



诺检标准
NTT STANDARD

TEST REPORT

FCC ID: 2A9M6-I3

Product : Children AI Study Travel Machine
Model Name : I1, I2, I3, I5, I6, I7, I8, I9, I10
Brand : GS Wear
Report No. : SZNTT26004043E1-2

Prepared for

Shenzhen Guangsu Shidai Technology Co. , Ltd.
Ji Hua Jie Dao Gan Li er Lu Ju Yin sci-tech industrial park b 2,
Longgang District, Shenzhen, China.

Prepared by

Shenzhen NTT Testing Technology Co., Ltd.
1B, Building 2, Factory Building & 103, Building 3, Factory Building, Dayang Industrial
Park No.4, Industrial Avenue, Tangwei Community, Fuhai Sub-district, Bao 'an District,
Shenzhen City, China
TEL: 0755-27889935



1 TEST RESULT CERTIFICATION

Applicant : Shenzhen Guangsu Shidai Technology Co. , Ltd.
Address : Ji Hua Jie Dao Gan Li er Lu Ju Yin sci-tech industrial park b 2,
Longgang District, Shenzhen, China.
Manufacturer : Shenzhen Guangsu Shidai Technology Co. , Ltd.
Address : Ji Hua Jie Dao Gan Li er Lu Ju Yin sci-tech industrial park b 2,
Longgang District, Shenzhen, China.
Product name : Children AI Study Travel Machine
Model name : I1, I2, I3, I5, I6, I7, I8, I9, I10
Standards : FCC CFR47 Part 15 Section 15.247
Test procedure : ANSI C63.10-2020+Cor 1+2023
Date of test : Jan. 23, 2026 to Mar. 31, 2026
Date of Issue : Mar. 31, 2026

This device described above has been tested by NTT, 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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Prepared by(Test Engineer):

Zhao Di

Zhao Di

Reviewer(Supervisor):

Ken Wu

Ken Wu

Approved(Manager):

Abel Yu





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2 Test Summary

Test Items	Test Requirement	Result
AC Power Line conducted emission	FCC part 15.207	PASS
Radiated Spurious Emissions	FCC part 15.205/15.209	PASS
Conducted Spurious Emission	FCC part 15.205/15.209	PASS
Band edge	FCC part 15.247(d)	PASS
6dB&99% Bandwidth	FCC part 15.247 (a)(2)	PASS
Maximum Peak Output Power	FCC part 15.247 (b)(3)	PASS
Power Spectral Density	FCC part 15.247 (e)	PASS
Antenna Requirement	FCC part 15.203/15.247 (b)(4)	PASS

Remark:

"N/A" denotes test is not applicable in this Test Report.



3 General Information

3.1 General Description of E.U.T.

Product Name	:	Children AI Study Travel Machine
Model Name	:	I3
Sample ID	:	SZNTT26004043E1-001#
Sample(s) Status:	:	Engineer sample
Series Model	:	I1, I2, I5, I6, I7, I8, I9, I10
Model Different.:	:	Everything is the same except for the model name.
Specification	:	802.11b/g/nHT20
Operation Frequency	:	2412-2462MHz for 802.11b/g/n20
Number of Channel	:	11 channels for 802.11b/g/n20
Type of Modulation	:	802.11b: DSSS (CCK, DQPSK, DBPSK) 802.11g/n(20):(64-QAM,16-QAM, QPSK, BPSK) OFDM
Antenna installation	:	FPC Antenna
Antenna Gain	:	0.5dBi
Power supply	:	DC 3.7V from Battery; Charging input:DC 5V
Remark: the Antenna gain is provided by customer from Antenna spec. and the laboratory will not be responsible for the accumulated calculation results which covers the information provided by the applicant.		



3.2 Channel List

The EUT has been tested under its typical operating condition.

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

The Transmitter was operated in the normal operating mode. The TX frequency was fixed which was for the purpose of the measurements.

Test of channel included the lowest and middle and highest frequency to perform the test, then record on this report.

Those data rates (802.11b: 1 Mbps; 802.11g: 6 Mbps; 802.11n (HT20:MCS0); were used for all test.

Pre-defined engineering program for regulatory testing used to control the EUT for staying in continuous transmitting and receiving mode is programmed.

Frequency and Channel list for 802.11 b/g/n (HT20):

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	5	2432	9	2452
2	2417	6	2437	10	2457
3	2422	7	2442	11	2462
4	2427	8	2447		

Test Frequency and Channel for 802.11 b/g/n (HT20):

Lowest Frequency		Middle Frequency		Highest Frequency	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	6	2437	11	2462



3.3 Test Site

Site Description

EMC Lab. : Designation Number: CN3446

Test Firm Registration Number: 129414

Accredited by ANAB, Dec. 19, 2025

The Certificate Registration Number is AT-3446

Name of Firm : Shenzhen NTT Testing Technology Co., Ltd.

Site Location : 1B, Building 2, Factory Building & 103, Building 3, Factory Building,
Dayang Industrial Park No.4, Industrial Avenue, Tangwei Community,
Fuhai Sub-district, Bao'an District, Shenzhen City, China



3.4 Test Setup Configuration

Conducted Emission



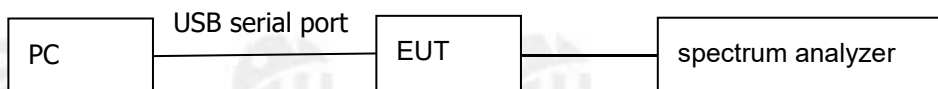
Radiated Emission (30MHz-1GHz)



Radiated Spurious



Conducted Spurious



3.5 Test Mode

Transmitting mode	Keep the EUT in continuously transmitting mode.
Remark: During the test, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's data.	

Test Software	Pandora_R22.19.3201
Power level setup	6

4 Equipment During Test

4.1 Equipments List

Conducted emission Test Equipment

Name	Model No.	Serial No.	Manufacturer	Date of Cal.	Due Date
944 Shielded Room	HSRCE944	/	HTEC	2025/4/30	2028/4/29
EMI Test Receiver	ESPI	/	RS	2025/9/8	2026/9/7
LISN	NNLK 8129	00603	Schwarzbeck	2025/9/8	2026/9/7
LISN	NNHV 8123-400	00694	Schwarzbeck	2025/9/8	2026/9/7
LISN	NNHV 8123-400	00680	Schwarzbeck	2025/9/8	2026/9/7
Cable	RG223-1500MM	NA	RG	2025/9/8	2026/9/7

Radiated emission & Radio Frequency Test Equipment

Name	Model No.	Serial No.	Manufacturer	Date of Cal.	Due Date
966 Shielded Room	966 Room	/	EMToni	2025/7/24	2028/7/23
EMI Test Receiver	ESCI	101018	RS	2025/9/8	2026/9/7
Amplifier (30MHz-1GHz)	BBV 9718D	00042	SCHWARZBECK	2025/9/8	2026/9/7
Bilog Antenna (30MHz-1GHz)	VULB9168	1858	SCHWARZBECK	2025/9/9	2026/9/8
Horn antenna (1GHz-18GHz)	BBHA 9120 D	02622	SCHWARZBECK	2025/9/9	2026/9/8
Preamplifier (1GHz-18GHz)	BBV 9718D	0024	SCHWARZBECK	2025/9/8	2026/9/7
Spectrum Analyzer (10Hz-40GHz)	FSV 40	100952	Rohde & Schwarz	2025/9/8	2026/9/7
Preamplifier (18GHz-40GHz)	BBV 9721	0056	SCHWARZBECK	2025/9/8	2026/9/7



Double Ridge Guide Horn Antenna (18GHz-40GHz)	SAS-574	588	A.H.System	2025/9/8	2026/9/7
Loop Antenna (9KHz-30MHz)	FMZB1519B	014	SCHWARZBECK	2025/9/8	2026/9/7
Amplifier (9KHz-30MHz)	CVP 9222 C	00109	SCHWARZBECK	2025/9/8	2026/9/7
MXG Signal Analyzer	N9020A	MY50510202	Agilent	2025/9/8	2026/9/7
MXG Vector Signal Generator	N5182A	MY50140020	Agilent	2025/9/8	2026/9/7
MXG Analog Signal Generator	N5181A	MY47420919	Agilent	2025/9/8	2026/9/7
Power Sensor	TR1029-2	512364	Techoy	2025/9/8	2026/9/7
RF Switch	TR1029-1	512364	Techoy	2025/9/8	2026/9/7
Cable	DA800- 4000MM	NA	DA	2025/9/8	2026/9/7
Cable	DA800- 11000MM	NA	DA	2025/9/8	2026/9/7

Other

Item	Name	Manufacturer	Model	Software version
1	EMC Conduction Test System	FALA	EZ-EMC	Ver.EMC-CON 3A1.1+
2	EMC radiation test system	FALA	EZ-EMC	Ver.FA-03A2 RE+
3	RF test system	TACHOY	RFTest	V1.0.0
4	RF communication test system	TACHOY	RFTest	V1.0.0



4.2 Measurement Uncertainty

Parameter	Uncertainty
RF output power, conducted	$\pm 1.0\text{dB}$
Power Spectral Density, conducted	$\pm 2.2\text{dB}$
Radio Frequency	$\pm 1 \times 10^{-6}$
Bandwidth	$\pm 1.5 \times 10^{-6}$
Time	$\pm 2\%$
Duty Cycle	$\pm 2\%$
Temperature	$\pm 1^{\circ}\text{C}$
Humidity	$\pm 5\%$
DC and low frequency voltages	$\pm 3\%$
Conducted Emissions (150kHz~30MHz)	$\pm 3.64\text{dB}$
Radiated Emission(9KHz~30MHz)	$\pm 4.51\text{dB}$
Radiated Emission(30MHz~1GHz)	$\pm 5.03\text{dB}$
Radiated Emission(1GHz~25GHz)	$\pm 4.74\text{dB}$
Remark:When making a conformity declaration based on test results for regulations/standards or specifications,the default is to use Clause 4.2.1of ILAC-G8:09/2019 and the guidelines on decision rules and conformity declaration in IEC Guide 115:2023.	



4.3 Description of 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.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
E-1	Children AI Study Travel Machine	GS Wear	I3	N/A	EUT
E-2	Adapter	/	X2903	/	Auxiliary
E-3	USB serial port	/	AML6001G	/	Auxiliary
E-4	PC	ASUS	U1	/	Auxiliary

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.



5 Conducted Emission

Test Requirement:	: FCC CFR 47 Part 15 Section 15.207
Test Method	: ANSI C63.10-2020+Cor 1+2023
Test Result	: PASS
Frequency Range	: 150kHz to 30MHz
Class/Severity	: Class B

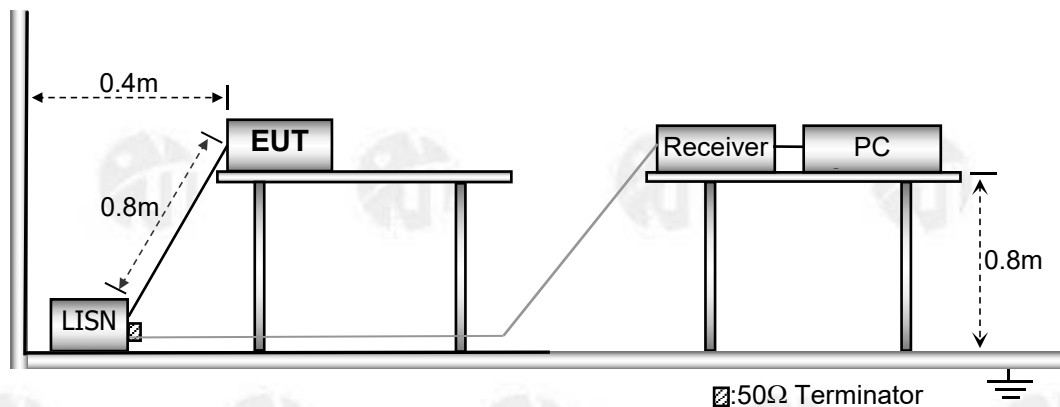
5.1 E.U.T. Operation

Operating Environment :

Temperature	: 26°C
Humidity	: 54 % RH
Atmospheric Pressure	: 101.11kPa

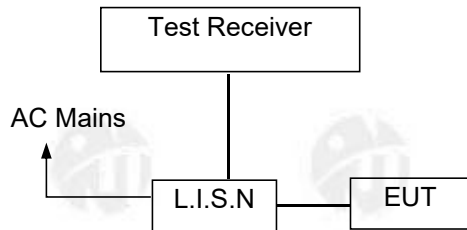
5.2 EUT Setup

The conducted emission tests were performed using the setup accordance with the ANSI C63.10-2020+Cor 1+2023.





5.3 Test SET-UP (Block Diagram of Configuration)



5.4 Measurement Procedure

1. The EUT was placed on a table, which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured was complete.

5.5 Conducted Emission Limit

Conducted Emission

Frequency(MHz)	Quasi-peak	Average
0.15-0.5	66-56	56-46
0.5-5.0	56	46
5.0-30.0	60	50

Note:

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

5.6 Measurement Description

The maximised peak emissions from the EUT was scanned and measured for both the Live and Neutral Lines. Quasi-peak & average measurements were performed if peak emissions were within 6dB of the average limit line.

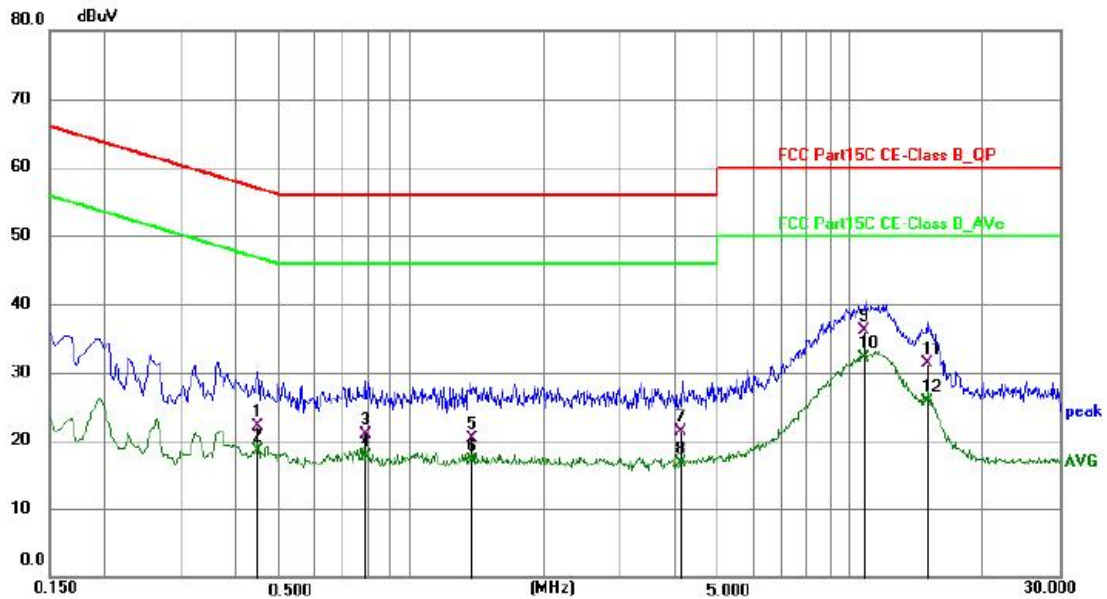
5.7 Conducted Emission Test Result

Pass.

Conducted emission at both 120V & 240V is assessed, and emission at 120V represents the worst case. All the modulation modes were tested the data of the worst mode (802.11b, Middle channel) are recorded in the following pages and the others modulation methods do not exceed the limits.



Temperature:	26°C	Relative Humidity:	54%
Pressure:	101kPa	Phase :	L
Test Voltage :	AC 120V/60Hz		

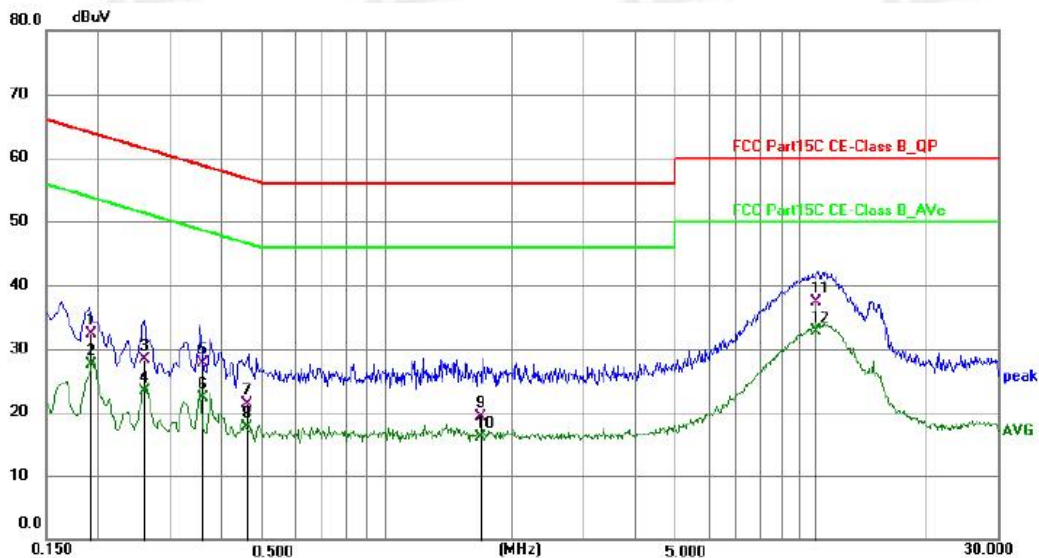


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.4484	11.89	10.13	22.02	56.90	-34.88	QP	P
2	0.4484	8.28	10.13	18.41	46.90	-28.49	AVG	P
3	0.7889	10.70	10.13	20.83	56.00	-35.17	QP	P
4	0.7889	7.48	10.13	17.61	46.00	-28.39	AVG	P
5	1.3755	10.14	10.14	20.28	56.00	-35.72	QP	P
6	1.3755	6.89	10.14	17.03	46.00	-28.97	AVG	P
7	4.1346	11.09	10.20	21.29	56.00	-34.71	QP	P
8	4.1346	6.41	10.20	16.61	46.00	-29.39	AVG	P
9	10.7995	25.81	10.37	36.18	60.00	-23.82	QP	P
10 *	10.7995	21.70	10.37	32.07	50.00	-17.93	AVG	P
11	14.9290	20.69	10.54	31.23	60.00	-28.77	QP	P
12	14.9290	15.07	10.54	25.61	50.00	-24.39	AVG	P

Notes: 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. Correct Factor = Insertion loss of LISN + Cable loss.
4.Mesurement Level = Reading level + Correct Factor.



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



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1929	22.20	10.16	32.36	63.91	-31.55	QP	P
2	0.1929	17.38	10.16	27.54	53.91	-26.37	AVG	P
3	0.2599	18.16	10.13	28.29	61.43	-33.14	QP	P
4	0.2599	13.12	10.13	23.25	51.43	-28.18	AVG	P
5	0.3573	17.59	10.12	27.71	58.79	-31.08	QP	P
6	0.3573	12.17	10.12	22.29	48.79	-26.50	AVG	P
7	0.4597	11.10	10.12	21.22	56.70	-35.48	QP	P
8	0.4597	7.50	10.12	17.62	46.70	-29.08	AVG	P
9	1.6888	9.06	10.15	19.21	56.00	-36.79	QP	P
10	1.6888	5.99	10.15	16.14	46.00	-29.86	AVG	P
11	10.9485	26.87	10.38	37.25	60.00	-22.75	QP	P
12 *	10.9485	22.37	10.38	32.75	50.00	-17.25	AVG	P

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



6 Radiated Spurious Emissions

Test Requirement : FCC CFR47 Part 15 Section 15.209 & 15.247
 Test Method : ANSI C63.10-2020+Cor 1+2023
 Test Result : PASS
 Measurement Distance : 3m
 Limit : See the follow table

Frequency (MHz)	Field Strength		Field Strength Limit at 3m Measurement Dist	
	uV/m	Distance (m)	uV/m	dBuV/m
0.009 ~ 0.490	$2400/F(\text{kHz})$	300	$10000 * 2400/F(\text{kHz})$	$20\log^{(2400/F(\text{kHz}))} + 80$
0.490 ~ 1.705	$24000/F(\text{kHz})$	30	$100 * 24000/F(\text{kHz})$	$20\log^{(24000/F(\text{kHz}))} + 40$
1.705 ~ 30	30	30	$100 * 30$	$20\log^{(30)} + 40$
30 ~ 88	100	3	100	$20\log^{(100)}$
88 ~ 216	150	3	150	$20\log^{(150)}$
216 ~ 960	200	3	200	$20\log^{(200)}$
Above 960	500	3	500	$20\log^{(500)}$

6.1 EUT Operation

Operating Environment :

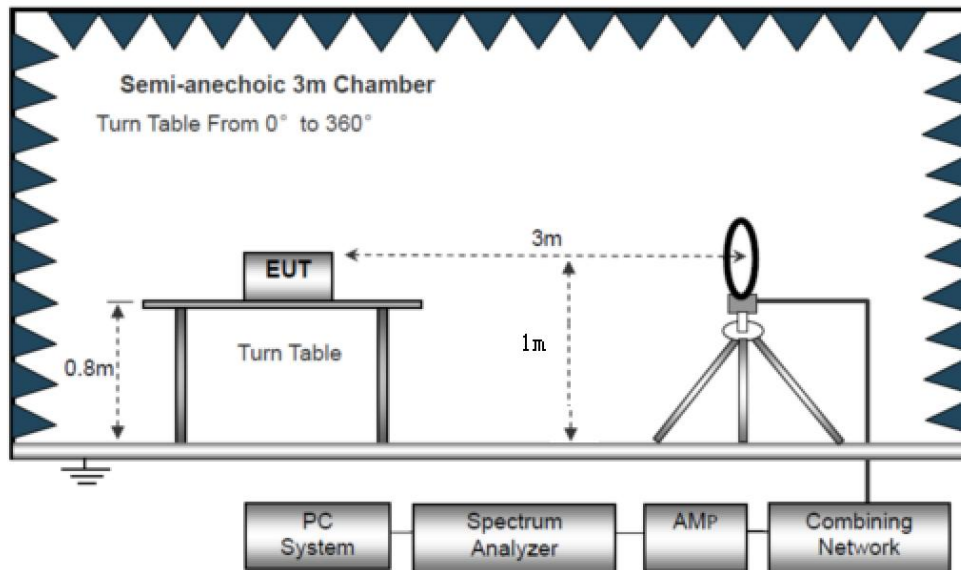
Temperature: : 26°C
 Humidity: : 54 % RH
 Atmospheric Pressure: : 101.11kPa
 Test Voltage : DC 3.7V



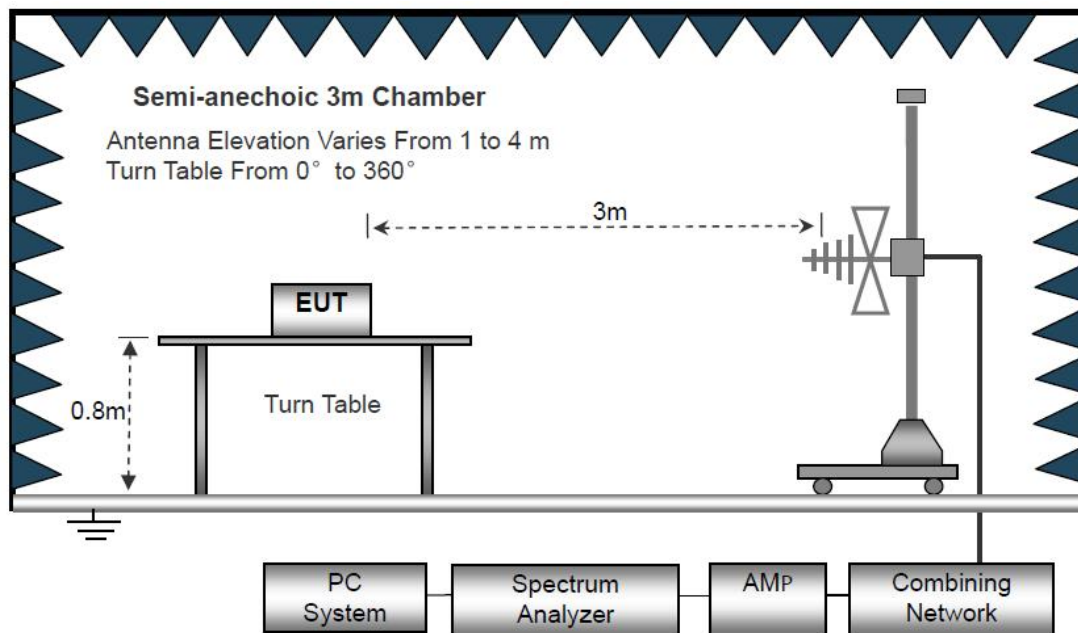
6.2 Test Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site

The test setup for emission measurement below 30MHz

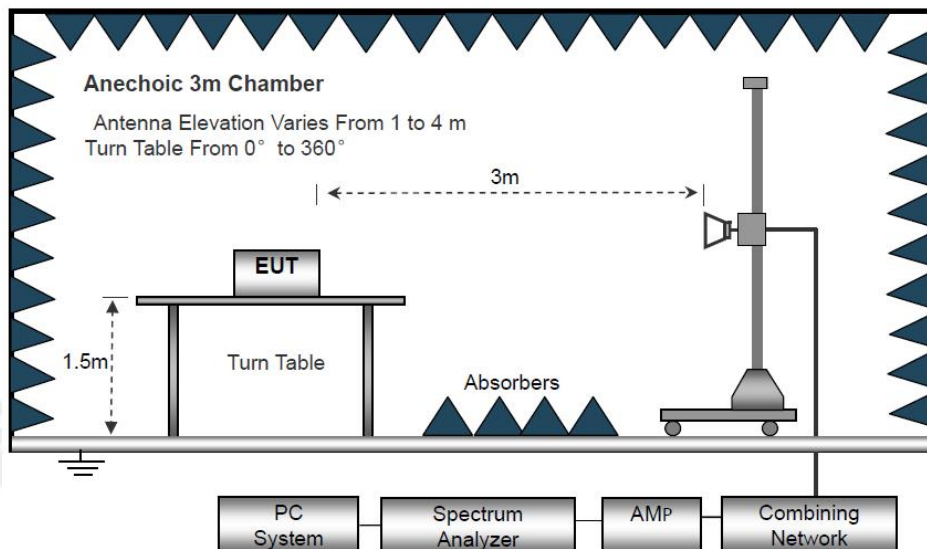


The test setup for emission measurement from 30 MHz to 1 GHz.





The test setup for emission measurement above 1 GHz



6.3 Spectrum Analyzer Setup

Below 30MHz			
IF Bandwidth	:	10kHz	
Resolution Bandwidth	:	10kHz	
Video Bandwidth	:	10kHz	
30MHz ~ 1GHz			
Detector	:	PK	QP
Resolution Bandwidth	:	100kHz	120kHz
Video Bandwidth	:	300kHz	300kHz
Above 1GHz			
Detector	:	PK	AV
Resolution Bandwidth	:	1MHz	1MHz
Video Bandwidth	:	3MHz	10Hz



6.4 Test Procedure

1. Below 1000MHz, The EUT was placed on a turn table which is 0.8m above ground plane, And above 1000MHz, The EUT was placed on a styrofoam table which is 1.5m above ground plane.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is moved from 1m to 4m to find out the maximum emissions. The spectrum was investigated from the lowest radio frequency signal generated in the device, without going below 9 kHz, up to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.
4. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
5. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
6. Repeat above procedures until the measurements for all frequencies are complete.
7. The radiation measurements are tested under 3-axes(X,Y,Z) position(X denotes lying on the table, Y denotes side stand and Z denotes vertical stand), After pre-test, It was found that the worse radiation emission was get at the X position. So the data shown was the X position only.
8. The test above 1GHz must be use the fully anechoic room, and the test below 1GHz use the half anechoic room



6.5 Summary of Test Results

Test Frequency: 9KHz-30MHz

Freq. (MHz)	Ant.Pol. H/V	Emission Level (dBuV/m)	Limit 3m (dBuV/m)	Over (dB)
--	--	--	--	>20

Note:

The amplitude of spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.

Distance extrapolation factor = $40\log(\text{Specific distance} / \text{test distance})$ (dB);
Limit line = Specific limits (dBuV) + distance extrapolation factor.

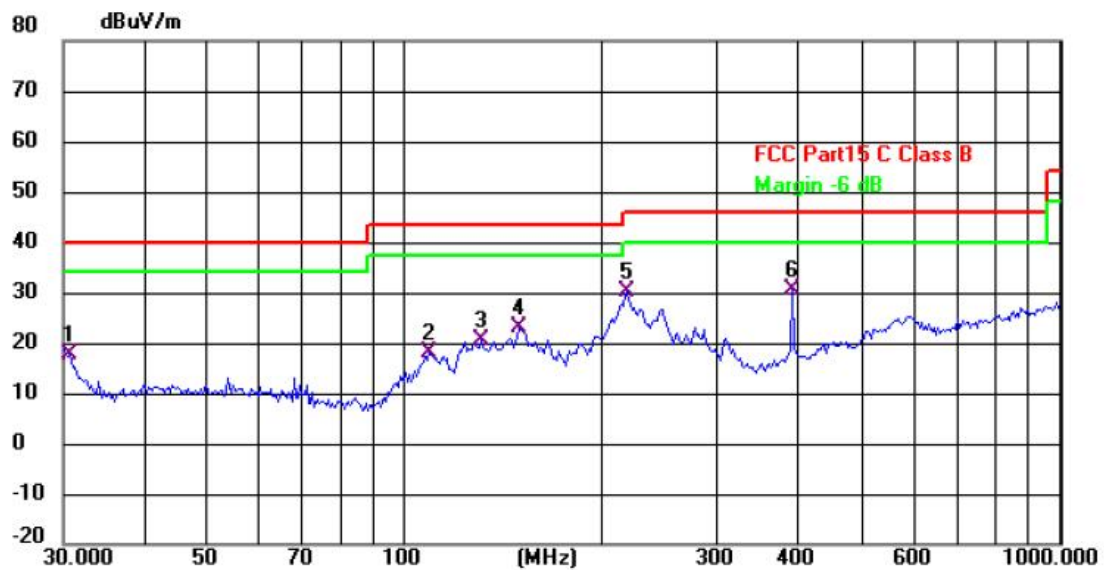
Test Frequency: 30MHz ~ 1GHz

All the modulation modes were tested the data of the worst mode (TX 802.11b Low Channel) are recorded in the following pages and the others modulation methods do not exceed the limits.

Please refer to the following test plots:



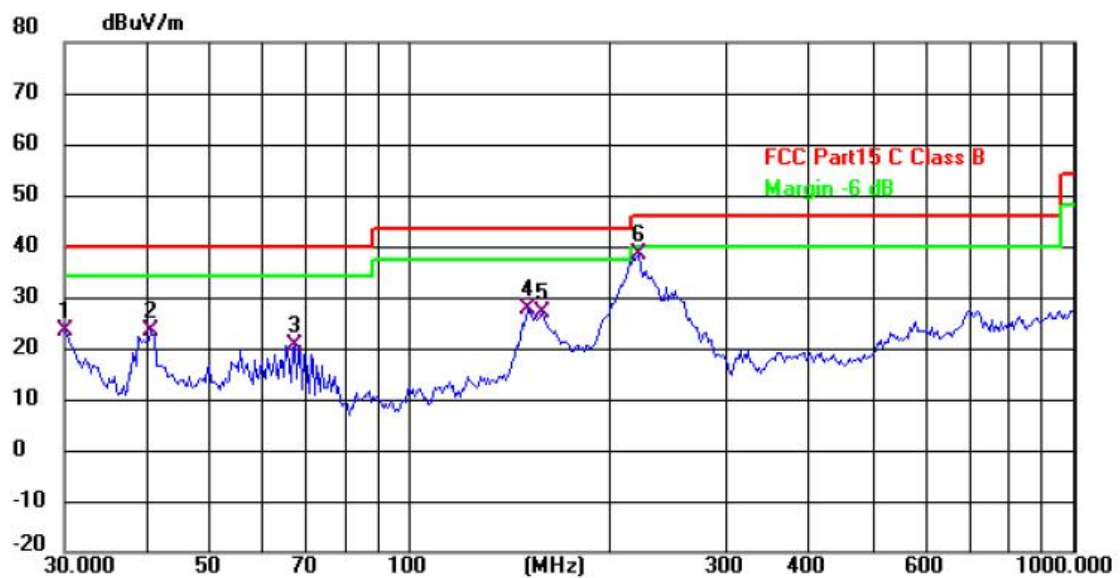
Temperature:	26℃	Relative Humidity:	54%
Pressure:	101 kPa	Polarization:	Horizontal
Test Voltage:	DC 3.7V		



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	30.6377	31.85	-14.08	17.77	40.00	-22.23	QP
2	109.0285	33.15	-14.98	18.17	43.50	-25.33	QP
3	130.8369	33.83	-13.37	20.46	43.50	-23.04	QP
4	149.4857	35.66	-12.47	23.19	43.50	-20.31	QP
5	218.3084	45.32	-15.10	30.22	46.00	-15.78	QP
6 *	390.7225	40.84	-10.20	30.64	46.00	-15.36	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	30.2110	37.48	-14.08	23.40	40.00	-16.60	QP
2	40.5591	36.54	-13.10	23.44	40.00	-16.56	QP
3	66.7325	35.91	-15.27	20.64	40.00	-19.36	QP
4	150.5377	40.21	-12.43	27.78	43.50	-15.72	QP
5	158.1123	38.96	-12.00	26.96	43.50	-16.54	QP
6 *	221.3921	53.50	-15.00	38.50	46.00	-7.50	QP

Remark:1.Emission Level=Reading+Cable Loss+ANT Factor-AMP Factor

2.Margin = Emission Level - Limit



Test Frequency: From 1GHz to 25GHz

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre- amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/ m)	Margin (dB)	Detect or Type
Low Channel:2412MHz									
V	4824.00	54.08	30.55	5.77	24.66	53.96	74.00	-20.04	PK
V	4824.00	43.63	30.55	5.77	24.66	43.51	54.00	-10.49	AV
V	7236.00	52.91	30.33	6.32	24.55	53.45	74.00	-20.55	PK
V	7236.00	43.78	30.33	6.32	24.55	44.32	54.00	-9.68	AV
V	9648.00	53.42	30.85	7.45	24.69	54.71	74.00	-19.29	PK
V	9648.00	41.84	30.85	7.45	24.69	43.13	54.00	-10.87	AV
V	12060.00	52.51	31.02	8.99	25.57	56.05	74.00	-17.95	PK
V	12060.00	42.41	31.02	8.99	25.57	45.95	54.00	-8.05	AV
H	4824.00	54.03	30.55	5.77	24.66	53.91	74.00	-20.09	PK
H	4824.00	42.47	30.55	5.77	24.66	42.35	54.00	-11.65	AV
H	7236.00	52.15	30.33	6.32	24.55	52.69	74.00	-21.31	PK
H	7236.00	43.51	30.33	6.32	24.55	44.05	54.00	-9.95	AV
H	9648.00	54.98	30.85	7.45	24.69	56.27	74.00	-17.73	PK
H	9648.00	43.07	30.85	7.45	24.69	44.36	54.00	-9.64	AV
H	12060.00	54.22	31.02	8.99	25.57	57.76	74.00	-16.24	PK
H	12060.00	44.37	31.02	8.99	25.57	47.91	54.00	-6.09	AV



Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre- amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/ m)	Margin (dB)	Detect or Type
Middle Channel:2437MHz									
V	4874.00	53.98	30.55	5.77	24.66	53.86	74.00	-20.14	PK
V	4874.00	43.8	30.55	5.77	24.66	43.68	54.00	-10.32	AV
V	7311.00	51.46	30.33	6.32	24.55	52	74.00	-22	PK
V	7311.00	42.98	30.33	6.32	24.55	43.52	54.00	-10.48	AV
V	9748.00	53.42	30.85	7.45	24.69	54.71	74.00	-19.29	PK
V	9748.00	42.03	30.85	7.45	24.69	43.32	54.00	-10.68	AV
V	12185.00	52.24	31.02	8.99	25.57	55.78	74.00	-18.22	PK
V	12185.00	43.14	31.02	8.99	25.57	46.68	54.00	-7.32	AV
H	4874.00	52.56	30.55	5.77	24.66	52.44	74.00	-21.56	PK
H	4874.00	43.44	30.55	5.77	24.66	43.32	54.00	-10.68	AV
H	7311.00	54	30.33	6.32	24.55	54.54	74.00	-19.46	PK
H	7311.00	43.14	30.33	6.32	24.55	43.68	54.00	-10.32	AV
H	9748.00	54.27	30.85	7.45	24.69	55.56	74.00	-18.44	PK
H	9748.00	44.3	30.85	7.45	24.69	45.59	54.00	-8.41	AV
H	12185.00	53.52	31.02	8.99	25.57	57.06	74.00	-16.94	PK
H	12185.00	42.98	31.02	8.99	25.57	46.52	54.00	-7.48	AV



Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre- amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/ m)	Margin (dB)	Detect or Type
High Channel:2462MHz									
V	4924.00	53.8	30.55	5.77	24.66	53.68	74.00	-20.32	PK
V	4924.00	43.72	30.55	5.77	24.66	43.6	54.00	-10.4	AV
V	7386.00	52.51	30.33	6.32	24.55	53.05	74.00	-20.95	PK
V	7386.00	42.1	30.33	6.32	24.55	42.64	54.00	-11.36	AV
V	9848.00	54.58	30.85	7.45	24.69	55.87	74.00	-18.13	PK
V	9848.00	41.41	30.85	7.45	24.69	42.7	54.00	-11.3	AV
V	12310.00	54.07	31.02	8.99	25.57	57.61	74.00	-16.39	PK
V	12310.00	43.18	31.02	8.99	25.57	46.72	54.00	-7.28	AV
H	4924.00	51.61	30.55	5.77	24.66	51.49	74.00	-22.51	PK
H	4924.00	43.89	30.55	5.77	24.66	43.77	54.00	-10.23	AV
H	7386.00	53.98	30.33	6.32	24.55	54.52	74.00	-19.48	PK
H	7386.00	43.06	30.33	6.32	24.55	43.6	54.00	-10.4	AV
H	9848.00	53.97	30.85	7.45	24.69	55.26	74.00	-18.74	PK
H	9848.00	44.72	30.85	7.45	24.69	46.01	54.00	-7.99	AV
H	12310.00	54.01	31.02	8.99	25.57	57.55	74.00	-16.45	PK
H	12310.00	44.56	31.02	8.99	25.57	48.1	54.00	-5.9	AV

Note:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier,

Margin= Emission Level - Limit

2. If peak below the average limit, the average emission was no test.

3. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

4. We test all the mode and recorded the worst mode (802.11b) in the report.



Radiated Band Emission Measurement:

	Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/m)	Detector Type	Result
802.11b	Low Channel 2412MHz									
	H	2390.00	58.23	35.17	3.48	27.49	54.03	74.00	PK	PASS
	H	2390.00	50.77	35.17	3.48	27.49	46.57	54.00	AV	PASS
	H	2400.00	61.12	35.16	3.49	27.52	56.97	74.00	PK	PASS
	H	2400.00	50.79	35.16	3.49	27.52	46.64	54.00	AV	PASS
	V	2390.00	59.56	35.17	3.48	27.49	55.36	74.00	PK	PASS
	V	2390.00	51.74	35.17	3.48	27.49	47.54	54.00	AV	PASS
	V	2400.00	60.98	35.16	3.49	27.52	56.83	74.00	PK	PASS
	V	2400.00	50.68	35.16	3.49	27.52	46.53	54.00	AV	PASS
	High Channel 2462MHz									
	H	2483.50	58.99	35.11	3.56	27.75	55.19	74.00	PK	PASS
	H	2483.50	50.26	35.11	3.56	27.75	46.46	54.00	AV	PASS
	H	2500.00	60.33	35.1	3.57	27.8	56.6	74.00	PK	PASS
	H	2500.00	50.18	35.1	3.57	27.8	46.45	54.00	AV	PASS
	V	2483.50	59.76	35.11	3.56	27.75	55.96	74.00	PK	PASS
	V	2483.50	51.35	35.11	3.56	27.75	47.55	54.00	AV	PASS
	V	2500.00	58.76	35.1	3.57	27.8	55.03	74.00	PK	PASS
	V	2500.00	51.26	35.1	3.57	27.8	47.53	54.00	AV	PASS
802.11g	Low Channel 2412MHz									
	H	2390.00	57.52	35.17	3.48	27.49	53.32	74.00	PK	PASS
	H	2390.00	49.85	35.17	3.48	27.49	45.65	54.00	AV	PASS
	H	2400.00	58.82	35.16	3.49	27.52	54.67	74.00	PK	PASS



	H	2400.00	50.57	35.16	3.49	27.52	46.42	54.00	AV	PASS
	V	2390.00	57.72	35.17	3.48	27.49	53.52	74.00	PK	PASS
	V	2390.00	49.86	35.17	3.48	27.49	45.66	54.00	AV	PASS
	V	2400.00	59.02	35.16	3.49	27.52	54.87	74.00	PK	PASS
	V	2400.00	49.28	35.16	3.49	27.52	45.13	54.00	AV	PASS
	High Channel 2462MHz									
	H	2483.50	57.42	35.11	3.56	27.75	53.62	74.00	PK	PASS
	H	2483.50	48.71	35.11	3.56	27.75	44.91	54.00	AV	PASS
	H	2500.00	59.13	35.1	3.57	27.8	55.4	74.00	PK	PASS
	H	2500.00	49.64	35.1	3.57	27.8	45.91	54.00	AV	PASS
	V	2483.50	58.27	35.11	3.56	27.75	54.47	74.00	PK	PASS
	V	2483.50	50.04	35.11	3.56	27.75	46.24	54.00	AV	PASS
	V	2500.00	58.86	35.1	3.57	27.8	55.13	74.00	PK	PASS
	V	2500.00	50.03	35.1	3.57	27.8	46.3	54.00	AV	PASS
802.11 n20	Low Channel 2412MHz									
	H	2390.00	58.17	35.17	3.48	27.49	53.97	74.00	PK	PASS
	H	2390.00	50.92	35.17	3.48	27.49	46.72	54.00	AV	PASS
	H	2400.00	61.05	35.16	3.49	27.52	56.9	74.00	PK	PASS
	H	2400.00	49.63	35.16	3.49	27.52	45.48	54.00	AV	PASS
	V	2390.00	58.36	35.17	3.48	27.49	54.16	74.00	PK	PASS
	V	2390.00	51.04	35.17	3.48	27.49	46.84	54.00	AV	PASS
	V	2400.00	60.01	35.16	3.49	27.52	55.86	74.00	PK	PASS
	V	2400.00	50.11	35.16	3.49	27.52	45.96	54.00	AV	PASS
	High Channel 2462MHz									
	H	2483.50	58.51	35.11	3.56	27.75	54.71	74.00	PK	PASS
	H	2483.50	49.6	35.11	3.56	27.75	45.8	54.00	AV	PASS



	H	2500.00	59.57	35.1	3.57	27.8	55.84	74.00	PK	PASS
	H	2500.00	50.2	35.1	3.57	27.8	46.47	54.00	AV	PASS
	V	2483.50	59.15	35.11	3.56	27.75	55.35	74.00	PK	PASS
	V	2483.50	50.17	35.11	3.56	27.75	46.37	54.00	AV	PASS
	V	2500.00	58.71	35.1	3.57	27.8	54.98	74.00	PK	PASS
	V	2500.00	50.18	35.1	3.57	27.8	46.45	54.00	AV	PASS

Remark:

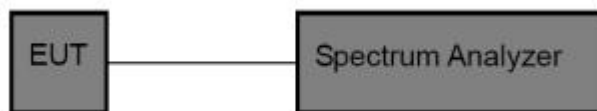
1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit
2. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



7 Conduct Band Edge And Spurious Emissions Measurement

Test Requirement	:	FCC CFR47 Part 15 Section 15.247
Test Method	:	ANSI C63.10-2020+Cor 1+2023
Test Limit	:	Regulation 15.247 (d), In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

7.1 Test Setup



7.2 Test Procedure

- Set instrument center frequency to DTS channel center frequency.
- Set the span to ≥ 1.5 times the DTS bandwidth.
- Set the RBW = 100 kHz.
- Set the VBW $\geq [3 \times \text{RBW}]$.
- Detector = peak.
- Sweep time = No faster than coupled (auto) time.
- Trace mode = max-hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum PSD level.

Note that the channel found to contain the maximum PSD level can be used to establish the reference level
Establish an emission level by using the following procedure:



a) Set the center frequency and span to encompass frequency range to be measured. Note that the frequency range might need to be divided into multiple frequency ranges to retain frequency resolution.

NOTE—the number of points can also be increased for large spans to retain frequency resolution

b) Set the RBW = 100 kHz.

c) Set the VBW $\geq [3 \times \text{RBW}]$.

d) Detector = peak.

e) Sweep time = No faster than coupled (auto) time.

f) Trace mode = max-hold.

g) Allow trace to fully stabilize.

h) Use the peak marker function to determine the maximum amplitude level.

7.3 Test Result

Please see the attachment for the data.



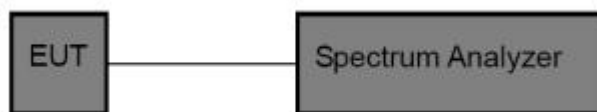
8 6dB&99% Bandwidth Measurement

Test Requirement : FCC CFR47 Part 15 Section 15.247

Test Method : ANSI C63.10-2020+Cor 1+2023

Test Limit Systems using digital modulation techniques may operate in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

8.1 Test Setup



8.2 Test Procedure

DTS Bandwidth

- Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;
- Set RBW = shall be in the range of 1% to 5% of the OBW but not less than 100 kHz.
- Set the VBW $\geq [3 \times \text{RBW}]$.
- Detector = peak.
- Trace mode = max-hold.
- Sweep = No faster than coupled (auto) time.
- Allow the trace to stabilize.

99% Bandwidth

- The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.
- The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be at least three times the RBW, unless otherwise specified by the applicable requirement
- Detector = peak.
- Trace mode = max-hold.
- Sweep = No faster than coupled (auto) time.
- Allow the trace to stabilize.



8.3 Test Result

Please see the attachment for the data.



9 Maximum Peak Output Power

Test Requirement : FCC CFR47 Part 15 Section 15.247, RSS-247 § 5.4

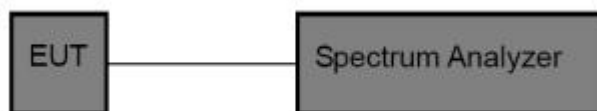
Test Method : ANSI C63.10-2020+Cor 1+2023

Test Limit : Regulation 15.247 (b)(3), For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power.

RSS-247 § 5.4 (d)

For DTSs employing digital modulation techniques operating in the bands 902-928 MHz and 2400-2483.5 MHz, the maximum peak conducted output power shall not exceed 1 W. The e.i.r.p. shall not exceed 4 W, except as provided in section 5.4(e).

9.1 Test Setup



9.2 Test Procedure

ANSI C63.10-2020 section 12.4

Method AVGSA-2 uses trace averaging across ON and OFF times of the EUT transmissions, followed by

duty cycle correction. The procedure for this method is as follows:

- Measure the duty cycle D of the transmitter output signal as described in 11.6.
- Set span to >1.5 times the OBW.
- Set RBW = 1% to 5% of the OBW, but do not exceed 1 MHz.
- Set VBW $\geq [3 \times \text{RBW}]$.
- Number of points in sweep $\geq [2 \times \text{span} / \text{RBW}]$. (This gives bin-to-bin spacing $\leq \text{RBW} / 2$, so that narrowband signals are not lost between frequency bins.)
- Sweep time = auto.
- Detector = Power averaging (rms), if available. Otherwise, use the sample detector mode.
- Do not use sweep triggering. Allow the sweep to “free run.”
- Trace average at least 100 traces in power averaging (rms) mode; however, the number of traces to



be averaged shall be increased above 100 until trace is stabilized so that the average accurately represents the true average over the ON and OFF periods of the transmitter.

j) Compute power by integrating the spectrum across the OBW of the signal using the instrument's band-power measurement function with band limits set equal to the OBW band-edges. If the instrument does not have a band-power function, then sum the spectrum levels (in power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.

k) Add $[10 \log (1 / D)]$, where D is the duty cycle, to the measured power to compute the average power during the actual transmission times (because the measurement represents an average over both the ON and OFF times of the transmission). For example, add $[10 \log (1/0.25)] = 6$ dB if the duty cycle is 25%.

9.3 Test Result

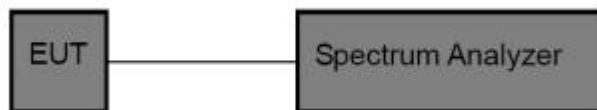
Please see the attachment for data.



10 Power Spectral density

Test Requirement	: FCC CFR47 Part 15 Section 15.247
Test Method	: ANSI C63.10-2020+Cor 1+2023
Test Limit	: Regulation 15.247(f) The power spectral density conducted from the intentional radiator to the antenna due to the digital modulation operation of the hybrid system, with the frequency hopping operation turned off, shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

10.1 Test Setup



10.2 Test Procedure

- Set instrument center frequency to DTS channel center frequency.
- Set span to > 1.5 times the OBW.
- Set RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- Set VBW $> [3 \times \text{RBW}]$.
- Detector = power averaging (rms) or sample detector (when rms not available).
- Ensure that the number of measurement points in the sweep $> [2 \times \text{span} / \text{RBW}]$.
- Sweep time = auto couple.
- Employ trace averaging (rms) mode over a minimum of 100 traces.
- Use the peak marker function to determine the maximum amplitude level.
- If the measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat (note that this might require zooming in on the emission of interest and reducing the span to meet the minimum measurement point requirement as the RBW is reduced).

10.3 Test Result

Please see the attachment for the data.



11 Antenna Application

11.1 Antenna Requirement

For intentional device, according to FCC 47 CFR Section 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. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

11.2 Result

The EUT'S antenna, permanent attached antenna, is FPC Antenna. The antenna's gain is 0.5 dBi and meets the requirement.



12 Test Setup and EUT Photos

Reference to the attachment for details.

*******THE END REPORT*******