Shenzhen Zhilai Sci and Tech Co., Ltd.

RF TEST REPORT

Report Type:
FCC Part 15.247 RF report

Model:
ZL-Android-IMX6D-1G8G-WIFI-04
ZL-Android-IMX6D-2G8G-WIFI-04
ZL-Android-IMX6Q-2G8G-WIFI-04
ZL-Android-IMX6Q-2G8G-WIFI-070-VGA-06
ZL-Android-IMX6Q-1G8G-WIFI-070-VGA-06

REPORT NUMBER:
181101420SHA-002

ISSUE DATE:
June 12, 2019

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TEST REPORT

Report no.: 181101420SHA-002

Applicant:	Shenzhen Zhilai Sci and Tech Co., Ltd.
Address of Applicant:	Floor 15, C3 building, Nanshan Zhiyuan, Xueyuan road 1001, Nanshan District, Shenzhen 518052, China.
Manufacturer:	Shenzhen Zhilai Sci and Tech Co., Ltd.
Address of Manufacturer:	Floor 15, C3 building, Nanshan Zhiyuan, Xueyuan road 1001, Nanshan District, Shenzhen 518052, China.
FCC ID:	2ARP5-ZHILAI-IMX6DQ

SUMMARY:

The equipment complies with the requirements according to the following standard(s) or Specification:
47CFR Part 15 (2018): Radio Frequency Devices (Subpart C) **ANSI C63.10 (2013):** American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices

TESTED, PREPARED AND CHECKED BY :	REVIEWED AND APPROVED BY :
Project Engineer Eric Yu Shenzhen UnionTrust Quality and Technology Co., Ltd.	Reviewer Daniel Zhao Intertek Testing Services Shanghai

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TEST REPORT

Content

TEST REPORT

Revision History

Report No.	Version	Description	Issued Date
181101420SHA-002	Rev. 01	Initial issue of report	June 12, 2019

Measurement result summary

TEST ITEM	FCC REFERANCE	RESULT
Minimum 6dB Bandwidth	15.247(a)(2)	Pass
Maximum conducted output power and e.i.r.p.	15.247(b)(3)	Pass
Power spectrum density	15.247(e)	Pass
Emission outside the frequency band	15.247(d)	Pass
Radiated Emissions in restricted frequency bands	15.247(d), 15.205&15.209	Pass
Power line conducted emission	15.207(a)	Pass
Antenna requirement	15.203	Pass

Notes: 1: NA =Not Applicable

Remark: All the tests were performed in Subcontractor list - Shenzhen UnionTrust Quality and Technology Co., Ltd.

TEST REPORT

Model list

Model name	ROM, CPU
ZL-Android-IMX6D-1G8G-WIFI-04	ROM: 1G; CPU: Dual-core
ZL-Android-IMX6D-2G8G-WIFI-04	ROM: 2G; CPU: Dual-core
ZL-Android-IMX6Q-2G8G-WIFI-04	ROM: 2G; CPU: Quad-core
ZL-Android-IMX6Q-1G8G-WIFI-070-VGA-06	ROM: 1G; CPU: Quad-core
ZL-Android-IMX6Q-2G8G-WIFI-070-VGA-06	ROM: 2G; CPU: Quad-core

Without screen: ZL-Android-IMX6Q-2G8G-WIFI-070-VGA-06 are the same as the test Model ZL-Android-IMX6Q-1G8G-WIFI-070-VGA-06 in circuitry and electrical, mechanical and physical construction aspect. The difference are ROM, CPU and model number.

7 inch all-in-one machine (conventional microcomputer +7 inch screen): ZL-Android-IMX6D-1G8G- WIFI-04, ZL-Android-IMX6D-2G8G- WIFI-04 are the same as the test Model ZL-Android-IMX6Q-2G8G- WIFI-04 in circuitry and electrical, mechanical and physical construction aspect. The difference are ROM, CPU and model number.

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	Embedded Industrial Computer
Type/Model:	ZL-Android-IMX6D-1G8G-WIFI-04 ZL-Android-IMX6D-2G8G-WIFI-04 ZL-Android-IMX6Q-2G8G-WIFI-04 ZL-Android-IMX6Q-2G8G-WIFI-070-VGA-06 ZL-Android-IMX6Q-1G8G-WIFI-070-VGA-06
Description of EUT:	NA
Rating:	Input: 12Vdc, 3.5A
EUT type:	☒ Table top ☐ Floor standing
Software Version:	V5.2.2.4_25483.20171222
Sample received date:	October 25 ,2018
Date of test:	October 30 ,2018 to November 14,2018

1.2 Technical Specification

Frequency Range:	IEEE 802.11b/g/n-HT20: 2412MHz ~ 2462MHz IEEE 802.11n-HT40: 2422MHz ~ 2452MHz
Support Standards:	IEEE 802.11b, IEEE 802.11g, IEEE 802.11n-HT20, IEEE 802.11n-HT40
Type of Modulation:	IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g: OFDM (64-QAM, 16-QAM, QPSK, BPSK) IEEE 802.11n-HT20: OFDM (64-QAM, 16-QAM, QPSK, BPSK) IEEE 802.11n-HT40: OFDM (64-QAM, 16-QAM, QPSK, BPSK)
Channel Number:	11 Channels for 802.11b, 802.11g and 802.11n(HT20) 9 Channels for 802.11n(HT40)
Data Rate:	IEEE 802.11b: Up to 11 Mbps IEEE 802.11g: Up to 54 Mbps IEEE 802.11n-HT20: Up to MCS7 IEEE 802.11n-HT40: Up to MCS7
Channel Separation:	5 MHz

1.3 Antenna information

Antenna No.	Antenna type	Antenna Gain	Note
1	Dipole Antenna	2	-

Mode	Tx/Rx Function	Beamforming function	CDD function
802.11b	1Tx/1Rx	NO	NO
802.11g	1Tx/1Rx	NO	NO
802.11n(HT20)	2Tx/2Rx	NO	NO
802.11n(HT40)	2Tx/2Rx	NO	NO

1.4 Description of Test Facility

Name:	Intertek Testing Services Shanghai
Address:	Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China
Telephone:	86 21 61278200
Telefax:	86 21 54262353

The test facility is recognized, certified, or accredited by these organizations:	CNAS Accreditation Lab Registration No. CNAS L0139
	FCC Accredited Lab Designation Number: CN1175
	IC Registration Lab Registration code No.: 2042B-1
	VCCI Registration Lab Registration No.: R-4243, G-845, C-4723, T-2252
	NVLAP Accreditation Lab NVLAP LAB CODE: 200849-0
	A2LA Accreditation Lab Certificate Number: 3309.02

TEST REPORT

Tests were sub-contracted.

Name:	Shenzhen UnionTrust Quality and Technology Co., Ltd.
Address:	16/F, Block A, Building 6, Baoneng Science and Technology Park, Qingxiang Road No.1, Longhua New District, Shenzhen, China 518109
Telephone:	86 (0) 755 2823 0888
Telefax:	86 (0) 755 2823 0886

The test facility is recognized, certified, or accredited by these organizations:	CNAS-Lab Code: L9069
	A2LA-Lab Certificate No.: 4312.01
	FCC Accredited Lab. Designation Number: CN1194 Test Firm Registration Number: 259480

2 TEST SPECIFICATIONS

2.1 Standards or specification

47CFR Part 15 (2018)
ANSI C63.10 (2013)
KDB 558074 (v04)

2.2 Mode of operation during the test

Keep the EUT in continuously transmitting with modulation test single.

2.3 Test software list

Test Items	Software	Manufacturer	Version
Conducted emission	E3	Audix	9.160323
Radiated emission	E3	Audix	9.160323

2.4 Test peripherals list

Item No.	Name	Model	Description
1	Adapter	ADP60-S120A5000 Output:12Vdc 5A	NA
2	24'' Monitor	E2209Wc	NA
3	LED Monitor	M21A6	NA
4	Mouse & Keyboard	DELL MS111, KB212-B	NA
5	TF Card & USB	Kingston DTSE9G2	NA
6	Notebook	LENOVO,E450	NA
7	Speaker	8Ω5W	NA
8	Earphone	QTER01JY	NA
9	DC Cable	ADP60-S120A5000	0.5M, Unshielded with one ferrite
10	LVDS Cable	NA	0.3M, Unshielded with two ferrite
11	BKL Cable	NA	0.5M, Unshielded with one ferrite

2.5 Test environment condition:

Test items	Temperature	Humidity
Minimum 6dB Bandwidth	23.5°C	53% RH
Maximum conducted output power and e.i.r.p.		
Power spectrum density		
Emission outside the frequency band		
Occupied bandwidth		
Radiated Emissions in restricted frequency bands	23°C	52% RH
Power line conducted emission	24°C	54% RH

2.6 Instrument list

Radiated Emission Test Equipment List						
Used	**Equipment**	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. date (mm dd, yyyy)**	**Cal. Due date (mm dd, yyyy)**
☑	3M Chamber & Accessory Equipment	ETS-LINDGREN	3M	N/A	Dec. 20, 2015	Dec. 19, 2018
☑	Receiver	R&S	ESIB26	100114	Dec. 10, 2017	Dec. 10, 2018
☑	Loop Antenna	ETS-LINDGREN	6502	00202525	Dec. 22, 2017	Dec. 22, 2018
☑	Broadband Antenna	ETS-LINDGREN	3142E	00201566	Dec. 17, 2017	Dec. 17, 2018
☑	Preamplifier	HP	8447F	2805A02960	Dec. 10, 2017	Dec. 10, 2018
☑	Horn Antenna (Pre-amplifier)	ETS-LINDGREN	3117-PA	00201874	May 22, 2018	May 22, 2019
☑	Horn Antenna (Pre-amplifier)	ETS-LINDGREN	3116C-PA	00202652	Dec. 17, 2017	Dec. 17, 2018
☑	Multi device Controller	ETS-LINDGREN	7006-001	00160105	N/A	N/A
☑	Band Rejection Filter (2400MHz~2500MHz)	Micro-Tronics	BRM50702	G248	June 06, 2018	June 06, 2019
☑	Test Software	Audix	e3	Software Version: 9.160323		

Conducted Emission Test Equipment List						
Used	**Equipment**	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. date (mm dd, yyyy)**	**Cal. Due date (mm dd, yyyy)**
☑	Receiver	R&S	ESR7	1316.3003K07-101181-K3	Dec. 10, 2017	Dec. 10, 2018
☑	Pulse Limiter	R&S	ESH3-Z2	0357.8810.54	Dec. 10, 2017	Dec. 10, 2018
☑	LISN	R&S	ESH2-Z5	860014/024	Dec. 10, 2017	Dec. 10, 2018
☐	LISN	ETS-Lindgren	3816/2SH	00201088	Dec. 10, 2017	Dec. 10, 2018
☑	Test Software	Audix	e3	Software Version: 9.160323		

Conducted RF test Equipment List						
Used	**Equipment**	**Manufacturer**	**Model No.**	**Serial Number**	**Cal. date (mm dd, yyyy)**	**Cal. Due date (mm dd, yyyy)**
☑	EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY51440197	Dec.10, 2017	Dec. 10, 2018
☑	USB Wideband Power Sensor	KEYSIGHT	U2021XA	MY55430035	Dec. 10, 2017	Dec. 10, 2018
☐	USB Wideband Power Sensor	KEYSIGHT	U2021XA	MY55430023	Dec. 10, 2017	Dec. 10, 2018

2.7 Measurement uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

No.	Item	Measurement Uncertainty
1	Conducted emission 9KHz-150KHz	±3.8 dB
2	Conducted emission 150KHz-30MHz	±3.4 dB
3	Radiated emission 9KHz-30MHz	±4.9 dB
4	Radiated emission 30MHz-1GHz	±4.7 dB
5	Radiated emission 1GHz-18GHz	±5.1 dB
6	Radiated emission 18GHz-26GHz	±5.2 dB
7	Radiated emission 26GHz-40GHz	±5.2 dB

3 Minimum 6dB bandwidth

Test result: Pass

3.1 Limit

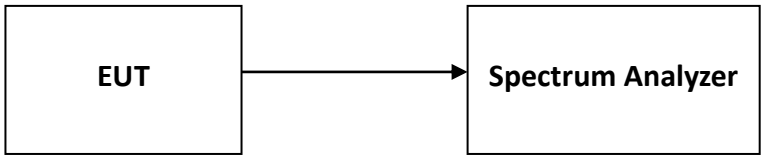
For systems using digital modulation techniques that may operate in the 902 - 928 MHz, 2400 - 2483.5 MHz and 5725 - 5850 MHz bands, the minimum 6 dB bandwidth shall be at least 500 kHz.

3.2 Measurement Procedure

The minimum 6dB bandwidth is measured using the Spectrum Analyzer according to DTS test procedure of “KDB558074 D01 DTS Meas Guidance” (clause 8.2) for compliance requirements.

a) Set RBW = 100 kHz.
b) Set the video bandwidth (VBW) ≥ 3 × RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Sweep = auto couple.
f) Allow the trace to stabilize.
g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

3.3 Test Configuration



3.4 Test Results of Minimum 6dB bandwidth

Mode	Channel/ Frequency (MHz)	6 dB Bandwidth (MHz)	99% Bandwidth (MHz)	6 dB Bandwidth Limit	Pass / Fail
IEEE 802.11b	1(2412)	10.09	15.086	> 500 kHz	Pass
	6(2437)	10.09	15.044	> 500 kHz	Pass
	11(2462)	10.10	15.079	> 500 kHz	Pass
IEEE 802.11g	1(2412)	16.57	18.036	> 500 kHz	Pass
	6(2437)	16.57	18.130	> 500 kHz	Pass
	11(2462)	16.53	18.508	> 500 kHz	Pass
IEEE 802.11n-HT20	1(2412)	17.82	18.317	> 500 kHz	Pass
	6(2437)	17.83	18.758	> 500 kHz	Pass
	11(2462)	17.83	19.385	> 500 kHz	Pass
IEEE 802.11n-HT40	3(2422)	36.43	36.400	> 500 kHz	Pass
	6(2437)	36.43	36.492	> 500 kHz	Pass
	9(2452)	36.42	36.700	> 500 kHz	Pass

The test plots as follows:

IEEE 802.11b	IEEE 802.11g
Lowest Channel	
	
Middle Channel	
	
Highest Channel	
	

TEST REPORT

IEEE 802.11n-HT20	IEEE 802.11n-HT40
Lowest Channel	
	
Middle Channel	
	
Highest Channel	
	

4 Maximum conducted output power and e.i.r.p.

Test result: Pass

4.1 Limit

For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 W. (The e.i.r.p. shall not exceed 4 W)

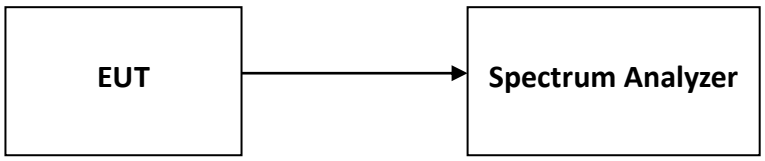
If the transmitting antenna of directional gain greater than 6dBi is used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi. If there have a beam forming type, the limit should be the minimum of 30dBm and 30+ (6 –antenna gain-beam forming gain).

4.2 Measurement Procedure

The EUT was tested according to DTS test procedure of "KDB558074 D01 DTS Meas Guidance" (clause 9.2.2.4) for compliance requirements.

a) Measure the duty cycle, x, of the transmitter output signal as described in Section 6.0.
b) Set span to at least 1.5 x OBW.
c) Set RBW = 1 % to 5 % of the OBW, not to exceed 1 MHz.
d) Set VBW ≥ 3 x RBW.
e) Number of points in sweep ≥ 2 x span / RBW. (This gives bin-to-bin spacing ≤ RBW/2, so that narrowband signals are not lost between frequency bins.)
f) Sweep time = auto.
g) Detector = RMS (i.e., power averaging), if available. Otherwise, use sample detector mode.
h) Do not use sweep triggering. Allow the sweep to "free run".
i) Trace average at least 100 traces in power averaging (i.e., RMS) mode; however, the number of traces to be averaged shall be increased above 100 as needed such that the average accurately represents the true average over the on and off periods of the transmitter.
j) Compute power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function with band limits set equal to the OBW band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.
k) Add 10 log (1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times (because the measurement represents an average over both the on- and off-times of the transmission). For example, add 10 log (1/0.25) = 6 dB if the duty cycle is 25 %.

4.3 Test Configuration



4.4 Test Results of Maximum conducted output power

Mode	Channel/ Frequency (MHz)	Maximum Conducted Peak Power (dBm)	Limit (dBm)	Pss / Fail
IEEE 802.11b	1(2412)	18.72	30	Pass
	6(2437)	18.21	30	Pass
	11(2462)	18.70	30	Pass
IEEE 802.11g	1(2412)	20.65	30	Pass
	6(2437)	20.35	30	Pass
	11(2462)	20.24	30	Pass
IEEE 802.11n-HT20	1(2412)	20.42	30	Pass
	6(2437)	20.14	30	Pass
	11(2462)	20.03	30	Pass
IEEE 802.11n-HT40	3(2422)	20.65	30	Pass
	6(2437)	20.32	30	Pass
	9(2452)	20.21	30	Pass

Note: The antenna gain of 2dBi less than 6dBi maximum permission antenna gain value based on 1 watt (30dBm) peak output power limit.

5 Power spectrum density

Test result: **Pass**

5.1 Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3 kHz band during any time interval of continuous transmission.

If the transmitting antenna of directional gain greater than 6dBi is used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi. If there have a beam forming type, the limit should be the minimum of 8dBm/MHz and 8+ (6 –antenna gain-beam forming gain).

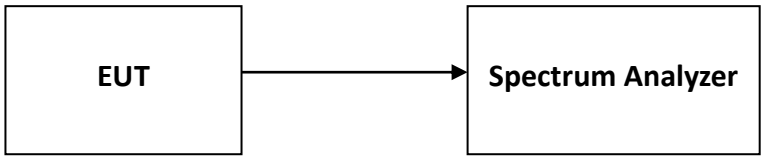
5.2 Measurement Procedure

The power output was tested according to DTS test procedure of “KDB558074 D01 DTS Meas Guidance” (clause 10.5) for compliance requirements.

This procedure is applicable when the EUT cannot be configured to transmit continuously (i.e., duty cycle < 98 %), and when sweep triggering/signal gating cannot be used to measure only when the EUT is transmitting at its maximum power control level, and when the transmission duty cycle is constant (i.e., duty cycle variations are less than ± 2 %):

a) Measure the duty cycle (x) of the transmitter output signal as described in Section 6.0.
b) Set instrument center frequency to DTS channel center frequency.
c) Set span to at least 1.5 x OBW.
d) Set RBW to: 3 kHz ≤ RBW ≤ 100 kHz.
e) Set VBW ≥3 x RBW.
f) Detector = power averaging (RMS) or sample detector (when RMS not available).
g) Ensure that the number of measurement points in the sweep ≥ 2 x span/RBW.
h) Sweep time = auto couple.
i) Do not use sweep triggering. Allow sweep to “free run”.
j) Employ trace averaging (RMS) mode over a minimum of 100 traces.
k) Use the peak marker function to determine the maximum amplitude level.
l) Add 10 log (1/x), where x is the duty cycle measured in step (a, to the measured PSD to compute the average PSD during the actual transmission time.
m) If resultant value exceeds the limit, then reduce RBW (no less than 3 kHz) and repeat (note that this may require zooming in on the emission of interest and reducing the span in order to meet the minimum measurement point requirement as the RBW is reduced).

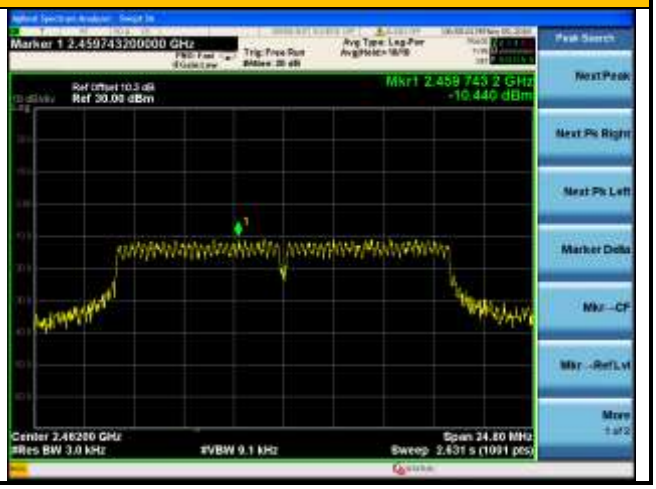
5.3 Test Configuration



5.4 Test Results of Power spectrum density

Mode	Channel/ Frequency (MHz)	PSD (dBm/3kHz)	PSD Limit (dBm/3kHz)	Pass / Fail
IEEE 802.11b	1(2412)	-13.058	8	Pass
	6(2437)	-14.100	8	Pass
	11(2462)	-13.242	8	Pass
IEEE 802.11g	1(2412)	-10.909	8	Pass
	6(2437)	-10.970	8	Pass
	11(2462)	-10.440	8	Pass
IEEE 802.11n-HT20	1(2412)	-10.207	8	Pass
	6(2437)	-10.987	8	Pass
	11(2462)	-10.407	8	Pass
IEEE 802.11n-HT40	3(2422)	-11.011	8	Pass
	6(2437)	-11.589	8	Pass
	9(2452)	-11.212	8	Pass

The test plots as follows:

IEEE 802.11b	IEEE 802.11g
Lowest Channel	
	
Middle Channel	
	
Highest Channel	
	

TEST REPORT

IEEE 802.11n-HT20	IEEE 802.11n-HT40
Lowest Channel	
	
Middle Channel	
	
Highest Channel	
	

6 Emission outside the frequency band

Test result: **Pass**

6.1 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 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

6.2 Measurement Procedure

The EUT was tested according to DTS test procedure of “KDB558074 D01 DTS Meas Guidance” (clause 11.0) for compliance requirements.

Reference level measurement

Establish a reference level by using the following procedure:

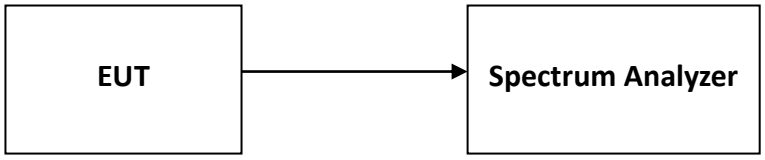
a) Set instrument center frequency to DTS channel center frequency.
b) Set the span to ≥ 1.5 times the DTS bandwidth.
c) Set the RBW = 100 kHz.
d) Set the VBW ≥ 3 x RBW.
e) Detector = peak.
f) Sweep time = auto couple.
g) Trace mode = max hold.
h) Allow trace to fully stabilize.
i) Use the peak marker function to determine the maximum PSD level.

Emission level measurement

a) Set the center frequency and span to encompass frequency range to be measured.
b) Set the RBW = 100 kHz.
c) Set the VBW ≥ 3 x RBW.
d) Detector = peak.
e) Sweep time = auto couple.
f) Trace mode = max hold.
g) Allow trace to fully stabilize.
h) Use the peak marker function to determine the maximum amplitude level.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) are attenuated by at least the minimum requirements specified in 11.1 a) or 11.1 b). Report the three highest emissions relative to the limit.

6.3 Test Configuration



6.4 The results of Emission outside the frequency band

The test plots as follows:

IEEE 802.11b	
In-Band Reference Level	**Out of Band Emission**
Lowest Channel	
	
	
Middle Channel	
	

TEST REPORT

Highest Channel	
	
	

IEEE 802.11g	
In-Band Reference Level	**Out of Band Emission**
Lowest Channel	
	 
Middle Channel	
	

TEST REPORT

Highest Channel	
	
	

IEEE 802.11n-HT20	
In-Band Reference Level	**Out of Band Emission**
Lowest Channel	
	
	
Middle Channel	
	

Highest Channel	
	
	

TEST REPORT

IEEE 802.11n-HT40	
In-Band Reference Level	**Out of Band Emission**
Lowest Channel	
	 
Middle Channel	
	

TEST REPORT

Highest Channel	
	
	

7 Radiated Emissions in restricted frequency bands

Test result: **Pass**

7.1 Limit

The radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits specified showed as below:

Frequencies (MHz)	Field Strength (microvolts/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

7.2 Measurement Procedure

For Radiated emission below 30MHz:

a) The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
b) The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c) Both X and Y axes of the antenna are set to make the measurement.
d) For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e) The test-receiver system was set to Quasi-Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

NOTE:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

TEST REPORT

For Radiated emission above 30MHz:

a) The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.

b) The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c) The height of antenna 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.

d) 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 rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e) The test-receiver system was set to quasi-peak detect function and specified bandwidth with maximum hold mode when the test frequency is below 1 GHz.

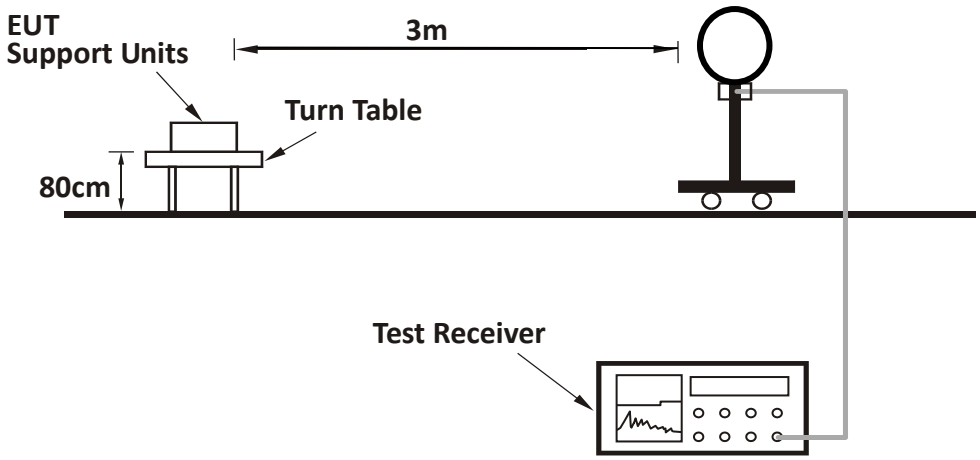
f) The test-receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

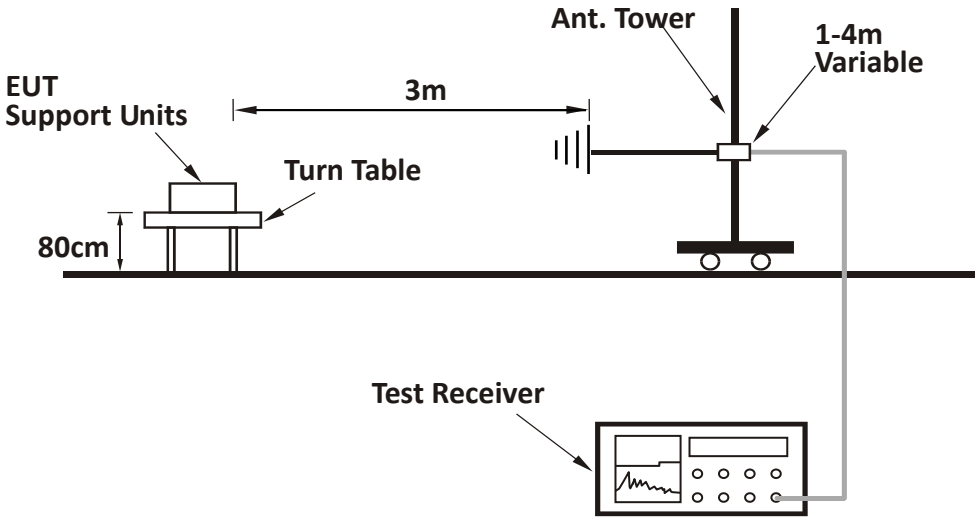
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98%) or 3 x RBW (Duty cycle ≥ 98%) for Average detection (AV) at frequency above 1GHz.
4. All modes of operation were investigated and the worst-case emissions are reported

7.3 Test Configuration

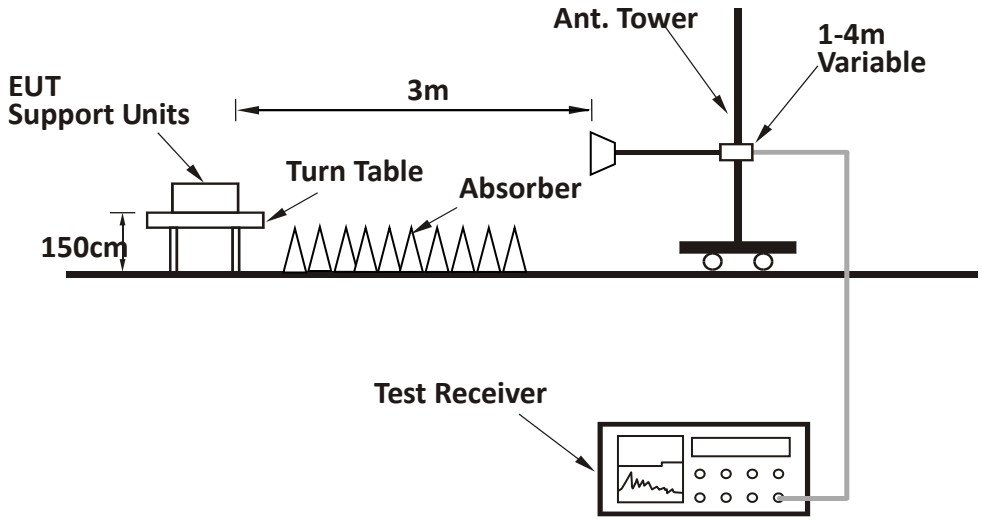
For Radiated emission below 30MHz:



For Radiated emission 30MHz to 1GHz:



For Radiated emission above 1GHz:



7.4 Test Results of Radiated Emissions

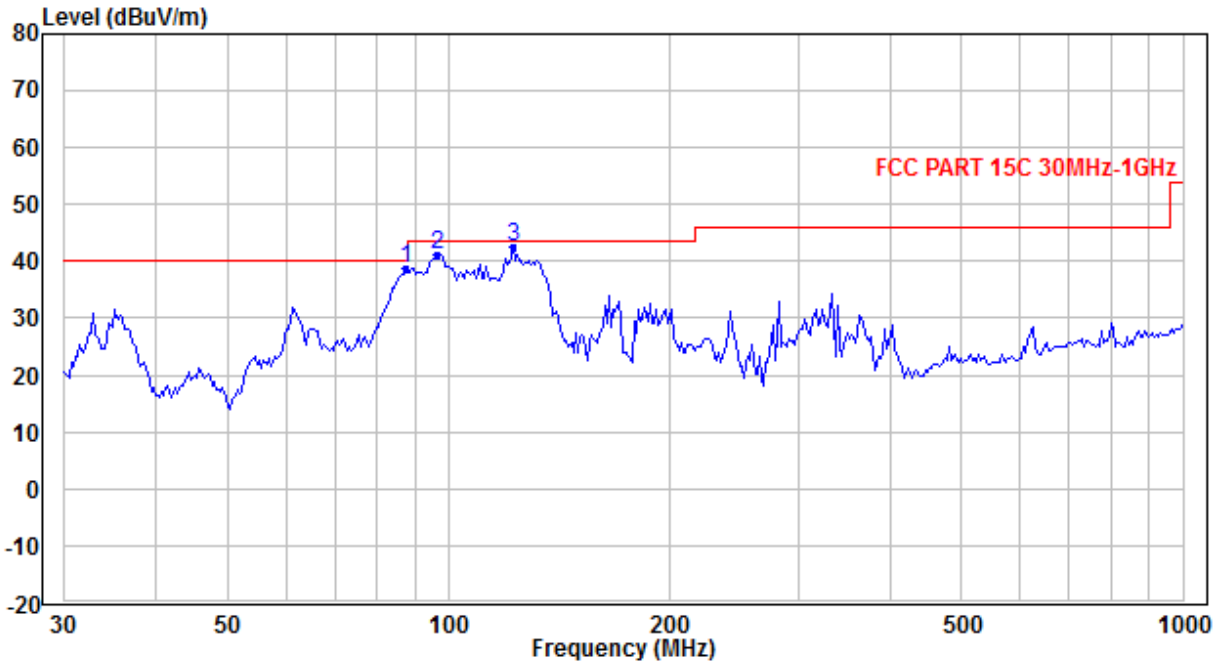
TEST REPORT

Without screen: ZL-Android-IMX6D-1G8G-WIFI-04

Radiated Emission Test Data (30 MHz ~ 1 GHz):

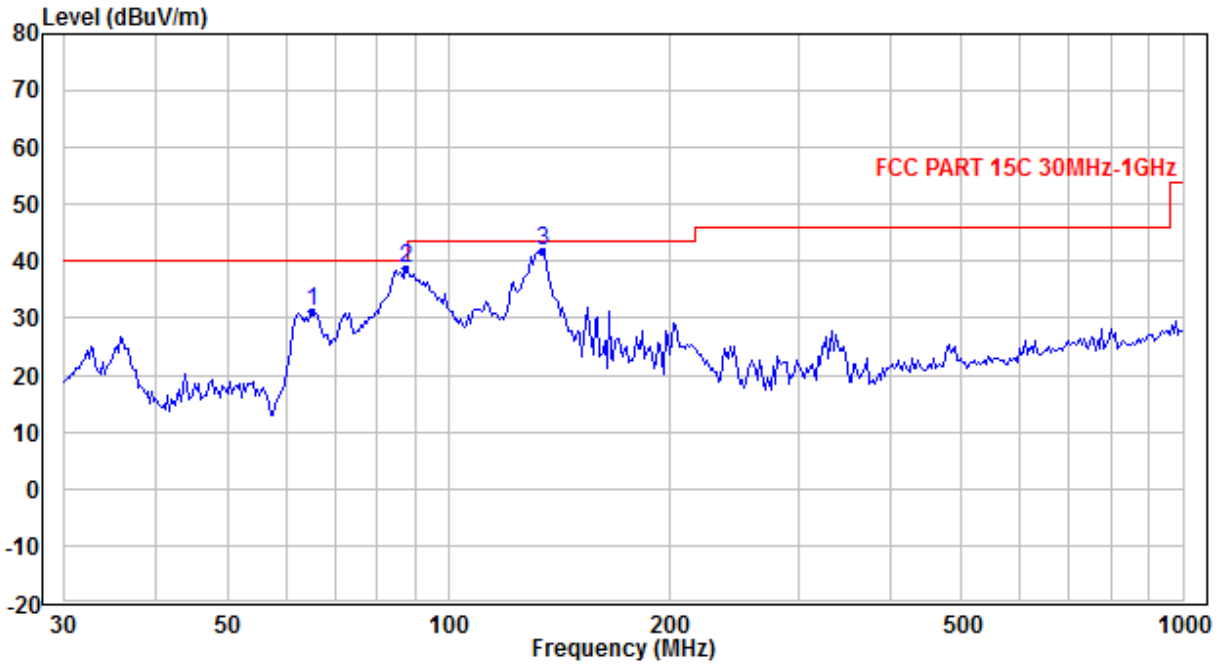
Worst-Case Configuration

Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	87.298	57.66	-18.73	38.93	40.00	-1.07	QP
2	96.323	59.16	-17.83	41.33	43.50	-2.17	QP
3	122.319	59.98	-17.50	42.48	43.50	-1.02	QP

Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	64.987	51.28	-20.00	31.28	40.00	-8.72	QP
2	87.298	57.40	-18.73	38.67	40.00	-1.33	QP
3	134.019	59.68	-17.76	41.92	43.50	-1.58	QP

Radiated Emission Test Data (Above 1GHz):

IEEE 802.11b_Lowest Channel:

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	4824.00	60.55	74.00	-13.45	Peak	Horizontal
2	4824.00	43.55	54.00	-10.45	Average	Horizontal
3	7236.00	51.60	74.00	-22.40	Peak	Horizontal
4	7236.00	38.60	54.00	-15.40	Average	Horizontal
5	4824.00	61.22	74.00	-12.78	Peak	Vertical
6	4824.00	41.22	54.00	-12.78	Average	Vertical
7	7236.00	51.85	74.00	-22.15	Peak	Vertical
8	7236.00	38.85	54.00	-15.15	Average	Vertical

IEEE 802.11b_Middle Channel:

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	4874.00	58.54	74.00	-15.46	Peak	Horizontal
2	4874.00	39.54	54.00	-14.46	Average	Horizontal
3	7311.00	51.83	74.00	-22.17	Peak	Horizontal
4	7311.00	38.83	54.00	-15.17	Average	Horizontal
5	4874.00	57.18	74.00	-16.82	Peak	Vertical
6	4874.00	38.18	54.00	-15.82	Average	Vertical
7	7311.00	51.00	74.00	-23.00	Peak	Vertical
8	7311.00	39.00	54.00	-15.00	Average	Vertical

IEEE 802.11b_Highest Channel:

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	4924.00	59.38	74.00	-14.62	Peak	Horizontal
2	4924.00	39.38	54.00	-14.62	Average	Horizontal
3	7386.00	49.35	74.00	-24.65	Peak	Horizontal
4	7386.00	37.36	54.00	-16.64	Average	Horizontal
5	4924.00	57.56	74.00	-16.44	Peak	Vertical
6	4924.00	37.56	54.00	-16.44	Average	Vertical
7	7386.00	52.20	74.00	-21.80	Peak	Vertical
8	7386.00	39.20	54.00	-14.80	Average	Vertical

IEEE 802.11g_Lowest Channel:

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	4824.00	45.72	74.00	-28.28	Peak	Horizontal
2	4824.00	45.72	54.00	-8.28	Average	Horizontal
3	7236.00	54.58	74.00	-19.42	Peak	Horizontal
4	7236.00	39.58	54.00	-14.42	Average	Horizontal
5	4824.00	62.53	74.00	-11.47	Peak	Vertical
6	4824.00	47.53	54.00	-6.47	Average	Vertical
7	7236.00	53.97	74.00	-20.03	Peak	Vertical
8	7236.00	39.97	54.00	-14.03	Average	Vertical

IEEE 802.11g_Middle Channel:

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	4874.00	60.00	74.00	-14.00	Peak	Horizontal
2	4874.00	41.00	54.00	-13.00	Average	Horizontal
3	7311.00	54.13	74.00	-19.87	Peak	Horizontal
4	7311.00	40.13	54.00	-13.87	Average	Horizontal
5	4874.00	60.26	74.00	-13.74	Peak	Vertical
6	4874.00	44.26	54.00	-9.74	Average	Vertical
7	7311.00	51.54	74.00	-22.46	Peak	Vertical
8	7311.00	38.54	54.00	-15.46	Average	Vertical

IEEE 802.11g_Highest Channel:

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	4924.00	61.72	74.00	-12.28	Peak	Horizontal
2	4924.00	44.72	54.00	-9.28	Average	Horizontal
3	7386.00	53.25	74.00	-20.75	Peak	Horizontal
4	7386.00	40.25	54.00	-13.75	Average	Horizontal
5	4924.00	59.29	74.00	-14.71	Peak	Vertical
6	4924.00	43.29	54.00	-10.71	Average	Vertical
7	7386.00	55.04	74.00	-18.96	Peak	Vertical
8	7386.00	42.04	54.00	-11.96	Average	Vertical

IEEE 802.11n-HT20_Lowest Channel:

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	4824.00	63.72	74.00	-10.28	Peak	Horizontal
2	4824.00	46.72	54.00	-7.28	Average	Horizontal
3	7236.00	53.03	74.00	-20.97	Peak	Horizontal
4	7236.00	39.03	54.00	-14.97	Average	Horizontal
5	4824.00	63.14	74.00	-10.86	Peak	Vertical
6	4824.00	49.14	54.00	-4.86	Average	Vertical
7	7236.00	54.67	74.00	-19.33	Peak	Vertical
8	7236.00	39.67	54.00	-14.33	Average	Vertical

IEEE 802.11n-HT20_Middle Channel:

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	4874.00	64.56	74.00	-9.44	Peak	Horizontal
2	4874.00	41.56	54.00	-12.44	Average	Horizontal
3	7311.00	52.69	74.00	-21.31	Peak	Horizontal
4	7311.00	38.69	54.00	-15.31	Average	Horizontal
5	4874.00	63.36	74.00	-10.64	Peak	Vertical
6	4874.00	48.36	54.00	-5.64	Average	Vertical
7	7311.00	55.85	74.00	-18.15	Peak	Vertical
8	7311.00	40.85	54.00	-13.15	Average	Vertical

IEEE 802.11n-HT20_Highest Channel:

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	4924.00	62.70	74.00	-11.30	Peak	Horizontal
2	4924.00	40.70	54.00	-13.30	Average	Horizontal
3	7386.00	54.88	74.00	-19.12	Peak	Horizontal
4	7386.00	39.88	54.00	-14.12	Average	Horizontal
5	4924.00	60.17	74.00	-13.83	Peak	Vertical
6	4924.00	45.17	54.00	-8.83	Average	Vertical
7	7386.00	56.56	74.00	-17.44	Peak	Vertical
8	7386.00	42.56	54.00	-11.44	Average	Vertical

IEEE 802.11n-HT40_Lowest Channel:

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	4844.00	61.34	74.00	-12.66	Peak	Horizontal
2	4844.00	44.34	54.00	-9.66	Average	Horizontal
3	7266.00	51.09	74.00	-22.91	Peak	Horizontal
4	7266.00	38.09	54.00	-15.91	Average	Horizontal
5	4844.00	61.97	74.00	-12.03	Peak	Vertical
6	4844.00	47.92	54.00	-6.08	Average	Vertical
7	7266.00	52.42	74.00	-21.58	Peak	Vertical
8	7266.00	39.42	54.00	-14.58	Average	Vertical

IEEE 802.11n-HT40_Middle Channel:

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	4874.00	59.98	74.00	-14.02	Peak	Horizontal
2	4874.00	46.98	54.00	-7.02	Average	Horizontal
3	7311.00	51.83	74.00	-22.17	Peak	Horizontal
4	7311.00	39.83	54.00	-14.17	Average	Horizontal
5	4874.00	59.41	74.00	-14.59	Peak	Vertical
6	4874.00	42.41	54.00	-11.59	Average	Vertical
7	7311.00	52.46	74.00	-21.54	Peak	Vertical
8	7311.00	39.46	54.00	-14.54	Average	Vertical

IEEE 802.11n-HT40_Highest Channel:

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	4904.00	59.69	74.00	-14.31	Peak	Horizontal
2	4904.00	45.69	54.00	-8.31	Average	Horizontal
3	7356.00	51.20	74.00	-22.80	Peak	Horizontal
4	7356.00	39.20	54.00	-14.80	Average	Horizontal
5	4904.00	59.41	74.00	-14.59	Peak	Vertical
6	4904.00	45.41	54.00	-8.59	Average	Vertical
7	7356.00	52.46	74.00	-21.54	Peak	Vertical
8	7356.00	39.46	54.00	-14.54	Average	Vertical

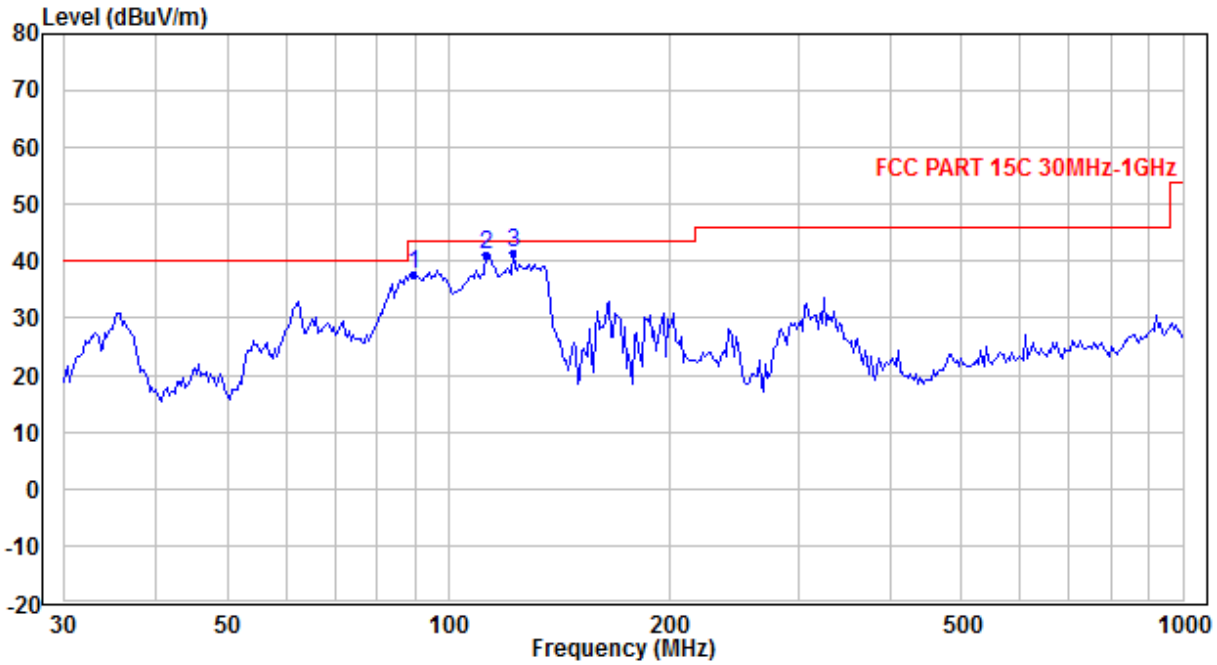
TEST REPORT

7 inch all-in-one machine (conventional microcomputer +7 inch screen): ZL-Android-IMX6Q-2G8G-WIFI-070-VGA-06

Radiated Emission Test Data (30 MHz ~ 1 GHz):

Worst-Case Configuration

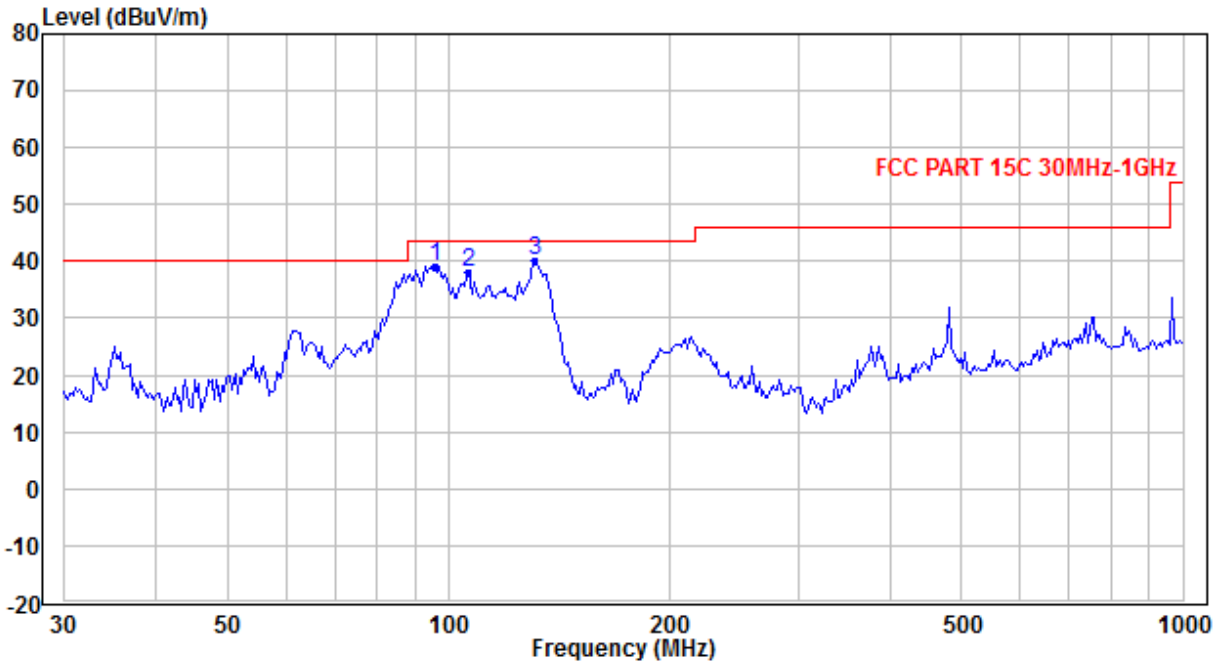
Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	89.787	56.33	-18.56	37.77	43.50	-5.73	QP
2	112.427	58.69	-17.43	41.26	43.50	-2.24	QP
3	122.319	58.92	-17.50	41.42	43.50	-2.08	QP

TEST REPORT

Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correction factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	95.649	57.03	-17.90	39.13	43.50	-4.37	QP
2	106.281	55.42	-17.42	38.00	43.50	-5.50	QP
3	131.224	57.93	-17.70	40.23	43.50	-3.27	QP

Radiated Emission Test Data (Above 1GHz):

IEEE 802.11b_Lowest Channel:

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	4824.00	57.78	74.00	-16.22	Peak	Horizontal
2	4824.00	43.83	54.00	-10.17	Average	Horizontal
3	7236.00	52.80	74.00	-21.20	Peak	Horizontal
4	7236.00	39.00	54.00	-15.00	Average	Horizontal
5	4824.00	55.92	74.00	-18.08	Peak	Vertical
6	4824.00	43.15	54.00	-10.85	Average	Vertical
7	7236.00	51.85	74.00	-22.15	Peak	Vertical
8	7236.00	38.42	54.00	-15.58	Average	Vertical

IEEE 802.11b_Middle Channel:

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	4874.00	55.54	74.00	-18.46	Peak	Horizontal
2	4874.00	40.47	54.00	-13.53	Average	Horizontal
3	7311.00	51.83	74.00	-22.17	Peak	Horizontal
4	7311.00	39.11	54.00	-14.89	Average	Horizontal
5	4874.00	55.18	74.00	-18.82	Peak	Vertical
6	4874.00	38.89	54.00	-15.11	Average	Vertical
7	7311.00	50.92	74.00	-23.08	Peak	Vertical
8	7311.00	38.30	54.00	-15.70	Average	Vertical

IEEE 802.11b_Highest Channel:

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	4924.00	58.38	74.00	-15.62	Peak	Horizontal
2	4924.00	43.36	54.00	-10.64	Average	Horizontal
3	7386.00	51.35	74.00	-22.65	Peak	Horizontal
4	7386.00	39.35	54.00	-14.65	Average	Horizontal
5	4924.00	55.56	74.00	-18.44	Peak	Vertical
6	4924.00	41.23	54.00	-12.77	Average	Vertical
7	7386.00	52.20	74.00	-21.80	Peak	Vertical
8	7386.00	41.55	54.00	-12.45	Average	Vertical

IEEE 802.11g_Lowest Channel:

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	4824.00	57.97	74.00	-16.03	Peak	Horizontal
2	4824.00	44.60	54.00	-9.40	Average	Horizontal
3	7236.00	52.87	74.00	-21.13	Peak	Horizontal
4	7236.00	38.89	54.00	-15.11	Average	Horizontal
5	4824.00	59.53	74.00	-14.47	Peak	Vertical
6	4824.00	47.44	54.00	-6.56	Average	Vertical
7	7236.00	51.96	74.00	-22.04	Peak	Vertical
8	7236.00	39.23	54.00	-14.77	Average	Vertical

IEEE 802.11g_Middle Channel:

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	4874.00	58.00	74.00	-16.00	Peak	Horizontal
2	4874.00	46.92	54.00	-7.08	Average	Horizontal
3	7311.00	55.13	74.00	-18.87	Peak	Horizontal
4	7311.00	40.80	54.00	-13.20	Average	Horizontal
5	4874.00	60.26	74.00	-13.74	Peak	Vertical
6	4874.00	45.86	54.00	-8.14	Average	Vertical
7	7311.00	51.54	74.00	-22.46	Peak	Vertical
8	7311.00	42.25	54.00	-11.75	Average	Vertical

IEEE 802.11g_Highest Channel:

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	4924.00	58.72	74.00	-15.28	Peak	Horizontal
2	4924.00	47.56	54.00	-6.44	Average	Horizontal
3	7386.00	53.25	74.00	-20.75	Peak	Horizontal
4	7386.00	40.26	54.00	-13.74	Average	Horizontal
5	4924.00	59.13	74.00	-14.87	Peak	Vertical
6	4924.00	43.94	54.00	-10.06	Average	Vertical
7	7386.00	55.32	74.00	-18.68	Peak	Vertical
8	7386.00	42.78	54.00	-11.22	Average	Vertical

IEEE 802.11n-HT20_Lowest Channel:

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	4824.00	55.73	74.00	-18.27	Peak	Horizontal
2	4824.00	49.67	54.00	-4.33	Average	Horizontal
3	7236.00	52.03	74.00	-21.97	Peak	Horizontal
4	7236.00	38.34	54.00	-15.66	Average	Horizontal
5	4824.00	57.14	74.00	-16.86	Peak	Vertical
6	4824.00	44.88	54.00	-9.12	Average	Vertical
7	7236.00	50.67	74.00	-23.33	Peak	Vertical
8	7236.00	38.71	54.00	-15.29	Average	Vertical

IEEE 802.11n-HT20_Middle Channel:

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	4874.00	60.56	74.00	-13.44	Peak	Horizontal
2	4874.00	44.69	54.00	-9.31	Average	Horizontal
3	7311.00	52.57	74.00	-21.43	Peak	Horizontal
4	7311.00	39.69	54.00	-14.31	Average	Horizontal
5	4874.00	58.36	74.00	-15.64	Peak	Vertical
6	4874.00	49.12	54.00	-4.88	Average	Vertical
7	7311.00	56.85	74.00	-17.15	Peak	Vertical
8	7311.00	41.33	54.00	-12.67	Average	Vertical

IEEE 802.11n-HT20_Highest Channel:

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	4924.00	60.70	74.00	-13.30	Peak	Horizontal
2	4924.00	45.58	54.00	-8.42	Average	Horizontal
3	7386.00	53.88	74.00	-20.12	Peak	Horizontal
4	7386.00	41.38	54.00	-12.62	Average	Horizontal
5	4924.00	58.17	74.00	-15.83	Peak	Vertical
6	4924.00	47.05	54.00	-6.95	Average	Vertical
7	7386.00	56.56	74.00	-17.44	Peak	Vertical
8	7386.00	44.51	54.00	-9.49	Average	Vertical

IEEE 802.11n-HT40_Lowest Channel:

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	4844.00	60.34	74.00	-13.66	Peak	Horizontal
2	4844.00	50.00	54.00	-4.00	Average	Horizontal
3	7266.00	49.09	74.00	-24.91	Peak	Horizontal
4	7266.00	40.81	54.00	-13.19	Average	Horizontal
5	4844.00	63.92	74.00	-10.08	Peak	Vertical
6	4844.00	49.94	54.00	-4.06	Average	Vertical
7	7266.00	52.42	74.00	-21.58	Peak	Vertical
8	7266.00	40.31	54.00	-13.69	Average	Vertical

IEEE 802.11n-HT40_Middle Channel:

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	4874.00	58.55	74.00	-15.45	Peak	Horizontal
2	4874.00	49.66	54.00	-4.34	Average	Horizontal
3	7311.00	51.83	74.00	-22.17	Peak	Horizontal
4	7311.00	39.74	54.00	-14.26	Average	Horizontal
5	4874.00	59.41	74.00	-14.59	Peak	Vertical
6	4874.00	43.75	54.00	-10.25	Average	Vertical
7	7311.00	52.46	74.00	-21.54	Peak	Vertical
8	7311.00	39.58	54.00	-14.42	Average	Vertical

IEEE 802.11n-HT40_Highest Channel:

No.	Frequency (MHz)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Antenna Polaxis
1	4904.00	59.52	74.00	-14.48	Peak	Horizontal
2	4904.00	46.07	54.00	-7.93	Average	Horizontal
3	7356.00	51.20	74.00	-22.80	Peak	Horizontal
4	7356.00	39.74	54.00	-14.26	Average	Horizontal
5	4904.00	56.81	74.00	-17.19	Peak	Vertical
6	4904.00	48.97	54.00	-5.03	Average	Vertical
7	7356.00	51.05	74.00	-22.95	Peak	Vertical
8	7356.00	38.63	54.00	-15.37	Average	Vertical

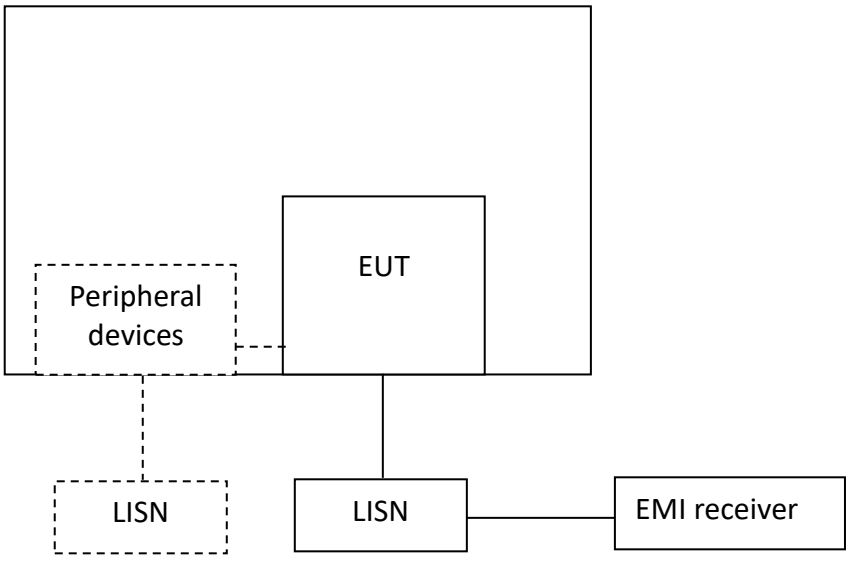
8 Power line conducted emission

Test result: **Pass**

8.1 Limit

Frequency range (MHz)	Limits dB(μV)	
	Quasi-peak	Average
0.15 ~ 0.5	79	66
0.5 ~ 30	73	60

8.2 Test Configuration



8.3 Measurement Procedure

Measured levels of ac power-line conducted emission shall be the emission voltages from the voltage probe, where permitted, or across the 50 Ω LISN port (to which the EUT is connected), where permitted, terminated into a 50 Ω measuring instrument. All emission voltage and current measurements shall be made on each current-carrying conductor at the plug end of the EUT power cord by the use of mating plugs and receptacles on the LISN, if used. Equipment shall be tested with power cords that are normally supplied or recommended by the manufacturer and that have electrical and shielding characteristics that are the same as those cords normally supplied or recommended by the manufacturer. For those measurements using a LISN, the 50 Ω measuring port is terminated by a measuring instrument having 50 Ω input impedance. All other ports are terminated in 50 Ω loads.

Tabletop devices shall be placed on a platform of nominal size 1 m by 1.5 m, raised 80 cm above the reference ground plane. The vertical conducting plane or wall of an RF-shielded (screened) room shall be located 40 cm to the rear of the EUT. Floor-standing devices shall be placed either directly on the reference ground-plane or on insulating material as described in ANSI C63.4. All other surfaces of tabletop or floor-standing EUTs shall be at least 80 cm from any other grounded conducting surface, including the case or cases of one or more LISNs.

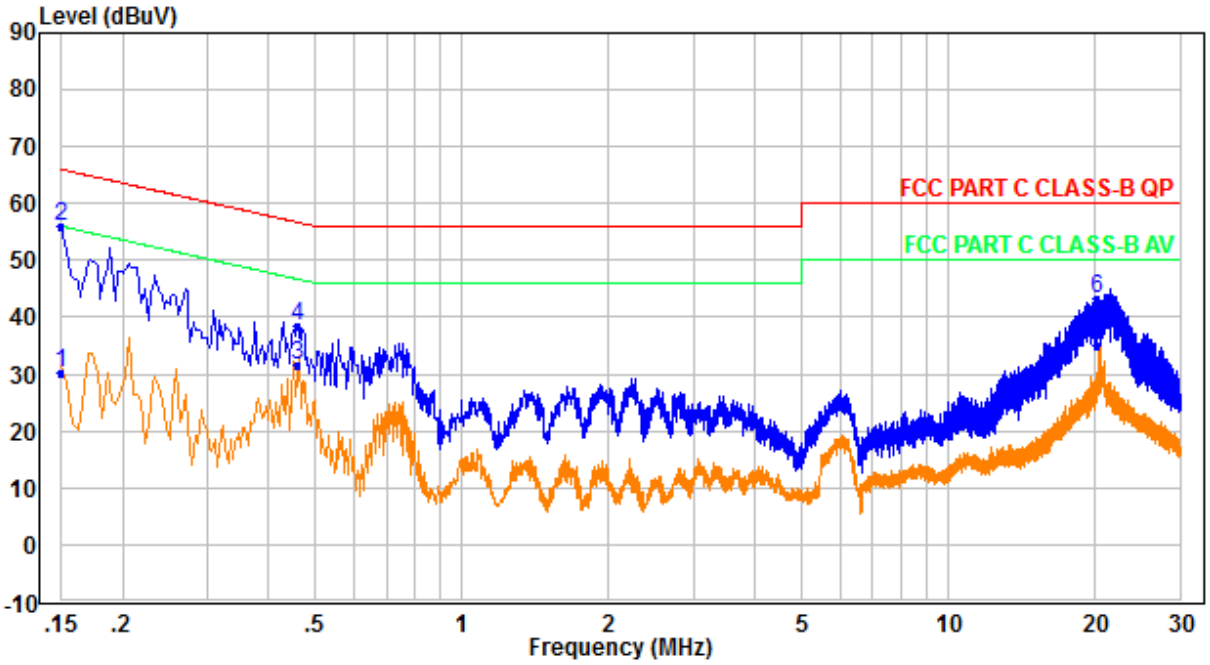
The bandwidth of the test receiver is set at 9 kHz.

8.4 Test Results of Power line conducted emission

Without screen: ZL-Android-IMX6D-1G8G-WIFI-04:

Test Curve:

L Line



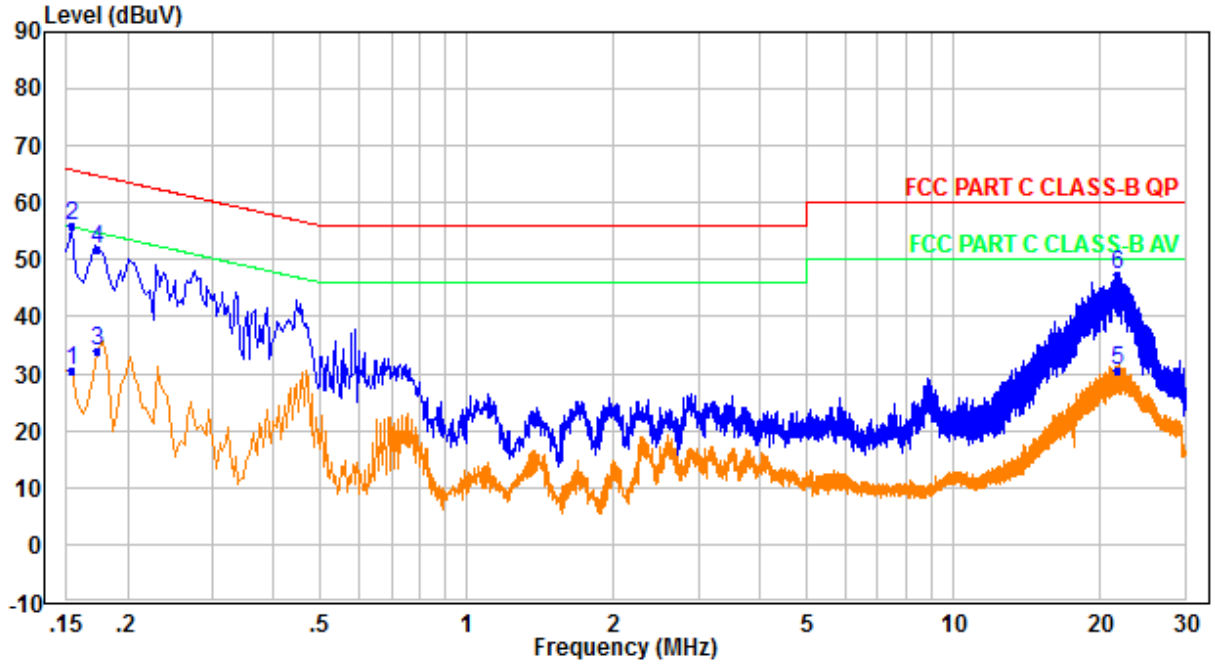
Test Data:

Frequency (MHz)	Quasi-peak			Average		
	level dB(μV)	Limit dB(μV)	Margin (dB)	level dB(μV)	limit dB(μV)	Margin (dB)
0.154	55.95	65.78	-9.83	30.66	55.78	-25.12
0.174	52.03	64.77	-12.74	34.02	54.77	-20.75
21.883	47.55	60.00	-12.45	30.54	50.00	-19.46

TEST REPORT

Test Curve:

N Line



Test Data:

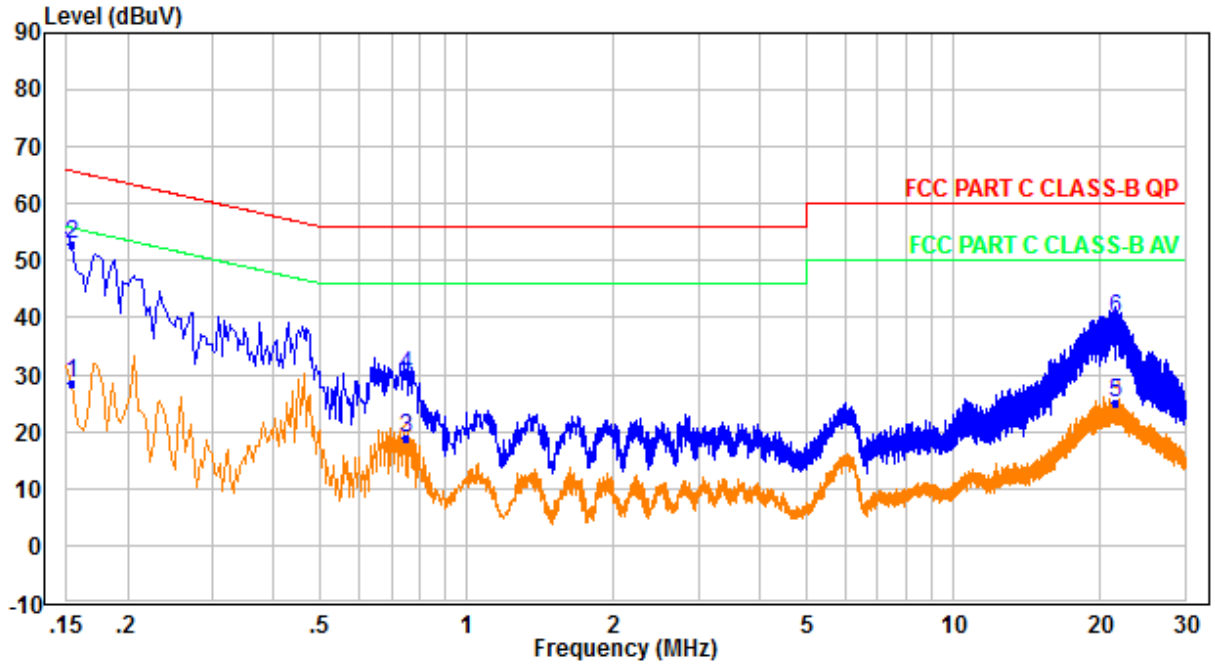
Frequency (MHz)	Quasi-peak			Average		
	level dB(μV)	Limit dB(μV)	Margin (dB)	level dB(μV)	limit dB(μV)	Margin (dB)
0.158	47.00	79.00	-32.00	28.91	66.00	-37.09
0.186	43.76	79.00	-35.24	25.83	66.00	-40.17
25.452	41.32	73.00	-31.68	22.27	60.00	-37.73

TEST REPORT

7 inch all-in-one machine (conventional microcomputer +7 inch screen): ZL-Android-IMX6Q-2G8G-WIFI-070-VGA-06:

Test Curve:

L Line



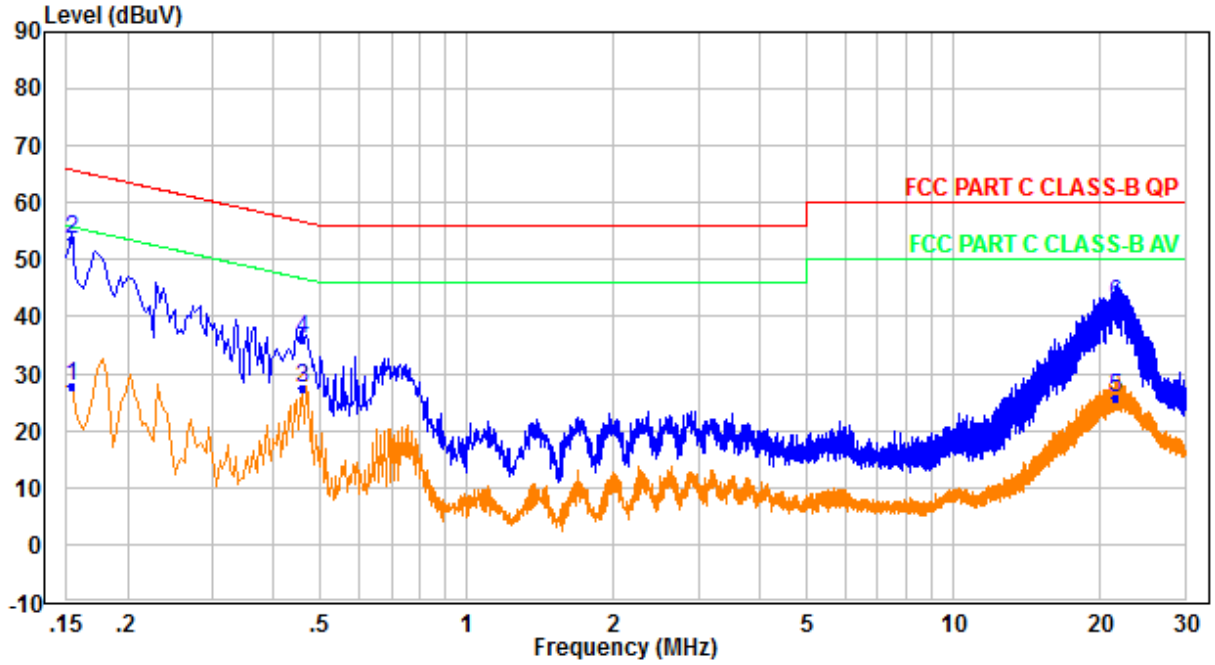
Test Data:

Frequency (MHz)	Quasi-peak			Average		
	level dB(μV)	Limit dB(μV)	Margin (dB)	level dB(μV)	limit dB(μV)	Margin (dB)
0.154	52.86	65.78	-12.92	28.53	55.78	-27.25
0.750	29.75	56.00	-26.25	19.00	46.00	-27.00
21.665	39.82	60.00	-20.18	25.00	50.00	-25.00

TEST REPORT

Test Curve:

N Line



Test Data:

Frequency (MHz)	Quasi-peak			Average		
	level dB(μV)	Limit dB(μV)	Margin (dB)	level dB(μV)	limit dB(μV)	Margin (dB)
0.154	53.65	65.78	-12.13	27.67	55.78	-28.11
0.458	35.96	56.73	-20.77	27.37	46.73	-19.36
21.569	42.25	60.00	-17.75	25.82	50.00	-24.18

Remark: 1. Correct Factor = LISN Factor + Cable Loss, the value was added to Original Receiver Reading by the software automatically.

2. Corrected Reading = Original Receiver Reading + Correct Factor

3. Margin = Limit - Corrected Reading

4. If the PK Corrected Reading is lower than AV limit, the AV test can be elided.

9 Antenna requirement

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 shall be considered sufficient to comply with the provisions of this section.

Result:

Antenna connectors is reserve-SMA and no consideration of replacement. The gain of the antenna is 2 dBi.

Appendix I: Photograph of test setup

See test photos attached in Appendix 1 for the actual connections between Product and support equipment.

Appendix II: Photograph of equipment under test

Refer to Appendix 2 for EUT external and internal photos.

********** END **********