Shenzhen Global Test Service Co.,Ltd.
No.7-101 and 8A-104, Building 7 and 8, DCC Cultural and Creative Garden, No.98, Pingxin North Road,
Shangmugu Community, Pinghu Street, Longgang District, Shenzhen, Guangdong

FCC PART 15 SUBPART C TEST REPORT

FCC PART 15 C (15.225)

Report Reference No. ..... :	**GTS20221215003-1-8**
FCC ID. ..... :	**RBWEMC0650C**
Compiled by (position+printed name+signature) . :	File administrators Peter Xiao
Supervised by (position+printed name+signature) . :	Test Engineer Jenny Zeng
Approved by (position+printed name+signature) . :	Manager Jason Hu
Date of issue .....:	Jun.15, 2023
Representative Laboratory Name.:	**Shenzhen Global Test Service Co.,Ltd.**
Address .....:	No.7-101 and 8A-104, Building 7 and 8, DCC Cultural and Creative Garden, No.98, Pingxin North Road, Shangmugu Community, Pinghu Street, Longgang District, Shenzhen, Guangdong
Applicant's name.....:	**Elo Touch Solutions, Inc.**
Address .....:	670 N. McCarthy Blvd. Suite 100, Milpitas, CA 95035, USA
Test specification.....**:**	
Standard.....:	**FCC Part 15 C (15.225)**
TRF Originator.....:	Shenzhen Global Test Service Co.,Ltd.
Master TRF .....:	Dated 2014-12

Test item description .....:	**mobile POS**
Trade Mark.....:	Elo
Manufacturer .....:	Elo Touch Solutions, Inc.
Model/Type reference .....:	EMC0650S
List Model .....:	EMC0650
Modulation Type.....:	ASK
Operation Frequency .....:	13.56 MHz
Hardware Version .....:	N/A
Software Version.....:	N/A
Rating .....:	DC 5.0V/2.0A by Adapter
Result .....:	**PASS**

T E S T R E P O R T

Test Report No. :	**GTS20221215003-1-8**	Jun.15, 2023 Date of issue

Equipment under Test	:	mobile POS
Model /Type	:	EMC0650S
List Model	:	EMC0650
Applicant	:	**Elo Touch Solutions, Inc.**
Address	:	670 N. McCarthy Blvd. Suite 100, Milpitas, CA 95035, USA
Manufacturer	:	**Elo Touch Solutions, Inc.**
Address	:	670 N. McCarthy Blvd. Suite 100, Milpitas, CA 95035, USA

Test Result:	**PASS**

The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Contents

1. TEST STANDARDS

The tests were performed according to following standards:

FCC Rules Part 15.225: RADIO FREQUENCY DEVICES.
ANSI C63.10-2020: American National Standard for Testing Unlicensed Wireless Devices

2. SUMMARY

2.1. General Remarks

Date of receipt of test sample	:	May.18, 2023
Testing commenced on	:	May.18, 2023
Testing concluded on	:	Jun. 15, 2023

2.2. Product Description

Product Name:	mobile POS
Trade Mark:	Elo
Model/Type reference:	EMC0650S
List Model:	EMC0650
Model Declaration	PCB board, structure and internal of these model(s) are the same, Only the difference in the scanning head, model (EMC0650S) with a scanning head and model (EMC0650) without a scanning head, was evaluated for the EMC part and did not affect RF performance.
Power supply:	DC 5.0V/2.0A by Adapter
Hardware Version	N/A
Software Version	N/A
Sample ID	GTS20221215003-1-S0001-1#& GTS20221215003-1-S0001-2#
Bluetooth	
Frequency Range	2402MHz ~ 2480MHz
Channel Number	79 channels for Bluetooth (DSS) 40 channels for Bluetooth (DTS)
Channel Spacing	1MHz for Bluetooth (DSS) 2MHz for Bluetooth (DTS)
Modulation Type	GFSK, π/4-DQPSK, 8-DPSK for Bluetooth (DSS) GFSK for Bluetooth (DTS)
2.4GWLAN	
WLAN Operation frequency	IEEE 802.11b:2412-2462MHz IEEE 802.11g:2412-2462MHz IEEE 802.11n HT20:2412-2462MHz IEEE 802.11n HT40:2422-2452MHz
WLAN Modulation Type	IEEE 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE 802.11g: OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20: OFDM (64QAM, 16QAM, QPSK,BPSK) IEEE 802.11n HT40: OFDM (64QAM, 16QAM, QPSK,BPSK)
Channel number:	11 Channel for IEEE 802.11b/g/n(HT20) 7 Channel for IEEE 802.11n(HT40)
Channel separation:	5MHz
WIFI(5.2G/5.3G/5.7G Band)	
Frequency Range	5180MHz ~ 5240MHz, 5260MHz ~ 5320MHz, 5500MHz ~ 5700MHz
Channel Number	4 Channels for 20MHz bandwidth(5180-5240MHz) 4 Channels for 20MHz bandwidth(5260-5320MHz) 11 Channels for 20MHz bandwidth(5500-5700MHz) 2 channels for 40MHz bandwidth(5190~5230MHz) 2 channels for 40MHz bandwidth(5270~5310MHz) 5 Channels for 40MHz bandwidth(5510-5670MHz) 1 channels for 80MHz bandwidth(5210MHz) 1 channels for 80MHz bandwidth(5290MHz) 2 Channels for 80MHz bandwidth(5530-5610MHz)
Modulation Type	802.11a/n/ac: OFDM
WIFI (5.8G Band)	
Frequency Range	5745MHz ~ 5825MHz
Channel Number	5 channels for 20MHz bandwidth(5745-5825MHz) 2 channels for 40MHz bandwidth(5755~5795MHz) 1 channels for 80MHz bandwidth(5775MHz)
Modulation Type	802.11a/n/ac: OFDM

Antenna Description	FPC Antenna, 2.50dBi(Max.) for 2.4G Band and 1.80dBi(Max.) for 5G Band
LTE	
LTE Operation Frequency Band	E-UTRA Band 2(1850 MHz -1910MHz) E-UTRA Band 4(1710 MHz -1755MHz) E-UTRA Band 5(824 MHz -849MHz) E-UTRA Band 7(2500 MHz -2570MHz) E-UTRA Band 12(699 MHz -716MHz) E-UTRA Band 13(777 MHz -787MHz) E-UTRA Band 14(788 MHz -798MHz) E-UTRA Band 17(704 MHz -716MHz) E-UTRA Band 25(1850 MHz -1915MHz) E-UTRA Band 26(814 MHz -824MHz) E-UTRA Band 26(824 MHz -849MHz) E-UTRA Band 41(2496 MHz -2690MHz) E-UTRA Band 66(1710 MHz -1780MHz) E-UTRA Band 71(663 MHz -698MHz)
LTE Release Version	R10
Type Of Modulation	QPSK/16QAM
Antenna Description	FPC Antenna; 1.23dBi (max.) For LTE Band 2; 0.80dBi (max.) For LTE Band 4; -2.49dBi (max.) For LTE Band 5; 0.80dBi (max.) For LTE Band 7; -2.86dBi (max.) For LTE Band 12; -2.56dBi (max.) For LTE Band 13; -2.75dBi (max.) For LTE Band 14; -2.92dBi (max.) For LTE Band 17; 1.26dBi (max.) For LTE Band 25; -2.72dBi (max.) For LTE Band 26; 0.63dBi (max.) For LTE Band 41; 0.94dBi (max.) For LTE Band 66; -2.96dBi (max.) For LTE Band 71;
RFID(13.56MHz) (Optional)	
Frequency Range	13.56MHz
Channel Number	1
Modulation Type	ASK
Antenna Description	Internal Antenna, 0dBi (Max.)
GPS(RX)	Support

2.3. Equipment Under Test

Power supply system utilised

Power supply voltage	:	○	230V / 50 Hz	○	120V / 60Hz
		○	12 V DC	○	24 V DC
		●	Other (specified in blank below)		

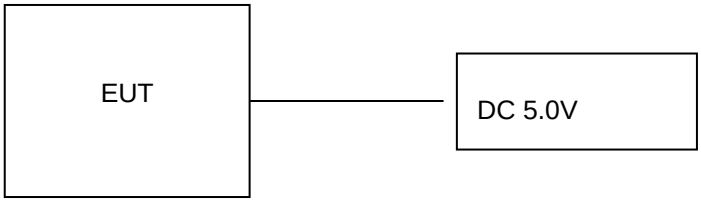
DC 5.0V

2.4. Short description of the Equipment under Test (EUT)

This is a mobile POS

For more details, refer to the user's manual of the EUT.

2.5. Block Diagram of Test Setup



2.6. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for **FCC ID: RBWEMC0650C** filing to comply with Section 15.247 of the FCC Part 15, Subpart C Rules.

2.7. EUT Exercise Software

N/A

2.8. Special Accessories

Manufacturer	Description	Model	Serial Number	Certificate
SHENZHEN TIANYIN ELECTRONICS CO.,LTD.	Adapter	TPA-46050200UU	--	SDOC
SHENZHEN HONOR ELECTRONIC CO.,LTD.	Adapter	ADS-10LA-06 05010EPCU	--	SDOC

2.9. External I/O Cable

I/O Port Description	Quantity	Cable
DC IN Port	1	1.2M, Unscreened Cable

2.10. Modifications

No modifications were implemented to meet testing criteria.

3. TEST ENVIRONMENT

3.1. Address of the test laboratory

Shenzhen Global Test Service Co.,Ltd.
No.7-101 and 8A-104, Building 7 and 8, DCC Cultural and Creative Garden, No.98, Pingxin North Road, Shangmugu Community, Pinghu Street, Longgang District, Shenzhen, Guangdong

3.2. Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

CNAS (No. CNAS L8169)
Shenzhen Global Test Service Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 2019 General Requirements) for the Competence of Testing and Calibration Laboratories.
A2LA (Certificate No. 4758.01)
Shenzhen Global Test Service Co., Ltd. has been assessed by the American Association for Laboratory Accreditation (A2LA). Certificate No. 4758.01.
Industry Canada Registration Number. is 24189.
FCC Designation Number is CN1234.
FCC Registered Test Site Number is165725.

3.3. Environmental conditions

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

Temperature:	-20-50 ° C
Humidity:	30-60 %
Atmospheric pressure:	950-1050mbar

3.4. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 „Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements“ and is documented in the Shenzhen Global Test Service Co.,Ltd. quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.
Hereafter the best measurement capability for Shenzhen GTS laboratory is reported:

Test	Range	Measurement Uncertainty	Notes
Radiated Emission	30~1000MHz	4.10 dB	(1)
Radiated Emission	1~18GHz	4.32 dB	(1)
Radiated Emission	18-40GHz	5.54 dB	(1)
Conducted Disturbance	0.15~30MHz	3.12 dB	(1)

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3.5. Summary of measurement results

Applied Standard: FCC Part 15 Subpart C			
Test Items	**FCC Rules**	**Test Sample**	**Result**
Line Conducted Emissions	§15.207(a)	GTS20221215003-1-S0001-2#	PASS
Field Strength of Fundamental Emissions	§15.225(a)(b)(c)	GTS20221215003-1-S0001-1#	PASS
Radiated Emissions	§15.225(d) & §15.209	GTS20221215003-1-S0001-2#	PASS
20dB Bandwidth	§ 15.215	GTS20221215003-1-S0001-1#	PASS
Frequency Stability	§15.225(e)	GTS20221215003-1-S0001-1#	PASS
Antenna Requirement	§15.203	GTS20221215003-1-S0001-1#	PASS

Remark:
1. The measurement uncertainty is not included in the test result.
2. NA = Not Applicable; NP = Not Performed
3. Note 1 – Test results inside test report;
4. Note 2 – Test results in other test report (SAR Report).
5. We tested all test mode and recorded worst case in report

3.6. Equipments Used during the Test

Test Equipment	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Due Date
LISN	CYBERTEK	EM5040A	E1850400105	2022/07/13	2023/07/12
LISN	R&S	ESH2-Z5	893606/008	2022/07/13	2023/07/12
EMI Test Receiver	R&S	ESPI3	101841-cd	2022/07/13	2023/07/12
EMI Test Receiver	R&S	ESCI7	101102	2022/09/09	2023/09/08
Spectrum Analyzer	Agilent	N9020A	MY48010425	2022/09/09	2023/09/08
Spectrum Analyzer	R&S	FSV40	100019	2022/07/13	2023/07/12
Vector Signal generator	Agilent	N5181A	MY49060502	2022/07/13	2023/07/12
Signal generator	Agilent	N5182A	3610AO1069	2022/09/09	2023/09/08
Climate Chamber	ESPEC	EL-10KA	A20120523	2022/09/09	2023/09/08
Controller	EM Electronics	Controller EM 1000	N/A	N/A	N/A
Horn Antenna	Schwarzbeck	BBHA 9120D	01622	2022/09/09	2023/09/08
Active Loop Antenna	Beijing Da Ze Technology Co.,Ltd.	ZN30900C	15006	2022/09/09	2023/09/08
Bilog Antenna	Schwarzbeck	VULB9163	000976	2022/07/13	2023/07/12
Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	791	2022/09/09	2023/09/08
Amplifier	Schwarzbeck	BBV 9743	#202	2022/07/13	2023/07/12
Amplifier	Schwarzbeck	BBV9179	9719-025	2022/07/13	2023/07/12
Amplifier	EMCI	EMC051845B	980355	2022/07/13	2023/07/12
Temperature/Humidity Meter	Gangxing	CTH-608	02	2022/07/13	2023/07/12
High-Pass Filter	K&L	9SH10-2700/X12750-O/O	KL142031	2022/07/13	2023/07/12
High-Pass Filter	K&L	41H10-1375/U12750-O/O	KL142032	2022/07/13	2023/07/12
RF Cable(below 1GHz)	HUBER+SUHNER	RG214	RE01	2022/07/13	2023/07/12
RF Cable(above 1GHz)	HUBER+SUHNER	RG214	RE02	2022/07/13	2023/07/12
Data acquisition card	Agilent	U2531A	TW53323507	2022/07/13	2023/07/12
Power Sensor	Agilent	U2021XA	MY5365004	2022/07/13	2023/07/12
Test Control Unit	Tonscend	JS0806-1	178060067	2022/07/13	2023/07/12
Automated filter bank	Tonscend	JS0806-F	19F8060177	2022/07/13	2023/07/12
EMI Test Software	Tonscend	JS1120-1	Ver 2.6.8.0518	/	/
EMI Test Software	Tonscend	JS1120-3	Ver 2.5.77.0418	/	/
EMI Test Software	Tonscend	JS32-CE	Ver 2.5	/	/
EMI Test Software	Tonscend	JS32-RE	Ver 2.5.1.8	/	/

Note: The Cal.Interval was one year.

4. RADIATED MEASUREMENT

4.1. Standard Applicable

According to §15.209/ §15.205

15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
\1\ 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293.	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(\2\)
13.36-13.41			

\1\ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

\2\ Above 38.6

According to §15.247 (d): 20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

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

4.2. Measuring Instruments and Setting

Please refer to equipment list in this report. The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10^{th} carrier harmonic
RB / VB (Emission in restricted band)	1MHz / 1MHz for Peak, 1 MHz / 1/B kHz for Average
RB / VB (Emission in non-restricted band)	1MHz / 1MHz for Peak, 1 MHz / 1/B kHz for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB/VB 200Hz/1KHz for QP/AVG
Start ~ Stop Frequency	150kHz~30MHz / RB/VB 9kHz/30KHz for QP/AVG
Start ~ Stop Frequency	30MHz~1000MHz / RB/VB 120kHz/1MHz for QP

4.3. Test Procedures

1) Sequence of testing 9 kHz to 30 MHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a rotatable table with 0.8 m height is used.

--- If the EUT is a floor standing device, it is placed on the ground.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions.

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 3 meter.

--- The EUT was set into operation.

Premeasurement:

--- The turntable rotates from 0° to 315° using 45° steps.

--- The antenna height is 1.0 meter.

--- At each turntable position the analyzer sweeps with peak detection to find the maximum of all emissions

Final measurement:

--- Identified emissions during the premeasurement the software maximizes by rotating the turntable position (0° to 360°) and by rotating the elevation axes (0° to 360°).

--- The final measurement will be done in the position (turntable and elevation) causing the highest emissions with QPK detector.

--- The final levels, frequency, measuring time, bandwidth, turntable position, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement and the limit will be stored.

2) Sequence of testing 30 MHz to 1 GHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a table with 0.8 m height is used, which is placed on the ground plane.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 3 meter.

--- The EUT was set into operation.

Premeasurement:

--- The turntable rotates from 0° to 315° using 45° steps.

--- The antenna is polarized vertical and horizontal.

--- The antenna height changes from 1 to 3 meter.

--- At each turntable position, antenna polarization and height the analyzer sweeps three times in peak to find the maximum of all emissions.

Final measurement:

--- The final measurement will be performed with minimum the six highest peaks.

--- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable position (± 45°) and antenna movement between 1 and 4 meter.

--- The final measurement will be done with QP detector with an EMI receiver.

--- The final levels, frequency, measuring time, bandwidth, antenna height, antenna polarization, turntable angle, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement with marked maximum final measurements and the limit will be stored.

3) Sequence of testing 1 GHz to 18 GHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a rotatable table with 1.5 m height is used.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 3 meter.

--- The EUT was set into operation.

Premeasurement:

--- The turntable rotates from 0° to 315° using 45° steps.

--- The antenna is polarized vertical and horizontal.

--- The antenna height scan range is 1 meter to 2.5 meter.

--- At each turntable position and antenna polarization the analyzer sweeps with peak detection to find the maximum of all emissions.

Final measurement:

--- The final measurement will be performed with minimum the six highest peaks.

--- According to the maximum antenna and turntable positions of premeasurement the software maximize the peaks by changing turntable position (± 45°) and antenna movement between 1 and 4 meter. This procedure is repeated for both antenna polarizations.

--- The final measurement will be done in the position (turntable, EUT-table and antenna polarization) causing the highest emissions with Peak and Average detector.

--- The final levels, frequency, measuring time, bandwidth, turntable position, EUT-table position, antenna polarization, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement with marked maximum final measurements and the limit will be stored.

4) Sequence of testing above 18 GHz

Setup:

--- The equipment was set up to simulate a typical usage like described in the user manual or described by manufacturer.

--- If the EUT is a tabletop system, a rotatable table with 1.5 m height is used.

--- If the EUT is a floor standing device, it is placed on the ground plane with insulation between both.

--- Auxiliary equipment and cables were positioned to simulate normal operation conditions

--- The AC power port of the EUT (if available) is connected to a power outlet below the turntable.

--- The measurement distance is 1 meter.

--- The EUT was set into operation.

Premeasurement:

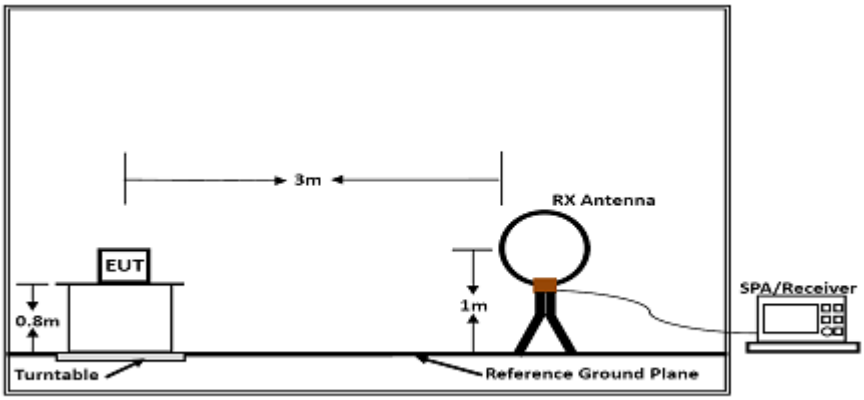
--- The antenna is moved spherical over the EUT in different polarizations of the antenna.

Final measurement:

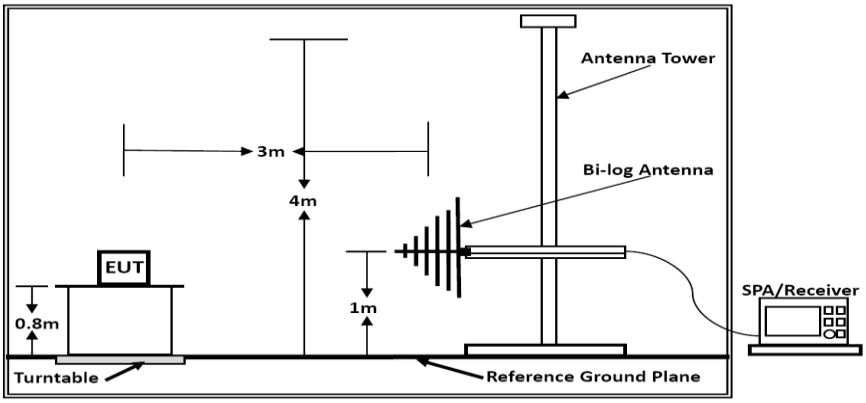
--- The final measurement will be performed at the position and antenna orientation for all detected emissions that were found during the premeasurements with Peak and Average detector.

--- The final levels, frequency, measuring time, bandwidth, correction factor, margin to the limit and limit will be recorded. Also a plot with the graph of the premeasurement and the limit will be stored.

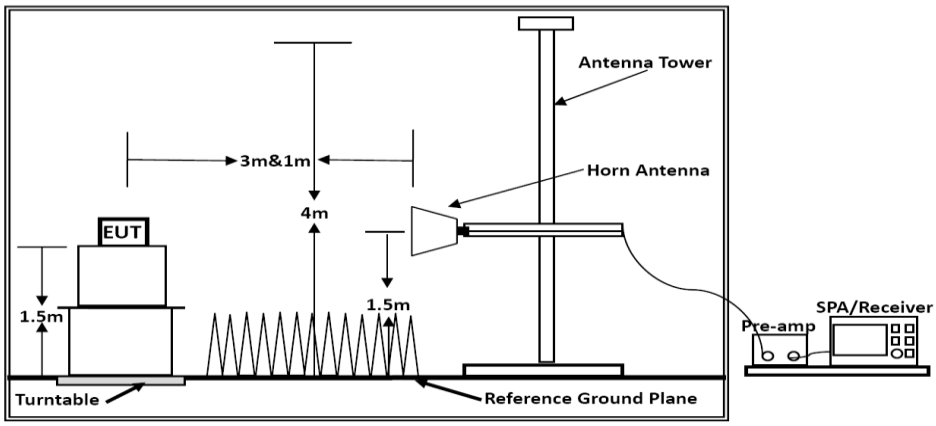
4.4. Test Setup Layout



Below 30MHz



Below 1GHz



Above 1GHz

Above 18 GHz shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade form 3m to 1m.

Distance extrapolation factor = 20 log (specific distanc [3m] / test distance [1m]) (dB);
Limit line = specific limits (dBuV) + distance extrapolation factor [6 dB].

4.5. Test Results

Temperature	24.5℃	Humidity	53.7%
Test Engineer	Jenny Zeng	Configurations	NFC

PASS.

The test data please refer to following page:

9 KHz~30MHz

Freq. MHz	Reading dBuV	Factor dB	Measured dBuV/m	Limit dBuV/m	Margin dB	Remark
0.16	33.78	20.54	54.32	103.62	49.30	QP
0.88	30.05	20.48	50.53	83.62	33.09	QP
1.96	24.80	20.30	45.10	69.54	24.44	QP
4.98	33.91	20.32	54.23	69.54	15.31	QP
13.56	63.63	20.18	83.81	124.00	40.19	QP
15.01	31.39	20.12	51.51	69.54	18.03	QP
21.98	29.04	19.94	48.98	69.54	20.56	QP
26.04	32.04	19.95	51.99	69.54	17.55	QP

*Note: Emission Level= Reading Level + Factor

Factor= Antenna Factor + Cable Loss

Margin = Emission Level Limit – Measured Values

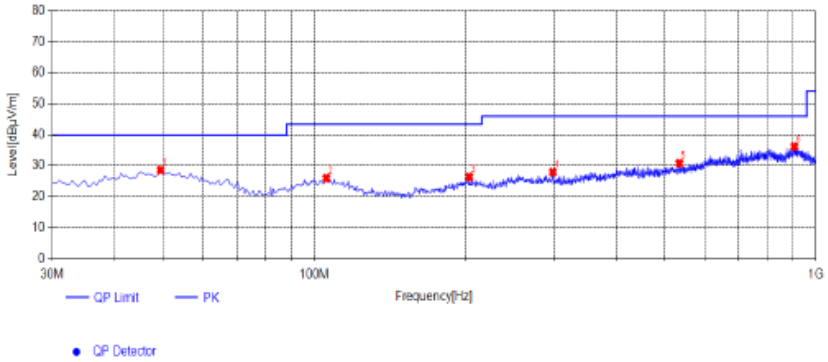
"--" means noise floor.

NOTE: All the modes have been tested and recorded worst mode in the report.

30MHz ~ 1GHz
Adapter:TPA-46050200UU
Model: EMC0650S

Horizontal

Test Graph



Suspected List

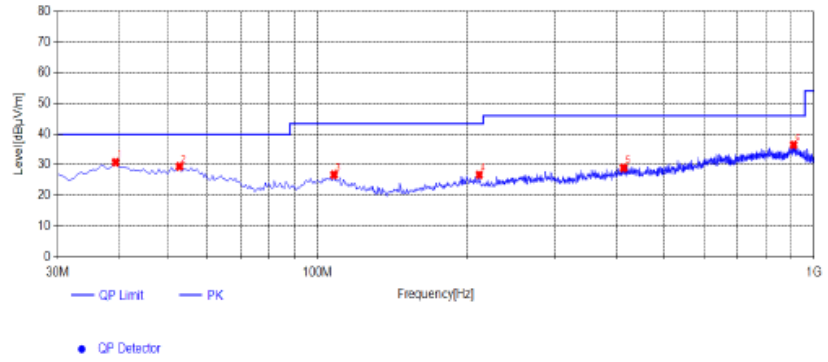
NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	49.4	44.19	-15.60	28.59	40.00	11.41	100	337	PK	Horizonta	PASS
2	105.66	43.27	-17.27	26.00	43.50	17.50	100	174	PK	Horizonta	PASS
3	203.63	44.69	-18.30	26.39	43.50	17.11	100	308	PK	Horizonta	PASS
4	299.175	44.75	-16.84	27.91	46.00	18.09	100	52	PK	Horizonta	PASS
5	534.885	43.77	-13.00	30.77	46.00	15.23	100	88	PK	Horizonta	PASS
6	905.91	43.84	-7.76	36.08	46.00	9.92	100	49	PK	Horizonta	PASS

Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Vertical

Test Graph



Suspected List

NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	39.215	47.89	-17.11	30.78	40.00	9.22	100	19	PK	Vertical	PASS
2	52.795	45.05	-15.62	29.43	40.00	10.57	100	39	PK	Vertical	PASS
3	108.085	44.10	-17.34	26.76	43.50	16.74	100	203	PK	Vertical	PASS
4	211.875	45.38	-18.65	26.73	43.50	16.77	100	239	PK	Vertical	PASS
5	414.12	43.62	-14.67	28.95	46.00	17.05	100	91	PK	Vertical	PASS
6	909.79	43.86	-7.49	36.37	46.00	9.63	100	147	PK	Vertical	PASS

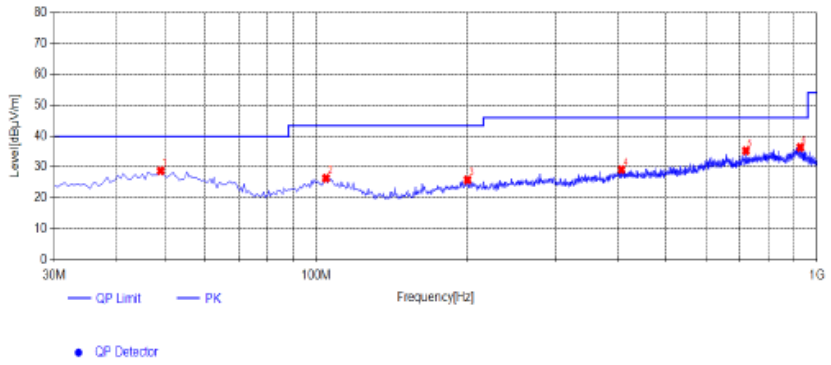
Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Model: EMC0650

Horizontal

Test Graph



Suspected List

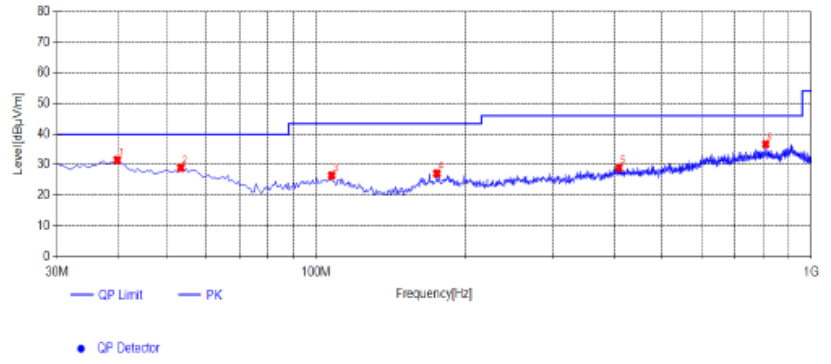
NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	48.915	44.53	-15.76	28.77	40.00	11.23	100	207	PK	Horizonta	PASS
2	104.69	43.71	-17.33	26.38	43.50	17.12	100	66	PK	Horizonta	PASS
3	200.72	43.96	-18.13	25.83	43.50	17.67	100	288	PK	Horizonta	PASS
4	407.33	43.67	-14.52	29.15	46.00	16.85	100	184	PK	Horizonta	PASS
5	722.095	45.55	-10.37	35.18	46.00	10.82	100	358	PK	Horizonta	PASS
6	926.765	44.56	-8.31	36.25	46.00	9.75	100	181	PK	Horizonta	PASS

Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Vertical

Test Graph



Suspected List

NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	39.7	48.45	-16.95	31.50	40.00	8.50	100	78	PK	Vertical	PASS
2	53.28	44.73	-15.74	28.99	40.00	11.01	100	52	PK	Vertical	PASS
3	107.6	43.70	-17.20	26.50	43.50	17.00	100	325	PK	Vertical	PASS
4	175.5	47.36	-20.23	27.13	43.50	16.37	100	25	PK	Vertical	PASS
5	409.27	43.43	-14.47	28.96	46.00	17.04	100	98	PK	Vertical	PASS
6	809.395	45.37	-8.77	36.60	46.00	9.40	100	226	PK	Vertical	PASS

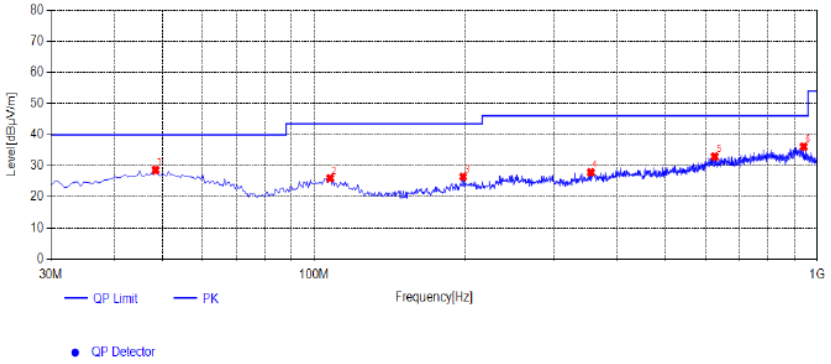
Note:1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Adapter: ADS-10LA-06 05010EPCU
Model: EMC0650S

Horizontal

Test Graph



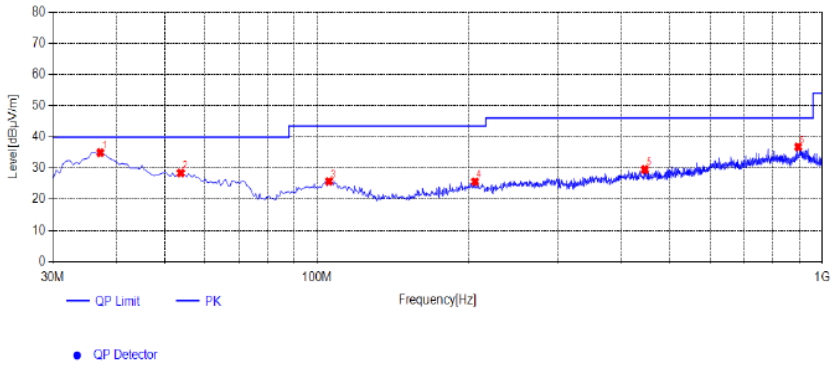
Suspected List											
NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	48.43	44.44	-15.77	28.67	40.00	11.33	100	227	PK	Horizonta	PASS
2	107.6	43.21	-17.20	26.01	43.50	17.49	100	273	PK	Horizonta	PASS
3	197.81	44.96	-18.49	26.47	43.50	17.03	100	197	PK	Horizonta	PASS
4	354.95	43.15	-15.26	27.89	46.00	18.11	100	181	PK	Horizonta	PASS
5	626.065	44.23	-11.31	32.92	46.00	13.08	100	187	PK	Horizonta	PASS
6	940.345	44.99	-8.90	36.09	46.00	9.91	100	309	PK	Horizonta	PASS

Note: 1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Vertical

Test Graph



Suspected List											
NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	37.275	53.11	-18.19	34.92	40.00	5.08	100	49	PK	Vertical	PASS
2	53.765	44.38	-15.90	28.48	40.00	11.52	100	16	PK	Vertical	PASS
3	105.66	43.02	-17.27	25.75	43.50	17.75	100	312	PK	Vertical	PASS
4	205.57	43.97	-18.35	25.62	43.50	17.88	100	294	PK	Vertical	PASS
5	445.645	43.78	-14.22	29.56	46.00	16.44	100	235	PK	Vertical	PASS
6	896.21	45.26	-8.51	36.75	46.00	9.25	100	62	PK	Vertical	PASS

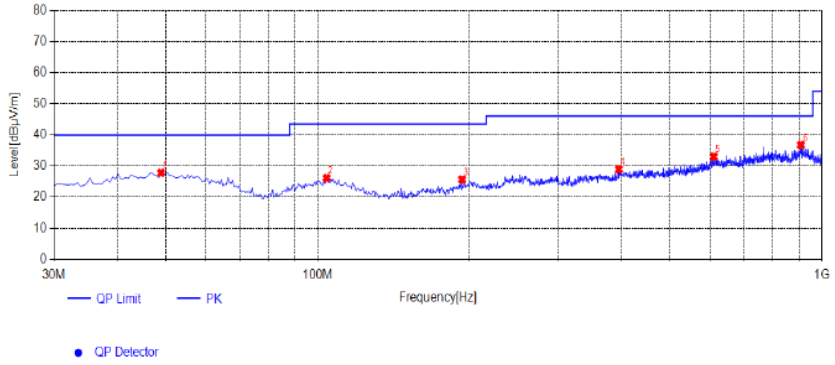
Note: 1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Model: EMC0650

Horizontal

Test Graph



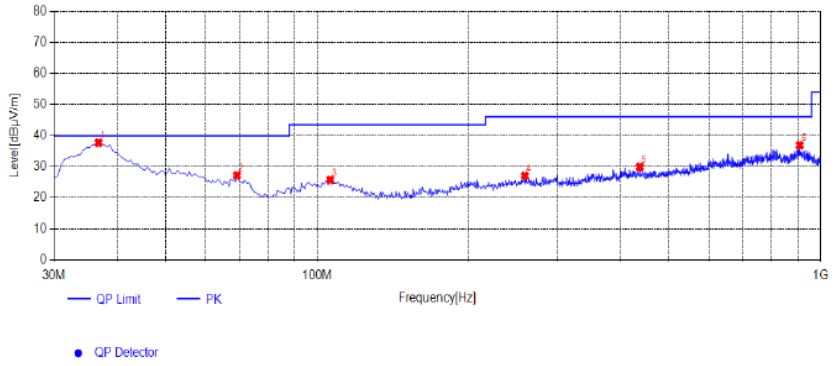
Suspected List											
NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	48.915	43.58	-15.76	27.82	40.00	12.18	100	357	PK	Horizonta	PASS
2	104.205	43.46	-17.35	26.11	43.50	17.39	100	334	PK	Horizonta	PASS
3	193.445	44.63	-19.01	25.62	43.50	17.88	100	327	PK	Horizonta	PASS
4	395.69	44.19	-15.21	28.98	46.00	17.02	100	275	PK	Horizonta	PASS
5	610.545	44.37	-11.38	32.99	46.00	13.01	100	314	PK	Horizonta	PASS
6	909.305	44.22	-7.52	36.70	46.00	9.30	100	156	PK	Horizonta	PASS

Note: 1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

Vertical

Test Graph



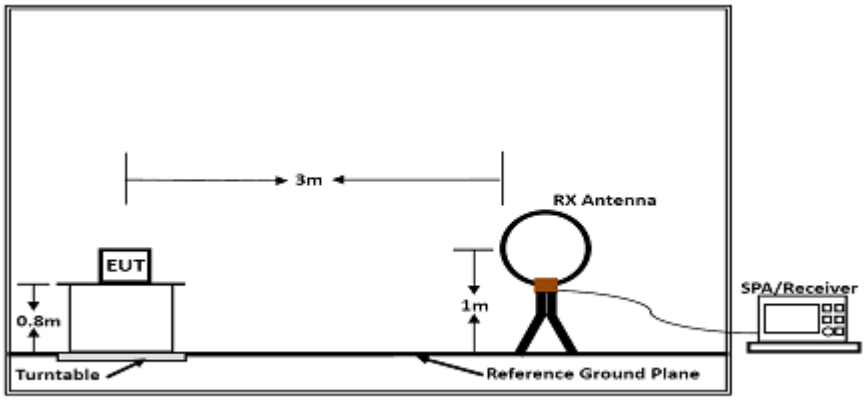
Suspected List											
NO.	Frequency [MHz]	Reading [dBµV/m]	Factor [dB]	Result [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Detector	Polarity	Remark
1	36.79	56.14	-18.49	37.65	40.00	2.35	100	3	PK	Vertical	PASS
2	69.285	46.42	-19.23	27.19	40.00	12.81	100	56	PK	Vertical	PASS
3	106.145	42.97	-17.24	25.73	43.50	17.77	100	164	PK	Vertical	PASS
4	258.435	44.44	-17.37	27.07	46.00	18.93	100	349	PK	Vertical	PASS
5	437.4	43.99	-14.06	29.93	46.00	16.07	100	65	PK	Vertical	PASS
6	909.79	44.32	-7.49	36.83	46.00	9.17	100	16	PK	Vertical	PASS

Note: 1. Result (dBµV/m) = Reading(dBµV/m) + Factor (dB) .

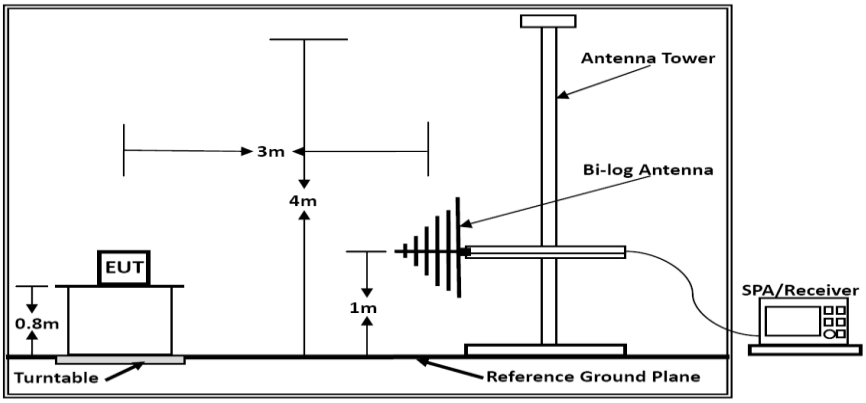
2. Factor (dB) = Antenna Factor (dB/m) + Cable loss (dB) - Pre Amplifier gain (dB).

5. FIELD STRENGTH OF FUNDAMENTAL EMISSIONS AND MASK MEASUREMENT

5.1. Block Diagram of Test Setup



Below 30MHz



Below 1GHz

5.2. Field strength of fundamental emissions limit and Mask limit

The field strength of fundamental emissions shall not exceed 15848 microvolts/meter at 30 meters. The emissions limit in this paragraph is based on measurement instrumentation employing a QP detector.

Frequencies (MHz)	Field Strength (microvolts/meter)	Field Strength (dBμV/m) at 10m	Field Strength (dBμV/m) at 3m
13.553 ~ 13.567MHz	15848 at 30m	103.08 (QP)	124 (QP)

Mask Limit:

Frequency (MHz)	Limit (dBuV/m)	Distance (m)
1.705-13.110	69.5	3
13.110-13.410	80.5	3
13.410-13.553	90.5	3
13.553-13.567	124.0	3
13.567-13.710	90.5	3
13.710-14.010	80.5	3
14.010-30.000	69.5	3

5.3. Test Results

Temperature	24.5℃	Humidity	53.7%
Test Engineer	Jenny Zeng	Configurations	NFC

PASS.

The test data please refer to following page:

	Freq.(MHz)	Reading (dBuV)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin dB	Remark
1	13.24	31.73	20.18	51.91	80.50	28.59	QP
2	13.46	35.10	20.18	55.28	90.50	35.22	QP
3	13.56	63.63	20.18	83.81	124.00	40.19	QP
4	13.42	33.60	20.18	53.78	90.50	36.72	QP
5	13.65	29.26	20.18	49.44	90.50	41.06	QP
6	13.72	36.22	21.18	57.40	81.50	24.10	QP

*Note: Factor= Antenna Factor + Cable Loss

Emission level (dBμV/m) = 20 log Emission level (μV/m).

Measured distance is 3m.

All emissions emit from non-NFC function of digital unintentional emissions. All NFC's spurious emissions are below 20dB of limits.

NOTE: All the modes have been tested and recorded worst mode in the report.

6. BANDWIDTH OF THE OPERATING FREQUENCY

6.1. Standard Applicable

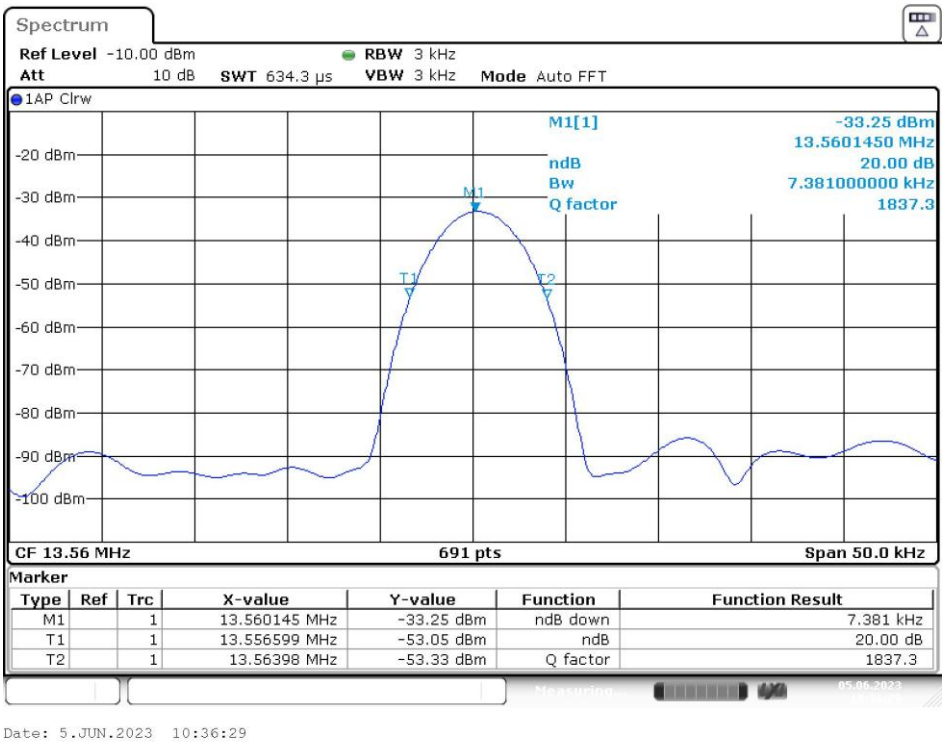
Intentional radiators must be designed to ensure that the 20 dB bandwidth of the emissions in the specific band (13.553 ~ 13.567MHz).

6.2. Test Result

Temperature	24.5℃	Humidity	53.7%
Test Engineer	Jenny Zeng	Configurations	NFC

Carrier Frequency (MHz)	20dB Bandwidth (KHz)	F_L (MHz)	F_H (MHz)
13.56	7.381	13.556599	13.560145

Please refer to the test plot:



7. FREQUENCY STABILITY MEASUREMENT

7.1. Standard Applicable

The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% (100ppm) 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 full charged battery.

7.2. Test Result

Temperature	24.5℃	Humidity	53.7%
Test Engineer	Jenny Zeng	Configurations	NFC

Voltage vs. Frequency Stability

Voltage(V)	Measurement Frequency (MHz)	Deviation (KHz)	Deviation (ppm)	Limit (ppm)
DC 5.5V	13.560026	0.026	1.90	100
DC 5.0V	13.560032	0.032	2.39	100
DC 4.5V	13.560044	0.044	3.26	100

Temperature vs. Frequency Stability

Temperature (℃)	Measurement Frequency (MHz)	Deviation (KHz)	Deviation (ppm)	Limit (ppm)
-20	13.560050	0.050	3.72	100
-10	13.560058	0.058	4.28	100
0	13.560028	0.028	2.05	100
10	13.560044	0.044	3.23	100
20	13.560017	0.017	1.23	100
30	13.560035	0.035	2.59	100
40	13.560038	0.038	2.83	100
50	13.560034	0.034	2.54	100

8. LINE CONDUCTED EMISSIONS

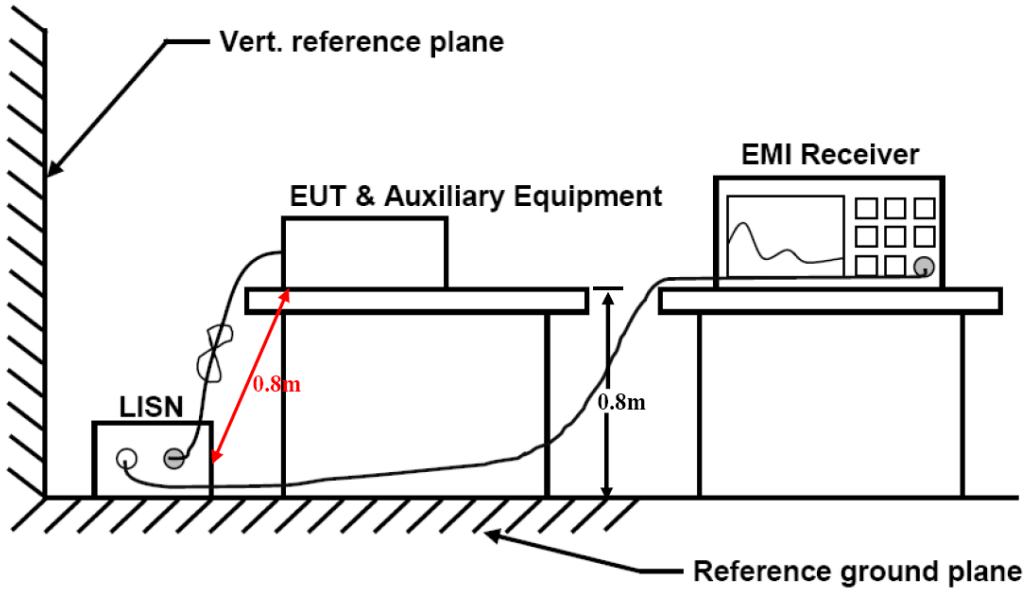
8.1. Standard Applicable

According to §15.207(a): For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed 250 microvolts (The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz). The limits at specific frequency range are listed as follows:

Frequency Range (MHz)	Limits (dBμV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

* Decreasing linearly with the logarithm of the frequency

8.2. Block Diagram of Test Setup



8.3. Test Results

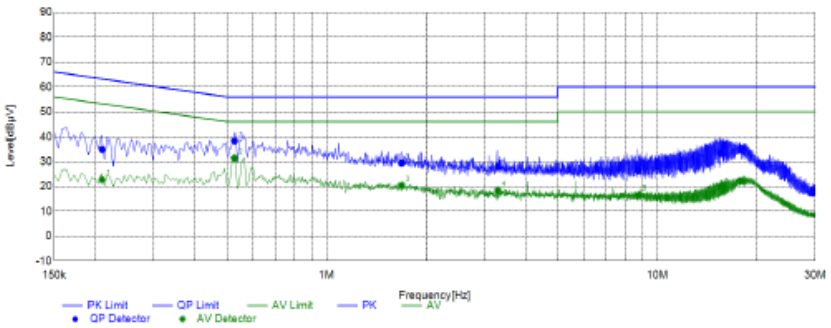
Temperature	24.5℃	Humidity	53.7%
Test Engineer	Jenny Zeng	Configurations	NFC

Adapter:TPA-46050200UU

Model: EMC0650S

Power supply:	AC 120V/60Hz	Polarization	L

Test Graph



Final Data List

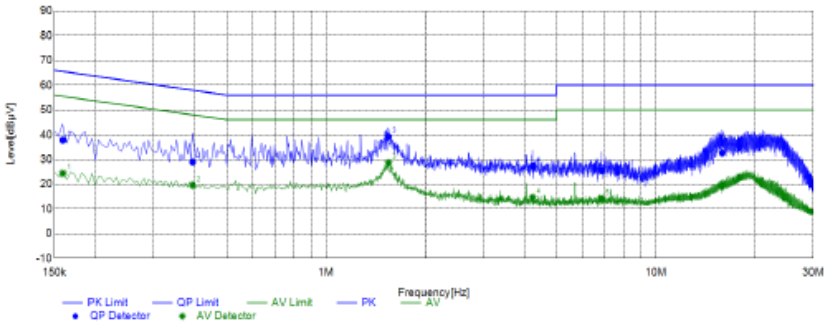
NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.2095	25.39	13.22	9.54	34.93	22.76	63.23	53.23	28.30	30.47	L1	PASS
2	0.5266	28.83	21.80	9.48	38.31	31.28	56.00	46.00	17.69	14.72	L1	PASS
3	1.6856	20.02	11.02	9.37	29.39	20.39	56.00	46.00	26.61	25.61	L1	PASS
4	3.2937	18.55	8.97	9.37	27.92	18.34	56.00	46.00	28.08	27.66	L1	PASS
5	8.7688	17.19	7.18	9.24	26.43	16.42	60.00	50.00	33.57	33.58	L1	PASS
6	15.5242	24.17	10.60	9.17	33.34	19.77	60.00	50.00	26.66	30.23	L1	PASS

Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Power supply:	AC 120V/60Hz	Polarization	N

Test Graph



Final Data List

NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.1593	28.22	14.85	9.60	37.82	24.45	65.50	55.50	27.68	31.05	N	PASS
2	0.3938	19.50	10.05	9.48	28.98	19.53	57.98	47.98	29.00	28.45	N	PASS
3	1.5470	29.79	19.19	9.36	39.15	28.55	56.00	46.00	16.85	17.45	N	PASS
4	4.2325	18.08	5.16	9.38	27.46	14.54	56.00	46.00	28.54	31.46	N	PASS
5	6.8554	16.12	4.83	9.32	25.44	14.15	60.00	50.00	34.56	35.85	N	PASS
6	15.9026	23.44	10.33	9.19	32.63	19.52	60.00	50.00	27.37	30.48	N	PASS

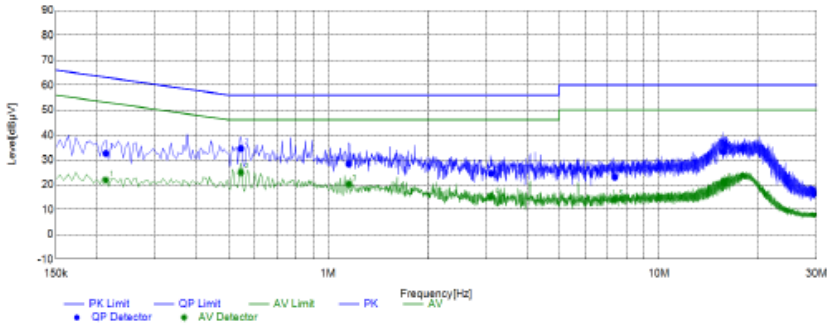
Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Model: EMC0650

Power supply:	AC 120V/60Hz	Polarization	L

Test Graph



Final Data List

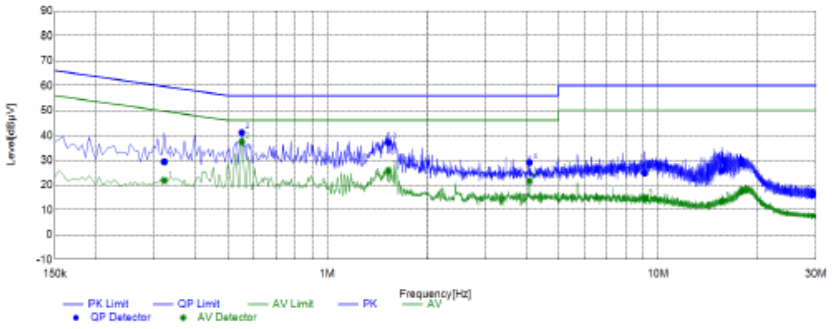
NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.2127	23.08	12.27	9.53	32.61	21.80	63.10	53.10	30.49	31.30	L1	PASS
2	0.5439	25.01	15.44	9.53	34.54	24.97	56.00	46.00	21.46	21.03	L1	PASS
3	1.1558	18.90	10.78	9.40	28.30	20.18	56.00	46.00	27.70	25.82	L1	PASS
4	3.1117	15.26	5.74	9.35	24.61	15.09	56.00	46.00	31.39	30.91	L1	PASS
5	7.3737	13.72	4.66	9.29	23.01	13.95	60.00	50.00	36.99	36.05	L1	PASS
6	15.6895	23.96	11.75	9.16	33.12	20.91	60.00	50.00	26.88	29.09	L1	PASS

Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Power supply:	AC 120V/60Hz	Polarization	N

Test Graph



Final Data List

NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.3214	19.94	12.39	9.46	29.40	21.85	59.67	49.67	30.27	27.82	N	PASS
2	0.5510	31.72	27.90	9.40	41.12	37.30	56.00	46.00	14.88	8.70	N	PASS
3	1.5316	27.70	16.36	9.36	37.06	25.72	56.00	46.00	18.94	20.28	N	PASS
4	4.0813	19.68	12.22	9.39	29.07	21.61	56.00	46.00	26.93	24.39	N	PASS
5	9.1161	15.64	5.40	9.30	24.94	14.70	60.00	50.00	35.06	35.30	N	PASS
6	15.5958	16.52	4.41	9.18	25.70	13.59	60.00	50.00	34.30	36.41	N	PASS

Note:1. Result (dBµV) = Reading (dBµV) + Factor (dB).

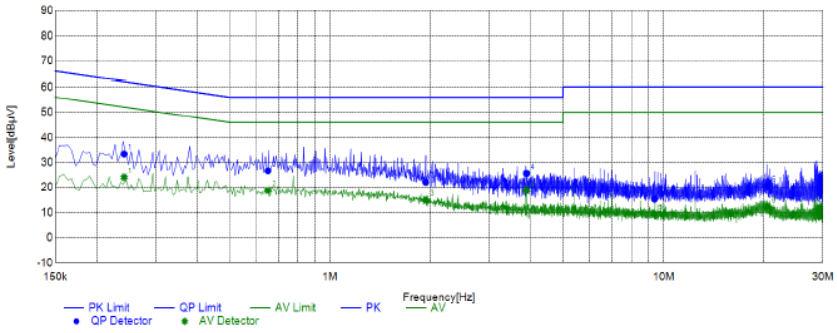
2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Adapter: ADS-10LA-06 05010EPCU

Model: EMC0650S

Power supply:	AC 120V/60Hz	Polarization	L

Test Graph



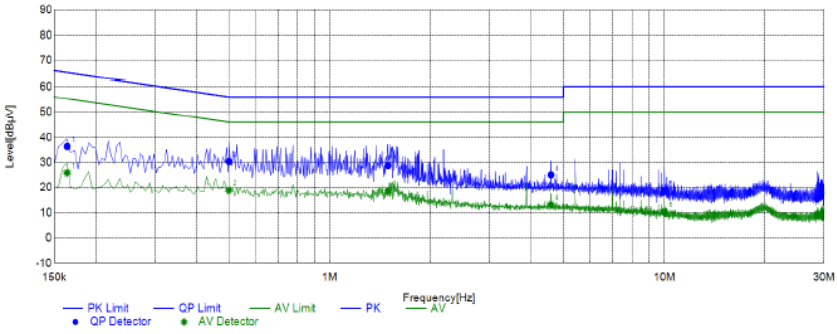
Final Data List												
NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.2412	23.87	14.56	9.50	33.37	24.06	62.06	52.06	28.69	28.00	L1	PASS
2	0.6515	17.14	9.34	9.54	26.68	18.88	56.00	46.00	29.32	27.12	L1	PASS
3	1.9380	12.84	5.75	9.35	22.19	15.10	56.00	46.00	33.81	30.90	L1	PASS
4	3.8809	16.18	9.37	9.41	25.59	18.78	56.00	46.00	30.41	27.22	L1	PASS
5	9.4009	6.33	0.28	9.21	15.54	9.49	60.00	50.00	44.46	40.51	L1	PASS
6	20.4937	11.55	3.30	9.22	20.77	12.52	60.00	50.00	39.23	37.48	L1	PASS

Note: 1. Result (dBµV) = Reading (dBµV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Power supply:	AC 120V/60Hz	Polarization	N

Test Graph



Final Data List												
NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.1641	26.79	16.25	9.60	36.39	25.85	65.25	55.25	28.86	29.40	N	PASS
2	0.4994	21.00	9.66	9.40	30.40	19.06	56.01	46.01	25.61	26.95	N	PASS
3	1.4939	19.47	9.27	9.36	28.83	18.63	56.00	46.00	27.17	27.37	N	PASS
4	4.5823	15.65	3.99	9.36	25.01	13.35	56.00	46.00	30.99	32.65	N	PASS
5	10.0082	9.61	1.10	9.28	18.89	10.38	60.00	50.00	41.11	39.62	N	PASS
6	28.6298	6.34	-0.01	9.25	15.59	9.24	60.00	50.00	44.41	40.76	N	PASS

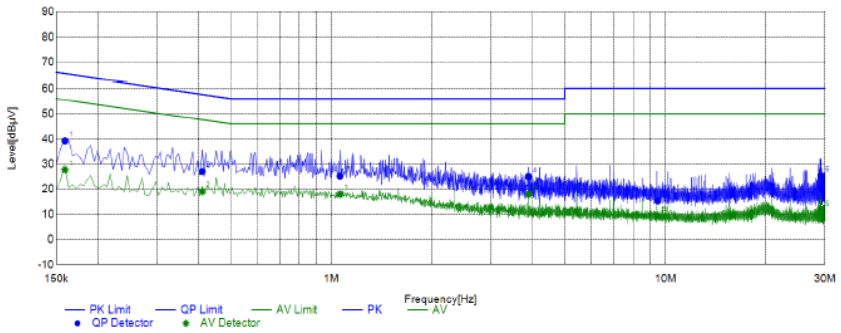
Note: 1. Result (dBµV) = Reading (dBµV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Model: EMC0650

Power supply:	AC 120V/60Hz	Polarization	L

Test Graph



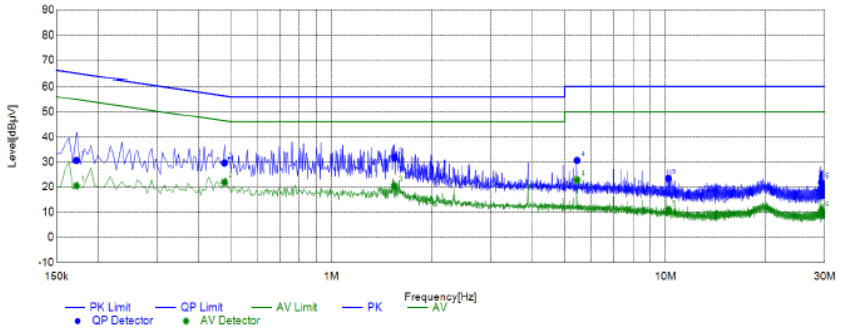
Final Data List												
NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.1593	29.57	18.11	9.60	39.17	27.71	65.50	55.50	26.33	27.79	L1	PASS
2	0.4098	17.60	9.68	9.44	27.04	19.12	57.65	47.65	30.61	28.53	L1	PASS
3	1.0606	15.76	8.61	9.39	25.15	18.00	56.00	46.00	30.85	28.00	L1	PASS
4	3.8897	15.54	8.58	9.41	24.95	17.99	56.00	46.00	31.05	28.01	L1	PASS
5	9.4897	6.21	0.26	9.21	15.42	9.47	60.00	50.00	44.58	40.53	L1	PASS
6	29.2032	16.05	2.44	9.29	25.34	11.73	60.00	50.00	34.66	38.27	L1	PASS

Note: 1. Result (dBµV) = Reading (dBµV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

Power supply:	AC 120V/60Hz	Polarization	N

Test Graph



Final Data List												
NO.	Frequency	QP Reading	AVG. Reading	Factor	QP Result	AVG. Result	QP Limit	AVG. Limit	QP Margin	AVG. Margin	Line	Remark
1	0.1724	21.03	10.91	9.59	30.62	20.50	64.84	54.84	34.22	34.34	N	PASS
2	0.4782	20.20	12.55	9.42	29.62	21.97	56.37	46.37	26.75	24.40	N	PASS
3	1.5439	22.28	11.14	9.36	31.64	20.50	56.00	46.00	24.36	25.50	N	PASS
4	5.4363	21.29	13.56	9.33	30.62	22.89	60.00	50.00	29.38	27.11	N	PASS
5	10.1979	14.15	1.68	9.28	23.43	10.96	60.00	50.00	36.57	39.04	N	PASS
6	29.2985	12.61	1.19	9.25	21.86	10.44	60.00	50.00	38.14	39.56	N	PASS

Note: 1. Result (dBµV) = Reading (dBµV) + Factor (dB).

2. Factor (dB) = Cable loss (dB) + LISN Factor (dB).

9. ANTENNA REQUIREMENTS

9.1. Standard Applicable

According to antenna requirement of §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 re-placed by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of Sections 15.211, 15.213, 15.217, 15.219, or 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with Section 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this Part are not exceeded.

9.2. Antenna Connected Construction

9.2.1. Standard Applicable

According to § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

9.2.2. Antenna Connector Construction

The gains of antenna used for transmitting is 0dBi, and the antenna is a Loop antenna connect to PCB board and no consideration of replacement. Please see EUT photo for details.

9.2.3. Results: Compliance.

10. TEST SETUP PHOTOS OF THE EUT

Photo of Radiated Emissions Measurement

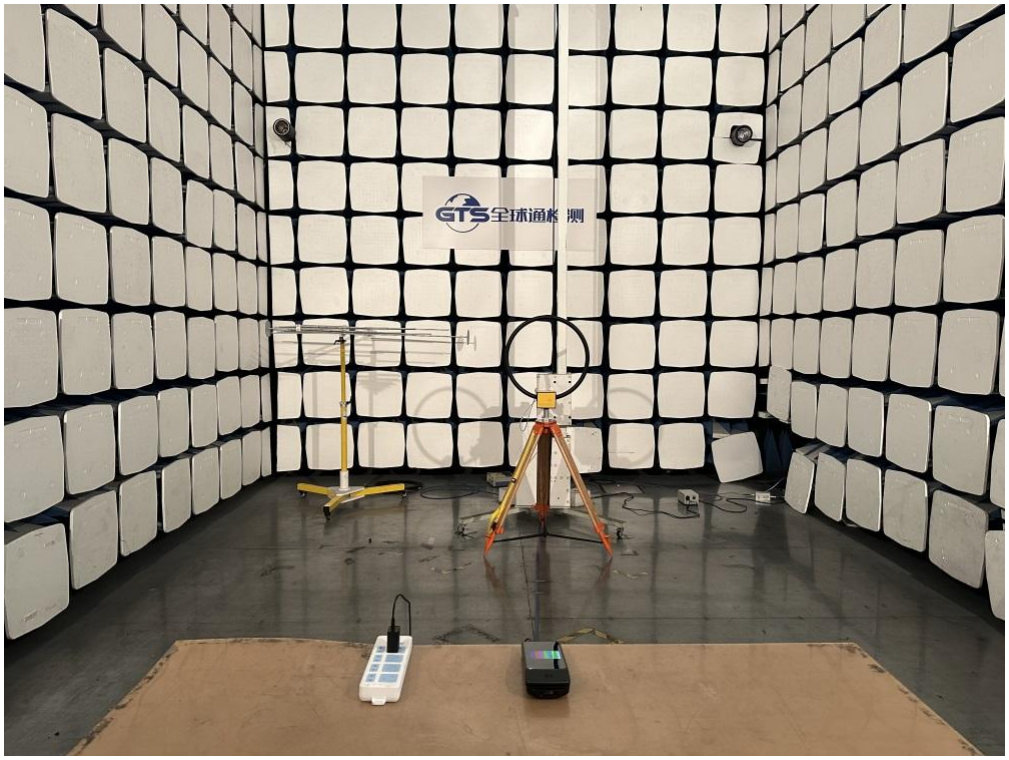


Fig. 1

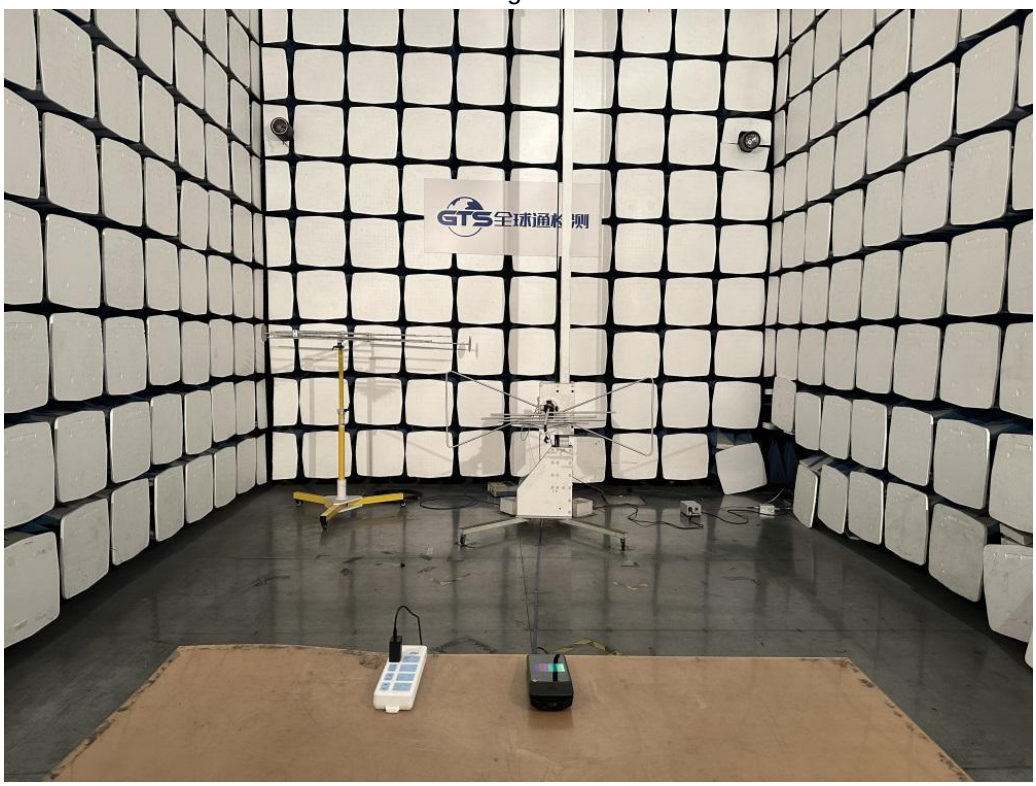


Fig. 2

Photo of Conducted Emission Measurement

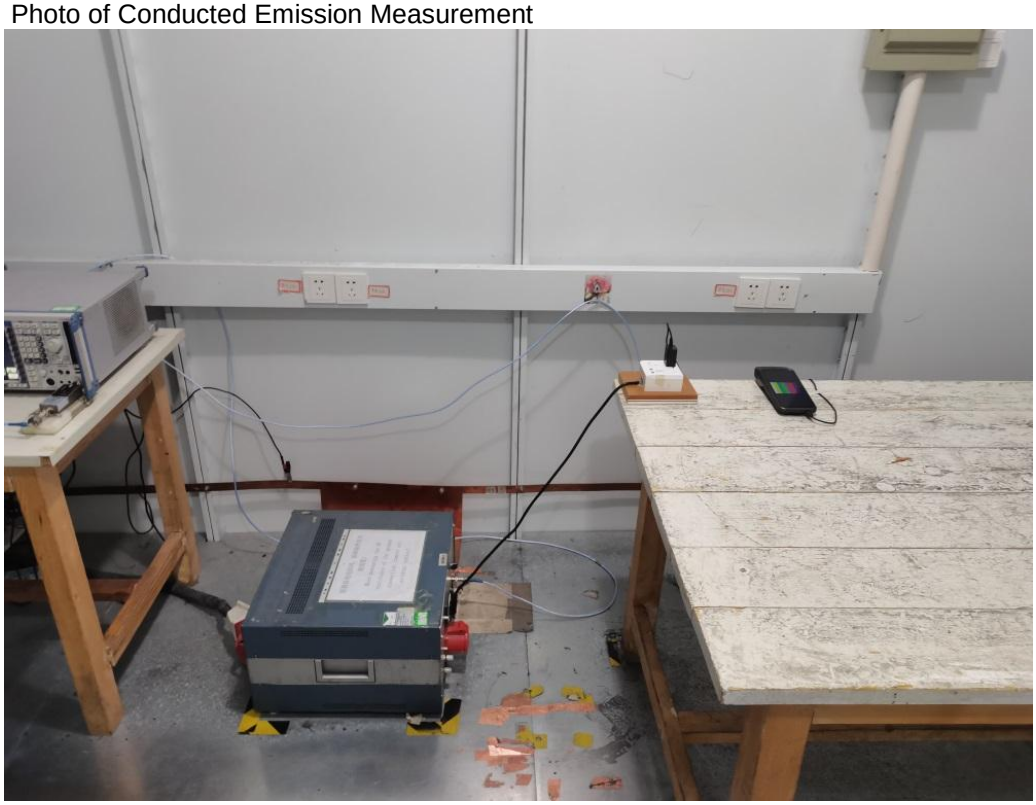


Fig. 3

11. EXTERNAL AND INTERNAL PHOTOS OF THE EUT

Reference to the **GTS20221215003-1-3.**

.....End of Report.....