

Report No: JYTSZB-R12-2100453

# FCC REPORT (Bluetooth)

Applicant:	SKY PHONE LLC
Address of Applicant:	1348 Washington Av. Suite 350, Miami Beach, FL 33139
Equipment Under Test (E	EUT)
Product Name:	Feature Phone
Model No.:	SKY Rock2
Trade mark:	SKY DEVICES
FCC ID:	2ABOSSKYROK2
Applicable standards:	FCC CFR Title 47 Part 15 Subpart C Section 15.247
Date of sample receipt:	19 Mar., 2021
Date of Test:	19 Mar., to 22 Apr., 2021
Date of report issued:	23 Apr., 2021
Test Result:	PASS *

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

Authorized Signature:



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 JYT product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

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### 2 Version

Version No.	Date	Description
00	23 Apr., 2021	Original

Tested by:

Mike.OU Test Engineer

Date: 23 Apr., 2021

Winner Thang

Date: 23 Apr., 2021

Reviewed by:

Project Engineer

Project No.: JYTSZE2103057



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### **4** Test Summary

Test Items	Section in CFR 47	Test Data	Result
Antenna Requirement	15.203 & 15.247 (b)	See Section 6.1	Pass
AC Power Line Conducted Emission	15.207	See Section 6.2	Pass
Conducted Peak Output Power	15.247 (b)(1)	Appendix A – BT	Pass
20dB Occupied Bandwidth	15.247 (a)(1)	Appendix A – BT	Pass
Carrier Frequencies Separation	15.247 (a)(1)	47 (a)(1) Appendix A – BT	
Hopping Channel Number	15.247 (a)(1)	Appendix A – BT	Pass
Dwell Time	15.247 (a)(1)	Appendix A – BT	Pass
Conducted Band Edge	45 005 8 45 000	Appendix A – BT	Pass
Radiated Band Edge	15.205 & 15.209	See Section 6.9.2	Pass
Conducted Spurious Emission		Appendix A – BT	Pass
Radiated Spurious Emission	15.247(d)	See Section 6.10.2	Pass
Remark:			

Pass: The EUT complies with the essential requirements in the standard. 1.

2. N/A: Not Applicable.

The cable insertion loss used by "RF Output Power" and other conduction measurement items is 0.5dB (provided by З. the customer).

Test Method:	ANSI C63.10-2013
rest method:	KDB 558074 D01 15.247 Meas Guidance v05r02



### **5** General Information

### **5.1 Client Information**

Applicant:	SKY PHONE LLC
Address:	1348 Washington Av. Suite 350, Miami Beach, FL 33139
Manufacturer:	SKY PHONE LLC
Address:	1348 Washington Av. Suite 350, Miami Beach, FL 33139

### 5.2 General Description of E.U.T.

Product Name:	Feature Phone
Model No.:	SKY Rock2
Operation Frequency:	2402MHz~2480MHz
Transfer rate:	1/2/3 Mbits/s
Number of channel:	79
Modulation type:	GFSK, π/4-DQPSK, 8DPSK
Modulation technology:	FHSS
Antenna Type:	Internal Antenna
Antenna gain:	2.1 dBi
Power supply:	Rechargeable Li-ion Battery DC3.7V, 600mAh
AC adapter:	Model: SKY Rock2
	Input: AC100-240V, 50/60Hz, 0.15A
	Output: DC 5.0V, 500mA
Test Sample Condition:	The test samples were provided in good working order with no visible defects.

Operation	Operation Frequency each of channel for GFSK, $\pi$ /4-DQPSK, 8DPSK							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency	
0	2402MHz	20	2422MHz	40	2442MHz	60	2462MHz	
1	2403MHz	21	2423MHz	41	2443MHz	61	2463MHz	
2	2404MHz	22	2424MHz	42	2444MHz	62	2464MHz	
3	2405MHz	23	2425MHz	43	2445MHz	63	2465MHz	
4	2406MHz	24	2426MHz	44	2446MHz	64	2466MHz	
5	2407MHz	25	2427MHz	45	2447MHz	65	2467MHz	
15	2417MHz	35	2437MHz	55	2457MHz	75	2477MHz	
16	2418MHz	36	2438MHz	56	2458MHz	76	2478MHz	
17	2419MHz	37	2439MHz	57	2459MHz	77	2479MHz	
18	2420MHz	38	2440MHz	58	2460MHz	78	2480MHz	
19	19 2421MHz 39 2441MHz 59 2461MHz							
Remark: Channel 0, 39 &78 selected for GFSK, π/4-DQPSK and 8DPSK.								



### 5.3 Test environment and mode

Operating Environment:			
Temperature:	24.0 °C		
Humidity:	54 % RH		
Atmospheric Pressure:	1010 mbar		
Test Modes:			
Non-hopping mode:	Keep the EUT in continuous transmitting mode with worst case data rate.		
Hopping mode:	Keep the EUT in hopping mode.		
Remark	GFSK (1 Mbps) is the worst case mode.		
Padiated Emission: The sample was placed 0.8m (below 1GHz)/1.5m (above 1GHz) above the ground plane			

Radiated Emission: The sample was placed 0.8m (below 1GHz)/1.5m (above 1GHz) 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 Description of Support Units**

The EUT has been tested as an independent unit.

### **5.5 Measurement Uncertainty**

Parameters	Expanded Uncertainty
Conducted Emission (9kHz ~ 30MHz)	±1.60 dB (k=2)
Radiated Emission (9kHz ~ 30MHz)	±3.12 dB (k=2)
Radiated Emission (30MHz ~ 1000MHz)	±4.32 dB (k=2)
Radiated Emission (1GHz ~ 18GHz)	±5.16 dB (k=2)
Radiated Emission (18GHz ~ 40GHz)	±3.20 dB (k=2)

### 5.6 Additions to, deviations, or exclusions from the method

No

### 5.7 Laboratory Facility

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

### • FCC - Designation No.: CN1211

JianYan Testing Group Shenzhen Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

### • ISED – CAB identifier.: CN0021

The 3m Semi-anechoic chamber of JianYan Testing Group Shenzhen Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

### • 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: <u>https://portal.a2la.org/scopepdf/4346-01.pdf</u>

### 5.8 Laboratory Location

JianYan Testing Group Shenzhen Co., Ltd. Address: No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China. Tel: +86-755-23118282, Fax: +86-755-23116366 Email: info@ccis-cb.com, Website: <u>http://www.ccis-cb.com</u>



### **5.9 Test Instruments list**

Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
3m SAC	ETS	9m*6m*6m	966	01-19-2021	01-18-2024
BiConiLog Antenna	SCHWARZBECK	VULB9163	497	03-03-2021	03-02-2022
Biconical Antenna	SCHWARZBECK	VUBA9117	359	06-18-2020	06-17-2021
Horn Antenna	SCHWARZBECK	BBHA9120D	916	03-03-2021	03-02-2022
Horn Antenna	SCHWARZBECK	BBHA9120D	1805	06-18-2020	06-17-2021
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170582	11-18-2020	11-17-2021
EMI Test Software	AUDIX	E3	V	/ersion: 6.110919b	
Pre-amplifier	HP	8447D	2944A09358	03-03-2021	03-02-2022
Pre-amplifier	CD	PAP-1G18	11804	03-03-2021	03-02-2022
Spectrum analyzer	Rohde & Schwarz	FSP30	101454	03-03-2021	03-02-2022
Spectrum analyzer	Rohde & Schwarz	FSP40	100363	11-18-2020	11-17-2021
EMI Test Receiver	Rohde & Schwarz	ESRP7	101070	03-03-2021	03-02-2022
Spectrum Analyzer	Agilent	N9020A	MY50510123	11-18-2020	11-17-2021
Signal Generator	Rohde & Schwarz	SMX	835454/016	03-03-2021	03-02-2022
Signal Generator	R&S	SMR20	1008100050	03-03-2021	03-02-2022
RF Switch Unit	MWRFTEST	MW200	N/A	N/A	N/A
Test Software	MWRFTEST	MTS8200		Version: 2.0.0.0	
Cable	ZDECL	Z108-NJ-NJ-81	1608458	03-03-2021	03-02-2022
Cable	MICRO-COAX	MFR64639	K10742-5	03-03-2021	03-02-2022
Cable	SUHNER	SUCOFLEX100	58193/4PE	03-03-2021	03-02-2022
DC Power Supply	XinNuoEr	WYK-10020K	1409050110020	09-25-2020	09-24-2021
Temperature Humidity Chamber	HengPu	HPGDS-500	20140828008	11-01-2020	10-31-2021
Simulated Station	Rohde & Schwarz	CMW500	140493	07-22-2020	07-21-2021

<b>Conducted Emission:</b>						
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)	
EMI Test Receiver	Rohde & Schwarz	ESCI	101189	03-03-2021	03-02-2022	
Pulse Limiter	SCHWARZBECK	OSRAM 2306	9731	03-03-2021	03-02-2022	
LISN	CHASE	MN2050D	1447	03-03-2021	03-02-2022	
LISN	Rohde & Schwarz	ESH3-Z5	8438621/010	06-18-2020	06-17-2021	
Cable	HP	10503A	N/A	03-03-2021	03-02-2022	
EMI Test Software	AUDIX	E3	Version: 6.110919b			

Conducted method:								
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)			
Spectrum Analyzer	Keysight	N9010B	MY60240202	11-27-2020	11-26-2021			
Vector Signal Generator	Keysight	N5182B	MY59101009	11-27-2020	11-26-2021			
Analog Signal Generator	Keysight	N5173B	MY59100765	11-27-2020	11-26-2021			
Power Detector Box	MWRF-test	MW100-PSB	MW201020JYT	11-27-2020	11-26-2021			
Simulated Station	Rohde & Schwarz	CMW270	102335	11-27-2020	11-26-2021			
RF Control Box	MWRF-test	MW100-RFCB	MW200927JYT	N/A	N/A			
PDU	MWRF-test	XY-G10	N/A	N/A	N/A			
Test Software	MWRF-tes	MTS 8310	Version: 2.0.0.0					
DC Power Supply	Keysight	E3642A	MY60296194	11-27-2020	11-26-2021			



# 6 Test results and measurement data

# 6.1 Antenna Requirement

Standard requirement:	FCC Part 15 C Section 15.203 & 247(b)
responsible party shall be us antenna that uses a unique so that a broken antenna ca electrical connector is prohit 15.247(b) (4) requirement: (4) The conducted output po antennas with directional ga section, if transmitting anten power from the intentional ra	be designed to ensure that no antenna other than that furnished by the sed with the device. The use of a permanently attached antenna or of an coupling to the intentional radiator, the manufacturer may design the unit n be replaced by the user, but the use of a standard antenna jack or bited. wer limit specified in paragraph (b) of this section is based on the use of ins that do not exceed 6 dBi. Except as shown in paragraph (c) of this nas of directional gain greater than 6 dBi are used, the conducted output adiator shall be reduced below the stated values in paragraphs (b)(1), ion, as appropriate, by the amount in dB that the directional gain of the
E.U.T Antenna:	
The Bluetooth antenna is an the antenna is 2.1 dBi.	Internal antenna which permanently attached, and the best case gain of



### **6.2 Conducted Emissions**

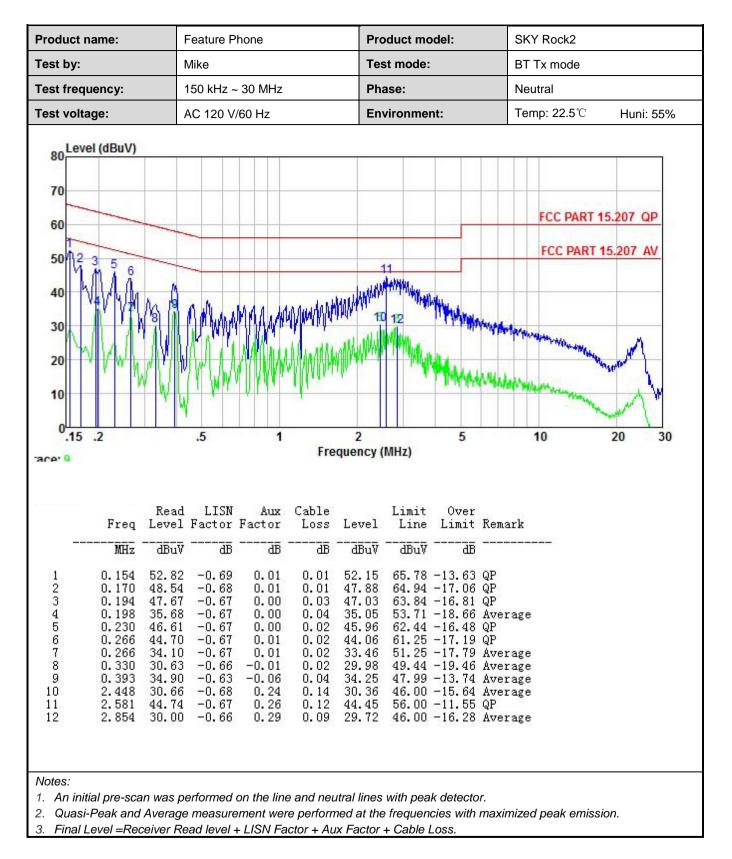
Test Requirement:	FCC Part 15 C Section 15.	207			
Test Frequency Range:	150 kHz to 30 MHz	150 kHz to 30 MHz			
Class / Severity:	Class B				
Receiver setup:	RBW=9 kHz, VBW=30 kHz, Sweep time=auto				
Limit:	Frequency range (MHz)	Limit (d	dBuV)		
		Quasi-peak	Average		
	0.15-0.5	66 to 56*	56 to 46*		
	0.5-5	56	46		
	5-30	60	50		
	* Decreases with the logari	thm of the frequency.			
Test setup:	Reference P	lane			
	AUX         Equipment         EQUIPMENT         Test table/Insulation plane         Remark:         E.U.T. Equipment Under Test         LISN: Line Impedence Stabilization Networ         Test table height=0.8m				
Test procedure:	<ol> <li>50ohm/50uH coupling ir</li> <li>The peripheral devices a LISN that provides a 50 termination. (Please reference)</li> <li>Both sides of A.C. line interference. In order to positions of equipment</li> </ol>	tion network (L.I.S.N.). Th npedance for the measuri	is provides a ng equipment. main power through a lance with 500hm the test setup and n conducted sion, the relative ables must be changed		
Test Instruments:	Refer to section 5.9 for det	ails			
Test mode:	Hopping mode				
Test results:	Pass				



#### **Measurement Data:**

	me: Feature Phone Product model:		SKY Rock2		
est by:	Mike	Test mode:	BT Tx mode		
est frequency:	150 kHz ~ 30 MHz	Phase:	Line		
est voltage:	AC 120 V/60 Hz	Environment:	Temp: 22.5℃ Huni: 55%		
70 60 50 40 30 20	A GWWMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMMM		FCC PART 15.207 QP		
10 0.15 .2	.5 1	2 5	10 20 30		
0.15 .2	Freq ead LISN Aux Cable	uency (MHz)			
0.15 .2 Trace: 11 Freq Le	Freq ead LISN Aux Cable	uency(MHz) e Limit Over s Level Line Limit			







0.5 Conducted Out	
Test Requirement:	FCC Part 15 C Section 15.247 (b)(1)
Receiver setup:	RBW=1MHz, VBW=3MHz, Detector=Peak (If 20dB BW ≤1 MHz) RBW=2MHz, VBW=6MHz, Detector=Peak (If 20dB BW > 1 MHz and < 3MHz)
Limit:	For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.
Test setup:	
Test Instruments:	Refer to section 5.9 for details
Test mode:	Non-hopping mode
Test results:	Pass
Measurement Data:	Refer to Appendix A - BT

### 6.3 Conducted Output Power

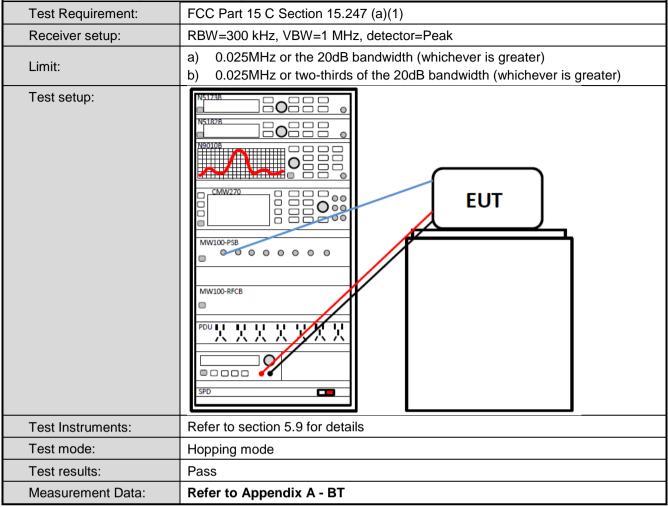


### 6.4 20dB Occupy Bandwidth

Test Requirement:	FCC Part 15 C Section 15.247 (a)(1)
Receiver setup:	DH1: RBW=15 kHz, VBW=47 kHz, detector=Peak 2DH1&3DH: RBW=20 kHz, VBW=62 kHz, detector=Peak
Limit:	N/A
Test setup:	
Test Instruments:	Refer to section 5.9 for details
Test mode:	Non-hopping mode
Test results:	Pass
Measurement Data:	Refer to Appendix A - BT



## 6.5 Carrier Frequencies Separation





### 6.6 Hopping Channel Number

Test Requirement:	FCC Part 15 C Section 15.247 (a)(1)
Receiver setup:	RBW=100 kHz, VBW=300 kHz, Center Frequency=2441MHz, Span= 100MHz, Detector=Peak
Limit:	15 channels
Test setup:	
Test Instruments:	Refer to section 5.9 for details
Test mode:	Hopping mode
Test results:	Pass
Measurement Data:	Refer to Appendix A - BT



### 6.7 Dwell Time

Test Requirement:	FCC Part 15 C Section 15.247 (a)(1)
Receiver setup:	RBW=1 MHz, VBW=1 MHz, Span=0 Hz, Detector=Peak
Limit:	0.4 Second
Test setup:	
Test Instruments:	Refer to section 5.9 for details
Test mode:	Hopping mode
Test results:	Pass
Measurement Data:	Refer to Appendix A - BT



# 6.8 Pseudorandom Frequency Hopping Sequence

Test Requirement:	FCC Part 15 C Section 15.247	(a)(1) requirement:	
	s shall have hopping channel carrie		a minimum of
	dth of the hopping channel, which	•	
	oping systems operating in the 240		
	that are separated by 25 kHz or tw		
	r is greater, provided the systems of shall hop to channel frequencies th		
	ordered list of hopping frequencies		
	ismitter. The system receivers sha		
	s of their corresponding transmitte		
synchronization with the trai	nsmitted signals.		
EUT Pseudorandom Frequ	uency Hopping Sequence		
	ce may be generated in a nine-sta		
	ulo-two addition stage. And the res		
	s with the first ONE of 9 consecutiv	ve ONEs; i.e. the shift register	r is initialized
<ul><li>with nine ones.</li><li>Number of shift register state</li></ul>			
Length of pseudo-random			
Longest sequence of zeros			
	┌───────	┠─────────────────	
	•		
Linear Feedback S	hift Register for Generation of th	ne PRBS sequence	
An example of Pseudorando	om Frequency Hopping Sequence	as follow:	
0 2 4 6	62 64 78 1	73 75 77	
Each frequency used equall	y on the average by each transmit	tter.	
	input bandwidths that match the he		
corresponding transmitters a	and shift frequencies in synchroniz	zation with the transmitted sig	nals.



# 6.9 Band Edge

### 6.9.1 Conducted Emission Method

Test Requirement:	FCC Part 15 C Section 15.247 (d)
Receiver setup:	RBW=100 kHz, VBW=300 kHz, Detector=Peak
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.
Test setup:	
Test Instruments:	Refer to section 5.9 for details
Test mode:	Non-hopping mode and hopping mode
Test results:	Pass
Measurement Data:	Refer to Appendix A - BT



### 6.9.2 Radiated Emission Method

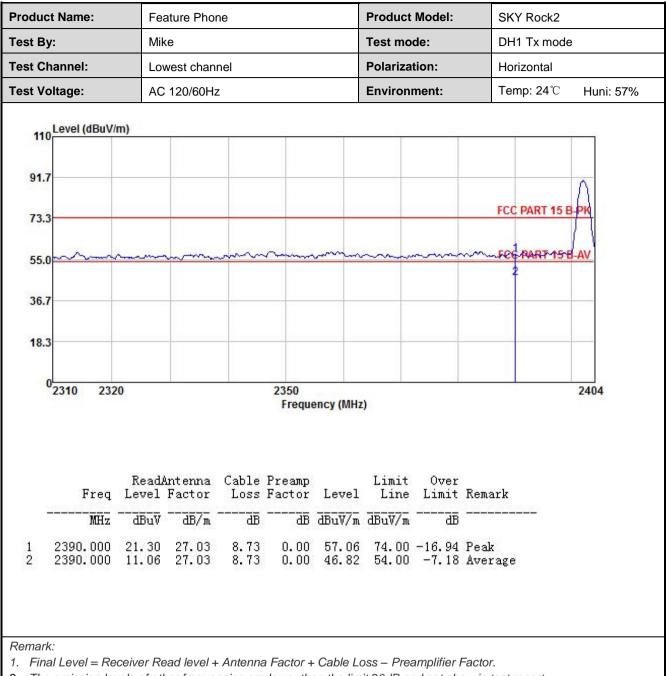
Test Requirement:	FCC Part 15 C Section 15.209 and 15.205						
Test Frequency Range:	2310 MHz to 2390 MHz and 2483.5 MHz to 2500 MHz						
Test Distance:	3m						
Receiver setup:	Frequency	Detector	ctor RBW		VBW		Remark
	Above 1GHz	Peak		1MHz		MHz	Peak Value
	Above IGHZ	RMS		1MHz	31	MHz	Average Value
Limit:	Frequency		Limit (dBuV/m @3		3m)		Remark
	Above 1G	Hz		54.00		Average Value	
	7.000010			74.00		F	Peak Value
Test setup:	Horn Antenna Tower Horn Antenna Tower Horn Antenna Tower Ground Reference Plane Test Receiver						
Test Procedure:	<ol> <li>The EUT was placed on the top of a rotating table 1.5meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.</li> <li>The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li> <li>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.</li> <li>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 a the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.</li> <li>The test-receiver system was set to Peak Detect Function and Specific Bandwidth with Maximum Hold Mode.</li> <li>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 100.</li> </ol>				degrees to eceiving ight antenna ers above the ngth. Both et to make the its worst case to 4 meters and s to find the on and Specified lower than the ak values of the		
Test Instruments:	Refer to section						
Test mode:	Non-hopping m	ode					
Test results:	Passed						



#### **GFSK Mode:**

oduct Name:	Feature Pho	Feature Phone Mike		Product Model:		SK	SKY Rock2		
est By:	Mike			Test mode: Di			0H1 Tx mode		
est Channel:	Lowest chan	nel		Polarization: V		Ver	ertical		
est Voltage:	AC 120/60H	Z		Enviro	nment:	Ter	<b>np: 24</b> ℃	Huni: 57%	
110 Level (dBuV/m)	)								
91.7								A	
73.3			-			FC	C PART 15	BPK	
55.0	m	·····		<u> </u>	um	marte	2	-B-AV	
36.7									
18.3									
0 <sup>2310</sup> 2320		2350 Fred	quency (M	Hz)				2404	
Freq 1	ReadAntenna Level Factor	Cable Preamp Loss Factor	Level	Limit Line	Over Limit	Remark			
MHz	dBuV dB/m		dBuV/m	dBuV/m	āē				
	21.11 27.03 11.67 27.03	8.73 0.00 8.73 0.00			-17.13 -6.57	Peak Average			
emark: Final Level = Rece	niver Dood lovel	Antonno Footor	. Coble l						





2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.









2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.



#### $\pi$ /4-DQPSK mode

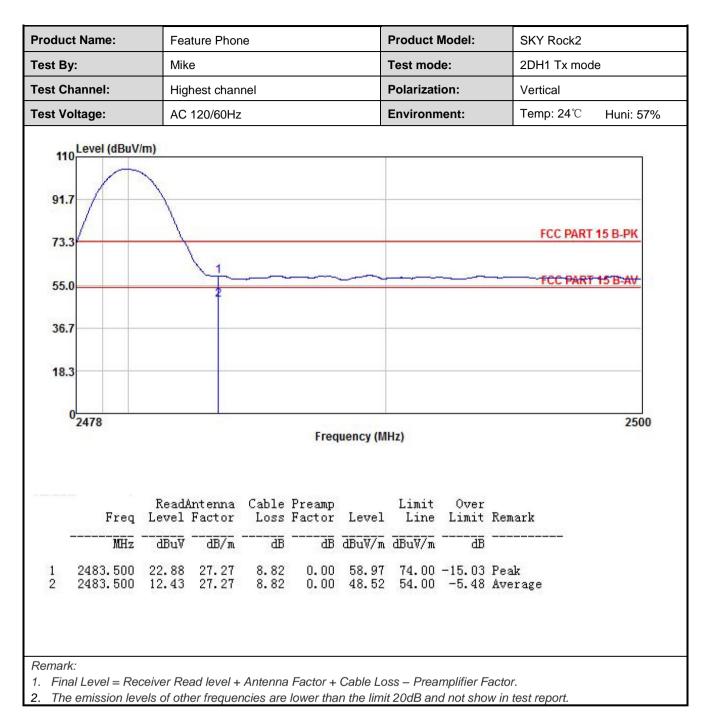
Product Name:		Fea	Feature Phone					Model:	SKY	SKY Rock2		
est By	:	Mik	Mike Lowest channel AC 120/60Hz				Test mo	de:	2DH	2DH1 Tx mode		
est Ch	annel:	Lov					Polarization: Environment:			Vertical Temp: 24°C Huni: 57%		
est Vo	Itage:	AC										
110	Level (dBuV/	m)										
91.7				_							A	
73.3				_		_			FC	C PART 1	B PK	
55.0			and me	m		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	n	m	Ame	PART 1	5-B-AV	
36.7												
18.3												
0	2310 232	20			2350 Frequ	uency (MH	łz)				2404	
	Freq	Read# Level	Intenna Factor		Preamp Factor		Limit Line	Over Limit	Remark			
33	MHz	 dBu∛	<u>ab</u> /m	 BB	<del>عة</del>	dBuV/m	dBuV/m	āē				
_		21.28	27.03	8.73 8.73		57.04 47.25	74.00	-16.96	Peak Average			



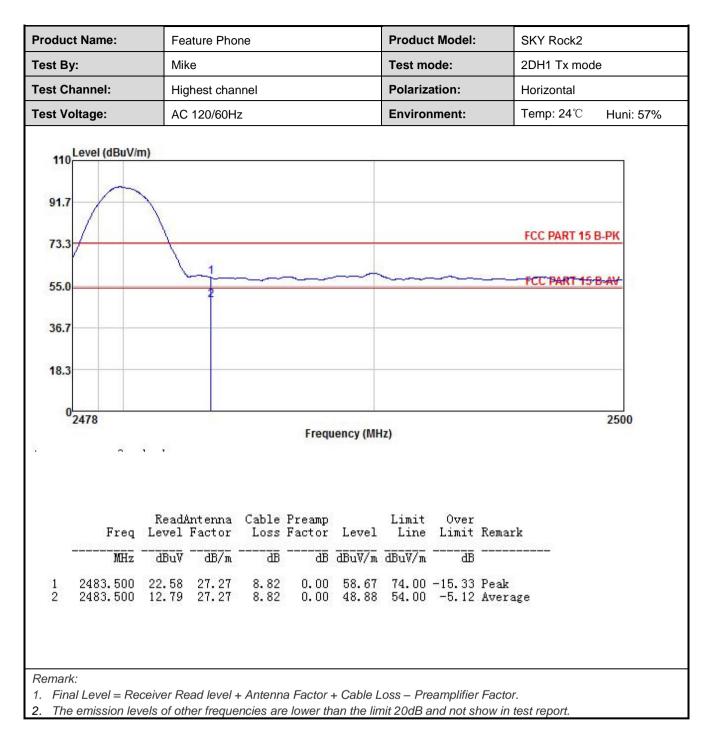


The emission levels of other frequencies are lower than the limit 20dB and not show in test report. 2.







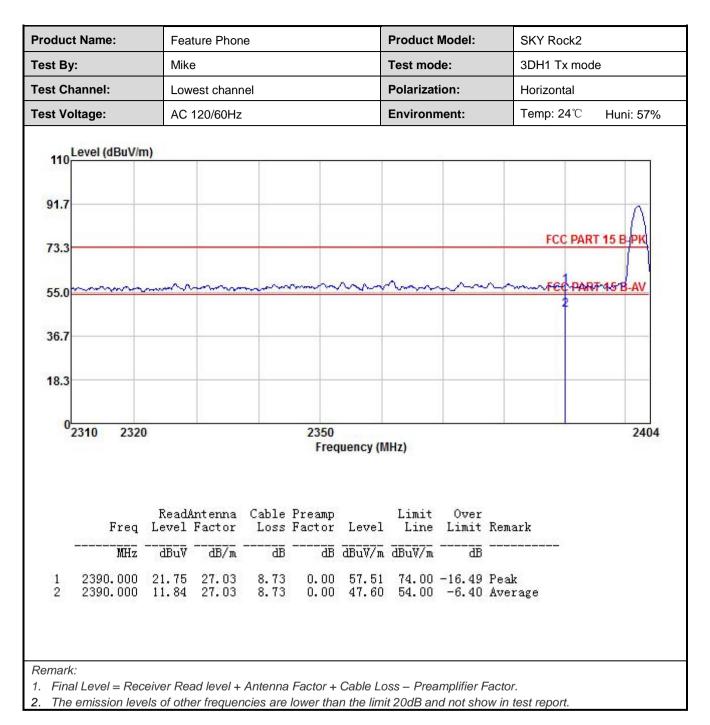




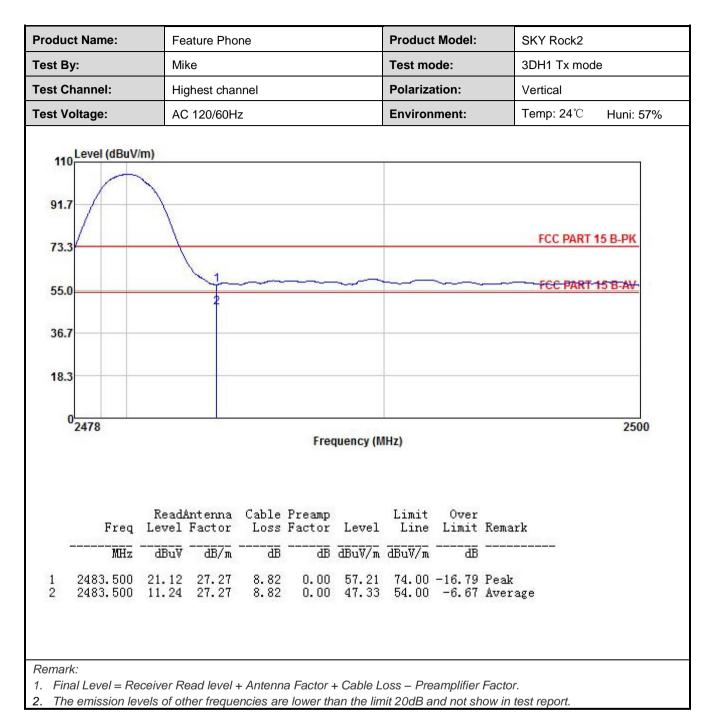
#### 8DPSK mode

	Feature Pho	one		Produ	ct Model	SKY R	SKY Rock2 3DH1 Tx mode		
est By:	Mike			Test m	ode:	3DH1			
est Channel:	Lowest char	Lowest channel AC 120/60Hz				Vertica	Vertical		
est Voltage:	AC 120/60H					Temp:	<b>24</b> ℃	Huni: 57%	
110 <sup>Level (dBuV/m)</sup> 91.7 73.3 55.0 36.7				~~~~~	~~~		PART 15		
18.3									
0		2350						2404	
0 2310 2320			quency (M	Hz)					
-2310 2320  Freq	Level Factor	Free Cable Preamp Loss Factor	Level	Limit Line	Limit	Remark			
-2310 2320		Free Cable Preamp Loss Factor		Limit Line	Limit	Remark			

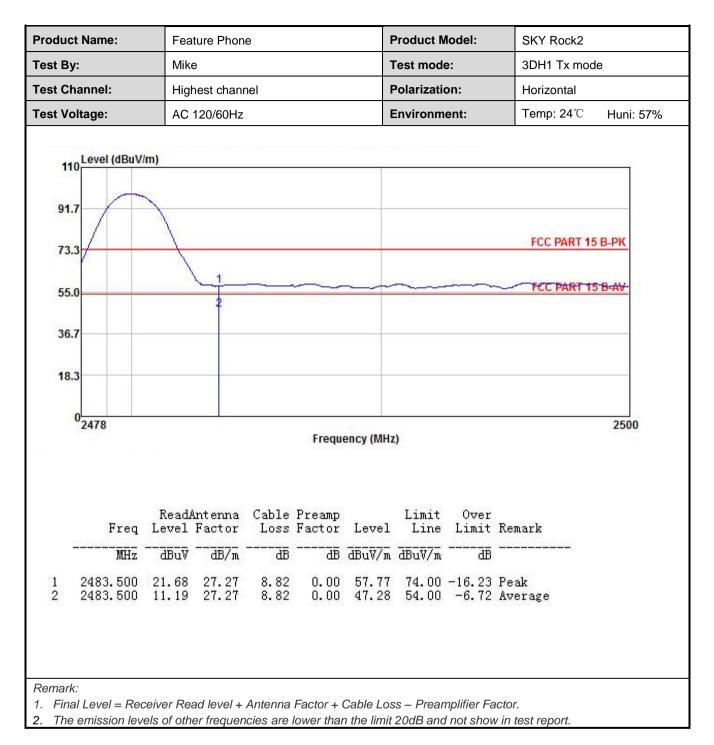














## 6.10 Spurious Emission

### 6.10.1 Conducted Emission Method

Test Requirement:	FCC Part 15 C Section 15.247 (d)
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.
Test setup:	
Test Instruments:	Refer to section 5.9 for details
Test mode:	Non-hopping mode
Test results:	Pass
Measurement Data:	Refer to Appendix A - BT



### 6.10.2 Radiated Emission Method

Test Requirement:	FCC Part 15 C Section 15.209							
Test Frequency Range:	9 kHz to 25 GHz	<u>.</u>						
Test Distance:	3m							
Receiver setup:	Frequency	Detecto	or RBW		VBW	1	Remark	
	30MHz-1GHz	Quasi-pe	eak	120kHz	300k⊢	lz (	Quasi-peak Value	
		Peak		1MHz	3MHz	z	Peak Value	
	Above 1GHz	RMS	6 1MHz 3MHz		z	Average Value		
Limit:	Frequenc	ÿ	Lim	nit (dBuV/m	@3m)	•	Remark	
	30MHz-88N	/Hz		40.0		Quasi-peak Value		
	88MHz-216	MHz		43.5		Qu	lasi-peak Value	
	216MHz-960	MHz		46.0		Qu	asi-peak Value	
	960MHz-10	GHz		54.0		Qu	asi-peak Value	
			54.0			A	verage Value	
	Above 1G	HZ	74.0				Peak Value	
	Above 1GHz	am 0.8m No.8m A E EUT (Turntable)	Test Re	Sround Reference Plane	Pre-	- S Ar RF Test Receiver		
Test Procedure:	<ol> <li>The EUT was /1.5m(above was rotated 3 radiation.</li> <li>The EUT was antenna, which</li> </ol>	1GHz) abo 60 degrees set 3 mete	ve th s to c ers a	ne ground at determine th way from the	a 3 mete e positio e interfer	er char n of th ence-r	mber. The table e highest receiving	

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	<ul><li>tower.</li><li>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.</li></ul>					
	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 rota 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 Specifi 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.					
Test Instruments:	Refer to section 5.9 for details					
Test mode:	Non-hopping mode					
Test results:	Pass					
Remark:	<ol> <li>Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis is the worst case.</li> <li>9 kHz to 30 MHz is noise floor and lower than the limit 20dB, so only shows the data of above 30MHz in this report.</li> </ol>					



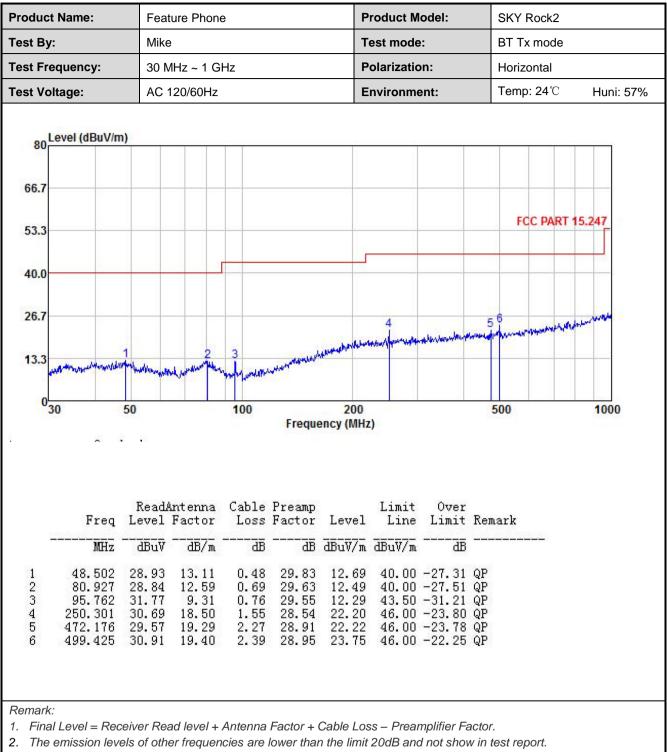
#### Measurement Data (worst case):

Below 1GHz:

	duct Name: Feature Pho					Product Model:       SKY Rock2         Test mode:       BT Tx mode         Polarization:       Vertical         Environment:       Temp: 24°C					
est By:	Mik	Mike 30 MHz ~ 1 GHz AC 120/60Hz									
est Frequency:	30										
est Voltage:	AC								<b>Гетр: 24°</b> ℃	Huni: 57%	
80 Level (dBuV/m	)										
66.7											
53.3									FCC PART	15.247	
40.0											
26.7		4					. m. m. moranda		ligd-sealetterille	wanter	
13.3 14 14 14 14 14	which rome		5	Manshanst	will when the second	where the second s			<u> </u>		
		···	mound	5.67							
030					000						
- 50	50		100	Frequ	200 ency (MHz	z)		500	)	1000	
30	50		100	Frequ		L)		500	)	1000	
30	57.5 8				ency (MHz	<i>a.</i> ,	0	500	)	1000	
	Read	Antenna Factor	Cable	Preamp	ency (MHz	Limit	Over Limit			1000	
	Read	Antenna Factor 	Cable	Preamp Factor	ency (MHz	Limit Line	Limit			1000	
Freq 	Read# Level dBuV 37.92 33.03 36.91 33.37	Factor 	Cable Loss dB 0.39 0.39 0.45 0.69	Preamp Factor dB 29.93 29.92 29.87 29.64	Level dBuV/m 21.04 16.23 20.36 17.08	Limit Line dBuV/m 40.00 40.00 40.00 40.00	Limit  dB -18.96 -23.77 -19.64 -22.92	Remar  QP QP QP QP QP		1000	
Freq 	Read# Level dBuV 37.92 33.03 36.91	Factor 	Cable Loss dB 0.39 0.39 0.45	Preamp Factor dB 29.93 29.92 29.87	Level dBuV/m 21.04 16.23 20.36 17.08 15.42	Limit Line dBuV/m 40.00 40.00 40.00 40.00 40.00 43.50	Limit  dB -18.96 -23.77 -19.64	Remar  QP QP QP QP QP QP		1000	
Freq 	Read# Level dBuV 37.92 33.03 36.91 33.37 34.93	Factor 	Cable Loss dB 0.39 0.39 0.45 0.69 0.77	Preamp Factor dB 29.93 29.92 29.87 29.64 29.55	Level dBuV/m 21.04 16.23 20.36 17.08 15.42	Limit Line dBuV/m 40.00 40.00 40.00 40.00 40.00 43.50	Limit -18.96 -23.77 -19.64 -22.92 -28.08	Remar  QP QP QP QP QP QP		1000	
Freq 	Read# Level dBuV 37.92 33.03 36.91 33.37 34.93	Factor 	Cable Loss dB 0.39 0.39 0.45 0.69 0.77	Preamp Factor dB 29.93 29.92 29.87 29.64 29.55	Level dBuV/m 21.04 16.23 20.36 17.08 15.42	Limit Line dBuV/m 40.00 40.00 40.00 40.00 40.00 43.50	Limit -18.96 -23.77 -19.64 -22.92 -28.08	Remar  QP QP QP QP QP QP		1000	

3. The Aux Factor is a notch filter switch box loss, this item is not used.





3. The Aux Factor is a notch filter switch box loss, this item is not used.



#### Above 1GHz:

			Te		el: Lowest c				
	1			Detecto	or: Peak Val	Je			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4804.00	44.21	30.78	6.80	2.44	41.81	42.42	74.00	-31.58	Vertical
4804.00	45.84	30.78	6.80	2.44	41.81	44.05	74.00	-29.95	Horizontal
	1	1		Detector:	Average Va	alue		r	
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4804.00	37.74	30.78	6.80	2.44	41.81	35.95	54.00	-18.05	Vertical
4804.00	37.13	30.78	6.80	2.44	41.81	35.34	54.00	-18.66	Horizontal
			T		el: Middle ch				
			<b>•</b> • •	1	or: Peak Val	he			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4882.00	43.50	30.96	6.86	2.47	41.84	41.95	74.00	-32.05	Vertical
4882.00	44.36	30.96	6.86	2.47	41.84	42.81	74.00	-31.19	Horizontal
				Detector:	Average Va	alue			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4882.00	36.77	30.96	6.86	2.47	41.84	35.22	54.00	-18.78	Vertical
4882.00	36.17	30.96	6.86	2.47	41.84	34.62	54.00	-19.38	Horizontal
			Te		el: Highest c or: Peak Val				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4960.00	44.26	31.11	6.91	2.49	41.87	42.90	74.00	-31.10	Vertical
4960.00	44.71	31.11	6.91	2.49	41.87	43.35	74.00	-30.65	Horizontal
				Detector:	Average Va	alue			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4960.00	37.06	31.11	6.91	2.49	41.87	35.70	54.00	-18.30	Vertical
4960.00	37.50	31.11	6.91	2.49	41.87	36.14	54.00	-17.86	Horizontal
						+ Aux Factor			

2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.