

FCC AND ISED CERTIFICATION TEST REPORT

FOR

Applicant	:	Sahara Presentation Systems LTD.
Address	:	Europa house, Delivery bays 28-30, Littlebrook DC1, Shield Road, Dartford, Kent
Equipment under Test	:	Interactive Touchscreen Display
Model No.	:	For FCC: IMPACT Lux 65", UX Pro 3 65", IMPACT Lux 75", UX Pro 3 75", IMPACT Lux 86", UX Pro 3 86", For ISED: IMPACT Lux 65", IMPACT Lux 75", IMPACT Lux 86"
Trade Mark	:	CLEVERTOUCH
FCC ID	:	2APKO-EKXXXG
IC	:	25437-EKXXXG
Manufacturer	:	Sahara Presentation Systems LTD.
Address	:	Europa house, Delivery bays 28-30, Littlebrook DC1, Shield Road, Dartford, Kent

Issued By: Dongguan Dongdian Testing Service Co., Ltd.

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REPORT

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Test Report Declare

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Trade Mark	:	CLEVERTOUCH
Manufacturer	:	Sahara Presentation Systems LTD.
Address	:	Europa house, Delivery bays 28-30, Littlebrook DC1, Shield Road, Dartford, Kent

Test Standard Used:

FCC Rules and Regulations Part 15 Subpart C

RSS-210 Issue 10 December 2019

Test procedure used:

ANSI C63.10:2013

RSS-Gen Issue 5 April 2018 Amendment 2 (February 2021)

We Declare:

The equipment described above is tested by Dongguan Dongdian Testing Service Co., Ltd and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Dongguan Dongdian Testing Service Co., Ltd is assumed of full responsibility for the accuracy and completeness of these tests.

After test and evaluation, our opinion is that the equipment provided for test compliance with the requirement of the above FCC and ISED standards.

Report No.:	DDT-RE23051601-1E01		
Date of Receipt:	Jun. 01, 2023	Date of Test:	Jun. 08, 2023 ~ Aug. 11, 2023

Prepared By:

Jacky Huang

Jacky Huang/Engineer

Approved By:

Damon Hu

Damon Hu/EMC Manager

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Dongguan Dongdian Testing Service Co., Ltd.

Revision History

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	Aug. 14, 2023	

1. Summary of Test Results

Description of Test Item	Standard	Results
20 dB Bandwidth & 99% Bandwidth	FCC Part 15: 15.215 ANSI C63.10:2013 RSS-210 Issue 10 RSS-Gen Issue 5	Pass
Frequency Tolerance	FCC Part 15:15.225 ANSI C63.10:2013 RSS-210 Issue 10 RSS-Gen Issue 5	Pass
Radiated Emission	FCC Part 15: 15.209 FCC Part 15: 15.225 ANSI C63.10:2013 RSS-210 Issue 10 RSS-Gen Issue 5	Pass
Power Line Conducted Emissions	FCC Part 15: 15.207 ANSI C63.10:2013 RSS-210 Issue 10 RSS-Gen Issue 5	Pass
Antenna Requirement	FCC Part 15: 15.203 ANSI C63.10:2013 RSS-210 Issue 10 RSS-Gen Issue 5	Pass

2. General Test Information

2.1. Description of EUT

EUT Name	: Interactive Touchscreen Display
Model Number	: For FCC: IMPACT Lux 65", UX Pro 3 65", IMPACT Lux 75", UX Pro 3 75", IMPACT Lux 86", UX Pro 3 86", For ISED: IMPACT Lux 65", IMPACT Lux 75", IMPACT Lux 86"
Difference of models	: The IMPACT Lux 65" is different from the UX Pro 3 65" only in model name and sales market. The rest of the hardware, performance, and functions are the same. The IMPACT Lux 75" is different from the UX Pro 3 75" only in model name and sales market. The rest of the hardware, performance, and functions are the same. The IMPACT Lux 86" is different from the UX Pro 3 86" only in model name and sales market. The rest of the hardware, performance, and functions are the same. Compare with IMPACT Lux 65", IMPACT Lux 75" only the appearance, size and power mainboard are different, others completely the same. Compare with IMPACT Lux 65", IMPACT Lux 86" only the appearance, size, power mainboard, AC power socket board and screen timing control T-CON board are different, others completely the same. All models' RF hardware and software, including modules, crystal oscillator, antenna, function exactly the same. According to the pretest results, the differences between the models only affect the results of the Radiated Emission (30MHz-1GHz) and Power Line Conducted Emissions. Therefore, in addition to the two test projects, the results of three models (IMPACT Lux 65", IMPACT Lux 75", IMPACT Lux 86") are recorded, and the remaining projects only record the test results of the worst model: IMPACT Lux 65".
EUT function description	: Please reference user manual of this device
Power Supply	: IMPACT Lux 65": 100-240V~ 50/60Hz 4.5A, IMPACT Lux 75": 100-240V~ 50/60Hz 5.5A, IMPACT Lux 86": 100-240V~ 50/60Hz 6.0A
Radio Specification	: NFC
Operation Frequency	: 13.56 MHz
Antenna Type	: Inductive loop coil antenna
Sample Number	: S23051601-01, S23051602-01, S23051603-01

Note: EUT is the abbreviation of equipment under test.

2.2. Accessories of EUT

Description of Accessories	Manufacturer	Model number	Serial No.	Other
N/A	N/A	N/A	N/A	N/A

2.3. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number or Type	EMC Compliance	Other
ID Card	N/A	N/A	N/A	N/A

2.4. Block diagram of EUT configuration for test



2.5. Deviations of test Stand

No deviation.

2.6. Test environment conditions

During the measurement the environmental conditions were within the listed ranges:

/	Normal Conditions	Extreme Conditions
Temperature range:	21-25 °C	0 °C and +40 °C
Humidity range:	40-75%	10-90%
Pressure range:	86-106 kPa	86-106 kPa
Power supply	NV: AC 120V/60Hz or AC 240V/50Hz	AC 102V/60Hz, AC 138V/60Hz or AC 204V/50Hz, AC 276V/50Hz (from 85% to 115% of the rated supply voltage)
Note: The Extreme temperature range and extreme voltages are declared by the manufacturer.		

2.7. Test laboratory

Dongguan Dongdian Testing Service Co., Ltd.

Add.: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park, Dongguan City,
Guangdong Province, China, 523808.

Tel.: +86-0769-38826678, <http://www.dgddt.com>, Email: ddt@dgddt.com.

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, R-20155, G-20118

2.8. Measurement uncertainty

Test Item	Uncertainty
Uncertainty for Radiation Emission test (9 kHz - 30 MHz)	3.78 dB (150 kHz - 30 MHz)
	3.37 dB (9 kHz - 150 kHz)
Uncertainty for Radiation Emission test (30 MHz - 1 GHz)	4.70 dB (Antenna Polarize: V)
	4.84 dB (Antenna Polarize: H)
Uncertainty for Radiation Emission test (1 GHz to 18 GHz)	4.10 dB (1-6 GHz)
	4.40 dB (6 GHz - 18 GHz)
Bandwidth	1.1%
Uncertainty for radio frequency (RBW < 20 kHz)	3×10^{-8}
Conducted disturbance at mains terminals	3.34 dB (150 kHz-30 MHz)
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

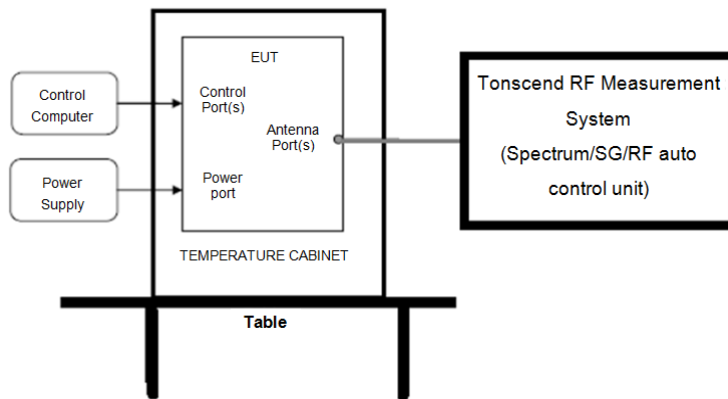
3. Equipment Used During Test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
☑RF Connected Test (Tonscend RF Measurement System 3#)					
Signal & Spectrum analyzer	R&S	FSV40	101407	Jul. 21, 2022	1 Year
Wideband Radio Communication tester	R&S	CMW500	117491	Apr. 27, 2023	1 Year
EXG Analog Signal Generator	KEYSIGHT	N5173B	MY62153058	Aug. 26, 2022	1 Year
Vector Signal Generator	Agilent	N5182A	MY48180912	Apr. 23, 2023	1 Year
RF Control Unit	Tonscend	JS0806-2	20C8060230	Apr. 27, 2023	1 Year
Temp&Humi Programmable	ZHIXIANG	ZXGDJS-150L	ZX170110-A	May 15, 2023	1 Year
Test Software	JS Tonscend	JS1120-3	Ver.3.2.22	N/A	N/A
☑Radiation 3#chamber					
EMI Test Receiver	R&S	ESU26	100472	Apr. 23, 2023	1 Year
Spectrum analyzer	Agilent	E4447A	MY50180031	Apr. 23, 2023	1 Year
Active Loop antenna	Schwarzbeck	FMZB-1519	1519-038	Sep. 29, 2022	1 Year
Trilog Broadband Antenna	Schwarzbeck	VULB 9163	01429	Jul. 22, 2022	1 Year
Double Ridged Horn Antenna	Schwarzbeck	BBHA9120 D	02468	Sep. 29, 2022	1 Year
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	790	Apr. 26, 2023	1 Year
Pre-amplifier	COM-POWER	PAM-118A	18040084	Aug.17, 2022	1 Year
Pre-amplifier	COM-POWER	PAM-840A	461369	Apr. 27, 2023	1 Year
RE Cable	N/A	W23.02 CP1-X2 + W23.09 AP1-X8+ JCT26S-NJ-NJ- 1.5M	4.5M+8M+1.5M	Apr. 21, 2023	1 Year
RF Cable	Yuhu Technology	JCTB810-NJ-N J-9M+ ZT26S-SMAJ-S MAJ-1M	21123964	Apr. 23, 2023	1 Year
Micro-Tronics filters	REBES	BRM50702	G555	N/A	N/A
Micro-Tronics filters	REBES	BRM50716	G392	N/A	N/A
High Pass filter	XB	XBLBQ-GTA67	210820-2-3	N/A	N/A
Test software	Tonscend	JS32-RE	V 5.0.0.1	N/A	N/A

☑Power Line Conducted Emissions Test 3#					
Test Receiver	R&S	ESCI	101028	Aug. 26, 2022	1 Year
LISN 1	R&S	ENV216	101725	Aug. 26, 2022	1 Year
LISN 2	R&S	ENV216	101726	Aug. 26, 2022	1 Year
LISN 3	SCHWARZBECK	NSLK 8163	00017	Aug. 26, 2022	1 Year
Pulse Limiter	SCHWARZBECK	VTSD 9561	102766	Aug. 26, 2022	1 Year
CE Cable 3	HUBSER	Z806-NJ-NJ-6M	21070275	Aug. 26, 2022	1 Year
Test software	Audix	E3	V 6.11111b	N/A	N/A

4. 20 dB Bandwidth & 99% Bandwidth

4.1. Block diagram of test setup



4.2. Limits

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in § 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

4.3. Test procedure

- (1) Connect EUT's antenna output to spectrum analyzer by RF cable.
- (2) Set the spectrum analyzer as follows:

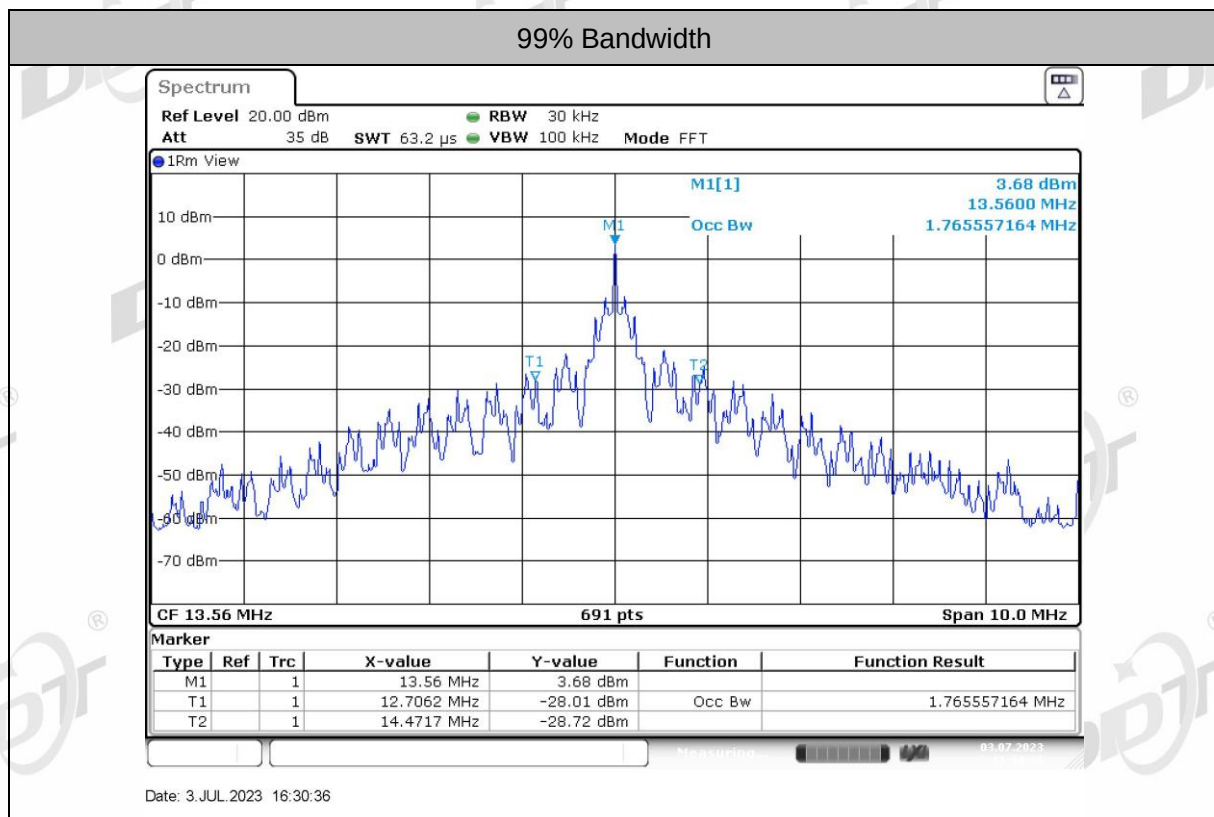
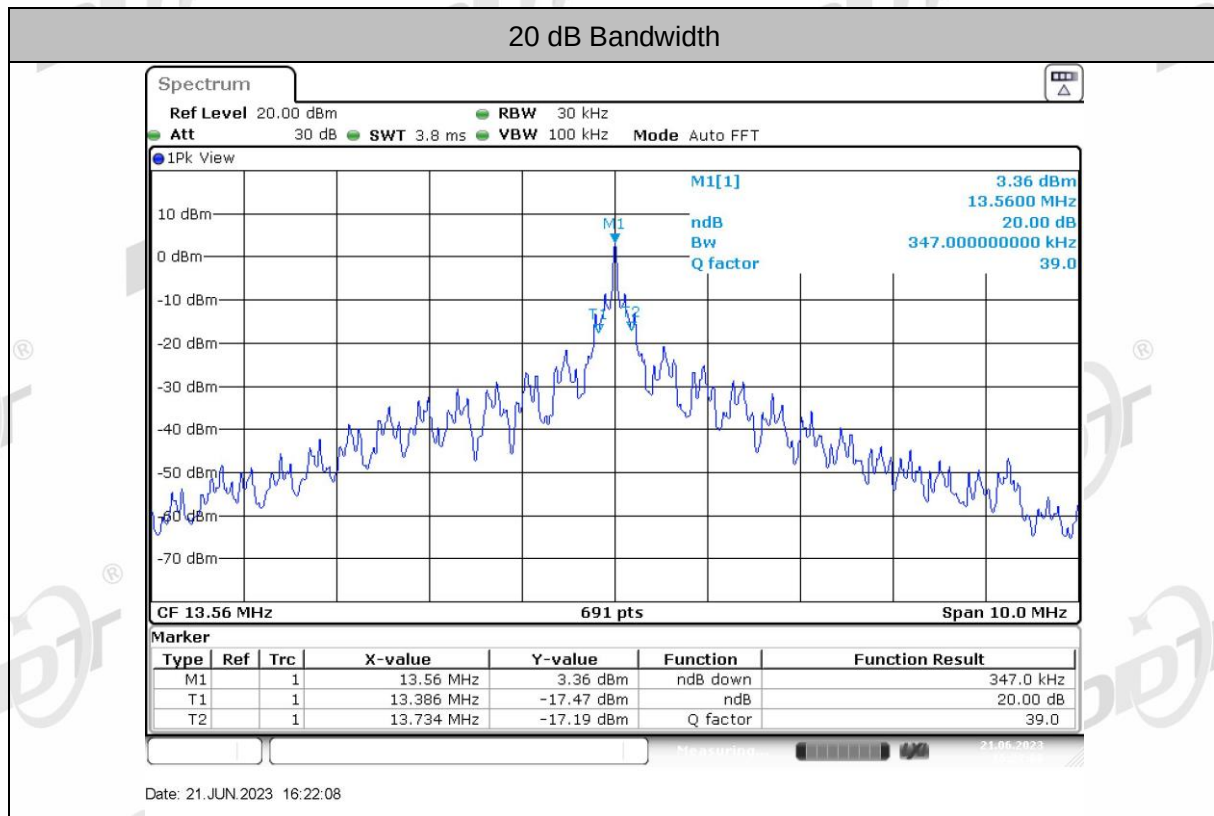
RBW:	30 kHz
VBW:	100 kHz
Detector Mode:	Peak
Sweep time:	auto
Trace mode	Max hold

- (3) Allow the trace to stabilize, measure the 20 dB bandwidth of signal.

4.4. Test result

Mode	Frequency (MHz)	20 dB bandwidth Result (kHz)	99% bandwidth Result (kHz)	Conclusion
ASK	13.56	347	1765.557	Pass

4.5. Original test data

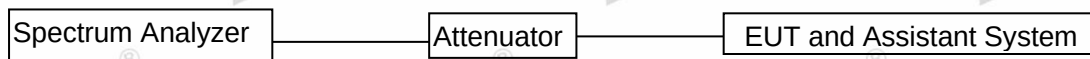


5. Frequency Tolerance

5.1. Limit

As contained in § 15.225 the frequency tolerance of the carrier signal shall be maintained within $\pm 0.01\%$ of the operating frequency over a temperature variation of -20 degrees to $+50$ degrees C at normal supply Voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

5.2. Block diagram of test setup



5.3. Test procedure

(1) Connected the EUT's antenna port to the Spectrum Analyzer by suitable attenuator, set the Spectrum Analyzer as below:

Centre Frequency: The centre frequency of the channel under test.

Resolution BW: 10 kHz.

Video BW: 10 kHz.

Span: 1 MHz.

Detector: Peak.

Trace Mode: Max Hold.

(2) When the trace is complete, find the peak value of the power envelope and record the frequency.

5.4. Test result

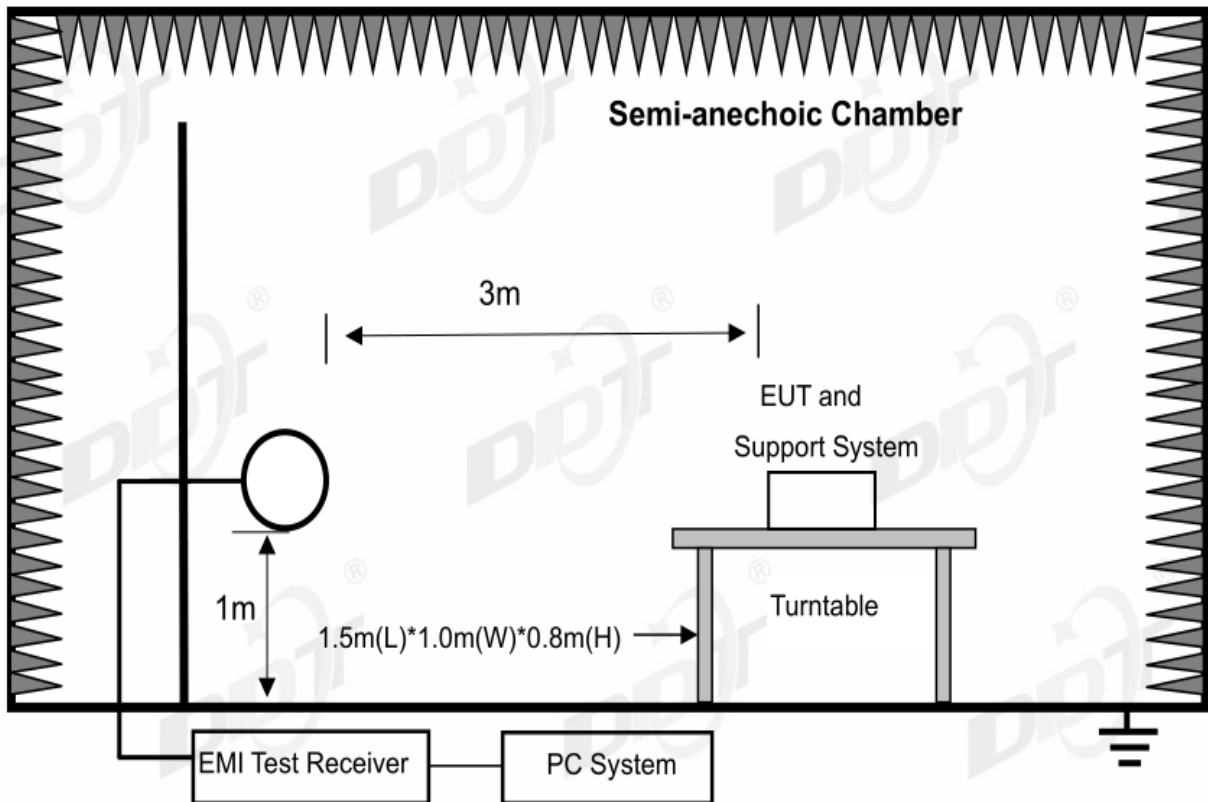
Mode	Condition		Result			Limit
	Temperature (°C)	Voltage (V)	Measured (MHz)	Tolerance (kHz)	Tolerance (ppm)	ppm
Carrier Tx Mode	NT	NV	13.560	0	0	±100
	-20	NV	13.560	0	0	±100
	-10	NV	13.560	0	0	±100
	0	NV	13.560	0	0	±100
	10	NV	13.560	0	0	±100
	30	NV	13.560	0	0	±100
	40	NV	13.560	0	0	±100
	NT	AC 102V	13.560	0	0	±100
	NT	AC 138V	13.560	0	0	±100
Note: NT: 20 °C, NV: AC 120V/60Hz						

Mode	Condition		Result			Limit
	Temperature (°C)	Voltage (V)	Measured (MHz)	Tolerance (kHz)	Tolerance (ppm)	ppm
Carrier Tx Mode	NT	NV	13.560	0	0	±100
	-20	NV	13.560	0	0	±100
	-10	NV	13.560	0	0	±100
	0	NV	13.560	0	0	±100
	10	NV	13.560	0	0	±100
	30	NV	13.560	0	0	±100
	40	NV	13.560	0	0	±100
	NT	AC 204V	13.560	0	0	±100
	NT	AC 276V	13.560	0	0	±100
Note: NT: 20 °C, NV: AC 240V/50Hz						

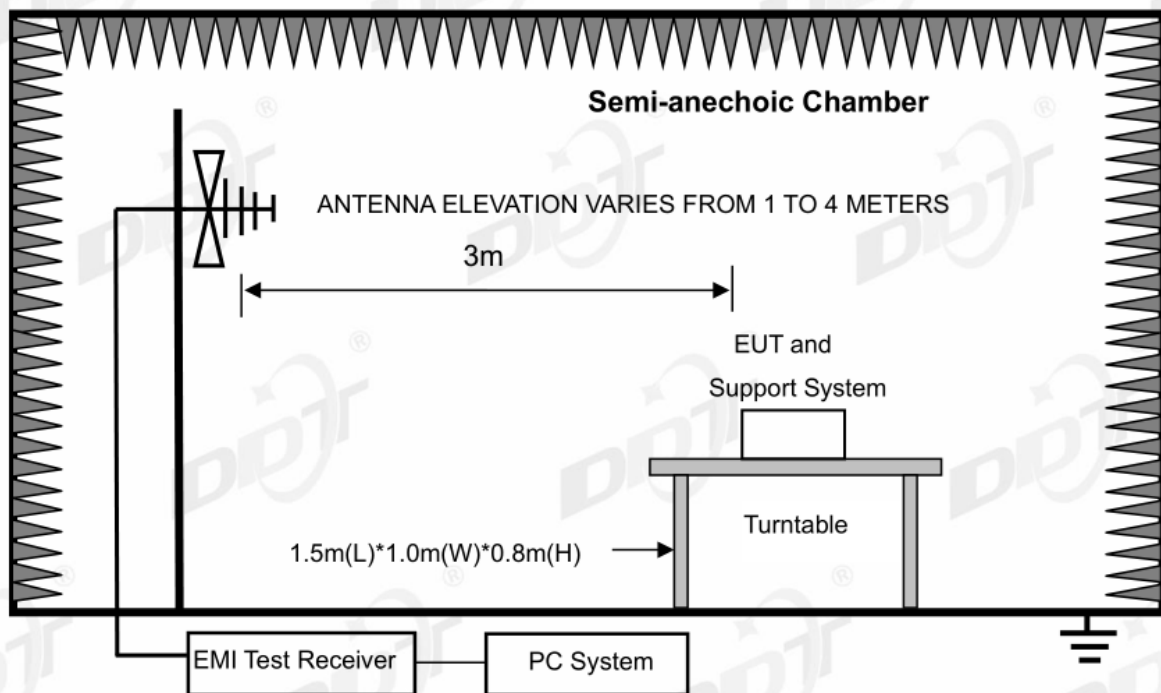
6. Radiated Emission

6.1. Block diagram of test setup

In 3 m Anechoic Chamber, test setup diagram for 9 kHz - 30 MHz:



In 3 m Anechoic Chamber, test setup diagram for 30 MHz - 1 GHz:



6.2. Limit

Operation within the band 13.110-14.010 MHz as contained in §15.225:

- (a) The field strength of any emissions within the band 13.553-13.567 MHz shall not exceed 15,848 microvolts/meter at 30 meters.
- (b) Within the bands 13.410-13.553 MHz and 13.567-13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter at 30 meters.
- (c) Within the bands 13.110-13.410 MHz and 13.710-14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter at 30 meters.
- (d) The field strength of any emissions appearing outside of the 13.110-14.010 MHz band shall not exceed the general radiated emission limits in §15.209.

FREQUENCY (MHz)	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		(μV/m)	dB(μV)/m
0.009 ~ 0.490	300	2400/F(KHz)	67.6-20log(F)
0.490 ~ 1.705	30	24000/F(KHz)	87.6-20log(F)
1.705 ~ 13.110	30	30	29.54
13.110 ~ 13.410	30	106	40.51
13.410~ 13.553	30	334	50.47
13.553~13.567	30	15848	84.00
13.567~13.710	30	334	50.47
13.710~14.010	30	106	40.51
14.010~30	30	30	29.54
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0

Note:

(1)The emission limits shown in the above table are based on measurements employing a CISPR QP detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emissions limits in these three bands are based on measurements employing an average detector.

(2) At frequencies below 30 MHz, measurement may be performed at a distance closer than that specified, and the limit at closer measurement distance can be extrapolated by below formula:

$$\text{Limit}_{3\text{m}}(\text{dBuV/m}) = \text{Limit}_{300\text{m}}(\text{dBuV/m}) + 40\text{Log}(300\text{m}/3\text{m}) = \text{Limit}_{300\text{m}}(\text{dBuV/m}) + 80$$

$$\text{Limit}_{3\text{m}}(\text{dBuV/m}) = \text{Limit}_{30\text{m}}(\text{dBuV/m}) + 40\text{Log}(30\text{m}/3\text{m}) = \text{Limit}_{30\text{m}}(\text{dBuV/m}) + 40$$

FREQUENCY (MHz)	DISTANCE Meters	FIELD STRENGTHS LIMIT dB(μV)/m
0.009 ~ 0.490	3	147.6-20log(F)
0.490 ~ 1.705	3	127.6-20log(F)
1.705 ~ 13.110	3	69.54
13.110 ~ 13.410	3	80.51
13.410 ~ 13.553	3	90.47
13.553 ~13.567	3	124.00
13.567 ~13.710	3	90.47
13.710 ~14.010	3	80.51
14.010~30	3	69.54
30 ~88	3	40.00
88 ~216	3	43.50
216 ~960	3	46.00
960 ~ 1000	3	54.00

6.3. Test procedure

(1) EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber.

(2) Test antenna was located 3m from the EUT on an adjustable mast, and the antenna used as below table.

Test frequency range	Test antenna used	Test antenna distance
9 kHz - 30 MHz	Active Loop antenna	3 m
30 MHz - 1 GHz	Trilog Broadband Antenna	3 m

According ANSI C63.10:2013 clause 6.4.4.2 and 6.5.3, for measurements below 30 MHz, the loop antenna was positioned with its plane vertical from the EUT and rotated about its vertical axis for maximum response at each azimuth position around the EUT. And the loop antenna also is positioned with its plane horizontal at the specified distance from the EUT. The lowest height of the loop is 1 m above the ground. For measurement above 30 MHz, the Trilog Broadband Antenna or Horn Antenna was located 3 m from EUT, Measurements were made with the antenna positioned in both the horizontal and vertical planes of Polarization, and the measurement antenna was varied from 1 m to 4 m. in height above the reference ground plane to obtain the maximum signal strength.

(3) Below pre-scan procedure was first performed in order to find prominent frequency spectrum radiated emissions from 9 kHz to 1 GHz:

(a) Scanning the peak frequency spectrum with the antenna specified in step (3), and the EUT was rotated 360 degree, the antenna height was varied from 1 m to 4 m (Except loop antenna, it's fixed 1 m above ground.)

(b) Change work frequency or channel of device if practicable.

(c) Change modulation type of device if practicable.

(d) Rotated EUT though three orthogonal axes to determine the attitude of EUT arrangement produces highest emissions. Spectrum frequency from 9 kHz to 1 GHz (tenth harmonic of fundamental frequency) was investigated.

(4) For final emissions measurements at each frequency of interest, the EUT was rotated and the antenna height was varied between 1 m and 4 m in order to maximize the emission.

Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.10:2013 on Radiated Emission test.

(5) The emissions from 9 kHz to 1 GHz were measured based on CISPR QP detector except for the frequency bands 9-90 kHz, 110-490 kHz, for emissions from 9 kHz - 90 kHz, 110 kHz - 490 kHz and above 1 GHz were measured based on average detector, for emissions above 1 GHz, peak emissions also be measured and need comply with Peak limit.

(6) The emissions from 9 kHz to 1 GHz, QP or average values were measured with EMI receiver with below RBW.

Frequency band	RBW
9 kHz - 150 kHz	200 Hz
150 kHz - 30 MHz	9 kHz
30 MHz - 1 GHz	120 kHz

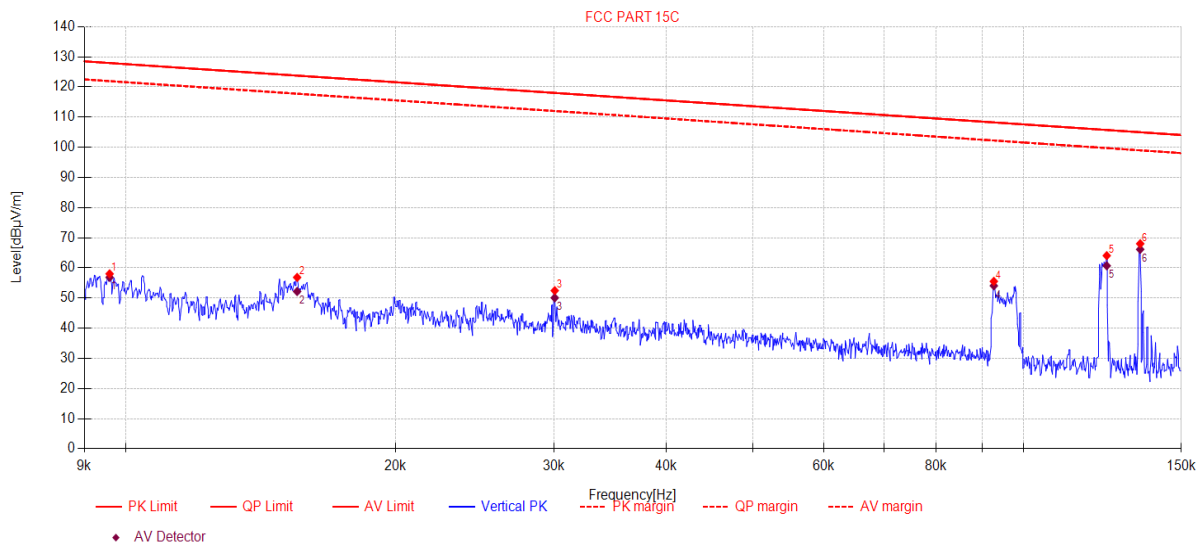
6.4. Test result

Pass. (See below detailed test result)

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-21
EUT: Interactive Touchscreen Display
Test Mode: TX Mode
Condition: Temp:21.5°C;Humi:57.3%
File Path: d:\ts\2023 report data\Q23051601-1E IMPACT LUX65\FCC BELOW 9k-30M\20230621-094257_V
Memo: NFC X

Tested By: Bairong
Model Number: IMPACT Lux 65"
Power Supply: AC 120V/60Hz
Test Site: DDT 3# Chamber



Suspected Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	0.01	38.09	0.07	19.86	0.00	58.02	127.95	69.93	PK	X
2	0.02	36.94	0.07	19.84	0.00	56.85	123.77	66.92	PK	X
3	0.03	32.68	0.07	19.70	0.00	52.45	118.03	65.58	PK	X
4	0.09	35.56	0.07	19.90	0.00	55.53	108.25	52.72	PK	X
5	0.12	44.13	0.07	19.85	0.00	64.05	105.74	41.69	PK	X
6	0.13	48.11	0.07	19.83	0.00	68.01	105.00	36.99	PK	X

Final Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	0.01	36.92	0.07	19.86	0.00	56.85	127.95	71.10	AV	X
2	0.02	32.26	0.07	19.85	0.00	52.18	123.79	71.61	AV	X
3	0.03	30.30	0.07	19.70	0.00	50.07	118.03	67.96	AV	X
4	0.09	34.10	0.07	19.90	0.00	54.07	108.26	54.19	AV	X
5	0.12	40.77	0.07	19.85	0.00	60.69	105.74	45.05	AV	X
6	0.13	46.23	0.07	19.83	0.00	66.13	104.99	38.86	AV	X

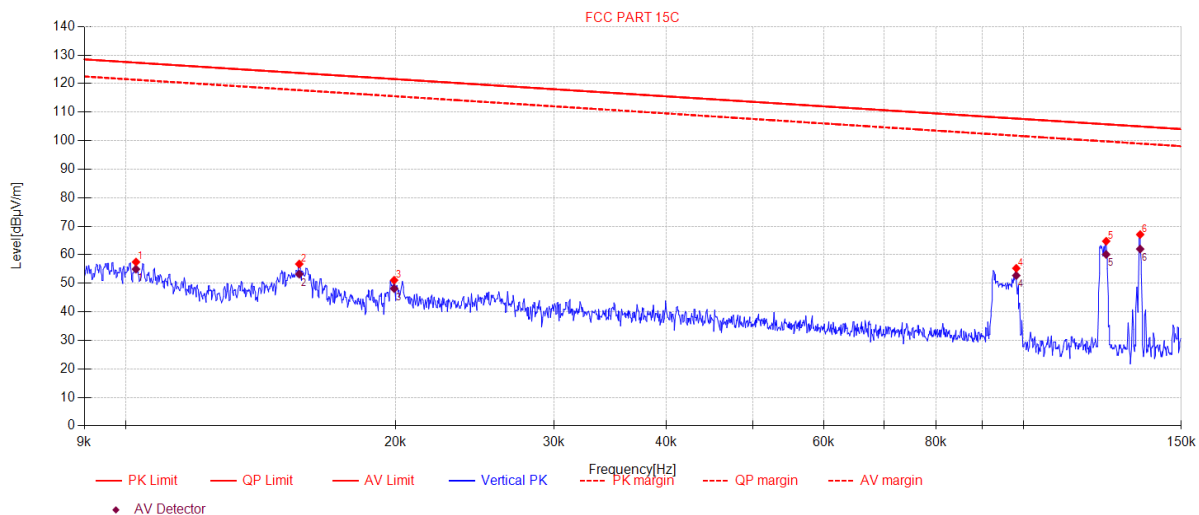
Note:

- Level = Reading + Cable Loss + Antenna Factor + AMP
- If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
- Test setup: 9kHz-150kHz RBW: 300Hz, VBW: 1 kHz, Sweep time: auto.
150kHz-30MHz RBW: 10kHz, VBW: 30kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-21
EUT: Interactive Touchscreen Display
Test Mode: TX Mode
Condition: Temp:21.5°C;Humi:57.3%
File Path: d:\ts\2023 report data\Q23051601-1E IMPACT LUX65\FCC BELOW 9k-30M\20230621-094500_V
Memo: NFC Y

Tested By: Bairong
Model Number: IMPACT Lux 65"
Power Supply: AC 120V/60Hz
Test Site: DDT 3# Chamber

**Suspected Data List**

NO.	Freq. [MHz]	Reading [dBμV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	0.01	37.49	0.07	19.90	0.00	57.46	127.36	69.90	PK	Y
2	0.02	36.85	0.07	19.84	0.00	56.76	123.72	66.96	PK	Y
3	0.02	31.21	0.07	19.80	0.00	51.08	121.61	70.53	PK	Y
4	0.10	35.30	0.07	19.90	0.00	55.27	107.75	52.48	PK	Y
5	0.12	44.83	0.07	19.85	0.00	64.75	105.75	41.00	PK	Y
6	0.13	47.20	0.07	19.83	0.00	67.10	105.00	37.90	PK	Y

Final Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	0.01	35.00	0.07	19.90	0.00	54.97	127.34	72.37	AV	Y
2	0.02	33.30	0.07	19.84	0.00	53.21	123.73	70.52	AV	Y
3	0.02	28.28	0.07	19.80	0.00	48.15	121.62	73.47	AV	Y
4	0.10	32.76	0.07	19.90	0.00	52.73	107.76	55.03	QP	Y
5	0.12	40.20	0.07	19.85	0.00	60.12	105.75	45.63	AV	Y
6	0.13	42.11	0.07	19.83	0.00	62.01	104.99	42.98	AV	Y

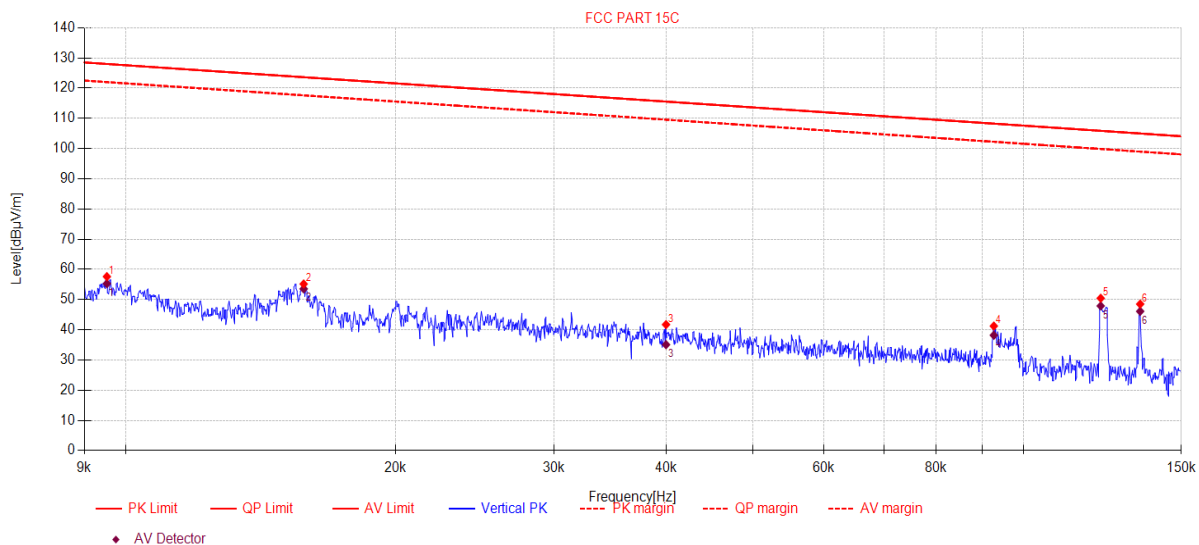
Note:

- Level = Reading + Cable Loss + Antenna Factor + AMP
- If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
- Test setup: 9kHz-150kHz RBW: 300Hz, VBW: 1 kHz, Sweep time: auto.
150kHz-30MHz RBW: 10kHz, VBW: 30kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-21
EUT: Interactive Touchscreen Display
Test Mode: TX Mode
Condition: Temp:21.5°C;Humi:57.3%
File Path: d:\ts\2023 report data\Q23051601-1E IMPACT LUX65\FCC BELOW 9k-30M\20230621-094556_V
Memo: NFC Z

Tested By: Bairong
Model Number: IMPACT Lux 65"
Power Supply: AC 120V/60Hz
Test Site: DDT 3# Chamber

**Suspected Data List**

NO.	Freq. [MHz]	Reading [dBμV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	0.01	37.68	0.07	19.85	0.00	57.60	128.01	70.41	PK	Z
2	0.02	35.25	0.07	19.84	0.00	55.16	123.63	68.47	PK	Z
3	0.04	21.90	0.07	19.75	0.00	41.72	115.56	73.84	PK	Z
4	0.09	21.26	0.07	19.90	0.00	41.23	108.25	67.02	PK	Z
5	0.12	30.51	0.07	19.86	0.00	50.44	105.87	55.43	PK	Z
6	0.13	28.61	0.07	19.83	0.00	48.51	105.00	56.49	PK	Z

Final Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Cable loss [dB]	Antenna Factor [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	0.01	35.35	0.07	19.85	0.00	55.27	128.04	72.77	AV	Z
2	0.02	33.64	0.07	19.84	0.00	53.55	123.62	70.07	AV	Z
3	0.04	15.25	0.07	19.75	0.00	35.07	115.56	80.49	AV	Z
4	0.09	18.21	0.07	19.90	0.00	38.18	108.26	70.08	AV	Z
5	0.12	27.97	0.07	19.86	0.00	47.90	105.87	57.97	AV	Z
6	0.13	26.21	0.07	19.83	0.00	46.11	104.99	58.88	AV	Z

Note:

- Level = Reading + Cable Loss + Antenna Factor + AMP
- If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
- Test setup: 9kHz-150kHz RBW: 300Hz, VBW: 1 kHz, Sweep time: auto.
150kHz-30MHz RBW: 10kHz, VBW: 30kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-20

Tested By: Bairong

EUT: Interactive Touchscreen Display

Model Number: IMPACT Lux 65"

Test Mode: TX Mode

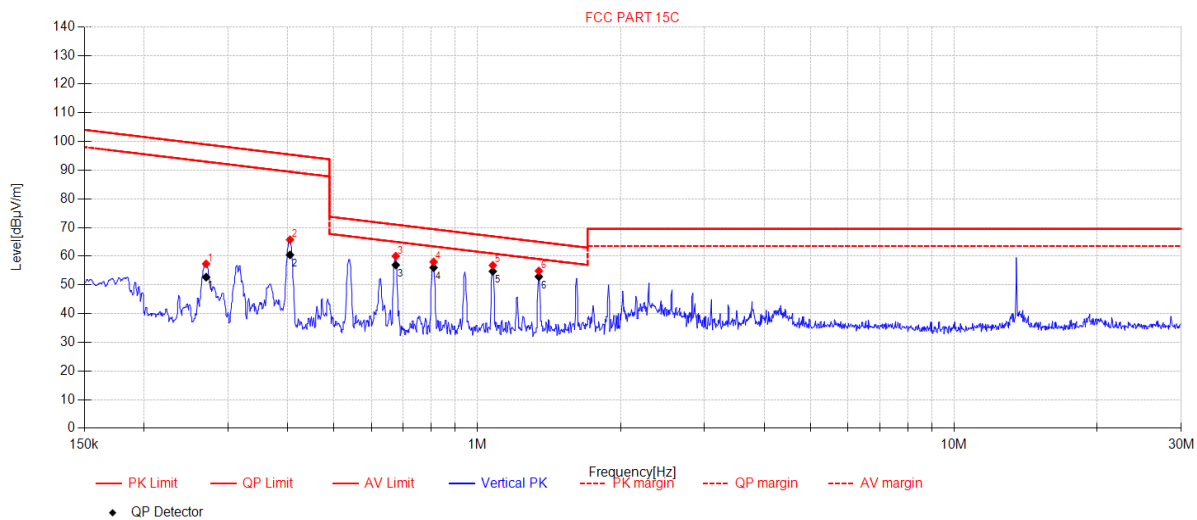
Power Supply: AC 120V/60Hz

Condition: Temp:21.5°C;Humi:57.3%

Test Site: DDT 3# Chamber

File Path: d:\ts\2023 report data\Q23051601-1E IMPACT LUX65\FCC BELOW 9k-30M\20230620-134352_V

Memo: NFC X



Suspected Data List

NO.	Freq. [MHz]	Reading [dBµV]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	0.27	37.55	19.79	57.34	98.98	41.52	PK	X
2	0.40	45.92	19.84	65.76	95.46	29.70	PK	X
3	0.67	40.08	19.95	60.03	71.02	10.99	PK	X
4	0.81	37.97	20.06	58.03	69.43	11.40	PK	X
5	1.08	36.52	20.30	56.82	66.95	10.13	PK	X
6	1.35	34.62	20.25	54.87	65.02	10.15	PK	X

Final Data List

NO.	Freq. [MHz]	Reading [dBµV/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	0.27	32.91	19.79	52.70	98.98	46.28	AV	X
2	0.40	40.63	19.84	60.47	95.46	34.99	AV	X
3	0.67	36.99	19.95	56.94	71.02	14.08	QP	X
4	0.81	35.97	20.06	56.03	69.43	13.40	QP	X
5	1.08	34.43	20.30	54.73	66.95	12.22	QP	X
6	1.35	32.62	20.25	52.87	65.02	12.15	QP	X

Note:

1. Level = Reading + Factor

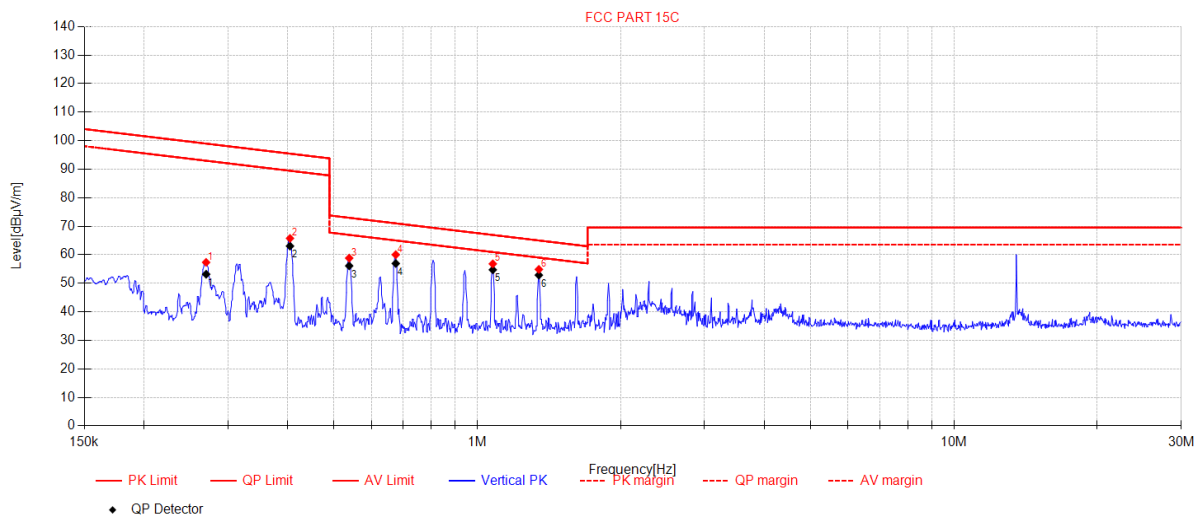
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.

3. Test setup: 9kHz-150kHz RBW: 300Hz, VBW: 1 kHz, Sweep time: auto.

150kHz-30MHz RBW: 10kHz, VBW: 30kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-20 **Tested By:** Bairong
EUT: Interactive Touchscreen Display **Model Number:** IMPACT Lux 65"
Test Mode: TX Mode **Power Supply:** AC 120V/60Hz
Condition: Temp:21.5°C;Humi:57.3% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2023 report data\Q23051601-1E IMPACT LUX65\FCC BELOW 9k-30M\20230620-133352_V
Memo: NFC Y



Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	0.27	37.55	19.79	57.34	98.98	41.52	PK	Y
2	0.40	45.92	19.84	65.76	95.46	29.70	PK	Y
3	0.54	38.93	19.90	58.83	72.97	14.14	PK	Y
4	0.67	40.08	19.95	60.03	71.02	10.99	PK	Y
5	1.08	36.52	20.30	56.82	66.95	10.13	PK	Y
6	1.35	34.62	20.25	54.87	65.02	10.15	PK	Y

Final Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	0.27	33.39	19.79	53.18	98.98	45.80	AV	Y
2	0.40	43.2	19.84	63.04	95.46	32.42	AV	Y
3	0.54	36.21	19.90	56.11	72.97	16.86	QP	Y
4	0.67	36.99	19.95	56.94	71.02	14.08	QP	Y
5	1.08	34.43	20.30	54.73	66.95	12.22	QP	Y
6	1.35	32.62	20.25	52.87	65.02	12.15	QP	Y

Note:

- Level = Reading + Factor
- If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
- Test setup: 9kHz-150kHz RBW: 300Hz, VBW: 1 kHz, Sweep time: auto.
150kHz-30MHz RBW: 10kHz, VBW: 30kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-20

Tested By: Bairong

EUT: Interactive Touchscreen Display

Model Number: IMPACT Lux 65

Test Mode: TX Mode

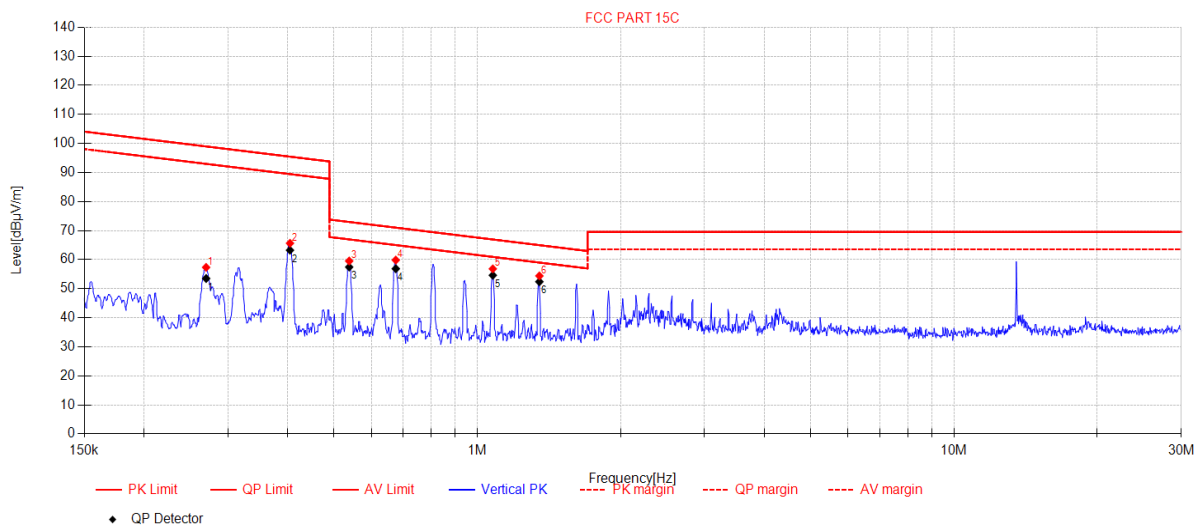
Power Supply: AC 120V/60Hz

Condition: Temp:21.5°C;Humi:57.3%

Test Site: DDT 3# Chamber

File Path: d:\ts\2023 report data\Q23051601-1E IMPACT LUX65\FCC BELOW 9k-30M\20230620-133515_V

Memo: NFC Z



Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	0.27	37.55	19.79	57.34	98.98	41.64	PK	Z
2	0.40	45.80	19.84	65.64	95.46	29.82	PK	Z
3	0.54	39.64	19.90	59.54	72.97	13.43	PK	Z
4	0.67	39.90	19.95	59.85	71.02	11.17	PK	Z
5	1.08	36.54	20.30	56.84	66.95	10.11	PK	Z
6	1.35	34.15	20.25	54.40	64.99	10.59	PK	Z

Final Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	0.27	33.72	19.79	53.51	98.98	45.47	AV	Z
2	0.40	43.41	19.84	63.25	95.46	32.21	AV	Z
3	0.54	37.54	19.90	57.44	72.97	15.53	QP	Z
4	0.67	36.92	19.95	56.87	71.02	14.15	QP	Z
5	1.08	34.31	20.30	54.61	66.95	12.34	QP	Z
6	1.35	32.15	20.25	52.40	64.99	12.59	QP	Z

Note:

- Level = Reading + Factor
- If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
- Test setup: 9kHz-150kHz RBW: 300Hz, VBW: 1 kHz, Sweep time: auto.
150kHz-30MHz RBW: 10kHz, VBW: 30kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-08-11 **Tested By:** Bairong

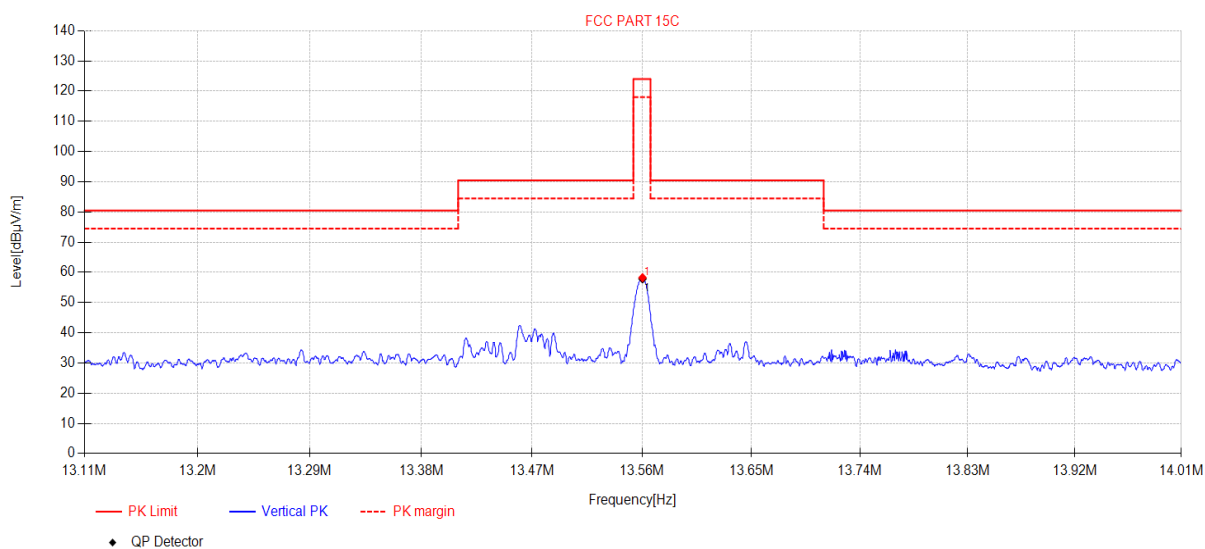
EUT: Interactive Touchscreen Display **Model Number:** IMPACT Lux 65"

Test Mode: TX Mode **Power Supply:** AC 120V/60Hz

Condition: Temp:21.5°C;Humi:57.3% **Test Site:** DDT 3# Chamber

File Path: d:\ts\2023 report data\Q23051601-1E IMPACT LUX65\FCC BELOW 9k-30M\20230621-195708_V

Memo: NFC X



Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	13.56	69.28	-11.02	58.26	124.00	65.74	PK	X

Final Data List

NO.	Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	13.56	68.87	-11.02	57.85	124.00	66.15	QP	X

Note:

- Level = Reading + Factor
- If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
- Test setup: 9kHz-150kHz RBW: 300Hz, VBW: 1 kHz, Sweep time: auto.
150kHz-30MHz RBW: 10kHz, VBW: 30kHz, Sweep time: auto.
- Have been tested X, Y, Z directions, only recorded the worst case (X direction) on this report.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-21

Tested By: Bairong

EUT: Interactive Touchscreen Display

Model Number: IMPACT Lux 65"

Test Mode: TX Mode

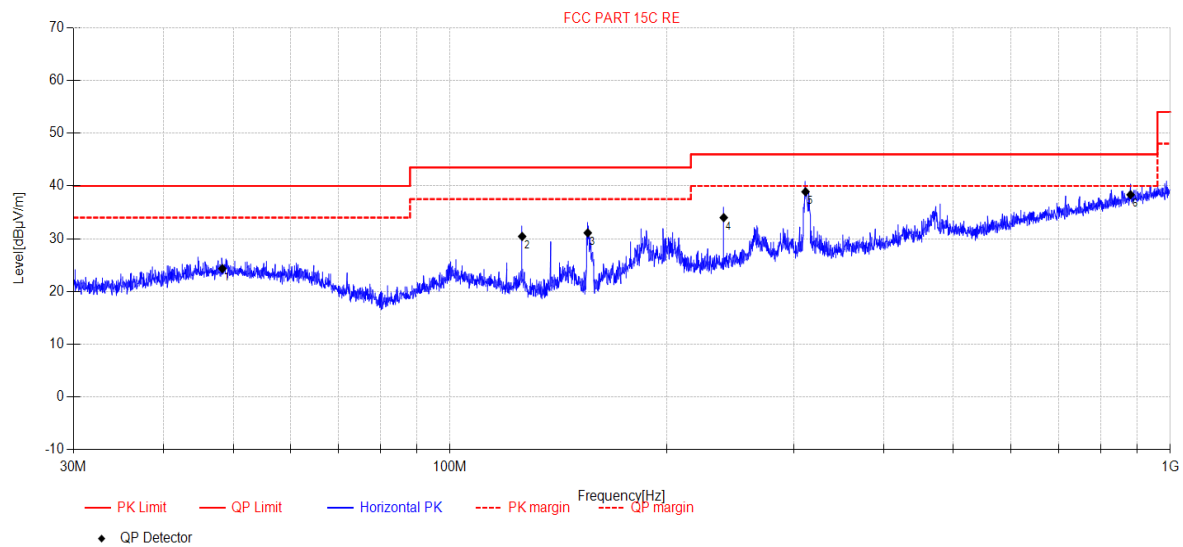
Power Supply: AC 240V/50Hz

Condition: Temp:21.5°C;Humi:57.3%

Test Site: DDT 3# Chamber

File Path: d:\ts\2023 report data\Q23051601-1E IMPACT LUX65\FCC BELOW 1G\20230621-090348_H

Memo: NFC

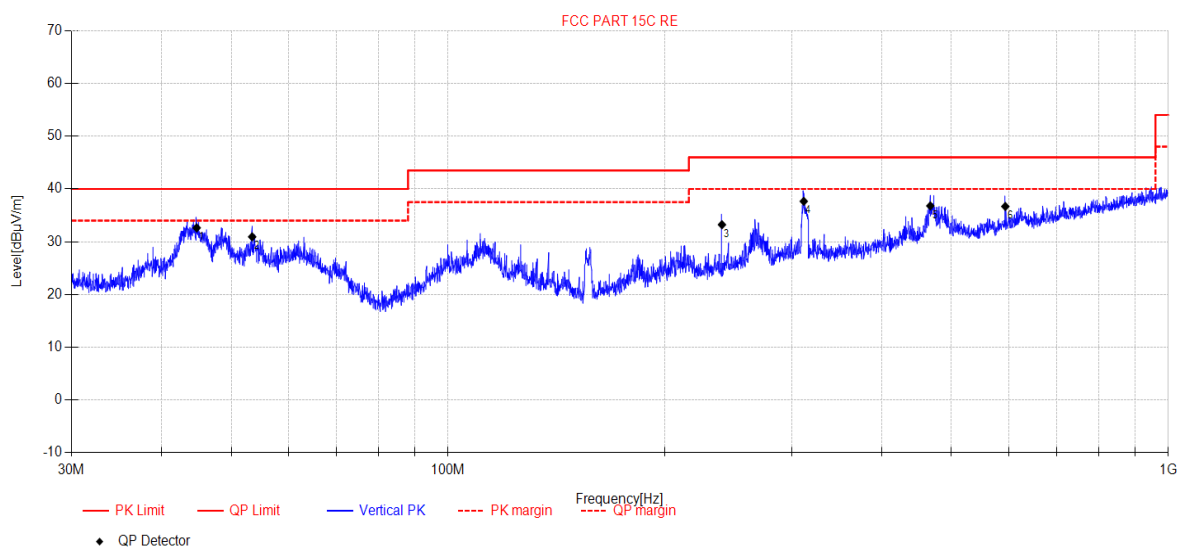


Final Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	AMP [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	48.29	6.42	13.20	4.71	0.00	24.33	40.00	15.67	QP	Horizontal
2	125.94	17.12	8.11	5.20	0.00	30.43	43.50	13.07	QP	Horizontal
3	155.31	18.02	7.73	5.36	0.00	31.11	43.50	12.39	QP	Horizontal
4	239.89	16.1	12.00	5.90	0.00	34.00	46.00	12.00	QP	Horizontal
5	311.60	19.13	13.56	6.21	0.00	38.90	46.00	7.10	QP	Horizontal
6	880.81	7.77	22.30	8.27	0.00	38.34	46.00	7.66	QP	Horizontal

Note:

1. Result Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

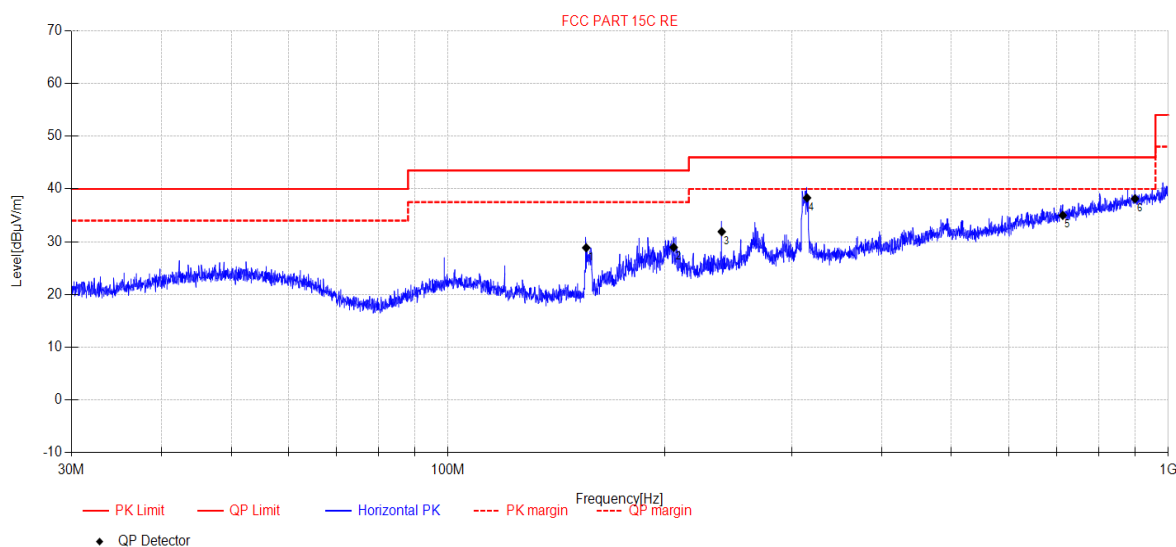
Test Date: 2023-06-21**Tested By:** Bairong**EUT:** Interactive Touchscreen Display**Model** IMPACT Lux 65"**Number:****Test Mode:** TX Mode**Power** AC 240V/50Hz**Supply:****Condition:** Temp:21.5°C;Humi:57.3%**Test Site:** DDT 3# Chamber**File Path:** d:\ts\2023 report data\Q23051601-1E IMPACT LUX65\FCC BELOW 1G\20230621-090448_V**Memo:** NFC

Final Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	AMP [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	44.77	14.99	12.98	4.66	0.00	32.63	40.00	7.37	QP	Vertical
2	53.46	13.34	12.85	4.74	0.00	30.93	40.00	9.07	QP	Vertical
3	240.06	15.33	12.00	5.90	0.00	33.23	46.00	12.77	QP	Vertical
4	311.81	17.88	13.57	6.21	0.00	37.66	46.00	8.34	QP	Vertical
5	467.31	13.59	16.35	6.85	0.00	36.79	46.00	9.21	QP	Vertical
6	593.94	10.79	18.58	7.31	0.00	36.68	46.00	9.32	QP	Vertical

Note:

1. Result Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

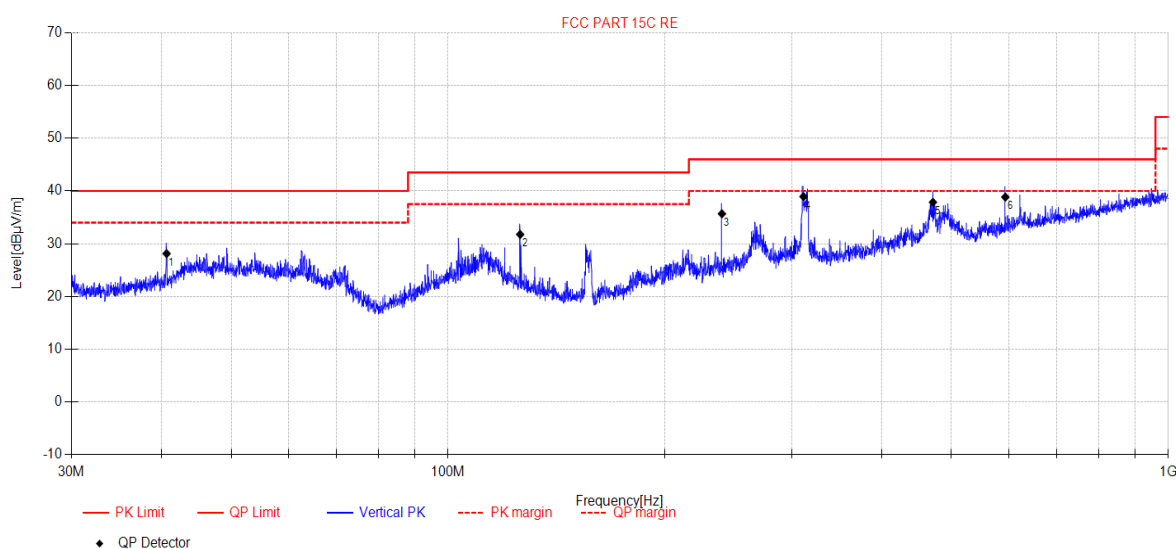
Test Date: 2023-06-21**Tested By:** Bairong**EUT:** Interactive Touchscreen Display**Model** IMPACT Lux 65"**Number:****Test Mode:** OPERATE Mode**Power** AC 120V/60Hz**Supply:****Condition:** Temp:21.5°C;Humi:57.3%**Test Site:** DDT 3# Chamber**File Path:** d:\ts\2023 report data\Q23051601-1E IMPACT LUX65\FCC BELOW 1G\20230621-090627_H**Memo:** NFC

Final Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	AMP [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	155.53	15.73	7.75	5.37	0.00	28.85	43.50	14.65	QP	Horizontal
2	205.74	12.38	10.81	5.75	0.00	28.94	43.50	14.56	QP	Horizontal
3	239.89	14	12.00	5.90	0.00	31.90	46.00	14.10	QP	Horizontal
4	315.11	18.38	13.70	6.23	0.00	38.31	46.00	7.69	QP	Horizontal
5	713.72	7.01	20.20	7.79	0.00	35.00	46.00	11.00	QP	Horizontal
6	898.90	7.4	22.40	8.34	0.00	38.14	46.00	7.86	QP	Horizontal

Note:

1. Result Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

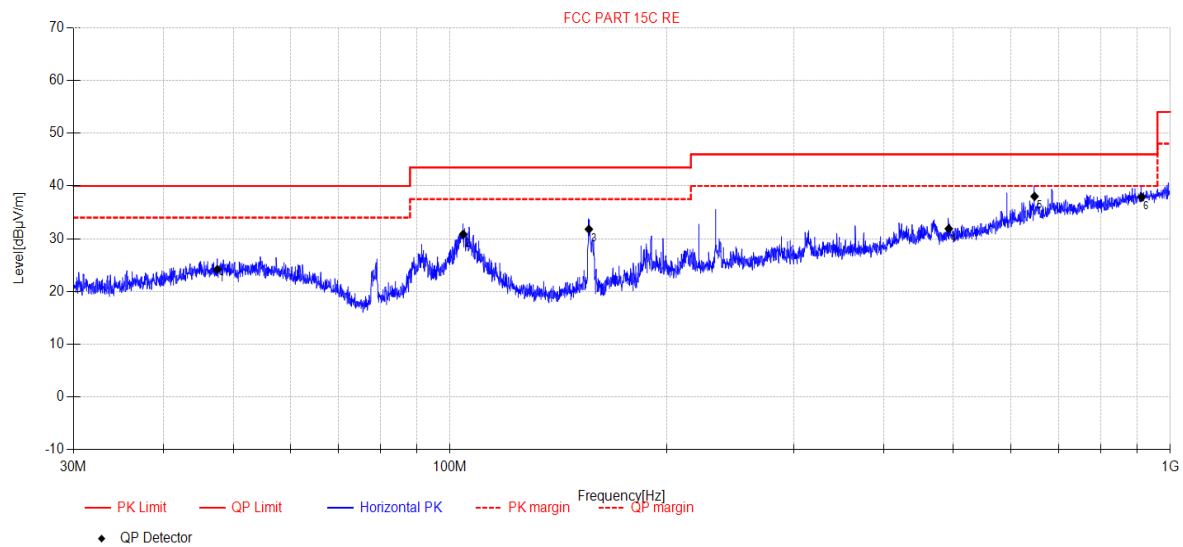
Test Date: 2023-06-21**Tested By:** Bairong**EUT:** Interactive Touchscreen Display**Model** IMPACT Lux 65"**Number:****Test Mode:** OPERATE Mode**Power** AC 120V/60Hz**Supply:****Condition:** Temp:21.5°C;Humi:57.3%**Test Site:** DDT 3# Chamber**File Path:** d:\ts\2023 report data\Q23051601-1E IMPACT LUX65\FCC BELOW 1G\20230621-090714_V**Memo:** NFC

Final Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	AMP [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	40.67	11.29	12.23	4.61	0.00	28.13	40.00	11.87	QP	Vertical
2	125.94	18.45	8.11	5.20	0.00	31.76	43.50	11.74	QP	Vertical
3	240.06	17.78	12.00	5.90	0.00	35.68	46.00	10.32	QP	Vertical
4	311.60	19.16	13.56	6.21	0.00	38.93	46.00	7.07	QP	Vertical
5	471.25	14.57	16.43	6.86	0.00	37.86	46.00	8.14	QP	Vertical
6	593.94	12.95	18.58	7.31	0.00	38.84	46.00	7.16	QP	Vertical

Note:

1. Result Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

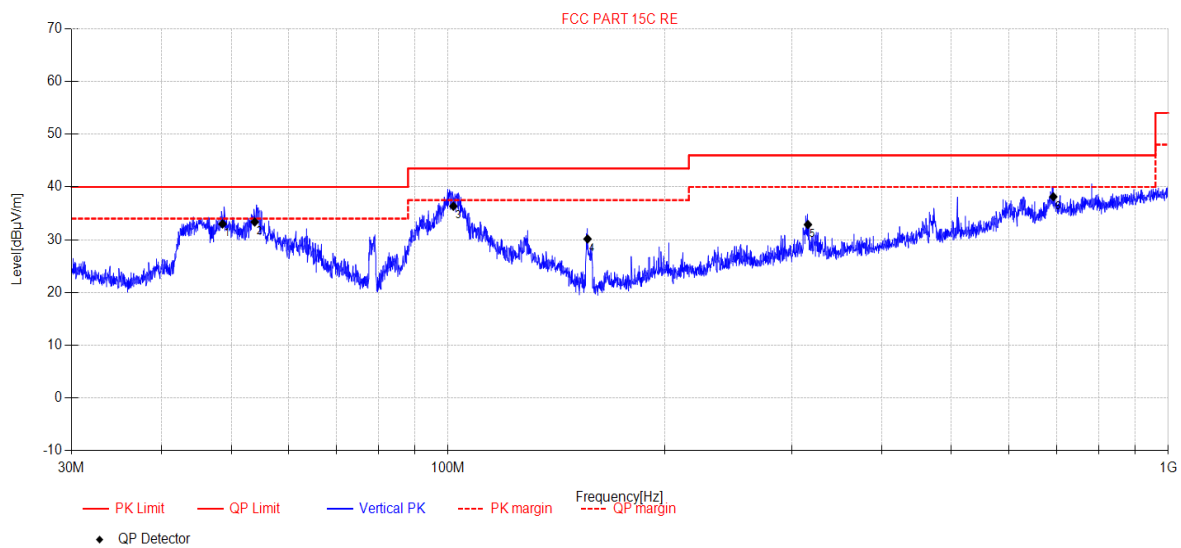
Test Date: 2023-06-20**Tested By:** Bairong**EUT:** Interactive Touchscreen Display**Model Number:** IMPACT Lux 75"**Test Mode:** TX Mode**Power Supply:** AC 240V/50Hz**Condition:** Temp:21.5°C;Humi:57.3%**Test Site:** DDT 3# Chamber**File Path:** d:\ts\2023 report data\Q23051601-2E IMPACT LUX75\FCC BELOW 1G\20230620-104021_H**Memo:** NFC

Final Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	AMP [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	47.52	6.28	13.20	4.70	0.00	24.18	40.00	15.82	QP	Horizontal
2	104.29	14.78	10.97	5.09	0.00	30.84	43.50	12.66	QP	Horizontal
3	155.86	18.64	7.79	5.37	0.00	31.80	43.50	11.70	QP	Horizontal
4	492.54	8.13	16.85	6.91	0.00	31.89	46.00	14.11	QP	Horizontal
5	647.90	11.29	19.20	7.54	0.00	38.03	46.00	7.97	QP	Horizontal
6	912.24	7.02	22.50	8.38	0.00	37.90	46.00	8.10	QP	Horizontal

Note:

1. Result Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-20**Tested By:** Bairong**EUT:** Interactive Touchscreen Display**Model Number:** IMPACT Lux 75"**Test Mode:** TX Mode**Power Supply:** AC 240V/50Hz**Condition:** Temp:21.5°C;Humi:57.3%**Test Site:** DDT 3# Chamber**File Path:** d:\ts\2023 report data\Q23051601-2E IMPACT LUX75\FCC BELOW 1G\20230620-104107_V**Memo:** NFC

Final Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	AMP [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	48.62	15.06	13.20	4.72	0.00	32.98	40.00	7.02	QP	Vertical
2	53.90	15.84	12.78	4.74	0.00	33.36	40.00	6.64	QP	Vertical
3	101.72	20.39	10.89	5.07	0.00	36.35	43.50	7.15	QP	Vertical
4	156.19	16.97	7.80	5.37	0.00	30.14	43.50	13.36	QP	Vertical
5	316.00	12.9	13.72	6.24	0.00	32.86	46.00	13.14	QP	Vertical
6	692.52	10.46	19.95	7.73	0.00	38.14	46.00	7.86	QP	Vertical

Note:

1. Result Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-20

Tested By: Bairong

EUT: Interactive Touchscreen Display

Model: IMPACT Lux 75"

Test Mode: TX Mode

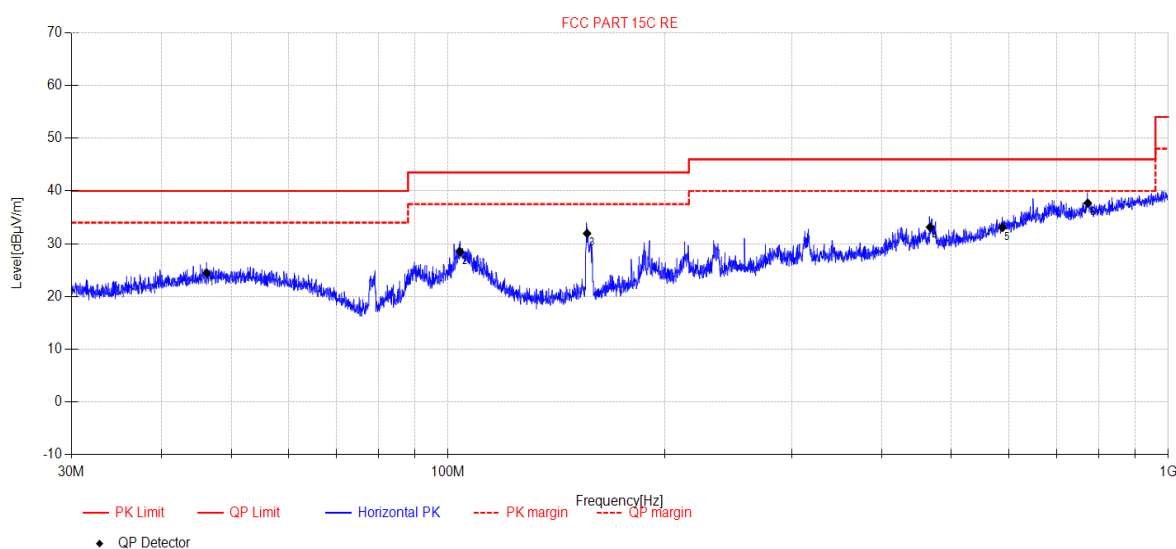
Number: IMPACT Lux 75"
Power: AC 120V/60Hz
Supply:

Condition: Temp:21.5°C;Humi:57.3%

Test Site: DDT 3# Chamber

File Path: d:\ts\2023 report data\Q23051601-2E IMPACT LUX75\FCC BELOW 1G\20230620-104752_H

Memo: NFC

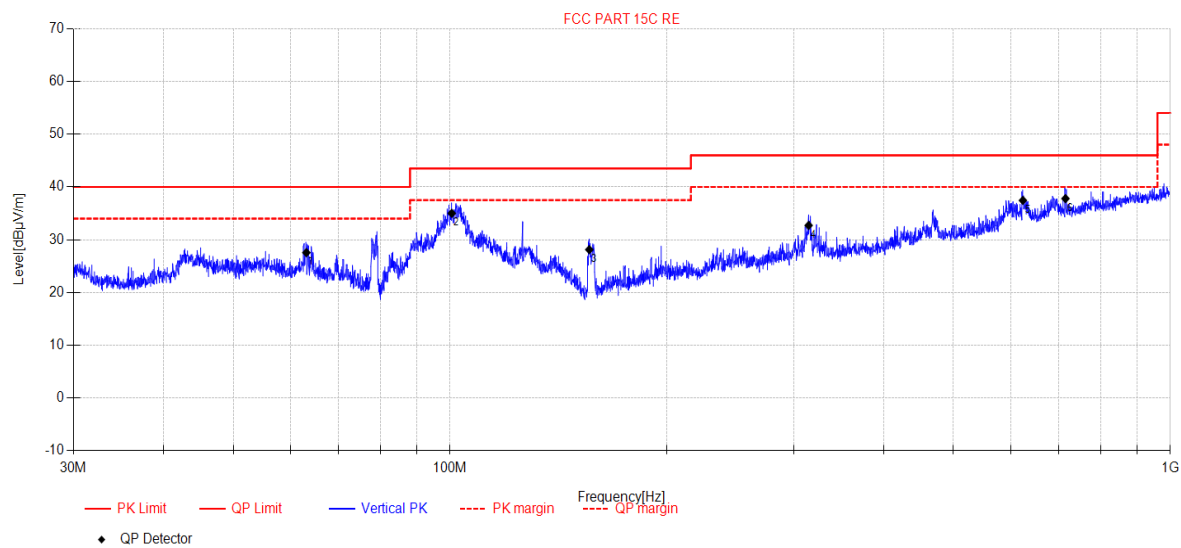


Final Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	AMP [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	46.24	6.66	13.12	4.68	0.00	24.46	40.00	15.54	QP	Horizontal
2	103.93	12.41	11.00	5.09	0.00	28.50	43.50	15.00	QP	Horizontal
3	155.97	18.78	7.80	5.37	0.00	31.95	43.50	11.55	QP	Horizontal
4	466.98	9.95	16.34	6.85	0.00	33.14	46.00	12.86	QP	Horizontal
5	588.55	7.31	18.47	7.28	0.00	33.06	46.00	12.94	QP	Horizontal
6	773.11	8.82	20.96	7.92	0.00	37.70	46.00	8.30	QP	Horizontal

Note:

1. Result Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

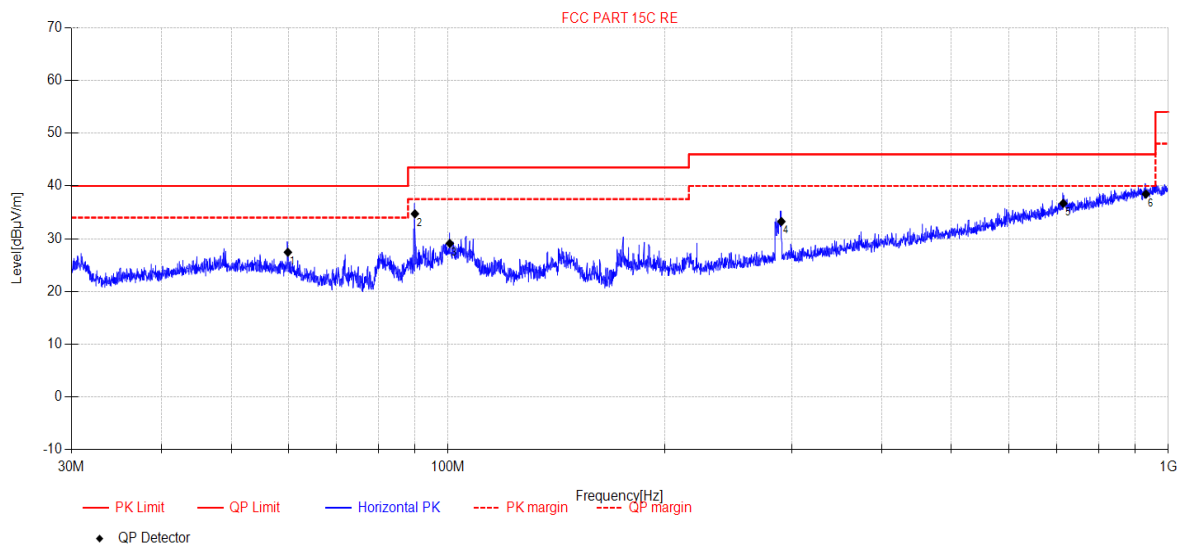
Test Date: 2023-06-20**Tested By:** Bairong**EUT:** Interactive Touchscreen Display**Model Number:** IMPACT Lux 75"**Test Mode:** TX Mode**Power Supply:** AC 120V/60Hz**Condition:** Temp:21.5°C;Humi:57.3%**Test Site:** DDT 3# Chamber**File Path:** d:\ts\2023 report data\Q23051601-2E IMPACT LUX75\FCC BELOW 1G\20230620-104841_V**Memo:** NFC

Final Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	AMP [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	63.17	11.71	11.07	4.77	0.00	27.55	40.00	12.45	QP	Vertical
2	100.56	18.97	10.96	5.07	0.00	35.00	43.50	8.50	QP	Vertical
3	156.08	14.95	7.80	5.37	0.00	28.12	43.50	15.38	QP	Vertical
4	314.67	12.79	13.69	6.23	0.00	32.71	46.00	13.29	QP	Vertical
5	624.26	11.03	18.99	7.43	0.00	37.45	46.00	8.55	QP	Vertical
6	715.22	9.81	20.20	7.79	0.00	37.80	46.00	8.20	QP	Vertical

Note:

1. Result Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-21**Tested By:** Bairong**EUT:** Interactive Touchscreen Display**Model Number:** IMPACT Lux 85"**Test Mode:** TX Mode**Power Supply:** AC 240V/50Hz**Condition:** Temp:21.5°C;Humi:57.3%**Test Site:** DDT 3# Chamber**File Path:** d:\ts\2023 report data\Q23051601-3E IMPACT Lux86\FCC BELOW 1G\20230621-103546_H**Memo:** NFC

Final Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	AMP [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	59.93	10.76	11.91	4.76	0.00	27.43	40.00	12.57	QP	Horizontal
2	89.95	20.4	9.38	4.94	0.00	34.72	43.50	8.78	QP	Horizontal
3	100.56	13.08	10.96	5.07	0.00	29.11	43.50	14.39	QP	Horizontal
4	290.29	14.14	13.01	6.11	0.00	33.26	46.00	12.74	QP	Horizontal
5	714.72	8.7	20.20	7.79	0.00	36.69	46.00	9.31	QP	Horizontal
6	930.98	7.49	22.52	8.45	0.00	38.46	46.00	7.54	QP	Horizontal

Note:

1. Result Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-21

Tested By: Bairong

EUT: Interactive Touchscreen Display

Model: IMPACT Lux 85"

Test Mode: TX Mode

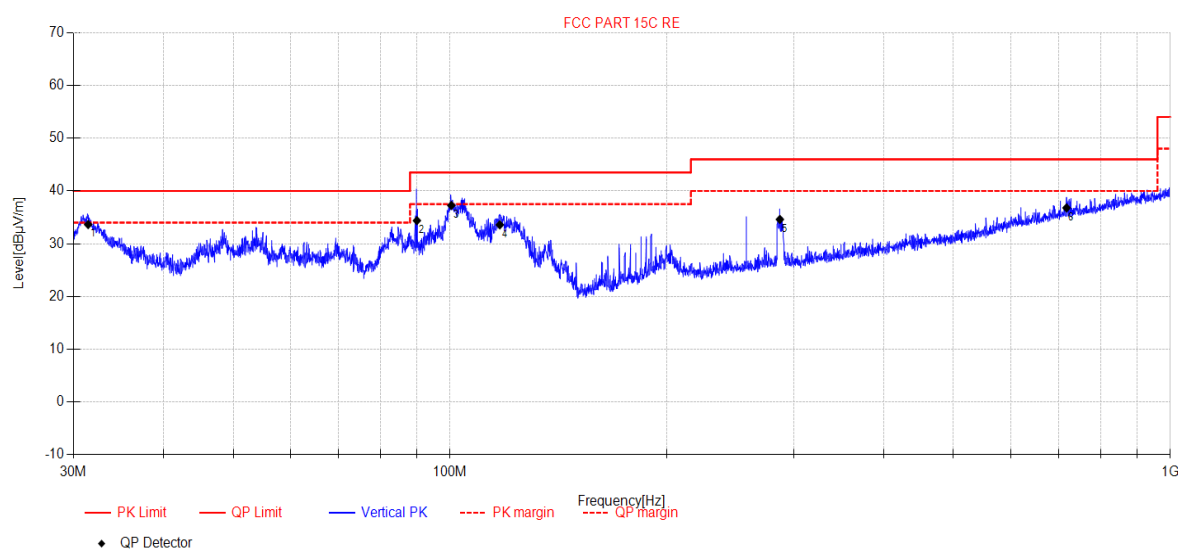
Number: IMPACT Lux 85"
Power: AC 240V/50Hz
Supply:

Condition: Temp:21.5°C;Humi:57.3%

Test Site: DDT 3# Chamber

File Path: d:\ts\2023 report data\Q23051601-3E IMPACT Lux86\FCC BELOW 1G\20230621-103859_V

Memo: NFC



Final Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	AMP [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	31.44	18.81	10.34	4.49	0.00	33.64	40.00	6.36	QP	Vertical
2	89.95	20.06	9.38	4.94	0.00	34.38	43.50	9.12	QP	Vertical
3	100.42	21.25	10.94	5.07	0.00	37.26	43.50	6.24	QP	Vertical
4	117.25	19.17	9.25	5.16	0.00	33.58	43.50	9.92	QP	Vertical
5	287.05	15.57	12.94	6.10	0.00	34.61	46.00	11.39	QP	Vertical
6	717.74	8.74	20.25	7.80	0.00	36.79	46.00	9.21	QP	Vertical

Note:

1. Result Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-21

Tested By: Bairong

EUT: Interactive Touchscreen Display

Model: IMPACT Lux 85"

Test Mode: TX Mode

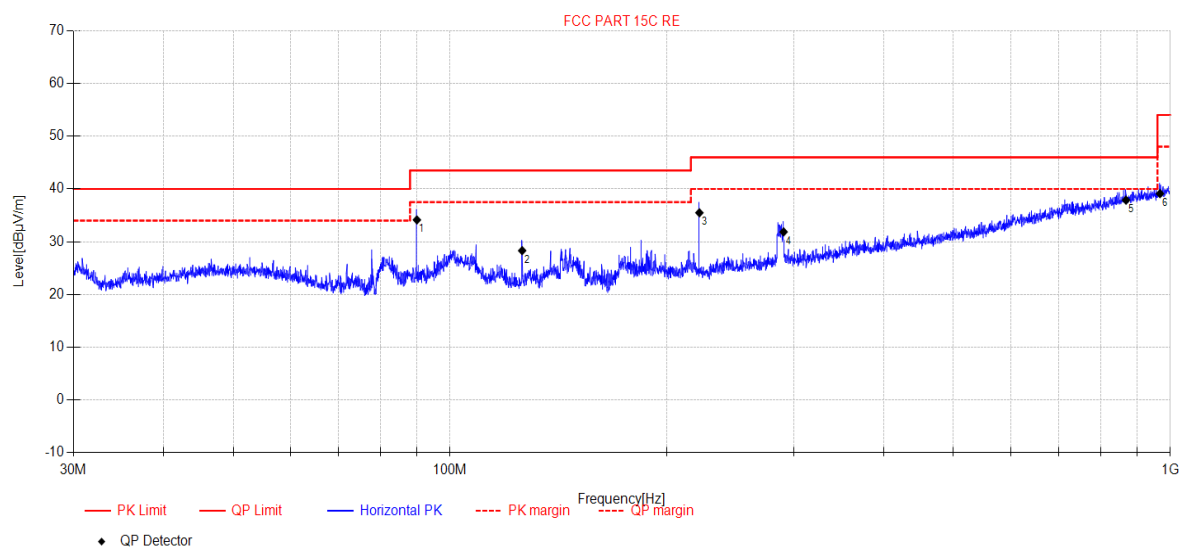
Number: IMPACT Lux 85"
Power: AC 120V/60Hz
Supply:

Condition: Temp:21.5°C;Humi:57.3%

Test Site: DDT 3# Chamber

File Path: d:\ts\2023 report data\Q23051601-3E IMPACT Lux86\FCC BELOW 1G\20230621-104530_H

Memo: NFC



Final Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	AMP [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	89.95	19.82	9.38	4.94	0.00	34.14	43.50	9.36	QP	Horizontal
2	125.94	15	8.11	5.20	0.00	28.31	43.50	15.19	QP	Horizontal
3	221.93	18.39	11.28	5.82	0.00	35.49	46.00	10.51	QP	Horizontal
4	290.50	12.74	13.01	6.11	0.00	31.86	46.00	14.14	QP	Horizontal
5	867.94	7.5	22.16	8.22	0.00	37.88	46.00	8.12	QP	Horizontal
6	967.58	7.73	22.80	8.58	0.00	39.11	54.00	14.89	QP	Horizontal

Note:

- Result Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
- Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2023-06-21

Tested By: Bairong

EUT: Interactive Touchscreen Display

Model: IMPACT Lux 85"

Test Mode: TX Mode

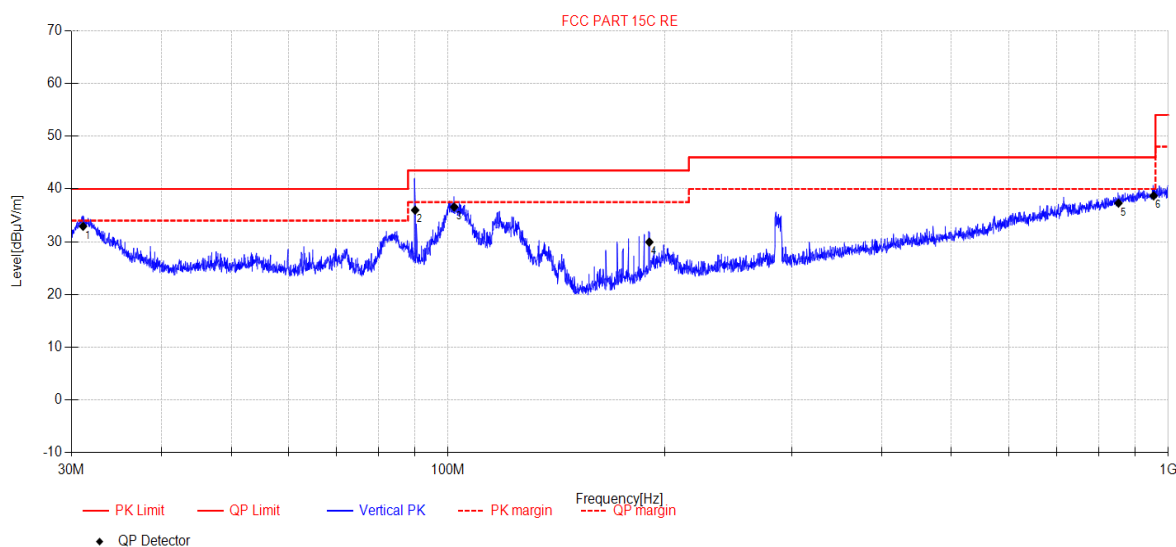
Number: IMPACT Lux 85"
Power: AC 120V/60Hz
Supply:

Condition: Temp:21.5°C;Humi:57.3%

Test Site: DDT 3# Chamber

File Path: d:\ts\2023 report data\Q23051601-3E IMPACT Lux86\FCC BELOW 1G\20230621-104854_V

Memo: NFC



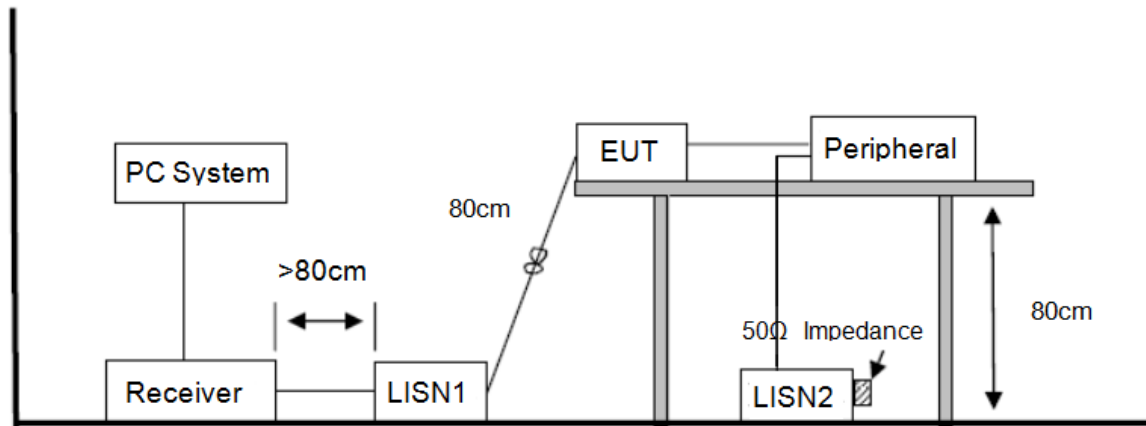
Final Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	AMP [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	31.14	18.13	10.31	4.48	0.00	32.92	40.00	7.08	QP	Vertical
2	90.01	21.63	9.40	4.95	0.00	35.98	43.50	7.52	QP	Vertical
3	101.98	20.49	11.00	5.08	0.00	36.57	43.50	6.93	QP	Vertical
4	190.33	14.05	10.23	5.65	0.00	29.93	43.50	13.57	QP	Vertical
5	852.85	7.18	21.96	8.17	0.00	37.31	46.00	8.69	QP	Vertical
6	954.11	7.47	22.70	8.53	0.00	38.70	46.00	7.30	QP	Vertical

Note:

1. Result Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

7. Power Line Conducted Emission

7.1. Block diagram of test setup



7.2. Power line conducted emission limits

Frequency	Quasi-Peak Level dB(μ V)	Average Level dB(μ V)
150 kHz ~ 500 kHz	66 ~ 56*	56 ~ 46*
500 kHz ~ 5 MHz	56	46
5 MHz ~ 30 MHz	60	50

Note 1: * Decreasing linearly with logarithm of frequency.

Note 2: The lower limit shall apply at the transition frequencies.

7.3. Test procedure

The EUT and Support equipment, if needed, were put placed on a non-metallic table, 80cm above the ground plane.

Configuration EUT to simulate typical usage as described in clause 2.4 and test equipment as described in clause 10.2 of this report.

All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.

All support equipment power received from a second LISN.

Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.

The Receiver scanned from 150 kHz to 30 MHz for emissions in each of the test modes.

During the above scans, the emissions were maximized by cable manipulation.

The test mode(s) described in clause 2.4 were scanned during the preliminary test.

After the preliminary scan, we found the test mode producing the highest emission level.

The EUT configuration and worse cable configuration of the above highest emission levels were recorded for reference of the final test.

EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test.

A scan was taken on both power lines, Neutral and Line, recording at least the six highest emissions.

Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit.

The test data of the worst-case condition(s) was recorded.

The bandwidth of test receiver is set at 9 kHz.

7.4. Test result

Pass. (See below detailed test result)

Note1: All emissions not reported below are too low against the prescribed limits.

Note2: "-----" means Peak detection; "-----" means Average detection

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 6# Shield Room

D:\2023 Report Data\Q23051601-1E FCC\FCC CE.EM6

Test Date : 2023-06-19

Tested By : Junchang Du

EUT : Interactive Touchscreen Display

Model Number : IMPACT Lux 65"

Power Supply : AC 120V/60Hz

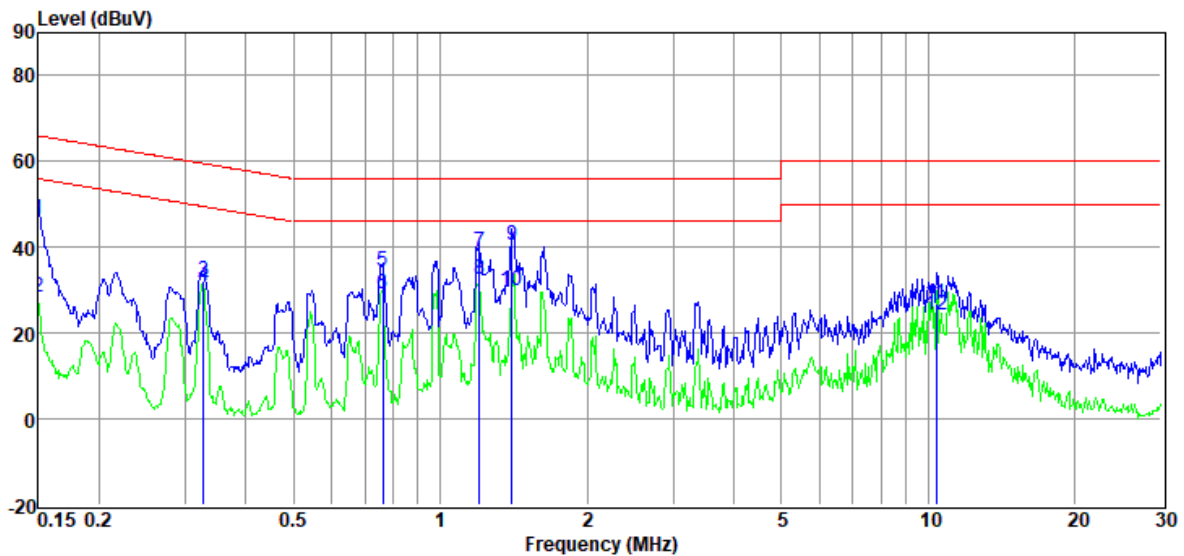
Test Mode : NFC mode

Condition : Temp:22.3°C,Humi:65.3%,Press:101.4kPa

LISN : 2022 ENV 216 3#/NEUTRAL

Memo :

Data: 2



Item	Freq.	Read Level	LISN Factor	Cable Loss	Pulse Limiter Factor	Result Level	Limit Line	Over Limit	Detector	Phase
(Mark)	(MHz)	(dBμV)	(dB)	(dB)	(dB)	(dBμV)	(dBμV)	(dB)		
1	0.15	26.99	9.70	0.13	9.83	46.65	66.00	-19.35	QP	NEUTRAL
2	0.15	8.56	9.70	0.13	9.83	28.22	56.00	-27.78	Average	NEUTRAL
3	0.33	12.49	9.60	0.13	9.83	32.05	59.53	-27.48	QP	NEUTRAL
4	0.33	11.66	9.60	0.13	9.83	31.22	49.53	-18.31	Average	NEUTRAL
5	0.76	14.60	9.70	0.13	9.83	34.26	56.00	-21.74	QP	NEUTRAL
6	0.76	9.45	9.70	0.13	9.83	29.11	46.00	-16.89	Average	NEUTRAL
7	1.20	19.31	9.73	0.13	9.83	39.00	56.00	-17.00	QP	NEUTRAL
8	1.20	12.88	9.73	0.13	9.83	32.57	46.00	-13.43	Average	NEUTRAL
9	1.40	20.74	9.75	0.12	9.83	40.44	56.00	-15.56	QP	NEUTRAL
10	1.40	10.15	9.75	0.12	9.83	29.85	46.00	-16.15	Average	NEUTRAL
11	10.40	6.95	9.84	0.09	9.85	26.73	60.00	-33.27	QP	NEUTRAL
12	10.40	4.45	9.84	0.09	9.85	24.23	50.00	-25.77	Average	NEUTRAL

Note:

1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 6# Shield Room

D:\2023 Report Data\Q23051601-1E FCC\FCC CE.EM6

Test Date : 2023-06-19

Tested By : Junchang Du

EUT : Interactive Touchscreen Display

Model Number : IMPACT Lux 65"

Power Supply : AC 120V/60Hz

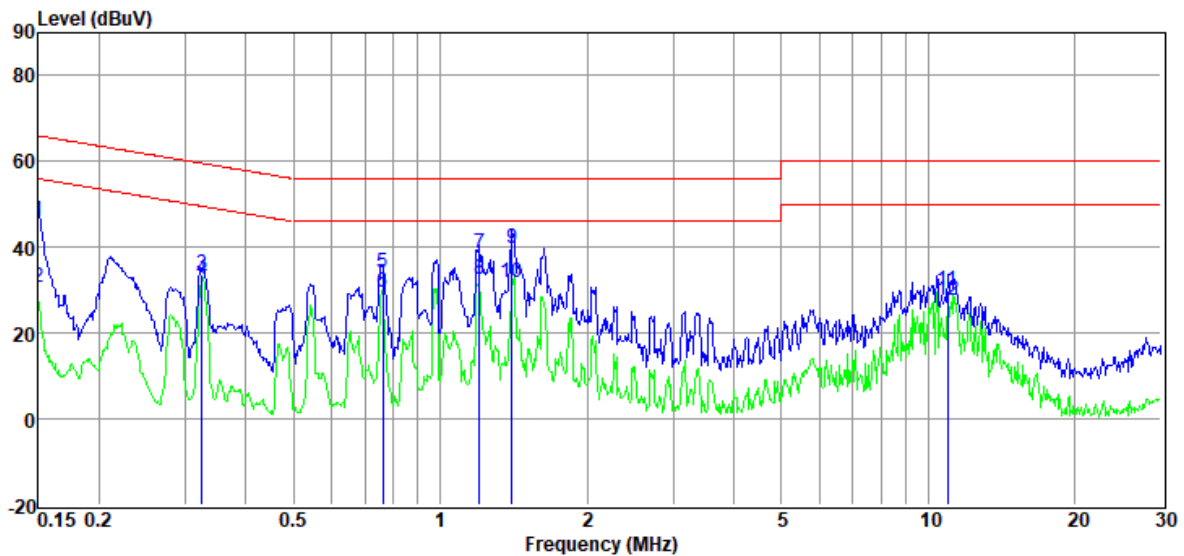
Test Mode : NFC mode

Condition : Temp:22.3°C,Humi:65.3%,Press:101.4kPa

LISN : 2022 ENV 216 3#/LINE

Memo :

Data: 4



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBμV)	Limit Line (dBμV)	Over Limit (dB)	Detector	Phase
1	0.15	26.31	9.80	0.13	9.83	46.07	66.00	-19.93	QP	LINE
2	0.15	10.88	9.80	0.13	9.83	30.64	56.00	-25.36	Average	LINE
3	0.33	13.90	9.80	0.13	9.83	33.66	59.57	-25.91	QP	LINE
4	0.33	12.92	9.80	0.13	9.83	32.68	49.57	-16.89	Average	LINE
5	0.76	14.31	9.75	0.13	9.83	34.02	56.00	-21.98	QP	LINE
6	0.76	9.92	9.75	0.13	9.83	29.63	46.00	-16.37	Average	LINE
7	1.20	18.94	9.65	0.13	9.83	38.55	56.00	-17.45	QP	LINE
8	1.20	12.90	9.65	0.13	9.83	32.51	46.00	-13.49	Average	LINE
9	1.40	20.12	9.70	0.12	9.83	39.77	56.00	-16.23	QP	LINE
10	1.40	12.31	9.70	0.12	9.83	31.96	46.00	-14.04	Average	LINE
11	10.96	10.33	9.65	0.09	9.85	29.92	60.00	-30.08	QP	LINE
12	10.96	8.15	9.65	0.09	9.85	27.74	50.00	-22.26	Average	LINE

Note:

1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

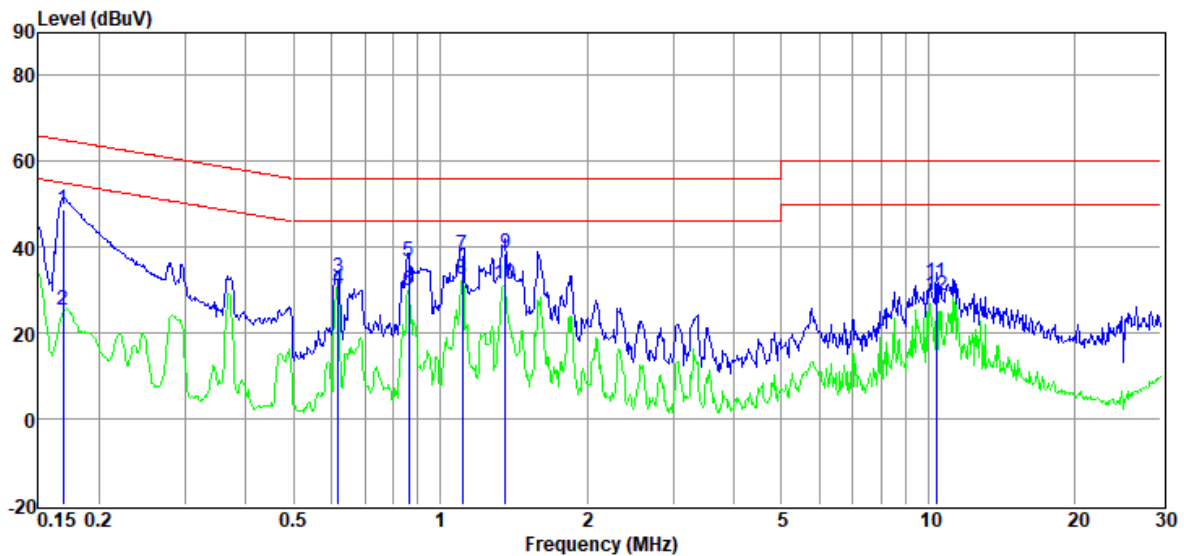
TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 6# Shield Room

D:\2023 Report Data\Q23051601-1E FCC\FCC CE.EM6

Test Date : 2023-06-19**Tested By** : Junchang Du**EUT** : Interactive Touchscreen Display**Model Number** : IMPACT Lux 65"**Power Supply** : AC 240V/50Hz**Test Mode** : NFC mode**Condition** : Temp:22.3°C,Humi:65.3%,Press:101.4kPa**LISN** : 2022 ENV 216 3#/LINE**Memo** :

Data: 6



Item	Freq.	Read Level	LISN Factor	Cable Loss	Pulse Limiter Factor	Result Level	Limit Line	Over Limit	Detector	Phase
(Mark)	(MHz)	(dBμV)	(dB)	(dB)	(dB)	(dBμV)	(dBμV)	(dB)		
1	0.17	29.14	9.80	0.13	9.83	48.90	65.03	-16.13	QP	LINE
2	0.17	5.67	9.80	0.13	9.83	25.43	55.03	-29.60	Average	LINE
3	0.62	13.34	9.80	0.13	9.83	33.10	56.00	-22.90	QP	LINE
4	0.62	10.45	9.80	0.13	9.83	30.21	46.00	-15.79	Average	LINE
5	0.86	17.04	9.68	0.13	9.83	36.68	56.00	-19.32	QP	LINE
6	0.86	10.24	9.68	0.13	9.83	29.88	46.00	-16.12	Average	LINE
7	1.11	18.60	9.63	0.13	9.83	38.19	56.00	-17.81	QP	LINE
8	1.11	12.82	9.63	0.13	9.83	32.41	46.00	-13.59	Average	LINE
9	1.36	19.05	9.69	0.12	9.83	38.69	56.00	-17.31	QP	LINE
10	1.36	11.92	9.69	0.12	9.83	31.56	46.00	-14.44	Average	LINE
11	10.40	12.20	9.68	0.09	9.85	31.82	60.00	-28.18	QP	LINE
12	10.40	9.05	9.68	0.09	9.85	28.67	50.00	-21.33	Average	LINE

Note:

1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 6# Shield Room

D:\2023 Report Data\Q23051601-1E FCC\FCC CE.EM6

Test Date : 2023-06-19

Tested By : Junchang Du

EUT : Interactive Touchscreen Display

Model Number : IMPACT Lux 65"

Power Supply : AC 240V/50Hz

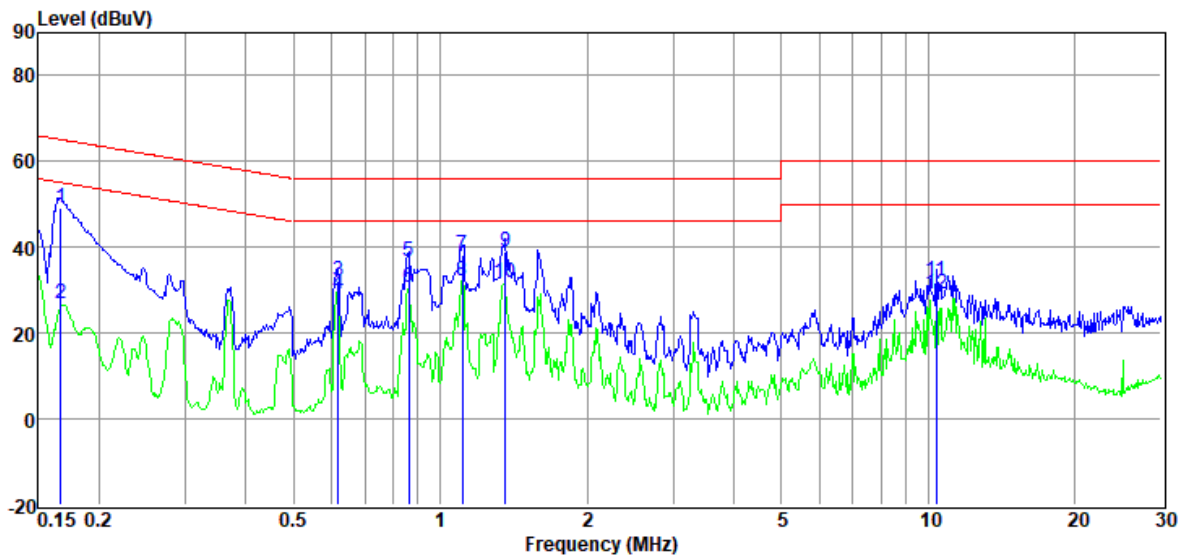
Test Mode : NFC mode

Condition : Temp:22.3°C,Humi:65.3%,Press:101.4kPa

LISN : 2022 ENV 216 3#/NEUTRAL

Memo :

Data: 8



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBμV)	Limit Line (dBμV)	Over Limit (dB)	Detector	Phase
1	0.17	29.71	9.66	0.13	9.83	49.33	65.12	-15.79	QP	NEUTRAL
2	0.17	7.31	9.66	0.13	9.83	26.93	55.12	-28.19	Average	NEUTRAL
3	0.62	12.47	9.66	0.13	9.83	32.09	56.00	-23.91	QP	NEUTRAL
4	0.62	9.62	9.66	0.13	9.83	29.24	46.00	-16.76	Average	NEUTRAL
5	0.86	17.00	9.70	0.13	9.83	36.66	56.00	-19.34	QP	NEUTRAL
6	0.86	11.09	9.70	0.13	9.83	30.75	46.00	-15.25	Average	NEUTRAL
7	1.11	18.58	9.72	0.13	9.83	38.26	56.00	-17.74	QP	NEUTRAL
8	1.11	12.63	9.72	0.13	9.83	32.31	46.00	-13.69	Average	NEUTRAL
9	1.36	19.20	9.74	0.12	9.83	38.89	56.00	-17.11	QP	NEUTRAL
10	1.36	12.11	9.74	0.12	9.83	31.80	46.00	-14.20	Average	NEUTRAL
11	10.40	12.20	9.84	0.09	9.85	31.98	60.00	-28.02	QP	NEUTRAL
12	10.40	9.37	9.84	0.09	9.85	29.15	50.00	-20.85	Average	NEUTRAL

Note:

1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 6# Shield Room

D:\2023 Report Data\Q23051601-2E FCC\FCC CE.EM6

Test Date : 2023-06-19

Tested By : Junchang Du

EUT : Interactive Touchscreen Display

Model Number : IMPACT Lux 75"

Power Supply : AC 240V/50Hz

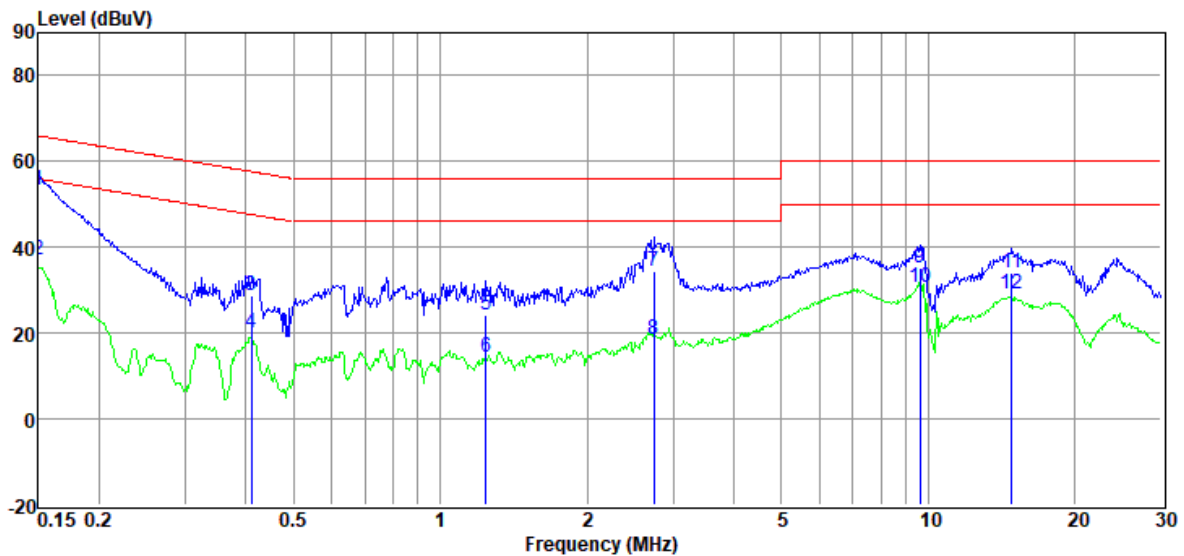
Test Mode : NFC mode

Condition : Temp:22.3°C,Humi:65.3%,Press:101.4kPa

LISN : 2022 ENV 216 3#/NEUTRAL

Memo :

Data: 18



Item	Freq.	Read Level	LISN Factor	Cable Loss	Pulse Limiter Factor	Result Level	Limit Line	Over Limit	Detector	Phase
(Mark)	(MHz)	(dBμV)	(dB)	(dB)	(dB)	(dBμV)	(dBμV)	(dB)		
1	0.15	33.56	9.70	0.13	9.83	53.22	66.00	-12.78	QP	NEUTRAL
2	0.15	17.44	9.70	0.13	9.83	37.10	56.00	-18.90	Average	NEUTRAL
3	0.41	9.23	9.60	0.13	9.83	28.79	57.64	-28.85	QP	NEUTRAL
4	0.41	0.54	9.60	0.13	9.83	20.10	47.64	-27.54	Average	NEUTRAL
5	1.24	4.59	9.73	0.13	9.83	24.28	56.00	-31.72	QP	NEUTRAL
6	1.24	-5.44	9.73	0.13	9.83	14.25	46.00	-31.75	Average	NEUTRAL
7	2.74	14.95	9.71	0.11	9.84	34.61	56.00	-21.39	QP	NEUTRAL
8	2.74	-0.96	9.71	0.11	9.84	18.70	46.00	-27.30	Average	NEUTRAL
9	9.60	15.40	9.89	0.09	9.85	35.23	60.00	-24.77	QP	NEUTRAL
10	9.60	10.88	9.89	0.09	9.85	30.71	50.00	-19.29	Average	NEUTRAL
11	14.83	14.63	9.32	0.08	9.87	33.90	60.00	-26.10	QP	NEUTRAL
12	14.83	9.81	9.32	0.08	9.87	29.08	50.00	-20.92	Average	NEUTRAL

Note:

- Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
- If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
- Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 6# Shield Room

D:\2023 Report Data\Q23051601-2E FCC\FCC CE.EM6

Test Date : 2023-06-19

Tested By : Junchang Du

EUT : Interactive Touchscreen Display

Model Number : IMPACT Lux 75"

Power Supply : AC 240V/50Hz

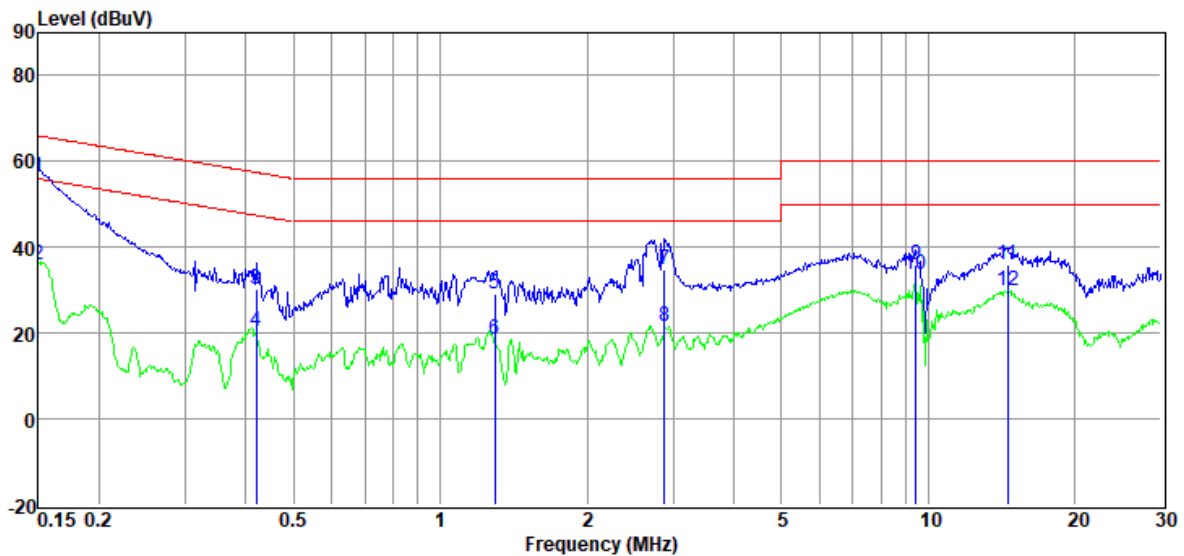
Test Mode : NFC mode

Condition : Temp:22.3°C,Humi:65.3%,Press:101.4kPa

LISN : 2022 ENV 216 3#/LINE

Memo :

Data: 20



Item	Freq.	Read Level	LISN Factor	Cable Loss	Pulse Limiter Factor	Result Level	Limit Line	Over Limit	Detector	Phase
(Mark)	(MHz)	(dBμV)	(dB)	(dB)	(dB)	(dBμV)	(dBμV)	(dB)		
1	0.15	36.76	9.80	0.13	9.83	56.52	66.00	-9.48	QP	LINE
2	0.15	16.14	9.80	0.13	9.83	35.90	56.00	-20.10	Average	LINE
3	0.42	10.42	9.80	0.13	9.83	30.18	57.46	-27.28	QP	LINE
4	0.42	0.74	9.80	0.13	9.83	20.50	47.46	-26.96	Average	LINE
5	1.30	9.33	9.67	0.13	9.83	28.96	56.00	-27.04	QP	LINE
6	1.30	-0.99	9.67	0.13	9.83	18.64	46.00	-27.36	Average	LINE
7	2.88	15.46	9.54	0.11	9.84	34.95	56.00	-21.05	QP	LINE
8	2.88	2.15	9.54	0.11	9.84	21.64	46.00	-24.36	Average	LINE
9	9.45	16.30	9.72	0.09	9.85	35.96	60.00	-24.04	QP	LINE
10	9.45	13.97	9.72	0.09	9.85	33.63	50.00	-16.37	Average	LINE
11	14.52	16.45	9.52	0.08	9.87	35.92	60.00	-24.08	QP	LINE
12	14.52	10.52	9.52	0.08	9.87	29.99	50.00	-20.01	Average	LINE

Note:

1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 6# Shield Room

D:\2023 Report Data\Q23051601-2E FCC\FCC CE.EM6

Test Date : 2023-06-19

Tested By : Junchang Du

EUT : Interactive Touchscreen Display

Model Number : IMPACT Lux 75"

Power Supply : AC 120V/60Hz

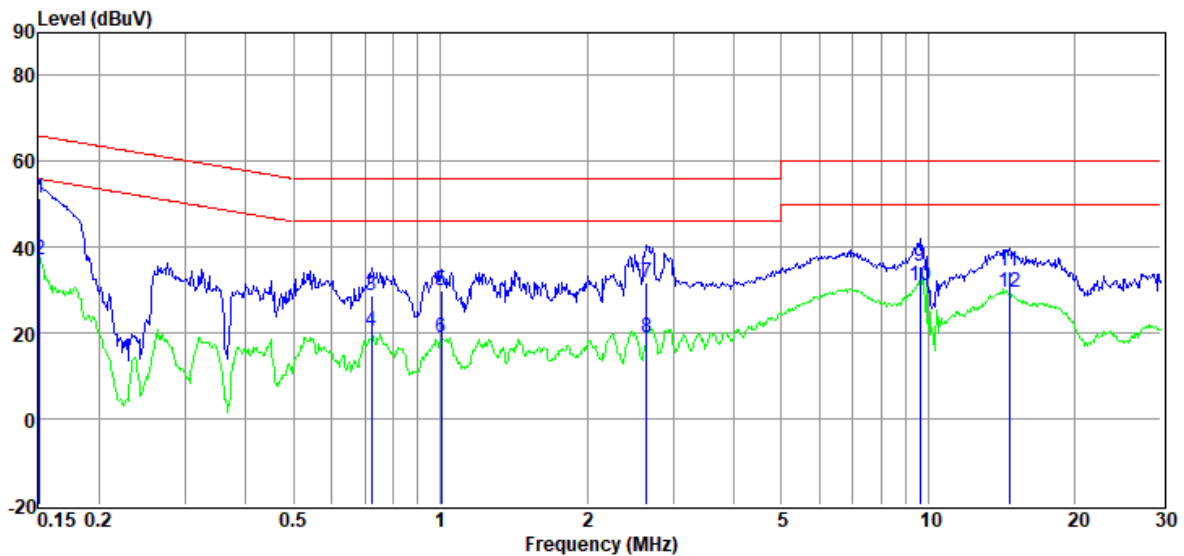
Test Mode : NFC mode

Condition : Temp:22.3°C,Humi:65.3%,Press:101.4kPa

LISN : 2022 ENV 216 3#/LINE

Memo :

Data: 22



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBμV)	Limit Line (dBμV)	Over Limit (dB)	Detector	Phase
1	0.15	31.79	9.80	0.13	9.83	51.55	65.96	-14.41	QP	LINE
2	0.15	17.27	9.80	0.13	9.83	37.03	55.96	-18.93	Average	LINE
3	0.72	9.06	9.78	0.13	9.83	28.80	56.00	-27.20	QP	LINE
4	0.72	0.58	9.78	0.13	9.83	20.32	46.00	-25.68	Average	LINE
5	1.01	10.33	9.60	0.13	9.83	29.89	56.00	-26.11	QP	LINE
6	1.01	-0.61	9.60	0.13	9.83	18.95	46.00	-27.05	Average	LINE
7	2.65	12.34	9.60	0.11	9.84	31.89	56.00	-24.11	QP	LINE
8	2.65	-0.75	9.60	0.11	9.84	18.80	46.00	-27.20	Average	LINE
9	9.60	15.88	9.71	0.09	9.85	35.53	60.00	-24.47	QP	LINE
10	9.60	11.36	9.71	0.09	9.85	31.01	50.00	-18.99	Average	LINE
11	14.67	14.83	9.51	0.08	9.87	34.29	60.00	-25.71	QP	LINE
12	14.67	9.97	9.51	0.08	9.87	29.43	50.00	-20.57	Average	LINE

Note:

1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 6# Shield Room

D:\2023 Report Data\Q23051601-2E FCC\FCC CE.EM6

Test Date : 2023-06-19

Tested By : Junchang Du

EUT : Interactive Touchscreen Display

Model Number : IMPACT Lux 75"

Power Supply : AC 120V/60Hz

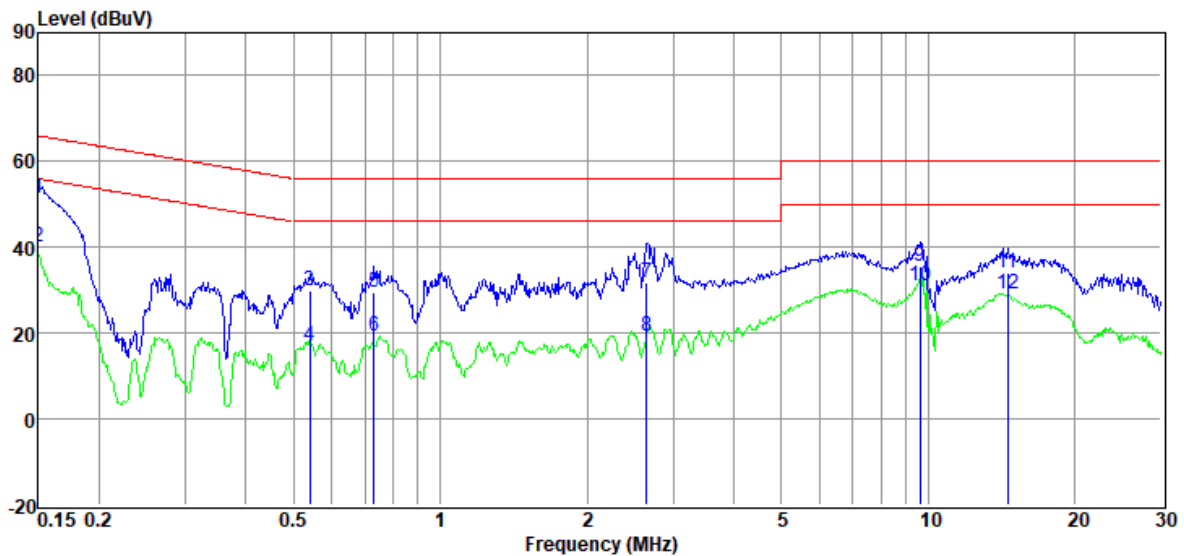
Test Mode : NFC mode

Condition : Temp:22.3°C,Humi:65.3%,Press:101.4kPa

LISN : 2022 ENV 216 3#/NEUTRAL

Memo :

Data: 24



Item	Freq.	Read Level	LISN Factor	Cable Loss	Pulse Limiter Factor	Result Level	Limit Line	Over Limit	Detector	Phase
(Mark)	(MHz)	(dBμV)	(dB)	(dB)	(dB)	(dBμV)	(dBμV)	(dB)		
1	0.15	31.78	9.70	0.13	9.83	51.44	66.00	-14.56	QP	NEUTRAL
2	0.15	20.61	9.70	0.13	9.83	40.27	56.00	-15.73	Average	NEUTRAL
3	0.54	10.33	9.62	0.13	9.83	29.91	56.00	-26.09	QP	NEUTRAL
4	0.54	-2.51	9.62	0.13	9.83	17.07	46.00	-28.93	Average	NEUTRAL
5	0.73	9.72	9.70	0.13	9.83	29.38	56.00	-26.62	QP	NEUTRAL
6	0.73	-0.46	9.70	0.13	9.83	19.20	46.00	-26.80	Average	NEUTRAL
7	2.65	12.10	9.72	0.11	9.84	31.77	56.00	-24.23	QP	NEUTRAL
8	2.65	-0.40	9.72	0.11	9.84	19.27	46.00	-26.73	Average	NEUTRAL
9	9.60	15.88	9.89	0.09	9.85	35.71	60.00	-24.29	QP	NEUTRAL
10	9.60	11.17	9.89	0.09	9.85	31.00	50.00	-19.00	Average	NEUTRAL
11	14.52	14.78	9.35	0.08	9.87	34.08	60.00	-25.92	QP	NEUTRAL
12	14.52	9.85	9.35	0.08	9.87	29.15	50.00	-20.85	Average	NEUTRAL

Note:

- Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
- If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
- Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 6# Shield Room

D:\2023 Report Data\Q23051601-3E FCC\FCC CE.EM6

Test Date : 2023-06-19

Tested By : Junchang Du

EUT : Interactive Touchscreen Display

Model Number : IMPACT Lux 86"

Power Supply : AC 240V/50Hz

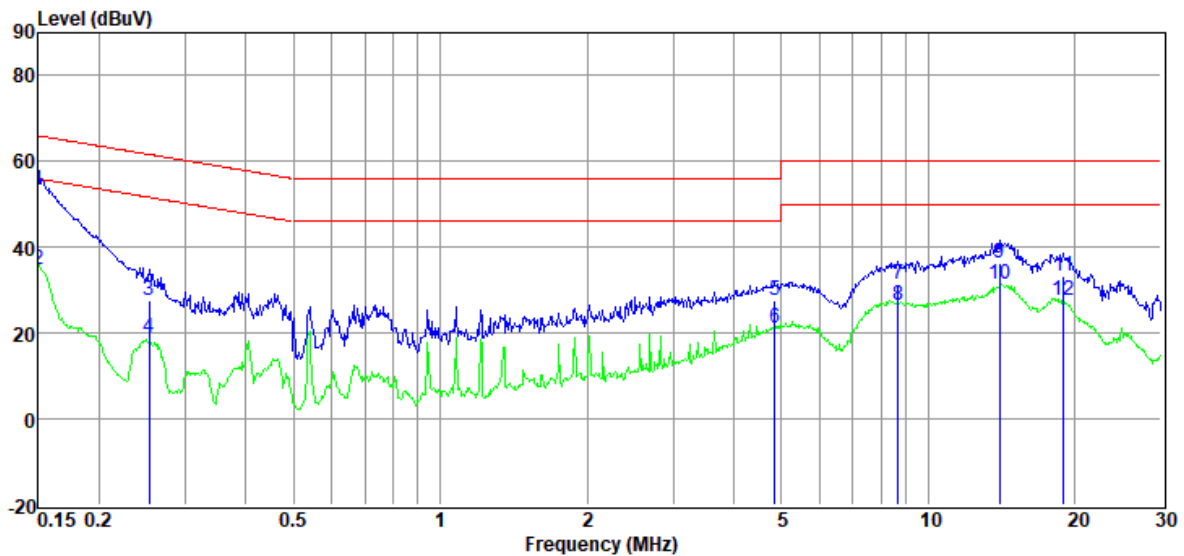
Test Mode : NFC mode

Condition : Temp:22.3°C,Humi:65.3%,Press:101.4kPa

LISN : 2022 ENV 216 3#/NEUTRAL

Memo :

Data: 10



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBμV)	Limit Line (dBμV)	Over Limit (dB)	Detector	Phase
1	0.15	33.52	9.70	0.13	9.83	53.18	66.00	-12.82	QP	NEUTRAL
2	0.15	15.02	9.70	0.13	9.83	34.68	56.00	-21.32	Average	NEUTRAL
3	0.25	7.91	9.60	0.13	9.83	27.47	61.64	-34.17	QP	NEUTRAL
4	0.25	-0.56	9.60	0.13	9.83	19.00	51.64	-32.64	Average	NEUTRAL
5	4.85	7.97	9.67	0.10	9.84	27.58	56.00	-28.42	QP	NEUTRAL
6	4.85	1.55	9.67	0.10	9.84	21.16	46.00	-24.84	Average	NEUTRAL
7	8.68	11.56	9.86	0.09	9.85	31.36	60.00	-28.64	QP	NEUTRAL
8	8.68	6.75	9.86	0.09	9.85	26.55	50.00	-23.45	Average	NEUTRAL
9	13.99	16.91	9.40	0.08	9.87	36.26	60.00	-23.74	QP	NEUTRAL
10	13.99	12.00	9.40	0.08	9.87	31.35	50.00	-18.65	Average	NEUTRAL
11	18.92	13.55	9.70	0.07	9.89	33.21	60.00	-26.79	QP	NEUTRAL
12	18.92	8.06	9.70	0.07	9.89	27.72	50.00	-22.28	Average	NEUTRAL

Note:

1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 6# Shield Room

D:\2023 Report Data\Q23051601-3E FCC\FCC CE.EM6

Test Date : 2023-06-19

Tested By : Junchang Du

EUT : Interactive Touchscreen Display

Model Number : IMPACT Lux 86"

Power Supply : AC 240V/50Hz

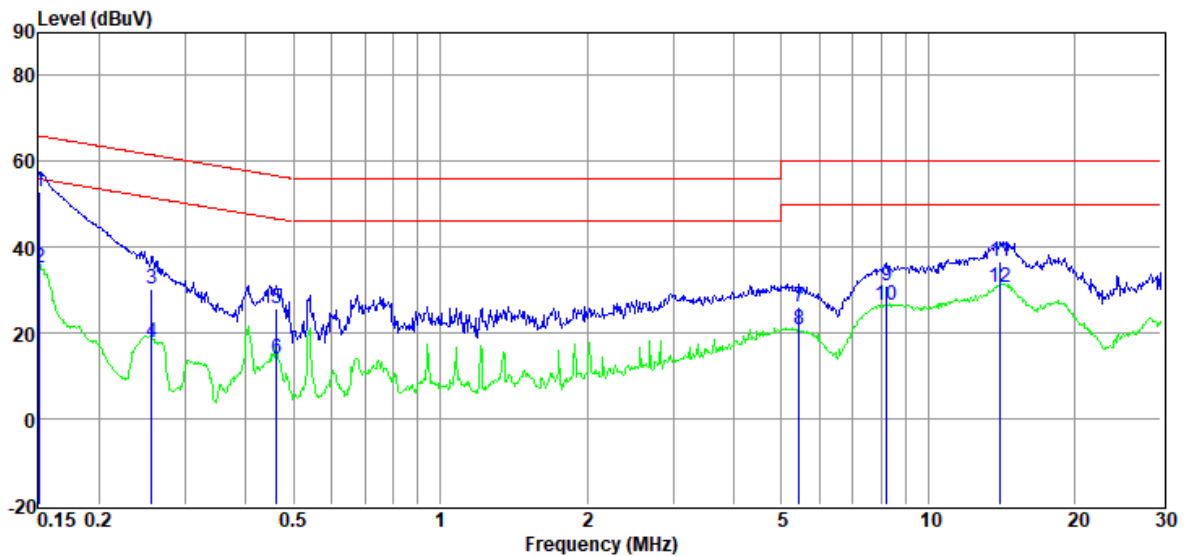
Test Mode : NFC mode

Condition : Temp:22.3°C,Humi:65.3%,Press:101.4kPa

LISN : 2022 ENV 216 3#/LINE

Memo :

Data: 12



Item	Freq.	Read Level	LISN Factor	Cable Loss	Pulse Limiter Factor	Result Level	Limit Line	Over Limit	Detector	Phase
(Mark)	(MHz)	(dBμV)	(dB)	(dB)	(dB)	(dBμV)	(dBμV)	(dB)		
1	0.15	33.28	9.80	0.13	9.83	53.04	65.96	-12.92	QP	LINE
2	0.15	15.31	9.80	0.13	9.83	35.07	55.96	-20.89	Average	LINE
3	0.26	10.47	9.80	0.13	9.83	30.23	61.56	-31.33	QP	LINE
4	0.26	-2.07	9.80	0.13	9.83	17.69	51.56	-33.87	Average	LINE
5	0.46	6.08	9.80	0.13	9.83	25.84	56.67	-30.83	QP	LINE
6	0.46	-5.87	9.80	0.13	9.83	13.89	46.67	-32.78	Average	LINE
7	5.45	6.66	9.58	0.10	9.85	26.19	60.00	-33.81	QP	LINE
8	5.45	1.23	9.58	0.10	9.85	20.76	50.00	-29.24	Average	LINE
9	8.24	11.17	9.75	0.09	9.85	30.86	60.00	-29.14	QP	LINE
10	8.24	6.84	9.75	0.09	9.85	26.53	50.00	-23.47	Average	LINE
11	14.06	17.05	9.53	0.08	9.87	36.53	60.00	-23.47	QP	LINE
12	14.06	11.27	9.53	0.08	9.87	30.75	50.00	-19.25	Average	LINE

Note:

1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 6# Shield Room

D:\2023 Report Data\Q23051601-3E FCC\FCC CE.EM6

Test Date : 2023-06-19

Tested By : Junchang Du

EUT : Interactive Touchscreen Display

Model Number : IMPACT Lux 86"

Power Supply : AC 120V/60Hz

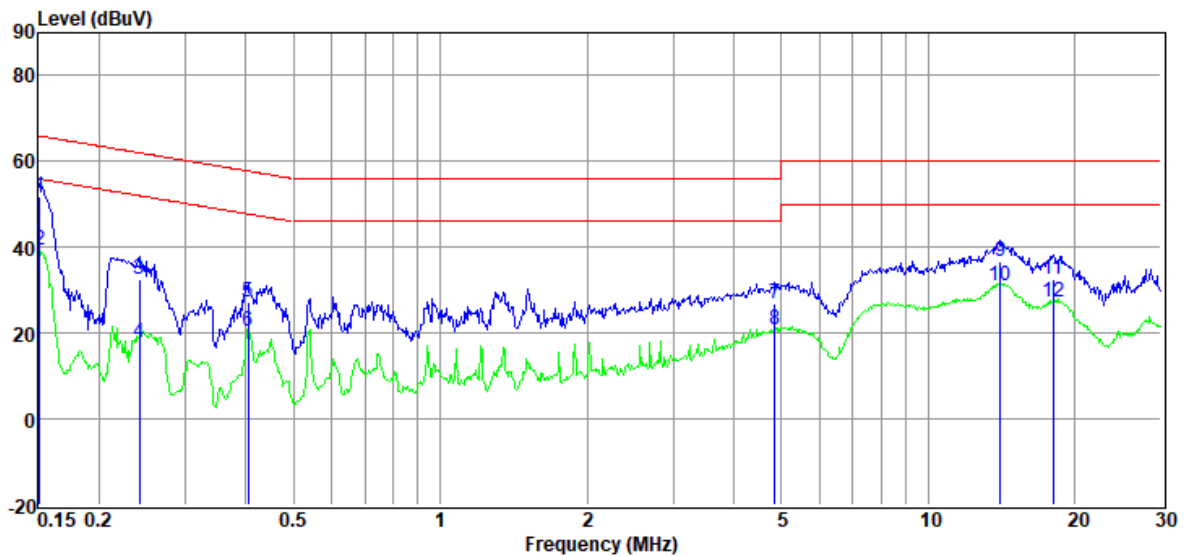
Test Mode : NFC mode

Condition : Temp:22.3°C,Humi:65.3%,Press:101.4kPa

LISN : 2022 ENV 216 3#/LINE

Memo :

Data: 14



Item	Freq.	Read Level	LISN Factor	Cable Loss	Pulse Limiter Factor	Result Level	Limit Line	Over Limit	Detector	Phase
(Mark)	(MHz)	(dBμV)	(dB)	(dB)	(dB)	(dBμV)	(dBμV)	(dB)		
1	0.15	32.03	9.80	0.13	9.83	51.79	65.96	-14.17	QP	LINE
2	0.15	19.55	9.80	0.13	9.83	39.31	55.96	-16.65	Average	LINE
3	0.24	12.74	9.80	0.13	9.83	32.50	62.04	-29.54	QP	LINE
4	0.24	-2.13	9.80	0.13	9.83	17.63	52.04	-34.41	Average	LINE
5	0.40	7.63	9.80	0.13	9.83	27.39	57.77	-30.38	QP	LINE
6	0.40	0.75	9.80	0.13	9.83	20.51	47.77	-27.26	Average	LINE
7	4.85	7.31	9.47	0.10	9.84	26.72	56.00	-29.28	QP	LINE
8	4.85	1.50	9.47	0.10	9.84	20.91	46.00	-25.09	Average	LINE
9	14.06	17.11	9.53	0.08	9.87	36.59	60.00	-23.41	QP	LINE
10	14.06	11.57	9.53	0.08	9.87	31.05	50.00	-18.95	Average	LINE
11	18.04	13.26	9.50	0.07	9.89	32.72	60.00	-27.28	QP	LINE
12	18.04	7.86	9.50	0.07	9.89	27.32	50.00	-22.68	Average	LINE

Note:

- Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
- If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
- Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 6# Shield Room

D:\2023 Report Data\Q23051601-3E FCC\FCC CE.EM6

Test Date : 2023-06-19

Tested By : Junchang Du

EUT : Interactive Touchscreen Display

Model Number : IMPACT Lux 86"

Power Supply : AC 120V/60Hz

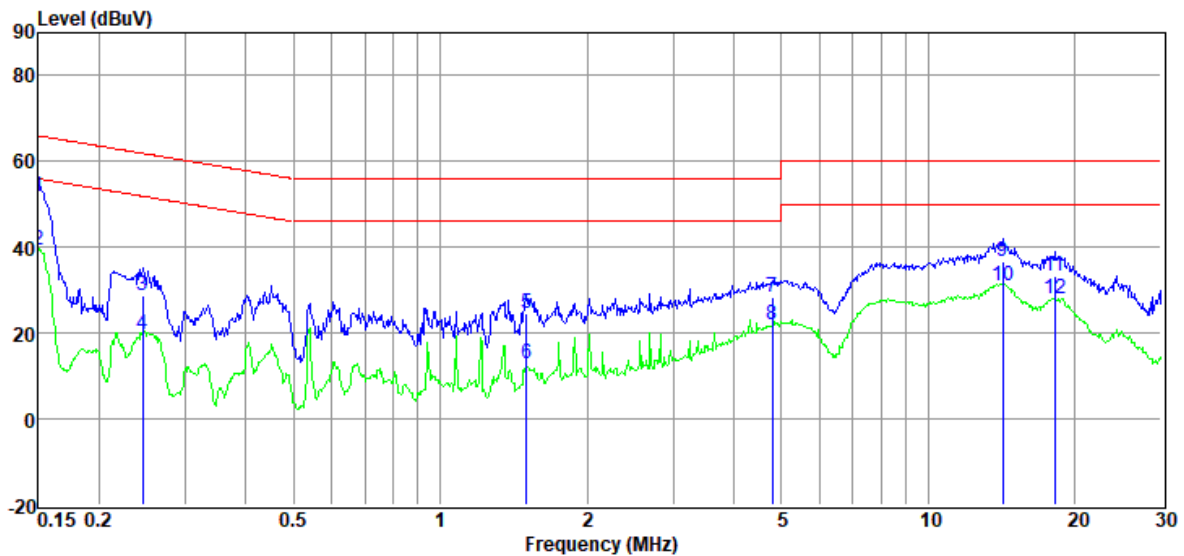
Test Mode : NFC mode

Condition : Temp:22.3°C,Humi:65.3%,Press:101.4kPa

LISN : 2022 ENV 216 3#/NEUTRAL

Memo :

Data: 16



Item (Mark)	Freq. (MHz)	Read Level (dBμV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBμV)	Limit Line (dBμV)	Over Limit (dB)	Detector	Phase
1	0.15	32.15	9.70	0.13	9.83	51.81	66.00	-14.19	QP	NEUTRAL
2	0.15	19.87	9.70	0.13	9.83	39.53	56.00	-16.47	Average	NEUTRAL
3	0.25	9.38	9.60	0.13	9.83	28.94	61.91	-32.97	QP	NEUTRAL
4	0.25	0.11	9.60	0.13	9.83	19.67	51.91	-32.24	Average	NEUTRAL
5	1.50	5.03	9.76	0.12	9.84	24.75	56.00	-31.25	QP	NEUTRAL
6	1.50	-6.96	9.76	0.12	9.84	12.76	46.00	-33.24	Average	NEUTRAL
7	4.80	8.71	9.66	0.10	9.84	28.31	56.00	-27.69	QP	NEUTRAL
8	4.80	2.52	9.66	0.10	9.84	22.12	46.00	-23.88	Average	NEUTRAL
9	14.21	17.30	9.38	0.08	9.87	36.63	60.00	-23.37	QP	NEUTRAL
10	14.21	11.74	9.38	0.08	9.87	31.07	50.00	-18.93	Average	NEUTRAL
11	18.14	13.81	9.63	0.07	9.89	33.40	60.00	-26.60	QP	NEUTRAL
12	18.14	8.47	9.63	0.07	9.89	28.06	50.00	-21.94	Average	NEUTRAL

Note:

1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

8. Antenna Requirements

For intentional device, according to FCC 47 CFR Section 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. 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. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

10. Photos of the EUT

Please refer to appendix I.

END OF REPORT