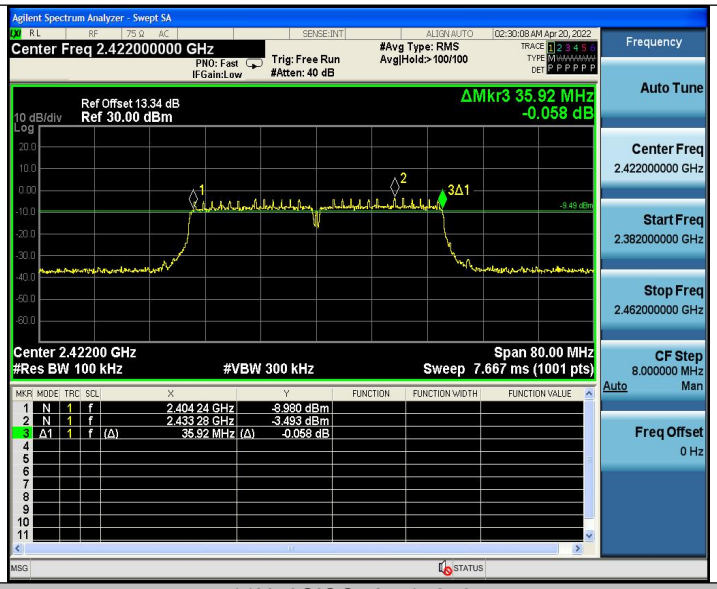
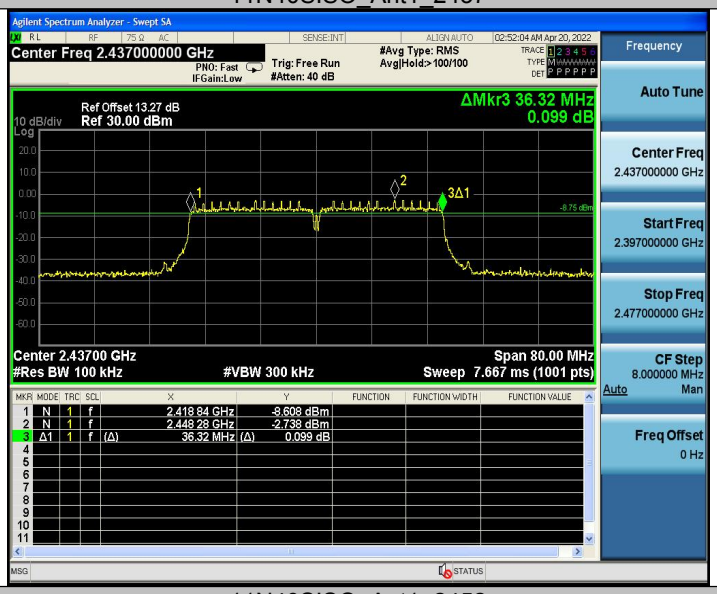
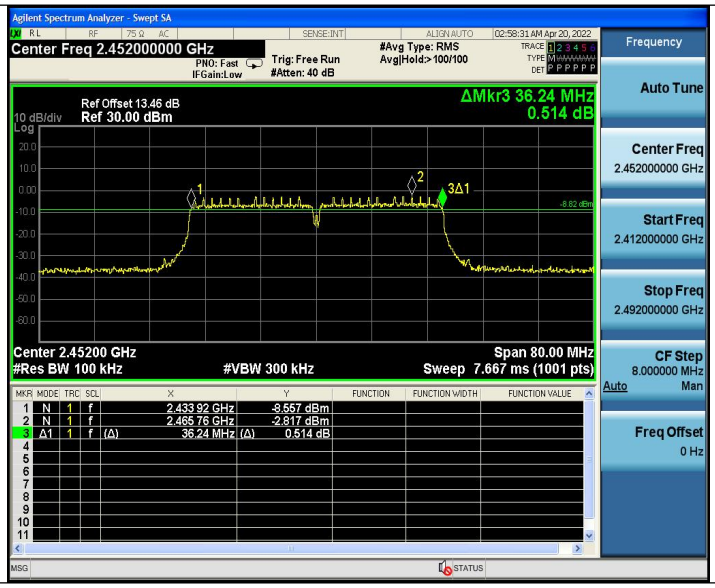


11N40SISO_Ant1_2437



11N40SISO_Ant1_2452


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.452000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
#Avg Type: RMS
Avg|Hold:>100/100
02:58:31 AM Apr 20, 2022
Ref Offset 13.46 dB
10 dB/div
Ref 30.00 dBm
ΔMkr3 36.24 MHz
0.514 dB
Center 2.45200 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 80.00 MHz
Sweep 7.667 ms (1001 pts)
1 N 1 f 2.433 92 GHz -8.557 dBm
2 N 1 f 2.465 76 GHz -2.817 dBm
3 Δ1 1 f (Δ) 36.24 MHz (Δ) 0.514 dB
Frequency
Auto Tune
Center Freq
2.452000000 GHz
Start Freq
2.412000000 GHz
Stop Freq
2.492000000 GHz
CF Step
8.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

10 Maximum conducted output power

Test Requirement : FCC CFR47 Part 15 Section 15.247

Test Method : ANSI C63.10:2013

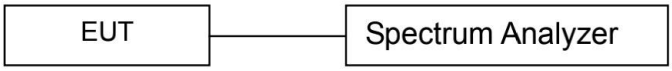
Test Limit : Regulation 15.247 (b)(3), For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power.

10.1 Test Procedure

1. The testing follows the Measurement Procedure of FCC KDB No. 558074 D01 15.247 Meas Guidance v05 section 8.3.2.2.
2. The RF output of EUT Connect the antenna port(s) to the spectrum analyzer input. The path loss was compensated to the results for each measurement.

3. Set to the maximum power setting and enable the EUT transmit continuously.
4. Measure the conducted output power and record the results in the test report.

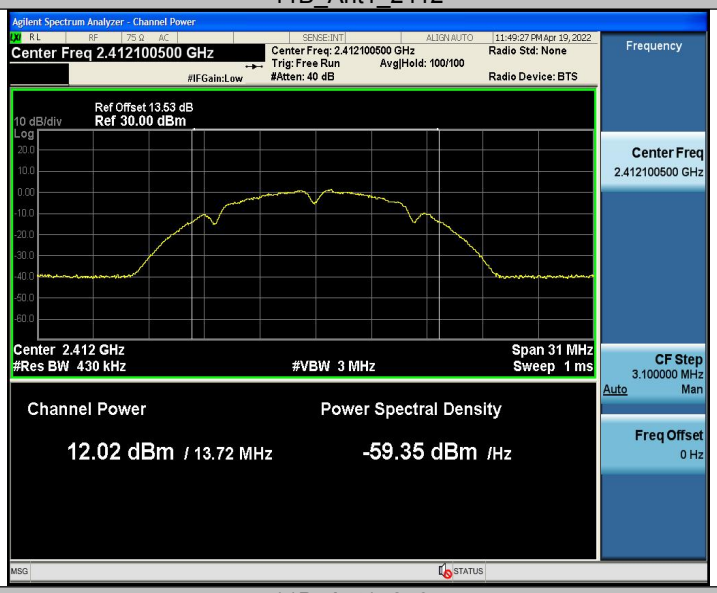
5. Test set-up(block diagram of configuration):



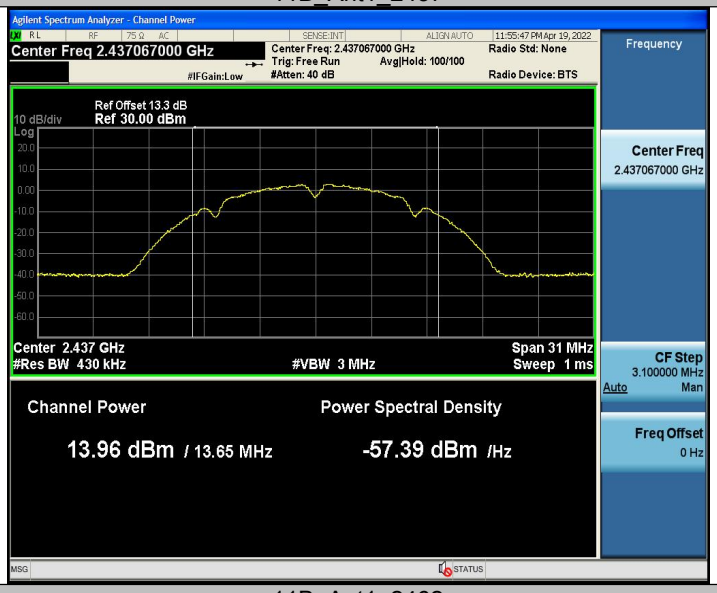
10.2 Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
11B	Ant1	2412	12.02	≤30.00	PASS
		2437	13.96	≤30.00	PASS
		2462	14.12	≤30.00	PASS
11G	Ant1	2412	11.26	≤30.00	PASS
		2437	11.45	≤30.00	PASS
		2462	11.78	≤30.00	PASS
11N40SISO	Ant1	2422	10.17	≤30.00	PASS
		2437	10.93	≤30.00	PASS
		2452	11.76	≤30.00	PASS

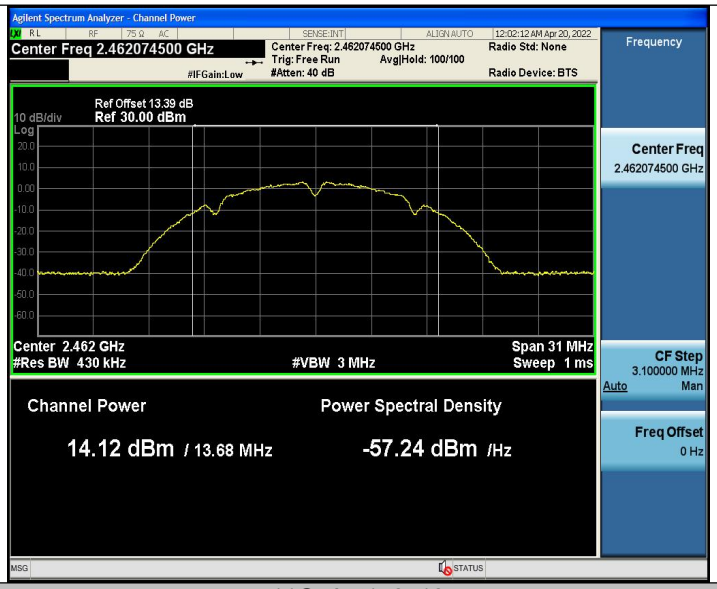
11B_Ant1_2412



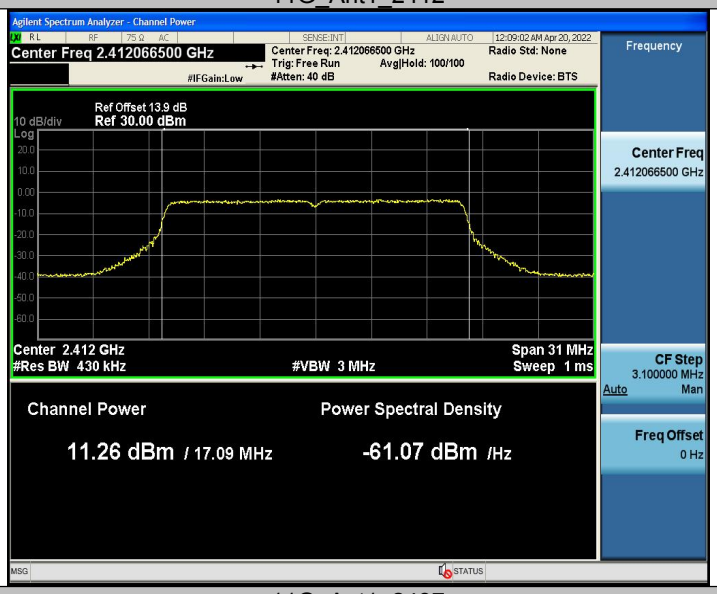
11B_Ant1_2437



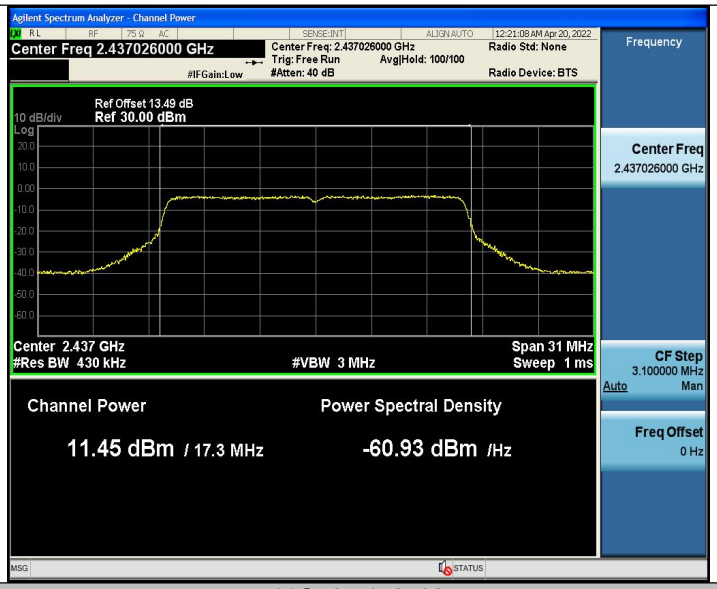
11B_Ant1_2462



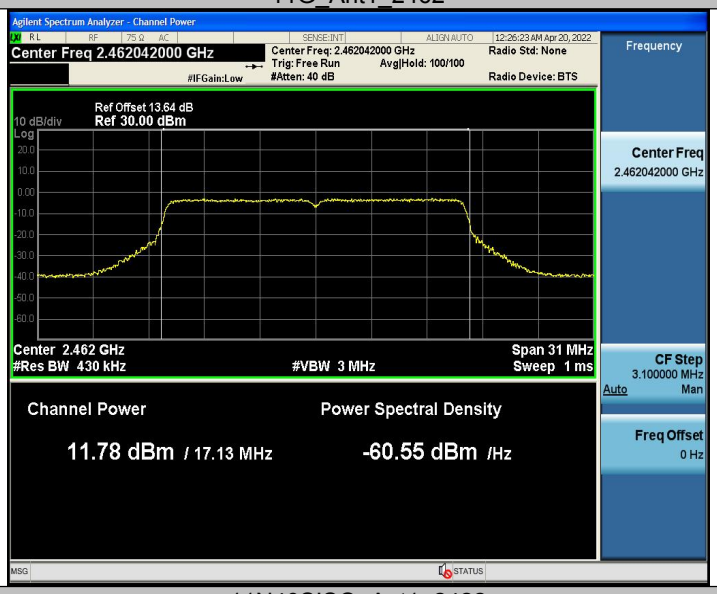
11G_Ant1_2412



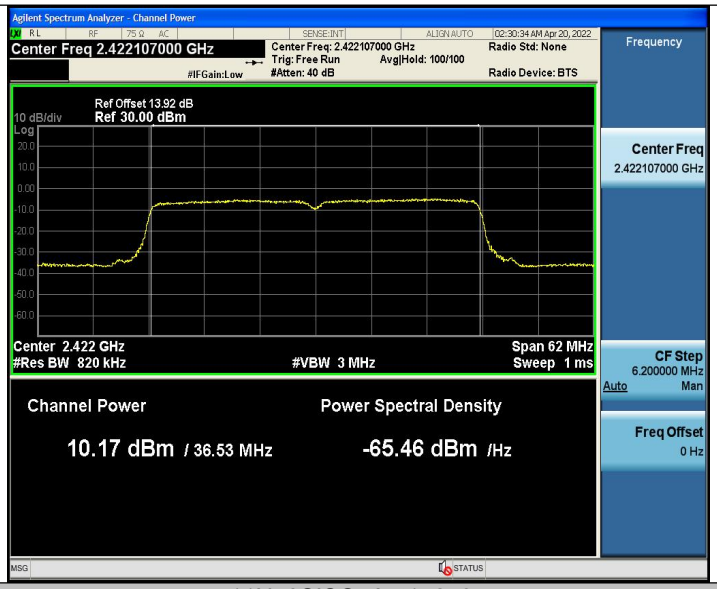
11G_Ant1_2437



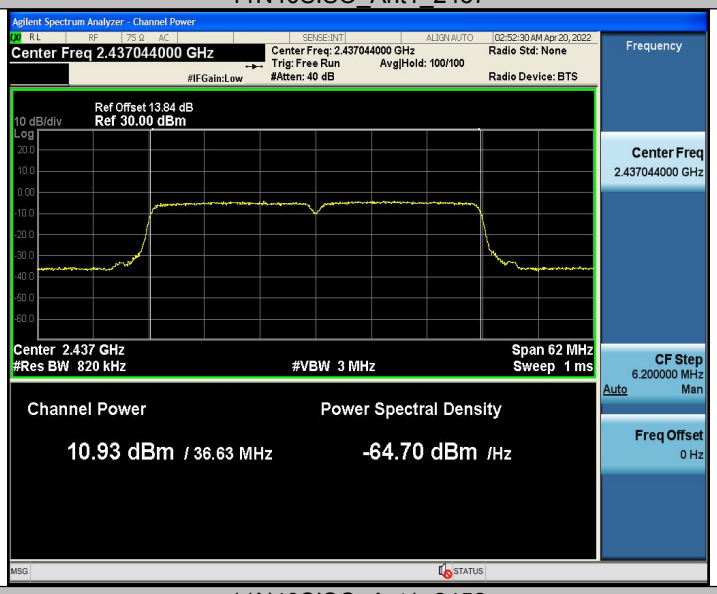
11G_Ant1_2462



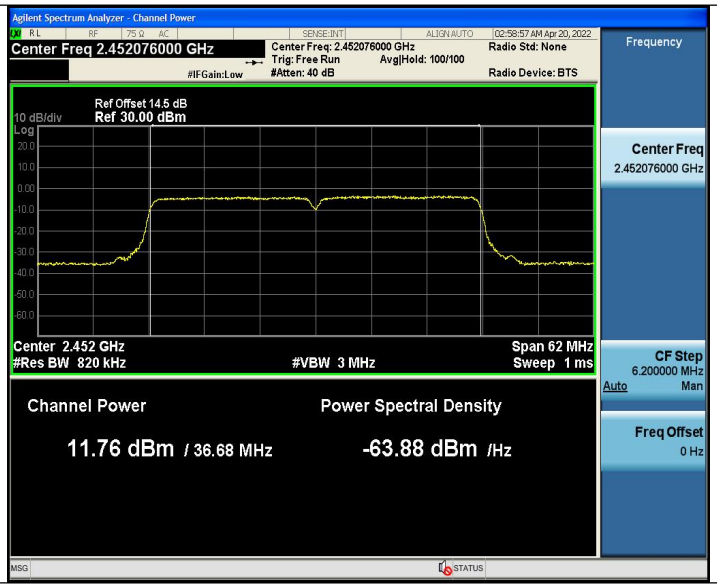
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452


Agilent Spectrum Analyzer - Channel Power
Center Freq 2.452076000 GHz
Center Freq: 2.452076000 GHz
Trig: Free Run
Avg|Hold: 100/100
#Atten: 40 dB
#IFGain:Low
Radio Std: None
Radio Device: BTS
02:58:57 AM Apr 20, 2022
Ref Offset 14.5 dB
10 dB/div
Ref 30.00 dBm
Log
Center 2.452 GHz
#Res BW 820 kHz
#VBW 3 MHz
Span 62 MHz
Sweep 1 ms
Channel Power
11.76 dBm / 36.68 MHz
Power Spectral Density
-63.88 dBm /Hz
Frequency
Center Freq
2.452076000 GHz
CF Step
6.200000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

11 Power Spectral density

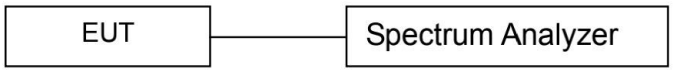
Test Requirement : FCC CFR47 Part 15 Section 15.247

Test Method : ANSI C63.10:2013

Test Limit : Regulation 15.247(f) The power spectral density conducted from the intentional radiator to the antenna due to the digital modulation operation of the hybrid system, with the frequency hopping operation turned off, shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

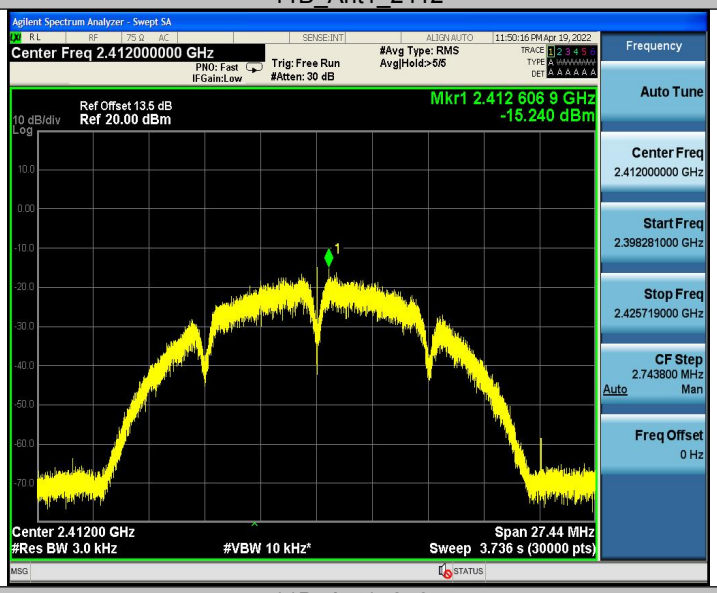
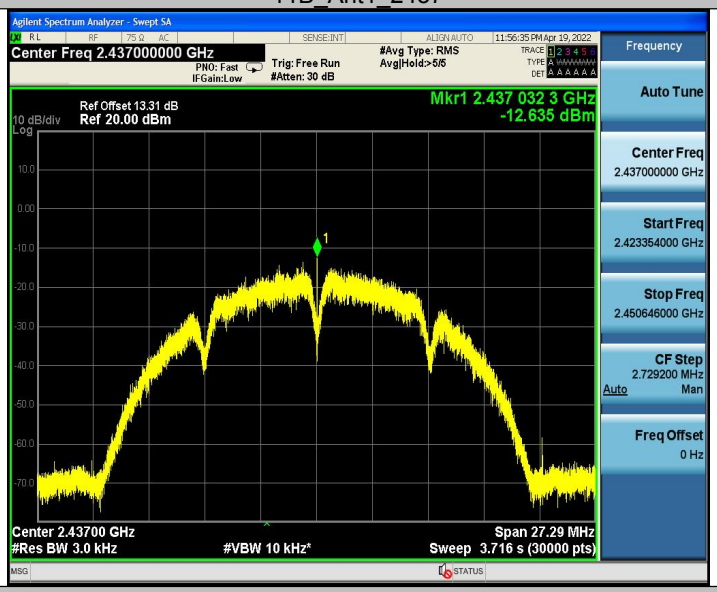
11.1 Test Procedure

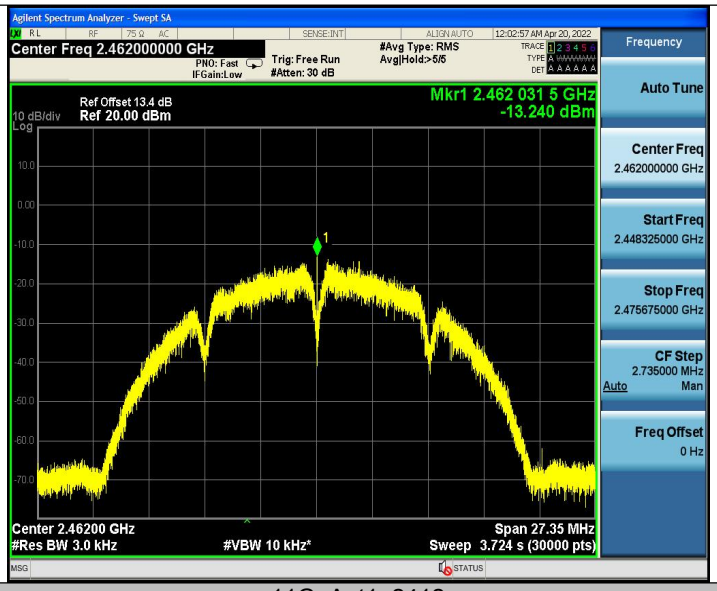
1. Connect the antenna port(s) to the spectrum analyzer input.
2. Configure the spectrum analyzer as shown below:
   Center frequency=DTS channel center frequency
   Span = 1.5 times the DTS bandwidth
   RBW = 3KHz, VBW = 10KHz
   Sweep time = auto couple
   Detector = power averaging (rms) or sample detector (when rms not available)
   Trace mode =max hold
3. Place the radio in continuous transmit mode, allow the trace to stabilize, view the transmitter wave form on the spectrum analyzer.
4. Use the peak marker function to determine the maximum amplitude level within the RBW.
5. If measured value exceeds limit, reduce RBW(no less than 3KHz) and repeat.
6. Test set-up(block diagram of configuration):



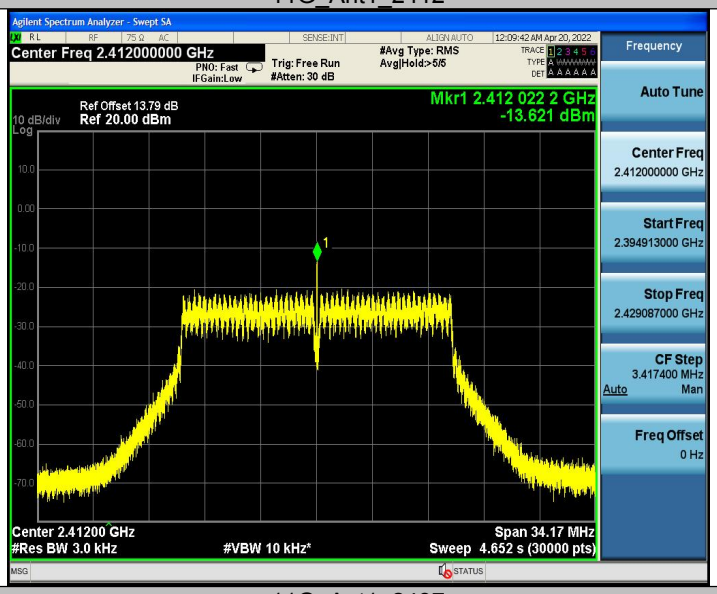
11.2 Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-15.24	≤8.00	PASS
		2437	-12.64	≤8.00	PASS
		2462	-13.24	≤8.00	PASS
11G	Ant1	2412	-13.62	≤8.00	PASS
		2437	-12.66	≤8.00	PASS
		2462	-13.27	≤8.00	PASS
11N40SISO	Ant1	2422	-12.86	≤8.00	PASS
		2437	-16.71	≤8.00	PASS
		2452	-16.3	≤8.00	PASS

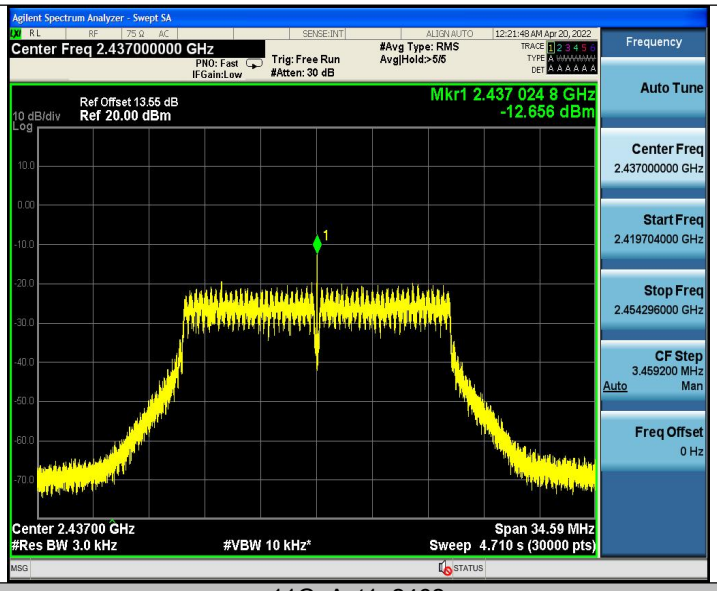
11B_Ant1_2412

11B_Ant1_2437

11B_Ant1_2462



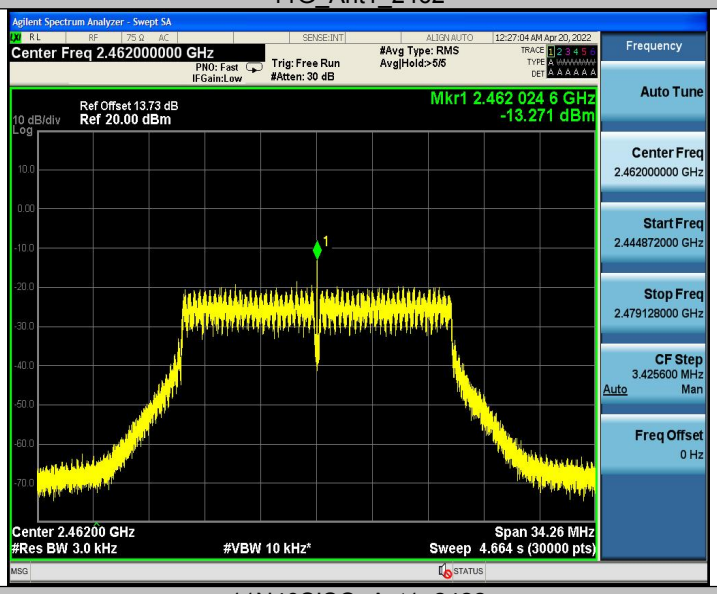
11G_Ant1_2412



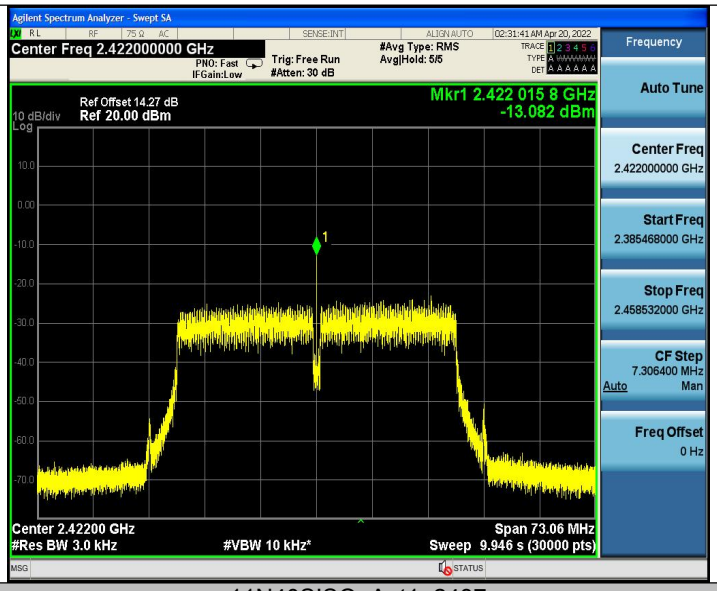
11G_Ant1_2437



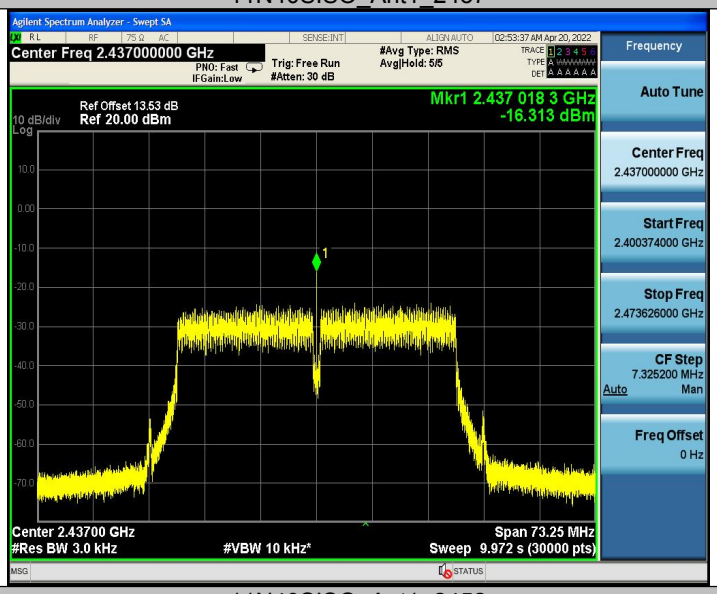
11G_Ant1_2462



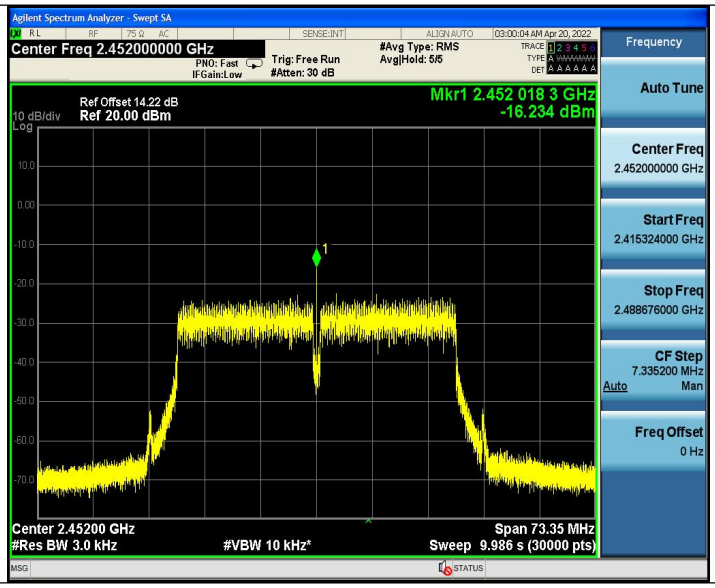
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452


Agilent Spectrum Analyzer - Swept SA
Center Freq 2.452000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
#Avg Type: RMS
Avg|Hold: 5/5
03:00:04 AM Apr 20, 2022
Ref Offset 14.22 dB
10 dB/div
Ref 20.00 dBm
Log
Mkr1 2.452 018 3 GHz
-16.234 dBm
Center 2.45200 GHz
#Res BW 3.0 kHz
#VBW 10 kHz*
Span 73.35 MHz
Sweep 9.986 s (30000 pts)
Frequency
Auto Tune
Center Freq
2.452000000 GHz
Start Freq
2.415324000 GHz
Stop Freq
2.488676000 GHz
CF Step
7.335200 MHz
Auto
Man
Freq Offset
0 Hz

12 Antenna Application

12.1 Antenna Requirement

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

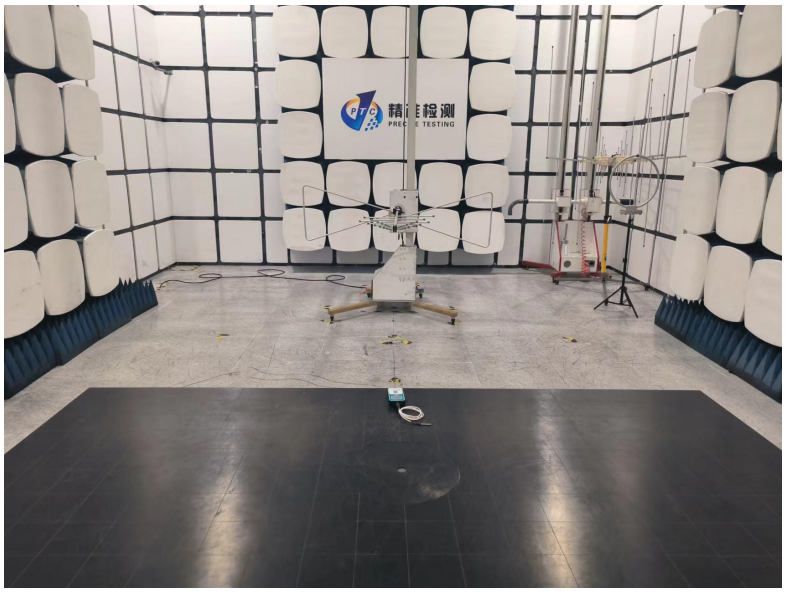
12.2 Result

The EUT'S antenna, permanent attached antenna,is PCB Antenna. The antenna's gain is 4.54 dBi and meets the requirement.

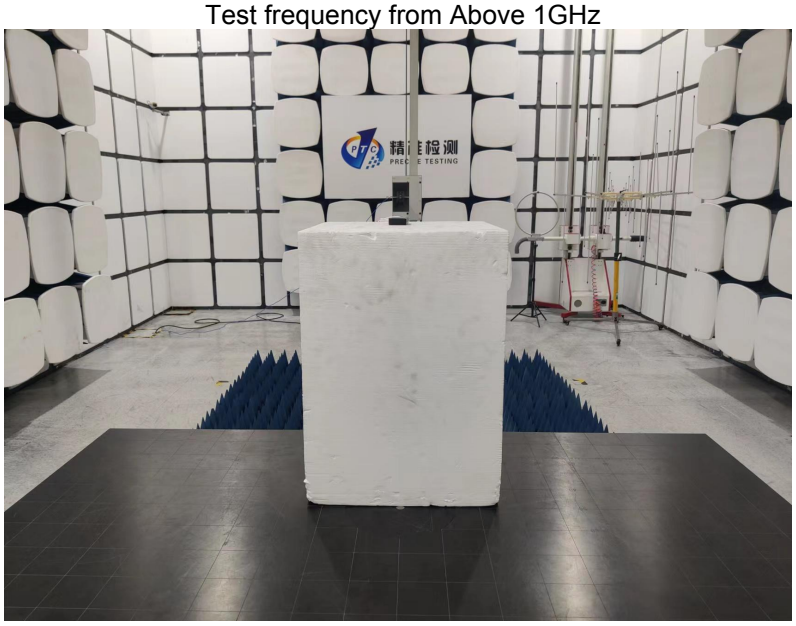
13 Test Setup

Conducted Emissions

Radiated Spurious Emissions
From 30MHz-1000MHz



Test frequency from Above 1GHz



14 EUT PHOTOS

Please reference “EUT Photos”.

******************END******************