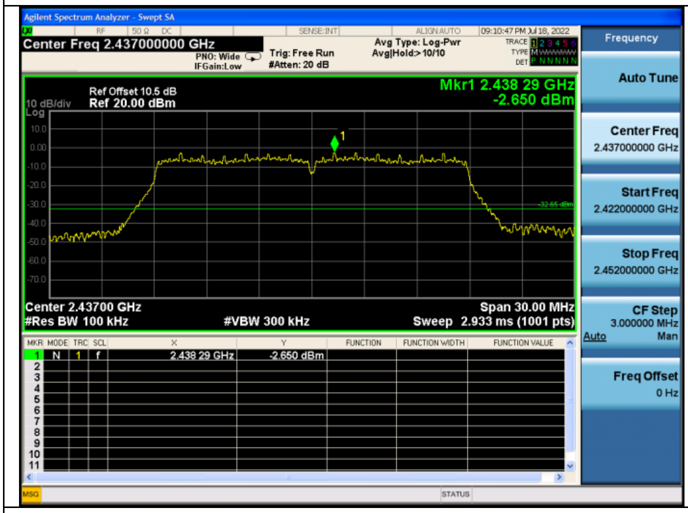
Test CH6: 2437MHz



Agilent Spectrum Analyzer - Swept SA

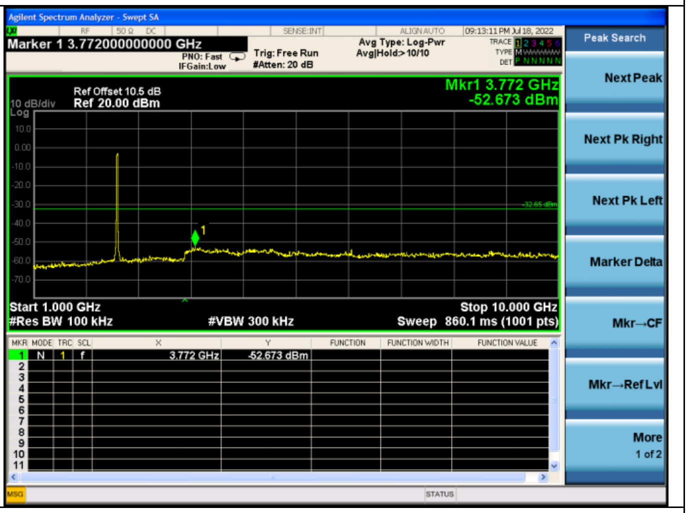
Center Freq 2.437000000 GHz
PNO: Wide IFGain:Low Trig: Free Run #Atten: 20 dB
Avg Type: Log-Pwr Avg|Hold:> 10/10
09:10:47 PM Jul 18, 2022

Ref Offset 10.5 dB
10 dB/div Ref 20.00 dBm
Mkr1 2.438 29 GHz
-2.650 dBm

Center 2.43700 GHz Span 30.00 MHz
#Res BW 100 kHz #VBW 300 kHz Sweep 2.933 ms (1001 pts)

1 N 1 f 2.438 29 GHz -2.650 dBm

Frequency
Auto Tune
Center Freq 2.437000000 GHz
Start Freq 2.422000000 GHz
Stop Freq 2.452000000 GHz
CF Step 3.000000 MHz Auto Man
Freq Offset 0 Hz
-32.65 dBm



Agilent Spectrum Analyzer - Swept SA

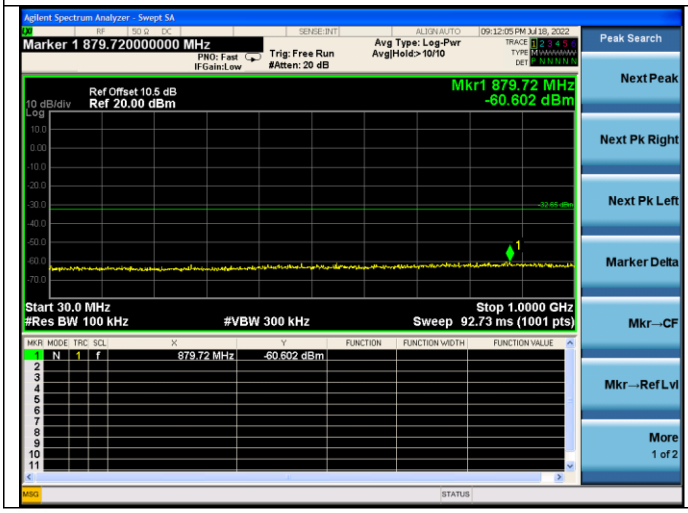
Marker 1 3.772000000000 GHz
PNO: Fast IFGain:Low Trig: Free Run #Atten: 20 dB
Avg Type: Log-Pwr Avg|Hold:> 10/10
09:13:11 PM Jul 18, 2022

Ref Offset 10.5 dB
10 dB/div Ref 20.00 dBm
Mkr1 3.772 GHz
-52.673 dBm

Start 1.000 GHz Stop 10.000 GHz
#Res BW 100 kHz #VBW 300 kHz Sweep 860.1 ms (1001 pts)

1 N 1 f 3.772 GHz -52.673 dBm

Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→RefLvl
More 1 of 2
-32.65 dBm



Agilent Spectrum Analyzer - Swept SA

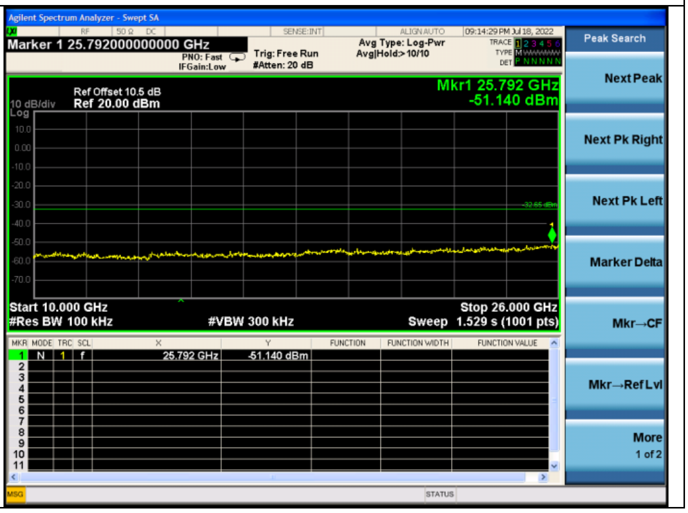
Marker 1 879.720000000 MHz
PNO: Fast IFGain:Low Trig: Free Run #Atten: 20 dB
Avg Type: Log-Pwr Avg|Hold:> 10/10
09:12:05 PM Jul 18, 2022

Ref Offset 10.5 dB
10 dB/div Ref 20.00 dBm
Mkr1 879.72 MHz
-60.602 dBm

Start 30.0 MHz Stop 1.0000 GHz
#Res BW 100 kHz #VBW 300 kHz Sweep 92.73 ms (1001 pts)

1 N 1 f 879.72 MHz -60.602 dBm

Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→RefLvl
More 1 of 2
-32.65 dBm



Agilent Spectrum Analyzer - Swept SA

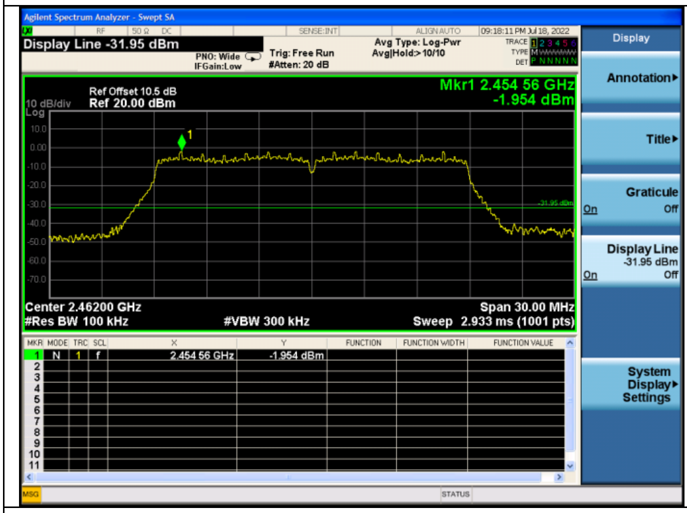
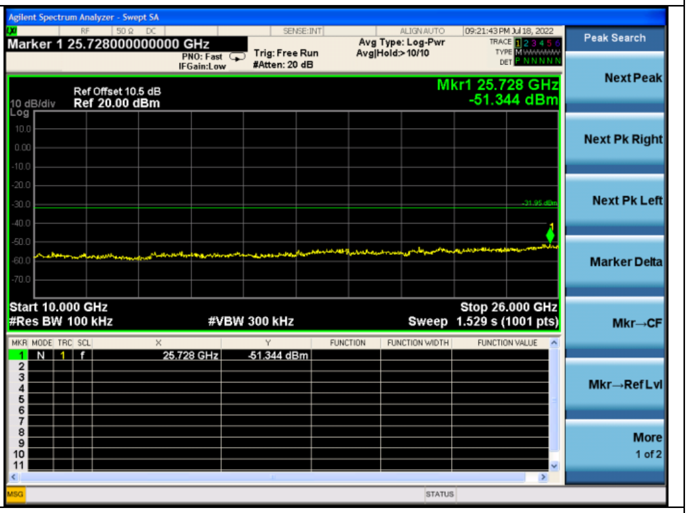
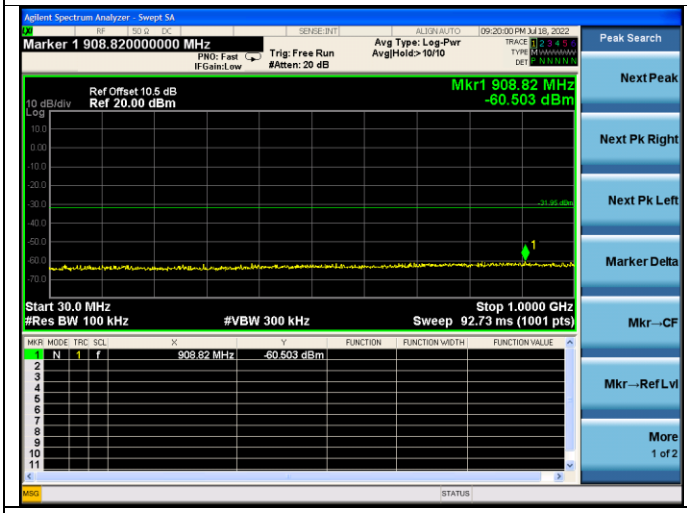
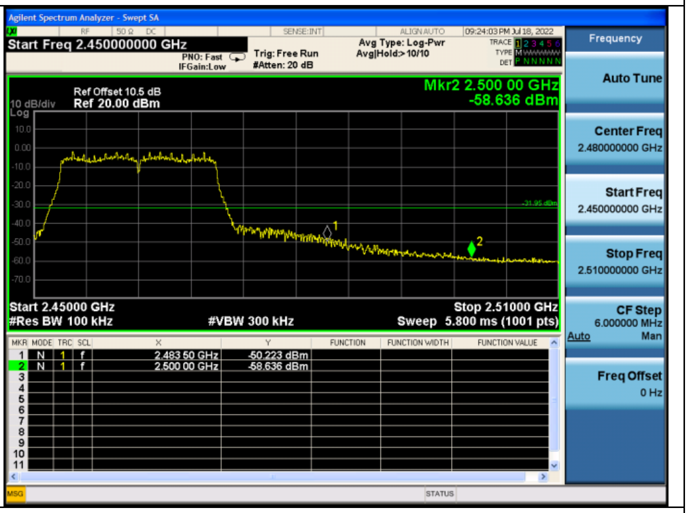
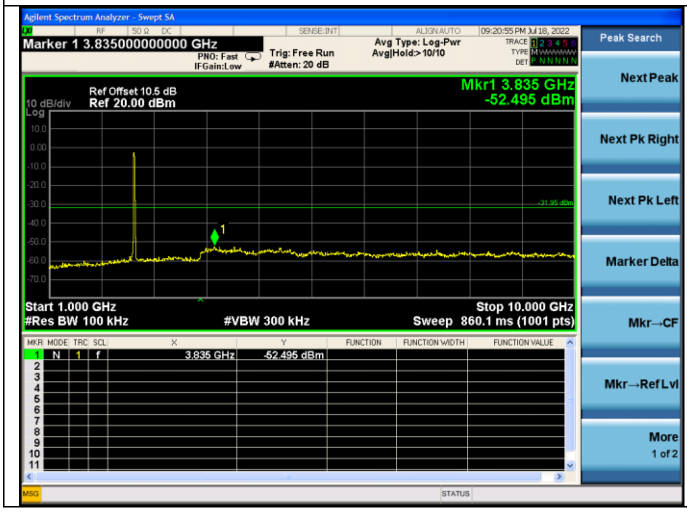
Marker 1 25.792000000000 GHz
PNO: Fast IFGain:Low Trig: Free Run #Atten: 20 dB
Avg Type: Log-Pwr Avg|Hold:> 10/10
09:14:29 PM Jul 18, 2022

Ref Offset 10.5 dB
10 dB/div Ref 20.00 dBm
Mkr1 25.792 GHz
-51.140 dBm

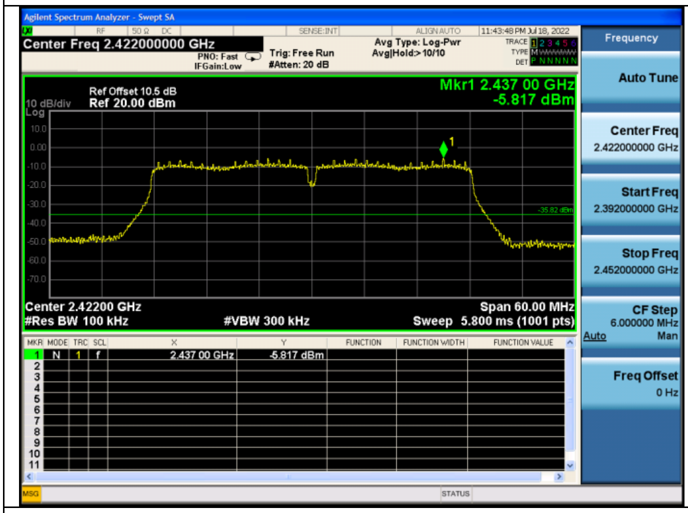
Start 10.000 GHz Stop 26.000 GHz
#Res BW 100 kHz #VBW 300 kHz Sweep 1.529 s (1001 pts)

1 N 1 f 25.792 GHz -51.140 dBm

Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→RefLvl
More 1 of 2
-32.65 dBm

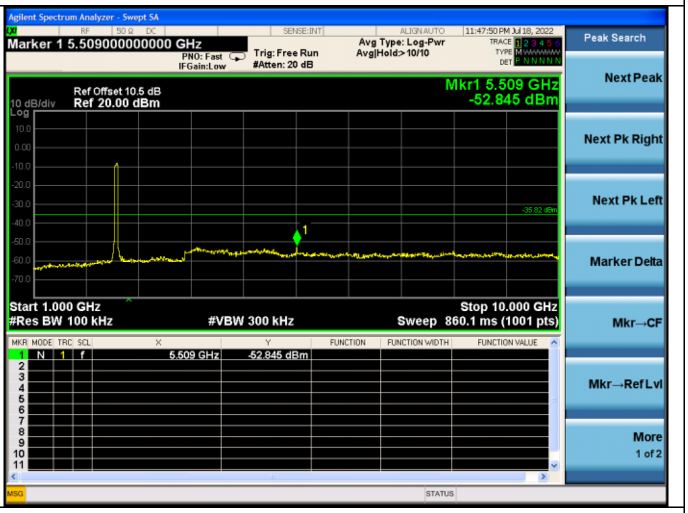
Test CH11: 2462MHz	
 Agilent Spectrum Analyzer - Swept SA 09:18:11 PM Jul 18, 2022 Display Line -31.95 dBm PNO: Wide IFGain:Low Trig: Free Run #Atten: 20 dB Avg Type: Log-Pwr Avg|Hold:>10/10 Ref Offset 10.5 dB 10 dB/div Ref 20.00 dBm Mkr1 2.454 56 GHz -1.954 dBm Center 2.46200 GHz Span 30.00 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 2.933 ms (1001 pts) 1 N 1 f 2.454 56 GHz -1.954 dBm	 Agilent Spectrum Analyzer - Swept SA 09:21:43 PM Jul 18, 2022 Marker 1 25.728000000000 GHz PNO: Fast IFGain:Low Trig: Free Run #Atten: 20 dB Avg Type: Log-Pwr Avg|Hold:>10/10 Ref Offset 10.5 dB 10 dB/div Ref 20.00 dBm Mkr1 25.728 GHz -51.344 dBm Start 10.000 GHz Stop 26.000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 1.529 s (1001 pts) 1 N 1 f 25.728 GHz -51.344 dBm
 Agilent Spectrum Analyzer - Swept SA 09:20:00 PM Jul 18, 2022 Marker 1 908.820000000 MHz PNO: Fast IFGain:Low Trig: Free Run #Atten: 20 dB Avg Type: Log-Pwr Avg|Hold:>10/10 Ref Offset 10.5 dB 10 dB/div Ref 20.00 dBm Mkr1 908.82 MHz -60.503 dBm Start 30.0 MHz Stop 1.0000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 92.73 ms (1001 pts) 1 N 1 f 908.82 MHz -60.503 dBm	 Agilent Spectrum Analyzer - Swept SA 09:24:03 PM Jul 18, 2022 Start Freq 2.450000000 GHz PNO: Fast IFGain:Low Trig: Free Run #Atten: 20 dB Avg Type: Log-Pwr Avg|Hold:>10/10 Ref Offset 10.5 dB 10 dB/div Ref 20.00 dBm Mkr2 2.500 00 GHz -58.636 dBm Start 2.45000 GHz Stop 2.51000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 5.800 ms (1001 pts) 1 N 1 f 2.483 50 GHz -50.223 dBm 2 N 1 f 2.500 00 GHz -58.636 dBm
	---
 Agilent Spectrum Analyzer - Swept SA 09:20:55 PM Jul 18, 2022 Marker 1 3.835000000000 GHz PNO: Fast IFGain:Low Trig: Free Run #Atten: 20 dB Avg Type: Log-Pwr Avg|Hold:>10/10 Ref Offset 10.5 dB 10 dB/div Ref 20.00 dBm Mkr1 3.835 GHz -52.495 dBm Start 1.000 GHz Stop 10.000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 860.1 ms (1001 pts) 1 N 1 f 3.835 GHz -52.495 dBm	---

Test Mode: IEEE 802.11n HT40
Test CH3: 2422MHz


Agilent Spectrum Analyzer - Swept SA
Frequency
Auto Tune
Center Freq 2.422000000 GHz
Start Freq 2.392000000 GHz
Stop Freq 2.452000000 GHz
CF Step 6.000000 MHz Auto Man
Freq Offset 0 Hz

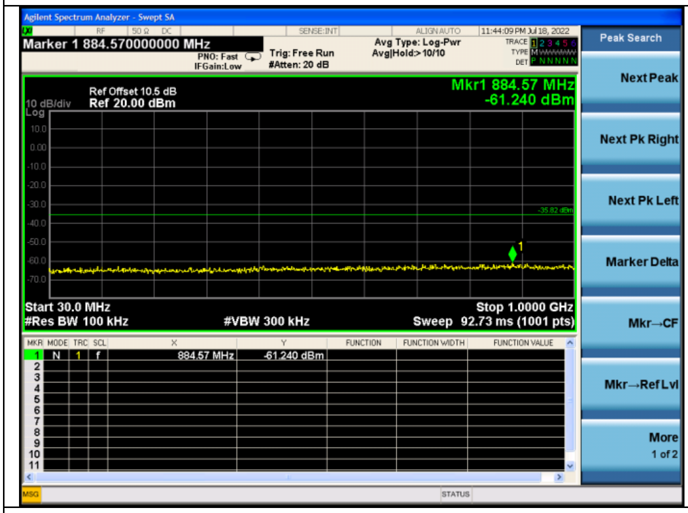
Center Freq 2.422000000 GHz
PNO: Fast IFGain:Low | Trig: Free Run #Atten: 20 dB | Avg Type: Log-Pwr Avg|Hold:>10/10 | 11:43:48 PM Jul 18, 2022
Ref Offset 10.5 dB
10 dB/div Ref 20.00 dBm
Mkr1 2.437 00 GHz -5.817 dBm
Center 2.42200 GHz #Res BW 100 kHz #VBW 300 kHz Span 60.00 MHz Sweep 5.800 ms (1001 pts)

MKR	MODE	TRC	SCL	X	Y
1	N	1	f	2.437 00 GHz	-5.817 dBm


Agilent Spectrum Analyzer - Swept SA
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→RefLvl
More 1 of 2

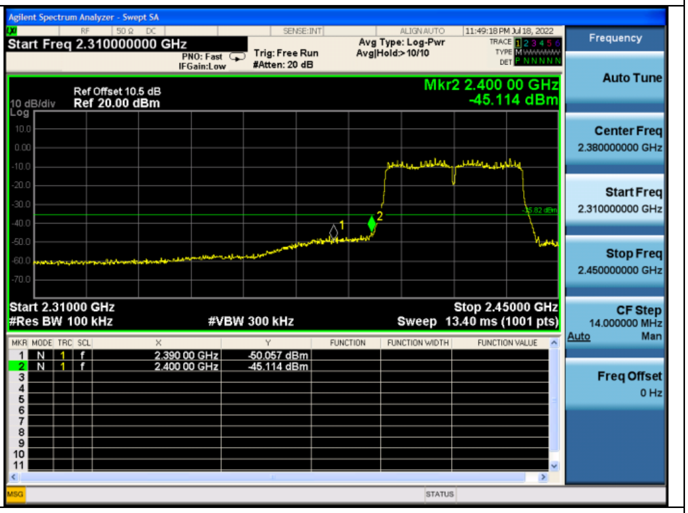
Marker 1 5.509000000000 GHz
PNO: Fast IFGain:Low | Trig: Free Run #Atten: 20 dB | Avg Type: Log-Pwr Avg|Hold:>10/10 | 11:47:50 PM Jul 18, 2022
Ref Offset 10.5 dB
10 dB/div Ref 20.00 dBm
Mkr1 5.509 GHz -52.845 dBm
Start 1.000 GHz #Res BW 100 kHz #VBW 300 kHz Stop 10.000 GHz Sweep 860.1 ms (1001 pts)

MKR	MODE	TRC	SCL	X	Y
1	N	1	f	5.509 GHz	-52.845 dBm


Agilent Spectrum Analyzer - Swept SA
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→RefLvl
More 1 of 2

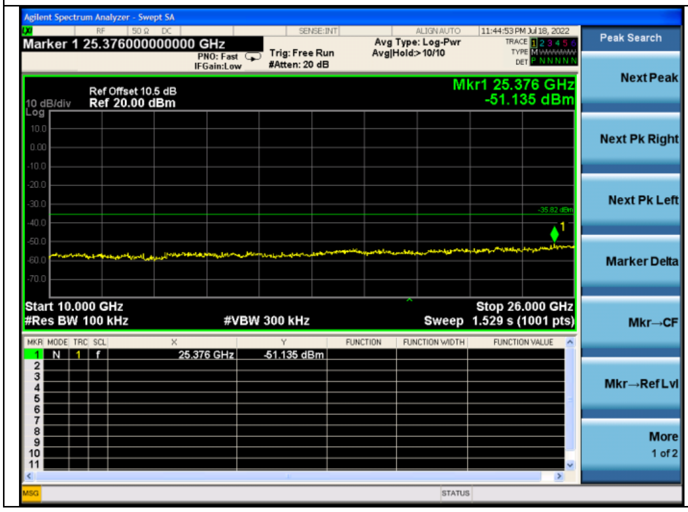
Marker 1 884.570000000 MHz
PNO: Fast IFGain:Low | Trig: Free Run #Atten: 20 dB | Avg Type: Log-Pwr Avg|Hold:>10/10 | 11:44:09 PM Jul 18, 2022
Ref Offset 10.5 dB
10 dB/div Ref 20.00 dBm
Mkr1 884.57 MHz -61.240 dBm
Start 30.0 MHz #Res BW 100 kHz #VBW 300 kHz Stop 1.0000 GHz Sweep 92.73 ms (1001 pts)

MKR	MODE	TRC	SCL	X	Y
1	N	1	f	884.57 MHz	-61.240 dBm


Agilent Spectrum Analyzer - Swept SA
Frequency
Auto Tune
Center Freq 2.380000000 GHz
Start Freq 2.310000000 GHz
Stop Freq 2.450000000 GHz
CF Step 14.000000 MHz Auto Man
Freq Offset 0 Hz

Start Freq 2.310000000 GHz
PNO: Fast IFGain:Low | Trig: Free Run #Atten: 20 dB | Avg Type: Log-Pwr Avg|Hold:>10/10 | 11:49:18 PM Jul 18, 2022
Ref Offset 10.5 dB
10 dB/div Ref 20.00 dBm
Mkr2 2.400 00 GHz -45.114 dBm
Start 2.31000 GHz #Res BW 100 kHz #VBW 300 kHz Stop 2.45000 GHz Sweep 13.40 ms (1001 pts)

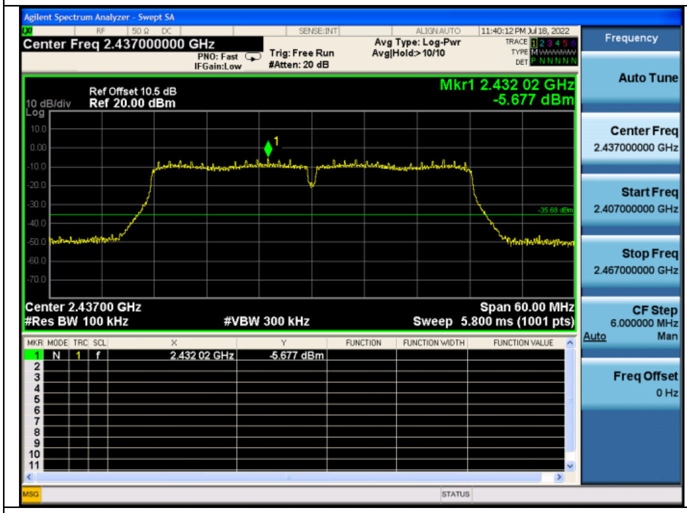
MKR	MODE	TRC	SCL	X	Y
1	N	1	f	2.390 00 GHz	-50.057 dBm
2	N	1	f	2.400 00 GHz	-45.114 dBm


Agilent Spectrum Analyzer - Swept SA
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→RefLvl
More 1 of 2

Marker 1 25.376000000000 GHz
PNO: Fast IFGain:Low | Trig: Free Run #Atten: 20 dB | Avg Type: Log-Pwr Avg|Hold:>10/10 | 11:44:53 PM Jul 18, 2022
Ref Offset 10.5 dB
10 dB/div Ref 20.00 dBm
Mkr1 25.376 GHz -51.135 dBm
Start 10.000 GHz #Res BW 100 kHz #VBW 300 kHz Stop 26.000 GHz Sweep 1.529 s (1001 pts)

MKR	MODE	TRC	SCL	X	Y
1	N	1	f	25.376 GHz	-51.135 dBm

Test CH6: 2437MHz


Agilent Spectrum Analyzer - Swept SA

Center Freq 2.437000000 GHz

PNO: Fast IFGain:Low Trig: Free Run #Atten: 20 dB Avg Type: Log-Pwr Avg|Hold:> 10/10

11:40:12 PM Jul 18, 2022

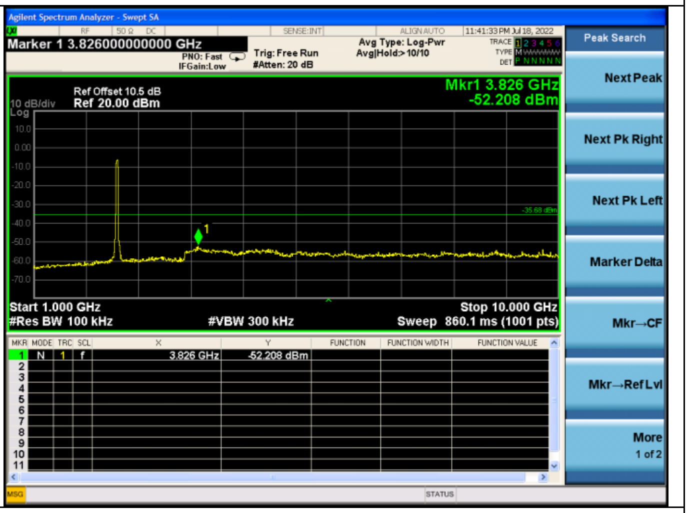
Ref Offset 10.5 dB
10 dB/div Ref 20.00 dBm

Mkr1 2.432 02 GHz
-5.677 dBm

Center 2.43700 GHz #Res BW 100 kHz #VBW 300 kHz Span 60.00 MHz Sweep 5.800 ms (1001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.432 02 GHz	-5.677 dBm			
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								

RF
50 Ω
DC
SENSE:INT
ALIGN AUTO
TRACE 1 2 3 4 5 6
TYPE M WWWWW
DET P N N N N N
Log
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-35.68 dBm
1
Frequency
Auto Tune
Center Freq
2.437000000 GHz
Start Freq
2.407000000 GHz
Stop Freq
2.467000000 GHz
CF Step
6.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS


Agilent Spectrum Analyzer - Swept SA

Marker 1 3.826000000000 GHz

PNO: Fast IFGain:Low Trig: Free Run #Atten: 20 dB Avg Type: Log-Pwr Avg|Hold:> 10/10

11:41:33 PM Jul 18, 2022

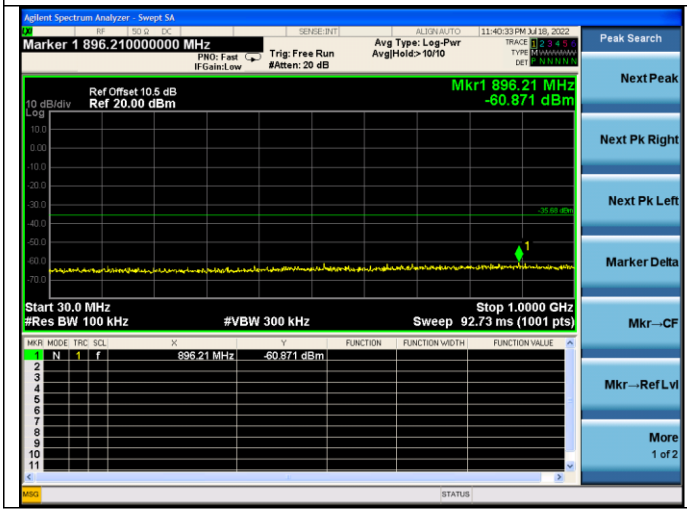
Ref Offset 10.5 dB
10 dB/div Ref 20.00 dBm

Mkr1 3.826 GHz
-52.208 dBm

Start 1.000 GHz #Res BW 100 kHz #VBW 300 kHz Stop 10.000 GHz Sweep 860.1 ms (1001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	3.826 GHz	-52.208 dBm			
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								

RF
50 Ω
DC
SENSE:INT
ALIGN AUTO
TRACE 1 2 3 4 5 6
TYPE M WWWWW
DET P N N N N N
Log
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-35.68 dBm
1
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→RefLvl
More
1 of 2
MSG
STATUS


Agilent Spectrum Analyzer - Swept SA

Marker 1 896.210000000 MHz

PNO: Fast IFGain:Low Trig: Free Run #Atten: 20 dB Avg Type: Log-Pwr Avg|Hold:> 10/10

11:40:33 PM Jul 18, 2022

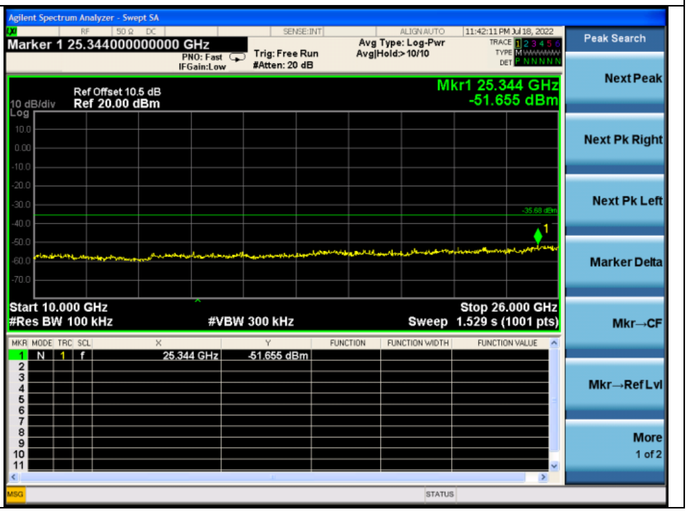
Ref Offset 10.5 dB
10 dB/div Ref 20.00 dBm

Mkr1 896.21 MHz
-60.871 dBm

Start 30.0 MHz #Res BW 100 kHz #VBW 300 kHz Stop 1.0000 GHz Sweep 92.73 ms (1001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	896.21 MHz	-60.871 dBm			
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								

RF
50 Ω
DC
SENSE:INT
ALIGN AUTO
TRACE 1 2 3 4 5 6
TYPE M WWWWW
DET P N N N N N
Log
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-35.68 dBm
1
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→RefLvl
More
1 of 2
MSG
STATUS


Agilent Spectrum Analyzer - Swept SA

Marker 1 25.344000000000 GHz

PNO: Fast IFGain:Low Trig: Free Run #Atten: 20 dB Avg Type: Log-Pwr Avg|Hold:> 10/10

11:42:11 PM Jul 18, 2022

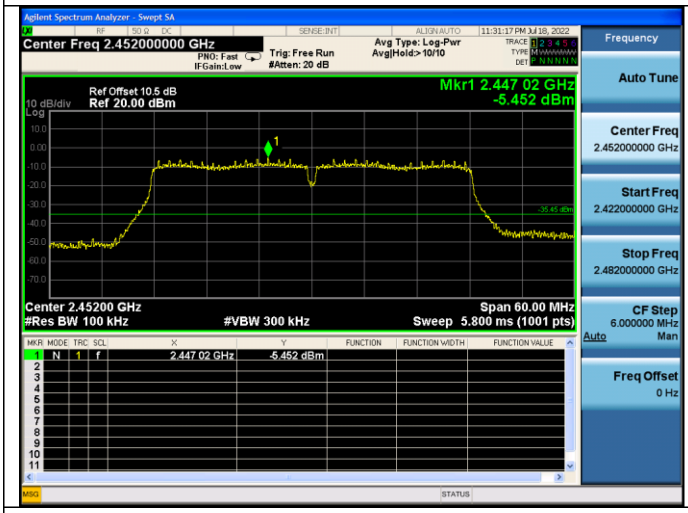
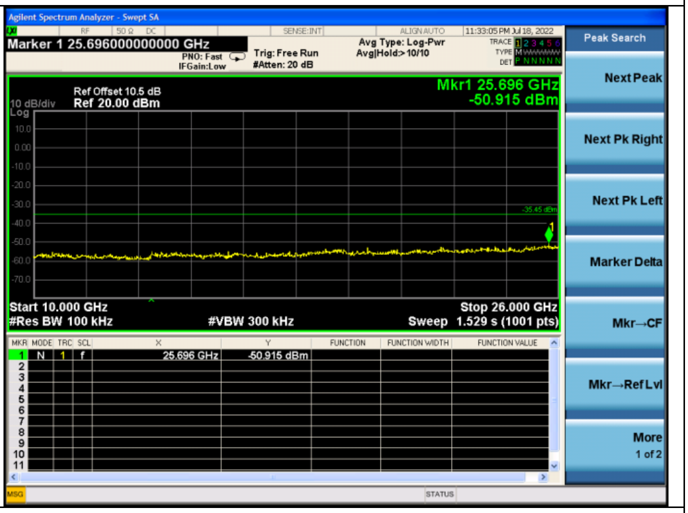
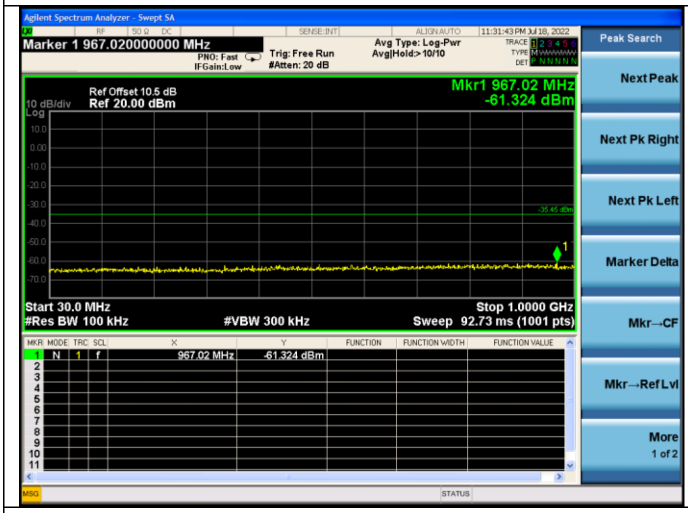
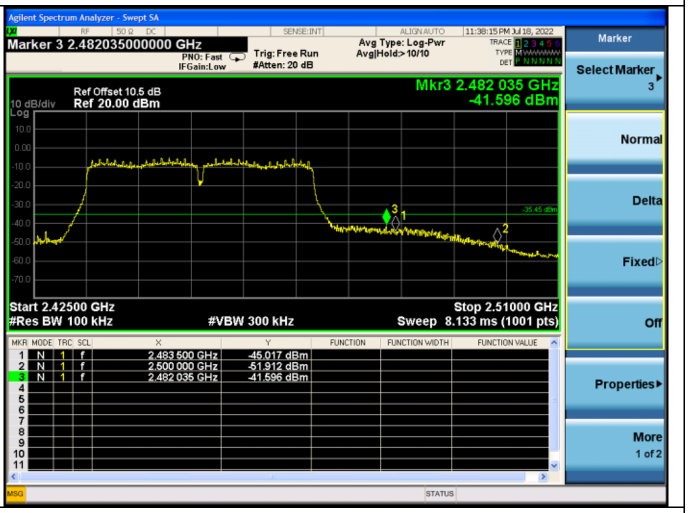
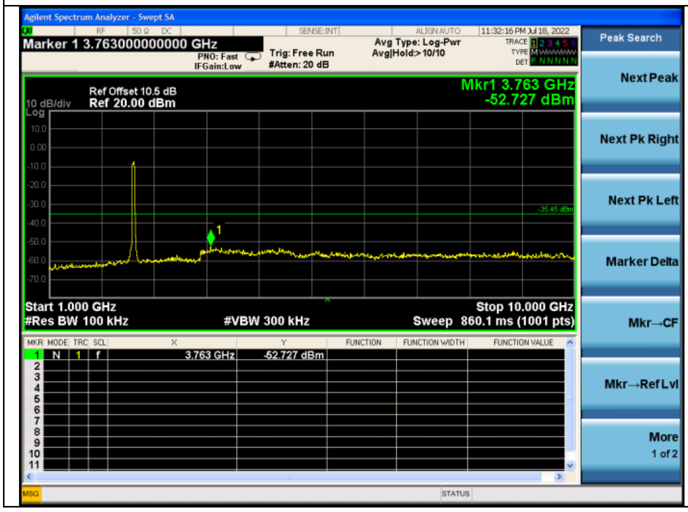
Ref Offset 10.5 dB
10 dB/div Ref 20.00 dBm

Mkr1 25.344 GHz
-51.655 dBm

Start 10.000 GHz #Res BW 100 kHz #VBW 300 kHz Stop 26.000 GHz Sweep 1.529 s (1001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	25.344 GHz	-51.655 dBm			
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								

RF
50 Ω
DC
SENSE:INT
ALIGN AUTO
TRACE 1 2 3 4 5 6
TYPE M WWWWW
DET P N N N N N
Log
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-35.68 dBm
1
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→RefLvl
More
1 of 2
MSG
STATUS

Test CH9: 2452MHz	
 Center Freq 2.452000000 GHz PNO: Fast IFGain:Low Trig: Free Run #Atten: 20 dB Avg Type: Log-Pwr Avg|Hold:>10/10 11:31:17 PM Jul 18, 2022 Ref Offset 10.5 dB 10 dB/div Ref 20.00 dBm Mkr1 2.447 02 GHz -5.452 dBm Center 2.45200 GHz #Res BW 100 kHz #VBW 300 kHz Span 60.00 MHz Sweep 5.800 ms (1001 pts) 1 N 1 f 2.447 02 GHz -5.452 dBm	 Marker 1 25.696000000000 GHz PNO: Fast IFGain:Low Trig: Free Run #Atten: 20 dB Avg Type: Log-Pwr Avg|Hold:>10/10 11:33:05 PM Jul 18, 2022 Ref Offset 10.5 dB 10 dB/div Ref 20.00 dBm Mkr1 25.696 GHz -50.915 dBm Start 10.000 GHz #Res BW 100 kHz #VBW 300 kHz Stop 26.000 GHz Sweep 1.529 s (1001 pts) 1 N 1 f 25.696 GHz -50.915 dBm
 Marker 1 967.020000000 MHz PNO: Fast IFGain:Low Trig: Free Run #Atten: 20 dB Avg Type: Log-Pwr Avg|Hold:>10/10 11:31:43 PM Jul 18, 2022 Ref Offset 10.5 dB 10 dB/div Ref 20.00 dBm Mkr1 967.02 MHz -61.324 dBm Start 30.0 MHz #Res BW 100 kHz #VBW 300 kHz Stop 1.0000 GHz Sweep 92.73 ms (1001 pts) 1 N 1 f 967.02 MHz -61.324 dBm	 Marker 3 2.482035000000 GHz PNO: Fast IFGain:Low Trig: Free Run #Atten: 20 dB Avg Type: Log-Pwr Avg|Hold:>10/10 11:38:15 PM Jul 18, 2022 Ref Offset 10.5 dB 10 dB/div Ref 20.00 dBm Mkr3 2.482 035 GHz -41.596 dBm Start 2.42500 GHz #Res BW 100 kHz #VBW 300 kHz Stop 2.51000 GHz Sweep 8.133 ms (1001 pts) 1 N 1 f 2.483 500 GHz -45.017 dBm 2 N 1 f 2.500 000 GHz -51.912 dBm 3 N 1 f 2.482 035 GHz -41.596 dBm
	---
 Marker 1 3.763000000000 GHz PNO: Fast IFGain:Low Trig: Free Run #Atten: 20 dB Avg Type: Log-Pwr Avg|Hold:>10/10 11:32:16 PM Jul 18, 2022 Ref Offset 10.5 dB 10 dB/div Ref 20.00 dBm Mkr1 3.763 GHz -52.727 dBm Start 1.000 GHz #Res BW 100 kHz #VBW 300 kHz Stop 10.000 GHz Sweep 860.1 ms (1001 pts) 1 N 1 f 3.763 GHz -52.727 dBm	---

6. BAND EDGE COMPLIANCE TEST

6.1.Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	PXA Signal Analyzer	Agilent	N9030A	MY51380221	Apr.07,22	1 Year
2.	Amplifier	Agilent	8449B	3008A00863	Apr.06,22	1 Year
3.	Horn Antenna	ETC	MCTD 1209	DRH15F03006	Jul.26,21	1 Year
4.	RF Cable	HUBER+SUHNER	SUCOFLEX-106	505238/6	Apr.06,22	1 Year

6.2.Limit

All the lower and upper band-edges emissions appearing within 2310MHz to 2390MHz and 2483.5MHz to 2500MHz restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400MHz to 2483.5MHz shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

6.3.Test Procedure

1. The EUT is placed on a turntable, which is 1.5m above the ground plane and worked at highest radiated power.

2. The turntable was rotated for 360 degrees to determine the position of maximum emission level.

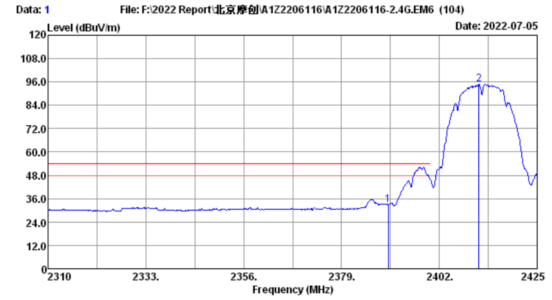
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.

4. Set the spectrum analyzer in the following setting in order to capture the lower and upper band-edges of the emission:

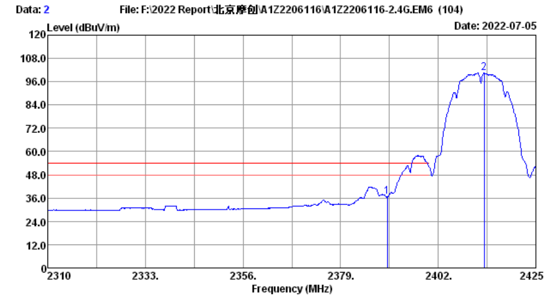
(a) PEAK: RBW=1MHz; VBW=3MHz; Sweep=AUTO
(b) AVERAGE: RBW=1MHz; VBW=10Hz; Sweep=AUTO

6.4.Test Results

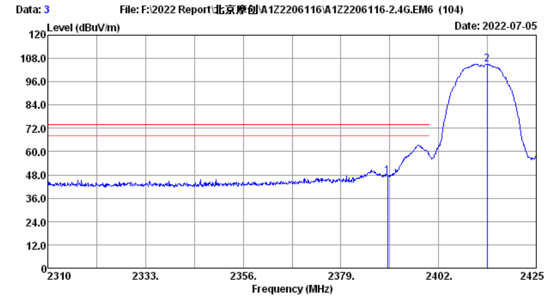
Pass (The testing data was attached in the next pages.)



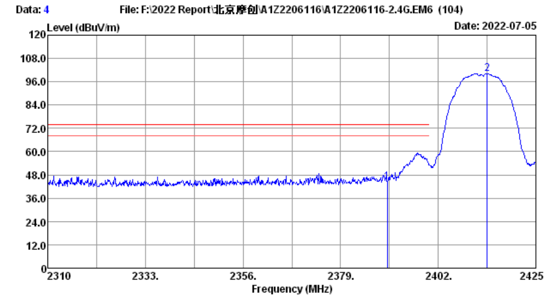
```
Site no.      : 3m Chamber                  Data no.  : 1
Dis. / Ant.   : 3m   2021 MCTD1209-3006     Ant. pol. : VERTICAL
Limit         : FCC PART 15C AV
Env. / Ins.   : 23.8*C/53.5%                Engineer  : Allen
Test Mode     : 11b 2412MHz Tx

                 Ant.   Cable              Amp   Emission
No.    Freq.    Factor  Loss   Reading   factor   Level    Limits   Margin  Remark
       (MHz)    (dB/m)  (dB)   (dBuV)     (dB)  (dBuV/m) (dBuV/m)   (dB)
 -------------------------------------------------------------------------------
  1  2390.00   27.89    3.65    36.54    35.24   32.84     54.00     21.16  Average
  2  2411.32   27.93    3.66    98.58    35.24   94.93    ------    ------  Average
 -------------------------------------------------------------------------------
     Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                 -Amp factor.
              2. The emission levels that are 20dB below the official
                 limit are not reported.
```



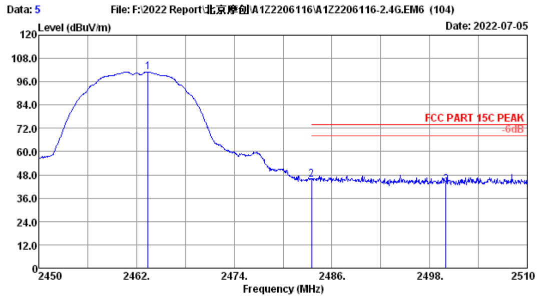
```
Site no.      : 3m Chamber                  Data no.  : 2
Dis. / Ant.   : 3m   2021 MCTD1209-3006     Ant. pol. : HORIZONTAL
Limit         : FCC PART 15C AV
Env. / Ins.   : 23.8*C/53.5%                Engineer  : Allen
Test Mode     : 11b 2412MHz Tx

                 Ant.   Cable              Amp   Emission
No.    Freq.    Factor  Loss   Reading   factor   Level    Limits   Margin  Remark
       (MHz)    (dB/m)  (dB)   (dBuV)     (dB)  (dBuV/m) (dBuV/m)   (dB)
 -------------------------------------------------------------------------------
  1  2390.00   27.89    3.65    40.33    35.24   36.63     54.00     17.37  Average
  2  2412.81   27.93    3.66   104.33    35.24  100.68    ------    ------  Average
 -------------------------------------------------------------------------------
     Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                 -Amp factor.
              2. The emission levels that are 20dB below the official
                 limit are not reported.
```



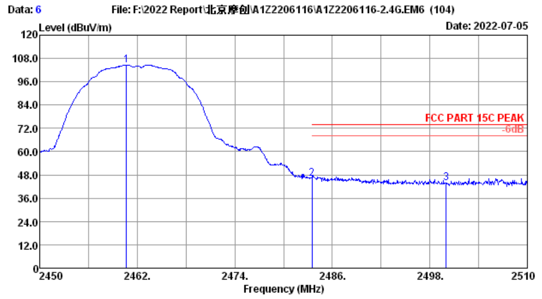
```
Site no.      : 3m Chamber                  Data no.  : 3
Dis. / Ant.   : 3m   2021 MCTD1209-3006     Ant. pol. : HORIZONTAL
Limit         : FCC PART 15C PEAK
Env. / Ins.   : 23.8*C/53.5%                Engineer  : Allen
Test Mode     : 11b 2412MHz Tx

                 Ant.   Cable              Amp   Emission
No.    Freq.    Factor  Loss   Reading   factor   Level    Limits   Margin  Remark
       (MHz)    (dB/m)  (dB)   (dBuV)     (dB)  (dBuV/m) (dBuV/m)   (dB)
 -------------------------------------------------------------------------------
  1  2390.00   27.89    3.65    51.11    35.24   47.41     74.00     26.59  Peak
  2  2413.39   27.93    3.66   108.72    35.24  105.07    ------    ------  Peak
 -------------------------------------------------------------------------------
     Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                 -Amp factor.
              2. The emission levels that are 20dB below the official
                 limit are not reported.
```



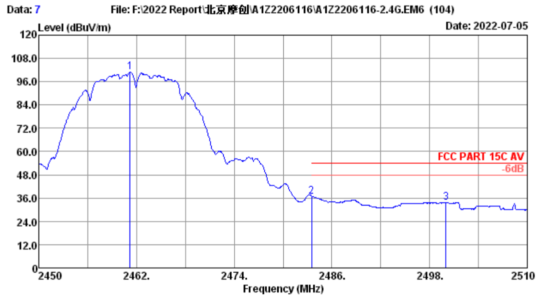
```
Site no.      : 3m Chamber                  Data no.  : 4
Dis. / Ant.   : 3m   2021 MCTD1209-3006     Ant. pol. : VERTICAL
Limit         : FCC PART 15C PEAK
Env. / Ins.   : 23.8*C/53.5%                Engineer  : Allen
Test Mode     : 11b 2412MHz Tx

                 Ant.   Cable              Amp   Emission
No.    Freq.    Factor  Loss   Reading   factor   Level    Limits   Margin  Remark
       (MHz)    (dB/m)  (dB)   (dBuV)     (dB)  (dBuV/m) (dBuV/m)   (dB)
 -------------------------------------------------------------------------------
  1  2390.00   27.89    3.65    48.11    35.24   44.41     74.00     29.59  Peak
  2  2413.50   27.93    3.66   103.91    35.24  100.26    ------    ------  Peak
 -------------------------------------------------------------------------------
     Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                 -Amp factor.
              2. The emission levels that are 20dB below the official
                 limit are not reported.
```



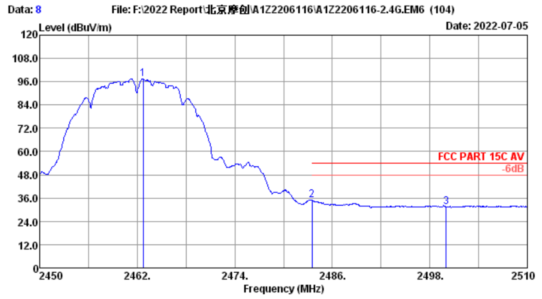
```
     Site no.       : 3m Chamber                    Data no.  : 5
     Dis. / Ant.    : 3m   2021 MCTD1209-3006       Ant. pol. : VERTICAL
     Limit          : FCC PART 15C PEAK
     Env. / Ins.    : 23.8*C/53.5%                  Engineer  : Allen
     Test Mode      : 11b 2462MHz Tx

                  Ant.    Cable               Amp    Emission
No.    Freq.     Factor   Loss    Reading   factor    Level     Limits    Margin   Remark
       (MHz)     (dB/m)   (dB)    (dBuV)     (dB)   (dBuV/m)  (dBuV/m)    (dB)
 ----------------------------------------------------------------------------------------
  1  2463.44    28.03    3.70    104.45    35.25   100.93    ------    ------    Peak
  2  2483.50    28.07    3.71     49.15    35.25    45.68     74.00     28.32    Peak
  3  2500.00    28.10    3.72     46.49    35.25    43.06     74.00     30.94    Peak
 ----------------------------------------------------------------------------------------
     Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                 -Amp factor.
              2. The emission levels that are 20dB below the official
                 limit are not reported.
```



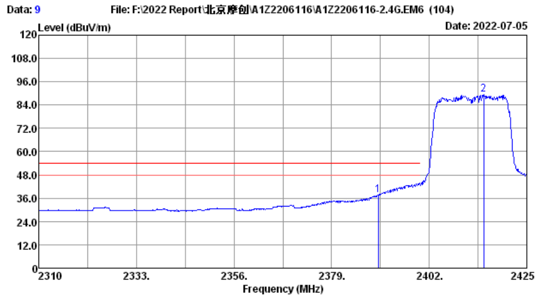
```
     Site no.       : 3m Chamber                    Data no.  : 6
     Dis. / Ant.    : 3m   2021 MCTD1209-3006       Ant. pol. : HORIZONTAL
     Limit          : FCC PART 15C PEAK
     Env. / Ins.    : 23.8*C/53.5%                  Engineer  : Allen
     Test Mode      : 11b 2462MHz Tx

                  Ant.    Cable               Amp    Emission
No.    Freq.     Factor   Loss    Reading   factor    Level     Limits    Margin   Remark
       (MHz)     (dB/m)   (dB)    (dBuV)     (dB)   (dBuV/m)  (dBuV/m)    (dB)
 ----------------------------------------------------------------------------------------
  1  2460.68    28.03    3.70    108.18    35.25   104.66    ------    ------    Peak
  2  2483.50    28.07    3.71     49.51    35.25    46.04     74.00     27.96    Peak
  3  2500.00    28.10    3.72     47.34    35.25    43.91     74.00     30.09    Peak
 ----------------------------------------------------------------------------------------
     Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                 -Amp factor.
              2. The emission levels that are 20dB below the official
                 limit are not reported.
```



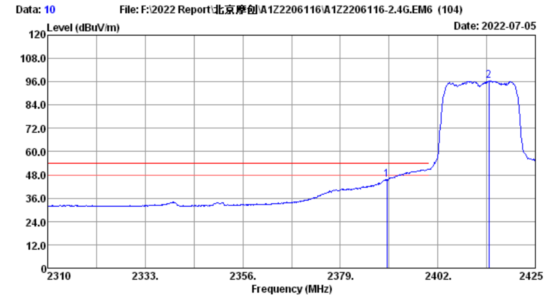
```
     Site no.       : 3m Chamber                    Data no.  : 7
     Dis. / Ant.    : 3m   2021 MCTD1209-3006       Ant. pol. : HORIZONTAL
     Limit          : FCC PART 15C AV
     Env. / Ins.    : 23.8*C/53.5%                  Engineer  : Allen
     Test Mode      : 11b 2462MHz Tx

                  Ant.    Cable               Amp    Emission
No.    Freq.     Factor   Loss    Reading   factor    Level     Limits    Margin   Remark
       (MHz)     (dB/m)   (dB)    (dBuV)     (dB)   (dBuV/m)  (dBuV/m)    (dB)
 ----------------------------------------------------------------------------------------
  1  2461.22    28.03    3.70    104.33    35.25   100.81    ------    ------    Average
  2  2483.50    28.07    3.71     40.32    35.25    36.85     54.00     17.15    Average
  3  2500.00    28.10    3.72     36.96    35.25    33.53     54.00     20.47    Average
 ----------------------------------------------------------------------------------------
     Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                 -Amp factor.
              2. The emission levels that are 20dB below the official
                 limit are not reported.
```



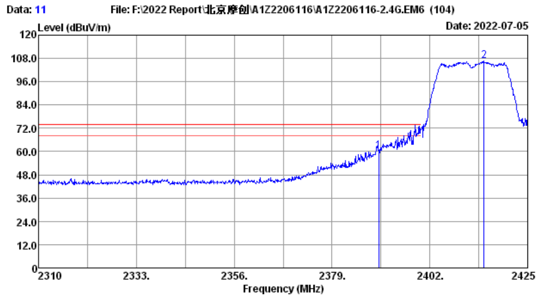
```
     Site no.       : 3m Chamber                    Data no.  : 8
     Dis. / Ant.    : 3m   2021 MCTD1209-3006       Ant. pol. : VERTICAL
     Limit          : FCC PART 15C AV
     Env. / Ins.    : 23.8*C/53.5%                  Engineer  : Allen
     Test Mode      : 11b 2462MHz Tx

                  Ant.    Cable               Amp    Emission
No.    Freq.     Factor   Loss    Reading   factor    Level     Limits    Margin   Remark
       (MHz)     (dB/m)   (dB)    (dBuV)     (dB)   (dBuV/m)  (dBuV/m)    (dB)
 ----------------------------------------------------------------------------------------
  1  2462.72    28.03    3.70    100.94    35.25    97.42    ------    ------    Average
  2  2483.50    28.07    3.71     38.39    35.25    34.92     54.00     19.08    Average
  3  2500.00    28.10    3.72     35.04    35.25    31.61     54.00     22.39    Average
 ----------------------------------------------------------------------------------------
     Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                 -Amp factor.
              2. The emission levels that are 20dB below the official
                 limit are not reported.
```



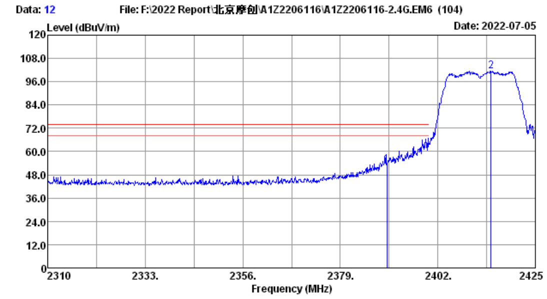
```
Site no.      : 3m Chamber                   Data no.  : 9
Dis. / Ant.   : 3m   2021 MCTD1209-3006      Ant. pol. : VERTICAL
Limit         : FCC PART 15C AV
Env. / Ins.   : 23.8*C/53.5%                 Engineer  : Allen
Test Mode     : 11g 2412MHz Tx

                Ant.   Cable              Amp   Emission
No.   Freq.    Factor  Loss   Reading  factor  Level     Limits    Margin  Remark
      (MHz)    (dB/m)  (dB)   (dBuV)    (dB)  (dBuV/m) (dBuV/m)    (dB)
 ------------------------------------------------------------------------------
 1  2390.00  27.89   3.65    41.26   35.24   37.56     54.00     16.44   Average
 2  2414.88  27.93   3.66    92.94   35.24   89.29    ------    ------   Average
 ------------------------------------------------------------------------------
     Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                 -Amp factor.
              2. The emission levels that are 20dB below the official
                 limit are not reported.
```



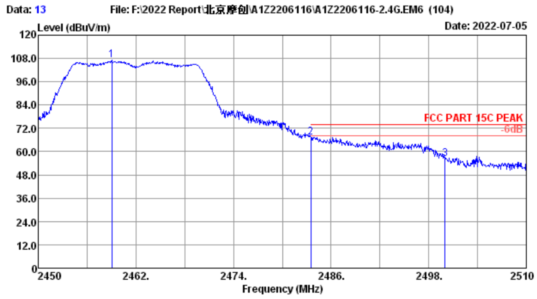
```
Site no.      : 3m Chamber                   Data no.  : 10
Dis. / Ant.   : 3m   2021 MCTD1209-3006      Ant. pol. : HORIZONTAL
Limit         : FCC PART 15C AV
Env. / Ins.   : 23.8*C/53.5%                 Engineer  : Allen
Test Mode     : 11g 2412MHz Tx

                Ant.   Cable              Amp   Emission
No.   Freq.    Factor  Loss   Reading  factor  Level     Limits    Margin  Remark
      (MHz)    (dB/m)  (dB)   (dBuV)    (dB)  (dBuV/m) (dBuV/m)    (dB)
 ------------------------------------------------------------------------------
 1  2390.00  27.89   3.65    49.23   35.24   45.53     54.00      8.47   Average
 2  2414.08  27.93   3.66    99.98   35.24   96.33    ------    ------   Average
 ------------------------------------------------------------------------------
     Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                 -Amp factor.
              2. The emission levels that are 20dB below the official
                 limit are not reported.
```



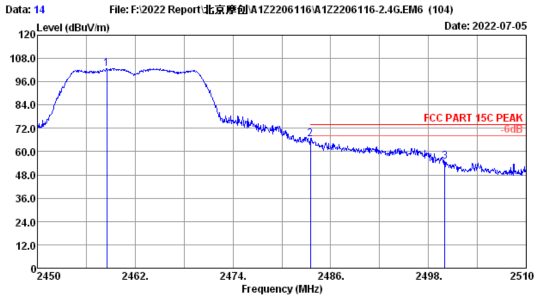
```
Site no.      : 3m Chamber                   Data no.  : 11
Dis. / Ant.   : 3m   2021 MCTD1209-3006      Ant. pol. : HORIZONTAL
Limit         : FCC PART 15C PEAK
Env. / Ins.   : 23.8*C/53.5%                 Engineer  : Allen
Test Mode     : 11g 2412MHz Tx

                Ant.   Cable              Amp   Emission
No.   Freq.    Factor  Loss   Reading  factor  Level     Limits    Margin  Remark
      (MHz)    (dB/m)  (dB)   (dBuV)    (dB)  (dBuV/m) (dBuV/m)    (dB)
 ------------------------------------------------------------------------------
 1  2390.00  27.89   3.65    63.70   35.24   60.00     74.00     14.00   Peak
 2  2414.77  27.93   3.66   110.25   35.24  106.60    ------    ------   Peak
 ------------------------------------------------------------------------------
     Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                 -Amp factor.
              2. The emission levels that are 20dB below the official
                 limit are not reported.
```



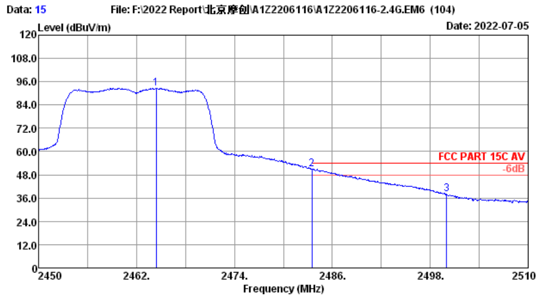
```
Site no.      : 3m Chamber                   Data no.  : 12
Dis. / Ant.   : 3m   2021 MCTD1209-3006      Ant. pol. : VERTICAL
Limit         : FCC PART 15C PEAK
Env. / Ins.   : 23.8*C/53.5%                 Engineer  : Allen
Test Mode     : 11g 2412MHz Tx

                Ant.   Cable              Amp   Emission
No.   Freq.    Factor  Loss   Reading  factor  Level     Limits    Margin  Remark
      (MHz)    (dB/m)  (dB)   (dBuV)    (dB)  (dBuV/m) (dBuV/m)    (dB)
 ------------------------------------------------------------------------------
 1  2390.00  27.89   3.65    57.03   35.24   53.33     74.00     20.67   Peak
 2  2414.54  27.93   3.66   105.13   35.24  101.48    ------    ------   Peak
 ------------------------------------------------------------------------------
     Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                 -Amp factor.
              2. The emission levels that are 20dB below the official
                 limit are not reported.
```



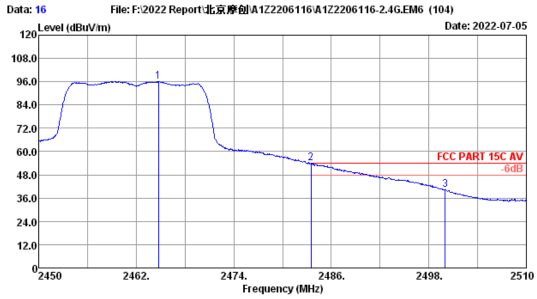
```
    Site no.      : 3m Chamber                      Data no.  : 13
    Dis. / Ant.   : 3m   2021 MCTD1209-3006         Ant. pol. : HORIZONTAL
    Limit         : FCC PART 15C PEAK
    Env. / Ins.   : 23.8*C/53.5%                    Engineer  : Allen
    Test Mode     : 11g 2462MHz Tx

                 Ant.   Cable              Amp   Emission
No.    Freq.    Factor  Loss   Reading   factor   Level     Limits   Margin  Remark
       (MHz)    (dB/m)  (dB)   (dBuV)     (dB)   (dBuV/m) (dBuV/m)   (dB)
 ------------------------------------------------------------------------------
  1  2459.06   28.03   3.70   110.46    35.25  106.94    ------    ------   Peak
  2  2483.50   28.07   3.71    70.59    35.25   67.12     74.00      6.88   Peak
  3  2500.00   28.10   3.72    59.61    35.25   56.18     74.00     17.82   Peak
 ------------------------------------------------------------------------------
    Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                -Amp factor.
             2. The emission levels that are 20dB below the official
                limit are not reported.
```



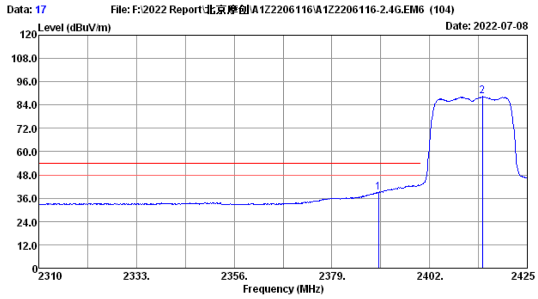
```
    Site no.      : 3m Chamber                      Data no.  : 14
    Dis. / Ant.   : 3m   2021 MCTD1209-3006         Ant. pol. : VERTICAL
    Limit         : FCC PART 15C PEAK
    Env. / Ins.   : 23.8*C/53.5%                    Engineer  : Allen
    Test Mode     : 11g 2462MHz Tx

                 Ant.   Cable              Amp   Emission
No.    Freq.    Factor  Loss   Reading   factor   Level     Limits   Margin  Remark
       (MHz)    (dB/m)  (dB)   (dBuV)     (dB)   (dBuV/m) (dBuV/m)   (dB)
 ------------------------------------------------------------------------------
  1  2458.52   28.03   3.70   106.44    35.25  102.92    ------    ------   Peak
  2  2483.50   28.07   3.71    69.79    35.25   66.32     74.00      7.68   Peak
  3  2500.00   28.10   3.72    58.20    35.25   54.77     74.00     19.23   Peak
 ------------------------------------------------------------------------------
    Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                -Amp factor.
             2. The emission levels that are 20dB below the official
                limit are not reported.
```



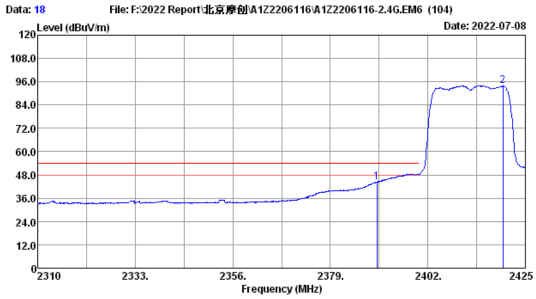
```
    Site no.      : 3m Chamber                      Data no.  : 15
    Dis. / Ant.   : 3m   2021 MCTD1209-3006         Ant. pol. : VERTICAL
    Limit         : FCC PART 15C AV
    Env. / Ins.   : 23.8*C/53.5%                    Engineer  : Allen
    Test Mode     : 11g 2462MHz Tx

                 Ant.   Cable              Amp   Emission
No.    Freq.    Factor  Loss   Reading   factor   Level     Limits   Margin  Remark
       (MHz)    (dB/m)  (dB)   (dBuV)     (dB)   (dBuV/m) (dBuV/m)   (dB)
 ------------------------------------------------------------------------------
  1  2464.40   28.03   3.70    96.02    35.25   92.50    ------    ------   Average
  2  2483.50   28.07   3.71    54.19    35.25   50.72     54.00      3.28   Average
  3  2500.00   28.10   3.72    41.29    35.25   37.86     54.00     16.14   Average
 ------------------------------------------------------------------------------
    Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                -Amp factor.
             2. The emission levels that are 20dB below the official
                limit are not reported.
```



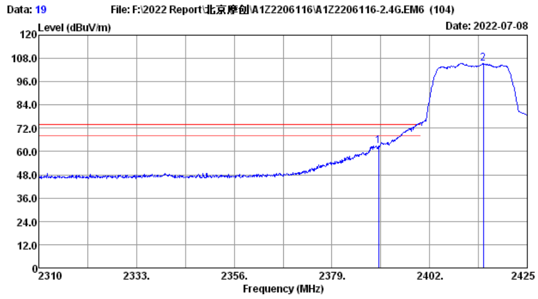
```
    Site no.      : 3m Chamber                      Data no.  : 16
    Dis. / Ant.   : 3m   2021 MCTD1209-3006         Ant. pol. : HORIZONTAL
    Limit         : FCC PART 15C AV
    Env. / Ins.   : 23.8*C/53.5%                    Engineer  : Allen
    Test Mode     : 11g 2462MHz Tx

                 Ant.   Cable              Amp   Emission
No.    Freq.    Factor  Loss   Reading   factor   Level     Limits   Margin  Remark
       (MHz)    (dB/m)  (dB)   (dBuV)     (dB)   (dBuV/m) (dBuV/m)   (dB)
 ------------------------------------------------------------------------------
  1  2464.76   28.03   3.70    99.68    35.25   96.16    ------    ------   Average
  2  2483.50   28.07   3.71    57.36    35.25   53.89     54.00      0.11   Average
  3  2500.00   28.10   3.72    43.71    35.25   40.28     54.00     13.72   Average
 ------------------------------------------------------------------------------
    Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                -Amp factor.
             2. The emission levels that are 20dB below the official
                limit are not reported.
```



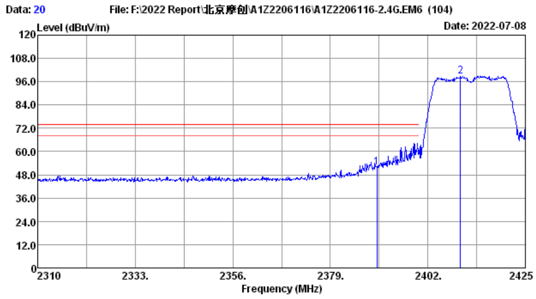
```
Site no.      : 3m Chamber                    Data no.  : 17
Dis. / Ant.   : 3m   2021 MCTD1209-3006       Ant. pol. : VERTICAL
Limit         : FCC PART 15C AV
Env. / Ins.   : 23.8*C/53.5%                  Engineer  : Allen
Test Mode     : 11n20 2412MHz Tx

               Ant.   Cable              Amp   Emission
No.   Freq.   Factor  Loss   Reading   factor  Level     Limits    Margin  Remark
      (MHz)   (dB/m)  (dB)   (dBuV)     (dB)  (dBuV/m) (dBuV/m)    (dB)
-------------------------------------------------------------------------------
 1  2390.00  27.89   3.65    42.72    35.24   39.02     54.00     14.98   Average
 2  2414.42  27.93   3.66    92.00    35.24   88.35    ------    ------   Average
-------------------------------------------------------------------------------
    Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                -Amp factor.
             2. The emission levels that are 20dB below the official
                limit are not reported.
```



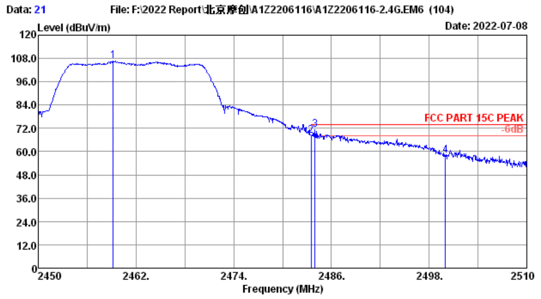
```
Site no.      : 3m Chamber                    Data no.  : 18
Dis. / Ant.   : 3m   2021 MCTD1209-3006       Ant. pol. : HORIZONTAL
Limit         : FCC PART 15C AV
Env. / Ins.   : 23.8*C/53.5%                  Engineer  : Allen
Test Mode     : 11n20 2412MHz Tx

               Ant.   Cable              Amp   Emission
No.   Freq.   Factor  Loss   Reading   factor  Level     Limits    Margin  Remark
      (MHz)   (dB/m)  (dB)   (dBuV)     (dB)  (dBuV/m) (dBuV/m)    (dB)
-------------------------------------------------------------------------------
 1  2390.00  27.89   3.65    48.15    35.24   44.45     54.00      9.55   Average
 2  2419.71  27.96   3.67    97.63    35.24   94.02    ------    ------   Average
-------------------------------------------------------------------------------
    Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                -Amp factor.
             2. The emission levels that are 20dB below the official
                limit are not reported.
```



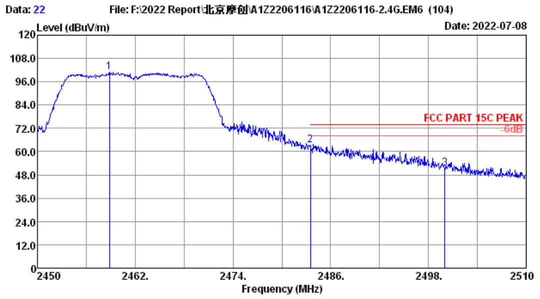
```
Site no.      : 3m Chamber                    Data no.  : 19
Dis. / Ant.   : 3m   2021 MCTD1209-3006       Ant. pol. : HORIZONTAL
Limit         : FCC PART 15C PEAK
Env. / Ins.   : 23.8*C/53.5%                  Engineer  : Allen
Test Mode     : 11n20 2412MHz Tx

               Ant.   Cable              Amp   Emission
No.   Freq.   Factor  Loss   Reading   factor  Level     Limits    Margin  Remark
      (MHz)   (dB/m)  (dB)   (dBuV)     (dB)  (dBuV/m) (dBuV/m)    (dB)
-------------------------------------------------------------------------------
 1  2390.00  27.89   3.65    66.55    35.24   62.85     74.00     11.15   Peak
 2  2414.65  27.93   3.66   109.01    35.24  105.36    ------    ------   Peak
-------------------------------------------------------------------------------
    Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                -Amp factor.
             2. The emission levels that are 20dB below the official
                limit are not reported.
```



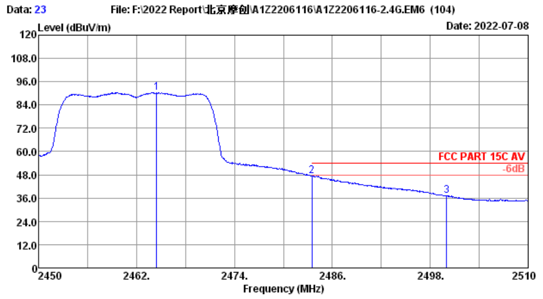
```
Site no.      : 3m Chamber                    Data no.  : 20
Dis. / Ant.   : 3m   2021 MCTD1209-3006       Ant. pol. : VERTICAL
Limit         : FCC PART 15C PEAK
Env. / Ins.   : 23.8*C/53.5%                  Engineer  : Allen
Test Mode     : 11n20 2412MHz Tx

               Ant.   Cable              Amp   Emission
No.   Freq.   Factor  Loss   Reading   factor  Level     Limits    Margin  Remark
      (MHz)   (dB/m)  (dB)   (dBuV)     (dB)  (dBuV/m) (dBuV/m)    (dB)
-------------------------------------------------------------------------------
 1  2390.00  27.89   3.65    55.69    35.24   51.99     74.00     22.01   Peak
 2  2409.71  27.93   3.66   102.50    35.24   98.85    ------    ------   Peak
-------------------------------------------------------------------------------
    Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                -Amp factor.
             2. The emission levels that are 20dB below the official
                limit are not reported.
```



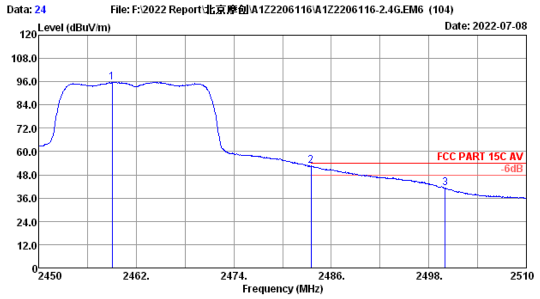
```
    Site no.      : 3m Chamber                   Data no.  : 21
    Dis. / Ant.   : 3m   2021 MCTD1209-3006      Ant. pol. : HORIZONTAL
    Limit         : FCC PART 15C PEAK
    Env. / Ins.   : 23.8*C/53.5%                 Engineer  : Allen
    Test Mode     : 11n20 2462MHz Tx

                   Ant.   Cable              Amp   Emission
No.    Freq.     Factor  Loss    Reading   factor   Level     Limits    Margin  Remark
       (MHz)     (dB/m)  (dB)    (dBuV)     (dB)   (dBuV/m) (dBuV/m)    (dB)
 ------------------------------------------------------------------------------
  1   2459.18    28.03    3.70    110.27    35.25   106.75    ------    ------   Peak
  2   2483.50    28.07    3.71     71.66    35.25    68.19     74.00      5.81   Peak
  3   2483.96    28.07    3.71     74.55    35.25    71.08     74.00      2.92   Peak
  4   2500.00    28.10    3.72     61.60    35.25    58.17     74.00     15.83   Peak
 ------------------------------------------------------------------------------
    Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                -Amp factor.
             2. The emission levels that are 20dB below the official
                limit are not reported.
```



```
    Site no.      : 3m Chamber                   Data no.  : 22
    Dis. / Ant.   : 3m   2021 MCTD1209-3006      Ant. pol. : VERTICAL
    Limit         : FCC PART 15C PEAK
    Env. / Ins.   : 23.8*C/53.5%                 Engineer  : Allen
    Test Mode     : 11n20 2462MHz Tx

                   Ant.   Cable              Amp   Emission
No.    Freq.     Factor  Loss    Reading   factor   Level     Limits    Margin  Remark
       (MHz)     (dB/m)  (dB)    (dBuV)     (dB)   (dBuV/m) (dBuV/m)    (dB)
 ------------------------------------------------------------------------------
  1   2458.82    28.03    3.70    104.70    35.25   101.18    ------    ------   Peak
  2   2483.50    28.07    3.71     66.88    35.25    63.41     74.00     10.59   Peak
  3   2500.00    28.10    3.72     54.80    35.25    51.37     74.00     22.63   Peak
 ------------------------------------------------------------------------------
    Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                -Amp factor.
             2. The emission levels that are 20dB below the official
                limit are not reported.
```

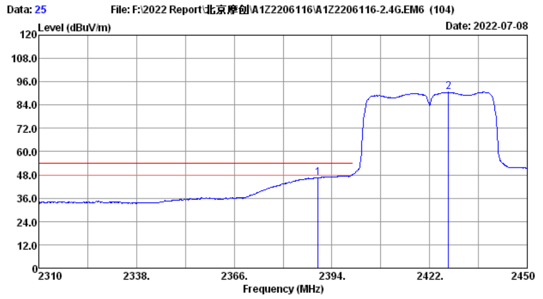


```
    Site no.      : 3m Chamber                   Data no.  : 23
    Dis. / Ant.   : 3m   2021 MCTD1209-3006      Ant. pol. : VERTICAL
    Limit         : FCC PART 15C AV
    Env. / Ins.   : 23.8*C/53.5%                 Engineer  : Allen
    Test Mode     : 11n20 2462MHz Tx

                   Ant.   Cable              Amp   Emission
No.    Freq.     Factor  Loss    Reading   factor   Level     Limits    Margin  Remark
       (MHz)     (dB/m)  (dB)    (dBuV)     (dB)   (dBuV/m) (dBuV/m)    (dB)
 ------------------------------------------------------------------------------
  1   2464.46    28.03    3.70     93.87    35.25    90.35    ------    ------   Average
  2   2483.50    28.07    3.71     50.96    35.25    47.49     54.00      6.51   Average
  3   2500.00    28.10    3.72     40.50    35.25    37.07     54.00     16.93   Average
 ------------------------------------------------------------------------------
    Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                -Amp factor.
             2. The emission levels that are 20dB below the official
                limit are not reported.
```



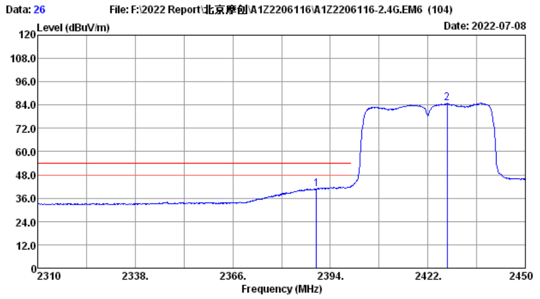
```
    Site no.      : 3m Chamber                   Data no.  : 24
    Dis. / Ant.   : 3m   2021 MCTD1209-3006      Ant. pol. : HORIZONTAL
    Limit         : FCC PART 15C AV
    Env. / Ins.   : 23.8*C/53.5%                 Engineer  : Allen
    Test Mode     : 11n20 2462MHz Tx

                   Ant.   Cable              Amp   Emission
No.    Freq.     Factor  Loss    Reading   factor   Level     Limits    Margin  Remark
       (MHz)     (dB/m)  (dB)    (dBuV)     (dB)   (dBuV/m) (dBuV/m)    (dB)
 ------------------------------------------------------------------------------
  1   2459.06    28.03    3.70     99.35    35.25    95.83    ------    ------   Average
  2   2483.50    28.07    3.71     56.30    35.25    52.83     54.00      1.17   Average
  3   2500.00    28.10    3.72     44.73    35.25    41.30     54.00     12.70   Average
 ------------------------------------------------------------------------------
    Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                -Amp factor.
             2. The emission levels that are 20dB below the official
                limit are not reported.
```

Data: 25 File: F:\2022 Report\北京摩创\A1Z2206116\A1Z2206116-2.4G.EM6 (104)



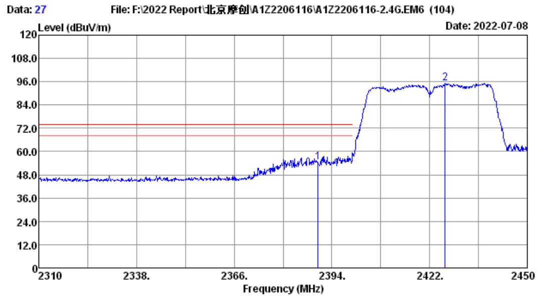
```
Site no.      : 3m Chamber                   Data no.  : 25
Dis. / Ant.   : 3m   2021 MCTD1209-3006      Ant. pol. : HORIZONTAL
Limit         : FCC PART 15C AV
Env. / Ins.   : 23.8*C/53.5%                 Engineer  : Allen
Test Mode     : 11n40 2422MHz Tx

                Ant.   Cable              Amp   Emission
No.    Freq.   Factor  Loss    Reading  factor   Level    Limits   Margin  Remark
       (MHz)   (dB/m)  (dB)    (dBuV)    (dB)   (dBuV/m) (dBuV/m)   (dB)
-------------------------------------------------------------------------------
  1  2390.00   27.89   3.65    50.21    35.24    46.51     54.00     7.49   Average
  2  2427.46   27.96   3.67    94.19    35.24    90.58    ------    ------  Average
-------------------------------------------------------------------------------
    Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                -Amp factor.
             2. The emission levels that are 20dB below the official
                limit are not reported.
```

Data: 26 File: F:\2022 Report\北京摩创\A1Z2206116\A1Z2206116-2.4G.EM6 (104)



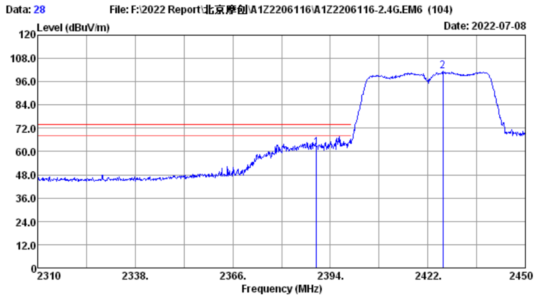
```
Site no.      : 3m Chamber                   Data no.  : 26
Dis. / Ant.   : 3m   2021 MCTD1209-3006      Ant. pol. : VERTICAL
Limit         : FCC PART 15C AV
Env. / Ins.   : 23.8*C/53.5%                 Engineer  : Allen
Test Mode     : 11n40 2422MHz Tx

                Ant.   Cable              Amp   Emission
No.    Freq.   Factor  Loss    Reading  factor   Level    Limits   Margin  Remark
       (MHz)   (dB/m)  (dB)    (dBuV)    (dB)   (dBuV/m) (dBuV/m)   (dB)
-------------------------------------------------------------------------------
  1  2390.00   27.89   3.65    44.33    35.24    40.63     54.00    13.37   Average
  2  2427.60   27.96   3.67    88.56    35.24    84.95    ------    ------  Average
-------------------------------------------------------------------------------
    Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                -Amp factor.
             2. The emission levels that are 20dB below the official
                limit are not reported.
```

Data: 27 File: F:\2022 Report\北京摩创\A1Z2206116\A1Z2206116-2.4G.EM6 (104)

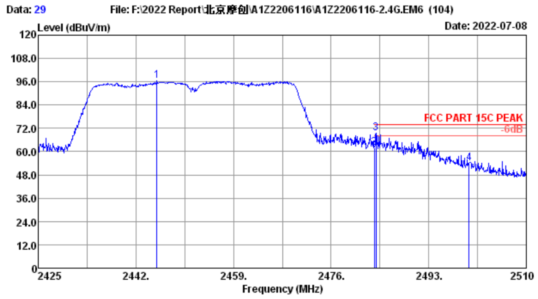


```
Site no.      : 3m Chamber                   Data no.  : 27
Dis. / Ant.   : 3m   2021 MCTD1209-3006      Ant. pol. : VERTICAL
Limit         : FCC PART 15C PEAK
Env. / Ins.   : 23.8*C/53.5%                 Engineer  : Allen
Test Mode     : 11n40 2422MHz Tx

                Ant.   Cable              Amp   Emission
No.    Freq.   Factor  Loss    Reading  factor   Level    Limits   Margin  Remark
       (MHz)   (dB/m)  (dB)    (dBuV)    (dB)   (dBuV/m) (dBuV/m)   (dB)
-------------------------------------------------------------------------------
  1  2390.00   27.89   3.65    58.07    35.24    54.37     74.00    19.63   Peak
  2  2426.48   27.96   3.67    98.64    35.24    95.03    ------    ------  Peak
-------------------------------------------------------------------------------
    Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                -Amp factor.
             2. The emission levels that are 20dB below the official
                limit are not reported.
```

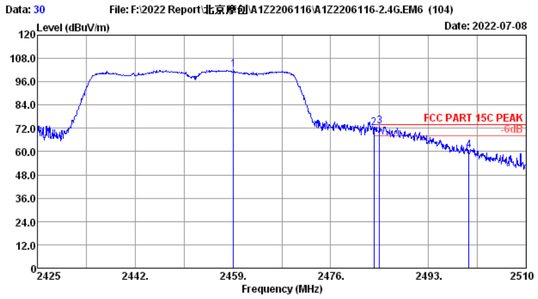
Data: 28 File: F:\2022 Report\北京摩创\A1Z2206116\A1Z2206116-2.4G.EM6 (104)



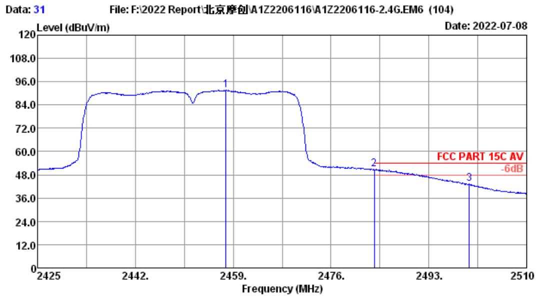
```
Site no.      : 3m Chamber                   Data no.  : 28
Dis. / Ant.   : 3m   2021 MCTD1209-3006      Ant. pol. : HORIZONTAL
Limit         : FCC PART 15C PEAK
Env. / Ins.   : 23.8*C/53.5%                 Engineer  : Allen
Test Mode     : 11n40 2422MHz Tx

                Ant.   Cable              Amp   Emission
No.    Freq.   Factor  Loss    Reading  factor   Level    Limits   Margin  Remark
       (MHz)   (dB/m)  (dB)    (dBuV)    (dB)   (dBuV/m) (dBuV/m)   (dB)
-------------------------------------------------------------------------------
  1  2390.00   27.89   3.65    65.73    35.24    62.03     74.00    11.97   Peak
  2  2426.34   27.96   3.67   104.89    35.24   101.28    ------    ------  Peak
-------------------------------------------------------------------------------
    Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                -Amp factor.
             2. The emission levels that are 20dB below the official
                limit are not reported.
```



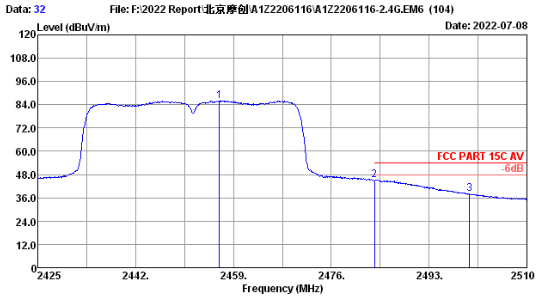
```
Site no.     : 3m Chamber                  Data no.  : 29
Dis. / Ant.  : 3m   2021 MCTD1209-3006     Ant. pol. : VERTICAL
Limit        : FCC PART 15C PEAK
Env. / Ins.  : 23.8*C/53.5%                Engineer  : Allen
Test Mode    : 11n40 2452MHz Tx

                Ant.   Cable               Amp   Emission
No.   Freq.    Factor  Loss    Reading   factor   Level    Limits    Margin  Remark
      (MHz)    (dB/m)  (dB)    (dBuV)     (dB)   (dBuV/m) (dBuV/m)    (dB)
-------------------------------------------------------------------------------
 1  2445.66    28.00   3.68    100.16    35.25    96.59    ------    ------   Peak
 2  2483.50    28.07   3.71     65.46    35.25    61.99     74.00     12.01   Peak
 3  2483.82    28.07   3.71     72.81    35.25    69.34     74.00      4.66   Peak
 4  2500.00    28.10   3.72     57.51    35.25    54.08     74.00     19.92   Peak
-------------------------------------------------------------------------------
    Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                -Amp factor.
             2. The emission levels that are 20dB below the official
                limit are not reported.
```



```
Site no.     : 3m Chamber                  Data no.  : 30
Dis. / Ant.  : 3m   2021 MCTD1209-3006     Ant. pol. : HORIZONTAL
Limit        : FCC PART 15C PEAK
Env. / Ins.  : 23.8*C/53.5%                Engineer  : Allen
Test Mode    : 11n40 2452MHz Tx

                Ant.   Cable               Amp   Emission
No.   Freq.    Factor  Loss    Reading   factor   Level    Limits    Margin  Remark
      (MHz)    (dB/m)  (dB)    (dBuV)     (dB)   (dBuV/m) (dBuV/m)    (dB)
-------------------------------------------------------------------------------
 1  2459.09    28.03   3.70    105.87    35.25   102.35    ------    ------   Peak
 2  2483.50    28.07   3.71     75.54    35.25    72.07     74.00      1.93   Peak
 3  2484.50    28.07   3.71     76.36    35.25    72.89     74.00      1.11   Peak
 4  2500.00    28.10   3.72     64.11    35.25    60.68     74.00     13.32   Peak
-------------------------------------------------------------------------------
    Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                -Amp factor.
             2. The emission levels that are 20dB below the official
                limit are not reported.
```



```
Site no.     : 3m Chamber                  Data no.  : 31
Dis. / Ant.  : 3m   2021 MCTD1209-3006     Ant. pol. : HORIZONTAL
Limit        : FCC PART 15C AV
Env. / Ins.  : 23.8*C/53.5%                Engineer  : Allen
Test Mode    : 11n40 2452MHz Tx

                Ant.   Cable               Amp   Emission
No.   Freq.    Factor  Loss    Reading   factor   Level    Limits    Margin  Remark
      (MHz)    (dB/m)  (dB)    (dBuV)     (dB)   (dBuV/m) (dBuV/m)    (dB)
-------------------------------------------------------------------------------
 1  2457.73    28.03   3.70     95.14    35.25    91.62    ------    ------   Average
 2  2483.50    28.07   3.71     54.22    35.25    50.75     54.00      3.25   Average
 3  2500.00    28.10   3.72     46.65    35.25    43.22     54.00     10.78   Average
-------------------------------------------------------------------------------
    Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                -Amp factor.
             2. The emission levels that are 20dB below the official
                limit are not reported.
```



```
Site no.     : 3m Chamber                  Data no.  : 32
Dis. / Ant.  : 3m   2021 MCTD1209-3006     Ant. pol. : VERTICAL
Limit        : FCC PART 15C AV
Env. / Ins.  : 23.8*C/53.5%                Engineer  : Allen
Test Mode    : 11n40 2452MHz Tx

                Ant.   Cable               Amp   Emission
No.   Freq.    Factor  Loss    Reading   factor   Level    Limits    Margin  Remark
      (MHz)    (dB/m)  (dB)    (dBuV)     (dB)   (dBuV/m) (dBuV/m)    (dB)
-------------------------------------------------------------------------------
 1  2456.54    28.03   3.70     89.50    35.25    85.98    ------    ------   Average
 2  2483.50    28.07   3.71     48.57    35.25    45.10     54.00      8.90   Average
 3  2500.00    28.10   3.72     41.31    35.25    37.88     54.00     16.12   Average
-------------------------------------------------------------------------------
    Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading
                -Amp factor.
             2. The emission levels that are 20dB below the official
                limit are not reported.
```

7. 6dB & 99% Bandwidth Test

7.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	PXA Signal Analyzer	Agilent	N9030A	MY51380221	Apr.07,22	1 Year
2.	RF Cable	HUBER+SUHNER	SUCOFLE X-106	505238/6	Apr.06,22	1 Year

7.2. Limit

For direct sequence systems, the minimum 6dB bandwidth shall be at least 500kHz

7.3. Test Procedure

Use the test method descried in ANSI C63.10 Section 11.8:
The automatic bandwidth measurement capability of an instrument may be employed using the X dB bandwidth mode with X set to 6 dB, if the functionality described in 11.8.1 (i.e., RBW = 100 kHz, VBW ≥ 3 × RBW, and peak detector with maximum hold) is implemented by the instrumentation function. When using this capability, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be ≥6 dB.

Use the test method descried in ANSI C63.10 Section 6.9.2:
The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers are each equal to 0.5% of the total mean power of the given emission. The following procedure shall be used for measuring 99% power bandwidth:

a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.

b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be approximately three times the RBW, unless otherwise specified by the applicable requirement.

c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.5.2.

d) Step a) through step c) might require iteration to adjust within the specified range.

e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.

f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.

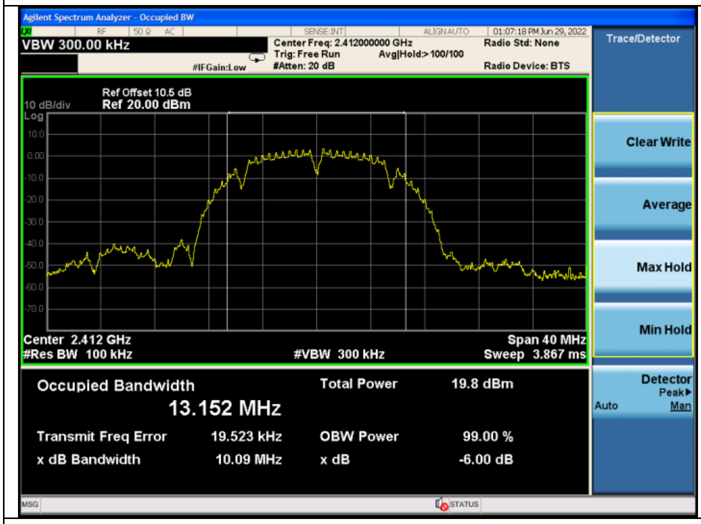
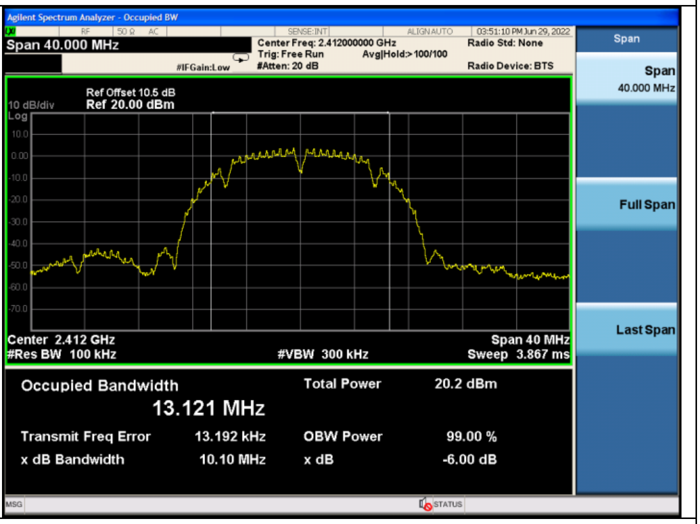
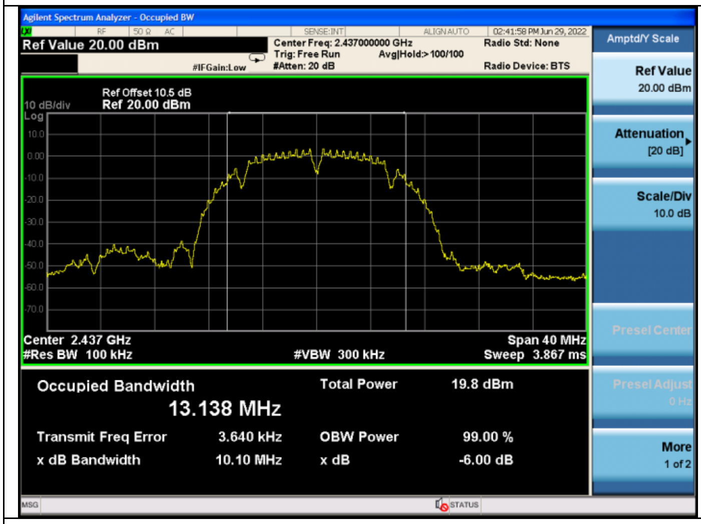
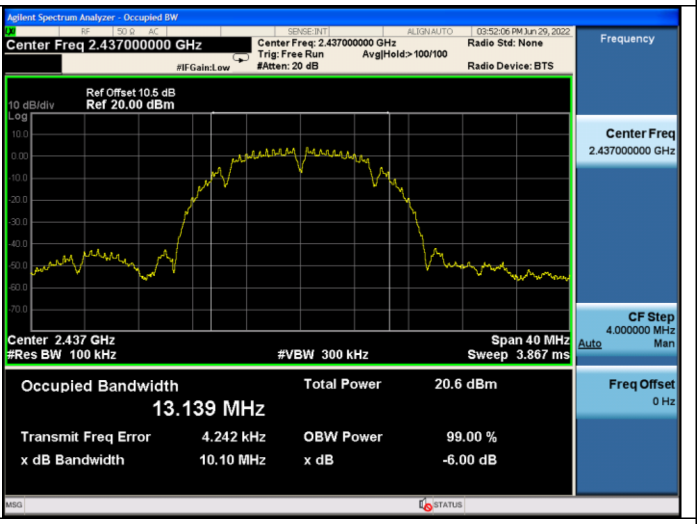
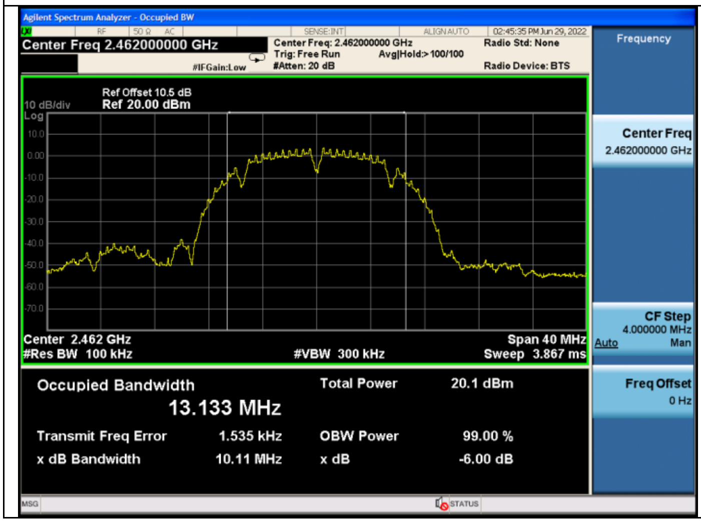
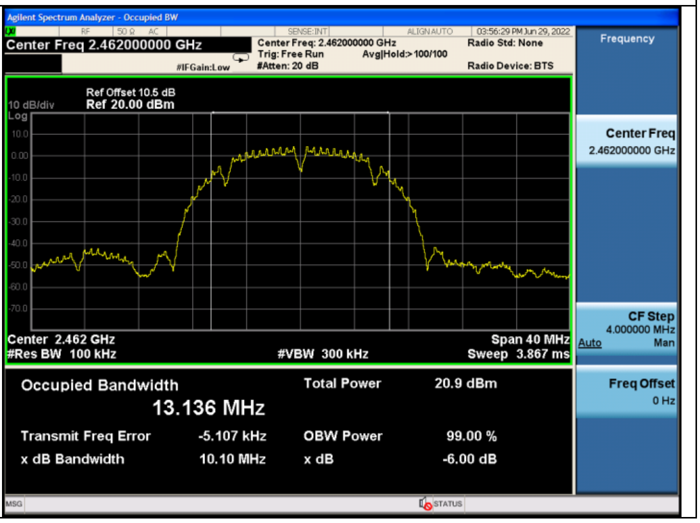
g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.

h) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

7.4.Test Results

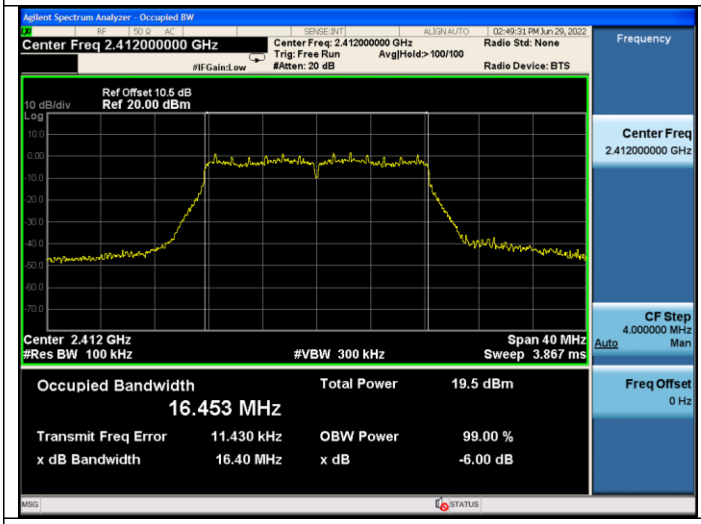
EUT: Truck Infotainment Unit		
M/N: Service Entertainment Module 2.5		
Test date: 2022-06-29	Pressure: 102.1±1.0 kpa	Humidity: 53.2±3.0%
Tested by: Xinyao	Test site: RF site	Temperature: 22.3±0.6℃

Test Mode	CH	-6dB Bandwidth(MHz)		Limit (KHz)
		ANT1	ANT2	
11b	CH1	10.09	10.10	≧500
	CH6	10.10	10.10	
	CH11	10.11	10.10	
11g	CH1	16.40	16.41	≧500
	CH6	16.39	16.40	
	CH11	16.40	16.39	
11n HT20	CH1	17.58	17.60	≧500
	CH6	17.56	17.57	
	CH11	17.56	17.59	
11n HT40	CH3	35.77	35.76	≧500
	CH6	35.78	35.70	
	CH9	35.86	35.78	
Conclusion:Pass				

ANT1:	**ANT2:**
Test Mode: IEEE 802.11b Test CH1: 2412MHz	Test Mode: IEEE 802.11b Test CH1: 2412MHz
 Agilent Spectrum Analyzer - Occupied BW 01:07:18 PM Jun 29, 2022 VBW 300.00 kHz Center Freq: 2.412000000 GHz Trig: Free Run Avg|Hold:>100/100 #Atten: 20 dB Radio Std: None Radio Device: BTS #IFGain:Low Ref Offset 10.5 dB Ref 20.00 dBm Center 2.412 GHz #Res BW 100 kHz #VBW 300 kHz Span 40 MHz Sweep 3.867 ms Occupied Bandwidth 13.152 MHz Total Power 19.8 dBm Transmit Freq Error 19.523 kHz OBW Power 99.00 % x dB Bandwidth 10.09 MHz x dB -6.00 dB Trace/Detector Clear Write Average Max Hold Min Hold Detector Peak Auto Man 10 dB/div Log	 Agilent Spectrum Analyzer - Occupied BW 03:51:10 PM Jun 29, 2022 Span 40.000 MHz Center Freq: 2.412000000 GHz Trig: Free Run Avg|Hold:>100/100 #Atten: 20 dB Radio Std: None Radio Device: BTS #IFGain:Low Ref Offset 10.5 dB Ref 20.00 dBm Center 2.412 GHz #Res BW 100 kHz #VBW 300 kHz Span 40 MHz Sweep 3.867 ms Occupied Bandwidth 13.121 MHz Total Power 20.2 dBm Transmit Freq Error 13.192 kHz OBW Power 99.00 % x dB Bandwidth 10.10 MHz x dB -6.00 dB Span Span 40.000 MHz Full Span Last Span 10 dB/div Log
Test CH6: 2437MHz	Test CH6: 2437MHz
 Agilent Spectrum Analyzer - Occupied BW 02:41:58 PM Jun 29, 2022 Ref Value 20.00 dBm Center Freq: 2.437000000 GHz Trig: Free Run Avg|Hold:>100/100 #Atten: 20 dB Radio Std: None Radio Device: BTS #IFGain:Low Ref Offset 10.5 dB Ref 20.00 dBm Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 40 MHz Sweep 3.867 ms Occupied Bandwidth 13.138 MHz Total Power 19.8 dBm Transmit Freq Error 3.640 kHz OBW Power 99.00 % x dB Bandwidth 10.10 MHz x dB -6.00 dB Amptd/Y Scale Ref Value 20.00 dBm Attenuation [20 dB] Scale/Div 10.0 dB Presel Center Presel Adjust 0 Hz More 1 of 2 10 dB/div Log	 Agilent Spectrum Analyzer - Occupied BW 03:52:06 PM Jun 29, 2022 Center Freq 2.437000000 GHz Center Freq: 2.437000000 GHz Trig: Free Run Avg|Hold:>100/100 #Atten: 20 dB Radio Std: None Radio Device: BTS #IFGain:Low Ref Offset 10.5 dB Ref 20.00 dBm Center 2.437 GHz #Res BW 100 kHz #VBW 300 kHz Span 40 MHz Sweep 3.867 ms Occupied Bandwidth 13.139 MHz Total Power 20.6 dBm Transmit Freq Error 4.242 kHz OBW Power 99.00 % x dB Bandwidth 10.10 MHz x dB -6.00 dB Frequency Center Freq 2.437000000 GHz CF Step 4.000000 MHz Auto Man Freq Offset 0 Hz 10 dB/div Log
Test CH11: 2462MHz	Test CH11: 2462MHz
 Agilent Spectrum Analyzer - Occupied BW 02:45:35 PM Jun 29, 2022 Center Freq 2.462000000 GHz Center Freq: 2.462000000 GHz Trig: Free Run Avg|Hold:>100/100 #Atten: 20 dB Radio Std: None Radio Device: BTS #IFGain:Low Ref Offset 10.5 dB Ref 20.00 dBm Center 2.462 GHz #Res BW 100 kHz #VBW 300 kHz Span 40 MHz Sweep 3.867 ms Occupied Bandwidth 13.133 MHz Total Power 20.1 dBm Transmit Freq Error 1.535 kHz OBW Power 99.00 % x dB Bandwidth 10.11 MHz x dB -6.00 dB Frequency Center Freq 2.462000000 GHz CF Step 4.000000 MHz Auto Man Freq Offset 0 Hz 10 dB/div Log	 Agilent Spectrum Analyzer - Occupied BW 03:56:29 PM Jun 29, 2022 Center Freq 2.462000000 GHz Center Freq: 2.462000000 GHz Trig: Free Run Avg|Hold:>100/100 #Atten: 20 dB Radio Std: None Radio Device: BTS #IFGain:Low Ref Offset 10.5 dB Ref 20.00 dBm Center 2.462 GHz #Res BW 100 kHz #VBW 300 kHz Span 40 MHz Sweep 3.867 ms Occupied Bandwidth 13.136 MHz Total Power 20.9 dBm Transmit Freq Error -5.107 kHz OBW Power 99.00 % x dB Bandwidth 10.10 MHz x dB -6.00 dB Frequency Center Freq 2.462000000 GHz CF Step 4.000000 MHz Auto Man Freq Offset 0 Hz 10 dB/div Log

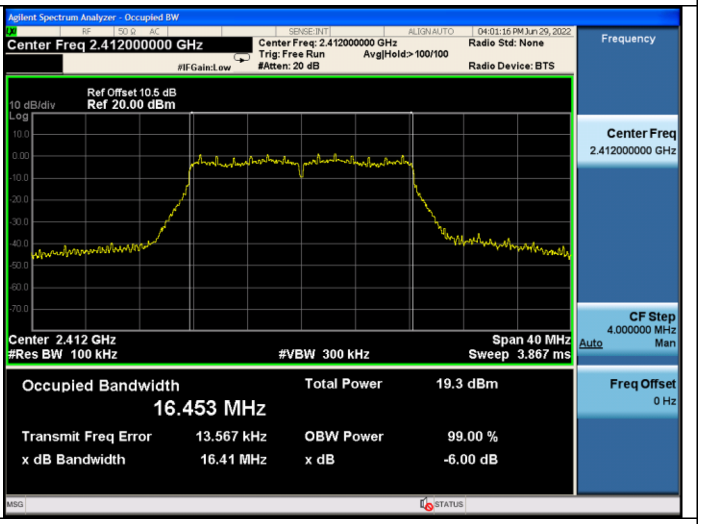
ANT1:

Test Mode: IEEE 802.11g
Test CH1: 2412MHz

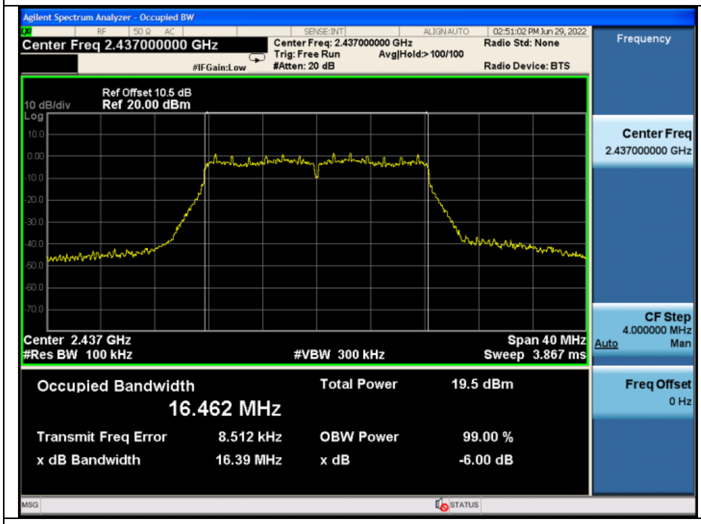

Agilent Spectrum Analyzer - Occupied BW
RF | 50 Ω | AC | SENSE:INT | ALIGN AUTO | 02:49:31 PM Jun 29, 2022
Center Freq 2.412000000 GHz
Center Freq: 2.412000000 GHz | Radio Std: None
Trig: Free Run | Avg|Hold:>100/100
#IFGain:Low | #Atten: 20 dB | Radio Device: BTS
Ref Offset 10.5 dB
10 dB/div Ref 20.00 dBm
Center 2.412 GHz | Span 40 MHz
#Res BW 100 kHz | #VBW 300 kHz | Sweep 3.867 ms
Occupied Bandwidth 16.453 MHz | Total Power 19.5 dBm
Transmit Freq Error 11.430 kHz | OBW Power 99.00 %
x dB Bandwidth 16.40 MHz | x dB -6.00 dB
Log
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Frequency
Center Freq
2.412000000 GHz
CF Step
4.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

ANT2:

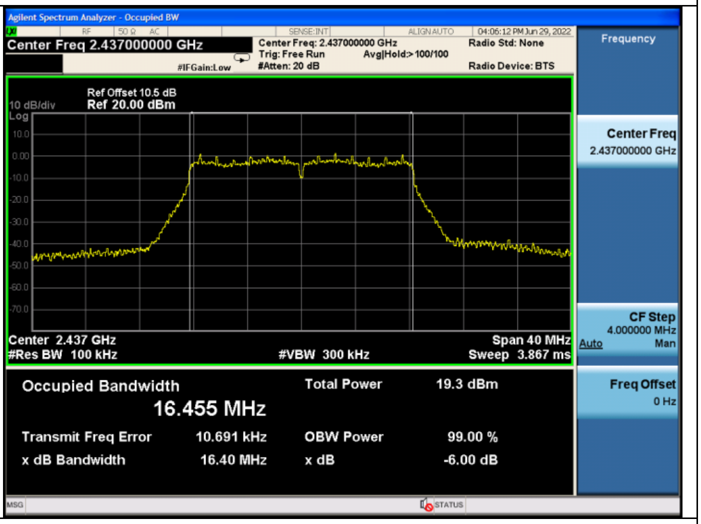
Test Mode: IEEE 802.11g
Test CH1: 2412MHz


Agilent Spectrum Analyzer - Occupied BW
RF | 50 Ω | AC | SENSE:INT | ALIGN AUTO | 04:01:16 PM Jun 29, 2022
Center Freq 2.412000000 GHz
Center Freq: 2.412000000 GHz | Radio Std: None
Trig: Free Run | Avg|Hold:>100/100
#IFGain:Low | #Atten: 20 dB | Radio Device: BTS
Ref Offset 10.5 dB
10 dB/div Ref 20.00 dBm
Center 2.412 GHz | Span 40 MHz
#Res BW 100 kHz | #VBW 300 kHz | Sweep 3.867 ms
Occupied Bandwidth 16.453 MHz | Total Power 19.3 dBm
Transmit Freq Error 13.567 kHz | OBW Power 99.00 %
x dB Bandwidth 16.41 MHz | x dB -6.00 dB
Log
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Frequency
Center Freq
2.412000000 GHz
CF Step
4.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

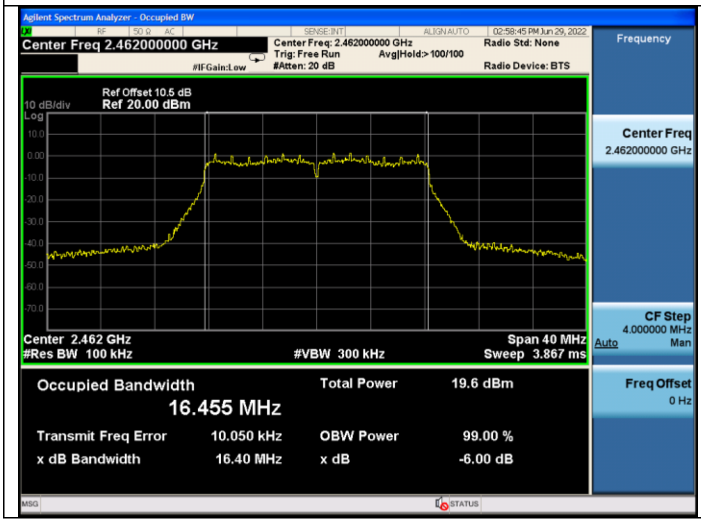
Test CH6: 2437MHz


Agilent Spectrum Analyzer - Occupied BW
RF | 50 Ω | AC | SENSE:INT | ALIGN AUTO | 02:51:02 PM Jun 29, 2022
Center Freq 2.437000000 GHz
Center Freq: 2.437000000 GHz | Radio Std: None
Trig: Free Run | Avg|Hold:>100/100
#IFGain:Low | #Atten: 20 dB | Radio Device: BTS
Ref Offset 10.5 dB
10 dB/div Ref 20.00 dBm
Center 2.437 GHz | Span 40 MHz
#Res BW 100 kHz | #VBW 300 kHz | Sweep 3.867 ms
Occupied Bandwidth 16.462 MHz | Total Power 19.5 dBm
Transmit Freq Error 8.512 kHz | OBW Power 99.00 %
x dB Bandwidth 16.39 MHz | x dB -6.00 dB
Log
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Frequency
Center Freq
2.437000000 GHz
CF Step
4.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

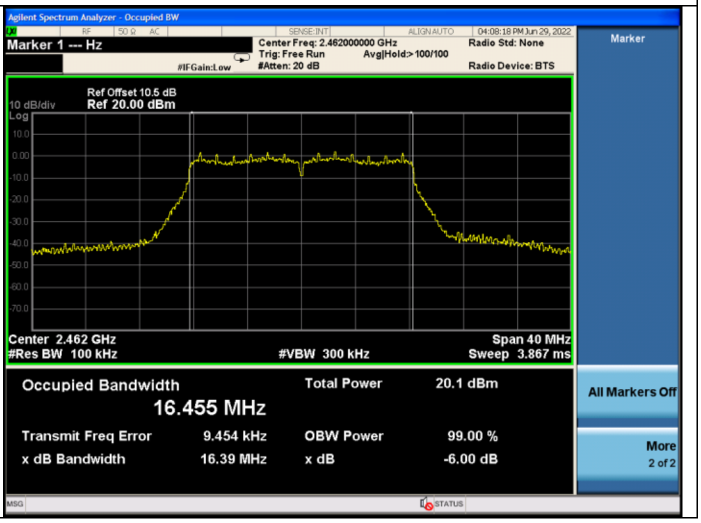
Test CH6: 2437MHz


Agilent Spectrum Analyzer - Occupied BW
RF | 50 Ω | AC | SENSE:INT | ALIGN AUTO | 04:06:12 PM Jun 29, 2022
Center Freq 2.437000000 GHz
Center Freq: 2.437000000 GHz | Radio Std: None
Trig: Free Run | Avg|Hold:>100/100
#IFGain:Low | #Atten: 20 dB | Radio Device: BTS
Ref Offset 10.5 dB
10 dB/div Ref 20.00 dBm
Center 2.437 GHz | Span 40 MHz
#Res BW 100 kHz | #VBW 300 kHz | Sweep 3.867 ms
Occupied Bandwidth 16.455 MHz | Total Power 19.3 dBm
Transmit Freq Error 10.691 kHz | OBW Power 99.00 %
x dB Bandwidth 16.40 MHz | x dB -6.00 dB
Log
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Frequency
Center Freq
2.437000000 GHz
CF Step
4.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

Test CH11: 2462MHz

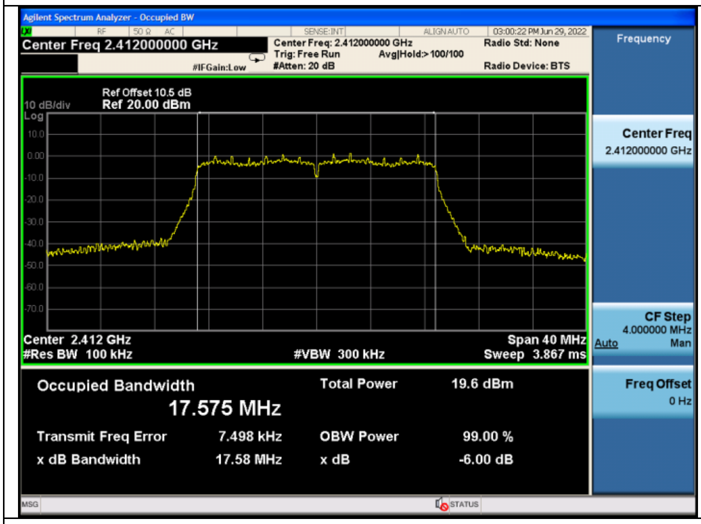

Agilent Spectrum Analyzer - Occupied BW
RF | 50 Ω | AC | SENSE:INT | ALIGN AUTO | 02:58:45 PM Jun 29, 2022
Center Freq 2.462000000 GHz
Center Freq: 2.462000000 GHz | Radio Std: None
Trig: Free Run | Avg|Hold:>100/100
#IFGain:Low | #Atten: 20 dB | Radio Device: BTS
Ref Offset 10.5 dB
10 dB/div Ref 20.00 dBm
Center 2.462 GHz | Span 40 MHz
#Res BW 100 kHz | #VBW 300 kHz | Sweep 3.867 ms
Occupied Bandwidth 16.455 MHz | Total Power 19.6 dBm
Transmit Freq Error 10.050 kHz | OBW Power 99.00 %
x dB Bandwidth 16.40 MHz | x dB -6.00 dB
Log
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Frequency
Center Freq
2.462000000 GHz
CF Step
4.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

Test CH11: 2462MHz


Agilent Spectrum Analyzer - Occupied BW
RF | 50 Ω | AC | SENSE:INT | ALIGN AUTO | 04:08:18 PM Jun 29, 2022
Marker 1 --- Hz
Center Freq: 2.462000000 GHz | Radio Std: None
Trig: Free Run | Avg|Hold:>100/100
#IFGain:Low | #Atten: 20 dB | Radio Device: BTS
Ref Offset 10.5 dB
10 dB/div Ref 20.00 dBm
Center 2.462 GHz | Span 40 MHz
#Res BW 100 kHz | #VBW 300 kHz | Sweep 3.867 ms
Occupied Bandwidth 16.455 MHz | Total Power 20.1 dBm
Transmit Freq Error 9.454 kHz | OBW Power 99.00 %
x dB Bandwidth 16.39 MHz | x dB -6.00 dB
Log
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
Marker
All Markers Off
More
2 of 2
MSG
STATUS

ANT1:

Test Mode: IEEE 802.11n HT20
Test CH1: 2412MHz

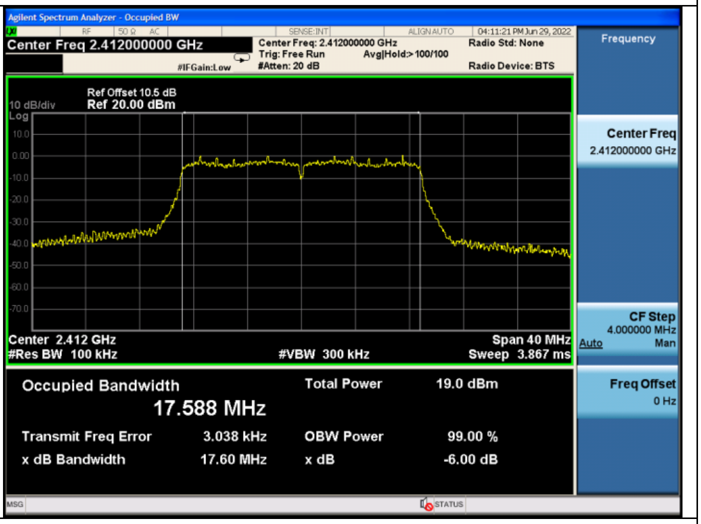

Agilent Spectrum Analyzer - Occupied BW
RF
50 Ω
AC
SENSE:INT
ALIGN AUTO
Frequency
Center Freq
2.412000000 GHz
CF Step
4.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0

03:00:22 PM Jun 29, 2022
Center Freq 2.412000000 GHz
Center Freq: 2.412000000 GHz
Trig: Free Run
Avg|Hold:> 100/100
#IFGain:Low
#Atten: 20 dB
Radio Std: None
Radio Device: BTS
Ref Offset 10.5 dB
10 dB/div Ref 20.00 dBm
Log
Center 2.412 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 40 MHz
Sweep 3.867 ms

Occupied Bandwidth		Total Power	19.6 dBm
	17.575 MHz		
Transmit Freq Error	7.498 kHz	OBW Power	99.00 %
x dB Bandwidth	17.58 MHz	x dB	-6.00 dB

ANT2:

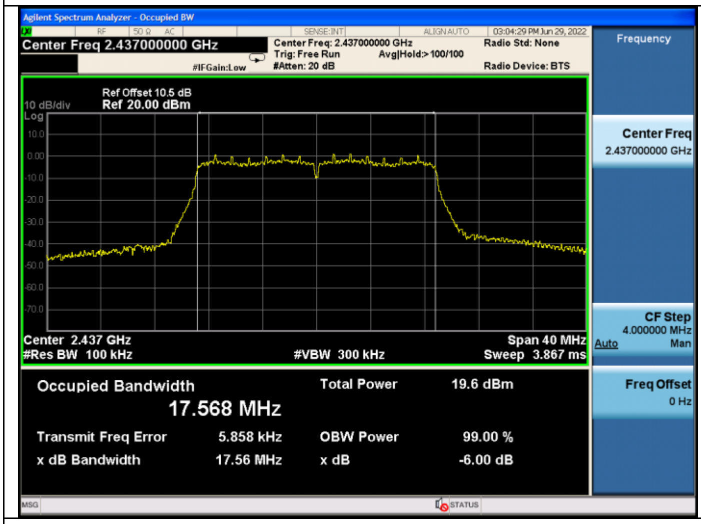
Test Mode: IEEE 802.11n HT20
Test CH1: 2412MHz


Agilent Spectrum Analyzer - Occupied BW
RF
50 Ω
AC
SENSE:INT
ALIGN AUTO
Frequency
Center Freq
2.412000000 GHz
CF Step
4.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0

04:11:21 PM Jun 29, 2022
Center Freq 2.412000000 GHz
Center Freq: 2.412000000 GHz
Trig: Free Run
Avg|Hold:> 100/100
#IFGain:Low
#Atten: 20 dB
Radio Std: None
Radio Device: BTS
Ref Offset 10.5 dB
10 dB/div Ref 20.00 dBm
Log
Center 2.412 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 40 MHz
Sweep 3.867 ms

Occupied Bandwidth		Total Power	19.0 dBm
	17.588 MHz		
Transmit Freq Error	3.038 kHz	OBW Power	99.00 %
x dB Bandwidth	17.60 MHz	x dB	-6.00 dB

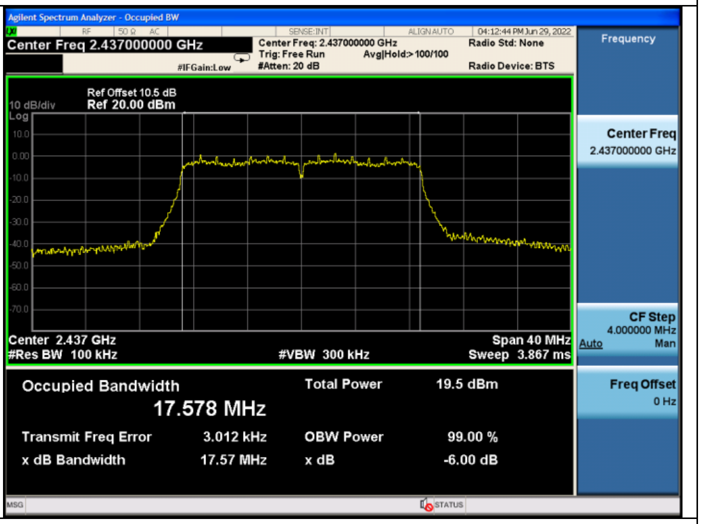
Test CH6: 2437MHz


Agilent Spectrum Analyzer - Occupied BW
RF
50 Ω
AC
SENSE:INT
ALIGN AUTO
Frequency
Center Freq
2.437000000 GHz
CF Step
4.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0

03:04:29 PM Jun 29, 2022
Center Freq 2.437000000 GHz
Center Freq: 2.437000000 GHz
Trig: Free Run
Avg|Hold:> 100/100
#IFGain:Low
#Atten: 20 dB
Radio Std: None
Radio Device: BTS
Ref Offset 10.5 dB
10 dB/div Ref 20.00 dBm
Log
Center 2.437 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 40 MHz
Sweep 3.867 ms

Occupied Bandwidth		Total Power	19.6 dBm
	17.568 MHz		
Transmit Freq Error	5.858 kHz	OBW Power	99.00 %
x dB Bandwidth	17.56 MHz	x dB	-6.00 dB

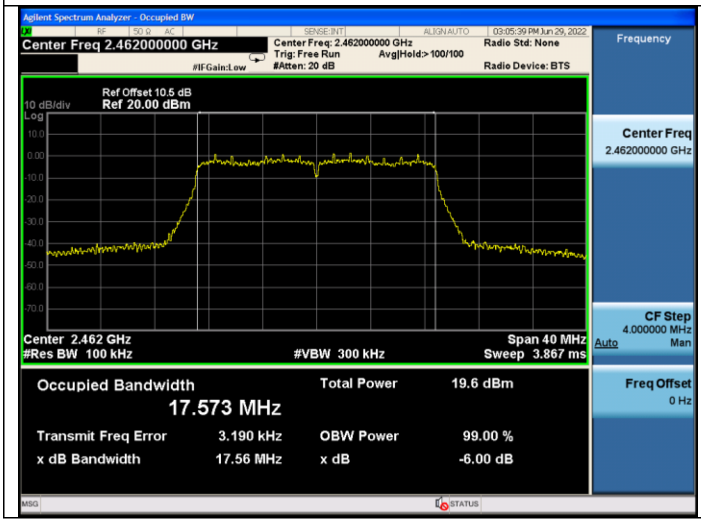
Test CH6: 2437MHz


Agilent Spectrum Analyzer - Occupied BW
RF
50 Ω
AC
SENSE:INT
ALIGN AUTO
Frequency
Center Freq
2.437000000 GHz
CF Step
4.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0

04:12:44 PM Jun 29, 2022
Center Freq 2.437000000 GHz
Center Freq: 2.437000000 GHz
Trig: Free Run
Avg|Hold:> 100/100
#IFGain:Low
#Atten: 20 dB
Radio Std: None
Radio Device: BTS
Ref Offset 10.5 dB
10 dB/div Ref 20.00 dBm
Log
Center 2.437 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 40 MHz
Sweep 3.867 ms

Occupied Bandwidth		Total Power	19.5 dBm
	17.578 MHz		
Transmit Freq Error	3.012 kHz	OBW Power	99.00 %
x dB Bandwidth	17.57 MHz	x dB	-6.00 dB

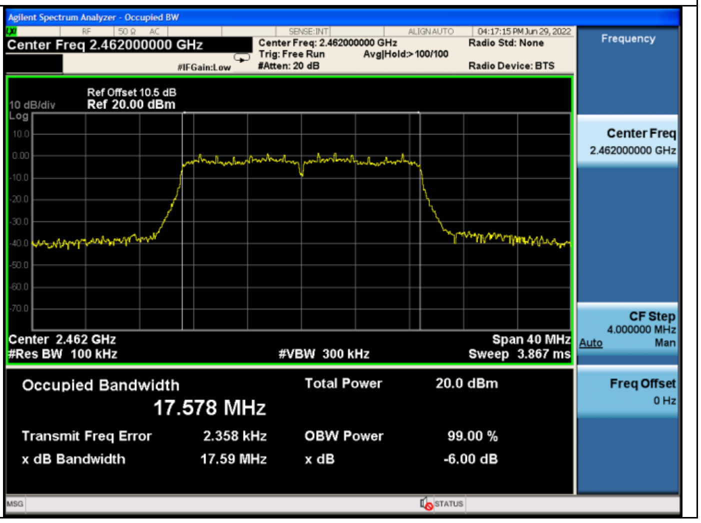
Test CH11: 2462MHz


Agilent Spectrum Analyzer - Occupied BW
RF
50 Ω
AC
SENSE:INT
ALIGN AUTO
Frequency
Center Freq
2.462000000 GHz
CF Step
4.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0

03:05:39 PM Jun 29, 2022
Center Freq 2.462000000 GHz
Center Freq: 2.462000000 GHz
Trig: Free Run
Avg|Hold:> 100/100
#IFGain:Low
#Atten: 20 dB
Radio Std: None
Radio Device: BTS
Ref Offset 10.5 dB
10 dB/div Ref 20.00 dBm
Log
Center 2.462 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 40 MHz
Sweep 3.867 ms

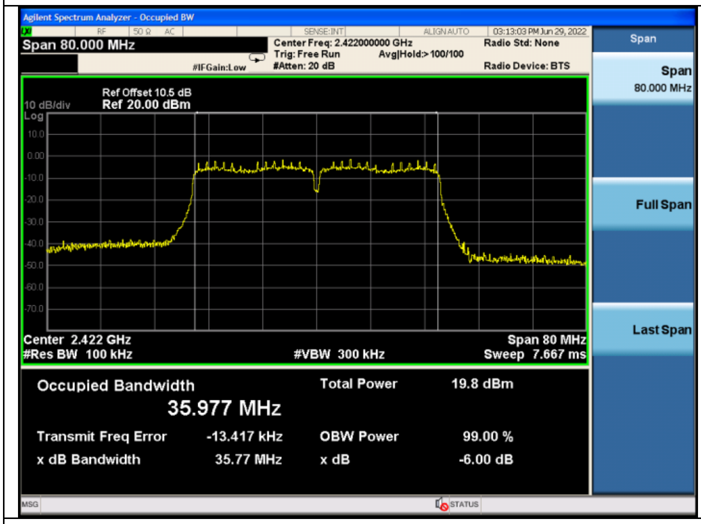
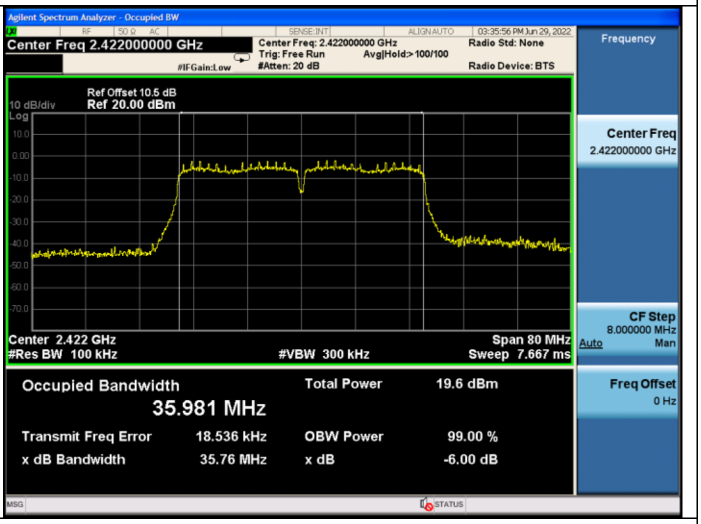
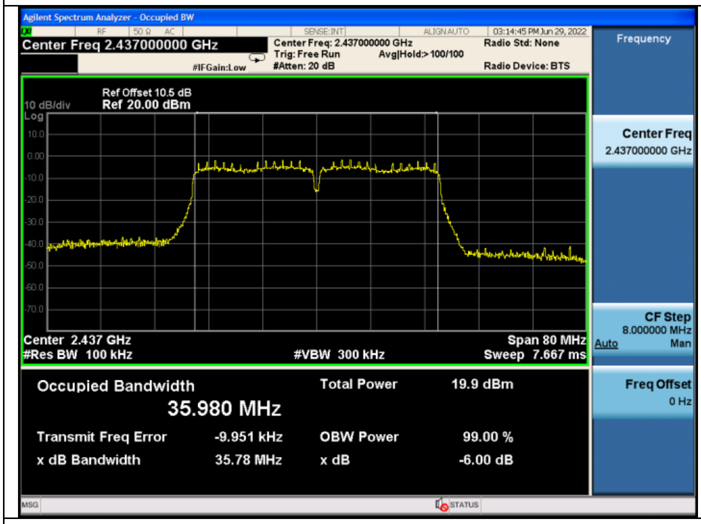
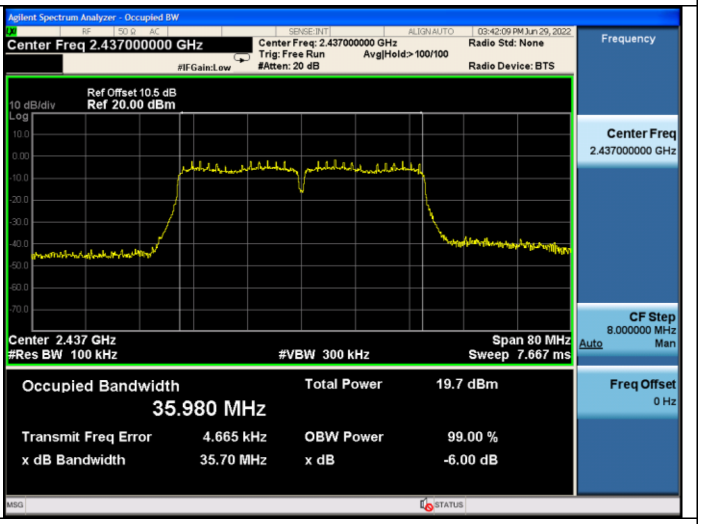
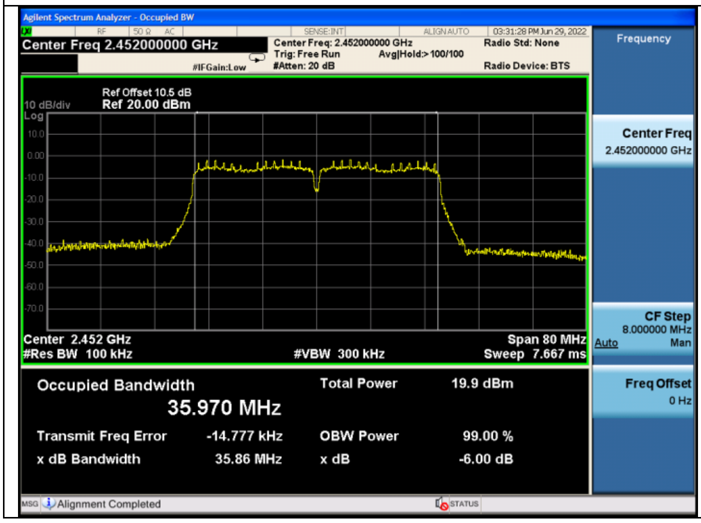
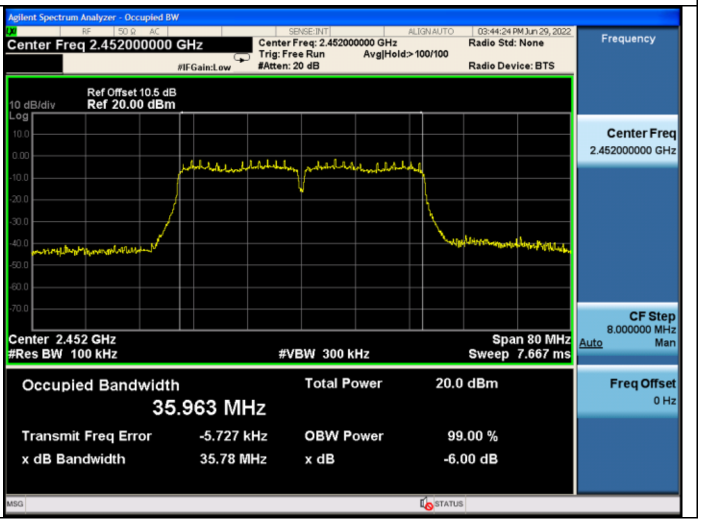
Occupied Bandwidth		Total Power	19.6 dBm
	17.573 MHz		
Transmit Freq Error	3.190 kHz	OBW Power	99.00 %
x dB Bandwidth	17.56 MHz	x dB	-6.00 dB

Test CH11: 2462MHz


Agilent Spectrum Analyzer - Occupied BW
RF
50 Ω
AC
SENSE:INT
ALIGN AUTO
Frequency
Center Freq
2.462000000 GHz
CF Step
4.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0

04:17:15 PM Jun 29, 2022
Center Freq 2.462000000 GHz
Center Freq: 2.462000000 GHz
Trig: Free Run
Avg|Hold:> 100/100
#IFGain:Low
#Atten: 20 dB
Radio Std: None
Radio Device: BTS
Ref Offset 10.5 dB
10 dB/div Ref 20.00 dBm
Log
Center 2.462 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 40 MHz
Sweep 3.867 ms

Occupied Bandwidth		Total Power	20.0 dBm
	17.578 MHz		
Transmit Freq Error	2.358 kHz	OBW Power	99.00 %
x dB Bandwidth	17.59 MHz	x dB	-6.00 dB

ANT1:	**ANT2:**
Test Mode: IEEE 802.11n HT40 Test CH3: 2422MHz	Test Mode: IEEE 802.11n HT40 Test CH3: 2422MHz
 Agilent Spectrum Analyzer - Occupied BW RF 50 Ω AC SENSE:INT ALIGN AUTO 03:13:03 PM Jun 29, 2022 Span 80.000 MHz Center Freq: 2.422000000 GHz Radio Std: None Trig: Free Run Avg|Hold:>100/100 #IFGain:Low #Atten: 20 dB Radio Device: BTS Ref Offset 10.5 dB 10 dB/div Ref 20.00 dBm Center 2.422 GHz Span 80 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 7.667 ms Occupied Bandwidth Total Power 19.8 dBm 35.977 MHz Transmit Freq Error -13.417 kHz OBW Power 99.00 % x dB Bandwidth 35.77 MHz x dB -6.00 dB Span Span 80.000 MHz Full Span Last Span MSG STATUS	 Agilent Spectrum Analyzer - Occupied BW RF 50 Ω AC SENSE:INT ALIGN AUTO 03:35:56 PM Jun 29, 2022 Center Freq 2.422000000 GHz Center Freq: 2.422000000 GHz Radio Std: None Trig: Free Run Avg|Hold:>100/100 #IFGain:Low #Atten: 20 dB Radio Device: BTS Ref Offset 10.5 dB 10 dB/div Ref 20.00 dBm Center 2.422 GHz Span 80 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 7.667 ms Occupied Bandwidth Total Power 19.6 dBm 35.981 MHz Transmit Freq Error 18.536 kHz OBW Power 99.00 % x dB Bandwidth 35.76 MHz x dB -6.00 dB Frequency Center Freq 2.422000000 GHz CF Step 8.000000 MHz Auto Man Freq Offset 0 Hz MSG STATUS
Test CH6: 2437MHz	Test CH6: 2437MHz
 Agilent Spectrum Analyzer - Occupied BW RF 50 Ω AC SENSE:INT ALIGN AUTO 03:14:45 PM Jun 29, 2022 Center Freq 2.437000000 GHz Center Freq: 2.437000000 GHz Radio Std: None Trig: Free Run Avg|Hold:>100/100 #IFGain:Low #Atten: 20 dB Radio Device: BTS Ref Offset 10.5 dB 10 dB/div Ref 20.00 dBm Center 2.437 GHz Span 80 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 7.667 ms Occupied Bandwidth Total Power 19.9 dBm 35.980 MHz Transmit Freq Error -9.951 kHz OBW Power 99.00 % x dB Bandwidth 35.78 MHz x dB -6.00 dB Frequency Center Freq 2.437000000 GHz CF Step 8.000000 MHz Auto Man Freq Offset 0 Hz MSG STATUS	 Agilent Spectrum Analyzer - Occupied BW RF 50 Ω AC SENSE:INT ALIGN AUTO 03:42:09 PM Jun 29, 2022 Center Freq 2.437000000 GHz Center Freq: 2.437000000 GHz Radio Std: None Trig: Free Run Avg|Hold:>100/100 #IFGain:Low #Atten: 20 dB Radio Device: BTS Ref Offset 10.5 dB 10 dB/div Ref 20.00 dBm Center 2.437 GHz Span 80 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 7.667 ms Occupied Bandwidth Total Power 19.7 dBm 35.980 MHz Transmit Freq Error 4.665 kHz OBW Power 99.00 % x dB Bandwidth 35.70 MHz x dB -6.00 dB Frequency Center Freq 2.437000000 GHz CF Step 8.000000 MHz Auto Man Freq Offset 0 Hz MSG STATUS
Test CH9: 2452MHz	Test CH9: 2452MHz
 Agilent Spectrum Analyzer - Occupied BW RF 50 Ω AC SENSE:INT ALIGN AUTO 03:31:28 PM Jun 29, 2022 Center Freq 2.452000000 GHz Center Freq: 2.452000000 GHz Radio Std: None Trig: Free Run Avg|Hold:>100/100 #IFGain:Low #Atten: 20 dB Radio Device: BTS Ref Offset 10.5 dB 10 dB/div Ref 20.00 dBm Center 2.452 GHz Span 80 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 7.667 ms Occupied Bandwidth Total Power 19.9 dBm 35.970 MHz Transmit Freq Error -14.777 kHz OBW Power 99.00 % x dB Bandwidth 35.86 MHz x dB -6.00 dB Frequency Center Freq 2.452000000 GHz CF Step 8.000000 MHz Auto Man Freq Offset 0 Hz MSG Alignment Completed STATUS	 Agilent Spectrum Analyzer - Occupied BW RF 50 Ω AC SENSE:INT ALIGN AUTO 03:44:24 PM Jun 29, 2022 Center Freq 2.452000000 GHz Center Freq: 2.452000000 GHz Radio Std: None Trig: Free Run Avg|Hold:>100/100 #IFGain:Low #Atten: 20 dB Radio Device: BTS Ref Offset 10.5 dB 10 dB/div Ref 20.00 dBm Center 2.452 GHz Span 80 MHz #Res BW 100 kHz #VBW 300 kHz Sweep 7.667 ms Occupied Bandwidth Total Power 20.0 dBm 35.963 MHz Transmit Freq Error -5.727 kHz OBW Power 99.00 % x dB Bandwidth 35.78 MHz x dB -6.00 dB Frequency Center Freq 2.452000000 GHz CF Step 8.000000 MHz Auto Man Freq Offset 0 Hz MSG STATUS

EUT: Truck Infotainment Unit		
M/N: Service Entertainment Module 2.5		
Test date: 2022-06-28~29	Pressure: 102.1±1.0 kpa	Humidity: 53.2±3.0%
Tested by: Xinyao	Test site: RF site	Temperature: 22.3±0.6℃

Test Mode	CH	99%Bandwidth(MHz)		Limit (MHz)
		ANT1	ANT2	
11b	CH1	13.172	13.175	N/A
	CH6	13.164	13.162	
	CH11	13.178	13.174	
11g	CH1	16.561	16.603	N/A
	CH6	16.535	16.531	
	CH11	16.540	16.545	
11n HT20	CH1	17.599	17.635	N/A
	CH6	17.594	17.611	
	CH11	17.607	17.609	
11n HT40	CH3	36.021	36.012	N/A
	CH6	36.010	36.001	
	CH9	36.001	36.030	
Conclusion:Pass				