2ABOSSKYMUSIC

Applicable standards: FCC CFR Title 47 Part 15 Subpart B

Date of sample receipt: 19 Nov., 2018

Date of Test: 20 Nov., to 29 Nov., 2018

Date of report issued: 30 Nov., 2018

Test Result: PASS *

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



Bruce Zhang
Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the CCIS product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.

2 Version

Version No.	Date	Description
00	30 Nov., 2018	<p><i>This report was amended on FCC ID: 2ABOSSKYMUSIC follow FCC Class II Permissive Change.</i></p> <p><i>The differences between them as below:</i></p> <p><i>Add model .: SKY F2C . SKY F2C is a single SIM card, before SKY MUSIC was a dual SIM card. So re-test SKY F2C the CE and RE.</i></p>

Tested by:

Mike.Ou

Date:

30 Nov., 2018

Test Engineer

Reviewed by:

Wimer Zhang

Date:

30 Nov., 2018

Project Engineer

3 Contents

	Page
1 COVER PAGE.....	1
2 VERSION	2
3 CONTENTS	3
4 TEST SUMMARY.....	4
5 GENERAL INFORMATION.....	5
5.1 CLIENT INFORMATION	5
5.2 GENERAL DESCRIPTION OF E.U.T.	5
5.3 TEST MODE.....	5
5.4 MEASUREMENT UNCERTAINTY.....	5
5.5 DESCRIPTION OF SUPPORT UNITS	6
5.6 RELATED SUBMITTAL(s) / GRANT (s).....	6
5.7 LABORATORY FACILITY	6
5.8 LABORATORY LOCATION	6
5.9 TEST INSTRUMENTS LIST.....	7
6 TEST RESULTS AND MEASUREMENT DATA.....	8
6.1 CONDUCTED EMISSION.....	8
6.2 RADIATED EMISSION	11
7 TEST SETUP PHOTO	17
8 EUT CONSTRUCTIONAL DETAILS	18

4 Test Summary

Test Item	Section in CFR 47	Result
Conducted Emission	Part 15.107	Pass
Radiated Emission	Part 15.109	Pass
<p><i>Remark:</i> <i>Pass: The EUT complies with the essential requirements in the standard.</i> <i>N/A: The EUT not applicable of the test item.</i></p>		

5 General Information

5.1 Client Information

Applicant:	Sky Phone LLC
Address of Applicant:	1348 Washington Av.Suite 350 ,Miami Beach,Florida,United States
Manufacturer:	Hunan Huigao electronics technology co., ltd.
Address:	Yaodu RD north jianghua industrial park Jianghua Yaozu autonomous county ,Yongzhou,Hunan province,China

5.2 General Description of E.U.T.

Product Name:	Feature Phone
Model No.:	SKY MUSIC , SKY F2C
Power supply:	Rechargeable Li-ion Battery DC3.7V-600mAh
AC adapter :	Model: SKY Music Input: AC100-240V, 50/60Hz, 0.2A Output: DC 5.0V, 500mA
Remark:	The model No.: SKY F2C, SKY MUSIC were identical inside, the electrical circuit design, layout, components used and internal wiring, Different model. The PCB function is the same, only difference is as below: SKY MUSIC is a double SIM card, SKY F2C is a single SIM card

5.3 Test Mode

Operating mode	Detail description
PC mode	Keep the EUT in Downloading mode(Worst case)
Charging+Recording mode	Keep the EUT in Charging+Recording mode
Charging+Playing mode	Keep the EUT in Charging+Playing mode
FM mode	Keep the EUT in FM receiver mode

The sample was placed 0.8m above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages.

5.4 Measurement Uncertainty

Parameters	Expanded Uncertainty
Conducted Emission (9kHz ~ 30MHz)	±2.22 dB (k=2)
Radiated Emission (9kHz ~ 30MHz)	±2.76 dB (k=2)
Radiated Emission (30MHz ~ 1000MHz)	±4.28 dB (k=2)
Radiated Emission (1GHz ~ 18GHz)	±5.72 dB (k=2)
Radiated Emission (18GHz ~ 40GHz)	±2.88 dB (k=2)

5.5 Description of Support Units

Manufacturer	Description	Model	Serial Number	FCC ID/DoC
DELL	PC	OPTIPLEX745	N/A	DoC
DELL	MONITOR	E178FPC	N/A	DoC
DELL	KEYBOARD	SK-8115	N/A	DoC
DELL	MOUSE	MOC5UO	N/A	DoC
LENOVO	Laptop	SL510	2847A65	DoC

5.6 Related Submittal(s) / Grant (s)

This is an original grant, no related submittals and grants.

5.7 Laboratory Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **FCC - Registration No.: 727551**
Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been accredited as a testing laboratory by FCC (Federal Communications Commission). The Registration No. is 727551.
- **IC - Registration No.: 10106A-1**
The 3m Semi-anechoic chamber of Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.
- **CNAS - Registration No.: CNAS L6048**
Shenzhen Zhongjian Nanfang Testing Co., Ltd. is accredited to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L6048.
- **A2LA - Registration No.: 4346.01**
This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: <https://portal.a2la.org/scopepdf/4346-01.pdf>

5.8 Laboratory Location

Shenzhen Zhongjian Nanfang Testing Co., Ltd.
 Address: No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road,
 Bao'an District, Shenzhen, Guangdong, China
 Tel: +86-755-23118282, Fax: +86-755-23116366
 Email: info@ccis-cb.com, Website: http://www.ccis-cb.com

5.9 Test Instruments list

Radiated Emission:					
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
3m SAC	SAEMC	9(L)*6(W)* 6(H)	CCIS0001	07-22-2017	07-21-2020
BiConiLog Antenna	SCHWARZBECK	VULB9163	CCIS0005	03-16-2018	03-15-2019
Horn Antenna	SCHWARZBECK	BBHA9120D	CCIS0006	03-16-2018	03-15-2019
Pre-amplifier (10kHz-1.3GHz)	HP	8447D	CCIS0003	03-07-2018	03-06-2019
Pre-amplifier (1GHz-18GHz)	Compliance Direction Systems Inc.	PAP-1G18	CCIS0011	03-07-2018	03-06-2019
Spectrum analyzer 9k-30GHz	Rohde & Schwarz	FSP30	CCIS0023	03-07-2018	03-06-2019
EMI Test Receiver	Rohde & Schwarz	ESRP7	CCIS0167	03-07-2018	03-06-2019
EMI Test Software	AUDIX	E3	Version: 6.110919b		
Coaxial Cable	N/A	N/A	CCIS0018	03-07-2018	03-06-2019
Coaxial Cable	N/A	N/A	CCIS0020	03-07-2018	03-06-2019

Conducted Emission:					
Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
Shielding Room	ZhongShuo Electron	11.0(L)x4.0(W)x3.0(H)	CCIS0061	07-22-2017	07-21-2020
EMI Test Receiver	Rohde & Schwarz	ESCI	CCIS0002	03-07-2018	03-06-2019
LISN	CHASE	MN2050D	CCIS0074	03-19-2018	03-18-2019
LISN	Rohde & Schwarz	ESH3-Z5	8438621/010	07-21-2018	07-20-2019
Coaxial Cable	CCIS	N/A	CCIS0086	03-07-2018	03-06-2019
EMI Test Software	AUDIX	E3	Version: 6.110919b		

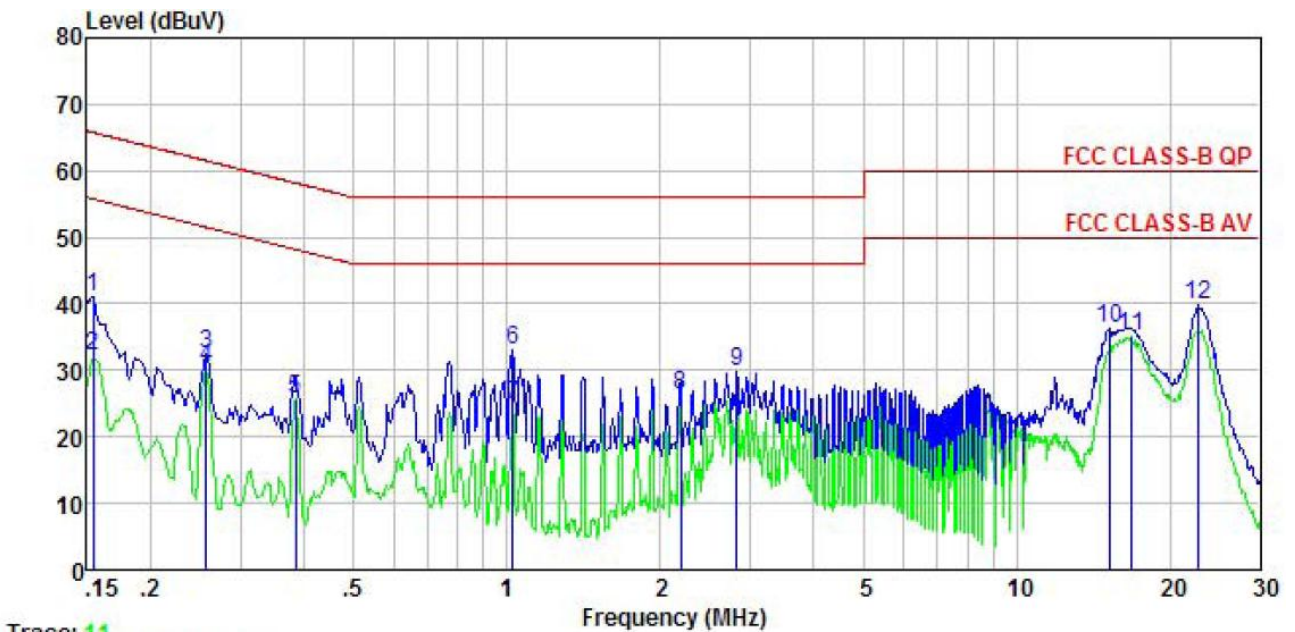
6 Test results and Measurement Data

6.1 Conducted Emission

Test Requirement:	FCC Part 15 B Section 15.107		
Test Method:	ANSI C63.4:2014		
Test Frequency Range:	150kHz to 30MHz		
Class / Severity:	Class B		
Receiver setup:	RBW=9kHz, VBW=30kHz		
Limit:	Frequency range (MHz)	Limit (dB μ V)	
		Quasi-peak	Average
	0.15-0.5	66 to 56*	56 to 46*
	0.5-5	56	46
	0.5-30	60	50
* Decreases with the logarithm of the frequency.			
Test setup:	<p><i>Remark</i> <i>E.U.T. Equipment Under Test</i> <i>LISN: Line Impedance Stabilization Network</i> <i>Test table height=0.8m</i></p>		
Test procedure	<ol style="list-style-type: none"> 1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network(L.I.S.N.). The provide a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2014 on conducted measurement. 		
Test Instruments:	Refer to section 5.9 for details		
Test mode:	Refer to section 5.3 for details		
Test results:	Pass		

Measurement data:

Product name:	Feature Phone	Product model:	SKY F2C
Test by:	Alex	Test mode:	PC mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Line
Test voltage:	AC 120 V/60 Hz	Environment:	Temp: 22.5°C Huni: 55%



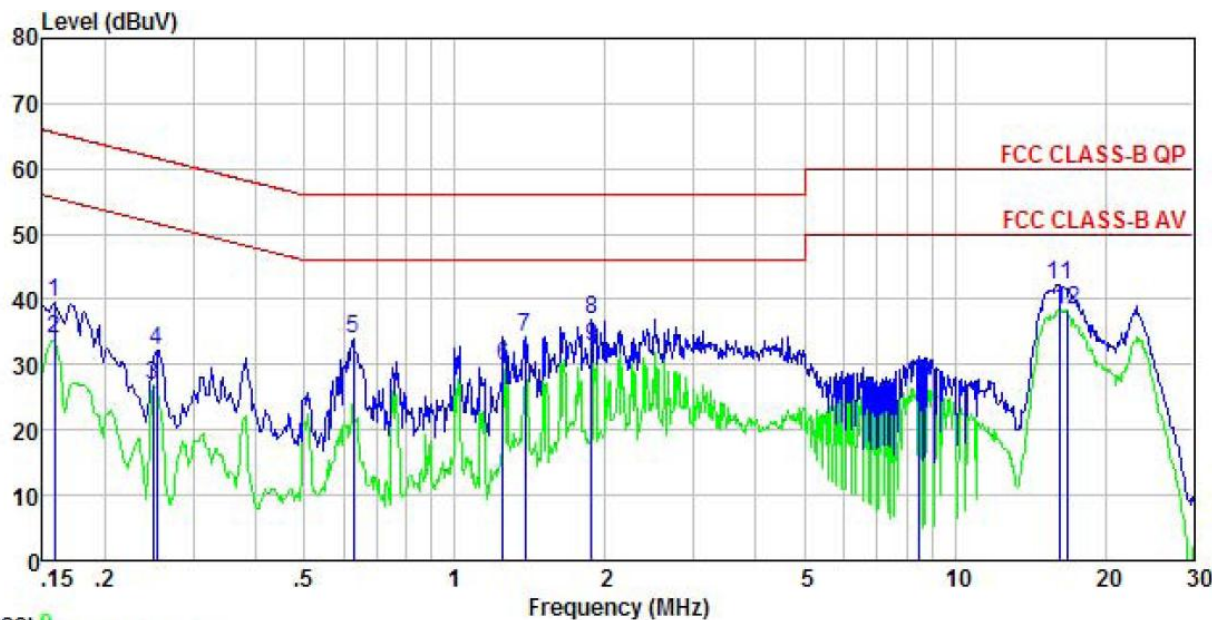
Trace: 11

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.154	30.17	0.18	10.78	41.13	65.78	-24.65	QP
2	0.154	21.11	0.18	10.78	32.07	55.78	-23.71	Average
3	0.258	21.48	0.14	10.75	32.37	61.51	-29.14	QP
4	0.258	19.49	0.14	10.75	30.38	51.51	-21.13	Average
5	0.385	14.96	0.12	10.72	25.80	48.17	-22.37	Average
6	1.027	22.17	0.13	10.87	33.17	56.00	-22.83	QP
7	1.027	13.93	0.13	10.87	24.93	46.00	-21.07	Average
8	2.190	15.17	0.15	10.95	26.27	46.00	-19.73	Average
9	2.824	18.60	0.16	10.93	29.69	56.00	-26.31	QP
10	15.226	25.21	0.32	10.90	36.43	60.00	-23.57	QP
11	16.750	23.89	0.30	10.91	35.10	50.00	-14.90	Average
12	22.655	28.52	0.31	10.90	39.73	60.00	-20.27	QP

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level = Receiver Read level + LISN Factor + Cable Loss.

Product name:	Feature Phone	Product model:	SKY F2C
Test by:	Alex	Test mode:	PC mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Neutral
Test voltage:	AC 120 V/60 Hz	Environment:	Temp: 22.5°C Humi: 55%



Trace: 9

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dBuV	dBuV	dB	
1	0.158	27.76	0.98	10.77	39.51	65.56	-26.05	QP
2	0.158	22.21	0.98	10.77	33.96	55.56	-21.60	Average
3	0.249	15.28	0.95	10.75	26.98	51.78	-24.80	Average
4	0.253	20.43	0.95	10.75	32.13	61.64	-29.51	QP
5	0.627	22.08	0.97	10.77	33.82	56.00	-22.18	QP
6	1.249	17.98	0.97	10.90	29.85	46.00	-16.15	Average
7	1.381	22.31	0.97	10.91	34.19	56.00	-21.81	QP
8	1.878	24.97	0.98	10.95	36.90	56.00	-19.10	QP
9	1.878	20.70	0.98	10.95	32.63	46.00	-13.37	Average
10	8.501	15.13	1.02	10.88	27.03	50.00	-22.97	Average
11	16.140	30.56	0.85	10.91	42.32	60.00	-17.68	QP
12	16.750	26.79	0.82	10.91	38.52	50.00	-11.48	Average

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level = Receiver Read level + LISN Factor + Cable Loss.

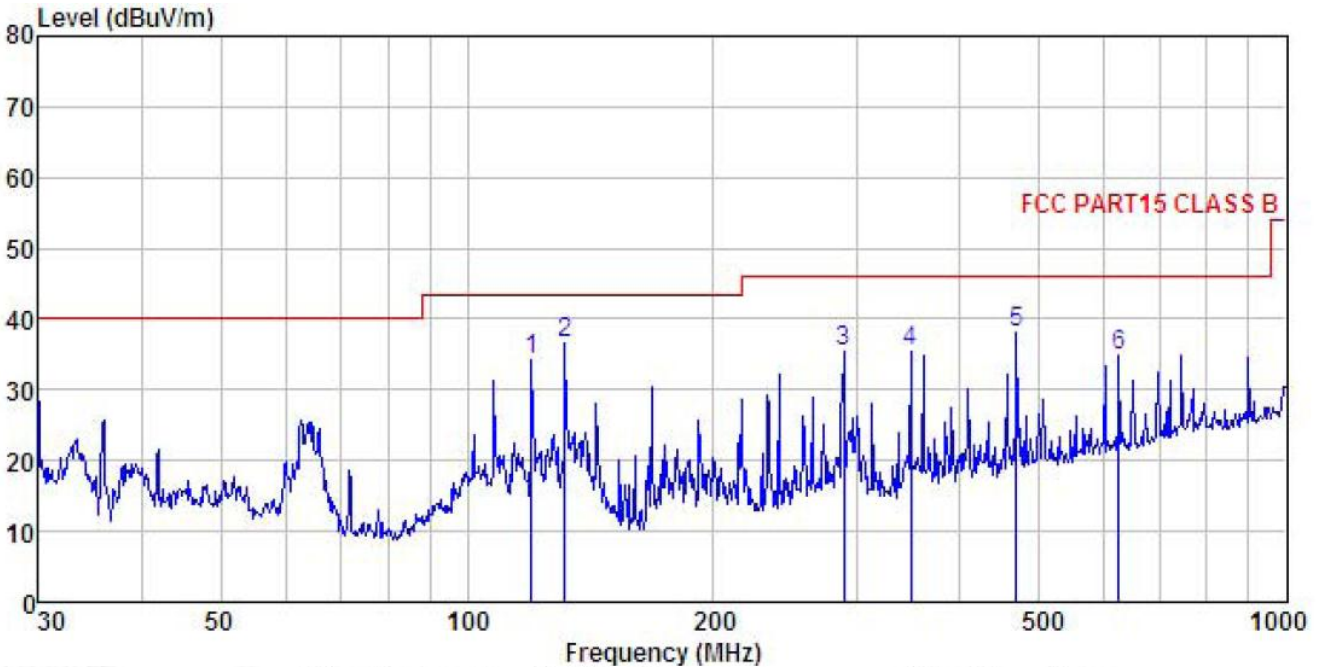
6.2 Radiated Emission

Test Requirement:	FCC Part 15 B Section 15.109				
Test Method:	ANSI C63.4:2014				
Test Frequency Range:	30MHz to 6000MHz				
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)				
Receiver setup:	Frequency	Detector	RBW	VBW	Remark
	30MHz-1GHz	Quasi-peak	120kHz	300kHz	Quasi-peak Value
	Above 1GHz	Peak RMS	1MHz 1MHz	3MHz 3MHz	Peak Value Average Value
Limit:	Frequency	Limit (dBuV/m @3m)			Remark
	30MHz-88MHz	40.0			Quasi-peak Value
	88MHz-216MHz	43.5			Quasi-peak Value
	216MHz-960MHz	46.0			Quasi-peak Value
	960MHz-1GHz	54.0			Quasi-peak Value
	Above 1GHz	54.0			Average Value
		74.0			Peak Value
Test setup:	Below 1GHz				
	Above 1GHz				

<p>Test Procedure:</p>	<ol style="list-style-type: none"> 1. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. 2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 3. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. 4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. 5. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. 6. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
<p>Test Instruments:</p>	<p>Refer to section 5.9 for details</p>
<p>Test mode:</p>	<p>Refer to section 5.3 for details</p>
<p>Test results:</p>	<p>Passed</p>
<p>Remark:</p>	<p>All of the observed value above 6GHz were the noise floor , which were no recorded</p>

Measurement Data:
Below 1GHz:

Product Name:	Feature Phone	Product model:	SKY F2C
Test By:	Alex	Test mode:	PC mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Humi: 57%

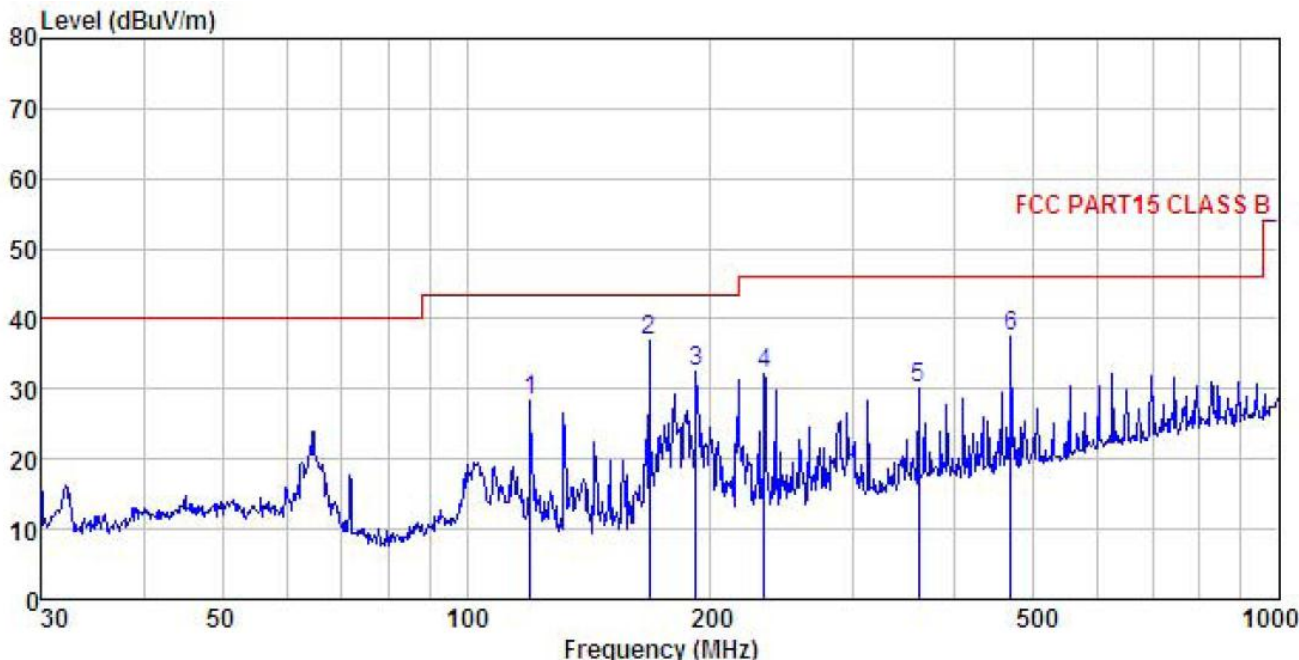


	Read Freq	Antenna Level	Cable Factor	Preamp Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	119.856	51.26	10.23	2.17	29.39	34.27	43.50	-9.23	QP
2	131.758	55.09	8.59	2.30	29.32	36.66	43.50	-6.84	QP
3	287.990	47.47	13.53	2.91	28.47	35.44	46.00	-10.56	QP
4	348.027	46.43	14.56	3.09	28.56	35.52	46.00	-10.48	QP
5	468.876	46.84	16.65	3.36	28.90	37.95	46.00	-8.05	QP
6	625.078	40.34	19.51	3.90	28.86	34.89	46.00	-11.11	QP

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preampifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Name:	Feature Phone	Product model:	SKY F2C
Test By:	Alex	Test mode:	PC mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%



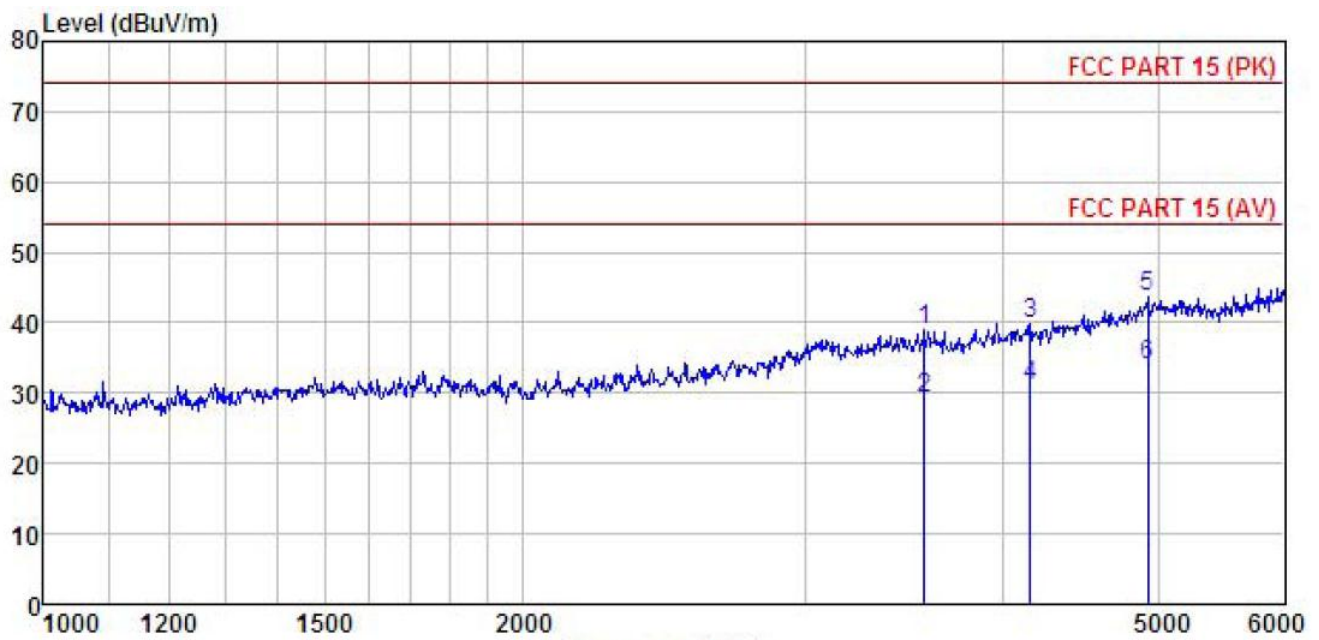
	Read	Antenna	Cable	Preamp	Level	Limit	Over	Remark
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	119.856	45.41	10.23	2.17	29.39	28.42	43.50	-15.08 QP
2	167.824	53.99	9.34	2.64	29.07	36.90	43.50	-6.60 QP
3	191.745	47.24	11.25	2.81	28.89	32.41	43.50	-11.09 QP
4	232.532	45.30	12.72	2.83	28.64	32.21	46.00	-13.79 QP
5	360.448	40.79	14.80	3.10	28.61	30.08	46.00	-15.92 QP
6	468.876	46.33	16.65	3.36	28.90	37.44	46.00	-8.56 QP

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.

Above 1GHz:

Product Name:	Feature Phone	Product model:	SKY F2C
Test By:	Alex	Test mode:	PC mode
Test Frequency:	1 GHz ~ 6 GHz	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Humi: 57%

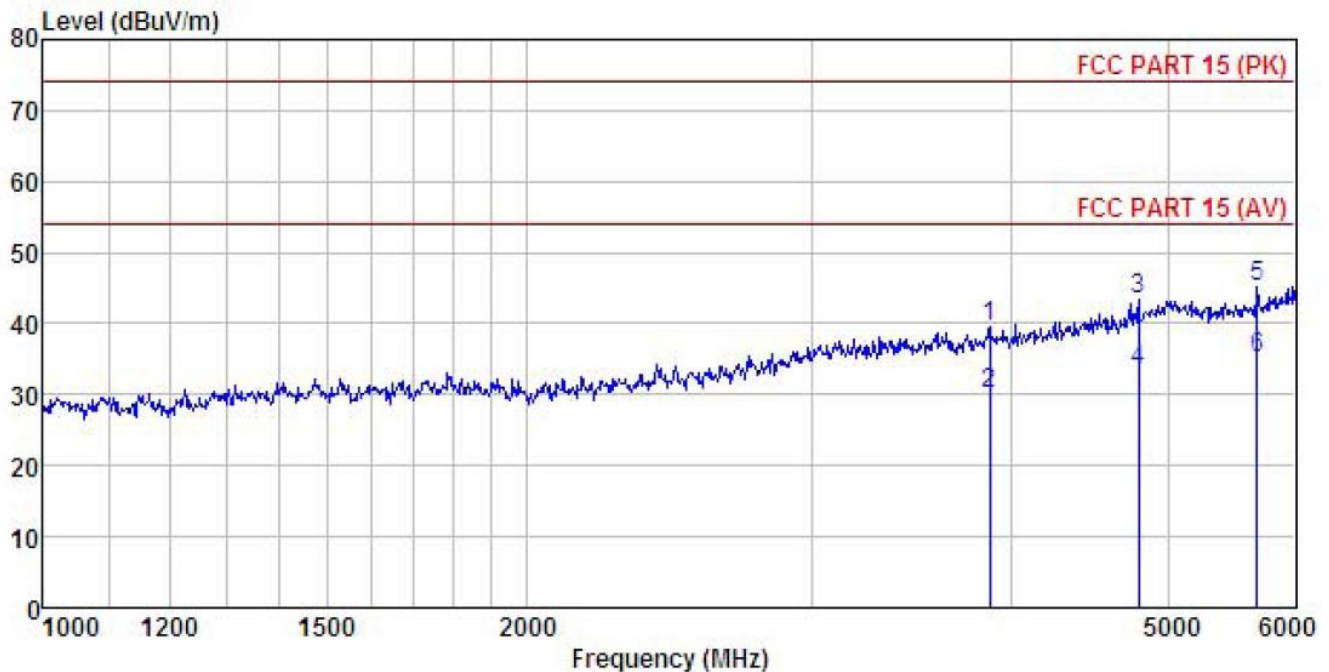


	ReadAntenna	Cable	Preamp	Limit	Over				
Freq	Level	Loss	Factor	Line	Limit	Remark			
MHz	dBuV	dB	dB	dBuV/m	dB				
1	3568.514	47.14	27.62	5.85	41.51	39.10	74.00	-34.90	Peak
2	3568.514	37.27	27.62	5.85	41.51	29.23	54.00	-24.77	Average
3	4155.566	46.49	28.70	6.34	41.81	39.72	74.00	-34.28	Peak
4	4155.566	37.69	28.70	6.34	41.81	30.92	54.00	-23.08	Average
5	4926.683	47.26	31.46	6.89	41.86	43.75	74.00	-30.25	Peak
6	4926.683	37.57	31.46	6.89	41.86	34.06	54.00	-19.94	Average

Remark:

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
- The emission levels of other frequencies are very lower than the limit and not show in test report.

Product Name:	Feature Phone	Product model:	SKY F2C
Test By:	Alex	Test mode:	PC mode
Test Frequency:	1 GHz ~ 6 GHz	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Humi: 57%



	ReadAntenna	Cable	Preamp	Limit	Over			
Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1	3875.095	47.07	28.18	6.09	41.80	39.54	74.00	-34.46 Peak
2	3875.095	37.56	28.18	6.09	41.80	30.03	54.00	-23.97 Average
3	4796.035	47.64	30.77	6.81	41.83	43.39	74.00	-30.61 Peak
4	4796.035	37.60	30.77	6.81	41.83	33.35	54.00	-20.65 Average
5	5685.998	48.47	30.93	7.55	41.89	45.06	74.00	-28.94 Peak
6	5685.998	38.62	30.93	7.55	41.89	35.21	54.00	-18.79 Average

Remark:

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.
2. The emission levels of other frequencies are very lower than the limit and not show in test report.