

Shenzhen Zhongjian Nanfang Testing Co., Ltd.

Report No: CCISE190606902

FCC REPORT (BLE)

Applicant: Telecell Mobile (H.K) Ltd.

Address of Applicant: RM 801 Metro Ctr II, 21 Lam Hing Street KIn Bay, Hong Kong

Equipment Under Test (EUT)

Product Name: mobile phone

Model No.: J9

FCC ID: 2ADX3J9

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

Date of sample receipt: 20 Jun., 2019

Date of Test: 20 Jun., to 10 Jul., 2019

Date of report issued: 10 Jul., 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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Version

Version No.	Date	Description
00	10 Jul., 2019	Original

Test Engineer Tested by: Date: 10 Jul., 2019

Reviewed by: 10 Jul., 2019 Date:

Project Engineer



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4 Test Summary

Test Items	Section in CFR 47	Result
Antenna requirement	15.203 & 15.247 (c)	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

All measurement data were performed in accordance with ANSI C63.10: 2013 and KDB 558074 D01 15.247 Meas Guidance v05r02 of test method.

Remark

- 1. Pass: The EUT complies with the essential requirements in the standard.
- 2. N/A: Not Applicable.



5 General Information

5.1 Client Information

Applicant:	Telecell Mobile (H.K) Ltd.	
Address: RM 801 Metro Ctr II, 21 Lam Hing Street Kln Bay, Hong Kong		
Manufacturer/Factory:	Telecell Mobile (H.K) Ltd.	
Address:	RM 801 Metro Ctr II, 21 Lam Hing Street Kln Bay, Hong Kong	

5.2 General Description of E.U.T.

Product Name:	mobile phone
Model No.:	J9
Operation Frequency:	2402-2480 MHz
Channel numbers:	40
Channel separation:	2 MHz
Modulation technology:	GFSK
Data speed :	1Mbps
Antenna Type:	Internal Antenna
Antenna gain:	2.16 dBi
Power supply:	Rechargeable Li-ion Battery DC3.7V, 2000mAh
AC adapter:	Model: J9 Input: AC100-240V, 50/60Hz, 0.15A Output: DC 5V, 1.0A
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

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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)	±4.54 dB (k=2)
Radiated Emission (1GHz ~ 18GHz)	±5.84 dB (k=2)
Radiated Emission (18GHz ~ 40GHz)	±3.36 dB (k=2)

5.6 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

5.7 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

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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
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5.8 Test Instruments list

Radiated Emission:					
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (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	07-21-2018	07-20-2019	
Cable	HP	10503A	N/A	03-18-2019	03-17-2020	
EMI Test Software	AUDIX	E3	\	/ersion: 6.110919	b	



6 Test results and Measurement Data

6.1 Antenna requirement:

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

15.203 requirement:

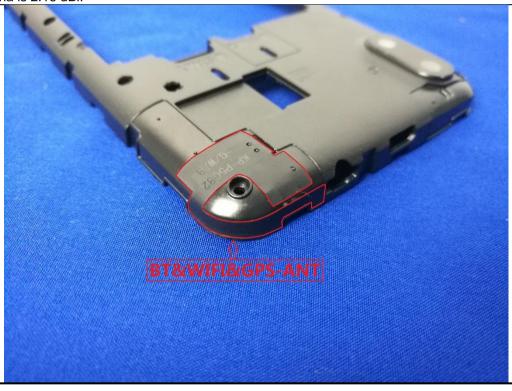
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit 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 2.16 dBi.





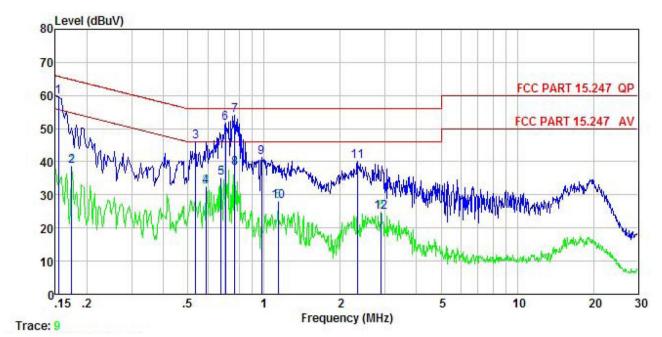
6.2 Conducted Emission

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=9kHz, VBW=30kHz				
Limit:	Frequency range (MHz)		(dBuV)		
		Quasi-peak 66 to 56*	Average		
	0.15-0.5 0.5-5	56	56 to 46* 46		
	5-30	60	50		
	* Decreases with the logar		00		
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:	LISN 40cm		AC power		
Test Instruments:	Refer to section 5.8 for details				
Test mode:	Refer to section 5.3 for details				
Test results:	Passed				



Measurement Data:

Product name:	mobile phone	Product model:	J9
Test by:	Mike	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%



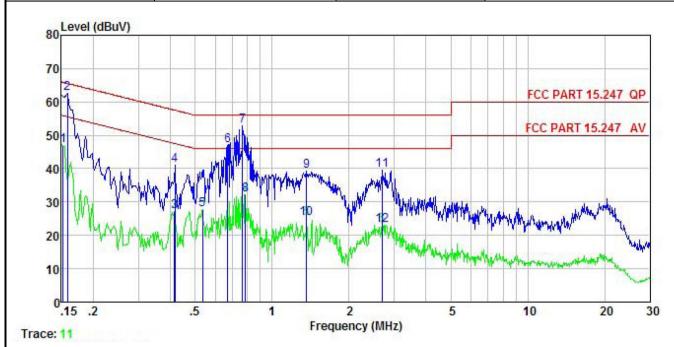
	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
1	MHz	dBu∇	<u>dB</u>	<u>dB</u>	dBu₹	dBu∀	<u>dB</u>	
1	0.154	49.37	-0.45	10.78	59.70	65.78	-6.08	QP
2	0.174	28.26	-0.43	10.77	38.60	54.77	-16.17	Average
3	0.538	35.62	-0.39	10.76	45.99	56.00	-10.01	QP
4	0.589	22.07	-0.39	10.76	32.44	46.00	-13.56	Average
1 2 3 4 5 6 7 8 9	0.675	24.62	-0.38	10.77	35.01			Average
6	0.705	41.23	-0.38	10.77	51.62	56.00	-4.38	QP
7	0.767	43.68	-0.38	10.80	54.10	56.00	-1.90	QP
8	0.767	27.63	-0.38	10.80	38.05	46.00	-7.95	Average
9	0.979	30.79	-0.38	10.86	41.27		-14.73	
10	1.135	17.61	-0.39	10.89	28.11	46.00	-17.89	Average
11	2.334	29.69	-0.42	10.94	40.21		-15.79	
12	2.900	14.40	-0.44	10.92	24.88			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.



Product name:	mobile phone	Product model:	J9
Test by:	Mike	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%



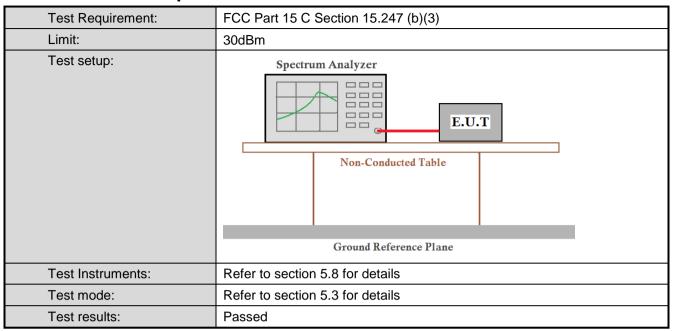
	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBu∇	<u>dB</u>	₫B	dBu₹	dBu∜	<u>ab</u>	
1 2	0.152 0.158	36.74 52.39	-0.68 -0.68	10.78 10.77	46.84 62.48	55.87 65.56		Average OP
3 4	0.415 0.417	17.11 30.97		10.73	27.20 41.06	47.55		Average
2 3 4 5 6 7 8 9	0.535 0.672	17.66 36.75	-0.65 -0.64	10.76 10.77	27.77 46.88		-18.23	Average
7 8	0.767 0.788	42.57 21.97	-0.64 -0.64	10.80 10.81	52.73 32.14		-3.27 -13.86	QP Average
9 10	1.367 1.367	29.08 14.76	-0.65 -0.65	10.91 10.91	39.34 25.02		-16.66 -20.98	QP Average
11 12	2.692 2.692	29.36 12.86	-0.67 -0.67	10.93 10.93	39.62 23.12		-16.38 -22.88	QP 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.



6.3 Conducted Output Power

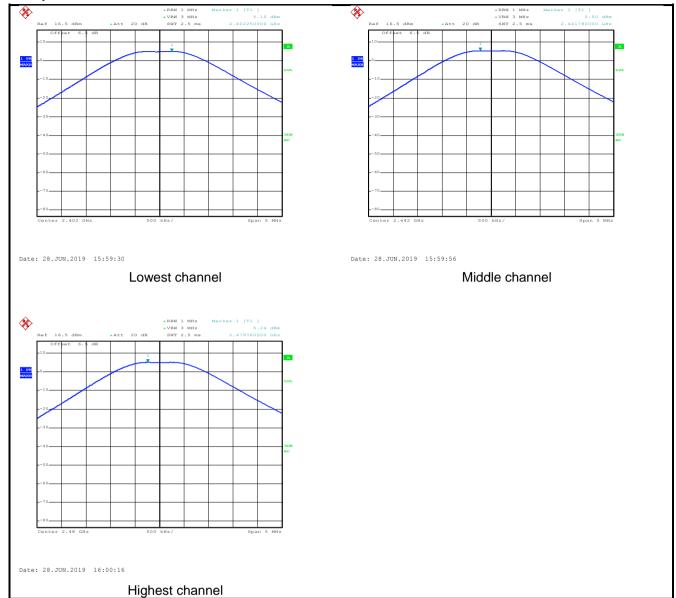


Measurement Data:

Test CH	Maximum Conducted Output Power (dBm)	Limit(dBm)	Result					
Lowest	5.15							
Middle	5.50	30.00	Pass					
Highest	5.24							



Test plot as follows:





6.4 Occupy Bandwidth

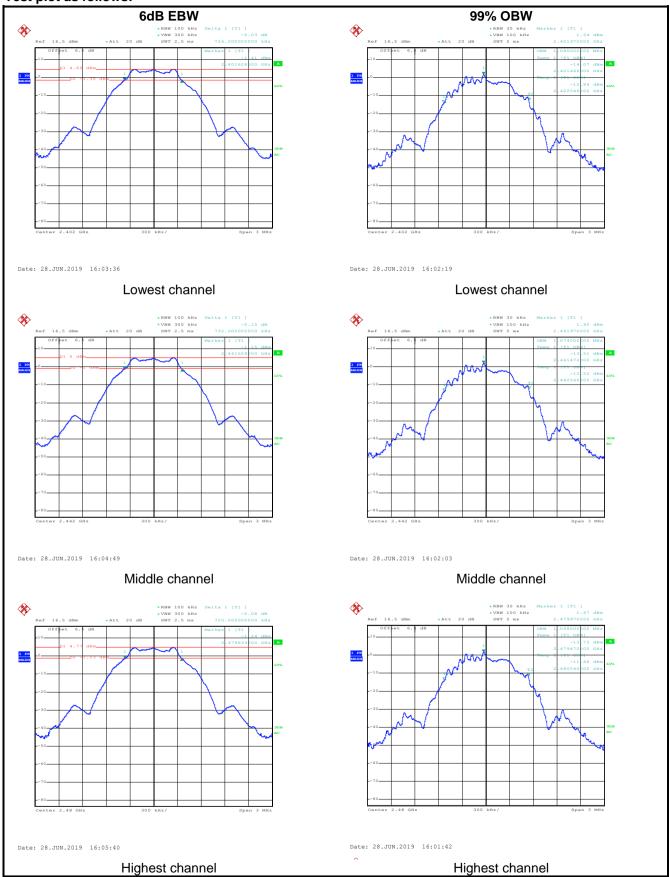
Test Requirement:	FCC Part 15 C Section 15.247 (a)(2)
Test Method:	ANSI C63.10:2013 and KDB 558074
Limit:	>500kHz
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data:

Test CH	6dB Emission Bandwidth (MHz)	Limit(kHz)	Result
Lowest	0.726		
Middle	0.732	>500	Pass
Highest	0.720		
Test CH	99% Occupy Bandwidth (MHz)	Limit(kHz)	Result
Lowest	1.080		
Middle	1.074	N/A	N/A
Highest	1.068		

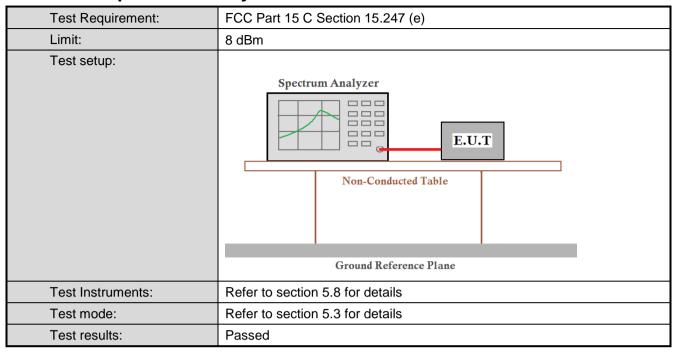


Test plot as follows:





6.5 Power Spectral Density

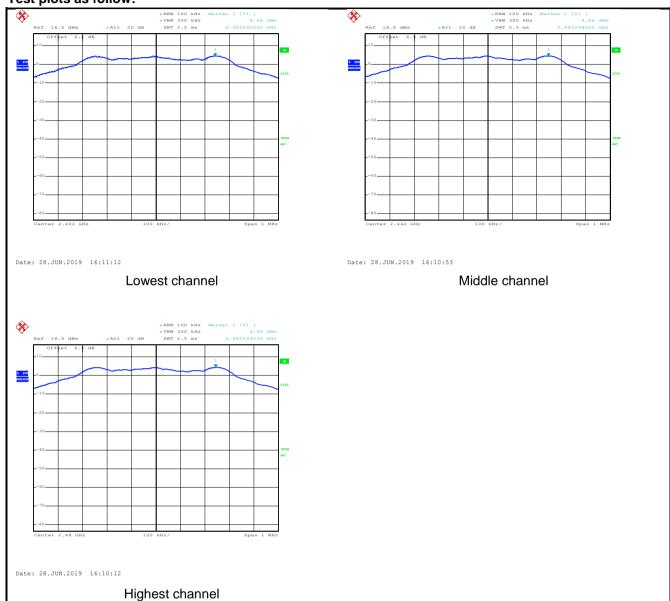


Measurement Data:

mode di fori di la casa di cas									
Test CH	Power Spectral Density (dBm)	Limit(dBm)	Result						
Lowest	4.66								
Middle	4.66	8.00	Pass						
Highest	4.46								



Test plots as follow:





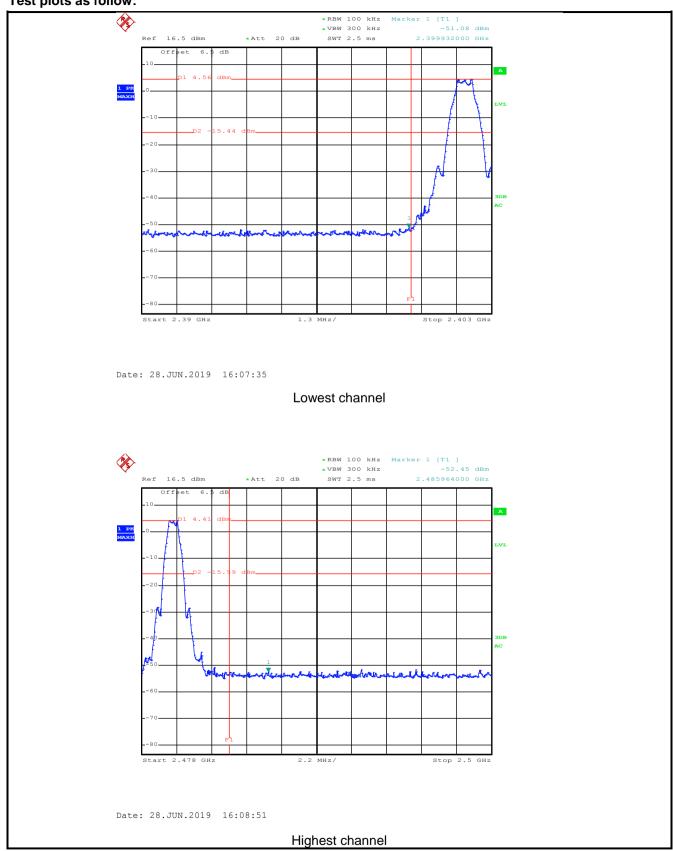
6.6 Band Edge

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 5.8 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	vietriou							
Te	est Requirement:	FCC Part 15 C	Section 15.2	.05 and 15.209					
Te	est Frequency Range:	2.3GHz to 2.5	GHz						
Te	est Distance:	3m	m						
Re	eceiver setup:	Frequency	Detector	RBW	VBW	Remark			
	·	Above 1GHz	Peak	1MHz	3MHz	Peak Value			
			RMS	1MHz	3MHz	Average Value			
Li	mit:	Frequer	icy L	imit (dBuV/m @3		Remark			
		Above 10	GHz —	54.00 74.00		verage Value Peak Value			
T€	est Procedure:	 The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 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. 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. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. If the emission level of the EUT in peak mode was 10 dB 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 10 dB margin would be re-tested one by one using peak, quasipeak or average method as specified and then reported in a data sheet. 							
Т€	est setup:	AE (T	umtable) Grou Test Receiver	Horn Antenna Horn Antenna Amptifer Cont	Antenna Tower				
Te	est Instruments:	Refer to section	n 5.8 for deta	ils					
Te	est mode:	Refer to section							
Te	est results:	Passed							



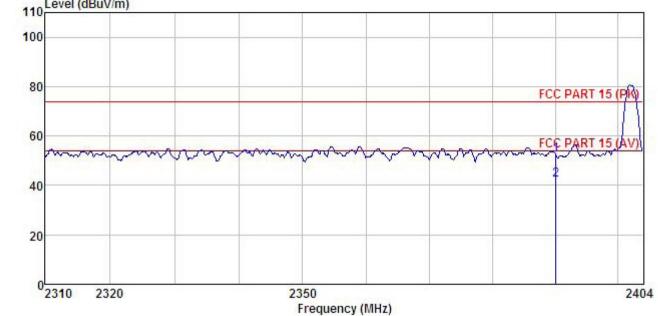
Product Name:		mobile phone				Product Model:		J9		
est By:		Mike Lowest channel			T	Test mode:		BLE Tx mode		
est Cha	annel:				Р	olarization	1:	Vertical		
est Vol	tage:	AC 120/60)Hz		E	nvironmer	nt:	Temp: 24	°C Huni: 57%	
Lev	el (dBuV/m)									
William .										
100										
00									\wedge	
80								FCC	PART 15 (PK)	
60										
75	and the contraction of the contr	~~~	~~~	V~V	work	www	A.A.	WWW FCE	PART 15 (AV)	
40								2		
20										
0231	0 2320			2350					2404	
23	2320				uency (MH:	z)			2404	
							Constitution and Company Company			
	Freq	ReadA Level	ntenna Factor	Cable Loss	Preamp Factor	Level	Limit Line		Remark	
	Freq MHz	ReadA Level dBuV	ntenna Factor ——dB/m	Cable Loss dB	Factor	Level	Line		Remark	
1 2	<u> </u>	Level	Factor ——dB/m	Loss	Factor dB 0.00	Level dBuV/m 52.37	Line dBuV/m 74.00	Limit dB -21.63		

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:	t By: Mike Test mode:		Test mode: BLE Tx mode				
Test By:							
Test Channel:							
Test Voltage:	AC 120/60Hz	Environment:			Temp: 24℃	Huni: 57%	
110 Level (dBuV/n	n)						
80							



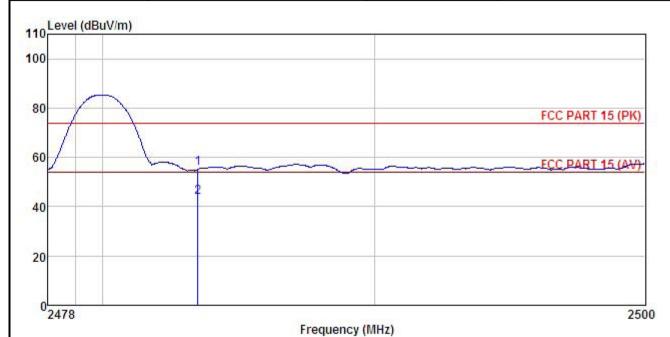
	Freq		Antenna Factor						
_	MHz	—dBu√	<u>dB</u> /m	<u>ap</u>	<u>ab</u>	$\overline{dB} \overline{uV/m}$	$\overline{dBuV/m}$	<u>ab</u>	
	2390.000 2390.000								

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:	mobile phone	Product Model:	J9
Test By:	Mike	Test mode:	BLE Tx mode
Test Channel:	Highest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%



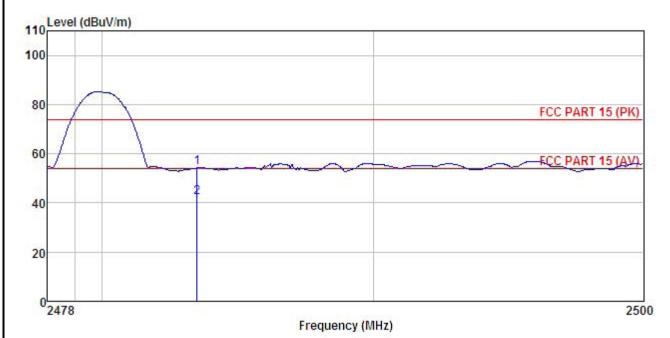
	Freq		Antenna Factor					
-	MHz	dBu∜	<u>dB</u> /m	 <u>ab</u>	$\overline{dBuV/m}$	$\overline{dBuV/m}$	<u>ab</u>	
	2483.500 2483.500							

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:	mobile phone	Product Model:	J9
Test By:	Mike	Test mode:	BLE Tx mode
Test Channel:	Highest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%



	Freq	ReadAntenna Freq Level Factor								
2	MHz	—dBu∜		<u>d</u> B	<u>ab</u>	$\overline{dBuV/m}$	$\overline{dBuV/m}$	<u>dB</u>		
	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.



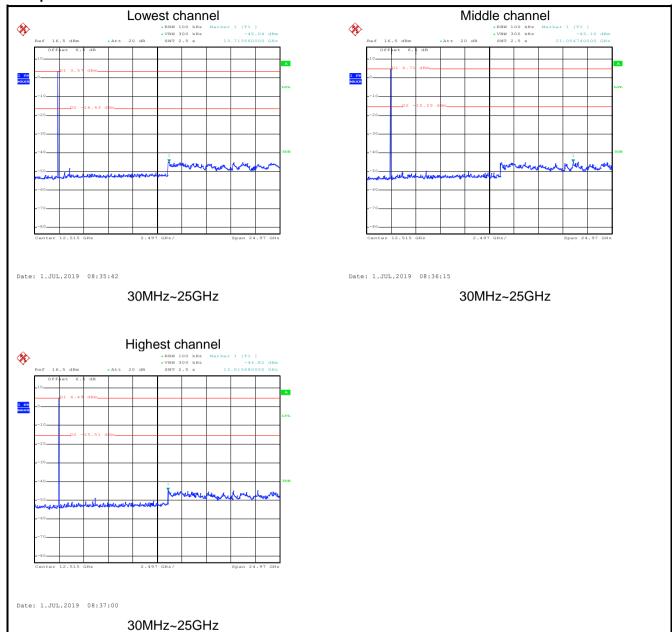
6.7 Spurious Emission

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 5.8 for details					
Test mode:	Refer to section 5.3 for details					
Test results:	Passed					



Test plot as follows:

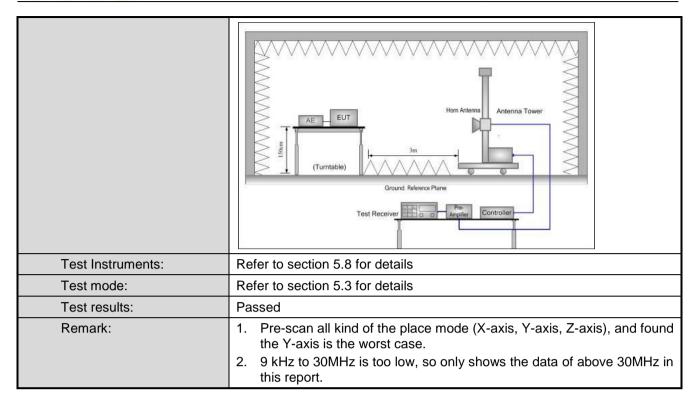




6.7.2 Radiated Emission Method

FCC Part 15 C	Section 15.20	05 and 15.209	<u> </u>			
9kHz to 25GHz						
3m						
Frequency	Detector	RBW	VB	sW	Remark	
30MHz-1GHz	Quasi-peak	120KHz	3001	KHz	Quasi-peak Value	
Above 1CHz	Peak	1MHz	3M	Hz	Peak Value	
Above 1GHz	RMS	1MHz	3M	Hz	Average Value	
Frequency	/ L	imit (dBuV/m @	3m)		Remark	
30MHz-88M	Hz	40.0		C	Quasi-peak Value	
88MHz-216M	1Hz	43.5		C	Quasi-peak Value	
216MHz-960	ИНz	46.0		C	Quasi-peak Value	
960MHz-1G	Hz	54.0		C	Quasi-peak Value	
Above 1GH	17	54.0			Average Value	
		74.0			Peak Value	
 1GHz)/1.5m(above 1GHz) above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. 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. 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. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. If the emission level of the EUT in peak mode was 10 dB 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 10 dB margin would be re-tested one by one using peak, quasi- 						
Turn Table Ground Plane	4m				1	
	9kHz to 25GHz 3m Frequency 30MHz-1GHz Above 1GHz Frequency 30MHz-88M 88MHz-216M 216MHz-960M 960MHz-1G Above 1GH 1. The EUT 1GHz)/1.5r The table of highest rad 2. The EUT antenna, we tower. 3. The antennathe ground Both horizon make the limit spoof the EUT have 10 depeak or averaged to the second to the EUT have 10 depeak or averaged to the second to the EUT have 10 depeak or averaged to the second to the EUT have 10 depeak or averaged to the second to the EUT have 10 depeak or averaged to the second to the EUT have 10 depeak or averaged to the second to the EUT have 10 depeak or averaged to the second to	9kHz to 25GHz 3m Frequency Detector 30MHz-1GHz Quasi-peak Above 1GHz RMS Frequency Li 30MHz-88MHz 88MHz-88MHz 960MHz-960MHz 960MHz-1GHz Above 1GHz 1. The EUT was placed 1GHz)/1.5m(above 1GH The table was rotated 3 highest radiation. 2. The EUT was set 3 m antenna, which was mo tower. 3. The antenna height is a the ground to determin Both horizontal and ver make the measurement. 4. For each suspected en case and then the ante meters and the rota table to find the maximum rea 5. The test-receiver syste Specified Bandwidth wit 6. If the emission level of the EUT would be re have 10 dB margin wou peak or average methor sheet. Below 1GHz	9kHz to 25GHz 3m Frequency Detector RBW 30MHz-1GHz Quasi-peak 120KHz Peak 1MHz RMS 1MHz Frequency Limit (dBuV/m @ 30MHz-88MHz 40.0 88MHz-216MHz 43.5 216MHz-960MHz 46.0 960MHz-1GHz 54.0 Above 1GHz 74.0 1. The EUT was placed on the top of 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 of the ground to determine the maxim Both horizontal and vertical polarization make the measurement. 4. For each suspected emission, the Ecase and then the antenna was tune meters and the rota table was turned to find the maximum reading. 5. The test-receiver system was set Specified Bandwidth with Maximum He. If the emission level of the EUT in pethe limit specified, then testing could to the EUT would be reported. Other have 10 dB margin would be re-tested peak or average method as specifies sheet. Below 1GHz	Frequency Detector RBW VE 30MHz-1GHz Quasi-peak 120KHz 3001 Above 1GHz Peak 1MHz 3M RMS 1MHz 3M Frequency Limit (dBuV/m @3m) 30MHz-88MHz 40.0 88MHz-216MHz 43.5 216MHz-960MHz 46.0 960MHz-1GHz 54.0 Above 1GHz 74.0 1. The EUT was placed on the top of a ro 1GHz)/1.5m(above 1GHz) above the groun The table was rotated 360 degrees to detern 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 metern the ground to determine the maximum val Both horizontal and vertical polarizations of make the measurement. 4. For each suspected emission, the EUT was a set 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 Peas Specified Bandwidth with Maximum Hold Mo. If the emission level of the EUT in peak more 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 because of the EUT would be reported. Otherwise the have 10 dB margin would be re-tested one because of the EUT would be reported. Otherwise the have 10 dB margin would be re-tested one because of the EUT would be reported. Otherwise the have 10 dB margin would be re-tested one because of the EUT would be reported. Otherwise the have 10 dB margin would be re-tested one because of the EUT would be reported. Otherwise the have 10 dB margin would be re-tested one because of the EUT would be reported. Otherwise the have 10 dB margin would be re-tested one because of the EUT would be reported. Otherwise the have 10 dB margin would be re-tested one because of the EUT would be reported.	9kHz to 25GHz 3m Frequency Detector RBW VBW 30MHz-1GHz Quasi-peak 120KHz 300KHz Above 1GHz Peak 1MHz 3MHz Frequency Limit (dBuV/m @3m) 30MHz-88MHz 40.0 C 88MHz-216MHz 43.5 C 216MHz-960MHz 46.0 C 960MHz-1GHz 74.0 1. The EUT was placed on the top of a rotating 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 interpretation antenna, which was mounted on the top of a variation 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 turned 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 De Specified 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 a of the EUT would be reported. Otherwise the emi have 10 dB margin would be re-tested one by one peak or average method as specified and then sheet. Below 1GHz	



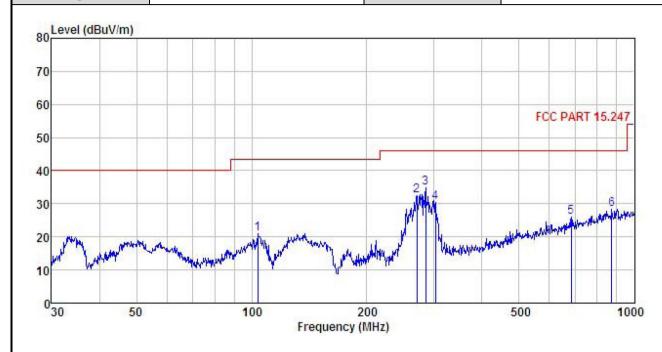




Measurement Data (worst case):

Below 1GHz:

Product Name:	mobile phone	Product Model:	J9
Test By:	Mike	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				Limit Line		Remark
_	MHz	—dBu∀	<u>dB</u> /π		<u>ab</u>	$\overline{dBuV/m}$	$\overline{dBuV/m}$	<u>ab</u>	
1	103.806	36.28	12.16	1.99	29.50	20.93	43.50	-22.57	QP
2	270.375	44.88	13.10	2.86	28.50	32.34	46.00	-13.66	QP
3	284.977	46.94	13.35	2.90	28.48	34.71	46.00	-11.29	QP
2 3 4 5 6	302.481	42.36	13.65	2.95	28.45	30.51	46.00	-15.49	QP
5	684.745	30.35	20.21	4.08	28.70	25.94	46.00	-20.06	QP
6	872.183	29.70	22.56	3.97	27.95	28.28	46.00	-17.72	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 Na	ame:	mobile ph	one		Pro	oduct Mod	el:	J9		
Test By:		Mike			Tes	st mode:		BLE Tx mo	ode	
Test Frequ	iency:	30 MHz ~	1 GHz		Po	larization:		Horizontal		
Test Volta	ge:	AC 120/60	Hz		En	vironment	:	Temp: 24℃ Huni: 57%		
80 Level	(dBuV/m)									
60								FCC	PART 15.247	
50										
30						2 34			6	
20	who we wish with	والمراس	J. P. M.	M. Who who who	embly when	AND THE PROPERTY OF THE PROPER	inspertingualists	LANGE THE WAY	March of the production of the state of the	
030	50	and and board	100		200 ency (MHz)			500	1000	
	Freq	Read! Level	intenna Factor	Cable	Preamp		Limit Line		Remark	
-	MHz	dBu∀	dB/π		B	dBuV/m	dBuV/m	<u>dB</u>		
1 2 3 4 5 6	181. 283 263. 819 286. 982 295. 147 515. 437 798. 980	40.23 41.01 41.18 29.18	10.01 12.97 13.39 13.52 18.26 21.50	2.74 2.85 2.90 2.93 3.70 4.35	28.51	27.54	46.00 46.00 46.00 46.00	-24.65 -18.46 -17.17 -16.83 -23.86 -18.06	QP QP QP 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

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	46.27	30.85	6.80	41.81	42.11	74.00	-31.89	Vertical		
4804.00	46.07	30.85	6.80	41.81	41.91	74.00	-32.09	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	37.21	30.85	6.80	41.81	33.05	54.00	-20.95	Vertical		
4804.00	38.09	30.85	6.80	41.81	33.93	54.00	-20.07	Horizontal		
Test channel: Middle channel										
			De	tector: Peak	Value			<u> </u>		
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	46.85	31.20	6.86	41.84	43.07	74.00	-30.93	Vertical		
4884.00	46.17	31.20	6.86	41.84	42.39	74.00	-31.61	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		
4884.00	37.54	31.20	6.86	41.84	33.76	54.00	-20.24	Vertical		
4884.00	38.59	31.20	6.86	41.84	34.81	54.00	-19.19	Horizontal		
			Test ch	annel: High	est 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		

(MHz)	Level (dBuV)	Factor (dB/m)	Loss (dB)	Factor (dB)	(dBuV/m)	(dBuV/m)	Limit (dB)	Polarization		
4960.00	46.12	31.63	6.91	41.87	42.79	74.00	-31.21	Vertical		
4960.00	46.28	31.63	6.91	41.87	42.95	74.00	-31.05	Horizontal		
	Detector: Average 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	37.94	31.63	6.91	41.87	34.61	54.00	-19.39	Vertical		

41.87

34.70

54.00

-19.30

Remark.

4960.00

38.03

6.91

31.63

Project No.: CCISE1906069

Horizontal

^{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.