



Radio Test Report

Report No.:STS2512104W03

Issued for

SWAGTEK

10205 NW 19th Street,STE 101,Miami, FL33172.USA

Product Name: 4G Smart Phone

Brand Name: LOGIC,UNONU, iSWAG

Model Name: L68M PLUS

Series Model(s): UL68M, Mega2

FCC ID: O55683725

Test Standards: FCC Part15.247

The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the Shenzhen STS Test Services Co., Ltd.

**TEST REPORT****Applicant's Name** : SWAGTEK

Address : 10205 NW 19th Street, STE 101, Miami, FL33172.USA

Manufacturer's Name : SWAGTEK

Address : 10205 NW 19th Street, STE 101, Miami, FL33172.USA

Product Description

Product Name : 4G Smart Phone

Brand Name : LOGIC, UNONU, iSWAG

Model Name : L68M PLUS

Series Model(s) : UL68M, Mega2

Standards : FCC Part 15.247

Test Procedure : ANSI C63.10-2020

This device described above has been tested by STS, the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

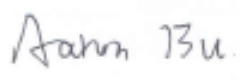
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Date of Test :

Date of receipt of test item : 28 May, 2025

Date (s) of performance of tests : 29 May, to 06 Aug., 2025

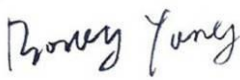
Date of Issue : 07 Aug., 2025

Test Result : **Pass**Testing Engineer : 

(Aaron Bu)

Technical Manager : 

(Skylar Li)

Authorized Signatory : 

(Bovey Yang)





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**Revision History**

Rev.	Issue Date	Report No.	Effect Page	Contents
00	07 Aug., 2025	STS2512104W03	ALL	Initial Issue



1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:
KDB 558074 D01 15.247 Meas Guidance v05r02.

FCC Part 15.247, Subpart C			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	PASS	--
15.247 (a)(2)	6dB Bandwidth	PASS	--
15.247 (b)(3)	Output Power	PASS	--
15.209	Radiated Spurious Emission	PASS	--
15.247 (d)	Conducted Spurious & Band Edge Emission	PASS	--
15.247 (e)	Power Spectral Density	PASS	--
15.205	Restricted Band Edge Emission	PASS	--
Part 15.247(d)/ part 15.209(a)	Band Edge Emission	PASS	--
15.203	Antenna Requirement	PASS	--

NOTE:

- (1) 'N/A' denotes test is not applicable in this Test Report.
- (2) All tests are according to ANSI C63.10-2020.



1.1 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD

Add. : 101, Building B, Zhuoke Science Park, No.190 Chongqing Road, ZhanChengShequ, Fuhai Sub-District, Bao'an District, Shenzhen, Guang Dong, China

FCC test Firm Registration Number: 625569

IC test Firm Registration Number: 12108A

A2LA Certificate No.: 4338.01

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95 %.

No.	Item	Uncertainty
1	RF output power, conducted	$\pm 0.751\text{dB}$
2	Unwanted Emissions, conducted	$\pm 2.888\text{dB}$
3	All emissions, radiated 9K-30MHz	$\pm 2.48\text{dB}$
4	All emissions, radiated 30M-1GHz	$\pm 2.52\text{dB}$
5	All emissions, radiated 1G-18GHz	$\pm 3.48\text{dB}$
6	All emissions, radiated >18GHz	$\pm 4.18\text{dB}$
7	Conducted Emission (9KHz-150KHz)	$\pm 2.48\text{dB}$
8	Conducted Emission (150KHz-30MHz)	$\pm 2.52\text{dB}$
9	Occupied Channel Bandwidth	$\pm 3.6\%$
10	Power Spectral Density, conducted	$\pm 1.214\text{dB}$
11	Duty Cycle	$\pm 3.2\%$



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

Product Name	4G Smart Phone	
Brand Name	LOGIC, UNONU, iSWAG	
Model Name	L68M PLUS	
Series Model(s)	UL68M, Mega2	
Model Difference	L68M PLUS, UL68M, Mega2 were identical inside, the electrical circuit design, layout, components used and internal wiring, with only difference being model name and trade mark.	
Product Description	The EUT is a \${Product name}	
	Operation Frequency:	802.11b/g/n 20: 2412~2462 MHz 802.11n40: 2422~2452MHz
	Modulation Type:	802.11b(DSSS): CCK, DQPSK, DBPSK 802.11g(OFDM): BPSK, QPSK, 16-QAM, 64-QAM 802.11n(OFDM): BPSK, QPSK, 16-QAM, 64-QAM BPSK, QPSK, 16-QAM, 64-QAM 802.11b/g/n Support SISO
	Bit Rate of Transmitter:	802.11b: 11/5.5/2/1 Mbps 802.11g: 54/48/36/24/18/12/9/6Mbps 802.11n(20MHz): 65/58.5/52/39/26/19.5/13/6.5Mbps 802.11n(40MHz): 135/121.5/108/81/54/40.5/37/13.5Mbps
	Number of Channel:	802.11b/g/n20: 11CH 802.11n 40: 7CH
	Antenna Type:	Internal Antenna
	Antenna Gain (dBi):	1.33 dBi (declare by applicant)
Channel List	Please refer to the Note 3.	
Adapter	Model: HAD-010U Input: AC100-240V, 50/60Hz, 0.35A Output: DC 5.0V, 2.0A, 10.0W	
Battery	Rechargeable Li-ion Polymer Battery DC3.87V, 4900mAh	
Hardware version number	/	
Software version number	/	
Connecting I/O Port(s)	Please refer to the Note 1.	

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User Manual.
2. The antenna details in this report are based on the manufacturer provided antenna specification documents and apply only to the tested sample identified herein.
Any discrepancies in the antenna information may affect the accuracy of the test results, and the customer assumes responsibility for any related issues..



3

Operation Frequency of channel			
802.11b/g/n/ax(20MHz)		Channel List for 802.11n/ax(40MHz)	
Channel	Frequency	Channel	Frequency
01	2412	03	2422
02	2417	04	2427
03	2422	05	2432
04	2427	06	2437
05	2432	07	2442
06	2437	08	2447
07	2442	09	2452
08	2447		
09	2452		
10	2457		
11	2462		

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, and the selected channel see below:

Carrier Frequency Channel

2.4GHz Test Frequency:

For 802.11b/g/n (HT20)		For 802.11n (HT40)	
Channel	Freq.(MHz)	Channel	Freq.(MHz)
01	2412	03	2422
06	2437	06	2437
11	2462	09	2452



2.2 DESCRIPTION OF THE TEST MODES

Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Worst Mode	Description	Data Rate
Mode 1	TX IEEE 802.11b CH01	1 Mbps
Mode 2	TX IEEE 802.11b CH06	1 Mbps
Mode 3	TX IEEE 802.11 b CH11	1 Mbps
Mode 4	TX IEEE 802.11g CH01	6 Mbps
Mode 5	TX IEEE 802.11g CH06	6 Mbps
Mode 6	TX IEEE 802.11g CH11	6 Mbps
Mode 7	TX IEEE 802.11n HT20 CH01	MCS 0
Mode 8	TX IEEE 802.11n HT20 CH06	MCS 0
Mode 9	TX IEEE 802.11n HT20 CH11	MCS 0
Mode 10	TX IEEE 802.11n HT40 CH03	MCS 0
Mode 11	TX IEEE 802.11n HT40 CH06	MCS 0
Mode 12	TX IEEE 802.11n HT40 CH09	MCS 0

Note:

- (1) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported.
- (2) We have be tested for all avaiable U.S. voltage and frequencies(For 120V,50/60Hz and 240V, 50/60Hz) for which the device is capable of operation, and the worst case of 120V /60Hz is shown in the report.

AC Conducted Emission

Test Worst Case	
AC Conducted Emission	Mode13: Keeping TX

For Radiated Spurious Emission

Test Worst Case	
Radiated Spurious Emission	Mode 13 : Keeping BT TX

2.3 TEST SOFTWARE AND POWER LEVEL

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level.

RF Function	Type	Data Rate	ANT Gain(dBi)	Power Class	Softwere for testing
2.4GHzWi-Fi	802.11b	1 Mbps	1.33	default	Engineering Mode
	802.11g	6 Mbps		default	
	802.11n20	MCS 0		default	
	802.11n40	MCS 0		default	

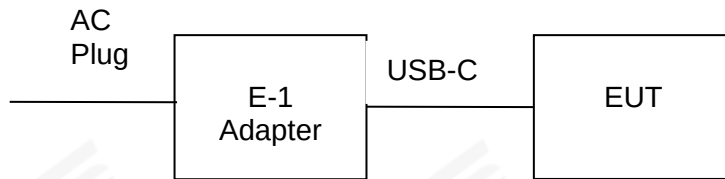


2.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Radiated Spurious Emission Test



AC Conducted Emission Test



RF Conducted Test





2.5 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Note
1	Adapter	N/A	HAD-010U	N/A
2	USB Cable	N/A	N/A	N/A

Item	Equipment	Ferrite Core	Length	Note
1	Detached USB Cable	Shielding	0.8m	N/A

Note:

- (1) For detachable type I/O cable should be specified the length in cm in 『Length』 column.
- (2) “YES” is means “with core”; “NO” is means “without core”.



2.6 EQUIPMENTS LIST FOR ALL TEST ITEMS

RF RADIATION TEST EQUIPMENT

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
Temperature & Humidity	SW-108	SuWei	N/A	2025.02.24	2026.02.23
Pre-Amplifier(0.1 M-3GHz)	EM	EM330	060665	2025.02.22	2026.02.21
Pre-Amplifier(1G-18GHz)	SKET	LNPA-01018G-45	SK2018080901	2024.09.23	2025.09.22
				2025.09.25	2026.09.24
Pre-Amplifier(18G-40GHz)	SKET	LNPA_1840-50	SK2018101801	2025.02.22	2026.02.21
Active loop Antenna	ZHINAN	ZN30900C	16035	2025.02.25	2027.02.24
Bilog Antenna	TESEQ	CBL6111D	34678	2024.09.30	2025.09.29
				2025.09.27	2027.09.26
Horn Antenna	SCHWARZBECK	BBHA 9120D	02014	2023.09.24	2025.09.23
				2025.09.27	2027.09.26
Horn Antenna	A-INFOMW	LB-180400-KF	J211020657	2023.10.10	2025.10.09
				2025.09.27	2027.09.26
Positioning Controller	MF	MF-7802	MF-780208587	N/A	N/A
Signal Analyzer	R&S	FSV 40-N	101823	2024.09.23	2025.09.22
				2025.09.26	2026.09.25
Switch Control Box	N/A	N/A	N/A	N/A	N/A
Filter Box	BALUN Technology	SU319E	BL-SZ1530051	N/A	N/A
Antenna Mast	MF	MFA-440H	N/A	N/A	N/A
Turn Table	MF	SC100_1	60531	N/A	N/A
AC Power Source	APC	KDF-11010G	F214050035	N/A	N/A
DC power supply	HONGSHENGFENG	DPS-305AF	17064939	2024.09.23	2025.09.22
				2025.09.22	2026.09.21
Test SW	EZ-EMC	Ver.STSLAB-03A1 RE			
Conduction Test Equipment					
Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Test Receiver	R&S	ESCI	101427	2024.9.23	2025.9.22
				2025.09.25	2026.09.24
Limiter	CYBERTEK	EM5010	N/A	2024.9.23	2025.9.22
				2025.09.25	2026.09.24
LISN	R&S	ENV216	101242	2024.9.23	2025.9.22
				2025.09.25	2026.09.24
LISN	EMCO	3810/2NM	23625	2024.9.23	2025.9.22
				2025.09.25	2026.09.24
Temperature & Humidity	SW-108	SuWei	N/A	2025.02.24	2026.02.23
Test SW	EZ-EMC	Ver.STSLAB-03A1 CE			
RF Connected Test					
Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Signal Analyzer	Keysight	N9020B	MY60240215	2024.09.10	2025.09.09
				2025.08.08	2026.08.07
Power detector group	Keysight	NW2021031	N/A	2024.09.24	2025.09.23
				2025.09.23	2026.09.22
Switch control box	MW	MW100-RFCB	N/A	N/A	N/A
Temperature& Humidity test chamber	Safety test	AG80L	171200018	2025.02.22	2026.02.21
Temperature & Humidity	SW-108	SuWei	N/A	2025.02.24	2026.02.23
Test SW	MW	MTS 8310_2.0.0.0			



3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION LIMITS

The radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table.

FREQUENCY (MHz)	Conducted Emission limit (dBuV)	
	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of “ * ” marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

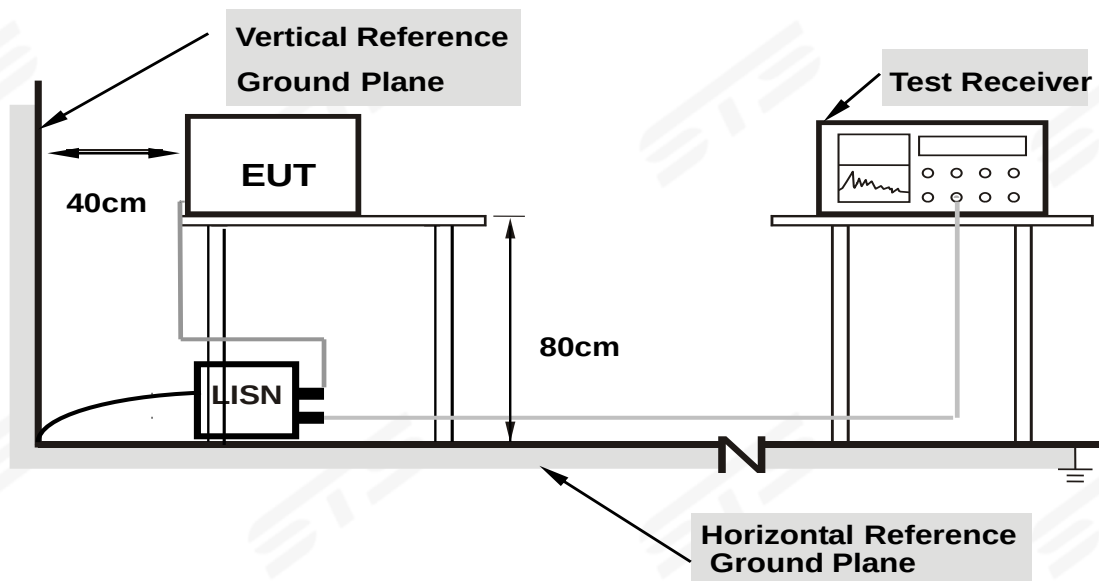
The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

3.1.2 TEST PROCEDURE

- The EUT is 0.8 m from the horizontal ground plane and 0.4 m from the vertical ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments are powered from additional LISN(s). The LISN provides 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- LISN is at least 80 cm from the nearest part of EUT chassis.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.1.3 TEST SETUP



Note: 1. Support units were connected to second LISN.

2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes support units.

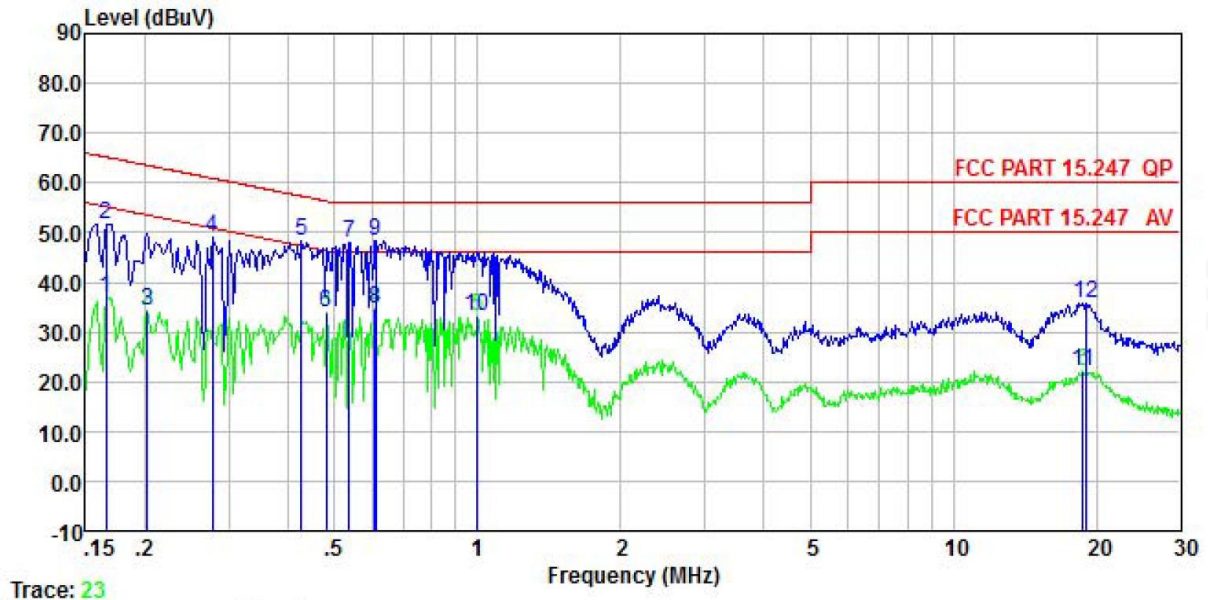
3.1.4 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.



3.1.5 TEST RESULT

Temperature:	23.9℃	Relative Humidity:	44%
Test Voltage:	AC 120V/60Hz	Phase:	L
Test Mode:	Mode 13		



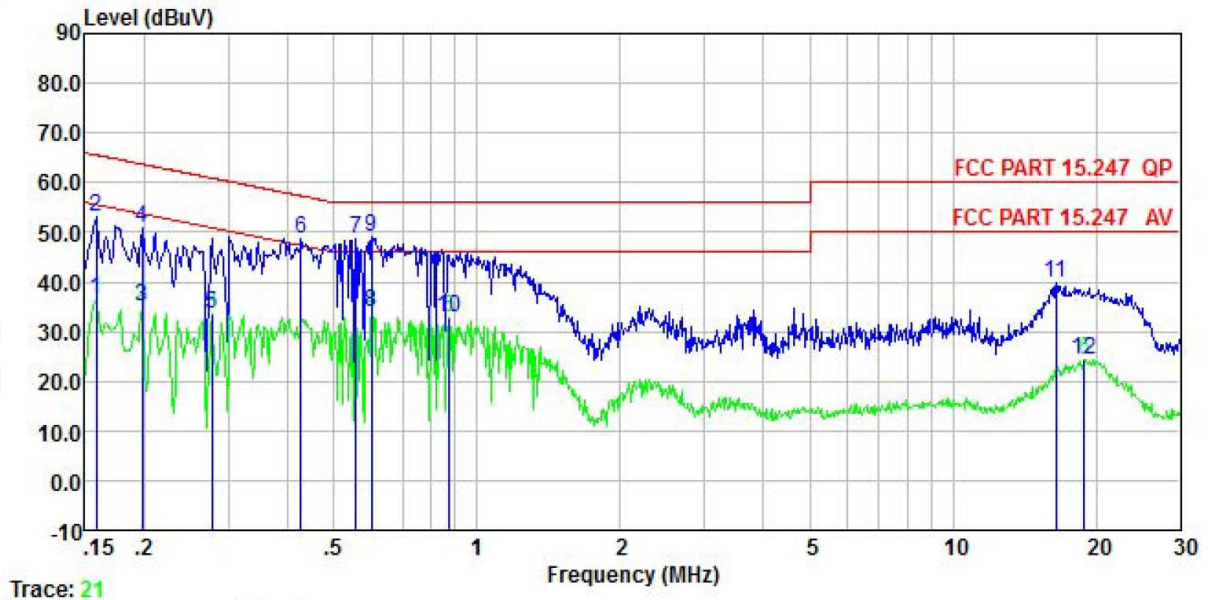
Remark:

1. All readings are Quasi-Peak and Average values
2. Margin = Result (Result = Reading + Factor) - Limit
3. Factor = LISN factor + Cable loss + Limiter (10dB)

	Freq	Read Level	LISN Factor	Aux Factor	Aux2 Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dB	dBuV	dBuV	dB	
1	0.166	16.98	10.17	0.00	9.88	0.01	37.04	55.16	-18.12	Average
2	0.166	31.62	10.17	0.00	9.88	0.01	51.68	65.16	-13.48	QP
3	0.202	14.16	10.10	0.00	9.88	0.04	34.18	53.54	-19.36	Average
4	0.277	28.98	10.10	0.00	9.88	0.02	48.98	60.90	-11.92	QP
5	0.426	28.27	10.12	0.00	9.88	0.03	48.30	57.33	-9.03	QP
6	0.481	13.80	10.15	0.00	9.88	0.03	33.86	46.32	-12.46	Average
7	0.538	28.00	10.17	0.00	9.88	0.03	48.08	56.00	-7.92	QP
8	0.608	14.71	10.20	0.00	9.88	0.02	34.81	46.00	-11.19	Average
9	0.611	28.19	10.19	0.00	9.88	0.02	48.28	56.00	-7.72	QP
10	1.000	13.22	10.20	0.00	9.88	0.05	33.35	46.00	-12.65	Average
11	18.721	1.63	10.49	0.00	9.95	0.15	22.22	50.00	-27.78	Average
12	19.021	15.34	10.47	0.00	9.95	0.15	35.91	60.00	-24.09	QP



Temperature:	23.9℃	Relative Humidity:	44%
Test Voltage:	AC 120V/60Hz	Phase:	N
Test Mode:	Mode 13		



Remark:

1. All readings are Quasi-Peak and Average values
2. Margin = Result (Result = Reading + Factor) - Limit
3. Factor = LISN factor + Cable loss + Limiter (10dB)

	Freq	Read Level	LISN Factor	Aux Factor	Aux2 Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dB	dB	dB	dBuV	dBuV	dB	
1	0.158	16.25	10.20	0.00	9.88	0.01	36.34	55.56	-19.22	Average
2	0.158	32.88	10.20	0.00	9.88	0.01	52.97	65.56	-12.59	QP
3	0.198	14.91	10.20	0.00	9.88	0.04	35.03	53.71	-18.68	Average
4	0.198	30.86	10.20	0.00	9.88	0.04	50.98	63.71	-12.73	QP
5	0.277	13.63	10.15	0.00	9.88	0.02	33.68	50.90	-17.22	Average
6	0.426	28.79	10.13	0.00	9.88	0.03	48.83	57.33	-8.50	QP
7	0.555	28.37	10.26	0.00	9.88	0.02	48.53	56.00	-7.47	QP
8	0.601	13.85	10.30	0.00	9.88	0.02	34.05	46.00	-11.95	Average
9	0.601	28.72	10.30	0.00	9.88	0.02	48.92	56.00	-7.08	QP
10	0.876	12.71	10.26	0.00	9.88	0.04	32.89	46.00	-13.11	Average
11	16.486	19.26	10.60	0.00	9.94	0.16	39.96	60.00	-20.04	QP
12	18.920	3.76	10.60	0.00	9.95	0.15	24.46	50.00	-25.54	Average



3.2 RADIATED EMISSION MEASUREMENT

3.2.1 RADIATED EMISSION LIMITS

In any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the Restricted band specified on Part15.205(a)&209(a) limit in the table and according to ANSI C63.10-2020 below has to be followed.

LIMITS OF RADIATED EMISSION MEASUREMENT (0.009MHz - 1000MHz)

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (1000MHz-25GHz)

FREQUENCY (MHz)	(dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

LIMITS OF RESTRICTED FREQUENCY BANDS

FREQUENCY (MHz)	FREQUENCY (MHz)	FREQUENCY (MHz)	FREQUENCY (GHz)
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	Above 38.6
13.36-13.41			



For Radiated Emission

Spectrum Parameter	Setting
Attenuation	Auto
Detector	Peak/QP/AV
Start Frequency	9 KHz/150KHz(Peak/QP/AV)
Stop Frequency	150KHz/30MHz(Peak/QP/AV)
RB / VB (emission in restricted band)	200Hz (From 9kHz to 0.15MHz)/ 9KHz (From 0.15MHz to 30MHz); 200Hz (From 9kHz to 0.15MHz)/ 9KHz (From 0.15MHz to 30MHz)

Spectrum Parameter	Setting
Attenuation	Auto
Detector	Peak/QP
Start Frequency	30 MHz(Peak/QP)
Stop Frequency	1000 MHz (Peak/QP)
RB / VB (emission in restricted band)	120 KHz / 300 KHz

Spectrum Parameter	Setting
Attenuation	Auto
Detector	Peak/AV
Start Frequency	1000 MHz(Peak/AV)
Stop Frequency	10th carrier hamonic(Peak/AV)
RB / VB (emission in restricted band)	1 MHz / 3 MHz(Peak) 1 MHz/1/T MHz(AVG)

For Restricted band

Spectrum Parameter	Setting
Detector	Peak/AV
Start/Stop Frequency	Lower Band Edge: 2310 to 2430 MHz Upper Band Edge: 2445 to 2500 MHz
RB / VB	1 MHz / 3 MHz(Peak) 1 MHz/1/T MHz(AVG)



Receiver Parameter	Setting
Start ~ Stop Frequency	9kHz~90kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	90kHz~110kHz / RB 200Hz for QP
Start ~ Stop Frequency	110kHz~490kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	490kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

3.2.2 TEST PROCEDURE

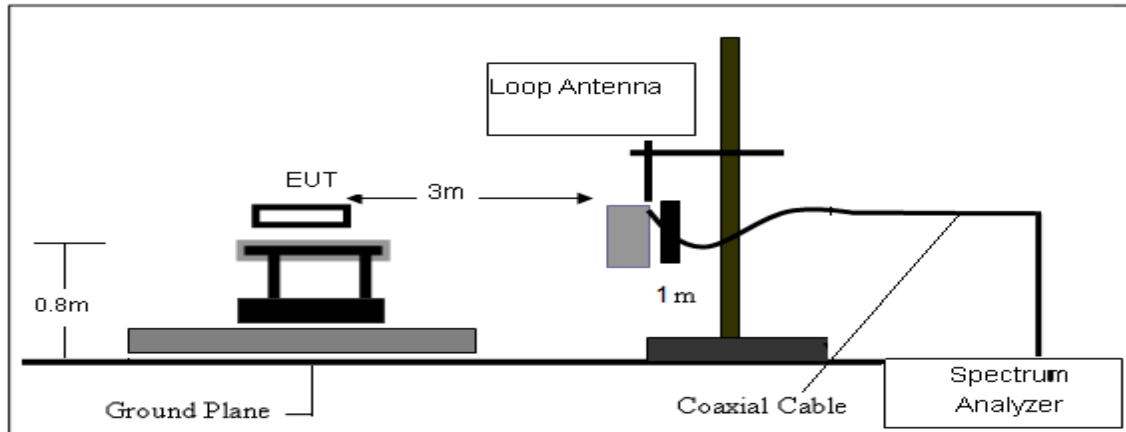
- The measuring distance at 3 m shall be used for measurements at frequency 0.009MHz up to 1GHz, and above 1GHz.
- The EUT was placed on the top of a rotating table 0.8 m (above 1GHz is 1.5 m) above the ground at a 3 m anechoic chamber test site. The table was rotated 360 degree to determine the position of the highest radiation.
- The height of the equipment shall be 0.8 m (above 1GHz is 1.5 m); the height of the test antenna shall vary between 1 m to 4 m. Horizontal and vertical polarization of the antenna are set to make the measurement.
- The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and QuasiPeak detector mode will be re-measured.
- If the Peak Mode measured value is compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and no additional QP Mode measurement was performed.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

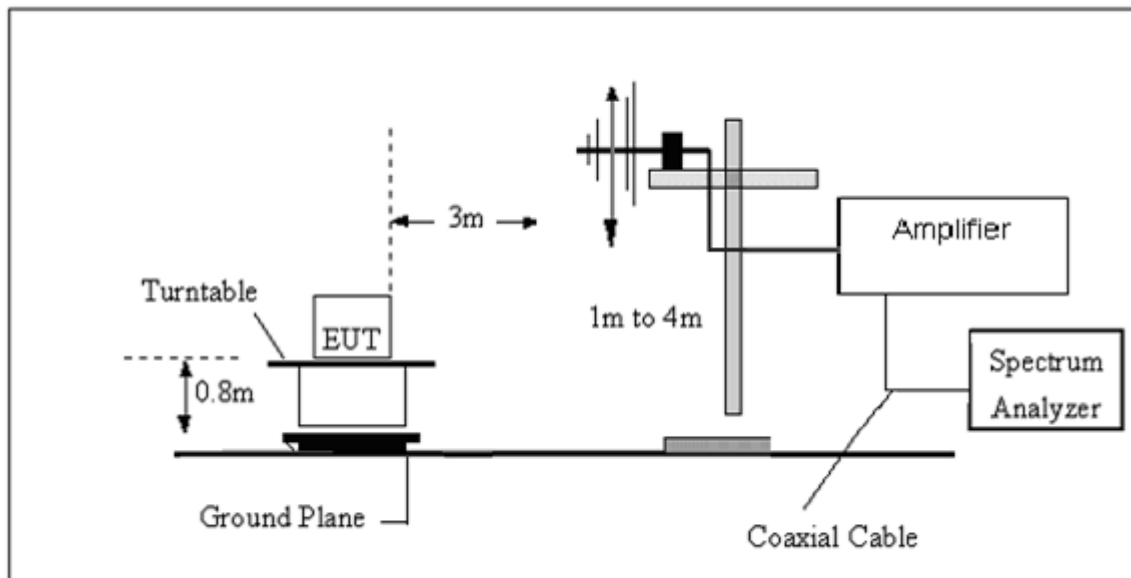
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

3.2.3 TEST SETUP

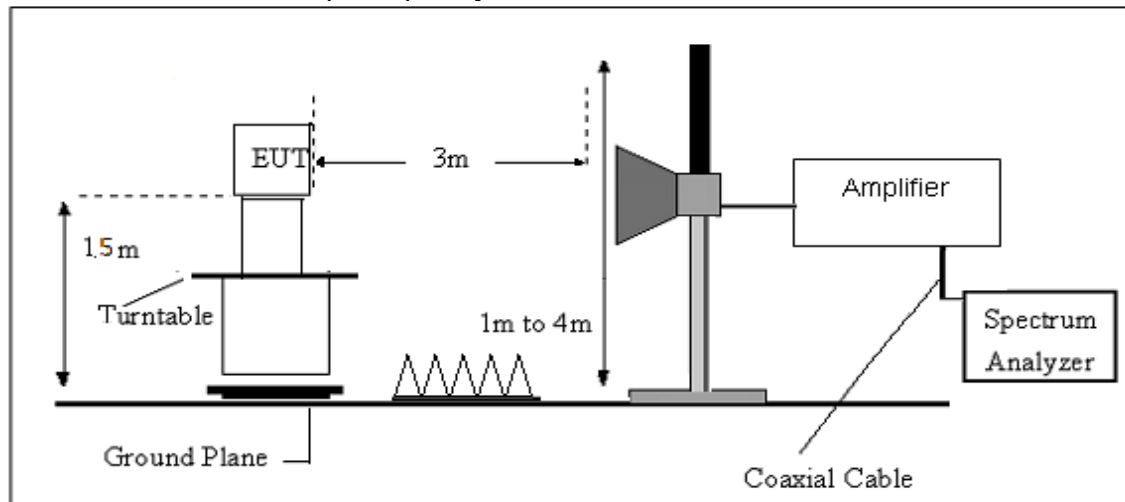
(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz



3.2.4 EUT OPERATING CONDITIONS

Please refer to section 3.1.4 of this report.



3.2.5 FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

Where

FS = Field Strength

CL = Cable Attenuation Factor (Cable Loss)

RA = Reading Amplitude

AG = Amplifier Gain

AF = Antenna Factor

For example

Frequency	FS	RA	AF	CL	AG	Factor
(MHz)	(dBμV/m)	(dBμV/m)	(dB)	(dB)	(dB)	(dB)
300	40	58.1	12.2	1.6	31.9	-18.1

$$\text{Factor} = \text{AF} + \text{CL} - \text{AG}$$



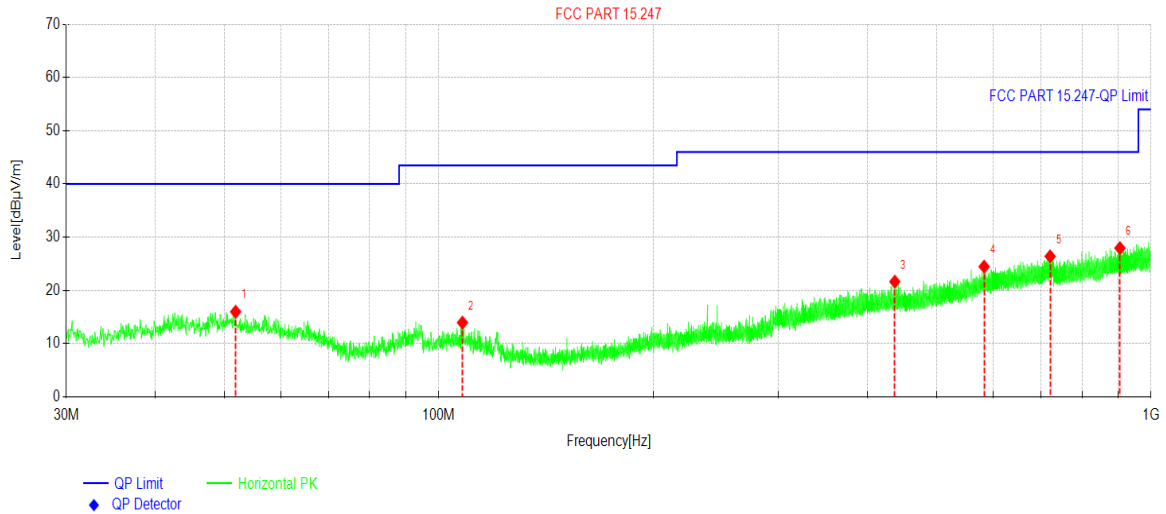
3.2.6 TEST RESULT

9KHz-30MHz

Test Frequency from 9KHz to 30MHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.

(30MHz - 1000MHz)

Temperature:	22℃	Relative Humidity:	54%
Test Voltage:	AC 120V/60Hz	Phase:	Horizontal
Test Mode:	Mode 13		



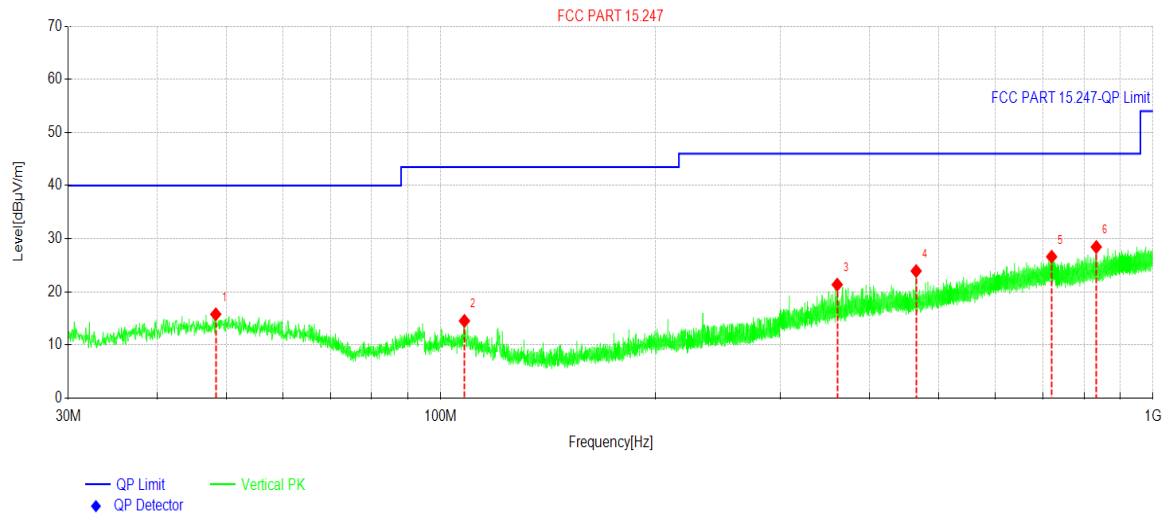
Remark:

1. Margin = Result (Result = Reading + Factor) – Limit
2. Factor = Antenna factor + Cable attenuation factor (cable loss) - Amplifier gain
3. All modes have been tested, only show the worst case.

Suspected Data List								
NO.	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	51.8746	28.50	-12.50	16.00	40.00	24.00	PK	Horizontal
2	107.9919	28.17	-14.22	13.95	43.50	29.55	PK	Horizontal
3	436.8868	31.39	-9.74	21.65	46.00	24.35	PK	Horizontal
4	583.0732	31.34	-6.87	24.47	46.00	21.53	PK	Horizontal
5	721.7901	31.16	-4.76	26.40	46.00	19.60	PK	Horizontal
6	904.5472	30.24	-2.29	27.95	46.00	18.05	PK	Horizontal



Temperature:	22℃	Relative Humidity:	54%
Test Voltage:	AC 120V/60Hz	Phase:	Vertical
Test Mode:	Mode 13		



Remark:.

1. Margin = Result (Result =Reading + Factor)–Limit
2. Factor= Antenna factor+Cable attenuation factor(cable loss)-Amplifier gain
3. All modes have been tested,only show the worst case.

Suspected Data List								
NO.	Freq. [MHz]	Reading[dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Trace	Polarity
1	48.3339	28.20	-12.42	15.78	40.00	24.22	PK	Vertical
2	107.9919	28.75	-14.22	14.53	43.50	28.97	PK	Vertical
3	360.3500	32.65	-11.29	21.36	46.00	24.64	PK	Vertical
4	465.0668	33.47	-9.55	23.92	46.00	22.08	PK	Vertical
5	720.6260	31.34	-4.73	26.61	46.00	19.39	PK	Vertical
6	832.5211	31.86	-3.41	28.45	46.00	17.55	PK	Vertical



(1000MHz-25GHz) Spurious emission Requirements

802.11b						
Test channel: Lowest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4824.00	62.93	-7.92	55.01	74.00	18.99	Vertical
4824.00	72.49	-7.92	64.57	74.00	9.43	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4824.00	49.31	-7.92	41.39	54.00	12.61	Vertical
4824.00	55.78	-7.92	47.86	54.00	6.14	Horizontal
Test channel: Middle channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4874.00	63.21	-7.55	55.66	74.00	18.34	Vertical
4874.00	72.39	-7.55	64.84	74.00	9.16	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4874.00	49.04	-7.55	41.49	54.00	12.51	Vertical
4874.00	56.19	-7.55	48.64	54.00	5.36	Horizontal
Test channel: Highest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4924.00	62.46	-7.21	55.25	74.00	18.75	Vertical
4924.00	72.62	-7.21	65.41	74.00	8.59	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4924.00	48.96	-7.21	41.75	54.00	12.25	Vertical
4924.00	55.61	-7.21	48.40	54.00	5.60	Horizontal
Remark:						
1. Level = Reading + Factor.						
2. Test Frequency up to 25GHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.						



802.11g						
Test channel: Lowest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4824.00	62.68	-7.82	54.86	74.00	19.14	Vertical
4824.00	72.04	-7.82	64.22	74.00	9.78	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4824.00	49.51	-7.82	41.69	54.00	12.31	Vertical
4824.00	55.46	-7.82	47.64	54.00	6.36	Horizontal
Test channel: Middle channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4874.00	63.05	-7.50	55.55	74.00	18.45	Vertical
4874.00	72.86	-7.50	65.36	74.00	8.64	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4874.00	49.44	-7.50	41.94	54.00	12.06	Vertical
4874.00	55.94	-7.50	48.44	54.00	5.56	Horizontal
Test channel: Highest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4924.00	63.33	-7.21	56.12	74.00	17.88	Vertical
4924.00	72.25	-7.21	65.04	74.00	8.96	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4924.00	49.8	-7.21	42.59	54.00	11.41	Vertical
4924.00	55.64	-7.21	48.43	54.00	5.57	Horizontal
Remark:						
1. Level = Reading + Factor.						
2. Test Frequency up to 25GHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.						



802.11n-HT20						
Test channel: Lowest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4824.00	62.96	-7.82	55.14	74.00	18.86	Vertical
4824.00	72.58	-7.82	64.76	74.00	9.24	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4824.00	49.36	-7.82	41.54	54.00	12.46	Vertical
4824.00	56.21	-7.82	48.39	54.00	5.61	Horizontal
Test channel: Middle channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4874.00	63.01	-7.50	55.51	74.00	18.49	Vertical
4874.00	72.66	-7.50	65.16	74.00	8.84	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4874.00	49.29	-7.50	41.79	54.00	12.21	Vertical
4874.00	55.58	-7.50	48.08	54.00	5.92	Horizontal
Test channel: Highest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4924.00	62.61	-7.21	55.40	74.00	18.60	Vertical
4924.00	72.88	-7.21	65.67	74.00	8.33	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4924.00	49.39	-7.21	42.18	54.00	11.82	Vertical
4924.00	55.75	-7.21	48.54	54.00	5.46	Horizontal
Remark:						
1. Level = Reading + Factor.						
2. Test Frequency up to 25GHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.						

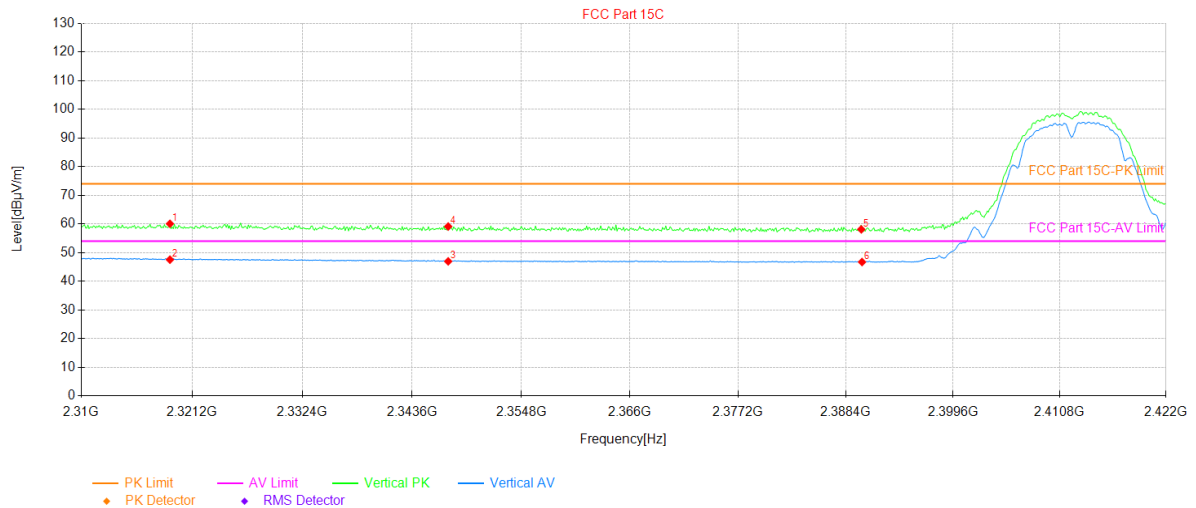


802.11n-HT40						
Test channel: Lowest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4844.00	62.71	-7.65	55.06	74.00	18.94	Vertical
4844.00	72.89	-7.65	65.24	74.00	8.76	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4844.00	49.43	-7.65	41.78	54.00	12.22	Vertical
4844.00	55.63	-7.65	47.98	54.00	6.02	Horizontal
Test channel: Middle channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4874.00	63.36	-7.50	55.86	74.00	18.14	Vertical
4874.00	72.59	-7.50	65.09	74.00	8.91	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4874.00	48.97	-7.50	41.47	54.00	12.53	Vertical
4874.00	56.05	-7.50	48.55	54.00	5.45	Horizontal
Test channel: Highest channel						
Detector: Peak Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4904.00	63.42	-7.35	56.07	74.00	17.93	Vertical
4904.00	72.88	-7.35	65.53	74.00	8.47	Horizontal
Detector: Average Value						
Frequency (MHz)	Read Level (dBμV)	Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
4904.00	49.76	-7.35	42.41	54.00	11.59	Vertical
4904.00	55.67	-7.35	48.32	54.00	5.68	Horizontal
Remark:						
1. Level = Reading + Factor.						
2. Test Frequency up to 25GHz, and the emission levels of other frequencies are lower than the limit 20dB, not show in test report.						



3.2.6 TEST RESULTS(Band edge Requirements)

Product Name:	4G Smart Phone	Product Model:	L68M PLUS
Test Channel:	Lowest channel	Test mode:	802.11b Tx mode
Test Voltage:	DC 3.87V	Polarization:	Vertical



Suspected Data List

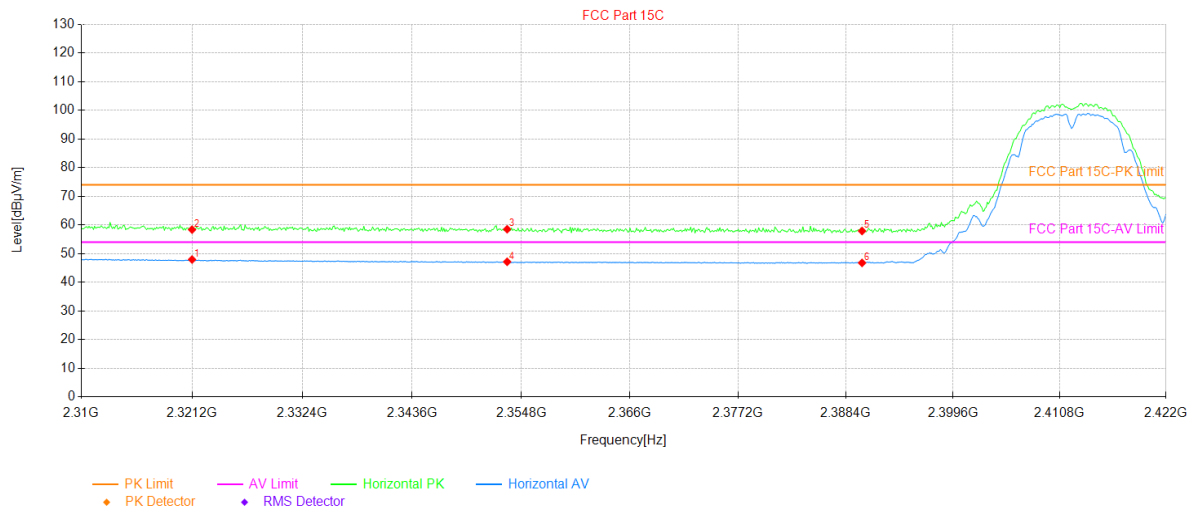
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	2318.96	23.61	36.42	60.03	74.00	13.97	173	PK	PASS	Vertical
2	2318.96	11.10	36.42	47.52	54.00	6.48	147	AV	PASS	Vertical
3	2347.30	10.93	36.00	46.93	54.00	7.07	101	AV	PASS	Vertical
4	2347.30	23.08	36.00	59.08	74.00	14.92	5	PK	PASS	Vertical
5	2390.00	22.16	35.93	58.09	74.00	15.91	194	PK	PASS	Vertical
6	2390.08	10.77	35.93	46.70	54.00	7.30	281	AV	PASS	Vertical

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor)



Product Name:	4G Smart Phone	Product Model:	L68M PLUS
Test Channel:	Lowest channel	Test mode:	802.11b Tx mode
Test Voltage:	DC 3.87V	Polarization:	Horizontal

**Suspected Data List**

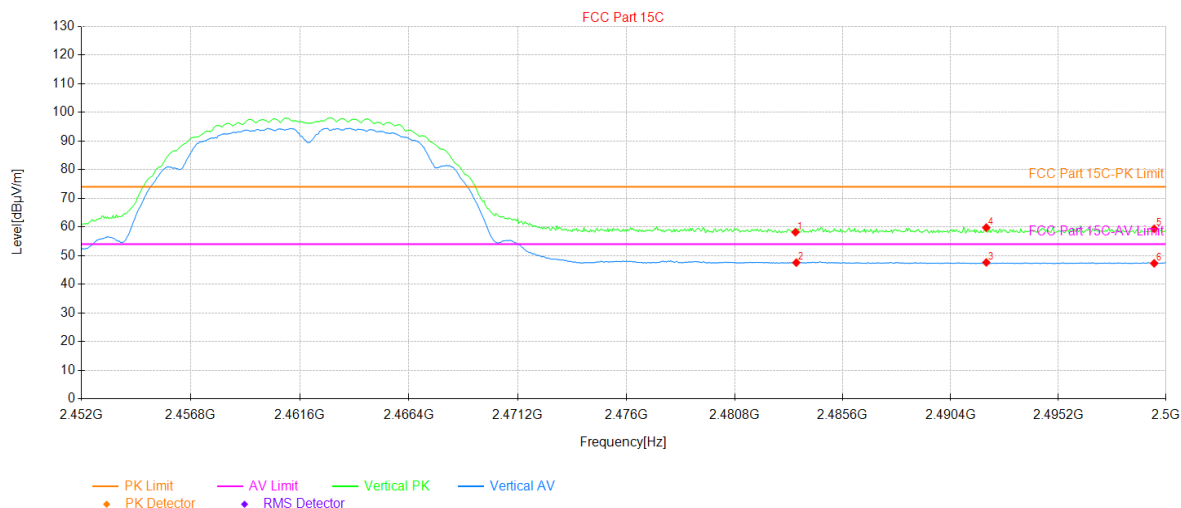
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	2321.20	11.53	36.38	47.91	54.00	6.09	66	AV	PASS	Horizontal
2	2321.20	21.96	36.38	58.34	74.00	15.66	333	PK	PASS	Horizontal
3	2353.34	22.51	35.97	58.48	74.00	15.52	95	PK	PASS	Horizontal
4	2353.34	11.16	35.97	47.13	54.00	6.87	8	AV	PASS	Horizontal
5	2390.08	21.94	35.93	57.87	74.00	16.13	356	PK	PASS	Horizontal
6	2390.08	10.81	35.93	46.74	54.00	7.26	28	AV	PASS	Horizontal

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor)



Product Name:	4G Smart Phone	Product Model:	L68M PLUS
Test Channel:	Highest channel	Test mode:	802.11b Tx mode
Test Voltage:	DC 3.87V	Polarization:	Vertical

**Suspected Data List**

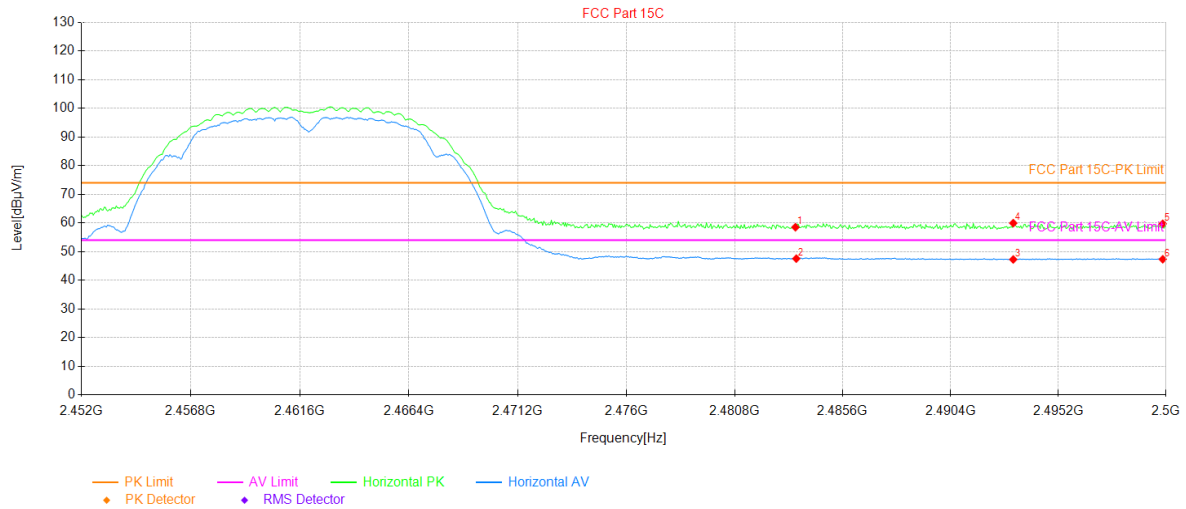
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	2483.50	21.40	36.74	58.14	74.00	15.86	360	PK	PASS	Vertical
2	2483.54	10.79	36.74	47.53	54.00	6.47	308	AV	PASS	Vertical
3	2491.98	10.83	36.76	47.59	54.00	6.41	282	AV	PASS	Vertical
4	2491.98	22.99	36.76	59.75	74.00	14.25	184	PK	PASS	Vertical
5	2499.47	22.55	36.78	59.33	74.00	14.67	241	PK	PASS	Vertical
6	2499.47	10.51	36.78	47.29	54.00	6.71	169	AV	PASS	Vertical

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor)



Product Name:	4G Smart Phone	Product Model:	L68M PLUS
Test Channel:	Highest channel	Test mode:	802.11b Tx mode
Test Voltage:	DC 3.87V	Polarization:	Horizontal

**Suspected Data List**

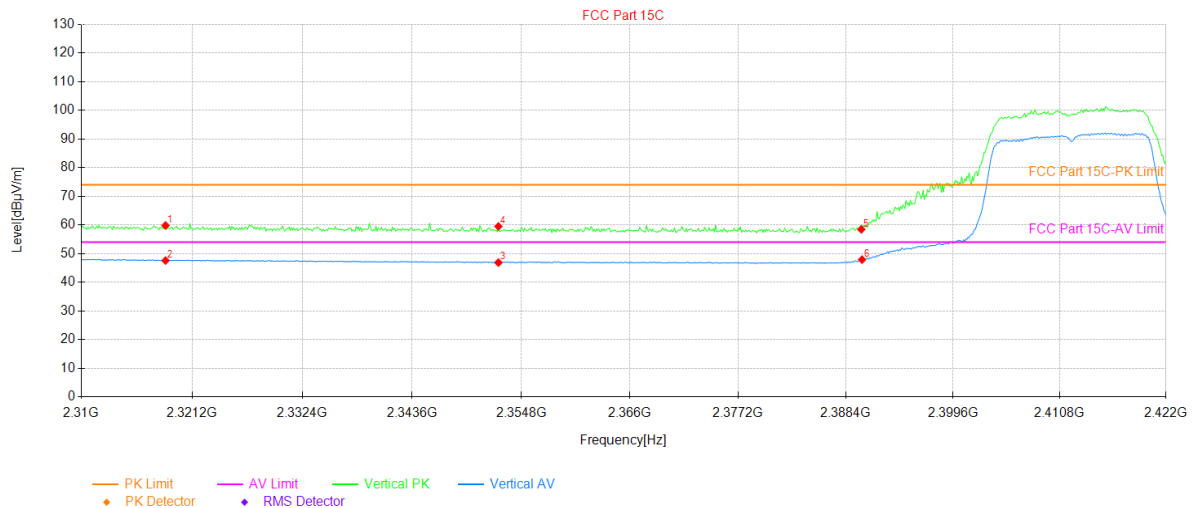
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	2483.50	21.74	36.74	58.48	74.00	15.52	1	PK	PASS	Horizontal
2	2483.54	10.79	36.74	47.53	54.00	6.47	0	AV	PASS	Horizontal
3	2493.18	10.48	36.76	47.24	54.00	6.76	3	AV	PASS	Horizontal
4	2493.18	23.15	36.76	59.91	74.00	14.09	117	PK	PASS	Horizontal
5	2499.86	22.90	36.78	59.68	74.00	14.32	224	PK	PASS	Horizontal
6	2499.86	10.54	36.78	47.32	54.00	6.68	30	AV	PASS	Horizontal

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor)



Product Name:	4G Smart Phone	Product Model:	L68M PLUS
Test Channel:	Lowest channel	Test mode:	802.11g Tx mode
Test Voltage:	DC 3.87V	Polarization:	Vertical

**Suspected Data List**

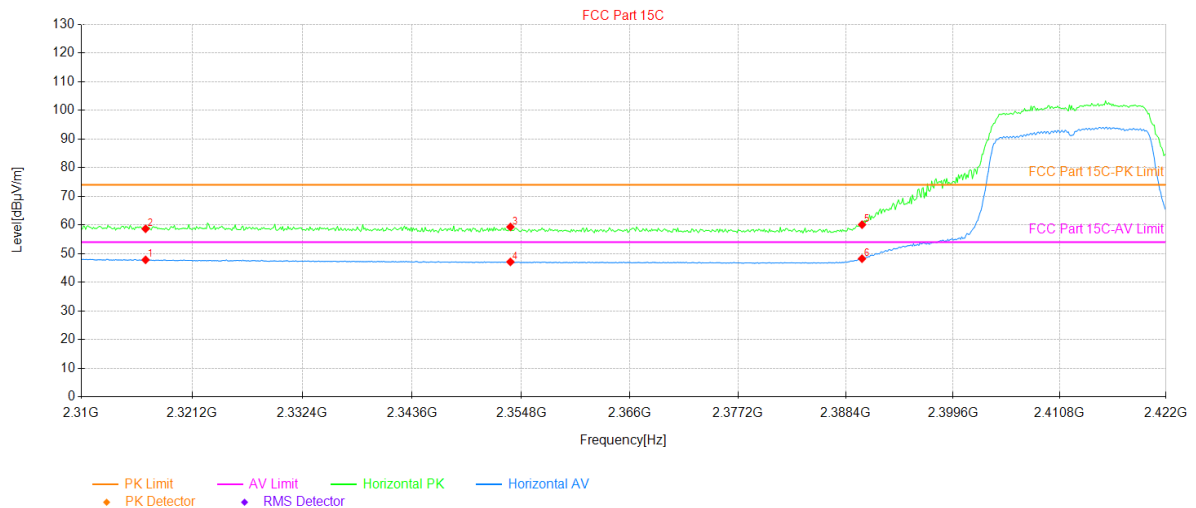
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	2318.51	23.36	36.42	59.78	74.00	14.22	359	PK	PASS	Vertical
2	2318.51	11.14	36.42	47.56	54.00	6.44	56	AV	PASS	Vertical
3	2352.45	10.88	35.97	46.85	54.00	7.15	336	AV	PASS	Vertical
4	2352.45	23.48	35.97	59.45	74.00	14.55	161	PK	PASS	Vertical
5	2390.00	22.49	35.93	58.42	74.00	15.58	318	PK	PASS	Vertical
6	2390.08	11.95	35.93	47.88	54.00	6.12	333	AV	PASS	Vertical

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor)



Product Name:	4G Smart Phone	Product Model:	L68M PLUS
Test Channel:	Lowest channel	Test mode:	802.11g Tx mode
Test Voltage:	DC 3.87V	Polarization:	Horizontal

**Suspected Data List**

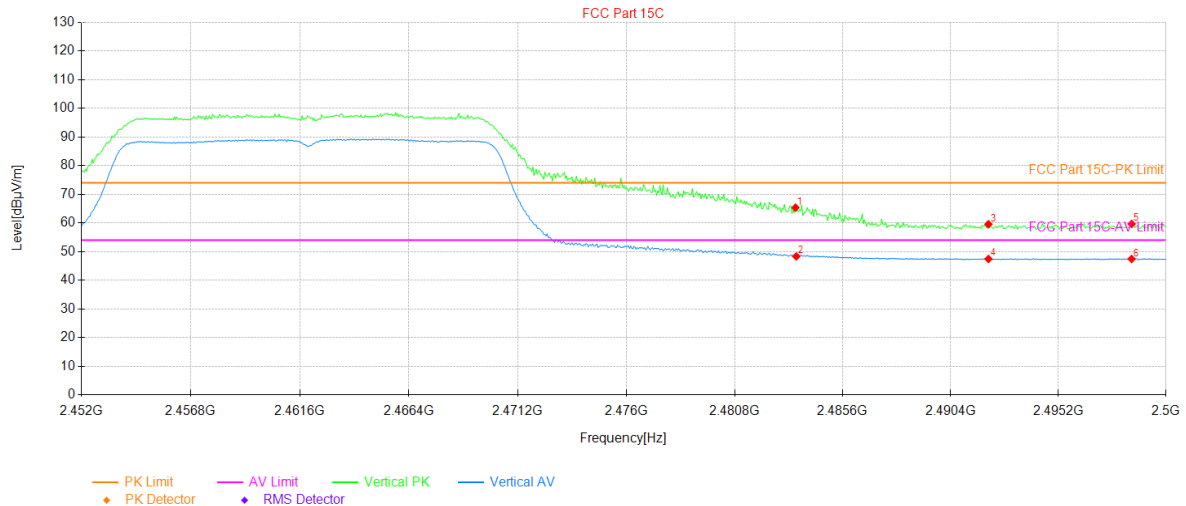
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	2316.50	11.34	36.47	47.81	54.00	6.19	199	AV	PASS	Horizontal
2	2316.50	22.17	36.47	58.64	74.00	15.36	154	PK	PASS	Horizontal
3	2353.68	23.31	35.97	59.28	74.00	14.72	0	PK	PASS	Horizontal
4	2353.68	11.12	35.97	47.09	54.00	6.91	233	AV	PASS	Horizontal
5	2390.08	24.15	35.93	60.08	74.00	13.92	35	PK	PASS	Horizontal
6	2390.08	12.28	35.93	48.21	54.00	5.79	32	AV	PASS	Horizontal

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor)



Product Name:	4G Smart Phone	Product Model:	L68M PLUS
Test Channel:	Highest channel	Test mode:	802.11g Tx mode
Test Voltage:	DC 3.87V	Polarization:	Vertical

**Suspected Data List**

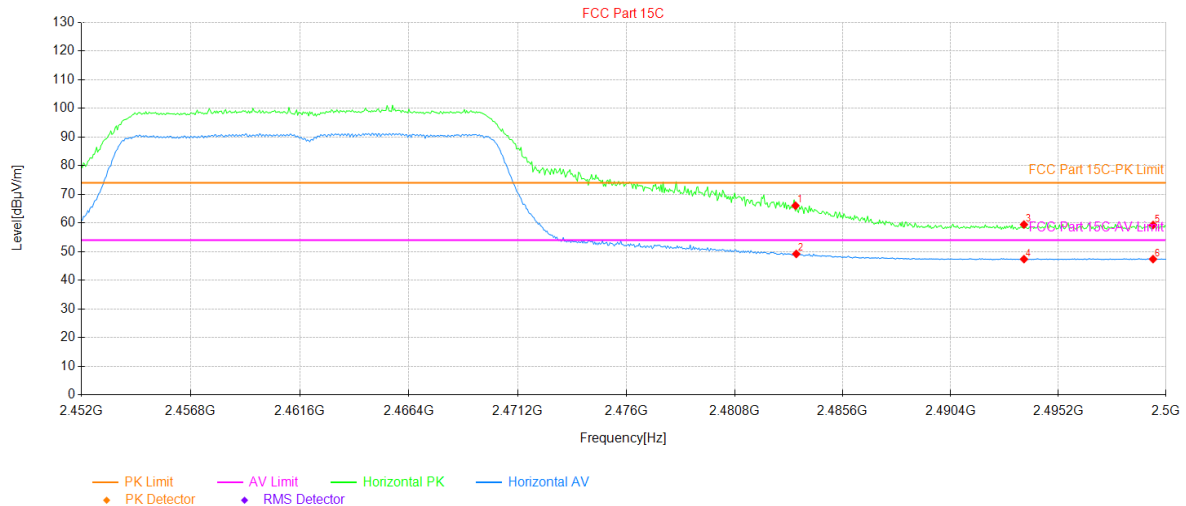
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	2483.50	28.57	36.74	65.31	74.00	8.69	290	PK	PASS	Vertical
2	2483.54	11.56	36.74	48.30	54.00	5.70	317	AV	PASS	Vertical
3	2492.08	22.77	36.76	59.53	74.00	14.47	136	PK	PASS	Vertical
4	2492.08	10.67	36.76	47.43	54.00	6.57	125	AV	PASS	Vertical
5	2498.46	22.87	36.77	59.64	74.00	14.36	99	PK	PASS	Vertical
6	2498.46	10.65	36.77	47.42	54.00	6.58	84	AV	PASS	Vertical

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor)



Product Name:	4G Smart Phone	Product Model:	L68M PLUS
Test Channel:	Highest channel	Test mode:	802.11g Tx mode
Test Voltage:	DC 3.87V	Polarization:	Horizontal

**Suspected Data List**

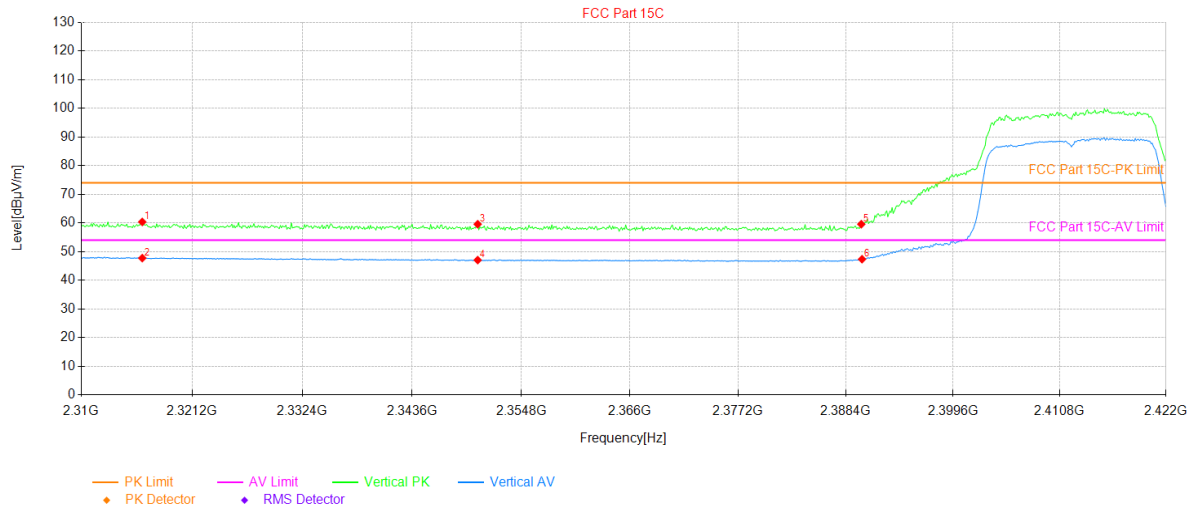
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	2483.50	29.26	36.74	66.00	74.00	8.00	139	PK	PASS	Horizontal
2	2483.54	12.43	36.74	49.17	54.00	4.83	143	AV	PASS	Horizontal
3	2493.66	22.65	36.76	59.41	74.00	14.59	44	PK	PASS	Horizontal
4	2493.66	10.59	36.76	47.35	54.00	6.65	272	AV	PASS	Horizontal
5	2499.42	22.49	36.78	59.27	74.00	14.73	128	PK	PASS	Horizontal
6	2499.42	10.58	36.78	47.36	54.00	6.64	348	AV	PASS	Horizontal

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor)



Product Name:	4G Smart Phone	Product Model:	L68M PLUS
Test Channel:	Lowest channel	Test mode:	802.11n-HT20 Tx mode
Test Voltage:	DC 3.87V	Polarization:	Vertical

**Suspected Data List**

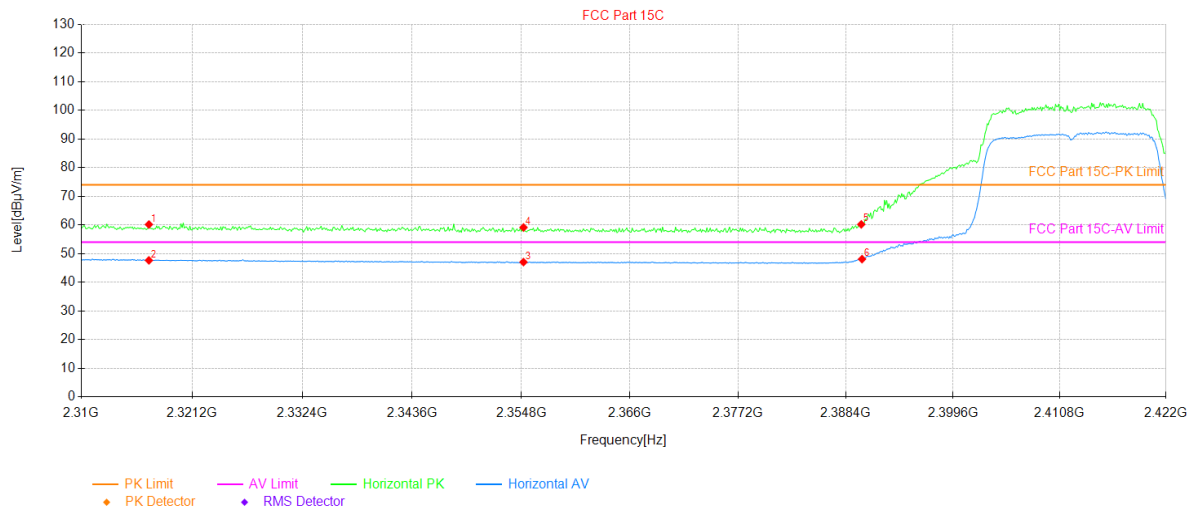
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	2316.16	23.86	36.47	60.33	74.00	13.67	215	PK	PASS	Vertical
2	2316.16	11.24	36.47	47.71	54.00	6.29	354	AV	PASS	Vertical
3	2350.32	23.57	35.97	59.54	74.00	14.46	27	PK	PASS	Vertical
4	2350.32	11.05	35.97	47.02	54.00	6.98	347	AV	PASS	Vertical
5	2390.00	23.62	35.93	59.55	74.00	14.45	181	PK	PASS	Vertical
6	2390.08	11.41	35.93	47.34	54.00	6.66	76	AV	PASS	Vertical

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor)



Product Name:	4G Smart Phone	Product Model:	L68M PLUS
Test Channel:	Lowest channel	Test mode:	802.11n-HT20 Tx mode
Test Voltage:	DC 3.87V	Polarization:	Horizontal

**Suspected Data List**

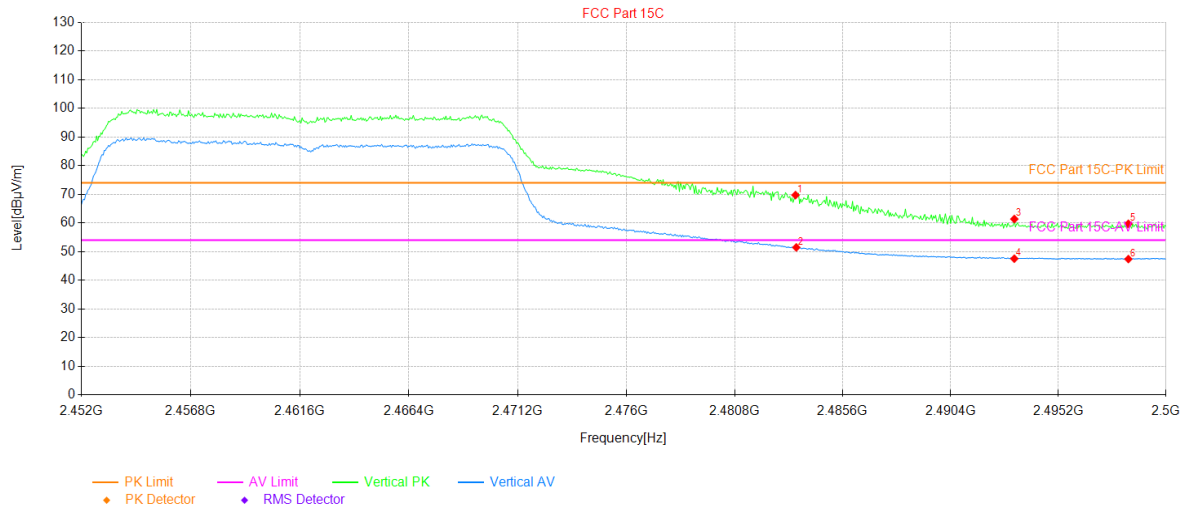
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	2316.83	23.68	36.46	60.14	74.00	13.86	288	PK	PASS	Horizontal
2	2316.83	11.17	36.46	47.63	54.00	6.37	23	AV	PASS	Horizontal
3	2355.02	11.05	35.97	47.02	54.00	6.98	2	AV	PASS	Horizontal
4	2355.02	23.12	35.97	59.09	74.00	14.91	326	PK	PASS	Horizontal
5	2390.00	24.25	35.93	60.18	74.00	13.82	146	PK	PASS	Horizontal
6	2390.08	12.13	35.93	48.06	54.00	5.94	139	AV	PASS	Horizontal

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor)



Product Name:	4G Smart Phone	Product Model:	L68M PLUS
Test Channel:	Highest channel	Test mode:	802.11n-HT20 Tx mode
Test Voltage:	DC 3.87V	Polarization:	Vertical

**Suspected Data List**

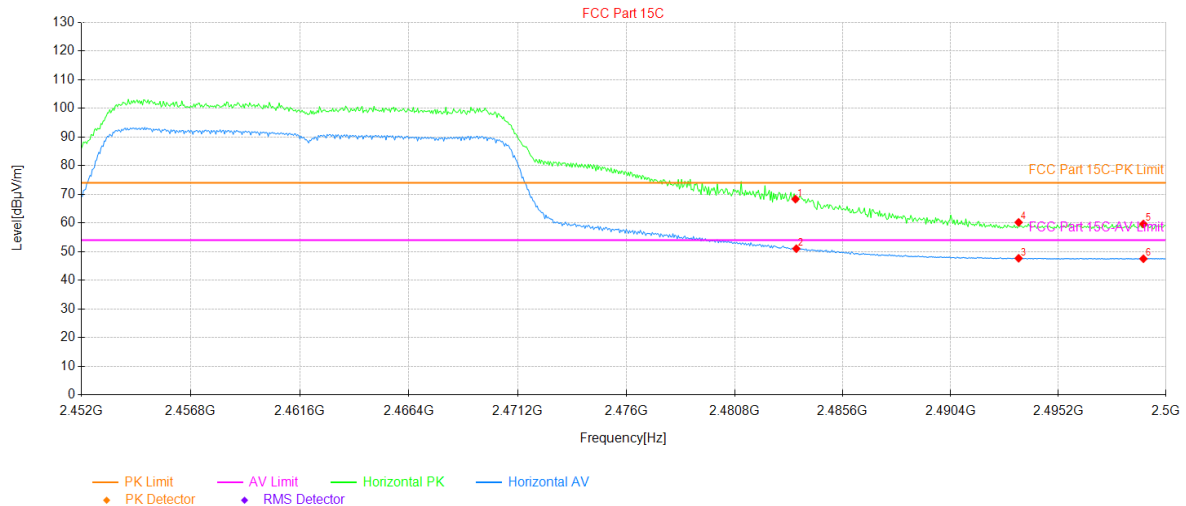
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	2483.50	32.95	36.74	69.69	74.00	4.31	90	PK	PASS	Vertical
2	2483.54	14.70	36.74	51.44	54.00	2.56	38	AV	PASS	Vertical
3	2493.23	24.58	36.76	61.34	74.00	12.66	64	PK	PASS	Vertical
4	2493.23	10.76	36.76	47.52	54.00	6.48	75	AV	PASS	Vertical
5	2498.32	22.91	36.77	59.68	74.00	14.32	134	PK	PASS	Vertical
6	2498.32	10.61	36.77	47.38	54.00	6.62	201	AV	PASS	Vertical

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor)



Product Name:	4G Smart Phone	Product Model:	L68M PLUS
Test Channel:	Highest channel	Test mode:	802.11n-HT20 Tx mode
Test Voltage:	DC 3.87V	Polarization:	Horizontal

**Suspected Data List**

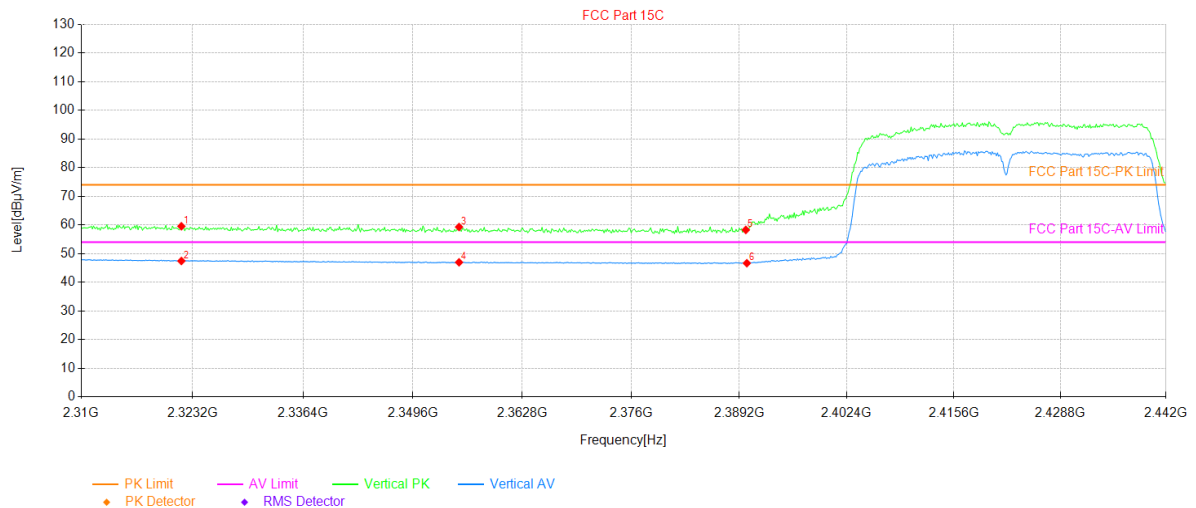
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	2483.50	31.54	36.74	68.28	74.00	5.72	131	PK	PASS	Horizontal
2	2483.54	14.26	36.74	51.00	54.00	3.00	127	AV	PASS	Horizontal
3	2493.42	10.89	36.76	47.65	54.00	6.35	23	AV	PASS	Horizontal
4	2493.42	23.43	36.76	60.19	74.00	13.81	104	PK	PASS	Horizontal
5	2498.99	22.86	36.77	59.63	74.00	14.37	26	PK	PASS	Horizontal
6	2498.99	10.71	36.77	47.48	54.00	6.52	198	AV	PASS	Horizontal

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor)



Product Name:	4G Smart Phone	Product Model:	L68M PLUS
Test Channel:	Lowest channel	Test mode:	802.11n-HT40 Tx mode
Test Voltage:	DC 3.87V	Polarization:	Vertical

**Suspected Data List**

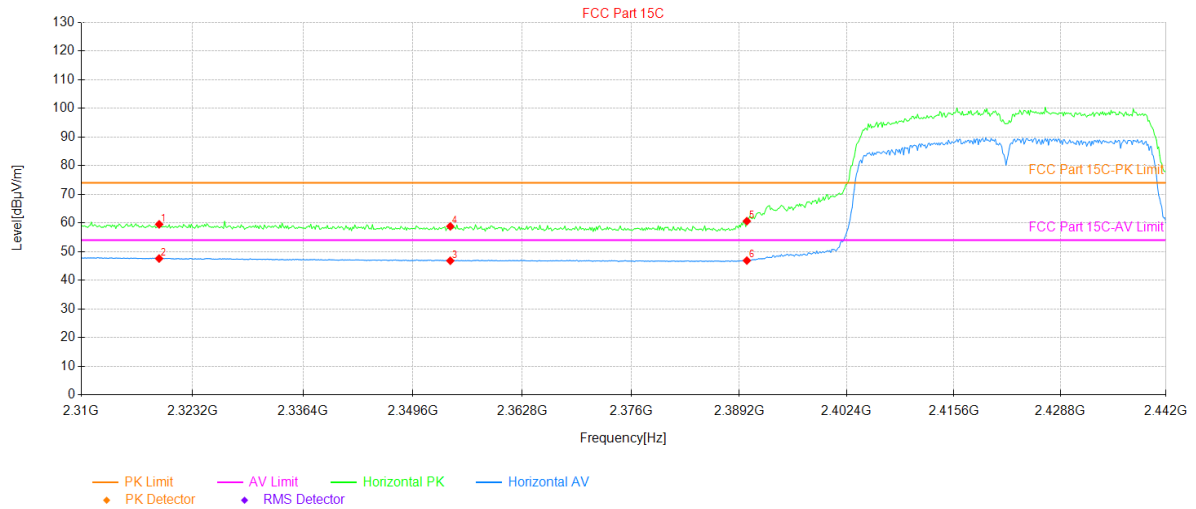
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	2321.88	23.15	36.37	59.52	74.00	14.48	271	PK	PASS	Vertical
2	2321.88	11.03	36.37	47.40	54.00	6.60	83	AV	PASS	Vertical
3	2355.14	23.28	35.97	59.25	74.00	14.75	75	PK	PASS	Vertical
4	2355.14	10.98	35.97	46.95	54.00	7.05	94	AV	PASS	Vertical
5	2390.00	22.31	35.93	58.24	74.00	15.76	112	PK	PASS	Vertical
6	2390.12	10.70	35.93	46.63	54.00	7.37	142	AV	PASS	Vertical

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor)



Product Name:	4G Smart Phone	Product Model:	L68M PLUS
Test Channel:	Lowest channel	Test mode:	802.11n-HT40 Tx mode
Test Voltage:	DC 3.87V	Polarization:	Horizontal

**Suspected Data List**

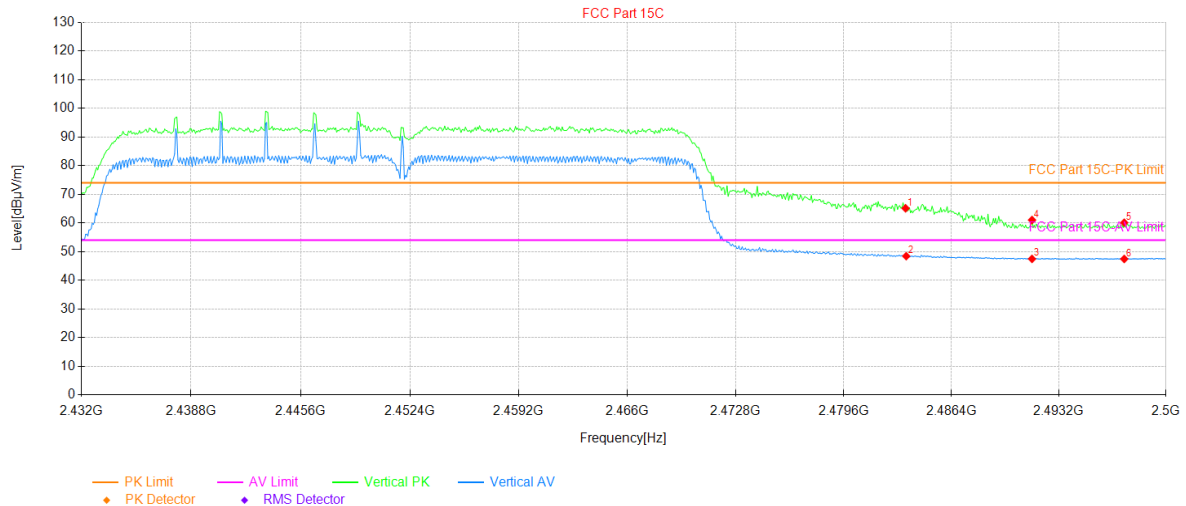
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	2319.24	23.08	36.41	59.49	74.00	14.51	288	PK	PASS	Horizontal
2	2319.24	11.15	36.41	47.56	54.00	6.44	116	AV	PASS	Horizontal
3	2354.09	10.83	35.96	46.79	54.00	7.21	4	AV	PASS	Horizontal
4	2354.09	22.82	35.96	58.78	74.00	15.22	78	PK	PASS	Horizontal
5	2390.12	24.66	35.93	60.59	74.00	13.41	146	PK	PASS	Horizontal
6	2390.12	10.92	35.93	46.85	54.00	7.15	138	AV	PASS	Horizontal

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor)



Product Name:	4G Smart Phone	Product Model:	L68M PLUS
Test Channel:	Highest channel	Test mode:	802.11n-HT40 Tx mode
Test Voltage:	DC 3.87V	Polarization:	Vertical

**Suspected Data List**

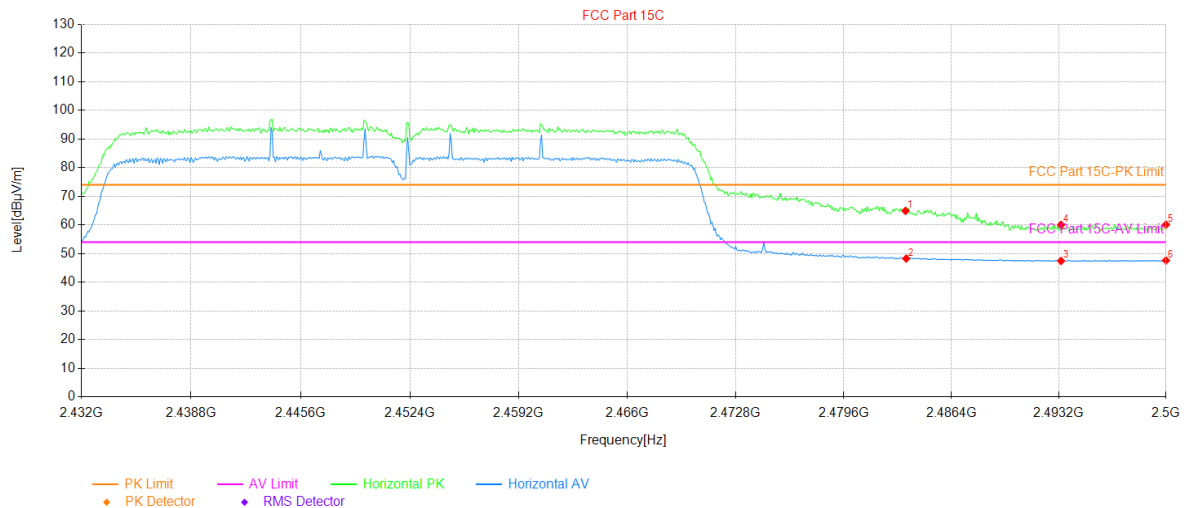
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	2483.50	28.35	36.74	65.09	74.00	8.91	306	PK	PASS	Vertical
2	2483.54	11.65	36.74	48.39	54.00	5.61	306	AV	PASS	Vertical
3	2491.50	10.68	36.76	47.44	54.00	6.56	0	AV	PASS	Vertical
4	2491.50	24.24	36.76	61.00	74.00	13.00	325	PK	PASS	Vertical
5	2497.35	23.29	36.78	60.07	74.00	13.93	146	PK	PASS	Vertical
6	2497.35	10.64	36.78	47.42	54.00	6.58	329	AV	PASS	Vertical

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor)



Product Name:	4G Smart Phone	Product Model:	L68M PLUS
Test Channel:	Highest channel	Test mode:	802.11n-HT40 Tx mode
Test Voltage:	DC 3.87V	Polarization:	Horizontal

**Suspected Data List**

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Angle [°]	Detector	Verdict	Polarity
1	2483.50	28.15	36.74	64.89	74.00	9.11	281	PK	PASS	Horizontal
2	2483.54	11.50	36.74	48.24	54.00	5.76	303	AV	PASS	Horizontal
3	2493.34	10.68	36.76	47.44	54.00	6.56	281	AV	PASS	Horizontal
4	2493.34	23.26	36.76	60.02	74.00	13.98	292	PK	PASS	Horizontal
5	2500.00	23.29	36.78	60.07	74.00	13.93	172	PK	PASS	Horizontal
6	2500.00	10.82	36.78	47.60	54.00	6.40	38	AV	PASS	Horizontal

Remark:

1. Level = Reading + Factor(Antenna Factor + Cable Loss – Preamplifier Factor)



4. CONDUCTED SPURIOUS & BAND EDGE EMISSION

4.1 LIMIT

According to FCC section 15.247(d), in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

4.2 TEST PROCEDURE

Spectrum Parameter	Setting
Detector	Peak
Start/Stop Frequency	30 MHz to 10th carrier harmonic
RB / VB (emission in restricted band)	100 KHz/300 KHz
Trace-Mode:	Max hold

For Band edge

Spectrum Parameter	Setting
Detector	Peak
RB / VB (emission in restricted band)	100 KHz/300 KHz
Trace-Mode:	Max hold

4.3 DEVIATION FROM STANDARD

No deviation.

4.4 TEST SETUP



The EUT is connected to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. In order to make an accurate measurement, set the span greater than RBW.

4.5 EUT OPERATION CONDITIONS

Please refer to section 3.1.4 of this report.

4.6 TEST RESULTS

Note:

1. The test data please refer to APPENDIX 1.



5. POWER SPECTRAL DENSITY TEST

5.1 LIMIT

FCC Part15.247 , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(e)	Power Spectral Density	≤ 8 dBm (RBW ≥ 3 KHz)	2400-2483.5	PASS

5.2 TEST PROCEDURE

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS channel bandwidth.
3. Set the $100 \text{ kHz} \geq \text{RBW} \geq 3 \text{ kHz}$.
4. Set the $\text{VBW} \geq 3 \times \text{RBW}$.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

5.3 DEVIATION FROM STANDARD

No deviation.

5.4 TEST SETUP



5.5 EUT OPERATION CONDITIONS

Please refer to section 3.1.4 of this report.

5.6 TEST RESULTS

Note: The test data please refer to APPENDIX 1.



6. BANDWIDTH TEST

6.1 LIMIT

FCC Part15.247,Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(a)(2)	Bandwidth	$\geq 500\text{KHz}$ (6dB bandwidth)	2400-2483.5	PASS

6.2 TEST PROCEDURE

The automatic bandwidth measurement capability of an instrument may be employed using the X dB bandwidth mode with X set to 6 dB, if the functionality described above (i.e., RBW = 1% to 5% of the OBW but not less than 100 kHz., VBW $\geq$ 3RBW, peak detector with maximum hold) is implemented by the instrumentation function. When using this capability, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be ≥ 6 dB.

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP



6.5 EUT OPERATION CONDITIONS

Please refer to section 3.1.4 of this report.

6.6 TEST RESULTS

Note: The test data please refer to APPENDIX 1.



7. PEAK OUTPUT POWER TEST

7.1 LIMIT

FCC Part15.247,Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3)	Output Power	1 watt or 30dBm	2400-2483.5	PASS

7.2 TEST PROCEDURE

PKPM1 Peak power meter method:

The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall use a fast-responding diode detector.

7.3 DEVIATION FROM STANDARD

No deviation.

7.4 TEST SETUP



7.5 EUT OPERATION CONDITIONS

Please refer to section 3.1.4 of this report.

7.6 TEST RESULTS

Note: The test data please refer to APPENDIX 1.



8. ANTENNA REQUIREMENT

8.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 15.203: 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.

8.2 EUT ANTENNA

The EUT antenna is Internal Antenna. It comply with the standard requirement.