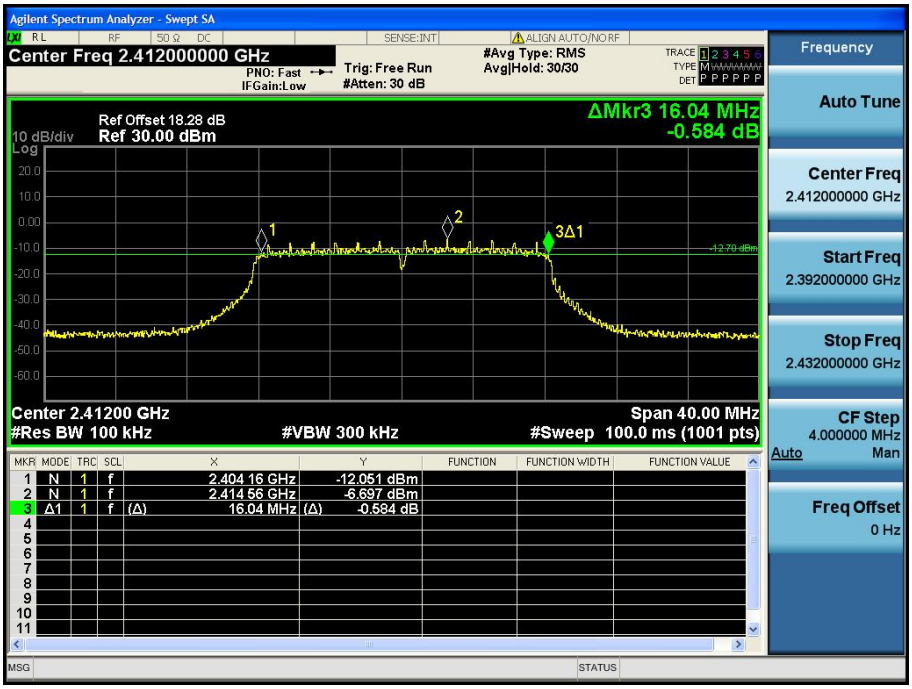
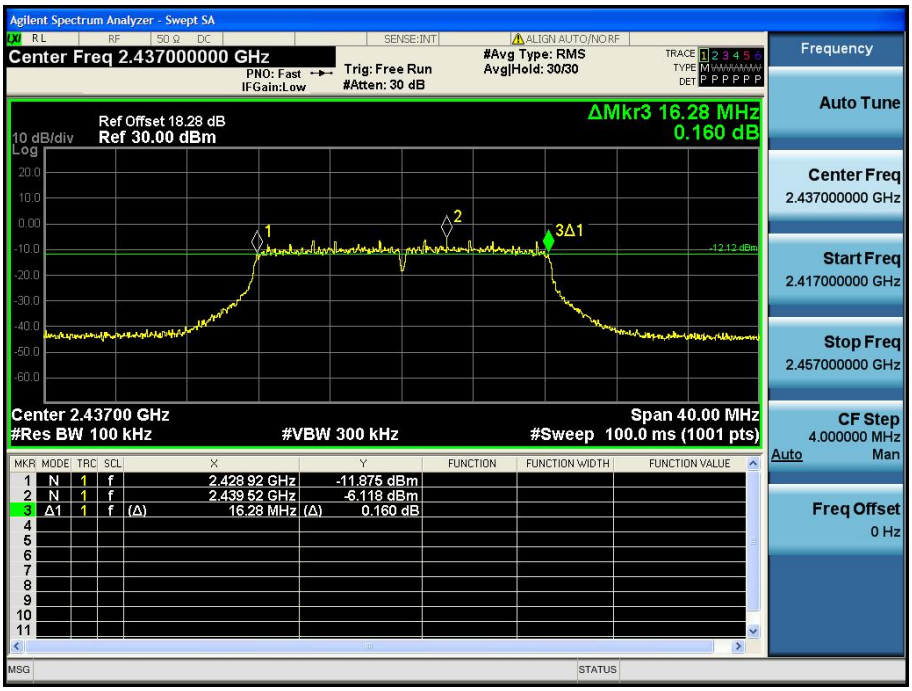
802.11b Channel 2462

802.11g Channel 2412

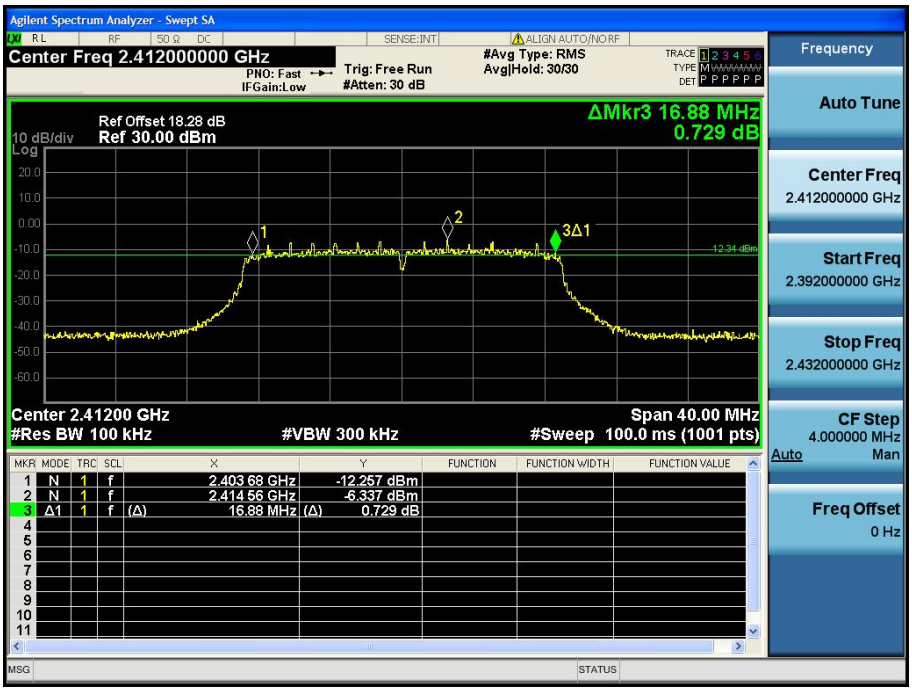


802.11g Channel 2437

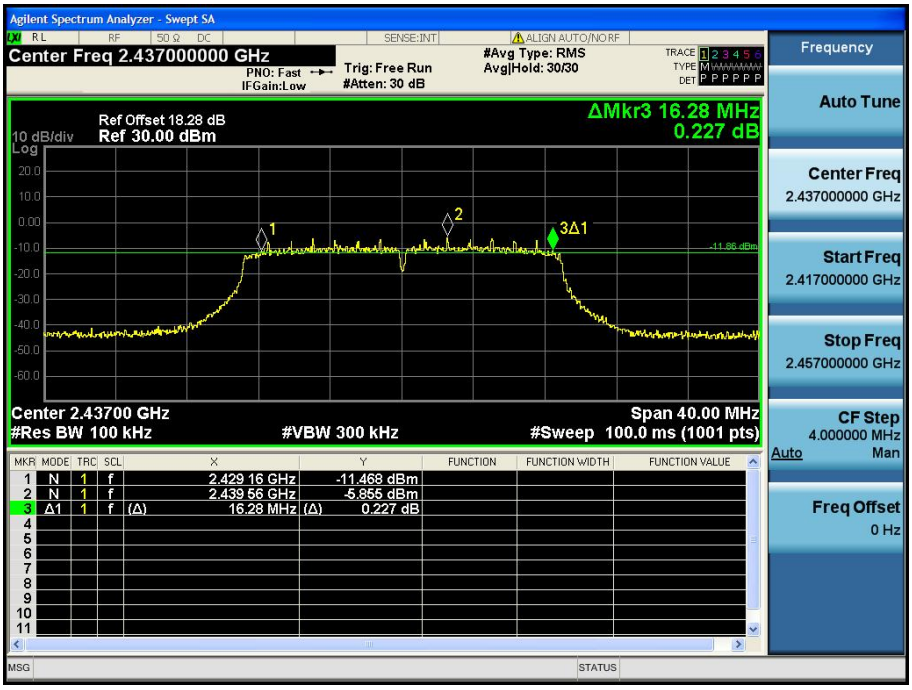


802.11g Channel 2462

802.11n(20) Channel 2412



802.11n(20) Channel 2437



802.11n(20) Channel 2462

9 Maximum Peak Output Power

Test Requirement	:	FCC CFR47 Part 15 Section 15.247&RSS-247 § 5.4
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.

9.1 Test Procedure

1. The RF output of EUT was connected to the power meter by RF cable and attenuator. The path loss was compensated to the results for each measurement.
2. Set to the maximum power setting and enable the EUT transmit continuously.
3. Measure the conducted output power and record the results in the test report.

9.2 Test Result

Test Mode	Channel frequency (MHz)	Peak Output Power(dBm)	Required Limit (dBm)
802.11b	2412	6.76	30
	2437	6.65	30
	2462	6.68	30
802.11g	2412	6.46	30
	2437	6.38	30
	2462	6.44	30
802.11n(20)	2412	6.29	30
	2437	6.39	30
	2462	6.67	30

10 Power Spectral density

Test Requirement	:	FCC CFR47 Part 15 Section 15.247&RSS-247 § 5.2
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.

10.1 Test Procedure

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set the spectrum analyzer: RBW = 3kHz. VBW = 10kHz , Span = 1.5 times the DTS channel bandwidth(6 dB bandwidth). Sweep = auto; Detector Function = Peak. Trace = Max hold.
3. Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channels. The limit is specified in one of the subparagraphs of this Section Submit this plot.

10.2 Test Result

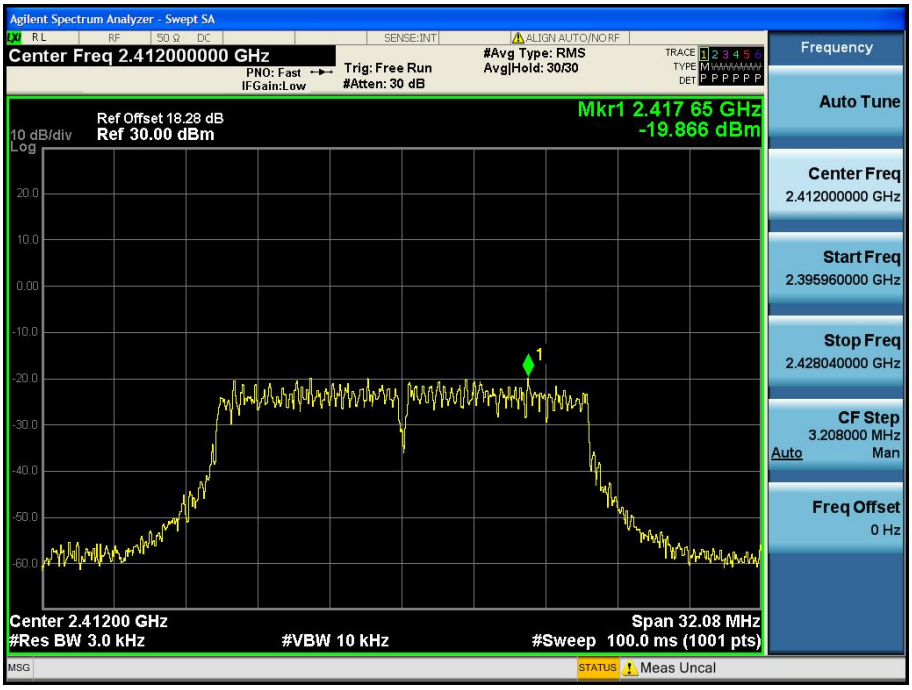
Test Mode	Channel frequency (MHz)	Power Spectral density (dBm)	Required Limit (dBm/3KHz)
802.11b	2412	-11.87	8
	2437	-10.27	8
	2462	-11.35	8
802.11g	2412	-19.87	8
	2437	-18.83	8
	2462	-17.28	8
802.11n(20)	2412	-19.3	8
	2437	-19.51	8
	2462	-18.92	8

802.11b Channel 2412

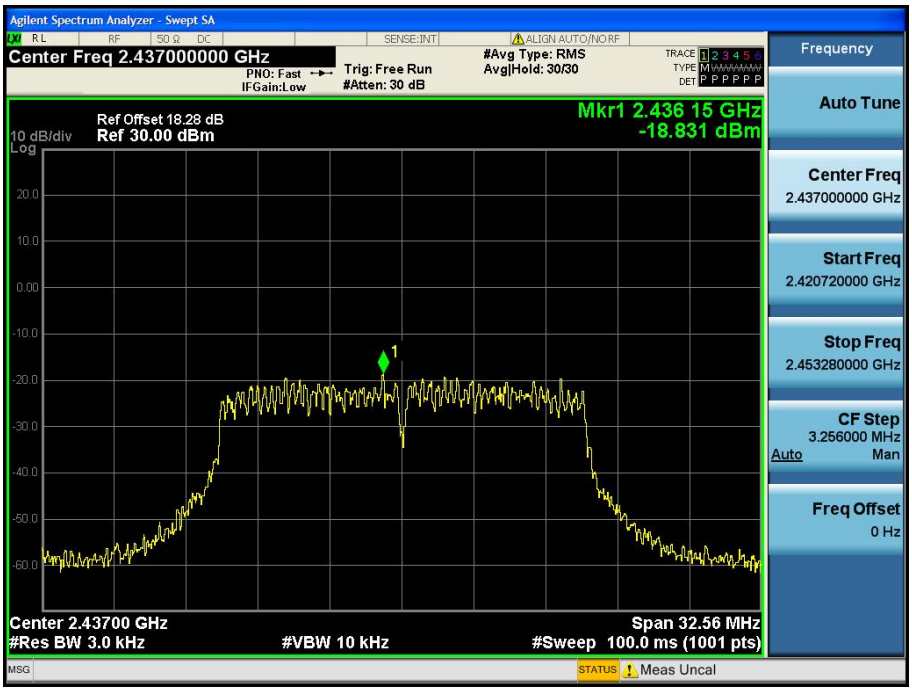
802.11g Channel 2437

802.11b Channel 2462

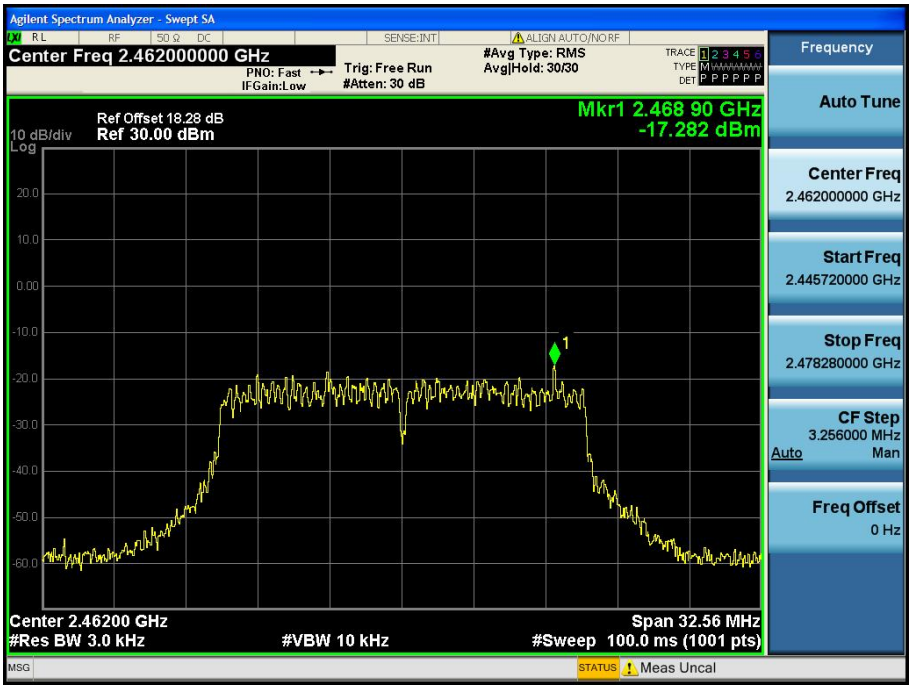
802.11g Channel 2412



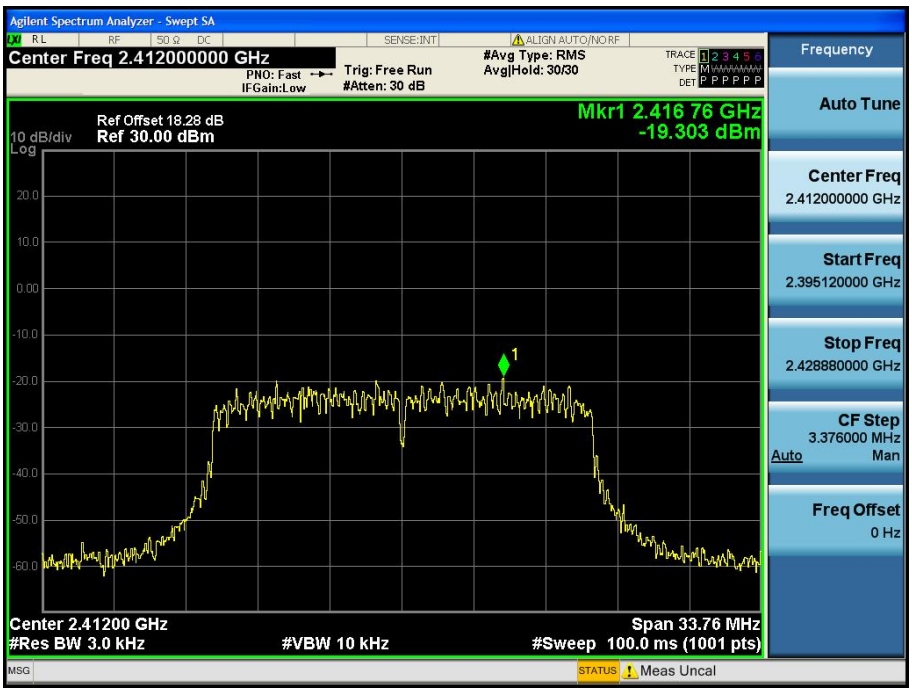
802.11b Channel 2437



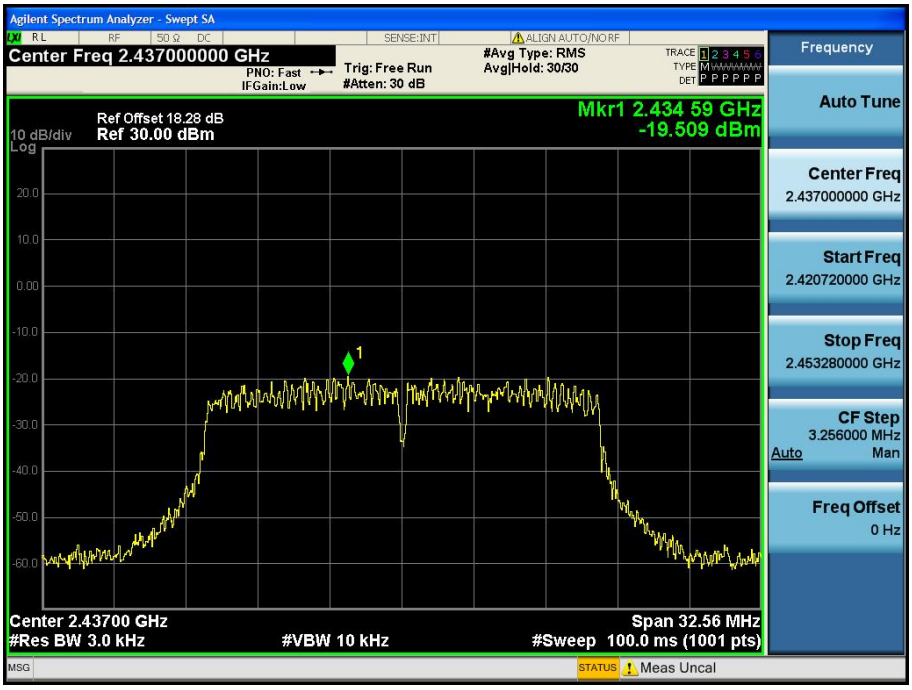
802.11b Channel 2462



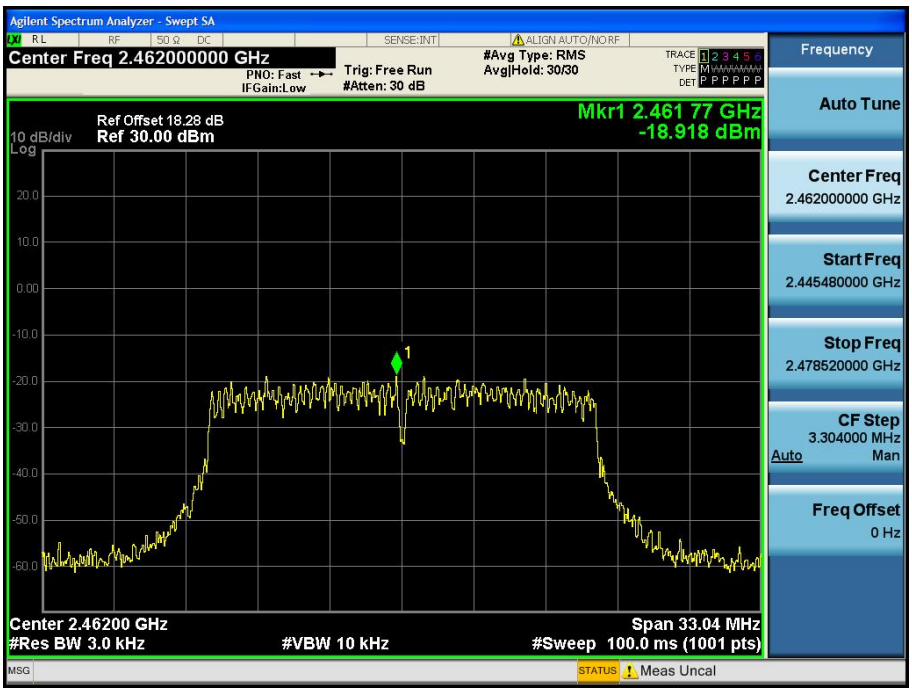
802.11n Channel 2412



802.11n Channel 2437



802.11n Channel 2462



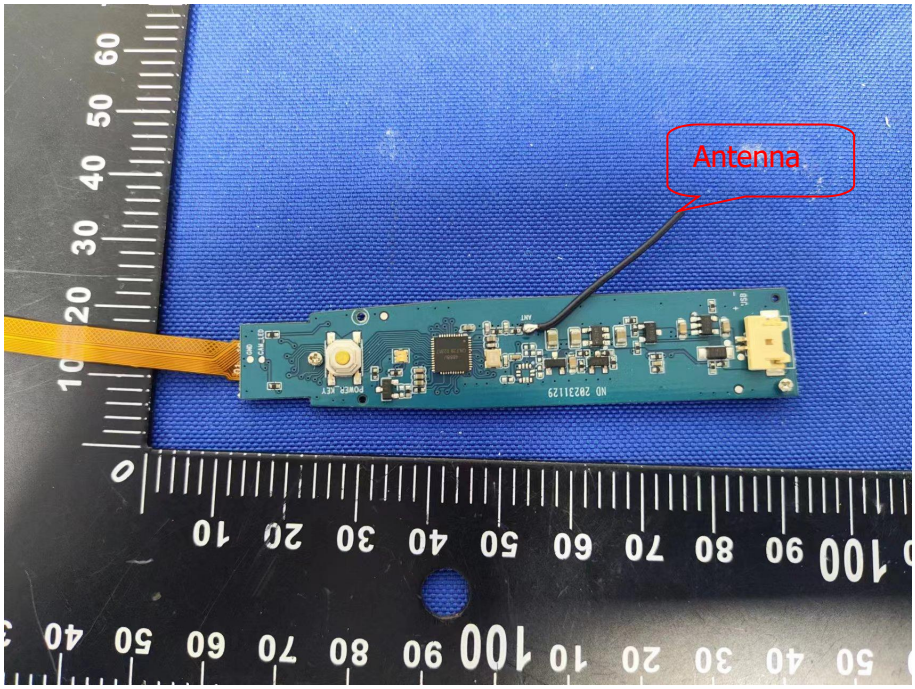
11 Antenna Application

11.1 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.

11.2 Result

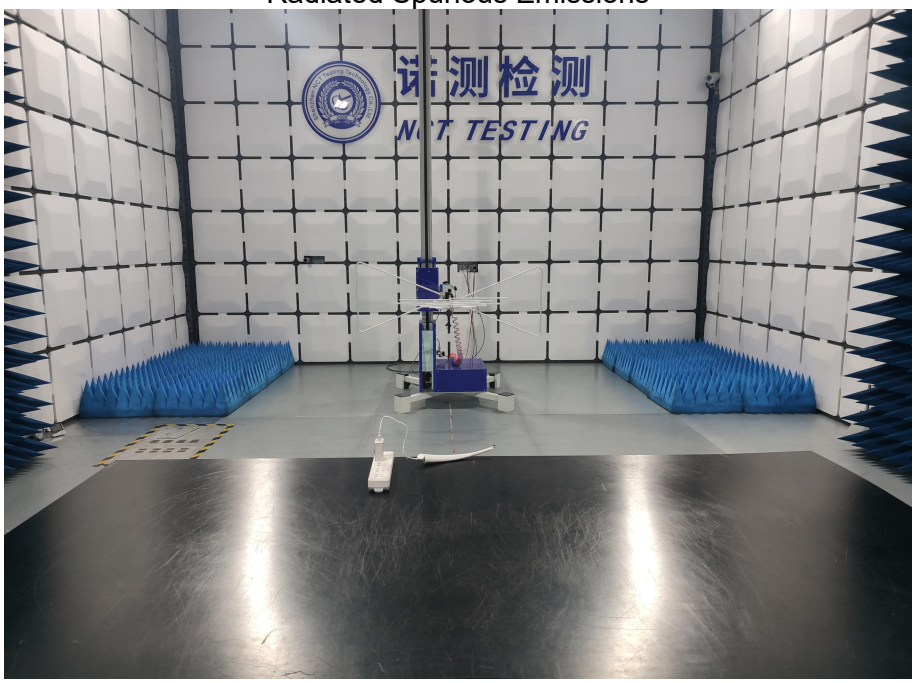
The EUT'S antenna, permanent attached antenna, is internal Cable antenna. The antenna's gain is 0.5 dBi and meets the requirement.

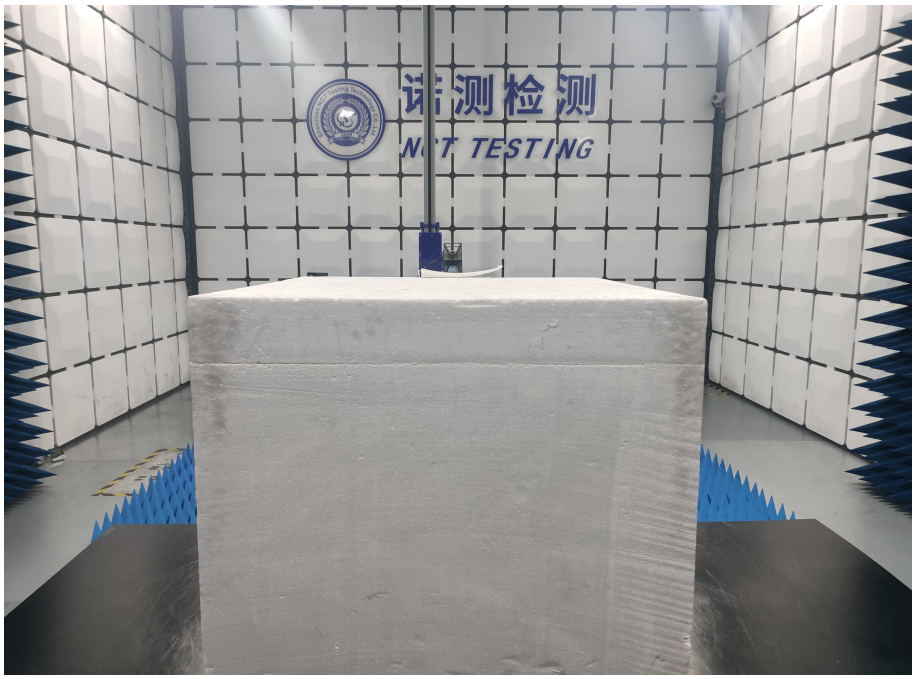


12 Test Setup

Conducted Emissions

Radiated Spurious Emissions





******THE END REPORT******