FCC TEST REPORT
FCC ID:2BLQT-AC83

Report Number..... :	ZKT-24092712385E-1
Date of Test.....	Sep. 27, 2024 to Oct. 15, 2024
Date of issue ..... :	Oct. 15, 2024
Total number of pages	25
Test Result ..... :	PASS
Testing Laboratory..... :	**Shenzhen ZKT Technology Co., Ltd.**
Address ..... :	1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China
Applicant's name ..... :	**Shen Zhen ACCO Technology Company Limited**
Address ..... :	No 235, 49 Building, No 3 Queshan Yunfeng Road, Taoyuan Community, Da Lang street, Long Hua District, Shen Zhen, Guangdong, China
Manufacturer's name ..... :	**Shen Zhen ACCO Technology Company Limited**
Address ..... :	No 235, 49 Building, No 3 Queshan Yunfeng Road, Taoyuan Community, Da Lang street, Long Hua District, Shen Zhen, Guangdong, China
Test specification:	
Standard..... :	FCC CFR Title 47 Part 15 Subpart C Section 15.225 ANSI C63.10:2013
Test procedure..... :	/
Non-standard test method ..... :	N/A
Test Report Form No. ..... :	TRF-EL-112_V0
Test Report Form(s) Originator .... :	ZKT Testing
Master TRF ..... :	Dated: 2020-01-06

This device described above has been tested by ZKT, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.
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Product name ..... :	**Educational player/ Educational cards**
Trademark ..... :	N/A
Model/Type reference ..... :	AC83 AC83A, AC83B, AC83C, AC83D, AC83E, AC83F, AC83G, AC83H
Ratings..... :	Input: 5V⎓ 1A Battery: 3.7V⎓ 1000mA, 3.7Wh

Testing procedure and testing location:

Testing Laboratory.....:	**Shenzhen ZKT Technology Co., Ltd.**
Address.....:	1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China
Tested by (name + signature).....:	Tom Zou Tom Zou
Reviewer (name + signature).....:	Jackson Fang Jackson Fang
Approved (name + signature).....:	Lake Xie Lake Xie

Table of Contents **Page**

1.VERSION 4
2. SUMMARY OF TEST RESULTS 5
2.1 TEST FACILITY 6
2.2 MEASUREMENT UNCERTAINTY 6
3. GENERAL INFORMATION 7
3.1 GENERAL DESCRIPTION OF EUT 7
3.3 DESCRIPTION OF TEST MODES 7
3.4 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED 8
3.5 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE) 8
3.6 EQUIPMENTS LIST FOR ALL TEST ITEMS 9
4. EMC EMISSION TEST 11
4.1 CONDUCTED EMISSION MEASUREMENT 11
4.1.1 POWER LINE CONDUCTED EMISSION LIMITS 11
4.1.2 TEST PROCEDURE 11
4.1.3 DEVIATION FROM TEST STANDARD 11
4.1.4 TEST SETUP 12
4.1.5 EUT OPERATING CONDITIONS 12
4.2 RADIATED EMISSION MEASUREMENT 15
4.2.1 RADIATED EMISSION LIMITS 15
4.2.2 TEST PROCEDURE 15
4.2.3 DEVIATION FROM TEST STANDARD 16
4.2.4 TEST SETUP 16
4.2.5 EUT OPERATING CONDITIONS 16
BETWEEN 30MHZ – 1GHZ 18
5. FREQUENCY TOLERANCE 20
5.1 LIMIT 20
5.2 TEST PROCEDURE 20
5.3 DEVIATION FROM TEST STANDARD 20
5.4 TEST SETUP 20
5.5 TEST RESULT 20
6. CHANNEL BANDWIDTH 21
6.1 APPLIED PROCEDURES / LIMIT 21
6.2 TEST PROCEDURE 21
6.3 DEVIATION FROM STANDARD 21
6.4 TEST SETUP 21
6.5 EUT OPERATION CONDITIONS 21
6.6 TEST RESULT 22
7.ANTENNA REQUIREMENT 23
8. TEST SETUP PHOTO 24
9. EUT CONSTRUCTIONAL DETAILS 24

1.VERSION

Report No.	Version	Description	Approved
ZKT-24092712385E-1	Rev.01	Initial issue of report	Oct. 15, 2024

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.225) , Subpart C			
Standard Section	Test Item	Judgment	Remark
FCC part 15.203	Antenna requirement	PASS	
FCC part 15.207	AC Power Line Conducted Emission	PASS	
FCC part 15.225(a)(b)(c)(d)	Fundamental &Radiated Spurious Emission Measurement	PASS	
FCC part 15.215	Channel Bandwidth	PASS	
FCC part 15.225(e)	Frequency Tolerance	PASS	

NOTE:

(1)" N/A" denotes test is not applicable in this Test Report

2.1 TEST FACILITY

Shenzhen ZKT Technology Co., Ltd.
Add. : 1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China

FCC Test Firm Registration Number: 692225
Designation Number: CN1299
IC Registered No.: 27033

2.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement y ± U，where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2，providing a level of confidence of approximately 95 %。

No.	Item	Uncertainty
1	3m camber Radiated spurious emission(9KHz-30MHz)	U=4.5dB
2	3m camber Radiated spurious emission(30MHz-1GHz)	U=4.8dB
3	3m chamber Radiated spurious emission(1GHz-6GHz)	U=4.9dB
4	3m chamber Radiated spurious emission(6GHz-40GHz)	U=5.0dB
5	Conducted disturbance	U=3.2dB
6	RF conducted Spurious Emission	U=2.2dB
7	RF Occupied Bandwidth	U=1.8dB
8	humidity uncertainty	U=5.3%
9	Temperature uncertainty	U=0.59℃

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Product Name:	Educational player/ Educational cards
Model No.:	AC83
Serial No.:	AC83A, AC83B, AC83C, AC83D, AC83E, AC83F, AC83G, AC83H
Model Different.:	All the model are the same circuit and RF module, except model names and appearance color.
Hardware Version:	N/A
Software Version:	N/A
Sample(s) Status:	Engineer sample
Operation Frequency:	13.56MHz
Channel Numbers:	1
Channel Separation:	N/A
Modulation Type:	ASK
Antenna Type:	Loop Antenna
Antenna gain:	0dBi
Power supply:	Input: 5V⎓ 1A Battery: 3.7V⎓ 1000mA, 3.7Wh

3.2 TEST CHANNEL

Channel List			
Channel	Frequency(MHz)	Channel	Frequency(MHz)
01	13.56		

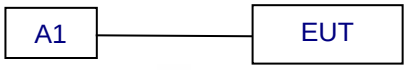
3.3 DESCRIPTION OF TEST MODES

Transmitting mode	Keep the EUT in continuously transmitting NFC mode
Remark: During the test, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and for battery operated equipment, the equipment tests shall be performed using a new battery.	

3.4 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Radiated Spurious Emission

Conducted Emission



3.5 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

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

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	Educational player/ Educational cards	N/A	AC83	D1, D2, D3	EUT
A1	AC/DC Adapter	HUAWEI	HW-050450C00	N/A	Auxiliary

Item	Shielded Type	Ferrite Core	Length	Note

Note:

(1) The support equipment was authorized by Declaration of Confirmation.

(2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.

(3) EUT used new batteries during test.

3.6 EQUIPMENTS LIST FOR ALL TEST ITEMS

Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Last calibration	Calibrated until
1	LISN	R&S	ENV216	101471	N/A	Nov. 14, 2023	Nov. 13, 2024
2	LISN	CYBERTEK	EM5040A	E1850400149	N/A	Nov. 02, 2023	Nov. 01, 2024
3	Test Cable	N/A	C-01	N/A	N/A	Nov. 02, 2023	Nov. 01, 2024
4	Test Cable	N/A	C-02	N/A	N/A	Nov. 02, 2023	Nov. 01, 2024
5	Test Cable	N/A	C-03	N/A	N/A	Nov. 02, 2023	Nov. 01, 2024
6	EMI Test Receiver	R&S	ESCI3	101393	4.42 SP3	Nov. 02, 2023	Nov. 01, 2024
7	Triple-Loop Antenna	N/A	RF300	N/A	N/A	Nov. 02, 2023	Nov. 01, 2024
8	Absorbing Clamp	DZ	ZN23201	15034	N/A	Nov. 07, 2023	Nov. 06, 2024
9	EMC Software	Frad	EZ-EMC	Ver.EMC-CON 3A1.1	N/A	\	\

Radiation Test equipment

Item	Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Last calibration	Calibrated until
1	Spectrum Analyzer (9kHz-26.5GHz)	KEYSIGHT	9020A	MY55370835	A.17.05	Nov. 02, 2023	Nov. 01, 2024
2	Spectrum Analyzer (10kHz-39.9GHz)	R&S	FSV40-N	100363	1.71 SP2	Nov. 02, 2023	Nov. 01, 2024
3	EMI Test Receiver (9kHz-7GHz)	R&S	ESCI7	100969	4.32	Nov. 02, 2023	Nov. 01, 2024
4	Bilog Antenna (30MHz-1500MHz)	Schwarzbeck	VULB9168	N/A	N/A	Nov. 13, 2023	Nov. 12, 2024
5	Horn Antenna (1GHz-18GHz)	Agilent	AH-118	071145	N/A	Nov. 13, 2023	Nov. 12, 2024
6	Horn Antenna (15GHz-40GHz)	A.H.System	SAS-574	588	N/A	Nov. 13, 2023	Nov. 12, 2024
7	Loop Antenna	TESEQ	HLA6121	58357	N/A	Nov. 16, 2023	Nov. 15, 2024
8	Amplifier (30-1000MHz)	EM Electronics	EM330 Amplifier	60747	N/A	Nov. 02, 2023	Nov. 01, 2024
9	Amplifier (1GHz-26.5GHz)	HuiPu	8449B	3008A00315	N/A	Nov. 02, 2023	Nov. 01, 2024
10	Amplifier (500MHz-40GHz)	QuanJuDa	DLE-161	097	N/A	Nov. 02, 2023	Nov. 01, 2024
11	Test Cable	N/A	R-01	N/A	N/A	Nov. 02, 2023	Nov. 01, 2024
12	Test Cable	N/A	R-02	N/A	N/A	Nov. 02, 2023	Nov. 01, 2024
13	Test Cable	N/A	R-03	N/A	N/A	Nov. 02, 2023	Nov. 01, 2024
14	D.C. Power Supply	LongWei	TPR-6405D	N/A	N/A	\	\
15	EMC Software	Frad	EZ-EMC	Ver.EMC-CO N 3A1.1	N/A	\	\
16	Turntable	MF	MF-7802B S	N/A	N/A	\	\
17	Antenna tower	MF	MF-7802B S	N/A	N/A	\	\

RF Test equipment

Item	Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Last calibration	Calibrated until
1	Spectrum Analyzer (9kHz-26.5GHz)	KEYSIGHT	9020A	MY55370835	A.17.05	Nov. 02, 2023	Nov. 01, 2024
2	Spectrum Analyzer (10kHz-39.9GHz)	R&S	FSV40-N	100363	1.71 SP2	Nov. 02, 2023	Nov. 01, 2024
3	Test Cable	N/A	RF-01	N/A	N/A	Nov. 02, 2023	Nov. 01, 2024
4	Test Cable	N/A	RF-02	N/A	N/A	Nov. 02, 2023	Nov. 01, 2024
5	Test Cable	N/A	RF-03	N/A	N/A	Nov. 02, 2023	Nov. 01, 2024
6	ESG Signal Generator	Agilent	E4421B	N/A	B.03.84	Nov. 02, 2023	Nov. 01, 2024
7	Signal Generator	Agilent	N5182A	N/A	A.01.87	Nov. 02, 2023	Nov. 01, 2024
8	Magnetic Field Probe Tester	Narda	ELT-400	0-0344	N/A	Nov. 16, 2023	Nov. 15, 2024
9	Wideband Radio Communication Test	R&S	CMW500	106504	V 3.7.22	Nov. 02, 2023	Nov. 01, 2024
10	Power Meter	KEYSIGHT	N1912AP	N/A	A.05.00	Nov. 02, 2023	Nov. 01, 2024
11	D.C. Power Supply	LongWei	TPR-6405D	N/A	N/A	\	\
12	RF Software	MW	MTS8310	V2.0.0.0	N/A	\	\

4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

Test Requirement:	FCC Part15 C Section 15.207
Test Method:	ANSI C63.10:2013
Test Frequency Range:	150KHz to 30MHz
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto

4.1.1 POWER LINE CONDUCTED EMISSION Limits

FREQUENCY (MHz)	Limit (dBuV)		Standard
	Quas -peak	Average	
0.15 -0.5	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	56.00	46.00	FCC
5.0 -30.0	60.00	50.00	FCC

Note:

(1) *Decreases with the logarithm of the frequency.

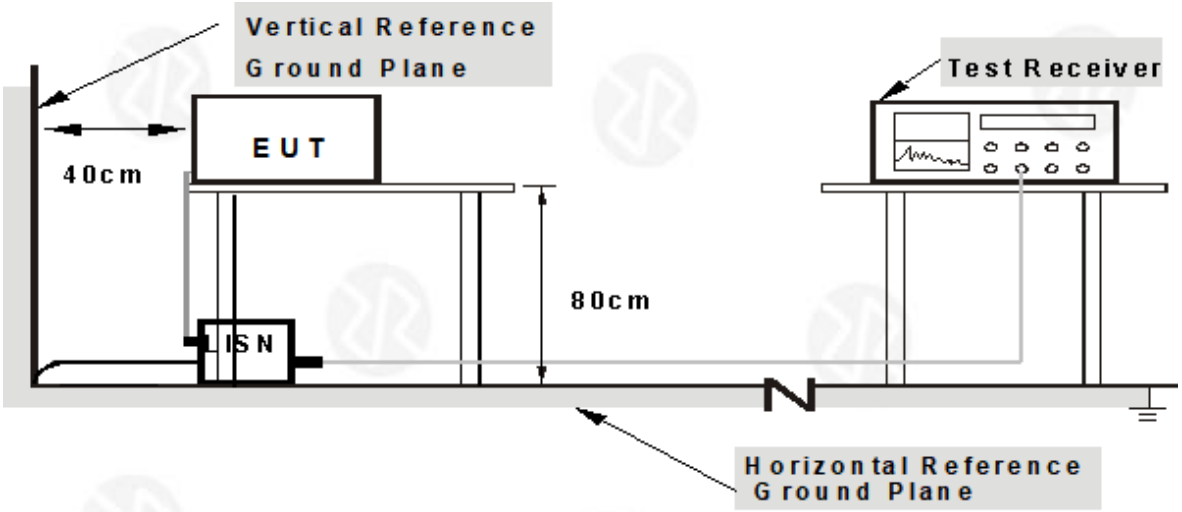
4.1.2 TEST PROCEDURE

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

4.1.3 DEVIATION FROM TEST STANDARD

No deviation

4.1.4 TEST SETUP



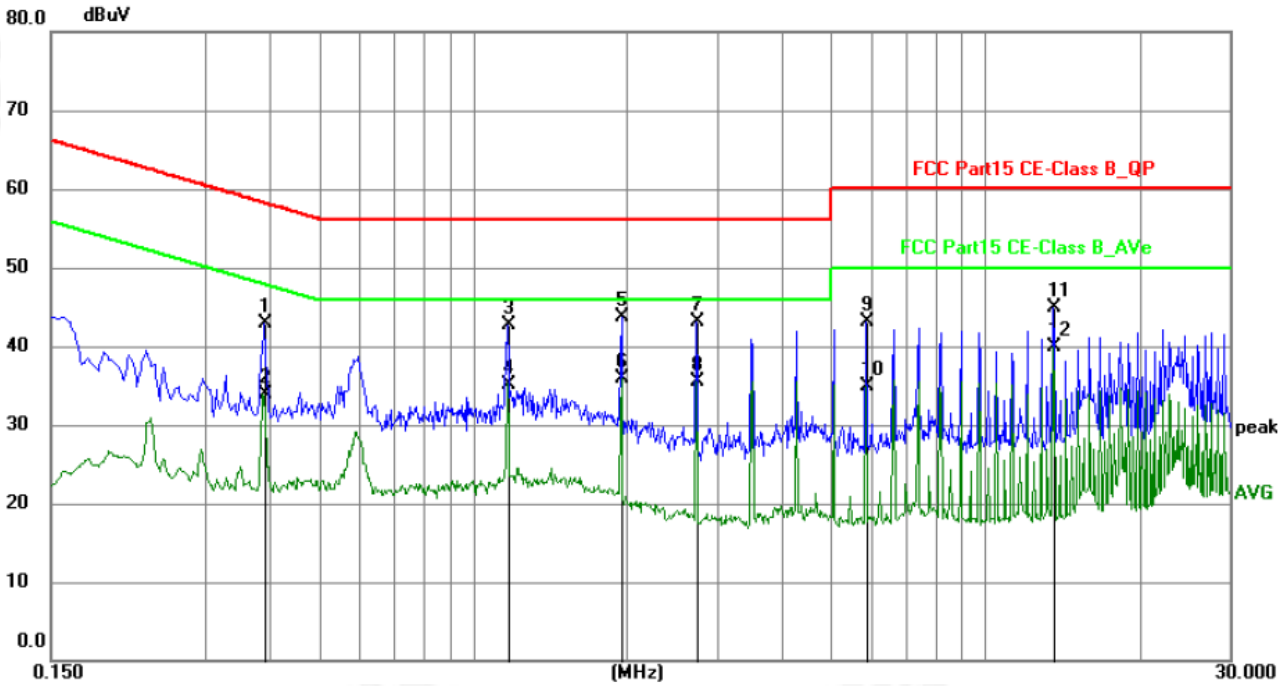
Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

4.1.5 EUT OPERATING CONDITIONS

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

4.1.6 Test Result

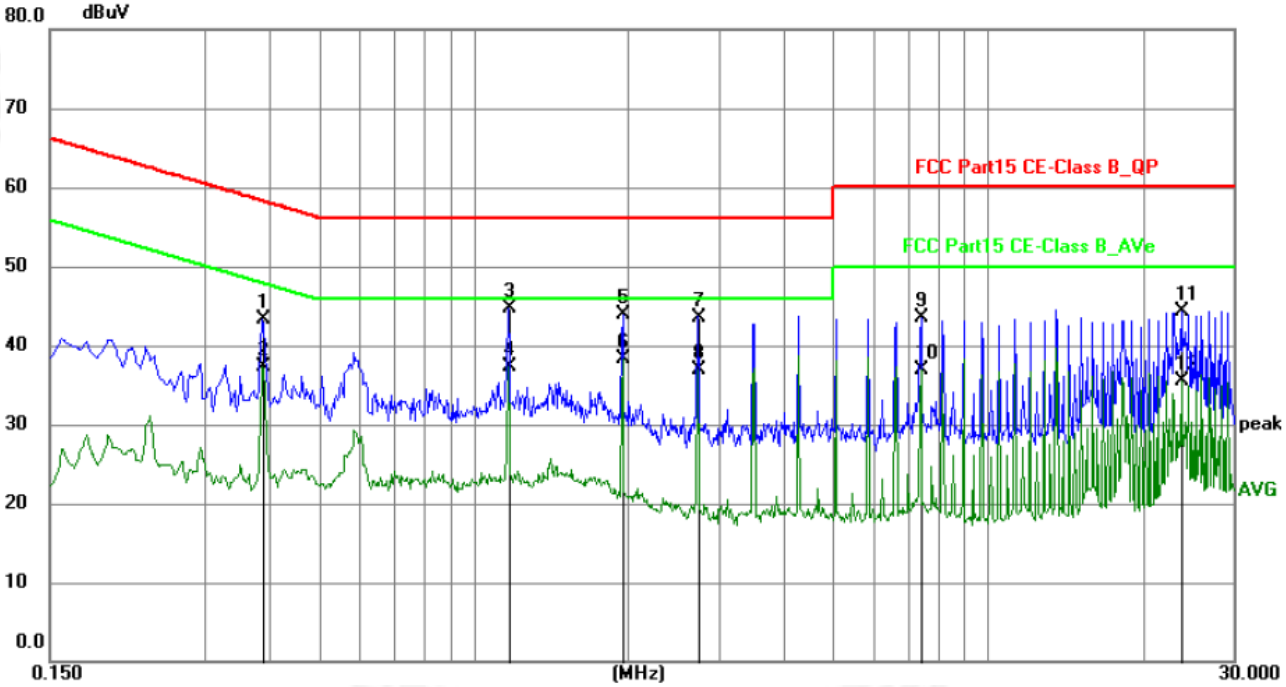
Temperature:	26℃	Relative Humidity:	54%
Pressure:	101 kPa	Polarization:	L
Test Voltage:	AC 120V/60Hz	Test Mode :	TX



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.3930	22.35	20.55	42.90	58.00	-15.10	QP	P
2	0.3930	13.35	20.55	33.90	48.00	-14.10	AVG	P
3	1.1715	22.14	20.58	42.72	56.00	-13.28	QP	P
4	1.1715	14.62	20.58	35.20	46.00	-10.80	AVG	P
5	1.9500	23.04	20.63	43.67	56.00	-12.33	QP	P
6	1.9500	15.26	20.63	35.89	46.00	-10.11	AVG	P
7	2.7285	22.47	20.68	43.15	56.00	-12.85	QP	P
8	2.7285	14.77	20.68	35.45	46.00	-10.55	AVG	P
9	5.8515	22.26	20.93	43.19	60.00	-16.81	QP	P
10	5.8515	13.98	20.93	34.91	50.00	-15.09	AVG	P
11	13.5600	22.72	22.14	44.86	60.00	-15.14	QP	P
12	13.5600	17.79	22.14	39.93	50.00	-10.07	AVG	P

Notes:
1.An initial pre-scan was performed on the line and neutral lines with peak detector.
2.Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3.Mesurement Level = Reading level + Correct Factor.

Temperature :	26℃	Relative Humidity:	54%
Pressure :	101kPa	Phase :	N
Test Voltage :	AC 120V/60Hz	Test Mode :	TX



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.3885	20.46	20.56	41.02	58.10	-17.08	QP	P
2	0.3885	12.95	20.56	33.51	48.10	-14.59	AVG	P
3	1.1715	22.89	20.58	43.47	56.00	-12.53	QP	P
4	1.1715	15.24	20.58	35.82	46.00	-10.18	AVG	P
5	2.7330	21.07	20.68	41.75	56.00	-14.25	QP	P
6	2.7330	14.59	20.68	35.27	46.00	-10.73	AVG	P
7	4.2945	20.24	20.79	41.03	56.00	-14.97	QP	P
8	4.2945	14.75	20.79	35.54	46.00	-10.46	AVG	P
9	13.5600	21.94	22.14	44.08	60.00	-15.92	QP	P
10	13.5600	17.83	22.14	39.97	50.00	-10.03	AVG	P
11	18.3480	18.57	23.06	41.63	60.00	-18.37	QP	P
12	18.3480	10.83	23.06	33.89	50.00	-16.11	AVG	P

Notes:
1.An initial pre-scan was performed on the line and neutral lines with peak detector.
2.Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3.Mesurement Level = Reading level + Correct Factor.

4.2 RADIATED EMISSION MEASUREMENT

Test Requirement:	FCC Part15 C Section 15.209
Test Method:	ANSI C63.10:2013
Test Frequency Range:	9kHz to 1GHz
Test site:	Measurement Distance: 3m
Receiver setup:	

Frequency	Detector	RBW	VBW	Value
9KHz-150KHz	Quasi-peak	200Hz	600Hz	Quasi-peak
150KHz-30MHz	Quasi-peak	9KHz	30KHz	Quasi-peak
30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Peak	1MHz	10Hz	Average

4.2.1 RADIATED EMISSION LIMITS

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

Field Strength of Fundamental Limit:
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. 15,848 microvolts/meter at 3 meters=124 dBuV/m.
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. 334 microvolts/meter at 3 meters=90.47 dBuV/m.

4.2.2 TEST PROCEDURE

a. The measuring distance of at 3 m shall be used for measurements at frequency up to 25GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-chamber test. The table was rotated 360 degrees to determine the position of the highest radiation.
c. The height of the equipment or of the substitution antenna shall be 0.8m; above 1GHz, the height was 1.5m, the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.

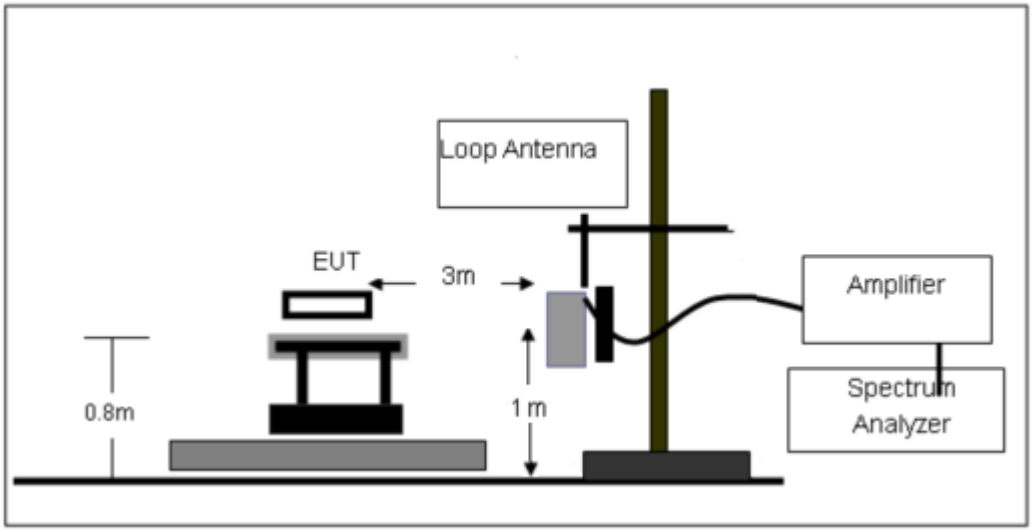
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.2.3 DEVIATION FROM TEST STANDARD

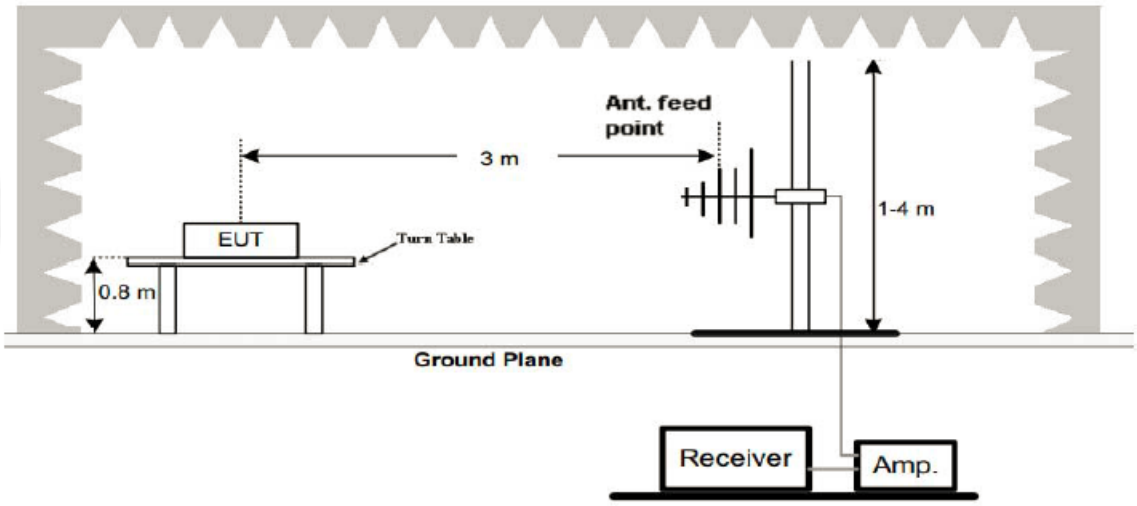
No deviation

4.2.4 TEST SETUP

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



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



4.2.5 EUT OPERATING CONDITIONS

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

4.2.6 TEST RESULTS

Field Strength of Fundamental

Frequency (MHz)	Reading (dBuV/m)	Correction Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Polar (H/V)	Detector
13.440	52.63	15.82	68.45	90.47	-22.02	H	QP
13.440	51.57	15.82	67.39	90.47	-23.08	V	QP
13.550	57.96	15.61	73.57	90.47	-16.90	H	QP
13.550	56.41	15.61	72.02	90.47	-18.45	V	QP
13.560	87.74	12.33	100.07	124.00	-23.93	H	Peak
13.560	82.39	12.33	94.72	124.00	-29.28	V	Peak
13.569	56.85	12.33	69.18	90.47	-21.29	H	QP
13.569	54.91	12.33	67.24	90.47	-23.23	V	QP
13.650	50.64	15.82	66.46	90.47	-24.01	H	QP
13.650	49.43	15.82	65.25	90.47	-25.22	V	QP

Between 9KHz – 30 MHz

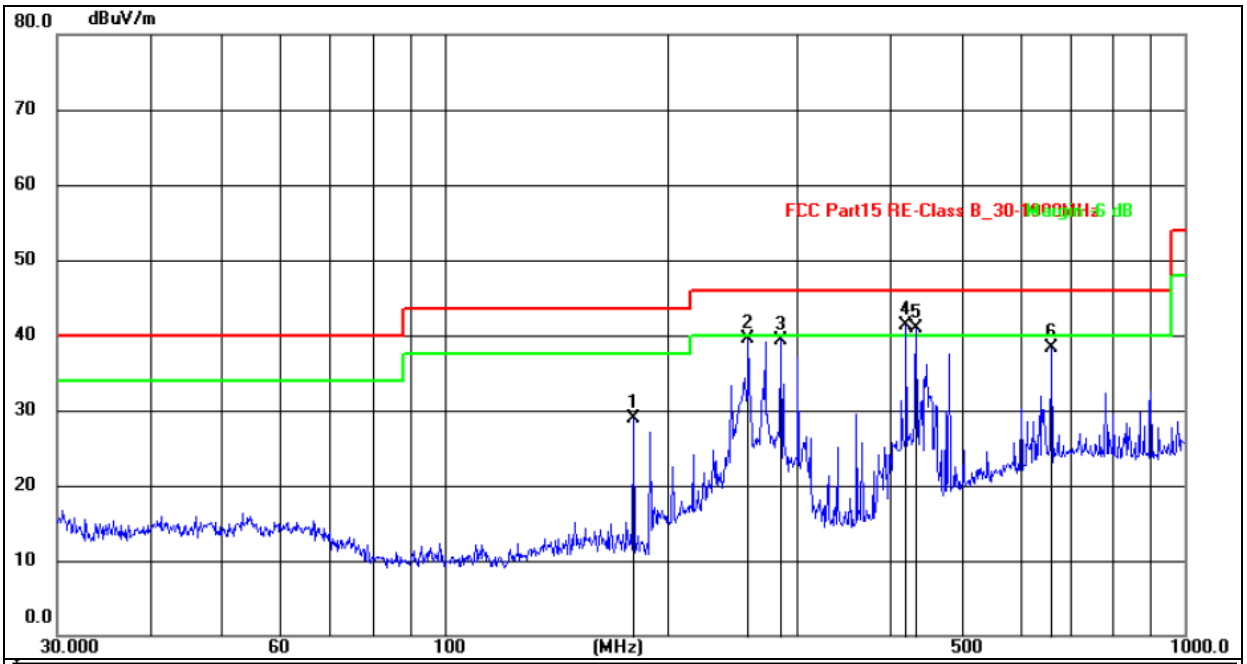
Note: Limit dBuV/m @3m = Limit dBuV/m @300m+ 80
Limit dBuV/m @3m = Limit dBuV/m @30m + 40

Frequency (kHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type
23.85	37.52	15.35	52.87	120.05	-67.18	AV
59.33	38.64	15.26	53.90	112.14	-58.24	AV
161.54	39.25	16.12	55.37	103.44	-48.07	AV
1237.15	38.45	15.87	54.32	65.76	-11.44	QP
2136.25	36.36	17.48	53.84	69.54	-15.70	QP
3217.92	34.59	18.72	53.31	69.54	-16.23	QP
6845.63	32.38	16.34	48.72	69.54	-20.82	QP
9272.28	30.74	12.85	43.59	69.54	-25.95	QP
11136.58	31.85	11.36	43.21	69.54	-26.33	QP

Note:
Pre-scan in the all of mode, the worst case in of was recorded.
Factor = antenna factor + cable loss – pre-amplifier.
Margin = Emission Level- Limit.

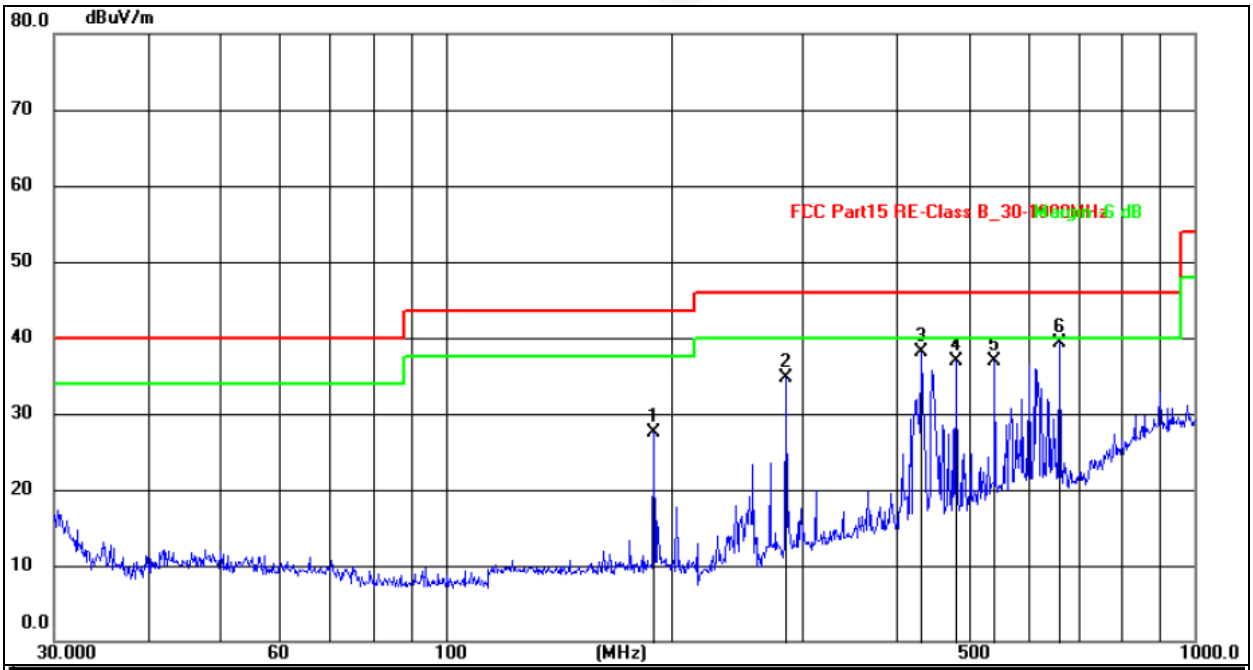
Between 30MHz – 1GHz

Temperature:	26℃	Relative Humidity:	54%
Pressure:	101 kPa	Polarization:	Horizontal
Test Voltage:	DC 3.7V		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	180.0164	46.82	-17.84	28.98	43.50	-14.52	QP
2	257.4221	55.12	-15.65	39.47	46.00	-6.53	QP
3	284.9766	54.39	-14.99	39.40	46.00	-6.60	QP
4	420.5803	56.86	-15.55	41.31	46.00	-4.69	QP
5	434.0649	55.76	-14.88	40.88	46.00	-5.12	QP
6	661.1503	45.83	-7.52	38.31	46.00	-7.69	QP

Temperature:	26℃	Relative Humidity:	54%
Pressure:	101kPa	Polarization:	Vertical
Test Voltage:	DC 3.7V		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	189.7384	47.75	-20.25	27.50	43.50	-16.00	QP
2	284.9766	53.42	-18.79	34.63	46.00	-11.37	QP
3	431.0314	52.08	-13.95	38.13	46.00	-7.87	QP
4	480.5276	49.20	-12.24	36.96	46.00	-9.04	QP
5	541.3723	46.98	-10.00	36.98	46.00	-9.02	QP
6	661.1503	47.09	-7.69	39.40	46.00	-6.60	QP

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

5. FREQUENCY TOLERANCE

Test Requirement:	FCC Part15 C Section 15.225(e)
Test Method:	ANSI C63.10:2013

5.1 LIMIT

The frequency tolerance of the carrier signal shall be maintained within ±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.

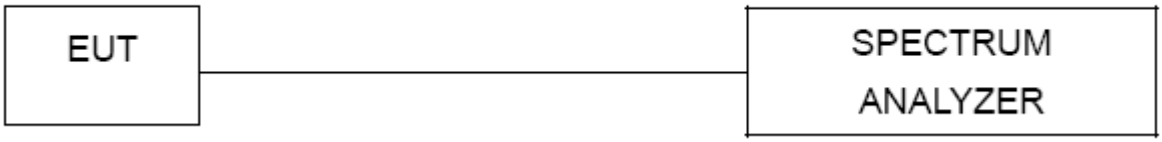
Limit: ±0.01% of 13.56MHz=±1356Hz

5.2 TEST PROCEDURE

1. Set RBW = 10 kHz.
2. Set the video bandwidth (VBW) ≥RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. The transmitter output (antenna port) was connected to the spectrum analyzer.

5.3 DEVIATION FROM TEST STANDARD
No deviation

5.4 TEST SETUP



5.5 TEST RESULT

Test Conditions			Frequency Deviation		Limit
Frequency MHz	Power(Vdc)	Temperature (℃)	Measured Freq. (MHz)	Deviation (%)	
13.56	Normal	-20	13.5601	0.0001	±0.01%
	Normal	-10	13.5602	0.0002	
	Normal	0	13.5602	0.0002	
	Normal	10	13.5600	0	
	Normal	20	13.5602	0.0002	
	Normal	30	13.5601	0.0001	
	Normal	40	13.5603	0.0003	
	Normal	50	13.5601	0.0001	
	Normal*85%	20	13.5602	0.0002	
	Normal *115%	20	13.5604	0.0004	

6. CHANNEL BANDWIDTH

Test Requirement:	FCC Part15 C Section 15.215
Test Method:	ANSI C63.10: 2013

6.1 APPLIED PROCEDURES / LIMIT

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 20dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equip compliance with the 20dB attenuation specification may base on measurement at the intentional radiator's antenna output terminal unless the intentional radiator uses a permanently attached antenna, in which case compliance shall be deomonstrated by measuring the radiated emissions.

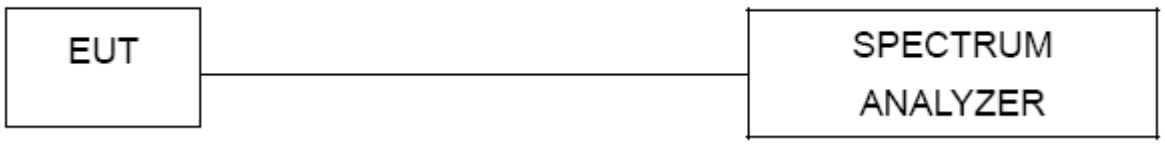
6.2 TEST PROCEDURE

1. Set RBW = 1 kHz.
2. Set the video bandwidth (VBW) ≥RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 20 dB relative to the maximum level measured in the fundamental emission.

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP



6.5 EUT OPERATION CONDITIONS

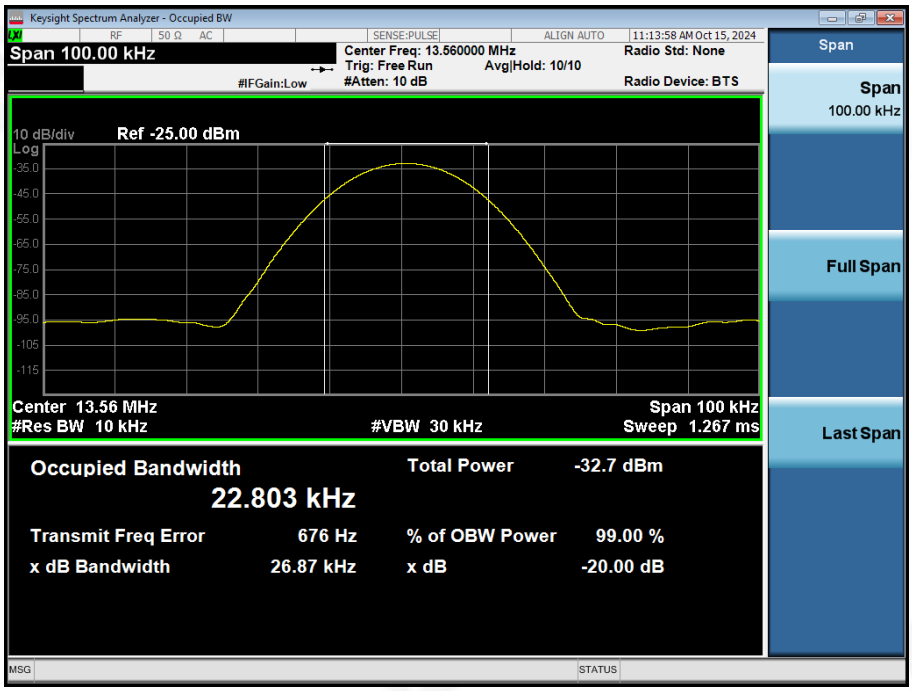
The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

6.6 TEST RESULT

Temperature :	26℃	Relative Humidity :	54%
Test Mode :	ASK	Test Voltage :	DC 3.7V

Test channel	20dB Channel Bandwidth (KHz)	Result
1	26.87	Pass

CH 01



7.ANTENNA REQUIREMENT

Standard requirement:	FCC Part15 C Section 15.203
15.203 requirement: An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.	
EUT Antenna:	
The antennas is Loop Antenna, the best case gain of the antennas is 0dBi, reference to the appendix II for details	

8. TEST SETUP PHOTO

Reference to the appendix I for details.

9. EUT CONSTRUCTIONAL DETAILS

Reference to the appendix II for details.

※※※※※ END OF REPORT ※※※※※