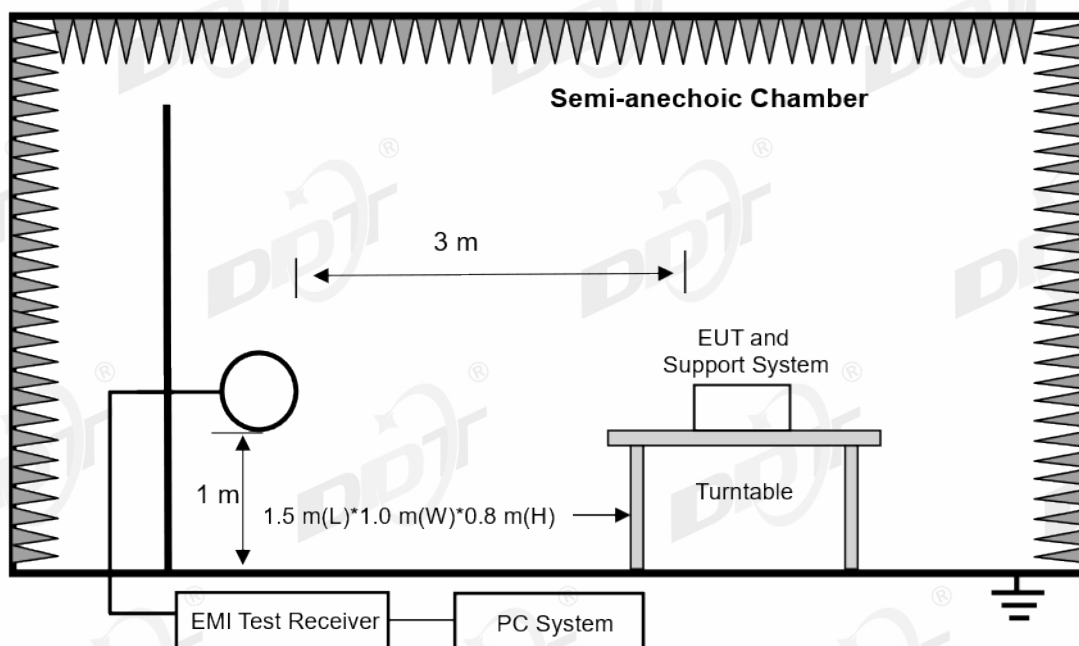


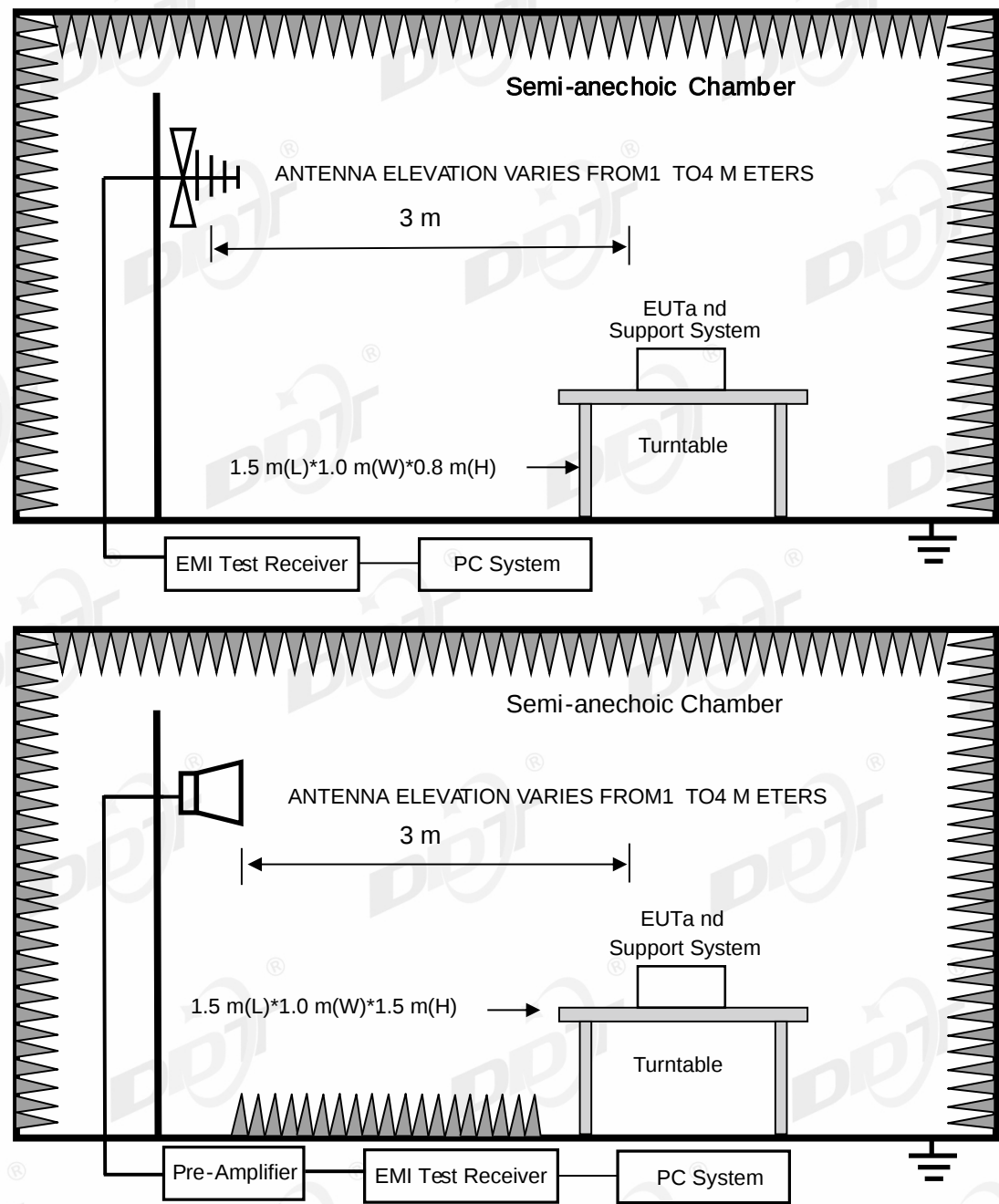
14. Radiated Emission

14.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Cal Due To
Micro-Tronics filters	REBES	BRM50702	DDT-ZC03242	/
RF Cable	N/A	W24.02 HL-562	DDT-ZC04022	2026/03/28
RF cable	Yuhu Technology	JCTB810-NJ-NJ-9M	DDT-ZC02538	2026/03/28
RF cable	Zhongke Junchuang	JCT26S-NJ-NJ-1.5M	DDT-ZC02762	/
RF cable	Yuhu Technology	ZT26S-SMAJ-SMAJ-1M	DDT-ZC02037	2026/03/28
RF Cable	N/A	W13.02 AP1-X2	DDT-ZC04023	2026/03/28
Pre-amplifier	COM-POWER	PAM-840A	DDT-ZC01693	2026/03/28
Pre-amplifier	COM-POWER	PAM-118A	DDT-ZC01293	2026/08/10
High pass filter	Micro-Tronics	HPM50102	DDT-ZC00561	2026/03/28
EMI TEST RECEIVER	R&S	ESU26	DDT-ZC01909	2026/03/28
High pass filter	Micro-Tronics	HPM50108	DDT-ZC00560	2026/03/28
High Pass filter	Xi'an Xingbo	XBLBQ-GTA67	DDT-ZC02179	2026/03/28
Micro-Tronics filters	REBES	BRM50716	DDT-ZC03240	/
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	DDT-ZC00506	2026/04/01
Trilog Broadband Antenna	Schwarzbeck	VULB 9163	DDT-ZC02050	2026/07/25
Hochgewinn-Hornantenne	SCHWARZBEC K	BBHA 9120 D	DDT-ZC02129	2026/08/11
Active Loop Antenna	Schwarzbeck	FMZB1519	DDT-ZC00524	2026/08/18
PSA Series Spectrum Analyzer	Agilent	E4447A	DDT-ZC00517	2026/03/28

14.2. Block diagram of test setup





14.3. Limits

(1) FCC 15.205 Restricted frequency band

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
10.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.1772&4.1775	37.5-38.25	1435-1626.5	9.0-9.2
4.2072&4.2075	73-74.6	1645.5-1646.5	9.3-9.5

6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(²)
13.36-13.41			

1Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz

2Above 38.6

(2) FCC 15.209 Limit

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		uV/m	dBuV/m
0.009 ~ 0.490	300	2400/F(kHz)	67.6-20log(F)
0.490 ~ 1.705	30	24000/F(kHz)	87.6-20log(F)
1.705 ~ 30.0	30	30	29.54
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	74.0 dBuV/m (Peak) 54.0 dBuV/m (Average)	

Note:

(1) The emission limits shown in the above table are based on measurements employing a CISPR QP detector except for the frequency bands 9 - 90 kHz, 110 - 490 kHz and above 1000 MHz, radiated emissions limits in these three bands are based on measurements employing an average detector.

(2) At frequencies below 30 MHz, measurement may be performed at a distance closer than that specified, and the limit at closer measurement distance can be extrapolated by below formula:

$$\text{Limit}_{3m}(\text{dBuV/m}) = \text{Limit}_{30m}(\text{dBuV/m}) + 40\text{Log}(30m/3m)$$

(3) Limit for this EUT

The emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20 dB below the fundamental emissions or comply with 15.209 limits.

14.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	other
/	/	/	/	/

14.5. Test procedure

(1) EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber for below 1G and 150 cm above the ground plane inside a fully-anechoic chamber for above 1G.

(2) Test antenna was located 3 m from the EUT on an adjustable mast, and the antenna used as below table.

Test frequency range	Test antenna used	Test antenna distance
9 kHz - 30 MHz	Active Loop antenna	3 m
30 MHz - 1 GHz	Trilog Broadband Antenna	3 m
1 GHz - 18 GHz	Double Ridged Horn Antenna(1 GHz-18 GHz)	3 m
18 GHz - 40 GHz	Horn Antenna(18 GHz-40 GHz)	1 m

According ANSI C63.10 clause 6.4.6 and 6.5.3, for measurements below 30 MHz, Antenna was located 3 m from EUT, the loop antenna was positioned in three antenna orientations (parallel, perpendicular, and round-parallel), for each measurement antenna alignment, the EUT shall be rotated through 0° to 360° on a turntable, and the lowest height of the magnetic antenna shall be 1 m above the ground. For measurement above 30MHz, the trilog Broadband Antenna or Horn Antenna was located 3m from EUT, Measurements were made with the antenna positioned in both the horizontal and vertical planes of Polarization, and the measurement antenna was varied from 1 m to 4 m. in height above the reference ground plane to obtain the maximum signal strength.

(3) Below pre-scan procedure was first performed in order to find prominent frequency spectrum radiated emissions from 9 kHz to 25 GHz:

(a) Scanning the peak frequency spectrum with the antenna specified in step (3), and the EUT was rotated 360 degree, the antenna height was varied from 1 m to 4 m (Except loop antenna, it's fixed 1 m above ground.)

(b) Change work frequency or channel of device if practicable.

(c) Change modulation type of device if practicable.

(d) Change power supply range from 85% to 115% of the rated supply voltage

(e) Rotated EUT though three orthogonal axes to determine the attitude of EUT arrangement produces highest emissions.

Spectrum frequency from 9 kHz to 25 GHz (tenth harmonic of fundamental frequency) was investigated, and no any obvious emission were detected from 18 GHz to 25 GHz, so below final test was performed with frequency range from 9 kHz to 18 GHz.

(4) For final emissions measurements at each frequency of interest, the EUT was rotated and the antenna height was varied between 1 m and 4 m in order to maximize the emission. Measurements

in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipment and all of the interface cables were changed according to ANSI C63.10 on Radiated Emission test.

(5) The emissions from 9 kHz to 1 GHz were measured based on CISPR QP detector except for the frequency bands 9 - 90 kHz, 110 - 490 kHz, for emissions from 9 kHz - 90 kHz, 110 kHz - 490 kHz and above 1 GHz were measured based on average detector, for emissions above 1 GHz, peak emissions also be measured and need comply with Peak limit.

(6) The emissions from 9 kHz to 1 GHz, QP or average values were measured with EMI receiver with below RBW.

Frequency band	RBW
9 kHz - 150 kHz	200 Hz
150 kHz - 30 MHz	9 kHz
30 MHz - 1 GHz	120 kHz

(7) For emissions above 1GHz, both Peak and Average level were measured with Spectrum Analyzer, and the RBW is set at 1 MHz, VBW is set at 3 MHz for Peak measure; According ANSI C63.10 clause 4.1.5.2.2 procedure for average measure.

(8) For portable device, X axis, Y axis, Z axis are tested, and worse setup is reported.

(9) According exploratory test, the emission levels are 20 dB below the limit detected from 9 kHz to 30 MHz and 18 GHz to 25 GHz, so the final test was performed with frequency range from 30 MHz to 18 GHz and recorded in below.

(10) For 30 MHz ~ 25 GHz: (Scan with GFSK, $\pi/4$ -DQPSK and 8DPSK, the worst case is record and reported)

(11) For emissions below 1 GHz, according exploratory explorer test, when change Tx mode and channel, have no distinct influence on emissions level, so for emissions below 1 GHz, the final test was only performed with EUT working in worst mode.

14.6. Test result

PASS. (See below detailed test result)

14.7. Test data

TR-4-E-009 Radiated Emission Test Result

Test Date:

2025-10-14

Tested By:

Lin Guoyuan

EUT:

Bookshelf Speaker

Model Number:

BS316-1

Test Mode:

TX DH5 2402MHz Mode

Power Supply:

AC 120V/60Hz

Condition:

Temp:23.9°C;Humi:54.9%

Test Site:

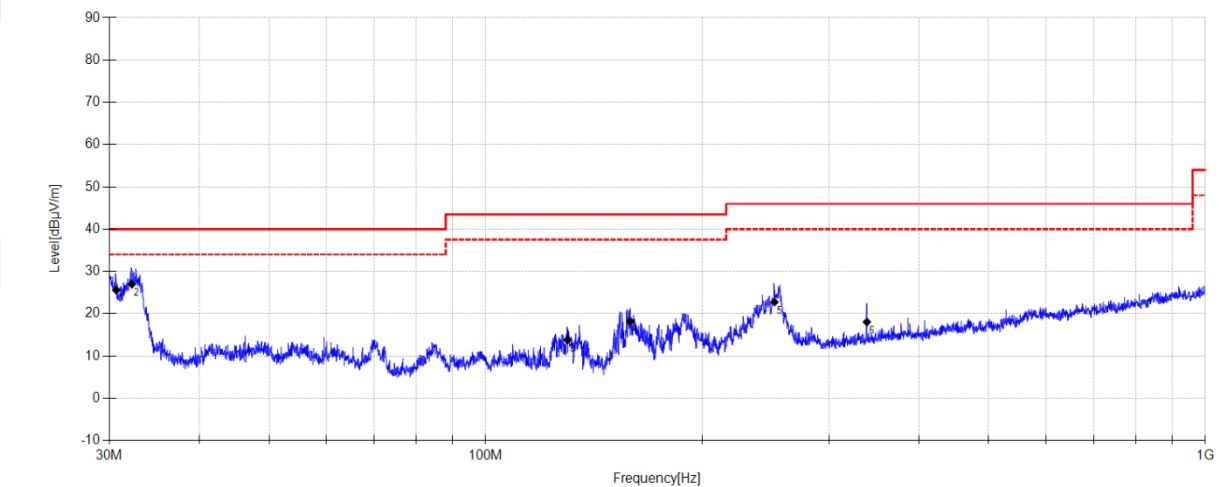
DDT 3# Chamber

File Path:

d:\ts\2025 report date\Q25091623-2E\FCC BELOW 1G\1

Memo:

Sample Numbre:S25091623-003



Final Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	30.659	43.77	10.37	3.79	25.63	40.00	14.37	QP	Horizontal
2	32.247	44.58	10.90	3.81	26.99	40.00	13.01	QP	Horizontal
3	129.976	32.47	9.19	4.47	13.80	43.50	29.70	QP	Horizontal
4	158.838	37.01	8.94	4.64	18.23	43.50	25.27	QP	Horizontal
5	251.955	38.06	12.02	5.09	22.77	46.00	23.23	QP	Horizontal
6	338.711	30.82	14.23	5.45	18.06	46.00	27.94	QP	Horizontal

Note:

1. Result Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.

3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2025-10-14

Tested By:

Lin Guoyuan

EUT:

Bookshelf Speaker

Model Number:

BS316-1

Test Mode:

TX DH5 2402MHz Mode

Power Supply:

AC 120V/60Hz

Condition:

Temp:23.9°C;Humi:54.9%

Test Site:

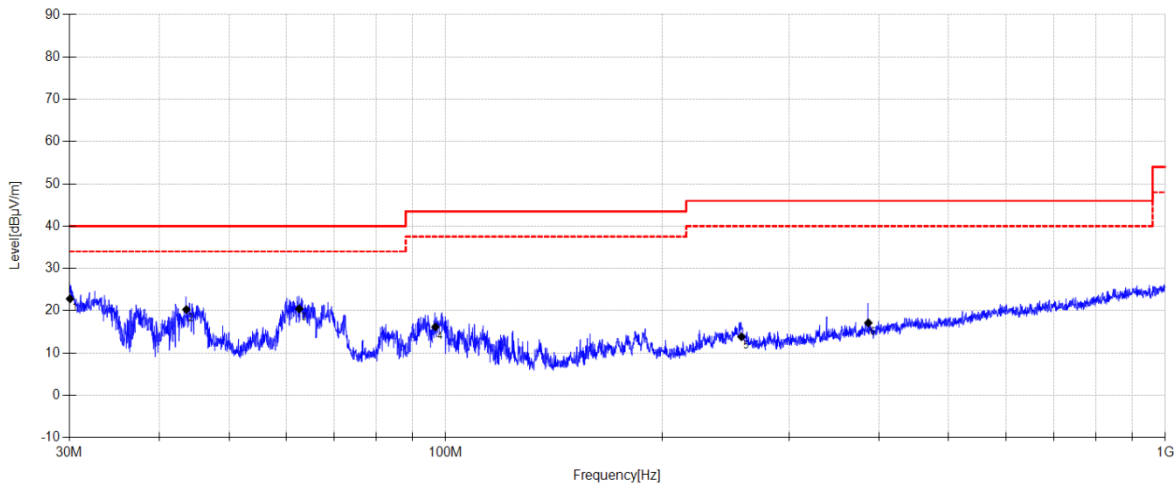
DDT 3# Chamber

File Path:

d:\ts\2025 report date\Q25091623-2E\FCC BELOW 1G\2

Memo:

Sample Numbler:S25091623-003



Final Data List									
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable Loss [dB]	Result [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	30.063	40.85	10.49	3.78	22.82	40.00	17.18	QP	Vertical
2	43.625	35.13	13.51	3.94	20.28	40.00	19.72	QP	Vertical
3	62.598	36.17	12.48	4.09	20.44	40.00	19.56	QP	Vertical
4	96.752	33.74	10.45	4.28	16.17	43.50	27.33	QP	Vertical
5	257.673	28.93	12.20	5.11	13.84	46.00	32.16	QP	Vertical
6	386.707	28.36	15.60	5.65	17.12	46.00	28.88	QP	Vertical

Note:

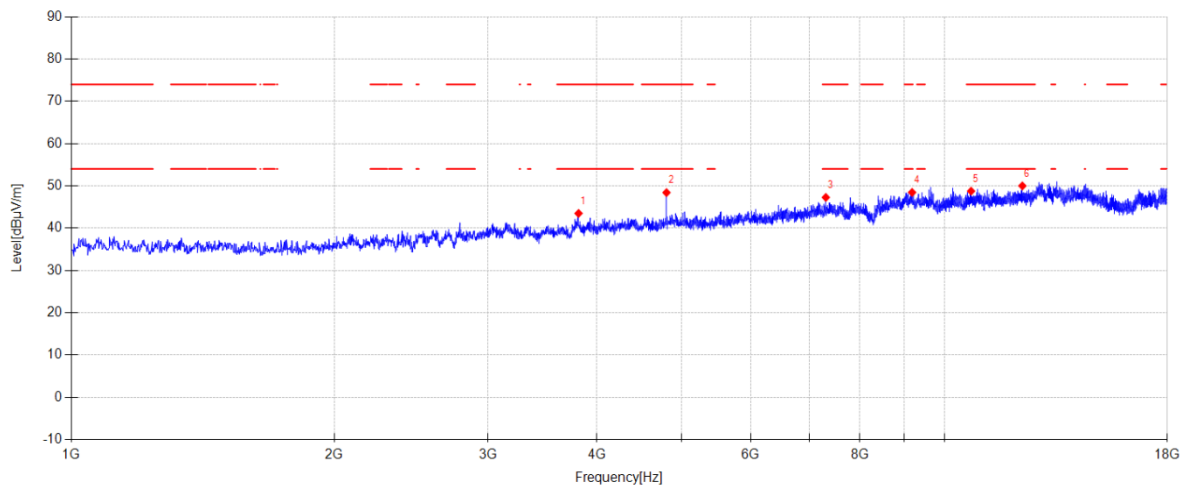
1. Result Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.

3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2025-10-15 **Tested By:** Lin Guoyuan
EUT: Bookshelf Speaker **Model Number:** BS316-1
Test Mode: TX DH5 2402MHz Mode **Power Supply:** AC 120V/60HZ
Condition: Temp:23.9°C;Humi:54.9% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2025 report date\Q25091623-2E\FCC ABOVE 1G BT\11
Memo: Sample Numbler:S25091623-003 Power Setting:5

**Suspected Data List**

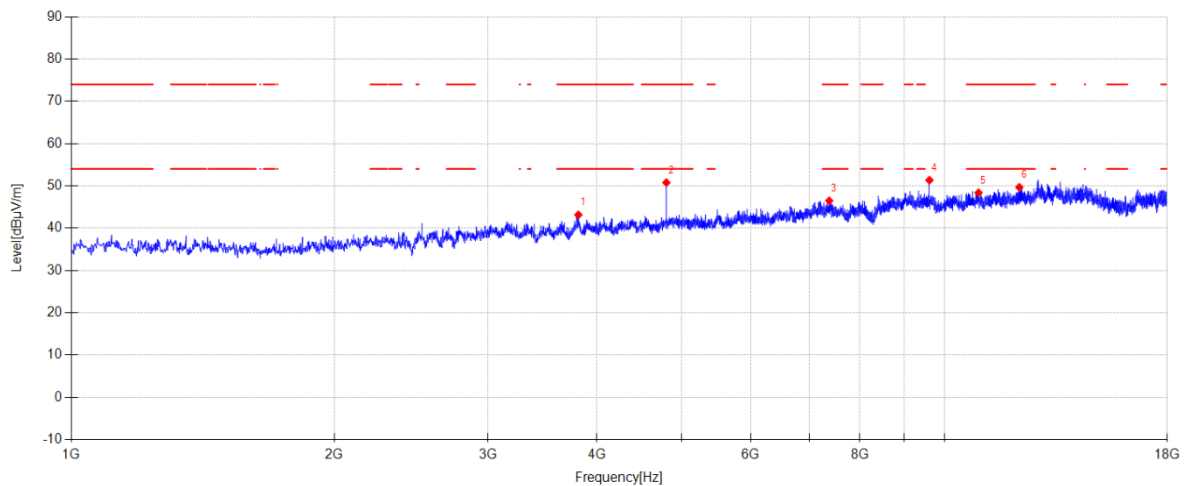
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	3810.100	47.78	30.78	4.55	-39.62	43.49	74.00	30.51	PK	Horizontal
2	4804.600	50.90	32.17	5.12	-39.78	48.41	74.00	25.59	PK	Horizontal
3	7313.800	44.41	37.00	5.73	-39.87	47.27	74.00	26.73	PK	Horizontal
4	9182.100	41.87	38.61	6.78	-38.80	48.46	74.00	25.54	PK	Horizontal
5	10727.400	41.81	39.36	7.21	-39.63	48.75	74.00	25.25	PK	Horizontal
6	12281.200	42.21	39.36	7.81	-39.38	50.00	74.00	24.00	PK	Horizontal

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2025-10-15 **Tested By:** Lin Guoyuan
EUT: Bookshelf Speaker **Model Number:** BS316-1
Test Mode: TX DH5 2402MHz Mode **Power Supply:** AC 120V/60HZ
Condition: Temp:23.9°C;Humi:54.9% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2025 report date\Q25091623-2E\FCC ABOVE 1G BT\12
Memo: Sample Numbler:S25091623-003 Power Setting:5

**Suspected Data List**

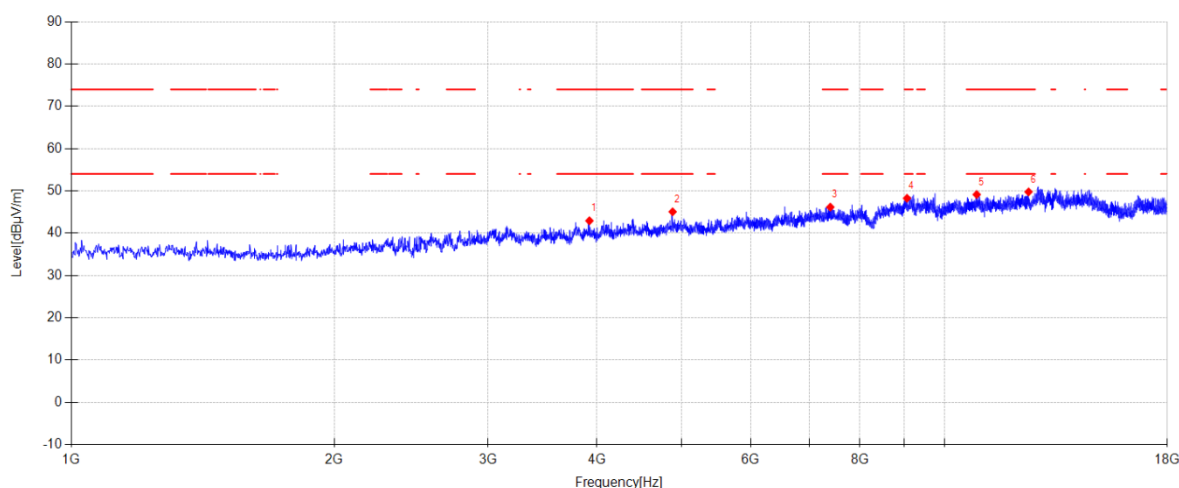
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	3808.400	47.42	30.80	4.55	-39.62	43.15	74.00	30.85	PK	Vertical
2	4802.900	53.28	32.15	5.12	-39.78	50.77	74.00	23.23	PK	Vertical
3	7380.100	43.77	36.82	5.75	-39.86	46.48	74.00	27.52	PK	Vertical
4	9612.200	45.75	38.15	6.72	-39.27	51.35	74.00	22.65	PK	Vertical
5	10939.900	40.98	39.64	7.37	-39.61	48.38	74.00	25.62	PK	Vertical
6	12184.300	42.05	39.25	7.81	-39.45	49.66	74.00	24.34	PK	Vertical

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2025-10-15 **Tested By:** Lin Guoyuan
EUT: Bookshelf Speaker **Model Number:** BS316-1
Test Mode: TX DH5 2441MHz Mode **Power Supply:** AC 120V/60HZ
Condition: Temp:23.9°C;Humi:54.9% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2025 report date\Q25091623-2E\FCC ABOVE 1G BT\13
Memo: Sample Numbler:S25091623-003 Power Setting:5

**Suspected Data List**

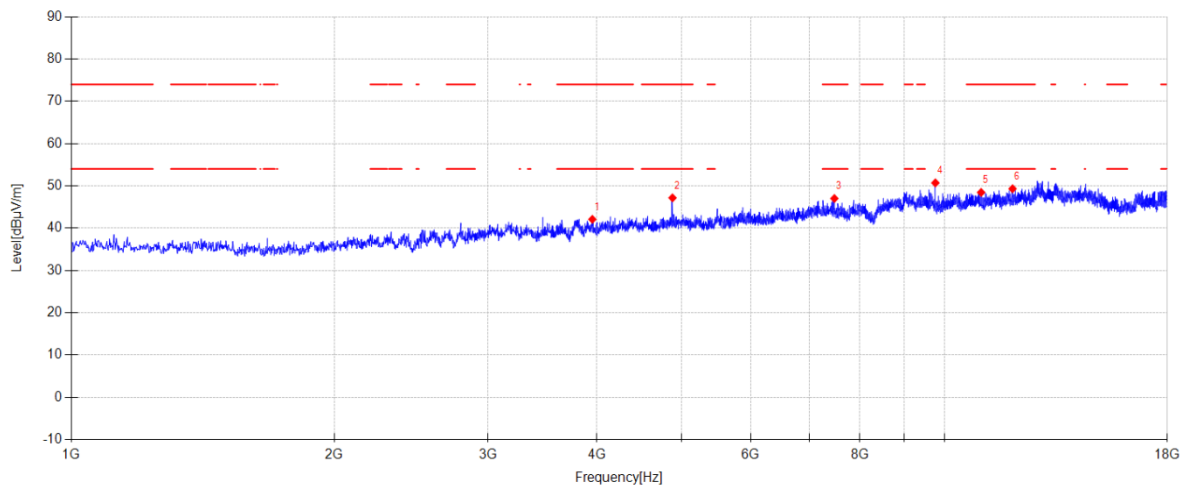
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	3920.600	47.39	30.65	4.56	-39.67	42.93	74.00	31.07	PK	Horizontal
2	4882.800	46.64	33.03	5.17	-39.79	45.05	74.00	28.95	PK	Horizontal
3	7400.500	43.56	36.70	5.76	-39.86	46.16	74.00	27.84	PK	Horizontal
4	9059.700	41.40	38.73	6.79	-38.67	48.25	74.00	25.75	PK	Horizontal
5	10887.200	41.89	39.52	7.33	-39.61	49.13	74.00	24.87	PK	Horizontal
6	12483.500	41.56	39.60	7.81	-39.21	49.76	74.00	24.24	PK	Horizontal

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2025-10-15 **Tested By:** Lin Guoyuan
EUT: Bookshelf Speaker **Model Number:** BS316-1
Test Mode: TX DH5 2441MHz Mode **Power Supply:** AC 120V/60HZ
Condition: Temp:23.9°C;Humi:54.9% **Test Site:** DDT 3# Chamber
File Path: d:\ts\2025 report date\Q25091623-2E\FCC ABOVE 1G BT\14
Memo: Sample Numbler:S25091623-003 Power Setting:5

**Suspected Data List**

NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	3951.200	46.90	30.31	4.56	-39.68	42.09	74.00	31.91	PK	Vertical
2	4881.100	48.76	33.02	5.17	-39.79	47.16	74.00	26.84	PK	Vertical
3	7480.400	44.30	36.78	5.79	-39.85	47.02	74.00	26.98	PK	Vertical
4	9763.500	45.48	37.97	6.70	-39.44	50.71	74.00	23.29	PK	Vertical
5	11014.700	41.05	39.58	7.42	-39.60	48.45	74.00	25.55	PK	Vertical
6	11966.700	42.29	38.83	7.80	-39.60	49.32	74.00	24.68	PK	Vertical

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2025-10-15

Tested By:

Lin Guoyuan

EUT:

Bookshelf Speaker

Model Number:

BS316-1

Test Mode:

TX DH5 2480MHz Mode

Power Supply:

AC 120V/60HZ

Condition:

Temp:23.9°C;Humi:54.9%

Test Site:

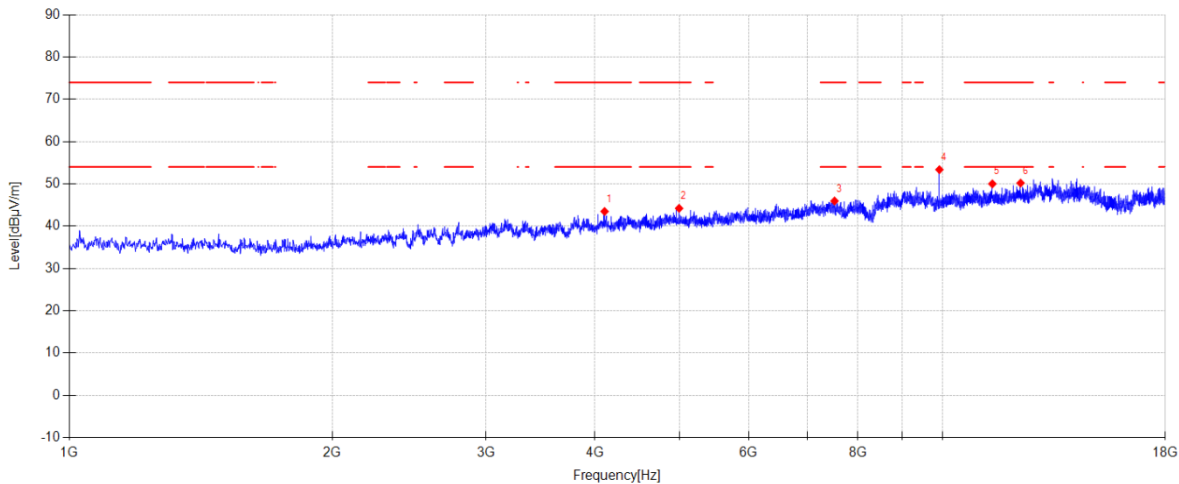
DDT 3# Chamber

File Path:

d:\ts\2025 report date\Q25091623-2E\FCC ABOVE 1G BT\15

Memo:

Sample Numbler:S25091623-003 Power Setting:5



Suspected Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	4102.500	47.43	31.12	4.64	-39.71	43.48	74.00	30.52	PK	Horizontal
2	4993.300	45.75	33.01	5.25	-39.80	44.21	74.00	29.79	PK	Horizontal
3	7522.900	43.42	36.58	5.80	-39.85	45.95	74.00	28.05	PK	Horizontal
4	9919.900	47.95	38.34	6.68	-39.61	53.36	-	-	PK	Horizontal
5	11407.400	42.31	39.73	7.57	-39.60	50.01	74.00	23.99	PK	Horizontal
6	12288.000	42.37	39.38	7.81	-39.37	50.19	74.00	23.81	PK	Horizontal

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2025-10-15

Tested By:

Lin Guoyuan

EUT:

Bookshelf Speaker

Model Number:

BS316-1

Test Mode:

TX DH5 2480MHz Mode

Power Supply:

AC 120V/60HZ

Condition:

Temp:23.9°C;Humi:54.9%

Test Site:

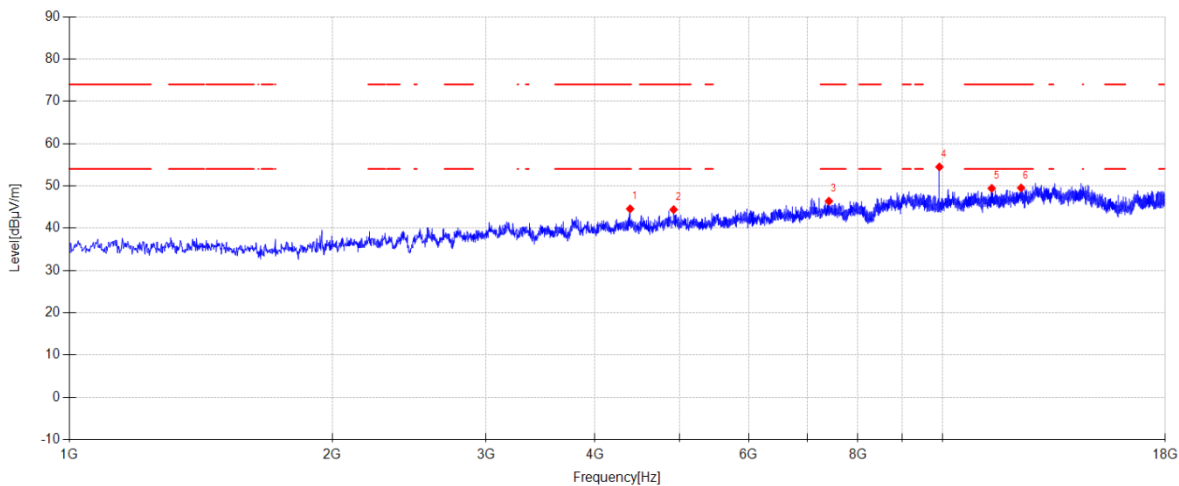
DDT 3# Chamber

File Path:

d:\ts\2025 report date\Q25091623-2E\FCC ABOVE 1G BT\16

Memo:

Sample Numbler:S25091623-003 Power Setting:5



Suspected Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	4388.100	47.71	31.76	4.83	-39.74	44.56	74.00	29.44	PK	Vertical
2	4921.900	45.87	33.10	5.20	-39.79	44.38	74.00	29.62	PK	Vertical
3	7412.400	43.80	36.68	5.76	-39.86	46.38	74.00	27.62	PK	Vertical
4	9919.900	49.07	38.34	6.68	-39.61	54.48	-	-	PK	Vertical
5	11387.000	41.81	39.64	7.56	-39.60	49.41	74.00	24.59	PK	Vertical
6	12305.000	41.68	39.39	7.81	-39.36	49.52	74.00	24.48	PK	Vertical

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

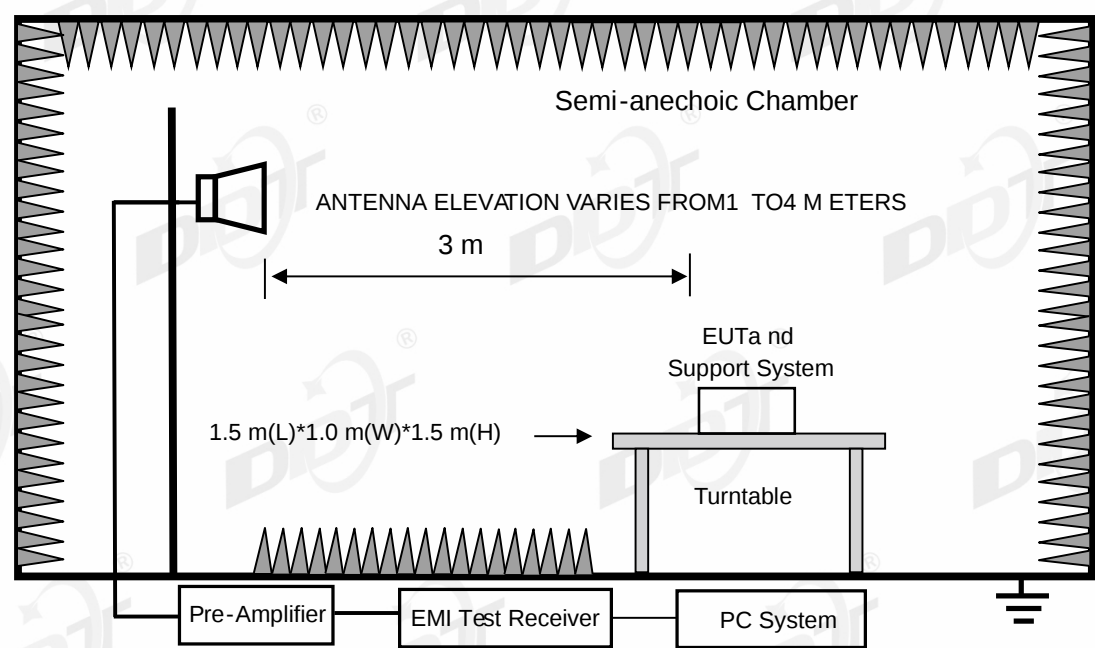
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

15. Band Edge Compliance

15.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Cal Due To
Micro-Tronics filters	REBES	BRM50702	DDT-ZC03242	/
RF Cable	N/A	W24.02 HL-562	DDT-ZC04022	2026/03/28
RF cable	Yuhu Technology	JCTB810-NJ-NJ-9M	DDT-ZC02538	2026/03/28
RF cable	Zhongke Junchuang	JCT26S-NJ-NJ-1.5M	DDT-ZC02762	/
RF cable	Yuhu Technology	ZT26S-SMAJ-SMAJ-1M	DDT-ZC02037	2026/03/28
RF Cable	N/A	W13.02 AP1-X2	DDT-ZC04023	2026/03/28
Pre-amplifier	COM-POWER	PAM-840A	DDT-ZC01693	2026/03/28
Pre-amplifier	COM-POWER	PAM-118A	DDT-ZC01293	2026/08/10
High pass filter	Micro-Tronics	HPM50102	DDT-ZC00561	2026/03/28
EMI TEST RECEIVER	R&S	ESU26	DDT-ZC01909	2026/03/28
High pass filter	Micro-Tronics	HPM50108	DDT-ZC00560	2026/03/28
High Pass filter	Xi'an Xingbo	XBLBQ-GTA67	DDT-ZC02179	2026/03/28
Micro-Tronics filters	REBES	BRM50716	DDT-ZC03240	/
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	DDT-ZC00506	2026/04/01
Trilog Broadband Antenna	Schwarzbeck	VULB 9163	DDT-ZC02050	2026/07/25
Hochgewinn-Hornantenne	SCHWARZBECK	BBHA 9120 D	DDT-ZC02129	2026/08/11
Active Loop Antenna	Schwarzbeck	FMZB1519	DDT-ZC00524	2026/08/18
PSA Series Spectrum Analyzer	Agilent	E4447A	DDT-ZC00517	2026/03/28

15.2. Block diagram of test setup



15.3. Limits

All restriction band should comply with 15.209 limits, other emission should be at least 20 dB below the fundamental.

15.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	other
/	/	/	/	/

15.5. Test procedure

Same with Radiated Emission except change investigated frequency range.
Remark: All restriction band have been tested, and only the worst case is shown in report.

15.6. Test result

PASS. (See below detailed test result)

15.7. Test data

TR-4-E-009 Radiated Emission Test Result

Test Date:

2025-10-15

Tested By:

Lin Guoyuan

EUT:

Bookshelf Speaker

Model Number:

BS316-1

Test Mode:

TX DH5 2402MHz Mode

Power Supply:

AC 120V/60HZ

Condition:

Temp:23.9°C;Humi:54.9%

Test Site:

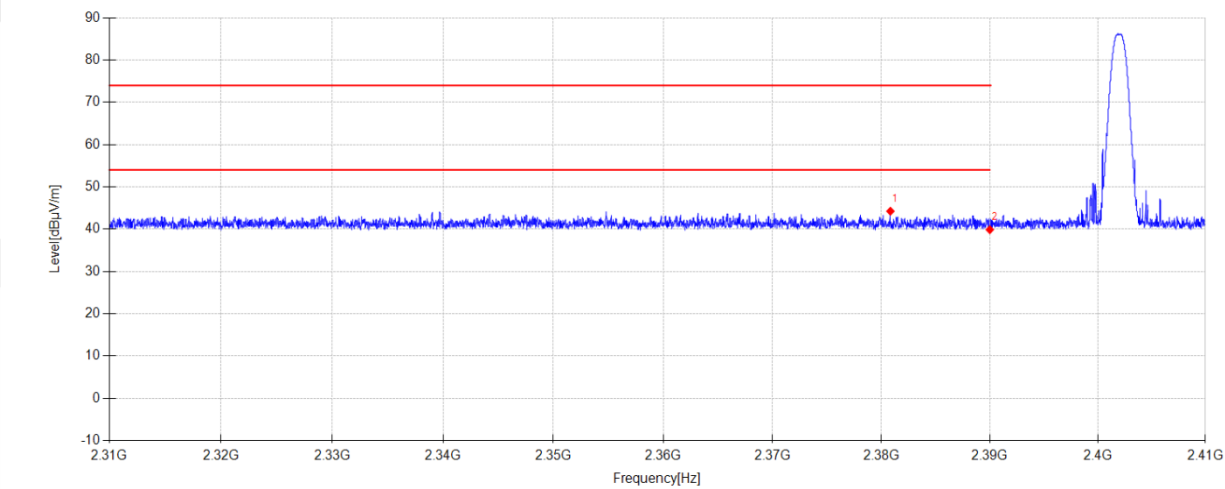
DDT 3# Chamber

File Path:

d:\ts\2025 report date\Q25091623-2E\FCC ABOVE 1G BT\23

Memo:

Sample Numbler:S25091623-003 Power Setting:5



Suspected Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2380.830	12.95	27.52	3.77	0.00	44.24	74.00	29.76	PK	Horizontal
2	2390.000	8.64	27.46	3.78	0.00	39.88	74.00	34.12	PK	Horizontal

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2025-10-15

Tested By:

Lin Guoyuan

EUT:

Bookshelf Speaker

Model Number:

BS316-1

Test Mode:

TX DH5 2402MHz Mode

Power Supply:

AC 120V/60HZ

Condition:

Temp:23.9°C;Humi:54.9%

Test Site:

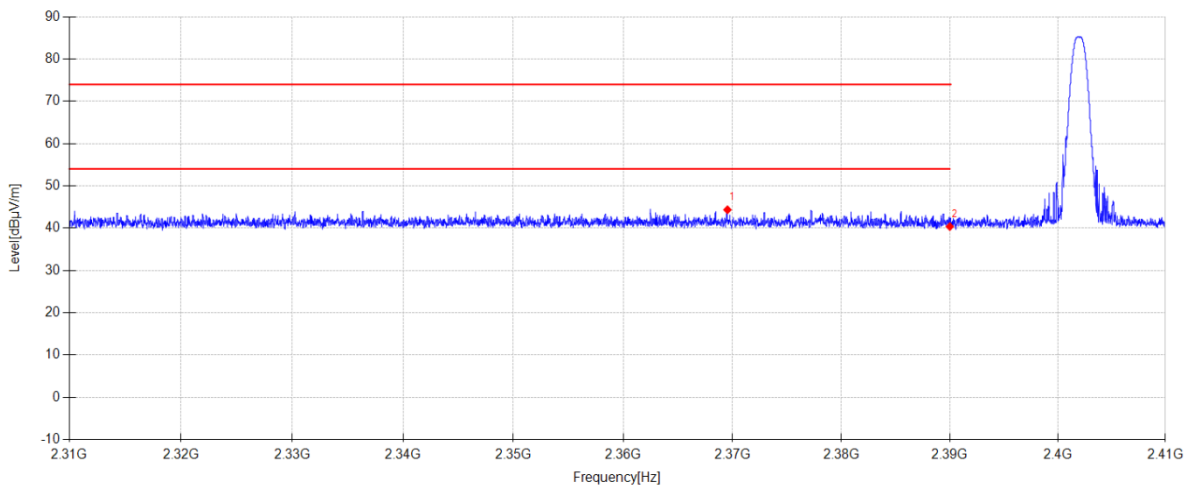
DDT 3# Chamber

File Path:

d:\ts\2025 report date\Q25091623-2E\FCC ABOVE 1G BT\24

Memo:

Sample Numbler:S25091623-003 Power Setting:5



Suspected Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2369.540	13.02	27.58	3.75	0.00	44.35	74.00	29.65	PK	Vertical
2	2390.000	9.13	27.46	3.78	0.00	40.37	74.00	33.63	PK	Vertical

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2025-10-15

Tested By:

Lin Guoyuan

EUT:

Bookshelf Speaker

Model Number:

BS316-1

Test Mode:

TX 2DH5 2402MHz Mode

Power Supply:

AC 120V/60HZ

Condition:

Temp:23.9°C;Humi:54.9%

Test Site:

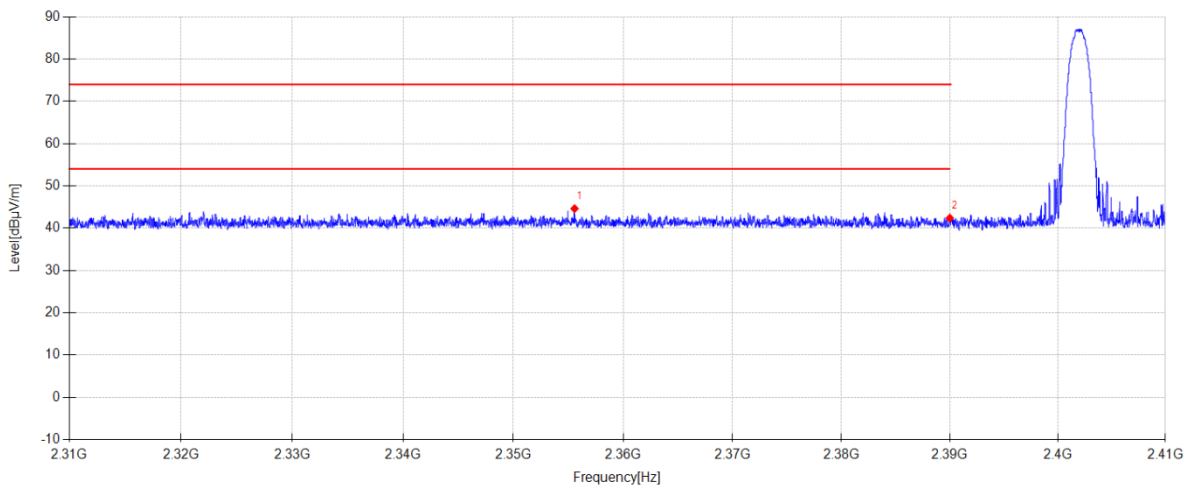
DDT 3# Chamber

File Path:

d:\ts\2025 report date\Q25091623-2E\FCC ABOVE 1G BT\21

Memo:

Sample Numbler:S25091623-003 Power Setting:5



Suspected Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2355.570	13.21	27.67	3.74	0.00	44.62	74.00	29.38	PK	Horizontal
2	2390.000	11.14	27.46	3.78	0.00	42.38	74.00	31.62	PK	Horizontal

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2025-10-15

Tested By:

Lin Guoyuan

EUT:

Bookshelf Speaker

Model Number:

BS316-1

Test Mode:

TX 2DH5 2402MHz Mode

Power Supply:

AC 120V/60HZ

Condition:

Temp:23.9°C;Humi:54.9%

Test Site:

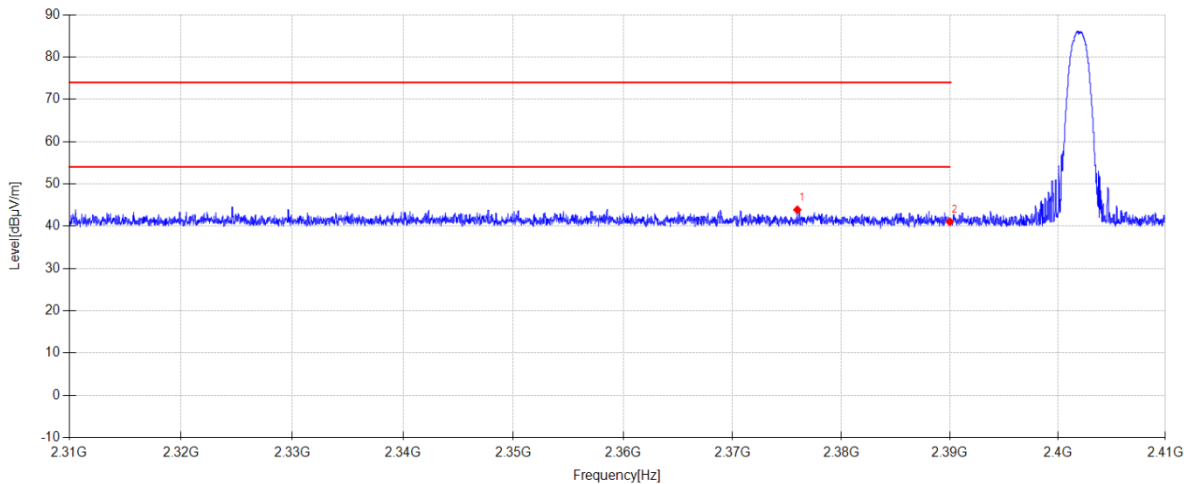
DDT 3# Chamber

File Path:

d:\ts\2025 report date\Q25091623-2E\FCC ABOVE 1G BT\22

Memo:

Sample Numbler:S25091623-003 Power Setting:5



Suspected Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2375.950	12.56	27.54	3.76	0.00	43.86	74.00	30.14	PK	Vertical
2	2390.000	9.78	27.46	3.78	0.00	41.02	74.00	32.98	PK	Vertical

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2025-10-17

Tested By:

Lin Guoyuan

EUT:

Bookshelf Speaker

Model Number:

BS316-1

Test Mode:

TX 3DH5 2402MHz Mode

Power Supply:

AC 120V/60HZ

Condition:

Temp:23.9°C;Humi:54.9%

Test Site:

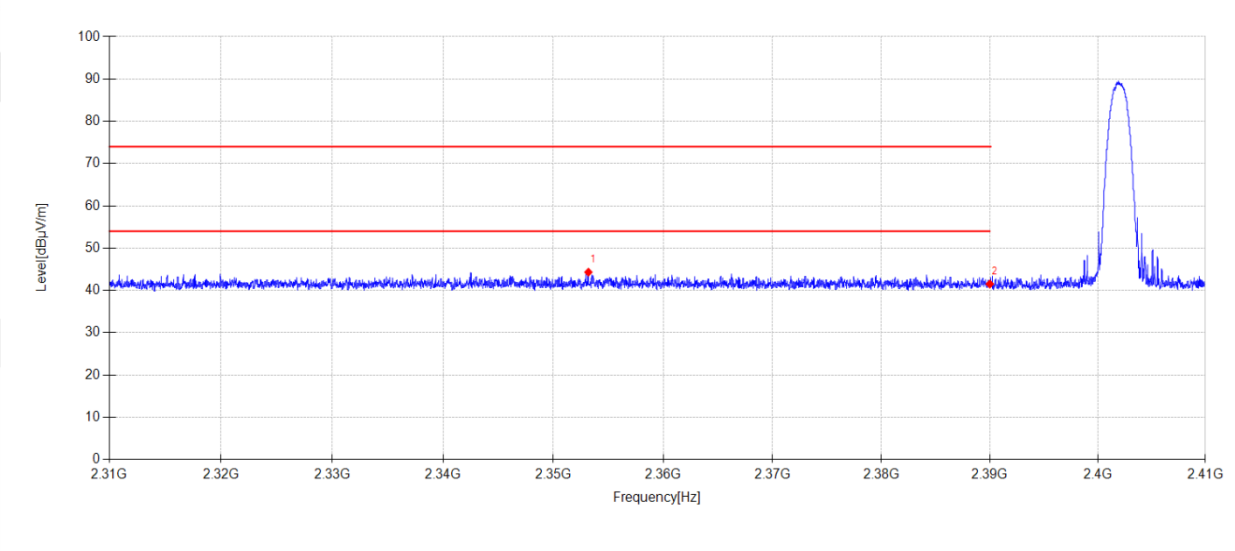
DDT 3# Chamber

File Path:

d:\ts\2025 report date\Q25091623-2E\FCC ABOVE 1G BT\25

Memo:

Sample Numbler:S25091623-003 Power Setting:5



Suspected Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2353.190	12.91	27.68	3.73	0.00	44.32	74.00	29.68	PK	Horizontal
2	2390.000	10.28	27.46	3.78	0.00	41.52	74.00	32.48	PK	Horizontal

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2025-10-17

Tested By:

Lin Guoyuan

EUT:

Bookshelf Speaker

Model Number:

BS316-1

Test Mode:

TX 3DH5 2402MHz Mode

Power Supply:

AC 120V/60HZ

Condition:

Temp:23.9°C;Humi:54.9%

Test Site:

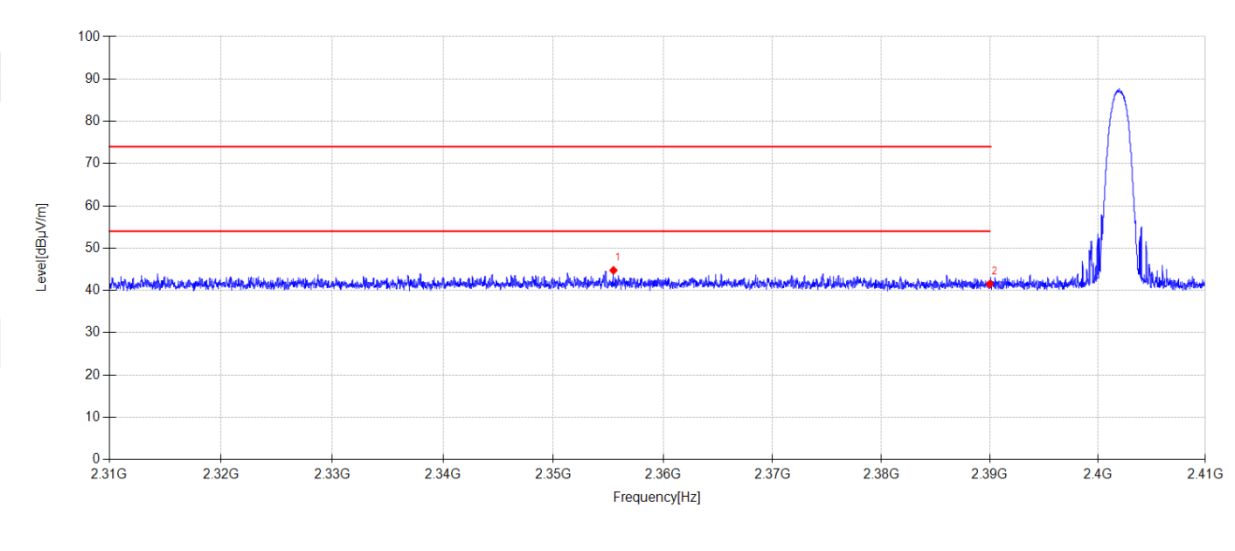
DDT 3# Chamber

File Path:

d:\ts\2025 report date\Q25091623-2E\FCC ABOVE 1G BT\26

Memo:

Sample Numbler:S25091623-003 Power Setting:5



Suspected Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2355.470	13.34	27.67	3.74	0.00	44.75	74.00	29.25	PK	Vertical
2	2390.000	10.29	27.46	3.78	0.00	41.53	74.00	32.47	PK	Vertical

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2025-10-15

Tested By:

Lin Guoyuan

EUT:

Bookshelf Speaker

Model Number:

BS316-1

Test Mode:

TX DH5 2480MHz Mode

Power Supply:

AC 120V/60HZ

Condition:

Temp:23.9°C;Humi:54.9%

Test Site:

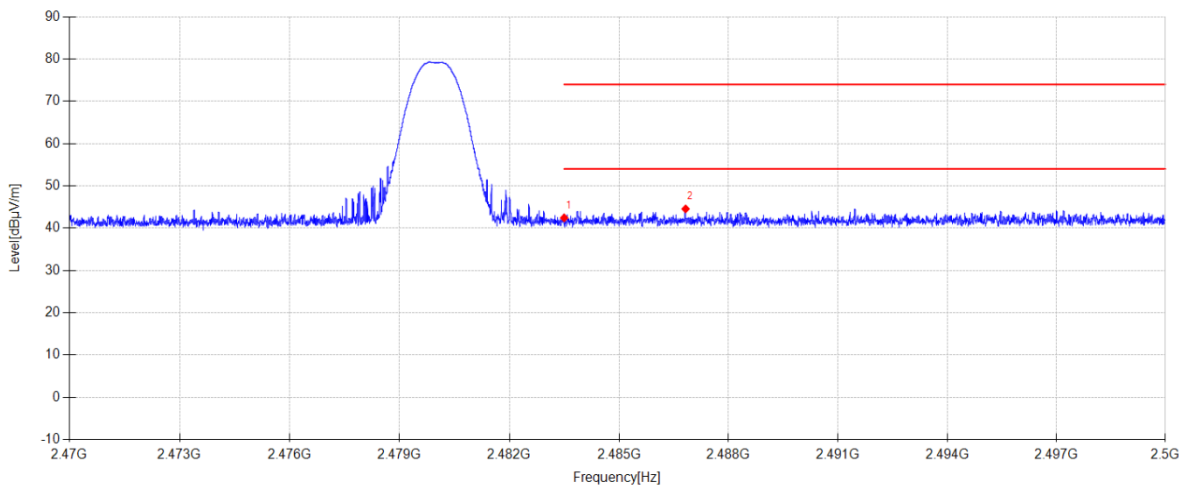
DDT 3# Chamber

File Path:

d:\ts\2025 report date\Q25091623-2E\FCC ABOVE 1G BT\17

Memo:

Sample Numbler:S25091623-003 Power Setting:5



Suspected Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.500	11.01	27.54	3.88	0.00	42.43	74.00	31.57	PK	Horizontal
2	2486.824	13.11	27.57	3.88	0.00	44.56	74.00	29.44	PK	Horizontal

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2025-10-15

Tested By:

Lin Guoyuan

EUT:

Bookshelf Speaker

Model Number:

BS316-1

Test Mode:

TX DH5 2480MHz Mode

Power Supply:

AC 120V/60HZ

Condition:

Temp:23.9°C;Humi:54.9%

Test Site:

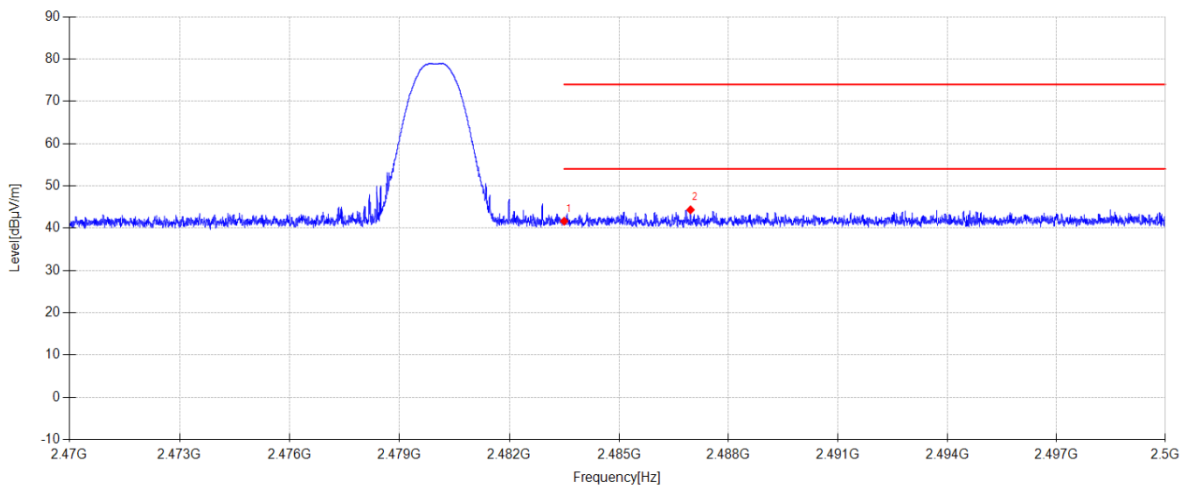
DDT 3# Chamber

File Path:

d:\ts\2025 report date\Q25091623-2E\FCC ABOVE 1G BT\18

Memo:

Sample Numbler:S25091623-003 Power Setting:5



Suspected Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.500	10.23	27.54	3.88	0.00	41.65	74.00	32.35	PK	Vertical
2	2486.959	12.89	27.57	3.88	0.00	44.34	74.00	29.66	PK	Vertical

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2025-10-15

Tested By:

Lin Guoyuan

EUT:

Bookshelf Speaker

Model Number:

BS316-1

Test Mode:

TX 2DH5 2480MHz Mode

Power Supply:

AC 120V/60HZ

Condition:

Temp:23.9°C;Humi:54.9%

Test Site:

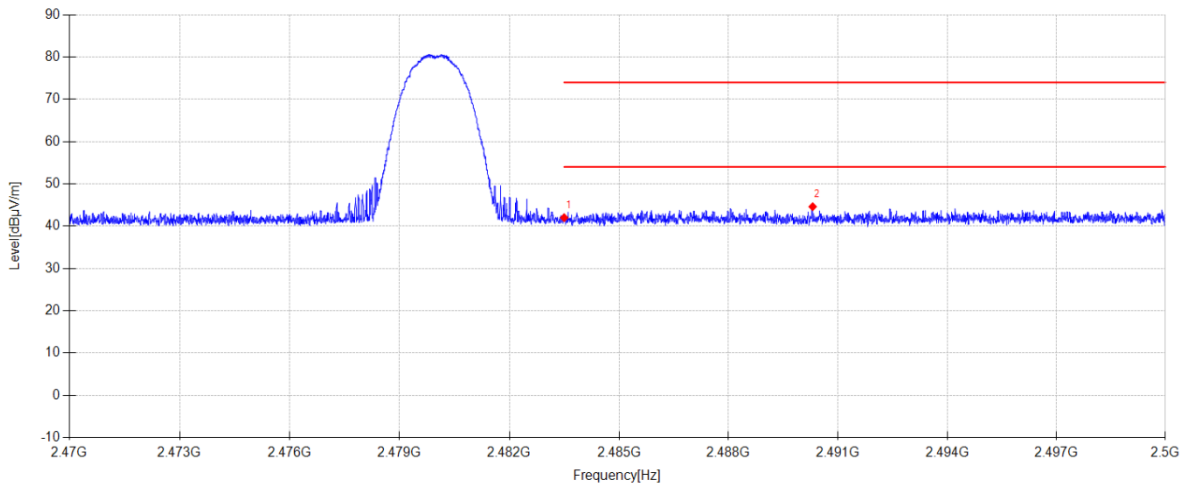
DDT 3# Chamber

File Path:

d:\ts\2025 report date\Q25091623-2E\FCC ABOVE 1G BT\19

Memo:

Sample Numbler:S25091623-003 Power Setting:5



Suspected Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.500	10.58	27.54	3.88	0.00	42.00	74.00	32.00	PK	Horizontal
2	2490.307	13.13	27.60	3.88	0.00	44.61	74.00	29.39	PK	Horizontal

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2025-10-15

Tested By:

Lin Guoyuan

EUT:

Bookshelf Speaker

Model Number:

BS316-1

Test Mode:

TX 2DH5 2480MHz Mode

Power Supply:

AC 120V/60HZ

Condition:

Temp:23.9°C;Humi:54.9%

Test Site:

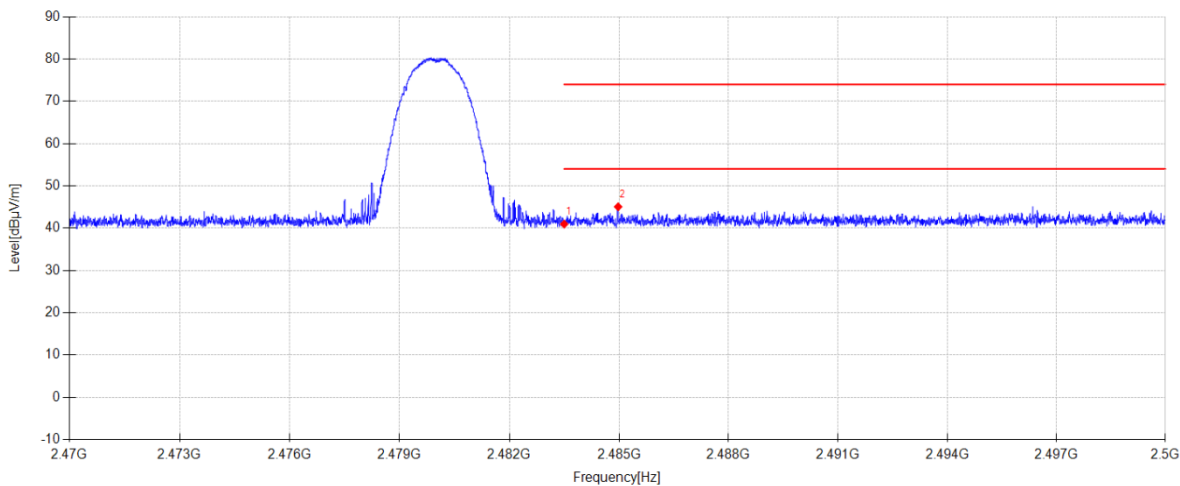
DDT 3# Chamber

File Path:

d:\ts\2025 report date\Q25091623-2E\FCC ABOVE 1G BT\20

Memo:

Sample Numbler:S25091623-003 Power Setting:5



Suspected Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.500	9.54	27.54	3.88	0.00	40.96	74.00	33.04	PK	Vertical
2	2484.976	13.62	27.55	3.88	0.00	45.05	74.00	28.95	PK	Vertical

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2025-10-17

Tested By:

Lin Guoyuan

EUT:

Bookshelf Speaker

Model Number:

BS316-1

Test Mode:

TX 3DH5 2480MHz Mode

Power Supply:

AC 120V/60HZ

Condition:

Temp:23.9°C;Humi:54.9%

Test Site:

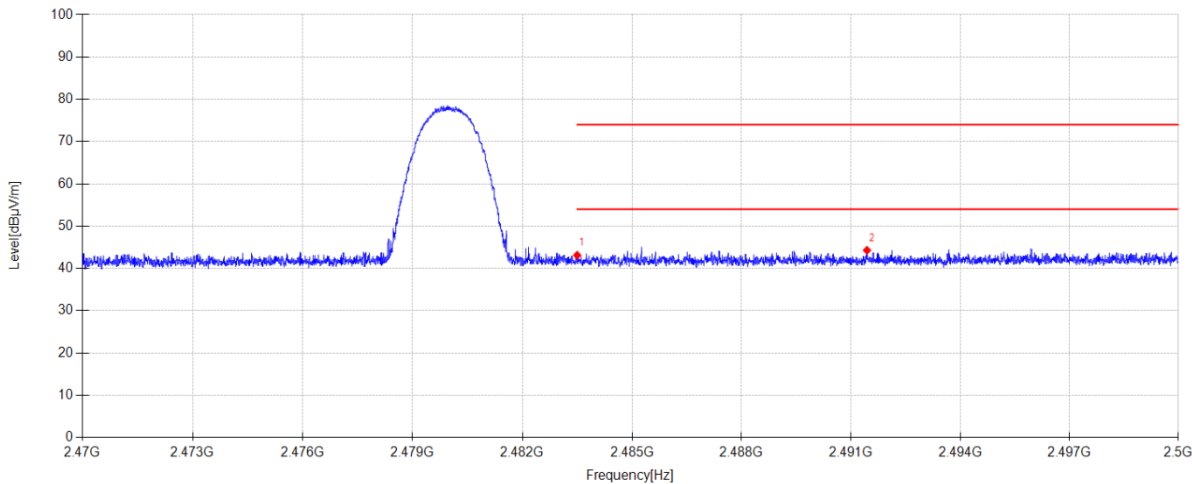
DDT 3# Chamber

File Path:

d:\ts\2025 report date\Q25091623-2E\FCC ABOVE 1G BT\27

Memo:

Sample Numbler:S25091623-003 Power Setting:5



Suspected Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.500	11.71	27.54	3.88	0.00	43.13	74.00	30.87	PK	Horizontal
2	2491.441	12.79	27.61	3.89	0.00	44.29	74.00	29.71	PK	Horizontal

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2025-10-17

Tested By:

Lin Guoyuan

EUT:

Bookshelf Speaker

Model Number:

BS316-1

Test Mode:

TX 3DH5 2480MHz Mode

Power Supply:

AC 120V/60HZ

Condition:

Temp:23.9°C;Humi:54.9%

Test Site:

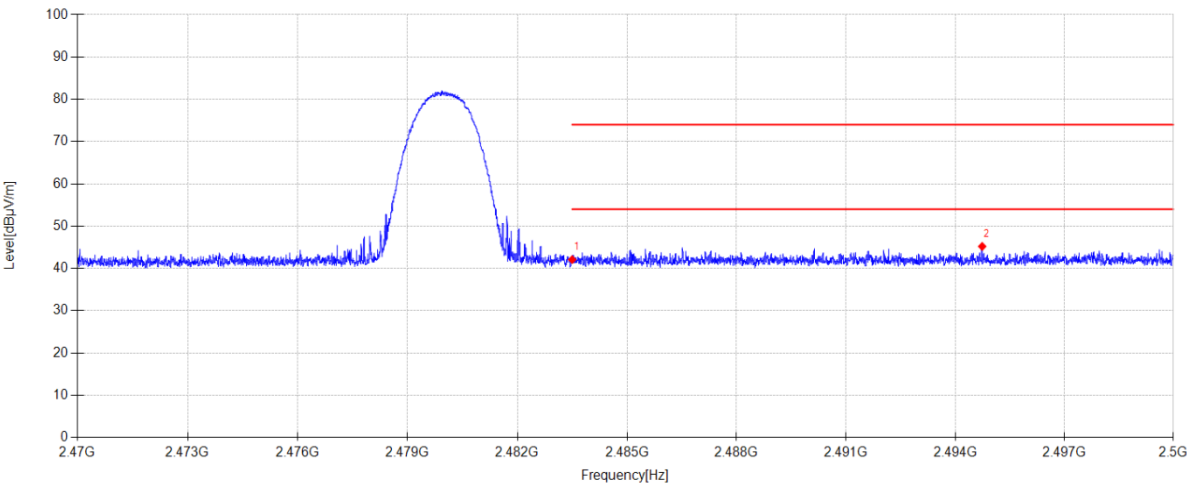
DDT 3# Chamber

File Path:

d:\ts\2025 report date\Q25091623-2E\FCC ABOVE 1G BT\28

Memo:

Sample Numbler:S25091623-003 Power Setting:5



Suspected Data List										
NO	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.500	10.67	27.54	3.88	0.00	42.09	74.00	31.91	PK	Vertical
2	2494.741	13.67	27.65	3.89	0.00	45.21	74.00	28.79	PK	Vertical

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

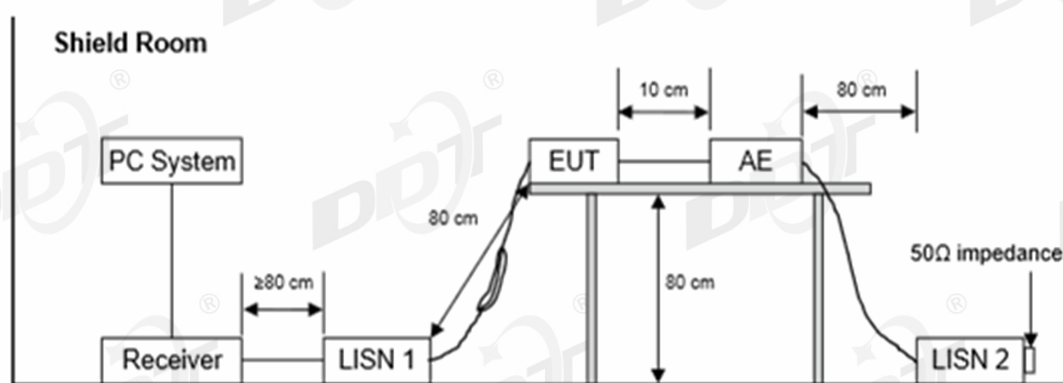
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

16. Power Line Conducted Emissions

16.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Cal Due To
EMI Test Receiver	R&S	ESCI	DDT-ZC00235	2026/07/06
Two Line V-Network	R&S	ENV216	DDT-ZC00535	2026/07/06
Artificial mains	R&S	ESH2-Z5	DDT-ZC00538	2026/07/06
Pulse Limiter	SCHWARZBECK	ESH3-Z2	DDT-ZC00539	2026/07/06
CE Cable 1	R&S	ESU8/RF2	DDT-ZC00566	2026/07/06
EMI Test Software	Audix/TW	e3	DDT-ZC01252	/

16.2. Block diagram of test setup



16.3. Limits

Frequency	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150 kHz~500 kHz	66 ~ 56*	56 ~ 46*
500 kHz~5 MHz	56	46
5 MHz~30 MHz	60	50

Note 1: * Decreasing linearly with logarithm of frequency.

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

16.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	other
/	/	/	/	/

16.5. Test procedure

The EUT and Support equipment, if needed, were put placed on a non-metallic table, 80cm above the ground plane.

All support equipment power received from a second LISN.

Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.

The Receiver scanned from 150 kHz to 30 MHz for emissions in each of the test modes.

During the above scans, the emissions were maximized by cable manipulation.

The test mode(s) described in clause 2.4 were scanned during the preliminary test.

After the preliminary scan, we found the test mode producing the highest emission level.

The EUT configuration and worse cable configuration of the above highest emission levels were recorded for reference of the final test.

EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test.

A scan was taken on both power lines, Neutral and Line, 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.

The test data of the worst-case condition(s) was recorded.

The bandwidth of test receiver is set at 9 kHz.

16.6. Test result

PASS. (See below detailed test result)

Note1: All emissions not reported below are too low against the prescribed limits.

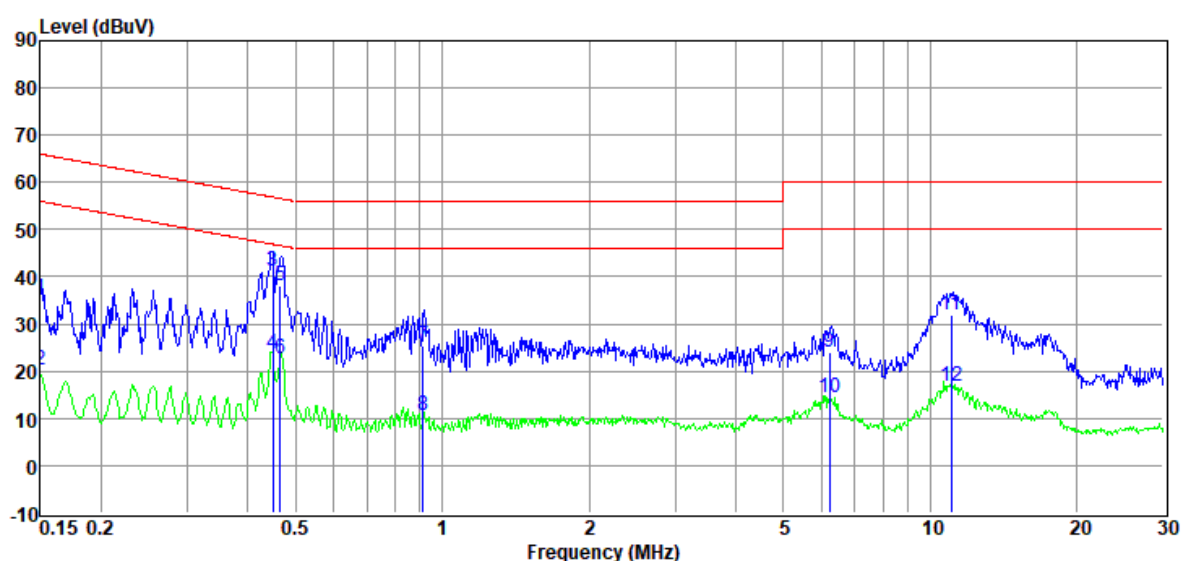
Note2: “----” means Peak detection; “-----” means Average detection.

Note3: Pre-test AC conducted emission at both voltage AC 120V/60Hz and AC 240V/50Hz, recorded the worst case.

16.7. Test data

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 1# Shield Room **D:\2025 CE report data\Q25091623-1E\1014 CE.EM6**
Test Date : 2025-10-14 **Tested By** : Alex Liu
EUT : Bookshelf Speaker **Model Number** : BS316-1
Power Supply : AC 120V/60Hz **Test Mode** : BT 2402MHz mode
Condition : TEMP:22.3°C, RH:61.1% **LISN** : 2025 1# 216/LINE
Memo :



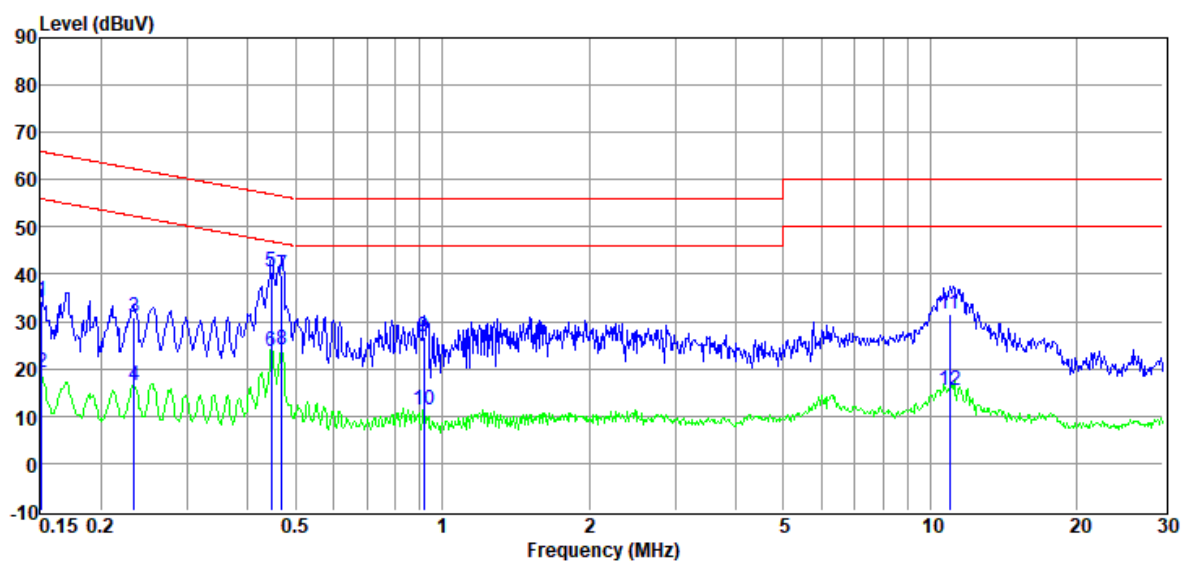
Item (Mark)	Freq. (MHz)	Read Level (dBμV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBμV)	Limit Line (dBμV)	Margin (dB)	Detector	Phase
1	0.15	15.46	9.85	0.05	9.89	35.25	66.00	30.75	QP	LINE
2	0.15	0.37	9.85	0.05	9.89	20.16	56.00	35.84	Average	LINE
3	0.45	21.47	9.73	0.08	9.89	41.17	56.89	15.72	QP	LINE
4	0.45	3.95	9.73	0.08	9.89	23.65	46.89	23.24	Average	LINE
5	0.47	18.28	9.74	0.09	9.89	38.00	56.58	18.58	QP	LINE
6	0.47	2.78	9.74	0.09	9.89	22.50	46.58	24.08	Average	LINE
7	0.91	5.41	9.87	0.14	9.90	25.32	56.00	30.68	QP	LINE
8	0.91	-9.43	9.87	0.14	9.90	10.48	46.00	35.52	Average	LINE
9	6.22	4.09	9.94	0.21	9.85	24.09	60.00	35.91	QP	LINE
10	6.22	-5.56	9.94	0.21	9.85	14.44	50.00	35.56	Average	LINE
11	11.02	11.73	10.23	0.28	9.85	32.09	60.00	27.91	QP	LINE
12	11.02	-3.42	10.23	0.28	9.85	16.94	50.00	33.06	Average	LINE

Note:

1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 1# Shield Room D:\2025 CE report data\Q25091623-1E\1014 CE.EM6
Test Date : 2025-10-14 Tested By : Alex Liu
EUT : Bookshelf Speaker Model Number : BS316-1
Power Supply : AC 120V/60Hz Test Mode : BT 2402MHz mode
Condition : TEMP:22.3°C, RH:61.1% LISN : 2025 1# 216/NEUTRAL
Memo :



Item	Freq.	Read Level	LISN Factor	Cable Loss	Pulse Limiter Factor	Result Level	Limit Line	Margin	Detector	Phase
(Mark)	(MHz)	(dBμV)	(dB)	(dB)	(dB)	(dBμV)	(dBμV)	(dB)		
1	0.15	14.71	9.77	0.05	9.89	34.42	65.96	31.54	QP	NEUTRAL
2	0.15	-0.46	9.77	0.05	9.89	19.25	55.96	36.71	Average	NEUTRAL
3	0.23	11.21	9.84	0.06	9.89	31.00	62.30	31.30	QP	NEUTRAL
4	0.23	-3.36	9.84	0.06	9.89	16.43	52.30	35.87	Average	NEUTRAL
5	0.45	20.65	9.85	0.08	9.89	40.47	56.93	16.46	QP	NEUTRAL
6	0.45	3.84	9.85	0.08	9.89	23.66	46.93	23.27	Average	NEUTRAL
7	0.47	20.08	9.88	0.09	9.89	39.94	56.54	16.60	QP	NEUTRAL
8	0.47	4.26	9.88	0.09	9.89	24.12	46.54	22.42	Average	NEUTRAL
9	0.92	7.00	9.89	0.14	9.90	26.93	56.00	29.07	QP	NEUTRAL
10	0.92	-8.75	9.89	0.14	9.90	11.18	46.00	34.82	Average	NEUTRAL
11	10.96	11.35	10.21	0.28	9.85	31.69	60.00	28.31	QP	NEUTRAL
12	10.96	-4.80	10.21	0.28	9.85	15.54	50.00	34.46	Average	NEUTRAL

Note:

1. Result Level = Read Level + LISN Factor + Pulse Limiter Factor + Cable loss.
2. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
4. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.

18. Photos of the EUT

Please refer to DDT-Q25091623-1E appendix I

-----End Report-----