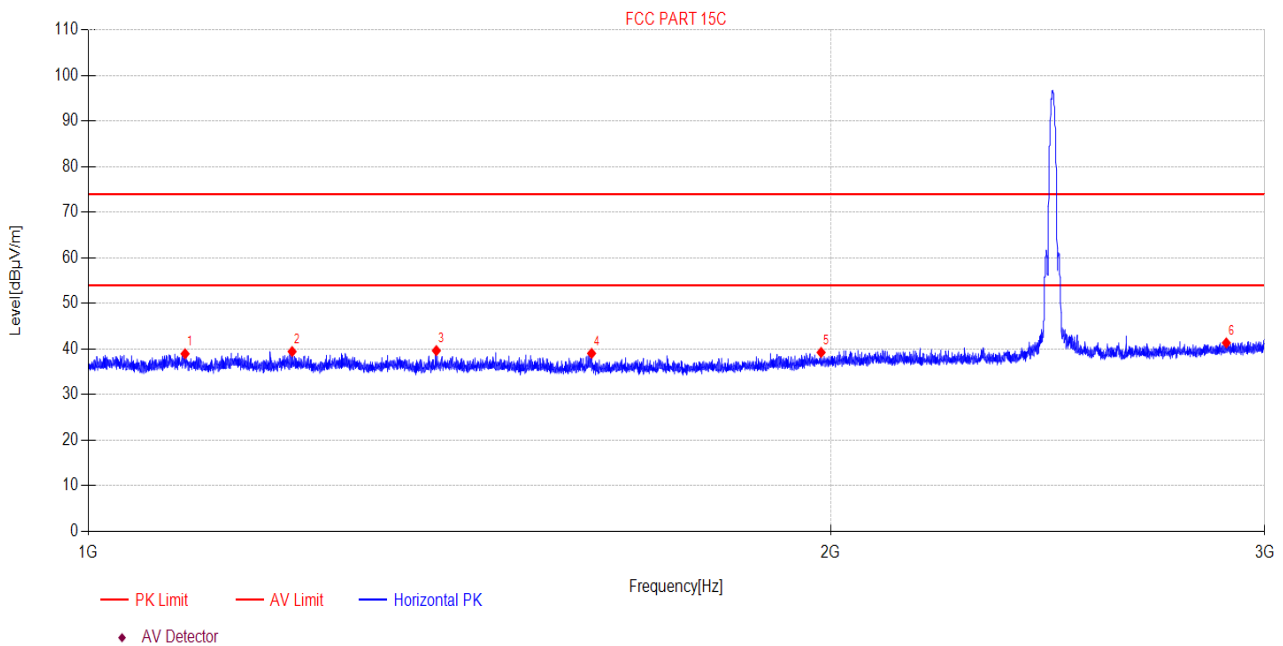


TR-4-E-009 Radiated Emission Test Result

Test Date: 2022-11-04 **Tested By:** James Gan
EUT: MADV Smart Video Doorbell 2M **Model Number:** FJ07MLTZ
Test Mode: TX Mode **Power Supply:** AC120V/60Hz
Condition: Temp:22.2°C;Humi:56.7%;Press:100.3kPa **Test Site:** DDT 3# Chamber
File Path: d:\ts\2022 report data\Q22102105-2E FJ07MLTZ\FCC ABOVE 1G 2.4G\23
Memo: 11G 2462

Test Graph



Suspected Data List								
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	1094.62	49.91	-10.94	38.97	74.00	35.03	PK	Horizontal
2	1209.70	50.39	-10.92	39.47	74.00	34.53	PK	Horizontal
3	1384.10	50.77	-11.10	39.67	74.00	34.33	PK	Horizontal
4	1600.07	50.55	-11.49	39.06	74.00	34.94	PK	Horizontal
5	1982.52	50.04	-10.77	39.27	74.00	34.73	PK	Horizontal
6	2894.47	49.60	-8.24	41.36	74.00	32.64	PK	Horizontal

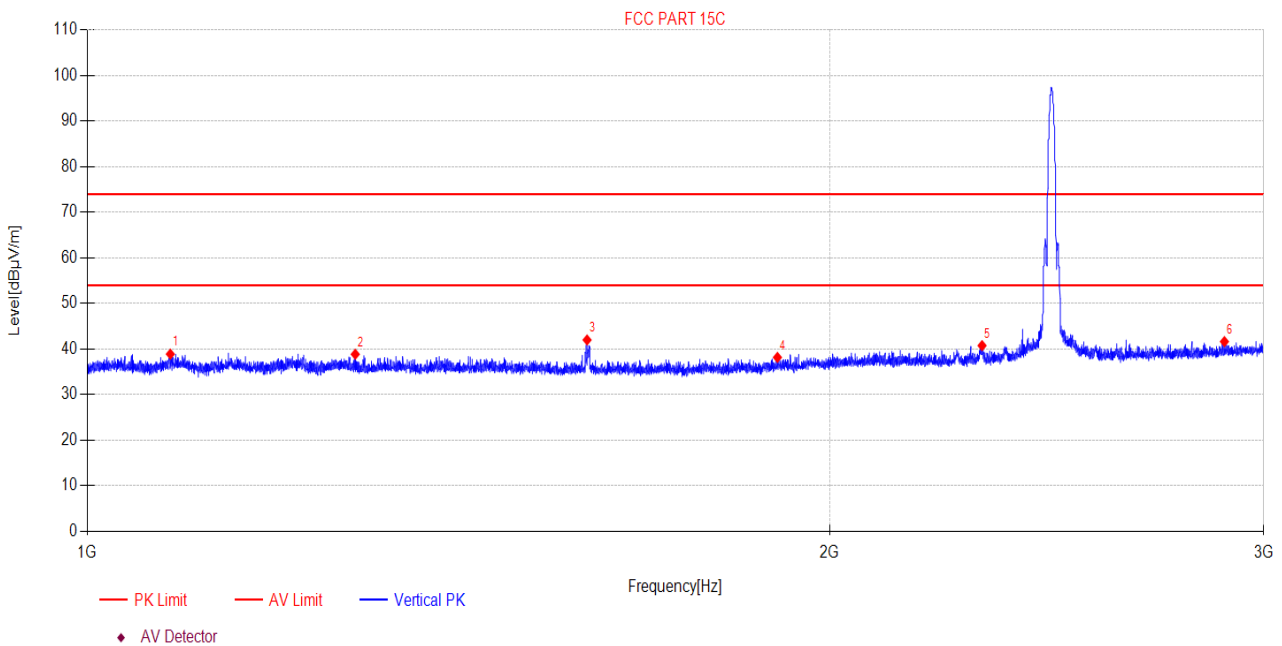
Note:

1. Level = Reading + Factor.
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: 2022-11-04 **Tested By:** James Gan
EUT: MADV Smart Video Doorbell 2M **Model Number:** FJ07MLTZ
Test Mode: TX Mode **Power Supply:** AC120V/60Hz
Condition: Temp:22.2°C;Humi:56.7%;Press:100.3kPa **Test Site:** DDT 3# Chamber
File Path: d:\ts\2022 report data\Q22102105-2E FJ07MLTZ\FCC ABOVE 1G 2.4G\24
Memo: 11G 2462

Test Graph



Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	1080.64	49.85	-10.94	38.91	74.00	35.09	PK	Vertical
2	1284.33	49.85	-10.98	38.87	74.00	35.13	PK	Vertical
3	1594.81	53.50	-11.49	42.01	74.00	31.99	PK	Vertical
4	1905.02	49.42	-11.24	38.18	74.00	35.82	PK	Vertical
5	2306.27	50.66	-9.90	40.76	74.00	33.24	PK	Vertical
6	2891.92	49.90	-8.25	41.65	74.00	32.35	PK	Vertical

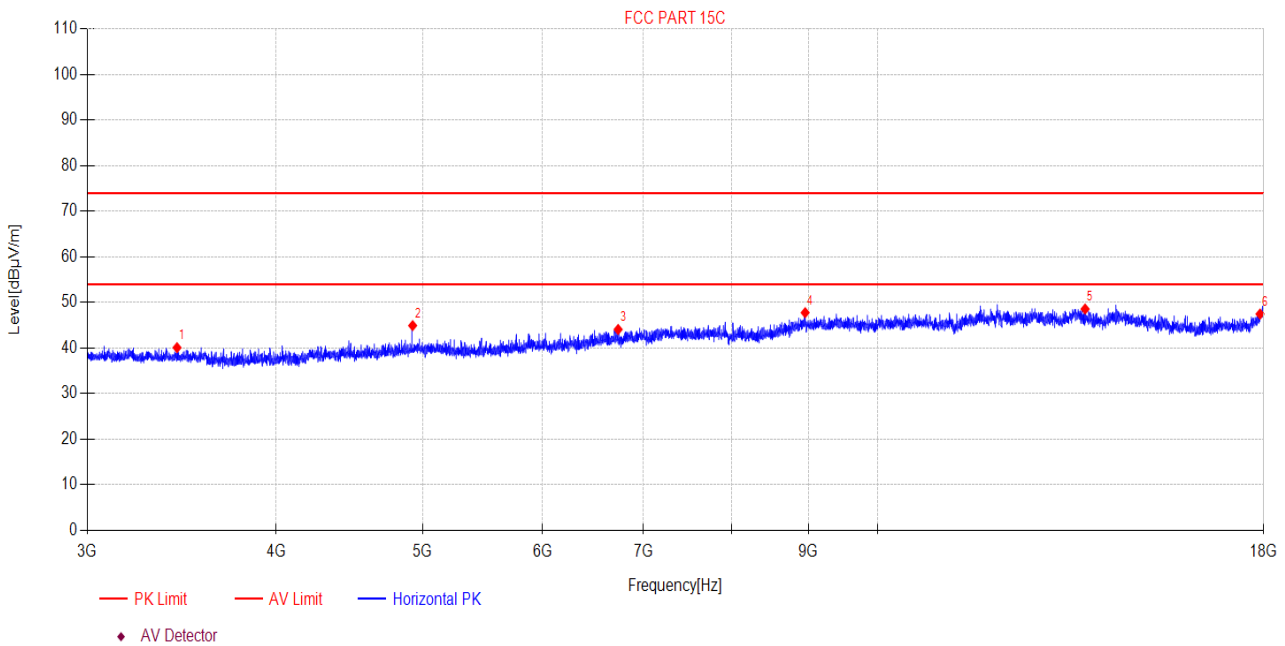
Note:

1. Level = Reading + Factor.
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: 2022-11-04 **Tested By:** James Gan
EUT: MADV Smart Video Doorbell 2M **Model Number:** FJ07MLTZ
Test Mode: TX Mode **Power Supply:** AC120V/60Hz
Condition: Temp:22.2°C;Humi:56.7%;Press:100.3kPa **Test Site:** DDT 3# Chamber
File Path: d:\ts\2022 report data\Q22102105-2E FJ07MLTZ\FCC ABOVE 1G 2.4G\21
Memo: 11G 2462

Test Graph



Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	3439.44	48.48	-8.38	40.10	74.00	33.90	PK	Horizontal
2	4924.00	49.96	-5.03	44.93	74.00	29.07	PK	Horizontal
3	6733.89	45.58	-1.49	44.09	74.00	29.91	PK	Horizontal
4	8953.22	44.93	2.84	47.77	74.00	26.23	PK	Horizontal
5	13713.90	42.75	5.82	48.57	74.00	25.43	PK	Horizontal
6	17900.31	39.39	8.08	47.47	74.00	26.53	PK	Horizontal

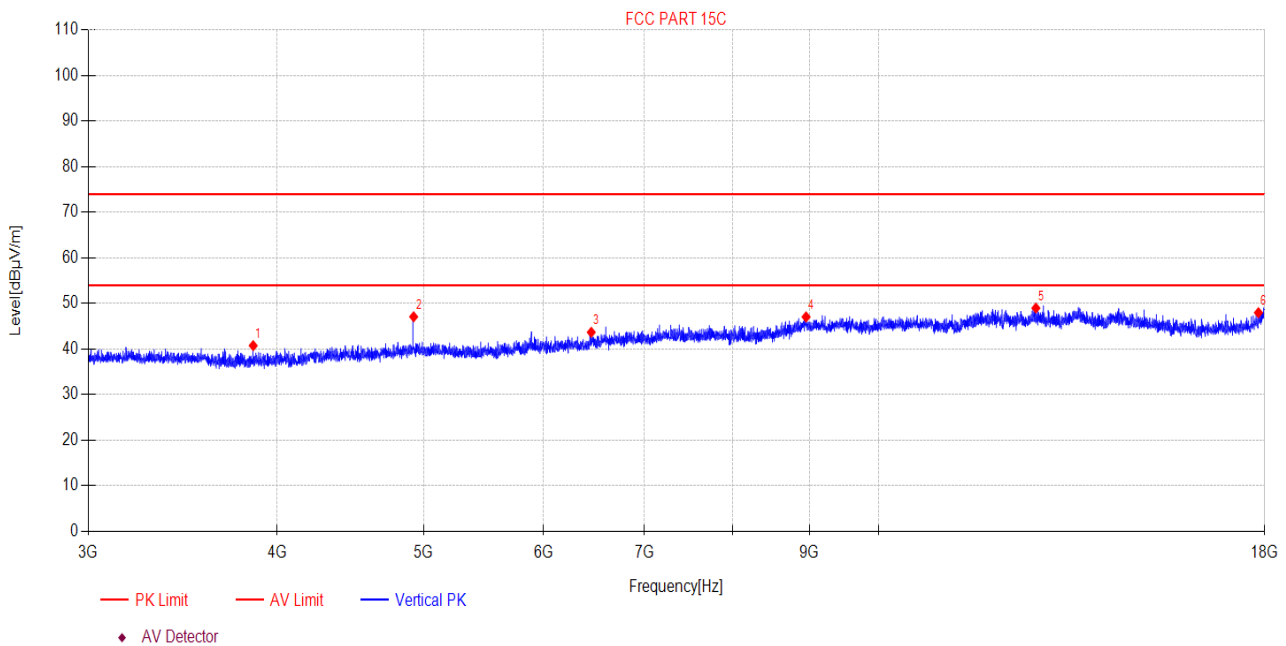
Note:

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

TR-4-E-009 Radiated Emission Test Result

Test Date: 2022-11-04 **Tested By:** James Gan
EUT: MADV Smart Video Doorbell 2M **Model Number:** FJ07MLTZ
Test Mode: TX Mode **Power Supply:** AC120V/60Hz
Condition: Temp:22.2°C;Humi:56.7%;Press:100.3kPa **Test Site:** DDT 3# Chamber
File Path: d:\ts\2022 report data\Q22102105-2E FJ07MLTZ\FCC ABOVE 1G 2.4G\22
Memo: 11G 2462

Test Graph



Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	3856.62	48.44	-7.68	40.76	74.00	33.24	PK	Vertical
2	4924.00	52.13	-5.03	47.10	74.00	26.90	PK	Vertical
3	6453.95	46.03	-2.34	43.69	74.00	30.31	PK	Vertical
4	8951.62	44.23	2.83	47.06	74.00	26.94	PK	Vertical
5	12703.90	44.02	4.98	49.00	74.00	25.00	PK	Vertical
6	17829.89	40.42	7.57	47.99	74.00	26.01	PK	Vertical

Note:

1. Level = Reading + Factor.
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.

9. RF Conducted Spurious Emissions

9.1. Block diagram of test setup

Same as section 4.1

9.2. Limits

In any 100 kHz bandwidth outside the frequency bands in which the spread spectrum 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.

9.3. Test procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.

(2) Establish a reference level by using the following procedure:

Center frequency	Test frequency
RBW:	100 kHz
VBW:	300 kHz
Span	Wide enough to capture the peak level of the in-band emission
Detector Mode:	Peak
Sweep time:	auto
Trace mode	Max hold

(3) Allow the trace to stabilize, use the peak marker function to determine the maximum peak power level to establish the reference level.

(4) Set the spectrum analyzer as follows:

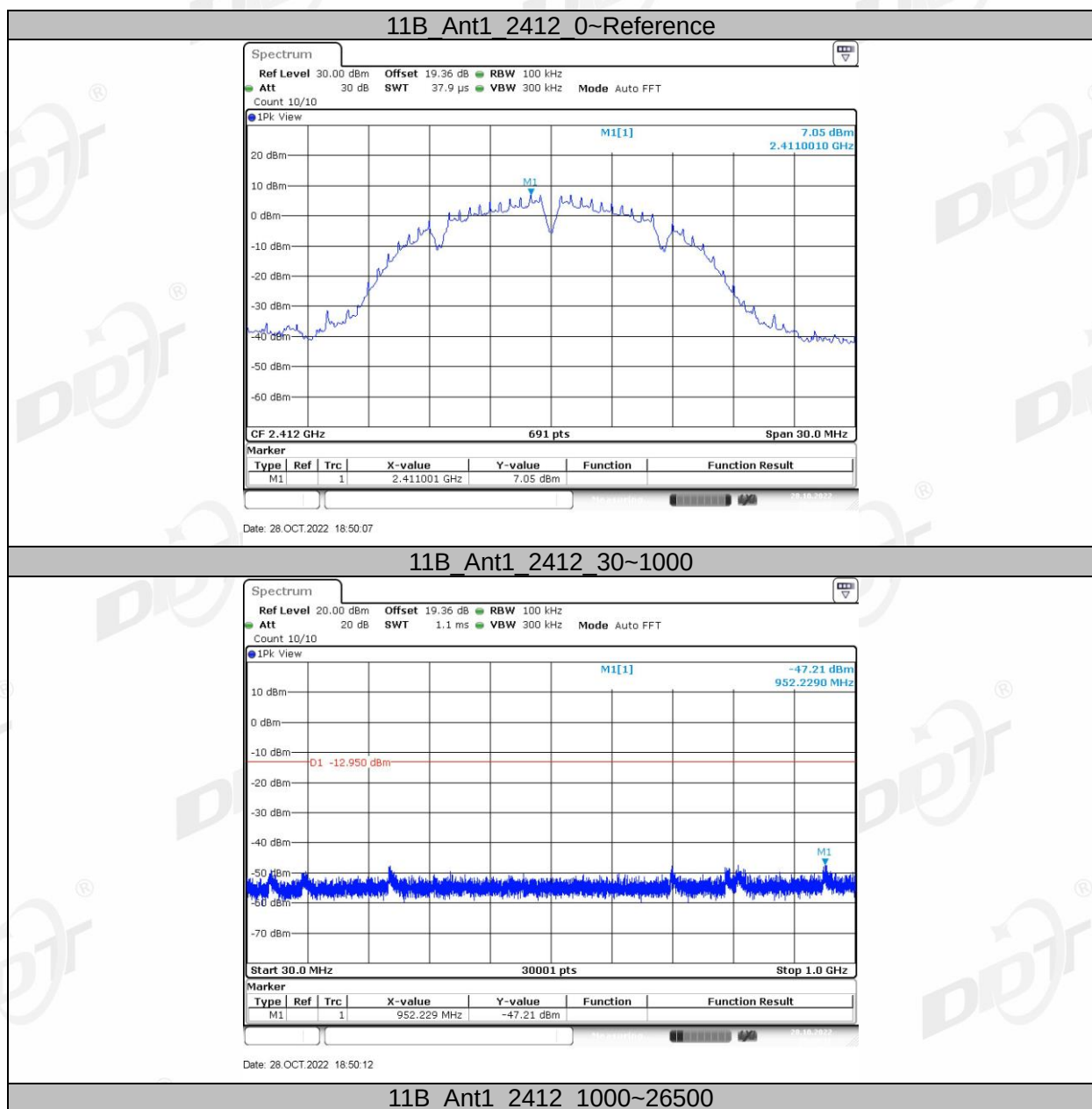
RBW:	100 kHz
VBW:	300 kHz
Span	Encompass frequency range to be measured
Number of measurement points	$\geq \text{span}/\text{RBW}$
Detector Mode:	Peak
Sweep time:	auto
Trace mode	Max hold

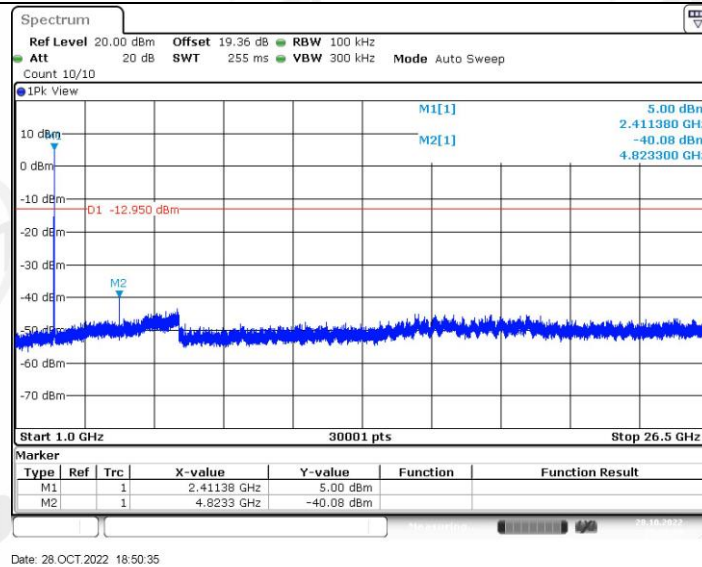
(5) Allow the trace to stabilize, use the peak marker function to determine the maximum amplitude of all unwanted emissions outside of the authorized frequency band

9.4. Test result

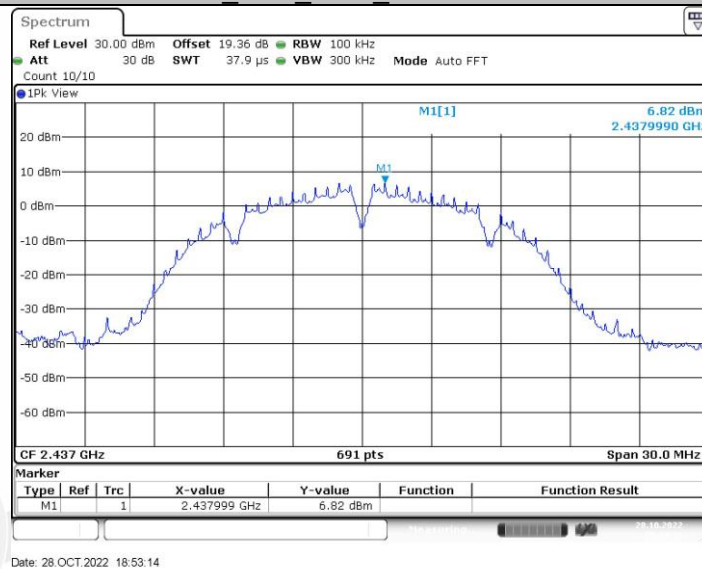
EUT Set Mode	CH or Frequency	Ant1 Result (dBm)	EUT Set Mode	CH or Frequency	Ant1 Result (dBm)
11b	CH1	Pass	11n HT 20	CH1	Pass
	CH6	Pass		CH6	Pass
	CH11	Pass		CH11	Pass
11g	CH1	Pass	/	/	/
	CH6	Pass			
	CH11	Pass			

9.5. Original test data

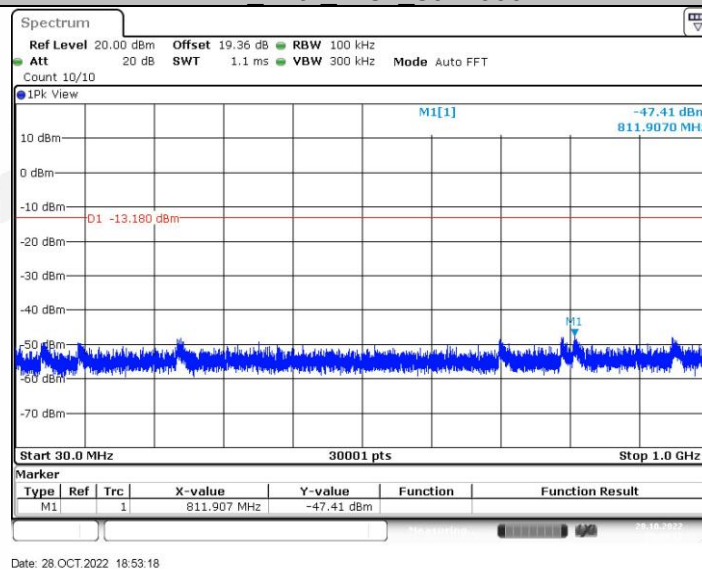




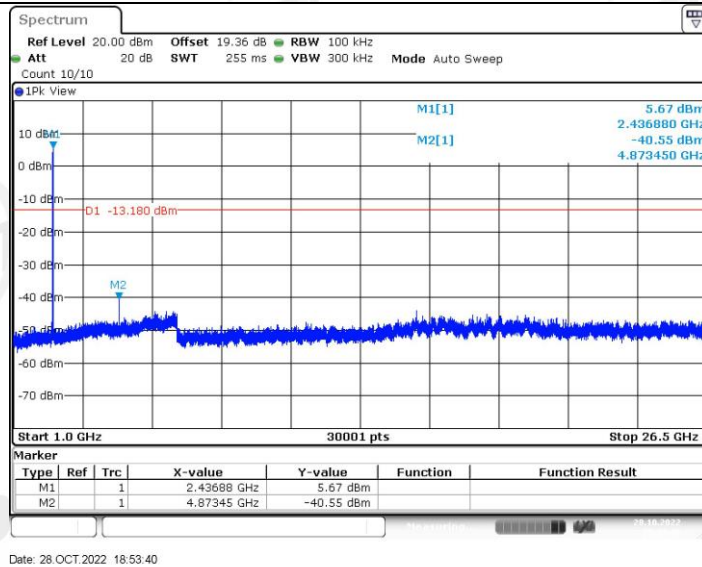
11B_Ant1_2437_0~Reference



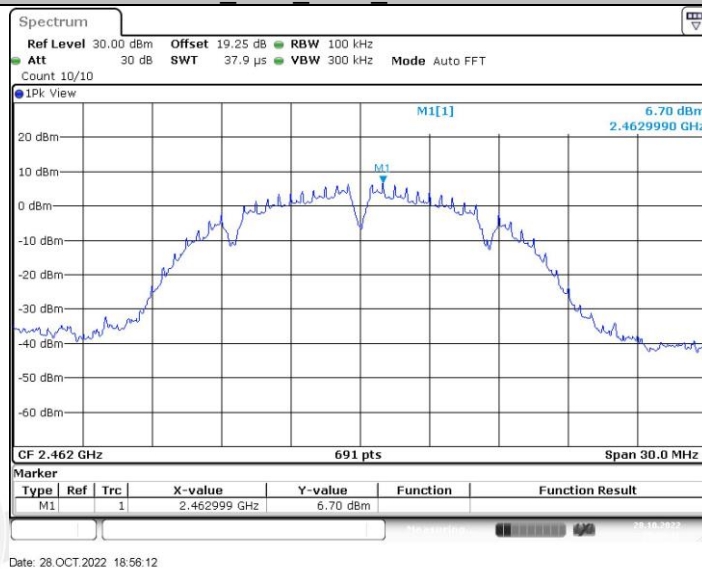
11B_Ant1_2437_30~1000



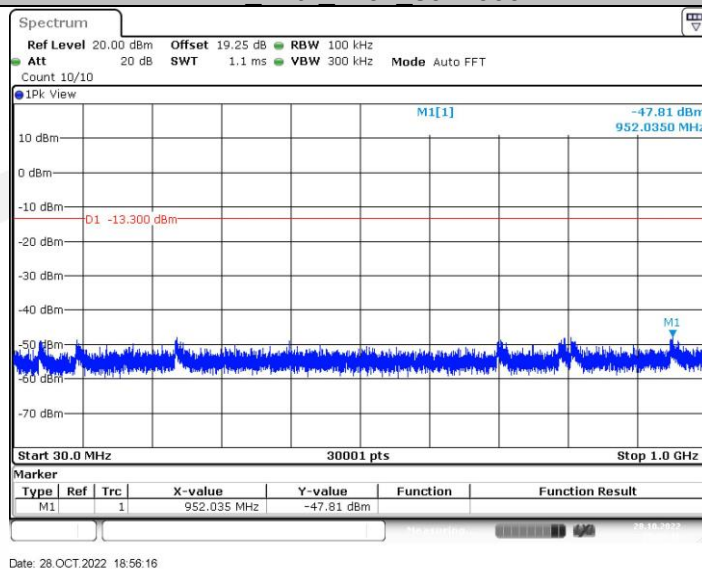
11B_Ant1_2437_1000~26500



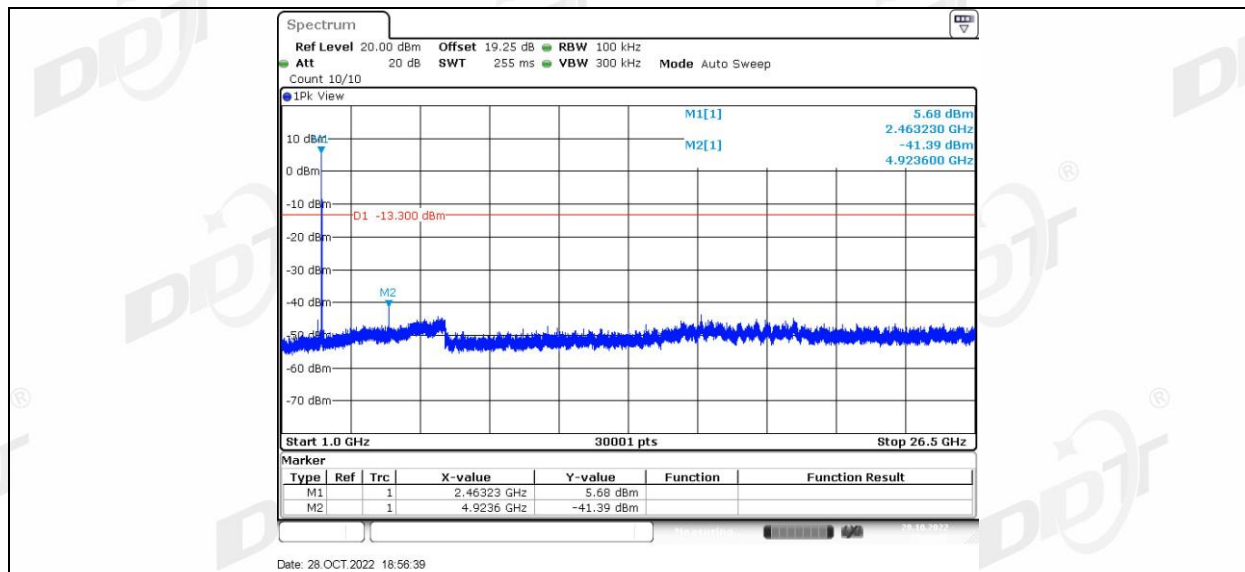
11B_Ant1_2462_0~Reference



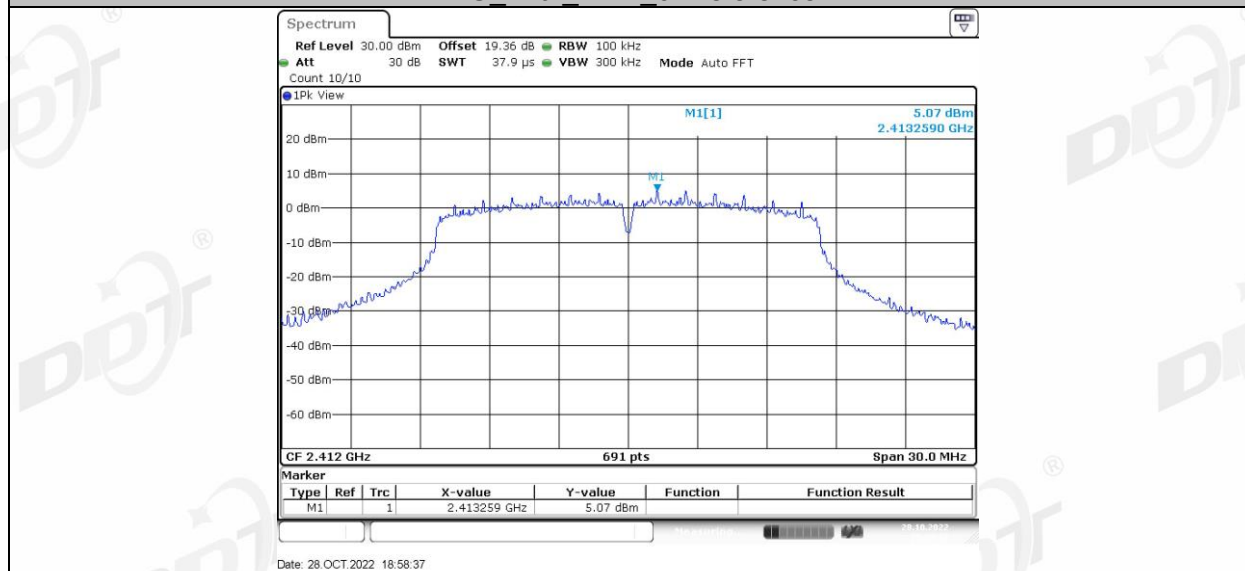
11B_Ant1_2462_30~1000



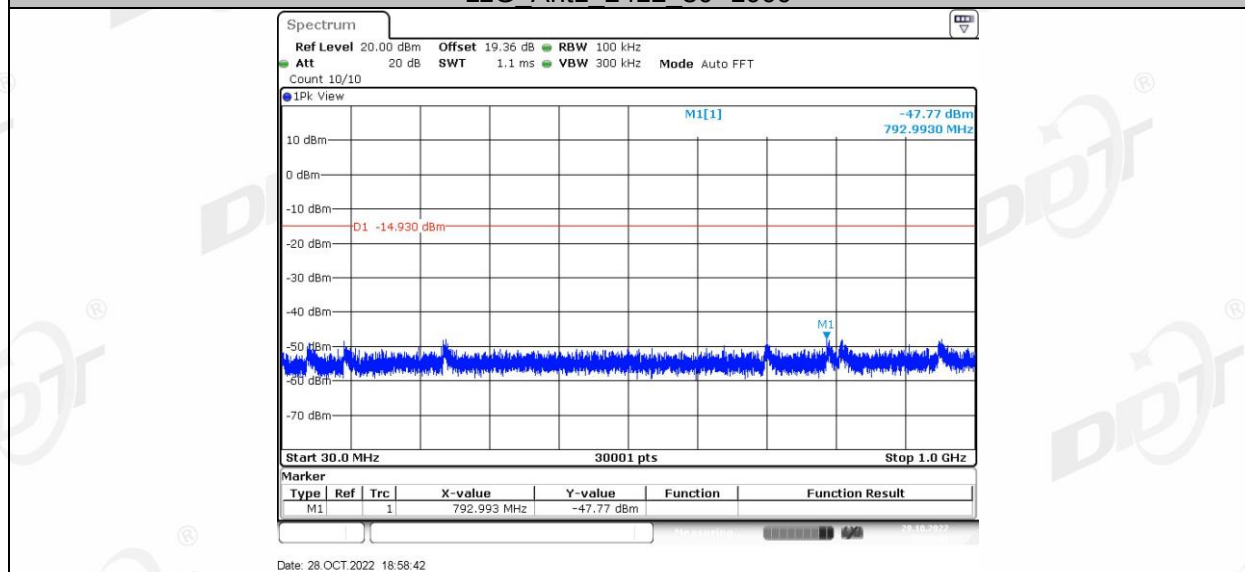
11B_Ant1_2462_1000~26500



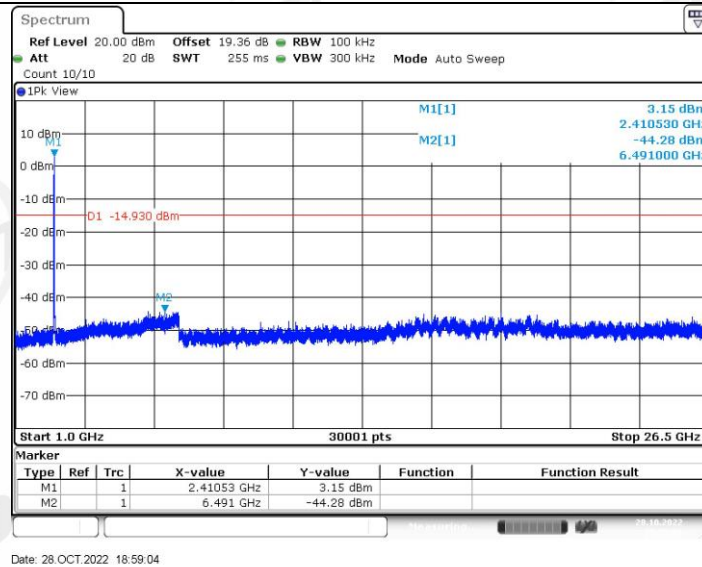
11G_Ant1_2412_0-Reference



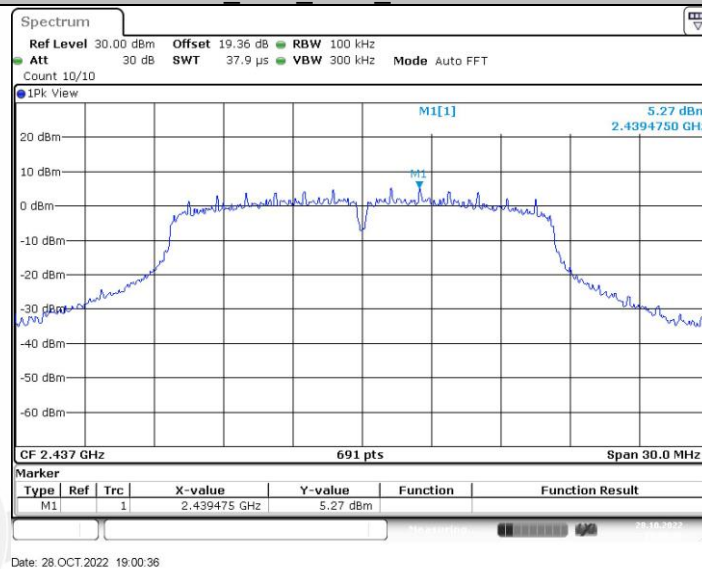
11G_Ant1_2412_30-1000



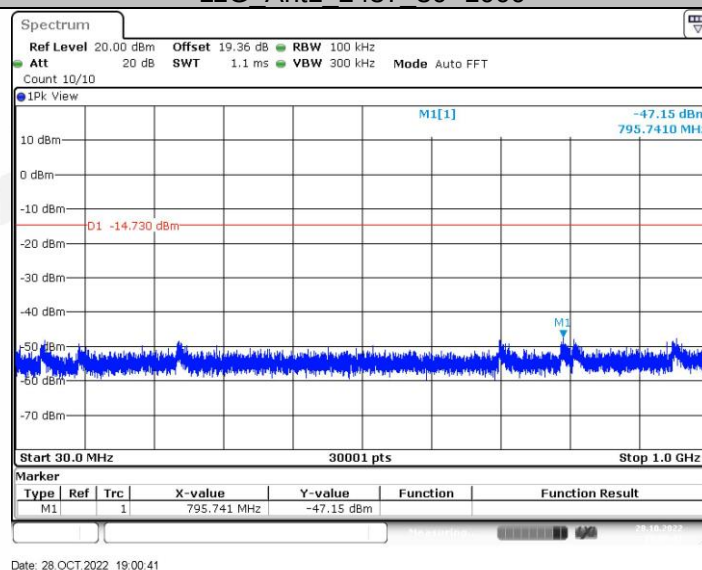
11G_Ant1_2412_1000-26500



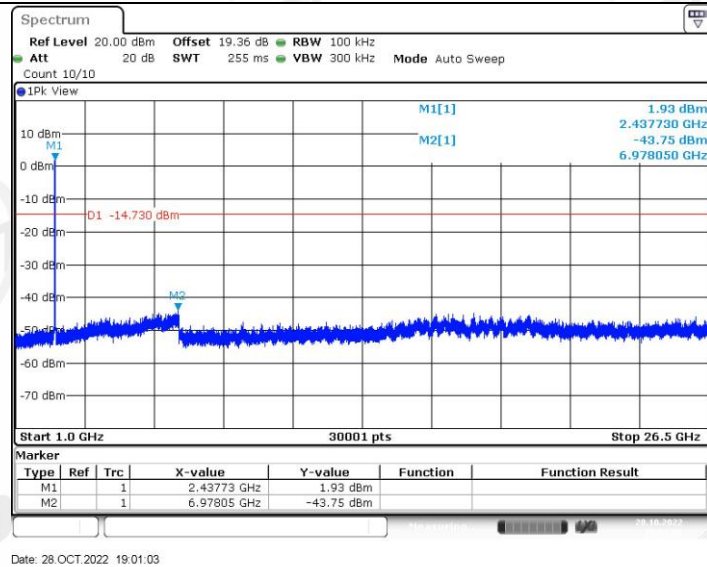
11G_Ant1_2437_0-Reference



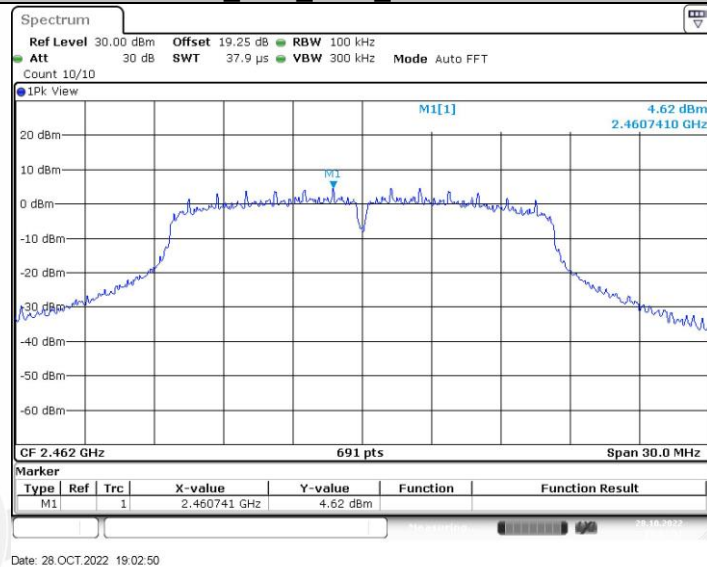
11G_Ant1_2437_30-1000



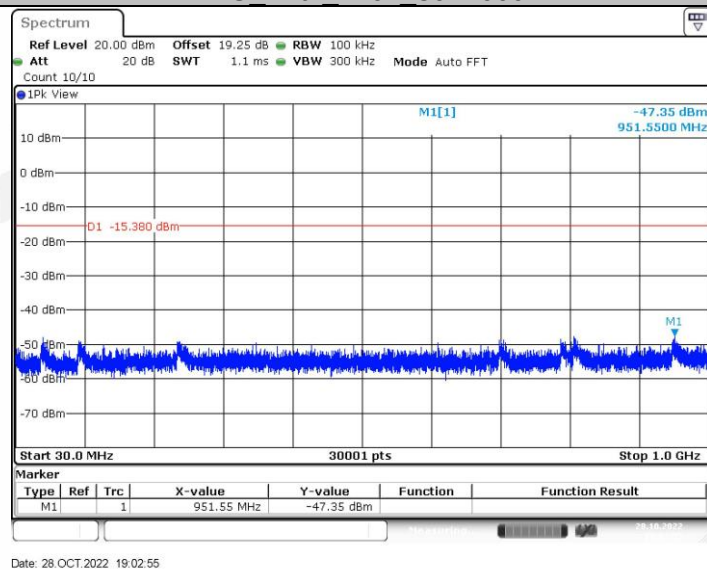
11G_Ant1_2437_1000-26500



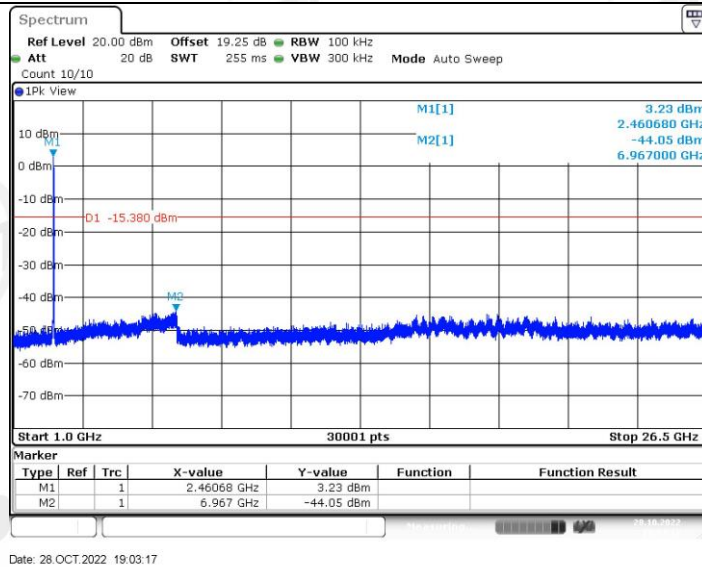
11G_Ant1_2462_0-Reference



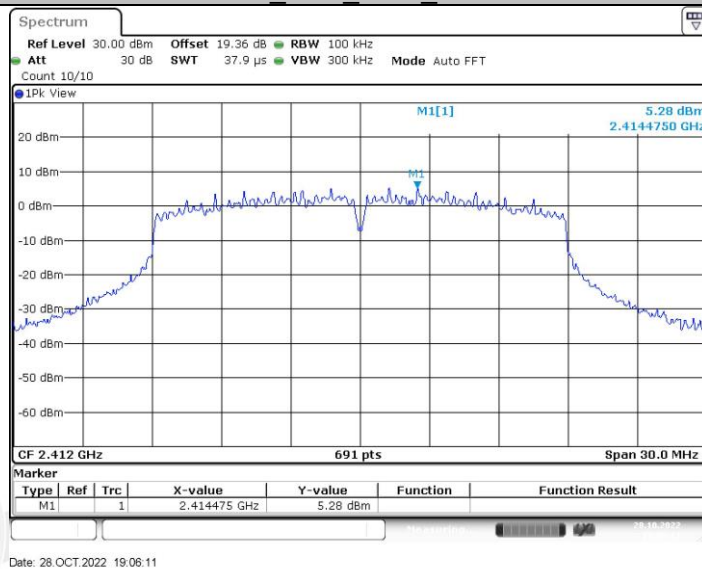
11G_Ant1_2462_30-1000



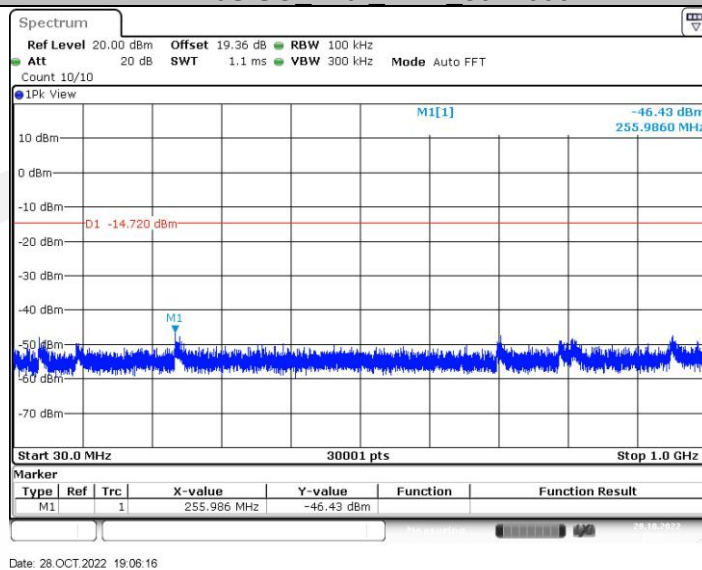
11G_Ant1_2462_1000-26500



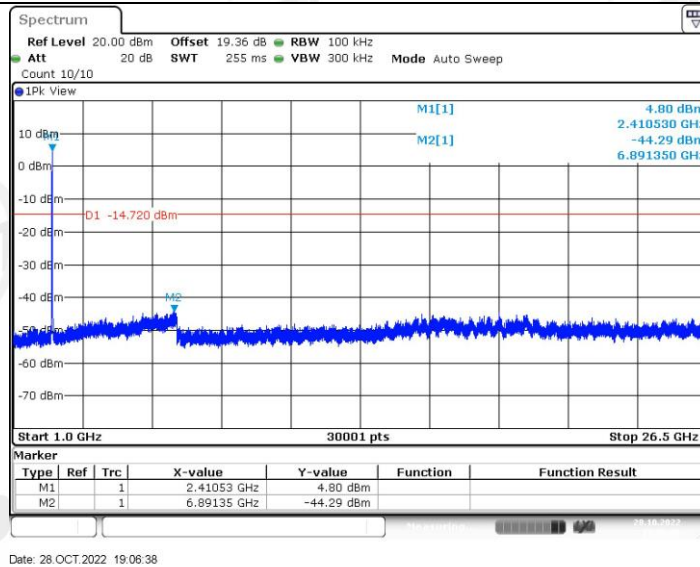
11N20SISO_Ant1_2412_0~Reference



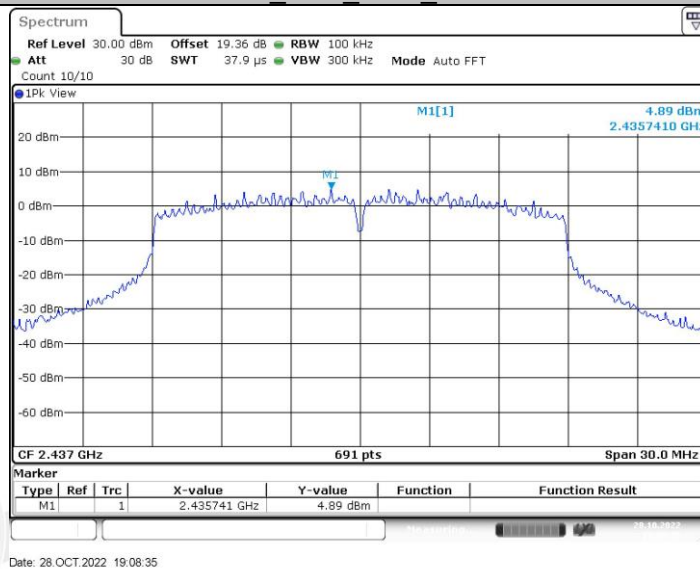
11N20SISO_Ant1_2412_30~1000



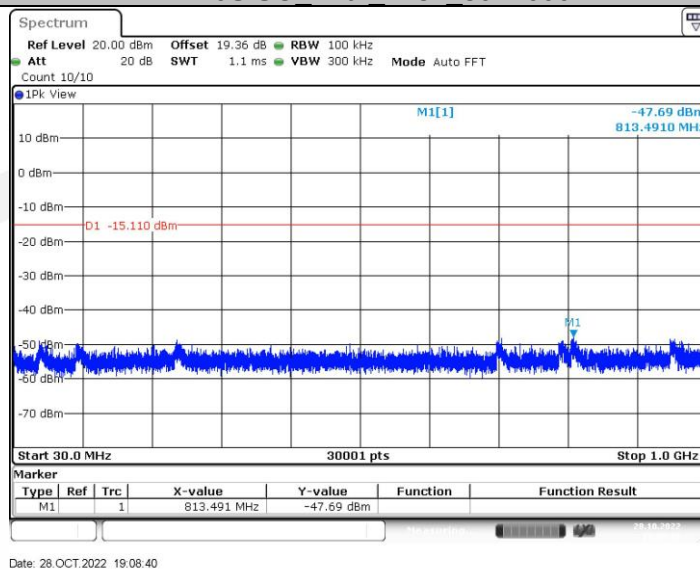
11N20SISO_Ant1_2412_1000~26500



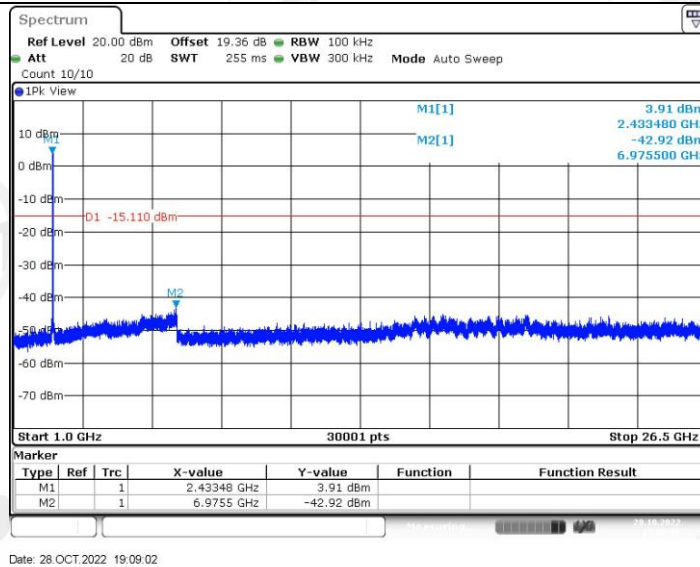
11N20SISO_Ant1_2437_0~Reference



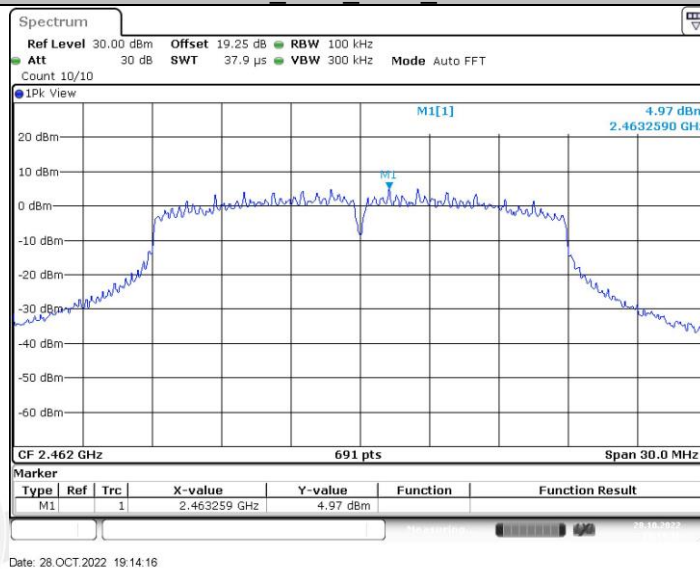
11N20SISO_Ant1_2437_30~1000



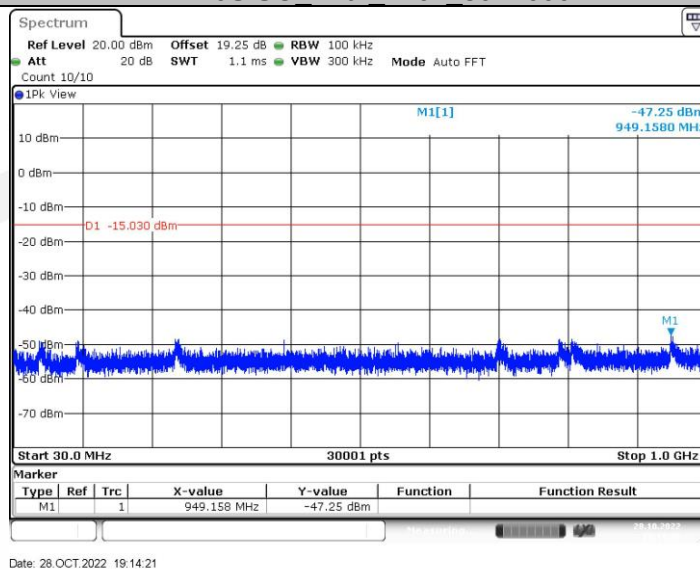
11N20SISO_Ant1_2437_1000~26500



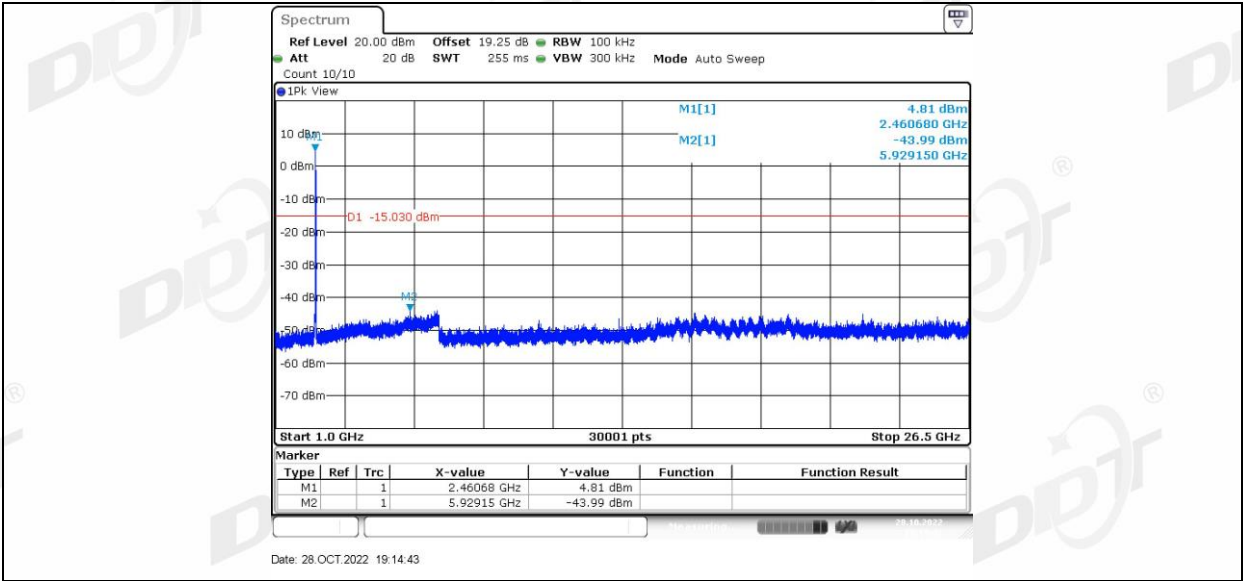
11N20SISO_Ant1_2462_0~Reference



11N20SISO_Ant1_2462_30~1000

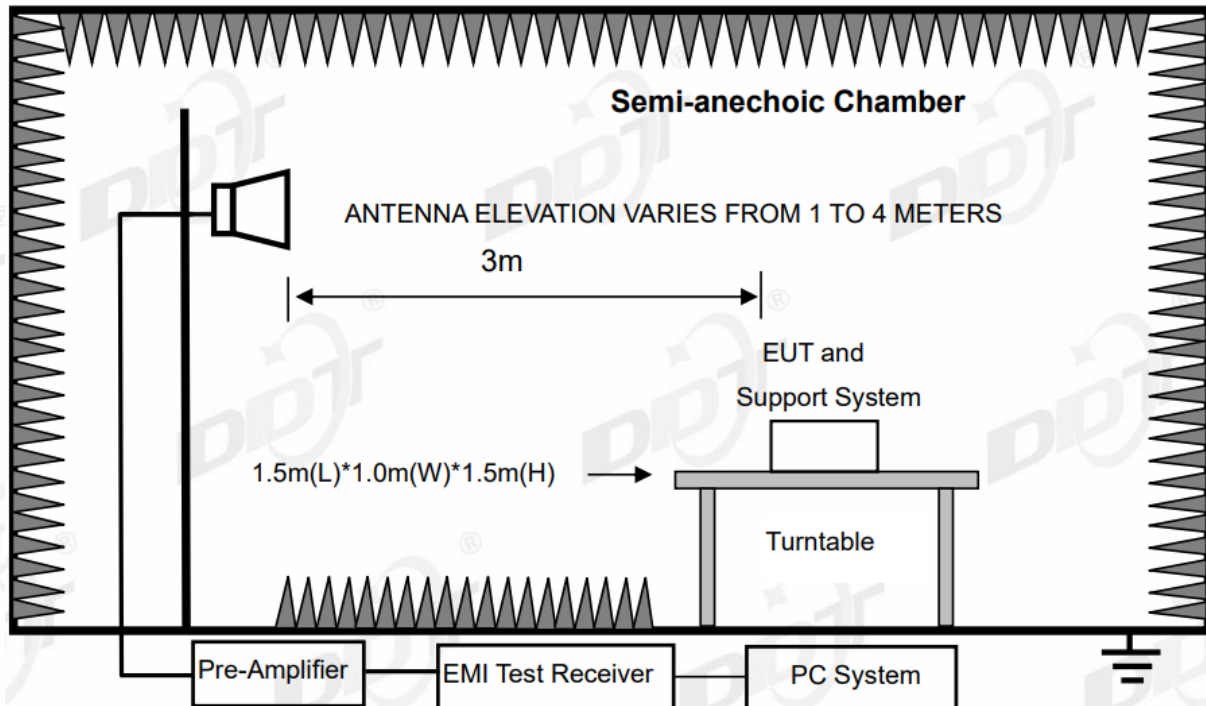


11N20SISO_Ant1_2462_1000~26500



10. Radiated Band Edge Compliance

10.1. Block diagram of test setup



10.2. Limit

All restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400 MHz to 2483.5 MHz shall be at least 20 dB below the fundamental emissions or comply with FCC 15.209 limits.

10.3. Test procedure

Same with clause 8.3 except change investigated frequency range from 2310 MHz to 2430 MHz and 2450 MHz to 2500 MHz.

Remark: All restriction band have been tested, and only the worst case is shown in report.

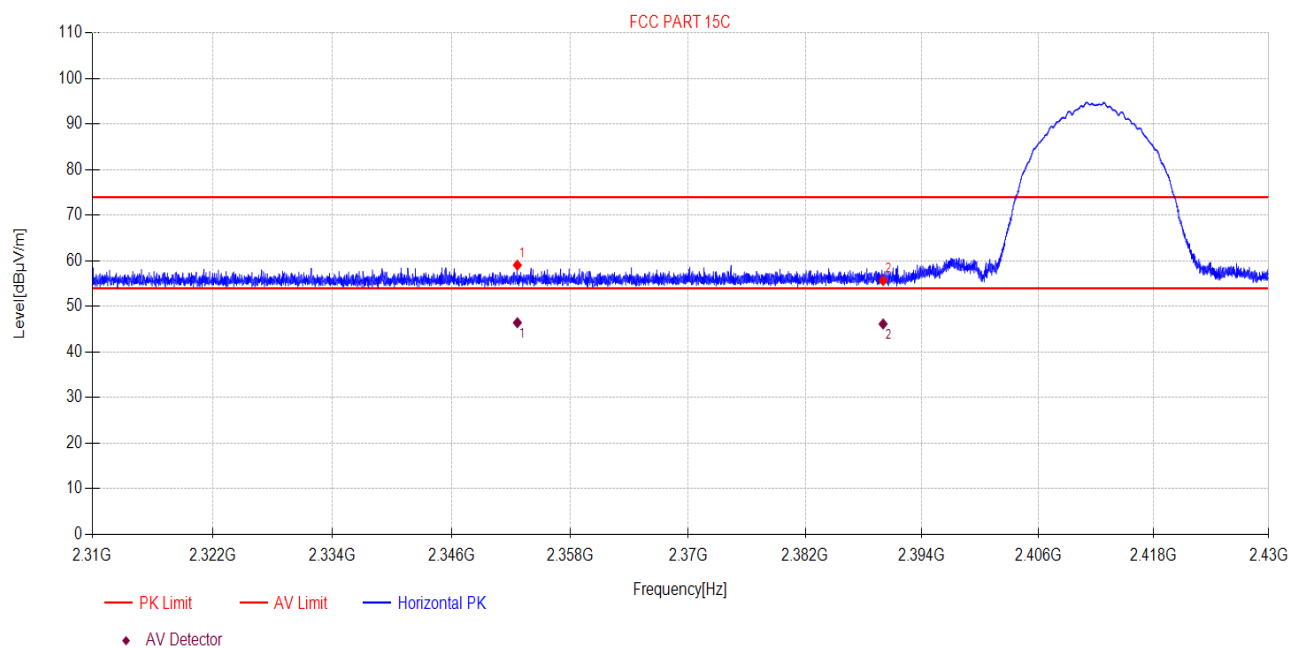
10.4. Test result

Pass. (See below detailed test result)

TR-4-E-009 Radiated Emission Test Result

Test Date: 2022-11-04 **Tested By:** James Gan
EUT: MADV Smart Video Doorbell 2M **Model Number:** FJ07MLTZ
Test Mode: TX Mode **Power Supply:** AC120V/60Hz
Condition: Temp:22.2°C;Humi:56.7%;Press:100.3kPa **Test Site:** DDT 3# Chamber
File Path: d:\ts\2022 report data\Q22102105-2E FJ07MLTZ\FCC ABOVE 1G 2.4G\1
Memo: 11B 2412

Test Graph



Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2352.66	48.86	10.21	59.07	74.00	14.93	PK	Horizontal
2	2390.00	45.42	10.28	55.70	74.00	18.30	PK	Horizontal

Final Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2352.66	36.24	10.21	46.45	54.00	7.55	AV	Horizontal
2	2390.00	35.89	10.28	46.17	54.00	7.83	AV	Horizontal

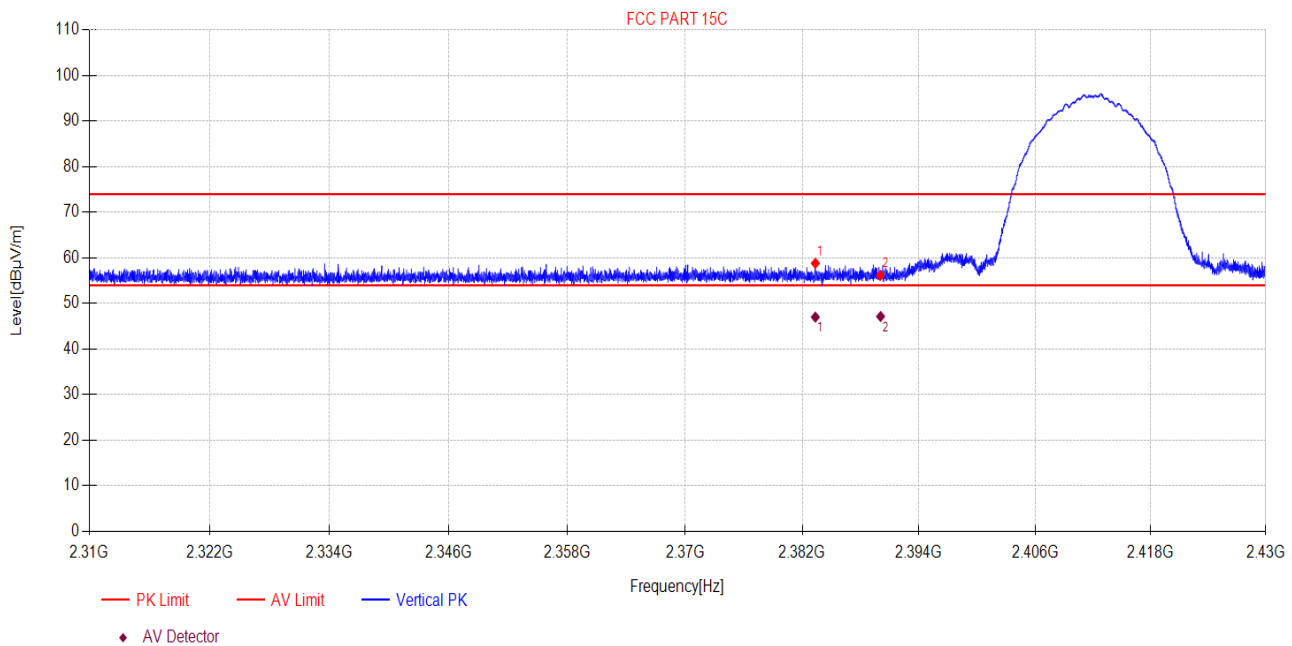
Note:

1. Level = Reading + Factor.
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: 2022-11-04 **Tested By:** James Gan
EUT: MADV Smart Video Doorbell 2M **Model Number:** FJ07MLTZ
Test Mode: TX Mode **Power Supply:** AC120V/60Hz
Condition: Temp:22.2°C;Humi:56.7%;Press:100.3kPa **Test Site:** DDT 3# Chamber
File Path: d:\ts\2022 report data\Q22102105-2E FJ07MLTZ\FCC ABOVE 1G 2.4G\2
Memo: 11B 2412

Test Graph



Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2383.34	48.56	10.27	58.83	74.00	15.17	PK	Vertical
2	2390.00	45.87	10.28	56.15	74.00	17.85	PK	Vertical

Final Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2383.34	36.75	10.27	47.02	54.00	6.98	AV	Vertical
2	2390.00	36.87	10.28	47.15	54.00	6.85	AV	Vertical

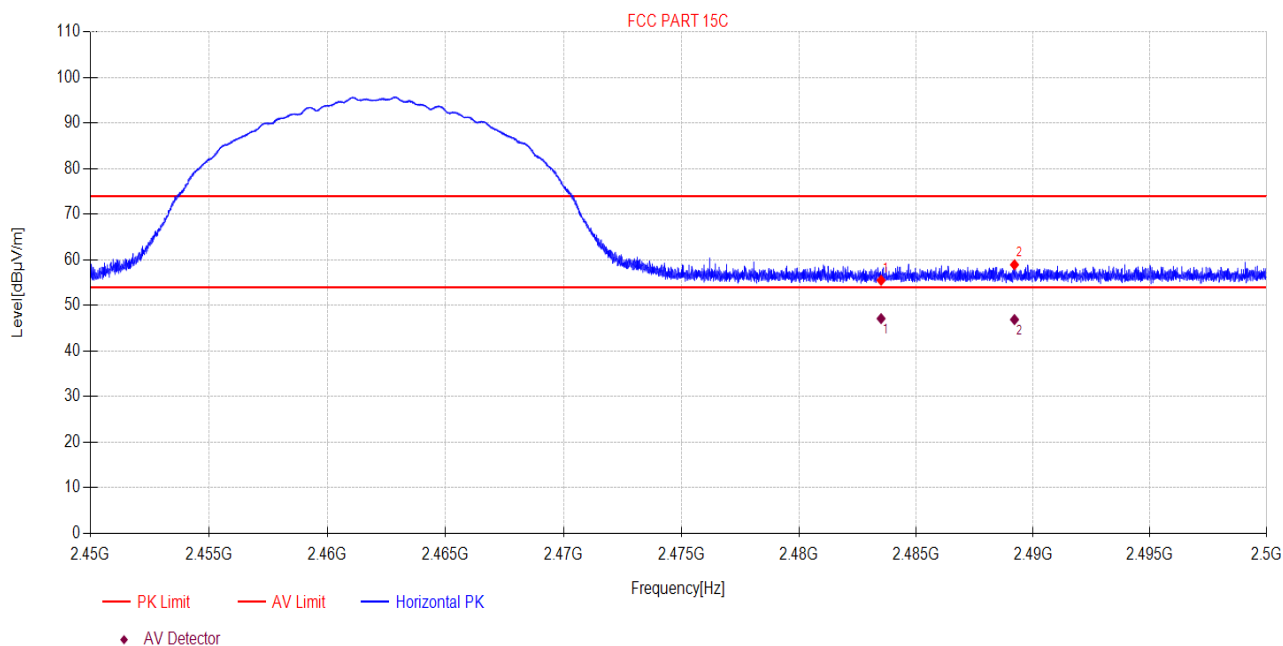
Note:

1. Level = Reading + Factor.
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: 2022-11-04 **Tested By:** James Gan
EUT: MADV Smart Video Doorbell 2M **Model Number:** FJ07MLTZ
Test Mode: TX Mode **Power Supply:** AC120V/60Hz
Condition: Temp:22.2°C;Humi:56.7%;Press:100.3kPa **Test Site:** DDT 3# Chamber
File Path: d:\ts\2022 report data\Q22102105-2E FJ07MLTZ\FCC ABOVE 1G 2.4G\3
Memo: 11B 2462

Test Graph



Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.50	44.99	10.54	55.53	74.00	18.47	PK	Horizontal
2	2489.20	48.37	10.57	58.94	74.00	15.06	PK	Horizontal

Final Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.50	36.59	10.54	47.13	54.00	6.87	AV	Horizontal
2	2489.20	36.34	10.57	46.91	54.00	7.09	AV	Horizontal

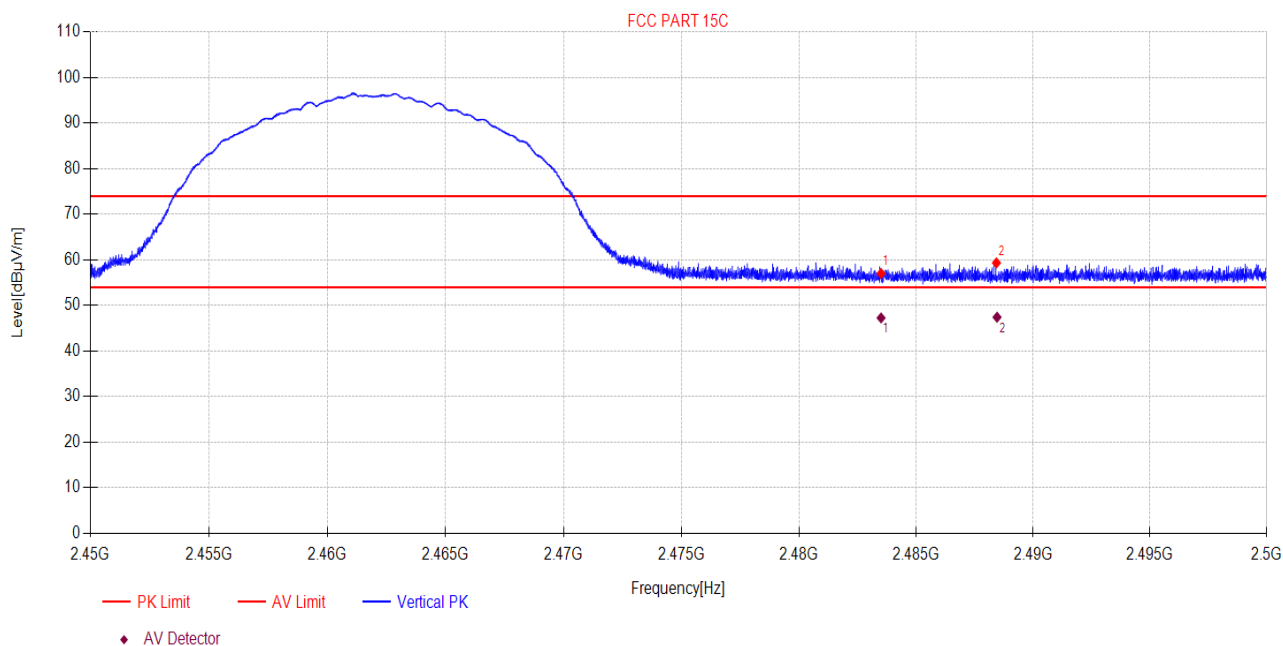
Note:

1. Level = Reading + Factor.
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: 2022-11-04 **Tested By:** James Gan
EUT: MADV Smart Video Doorbell 2M **Model Number:** FJ07MLTZ
Test Mode: TX Mode **Power Supply:** AC120V/60Hz
Condition: Temp:22.2°C;Humi:56.7%;Press:100.3kPa **Test Site:** DDT 3# Chamber
File Path: d:\ts\2022 report data\Q22102105-2E FJ07MLTZ\FCC ABOVE 1G 2.4G\4
Memo: 11B 2462

Test Graph



Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.50	46.48	10.54	57.02	74.00	16.98	PK	Vertical
2	2488.45	48.79	10.56	59.35	74.00	14.65	PK	Vertical

Final Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.50	36.73	10.55	47.28	54.00	6.72	AV	Vertical
2	2488.45	36.87	10.56	47.43	54.00	6.57	AV	Vertical

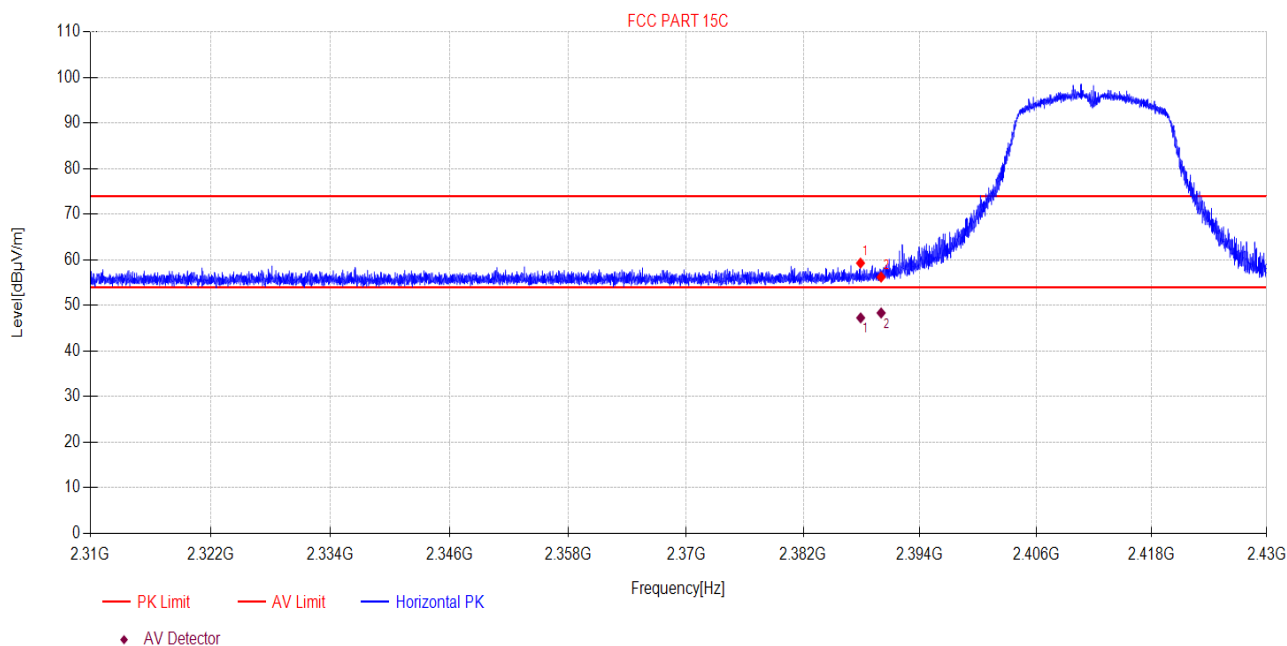
Note:

1. Level = Reading + Factor.
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: 2022-11-04 **Tested By:** James Gan
EUT: MADV Smart Video Doorbell 2M **Model Number:** FJ07MLTZ
Test Mode: TX Mode **Power Supply:** AC120V/60Hz
Condition: Temp:22.2°C;Humi:56.7%;Press:100.3kPa **Test Site:** DDT 3# Chamber
File Path: d:\ts\2022 report data\Q22102105-2E FJ07MLTZ\FCC ABOVE 1G 2.4G\5
Memo: 11G 2412

Test Graph



Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2387.90	49.02	10.28	59.30	74.00	14.70	PK	Horizontal
2	2390.00	45.95	10.28	56.23	74.00	17.77	PK	Horizontal

Final Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2387.90	37.02	10.28	47.30	54.00	6.70	AV	Horizontal
2	2390.00	38.09	10.28	48.37	54.00	5.63	AV	Horizontal

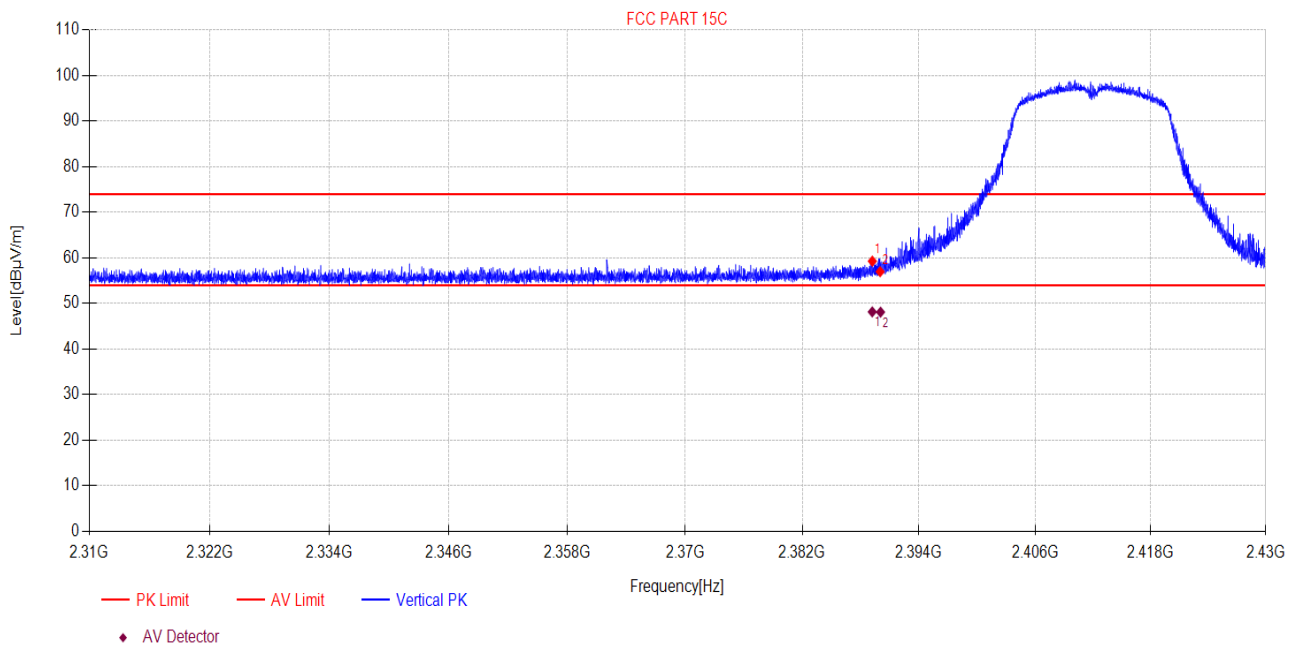
Note:

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

TR-4-E-009 Radiated Emission Test Result

Test Date: 2022-11-04 **Tested By:** James Gan
EUT: MADV Smart Video Doorbell 2M **Model Number:** FJ07MLTZ
Test Mode: TX Mode **Power Supply:** AC120V/60Hz
Condition: Temp:22.2°C;Humi:56.7%;Press:100.3kPa **Test Site:** DDT 3# Chamber
File Path: d:\ts\2022 report data\Q22102105-2E FJ07MLTZ\FCC ABOVE 1G 2.4G\6
Memo: 11G 2412

Test Graph



Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2389.20	49.01	10.28	59.29	74.00	14.71	PK	Vertical
2	2390.00	46.70	10.28	56.98	74.00	17.02	PK	Vertical

Final Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2389.20	37.89	10.28	48.17	54.00	5.83	AV	Vertical
2	2390.00	37.83	10.28	48.11	54.00	5.89	AV	Vertical

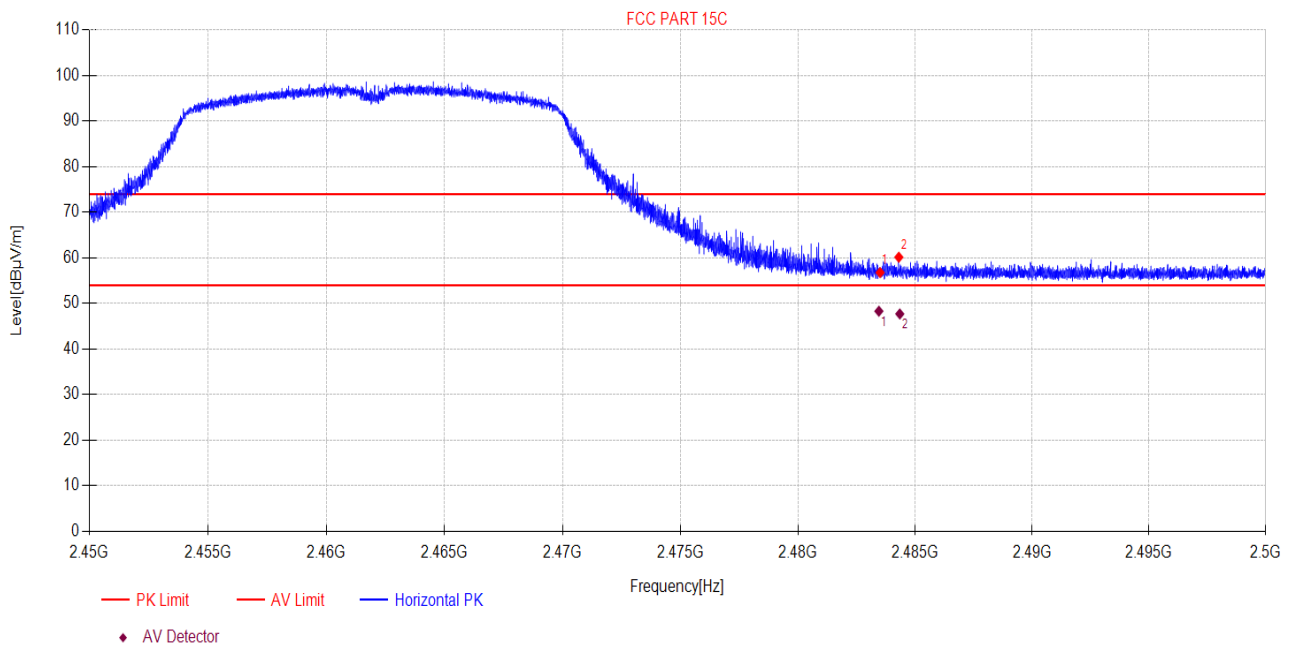
Note:

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

TR-4-E-009 Radiated Emission Test Result

Test Date: 2022-11-04 **Tested By:** James Gan
EUT: MADV Smart Video Doorbell 2M **Model Number:** FJ07MLTZ
Test Mode: TX Mode **Power Supply:** AC120V/60Hz
Condition: Temp:22.2°C;Humi:56.7%;Press:100.3kPa **Test Site:** DDT 3# Chamber
File Path: d:\ts\2022 report data\Q22102105-2E FJ07MLTZ\FCC ABOVE 1G 2.4G\7
Memo: 11G 2462

Test Graph



Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.50	46.25	10.54	56.79	74.00	17.21	PK	Horizontal
2	2484.34	49.60	10.55	60.15	74.00	13.85	PK	Horizontal

Final Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.50	37.77	10.55	48.32	54.00	5.68	AV	Horizontal
2	2484.34	37.15	10.56	47.71	54.00	6.29	AV	Horizontal

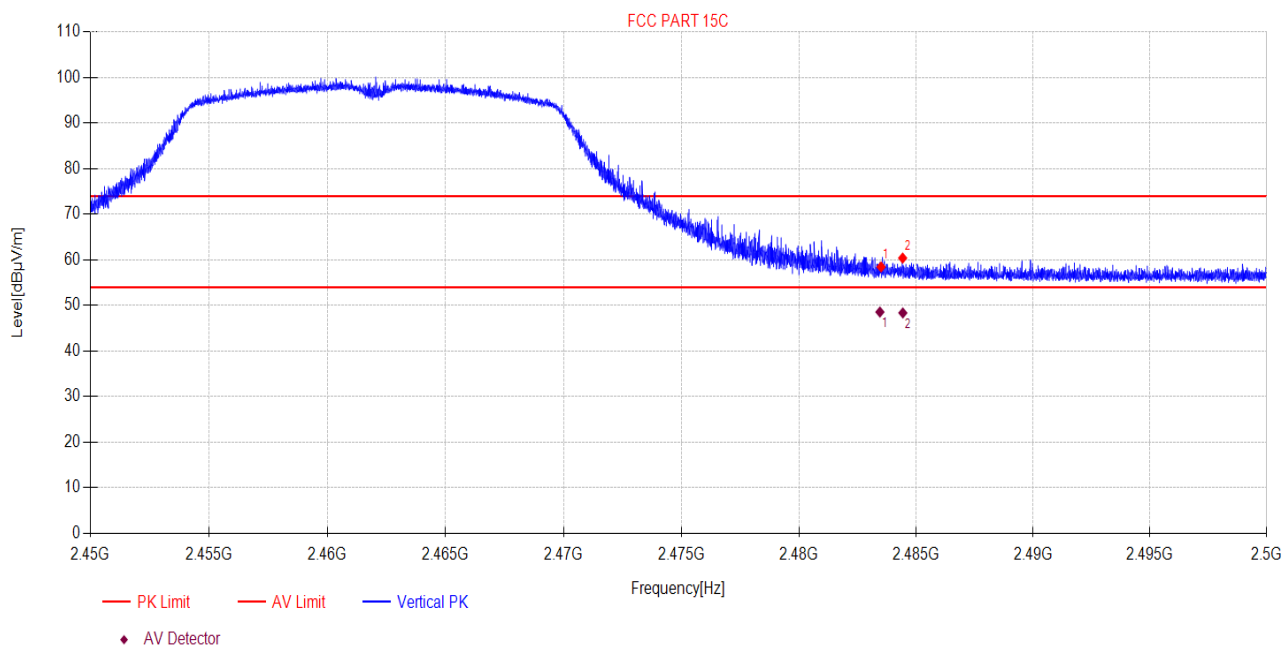
Note:

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

TR-4-E-009 Radiated Emission Test Result

Test Date: 2022-11-04 **Tested By:** James Gan
EUT: MADV Smart Video Doorbell 2M **Model Number:** FJ07MLTZ
Test Mode: TX Mode **Power Supply:** AC120V/60Hz
Condition: Temp:22.2°C;Humi:56.7%;Press:100.3kPa **Test Site:** DDT 3# Chamber
File Path: d:\ts\2022 report data\Q22102105-2E FJ07MLTZ\FCC ABOVE 1G 2.4G\8
Memo: 11G 2462

Test Graph



Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.50	47.93	10.54	58.47	74.00	15.53	PK	Vertical
2	2484.43	49.86	10.55	60.41	74.00	13.59	PK	Vertical

Final Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.50	38.02	10.55	48.57	54.00	5.43	AV	Vertical
2	2484.43	37.81	10.56	48.37	54.00	5.63	AV	Vertical

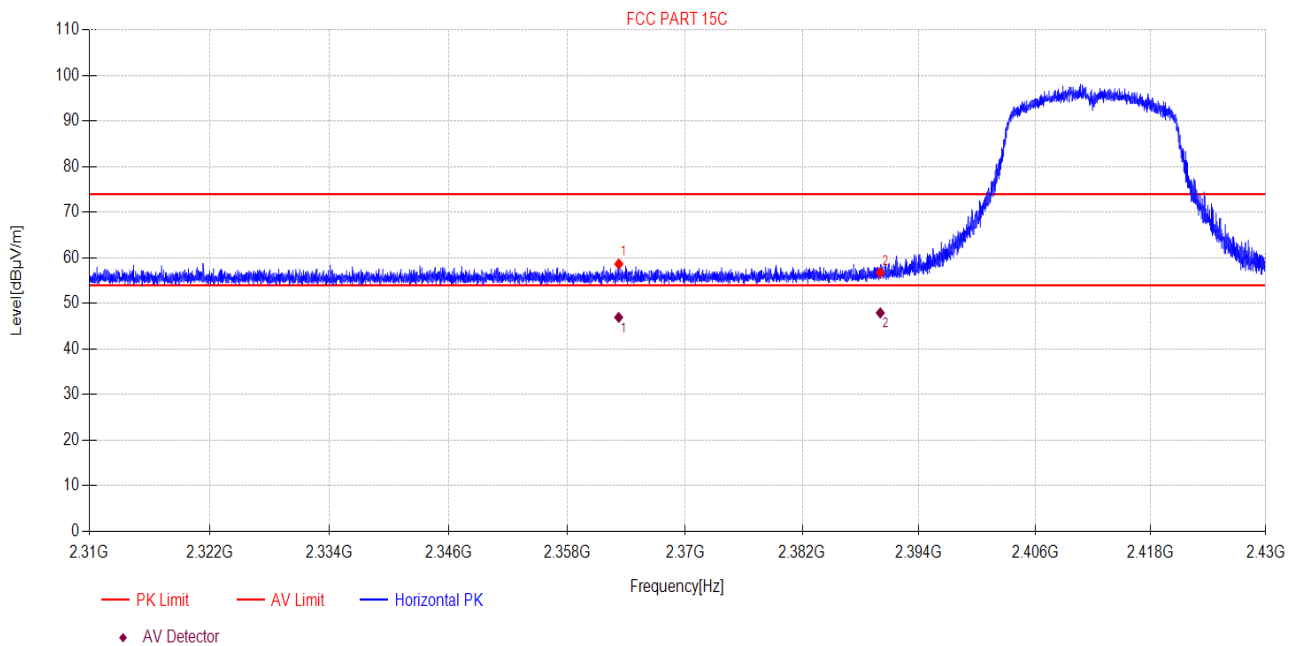
Note:

1. Level = Reading + Factor.
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: 2022-11-04 **Tested By:** James Gan
EUT: MADV Smart Video Doorbell 2M **Model Number:** FJ07MLTZ
Test Mode: TX Mode **Power Supply:** AC120V/60Hz
Condition: Temp:22.2°C;Humi:56.7%;Press:100.3kPa **Test Site:** DDT 3# Chamber
File Path: d:\ts\2022 report data\Q22102105-2E FJ07MLTZ\FCC ABOVE 1G 2.4G\9
Memo: 11N20 2412

Test Graph



Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2363.27	48.44	10.23	58.67	74.00	15.33	PK	Horizontal
2	2390.00	46.48	10.28	56.76	74.00	17.24	PK	Horizontal

Final Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2363.27	36.73	10.23	46.96	54.00	7.04	AV	Horizontal
2	2390.00	37.66	10.28	47.94	54.00	6.06	AV	Horizontal

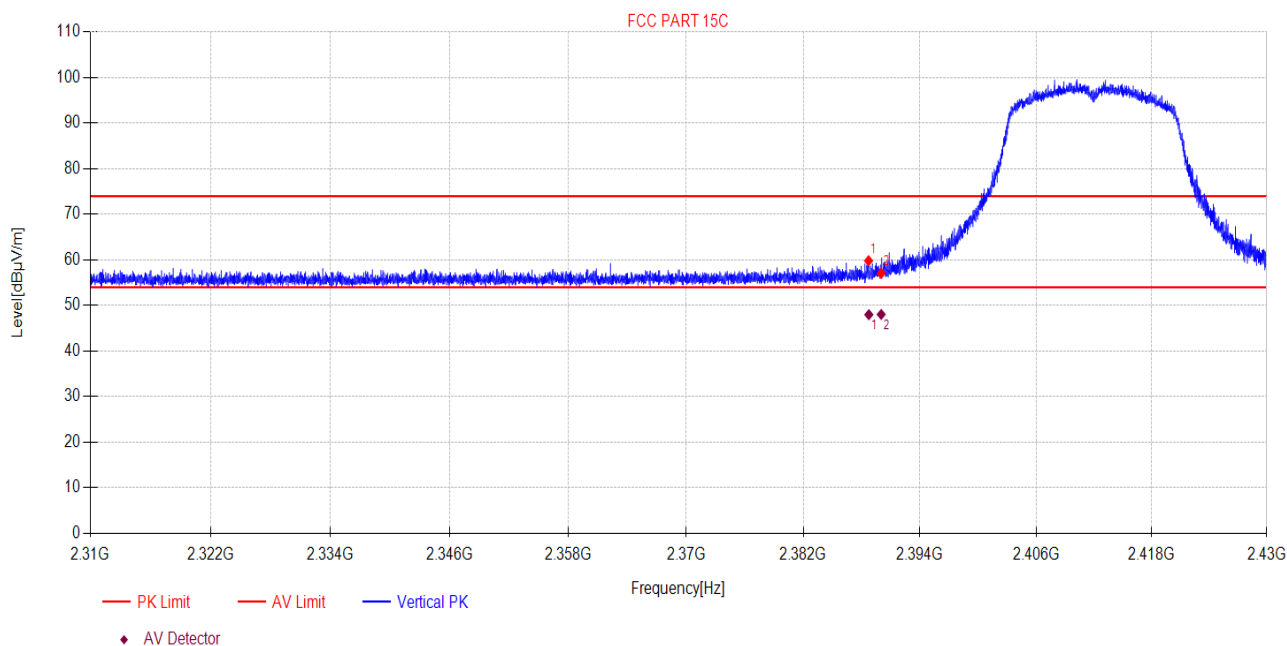
Note:

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

TR-4-E-009 Radiated Emission Test Result

Test Date: 2022-11-04 **Tested By:** James Gan
EUT: MADV Smart Video Doorbell 2M **Model Number:** FJ07MLTZ
Test Mode: TX Mode **Power Supply:** AC120V/60Hz
Condition: Temp:22.2°C;Humi:56.7%;Press:100.3kPa **Test Site:** DDT 3# Chamber
File Path: d:\ts\2022 report data\Q22102105-2E FJ07MLTZ\FCC ABOVE 1G 2.4G\10
Memo: 11N20 2412

Test Graph



Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2388.71	49.55	10.28	59.83	74.00	14.17	PK	Vertical
2	2390.00	46.77	10.28	57.05	74.00	16.95	PK	Vertical

Final Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2388.71	37.71	10.28	47.99	54.00	6.01	AV	Vertical
2	2390.00	37.77	10.28	48.05	54.00	5.95	AV	Vertical

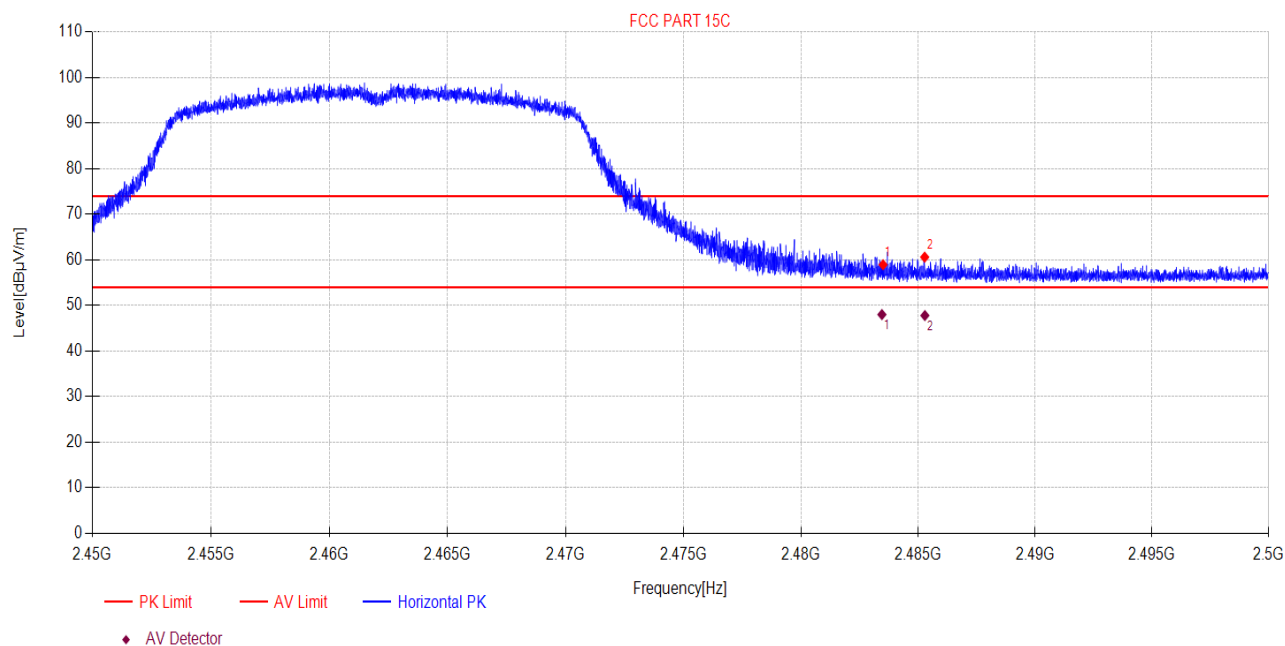
Note:

1. Level = Reading + Factor.
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: 2022-11-04 **Tested By:** James Gan
EUT: MADV Smart Video Doorbell 2M **Model Number:** FJ07MLTZ
Test Mode: TX Mode **Power Supply:** AC120V/60Hz
Condition: Temp:22.2°C;Humi:56.7%;Press:100.3kPa **Test Site:** DDT 3# Chamber
File Path: d:\ts\2022 report data\Q22102105-2E FJ07MLTZ\FCC ABOVE 1G 2.4G\11
Memo: 11N20 2462

Test Graph



Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.50	48.41	10.54	58.95	74.00	15.05	PK	Horizontal
2	2485.28	50.06	10.55	60.61	74.00	13.39	PK	Horizontal

Final Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.50	37.47	10.55	48.02	54.00	5.98	AV	Horizontal
2	2485.28	37.24	10.56	47.80	54.00	6.20	AV	Horizontal

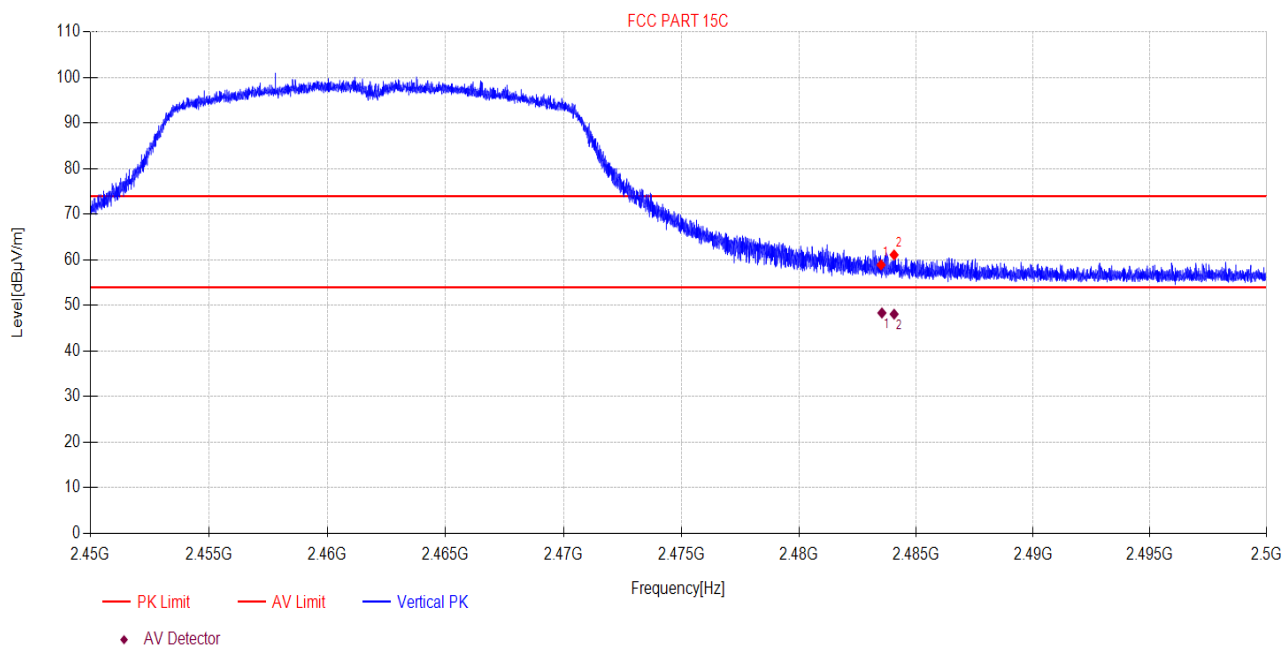
Note:

1. Level = Reading + Factor.
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: 2022-11-04 **Tested By:** James Gan
EUT: MADV Smart Video Doorbell 2M **Model Number:** FJ07MLTZ
Test Mode: TX Mode **Power Supply:** AC120V/60Hz
Condition: Temp:22.2°C;Humi:56.7%;Press:100.3kPa **Test Site:** DDT 3# Chamber
File Path: d:\ts\2022 report data\Q22102105-2E FJ07MLTZ\FCC ABOVE 1G 2.4G\12
Memo: 11N20 2462

Test Graph



Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.50	48.37	10.54	58.91	74.00	15.09	PK	Vertical
2	2484.06	50.55	10.55	61.10	74.00	12.90	PK	Vertical

Final Data List

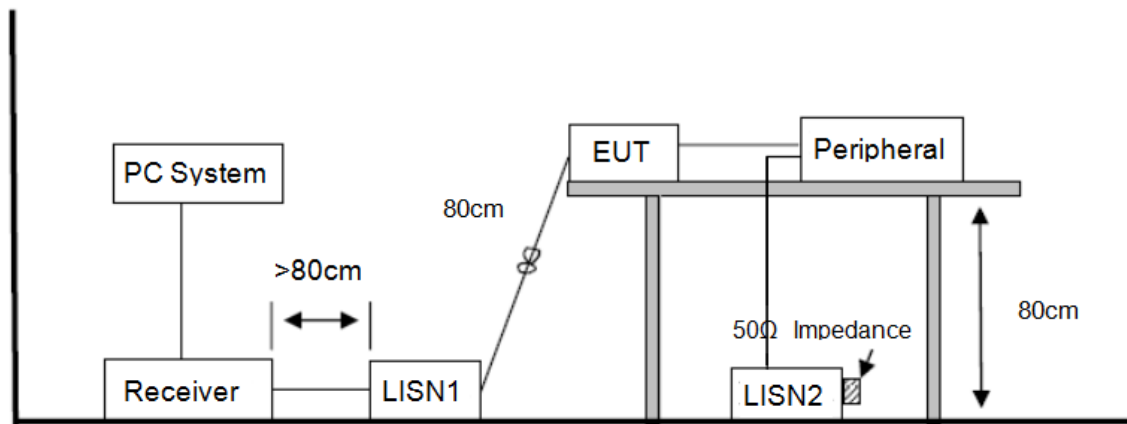
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	2483.50	37.82	10.55	48.37	54.00	5.63	AV	Vertical
2	2484.06	37.54	10.56	48.10	54.00	5.90	AV	Vertical

Note:

1. Level = Reading + Factor.
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.

11. Power Line Conducted Emission

11.1. Block diagram of test setup



11.2. Power line conducted emission limits (Class B)

Frequency	Quasi-Peak Level dB(μ V)	Average Level dB(μ V)
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.

11.3. Test procedure

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

All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4.

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.

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.

11.4. Test result

Pass. (See below detailed test result)

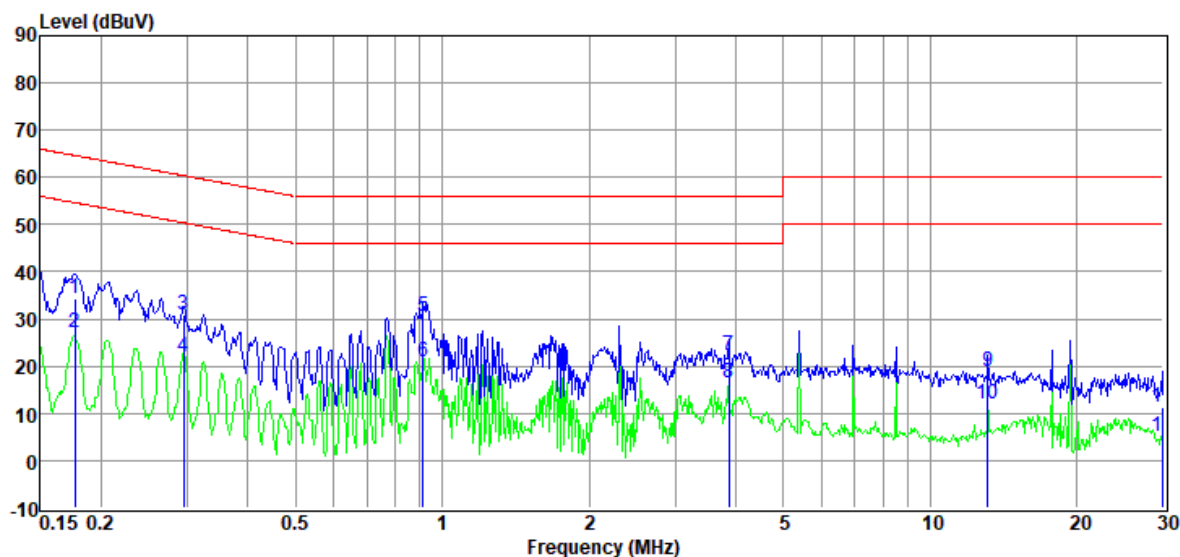
Note1: All emissions not reported below are too low against the prescribed limits.

Note2: "----" means peak detection; "----" means average detection

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

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 1# Shield Room **D:\2022 CE report date\Q22102105-2E FJ07MLTZ\FCC.EM6**
Test Date : 2022-11-07 **Tested By** : James Gan
EUT : MADV Smart Video Doorbell 2M **Model Number** : FJ07MLTZ
Power Supply : AC 120V/60Hz **Test Mode** : TX Mode
Condition : TEMP:23.2°C, RH:55.3%, BP:100.3KPa **LISN** : 2021 1# ENV216/NEUTRAL
Memo :



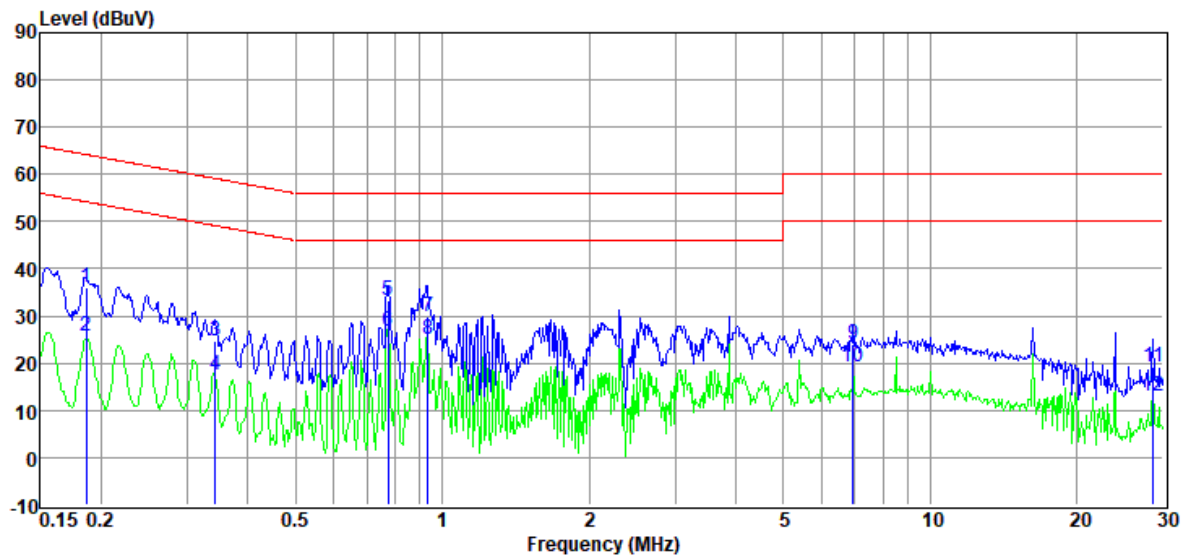
Item (Mark)	Freq. (MHz)	Read Level (dBμV)	LISN Factor (dB)	Cable Loss (dB)	Pulse Limiter Factor (dB)	Result Level (dBμV)	Limit Line (dBμV)	Over Limit (dB)	Detector	Phase
1	0.18	14.70	9.80	0.01	9.92	34.43	64.64	-30.21	QP	NEUTRAL
2	0.18	7.28	9.80	0.01	9.92	27.01	54.64	-27.63	Average	NEUTRAL
3	0.30	11.13	9.67	0.02	9.92	30.74	60.37	-29.63	QP	NEUTRAL
4	0.30	2.27	9.67	0.02	9.92	21.88	50.37	-28.49	Average	NEUTRAL
5	0.91	10.95	9.73	0.03	9.90	30.61	56.00	-25.39	QP	NEUTRAL
6	0.91	1.19	9.73	0.03	9.90	20.85	46.00	-25.15	Average	NEUTRAL
7	3.86	2.46	9.79	0.06	9.92	22.23	56.00	-33.77	QP	NEUTRAL
8	3.86	-3.43	9.79	0.06	9.92	16.34	46.00	-29.66	Average	NEUTRAL
9	13.13	-0.70	9.67	0.13	9.93	19.03	60.00	-40.97	QP	NEUTRAL
10	13.13	-7.65	9.67	0.13	9.93	12.08	50.00	-37.92	Average	NEUTRAL
11	29.84	-8.64	9.90	0.21	10.00	11.47	60.00	-48.53	QP	NEUTRAL
12	29.84	-15.09	9.90	0.21	10.00	5.02	50.00	-44.98	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.

TR-4-E-010 Conducted Emission Test Result

Test Site : DDT 1# Shield Room **D:\2022 CE report date\Q22102105-2E FJ07MLTZ\FCC.EM6**
Test Date : 2022-11-07 **Tested By** : James Gan
EUT : MADV Smart Video Doorbell 2M **Model Number** : FJ07MLTZ
Power Supply : AC 120V/60Hz **Test Mode** : TX Mode
Condition : TEMP:23.2°C, RH:55.3%, BP:100.3KPa **LISN** : 2021 1# ENV216/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)	Over Limit (dB)	Detector	Phase
1	0.19	16.23	9.75	0.01	9.92	35.91	64.20	-28.29	QP	LINE
2	0.19	6.20	9.75	0.01	9.92	25.88	54.20	-28.32	Average	LINE
3	0.34	4.96	9.68	0.02	9.91	24.57	59.13	-34.56	QP	LINE
4	0.34	-1.97	9.68	0.02	9.91	17.64	49.13	-31.49	Average	LINE
5	0.78	13.68	9.53	0.03	9.90	33.14	56.00	-22.86	QP	LINE
6	0.78	7.45	9.53	0.03	9.90	26.91	46.00	-19.09	Average	LINE
7	0.93	10.33	9.58	0.03	9.89	29.83	56.00	-26.17	QP	LINE
8	0.93	5.58	9.58	0.03	9.89	25.08	46.00	-20.92	Average	LINE
9	6.95	4.63	9.50	0.08	9.94	24.15	60.00	-35.85	QP	LINE
10	6.95	-0.39	9.50	0.08	9.94	19.13	50.00	-30.87	Average	LINE
11	28.60	-0.81	9.69	0.20	10.00	19.08	60.00	-40.92	QP	LINE
12	28.60	-6.78	9.69	0.20	10.00	13.11	50.00	-36.89	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.

12. Antenna Requirements

12.1. Limit

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 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

12.2. Result

The antenna used for this product and that no antenna other than that furnished by the responsible party shall be used with the device, the maximum peak gain is 1.57 dBi.