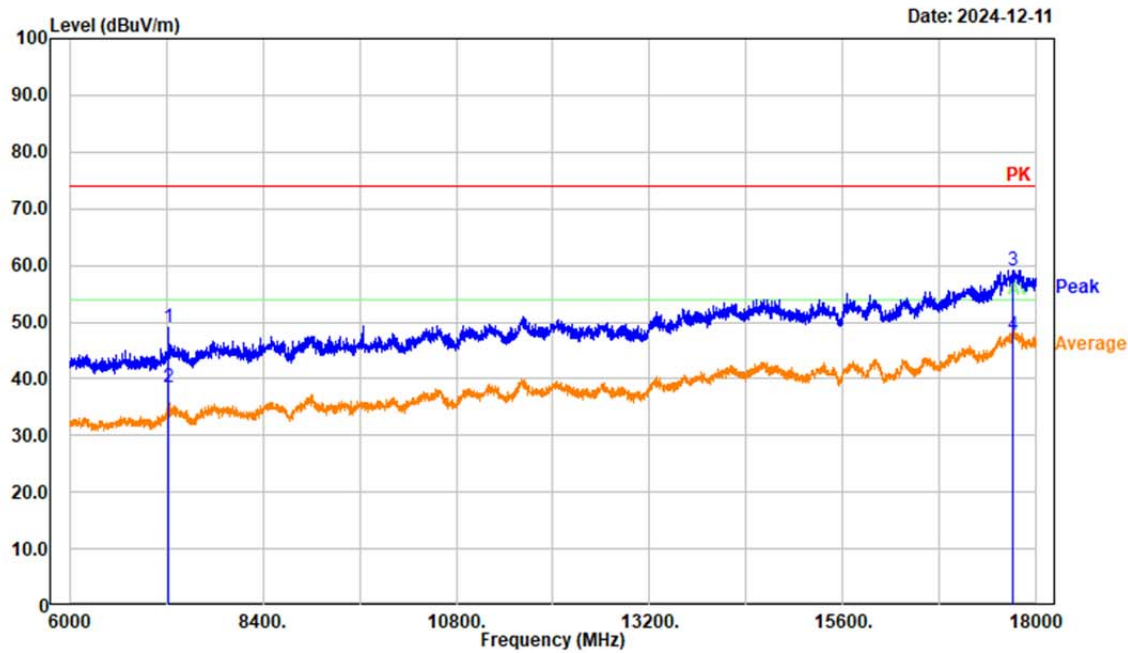Project No.: 2403Z107078E-RF
    Tester: Mack Huang
  Condition: PK trace RBW:1MHz; VBW:3MHz; SWT:0.3sec AV trace RBW:1MHz; VBW:5kHz; SWT:auto
Polarization: horizontal
      Note: 802.11b Mode Low Channel 2412MHz

No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	7236.000	37.56	11.40	48.96	74.00	25.04	Peak
2	7236.000	27.14	11.40	38.54	54.00	15.46	Average
3	17707.200	33.31	25.89	59.20	74.00	14.80	Peak
4	17707.200	21.85	25.89	47.74	54.00	6.26	Average

Project No.: 2403Z107078E-RF
      Tester: Mack Huang
   Condition: PK trace RBW:1MHz; VBW:3MHz; SWT:0.3sec AV trace RBW:1MHz; VBW:5kHz; SWT:auto
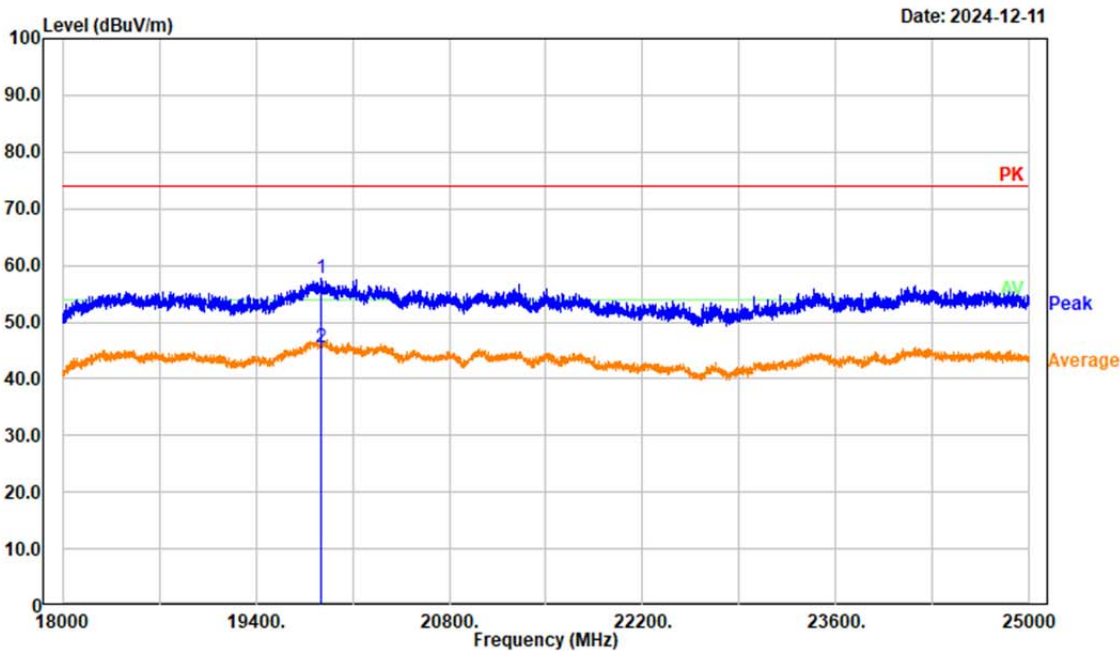Polarization: vertical
        Note: 802.11b Mode Low Channel 2412MHz
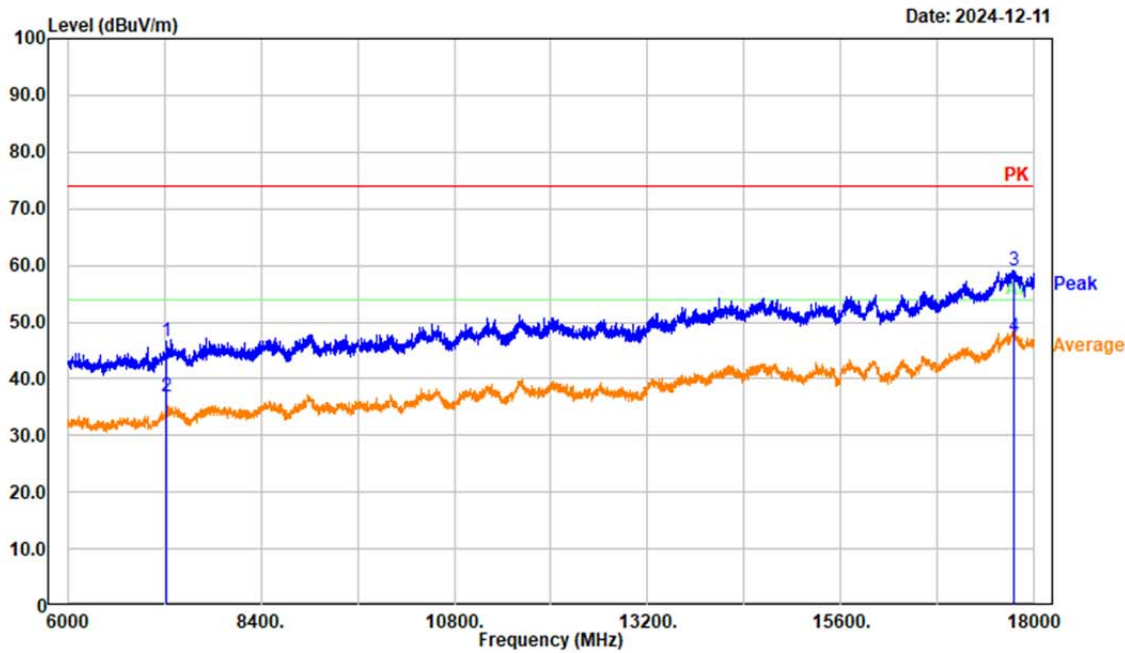
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	7236.000	35.23	11.40	46.63	74.00	27.37	Peak
2	7236.000	25.39	11.40	36.79	54.00	17.21	Average
3	17745.600	33.28	25.85	59.13	74.00	14.87	Peak
4	17745.600	21.71	25.85	47.56	54.00	6.44	Average

Project No.: 2403Z107078E-RF
    Tester: Mack Huang
  Condition: PK trace RBW:1MHz; VBW:3MHz; SWT:0.3sec AV trace RBW:1MHz; VBW:5kHz; SWT:auto
Polarization: Horizontal
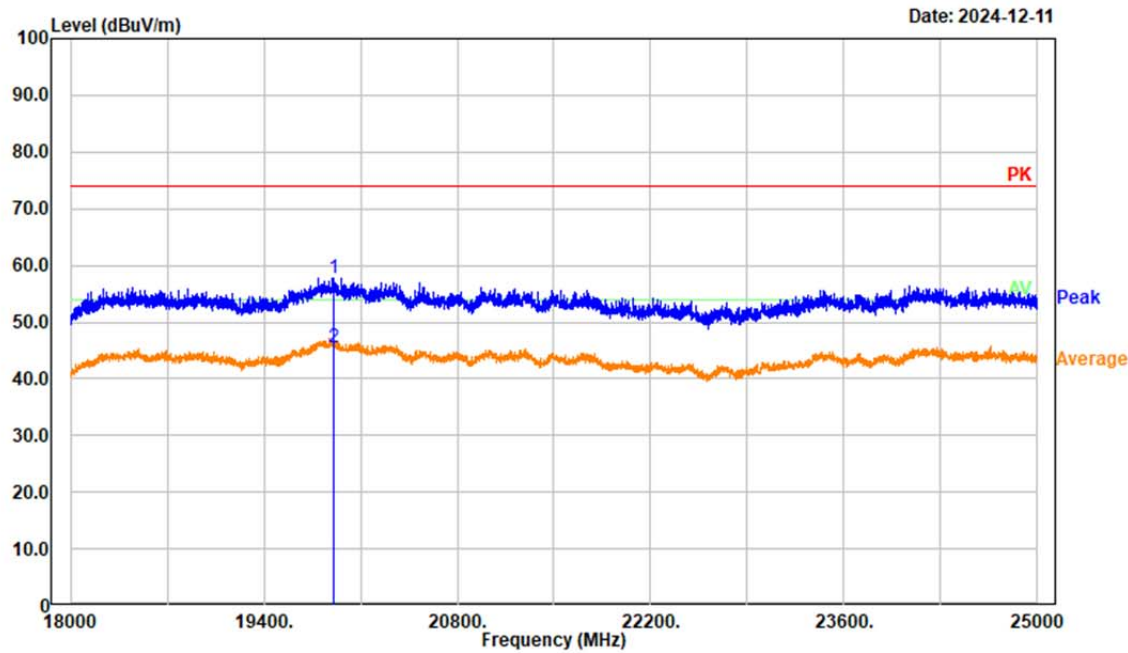   Note: 802.11b Mode Low Channel 2412MHz

No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	19869.000	49.68	7.96	57.64	74.00	16.36	Peak
2	19869.000	37.67	7.96	45.63	54.00	8.37	Average

Project No.: 2403Z107078E-RF
Tester: Mack Huang
Condition: PK trace RBW:1MHz; VBW:3MHz; SWT:0.3sec AV trace RBW:1MHz; VBW:5kHz; SWT:auto
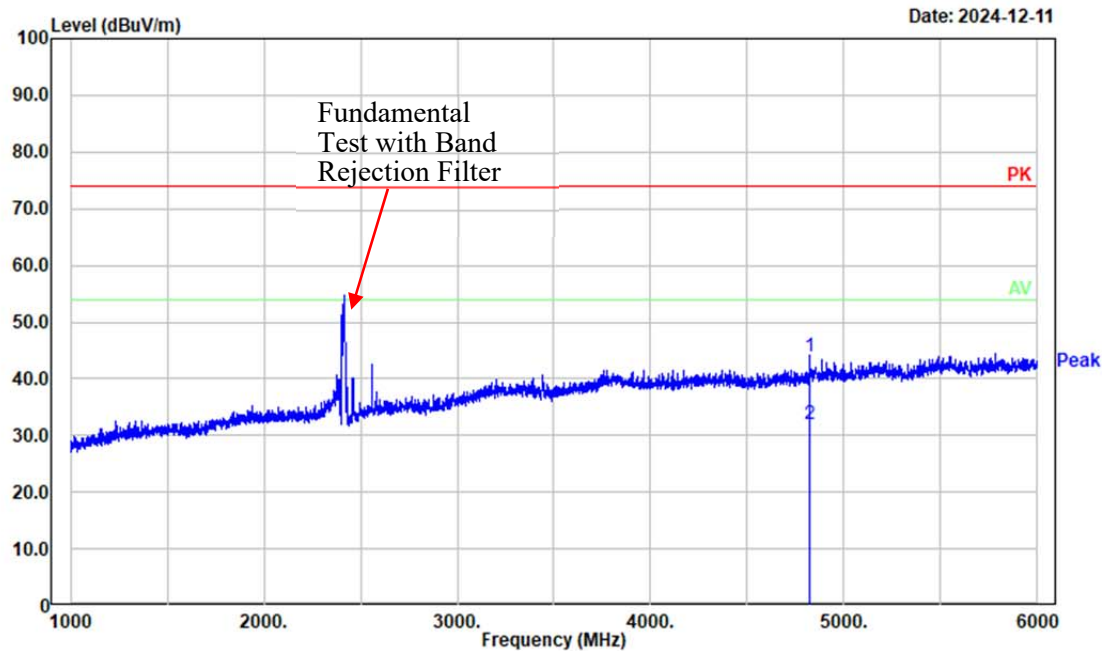Polarization: Vertical
Note: 802.11b Mode Low Channel 2412MHz

No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	19906.800	49.84	7.94	57.78	74.00	16.22	Peak
2	19906.800	37.64	7.94	45.58	54.00	8.42	Average

Project No.: 2403Z107078E-RF
Tester: Mack Huang
Condition: PK trace RBW:1MHz; VBW:3MHz; SWT:0.3sec
Polarization: horizontal
Note: 802.11g Mode Low Channel 2412MHz

No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4824.000	35.21	8.73	43.94	74.00	30.06	Peak
2	4824.000	23.37	8.73	32.10	54.00	21.90	Average

Project No.: 2403Z107078E-RF
        Tester: Mack Huang
    Condition: PK trace RBW:1MHz; VBW:3MHz; SWT:0.3sec
Polarization: vertical
        Note: 802.11g Mode Low Channel 2412MHz
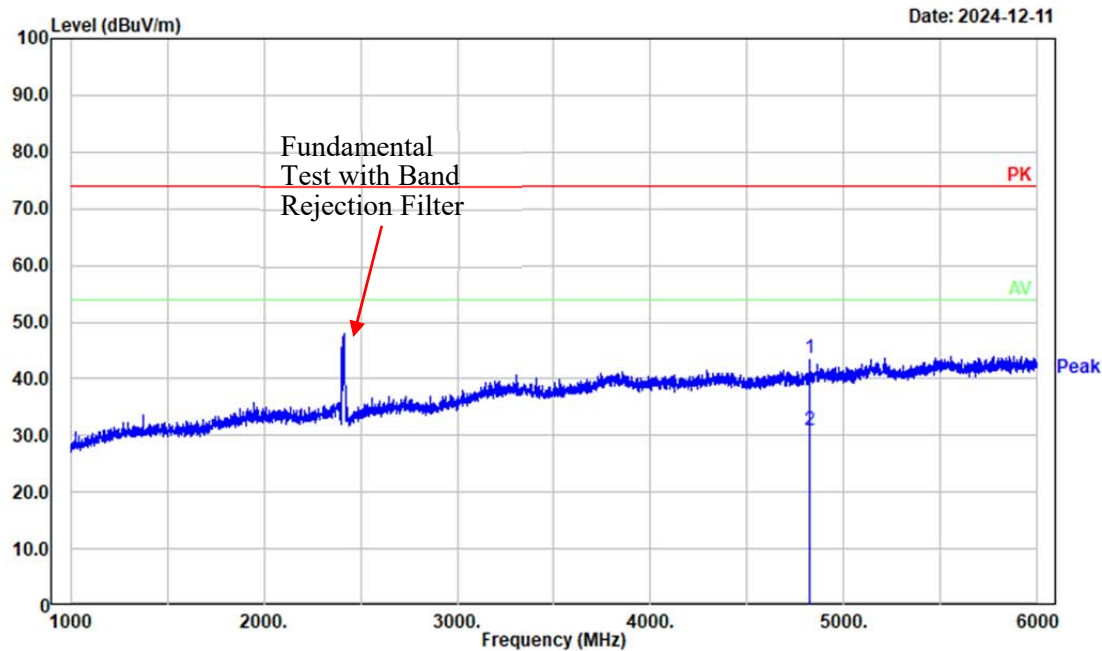
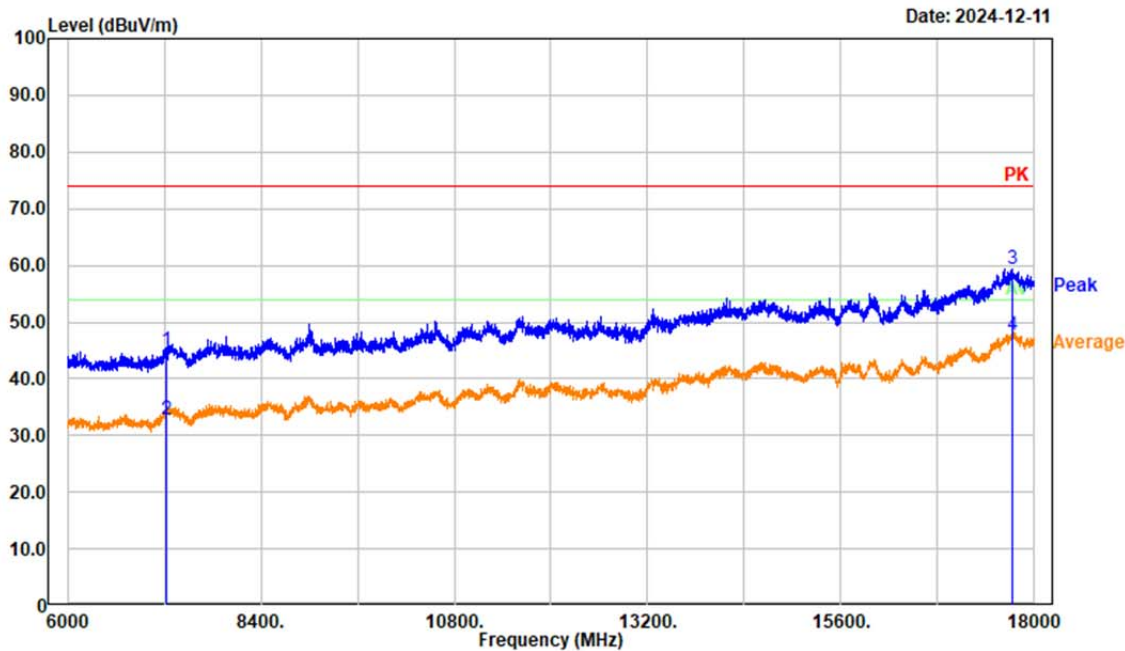| No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4824.000	34.85	8.73	43.58	74.00	30.42	Peak
2	4824.000	22.20	8.73	30.93	54.00	23.07	Average

Project No.: 2403Z107078E-RF
        Tester: Mack Huang
      Condition: PK trace RBW:1MHz; VBW:3MHz; SWT:0.3sec AV trace RBW:1MHz; VBW:5kHz; SWT:auto
  Polarization: horizontal
          Note: 802.11g Mode Low Channel 2412MHz

No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	7236.000	33.66	11.40	45.06	74.00	28.94	Peak
2	7236.000	21.41	11.40	32.81	54.00	21.19	Average
3	17733.600	33.42	25.87	59.29	74.00	14.71	Peak
4	17733.600	21.71	25.87	47.58	54.00	6.42	Average

Project No.: 2403Z107078E-RF
     Tester: Mack Huang
  Condition: PK trace RBW:1MHz; VBW:3MHz; SWT:0.3sec AV trace RBW:1MHz; VBW:5kHz; SWT:auto
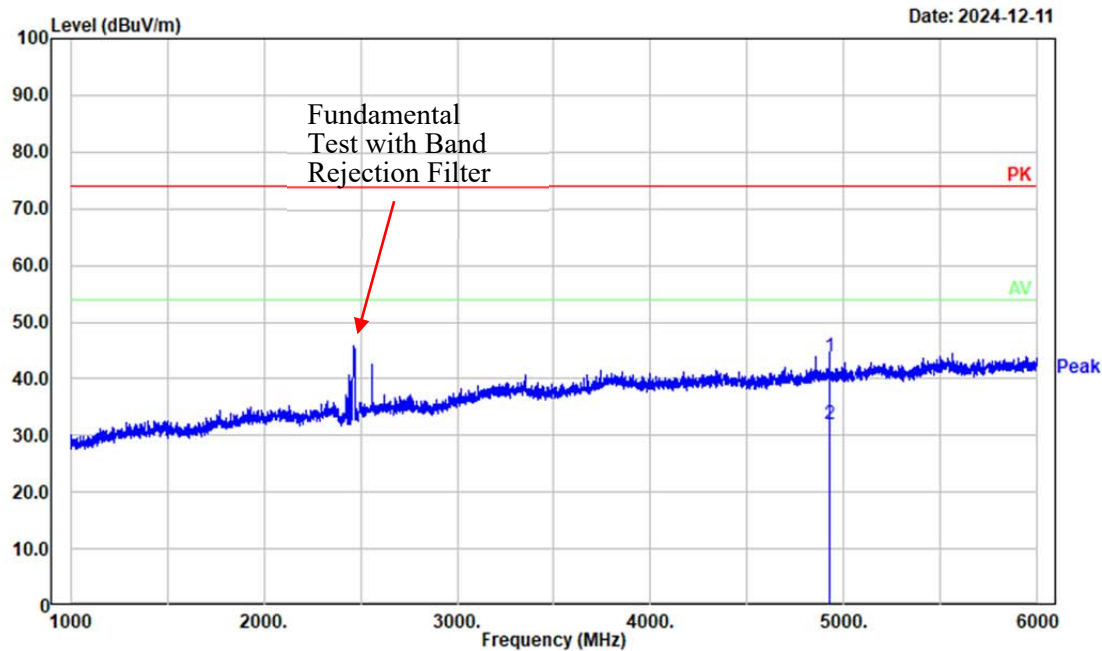Polarization: vertical
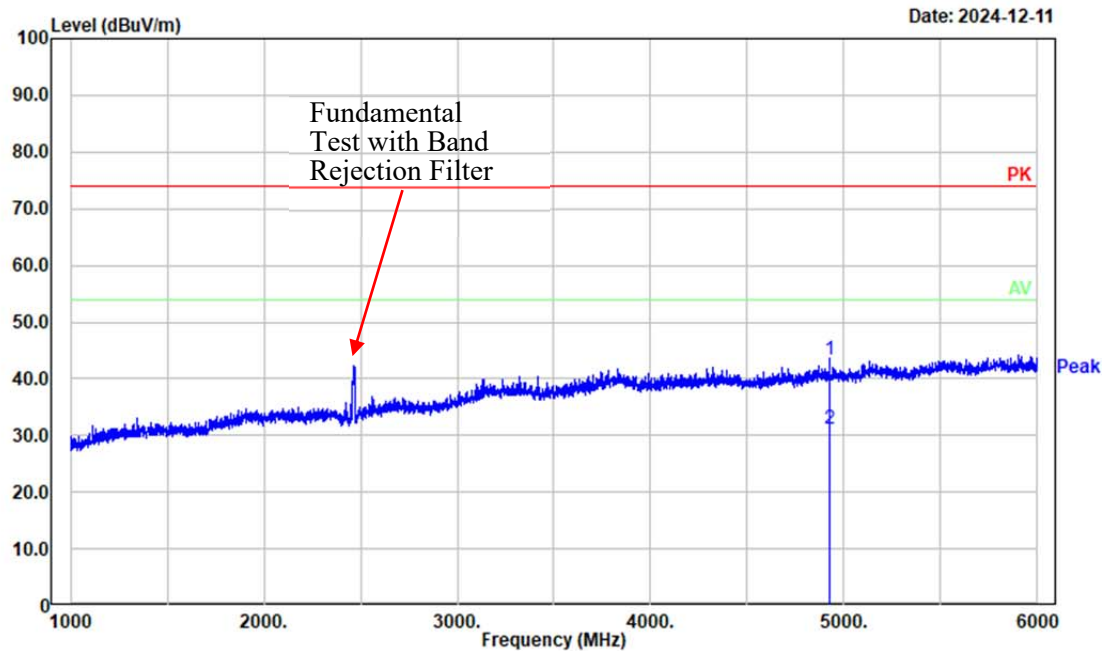   Note: 802.11g Mode Low Channel 2412MHz
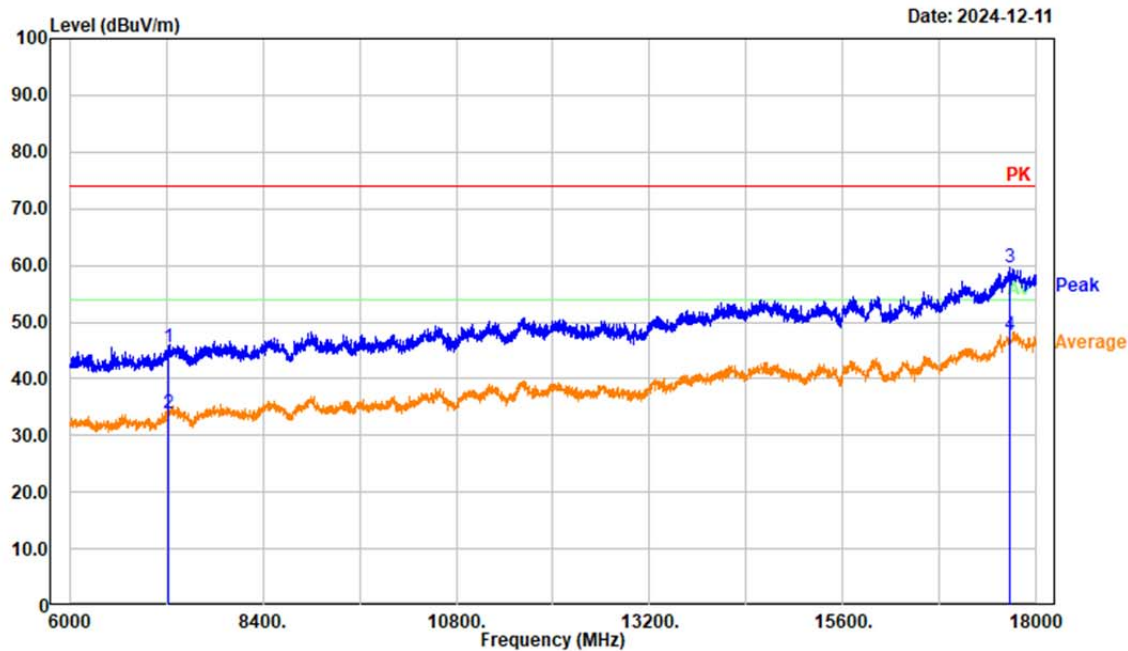
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	7236.000	34.01	11.40	45.41	74.00	28.59	Peak
2	7236.000	22.38	11.40	33.78	54.00	20.22	Average
3	17666.400	34.13	25.42	59.55	74.00	14.45	Peak
4	17666.400	22.19	25.42	47.61	54.00	6.39	Average

Project No.: 2403Z107078E-RF
        Tester: Mack Huang
     Condition: PK trace RBW:1MHz; VBW:3MHz; SWT:0.3sec
 Polarization: horizontal
          Note: 802.11n ht20 Mode High Channel 2462MHz

No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4924.000	35.02	8.88	43.90	74.00	30.10	Peak
2	4924.000	23.14	8.88	32.02	54.00	21.98	Average

Project No.: 2403Z107078E-RF
      Tester: Mack Huang
   Condition: PK trace RBW:1MHz; VBW:3MHz; SWT:0.3sec
Polarization: vertical
   Note: 802.11n ht20 Mode High Channel 2462MHz

No.	Frequency (MHz)	Reading (dBµV)	Factor (dB/m)	Result (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector
1	4924.000	34.38	8.88	43.26	74.00	30.74	Peak
2	4924.000	22.20	8.88	31.08	54.00	22.92	Average

```
Project No.: 2403Z107078E-RF
     Tester: Mack Huang
  Condition: PK trace RBW:1MHz; VBW:3MHz; SWT:0.3sec AV trace RBW:1MHz; VBW:5kHz; SWT:auto
Polarization: horizontal
       Note: 802.11n ht20 Mode High Channel 2462MHz
```
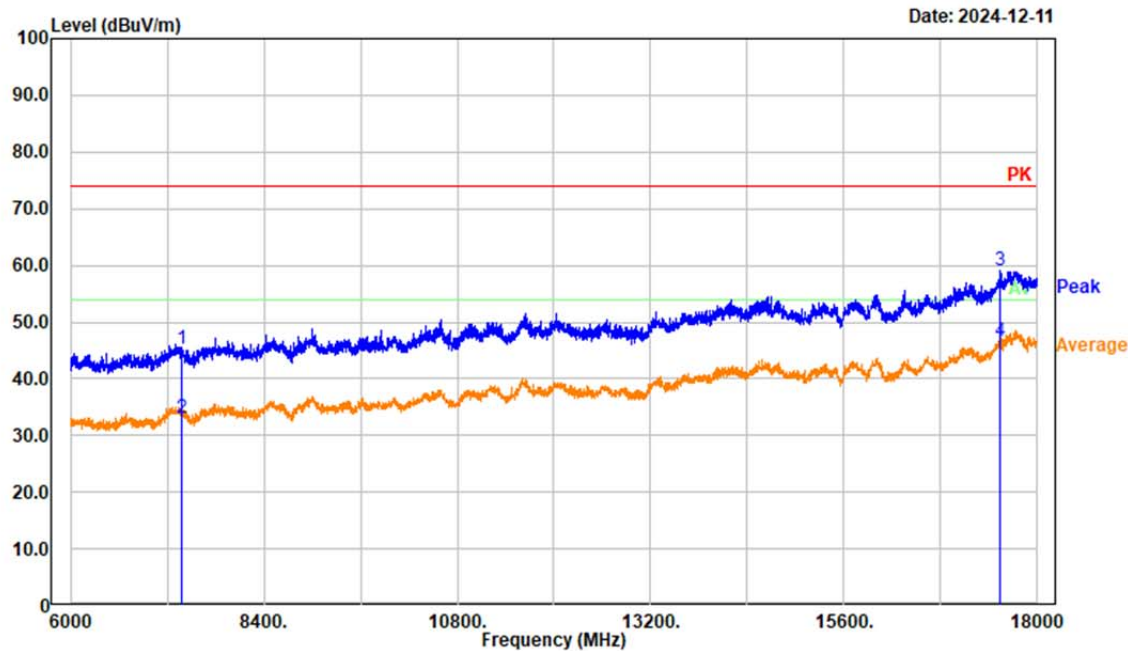

No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	7386.000	33.66	11.54	45.20	74.00	28.80	Peak
2	7386.000	21.59	11.54	33.13	54.00	20.87	Average
3	17539.200	35.55	23.43	58.98	74.00	15.02	Peak
4	17539.200	23.26	23.43	46.69	54.00	7.31	Average

```
Project No.: 2403Z107078E-RF
     Tester: Mack Huang
  Condition: PK trace RBW:1MHz; VBW:3MHz; SWT:0.3sec AV trace RBW:1MHz; VBW:5kHz; SWT:auto
Polarization: vertical
       Note: 802.11n ht20 Mode High Channel 2462MHz
```
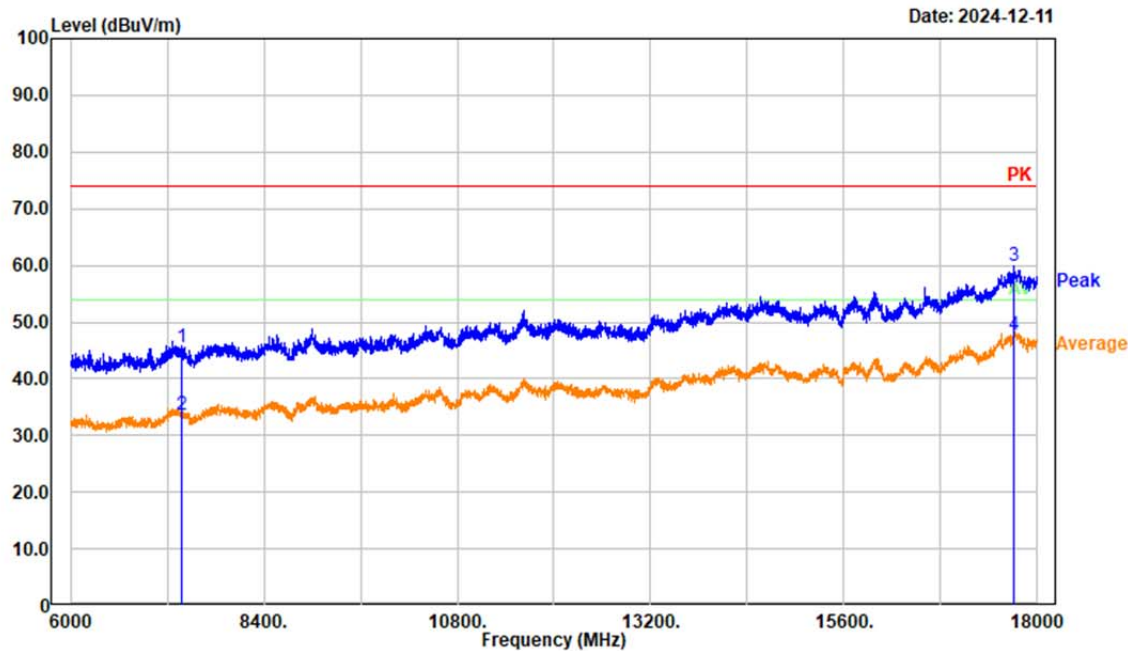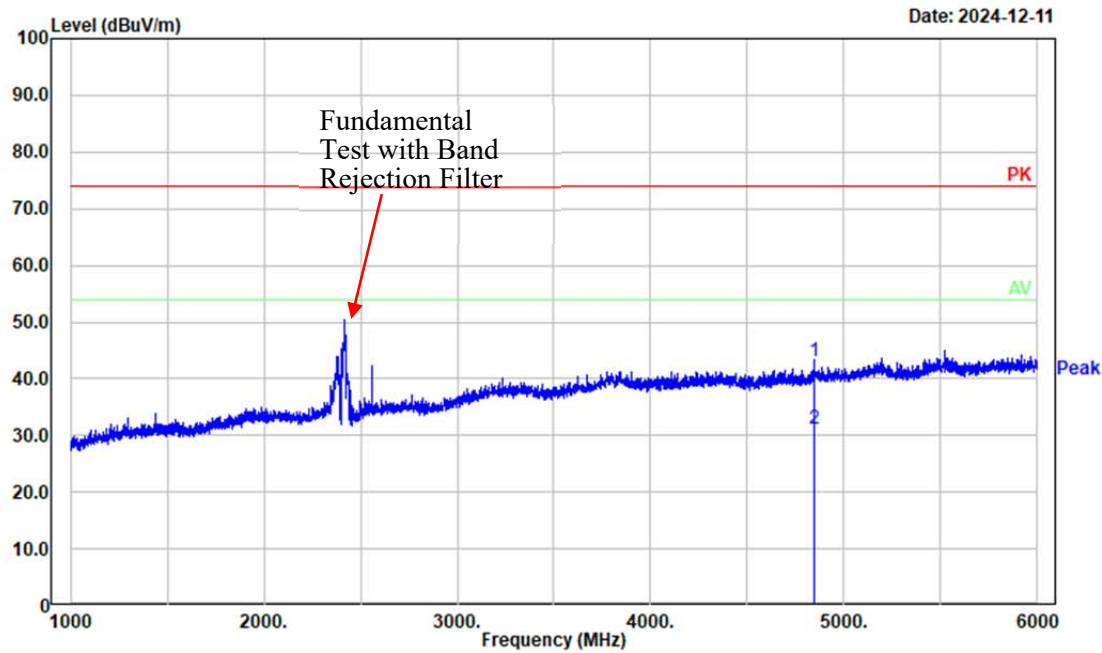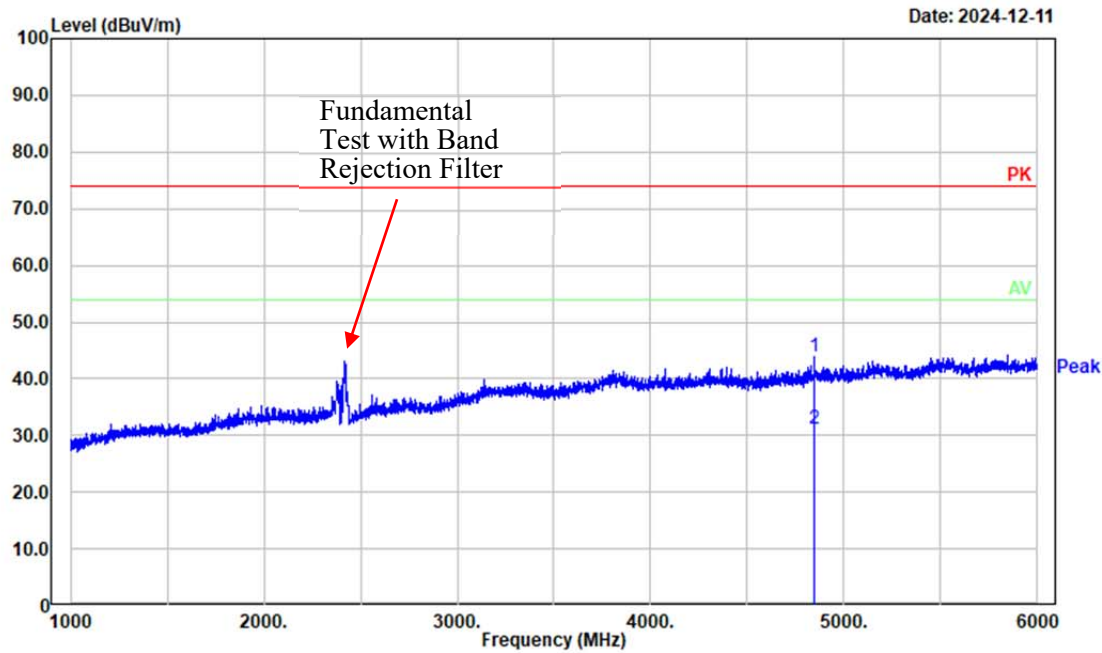

No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	7386.000	34.10	11.54	45.64	74.00	28.36	Peak
2	7386.000	22.16	11.54	33.70	54.00	20.30	Average
3	17714.400	33.91	25.89	59.80	74.00	14.20	Peak
4	17714.400	21.85	25.89	47.74	54.00	6.26	Average

Project No.: 2403Z107078E-RF
Tester: Mack Huang
Condition: PK trace RBW:1MHz; VBW:3MHz; SWT:0.3sec
Polarization: horizontal
Note: 802.11n ht40 Mode Low Channel 2422MHz

No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4844.000	34.17	8.97	43.14	74.00	30.86	Peak
2	4844.000	22.30	8.97	31.27	54.00	22.73	Average

Project No.: 2403Z107078E-RF
Tester: Mack Huang
Condition: PK trace RBW:1MHz; VBW:3MHz; SWT:0.3sec
Polarization: vertical
Note: 802.11n ht40 Mode Low Channel 2422MHz

No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	4844.000	34.82	8.97	43.79	74.00	30.21	Peak
2	4844.000	22.09	8.97	31.06	54.00	22.94	Average

Project No.: 2403Z107078E-RF
        Tester: Mack Huang
     Condition: PK trace RBW:1MHz; VBW:3MHz; SWT:0.3sec AV trace RBW:1MHz; VBW:5kHz; SWT:auto
  Polarization: horizontal
          Note: 802.11n ht40 Mode Low Channel 2422MHz
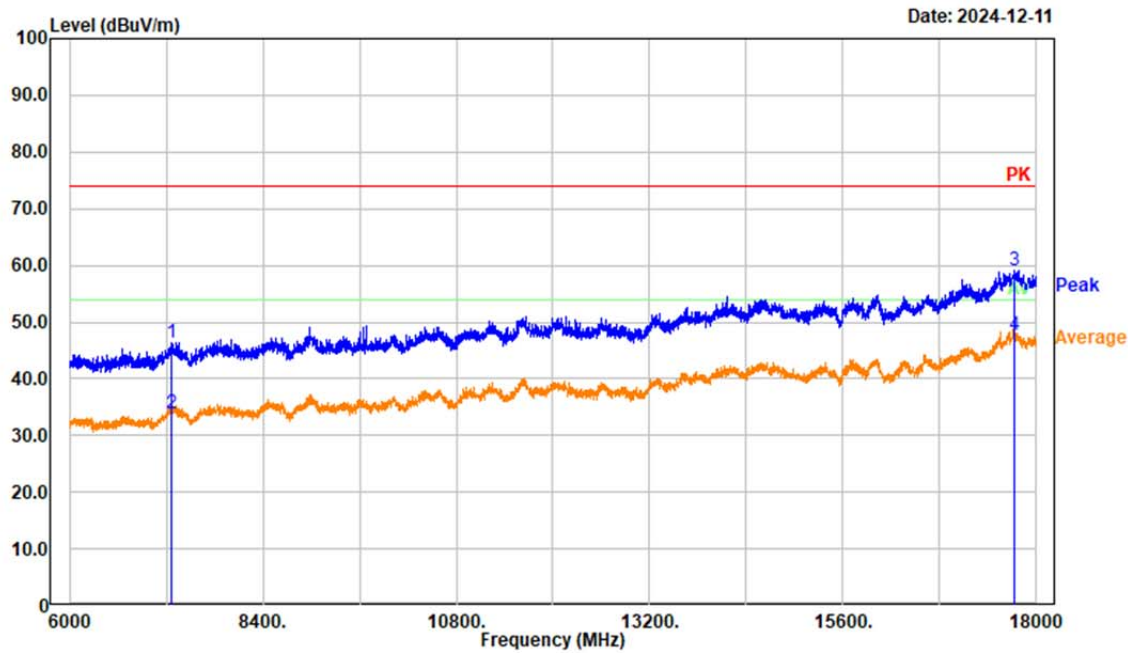
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	7266.000	34.96	11.43	46.39	74.00	27.61	Peak
2	7266.000	22.57	11.43	34.00	54.00	20.00	Average
3	17731.200	33.34	25.87	59.21	74.00	14.79	Peak
4	17731.200	21.71	25.87	47.58	54.00	6.42	Average

Project No.: 2403Z107078E-RF
    Tester: Mack Huang
  Condition: PK trace RBW:1MHz; VBW:3MHz; SWT:0.3sec AV trace RBW:1MHz; VBW:5kHz; SWT:auto
Polarization: vertical
      Note: 802.11n ht40 Mode Low Channel 2422MHz
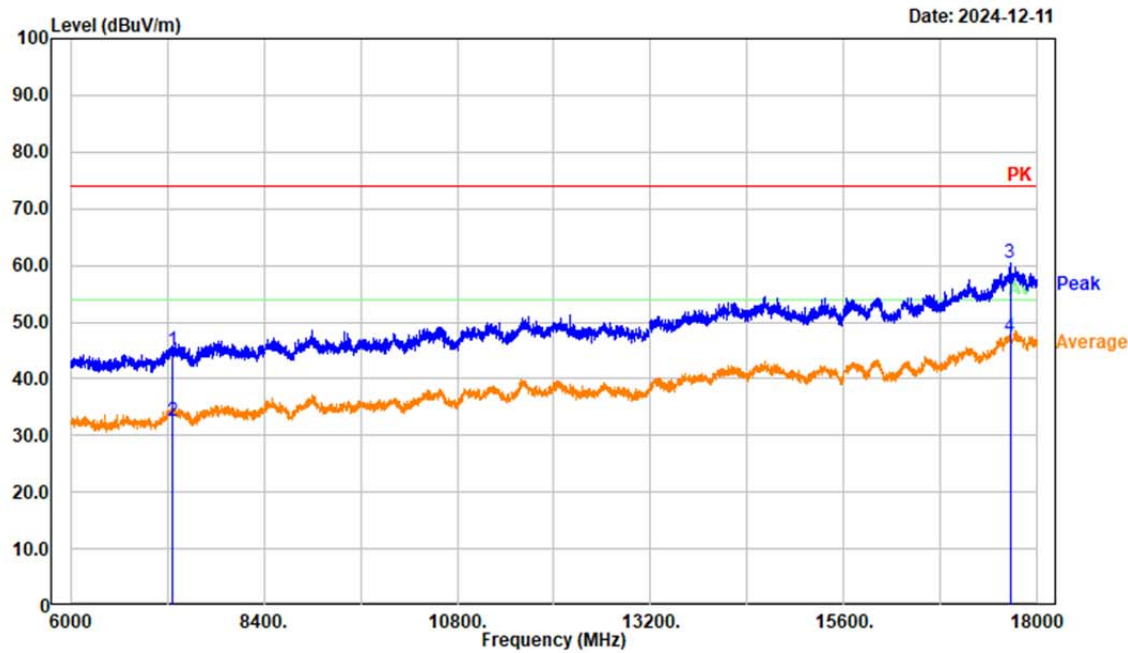
No.	Frequency (MHz)	Reading (dBμV)	Factor (dB/m)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector
1	7266.000	33.61	11.43	45.04	74.00	28.96	Peak
2	7266.000	21.20	11.43	32.63	54.00	21.37	Average
3	17659.200	35.17	25.31	60.48	74.00	13.52	Peak
4	17659.200	22.18	25.31	47.49	54.00	6.51	Average

4.3 RF Conducted Data
Please refer to Annex "2403Z107078E-RF-00A_AppendixA" for detail test data.

5. RF EXPOSURE EVALUATION

5.1 RF EXPOSURE EVALUATION-MAXIMUM PERMISSIBLE EXPOSURE (MPE)

5.1.1 Applicable Standard

According to subpart 15.247(i)and subpart §1.1310, systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

(B) Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Averaging Time (minutes)
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

f = frequency in MHz; * = Plane-wave equivalent power density;

According to §1.1310 and §2.1091 RF exposure is calculated.

5.1.2 Calculation formula:

Prediction of power density at the distance of the applicable MPE limit
$S = PG/4\pi R^2$ = power density (in appropriate units, e.g. mW/cm^2);
P = power input to the antenna (in appropriate units, e.g., mW);
G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain;
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

5.1.3 Calculated Data:

Frequency (MHz)	Antenna Gain		Conducted output power including Tune-up Tolerance		Evaluation Distance (cm)	Power Density (mW/cm^2)	MPE Limit (mW/cm^2)
	(dBi)	(numeric)	(dBm)	(mW)			
2412-2462	2.21	1.66	19.5	89.13	20	0.0294	1

The Conducted output power including Tune-up Tolerance provided by manufacturer

Result: The device meet FCC MPE at 20 cm distance

6. EUT PHOTOGRAPHS

Please refer to the attachment 2403Z107078E-RF-EXP EUT EXTERNAL PHOTOGRAPHS and 2403Z107078E-RF-INP EUT INTERNAL PHOTOGRAPHS

7. TEST SETUP PHOTOGRAPHS

Please refer to the attachment 2403Z107078E-RF-00A-TSP TEST SETUP PHOTOGRAPHS.

===== **END OF REPORT** ====