

# JianYan Testing Group Shenzhen Co., Ltd.

Report No: JYTSZB-R12-2100309

# FCC REPORT (WIFI)

Applicant: TECNO MOBILE LIMITED

Address of Applicant: FLAT 39 8/F BLOCK D WAH LOK INDUSTRIAL CENTRE 31-35

SHAN MEI STREET FOTAN NT

**Equipment Under Test (EUT)** 

Product Name: Mobile Phone

Model No.: LE7

Trade mark: TECNO

FCC ID: 2ADYY-LE7

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

Date of sample receipt: 25 Feb., 2021

**Date of Test:** 26 Feb., to 16 Mar., 2021

Date of report issued: 17 Mar., 2021

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 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	17 Mar., 2021	Original

Tested by:

Test Engineer

Date: 17 Mar., 2021

. Two was

Reviewed by: Date: 17 Mar., 2021

Project Engineer





# **Contents**

			Page
1	COV	/ER PAGE	1
2	VER	SION	2
3	CON	NTENTS	3
		T SUMMARY	
4			
5	GEN	NERAL INFORMATION	5
	5.1	CLIENT INFORMATION	5
	5.2	GENERAL DESCRIPTION OF E.U.T	5
	5.3	TEST ENVIRONMENT AND MODE	
	5.4	DESCRIPTION OF SUPPORT UNITS	6
	5.5	MEASUREMENT UNCERTAINTY	6
	5.6	LABORATORY FACILITY	6
	5.7	LABORATORY LOCATION	6
	5.8	TEST INSTRUMENTS LIST	7
6	TES	T RESULTS AND MEASUREMENT DATA	9
	6.1	ANTENNA REQUIREMENT	9
	6.2	CONDUCTED EMISSION	
	6.3	CONDUCTED OUTPUT POWER	
	6.4	OCCUPY BANDWIDTH	
	6.5	Power Spectral Density	
	6.6	BAND EDGE	16
	6.6.1	1 Conducted Emission Method	16
	6.6.2	2 Radiated Emission Method	17
	6.7	Spurious Emission	34
	6.7.1	1 Conducted Emission Method	34
	6.7.2	2 Radiated Emission Method	35
7	TES	T SETUP PHOTO	43
8	EUT	CONSTRUCTIONAL DETAILS	44





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
Duty Cycle	ANSI C63.10-2013	Appendix A – 2.4G Wi-Fi	Pass
Conducted Peak Output Power	15.247 (b)(3)	Appendix A – 2.4G Wi-Fi	Pass
6dB Emission Bandwidth 99% Occupied Bandwidth	15.247 (a)(2)	Appendix A – 2.4G Wi-Fi	Pass
Power Spectral Density	15.247 (e)	Appendix A – 2.4G Wi-Fi	Pass
Conducted Band Edge	45 247 (4)	Appendix A – 2.4G Wi-Fi	Pass
Radiated Band Edge	15.247 (d)	See Section 6.6.2	Pass
Conducted Spurious Emission	15 205 8 15 200	Appendix A – 2.4G Wi-Fi	Pass
Radiated Spurious Emission	15.205 & 15.209	See Section 6.7.2	

#### 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

Page 4 of 44





# 5 General Information

## **5.1 Client Information**

Applicant:	TECNO MOBILE LIMITED
Address:	FLAT 39 8/F BLOCK D WAH LOK INDUSTRIAL CENTRE 31-35 SHAN MEI STREET FOTAN NT
Manufacturer:	TECNO MOBILE LIMITED
Address:	FLAT 39 8/F BLOCK D WAH LOK INDUSTRIAL CENTRE 31-35 SHAN MEI STREET FOTAN NT
Factory:	SHENZHEN TECNO TECHNOLOGY CO., LTD.
Address:	101, Building 24, Waijing Industrial Park, Fumin Community, Fucheng Street, Longhua District, Shenzhen City, P.R.China

# 5.2 General Description of E.U.T.

Product Name:	Mobile Phone		
Model No.:	LE7		
Operation Frequency:	2412MHz~2462MHz: 802.11b/802.11g/802.11n(HT20)		
	2422MHz~2452MHz: 802.11n(HT40)		
Channel numbers:	11: 802.11b/802.11g/802.11(HT20)		
	7: 802.11n(HT40)		
Channel separation:	5MHz		
Modulation technology: (IEEE 802.11b)	Direct Sequence Spread Spectrum (DSSS)		
Modulation technology: (IEEE 802.11g/802.11n)	Orthogonal Frequency Division Multiplexing(OFDM)		
Data speed (IEEE 802.11b):	1Mbps, 2Mbps, 5.5Mbps, 11Mbps		
Data speed (IEEE 802.11g):	6Mbps, 9Mbps, 12Mbps, 18Mbps, 24Mbps, 36Mbps, 48Mbps, 54Mbps		
Data speed (IEEE 802.11n):	Up to 150Mbps		
Antenna Type:	Internal Antenna		
Antenna gain:	1.2dBi		
Power supply:	Rechargeable Li-ion polymer Battery DC3.87, 6850mAh		
AC adapter:	Model: U180TSA		
	Input: AC100-240V, 50/60Hz, 0.6A		
	Output: DC 5.0V - 9.0V === 2A, 9.0V - 12.0V === 1.5A		
Test Sample Condition:	The test samples were provided in good working order with no visible defects.		

Operation Frequency each of channel for 802.11b/g/n(HT20)							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2412MHz	4	2427MHz	7	2442MHz	10	2457MHz
2	2417MHz	5	2432MHz	8	2447MHz	11	2462MHz
3	2422MHz	6	2437MHz	9	2452MHz		

#### Note:

- 1. For 802.11n-HT40 mode, the channel number is from 3 to 9;
- 2. Channel 1, 6 & 11 selected for 802.11b/g/n-HT20 as Lowest, Middle and Highest channel. Channel 3, 6 & 9 selected for 802.11n-HT40 as Lowest, Middle and Highest Channel.

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## 5.3 Test environment and 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

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. We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

Per-scan all kind of data rate, the follow list were the worst case.				
Mode Data rate				
802.11b	1Mbps			
802.11g	6Mbps			
802.11n(HT20)	6.5Mbps			
802.11n(HT40)	13.5Mbps			

## 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 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: <a href="https://portal.a2la.org/scopepdf/4346-01.pdf">https://portal.a2la.org/scopepdf/4346-01.pdf</a>

## 5.7 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.

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Email: info@ccis-cb.com, Website: http://www.ccis-cb.com

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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	07-21-2020	07-20-2021
Loop Antenna	SCHWARZBECK	FMZB1519B	044	03-07-2020	03-06-2021
Loop Antenna	SCHWARZBECK	LINIZD 1319D	044	03-07-2021	03-06-2022
BiConiLog Antenna	SCHWARZBECK	VULB9163	497	03-07-2020	03-06-2021
BICOHILOG AHIEHHA	SCHWARZBECK	VOLDS103	497	03-07-2021	03-06-2022
Horn Antenna	SCHWARZBECK	BBHA9120D	916	03-07-2020	03-06-2021
Hom Antenna	SCHWARZBECK	DDHA9120D	910	03-07-2021	03-06-2022
Horn Antenna	SCHWARZBECK	BBHA9120D	1805	06-20-2020	06-19-2021
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170582	11-18-2019	11-17-2020
EMI Test Software	AUDIX	E3	\	/ersion: 6.110919b	)
Dro overlifier	HP	0447D	2044400250	03-07-2020	03-06-2021
Pre-amplifier	ПР	8447D	2944A09358	03-07-2021	03-06-2022
Dro overlifier	CD	DAD 4040	44004	03-07-2020	03-06-2021
Pre-amplifier	CD	PAP-1G18	11804	03-07-2021	03-06-2022
Spectrum analyzer	Rohde & Schwarz	FSP30	101454	03-05-2020	03-04-2021
Spectrum analyzer	Ronde & Schwarz	F3F3U	101404	03-05-2021	03-04-2022
Spectrum analyzer	Rohde & Schwarz	FSP40	100363	11-18-2019	11-17-2020
EMI Test Receiver	Rohde & Schwarz	ESRP7	101070	03-05-2020	03-04-2021
EIVII Test Neceivei	Ronde & Schwarz	LOKE	101070	03-05-2021	03-04-2022
Cable	ZDECL	Z108-NJ-NJ-81	1608458	03-07-2020	03-06-2021
Cable	ZDEGL	Z100-INJ-INJ-01	1000436	03-07-2021	03-06-2022
Cable	MICRO-COAX	MFR64639	K10742-5	03-07-2020	03-06-2021
Cable	WICKO-COAX	WIF N04039	K10742-5	03-07-2021	03-06-2022
Cable	SUHNER	SUCOFLEX100	0 58193/4PE	03-07-2020	03-06-2021
Cable	SULINER	30COFLEX 100		03-07-2021	03-06-2022
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	Cal. Due date	
root Equipment	Mariaraotaror	model No.		(mm-dd-yy)	(mm-dd-yy)	
EMI Test Receiver	Rohde & Schwarz	ESCI	404400	03-05-2020	03-04-2021	
EIVII Test Receiver	Ronde & Schwarz	ESCI	101189	03-05-2021	03-04-2022	
Dulas Limitar	COLIMA DZDECK	OCD AM 220C	9731	03-05-2020	03-04-2021	
Pulse Limiter	SCHWARZBECK	OSRAM 2306		03-05-2021	03-04-2022	
LION	CHACE	MNIOOFOD	4 4 4 7	03-05-2020	03-04-2021	
LISN	CHASE	MN2050D	1447	03-05-2021	03-04-2022	
LISN	Rohde & Schwarz	ESH3-Z5	8438621/010	06-18-2020	07-17-2021	
0-1-1-	LID	405004	N1/A	03-05-2020	03-04-2021	
Cable	HP	10503A	N/A	03-05-2021	03-04-2022	
EMI Test Software	AUDIX	E3	Version: 6.110919b			

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Page 7 of 44



Project No.: JYTSZE2102019



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	

Page 8 of 44



## 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 Wi-Fi antenna is an Internal antenna which cannot replace by end-user, the best case gain of the antenna is 1.2 dBi.

Page 9 of 44



## 6.2 Conducted Emission

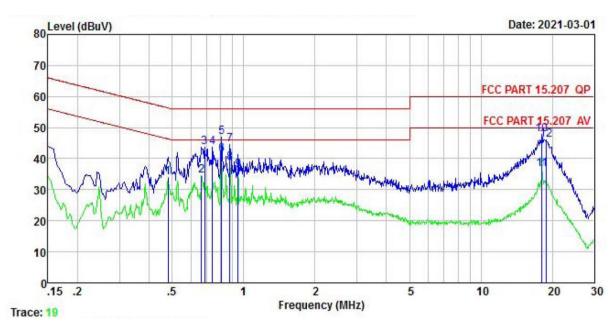
Test Requirement:	FCC Part 15 C Section 15.2	207						
Test Frequency Range:	150 kHz to 30 MHz							
Class / Severity:	Class B							
Receiver setup:	RBW=9 kHz, VBW=30 kHz							
Limit:	Fraguenov rango (MHz)	Limit (dRu\/)						
	Frequency range (MHz)	Quasi-peak	Average					
	0.15-0.5	66 to 56*	56 to 46*					
	0.5-5	56	46					
	5-30	60	50					
	* Decreases with the logarit	hm of the frequency.						
Test procedure	<ol> <li>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 500hm/50uH coupling impedance for the measuring equipment.</li> <li>The peripheral devices are also connected to the main power through a LISN that provides a 500hm/50uH coupling impedance with 500hm termination. (Please refer to the block diagram of the test setup and photographs).</li> <li>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(latest version) on conducted measurement.</li> </ol>							
Test setup:	LISN	st	er — AC power					
Test Instruments:	Refer to section 5.9 for deta	ails						
Test mode:	Refer to section 5.3 for deta	ails						
Test results:	Passed							

Page 10 of 44



#### **Measurement Data:**

Product name:	Mobile Phone	Product model:	LE7
Test by:	Mike	Test mode:	Wi-Fi 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	Level	Limit Line	Over Limit	Remark
<u>~</u>	MHz	dBu₹	<u>dB</u>	dBu₹	dBu₹	<u>dB</u>	
1	0.481	23.87	-0.44	33.94			Average
2	0.665	24.58	-0.51	34.45	46.00	-11.55	Average
3	0.686	33.94	-0.52	43.79	56.00	-12.21	QP
4	0.739	33.69	-0.54	43.66	56.00	-12.34	QP
5	0.809	36.64	-0.57	46.83	56.00	-9.17	QP
6	0.809	31.15	-0.57	41.34	46.00	-4.66	Average
7	0.876	34.34	-0.59	44.71	56.00	-11.29	QP
1 2 3 4 5 6 7 8 9	0.876	28.28	-0.59	38.65	46.00	-7.35	Average
9	0.948	25.80	-0.61	36.36	46.00	-9.64	Average
10	18.039	35.81	-0.80	47.83	60.00	-12.17	QP
11	18.039	24.52	-0.80	36.54	50.00	-13.46	Average
12	18.920	34.46	-0.83	45.98	60.00	-14.02	QP

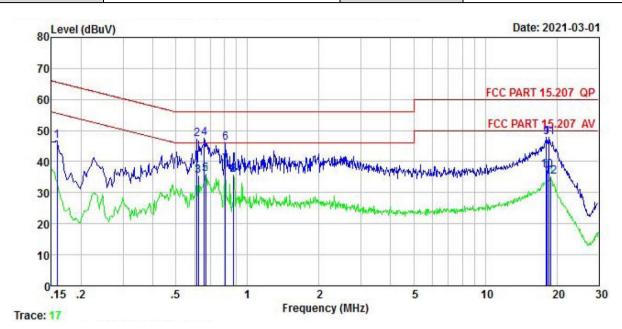
#### Notes:

- 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 + Aux Factor + Cable Loss.

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Product name:	Mobile Phone	Product model:	LE7
Test by:	Mike	Test mode:	Wi-Fi 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	Level	Limit Line	Over Limit	Remark
	MHz	dBu∜	<u>dB</u>	dBu₹	−dBuV	<u>d</u> B	
1	0.158	36.55	-0.69	46.64		-18.92	QP
2	0.614	37.01	-0.64	47.18	56.00	-8.82	QP
3	0.621	25.13	-0.64	35.30	46.00	-10.70	Average
4	0.658	37.40	-0.64	47.57	56.00	-8.43	QP
5	0.668	25.84	-0.64	36.01	46.00	-9.99	Average
6	0.809	35.75	-0.66	45.96	56.00	-10.04	QP
7	0.809	28.80	-0.66	39.01	46.00	-6.99	Average
1 2 3 4 5 6 7 8 9	0.876	25.41	-0.66	35.64	46.00	-10.36	Average
9	18.039	36.85	-1.11	47.96	60.00	-12.04	QP
10	18.135	26.32	-1.12	37.34	50.00	-12.66	Average
11	18.524	37.16	-1.16	47.89		-12.11	
12	18.820	24.46	-1.19	35.00			Average

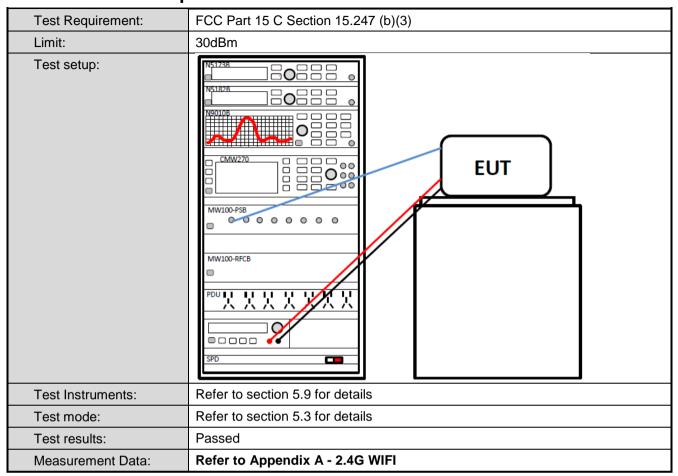
#### Notes:

- 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 + Aux Factor + Cable Loss.



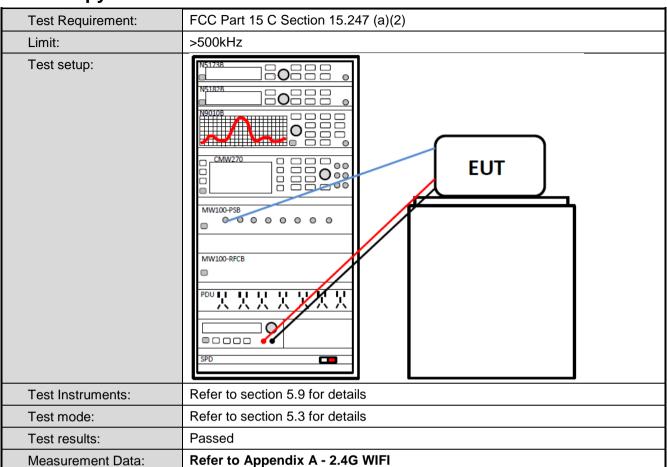


## **6.3 Conducted Output Power**





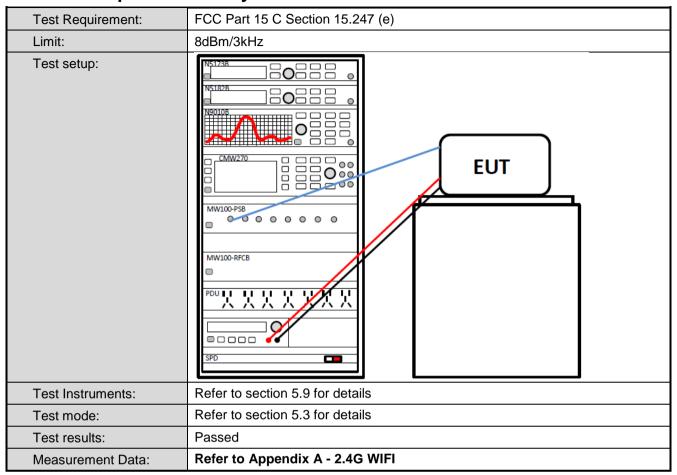
# 6.4 Occupy Bandwidth



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## 6.5 Power Spectral Density





# 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. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph(b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.					
Test setup:	NS182B  NS18B  NS18					
Test Instruments:	Refer to section 5.9 for details					
Test mode:	Refer to section 5.3 for details					
Test results:	Passed					
Measurement Data:	Refer to Appendix A - 2.4G WIFI					



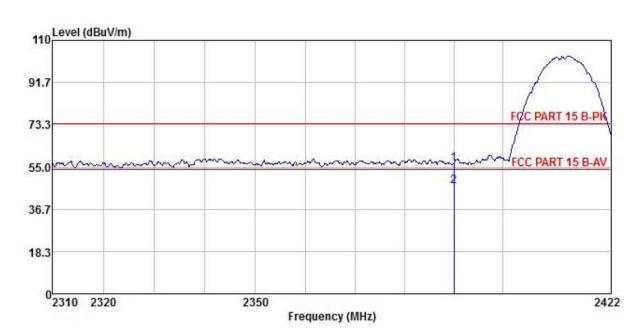
## 6.6.2 Radiated Emission Method

Test Requirement:	FCC Part 15 C Section 15.209 and 15.205						
Test Frequency Range:	2310 MHz to 2390	) MHz and 24	83.5 MHz to 2	500 MHz			
Test Distance:	3m						
Receiver setup:	Frequency	Detector	RBW	VBW	Remark		
·	Above 1GHz	Peak	1MHz	3MHz	Peak Value		
		RMS	1MHz	3MHz	Average Value		
Limit:	Frequency	Lir	nit (dBuV/m @	3m)	Remark		
	Above 1GH	z	54.00		Average Value		
Test Procedure:	<ol> <li>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.</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 and 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 Specified 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 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.</li> </ol>						
Test setup:	150cm	(Turntable)	Ground Reference Plane	Antenna Antenna  Antenna Controller	Tower		
Test Instruments:	Refer to section 5	.9 for details					
Test mode:	Refer to section 5	.3 for details					
Test results:	Passed						



#### 802.11b mode:

Product Name:	Mobile Phone	Product Model:	LE7
Test By:	Mike	Test mode:	802.11b Tx mode
Test Channel:	Lowest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%



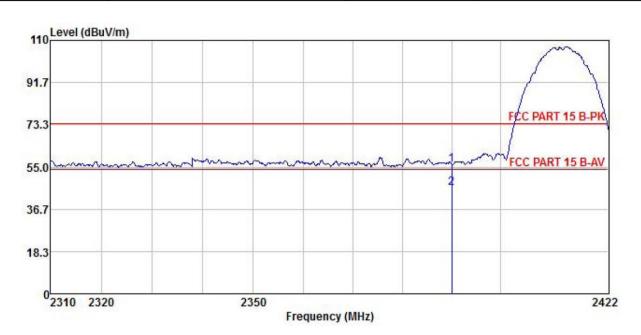
	Freq		Antenna Factor						Remark
	MHz	dBu∜		 <u>ab</u>	<u>dB</u>	dBuV/m	dBuV/m	<u>dB</u>	
1 2	2390.000 2390.000								

## Remark:

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.



Product Name:	Mobile Phone	Product Model:	LE7
Test By:	Mike	Test mode:	802.11b Tx mode
Test Channel:	Lowest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%



Freq									Remark
<u>MH</u> z	dBu∇	<u>dB</u> /m	<u>d</u> B	<u>d</u> B	<u>d</u> B	dBuV/m	dBuV/m	<u>dB</u>	
	MHz 2390.000	Freq Level  MHz dBuV  2390.000 20.15	Freq Level Factor  MHz dBuV dB/m  2390.000 20.15 27.03	Freq Level Factor Loss  MHz dBuV dB/m dB  2390.000 20.15 27.03 8.73	Freq Level Factor Loss Factor  MHz dBuV dB/m dB dB  2390.000 20.15 27.03 8.73 0.00	Freq Level Factor Loss Factor Factor  MHz dBuV dB/m dB dB dB  2390.000 20.15 27.03 8.73 0.00 0.00	Freq Level Factor Loss Factor Factor Level  MHz dBuV dB/m dB dB dB dB dBuV/m  2390.000 20.15 27.03 8.73 0.00 0.00 55.91	Freq Level Factor Loss Factor Factor Level Line  MHz dBuV dB/m dB dB dB dB dBuV/m dBuV/m  2390.000 20.15 27.03 8.73 0.00 0.00 55.91 74.00	ReadAntenna   Cable   Aux Preamp   Limit   Over

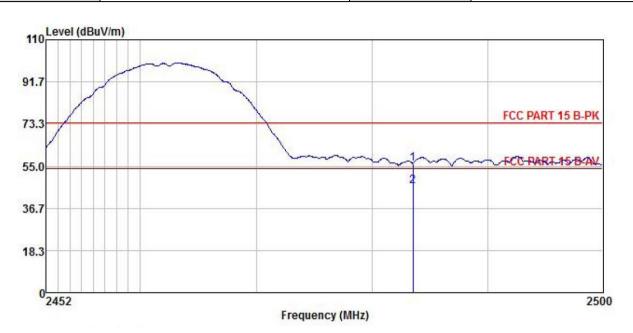
- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.

Telephone: +86 (0) 755 23118282 Fax: +86 (0) 755 23116366 Page 19 of 44

Project No.: JYTSZE2102019



Product Name:	Mobile Phone	Product Model:	LE7
Test By:	Mike	Test mode:	802.11b Tx mode
Test Channel:	Highest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%



	Freq	ReadAntenna Level Factor						Limit Line		Remark
	MHz	dBu∜			<u>dB</u>	<u>d</u> B	dBuV/m	dBuV/m	<u>dB</u>	
1 2	2483.500 2483.500									

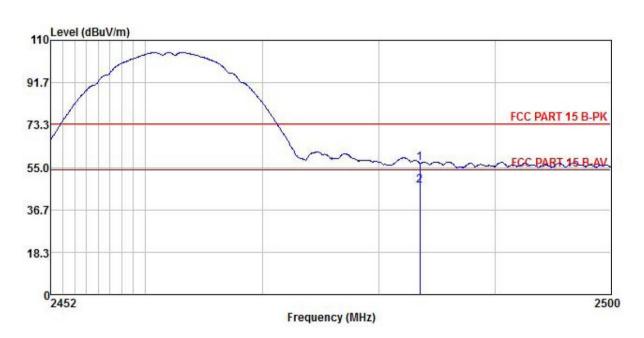
#### Remark

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.

Telephone: +86 (0) 755 23118282 Fax: +86 (0) 755 23116366 Page 20 of 44



Product Name:	Mobile Phone	Product Model:	LE7
Test By:	Mike	Test mode:	802.11b Tx mode
Test Channel:	Highest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%



	Freq	ReadAntenna Freq Level Factor		Cable Aux Loss Factor				Limit Line		Remark
	MHz	dBu∇	dB/m		<u>d</u> B	dB	dBuV/m	dBuV/m	<u>dB</u>	
1 2	2483.500 2483.500									

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.

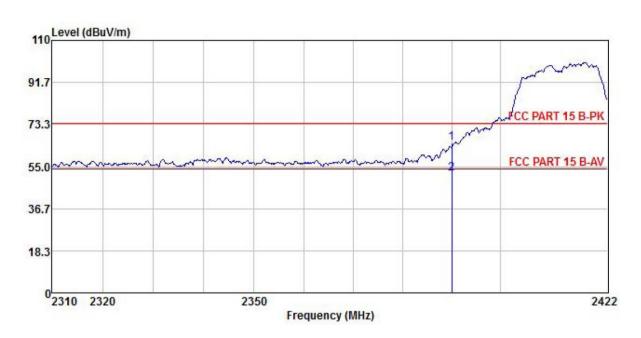
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#### 802.11g mode:

Product Name:	Mobile Phone	Product Model:	LE7
Test By:	Mike	Test mode:	802.11g Tx mode
Test Channel:	Lowest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%



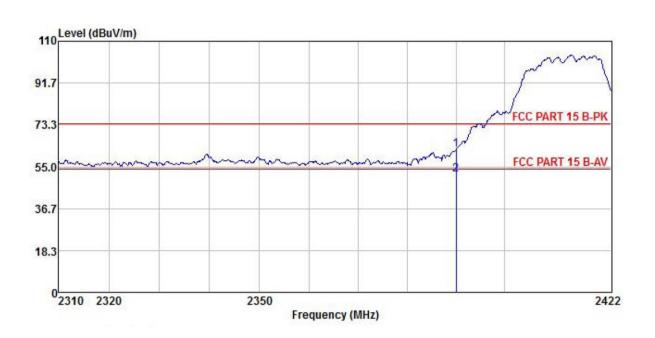
	Freq	ReadAntenna Level Factor						Limit Line		Remark
	MHz	dBu∇	<u>dB</u> /m	<u>d</u> B	<u>dB</u>	dB	$\overline{dBuV/m}$	$\overline{dBuV/m}$	<u>d</u> B	
1 2	2390.000 2390.000									

#### Remark

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.



Product Name:	Mobile Phone	Product Model:	LE7
Test By:	Mike	Test mode:	802.11g Tx mode
Test Channel:	Lowest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%



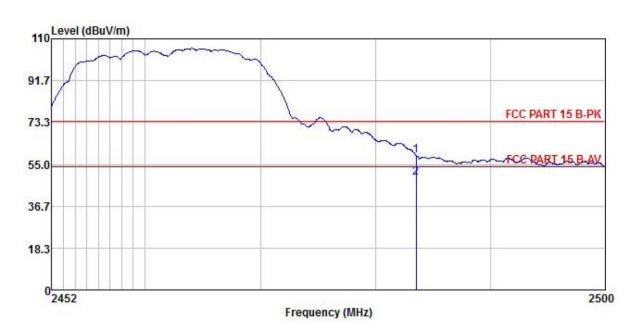
	Freq		Antenna Factor					Limit Line		Remark
	MHz	dBu∜	<u>dB</u> /m	<u>d</u> B	<u>dB</u>	<u>dB</u>	dBuV/m	dBuV/m	dB	
1 2	2390.000 2390.000									

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.

Telephone: +86 (0) 755 23118282 Fax: +86 (0) 755 23116366 Page 23 of 44



Product Name:	Mobile Phone	Product Model:	LE7		
Test By:	By: Mike Test mode:				
Test Channel:	Highest channel	Polarization:	Vertical		
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%		



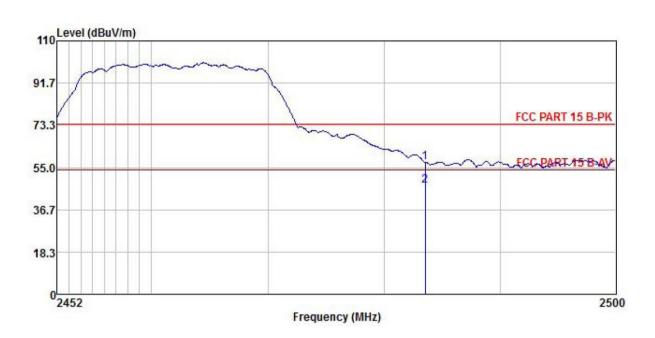
	Freq			e Aux				Over Limit	
	MHz	dBu∜	 <u>d</u> B	dB	<u>dB</u>	$\overline{dBuV/m}$	$\overline{dBuV/m}$	<u>dB</u>	
1 2	2483.500 2483.500								

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.

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Product Name:	Mobile Phone	Product Model:	LE7
Test By:	Mike	Test mode:	802.11g Tx mode
Test Channel:	Highest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%



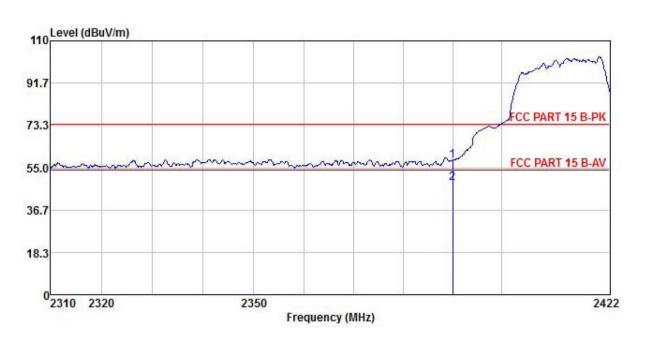
	Freq		na Cable or Loss				Limit Line		Remark
	MHz	dBu∇	 	<u>dB</u>	<u>d</u> B	dBuV/m	dBuV/m	<u>dB</u>	
1 2	2483.500 2483.500								

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.



#### 802.11n(HT20):

Product Name:	Mobile Phone	Product Model:	LE7		
Test By:	Mike	Test mode:	802.11n(HT20) Tx mode		
Test Channel:	Lowest channel	Polarization:	Vertical		
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%		



		ReadAntenna Freq Level Factor							
		dBu∇	— <u>dB</u> /m	 <u>dB</u>	<u>d</u> B	dBu∀/m	dBuV/m	<u>dB</u>	
	2390.000 2390.000								

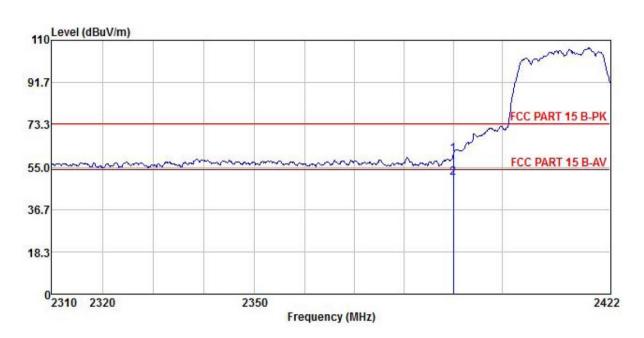
#### Remark:

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.

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Product Name:	Mobile Phone	Product Model:	LE7
Test By:	Mike	Test mode:	802.11n(HT20) Tx mode
Test Channel:	Lowest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%



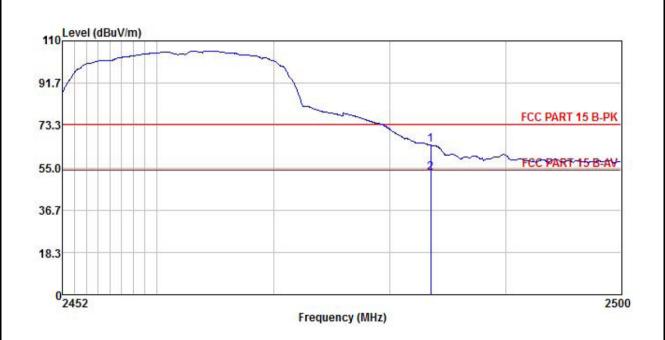
						Preamp Factor		Limit Line		Remark
		MHz dBuV dB/	<u>dB</u> /π	<u>d</u> B	<u>d</u> B	dB	$\overline{dBuV/m}$	dBuV/m	<u>dB</u>	
1 2	2390.000 2390.000									

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.

Page 27 of 44



Product Name:	Mobile Phone	Product Model:	LE7		
Test By:	Mike	Test mode:	802.11n(HT20) Tx mode		
Test Channel:	Highest channel	Polarization:	Vertical		
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%		



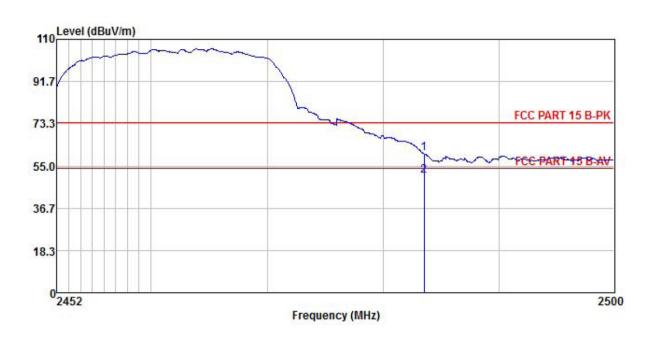
	Freq		Antenna Factor					Limit Line		Remark
	MHz	dBu∜	dB/m	<u>d</u> B	dB	<u>dB</u>	$\overline{dBuV/m}$	$\overline{dBuV/m}$	dB	
1 2	2483.500 2483.500									

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.

Page 28 of 44



Product Name:	Mobile Phone	Product Model:	LE7
Test By:	Mike	Test mode:	802.11n(HT20) Tx mode
Test Channel:	Highest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%



	Freq MHz	ReadAntenr Freq Level Facto		Cable Aux Loss Factor						Remark
		MHz dBuV dB			<u>dB</u>	<u>dB</u> <u>dB</u>	dBuV/m ∂	dBuV/m	<u>dB</u>	
1 2	2483.500 2483.500									

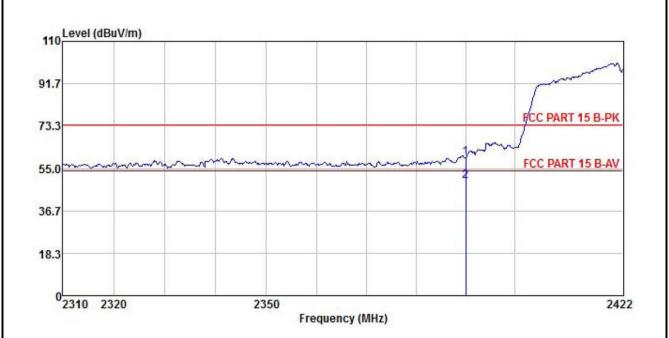
- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.

Page 29 of 44



#### 802.11n(HT40):

Product Name:	Mobile Phone	Product Model:	LE7
Test By:	Mike	Test mode:	802.11n(HT40) Tx mode
Test Channel:	Lowest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%



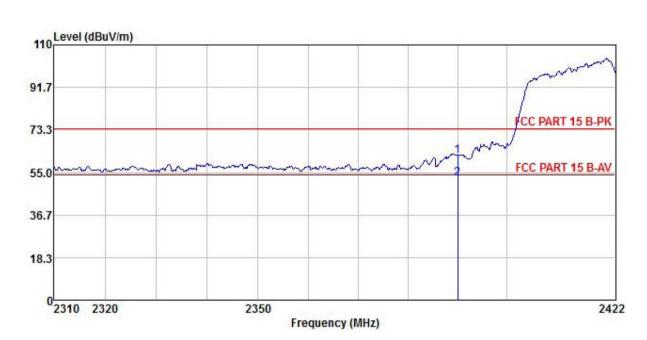
	ReadAntenna Freq Level Factor							Over Limit	Remark	
	MHz	dBu∜	dB/m	<u>d</u> B	<u>d</u> B	dB	$\overline{dBuV/m}$	dBu√/m	<u>dB</u>	
1 2	2390.000 2390.000									

## Remark:

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.



Product Name:	Mobile Phone	Product Model:	LE7
Test By:	Mike	Test mode:	802.11n(HT40) Tx mode
Test Channel:	Lowest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%

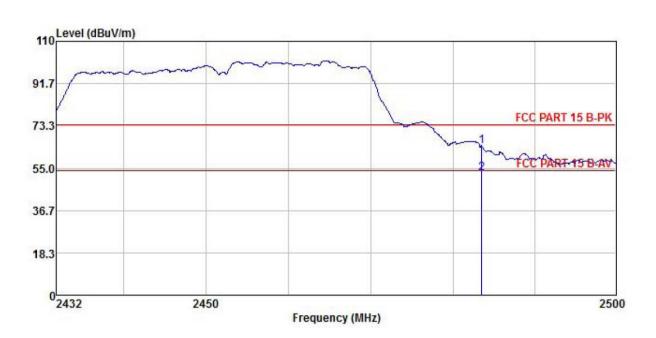


		ReadAntenna Freq Level Factor								Remark
		dBu∜	<u>dB</u> /m	<u>dB</u>	<u>dB</u>	<u>dB</u>	dBuV/m	dBuV/m	<u>dB</u>	
	2390.000 2390.000									

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.



Product Name:	Mobile Phone	Product Model:	LE7		
Test By:	Mike	Test mode:	802.11n(HT40) Tx mode		
Test Channel:	Highest channel	Polarization:	Vertical		
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%		



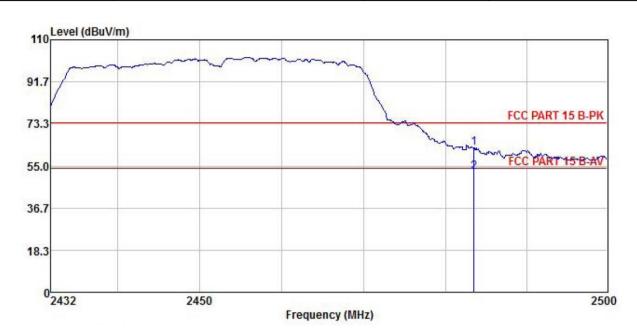
	Freq		Antenna Factor				Limit Line		Remark
	MHz	dBu∜		 <u>dB</u>	<u>dB</u>	dBuV/m	dBuV/m	<u>dB</u>	
1 2	2483.500 2483.500								

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.

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Product Name:	Mobile Phone	Product Model:	LE7
Test By:	Mike	Test mode:	802.11n(HT40) Tx mode
Test Channel:	Highest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%



	Freq		Antenna Factor						Over Limit	
	MHz	dBu∇	dB/m	<u>dB</u>	<u>dB</u>	<u>dB</u>	dBu√/m	dBuV/m	<u>dB</u>	
1 2	2483.500 2483.500									

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.

Page 33 of 44



# 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. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph(b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.
Test setup:	NSTREE  NSTREE
Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed
Measurement Data:	Refer to Appendix A - 2.4G WIFI

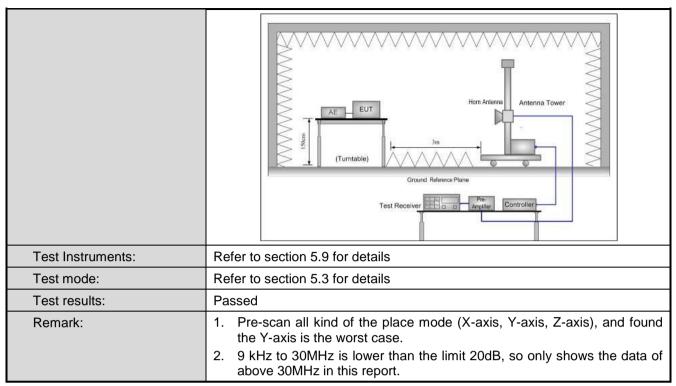
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## 6.7.2 Radiated Emission Method

Test Requirement:	FCC Part 15 C Se	ction 15.	.209 ar	nd 15.205				
Test Frequency Range:	9kHz to 25GHz							
Test Distance:	3m							
Receiver setup:	Frequency	Detec	ctor	RBW	V	BW	Remark	
·	30MHz-1GHz	Quasi-	peak	120KHz	300KHz		Quasi-peak Value	
	Above 1GHz	Pea		1MHz	31	ИHz	Peak Value	
		RM		1MHz		MHz Average Value		
Limit:	Frequency	_	m)	_	Remark			
	30MHz-88MH			40.0			uasi-peak Value	
	88MHz-216MH			43.5			uasi-peak Value	
	216MHz-960M			46.0			uasi-peak Value	
	960MHz-1GH	IZ		54.0 54.0			uasi-peak Value	
	Above 1GHz	<u> </u>		74.0		, ·	Average Value Peak Value	
Test Procedure:	<ol> <li>The EUT was placed on the top of a rotating table 0.8m(below 1GHz)/1.5m(above 1GHz) above the ground at a 3 meter chamber. 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 and 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 Specified 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 10dB margin would be re-tested one by one using peak, quasi-peak or</li> </ol>							
Test setup:	average meth Below 1GHz  EUT Turn Table Ground I	3m → 3m → 0.8m				Ant	tenna Tower Search ntenna	



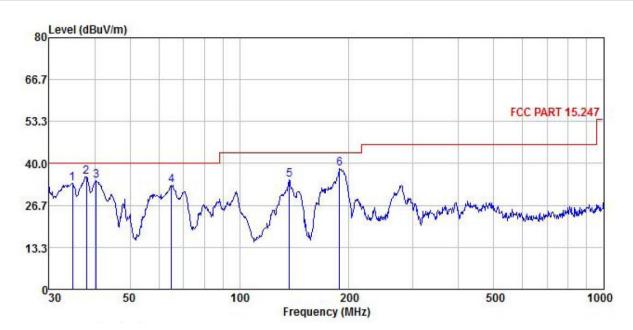




#### Measurement Data (worst case):

#### **Below 1GHz:**

Product Name:	Mobile Phone	Product Model:	LE7
Test By:	Mike	Test mode:	Wi-Fi Tx mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%



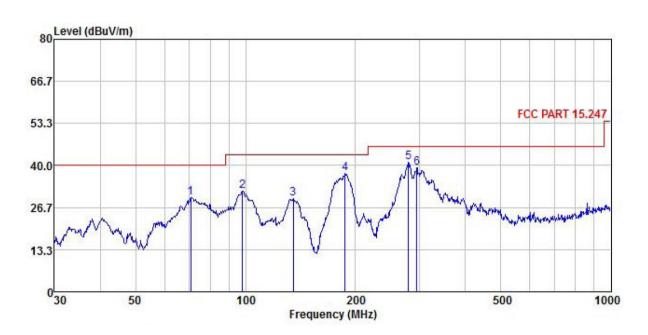
		Read	Antenna					Limit	Over	
	Freq	Level	Factor	Loss	Factor	Factor	Level	Line	Limit	Remark
	MHz	dBu∜	dB/m	<u>d</u> B	dB	−−−−dB	$\overline{dBuV/m}$	$\overline{dBuV/m}$	<u>dB</u>	A THE STREET OF THE STREET,
1	34.760	50.55	12.56	0.39	0.00	29.95	33.55	40.00	-6.45	QP
2	37.945	52.63	12.72	0.39	0.00	29.92	35.82	40.00	-4.18	QP
2	40.417	51.09	12.81	0.40	0.00	29.90	34.40	40.00	-5.60	QP
	65.114	52.42	9.81	0.61	0.00	29.76	33.08	40.00	-6.92	QP
4	136.939	49.64	13.62	0.98	0.00	29.29	34.95	43.50	-8.55	QP
6	188.413	48.60	17.34	1.35	0.00	28.91	38.38	43.50	-5.12	QP

#### Remark.

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.
- 3. The Aux Factor is a notch filter switch box loss, this item is not used.



Product Name:	Mobile Phone	Product Model:	LE7
Test By:	Mike	Test mode:	Wi-Fi Tx mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%



	Freq		Antenna Factor			Preamp Factor		Limit Line	Over Limit	Remark
2	MHz	dBu∜	dB/m	<u>dB</u>	<u>dB</u>	dB	$\overline{dBuV/m}$	$\overline{dBuV/m}$	<u>dB</u>	
1	70.832	48.51	10.32	0.66	0.00	29.71	29.78	40.00	-10.22	QP
2	98.142	51.71	9.01	0.78	0.00	29.54	31.96	43.50	-11.54	QP
3	135.032	44.34	13.50	0.97	0.00	29.30	29.51	43.50	-13.99	QP
4	187.096	47.81	17.29	1.34	0.00	28.92	37.52	43.50	-5.98	QP
5	279.044	49.15	18.62	1.68	0.00	28.49	40.96	46.00	-5.04	QP
6	294.114	47.21	18.68	1.74	0.00	28.46	39.17	46.00	-6.83	QP

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.
- 3. The Aux Factor is a notch filter switch box loss, this item is not used.

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#### **Above 1GHz**

	802.11b													
	Test channel: Lowest channel													
	Detector: Peak Value													
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	tor (dBuV/m) L		Over Limit (dB)	Polarization					
4824.00	59.68	30.81	6.81	2.46	41.82	57.94	74.00	-16.06	Vertical					
4824.00	59.18	30.81	6.81	2.46	41.82	57.44	74.00	-16.56	Horizontal					
				Detector:	Average V	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					
4824.00 49.72 30.81 6.81 2.46 41.82 47.98								-6.02	Vertical					
4824.00 49.31 30.81 6.81 2.46 41.82 47.57 54.00 -6.43 Horizont														
		·	·			·			-					

	Test channel: Middle channel												
Detector: Peak Value													
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				
4874.00	59.57	30.93	6.85	2.47	41.84	57.98	74.00	-16.02	Vertical				
4874.00	58.82	30.93	6.85	2.47	41.84	57.23	74.00	-16.77	Horizontal				
				Detector:	Average V	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				
4874.00	50.13	30.93	6.85	2.47	41.84	48.54	54.00	-5.46	Vertical				
4874.00	49.14	30.93	6.85	2.47	41.84	47.55	54.00	-6.45	Horizontal				

	Test channel: Highest channel													
Detector: Peak Value														
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					
4924.00	59.18	31.05	6.89	2.48	41.86	57.74	74.00	-16.26	Vertical					
4924.00	58.63	31.05	6.89	2.48	41.86	57.19	74.00	-16.81	Horizontal					
				Detector:	Average V	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					
4924.00	49.89	31.05	6.89	2.48	41.86	48.45	54.00	-5.55	Vertical					
4924.00	48.89	31.05	6.89	2.48	41.86	47.45	54.00	-6.55	Horizontal					

#### Remark:

<sup>1.</sup> Final Level = Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor.

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





802.11g										
Test channel: Lowest channel										
Detector: Peak Value										
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	
4824.00	58.68	30.81	6.81	2.46	41.82	56.94	74.00	-17.06	Vertical	
4824.00	58.51	30.81	6.81	2.46	41.82	56.77	74.00	-17.23	Horizontal	
				Detector:	Average V	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	
4824.00	50.31	30.81	6.81	2.46	41.82	48.57	54.00	-5.43	Vertical	
4824.00	48.74	30.81	6.81	2.46	41.82	47.00	54.00	-7.00	Horizontal	

Test channel: Middle channel											
Detector: Peak Value											
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		
4874.00	59.03	30.93	6.85	2.47	41.84	57.44	74.00	-16.56	Vertical		
4874.00	58.22	30.93	6.85	2.47	41.84	56.63	74.00	-17.37	Horizontal		
				Detector:	Average V	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		
4874.00	50.74	30.93	6.85	2.47	41.84	49.15	54.00	-4.85	Vertical		
4874.00	49.08	30.93	6.85	2.47	41.84	47.49	54.00	-6.51	Horizontal		

Test channel: Highest channel											
Detector: Peak Value											
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		
4924.00	58.81	31.05	6.89	2.48	41.86	57.37	74.00	-16.63	Vertical		
4924.00	58.47	31.05	6.89	2.48	41.86	57.03	74.00	-16.97	Horizontal		
				Detector:	Average V	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		
4924.00	50.99	31.05	6.89	2.48	41.86	49.55	54.00	-4.45	Vertical		
4924.00	48.65	31.05	6.89	2.48	41.86	47.21	54.00	-6.79	Horizontal		

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.

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202.44./UT22										
802.11n(HT20)										
Test channel: Lowest channel										
Detector: Peak Value										
Frequency	Read	Antenna	Cable	Aux	Preamp	Level	Limit	Over	Delevi-ation	
(MHz)	Level (dBuV)	Factor	Loss (dB)	Factor (dB)	Factor (dB)	(dBuV/m)	Line	Limit (dB)	Polarization	
4004.00	` '	(dB/m)		` '	` ′	50.04	(dBuV/m)	` '	) / a sti a a l	
4824.00	58.35	30.81	6.81	2.46	41.82	56.61	74.00	-17.39	Vertical	
4824.00   58.48   30.81   6.81   2.46   41.82   56.74   74.00   -17.26   Horizontal Detector: Average Value										
	- I		0.11	ı	T	aiue	1,			
Frequency	Read Level	Antenna Factor	Cable Loss	Aux Factor	Preamp Factor	Level	Limit Line	Over Limit	Polarization	
(MHz)	(dBuV)	(dB/m)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Polarization	
4824.00	51.13	30.81	6.81	2.46	41.82	49.39	54.00	-4.61	Vertical	
4824.00	48.82	30.81	6.81	2.46	41.82	47.08	54.00	-6.92	Horizontal	
4024.00	40.02	30.01	0.01	2.40	41.02	47.00	34.00	-0.32	Honzontai	
Test channel: Middle channel										
	Detector: Peak Value									
	Read	Antenna	Cable	Aux	Preamp		Limit	Over		
Frequency	Level	Factor	Loss	Factor	Factor	Level	Line	Limit	Polarization	
(MHz)	(dBuV)	(dB/m)	(dB)	(dB)	(dB)	(dBuV/m)	(dBuV/m)	(dB)		
4874.00	58.38	30.93	6.85	2.47	41.84	56.79	74.00	-17.21	Vertical	
4874.00	58.57	30.93	6.85	2.47	41.84	56.98	74.00	-17.02	Horizontal	
				Detector:	Average V	alue				
	Read	Antenna	Cable	Aux	Preamp	Lavial	Limit	Over		
Frequency (MHz)	Level	Factor	Loss	Factor	Factor	Level (dBuV/m)	Line	Limit	Polarization	
(1711 12)	(dBuV)	(dB/m)	(dB)	(dB)	(dB)	(ubu v/III)	(dBuV/m)	(dB)		
4874.00	51.30	30.93	6.85	2.47	41.84	49.71	54.00	-4.29	Vertical	
4874.00	48.92	30.93	6.85	2.47	41.84	47.33	54.00	-6.67	Horizontal	
			Te		l: Highest c					
					r: Peak Val	ue				
Frequency	Read	Antenna	Cable	Aux	Preamp	Level	Limit	Over		
(MHz)	Level	Factor	Loss	Factor	Factor	(dBuV/m)	Line	Limit	Polarization	
` '	(dBuV)	(dB/m)	(dB)	(dB	(dB)	,	(dBuV/m)	(dB)		
4924.00	58.61	31.05	6.89	2.48	41.86	57.17	74.00	-16.83	Vertical	
4924.00	58.98	31.05	6.89	2.48	41.86	57.54	74.00	-16.46	Horizontal	
				ı	Average V	alue				
Frequency	Read	Antenna	Cable	Aux	Preamp		Limit	Over	Polarization	
(MHz)	Level	Factor	Loss	Factor	Factor	(dBuV/m)	Line	Limit		
4024.00	(dBuV)	(dB/m)	(dB)	(dB)	(dB)	40.47	(dBuV/m)	(dB)	Vertical	
4924.00	50.91	31.05	6.89	2.48	41.86	49.47	54.00	-4.53 7.01	Vertical	
4924.00	48.43	31.05	6.89	2.48	41.86	46.99	54.00	-7.01	Horizontal	
Remark:										

<sup>1.</sup> Final Level = Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor.

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





802.11n(HT40)										
Test channel: Lowest channel										
Detector: Peak Value										
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	
4844.00	58.96	30.87	6.83	2.46	41.83	57.29	74.00	-16.71	Vertical	
4844.00	58.63	30.87	6.83	2.46	41.83	56.96	74.00	-17.04	Horizontal	
				Detector:	Average V	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	
4844.00	50.93	30.87	6.83	2.46	41.83	49.26	54.00	-4.74	Vertical	
4844.00	48.84	30.87	6.83	2.46	41.83	47.17	54.00	-6.83	Horizontal	
Test channel: Middle channel										
					r: Peak Val	ue				
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	
4874.00	59.12	30.93	6.85	2.47	41.84	57.53	74.00	-16.47	Vertical	
4874.00	58.67	30.93	6.85	2.47	41.84	57.08	74.00	-16.92	Horizontal	
				Detector:	Average V	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	
4874.00	50.79	30.93	6.85	2.47	41.84	49.20	54.00	-4.80	Vertical	
4874.00	49.30	30.93	6.85	2.47	41.84	47.71	54.00	-6.29	Horizontal	
			Те	st channel	l: Highest c	hannel				
	Detector: Peak Value									

Test channel: Highest channel											
Detector: Peak Value											
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		
4904.00	58.92	30.99	6.87	2.48	41.85	57.41	74.00	-16.59	Vertical		
4904.00	58.62	30.99	6.87	2.48	41.85	57.11	74.00	-16.89	Horizontal		
				Detector:	Average V	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		
4904.00	50.98	30.99	6.87	2.48	41.85	49.47	54.00	-4.53	Vertical		
4904.00	49.59	30.99	6.87	2.48	41.85	48.08	54.00	-5.92	Horizontal		

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<sup>1.</sup> Final Level = Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor.

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