FCC Test Report

Report No.: AGC11126240401FR01

FCC ID	:	2ARNX-8063
APPLICATION PURPOSE	:	Original Equipment
PRODUCT DESIGNATION	:	2 PLAY ARCADE MACHINE LRG(B-B)
BRAND NAME	:	N/A
MODEL NAME	:	8063, OR-2PLAYARCL,TCHOR-2PLAYARCL
APPLICANT	:	Tai Kee Industrial Company Limited
DATE OF ISSUE	:	Apr. 10, 2024
STANDARD(S) **TEST PROCEDURE(S)**	:	FCC Part 15 Rules
REPORT VERSION	:	V1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd

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REPORT REVISE RECORD

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Apr. 10, 2024	Valid	Initial Release

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1. VERIFICATION OF CONFORMITY

Applicant	Tai Kee Industrial Company Limited
Address	Rm 7-8, 9/F., Blk B, Delya Ind. Centre, 7 Shek Pai Tau Road, Tuen Mun,N.T., Hong Kong
Manufacturer	Tai Kee Industrial Company Limited
Address	Rm 7-8, 9/F., Blk B, Delya Ind. Centre, 7 Shek Pai Tau Road, Tuen Mun,N.T., Hong Kong
Factory	N/A
Address	N/A
Product Designation	2 PLAY ARCADE MACHINE LRG(B-B)
Brand Name	N/A
Test Model	8063
Series Model(s)	OR-2PLAYARCL,TCHOR-2PLAYARCL
Difference Description	All the series models are the same as the test model except for the model names.
Date of receipt of test item	Apr. 03, 2024
Date of test	Apr. 03, 2024 –Apr. 10, 2024
Deviation	No any deviation from the test method
Condition of Test Sample	Normal
Test Result	Pass
Report Template	AGCRT-US-2.4G/RF

Note: The test results of this report relate only to the tested sample identified in this report.

Prepared By	Jack Gui (Project Engineer)	Apr. 10, 2024
Reviewed By	Calvin Liu (Reviewer)	Apr. 10, 2024
Approved By	Max Zhang Authorized Officer	Apr. 10, 2024

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2. GENERAL INFORMATION

2.1. PRODUCT DESCRIPTION

A major technical description of EUT is described as following

Operation Frequency	2420MHz-2465MHz
Maximum field strength	86.51dBuV/m(Peak)@3m
Modulation	GFSK
Number of channels	16 Channels
Antenna Gain	-0.382dBi
Antenna Designation	PCB Antenna
Hardware Version	DRSDW-01
Software Version	V1.0
Power Supply	DC 3V by battery

2.2. TABLE OF CARRIER FREQUENCY

Frequency Band	Channel Number	Frequency	Channel Number	Frequency
2400~2483.5MHz	1	2420 MHz	9	2443 MHz
	2	2423 MHz	10	2446 MHz
	3	2425 MHz	11	2449 MHz
	4	2428 MHz	12	2452 MHz
	5	2431 MHz	13	2255 MHz
	6	2434 MHz	14	2458 MHz
	7	2437 MHz	15	2461 MHz
	8	2440 MHz	16	2465 MHz

2.3. ANTENNA REQUIREMENT

This intentional radiator is designed with a permanently attached antenna of an antenna to ensure that no antenna other than that furnished by the responsible party shall be used with the device.
For more information of the antenna, please refer to the APPENDIX B: PHOTOGRAPHS OF EUT.

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3. 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%.

Item	Measurement Uncertainty
Uncertainty of Conducted Emission for AC Port	U_c = ±2.9 dB
Uncertainty of Radiated Emission below 1GHz	U_c = ±3.9 dB
Uncertainty of Radiated Emission above 1GHz	U_c = ±4.9 dB
Uncertainty of Occupied Channel Bandwidth	U_c = ±2 %

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4. DESCRIPTION OF TEST MODES

Summary Table of Test Cases	
Test Item	Equipment type / Modulation
	2.4G / GFSK
Radiated Test Cases	Mode 1: 2.4G Tx CH01_2420 MHz (Battery powered) Mode 2: 2.4G Tx CH08_2440 MHz (Battery powered) Mode 3: 2.4G Tx CH16_2465 MHz (Battery powered)
AC Conducted Emission	N/A

Note:

1. Only the result of the worst case was recorded in the report, if no other cases.
2. The battery is full-charged during the test.
3. For Radiated Emission, 3axis were chosen for testing for each applicable mode.
4. Set the EUT into the individual test modes by pressing the EUT buttons.

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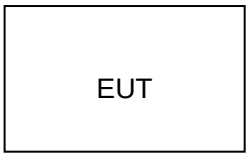
5. SYSTEM TEST CONFIGURATION

5.1. CONFIGURATION OF EUT SYSTEM

Radiated Emission Configure:



5.2 EQUIPMENT USED IN TESTED SYSTEM

Item	Equipment	Model No.	ID or Specification	Remark
1	--	--	--	--

5.3. SUMMARY OF TEST RESULTS

FCC RULES	DESCRIPTION OF TEST	RESULT
§15.249&15.209	Radiated Emission	Compliant
§15.249	Band Edges	Compliant
§15.215	20dB bandwidth	Compliant
§15.207	Conducted Emission	Not applicable

Note: The conducted emission tests at AC port are not required for devices which only employ battery power for operation.

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6. TEST FACILITY

Test Site	Attestation of Global Compliance (Shenzhen) Co., Ltd
Location	1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China
Designation Number	CN1259
FCC Test Firm Registration Number	975832
A2LA Cert. No.	5054.02
Description	Attestation of Global Compliance(Shenzhen) Co., Ltd is accredited by A2LA

● Radiated Spurious Emission

Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
☒	AGC-EM-E046	EMI Test Receiver	R&S	ESCI	10096	2024-02-01	2025-01-31
☐	AGC-EM-E116	EMI Test Receiver	R&S	ESCI	100034	2023-06-03	2024-06-02
☒	AGC-EM-E061	Spectrum Analyzer	Agilent	N9010A	MY53470504	2023-06-01	2024-05-31
☒	AGC-EM-E086	Loop Antenna	ZHINAN	ZN30900C	18051	2024-03-05	2026-03-04
☒	AGC-EM-E001	Wideband Antenna	SCHWARZBECK	VULB9168	D69250	2023-05-11	2025-05-10
☒	AGC-EM-E029	Broadband Ridged Horn Antenna	ETS	3117	00034609	2024-03-31	2025-03-30
☒	AGC-EM-E082	Horn Antenna	SCHWARZBECK	BBHA 9170	#768	2023-09-24	2025-09-23
☒	AGC-EM-E146	Pre-amplifier	ETS	3117-PA	00246148	2022-08-04	2024-08-03
☒	AGC-EM-A119	2.4G Filter	SongYi	N/A	N/A	2023-06-01	2024-05-31
☒	AGC-EM-A138	6dB Attenuator	Eeatsheep	LM-XX-6-5W	N/A	2023-06-09	2024-06-08
☐	AGC-EM-A139	6dB Attenuator	Eeatsheep	LM-XX-6-5W	N/A	2023-06-09	2024-06-08

● AC Power Line Conducted Emission

Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
☐	AGC-EM-E045	EMI Test Receiver	R&S	ESPI	101206	2023-06-03	2024-06-02
☐	AGC-EM-A130	6dB Attenuator	Eeatsheep	LM-XX-6-5W	DC-6GZ	2023-06-09	2024-06-08
☐	AGC-EM-E023	AMN	R&S	100086	ESH2-Z5	2023-06-03	2024-06-02

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● Test Software					
Used	Equipment No.	Test Equipment	Manufacturer	Model No.	Version Information
☒	AGC-EM-S004	RE Test System	Tonscend	TS+ Ver2.1(JS32-RE)	4.0.0.0
☒	AGC-EM-S011	RSE Test System	Tonscend	TS+ Ver2.1(JS36-RSE)	4.0.0.0
☐	AGC-EM-S001	CE Test System	R&S	ES-K1	V1.71
☒	AGC-ER-S009	BT/WIFI Test System	Tonscend	JS1120-3	2.6.77.0518

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7. RADIATED EMISSION

7.1. TEST LIMIT

Standard FCC15.249

Fundamental Frequency	Field Strength of Fundamental (millivolts/meter)	Field Strength of Harmonics (microvolts/meter)
900-928MHz	50	500
2400-2483.5MHz	50	500
5725-5875MHz	50	500
24.0-24.25GHz	250	2500

Standard FCC 15.209

Frequency (MHz)	Distance Meters	Field Strengths Limit	
		μV/m	dB(μV)/m
0.009 ~ 0.490	300	2400/F(kHz)	---
0.490 ~ 1.705	30	24000/F(kHz)	---
1.705 ~ 30	30	30	---
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	Other:74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)	

Remark: (1) Emission level dB μV = 20 log Emission level μV/m.
(2) The smaller limit shall apply at the cross point between two frequency bands.
(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

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7.2. MEASUREMENT PROCEDURE

1. The EUT was placed on the top of the turntable 0.8 or 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use minimum resolution bandwidth of 1 MHz. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High - Low scan is not required in this case.

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■ The following table is the setting of spectrum analyzer and receiver.

Spectrum Parameter	Setting
Start ~Stop Frequency	9kHz~150kHz/RB 200Hz for QP
Start ~Stop Frequency	150kHz~30MHz/RB 9kHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RB 120kHz for QP
Start ~Stop Frequency	1GHz~26.5GHz 1MHz/3MHz for Peak, 1MHz/3MHz for Average

Receiver Parameter	Setting
Start ~Stop Frequency	9kHz~150kHz/RB 200Hz for QP
Start ~Stop Frequency	150kHz~30MHz/RB 9kHz for QP
Start ~Stop Frequency	30MHz~1000MHz/RB 120kHz for QP

The following is the test setup of Field Strength of Fundamental:

- Peak detection: RBW is 5MHz, VBW=50MHz / Sweep=AUTO
- Average detection: RBW is 5MHz, VBW=50MHz / Sweep=AUTO

■ The following is the test setup of Band Edge:

The EUT operates at transmitting mode. The operate channel is tested to verify the largest transmission and spurious emissions power at the continuous transmission mode.

- Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:
  - Peak detection: RBW=1MHz, VBW=3MHz / Sweep=AUTO
  - Average detection: RBW=1MHz; VBW=1/T / Sweep=AUTO (Duty cycle is less than 98%)
  - Average detection: RBW=1MHz; VBW=3M / Sweep=AUTO
  - Other procedures refer to clause 7.2.

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Quasi-Peak Measurements below 1GHz

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. Span was set greater than 1MHz
3. RBW = as shown in the table above
4. Detector = CISPR quasi-peak
5. Sweep time = auto couple
6. Trace was allowed to stabilize

- **Peak Measurements above 1GHz**

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW = 3MHz
4. Detector = peak
5. Sweep time = auto couple
6. Trace mode = max hold
7. Trace was allowed to stabilize

- **Average Measurements above 1GHz (Method VB)**

1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
2. RBW = 1MHz
3. VBW setting requirements are as follows:
4. If the EUT is configured to transmit with duty cycle ≥ 98%, set VBW = 10 Hz.
5. If the EUT duty cycle is < 98%, set VBW ≥ 1/T. T is the minimum transmission duration.
6. Detector = Peak

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7. Sweep time = auto

8. Trace mode = max hold

8. Trace was allowed to stabilize

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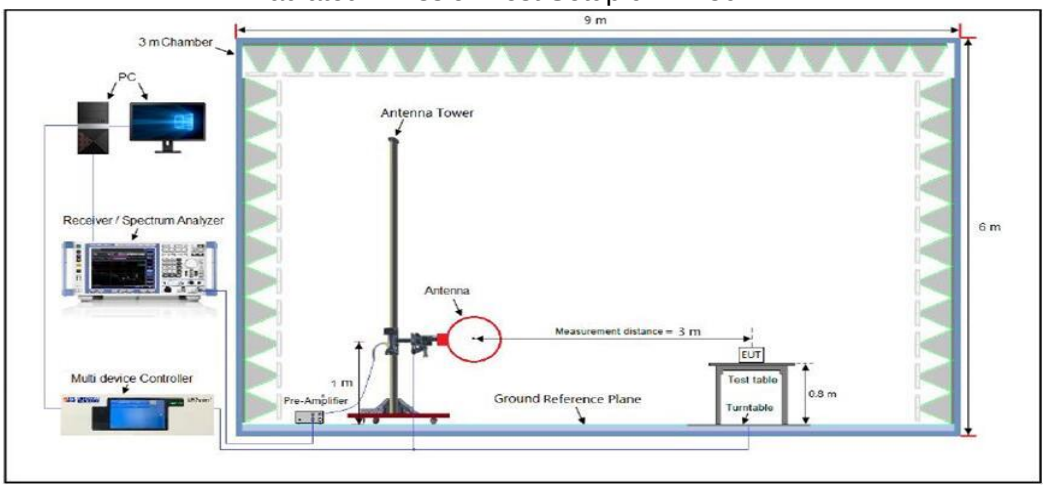
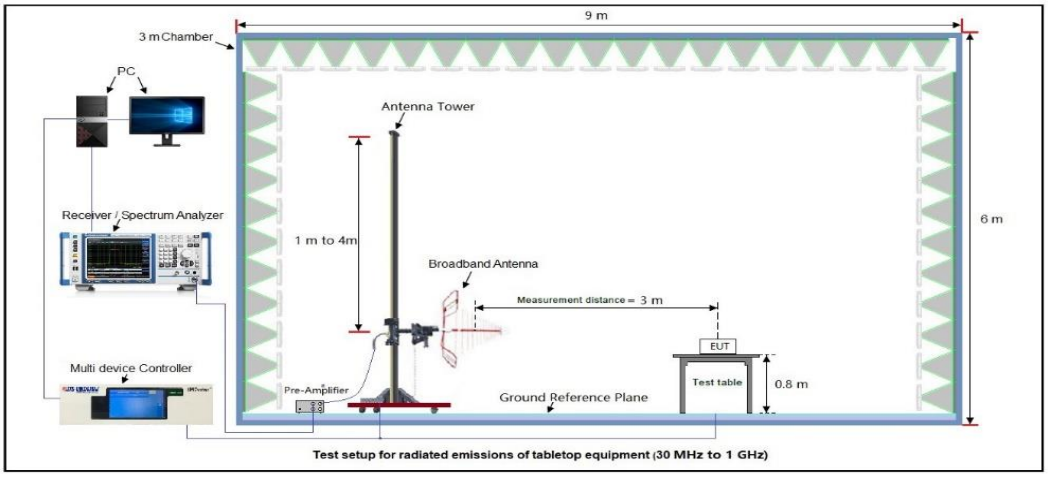
7.3. TEST SETUP

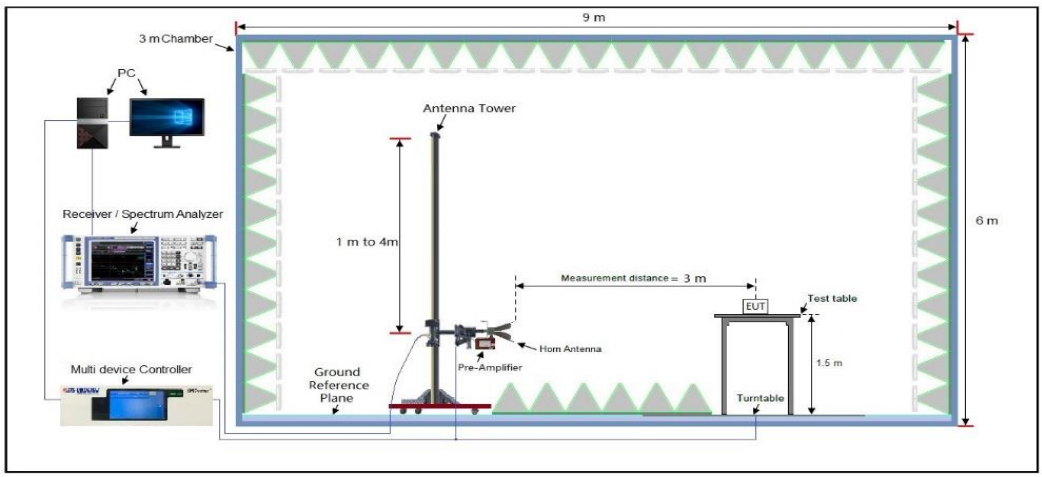
Radiated Emission Test Setup 9KHz-30MHz



Radiated Emission Test Setup 30MHz-1000MHz



Radiated Emission Test Setup Above 1000MHz



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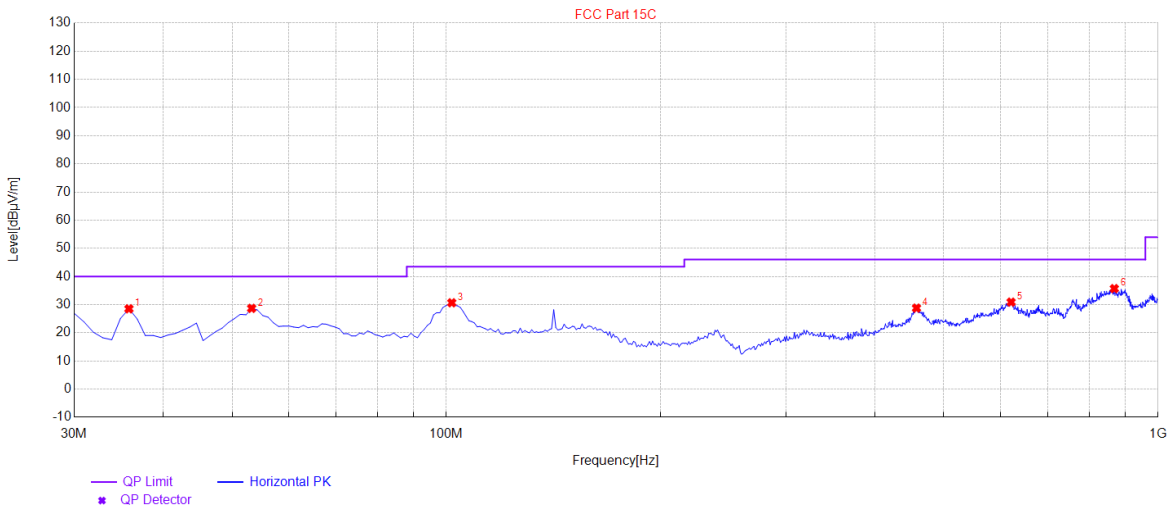
7.4. TEST RESULT

RADIATED EMISSION BELOW 30MHZ

The amplitude of spurious emissions from 9kHz to 30MHz which are attenuated more than 20 dB below the permissible value need not be reported.

RADIATED EMISSION 30MHz- 1GHZ

EUT	2 PLAY ARCADE MACHINE LRG(B-B)	**Model Name**	8063
Temperature	21.2°C	**Relative Humidity**	59.5%
Pressure	985kPa	**Test Voltage**	DC 3V by battery
Test Mode	Mode 1	**Polarization**	Horizontal



NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	35.82	28.53	11.52	40.00	11.47	100	115	Horizontal
2	53.28	28.69	16.09	40.00	11.31	100	131	Horizontal
3	101.78	30.67	16.98	43.50	12.83	100	290	Horizontal
4	457.77	28.78	24.14	46.00	17.22	100	327	Horizontal
5	621.7	30.90	25.68	46.00	15.10	100	274	Horizontal
6	868.08	35.70	29.74	46.00	10.30	100	294	Horizontal

RESULT: PASS

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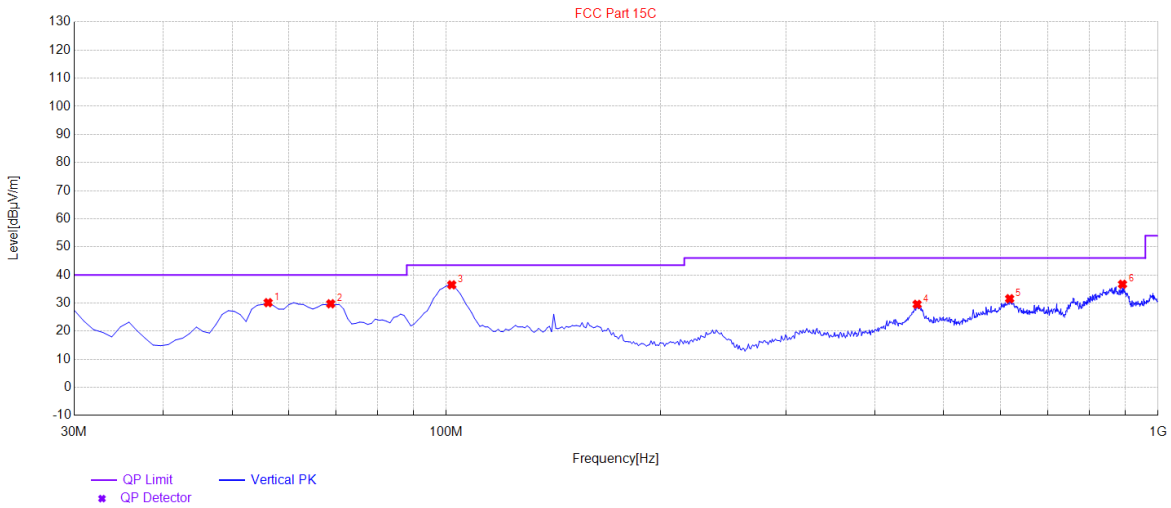
EUT	2 PLAY ARCADE MACHINE LRG(B-B)	**Model Name**	8063
Temperature	21.2°C	**Relative Humidity**	59.5%
Pressure	985kPa	**Test Voltage**	DC 3V by battery
Test Mode	Mode 1	**Polarization**	Vertical



NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	56.19	30.15	16.87	40.00	9.85	100	78	Vertical
2	68.8	29.75	15.04	40.00	10.25	100	26	Vertical
3	101.78	36.49	16.98	43.50	7.01	100	229	Vertical
4	458.74	29.55	24.42	46.00	16.45	100	90	Vertical
5	618.79	31.55	25.79	46.00	14.45	100	258	Vertical
6	891.36	36.70	29.88	46.00	9.30	100	294	Vertical

RESULT: PASS

Note: Factor=Antenna Factor + Cable loss, Margin=Limit-Level.

The “Factor” value can be calculated automatically by software of measurement system.

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FIELD STRENGTH OF FUNDAMENTAL

EUT	2 PLAY ARCADE MACHINE LRG(B-B)	**Model Name**	8063
Temperature	21.2°C	**Relative Humidity**	59.5%
Pressure	985kPa	**Test Voltage**	DC 3V by battery
Test Modulation	GFSK	**Polarization**	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
2420	37.20	49.05	86.25	114.00	-27.75	peak
2420	22.76	49.05	71.81	94.00	-22.19	AVG
2440	36.72	49.12	85.84	114.00	-28.16	peak
2440	22.36	49.12	71.48	94.00	-22.52	AVG
2465	36.56	49.25	85.81	114.00	-28.19	peak
2465	22.15	49.25	71.40	94.00	-22.60	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT	2 PLAY ARCADE MACHINE LRG(B-B)	**Model Name**	8063
Temperature	21.2°C	**Relative Humidity**	59.5%
Pressure	985kPa	**Test Voltage**	DC 3V by battery
Test Modulation	GFSK	**Polarization**	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
2420	44.37	49.05	86.51	114.00	-27.49	peak
2420	29.51	49.05	72.47	94.00	-21.53	AVG
2440	45.31	49.12	85.59	114.00	-28.41	peak
2440	30.11	49.12	71.66	94.00	-22.34	AVG
2465	40.78	49.25	85.52	114.00	-28.48	peak
2465	30.48	49.25	71.57	94.00	-22.43	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

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RADIATED EMISSION ABOVE 1GHZ

EUT	2 PLAY ARCADE MACHINE LRG(B-B)	**Model Name**	8063
Temperature	21.2°C	**Relative Humidity**	59.5%
Pressure	985kPa	**Test Voltage**	DC 3V by battery
Test Mode	Mode 1	**Polarization**	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4840	48.61	3.76	52.37	74.00	-21.63	peak
4840	38.14	3.76	41.90	54.00	-12.10	AVG
7260	42.19	8.17	50.36	74.00	-23.64	peak
7260	31.58	8.17	39.75	54.00	-14.25	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT	2 PLAY ARCADE MACHINE LRG(B-B)	**Model Name**	8063
Temperature	21.2°C	**Relative Humidity**	59.5%
Pressure	985kPa	**Test Voltage**	DC 3V by battery
Test Mode	Mode 1	**Polarization**	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4840	47.94	3.76	51.70	74.00	-22.30	peak
4840	38.52	3.76	42.28	54.00	-11.72	AVG
7260	42.13	8.17	50.30	74.00	-23.70	peak
7260	31.24	8.17	39.41	54.00	-14.59	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

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EUT	2 PLAY ARCADE MACHINE LRG(B-B)	**Model Name**	8063
Temperature	21.2°C	**Relative Humidity**	59.5%
Pressure	985kPa	**Test Voltage**	DC 3V by battery
Test Mode	Mode 2	**Polarization**	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4880	48.65	3.78	52.43	74.00	-21.57	peak
4880	38.74	3.78	42.52	54.00	-11.48	AVG
7320	42.59	8.23	50.82	74.00	-23.18	peak
7320	31.34	8.23	39.57	54.00	-14.43	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT	2 PLAY ARCADE MACHINE LRG(B-B)	**Model Name**	8063
Temperature	21.2°C	**Relative Humidity**	59.5%
Pressure	985kPa	**Test Voltage**	DC 3V by battery
Test Mode	Mode 2	**Polarization**	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4880	48.64	3.78	52.42	74.00	-21.58	peak
4880	37.54	3.78	41.32	54.00	-12.68	AVG
7320	42.16	8.23	50.39	74.00	-23.61	peak
7320	31.95	8.23	40.18	54.00	-13.82	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

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EUT	2 PLAY ARCADE MACHINE LRG(B-B)	**Model Name**	8063
Temperature	21.2°C	**Relative Humidity**	59.5%
Pressure	985kPa	**Test Voltage**	DC 3V by battery
Test Mode	Mode 3	**Polarization**	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4930	49.65	3.81	53.46	74.00	-20.54	peak
4930	38.42	3.81	42.23	54.00	-11.77	AVG
7395	41.35	8.27	49.62	74.00	-24.38	peak
7395	32.58	8.27	40.85	54.00	-13.15	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

EUT	2 PLAY ARCADE MACHINE LRG(B-B)	**Model Name**	8063
Temperature	21.2°C	**Relative Humidity**	59.5%
Pressure	985kPa	**Test Voltage**	DC 3V by battery
Test Mode	Mode 3	**Polarization**	Vertical

Frequency (MHz)	Meter Reading (dBμV)	Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Value Type
4930	48.65	3.81	52.46	74.00	-21.54	peak
4930	37.42	3.81	41.23	54.00	-12.77	AVG
7395	42.16	8.27	50.43	74.00	-23.57	peak
7395	31.26	8.27	39.53	54.00	-14.47	AVG
Remark:						
Factor = Antenna Factor + Cable Loss – Pre-amplifier.						

RESULT: PASS

Note: The amplitude of other spurious emissions from 1G to 25 GHz which are attenuated more than 20 dB below the permissible value need not be reported.

Factor=Antenna Factor + Cable loss - Amplifier gain, Margin=Emission Level-Limit.

The “Factor” value can be calculated automatically by software of measurement system.

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8. BAND EDGE EMISSION

8.1. MEASUREMENT PROCEDURE

1. The EUT operates at transmitting mode. The operate channel is tested to verify the largest transmission and spurious emissions power at the continuous transmission mode.

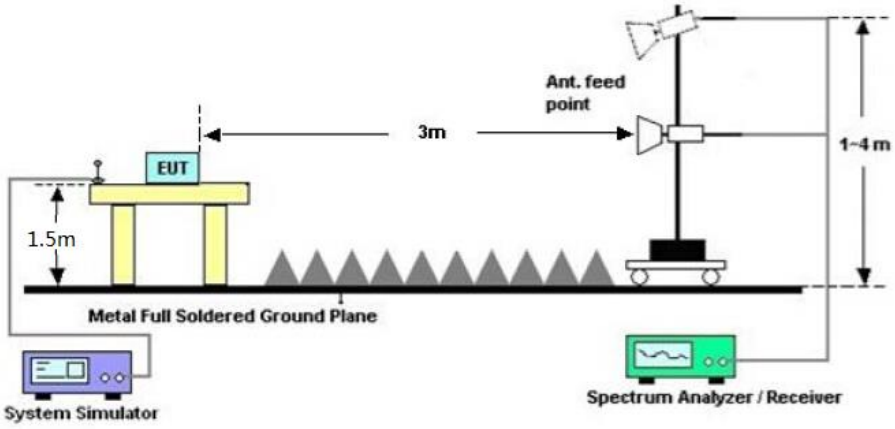
2. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission: (a) PEAK: RBW=1MHz, VBW=3MHz / Sweep=AUTO

(b) AVERAGE: RBW=1MHz; VBW=3MHz / Sweep=AUTO

3. Other procedures refer to clause 7.2.

8.2. TEST SETUP

RADIATED EMISSION TEST SETUP



8.3 RADIATED TEST RESULT

Note:

1. Factor=Antenna Factor + Cable loss - Amplifier gain. Field Strength=Factor + Reading level
2. The factor had been edited in the “Input Correction” of the Spectrum Analyzer. So the Amplitude of test plots is equal to Reading level plus the Factor in dB. Use the A dB(μV) to represent the Amplitude. Use the F dB(μV/m) to represent the Field Strength. So A=F.

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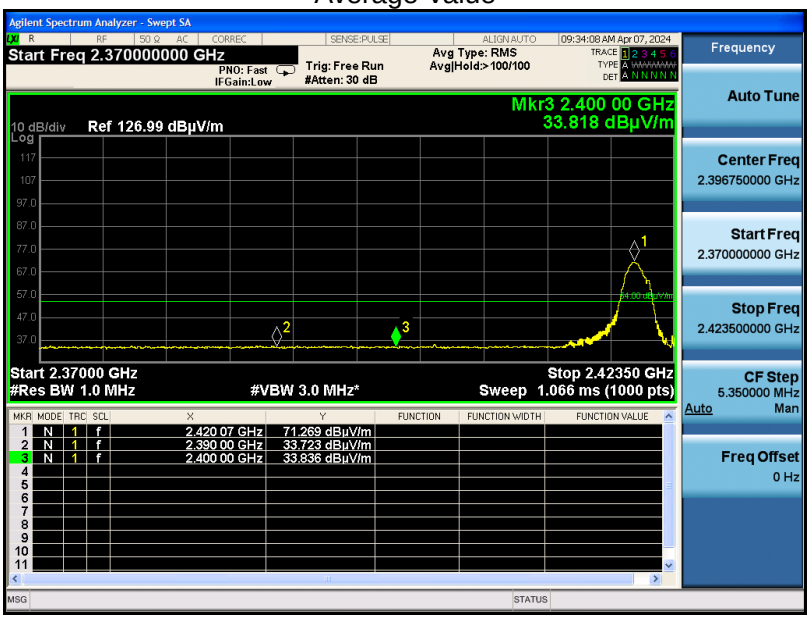
EUT	2 PLAY ARCADE MACHINE LRG(B-B)	**Model Name**	8063
Temperature	23.2°C	**Relative Humidity**	61.5%
Pressure	985kPa	**Test Voltage**	DC 3V by battery
Test Mode	Mode 1	**Polarization**	Horizontal

Peak Value

Average Value



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EUT	2 PLAY ARCADE MACHINE LRG(B-B)	**Model Name**	8063
Temperature	23.2°C	**Relative Humidity**	61.5%
Pressure	985kPa	**Test Voltage**	DC 3V by battery
Test Mode	Mode 1	**Polarization**	Vertical

Peak Value

Average Value

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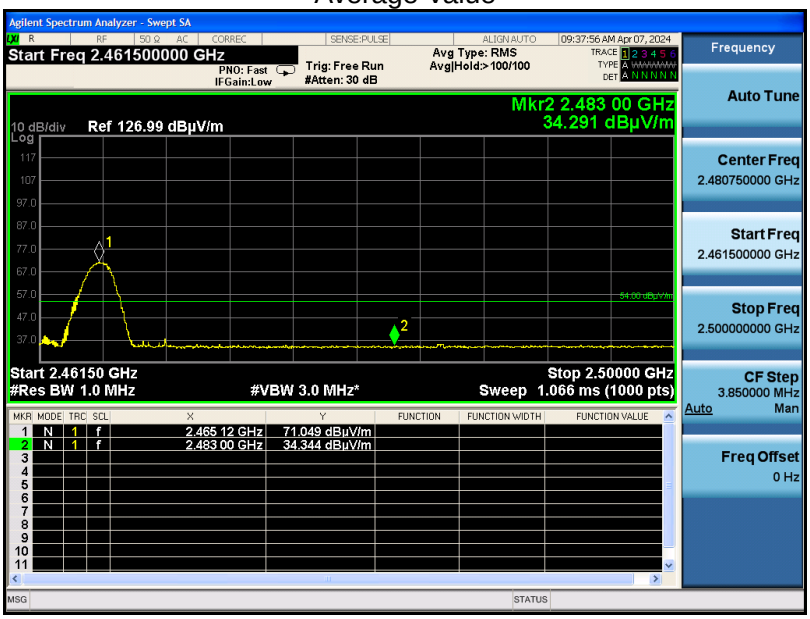
EUT	2 PLAY ARCADE MACHINE LRG(B-B)	**Model Name**	8063
Temperature	23.2°C	**Relative Humidity**	61.5%
Pressure	985kPa	**Test Voltage**	DC 3V by battery
Test Mode	Mode 3	**Polarization**	Horizontal

Peak Value

Average Value



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EUT	2 PLAY ARCADE MACHINE LRG(B-B)	**Model Name**	8063
Temperature	23.2°C	**Relative Humidity**	61.5%
Pressure	985kPa	**Test Voltage**	DC 3V by battery
Test Mode	Mode 3	**Polarization**	Vertical

Peak Value

Average Value

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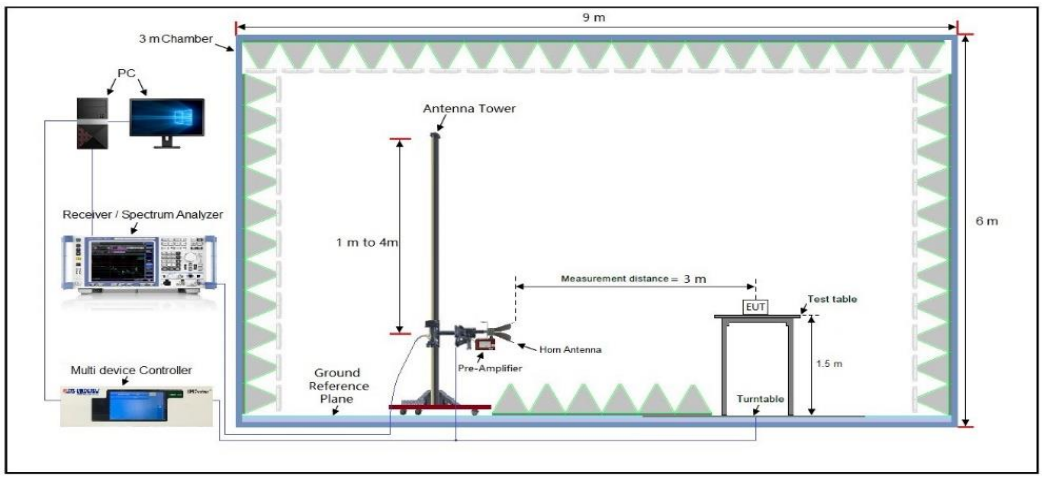
9. 20DB BANDWIDTH

9.1. MEASUREMENT PROCEDURE

1. Set the EUT Work on the top, the middle and the bottom operation frequency individually.
2. Set SPA Centre Frequency = Operation Frequency, RBW= 30 KHz, VBW≥3×RBW.
3. Set SPA Trace 1 Max hold, then View.

9.2. TEST SET-UP (BLOCK DIAGRAM OF CONFIGURATION)



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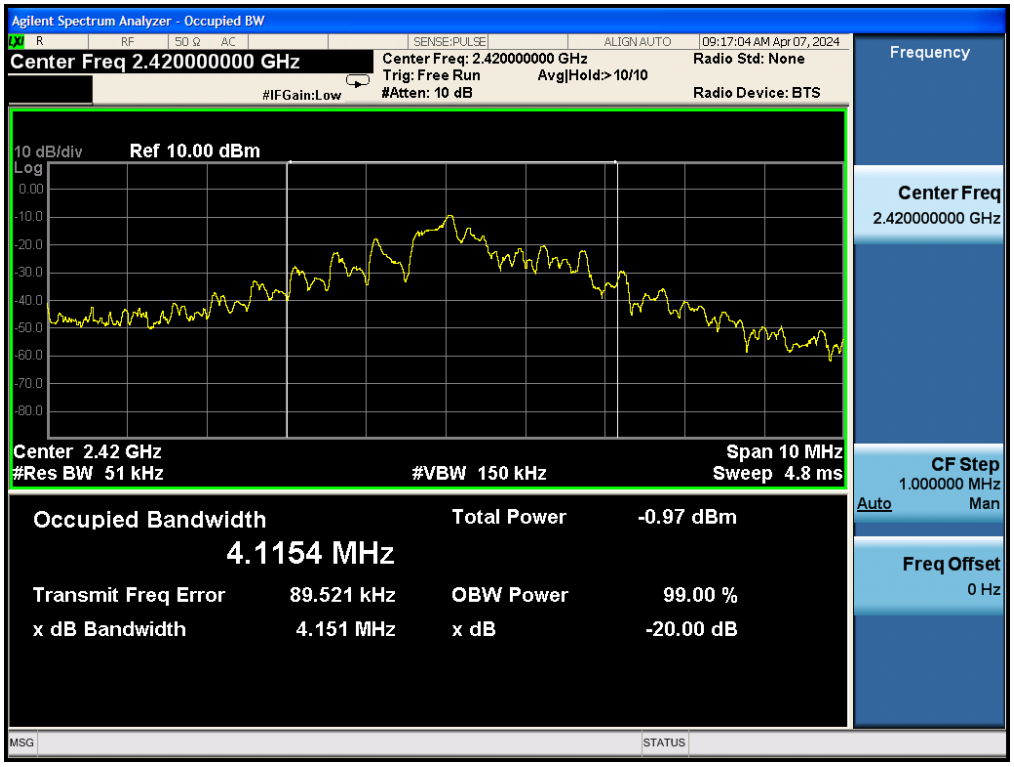
9.3. MEASUREMENT RESULTS

TEST ITEM	20DB BANDWIDTH
TEST MODULATION	GFSK

Test Channel (MHz)	20DB BANDWIDTH (MHz)	99% BANDWIDTH (MHz)	Criteria
2420	4.151	4.1154	PASS
2440	2.933	3.2599	PASS
2465	1.970	2.5882	PASS

TEST PLOT OF BANDWIDTH FOR LOW CHANNEL



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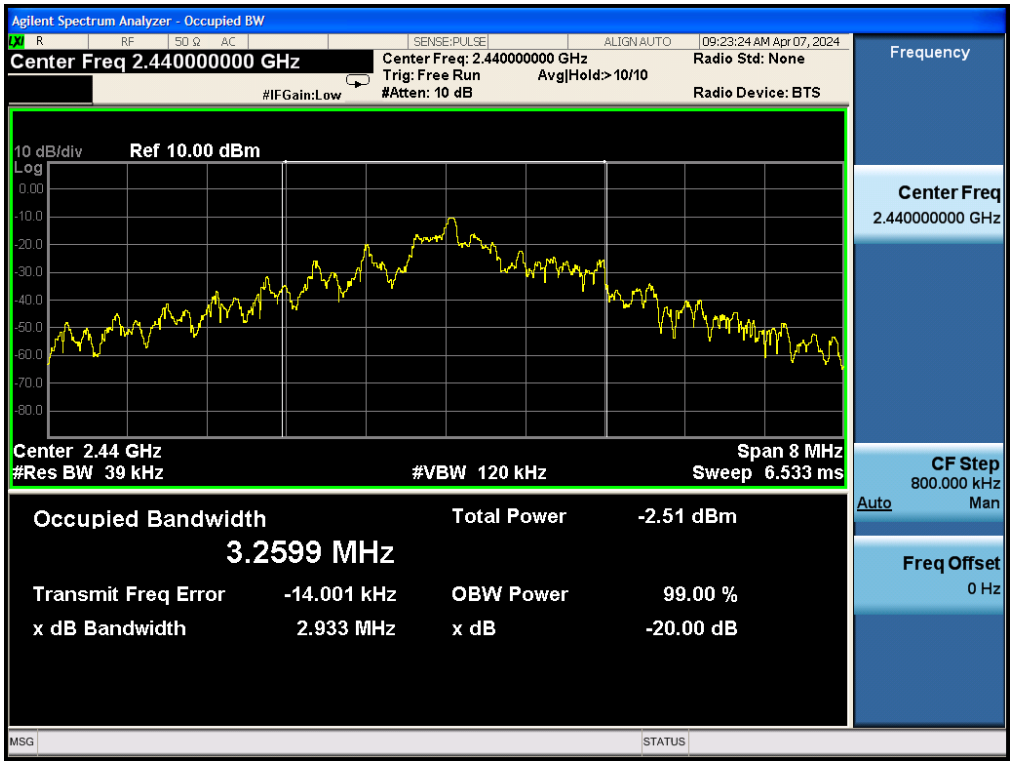
TEST PLOT OF BANDWIDTH FOR MIDDLE CHANNEL



TEST PLOT OF BANDWIDTH FOR HIGH CHANNEL

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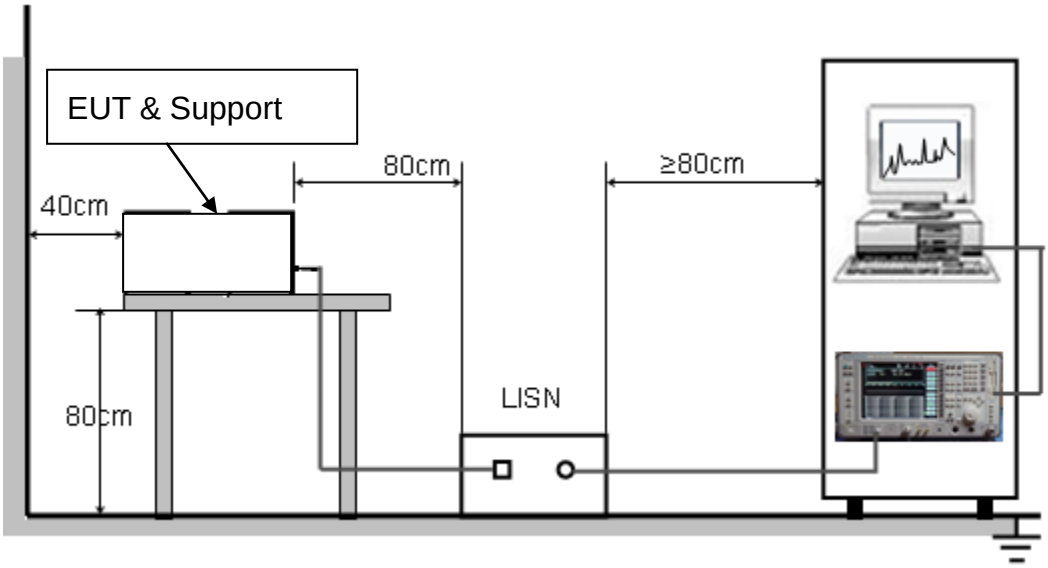
10. FCC LINE CONDUCTED EMISSION TEST

10.1. LIMITS OF LINE CONDUCTED EMISSION TEST

Frequency	Maximum RF Line Voltage	
	Q.P.(dBuV)	Average(dBuV)
150kHz~500kHz	66-56	56-46
500kHz~5MHz	56	46
5MHz~30MHz	60	50

Note: 1. The lower limit shall apply at the transition frequency.
2. The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz.

10.2. BLOCK DIAGRAM OF LINE CONDUCTED EMISSION TEST



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10.3. PRELIMINARY PROCEDURE OF LINE CONDUCTED EMISSION TEST

1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. When the EUT is a tabletop system, a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10-2013 (see Test Facility for the dimensions of the ground plane used). When the EUT is a floor-standing equipment, it is placed on the ground plane which has a 3-12 mm non-conductive covering to insulate the EUT from the ground plane.
2. Support equipment, if needed, was placed as per ANSI C63.10-2013.
3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10-2013.
4. All support equipment received AC120V/60Hz power from a LISN, if any.
5. The EUT received DC 5V power from adapter which received AC120V/60Hz power from a LISN.
6. The test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7. Analyzer / Receiver scanned from 150 kHz to 30MHz for emissions in each of the test modes.
8. During the above scans, the emissions were maximized by cable manipulation.
9. The test mode(s) were scanned during the preliminary test.

Then, the EUT configuration and cable configuration of the above highest emission level were recorded for reference of final testing.

10.4. FINAL PROCEDURE OF LINE CONDUCTED EMISSION TEST

1. EUT and support equipment was set up on the test bench as per step 2 of the preliminary test.
2. A scan was taken on both power lines, Line 1 and Line 2, 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. If EUT emission level was less –2dB to the A.V. limit in Peak mode, then the emission signal was re-checked using Q.P and Average detector.
3. The test data of the worst case condition(s) was reported on the Summary Data page.

10.5. TEST RESULT OF LINE CONDUCTED EMISSION TEST

Note: The conducted emission tests at AC port are not required for devices which only employ battery power for operation.

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APPENDIX A: PHOTOGRAPHS OF TEST SETUP

Refer to the Report No.: AGC11126240401AP01

APPENDIX B: PHOTOGRAPHS OF THE EUT

Refer to the Report No.: AGC11126240401AP02

----END OF REPORT----

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Conditions of Issuance of Test Reports

1. All samples and goods are accepted by the Attestation of Global Compliance (Shenzhen) Co., Ltd (the "Company") solely for testing and reporting in accordance with the following terms and conditions. The company provides its services on the basis that such terms and conditions constitute express agreement between the company and any person, firm or company requesting its services (the "Clients").

2. Any report issued by Company as a result of this application for testing services (the "Report") shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to its customer, supplier or other persons directly concerned. The Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.

3.The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.

4. In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.

5. Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.

6. The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.

7.Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.

8. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.

9. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.

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