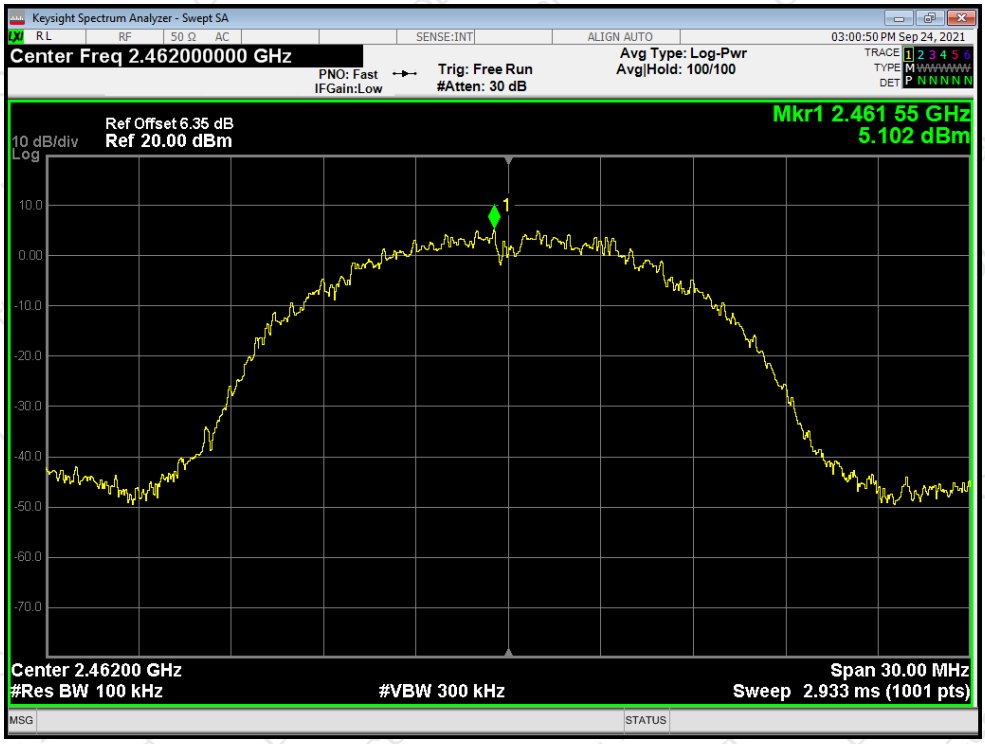
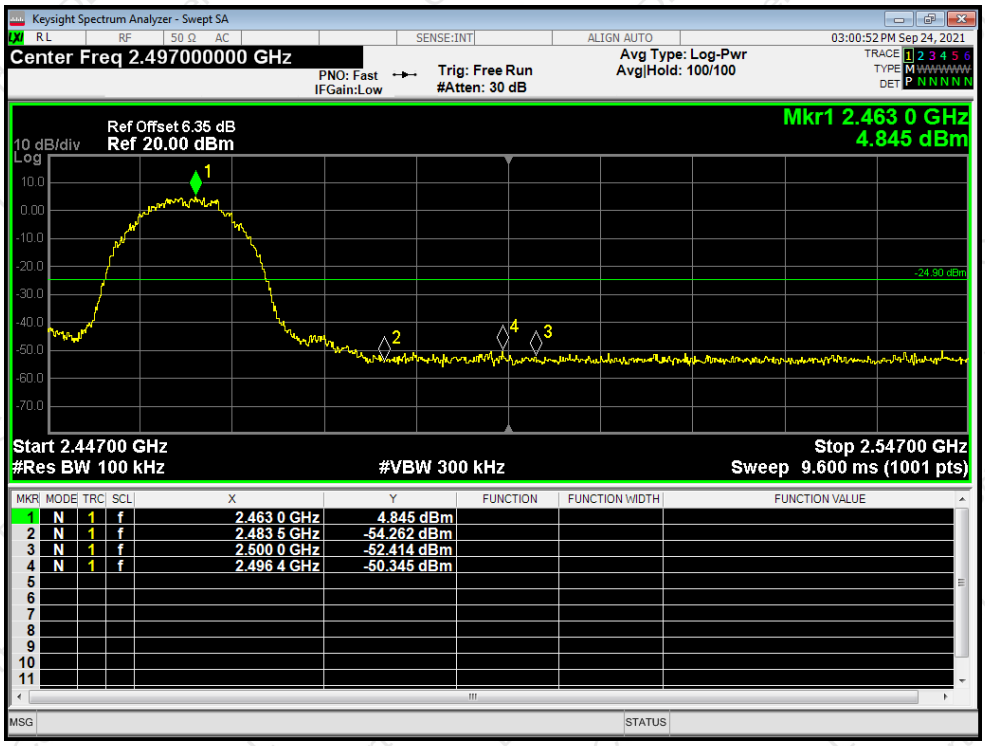
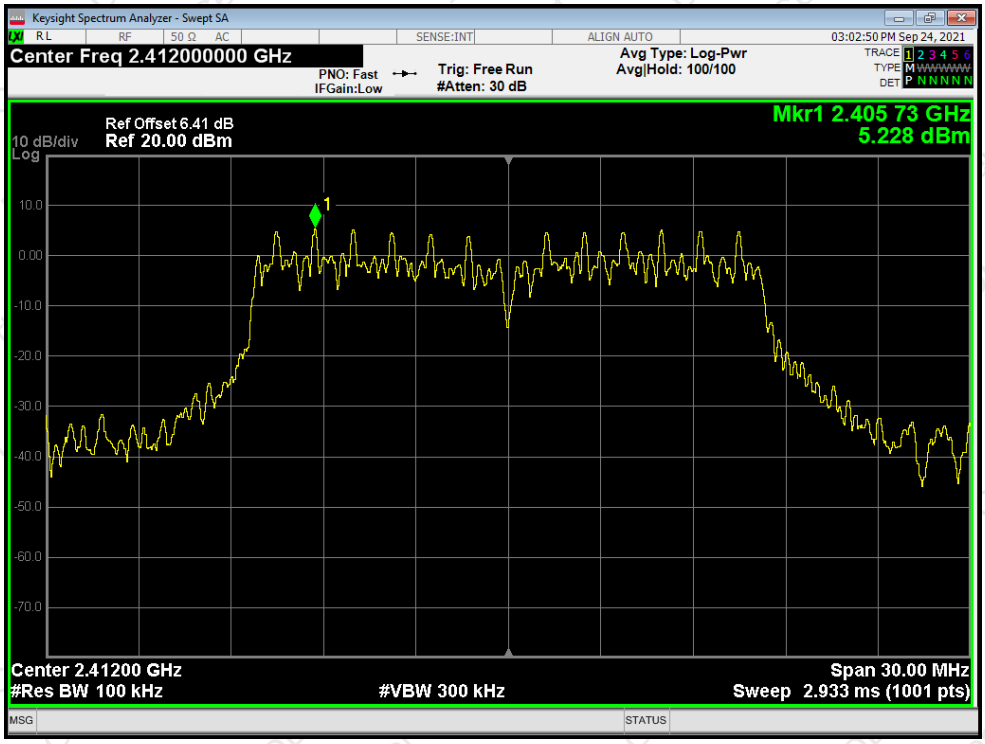
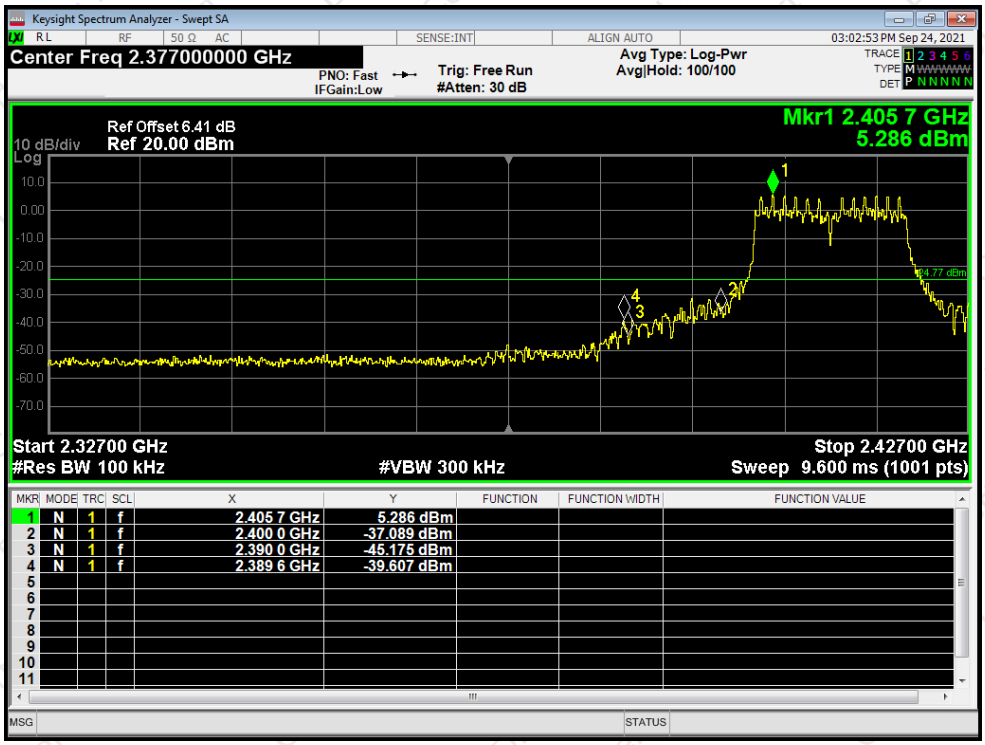
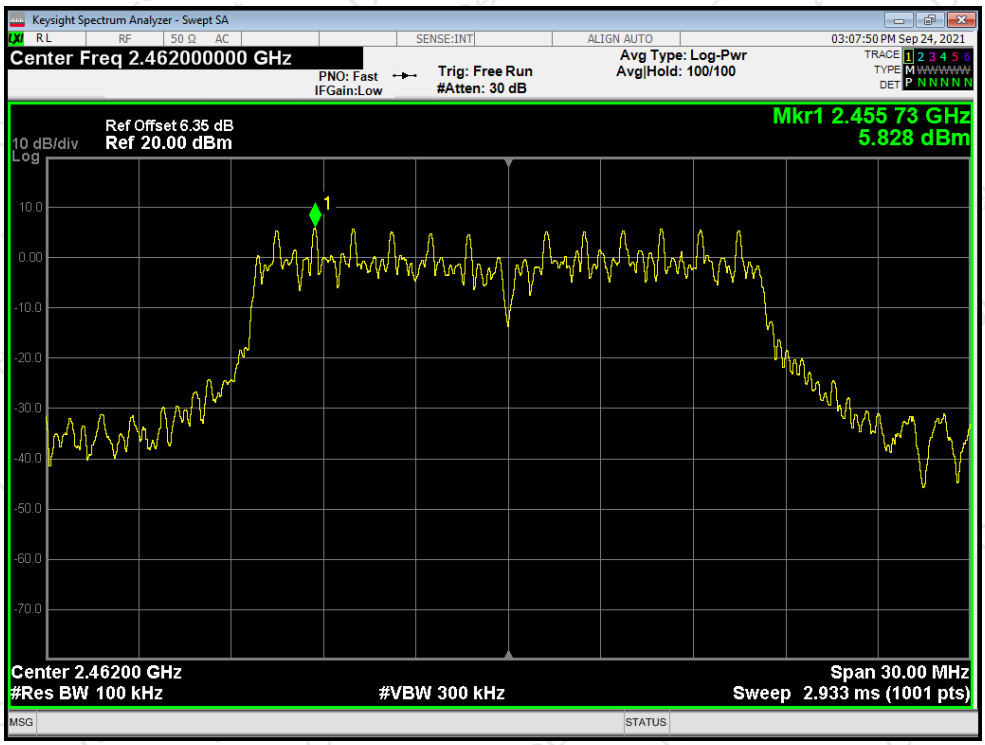

Keysight Spectrum Analyzer - Swept SA
Center Freq 2.462000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 100/100
03:00:50 PM Sep 24, 2021
Ref Offset 6.35 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 2.461 55 GHz
5.102 dBm
Center 2.46200 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 30.00 MHz
Sweep 2.933 ms (1001 pts)

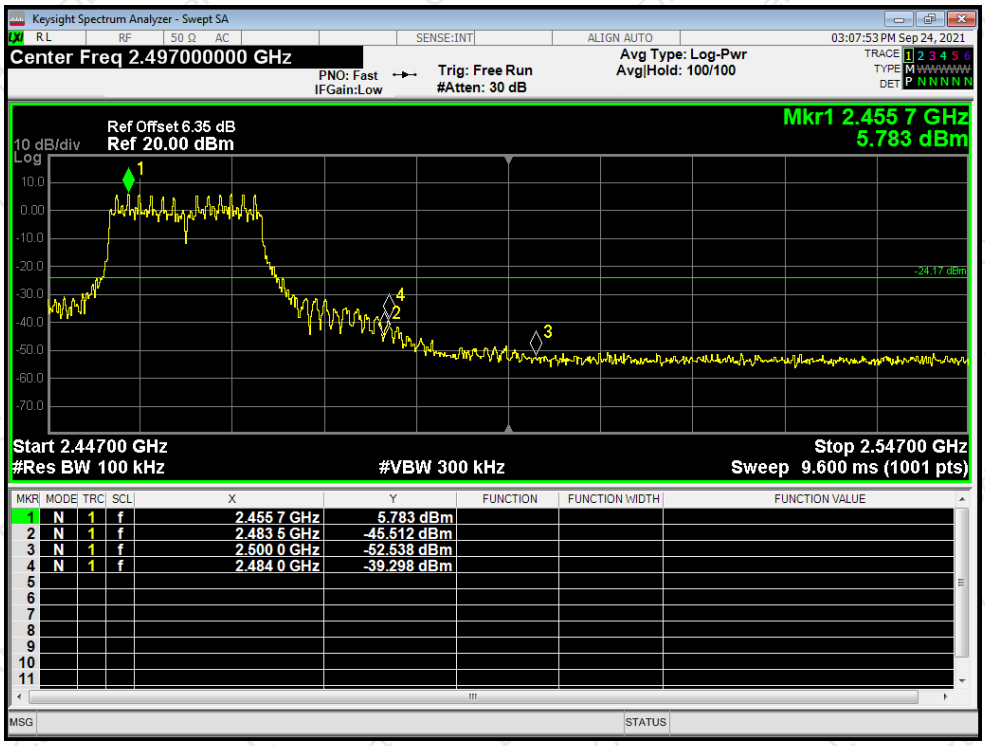

Keysight Spectrum Analyzer - Swept SA
Center Freq 2.497000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 100/100
03:00:52 PM Sep 24, 2021
Ref Offset 6.35 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 2.463 0 GHz
4.845 dBm
-24.90 dBm
Start 2.44700 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.54700 GHz
Sweep 9.600 ms (1001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 2.463 0 GHz 4.845 dBm
2 N 1 f 2.483 5 GHz -54.262 dBm
3 N 1 f 2.500 0 GHz -52.414 dBm
4 N 1 f 2.496 4 GHz -50.345 dBm

802.11g

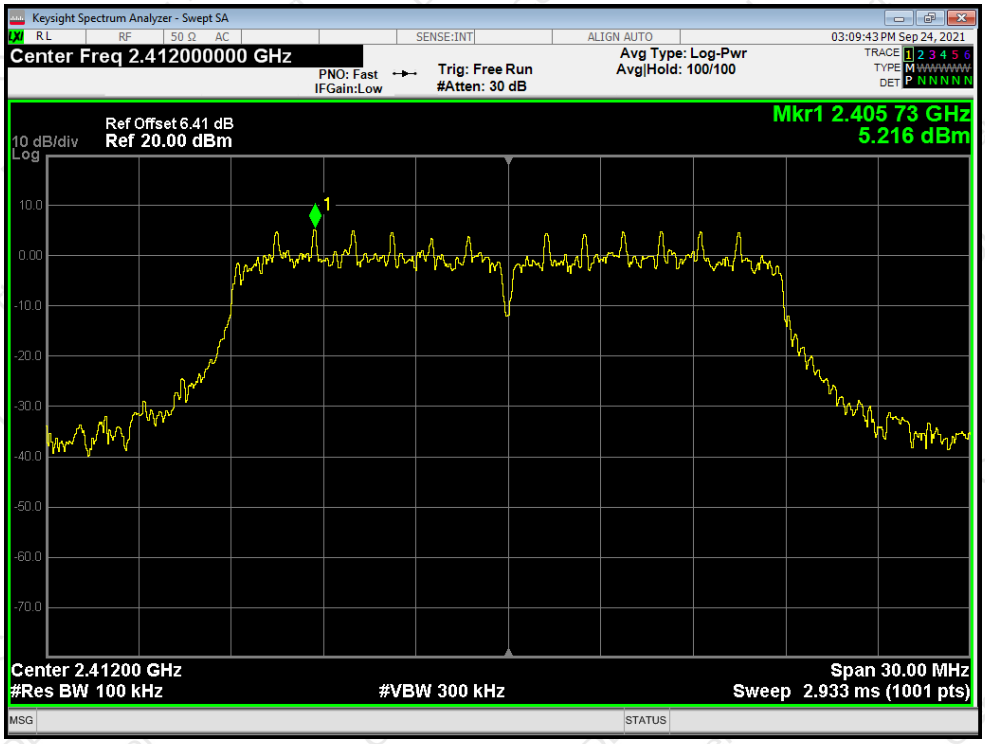

Keysight Spectrum Analyzer - Swept SA
Center Freq 2.412000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 100/100
03:02:50 PM Sep 24, 2021
Ref Offset 6.41 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 2.405 73 GHz
5.228 dBm
Center 2.41200 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 30.00 MHz
Sweep 2.933 ms (1001 pts)

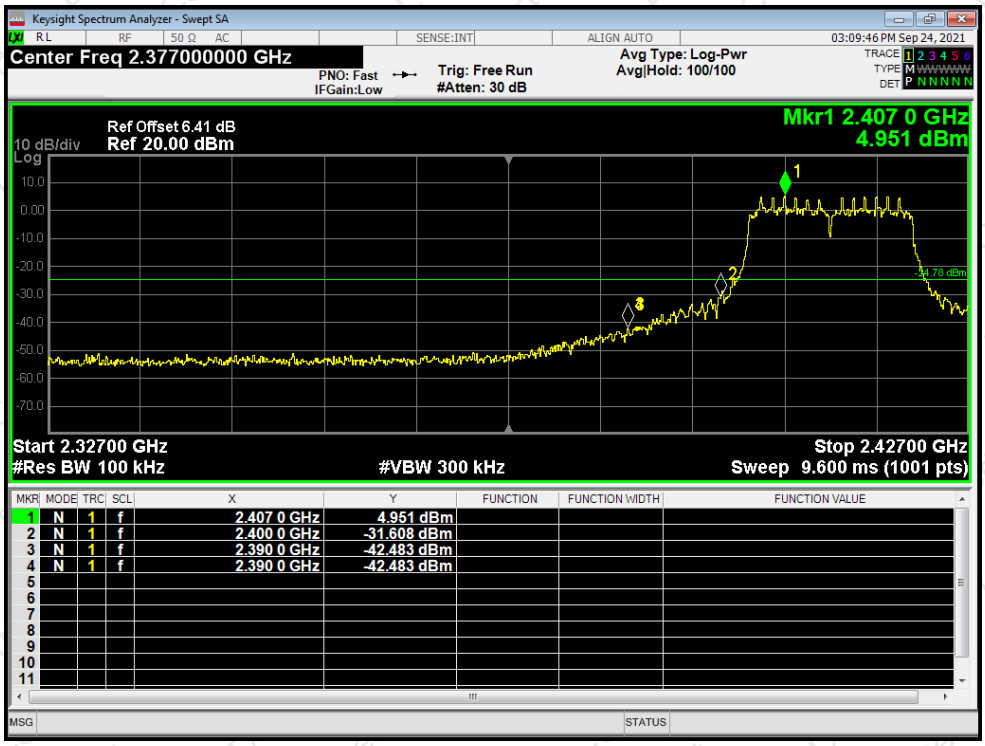

Keysight Spectrum Analyzer - Swept SA
Center Freq 2.377000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 100/100
03:02:53 PM Sep 24, 2021
Ref Offset 6.41 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 2.405 7 GHz
5.286 dBm
-4.77 dBm
Start 2.32700 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.42700 GHz
Sweep 9.600 ms (1001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 2.405 7 GHz 5.286 dBm
2 N 1 f 2.400 0 GHz -37.089 dBm
3 N 1 f 2.390 0 GHz -45.175 dBm
4 N 1 f 2.389 6 GHz -39.607 dBm

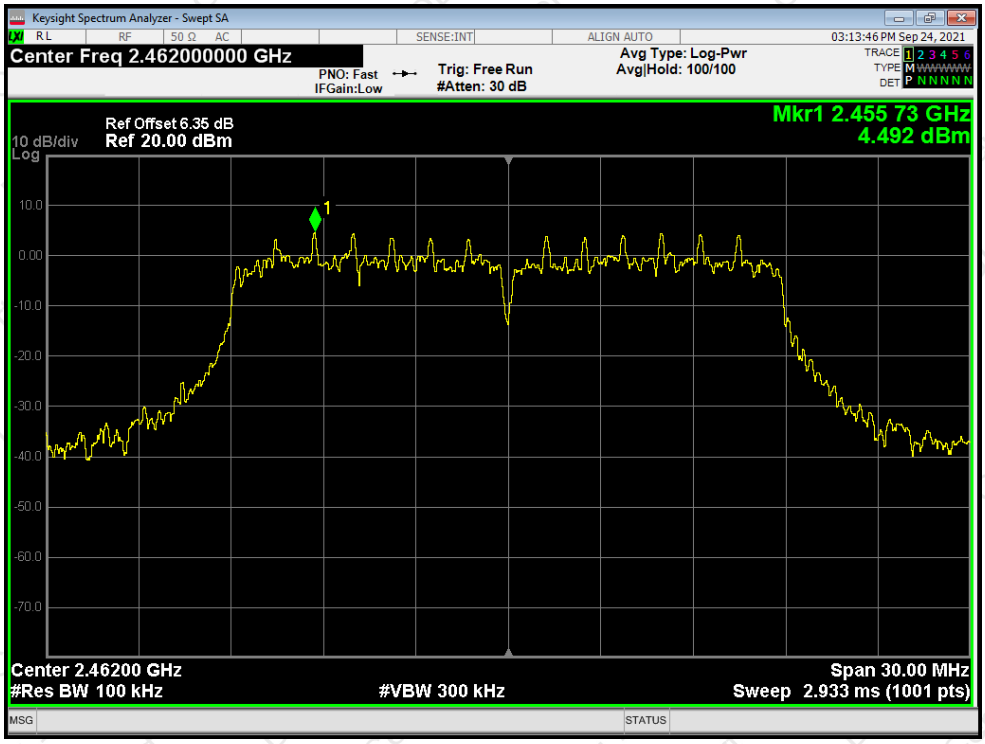

Keysight Spectrum Analyzer - Swept SA
Center Freq 2.462000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 100/100
03:07:50 PM Sep 24, 2021
Ref Offset 6.35 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 2.455 73 GHz
5.828 dBm
Center 2.46200 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 30.00 MHz
Sweep 2.933 ms (1001 pts)

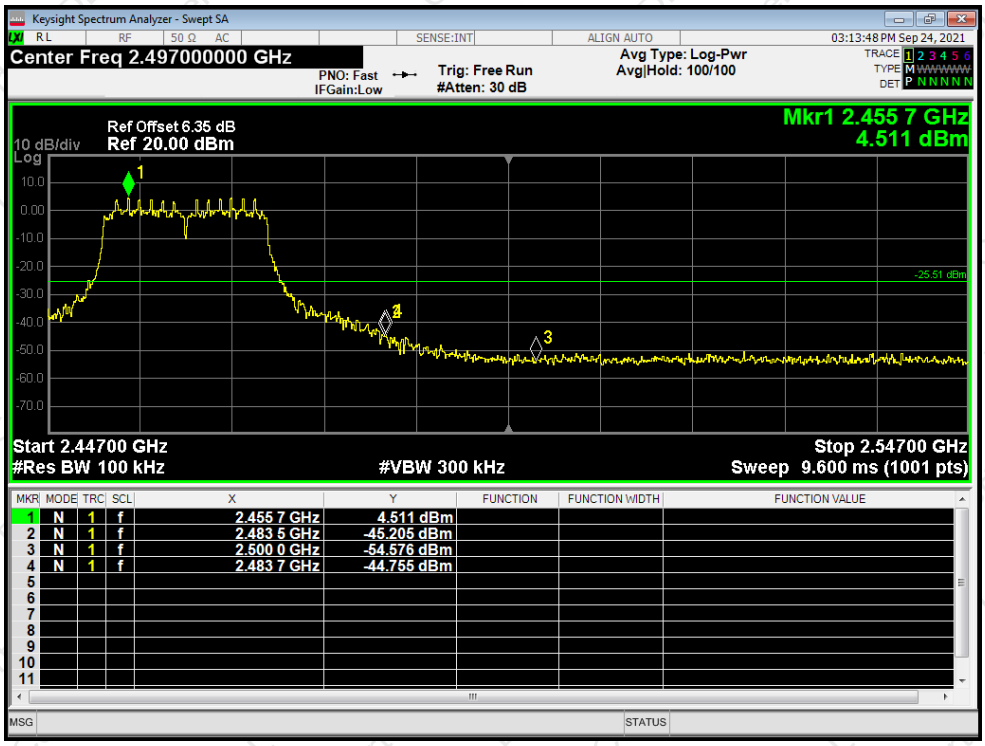

Keysight Spectrum Analyzer - Swept SA
Center Freq 2.497000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 100/100
03:07:53 PM Sep 24, 2021
Ref Offset 6.35 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 2.455 7 GHz
5.783 dBm
-24.17 dBm
Start 2.44700 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.54700 GHz
Sweep 9.600 ms (1001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 2.455 7 GHz 5.783 dBm
2 N 1 f 2.483 5 GHz -45.512 dBm
3 N 1 f 2.500 0 GHz -52.538 dBm
4 N 1 f 2.484 0 GHz -39.298 dBm

802.11n HT20

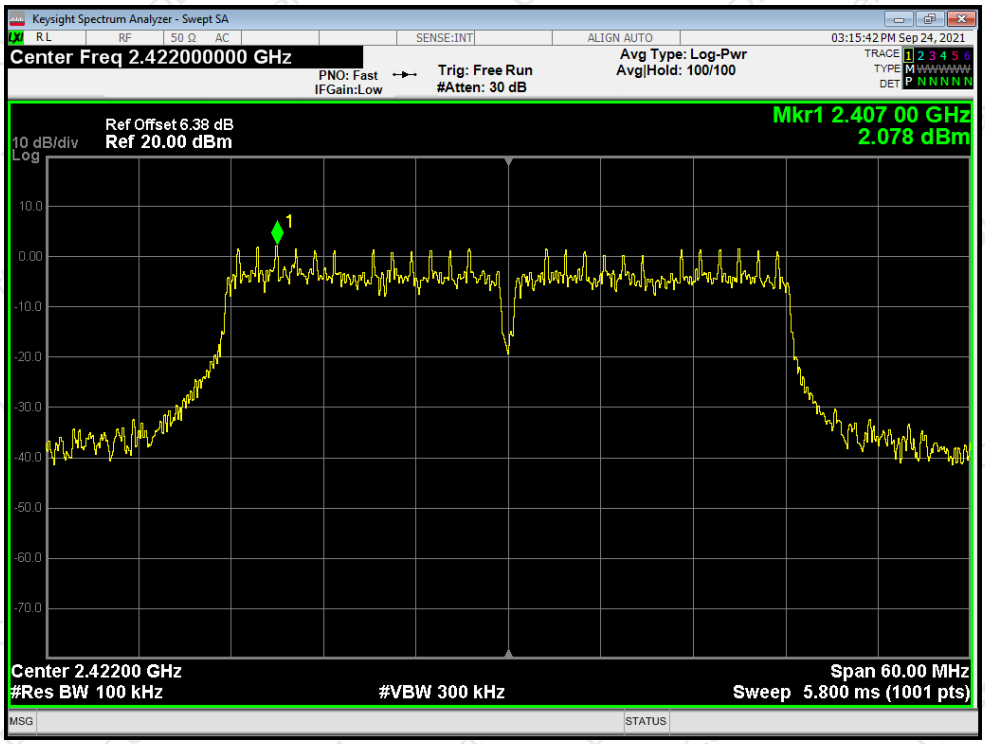

Keysight Spectrum Analyzer - Swept SA
Center Freq 2.412000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 100/100
03:09:43 PM Sep 24, 2021
Ref Offset 6.41 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 2.405 73 GHz
5.216 dBm
Center 2.41200 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 30.00 MHz
Sweep 2.933 ms (1001 pts)

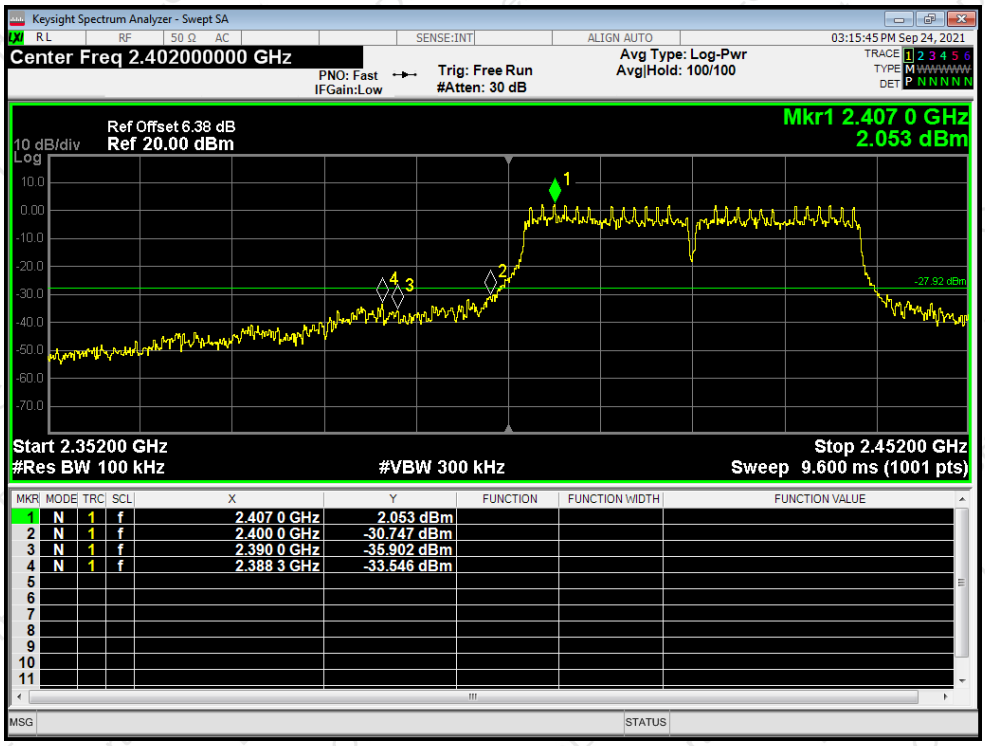

Keysight Spectrum Analyzer - Swept SA
Center Freq 2.377000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 100/100
03:09:46 PM Sep 24, 2021
Ref Offset 6.41 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 2.407 0 GHz
4.951 dBm
-14.78 dBm
Start 2.32700 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.42700 GHz
Sweep 9.600 ms (1001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 2.407 0 GHz 4.951 dBm
2 N 1 f 2.400 0 GHz -31.608 dBm
3 N 1 f 2.390 0 GHz -42.483 dBm
4 N 1 f 2.390 0 GHz -42.483 dBm

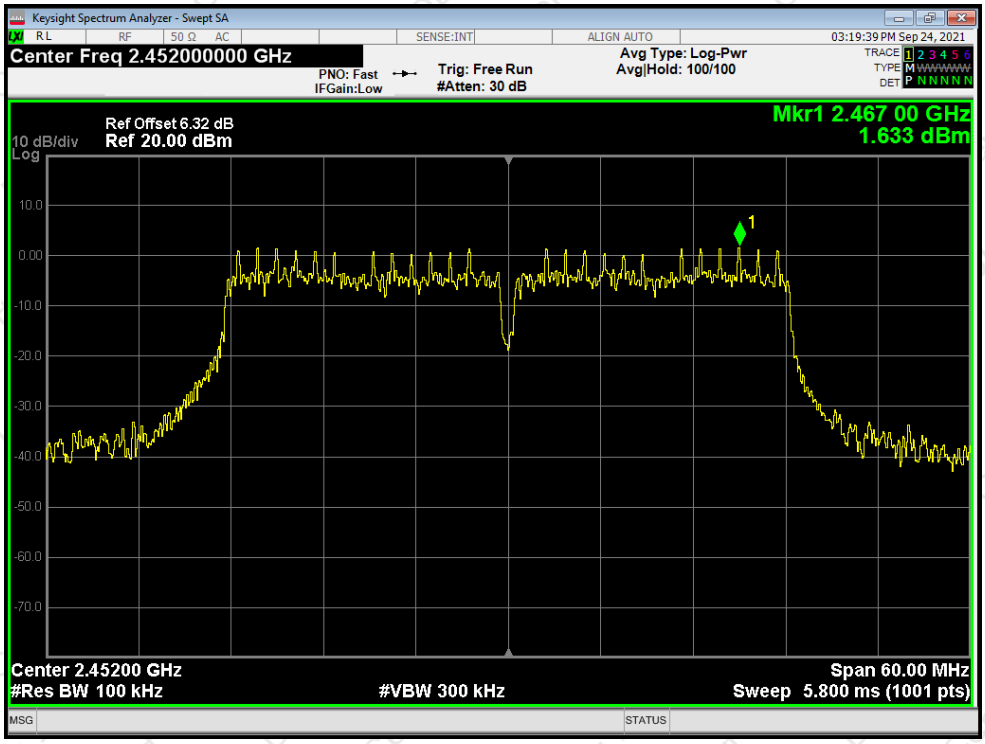

Keysight Spectrum Analyzer - Swept SA
Center Freq 2.462000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 100/100
03:13:46 PM Sep 24, 2021
Ref Offset 6.35 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 2.455 73 GHz
4.492 dBm
Center 2.46200 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 30.00 MHz
Sweep 2.933 ms (1001 pts)
MSG
STATUS

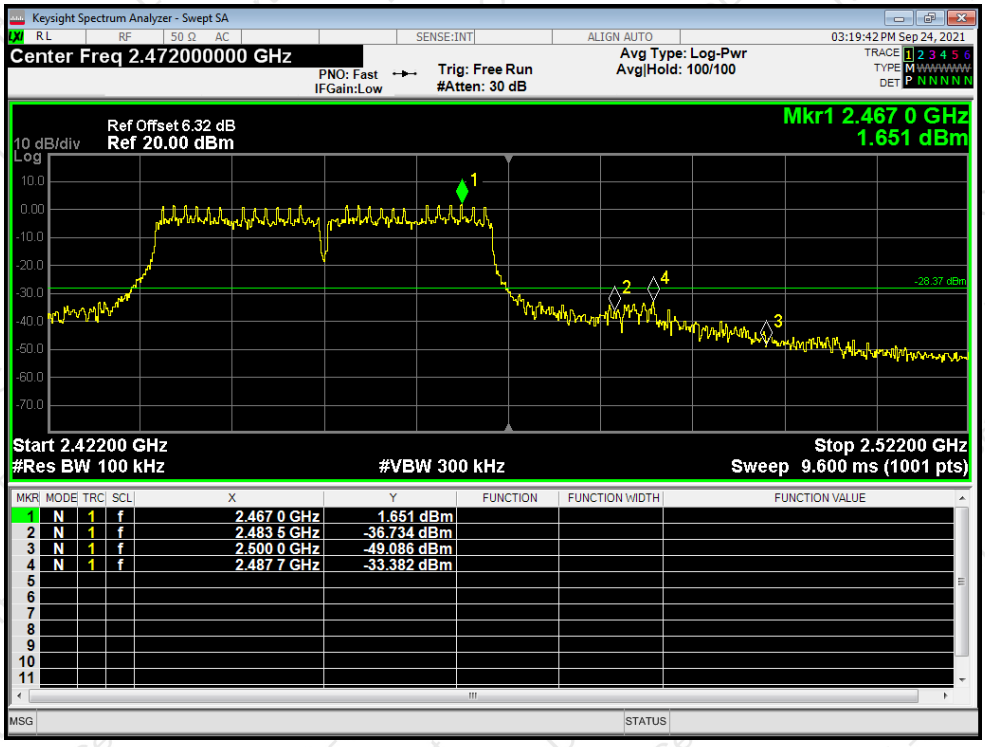

Keysight Spectrum Analyzer - Swept SA
Center Freq 2.497000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 100/100
03:13:48 PM Sep 24, 2021
Ref Offset 6.35 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 2.455 7 GHz
4.511 dBm
-25.51 dBm
Start 2.44700 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.54700 GHz
Sweep 9.600 ms (1001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 2.455 7 GHz 4.511 dBm
2 N 1 f 2.483 5 GHz -45.205 dBm
3 N 1 f 2.500 0 GHz -54.576 dBm
4 N 1 f 2.483 7 GHz -44.755 dBm
MSG
STATUS

802.11n HT40


Keysight Spectrum Analyzer - Swept SA
Center Freq 2.422000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 100/100
03:15:42 PM Sep 24, 2021
Ref Offset 6.38 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 2.407 00 GHz
2.078 dBm
Center 2.42200 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 60.00 MHz
Sweep 5.800 ms (1001 pts)


Keysight Spectrum Analyzer - Swept SA
Center Freq 2.402000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold: 100/100
03:15:45 PM Sep 24, 2021
Ref Offset 6.38 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 2.407 0 GHz
2.053 dBm
-27.92 dBm
Start 2.35200 GHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 2.45200 GHz
Sweep 9.600 ms (1001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 2.407 0 GHz 2.053 dBm
2 N 1 f 2.400 0 GHz -30.747 dBm
3 N 1 f 2.390 0 GHz -35.902 dBm
4 N 1 f 2.388 3 GHz -33.546 dBm





MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.467 0 GHz	1.651 dBm			
2	N	1	f	2.483 5 GHz	-36.734 dBm			
3	N	1	f	2.500 0 GHz	-49.086 dBm			
4	N	1	f	2.487 7 GHz	-33.382 dBm			
5								
6								
7								
8								
9								
10								
11								

4. AVERAGE OUTPUT POWER

4.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247 (b)(3)	Peak Output Power	1 watt or 30dBm	2400-2483.5	PASS

4.1.1 TEST PROCEDURE

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,

b. Spectrum Setting : RBW > the 20 dB bandwidth of the emission being measured

Span = approximately 5 times the 20 dB bandwidth, centered on a hopping channel

VBW ≥ RBW

Sweep = auto

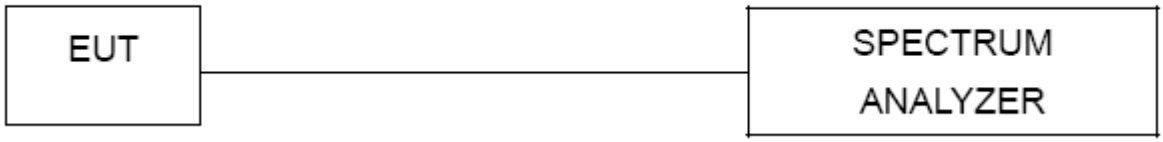
Detector function = peak

Trace = max hold

4.1.2 DEVIATION FROM STANDARD

No deviation.

4.1.3 TEST SETUP



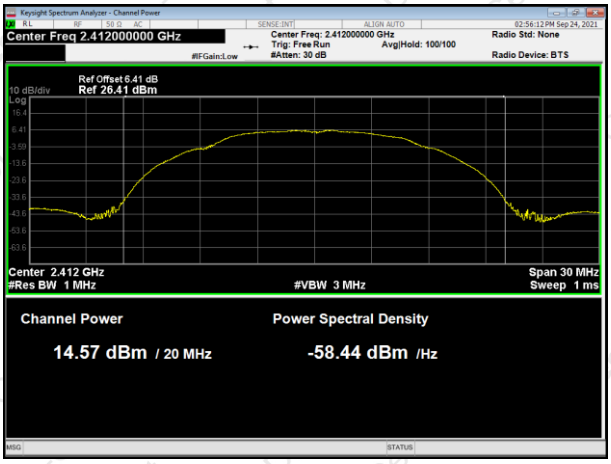
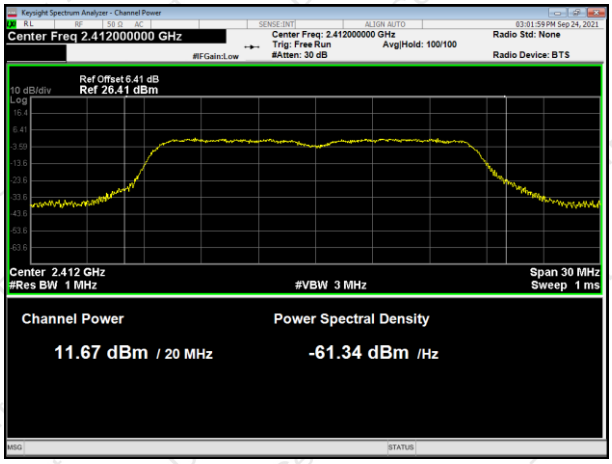
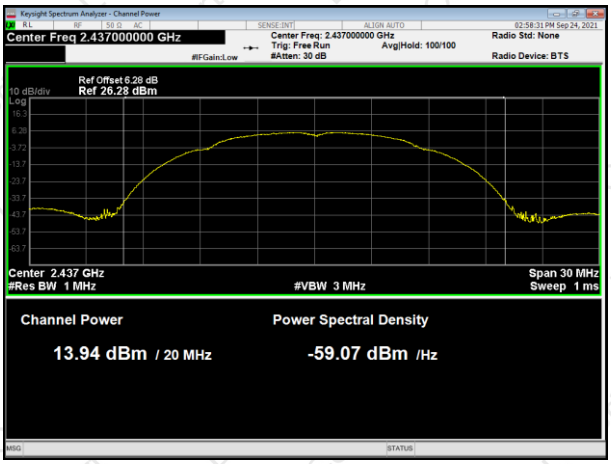
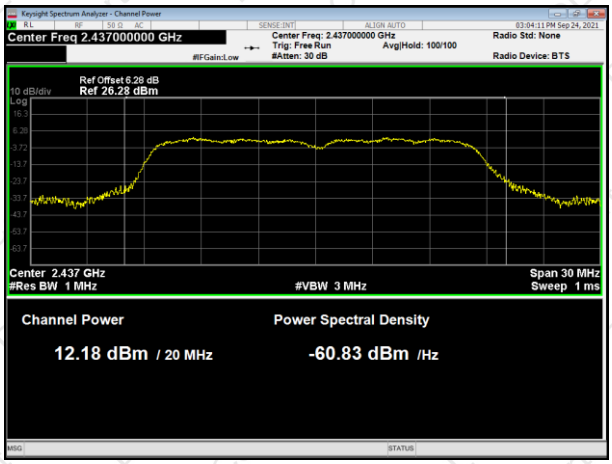
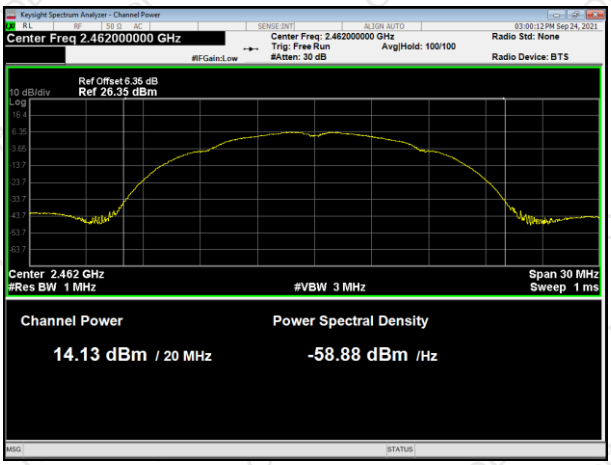
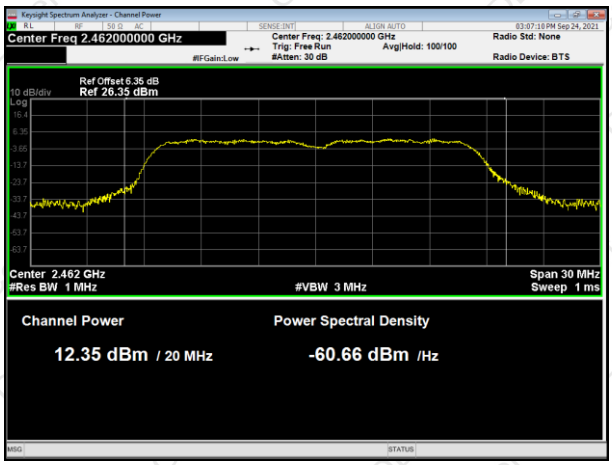
4.1.4 EUT OPERATION CONDITIONS

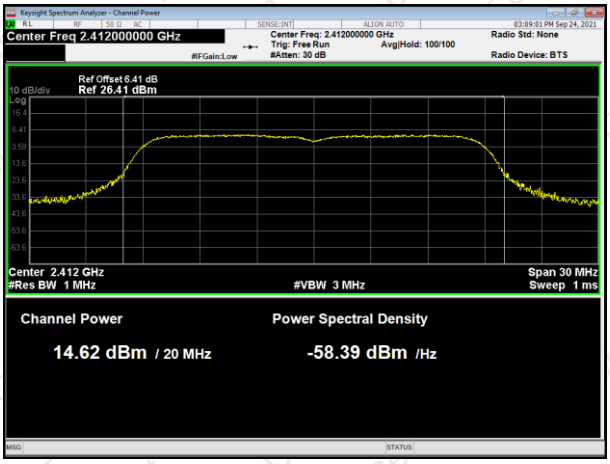
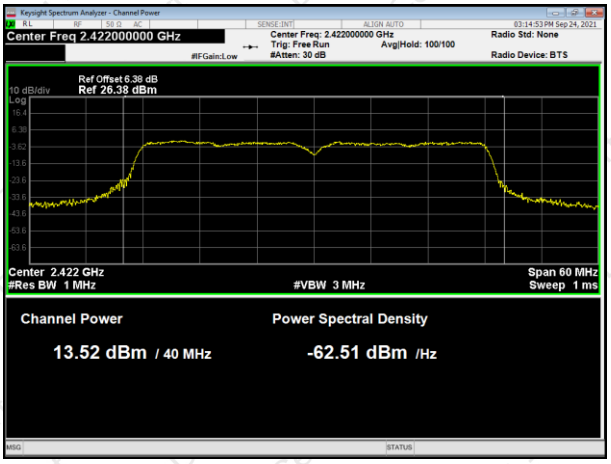
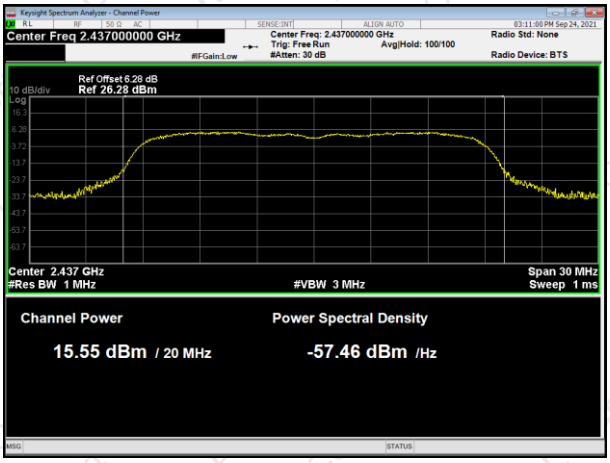
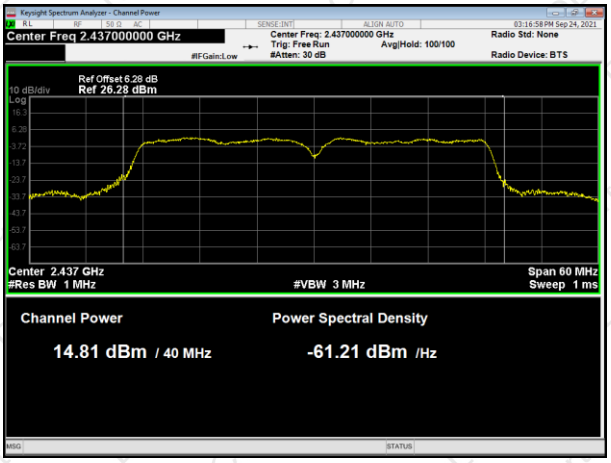
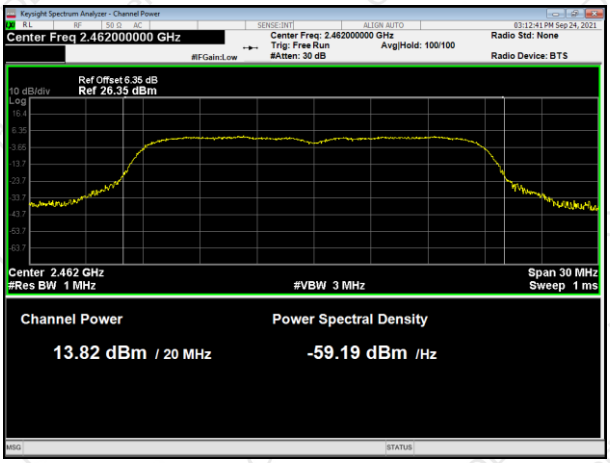
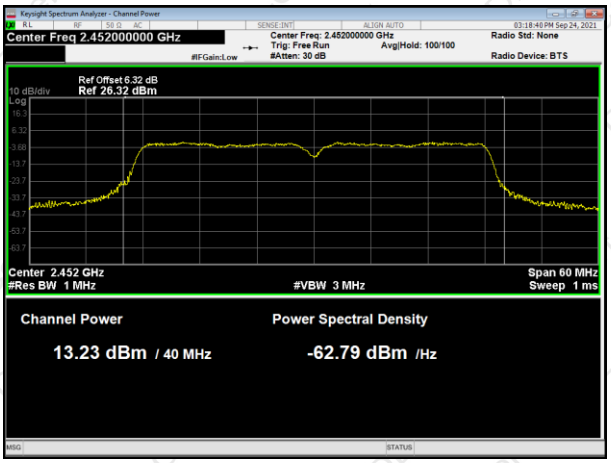
The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

4.1.5 TEST RESULTS

Temperature:	25 ℃	Relative Humidity:	60%
Pressure:	1012 hPa	Test Voltage :	DC 3.7V

Mode	Test Channel	Average Output Power (dBm)	LIMIT (dBm)
802.11b	Low	14.574	30.00
	Moddle	13.94	30.00
	High	14.132	30.00
802.11g	Low	11.667	30.00
	Moddle	12.179	30.00
	High	12.351	30.00
802.11n HT20	Low	14.619	30.00
	Moddle	15.548	30.00
	High	13.818	30.00
802.11n HT40	Low	13.516	30.00
	Moddle	14.812	30.00
	High	13.231	30.00

802.11b	802.11g
	
2412MHz	2412MHz
	
2437MHz	2437MHz
	
2462MHz	2462MHz

802.11n HT20	802.11n HT40
	
2412MHz	2422MHz
	
2437MHz	2437MHz
	
2462MHz	2452MHz

5. POWER SPECTRAL DENSITY TEST

5.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247	Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS

Spectrum Parameters	Setting
Attenuation	Auto
Span Frequency	= the frequency band of operation
RB	RBW ≥ 3kHz
VB	VBW ≥ 3RBW
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

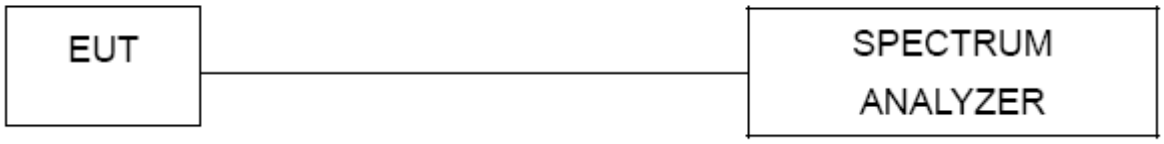
5.1.1 TEST PROCEDURE

a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,

5.1.2 DEVIATION FROM STANDARD

No deviation.

5.1.3 TEST SETUP

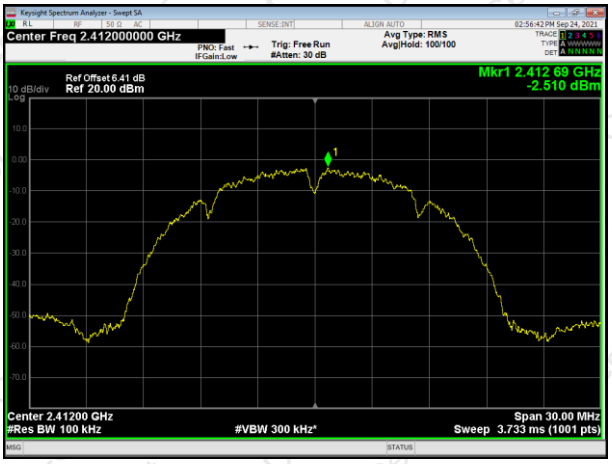
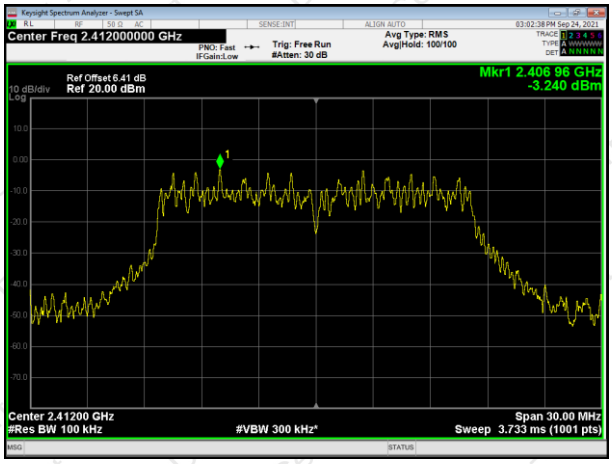
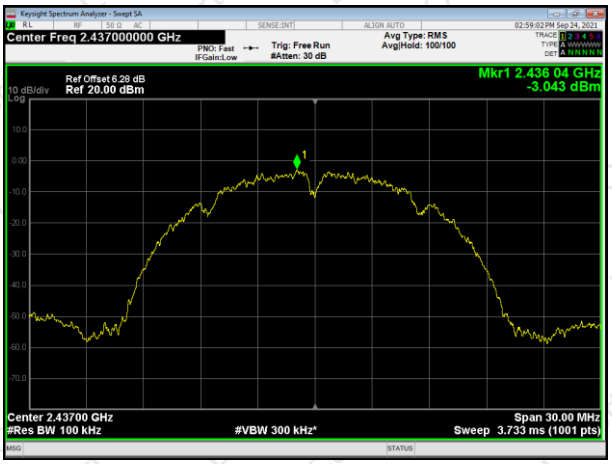
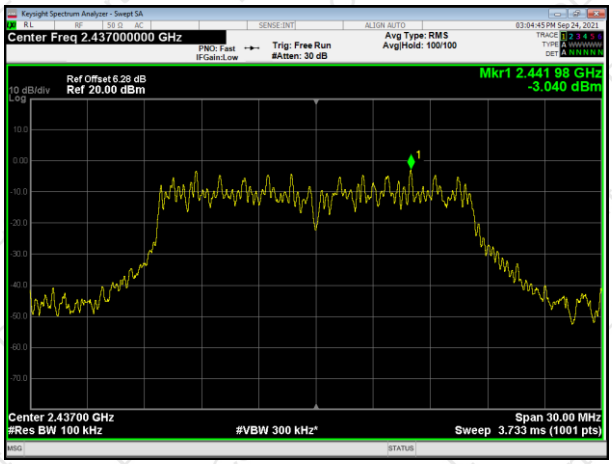
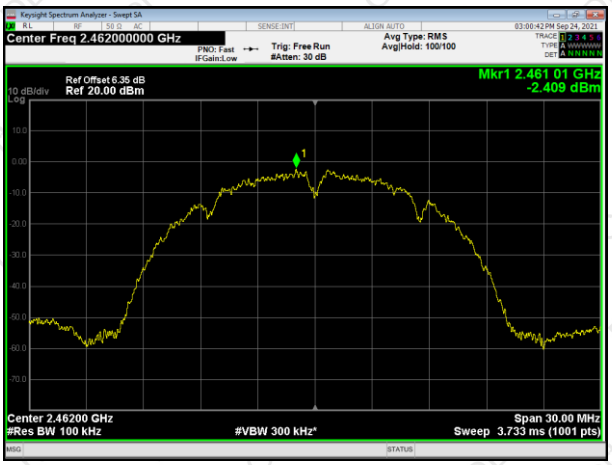
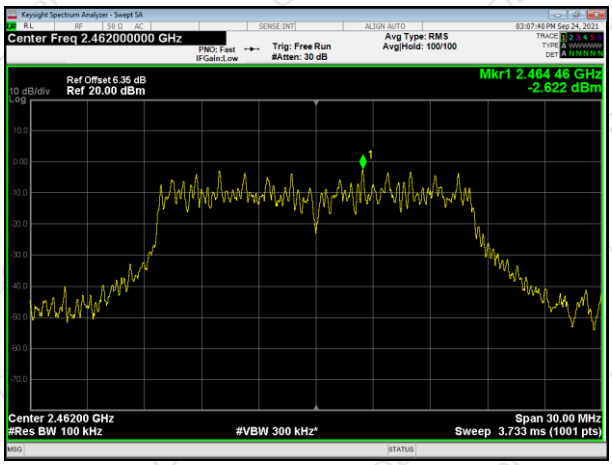


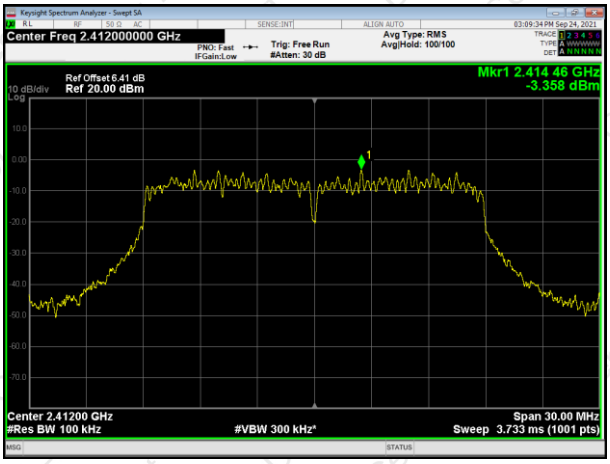
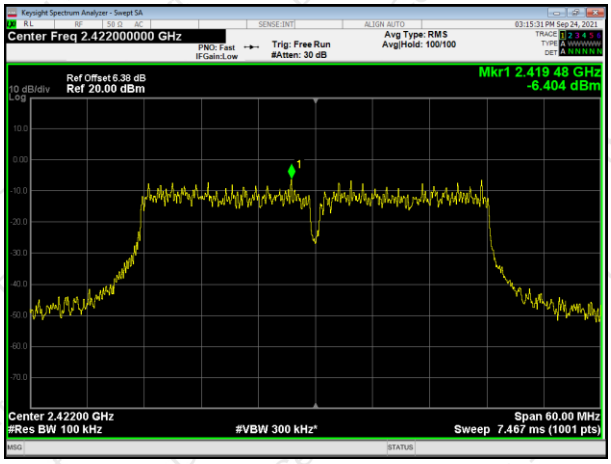
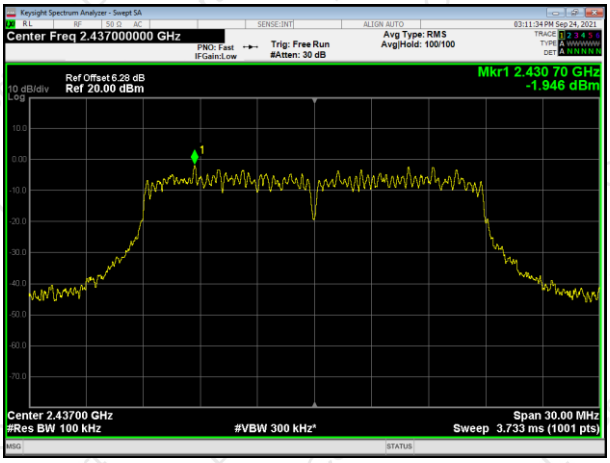
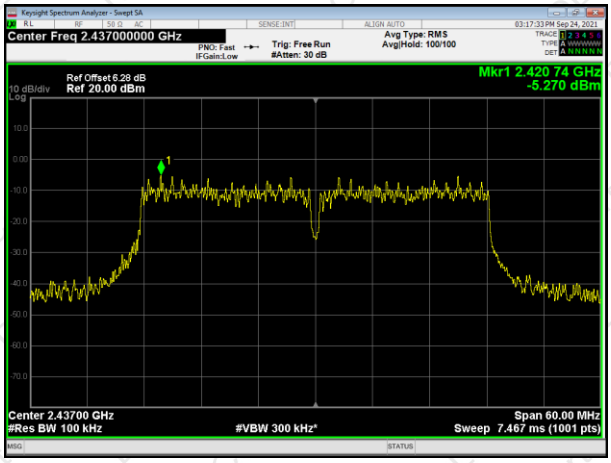
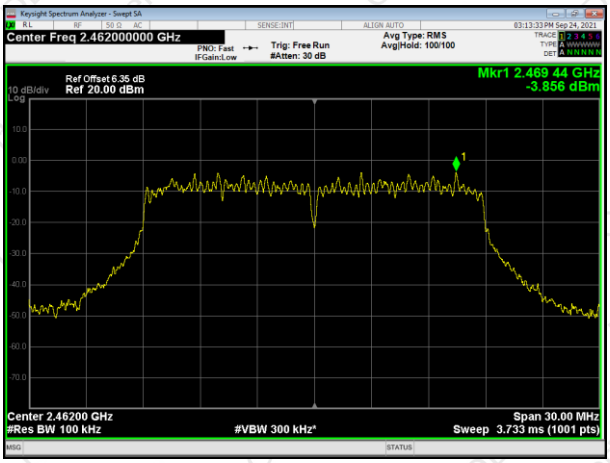
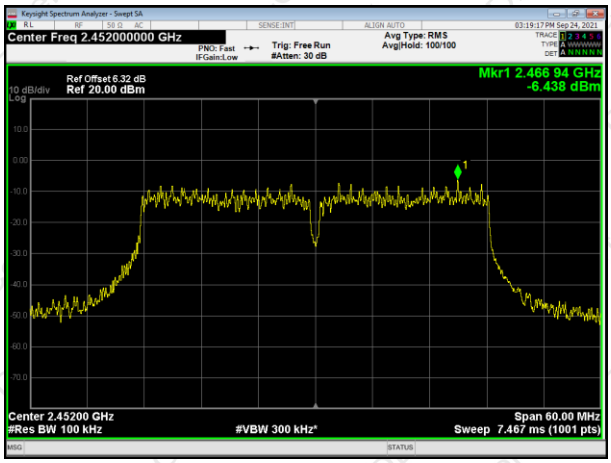
5.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

5.1.5 TEST RESULTS

Mode	Test Channel	Reading Level (dBm)	Limit (dBm)	Result
802.11b	Low	-2.51	8	PASS
	Moddle	-3.043	8	PASS
	High	-2.409	8	PASS
802.11g	Low	-3.24	8	PASS
	Moddle	-3.04	8	PASS
	High	-2.622	8	PASS
802.11n20	Low	-3.358	8	PASS
	Moddle	-1.946	8	PASS
	High	-3.856	8	PASS
802.11n40	Low	-6.404	8	PASS
	Moddle	-5.27	8	PASS
	High	-6.438	8	PASS

802.11b	802.11g
	
2412MHz	2412MHz
	
2437MHz	2437MHz
	
2462MHz	2462MHz

802.11n HT20	802.11n HT40
	
2412MHz	2422MHz
	
2437MHz	2437MHz
	
2462MHz	2452MHz

6. 6DB BANDWIDTH TEST

6.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range(MHz)	Result
15.247(a)(2)	Bandwidth	>= 500KHz (6dB bandwidth)	2400-2483.5	PASS

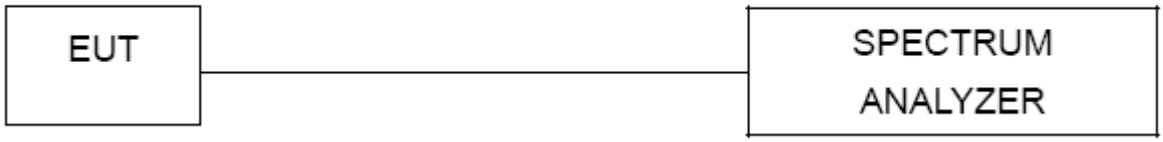
6.1.1 TEST PROCEDURE

1. Set RBW = 100 kHz.
2. Set the video bandwidth (VBW) ≥RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 20 dB relative to the maximum level measured in the fundamental emission.

6.1.2 DEVIATION FROM STANDARD

No deviation.

6.1.3 TEST SETUP

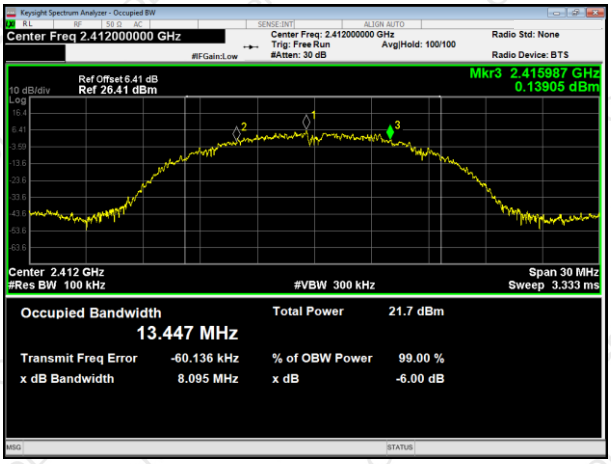
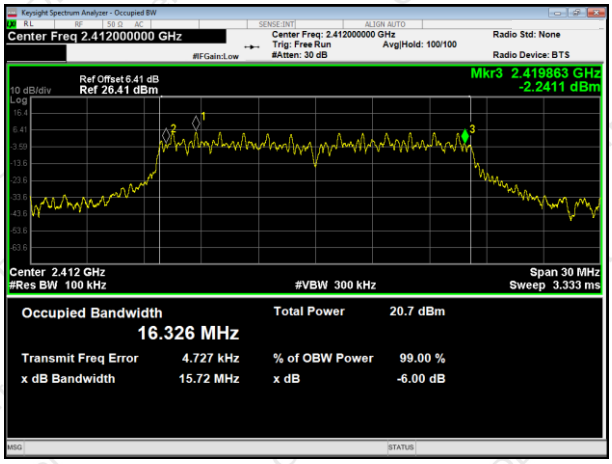
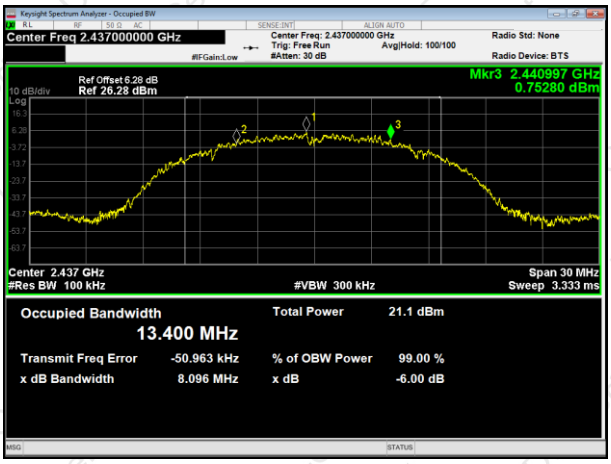
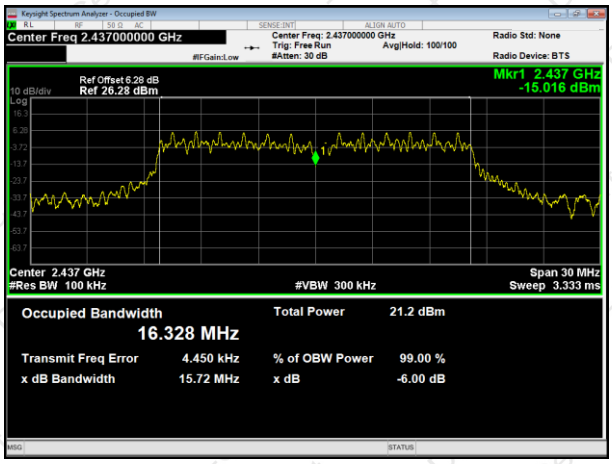
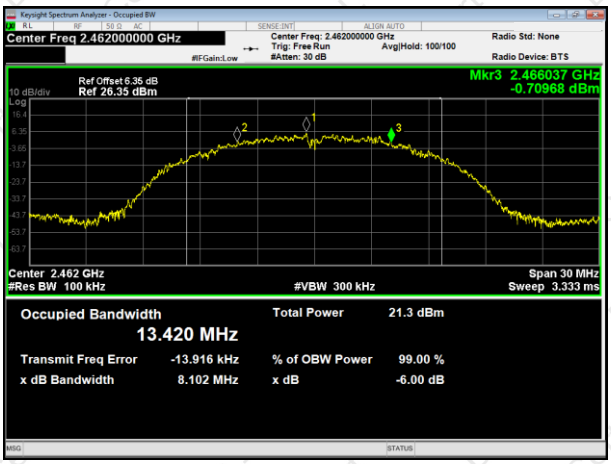
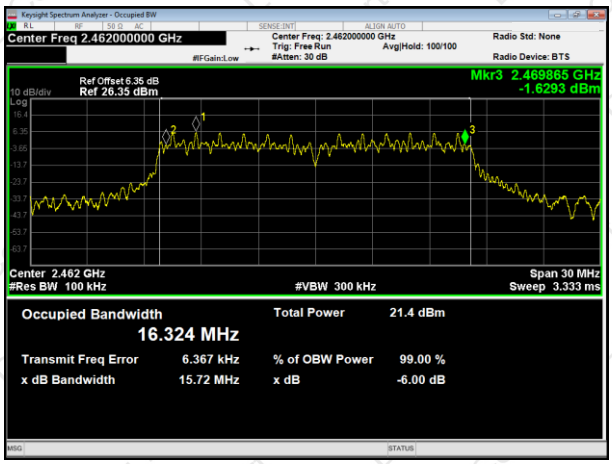


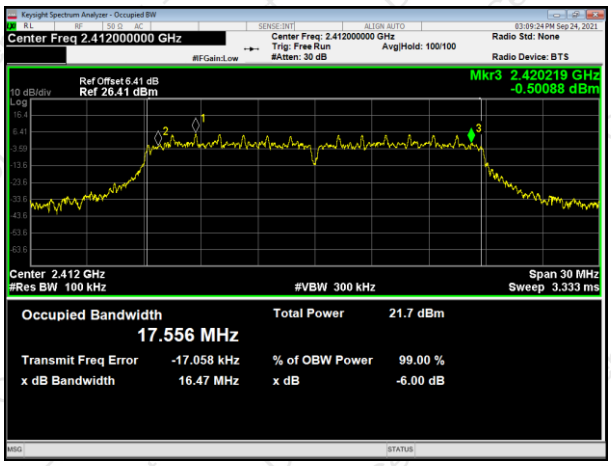
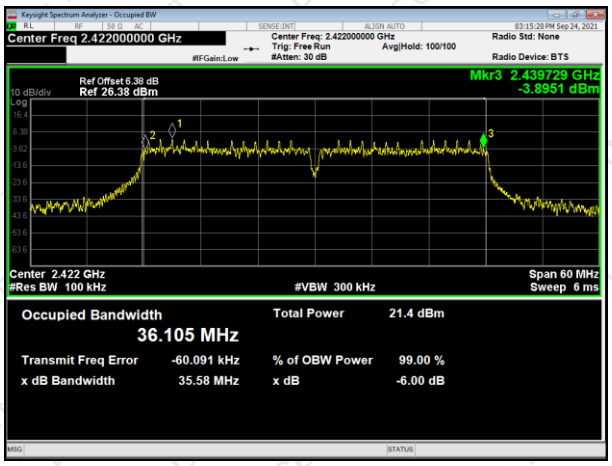
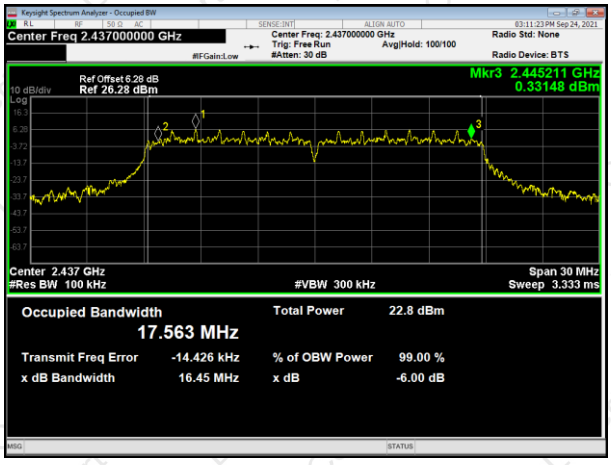
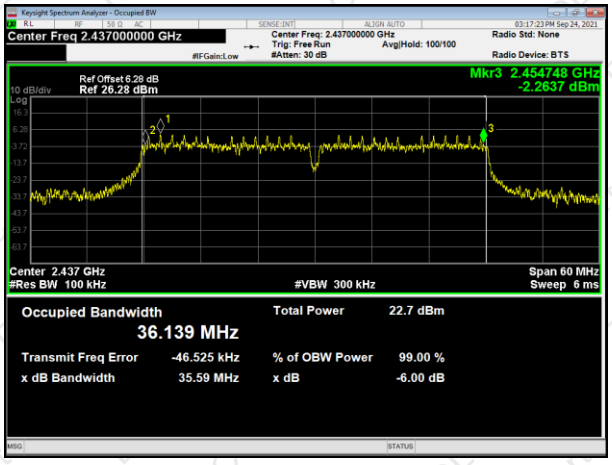
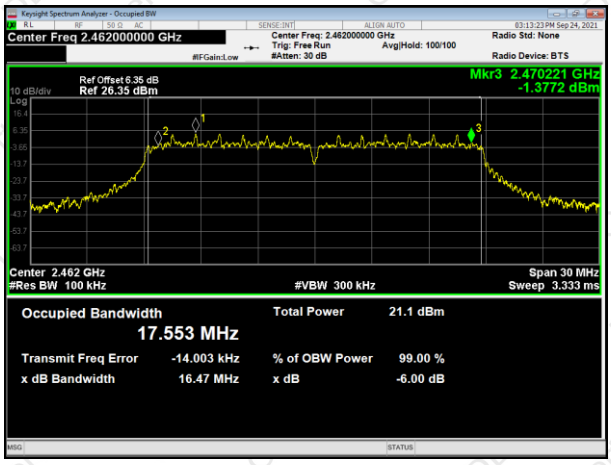
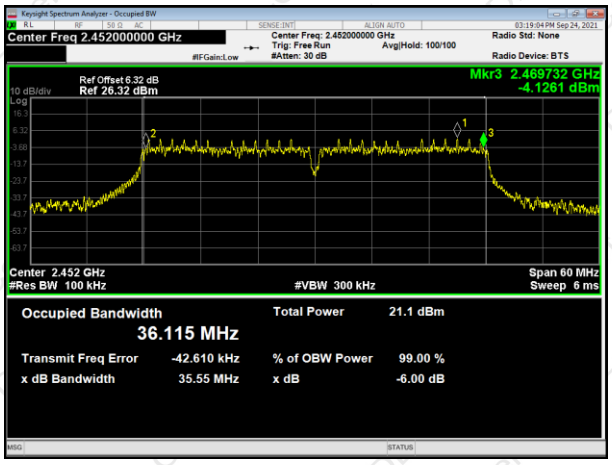
6.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

6.1.5 TEST RESULTS

	Test Channel	6dB Bandwidth (MHz)	Limit (MHz)	Result
802.11b	Low	8.095	0.5	Pass
	Middle	8.096	0.5	Pass
	High	8.102	0.5	Pass
802.11g	Low	15.716	0.5	Pass
	Middle	15.716	0.5	Pass
	High	15.718	0.5	Pass
802.11n HT20	Low	16.471	0.5	Pass
	Middle	16.452	0.5	Pass
	High	16.47	0.5	Pass
802.11n HT40	Low	35.578	0.5	Pass
	Middle	35.59	0.5	Pass
	High	35.549	0.5	Pass

802.11b	802.11g
	
2412MHz	2412MHz
	
2437MHz	2437MHz
	
2462MHz	2462MHz

802.11n HT20	802.11n HT40
	
2412MHz	2422MHz
	
2437MHz	2437MHz
	
2462MHz	2452MHz

7. ANTENNA REQUIREMENT

7.1 STANDARD REQUIREMENT

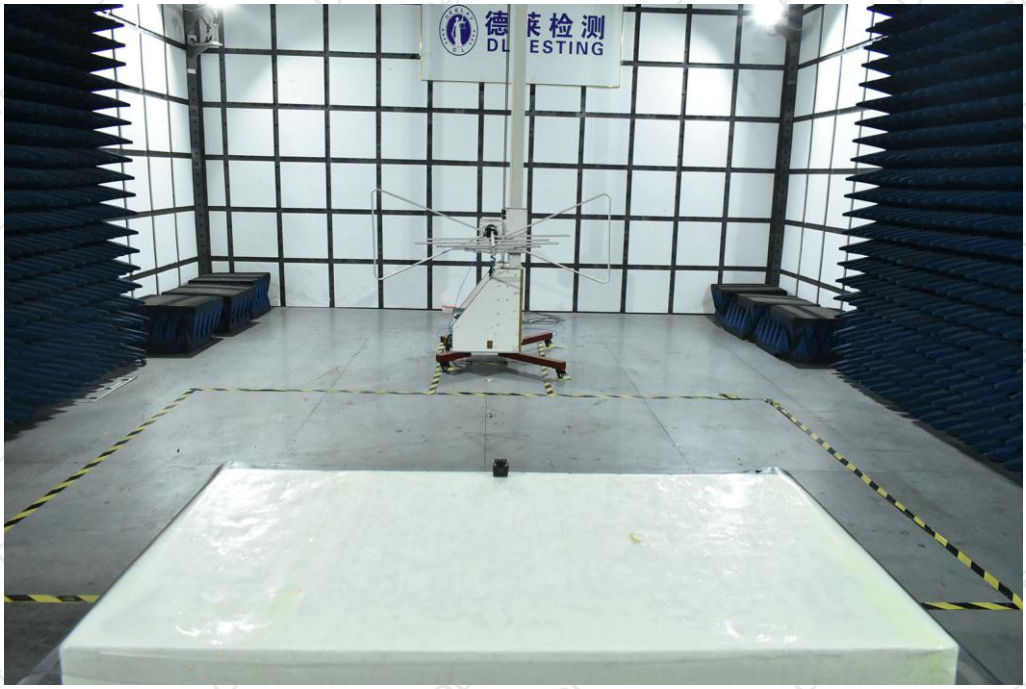
15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

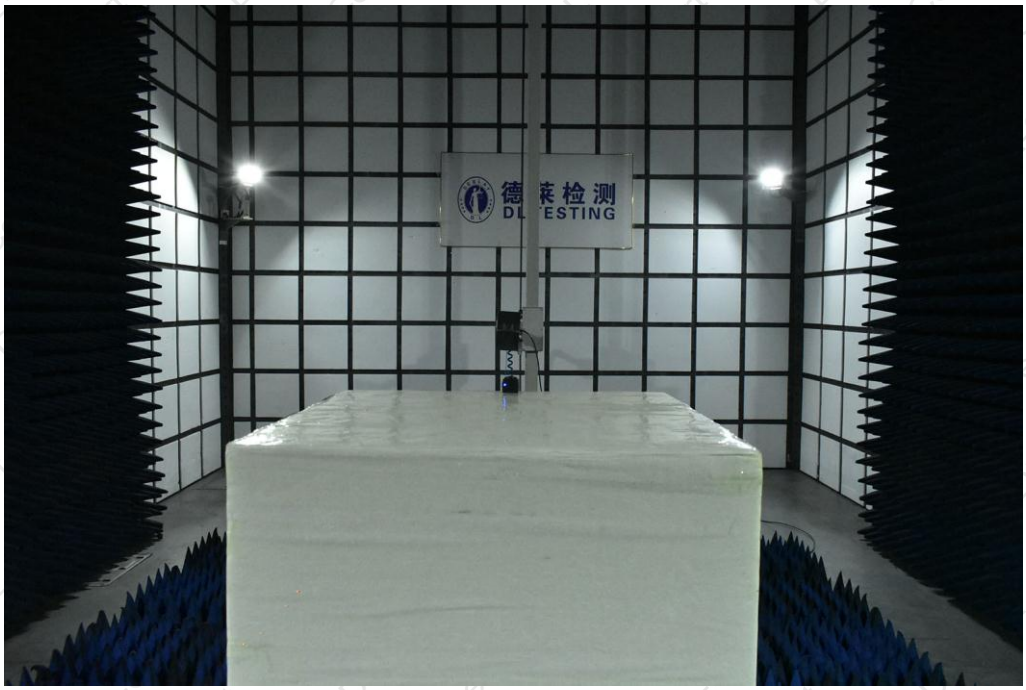
7.2 EUT ANTENNA

The EUT antenna is Built-in antenna,. It comply with the standard requirement.

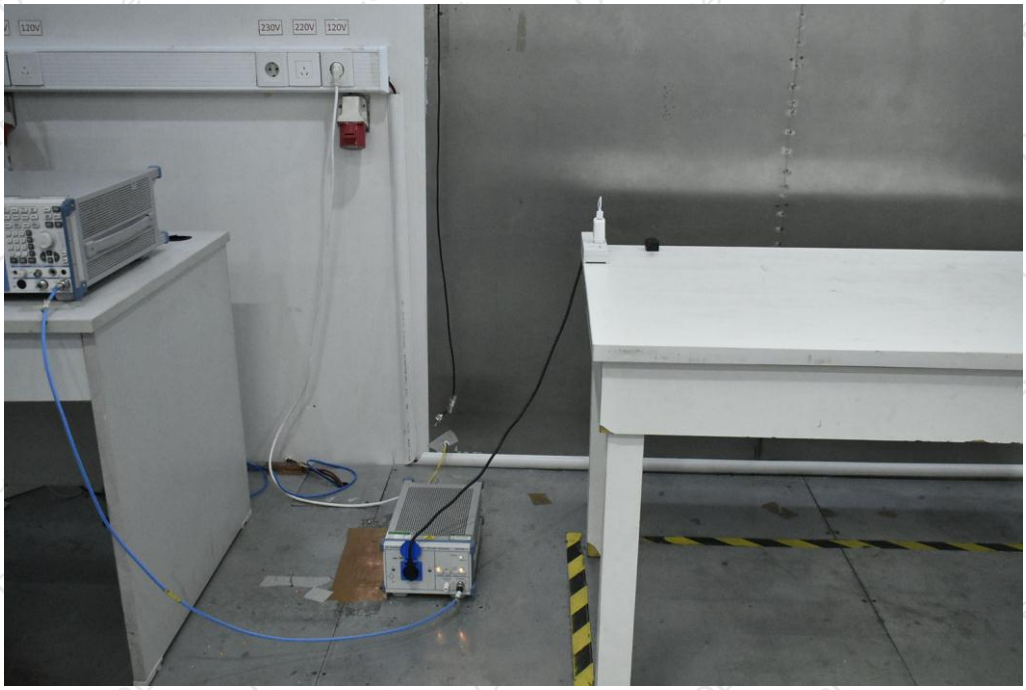
8. TEST SEUUP PHOTO

Radiated Measurement Photos

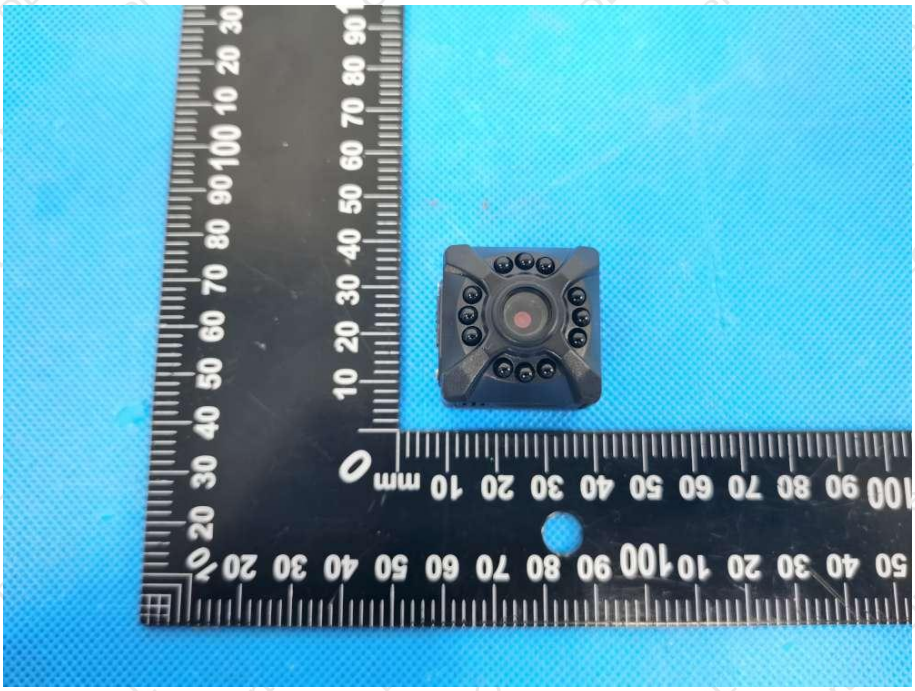


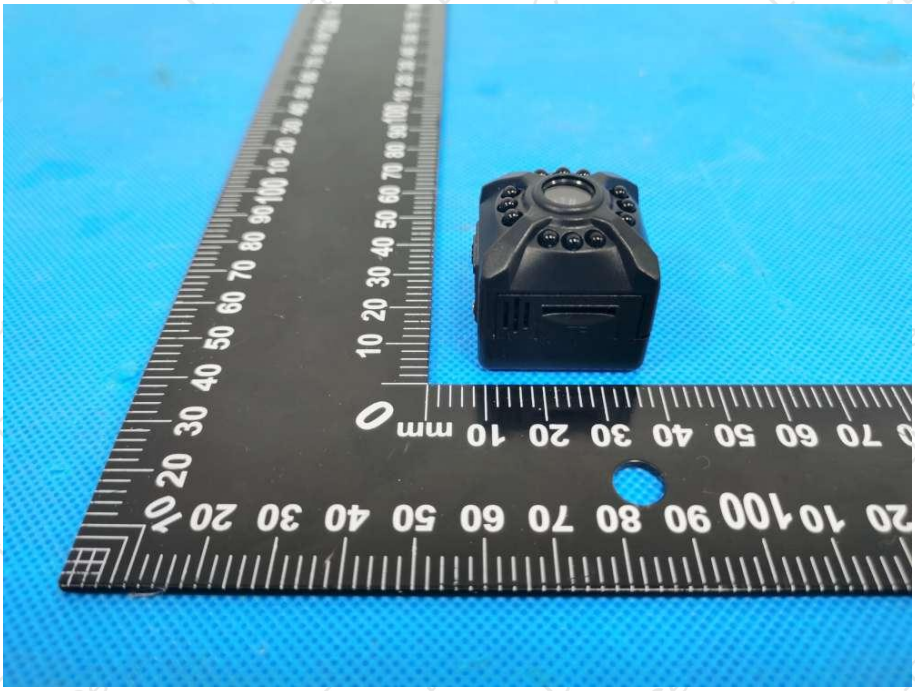


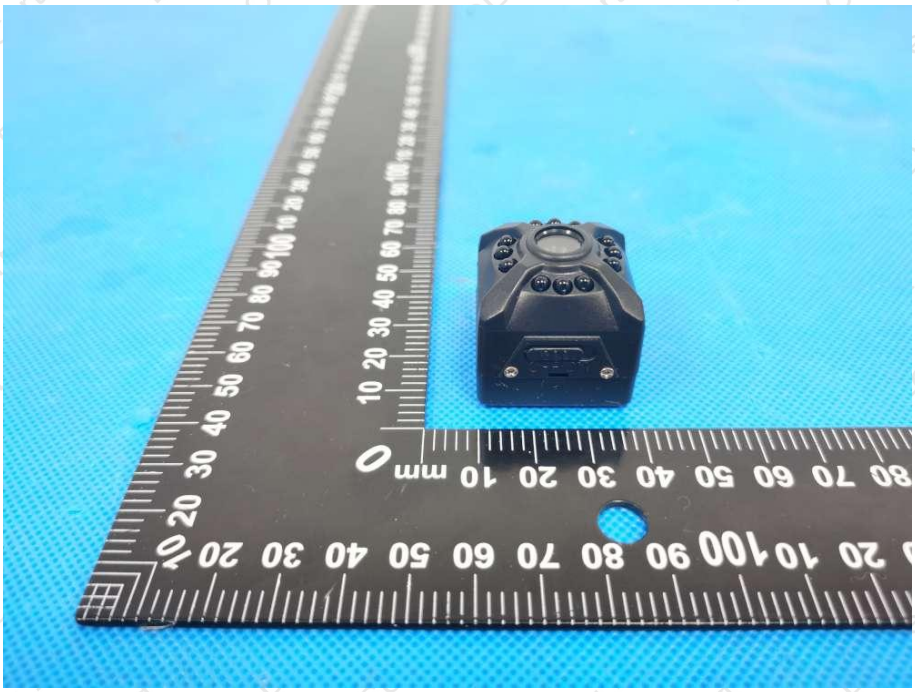
Conducted Measurement Photos

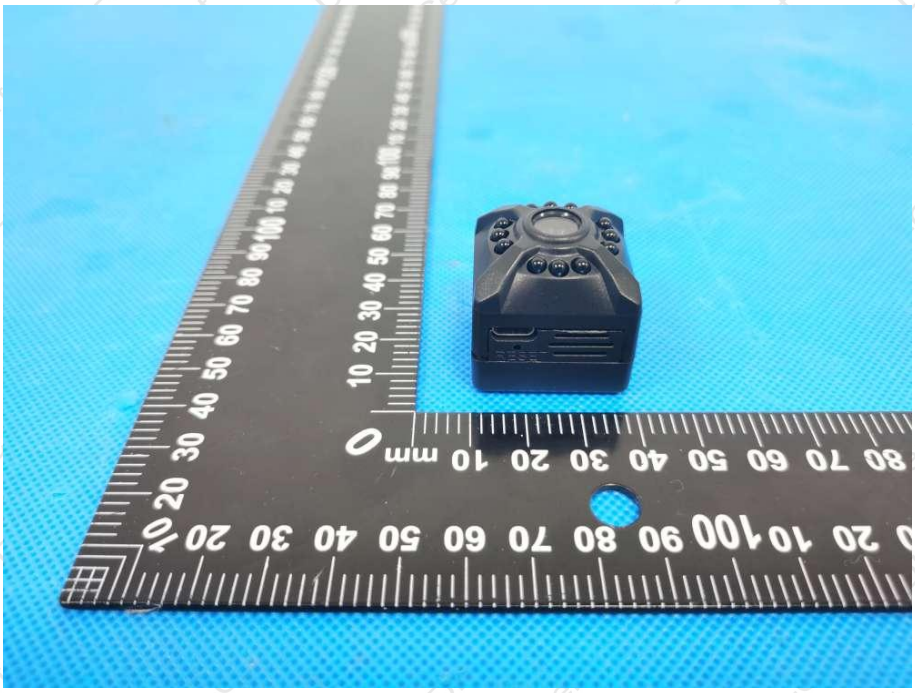


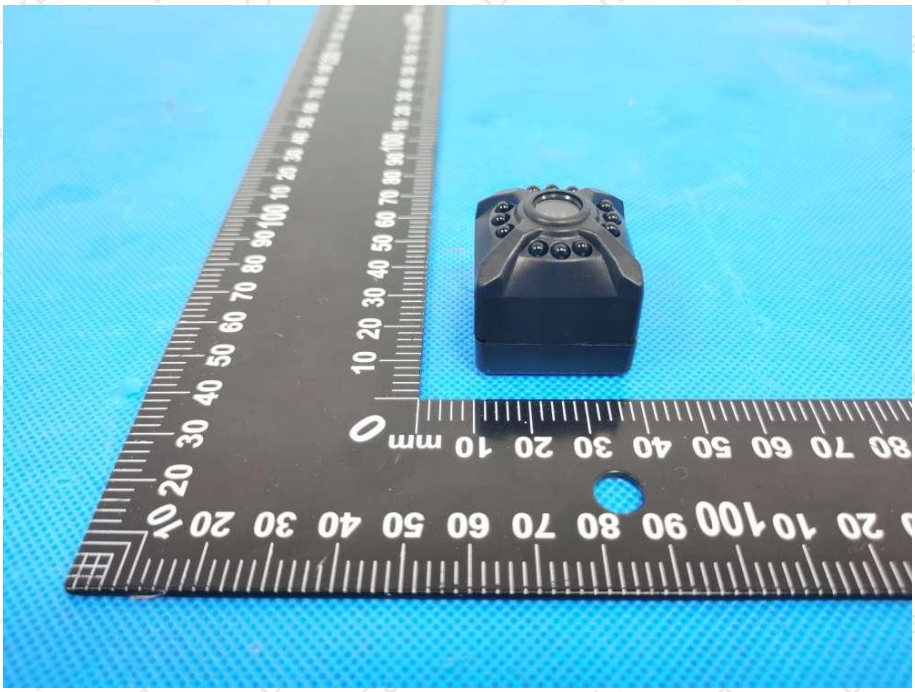
9. EUT PHOTO

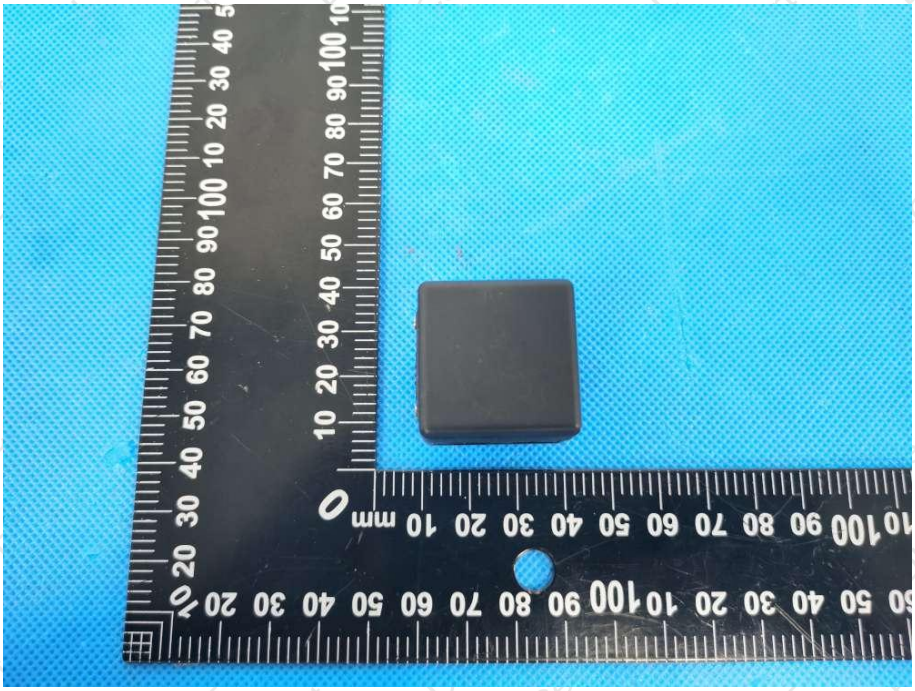


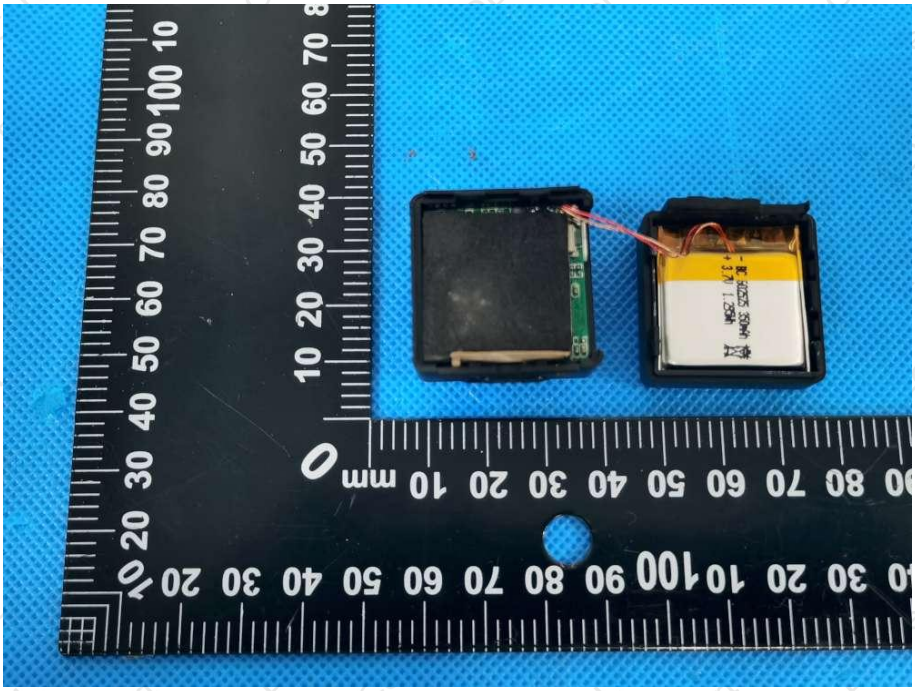


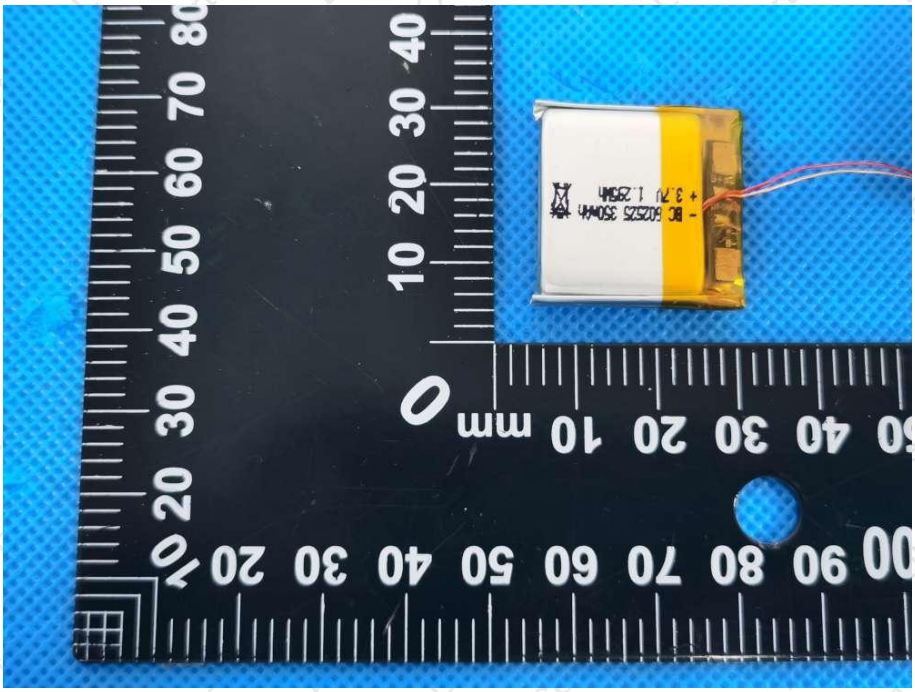


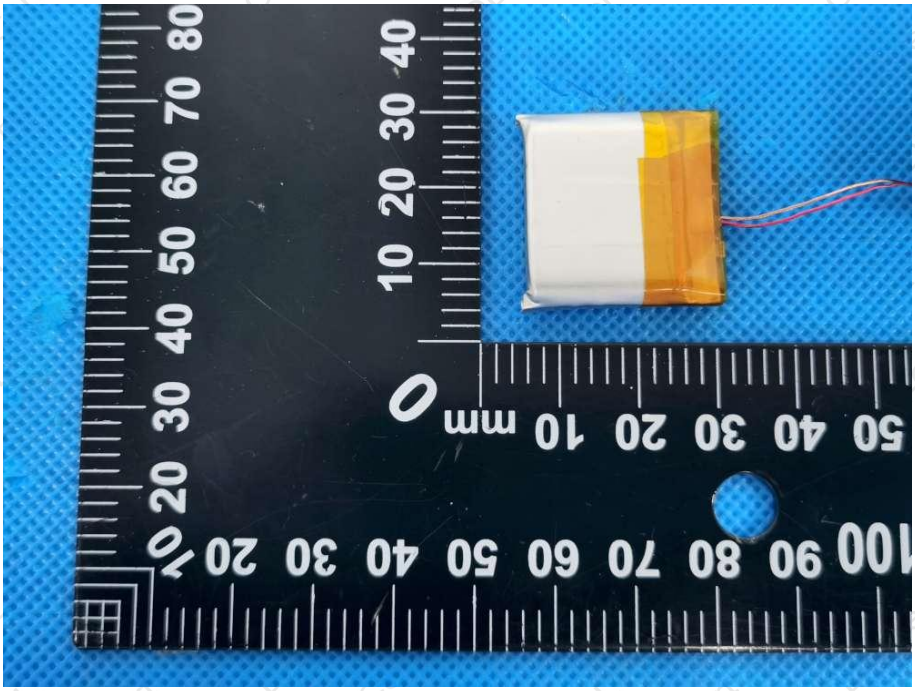


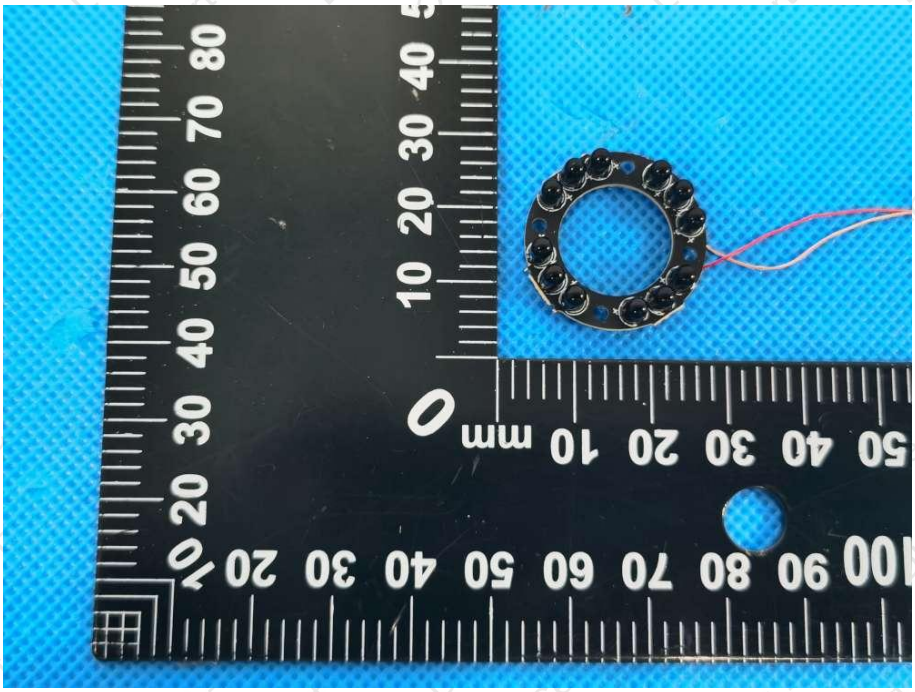


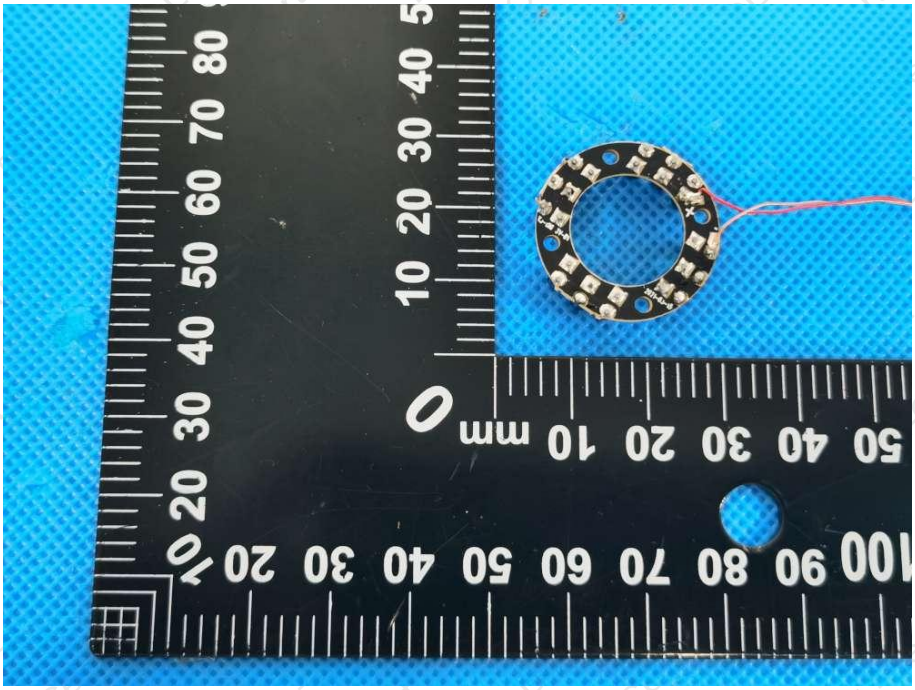


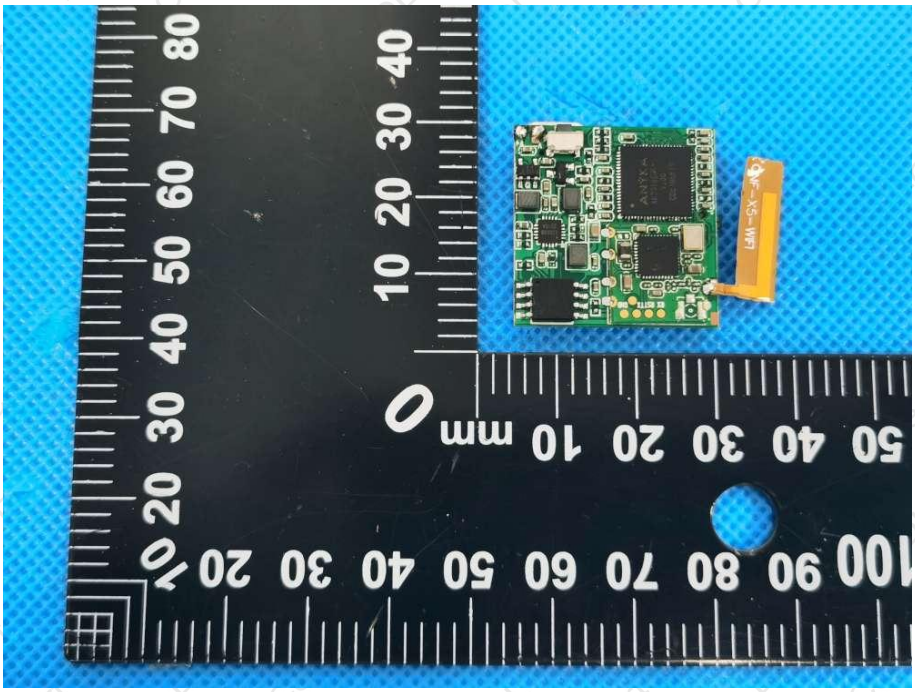


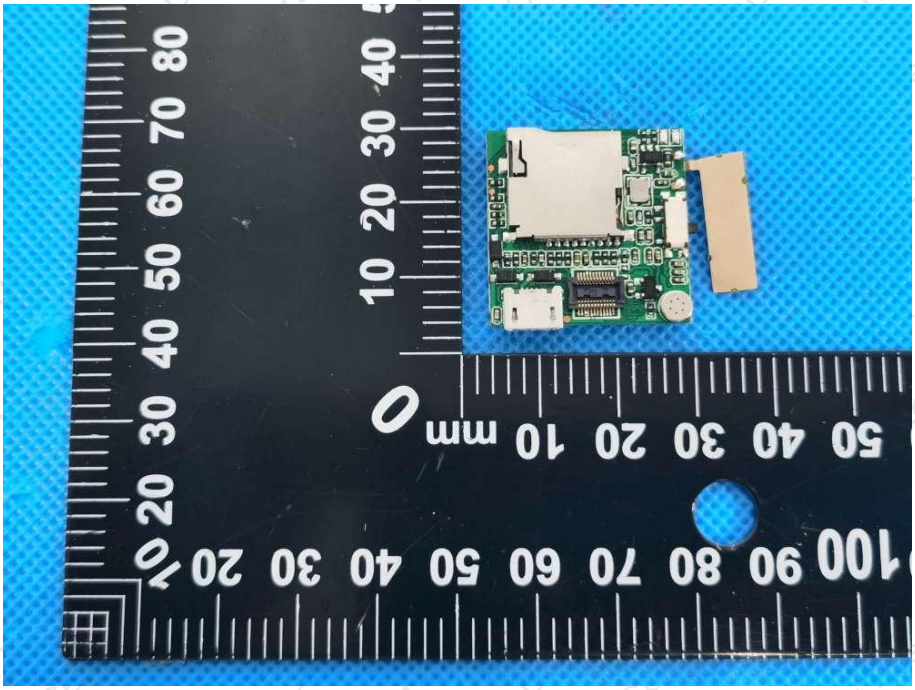


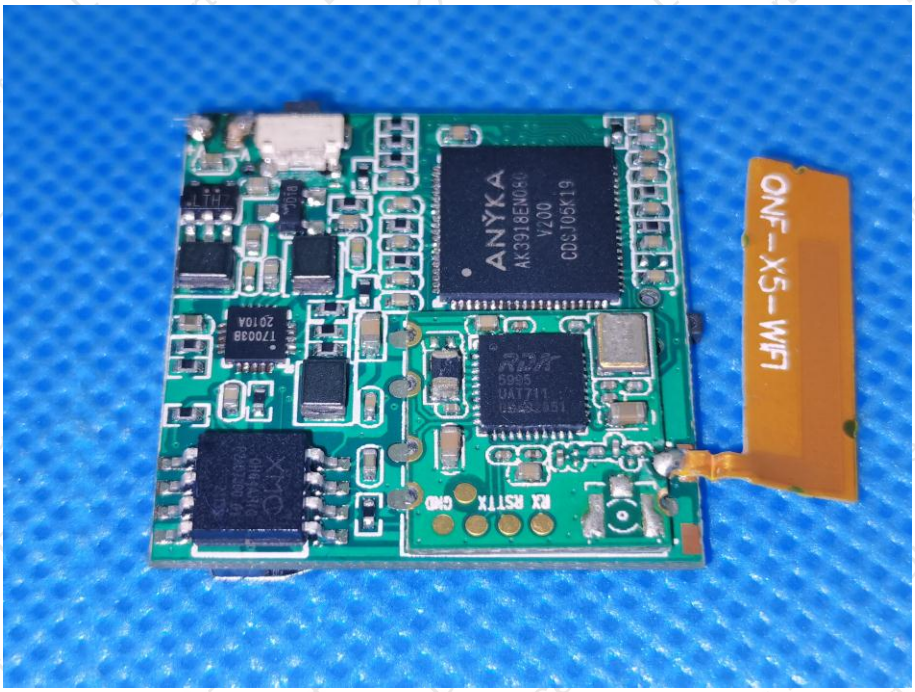












※※※※※ **END OF REPORT** ※※※※※