



RF TEST REPORT

Product Name: ATK Dragonfly A9 Ultra Lightweight Wireless Mouse

Model Name: ATK Dragonfly A9 Ultra

FCC ID: 2BE9P-MSHVVDBPX

Issued For : Shenzhen Yizhita Technology Co., Ltd
Room 1901, Qianhai HOP Int'l, No. 19 Xinghua 1st Rd
(Extension), Bao'an District, Shenzhen, Guangdong, China.

Issued By : Shenzhen LGT Test Service Co., Ltd.
Room 205, Building 13, Zone B, Zhenxiong Industrial Park,
No.177, Renmin West Road, Jinsha, Kengzi Street, Pingshan
District, Shenzhen, Guangdong, China

Report Number: LGT25G232RF04

Sample Received Date: Jul. 25, 2025

Date of Test: Jul. 25, 2025 ~ Aug. 05, 2025

Date of Issue: Aug. 05, 2025

The test report is effective only with both signature and specialized stamp. This report shall not be reproduced except in full without the written approval of the Laboratory. The results in this report only apply to the tested sample.



TEST REPORT CERTIFICATION

Applicant: Shenzhen Yizhita Technology Co., Ltd
Address: Room 1901, Qianhai HOP Int'l, No. 19 Xinghua 1st Rd (Extension),
Bao'an District, Shenzhen, Guangdong, China.

Manufacturer: Shenzhen Yizhita Technology Co., Ltd
Address: Room 1901, Qianhai HOP Int'l, No. 19 Xinghua 1st Rd (Extension),
Bao'an District, Shenzhen, Guangdong, China.

Factory: Dongguan Dianxuntong Electronics Technology Co., Ltd.
Address: Room 302, Building 1, No. 6 Wende Street, Xiabian, Chang'an Town,
Dongguan City, Guangdong Province

Product Name: ATK Dragonfly A9 Ultra Lightweight Wireless Mouse

Trademark: 艾泰克ATK

Model Name: ATK Dragonfly A9 Ultra

Sample Status: Normal

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC Part 15.249, Subpart C ANSI C63.10-2013	PASS

Prepared by:

Zane Shan

Zane Shan
Engineer

Approved by:

Vita Li

Vita Li
Technical Director





Table of Contents	Page
1. SUMMARY OF TEST RESULTS	5
1.1 TEST FACTORY	6
1.2 MEASUREMENT UNCERTAINTY	6
2. GENERAL INFORMATION	7
2.1 GENERAL DESCRIPTION OF THE EUT	7
2.2 DESCRIPTION OF THE TEST MODES	9
2.3 TEST SOFTWARE AND POWER LEVEL	9
2.4 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS	10
2.5 EQUIPMENTS LIST	11
3. EMC EMISSION TEST	13
3.1 CONDUCTED EMISSION MEASUREMENT	13
3.2 TEST PROCEDURE	14
3.3 TEST SETUP	14
3.4 EUT OPERATING CONDITIONS	14
3.5 TEST RESULTS	15
4. RADIATED EMISSION MEASUREMENT	17
4.1 RADIATED EMISSION LIMITS	17
4.2 TEST PROCEDURE	18
4.3 TEST SETUP	19
4.4 EUT OPERATING CONDITIONS	19
4.5 FIELD STRENGTH CALCULATION	20
4.6 TEST RESULTS	21
4.7 TEST RESULTS (BAND EDGE REQUIREMENTS)	26
4.8 TEST RESULTS (EIRP REQUIREMENTS)	26
5. BANDWIDTH TEST	27
5.1 TEST PROCEDURE	27
5.2 TEST SETUP	27
5.3 EUT OPERATION CONDITIONS	27
5.4 TEST RESULTS	27
6. ANTENNA REQUIREMENT	29
6.1 STANDARD REQUIREMENT	29
6.2 EUT ANTENNA	29
APPENDIX I - MEASUREMENT PHOTOS	30



Revision History

Rev.	Issue Date	Contents
00	Aug. 05, 2025	Initial Issue



1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part 15.249, Subpart C			
Standard Section	Test Item	Judgment	Remark
15.207	Conducted Emission	PASS	--
15.249	Radiated Spurious Emission	PASS	--
15.205	Restricted Band Edge Emission	PASS	--
15.249	20dB Bandwidth	Pass	--
15.203	Antenna Requirement	PASS	--

NOTE:

- (1) 'N/A' denotes test is not applicable in this Test Report.
- (2) All tests are according to ANSI C63.10-2013.



1.1 TEST FACTORY

Company Name:	Shenzhen LGT Test Service Co., Ltd.
Address:	Room 205, Building 13, Zone B, Zhenxiong Industrial Park, No.177, Renmin West Road, Jinsha, Kengzi Street, Pingshan District, Shenzhen, Guangdong, China
Accreditation Certificate:	A2LA Certificate No.: 6727.01
	FCC Registration No.: 746540
	CAB ID: CN0136

1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded 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	Occupied Channel Bandwidth	$\pm 0.46\%$
2	RF Output Power, Conducted	$\pm 0.71\text{dB}$
3	Power Spectral Density, Conducted	$\pm 1.57\text{dB}$
4	Unwanted Emission, Conducted	$\pm 0.63\text{dB}$
5	Conducted emission	$\pm 2.80\text{dB}$
6	All Emissions, Radiated (0.009-30MHz)	$\pm 2.16\text{dB}$
7	All Emissions, Radiated (30MHz-1GHz)	$\pm 4.61\text{dB}$
8	All Emissions, Radiated (1GHz-18GHz)	$\pm 5.49\text{dB}$
9	Temperature	$\pm 0.5^{\circ}\text{C}$
10	Humidity	$\pm 2\%$
11	Duty Cycle	$\pm 2.3\%$

Note: The measurement uncertainty is not included in the test result.



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF THE EUT

Product Name:	ATK Dragonfly A9 Ultra Lightweight Wireless Mouse	
Trademark:	艾泰克 ATK	
Test Model Name:	ATK Dragonfly A9 Ultra	
Series Model:	N/A	
Model Difference:	N/A	
Product Description:	Operation Frequency:	2403~2480 MHz
	Modulation Type:	GFSK
	Number Of Channel:	16CH
	Antenna Type:	PCB Antenna
	Antenna Gain (dBi):	-3.46dBi
Rating:	Input: DC 5V 500mA	
Battery:	Capacity: 500mAh Rated Voltage: 3.7V	
Hardware Version:	N/A	
Software Version:	N/A	
Connecting I/O Port(s):	Please refer to the Note 1.	

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User Manual.
2. The antenna information refers to the manufacturer provide report, applicable only to the tested sample identified in the report. Due to the incorrect antenna information, a series of problems such as the accuracy of the test results will be borne by the customer.



3.

Channel List	
Channel	Frequency (MHz)
1	2403
2	2424
3	2442
4	2444
5	2446
6	2450
7	2452
8	2458
9	2462
10	2464
11	2466
12	2468
13	2470
14	2472
15	2474
16	2480



2.2 DESCRIPTION OF THE TEST MODES

For conducted test items and radiated spurious emissions

Each of these EUT operation mode(s) or test configuration mode(s) mentioned below was evaluated respectively.

Worst Mode	Description	Data/Modulation
Mode 1	TX CH01(2403MHz)	GFSK
Mode 2	TX CH03(2442MHz)	GFSK
Mode 3	TX CH16(2480MHz)	GFSK

Note:

(1) All above mode has been measurement, only worst data was reported.

(2) We have be tested for all avaiable U.S. voltage and frequency (For 120V,50/60Hz and 240V, 50/60Hz) for which the device is capable of operation, and the worst case of 120V/60Hz is shown in the report.

(3) The battery is fully-charged during the radited and RF conducted test.

For AC Conducted Emission

Test Case	
AC Conducted Emission	Mode 4: Keeping 2.4G TX

2.3 TEST SOFTWARE AND POWER LEVEL

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level.

Test software Version	Test program: 2.4G	
Engineering Mode	Mode Or Modulation type	Power setting
	GFSK	Default



2.4 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

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.

Accessories Equipment

Description	Manufacturer	Model	S/N	Rating
USB-A to USB-C Cable	N/A	N/A	N/A	1.6m

Auxiliary Equipment

Description	Manufacturer	Model	S/N	Rating
Laptop	Lenovo	HKF-16	N/A	N/A
Adapter	Tenpao	S010WU0500200	N/A	Input: 100-240V ~ 50/60Hz 0.4A Output: 5V, 2A

Note:

- (1) For detachable type I/O cable should be specified the length in cm in 『Length』 column.
- (2) “YES” is means “with core”; “NO” is means “without core”.



2.5 EQUIPMENTS LIST

Conducted Emission					
Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Until
EMI Test Receiver	R&S	ESU8	100372	2025.03.06	2026.03.05
LISN	COM-POWER	LI-115	02032	2025.03.05	2026.03.04
LISN	SCHWARZBECK	NNLK 8122	00160	2025.03.05	2026.03.04
Transient Limiter	CYBERTEK	EM5010A	E225010004 9	2025.03.05	2026.03.04
Coaxial cables (9kHz-30MHz)	Juncoax	JMR600-N MNM-2M	N.A	2025.03.06	2026.03.05
Temperature & Humidity	JINGCHUANG	BT-3	N.A	2025.03.10	2026.03.09
Testing Software	EMC-I_V1.4.0.3_SKET				

Radiated Test equipment					
Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Until
EMI Test Receiver	R&S	ESU8	100372	2025.03.06	2026.03.05
Active loop Antenna	ETS	6502	00049544	2025.03.11	2028.03.10
Spectrum Analyzer	Keysight	N9010B	MY60242508	2025.03.05	2026.03.04
Trilog Broadband Antenna (30M-1G)	SCHWARZBECK	VULB 9168	2705	2024.05.17	2027.05.16
Horn Antenna(1-18G)	SCHWARZBECK	3115	10SL0060	2025.03.10	2028.03.09
Horn Antenna(18-40G)	SCHWARZBECK	BBHA 9170	685	2023.10.23	2026.10.22
Pre-amplifier(30M-1G)	EMtrace	RP01A	02019	2025.03.06	2026.03.05
Pre-amplifier(1-26.5G)	Agilent	8449B	3008A4722	2025.03.06	2026.03.05
Pre-amplifier(18-40G)	SCHWARZBECK	BBV 9721	9721-019	2024.10.21	2025.10.20
Coaxial cables (9kHz-1GHz)	Juncoax	JMR600-N MNM-8M	N.A	2025.03.06	2026.03.05
Coaxial cables (1GHz-18GHz)	TaiHe	UCD460B- NMSM-1M 9	N.A	2025.03.06	2026.03.05
Coaxial cables (18GHz-40GHz)	Junkosha Inc.	MWX241-0 5000KMSK MS	N.A	2025.03.08	2026.03.07
Temperature& Humidity test chamber	AISRY	LX-1000L	171200018	2025.07.30	2026.07.29
Antenna Tower	SAEMC	BK-4AT-BS -D	SK20210930 08	N.A	N.A
Temperature & Humidity	JINGCHUANG	BT-3	N.A	2025.03.10	2026.03.09
Testing Software	EMC-I_V1.4.0.3_SKET				

RF Conducted Test equipment					
Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Until
Signal Analyzer	Keysight	N9010B	MY60242508	2025.03.05	2026.03.04
Signal Analyzer	Keysight	N9020A	MY50530994	2025.03.05	2026.03.04
Signal Analyzer	R&S	FSV40-N	102245	2025.02.17	2026.02.16
Power Sensor	R&S	NRP8S	149.0006K02 -104963-Ae	2025.03.06	2026.03.05
RF Automatic Test system	MW	MW100 -RFCB	MW220324L G-33	2025.03.06	2026.03.05
MXG Vector Signal Generator	Keysight	N5182B	MY59100717	2025.03.05	2026.03.04



Temperature& Humidity test chamber	AISRY	LX-1000L	171200018	2024.08.05 2025.08.03	2025.08.04 2026.08.02
Attenuator	eastsheep	90db	N.A	2025.03.06	2026.03.05
Temperature & Humidity	JINGCHUANG	BT-3	N.A	2025.03.10	2026.03.09
Digital multimeter	MASTECH	MS8261	MBGBC8305 3	2025.03.05	2026.03.04
DC source	Jiuyuan	QJ6010E	N.A	2025.03.09	2026.03.08
Testing Software	MTS8310_V2.0.0.0_MW				



3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION LIMITS

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 the limits in the following table.

FREQUENCY (MHz)	Conducted Emission limit (dBuV)	
	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of “ * ” marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

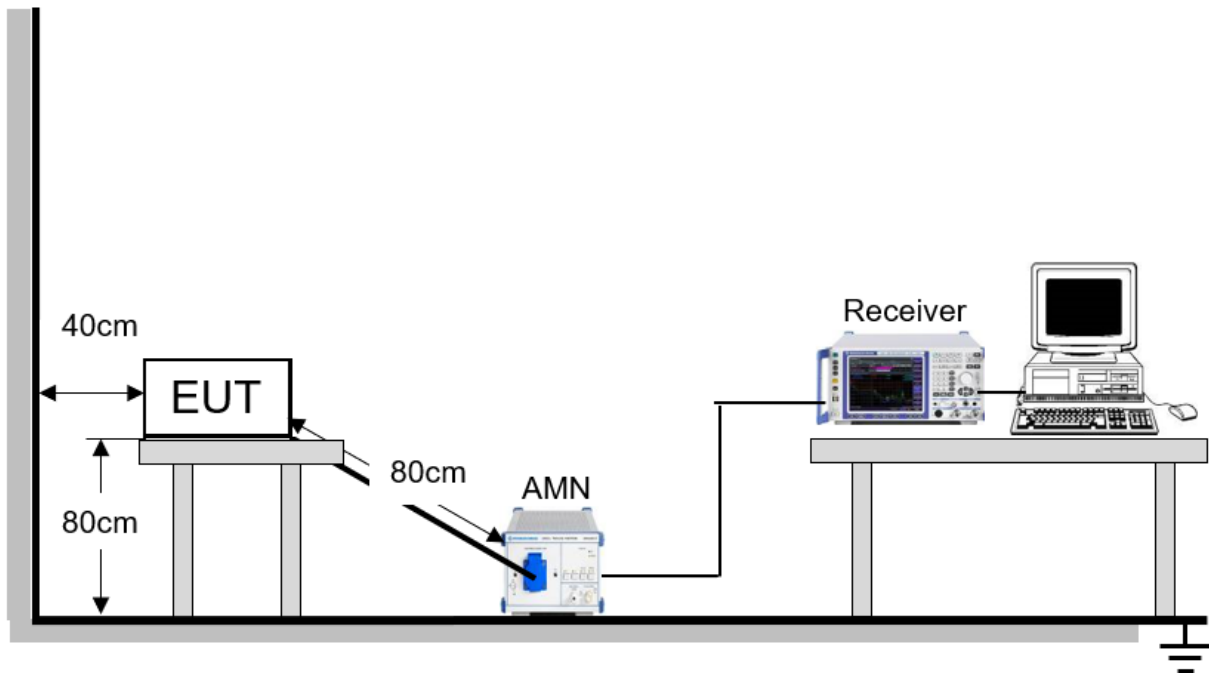
Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz



3.2 TEST PROCEDURE

- a. The EUT is 0.8 m from the horizontal ground plane and 0.4 m from the vertical ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments are powered from additional LISN(s). The LISN provides 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 is at least 80 cm from the nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

3.3 TEST SETUP



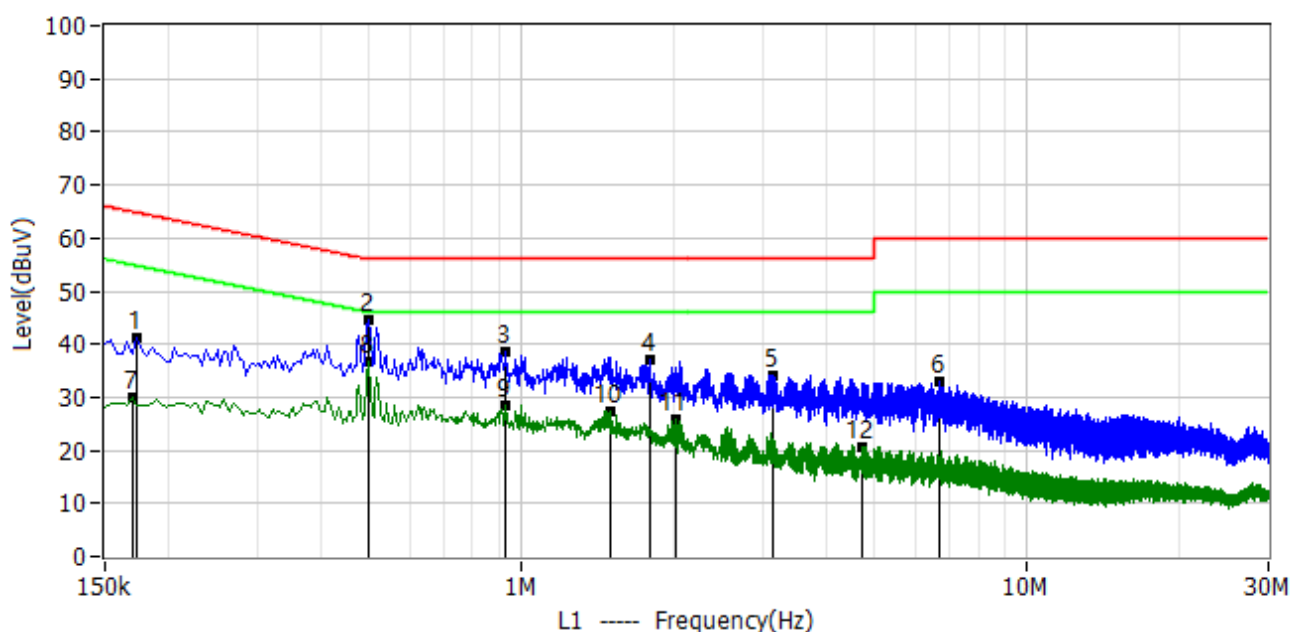
3.4 EUT OPERATING CONDITIONS

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.



3.5 TEST RESULTS

Project: LGT25G232	Test Engineer: LiuH
EUT: ATK Dragonfly A9 Ultra Lightweight Wireless Mouse	Temperature: 27.1°C
M/N: ATK Dragonfly A9 Ultra	Humidity: 45%RH
Test Voltage: AC 120V/60Hz	Test Data: 2025-07-28
Test Mode: TX 2403MHz	
Note:	



No.	Frequency MHz	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1*	0.174	30.64	10.65	41.29	64.77	-23.48	QP	L1
2*	0.498	33.58	10.93	44.51	56.03	-11.52	QP	L1
3*	0.930	27.87	10.86	38.73	56.00	-17.27	QP	L1
4*	1.798	25.95	11.11	37.06	56.00	-18.94	QP	L1
5*	3.154	22.73	11.32	34.05	56.00	-21.95	QP	L1
6*	6.698	21.43	11.39	32.82	60.00	-27.18	QP	L1
7*	0.170	19.51	10.63	30.14	54.96	-24.82	AV	L1
8*	0.498	25.81	10.93	36.74	46.03	-9.29	AV	L1
9*	0.930	17.77	10.86	28.63	46.00	-17.37	AV	L1
10*	1.494	16.37	11.15	27.52	46.00	-18.48	AV	L1
11*	2.014	14.68	11.09	25.77	46.00	-20.23	AV	L1
12*	4.706	9.27	11.31	20.58	46.00	-25.42	AV	L1

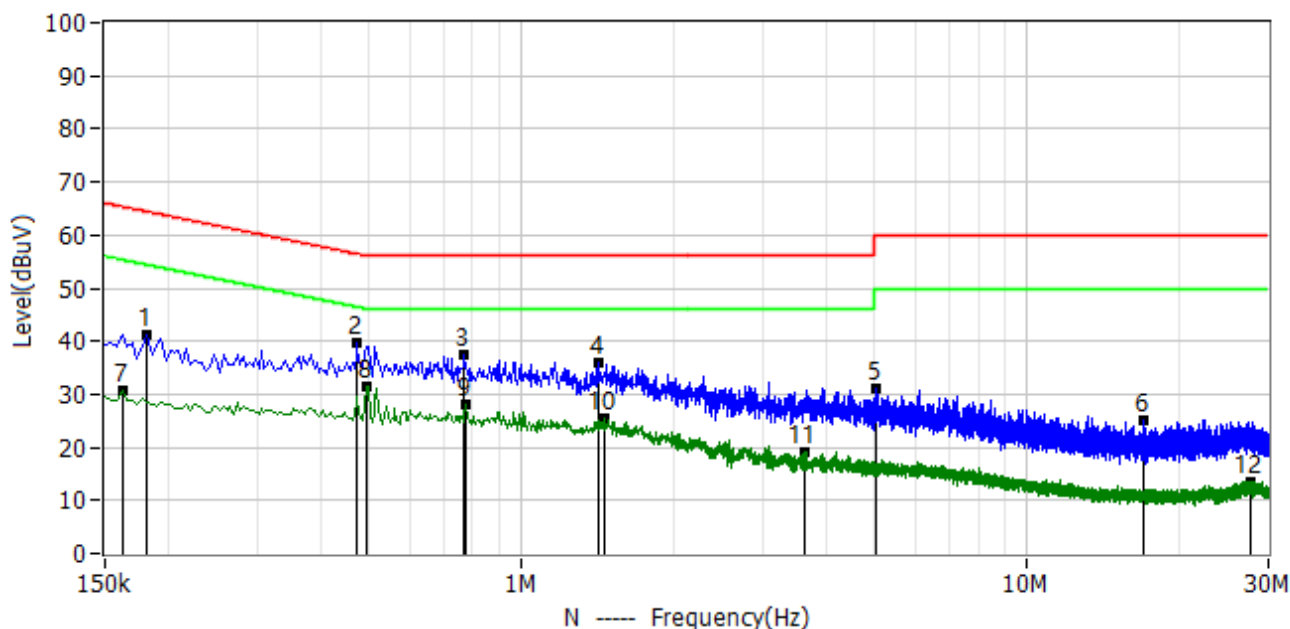
Note:

Level = Reading + Factor

Margin = Level – Limit



Project: LGT25G232	Test Engineer: LiuH
EUT: ATK Dragonfly A9 Ultra Lightweight Wireless Mouse	Temperature: 27.1°C
M/N: ATK Dragonfly A9 Ultra	Humidity: 45%RH
Test Voltage: AC 120V/60Hz	Test Data: 2025-07-28
Test Mode: TX 2403MHz	
Note:	



No.	Frequency MHz	Reading dBuV	Factor dB	Level dBuV	Limit dBuV	Margin dB	Detector	Polar
1*	0.182	30.57	10.65	41.22	64.39	-23.18	QP	N
2*	0.474	28.69	10.83	39.52	56.44	-16.93	QP	N
3*	0.770	26.65	10.83	37.48	56.00	-18.52	QP	N
4*	1.414	24.98	11.05	36.03	56.00	-19.97	QP	N
5*	5.006	19.80	11.31	31.11	60.00	-28.89	QP	N
6*	16.914	13.35	11.70	25.05	60.00	-34.95	QP	N
7*	0.162	20.07	10.66	30.73	55.36	-24.63	AV	N
8*	0.494	20.75	10.84	31.59	46.10	-14.51	AV	N
9*	0.778	17.24	10.83	28.07	46.00	-17.93	AV	N
10*	1.462	14.25	11.08	25.33	46.00	-20.67	AV	N
11*	3.622	7.77	11.26	19.03	46.00	-26.97	AV	N
12*	27.546	1.68	11.81	13.49	50.00	-36.51	AV	N

Note:

Level = Reading + Factor

Margin = Level – Limit



4. RADIATED EMISSION MEASUREMENT

4.1 RADIATED EMISSION LIMITS

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on Part 15.249, Part 15.209(a) limit in the table below has to be followed.

Standard FCC 15.209

Frequencies (MHz)	Field Strength (micovolts/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
960~1000	500	3
Above 1000	Other:74.0 dB(μ V)/m (Peak) 54.0 dB(μ V)/m (Average)	3

Standard FCC 15.249

Frequency of Emission (MHz)	Field Strength of fundamental (millivolts /meter)	Field Strength of Harmonics (microvolts/meter)
900~928	50	500
2400~2483.5	50	500
5725~5875	50	500
24000~242500	250	2500

Notes:

- (1) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

Spectrum Parameter	Setting
Detector	Peak/AV
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB (emission in restricted band)	>20BW
VB (emission in restricted band)	=3xRB



Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~90kHz / RB 200Hz for PK & AV
	90kHz~110kHz / RB 200Hz for QP
	110kHz~490kHz / RB 200Hz for PK & AV
	490kHz~30MHz / RB 9kHz for QP
	30MHz~1000MHz / RB 120kHz for QP

4.2 TEST PROCEDURE

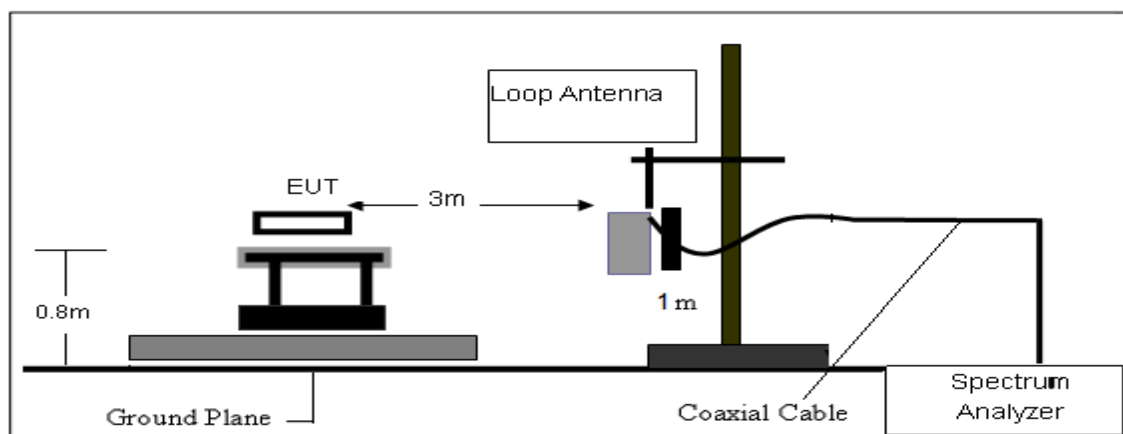
- The measuring distance at 3 m shall be used for measurements at frequency 0.009MHz up to 1GHz, and above 1GHz.
- The EUT was placed on the top of a rotating table 0.8 m (above 1GHz is 1.5 m) above the ground at a 3 m anechoic chamber test site. The table was rotated 360 degree to determine the position of the highest radiation.
- The height of the equipment shall be 0.8 m(above 1GHz is 1.5 m); the height of the test antenna shall vary between 1 m to 4 m. Horizontal and vertical polarization of the antenna are set to make the measurement.
- 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 QuasiPeak detector mode will be re-measured.
- If the Peak Mode measured value is compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and no additional QP Mode measurement was performed.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

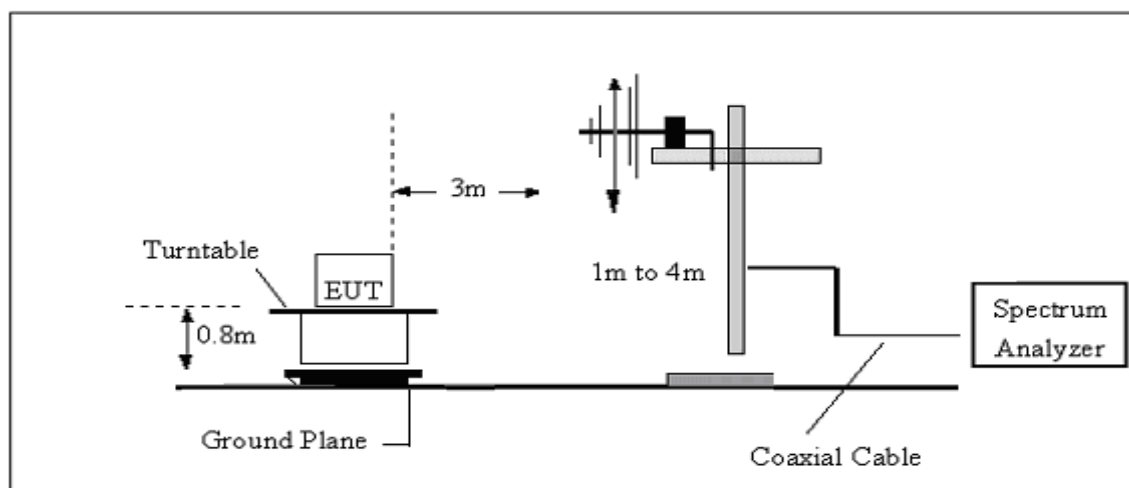
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

4.3 TEST SETUP

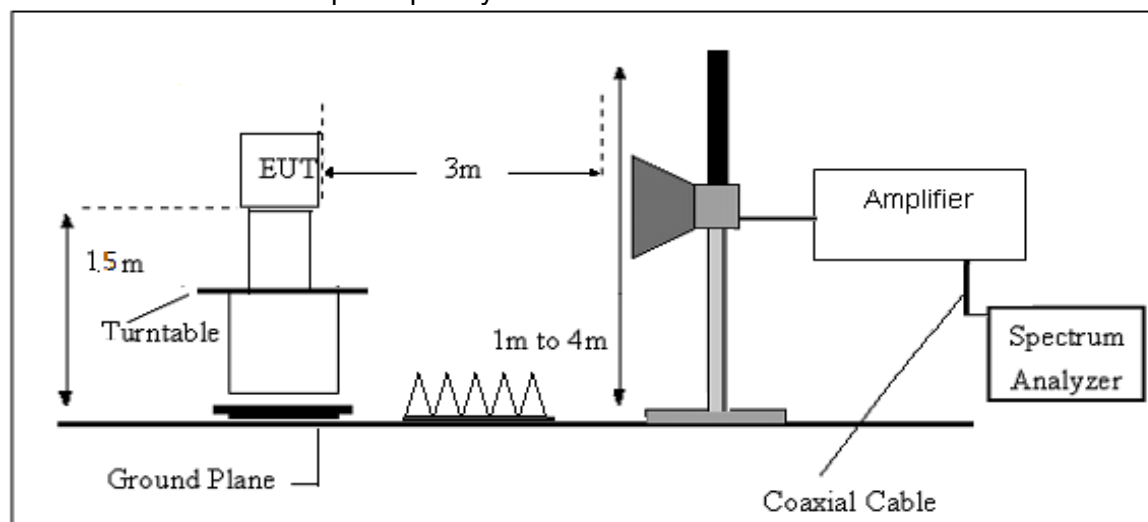
(A) Radiated Emission Test-Up Frequency Below 30MHz



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



(C) Radiated Emission Test-Up Frequency Above 1GHz



4.4 EUT OPERATING CONDITIONS

Please refer to section 3.4 of this report.



4.5 FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

Where

FS = Field Strength

CL = Cable Attenuation Factor (Cable Loss)

RA = Reading Amplitude

AG = Amplifier Gain

AF = Antenna Factor

For example

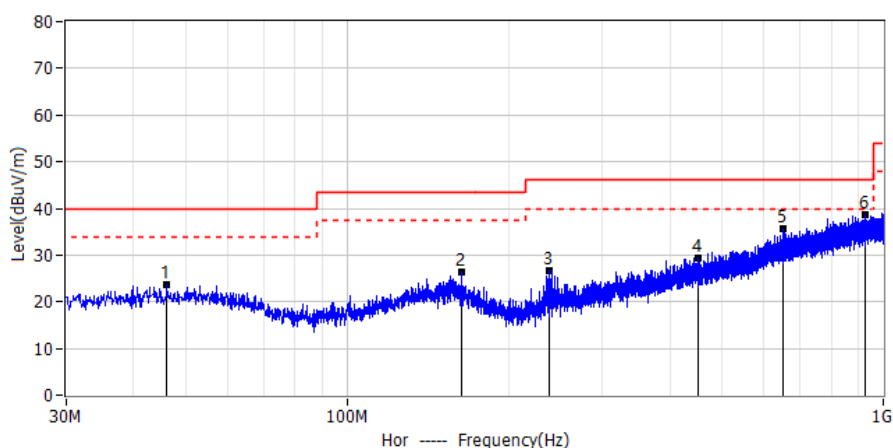
Frequency	FS	RA	AF	CL	AG	Factor
(MHz)	(dBμV/m)	(dBμV/m)	(dB)	(dB)	(dB)	(dB)
300	40	58.1	12.2	1.6	31.9	-18.1

$$\text{Factor} = \text{AF} + \text{CL} - \text{AG}$$

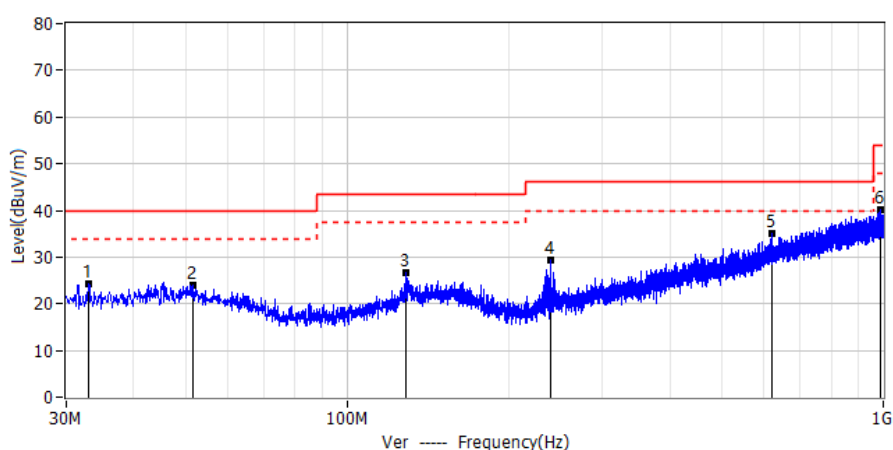


4.6 TEST RESULTS

Project: LGT25G232	Test Engineer: LiuH
EUT: ATK Dragonfly A9 Ultra Lightweight Wireless Mouse	Temperature: 24.5°C
M/N: ATK Dragonfly A9 Ultra	Humidity: 52%RH
Test Voltage: Battery	Test Data: 2025-07-30
Test Mode: TX 2403MHz	
Note:	



No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	46.248	2.85	20.71	23.56	40.00	-16.44	QP	Hor
2*	163.496	4.91	21.59	26.50	43.50	-17.00	QP	Hor
3*	238.550	7.52	19.29	26.81	46.00	-19.19	QP	Hor
4*	452.193	2.72	26.68	29.40	46.00	-16.60	QP	Hor
5*	650.800	5.40	30.24	35.64	46.00	-10.36	QP	Hor
6*	923.613	4.45	34.34	38.79	46.00	-7.21	QP	Hor



No.	Frequency MHz	Reading dBuV	Factor dB/m	Level dBuV/m	Limit dBuV/m	Margin dB	Detector	Polar
1*	33.031	4.39	19.74	24.13	40.00	-15.87	QP	Ver
2*	51.704	3.27	20.75	24.02	40.00	-15.98	QP	Ver
3*	128.819	6.15	20.45	26.60	43.50	-16.90	QP	Ver
4*	240.005	10.02	19.33	29.35	46.00	-16.65	QP	Ver
5*	620.488	5.17	29.81	34.98	46.00	-11.02	QP	Ver
6*	989.573	4.97	35.07	40.04	54.00	-13.96	QP	Ver

Note:

Level = Reading + Factor

Margin = Level – Limit



Above 1G Radiation Spurious

Frequency (MHz)	Reading (dBμV)	Corrected Factor (dB)	Result (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector	Polarity
Low Channel (2403 MHz)							
3264.72	55.11	-8.45	46.66	74.00	-27.34	PK	Vertical
3264.72	45.43	-8.45	36.98	54.00	-17.02	AV	Vertical
3264.68	55.00	-8.45	46.55	74.00	-27.45	PK	Horizontal
3264.68	46.56	-8.45	38.11	54.00	-15.89	AV	Horizontal
4804.34	54.43	-6.09	48.34	74.00	-25.66	PK	Vertical
4804.34	44.93	-6.09	38.84	54.00	-15.16	AV	Vertical
4804.47	55.39	-6.09	49.30	74.00	-24.70	PK	Horizontal
4804.47	44.17	-6.09	38.08	54.00	-15.92	AV	Horizontal
5359.60	57.53	-6.68	50.85	74.00	-23.15	PK	Vertical
5359.60	47.41	-6.68	40.73	54.00	-13.27	AV	Vertical
5359.71	57.07	-6.68	50.39	74.00	-23.61	PK	Horizontal
5359.71	47.73	-6.68	41.05	54.00	-12.95	AV	Horizontal
7205.86	59.56	-8.13	51.43	74.00	-22.57	PK	Vertical
7205.86	50.81	-8.13	42.68	54.00	-11.32	AV	Vertical
7205.68	60.81	-8.13	52.68	74.00	-21.32	PK	Horizontal
7205.68	49.50	-8.13	41.37	54.00	-12.63	AV	Horizontal
Middle Channel (2442 MHz)							
3264.84	55.19	-8.45	46.74	74.00	-27.26	PK	Vertical
3264.84	45.29	-8.45	36.84	54.00	-17.16	AV	Vertical
3264.65	55.96	-8.45	47.51	74.00	-26.49	PK	Horizontal
3264.65	45.15	-8.45	36.70	54.00	-17.30	AV	Horizontal
4880.56	54.98	-6.09	48.89	74.00	-25.11	PK	Vertical
4880.56	44.88	-6.09	38.79	54.00	-15.21	AV	Vertical
4880.54	54.32	-6.09	48.23	74.00	-25.77	PK	Horizontal
4880.54	44.71	-6.09	38.62	54.00	-15.38	AV	Horizontal
5359.76	56.88	-6.68	50.20	74.00	-23.80	PK	Vertical
5359.76	47.02	-6.68	40.34	54.00	-13.66	AV	Vertical
5359.64	56.88	-6.68	50.20	74.00	-23.80	PK	Horizontal
5359.64	47.22	-6.68	40.54	54.00	-13.46	AV	Horizontal
7310.76	60.30	-8.13	52.17	74.00	-21.83	PK	Vertical
7310.76	50.58	-8.13	42.45	54.00	-11.55	AV	Vertical
7310.96	60.03	-8.13	51.90	74.00	-22.10	PK	Horizontal
7310.96	50.39	-8.13	42.26	54.00	-11.74	AV	Horizontal
High Channel (2480 MHz)							



3264.89	55.12	-8.45	46.67	74.00	-27.33	PK	Vertical
3264.89	46.49	-8.45	38.04	54.00	-15.96	AV	Vertical
3264.80	56.35	-8.45	47.90	74.00	-26.10	PK	Horizontal
3264.80	46.40	-8.45	37.95	54.00	-16.05	AV	Horizontal
4960.50	54.64	-6.09	48.55	74.00	-25.45	PK	Vertical
4960.50	44.28	-6.09	38.19	54.00	-15.81	AV	Vertical
4960.47	55.01	-6.09	48.92	74.00	-25.08	PK	Horizontal
4960.47	44.65	-6.09	38.56	54.00	-15.44	AV	Horizontal
5359.71	57.18	-6.68	50.50	74.00	-23.50	PK	Vertical
5359.71	47.46	-6.68	40.78	54.00	-13.22	AV	Vertical
5359.70	57.41	-6.68	50.73	74.00	-23.27	PK	Horizontal
5359.70	47.48	-6.68	40.80	54.00	-13.20	AV	Horizontal
7439.92	60.98	-8.13	52.85	74.00	-21.15	PK	Vertical
7439.92	50.81	-8.13	42.68	54.00	-11.32	AV	Vertical
7439.83	60.30	-8.13	52.17	74.00	-21.83	PK	Horizontal
7439.83	49.60	-8.13	41.47	54.00	-12.53	AV	Horizontal

Note:

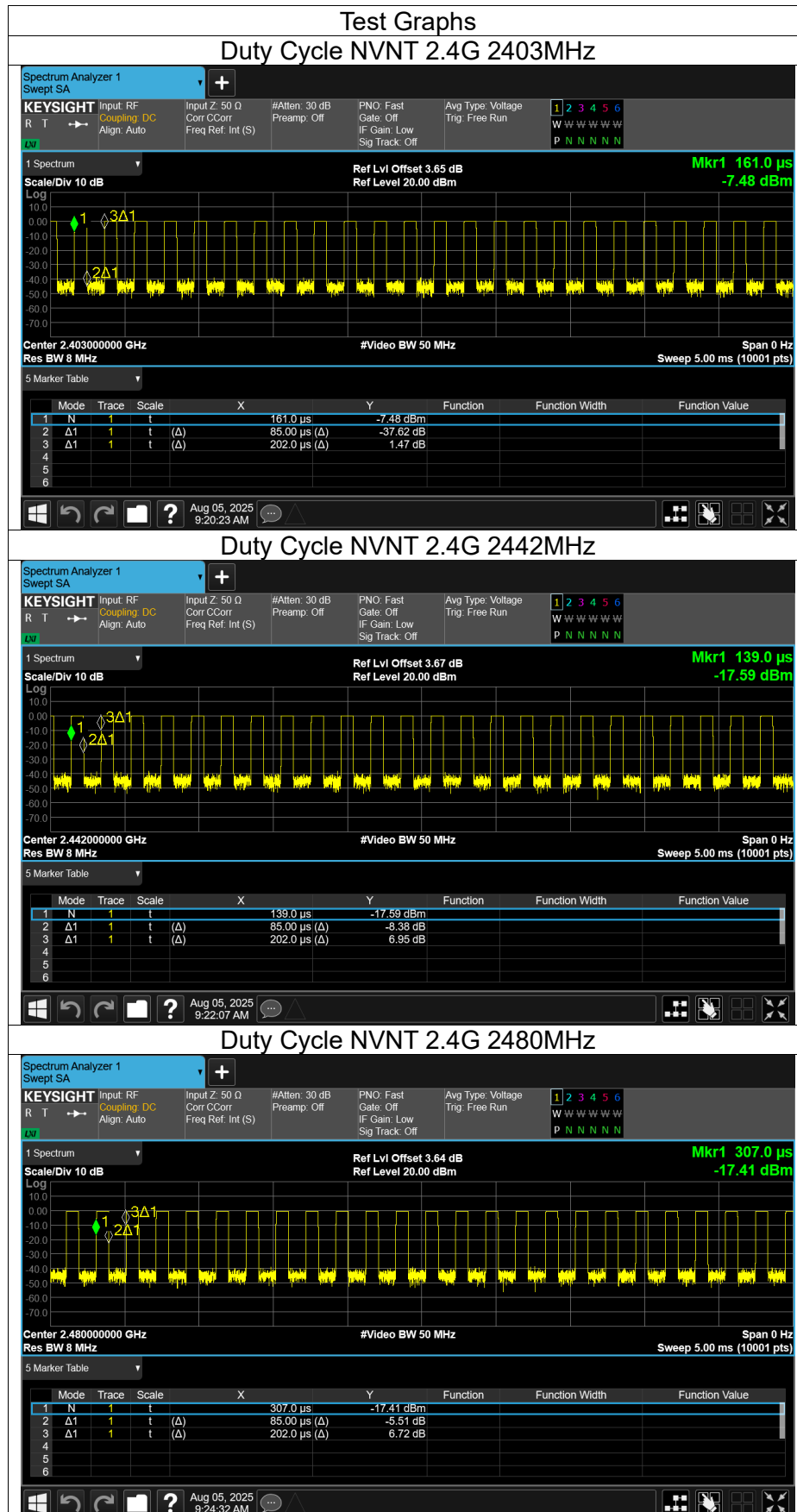
1. In frequency ranges 18~25GHz no any other harmonic emissions detected which are tested to compliance with the limit. No recording in the test report. No any other emissions level which are attenuated less than 20dB below the limit. No recording in the test report.

Average measurement was not performed if peak level lower than average limit. No any other emissions level which are attenuated less than 20dB below the limit. The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part. Hence there no other emissions have been reported.

2. Result = Reading + Corrected Factor, Margin = Result – Limit



Duty cycle





Condition	Mode	Frequency (MHz)	On Time (ms)	Period (ms)	Duty Cycle (%)	Correction Factor (dB)
NVNT	2.4G	2403	0.085	0.202	42.08	-7.52
NVNT	2.4G	2442	0.085	0.202	42.08	-7.52
NVNT	2.4G	2480	0.085	0.202	42.08	-7.52

Note: Duty Factor=20*LOG(Ton/Tp)



4.7 TEST RESULTS (BAND EDGE REQUIREMENTS)

Frequency (MHz)	Reading (dBμV)	Corrected Factor (dB)	Result (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector	Polarity
2400.00	17.28	34.18	51.46	74.00	-22.54	PK	Vertical
2400.00	5.75	34.18	39.93	54.00	-14.07	AV	Vertical
2400.00	17.41	34.18	51.59	74.00	-22.41	PK	Horizontal
2400.00	5.94	34.18	40.12	54.00	-13.88	AV	Horizontal
2483.50	14.31	34.44	48.75	74.00	-25.25	PK	Vertical
2483.50	2.74	34.44	37.18	54.00	-16.82	AV	Vertical
2483.50	14.04	34.44	48.48	74.00	-25.52	PK	Horizontal
2483.50	2.17	34.44	36.61	54.00	-17.39	AV	Horizontal

4.8 TEST RESULTS (EIRP REQUIREMENTS)

Frequency (MHz)	Meter Reading (dBμV/m)	Detector	Corrected Factor (dB)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polar
2403.00	58.85	PK	34.19	93.04	114.00	-20.96	H
2403.00	59.89	PK	34.19	94.08	114.00	-19.92	V
2442.00	57.77	PK	34.31	92.08	114.00	-21.92	H
2442.00	60.43	PK	34.31	94.74	114.00	-19.26	V
2480.00	56.30	PK	34.42	90.72	114.00	-23.28	H
2480.00	59.78	PK	34.42	94.20	114.00	-19.80	V

$$AV = \text{Peak} + 20\log_{10}(\text{duty cycle factor}) = PK + (-7.52)$$

Frequency (MHz)	PK Reading (dBμV/m)	Duty cycle factor (dB)	AV Reading (dBμV/m)	Corrected Factor (dB)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polar
2403.00	58.85	-7.52	51.33	34.19	85.52	94.00	-8.48	H
2403.00	59.89	-7.52	52.37	34.19	86.56	94.00	-7.44	V
2442.00	57.77	-7.52	50.25	34.31	84.56	94.00	-9.44	H
2442.00	60.43	-7.52	52.91	34.31	87.22	94.00	-6.78	V
2480.00	56.30	-7.52	48.78	34.42	83.20	94.00	-10.80	H
2480.00	59.78	-7.52	52.26	34.42	86.68	94.00	-7.32	V

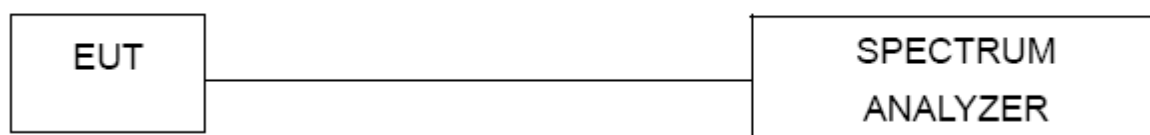


5. BANDWIDTH TEST

5.1 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- Spectrum Setting : RBW= 30KHz, VBW $\geq$ RBW, Sweep time = Auto.

5.2 TEST SETUP



5.3 EUT OPERATION CONDITIONS

TX mode.

5.4 TEST RESULTS

Mode	Frequency (MHz)	Antenna	20dB BANDWIDTH (MHz)
NVNT	2.4G	2403	1.496
NVNT	2.4G	2442	1.501
NVNT	2.4G	2480	1.5





6. ANTENNA REQUIREMENT

6.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, 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.

6.2 EUT ANTENNA

The EUT antenna is PCB Antenna. It comply with the standard requirement.



APPENDIX I - MEASUREMENT PHOTOS

Note: Please see the attached RF_Test Setup photos for FCC ID & IC.

※※※※※END OF THE REPORT※※※※※