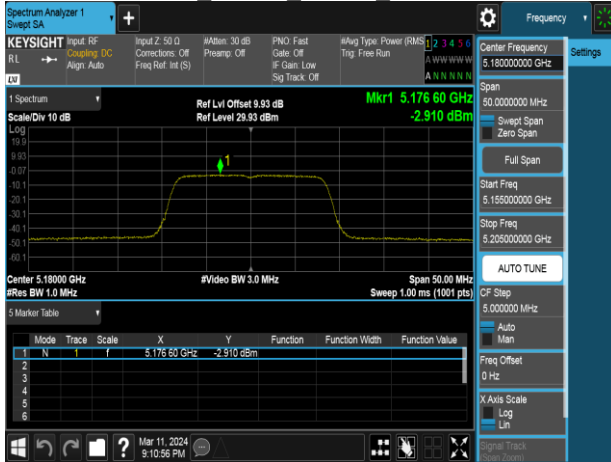


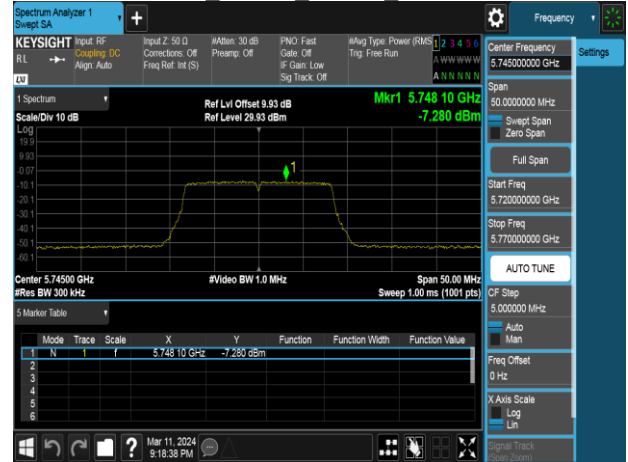
Report No.: TMWK2401000129KR

## Test Data

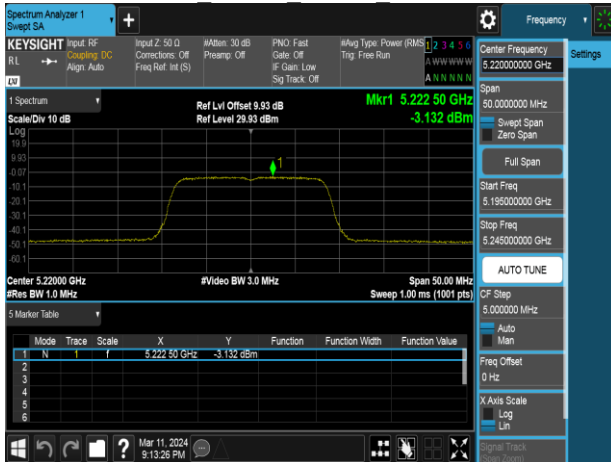
802.11a 20MHz Chain0 5180MHz



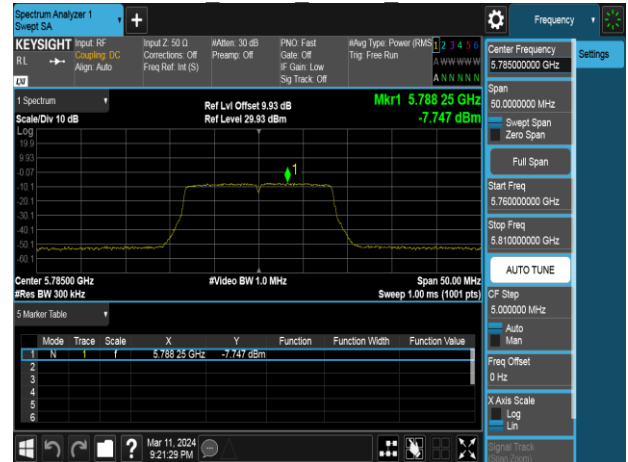
802.11a 20MHz Chain0 5745MHz



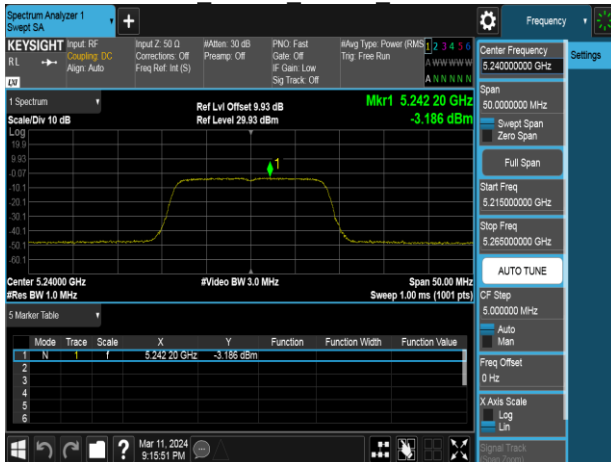
802.11a 20MHz Chain0 5220MHz



802.11a 20MHz Chain0 5785MHz



802.11a 20MHz Chain0 5240MHz



802.11a 20MHz Chain0 5825MHz

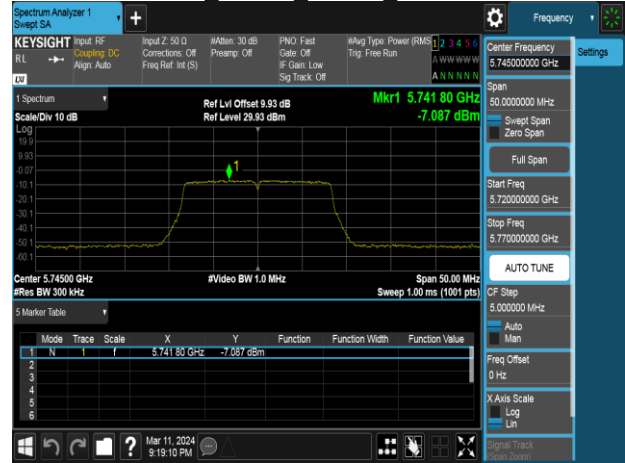


Report No.: TMWK2401000129KR

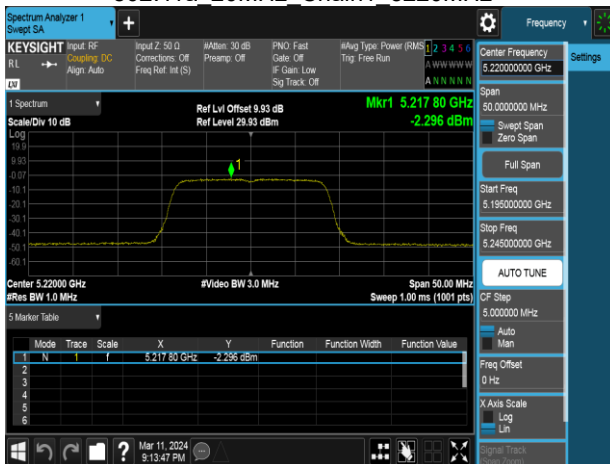
802.11a 20MHz Chain1 5180MHz



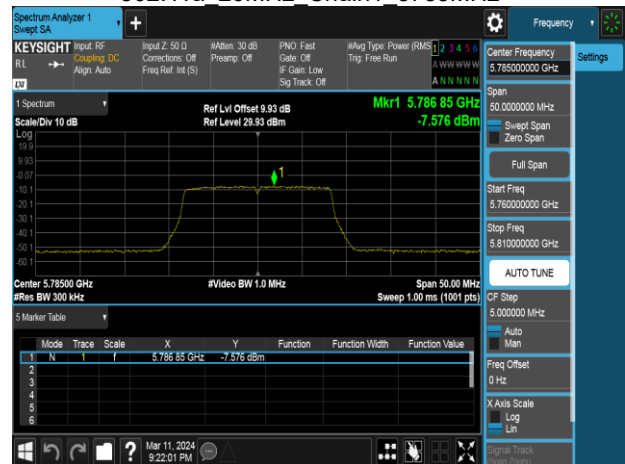
802.11a 20MHz Chain1 5745MHz



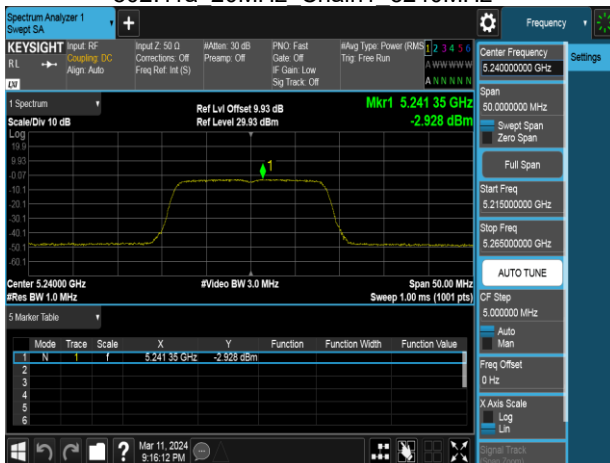
802.11a 20MHz Chain1 5220MHz



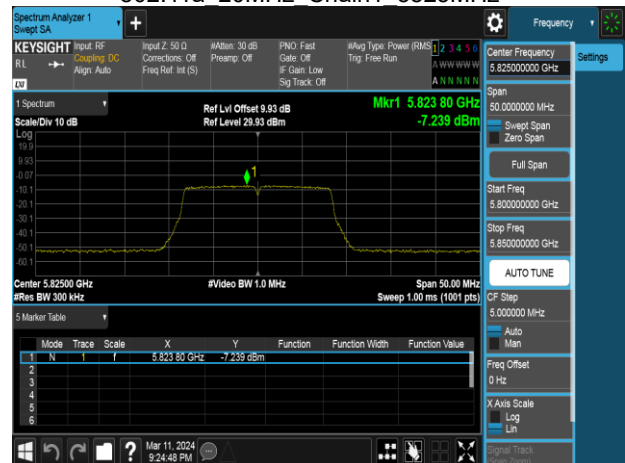
802.11a 20MHz Chain1 5785MHz



802.11a 20MHz Chain1 5240MHz

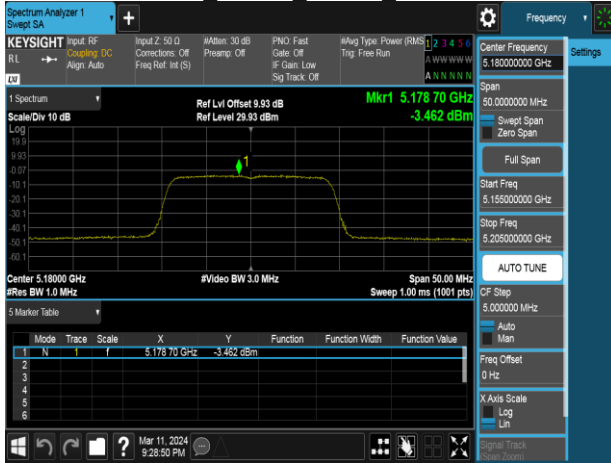


802.11a 20MHz Chain1 5825MHz

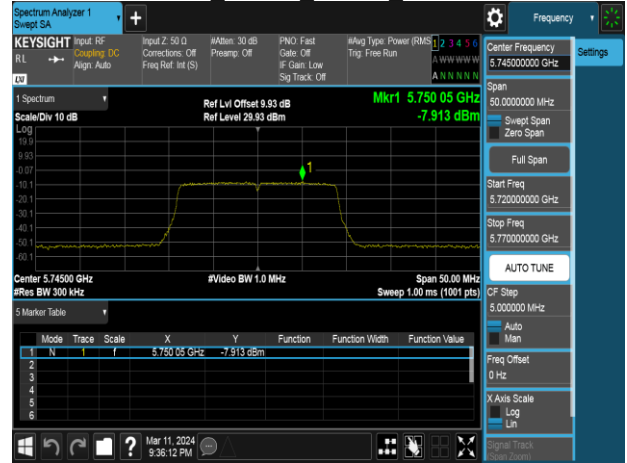


Report No.: TMWK2401000129KR

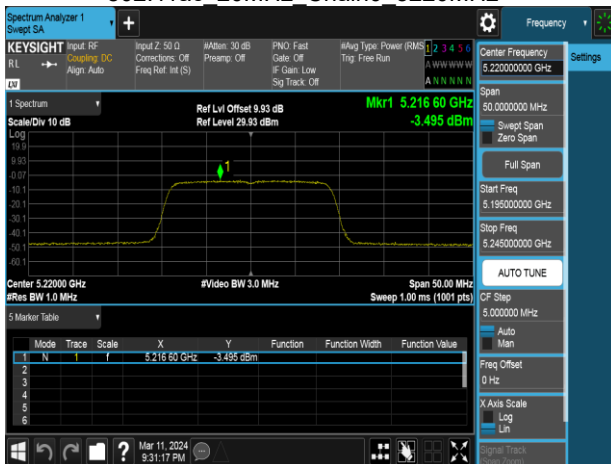
802.11ac 20MHz Chain0 5180MHz



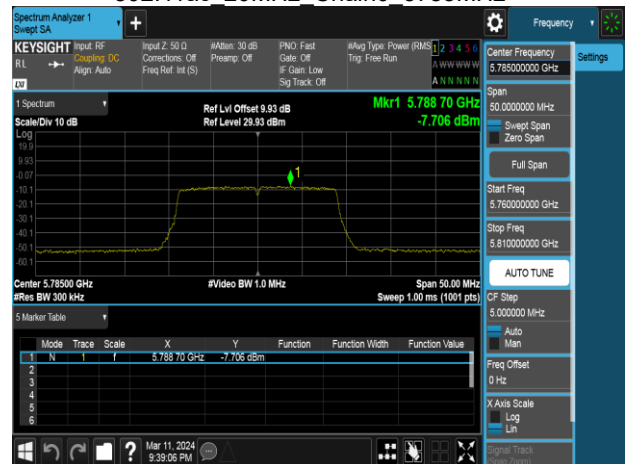
802.11ac 20MHz Chain0 5745MHz



802.11ac 20MHz Chain0 5220MHz



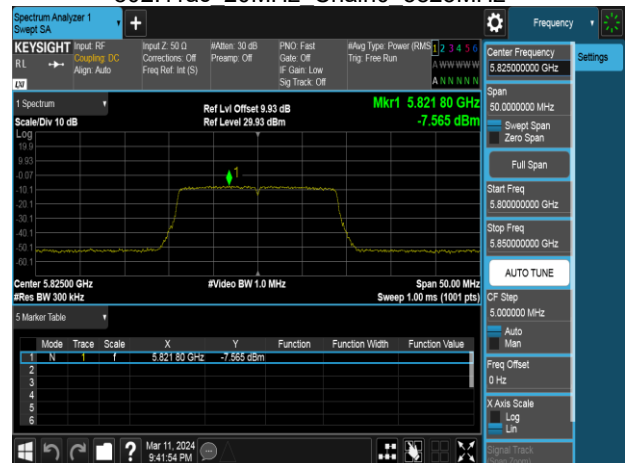
802.11ac 20MHz Chain0 5785MHz



802.11ac 20MHz Chain0 5240MHz

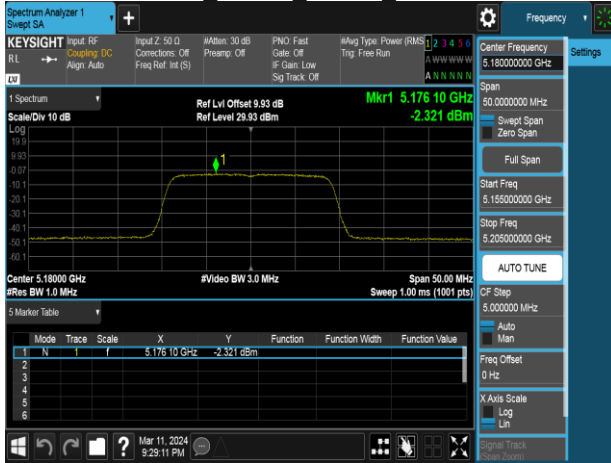


802.11ac 20MHz Chain0 5825MHz

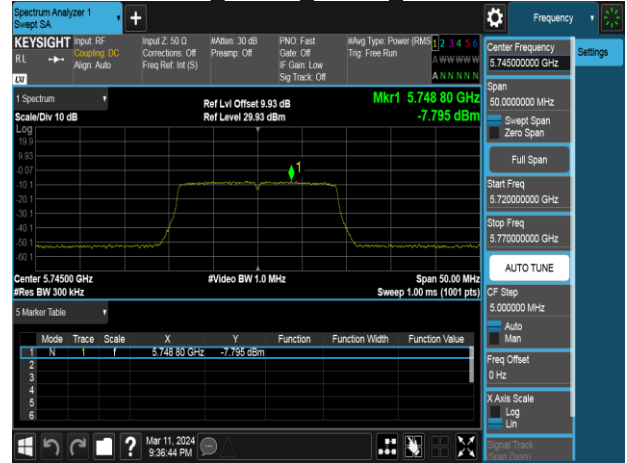


Report No.: TMWK2401000129KR

802.11ac 20MHz Chain1 5180MHz



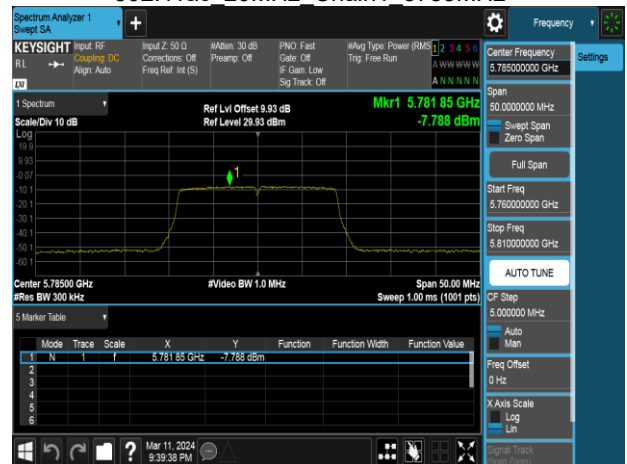
802.11ac 20MHz Chain1 5745MHz



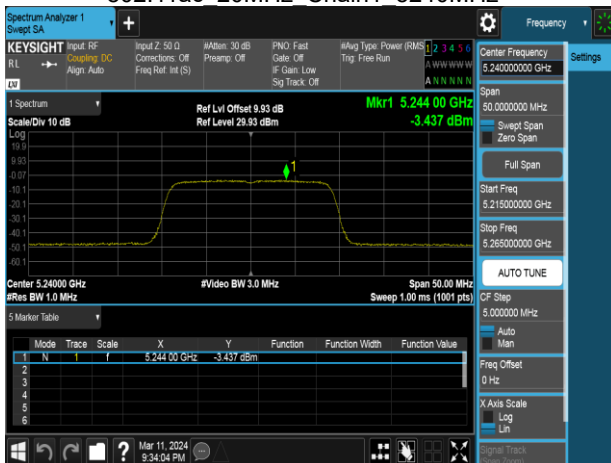
802.11ac 20MHz Chain1 5220MHz



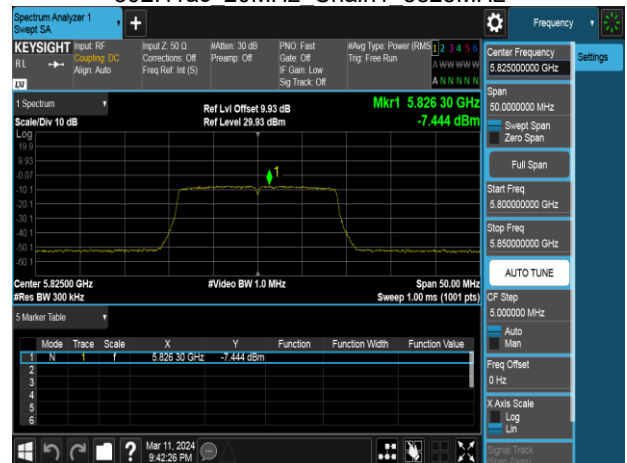
802.11ac 20MHz Chain1 5785MHz



802.11ac 20MHz Chain1 5240MHz

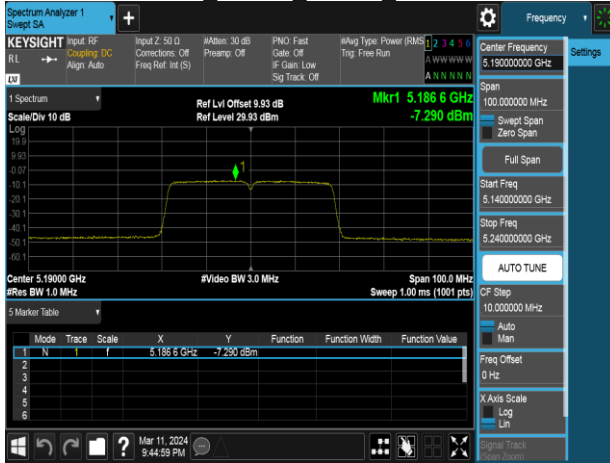


802.11ac 20MHz Chain1 5825MHz

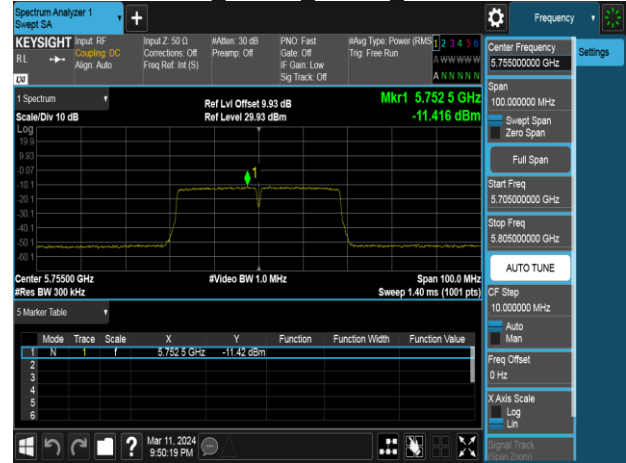


Report No.: TMWK2401000129KR

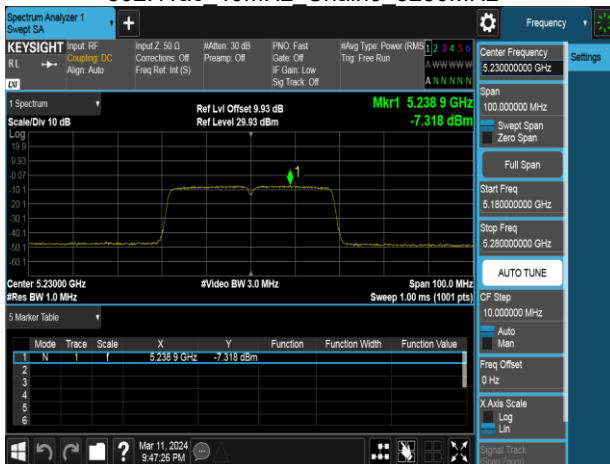
802.11ac 40MHz Chain0 5190MHz



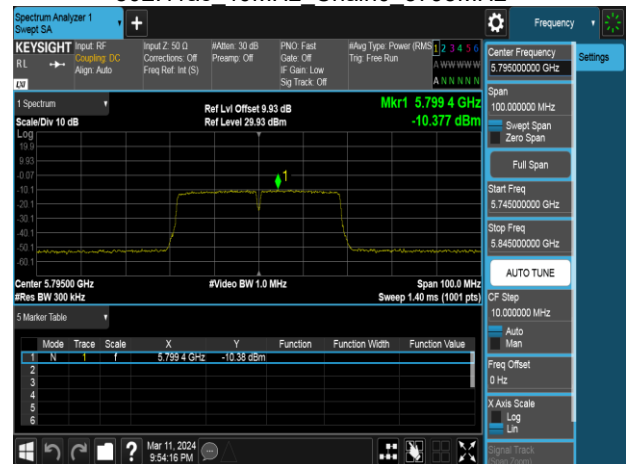
802.11ac 40MHz Chain0 5755MHz



802.11ac 40MHz Chain0 5230MHz



802.11ac 40MHz Chain0 5795MHz

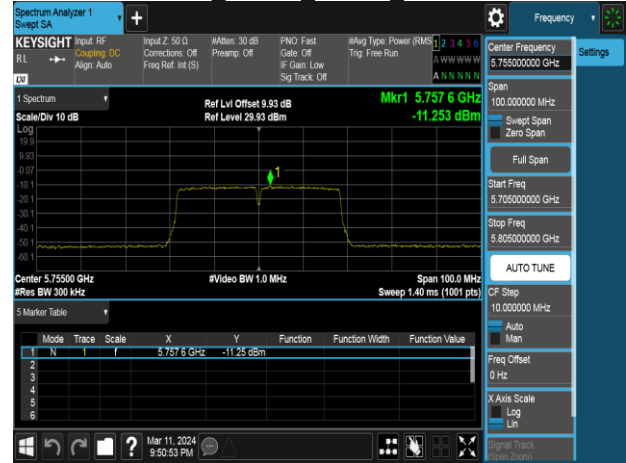


Report No.: TMWK2401000129KR

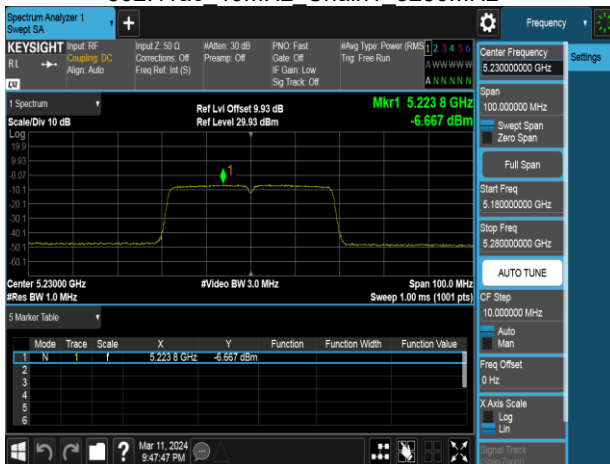
802.11ac 40MHz Chain1 5190MHz



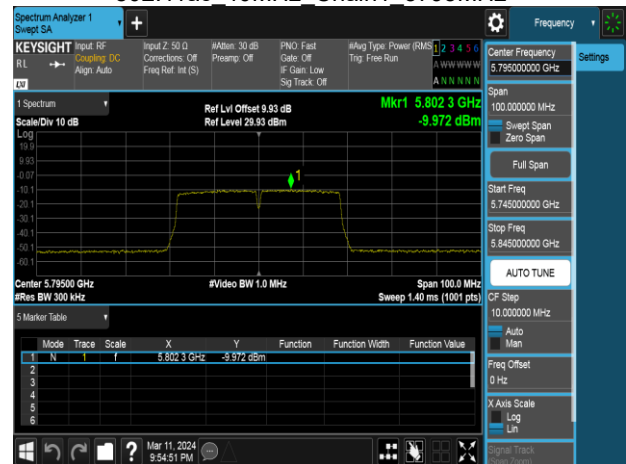
802.11ac 40MHz Chain1 5755MHz



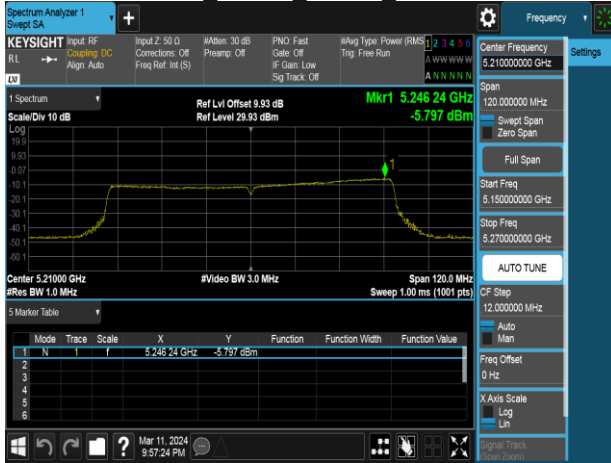
802.11ac 40MHz Chain1 5230MHz



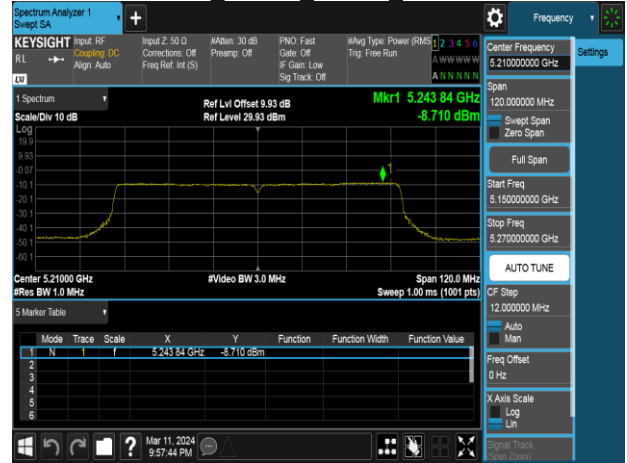
802.11ac 40MHz Chain1 5795MHz



802.11ac 80MHz Chain0 5210MHz



802.11ac 80MHz Chain1 5210MHz



802.11ac 80MHz Chain0 5775MHz

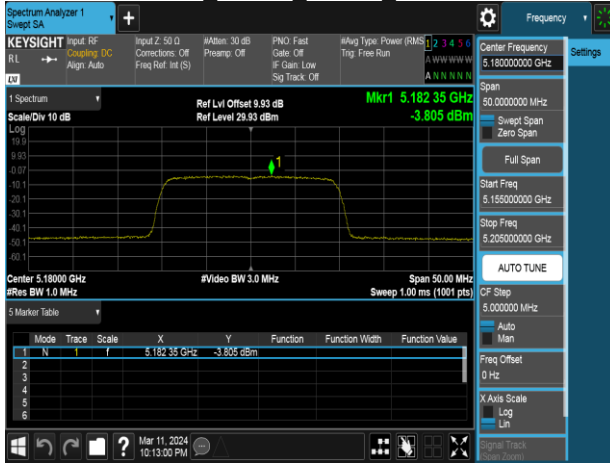


802.11ac 80MHz Chain1 5775MHz

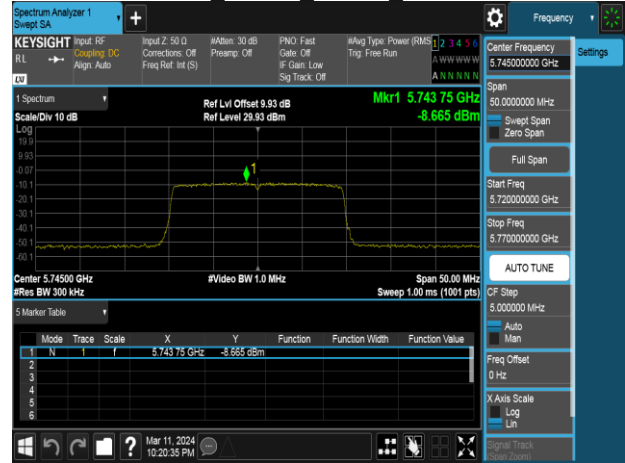


Report No.: TMWK2401000129KR

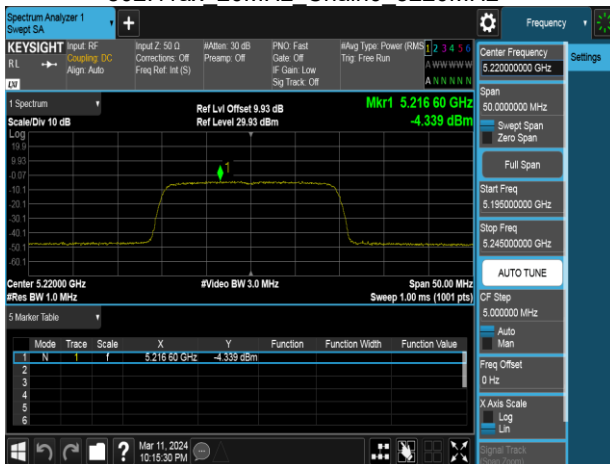
802.11ax 20MHz Chain0 5180MHz



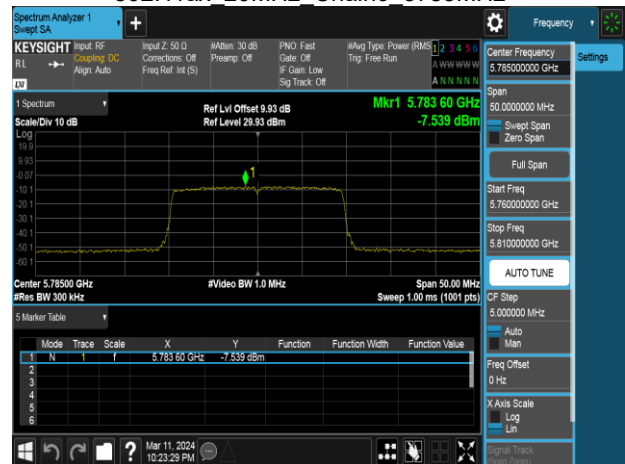
802.11ax 20MHz Chain0 5745MHz



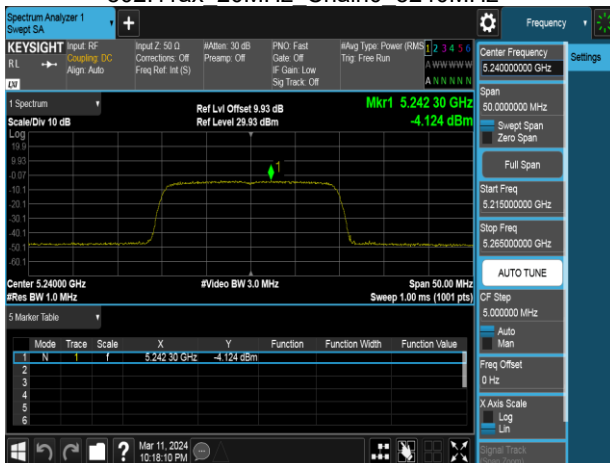
802.11ax 20MHz Chain0 5220MHz



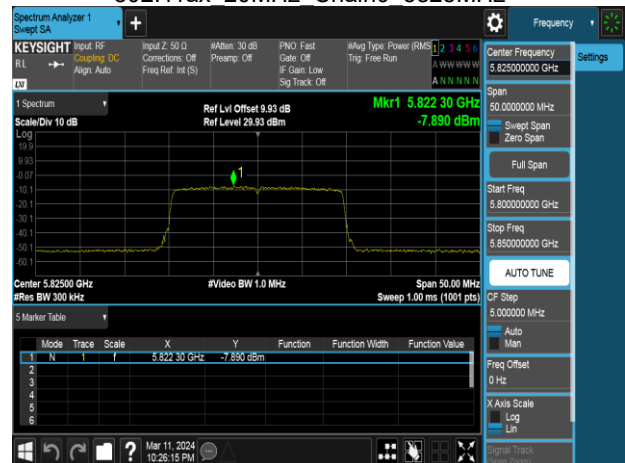
802.11ax 20MHz Chain0 5785MHz



802.11ax 20MHz Chain0 5240MHz



802.11ax 20MHz Chain0 5825MHz



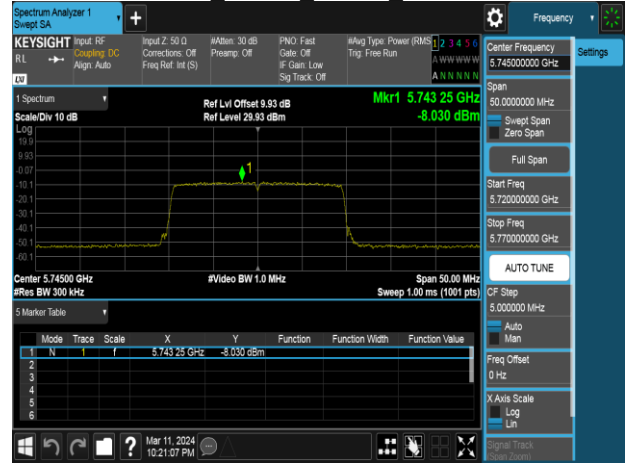


Report No.: TMWK2401000129KR

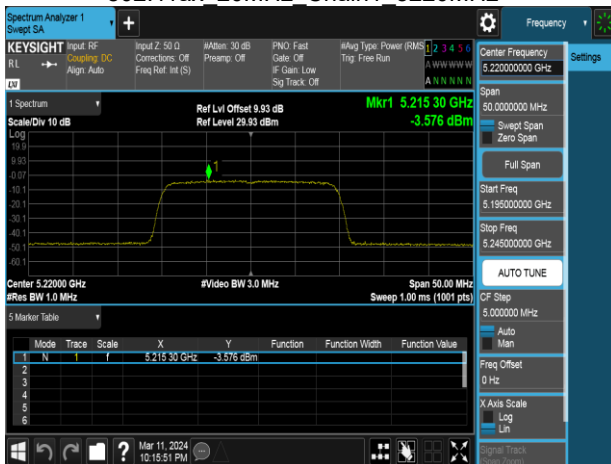
802.11ax 20MHz Chain1 5180MHz



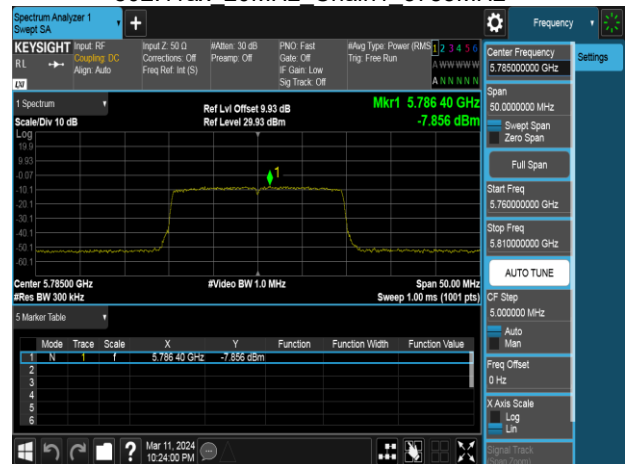
802.11ax 20MHz Chain1 5745MHz



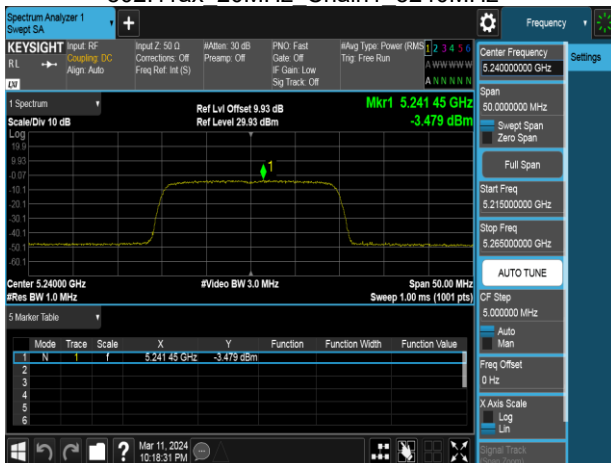
802.11ax 20MHz Chain1 5220MHz



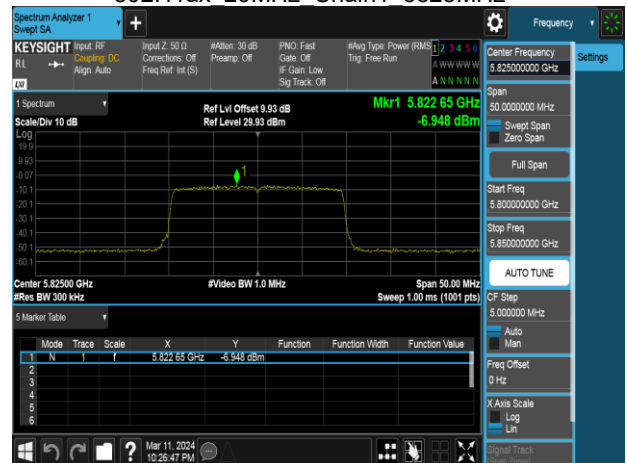
802.11ax 20MHz Chain1 5785MHz



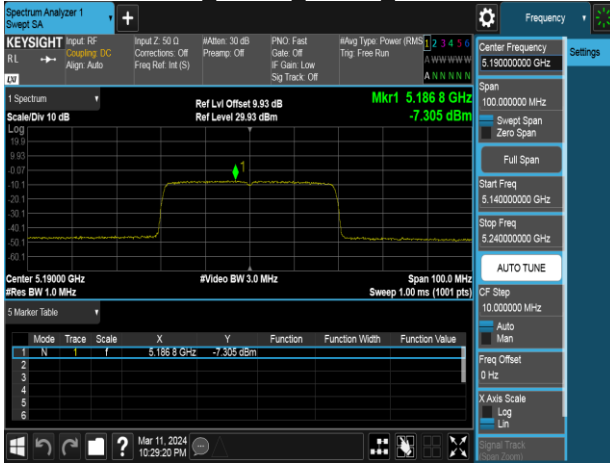
802.11ax 20MHz Chain1 5240MHz



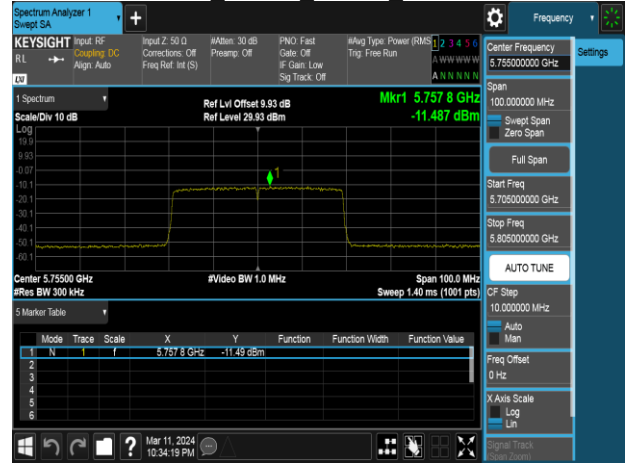
802.11ax 20MHz Chain1 5825MHz



802.11ax 40MHz Chain0 5190MHz



802.11ax 40MHz Chain0 5755MHz



802.11ax 40MHz Chain0 5230MHz

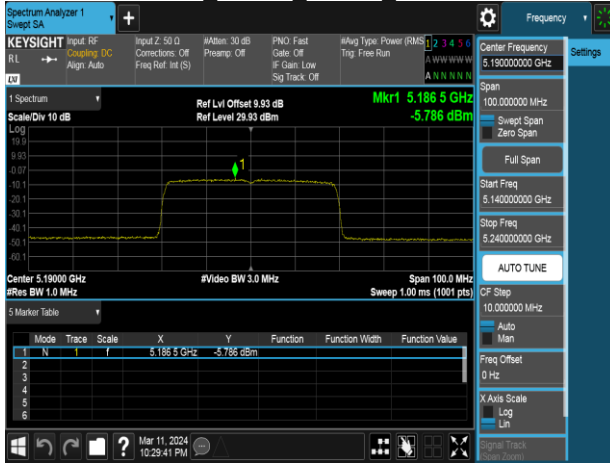


802.11ax 40MHz Chain0 5795MHz

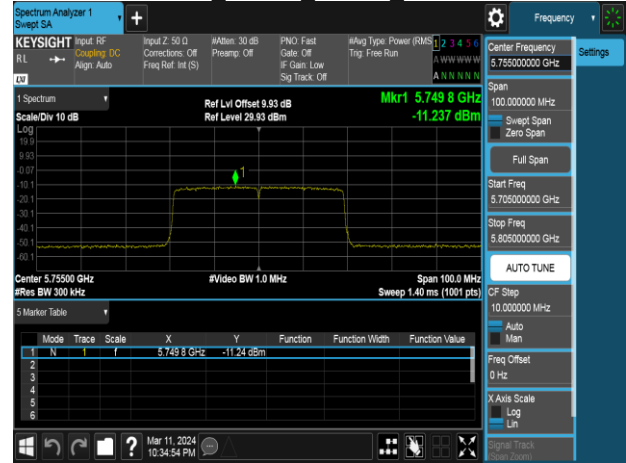


Report No.: TMWK2401000129KR

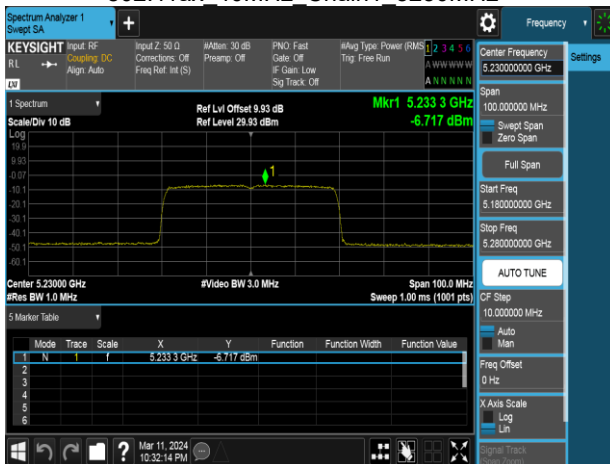
802.11ax 40MHz Chain1 5190MHz



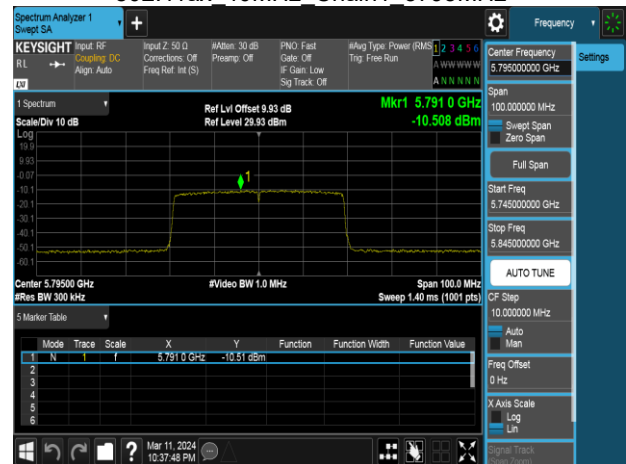
802.11ax 40MHz Chain1 5755MHz



802.11ax 40MHz Chain1 5230MHz

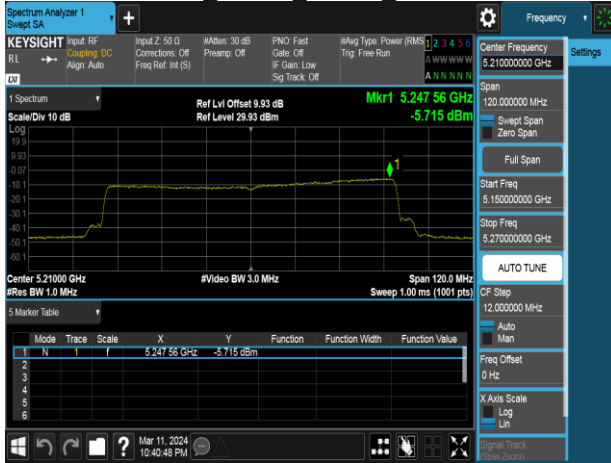


802.11ax 40MHz Chain1 5795MHz

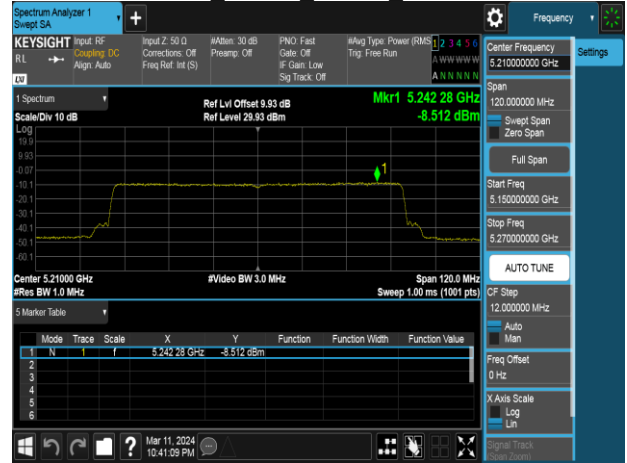


Report No.: TMWK2401000129KR

802.11ax 80MHz Chain0 5210MHz



802.11ax 80MHz Chain1 5210MHz



802.11ax 80MHz Chain0 5775MHz



802.11ax 80MHz Chain1 5775MHz



## 4.5 RADIATION BANDEDGE AND SPURIOUS EMISSION

### 4.5.1 Test Limit

FCC according to §15.407, §15.209 and §15.205,

#### Below 30 MHz

Frequency	Field Strength (microvolts/m)	Magnetic H-Field (microamperes/m)	Measurement Distance (metres)
9-490 kHz	2,400/F (F in kHz)	2,400/F (F in kHz)	300
490-1,705 kHz	24,000/F (F in kHz)	24,000/F (F in kHz)	30
1.705-30 MHz	30	N/A	30

#### Above 30 MHz

Frequency (MHz)	Field Strength microvolts/m at 3 metres (watts, e.i.r.p.)	
	Transmitters	Receivers
30-88	100 (3 nW)	100 (3 nW)
88-216	150 (6.8 nW)	150 (6.8 nW)
216-960	200 (12 nW)	200 (12 nW)
Above 960	500 (75 nW)	500 (75 nW)

#### UNII-1 :

For transmitters operating in the band 5150-5250 MHz, all emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. However, any unwanted emissions that fall into the band 5250-5350 MHz must be 26 dBc, when measured using a resolution bandwidth between 1 and 5% of the occupied bandwidth, above 5.25 GHz. Otherwise, the transmission is considered as intentional and the devices shall implement dynamic frequency selection (DFS) and transmitter power control (TPC) as per the requirements for the band 5250-5350 MHz

#### UNII-3:

All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

According to RSS-247 section 6.2.1.2, 6.2.2.2, 6.2.3.2 and 6.2.4.2

**Below 30 MHz**

Frequency	Field Strength (microvolts/m)	Magnetic H-Field (microamperes/m)	Measurement Distance (metres)
9-490 kHz	2,400/F (F in kHz)	2,400/F (F in kHz)	300
490-1,705 kHz	24,000/F (F in kHz)	24,000/F (F in kHz)	30
1.705-30 MHz	30	N/A	30

**Above 30 MHz**

Frequency (MHz)	Field Strength microvolts/m at 3 metres (watts, e.i.r.p.)	
	Transmitters	Receivers
30-88	100 (3 nW)	100 (3 nW)
88-216	150 (6.8 nW)	150 (6.8 nW)
216-960	200 (12 nW)	200 (12 nW)
Above 960	500 (75 nW)	500 (75 nW)

**RSS-Gen Table 3 and Table 5 – General Field Strength Limits for Transmitters and Receivers at Frequencies Above 30 MHz** <sup>(Note)</sup>

Frequency (MHz)	Field Strength microvolts/m at 3 metres (watts, e.i.r.p.)	
	Transmitters	Receivers
30-88	100 (3 nW)	100 (3 nW)
88-216	150 (6.8 nW)	150 (6.8 nW)
216-960	200 (12 nW)	200 (12 nW)
Above 960	500 (75 nW)	500 (75 nW)

**Note:** Measurements for compliance with the limits in table 3 may be performed at distances other than 3 metres, in accordance with Section 6.6.

**RSS-Gen Table 6: General Field Strength Limits for Transmitters at Frequencies Below 30 MHz (Transmit)**

Frequency	Magnetic field strength (H-Field) ( $\mu\text{A/m}$ )	Measurement Distance (m)
9-490 kHz <sup>Note</sup>	6.37/F (F in kHz)	300
490-1,705 kHz	63.7/F (F in kHz)	30
1.705-30 MHz	0.08	30

**Note:** The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.

**UNII-1 :**

For transmitters operating in the band 5150-5250 MHz, all emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. However, any unwanted emissions that fall into the band 5250-5350 MHz must be 26 dBc, when measured using a resolution bandwidth between 1 and 5% of the occupied bandwidth, above 5.25 GHz. Otherwise, the transmission is considered as intentional and the devices shall implement dynamic frequency selection (DFS) and transmitter power control (TPC) as per the requirements for the band 5250-5350 MHz

**UNII-3:**

For the band 5725-5850 MHz, emissions at frequencies from the band edges to 10 MHz above or below the band edges shall not exceed -17 dBm/MHz e.i.r.p. For emissions at frequencies more than 10 MHz above or below the band edges, the emissions power shall not exceed -27 dBm/MHz

## 4.5.2 Test Procedure

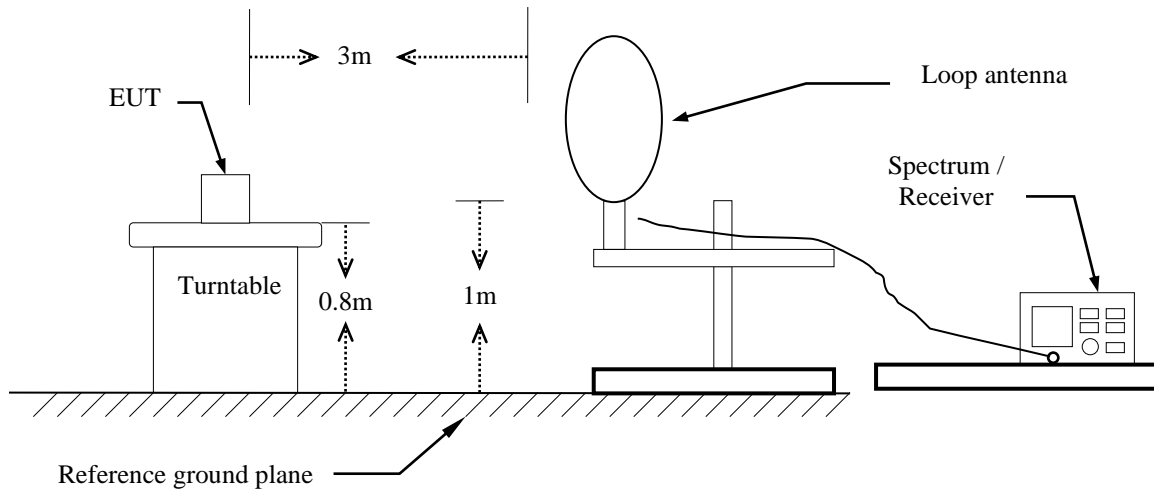
Test method Refer as KDB 789033 D02.

1. The EUT is placed on a turntable, Above 1 GHz is 1.5m and below 1 GHz is 0.8m above ground plane. The EUT Configured un accordance with ANSI C63.10: 2013, and the EUT set in a continuous mode.
2. The turntable shall be rotated for 360 degrees to determine the position of maximum emission level. And EUT is set 3m away from the receiving antenna, which is scanned from 1m to 4m above the ground plane to find out the highest emissions. Measurement are made polarized in both the vertical and the horizontal positions with antenna.
3. Span shall wide enough to full capture the emission measured. The SA from 9kHz to 40GHz set to the low, Mid and High channels with the EUT transmit.
4. No emission found between lowest internal used/generated frequency to 30MHz (9KHz~30MHz)
5. The SA setting following :
  - (1) Below 1G : RBW = 100kHz, VBW  $\geq 3 \times$  RBW, Sweep = Auto, Detector = Peak, Trace = Max hold.
  - (2) Above 1G :
    - (2.1) For Peak measurement : RBW = 1MHz, VBW  $\geq 3$  RBW, Sweep = Auto, Detector = Peak, Trace = Max hold.
    - (2.2) For Average measurement : RBW = 1MHz, VBW
      - 'If Duty Cycle  $\geq 98\%$ , VBW=10Hz.
      - 'If Duty Cycle  $< 98\%$ , VBW=1/T.

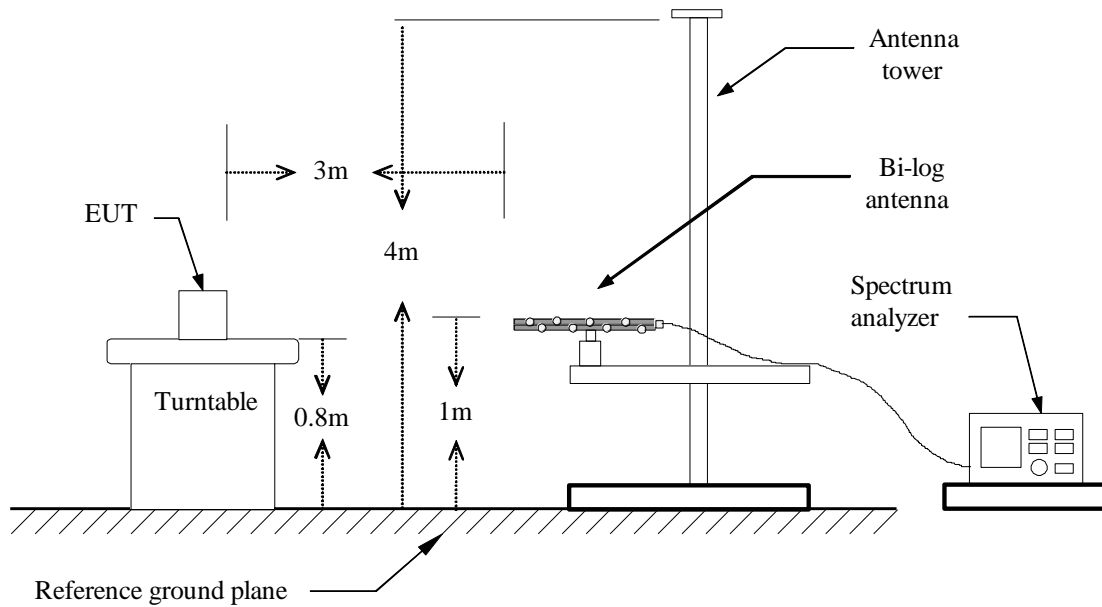


## 4.5.3 Test Setup

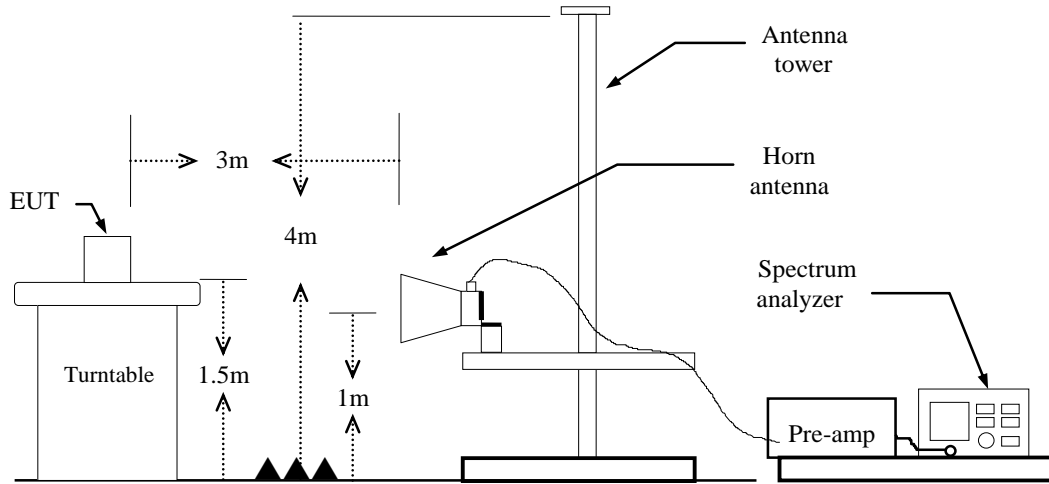
### 9kHz ~ 30MHz



### 30MHz ~ 1GHz



## Above 1 GHz

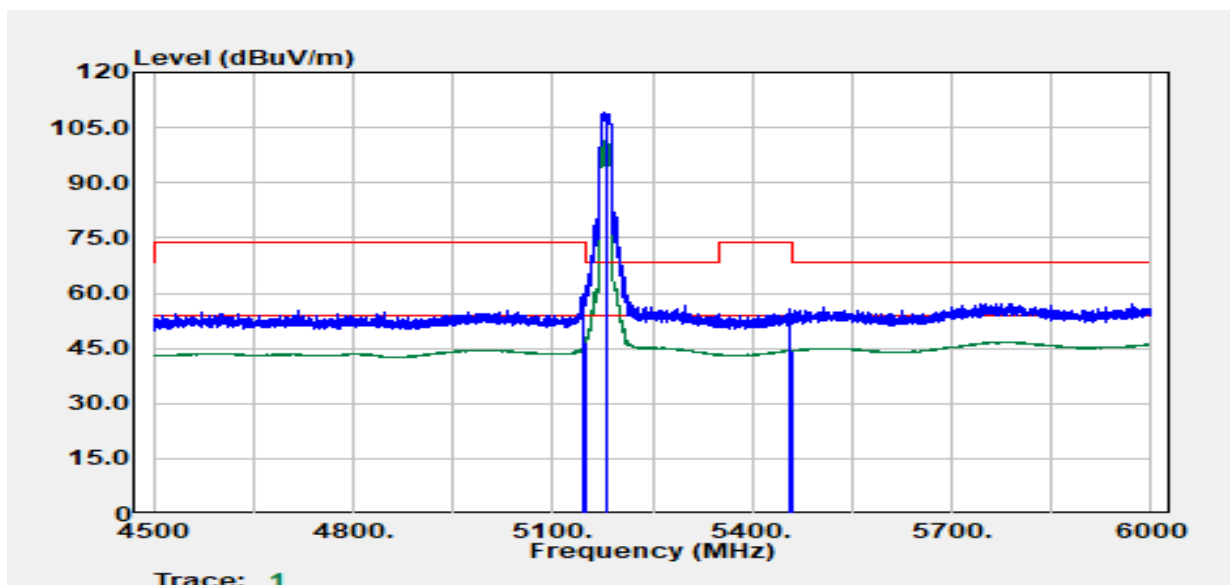


## 4.5.4 Test Result

### Test Data

#### Band Edge

Project No	:TM-2401000243P	Test Date	:2024-01-26
Operation Band	:802.11a/Band1	Temp./Humi.	:24.4/59
Frequency	:5180 MHz	Antenna Pol.	:Vertical
Operation Mode	:Bandedge	Engineer	:Tony Chao
EUT Pol	:E2	Test Chamber	: 966A
Setting	:		

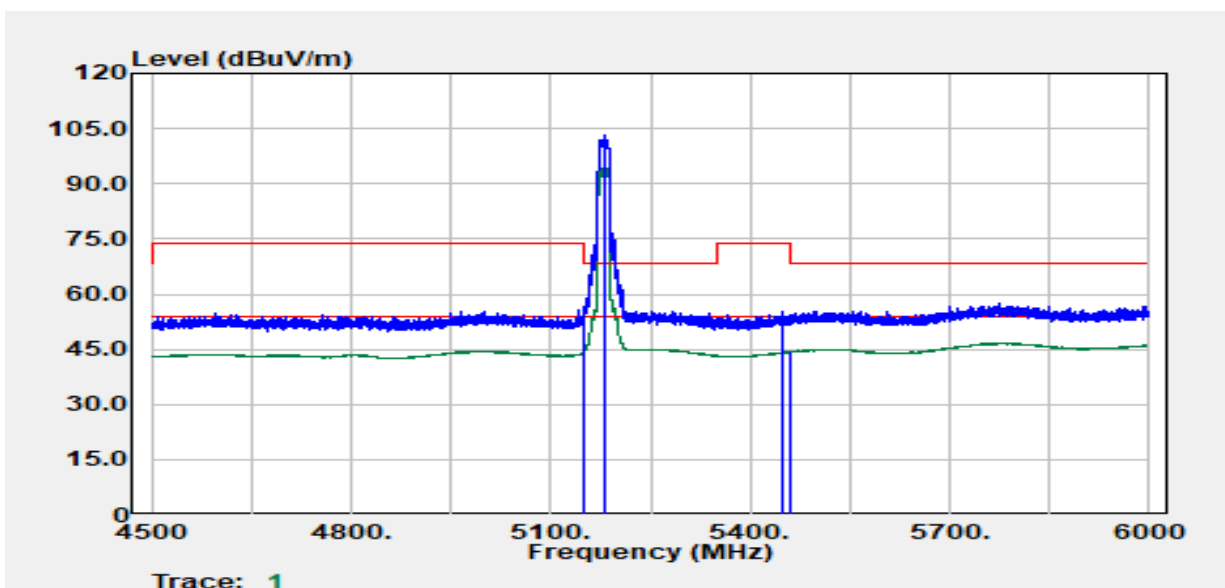


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level d $\mu$ V	Factor dB	Actual FS d $\mu$ V/m	Limit d $\mu$ V/m	Margin dB
5146.11	Peak	47.02	12.92	59.95	74.00	-14.05
5149.61	Average	33.72	12.92	46.64	54.00	-7.36
5180.00	Peak	95.93	12.99	108.93	--	--
5180.00	Average	88.46	12.99	101.45	--	--
5454.91	Peak	41.99	13.51	55.50	74.00	-18.50
5459.41	Average	30.97	13.50	44.47	54.00	-9.53

Report No.: TMWK2401000129KR

Project No :TM-2401000243P  
 Operation Band :802.11a/Band1  
 Frequency :5180 MHz  
 Operation Mode :Bandedge  
 EUT Pol :E2  
 Setting :

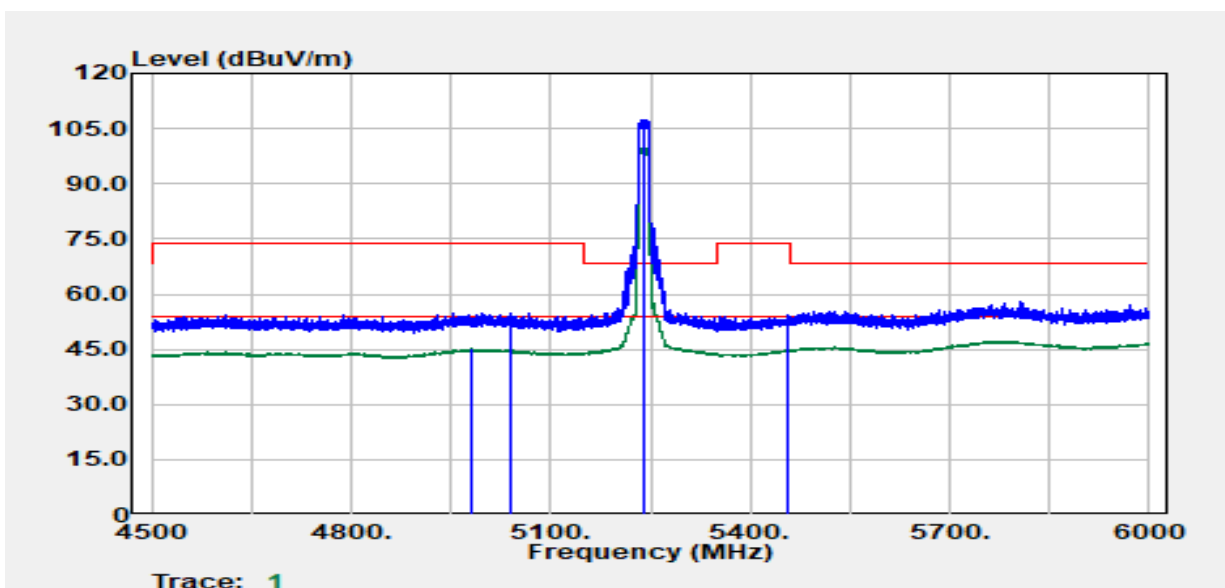
Test Date :2024-01-26  
 Temp./Humi. :24.4/59  
 Antenna Pol. :HORIZONTAL  
 Engineer :Tony Chao  
 Test Chamber : 966A



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level d $\mu$ V	Factor dB	Actual FS d $\mu$ V/m	Limit d $\mu$ V/m	Margin dB
5149.61	Peak	43.50	12.92	56.42	74.00	-17.58
5149.86	Average	31.53	12.92	44.45	54.00	-9.55
5180.00	Peak	90.18	12.99	103.17	--	--
5180.00	Average	81.26	12.99	94.26	--	--
5449.91	Peak	41.68	13.52	55.20	74.00	-18.80
5459.16	Average	30.87	13.50	44.37	54.00	-9.63

Report No.: TMWK2401000129KR

Project No	:TM-2401000243P	Test Date	:2024-01-26
Operation Band	:802.11a/Band1	Temp./Humi.	:24.4/59
Frequency	:5240 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Bandedge	Engineer	:Ray Li
EUT Pol	:E2	Test Chamber	: 966A
Setting	:		

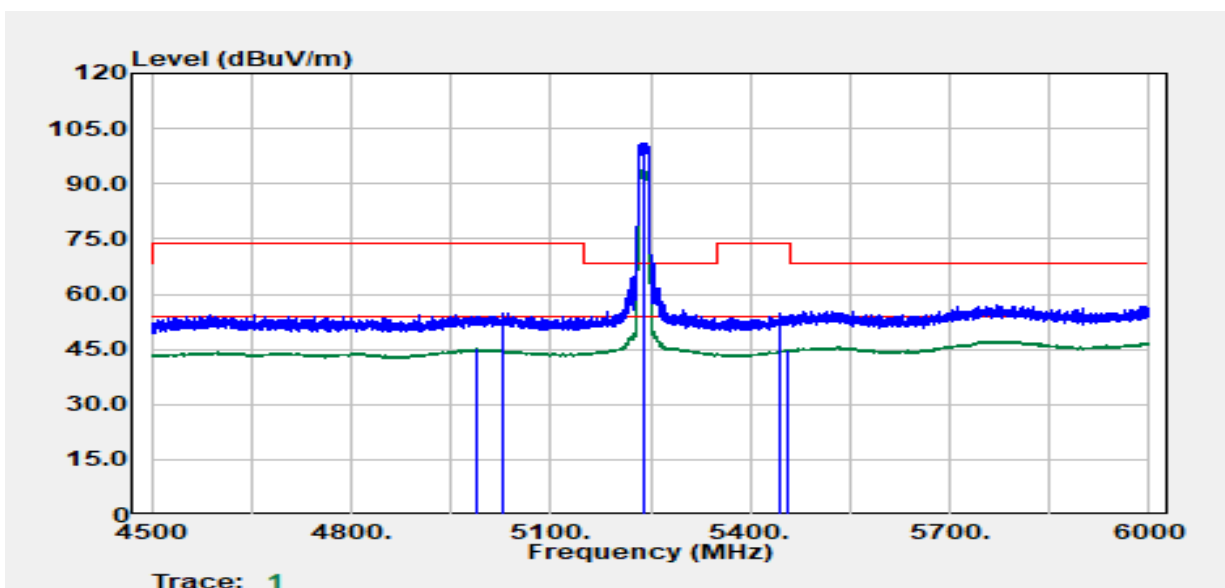


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level d $\mu$ V	Factor dB	Actual FS d $\mu$ V/m	Limit d $\mu$ V/m	Margin dB
4982.33	Average	32.73	12.36	45.09	54.00	-8.91
5040.34	Peak	42.05	12.77	54.82	74.00	-19.18
5240.00	Peak	94.44	13.10	107.54	--	--
5240.00	Average	86.79	13.10	99.89	--	--
5457.66	Peak	40.93	13.50	54.43	74.00	-19.57
5457.91	Average	31.33	13.50	44.83	54.00	-9.17

Report No.: TMWK2401000129KR

Project No : TM-2401000243P  
 Operation Band : 802.11a/Band1  
 Frequency : 5240 MHz  
 Operation Mode : Bandedge  
 EUT Pol : E2  
 Setting :

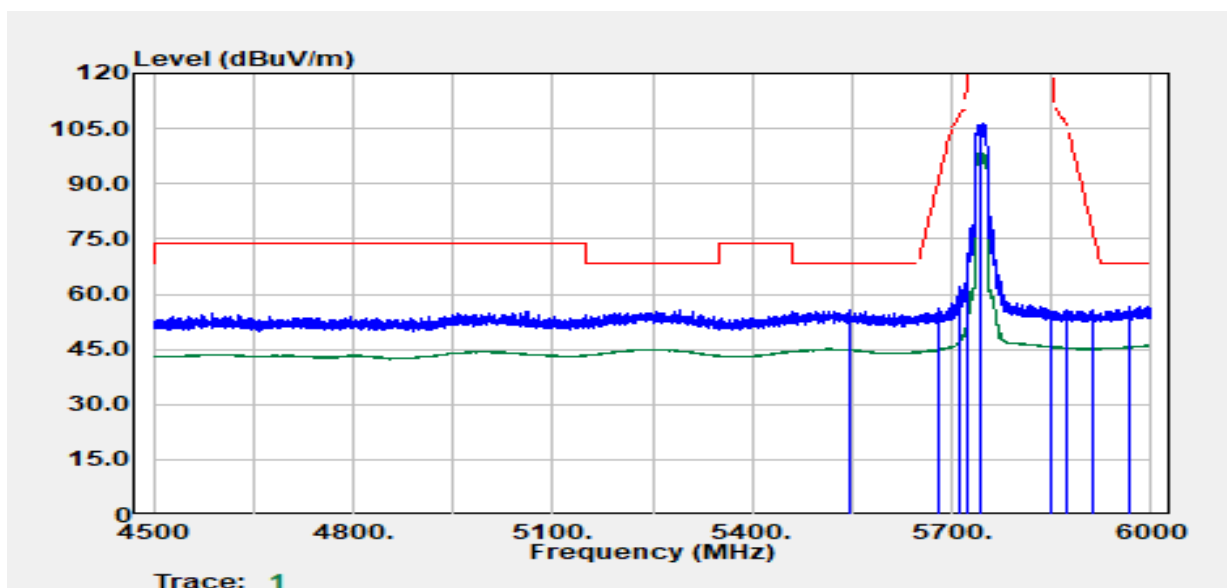
Test Date : 2024-01-26  
 Temp./Humi. : 24.4/59  
 Antenna Pol. : HORIZONTAL  
 Engineer : Ray Li  
 Test Chamber : 966A



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit dB $\mu$ V/m	Margin dB
4988.83	Average	32.71	12.40	45.10	54.00	-8.90
5028.84	Peak	42.29	12.68	54.98	74.00	-19.02
5240.00	Peak	88.10	13.10	101.20	--	--
5240.00	Average	80.54	13.10	93.64	--	--
5445.16	Peak	41.23	13.49	54.73	74.00	-19.27
5456.41	Average	31.35	13.51	44.85	54.00	-9.15

Report No.: TMWK2401000129KR

Project No	:TM-2401000243P	Test Date	:2024-01-26
Operation Band	:802.11a/Band4	Temp./Humi.	:24.4/59
Frequency	:5745 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Bandedge	Engineer	:Tony Chao
EUT Pol	:E2	Test Chamber	: 966A
Setting	:		

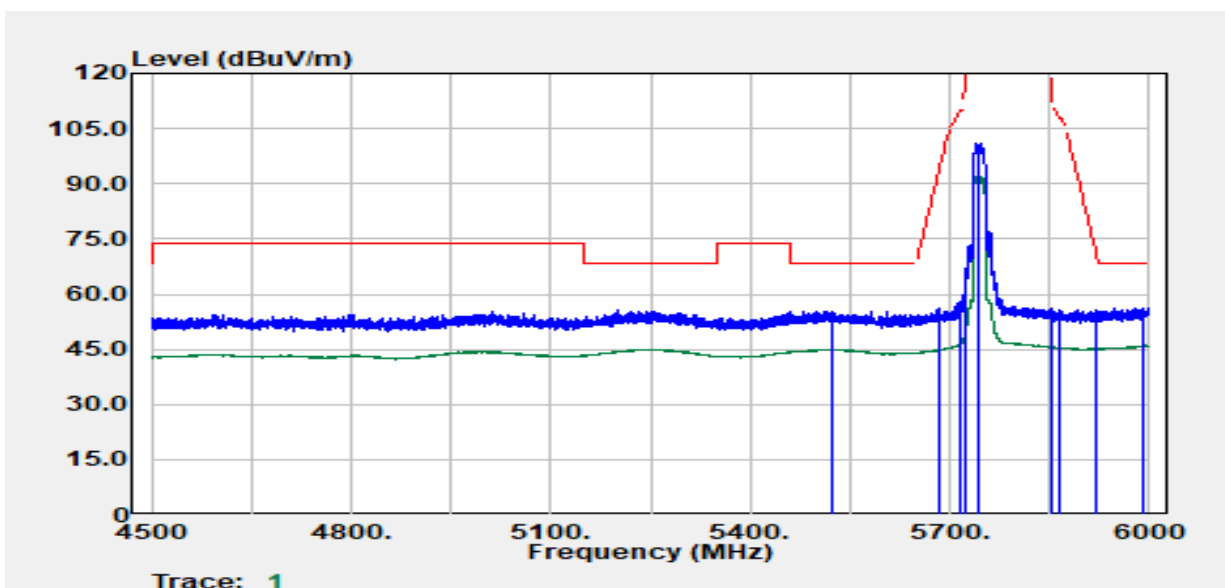


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level d $\mu$ V	Factor dB	Actual FS d $\mu$ V/m	Limit d $\mu$ V/m	Margin dB
5545.92	Peak	41.99	13.56	55.54	68.20	-12.66
5680.95	Peak	41.60	14.58	56.18	91.14	-34.96
5711.70	Peak	47.26	14.86	62.12	108.48	-46.36
5724.70	Peak	56.25	14.95	71.20	121.53	-50.33
5745.00	Peak	91.24	15.10	106.33	--	--
5745.00	Average	83.30	15.10	98.39	--	--
5850.98	Peak	40.19	15.12	55.32	119.98	-64.66
5871.48	Peak	40.52	15.12	55.64	106.18	-50.54
5912.49	Peak	40.67	15.18	55.85	77.43	-21.58
5968.75	Peak	41.29	15.33	56.62	68.20	-11.58

Report No.: TMWK2401000129KR

Project No :TM-2401000243P  
 Operation Band :802.11a/Band4  
 Frequency :5745 MHz  
 Operation Mode :Bandedge  
 EUT Pol :E2  
 Setting :

Test Date :2024-01-26  
 Temp./Humi. :24.4/59  
 Antenna Pol. :HORIZONTAL  
 Engineer :Tony Chao  
 Test Chamber :966A

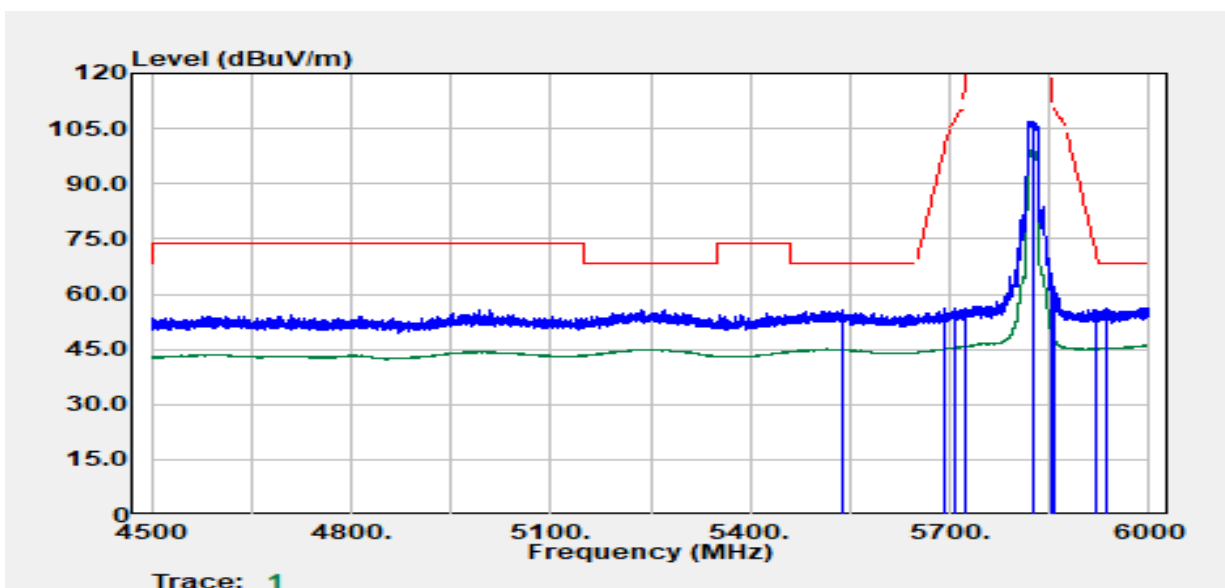


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit dB $\mu$ V/m	Margin dB
5524.17	Peak	41.77	13.48	55.24	68.20	-12.96
5684.20	Peak	41.65	14.62	56.27	93.54	-37.27
5717.20	Peak	42.90	14.90	57.80	110.02	-52.22
5724.70	Peak	50.85	14.95	65.81	121.53	-55.72
5745.00	Peak	86.09	15.10	101.18	--	--
5745.00	Average	77.07	15.10	92.17	--	--
5851.73	Peak	40.85	15.12	55.98	118.27	-62.29
5866.23	Peak	40.75	15.12	55.88	107.65	-51.78
5921.49	Peak	40.58	15.23	55.81	70.79	-14.98
5991.25	Peak	41.04	15.29	56.34	68.20	-11.86



Report No.: TMWK2401000129KR

Project No	:TM-2401000243P	Test Date	:2024-01-26
Operation Band	:802.11a/Band4	Temp./Humi.	:24.4/59
Frequency	:5825 MHz	Antenna Pol.	:VERTICAL
Operation Mode	:Bandedge	Engineer	:Tony Chao
EUT Pol	:E2	Test Chamber	: 966A
Setting	:		

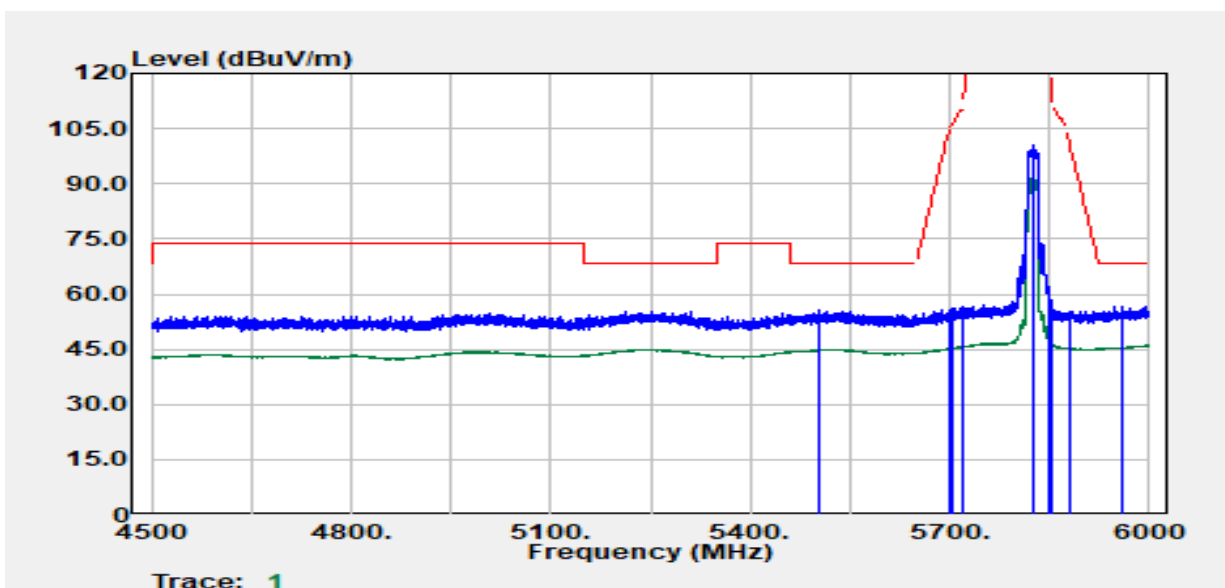


Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level d $\mu$ V	Factor dB	Actual FS d $\mu$ V/m	Limit d $\mu$ V/m	Margin dB
5537.67	Peak	41.98	13.53	55.50	68.20	-12.70
5690.45	Peak	41.28	14.68	55.96	98.16	-42.20
5707.95	Peak	41.30	14.84	56.13	107.43	-51.30
5724.70	Peak	41.33	14.95	56.28	121.53	-65.25
5825.00	Peak	91.86	15.21	107.08	--	--
5825.00	Average	84.21	15.21	99.42	--	--
5851.48	Peak	50.53	15.12	65.66	118.84	-53.18
5857.73	Peak	47.12	15.12	62.24	110.04	-47.79
5921.74	Peak	40.61	15.23	55.83	70.61	-14.77
5935.74	Peak	40.84	15.30	56.13	68.20	-12.07

Report No.: TMWK2401000129KR

Project No :TM-2401000243P  
 Operation Band :802.11a/Band4  
 Frequency :5825 MHz  
 Operation Mode :Bandedge  
 EUT Pol :E2  
 Setting :

Test Date :2024-01-26  
 Temp./Humi. :24.4/59  
 Antenna Pol. :HORIZONTAL  
 Engineer :Tony Chao  
 Test Chamber :966A



Freq. MHz	Detector Mode PK/QP/AV	Spectrum Read Level dB $\mu$ V	Factor dB	Actual FS dB $\mu$ V/m	Limit dB $\mu$ V/m	Margin dB
5503.42	Peak	42.32	13.40	55.72	68.20	-12.48
5699.20	Peak	40.97	14.77	55.74	104.61	-48.87
5702.20	Peak	41.21	14.80	56.00	105.82	-49.81
5720.95	Peak	41.72	14.93	56.64	112.98	-56.33
5825.00	Peak	85.23	15.21	100.44	--	--
5825.00	Average	76.42	15.21	91.63	--	--
5850.23	Peak	45.15	15.12	60.28	121.69	-61.41
5855.00	Peak	41.58	15.12	56.70	110.80	-54.10
5880.48	Peak	40.14	15.12	55.27	101.13	-45.86
5958.24	Peak	41.17	15.35	56.52	68.20	-11.68