

🧲 Shenzhen Zhongjian Nanfang Testing Co., Ltd.

Report No: CCISE190905503

FCC REPORT (BLE)

Applicant: SKY PHONE LLC

Address of Applicant: 1348 Washington Av. Suite 350, Miami Beach, FL33139

Equipment Under Test (EUT)

Product Name: SMART PHONE

Model No.: SKY BLACK

Trade mark: SKY DEVICES

FCC ID: 2ABOSSKYBLACK

Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247

Date of sample receipt: 17 Sep., 2019

Date of Test: 18 Sep., to 24 Oct., 2019

Date of report issued: 25 Oct., 2019

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.

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2 Version

Version No.	Date	Description
00	25 Oct., 2019	Original

Tested by: Date: 25 Oct., 2019

Test Engineer

Reviewed by: 25 Oct., 2019

Project Engineer



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4 Test Summary

Test Items	Section in CFR 47	Result
Antenna requirement	15.203 & 15.247 (b)	Pass
AC Power Line Conducted Emission	15.207	Pass
Conducted Peak Output Power	15.247 (b)(3)	Pass
6dB Emission Bandwidth 99% Occupied Bandwidth	15.247 (a)(2)	Pass
Power Spectral Density	15.247 (e)	Pass
Band Edge	15.247 (d)	Pass
Spurious Emission	15.205 & 15.209	Pass

Remark:

- 1. Pass: The EUT complies with the essential requirements in the standard.
- 2. N/A: Not Applicable.
- 3. The cable insertion loss used by "RF Output Power" and other conduction measurement items is 0.5dB (provided by the customer).

Test Method: ANSI C63.10-2013
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, FL33139
Manufacturer:	SKY PHONE LLC
Address:	1348 Washington Av. Suite 350, Miami Beach, FL33139
Factory:	Gui zhou Fortuneship Technology Co., Ltd
Address:	No. 4 Plant, High-tech Industrial Park, Xinpu Economic Development Zone) Jingkai Road, Xinpu Jingkai District, Xinpu New District, Zunyi City, Guizhou Province, P. R. China

5.2 General Description of E.U.T.

Product Name:	SMART PHONE
Model No.:	SKY BLACK
Operation Frequency:	2402-2480 MHz
Channel numbers:	40
Channel separation:	2 MHz
Modulation technology:	GFSK
Data speed :	1Mbps
Antenna Type:	Internal Antenna
Antenna gain:	-0.65 dBi
Power supply:	Rechargeable Li-ion Battery DC3.7V, 1400mAh
AC adapter:	Input: AC100-240V, 50/60Hz, 0.15A
	Output: DC 5.0V, 0.5A
Test Sample Condition:	The test samples were provided in good working order with no visible defects.

Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
0	2402MHz	10	2422MHz	20	2442MHz	30	2462MHz
1	2404MHz	11	2424MHz	21	2444MHz	31	2464MHz
2	2406MHz	12	2426MHz	22	2446MHz	32	2466MHz
3	2408MHz	13	2428MHz	23	2448MHz	33	2468MHz
4	2410MHz	14	2430MHz	24	2450MHz	34	2470MHz
5	2412MHz	15	2432MHz	25	2452MHz	35	2472MHz
6	2414MHz	16	2434MHz	26	2454MHz	36	2474MHz
7	2416MHz	17	2436MHz	27	2456MHz	37	2476MHz
8	2418MHz	18	2438MHz	28	2458MHz	38	2478MHz
9	2420MHz	19	2440MHz	29	2460MHz	39	2480MHz

Note:

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test. Channel No. 0, 20 & 39 were selected as Lowest, Middle and Highest channel.



5.3 Test environment and test mode

Operating Environment:	
Temperature:	24.0 °C
Humidity:	54 % RH
Atmospheric Pressure:	1010 mbar
Test mode:	
Transmitting mode	Keep the EUT in continuous transmitting with modulation

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. Duty cycle setting during the transmission is 100% with maximum power setting for all modulations.

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)	±5.38 dB (k=2)
Radiated Emission (18GHz ~ 40GHz)	±3.36 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

Shenzhen Zhongjian Nanfang Testing 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 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

Shenzhen Zhongjian Nanfang Testing Co., Ltd.

No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road,

Bao'an District, Shenzhen, Guangdong, China

Telephone: +86 (0) 755 23118282 Fax: +86 (0) 755 23116366

Report No: CCISE190905503



5.9 Test Instruments list

Radiated Emission:					
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Due date
				(mm-dd-yy)	(mm-dd-yy)
3m SAC	SAEMC	9m*6m*6m	966	07-22-2017	07-21-2020
Loop Antenna	SCHWARZBECK	FMZB1519B	00044	03-18-2019	03-17-2020
BiConiLog Antenna	SCHWARZBECK	VULB9163	497	03-18-2019	03-17-2020
Horn Antenna	SCHWARZBECK	BBHA9120D	916	03-18-2019	03-17-2020
Horn Antenna	SCHWARZBECK	BBHA9120D	1805	06-22-2017	06-21-2020
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170582	11-21-2018	11-20-2019
EMI Test Software	AUDIX	E3	Version: 6.110919b		b
Pre-amplifier	HP	8447D	2944A09358	03-18-2019	03-17-2020
Pre-amplifier	CD	PAP-1G18	11804	03-18-2019	03-17-2020
Spectrum analyzer	Rohde & Schwarz	FSP30	101454	03-18-2019	03-17-2020
Spectrum analyzer	Rohde & Schwarz	FSP40	100363	11-21-2018	11-20-2019
EMI Test Receiver	Rohde & Schwarz	ESRP7	101070	03-18-2019	03-17-2020
Cable	ZDECL	Z108-NJ-NJ-81	1608458	03-18-2019	03-17-2020
Cable	MICRO-COAX	MFR64639	K10742-5	03-18-2019	03-17-2020
Cable	SUHNER	SUCOFLEX100	58193/4PE	03-18-2019	03-17-2020
RF Switch Unit	MWRFTEST	MW200	N/A	N/A	N/A
Test Software	MWRFTEST	MTS8200	Version: 2.0.0.0		

Conducted Emission:					
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	03-18-2019	03-17-2020
Pulse Limiter	SCHWARZBECK	OSRAM 2306	9731	03-18-2019	03-17-2020
LISN	CHASE	MN2050D	1447	03-18-2019	03-17-2020
LISN	Rohde & Schwarz	ESH3-Z5	8438621/010	07-21-2019	07-20-2020
Cable	HP	10503A	N/A	03-18-2019	03-17-2020
EMI Test Software	AUDIX	E3	Version: 6.110919b		



6 Test results and Measurement Data

6.1 Antenna requirement:

Standard requirement: FCC Part 15 C Section 15.203 /247(b)

15.203 requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

15.247(b) (4) requirement:

(4) The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

E.U.T Antenna:

The BLE antenna is an Internal antenna which cannot replace by end-user, the best-case gain of the antenna is -0.65 dBi.





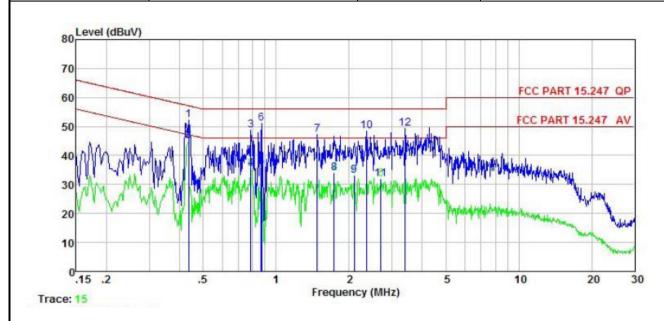
6.2 Conducted Emission

Test Requirement:	FCC Part 15 C Section 15	.207		
Test Frequency Range:	150 kHz to 30 MHz			
Class / Severity:	Class B			
Receiver setup:	RBW=9kHz, VBW=30kHz			
Limit:			dBuV)	
Limit	Frequency range (MHz)	Frequency range (MHz) 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 logar	•		
Test procedure	 The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.), which provides a 50ohm/50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). 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 C63.10-2013 on conducted measurement. 			
Test setup:	Reference Plane LISN 40cm 80cm Filter AC power Equipment Test table/Insulation plane Remark E.U.T. Equipment Under Test LISN: Line Impedence Stabilization Network Test table height=0.8m			
Test Instruments:	Refer to section 5.9 for details			
Test mode:	Refer to section 5.3 for details			
Test results:	Passed			



Measurement Data:

Product name:	SMART PHONE	Product model:	SKY BLACK
Test by:	YT	Test mode:	BLE Tx mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Line
Test voltage:	AC 120 V/60 Hz	Environment:	Temp: 22.5℃ Huni: 55%



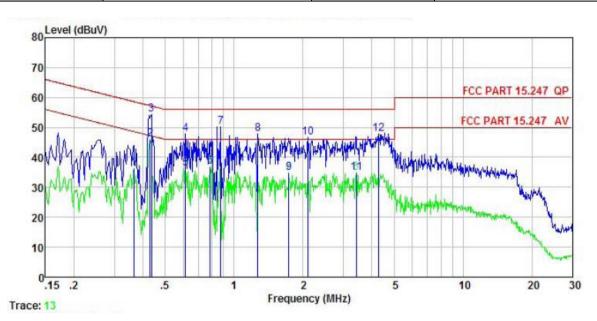
	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
-	MHz	dBu∀	₫B	dB	dBu₹	dBu∀	<u>d</u> B	
1	0.435	41.79	-0.38	10.73	52.14	57.15	-5.01	QP
2	0.435	34.69	-0.38	10.73	45.04	47.15	-2.11	Average
3	0.788	38.23	-0.38	10.81	48.66	56.00	-7.34	QP
1 2 3 4 5 6 7 8 9	0.788	25.07	-0.38	10.81	35.50	46.00	-10.50	Average
5	0.866	25.47	-0.38	10.83	35.92	46.00	-10.08	Average
6	0.871	40.66	-0.38	10.83	51.11	56.00	-4.89	QP
7	1.480	36.64	-0.40	10.92	47.16	56.00	-8.84	QP
8	1.734	23.40	-0.40	10.94	33.94	46.00	-12.06	Average
9	2.099	22.62	-0.41	10.96	33.17	46.00	-12.83	Average
10	2.358	38.04	-0.42	10.94	48.56	56.00	-7.44	QP
11	2.707	21.48	-0.43	10.93	31.98	46.00	-14.02	Average
12	3.399	38.84	-0.45	10.91	49.30	56.00	-6.70	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.
- Final Level =Receiver Read level + LISN Factor + Cable Loss.



Product name:	SMART PHONE	Product model:	SKY BLACK
Test by:	YT	Test mode:	BLE Tx mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Neutral
Test voltage:	AC 120 V/60 Hz	Environment:	Temp: 22.5℃ Huni: 55%



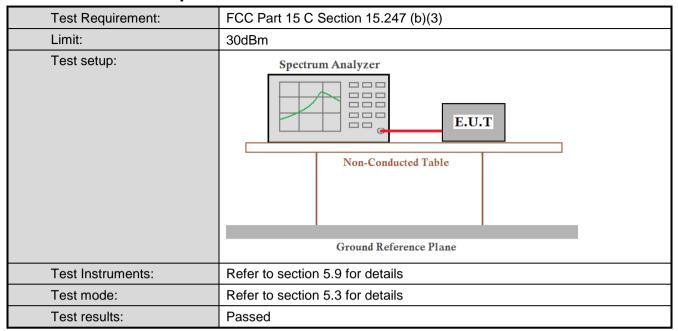
	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
1	MHz	dBu∀	₫B	dB	dBu₹	dBu∇	<u>d</u> B	
1	0.365	26.25	-0.64	10.73	36.34	48.61	-12.27	Average
2	0.431	36.04	-0.64	10.73	46.13	47.24		Average
3	0.435	44.21	-0.64	10.73	54.30	57.15	-2.85	QP
1 2 3 4 5 6 7 8	0.614	37.68	-0.64	10.77	47.81	56.00	-8.19	QP
5	0.614	26.09	-0.64	10.77	36.22	46.00	-9.78	Average
6	0.788	26.84	-0.64	10.81	37.01	46.00	-8.99	Average
7	0.876	40.11	-0.63	10.83	50.31	56.00	-5.69	QP
8	1.269	37.58	-0.64	10.90	47.84	56.00	-8.16	QP
9	1.734	24.61	-0.66	10.94	34.89	46.00	-11.11	Average
10	2.110	36.45	-0.67	10.95	46.73	56.00	-9.27	QP
11	3.417	24.65	-0.68	10.91	34.88	46.00	-11.12	Average
12	4.292	37.72	-0.71	10.88	47.89	56.00	-8.11	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.



6.3 Conducted Output Power

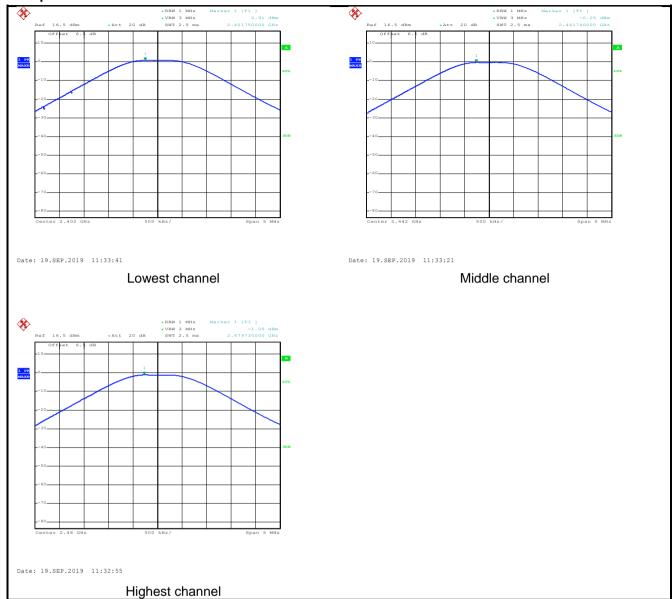


Measurement Data:

Test CH	Maximum Conducted Output Power (dBm)	Limit(dBm)	Result
Lowest	0.91		
Middle	-0.25	30.00	Pass
Highest	-1.05		

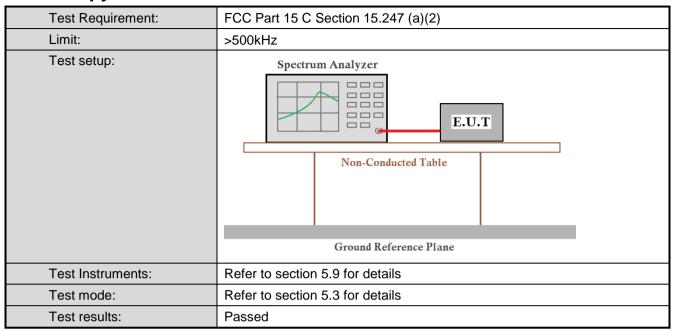


Test plot as follows:





6.4 Occupy Bandwidth

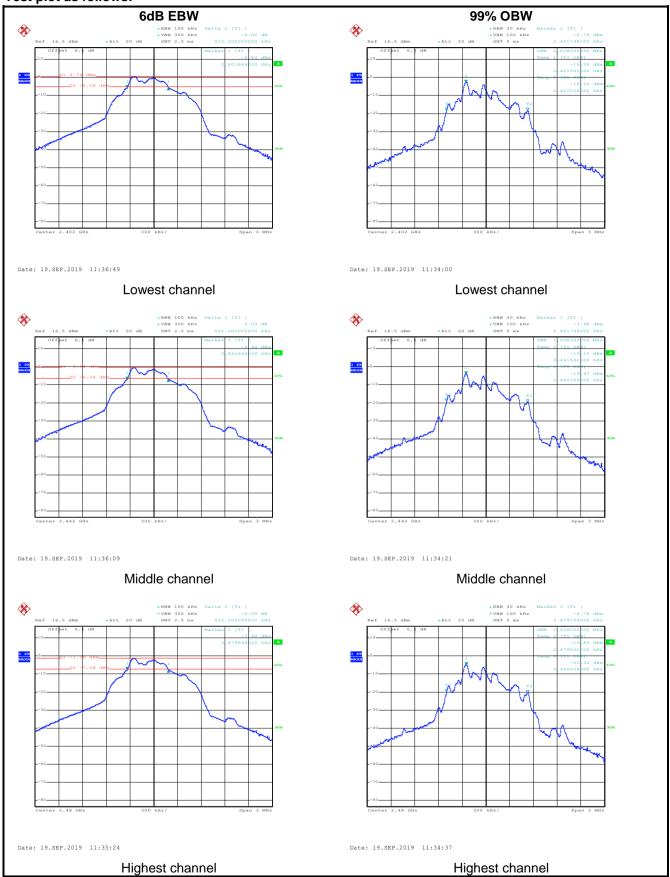


Measurement Data:

Test CH	6dB Emission Bandwidth (MHz)	Limit(kHz)	Result	
Lowest	0.522			
Middle	0.522	>500	Pass	
Highest	0.522		1	
Test CH	99% Occupy Bandwidth (MHz)	Limit(kHz)	Result	
Lowest	1.026			
Middle	Middle 1.026		N/A	
Highest	1.026			



Test plot as follows:





6.5 Power Spectral Density

Test Requirement:	FCC Part 15 C Section 15.247 (e)				
Limit:	8dBm/3KHz				
Test setup:	Spectrum Analyzer				
	Non-Conducted Table Ground Reference Plane				
Test Instruments:	Refer to section 5.9 for details				
Test mode:	Refer to section 5.3 for details				
Test results:	Passed				

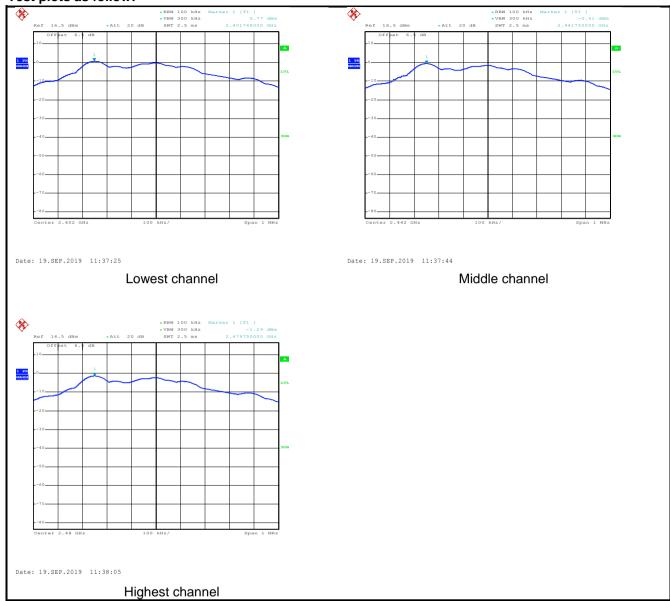
Measurement Data:

Test CH	Power Spectral Density (dBm/KHz)	Limit(dBm/KHz)	Result
Lowest	-14.45		
Middle	-15.73	8.00	Pass
Highest	-16.51		

Note: Final result showed in report was corrected by reading level showed in test plots + correction factor. Correction factor = $10 \log (BW_{Reference}/BW_{Measured}) = -15.22$



Test plots as follow:





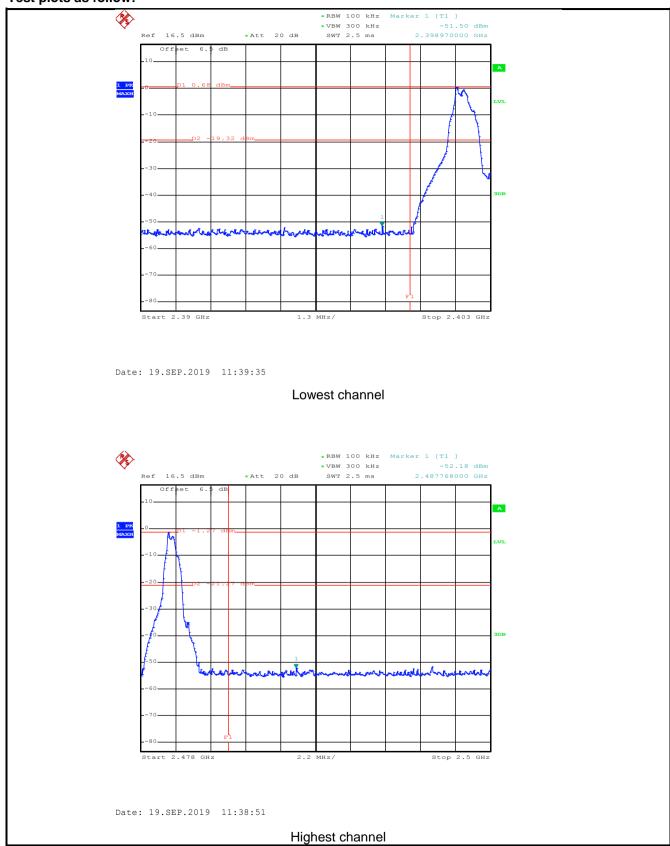
6.6 Band Edge

6.6.1 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:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane					
Test Instruments:	Refer to section 5.9 for details					
Test mode:	Refer to section 5.3 for details					
Test results:	Passed					



Test plots as follow:





6.6.2 Radiated Emission Method

0.0.2	Radiated Ellission i	Metriou						
7	Test Requirement:	FCC Part 15 C Section 15.205 and 15.209						
7	Test Frequency Range:	2.3GHz to 2.5GHz						
Т	Test Distance:	3m						
F	Receiver setup:	Frequency	Detector	RBW	VBW	Remark		
	·	Above 1GHz	Peak	1MHz	3MHz	Peak Value		
			RMS	1MHz	3MHz	Average Value		
L	₋imit:	Frequer	icy L	mit (dBuV/m @3		Remark		
		Above 10	GHz —	54.00 74.00		verage Value Peak Value		
7	Test Procedure:	the groun to determ 2. The EUT antenna, tower. 3. The anter the groun Both horiz make the 4. For each case and meters ar to find the Specified 6. If the emithe limits of the EU have 10 ce	T was placed on the top of a rotating table 1.5 meters above and at a 3 meter camber. The table was rotated 360 degrees rimine the position of the highest radiation. T was set 3 meters away from the interference-receiving a, which was mounted on the top of a variable-height antenna renna height is varied from one meter to four meters above and to determine the maximum value of the field strength. For interior to the interior to the antenna are set to be measurement. The suspected emission, the EUT was arranged to its worst and then the antenna was tuned to heights from 1 meter to 4 and the rota table was turned from 0 degrees to 360 degrees to another the maximum reading. The treceiver system was set to Peak Detect Function and and Bandwidth with Maximum Hold Mode. The mission level of the EUT in peak mode was 10 dB lower than a specified, then testing could be stopped and the peak values and the peak values are successful to the peak value are suc					
1	Test setup:	AE (T	umtable) Grou Test Receiver	Horn Antenna Amptier Cont	Antenna Tower			
7	Fest Instruments:	Refer to section	n 5.9 for deta	ils				
7	Fest mode:	Refer to section	on 5.3 for deta	ils				
7	Test results:	Passed						



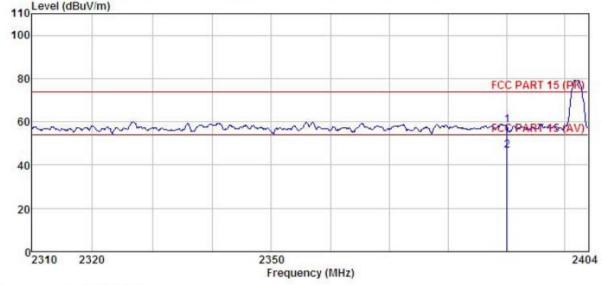
Product Name:		SMART PHONE			F	Product Model:		SKY BLACK		
st By:		YT			1	est mode:		BLE Tx mode		
st Cha	nnel:	Lowest c	hannel		F	Polarizatio	n:	Vertical		
st Vol	tage:	AC 120/6	60Hz		E	Environme	nt:	Temp: 24	4℃ Huni: 57%	
110L	.evel (dBuV/m)		71							
100										
									0	
80								FCC	PART 15 (PK)	
60								1		
00		m	~~~	m	~~~~	m	mym	m-pgc	PART 19 (AV)	
40										
20										
-5										
02	2310 2320			2350				<u> </u>	2404	
				Free	quency (MH	12)				
		Pood	Antenna	Cabla	Draams		Limit	Over		
	Freq	Level	Factor	Loss	Factor	Level			Remark	
	MHz	dBu∜	dB/m	dB	ФB	dbu√m	dBuV/m	dВ		
	2390.000	24.87	27.07 27.07			58.31		-15.69		
1 2	2390.000	13.30		4.69	10420000200200	100000000000000000000000000000000000000	54.00		Water Committee of the	

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.



Product Name:	SMART PHONE	Product Model:	SKY BLACK		
Test By:	YT	Test mode:	BLE Tx mode		
Test Channel:	st Channel: Lowest channel		Horizontal		
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%		
110 Level (dBuV/	n)				



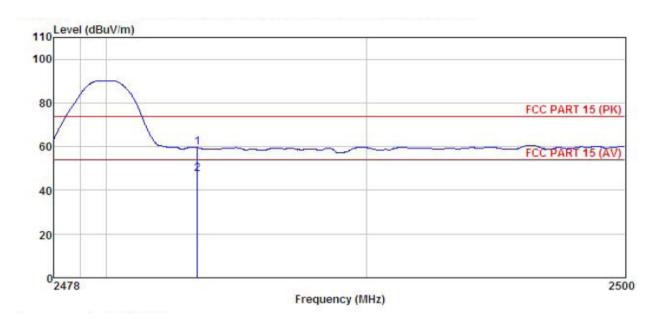
	Freq		Antenna Factor						
	MHz	dBu∜	dB/m	dB	dB	dBuV/m	dBuV/m	<u>dB</u>	
1 2	2390.000 2390.000								

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.



Product Name:	SMART PHONE	Product Model:	SKY BLACK
Test By:	YT	Test mode:	BLE Tx mode
Test Channel:	Highest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%



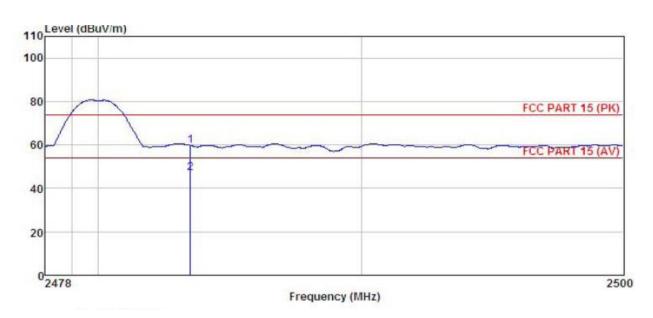
	Freq		Antenna Factor					Over Limit	
	MHz	dBu∜	dB/m	dB	dB	dBuV/m	dBuV/m	dB	
1 2	2483.500 2483.500								

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.



Product Name:	SMART PHONE	Product Model:	SKY BLACK
Test By:	YT	Test mode:	BLE Tx mode
Test Channel:	Highest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%



Freq		Antenna Factor						
MHz	dBu∜	dB/m	dB	<u>dB</u>	dBuV/m	dBu√/m	<u>dB</u>	
2483,500 2483,500						100 000 DUENT		Self-children on the control of the

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.



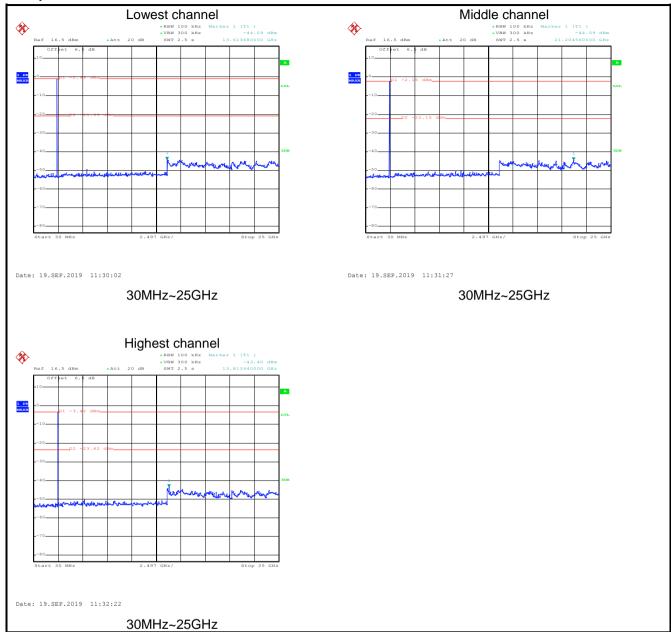
6.7 Spurious Emission

6.7.1 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:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane						
Test Instruments:	Refer to section 5.9 for details						
Test mode:	Refer to section 5.3 for details						
Test results:	Passed						



Test plot as follows:

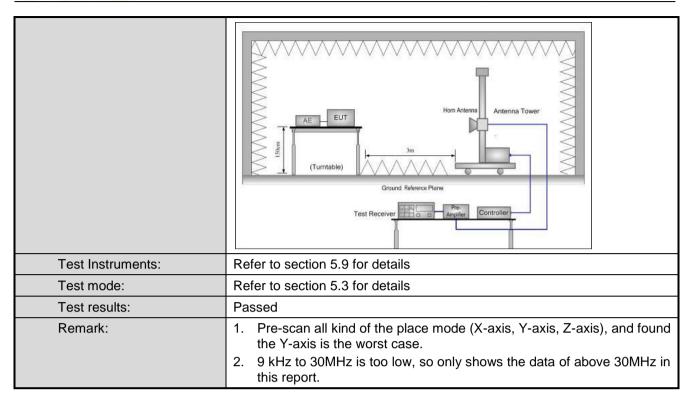




6.7.2 Radiated Emission Method

9kHz to 25GHz 3m Frequency 30MHz-1GHz Above 1GHz Frequency 30MHz-88M 88MHz-216N 216MHz-960I 960MHz-1G	Hz 1Hz	RBW 120KHz 1MHz 1MHz 1MHz mit (dBuV/m @	VB 300l 3M 3M 23m)	KHz Hz	Remark Quasi-peak Value Peak Value
Frequency 30MHz-1GHz Above 1GHz Frequency 30MHz-88M 88MHz-216M 216MHz-960	Quasi-peak Peak RMS / Li Hz	120KHz 1MHz 1MHz mit (dBuV/m @ 40.0	300F 3M 3M	KHz Hz	Quasi-peak Value Peak Value
30MHz-1GHz Above 1GHz Frequency 30MHz-88M 88MHz-216M 216MHz-960	Quasi-peak Peak RMS / Li Hz	120KHz 1MHz 1MHz mit (dBuV/m @ 40.0	300F 3M 3M	KHz Hz	Quasi-peak Value Peak Value
Above 1GHz Frequency 30MHz-88M 88MHz-216M 216MHz-960f	Peak RMS / Li Hz //Hz	1MHz 1MHz mit (dBuV/m @ 40.0	3M 3M	Hz	Peak Value
Frequency 30MHz-88M 88MHz-216M 216MHz-960	RMS / Li Hz //Hz	1MHz mit (dBuV/m @ 40.0	3M		
Frequency 30MHz-88M 88MHz-216M 216MHz-960	Hz Hz MHz	mit (dBuV/m @ 40.0		Hz	
30MHz-88M 88MHz-216M 216MHz-960I	Hz 1Hz	40.0	23m)		Average Value
88MHz-216M 216MHz-960M	ИНz				Remark
216MHz-960				C	Quasi-peak Value
	MH2	43.5		C	Quasi-peak Value
960MHz-1G		46.0			Quasi-peak Value
	Hz	54.0		C	Quasi-peak Value
Above 1GH	lz	54.0			Average Value
		74.0		_	Peak Value
highest rad 2. The EUT antenna, w tower. 3. The antenn Both horize make the n 4. For each s case and t meters and to find the n 5. The test-re Specified E 6. If the emiss the limit sp of the EUT have 10 dE	liation. was set 3 m which was more na height is v to determin- ontal and ver neasurement. suspected en hen the anter the rota tabl maximum rea eceiver syste Bandwidth with sion level of t ecified, then t would be re margin woul	neters away tunted on the to varied from one the maximutical polarizations the Enna was tuned ding. In Maximum Hamilton was set in Maximum Hamilton Could to ported. Other dobe re-tested	from the cop of a cop	ne inter to force to force to force the arms arranged arr	erference-receiving ble-height antenna four meters above the field strength. antenna are set to anged to its worst from 1 meter to 4 tes to 360 degrees tect Function and as 10 dB lower than and the peak values ssions that did not using peak, quasi-
Turn Table Ground Plane	4m				1
	1GHz)/1.5r The table of highest rad 2. The EUT antenna, we tower. 3. The antenna Both horizon make the normal search of the end of the end of the end of the EUT have 10 depeak or any sheet. Below 1GHz	1GHz)/1.5m(above 1GHThe table was rotated 3 highest radiation. 2. The EUT was set 3 mantenna, which was more tower. 3. The antenna height is with the ground to determine Both horizontal and vermake the measurement. 4. For each suspected encase and then the antemeters and the rotatable to find the maximum reases. The test-receiver systems Specified Bandwidth with the limit specified, then the of the EUT would be rehave 10 dB margin would peak or average methods sheet. Below 1GHz	1GHz)/1.5m(above 1GHz) above the The table was rotated 360 degrees thighest radiation. 2. The EUT was set 3 meters away antenna, which was mounted on the tower. 3. The antenna height is varied from on the ground to determine the maximum Both horizontal and vertical polarizate make the measurement. 4. For each suspected emission, the Excase and then the antenna was tuned to find the maximum reading. 5. The test-receiver system was set Specified Bandwidth with Maximum H. 6. If the emission level of the EUT in perthe limit specified, then testing could be for the EUT would be reported. Other have 10 dB margin would be re-tested peak or average method as specified sheet. Below 1GHz	1GHz)/1.5m(above 1GHz) above the ground The table was rotated 360 degrees to deter highest radiation. 2. The EUT was set 3 meters away from the antenna, which was mounted on the top of a tower. 3. The antenna height is varied from one met the ground to determine the maximum val Both horizontal and vertical polarizations of make the measurement. 4. For each suspected emission, the EUT was case and then the antenna was tuned to he meters and the rota table was turned from 0 to find the maximum reading. 5. The test-receiver system was set to Pea Specified Bandwidth with Maximum Hold Mo 6. If the emission level of the EUT in peak moon the limit specified, then testing could be stop of the EUT would be reported. Otherwise the have 10 dB margin would be re-tested one be peak or average method as specified and sheet. Below 1GHz	1GHz)/1.5m(above 1GHz) above the ground at a The table was rotated 360 degrees to determine highest radiation. 2. The EUT was set 3 meters away from the integration antenna, which was mounted on the top of a variat tower. 3. The antenna height is varied from one meter to the ground to determine the maximum value of Both horizontal and vertical polarizations of the amake the measurement. 4. For each suspected emission, the EUT was arracase and then the antenna was tuned to heights meters and the rota table was turned from 0 degree to find the maximum reading. 5. The test-receiver system was set to Peak Despecified Bandwidth with Maximum Hold Mode. 6. If the emission level of the EUT in peak mode was the limit specified, then testing could be stopped and of the EUT would be reported. Otherwise the eminave 10 dB margin would be re-tested one by one peak or average method as specified and then sheet. Below 1GHz



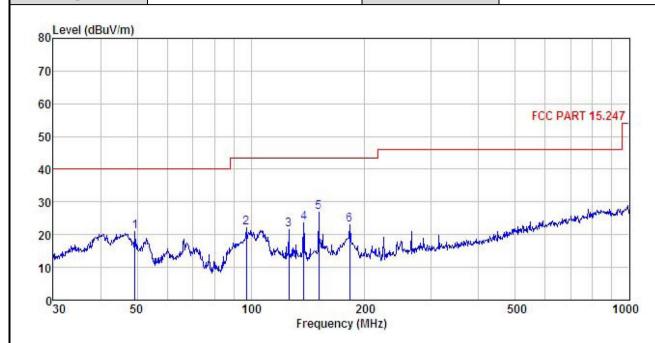




Measurement Data (worst case):

Below 1GHz:

Product Name:	SMART PHONE	Product Model:	SKY BLACK
Test By:	YT	Test mode:	BLE Tx mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%



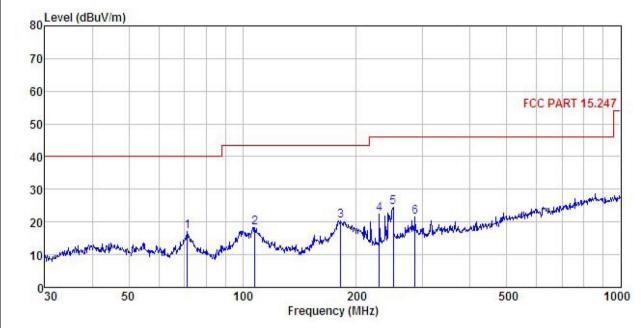
	Freq		Antenna Factor						
	MHz	dBu₹	dB/m	₫₿	dB	dBuV/m	dBu∀/m	dB	
1	49.359	37.42	12.12	1.26	29.83	20.97	40.00	-19.03	QP
2	97.115	37.96	11.85	1.98	29.54	22.25	43.50	-21.25	QP
3	125.886	38.23	10.47	2.24	29.35	21.59	43.50	-21.91	QP
4	137.903	41.01	9.65	2.37	29.28	23.75	43.50	-19.75	QP
4 5 6	151.067	44.51	8.95	2.53	29.21	26.78	43.50	-16.72	QP
6	182.559	39.16	10.06	2.75	28.95	23.02	43.50	-20.48	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.



Product Name:	SMART PHONE	Product Model:	SKY BLACK
Test By:	YT	Test mode:	BLE Tx mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%



Freq								
MHz	dBu₹	dB/m	dB	dB	dBuV/m	dBu√/m	<u>dB</u>	
71.330	36.89	8.32	1.54	29.71	17.04	40.00	-22.96	QP
107.888	33.94	11.82	2.03	29.47	18.32	43.50	-25.18	QP
181.920	36.63	10.03	2.74	28.96	20.44	43.50	-23.06	QP
230.099	36.29	11.91	2.83	28.65	22.38	46.00	-23.62	QP
250.301	37.48	12.70	2.81	28.54	24.45	46.00	-21.55	QP
285.978	33.70	13.37	2.90	28.47	21.50	46.00	-24.50	QP
	71. 330 107. 888 181. 920 230. 099 250. 301	Freq Level MHz dBuV 71.330 36.89 107.888 33.94 181.920 36.63 230.099 36.29 250.301 37.48	Treq Level Factor MHz dBuV dB/m 71.330 36.89 8.32 107.888 33.94 11.82 181.920 36.63 10.03 230.099 36.29 11.91 250.301 37.48 12.70	Treq Level Factor Loss MHz dBuV dB/m dB	MHz dBuV dB/m dB dB 71.330 36.89 8.32 1.54 29.71 107.888 33.94 11.82 2.03 29.47 181.920 36.63 10.03 2.74 28.96 230.099 36.29 11.91 2.83 28.65 250.301 37.48 12.70 2.81 28.54	MHz dBuV dB/m dB dB dBuV/m 71.330 36.89 8.32 1.54 29.71 17.04 107.888 33.94 11.82 2.03 29.47 18.32 181.920 36.63 10.03 2.74 28.96 20.44 230.099 36.29 11.91 2.83 28.65 22.38 250.301 37.48 12.70 2.81 28.54 24.45	MHz dBuV dB/m dB dB dBuV/m dBuV/m 71.330 36.89 8.32 1.54 29.71 17.04 40.00 107.888 33.94 11.82 2.03 29.47 18.32 43.50 181.920 36.63 10.03 2.74 28.96 20.44 43.50 230.099 36.29 11.91 2.83 28.65 22.38 46.00 250.301 37.48 12.70 2.81 28.54 24.45 46.00	Freq Level Factor Loss Factor Level Line Limit MHz dBuV dB/m dB dB dBuV/m dBuV/m dB 71.330 36.89 8.32 1.54 29.71 17.04 40.00 -22.96 107.888 33.94 11.82 2.03 29.47 18.32 43.50 -25.18 181.920 36.63 10.03 2.74 28.96 20.44 43.50 -23.06 230.099 36.29 11.91 2.83 28.65 22.38 46.00 -23.62

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

	•										
	Test channel: Lowest channel										
Detector: Peak Value											
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
4804.00	48.63	30.85	6.80	41.81	44.47	74.00	-29.53	Vertical			
4804.00	49.72	30.85	6.80	41.81	45.56	74.00	-28.44	Horizontal			
			Dete	ector: Averaç	ge Value						
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
4804.00	39.63	30.85	6.80	41.81	35.47	54.00	-18.53	Vertical			
4804.00	40.12	30.85	6.80	41.81	35.96	54.00	-18.04	Horizontal			
			Test ch	nannel: Midd	lle channel						
			De	tector: Peak	Value						
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
4884.00	48.98	31.20	6.86	41.84	45.20	74.00	-28.80	Vertical			
4884.00	49.36	31.20	6.86	41.84	45.58	74.00	-28.42	Horizontal			
			Dete	ector: Averaç	ge Value						
Frequency	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Polarization			

Test channel: Highest channel										
Detector: Peak Value										
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization		
4960.00	49.85	31.63	6.91	41.87	46.52	74.00	-27.48	Vertical		
4960.00	48.75	31.63	6.91	41.87	45.42	74.00	-28.58	Horizontal		
			Dete	ctor: Avera	ge Value					
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization		
4960.00	39.63	31.63	6.91	41.87	36.30	54.00	-17.70	Vertical		
4960.00	38.17	31.63	6.91	41.87	34.84	54.00	-19.16	Horizontal		

Factor

(dB)

41.84

41.84

(dBuV/m)

34.74

36.99

(dBuV/m)

54.00

54.00

Remark

Level

(dBuV)

38.52

40.77

(MHz)

4884.00

4884.00

Factor

(dB/m)

31.20

31.20

Loss

(dB)

6.86

6.86

Project No.: CCISE1909055

Polarization

Vertical

Horizontal

Limit

(dB)

-19.26

-17.01

^{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.