



No.: AJT241030031E-3

Applicant Name: Applicant Address:

Manufacturer: Manufacturer Address: NIKKO TOYS LIMITED UNIT 1220, 12TH FLOOR, PENINSULA CENTRE, 67 MODY ROAD, TSIM SHA TSUI EAST, KOWLOON, HONG KONG NIKKO TOYS LIMITED UNIT 1220, 12TH FLOOR, PENINSULA CENTRE, 67 MODY ROAD, TSIM SHA TSUI EAST, KOWLOON, HONG KONG

The following samples weresubmitted and identified by/on behalf of the client as:Sample Description:Hydro Thunder,
Thunder RedModel No.:10270/10271FCC ID:2AS9M10270NIKCOLSample Received Date:30 October, 2024Testing Completed Date:11 November, 2024

Tests conducted: For compliance with application, refer to attached page(s) for details.

Assess standard used:	Conclusion
FCC Part 15, Subpart C, Section 15.249 & ANSI C63.10-2013	PASS

Tested by:

Glom

Reviewed by: Fly Ling Approved by



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No.: AJT241030031E-3

1 Test Standards

The tests were performed according to following standards:

FCC Part 15, Subpart C, Section 15.249: Operation within the bands 902-928 MHz, 2400-2483.5 MHz, 5725-5875 MHZ, and 24.0-24.25 GHz

Test Report

ANSI C63.10-2013: American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices

2 Summary

2.1 General Remarks

Date of receipt of test sample	30 October, 2024
Testing commenced on	30 October, 2024 - 11 November, 2024
Testing concluded on	11 November, 2024

2.2 Final Assessment

Test Content:	Assessment	
The RF requirements pertaining to the technical standards and tested operation modes are	Fulfilled	
The equipment under test	Fulfilled the RF requirements	

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3 Equipment Under Test

3.1 Short description of the Equipment Under Test (EUT)

EUT Name	Hydro Thunder, Thunder Red
Model No.	10270/10271
FCC ID	2AS9M10270NIKCOL
Number of Tested Samples	1
Power Supply Voltage	DC 4.5V(AAA*3)
Operating Mode	TX Mode
Operation Frequency	2405MHz~2475MHz
Number of Channel	25
Modulation	GFSK
Antenna Type	Wire Antenna
Antenna Gain	0dBi
Max. RF output power:	92.14dB µ V/m@3m
NOTE	

NOTE:

1. The above EUT information is declared by manufacturer and for more detailed features description, please refers to the manufacturer's specifications or user's manual. The laboratory is not responsible for the accuracy of the information provided by manufacturer.

2. Only the model LS-T3A-TBX was tested, since according to the declaration from the applicant, the electrical circuit design, PCB layout, components used and internal wiring and functions were identical for the above model, with only difference on color, appearance and packaging.

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3.2 EUT Configuration

(The CDF filled by the applicant can be viewed at the test laboratory.) The following peripheral devices and interface cables were connected during the measurement:



3.3 Description of Test Modes

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and packet type. The worst case was found when the EUT was positioned on Y axis for radiated emission. The EUT was tested under the following mode.

ELIT Configure Mode	Applicable to		Description			
EUT Configure Mode	RE < 1G	RE≥1G	PLC	BW	DC 4.5V(AAA*3)	
А	\checkmark	\checkmark	N/A	\checkmark		

Where RE<1G: Radiated Emission below 1GHz PLC: Power Line Conducted Emission

RE≥1G: Radiated Emission above 1GHz BW: 20dB bandwidth

Following channel(s) was (were) selected for the test as listed below.

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2405	8	2422	15	2452	22	2472
2	2407	9	2425	16	2453	23	2473
3	2408	10	2427	17	2454	24	2474
4	2410	11	2428	18	2462	25	2475
5	2411	12	2435	19	2469	3	5
6	2414	13	2445	20	2470		
7	2418	14	2451	21	2471		6

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Channel List

Channel	Frequency (MHz)
The lowest channel	2405
The middle channel	2435
The highest channel	2475

Note: The more detailed channel, please refer to the product specifications

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4 Test Environment

4.1 Address of the test Laboratory

Test Laboratory:	AJT Testing Services Limited
Test Site:	1-2/F., NO.1, WENHUA SOUTH ROAD, CHENGHUA INDUSTRIAL ZONE,
1 1	CHENGHAI DISTRICT, SHANTOU, GUANGDONG, CHINA
Tel:	86-754-85860999
Fax:	86-754-86984098

4.2 Environmental Conditions

During the measurement the environmental conditions were within the listed ranges:		
Temperature	15~35℃	
Humidity	30~75%	

4.3 Statement of the Measurement Uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there June 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. Furthermore, component and process variability of devices are similar to that tested June result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Measurement Uncertainty (S	Standard: ETSI TR 100 028)
Conducted Emission (CE)	±2.14dB
Radiated Emission below 1GHz	±4.44dB
Radiated Emission above 1GHz	±5.26dB
Occupied bandwidth	55.4kHz

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

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4.4 Test Types and Results

Stand	ard: FCC PART 15, SUBPART C (SECTION 15.249)	
Standard section	Test Type	Result
§15.209 & §15.249(a)	Radiated Emission (RE)	PASS
§15.215(c)	20dB Bandwidth	PASS
§15.207(a)	Conducted Emission (CE)	N/A
§15.203	Antenna Requirement	PASS
§15.205	Restricted Band Around Fundamental Frequency	PASS

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5 Test Conditions and Results

5.1 Radiated Emission (RE)

For test instruments and accessories used see section 6

5.1.1 Test Procedures

- (1) The EUT was placed on the top of a rotating table 1.5 meters (above 1GHz) and 0.8 meters (below 1GHz) above the ground at a 3 meters semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- (2) The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- (3) The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- (4) For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- (5) The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- (6) For below 30MHz, a loop antenna with its vertical plane is place 3m from the EUT and rotated about its vertical axis for maximum response at each azimuth about the EUT. And the centre of the loop shall be 1m above the ground.
- (7) If the emission level of the EUT in peak mode was lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Note:

- 1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection at frequency below 1GHz
- 2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and video bandwidth is 3MHz for Peak detection at frequency above 1GHz.
- 3. All modes of operation were investigated and the worst-case emissions are reported
- 4. The testing of the EUT was performed on all 3 orthogonal axes; the worst-case test configuration was reported on the file test setup photo.

5.1.2 Test Setup

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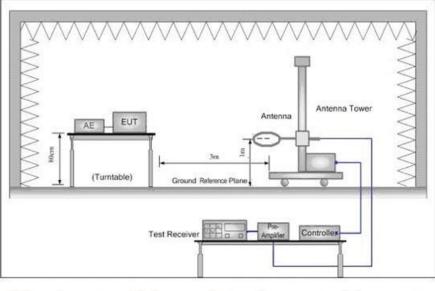
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Below 30MHz

30MHz-1000MHz

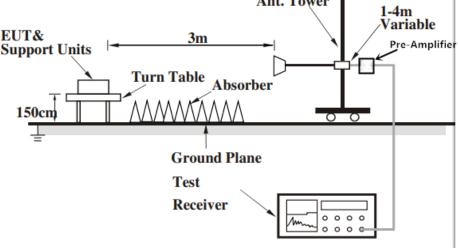
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JT IC-MRA **Test Report** Malalala CERTIFICATE #5443.01 No.: AJT241030031E-3 Ant. Tower



Above 1GHz

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Test Report



5.1.3 Test Limits

Emissions radiated outside of the specified bands, shall be according to the general radiated limits in 15.209 as following:

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

According to §15.249(a), the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Fundamental Frequency	Filed Strength of Fundamental (milli-volts/meter)	Field Strength of Harmonics (micro-volts/meter)
902 ~ 928 MHz	50	500
2400 ~ 2483.5 MHz	50	500
5725 ~5875 MHz	50	500
24.0 ~24.25 GHz	250	2500

The emission limit in this paragraph is based on measurement instrumentation employing an average detector. The provisions in §15.35 for limiting peak emissions apply.

Note:

1. The lower limit shall apply at the transition frequencies.

2. Emission level (dB μ V/m) = 20 log Emission level (μ V/m).

3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

4. Emission from 9kHz to 30MHz is more than 20dB below the limit.

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5.1.4 Test Results

The disturbance below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed.

5.1.4.1 Radiated Emissions Test (Below 1GHz)

Operation Mode	TX mode
Channel	The Lowest Channel (24105MHz)
Test Condition	Ambient Temperature: 23°C Humidity: 50%RH

Frequency (MHz)	Peak (dBµV/m)	QP (dBµV/m)	QP Lim. (dBµV/m)	Margin (dB)	Angle (°)	Height (m)	Polarization
45.229	19.14	1	40.00	-20.86	172.00	1.50	Horizontal
346.802	21.16	/	46.00	-24.84	41.00	1.50	Horizontal
496.958	23.54	1	46.00	-22.46	13.00	1.50	Horizontal
645.756	26.12	/	46.00	-19.88	282.00	1.50	Horizontal
729.176	28.63	1	46.00	-17.37	350.00	1.50	Horizontal
916.58	29.99	/	46.00	-16.01	9.00	1.50	Horizontal
46.296	13.89	1	40.00	-26.11	0.00	1.50	Vertical
350.488	18.65	/	46.00	-27.35	0.00	1.50	Vertical
503.845	21.19	1	46.00	-24.81	0.00	1.50	Vertical
664.962	23.88	/	46.00	-22.12	0.00	1.50	Vertical
761.283	25.46	/	46.00	-20.54	0.00	1.50	Vertical
927.638	26.30	/	46.00	-19.70	0.00	1.50	Vertical

1.QP is abbreviation of Quasi-Peak

2.Margin = Emission Level - Limit Value

3. The emission levels of other frequencies were more than 20dB margin against the limit

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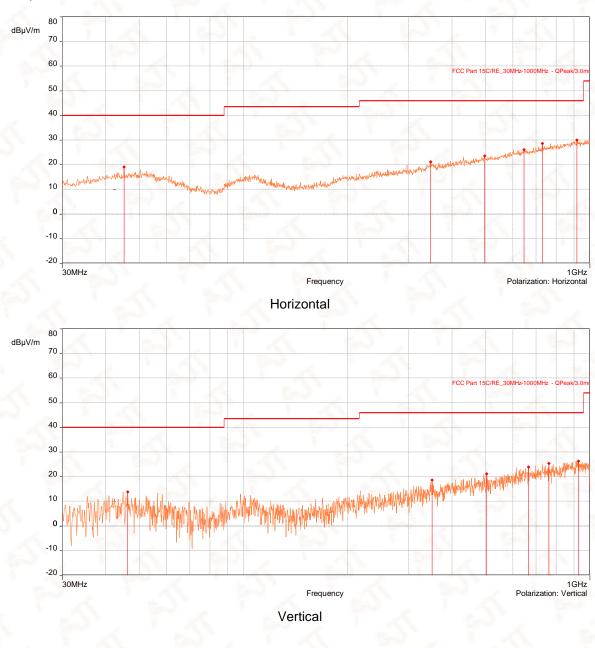
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Test Graph:



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5.1.4.2 Radiated Emissions Test (Above 1GHz)

Channel	1	The Lowest C (2405MHz)	Channel	Dete	ector Fund	ction Peak (PK) Average (AV)				
Frequency Ra	ange	Above 1GHz	2	Res	ult		PASS		~	
17	() ()	2	17 1		1	1	-	~ e	1	
	-	Antenna Po	olarity & Te	st Distan	ce: Horizo	ontal At 3	ßm			
Frequency (MHz)	Emissi Leve (dBµV/		Margin (dB)	Height (m)	Angle (°)	Polariz	ation	Correction (dB)	Detecto	
2390.04	38.94	4 54.00	-15.06	1.50	235.00	Horizo	ontal	-17.69	Average	
2400	48.18	3 54.00	-5.82	1.50	245.00	Horizo	ontal	-17.69	Average	
*2405.04	74.45	5 94.00	-19.55	1.50	240.00	Horizo	ontal	-17.69	Average	
4809.95	24.85	5 54.00	-29.15	2.00	312.00	Horizo	ontal	-17.69	Average	
7214.6	29.17	7 54.00	-24.83	2.00	75.00	Horizo	ontal	-17.69	Average	
2390.04	56.63	3 74.00	-17.37	1.50	235.00	Horizo	ontal	-2.86	Peak	
2400	65.87	7 74.00	-8.13	1.50	245.00	Horizo	ontal	-2.83	Peak	
*2405.04	92.14	114.00	-21.86	1.50	240.00	Horizo	ontal	-2.79	Peak	
4809.95	42.54	1 74.00	-31.46	2.00	312.00	Horizo	ontal	2.98	Peak	
7214.6	46.86	6 74.00	-27.14	2.00	75.00	Horizo	ontal	9.29	Peak	
		Antenna I	Polarity & To	est Dista	nce: Verti	cal At 3n	n	·		
Frequency (MHz)	Emissi Leve (dBµV/		Margin (dB)	Height (m)	Angle (°)	Polariz	ation	Correction (dB)	Detecto	
2390.04	30.72	2 54.00	-23.28	1.50	50.00	Verti	cal	-17.69	Average	
2400	39.81	I 54.00	-14.19	1.50	50.00	Verti	cal	-17.69	Average	
*2405.04	66.31	94.00	-27.69	1.50	14.00	Verti	cal	-17.69	Average	
4809.95	24.02	2 54.00	-29.98	1.99	300.00	Verti	cal	-17.69	Average	
7214.6	29.58	3 54.00	-24.42	1.99	96.00	Verti	cal	-17.69	Average	
2390.04	48.41	I 74.00	-25.59	1.50	50.00	Verti	cal	-2.86	Peak	
2400	57.50	74.00	-16.50	1.50	50.00	Verti	cal	-2.83	Peak	
*2405.04	84.00) 114.00	-30.00	1.50	14.00	Verti	cal	-2.79	Peak	
4809.95	41.71	74.00	-32.29	1.99	300.00	Verti	cal	2.98	Peak	
7214.6	47.27	7 74.00	-26.73	1.99	96.00	Verti	cal	9.29	Peak	

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Test Report



Remarks:

- 1. Emission level (dBµV/m) = Raw Value (dBµV) + Correction Factor (dB/m)
- 2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) Amplifier Gain (dB)
- 3. The emission levels of other frequencies were more than 20dB margin against the limit.
- 4. Margin = Emission level Limit value
- 5. " * ": Fundamental frequency.
- 6. The average value of fundamental frequency is: Average value = Peak value +AV factor, where the AV factor is calculated from following formula: AV factor=20 log (Duty cycle) = 20 log (13.05%) = -17.69dB, please see 5.1.4.3.
- 7. "#" Marginal pass.

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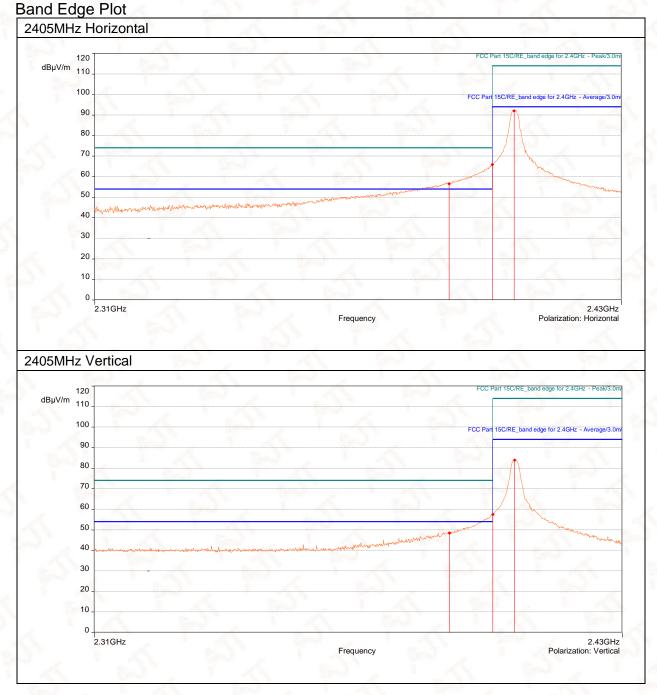
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Test Report



No.: AJT241030031E-3



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No.: AJT241030031E-3

Channel	The Middle Channel (2435MHz)	Detector Function	Peak (PK) Average (AV)
Frequency Range	Above 1GHz	Result	PASS

Antenna Polarity & Test Distance: Horizontal At 3m									
Emission Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (m)	Angle (°)	Polarization	Correction (dB)	Detector		
72.88	94.00	-21.12	1.52	231.00	Horizontal	-17.69	Average		
24.15	54.00	-29.85	2.00	302.00	Horizontal	-17.69	Average		
29.57	54.00	-24.43	1.01	233.00	Horizontal	-17.69	Average		
90.57	114.00	-23.43	1.52	231.00	Horizontal	-2.91	Peak		
41.84	74.00	-32.16	2.00	302.00	Horizontal	2.20	Peak		
47.26	74.00	-26.74	1.01	233.00	Horizontal	9.19	Peak		
-	Level (dBµV/m) 72.88 24.15 29.57 90.57 41.84	Level (dBµV/m) Limit (dBµV/m) 72.88 94.00 24.15 54.00 29.57 54.00 90.57 114.00 41.84 74.00	Level (dBµV/m)Limit (dBµV/m)Margin (dB)72.8894.00-21.1224.1554.00-29.8529.5754.00-24.4390.57114.00-23.4341.8474.00-32.16	Level (dBµV/m)Limit (dBµV/m)Margin (dB)Height (m)72.8894.00-21.121.5224.1554.00-29.852.0029.5754.00-24.431.0190.57114.00-23.431.5241.8474.00-32.162.00	Level (dBµV/m)Limit (dBµV/m)Margin (dB)Height (m)Angle (°)72.8894.00-21.121.52231.0024.1554.00-29.852.00302.0029.5754.00-24.431.01233.0090.57114.00-23.431.52231.0041.8474.00-32.162.00302.00	Level (dBμV/m) Limit (dBμV/m) Margin (dB) Height (m) Angle (°) Polarization 72.88 94.00 -21.12 1.52 231.00 Horizontal 24.15 54.00 -29.85 2.00 302.00 Horizontal 29.57 54.00 -24.43 1.01 233.00 Horizontal 90.57 114.00 -23.43 1.52 231.00 Horizontal 41.84 74.00 -32.16 2.00 302.00 Horizontal	Level (dBμV/m) Limit (dBμV/m) Margin (dB) Height (m) Angle (°) Polarization Correction (dB) 72.88 94.00 -21.12 1.52 231.00 Horizontal -17.69 24.15 54.00 -29.85 2.00 302.00 Horizontal -17.69 29.57 54.00 -24.43 1.01 233.00 Horizontal -17.69 90.57 114.00 -23.43 1.52 231.00 Horizontal -2.91 41.84 74.00 -32.16 2.00 302.00 Horizontal 2.20		

Antenna Polarity & Test Distance: Vertical At 3m

Frequency (MHz)	Emission Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (m)	Angle (°)	Polarization	Correction (dB)	Detector
*2434.9865	63.15	94.00	-30. <mark>8</mark> 5	1.50	0.00	Vertical	-17.69	Average
4869.75	25.27	54.00	-28.73	1.99	300.00	Vertical	-17.69	Average
7305.45	29.71	54.00	-24.29	1.99	77.00	Vertical	-17.69	Average
*2434.9865	80.84	114.00	-33.16	1.50	0.00	Vertical	-2.91	Peak
4869.75	42.96	74.00	-31.04	1.99	300.00	Vertical	2.20	Peak
7305.45	47.40	74.00	-2 <mark>6</mark> .60	1.99	77.00	Vertical	9.19	Peak

Remarks:

1. Emission level $(dB\mu V/m) = Raw Value (dB\mu V) + Correction Factor (dB/m)$

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Amplifier Gain (dB)

3. The emission levels of other frequencies were more than 20dB margin against the limit.

4. Margin = Emission level - Limit value

5. " * ": Fundamental frequency.

6. The average value of fundamental frequency is: Average value = Peak value +AV factor, where the AV factor is calculated from following formula: AV factor=20 log (Duty cycle) = 20 log (13.05%) = -17.69dB, please see 5.1.4.3.

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No.: AJT241030031E-3

Channel					Peak Avera	(PK) ge (AV)	1			
Frequency Ra	nge	Above 1GHz	z	Res	ult		PASS			
- Carlor 1	1	<u> </u>	2	1			5 - D -	1	~	
		Antenna Pola	arity & Te	st Distan	ce: Horizo	ontal At	3m			
Frequency (MHz)	Emission Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (m)	Angle (°)	Polari	zation	Correction (dB)	Detecto	
*2475	72.76	94.00	-21.24	1.50	231.00	Horiz	zontal	-17.69	Average	
2483.5	41.80	54.00	-12.20	1.50	245.00	Horiz	zontal	-17.69	Average	
4951.4	27.40	54.00	-26.60	1.98	322.00	Horiz	zontal	-17.69	Average	
7425.05	28.88	54.00	-25.12	1.98	71.00	Horiz	zontal	-17.69	Average	
*2475	90.45	114.00	-23.55	1.50	231.00	Horiz	ontal	-2.98	Peak	
2483.5	59.49	74.00	-14.51	1.50	245.00	Horizontal		-3.03	Peak	
4951.4	45.09	74.00	-28.91	1.98	322.00	Horizontal		2.48	🔪 Peak	
7425.05	46.57	74.00	-27.43	1.98	71.00	Horiz	zontal	9.37	Peak	
		Antenna Po	plarity & T	est Dista	nce: Verti	cal At 3	ßm			
Frequency (MHz)	Emission Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (m)	Angle (°)	Polari	zation	Correction (dB)	Detecto	
*2475	62.85	94.00	-31.15	1.50	56.00	Ver	tical	-17.69	Average	
2483.5	32.04	54.00	-21.96	1.50	275.00	Ver	tical	-17.69	Average	
4951.4	24.89	54.00	-29.11	1.99	286.00	Ver	tical	-17.69	Average	
7425.05	28.00	54.00	-2 <mark>6</mark> .00	1.99	251.00	Ver	tical	-17.69	Average	
*2475	80.54	114.00	-33.46	1.50	56.00	Ver	tical	-2.98	Peak	
2483.5	49.73	74.00	-24.27	1.50	275.00	Ver	tical	-3.03	Peak	
4951.4	42.58	74.00	-31.42	1.99	286.00	Ver	tical	2.48	Peak	
7425.05	45.69	74.00	-28.31	1.99	251.00	Ver	tical	9.37	Peak	

Remarks:

1. Emission level $(dB\mu V/m) = Raw Value (dB\mu V) + Correction Factor (dB/m)$

2. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Amplifier Gain (dB)

3. The emission levels of other frequencies were more than 20dB margin against the limit.

4. Margin = Emission level - Limit value

5. " * ": Fundamental frequency.

6. The average value of fundamental frequency is: Average value = Peak value +AV factor, where the AV factor is calculated from following formula: AV factor=20 log (Duty cycle) = 20 log (13.05%) = -17.69dB, please see 5.1.4.3.

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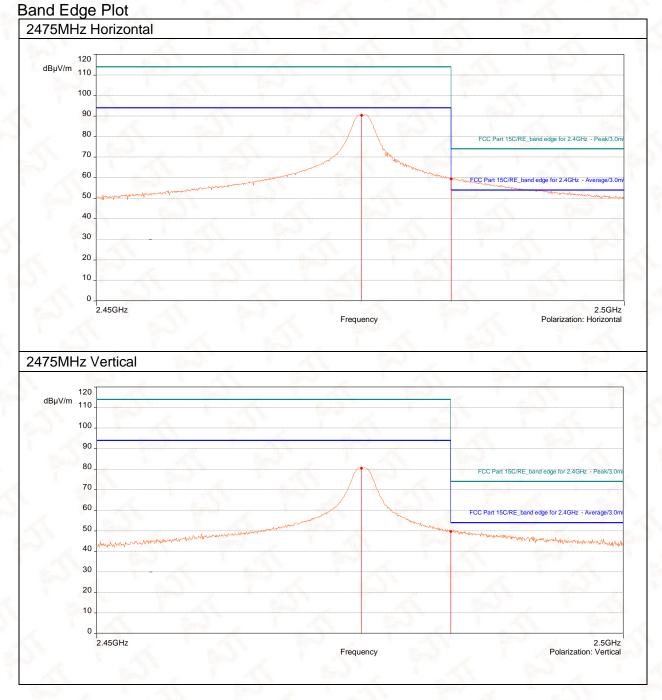
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Test Report



No.: AJT241030031E-3



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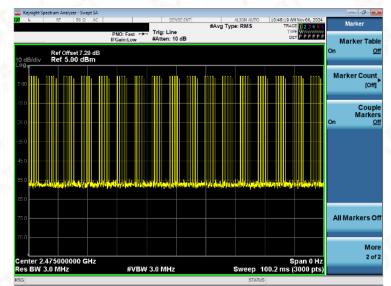
5.1.4.3 Calculation of Average Factor

Effective period of the cycle = 0.195*4=0.780ms

The duration of one cycle = 5.979ms

Duty Cycle = 0.780ms / 5.979ms = 13.05%

Averaging factor in dB = 20 log (duty cycle) = 20 log (13.05%) = -17.69dB



100ms Duty Cycle

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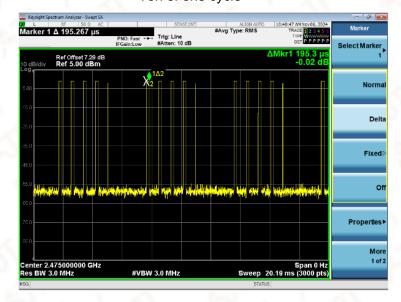
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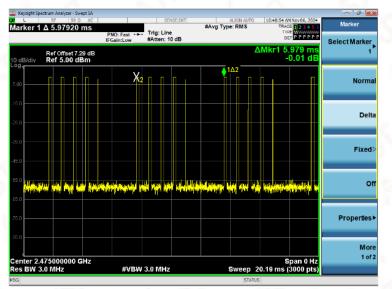




Ton of one cycle



The duration of one cycle



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5.2 20dB Bandwidth

For test instruments and accessories used see section 6

5.2.1 Test Procedures

- (1) Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
- (2) Turn on the EUT and connect it to measurement instrument. Then set it to any one convenient frequency within its operating range. Set a reference level on the measuring instrument equal to the highest peak value.
- (3) Measure the frequency difference of two frequencies that were attenuated 20dB from the reference level. Record the frequency difference as the emission bandwidth.
- (4) Repeat above procedures until all frequencies measured were complete.

5.2.2 Test Setup



5.2.3 Test Limits

According to FCC 15.215(c), must be designed to ensure that the 20dB bandwidth of the emission, or whatever bandwidth June otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

5.2.4 Test Results

Channel	frequency (MHz)	20dB Bandwidth (MHz)
The lowest channel	2405	1.363
The middle channel	2435	1.271
The highest channel	2475	1.342

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Test Report



No.: AJT241030031E-3



2405MHz



2435MHz

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No.: AJT241030031E-3



2475MHz

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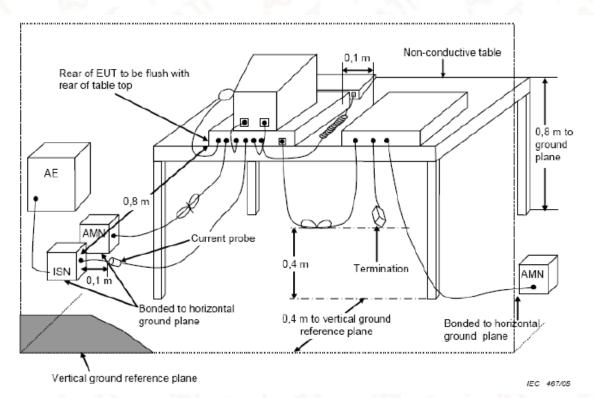
5.3 Conducted Emission (CE)

For test instruments and accessories used see section 6

5.3.1 Test Procedures

The PC Power connected to the power mains through a line impedance stabilization network (L.I.S.N.#2). This provides a 50 ohm coupling impedance for the EUT. Please refer the block diagram of the test setup and photographs. The other peripheral devices power cord connected to the power mains through a line impedance stabilization network (L.I.S.N.#1). Power on the PC and let it work normally, we use a keyboard test software, let EUT working in test mode, then test it. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.10-2013 on Conducted Emission Test.

5.3.2 Test Setup



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5.3.3 Test Limits

	Standard: FCC Part 15 §15.207(a)					
Frequency of optionion (MLT)	Maximum RF Line Voltage					
Frequency of emission (MHz)	Quasi-Peak Level dB(µV)	Average Level dB(µV)				
0.15-0.5	66 to 56*	56 to 46*				
0.5-5	56	46				
5-30	60	50				

Notes: 1. * Decreasing linearly with logarithm of frequency.

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

5.3.4 Test Results

Not Applicable

Note: The device is a DC power supply and does not apply to conducted emissions.

5.4 Antenna Requirements

5.4.1 Test Standard:

FCC Part 15, Subpart C 15.203

5.4.2 Standard 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 June 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.

5.4.3 EUT Antenna:

The antenna is Wire antenna and no consideration of replacement. The best case gain of the antenna is 0dBi.Antenna location: Refer to Internal photos.

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6 Test Equipment

Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1	Spectrum Analyzer	Keysight	N9010A	MY51120099	2024/03/02	2025/03/02
2	JS0806-2 RF Control Unit	Tonscend	JS0806-2	188060124	2024/08/07	2025/08/07
3	Broadband Preamplifier	SCHWARZBECK	BBV 9743B	00067	2023/03/14	2025/03/14
4	Broadband Preamplifier	SCHWARZBECK	BBV 9718B	00002	2024/03/02	2025/03/02
5	EMI Test Receiver	ROHDE & SCHWARZ	ESR3	102452	2024/03/02	2025/03/02
6	Trilog Broadband Antenna	SCHWARZBECK	VULB 9163	01127	2024/03/11	2025/03/11
7	Horn Antenna	SCHWARZBECK	BBHA 9120D	01829	2024/03/11	2025/03/11
8	DC Power Supply	SIGLENT	SPD1168X	SPD1XEAD3 R 0167	2024/03/01	2025/03/01
9	Vector Signal Generator	Keysight	N5172B	MY53052255	2024/03/02	2025/03/02
10	Analog Signal Generator	Keysight	N5171B	MY53051692	2024/03/02	2025/03/02
11	Temperature Humidity Chamber	Yiheng	BPS-50CB	191005684	2024/03/01	2025/03/01
12	Temperature and Humidity Indicator	JianDaRenKe	Cos-03	612058	2024/07/08	2025/07/08
13	BAT-EMC Testing (Test Software)	NEXIO	Version: 3.19.1.20	N/A	N/A	N/A
14	JS1120-3 Test System (Test Software)	Tonscend	JS1120-3	Version: 2.6.88.0341	N/A	N/A
15	Active Loop Antenna	HRTY	HR8913A	69331322060 23	2024/07/19	2025/07/19

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7 Test Photographs

Referring to – "Test Setup Photos of AJT241030031P-6

8 Photos of the EUT

Referring to - "External Photos of AJT241030031P-4" and "Internal Photos of AJT241030031P-5".

END OF TEST REPORT

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