

Appendix C(433.92M Test Result)

C.1: AC Line Conducted Emissions

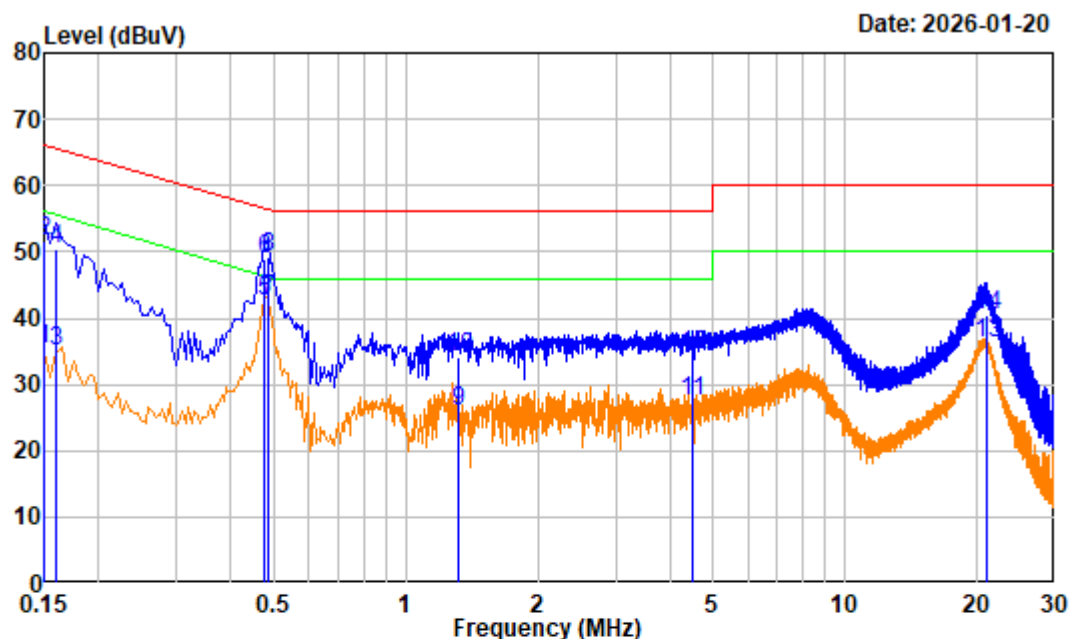
Test Data

Environmental Conditions

Temperature:	22.6 °C
Relative Humidity:	44 %
ATM Pressure:	101.8 kPa
Test Engineer:	Serein Wen
Test Date:	2026-01-20
EUT Operation Mode:	Transmitting

Test Result: Compliance, please refer to the below data.

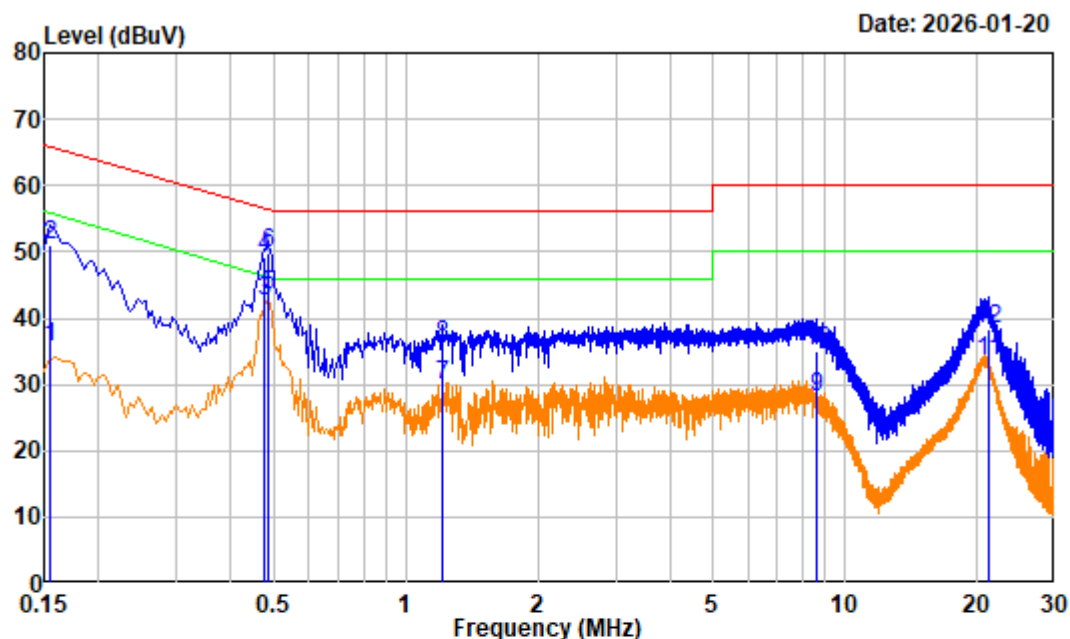
AC 120V/60Hz, Line:



Site : Shielding Room
 Condition : Line
 Job No. : 2504A22520E-RF
 Test Mode : 433M Transmitting
 Tester : Serein Wen
 Receiver Setting: IF B/W 9kHz PK/AV
 Note : POE power

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBuV	dBuV	dBuV	dB	
1	0.150	19.75	15.51	35.26	56.00	-20.74	Average
2	0.150	19.75	31.99	51.74	66.00	-14.26	QP
3	0.160	19.82	15.13	34.95	55.46	-20.51	Average
4	0.160	19.82	30.47	50.29	65.46	-15.17	QP
5	0.475	19.84	22.68	42.52	46.43	-3.91	Average
6	0.475	19.84	29.07	48.91	56.43	-7.52	QP
7	0.485	19.84	23.13	42.97	46.25	-3.28	Average
8	0.485	19.84	29.45	49.29	56.25	-6.96	QP
9	1.315	20.20	5.90	26.10	46.00	-19.90	Average
10	1.315	20.20	13.86	34.06	56.00	-21.94	QP
11	4.490	21.14	6.19	27.33	46.00	-18.67	Average
12	4.490	21.14	13.42	34.56	56.00	-21.44	QP
13	21.055	20.84	15.35	36.19	50.00	-13.81	Average
14	21.055	20.84	19.70	40.54	60.00	-19.46	QP

AC 120V/60Hz, Neutral:



Site : Shielding Room
 Condition : neutral
 Job No. : 2504A22520E-RF
 Test Mode : 433M Transmitting
 Tester : Serein Wen
 Receiver Setting: IF B/W 9kHz PK/AV
 Note : POE power

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dBUV	dBUV	dBUV	dB	
1	0.155	19.90	15.81	35.71	55.73	-20.02	Average
2	0.155	19.90	31.06	50.96	65.73	-14.77	QP
3	0.475	19.95	22.58	42.53	46.43	-3.90	Average
4	0.475	19.95	29.11	49.06	56.43	-7.37	QP
5	0.485	19.95	23.38	43.33	46.25	-2.92	Average
6	0.485	19.95	29.92	49.87	56.25	-6.38	QP
7	1.210	20.21	9.55	29.76	46.00	-16.24	Average
8	1.210	20.21	15.56	35.77	56.00	-20.23	QP
9	8.610	21.05	7.15	28.20	50.00	-21.80	Average
10	8.610	21.05	14.06	35.11	60.00	-24.89	QP
11	21.115	20.77	12.68	33.45	50.00	-16.55	Average
12	21.115	20.77	17.47	38.24	60.00	-21.76	QP

C.2: Radiated Emissions

Test Data

For radiates emissions, the applicant claims that device is installed vertically in Y-axes orientation. The Y-axes orientation was tested and recorded in the report.

9kHz-1GHz

Environmental Conditions

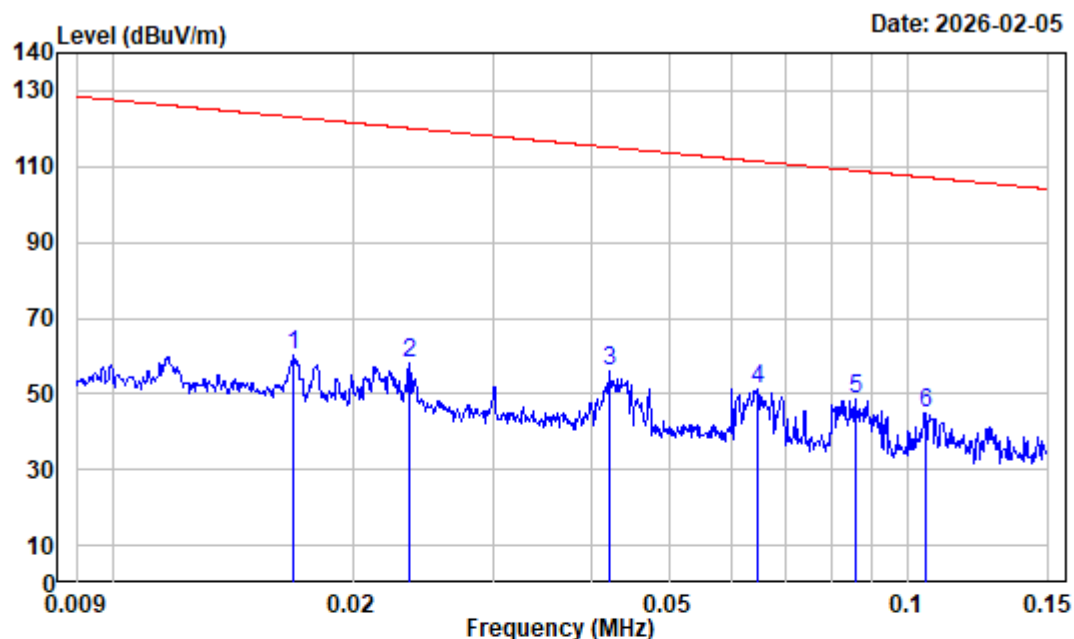
Temperature:	21.2 °C
Relative Humidity:	56 %
ATM Pressure:	101.9 kPa
Test Engineer:	Jayden Luo
Test Date:	2026-02-05
EUT Operation Mode:	Transmitting

Test Result: Compliance, please refer to the below data.

Note1: The Loop Antenna were tested in parallel, perpendicular, and ground-parallel. The worst orientation was parallel and the data was recorded in report.

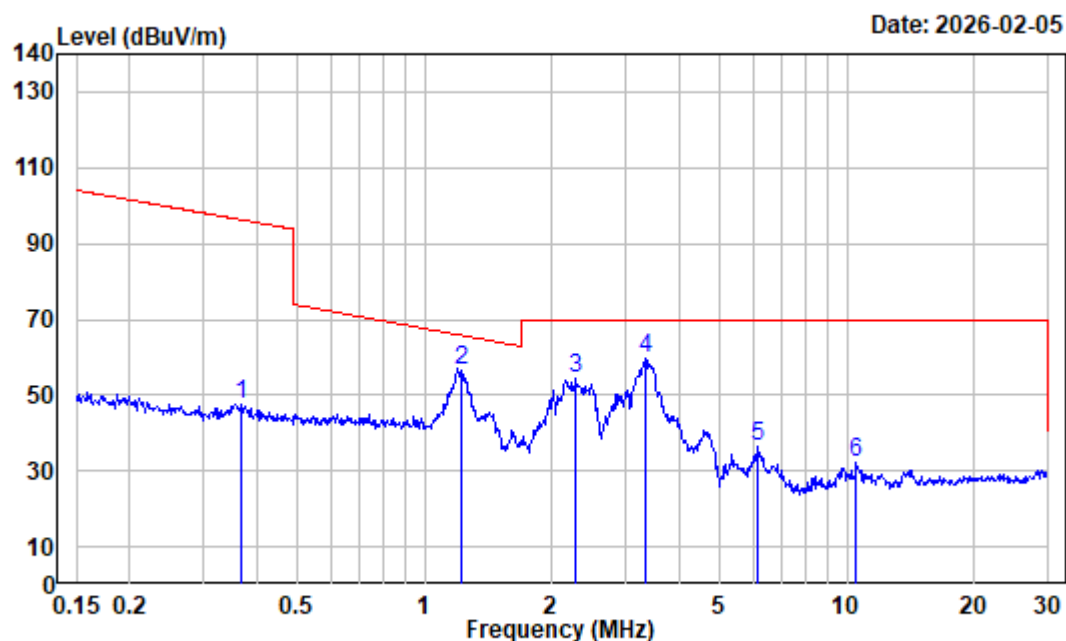
Note2: According to FCC §15.231(b) and RSS-210 Annex A.1.3, the fundamental frequency is 433.92 MHz. The spurious emission limit lies linearly within the range of 260 MHz to 470 MHz, corresponding to 375 $\mu\text{V/m}$ to 1250 $\mu\text{V/m}$. Therefore, the spurious emission limit at 867 MHz is 80.83 dBuV/m

9kHz~30MHz:



Site : chamber
 Condition : 3m
 Job No. : 2504A22520E-RF
 Polarization : Parallel Tester: Jayden Luo
 Test Mode : 433MHz Transmitting
 Note : PoE Adapter 48V
 Receiver Setting: RBW:300Hz VBW:1kHz

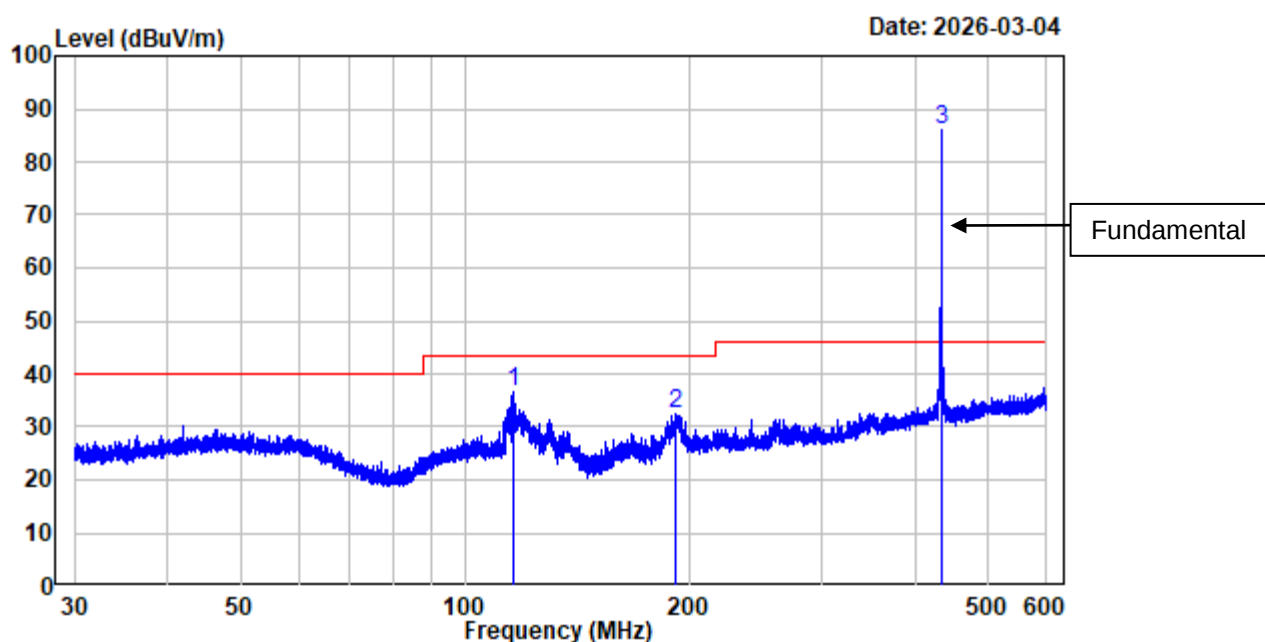
	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.017	32.77	27.69	60.46	123.05	-62.59	Peak
2	0.024	29.78	28.17	57.95	120.14	-62.19	Peak
3	0.042	24.43	31.48	55.91	115.10	-59.19	Peak
4	0.064	20.74	30.30	51.04	111.41	-60.37	Peak
5	0.086	17.93	30.41	48.34	108.95	-60.61	Peak
6	0.105	16.21	28.81	45.02	107.19	-62.17	Peak



Site : chamber
 Condition : 3m
 Job No. : 2504A22520E-RF
 Polarization : Parallel Tester: Jayden Luo
 Test Mode : 433MHz Transmitting
 Note : PoE Adapter 48V
 Receiver Setting: RBW:10kHz VBW:30kHz

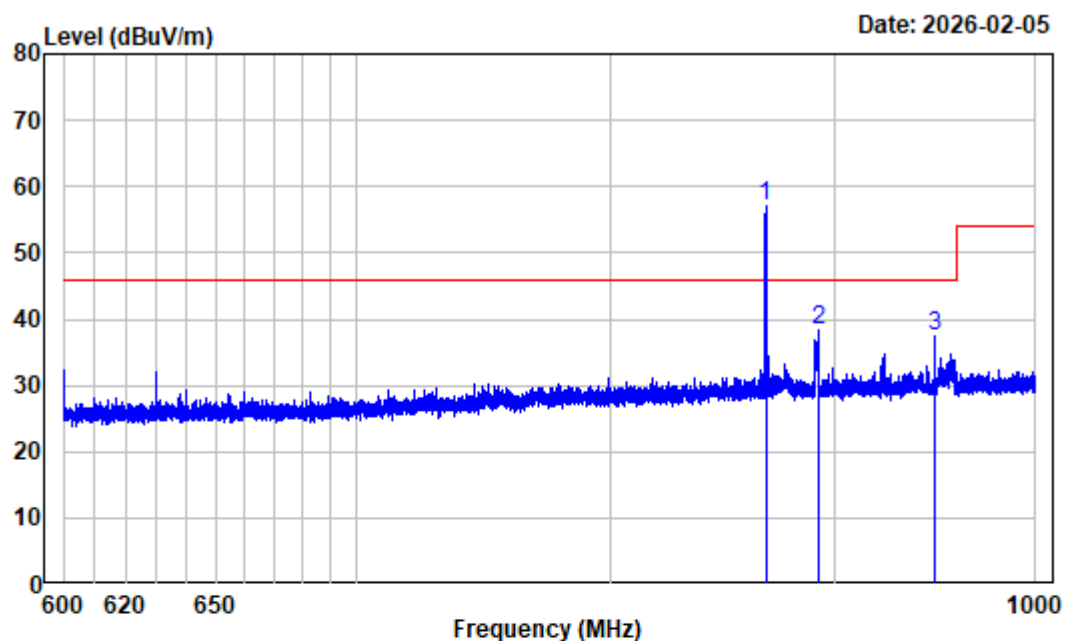
	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	0.369	5.89	41.83	47.72	96.26	-48.54	Peak
2	1.229	-2.64	59.25	56.61	65.64	-9.03	Peak
3	2.285	-5.51	60.01	54.50	69.54	-15.04	Peak
4	3.328	-5.98	65.76	59.78	69.54	-9.76	Peak
5	6.121	-6.20	42.49	36.29	69.54	-33.25	Peak
6	10.508	-5.22	37.66	32.44	69.54	-37.10	Peak

30MHz~1GHz:



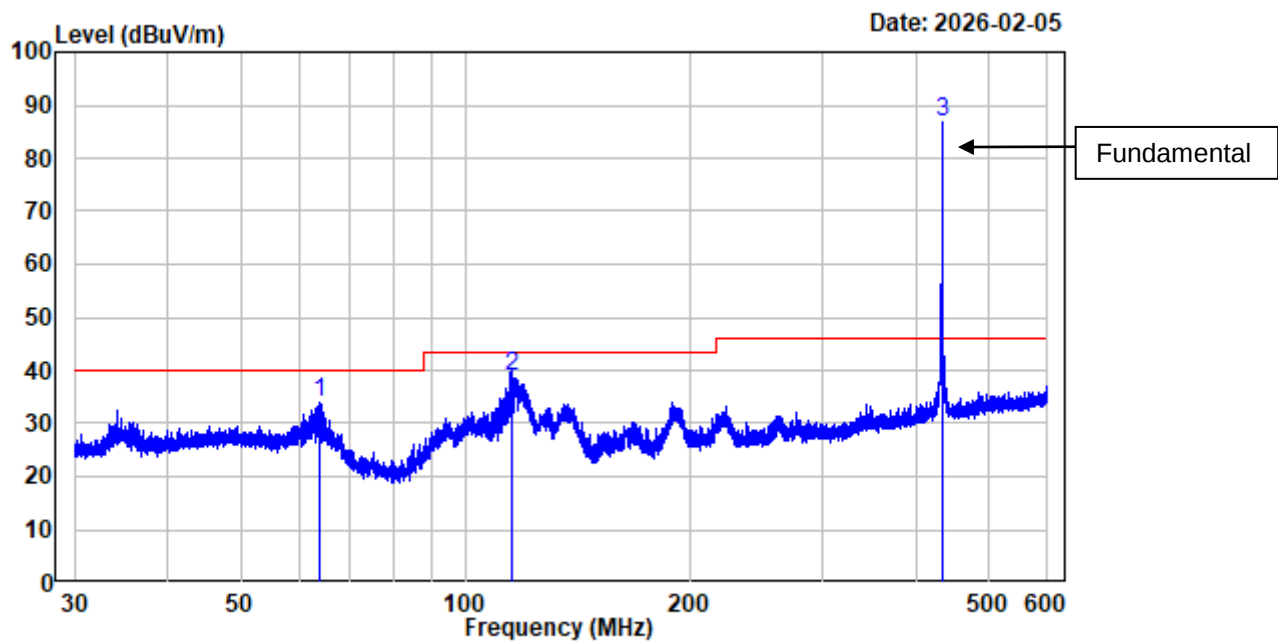
Site : chamber
 Condition : 3m HORIZONTAL
 Job No. : 2504A22520E-RF Tester: Jayden Luo
 Test Mode : 433MHz Transmitting
 Note : PoE Adapter 48V
 Receiver Setting: RBW:100kHz VBW:300kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	116.064	-12.60	49.38	36.78	43.50	-6.72	Peak
2	191.341	-10.24	42.77	32.53	43.50	-10.97	Peak
3	433.920	-4.88	90.91	86.03	100.83	-14.80	Peak



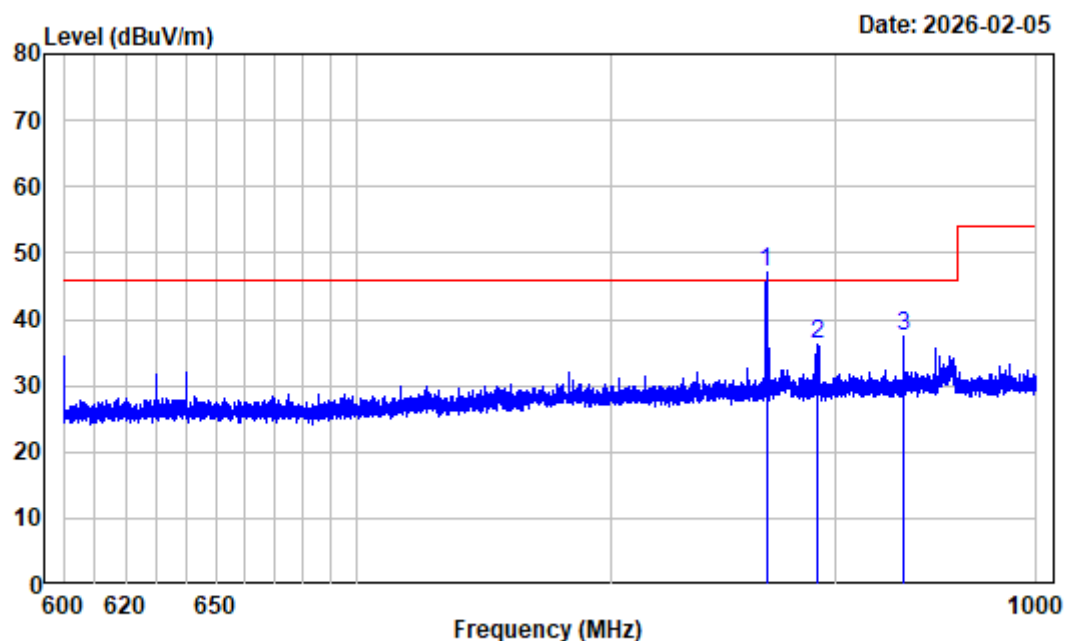
Site : chamber
 Condition : 3m HORIZONTAL
 Job No. : 2504A22520E-RF Tester: Jayden Luo
 Test Mode : 433MHz Transmitting
 Note : PoE Adapter 48V
 Receiver Setting: RBW:100kHz VBW:300kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	867.835	1.28	55.74	57.02	80.83	-23.81	Peak
2	891.936	1.59	36.87	38.46	46.00	-7.54	Peak
3	948.200	2.11	35.47	37.58	46.00	-8.42	Peak



Site : chamber
Condition : 3m VERTICAL
Job No. : 2504A22520E-RF Tester: Jayden Luo
Test Mode : 433MHz Transmitting
Note : PoE Adapter 48V
Receiver Setting: RBW:100kHz VBW:300kHz

Freq Factor		Read Level	Level	Limit Line	Over Limit	Remark
MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	63.943	-12.08	46.04	33.96	40.00	-6.04 Peak
2	115.198	-12.43	51.33	38.90	43.50	-4.60 QP
3	433.920	-4.88	91.57	86.69	100.83	-14.14 Peak



Site : chamber
 Condition : 3m VERTICAL
 Job No. : 2504A22520E-RF Tester: Jayden Luo
 Test Mode : 433MHz Transmitting
 Note : PoE Adapter 48V
 Receiver Setting: RBW:100kHz VBW:300kHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	867.835	1.28	45.79	47.07	80.83	-33.76	Peak
2	891.310	1.59	34.67	36.26	46.00	-9.74	Peak
3	933.065	2.05	35.40	37.45	46.00	-8.55	Peak

Field Strength of Average							
Frequency (MHz)	Peak Measurement @3m (dBμV/m)	Polar (H/V)	Duty Cycle Correction Factor (dB)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Comment
433.92	86.03	H	-7.33	78.70	80.83	-2.13	Fundamental
433.92	86.69	V	-7.33	79.36	80.83	-1.47	Fundamental

Note 1: Average Amplitude= Peak Measurement + Duty Cycle Factor

Note 2: Margin= Average Corrected Amplitude-Limit

Note 3: Each pulse train contains four different widths of sub-pulses.

$$\begin{aligned} \bullet \text{Total on time} &= \text{Ton1} \cdot \text{N1} + \text{Ton2} \cdot \text{N2} + \text{Ton3} \cdot \text{N3} + \text{Ton4} \cdot \text{N4} \\ &= 0.4435 \cdot 6 + 0.6406 \cdot 4 + 1.0594 \cdot 1 + 0.2464 \cdot 8 \\ &= 7.1946 \text{ms} \end{aligned}$$

$$\begin{aligned} \bullet \text{Duty Cycle} &= (\text{Total on time}) / \text{Tp} \cdot 100\% \\ &= (7.1946 / 16.7391) \cdot 100\% \\ &= 42.98\% \end{aligned}$$

$$\begin{aligned} \bullet \text{Duty cycle Factor} &= 20 \cdot \log(\text{Duty Cycle}) \\ &= 20 \cdot \log(0.4298) \\ &= -7.33 \text{dB} \end{aligned}$$

1GHz-4.5GHz

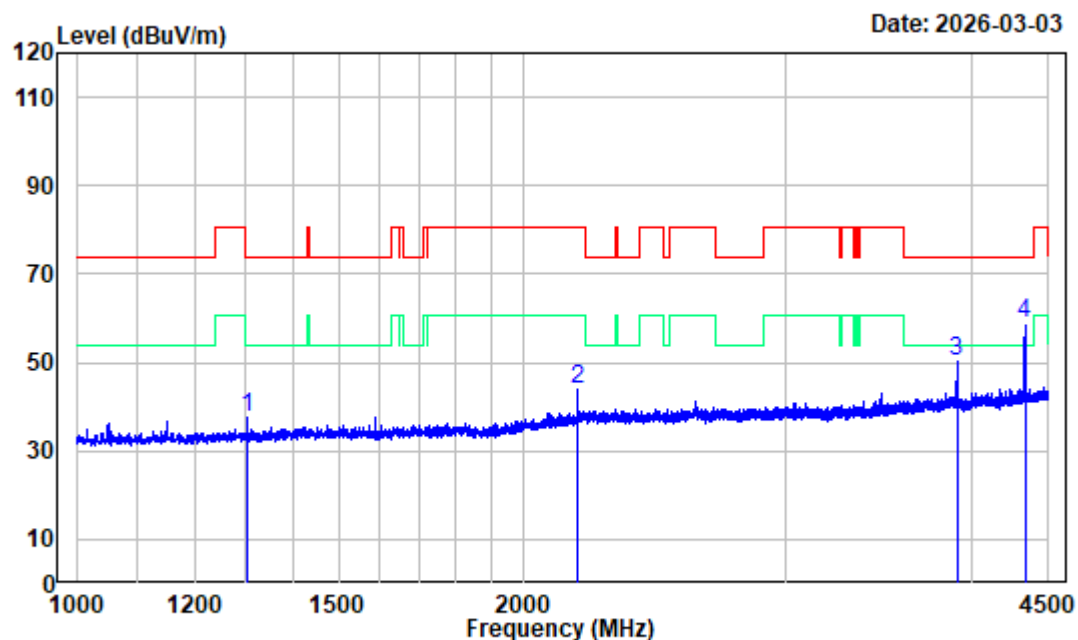
Environmental Conditions

Temperature:	22.3 °C
Relative Humidity:	55 %
ATM Pressure:	100.4 kPa
Test Engineer:	Max Tao
Test Date:	2026-03-03
EUT Operation Mode:	Transmitting

Test Result: Compliance, please refer to the below data.

Note: Choose the adapter for testing.

433.92MHz 1GHz-4.5GHz_HORIZONTAL



Site : chamber

Condition : 3m HORIZONTAL

Project No.: 2504A22520E-RF

Test Mode : Transmitting

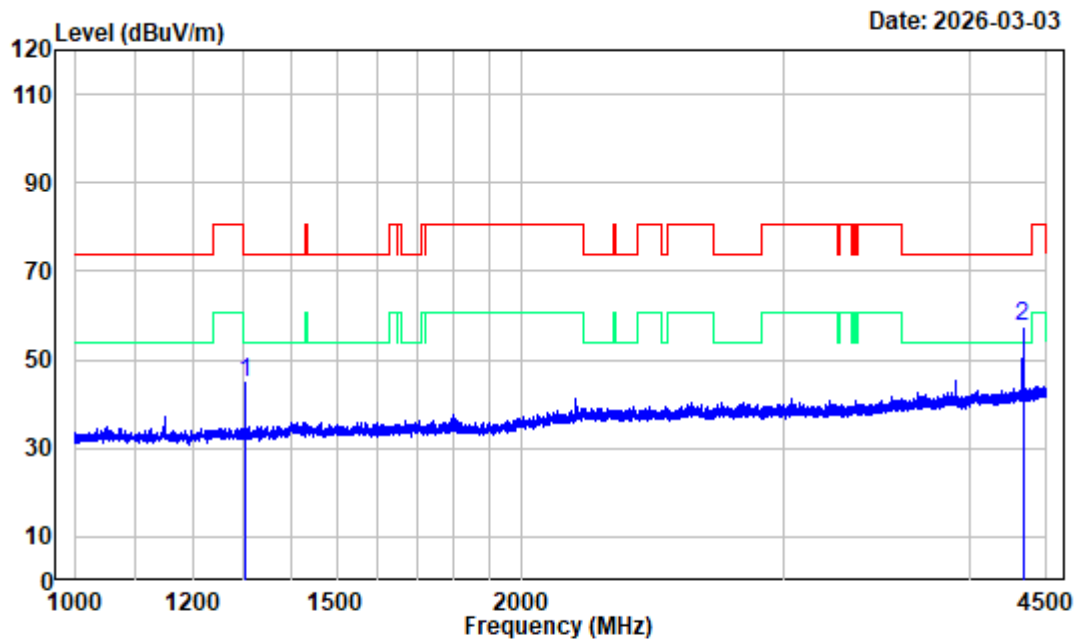
Tester:Max Tao

Note : 433M 1GHz-4.5GHz

SA setting : Peak:RBW:1MHz,VBW:3MHz

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	1301.760	-13.63	51.01	37.38	74.00	-36.62	Peak
2	2169.600	-10.33	54.36	44.03	80.83	-36.80	Peak
3	3905.280	-7.95	58.01	50.06	74.00	-23.94	Peak
4	4339.200	-7.46	66.13	58.67	74.00	-15.33	Peak

433.92MHz 1GHz-4.5GHz_VERTICAL



Site : chamber
Condition : 3m VERTICAL
Project No.: 2504A22520E-RF
Test Mode : Transmitting Tester:Max Tao
Note : 433M 1GHz-4.5GHz
SA setting : Peak:RBW:1MHz,VBW:3MHz

	Freq	Factor	Read Level	Limit Level	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB
1	1301.760	-13.63	58.25	44.62	74.00	-29.38 Peak
2	4339.200	-7.46	64.94	57.48	74.00	-16.52 Peak

Field Strength of Average							
Frequency (MHz)	Peak Measurement @3m (dBμV/m)	Polar (H/V)	Duty Cycle Correction Factor (dB)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Comment
4339.2	58.67	H	-7.33	51.34	54	-2.66	Harmonic
4339.2	57.48	V	-7.33	50.15	54	-3.85	Harmonic

Note 1: Average Amplitude= Peak Measurement + Duty Cycle Factor

Note 2: Margin= Average Corrected Amplitude-Limit

Note 3: Each pulse train contains four different widths of sub-pulses.

•Total on time= Ton1*N1+Ton2*N2+ Ton3*N3+ Ton4*N4
 $= 0.4435*6 + 0.6406*4 + 1.0594*1 + 0.2464*8$
 $= 7.1946\text{ms}$

•Duty Cycle= (Total on time)/Tp*100%
 $= (7.1946/16.7391)*100\%$
 $= 42.98\%$

•Duty cycle Factor=20*log(Duty Cycle)
 $= 20*\log(0.4298)$
 $= -7.33\text{dB}$

Duty Cycle

Environmental Conditions

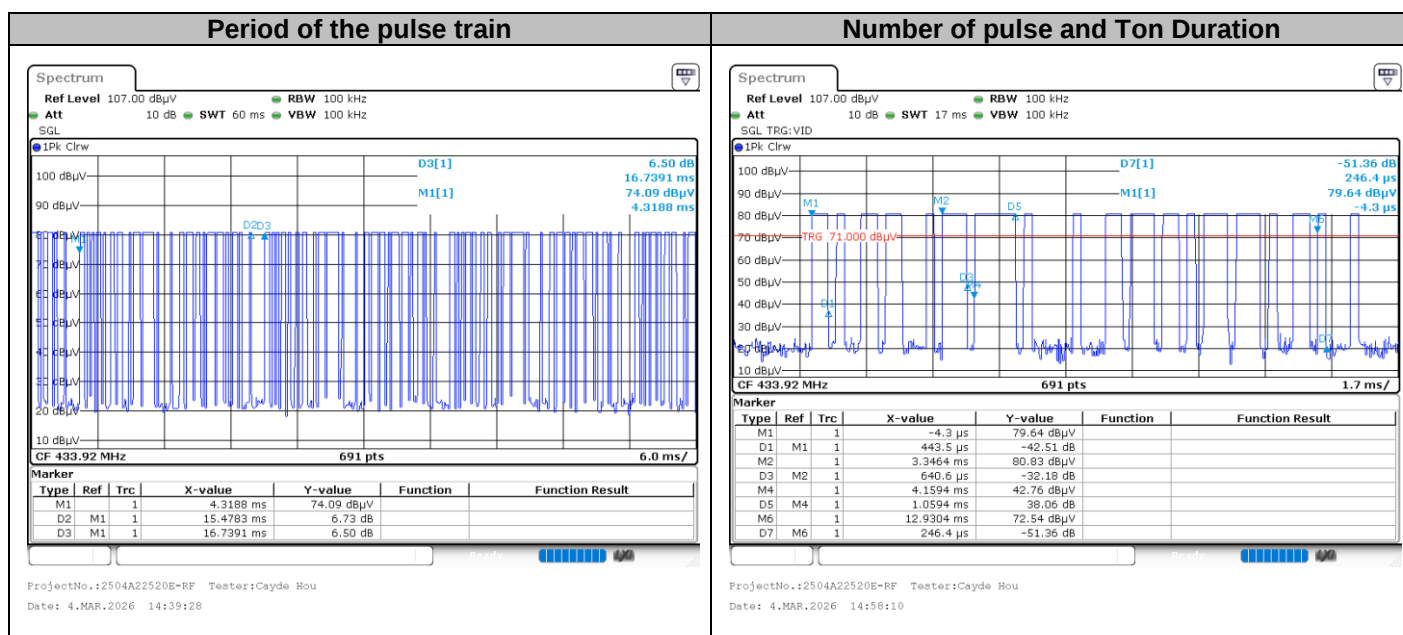
Temperature:	23.6 °C
Relative Humidity:	48 %
ATM Pressure:	100.4 kPa
Test Engineer:	Cayde Hou
Test Date:	2026-03-04
EUT Operation Mode:	Transmitting

Test Result: Compliance, please refer to the below data.

Subpulse	Ton Duration (ms)	Number of pulse (n)	Total on time (ms)	Period of the pulse train (ms)	Duty Cycle (%)
1	0.4435	6	7.1946	16.7391	42.98
2	0.6406	4			
3	1.0594	1			
4	0.2464	8			
Duty cycle Factor(dB)		-7.33			

Note: Each pulse train contains four different widths of sub-pulses.

- Total on time= Ton1*N1+Ton2*N2+ Ton3*N3+ Ton4*N4
 $= 0.4435*6 + 0.6406*4 + 1.0594*1 + 0.2464*8$
 $= 7.1946\text{ms}$
- Duty Cycle= (Total on time)/Tp*100%
 $= (7.1946/16.7391)*100\%$
 $= 42.98\%$
- Duty cycle Factor=20*log(Duty Cycle)
 $= 20*\log(0.4298)$
 $= -7.33\text{dB}$



C.3: Deactivation Time

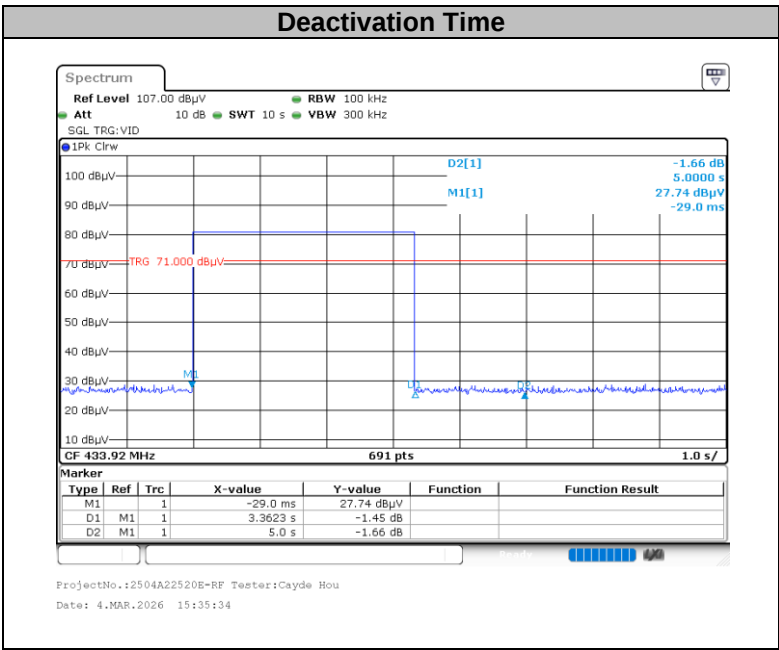
Test Data

Environmental Conditions

Temperature:	23.6 °C
Relative Humidity:	48 %
ATM Pressure:	100.4 kPa
Test Engineer:	Cayde Hou
Test Date:	2026-03-04
EUT Operation Mode:	Transmitting

Test Result: Compliance. This product will cease transmission within 5 seconds after activation. Please refer to the Appendix.

Channel Frequency (MHz)	Deactivation Time (s)	Limit (s)
433.92	3.3623	≤5



C.4: 20 dB Emission Bandwidth & 99% Occupied Bandwidth

Test Data

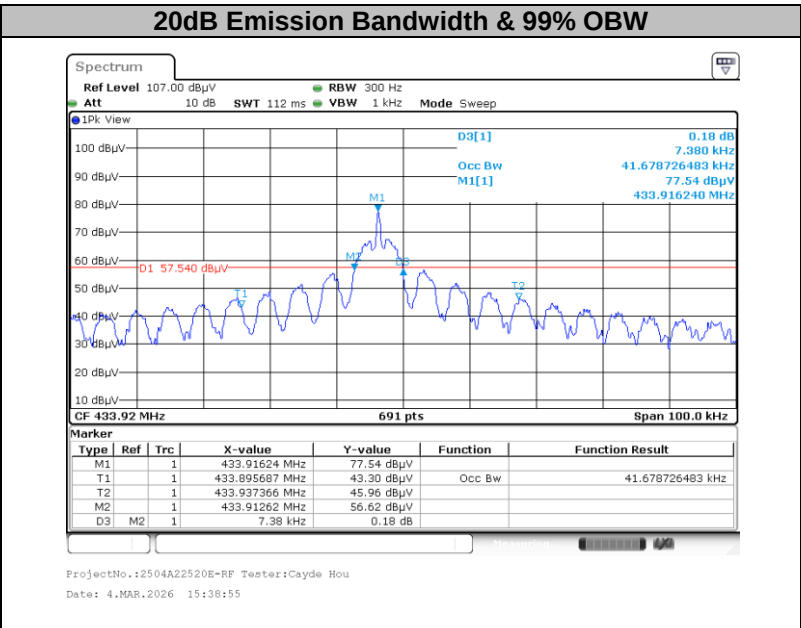
Environmental Conditions

Temperature:	23.6 °C
Relative Humidity:	48 %
ATM Pressure:	100.4 kPa
Test Engineer:	Cayde Hou
Test Date:	2026-03-04
EUT Operation Mode:	Transmitting

Test Result: Compliance. Please refer to the data.

Channel Frequency (MHz)	20dB Emission Bandwidth (kHz)	99% OBW (kHz)	Limit (kHz)
433.92	7.38	41.68	1084.8

Note: Limit=Channel Frequency*0.25%



***** END *****