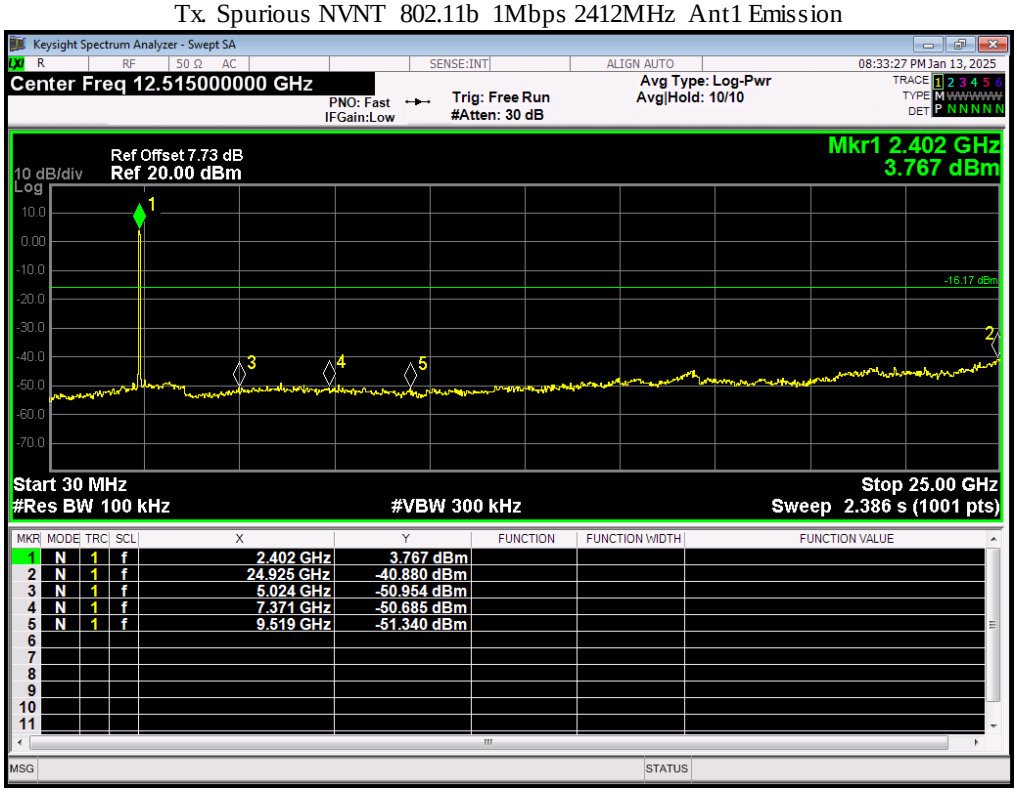
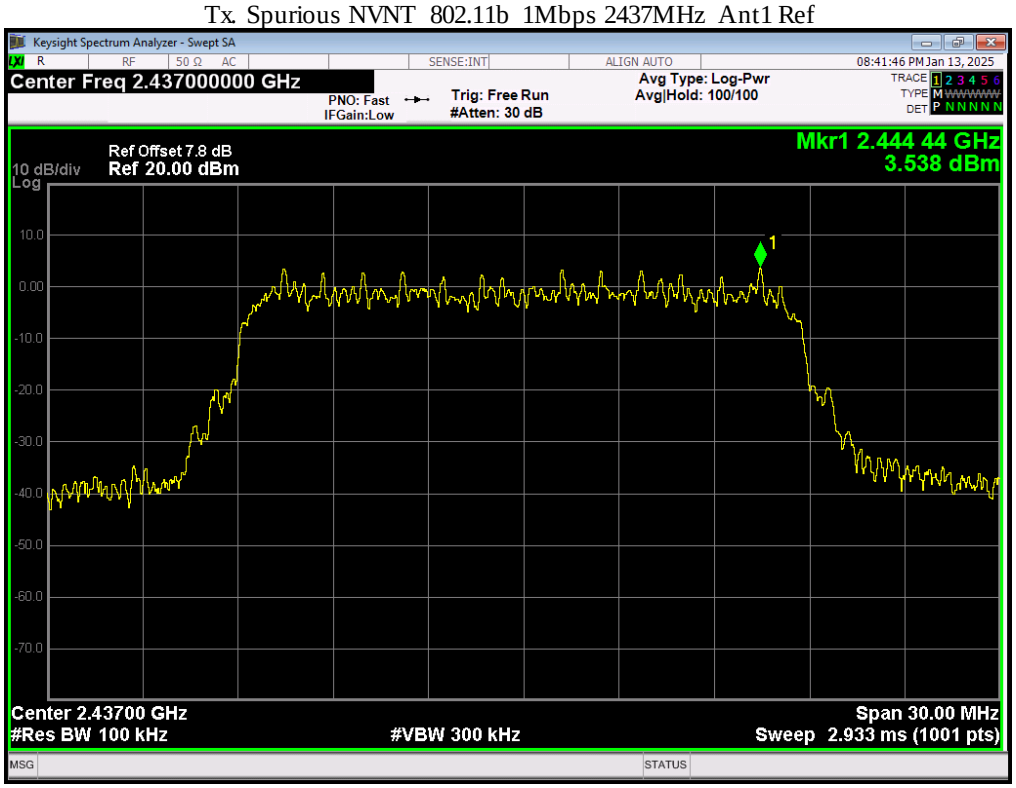
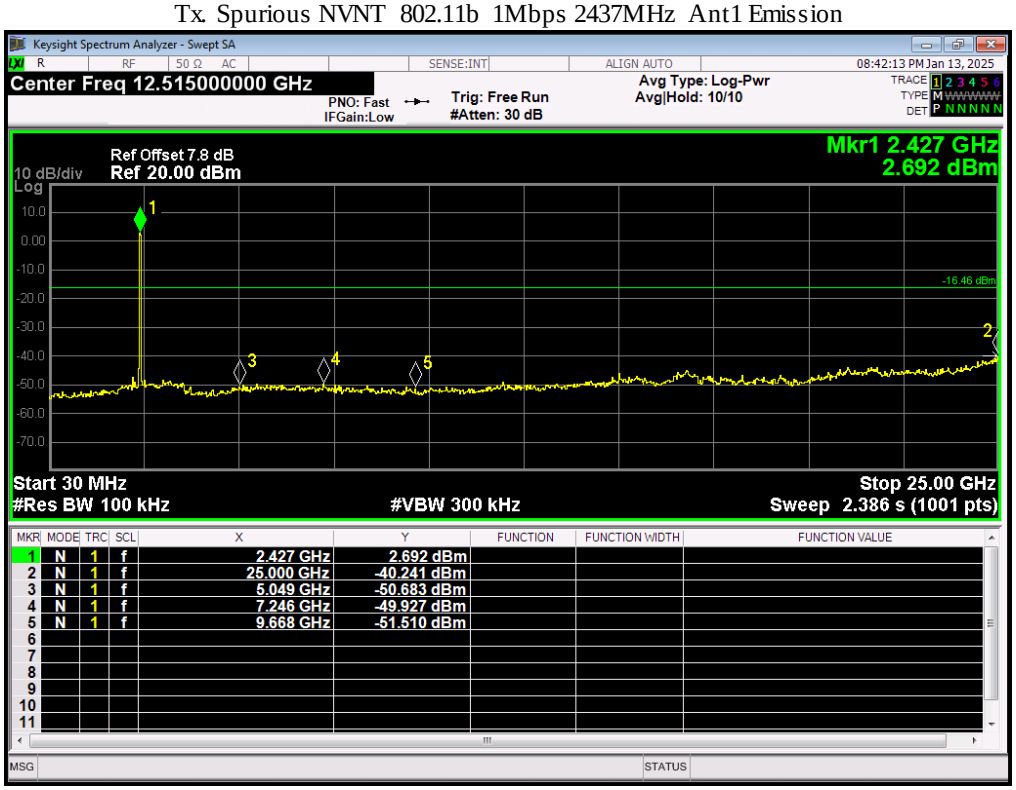
Tx. Spurious NVNT 802.11b 1Mbps 2412MHz Ant1 Emission



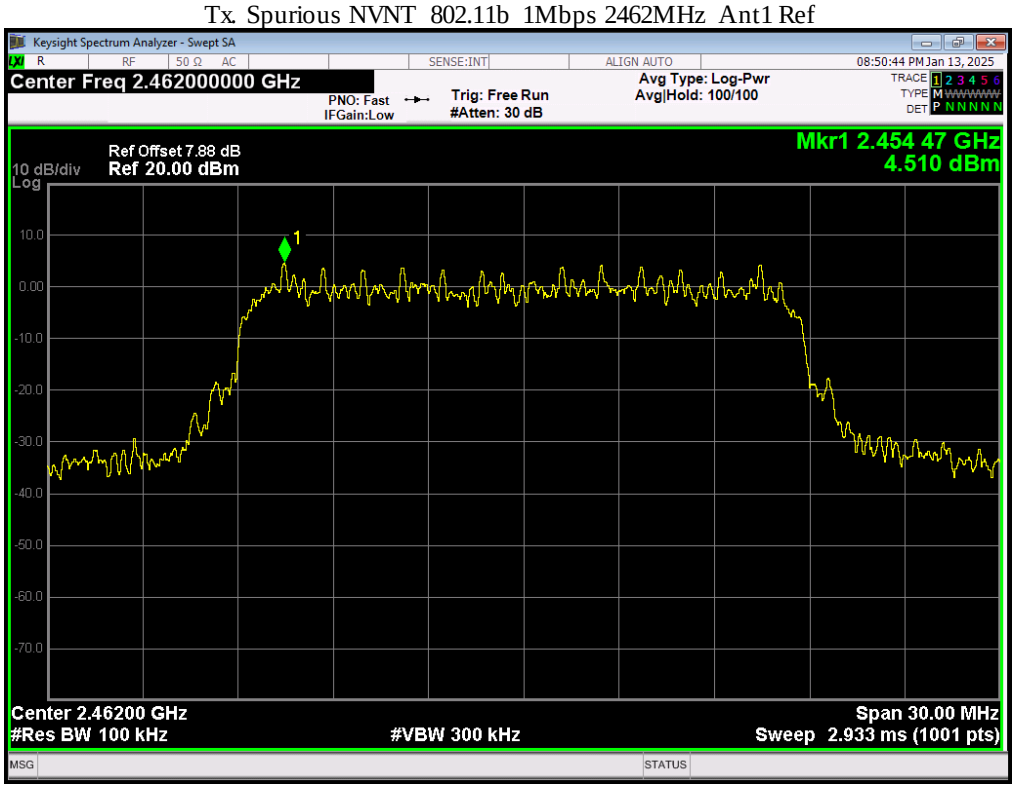
Tx. Spurious NVNT 802.11b 1Mbps 2437MHz Ant1 Ref



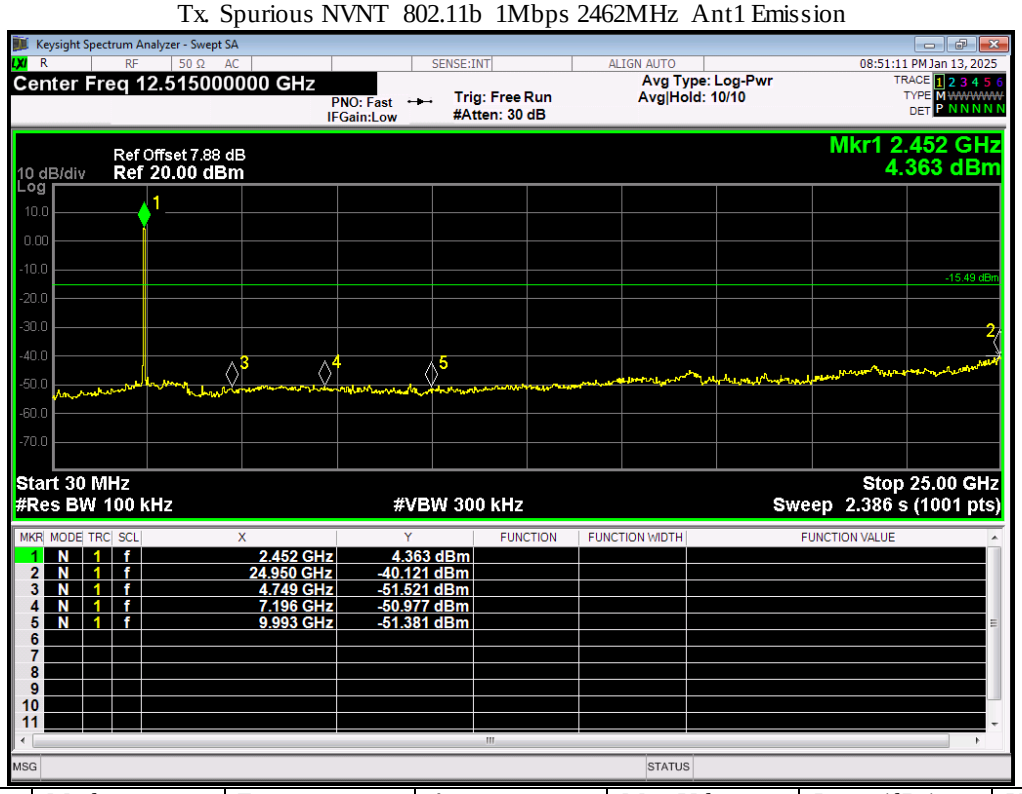
Tx. Spurious NVNT 802.11b 1Mbps 2437MHz Ant1 Emission



Tx. Spurious NVNT 802.11b 1Mbps 2462MHz Ant1 Ref

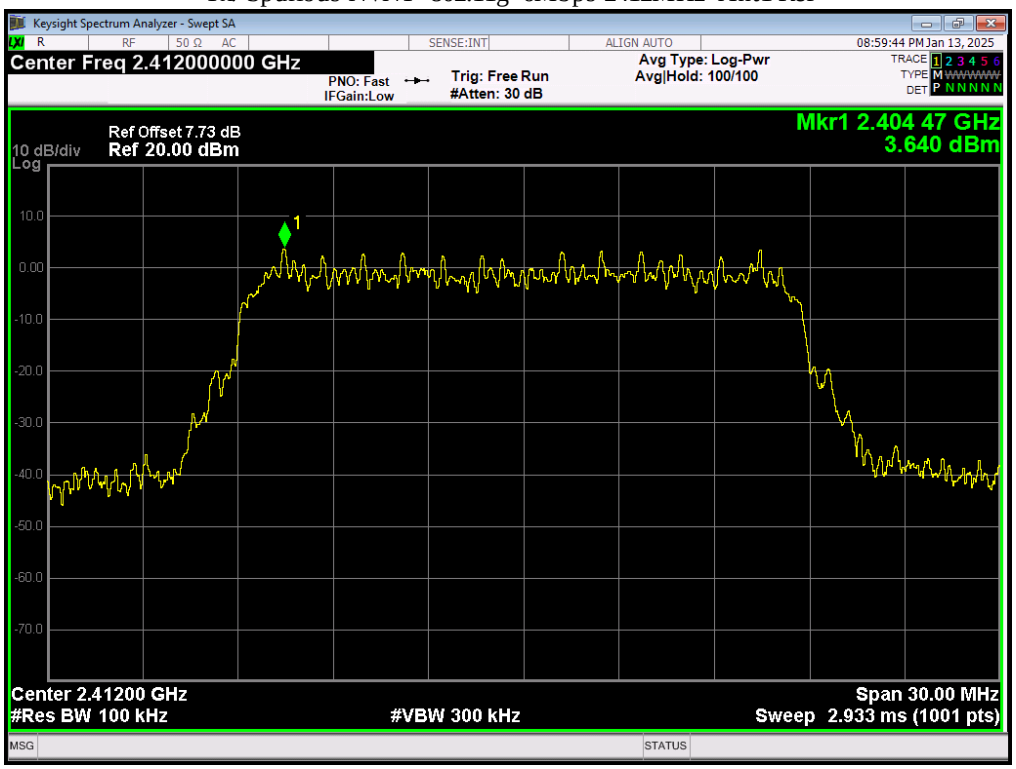


Tx. Spurious NVNT 802.11b 1Mbps 2462MHz Ant1 Emission

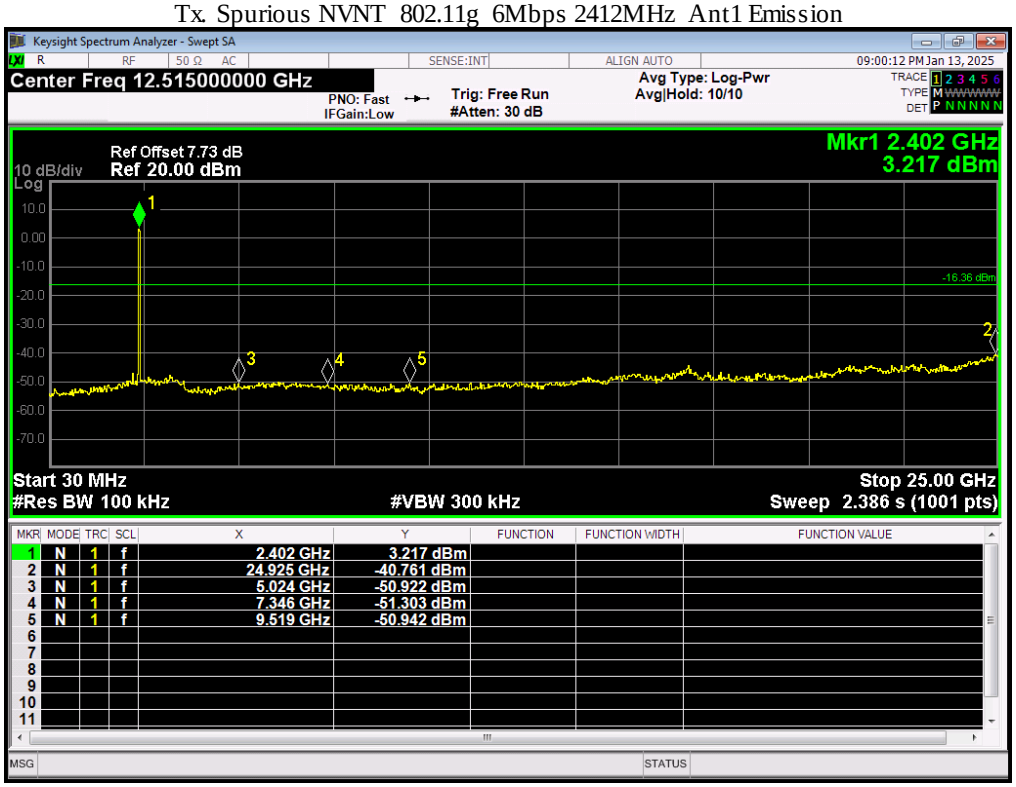


Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	802.11g 6Mbps	2412	Ant 1	-44.4	-30	Pass
NVNT	802.11g 6Mbps	2437	Ant 1	-43.266	-30	Pass
NVNT	802.11g 6Mbps	2462	Ant 1	-45.706	-30	Pass

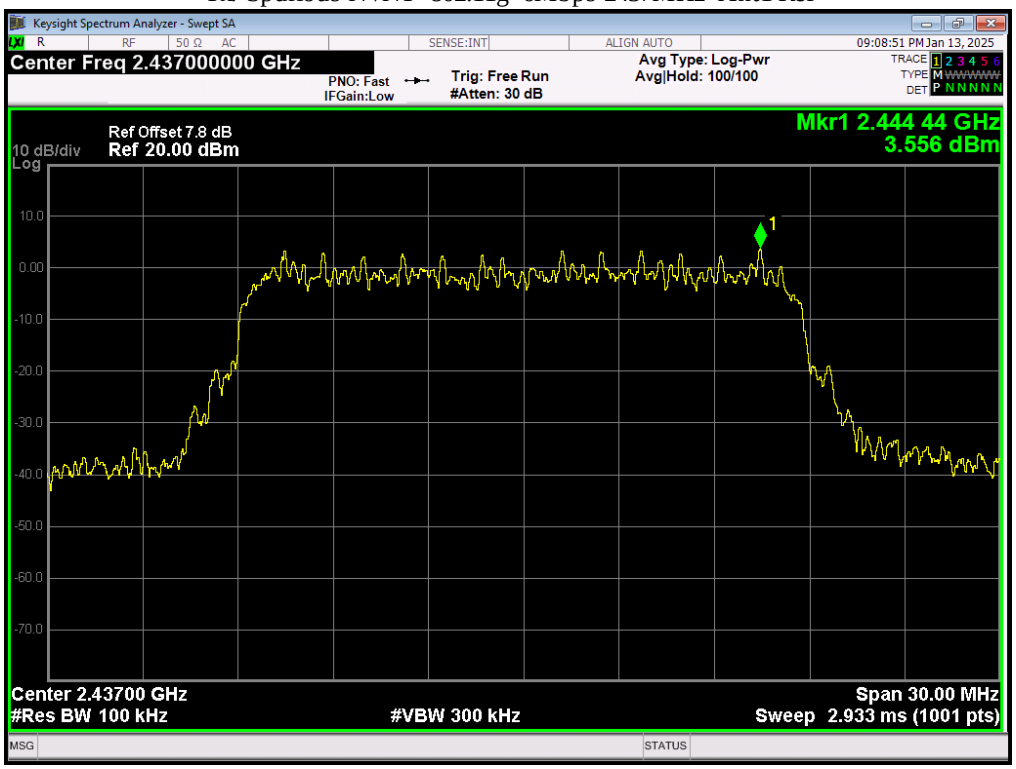
Tx. Spurious NVNT 802.11g 6Mbps 2412MHz Ant1 Ref



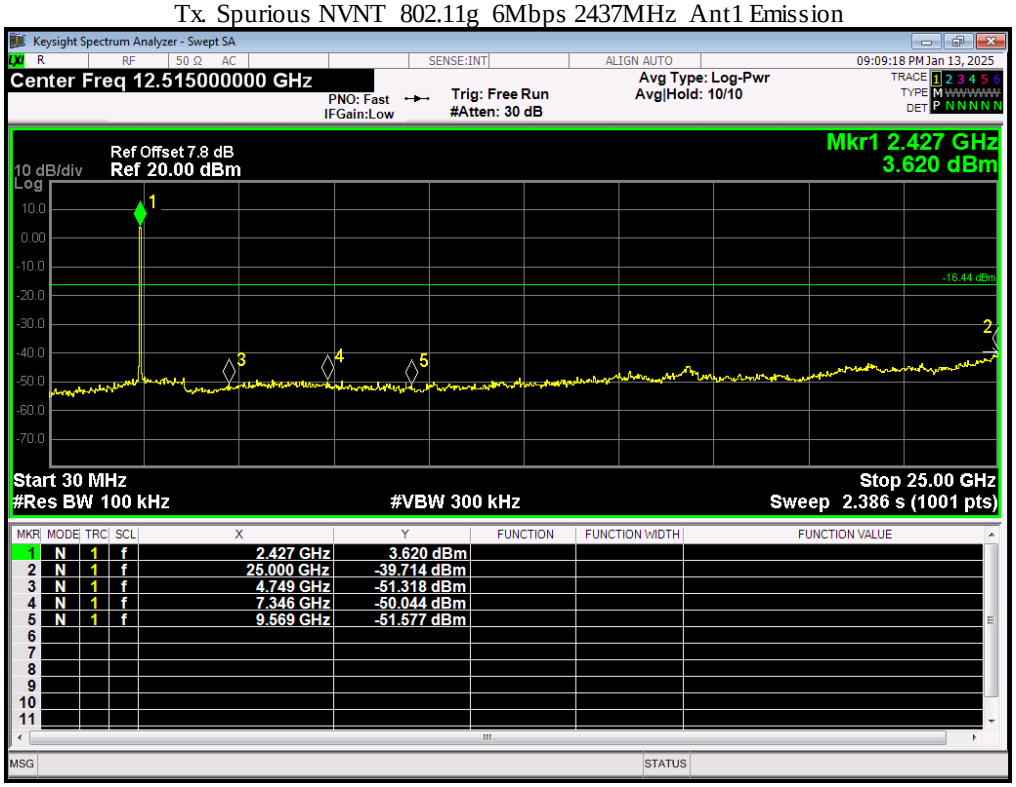
Tx. Spurious NVNT 802.11g 6Mbps 2412MHz Ant1 Emission



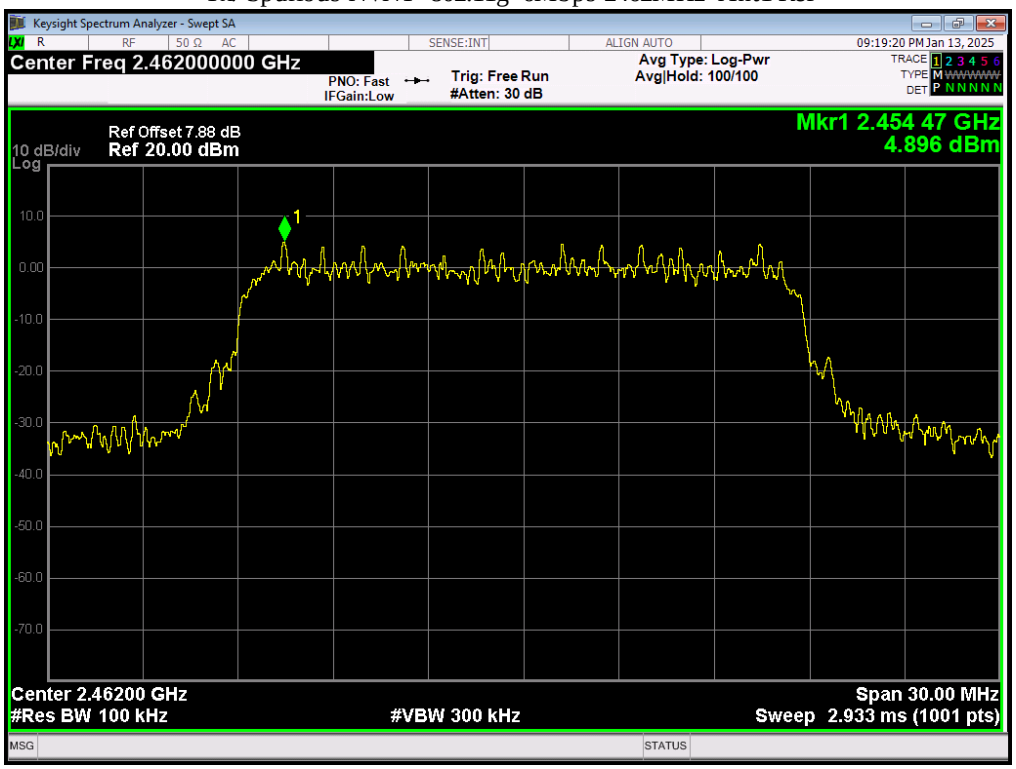
Tx. Spurious NVNT 802.11g 6Mbps 2437MHz Ant1 Ref



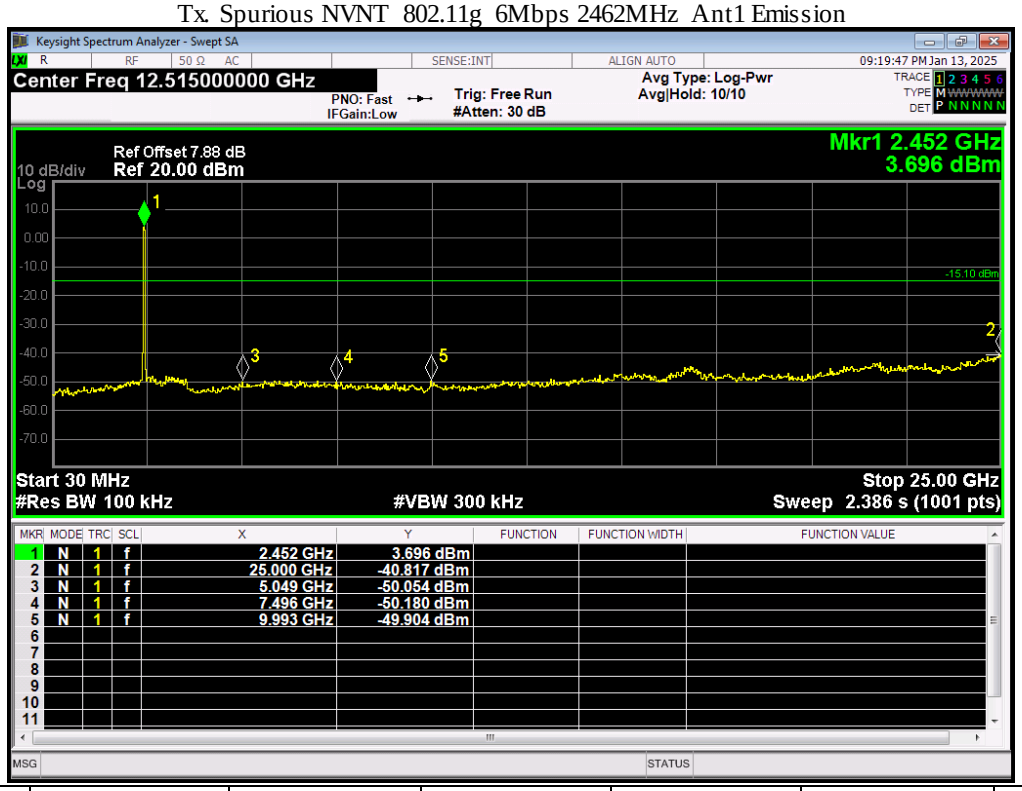
Tx. Spurious NVNT 802.11g 6Mbps 2437MHz Ant1 Emission



Tx. Spurious NVNT 802.11g 6Mbps 2462MHz Ant1 Ref

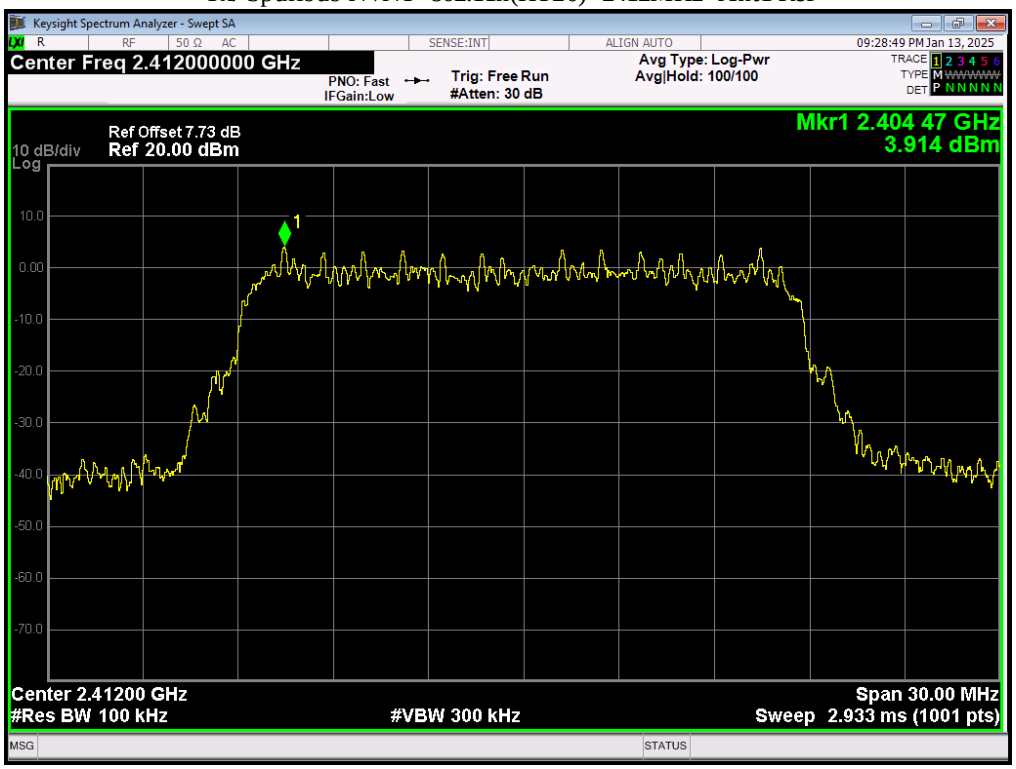


Tx. Spurious NVNT 802.11g 6Mbps 2462MHz Ant1 Emission

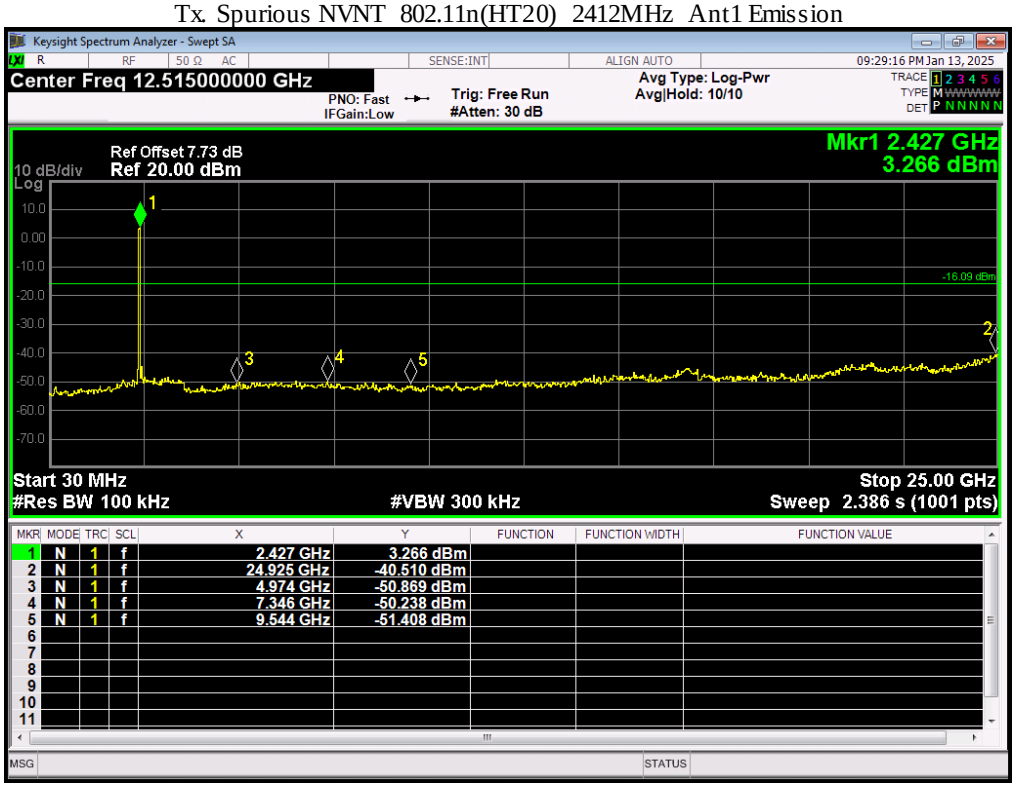


Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	802.11n(HT20)	2412	Ant 1	-44.424	-30	Pass
NVNT	802.11n(HT20)	2437	Ant 1	-44.033	-30	Pass
NVNT	802.11n(HT20)	2462	Ant 1	-45.543	-30	Pass

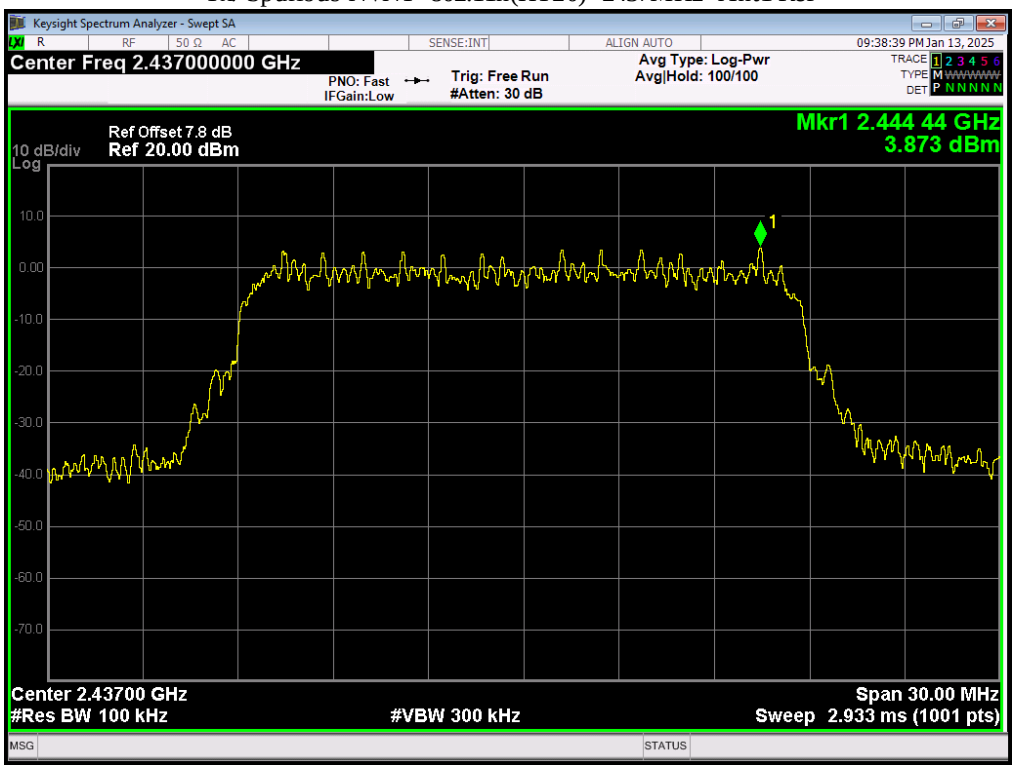
Tx. Spurious NVNT 802.11n(HT20) 2412MHz Ant1 Ref



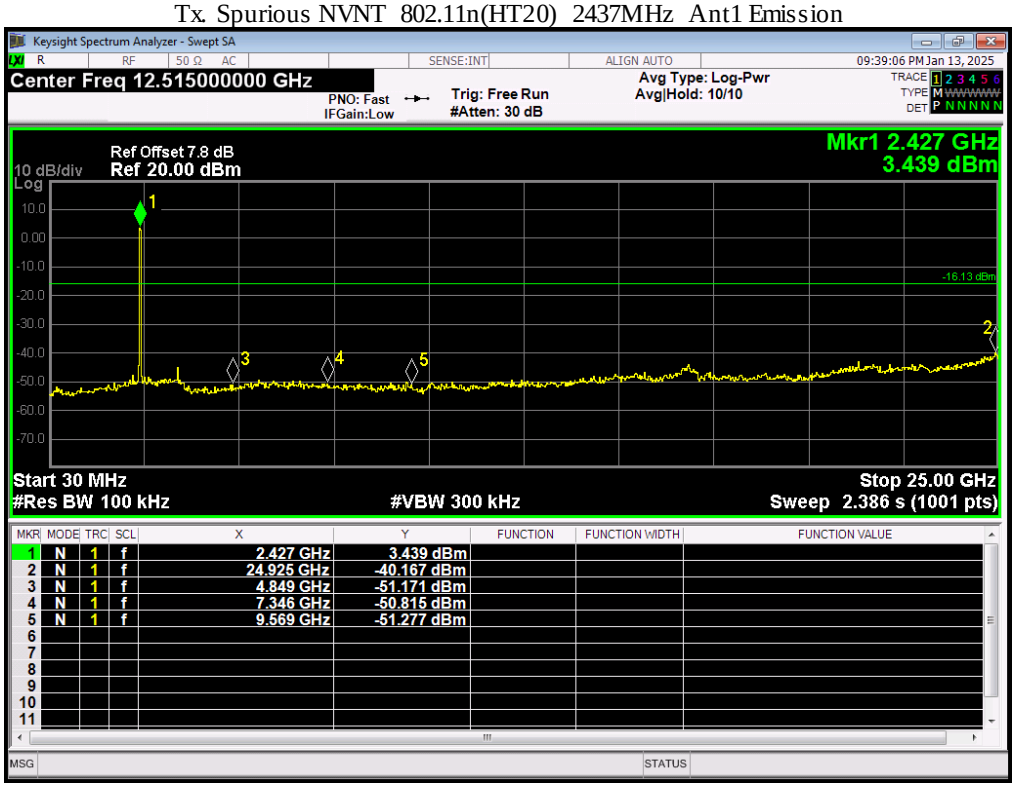
Tx. Spurious NVNT 802.11n(HT20) 2412MHz Ant1 Emission



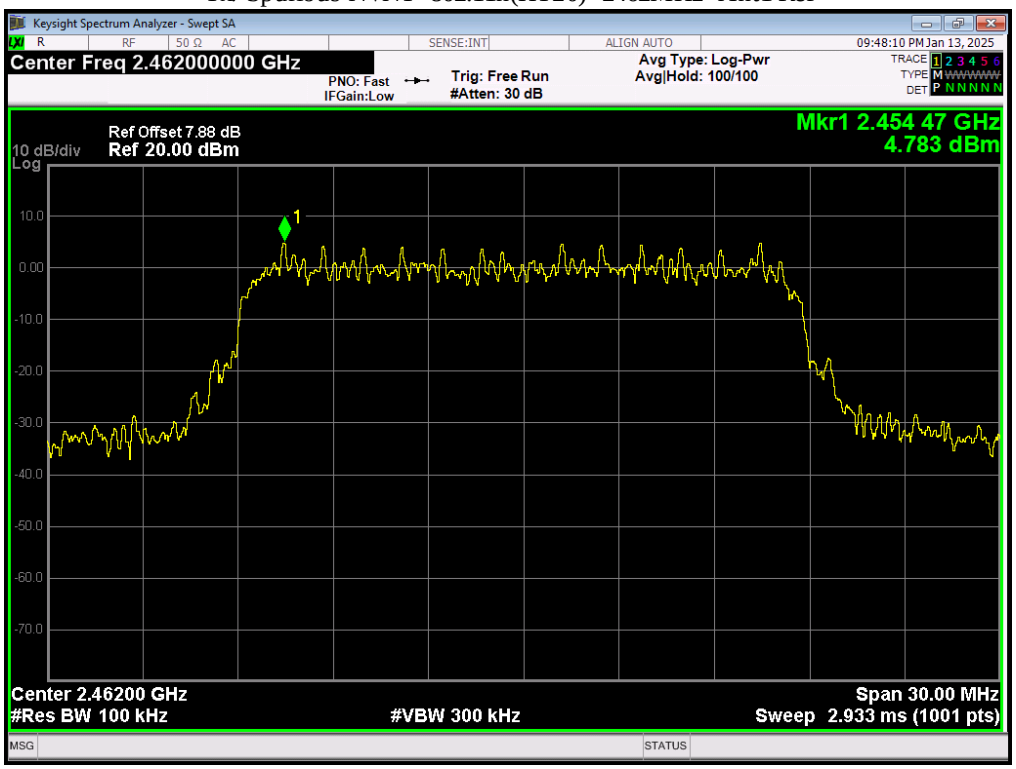
Tx. Spurious NVNT 802.11n(HT20) 2437MHz Ant1 Ref



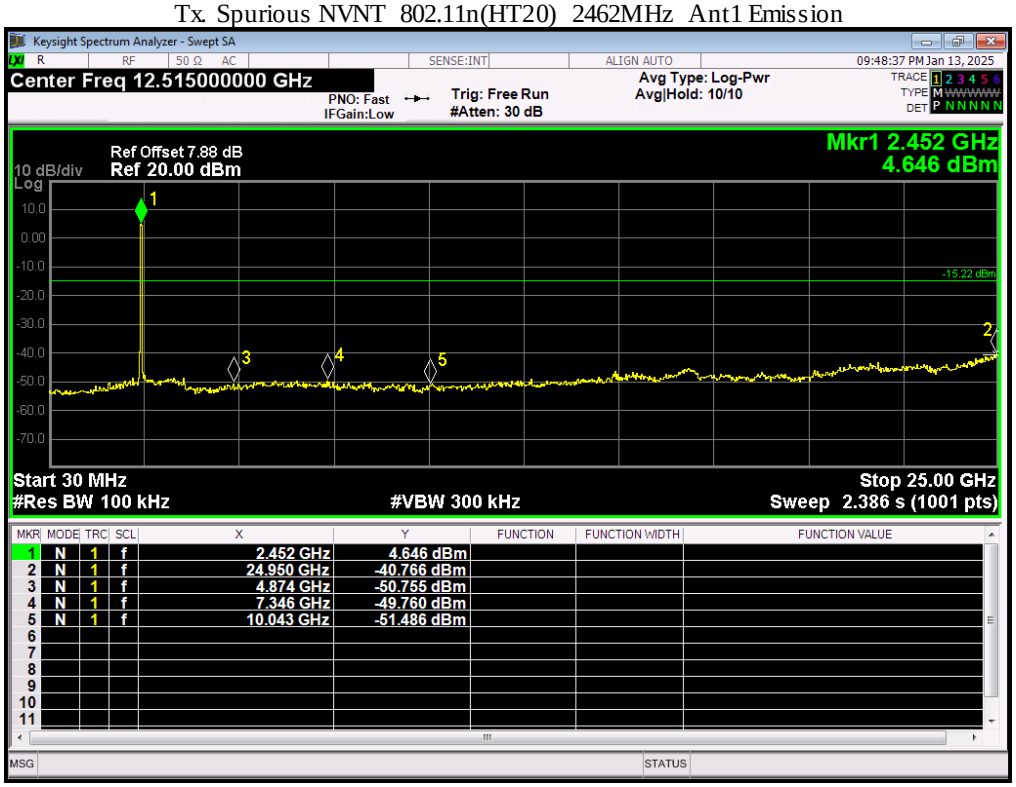
Tx. Spurious NVNT 802.11n(HT20) 2437MHz Ant1 Emission



Tx. Spurious NVNT 802.11n(HT20) 2462MHz Ant1 Ref



Tx. Spurious NVNT 802.11n(HT20) 2462MHz Ant1 Emission

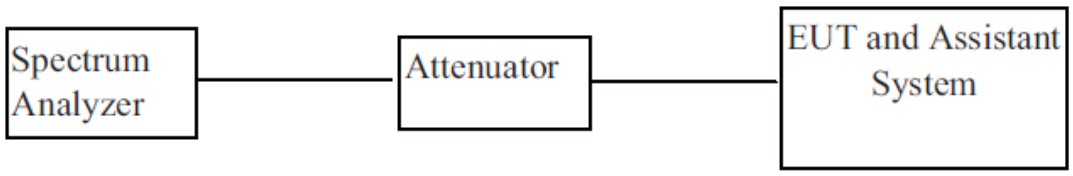


9. Conducted Output Power Spectral Density

9.1. Test equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	MXA Signal Analyzer	KEYSIGHT	N9020A	MY54510476	2024/05/14	1 Year

9.2. Block diagram of test setup



9.3. Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

9.4. Test Procedure

(1). Connect EUT RF output port to the Spectrum Analyzer through an RF attenuator

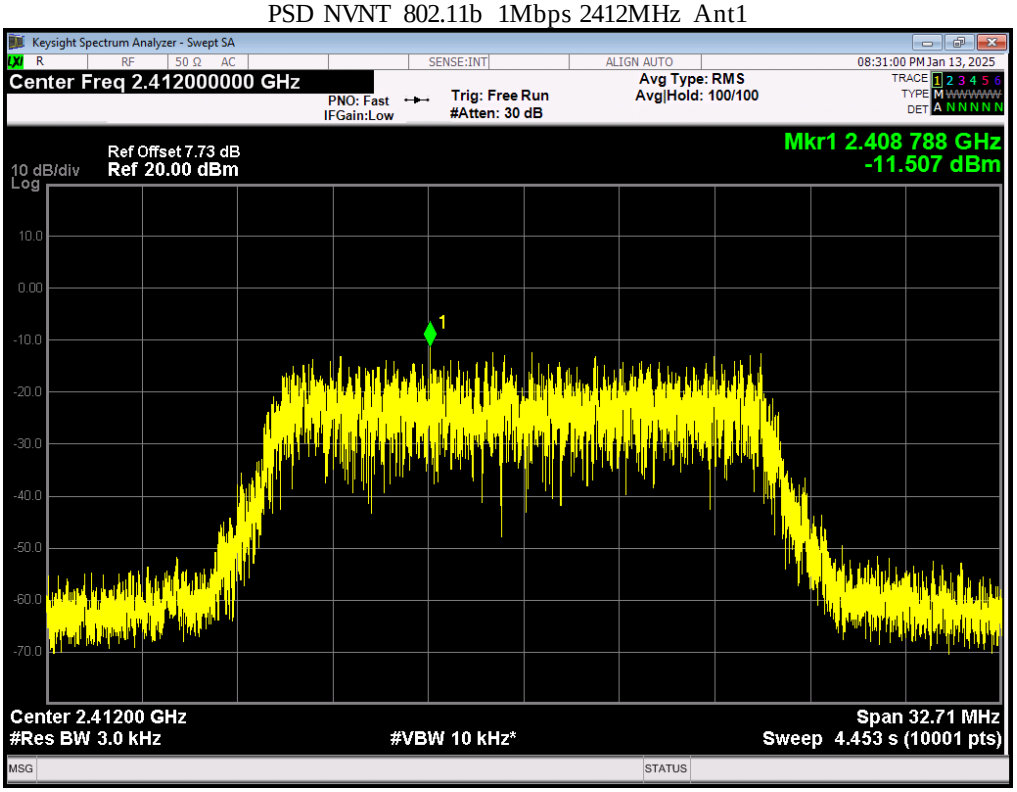
(2). Set the EUT Work on the top, the middle and the bottom operation frequency individually.

(3). Set SPA Trace 1 Max hold, then View.

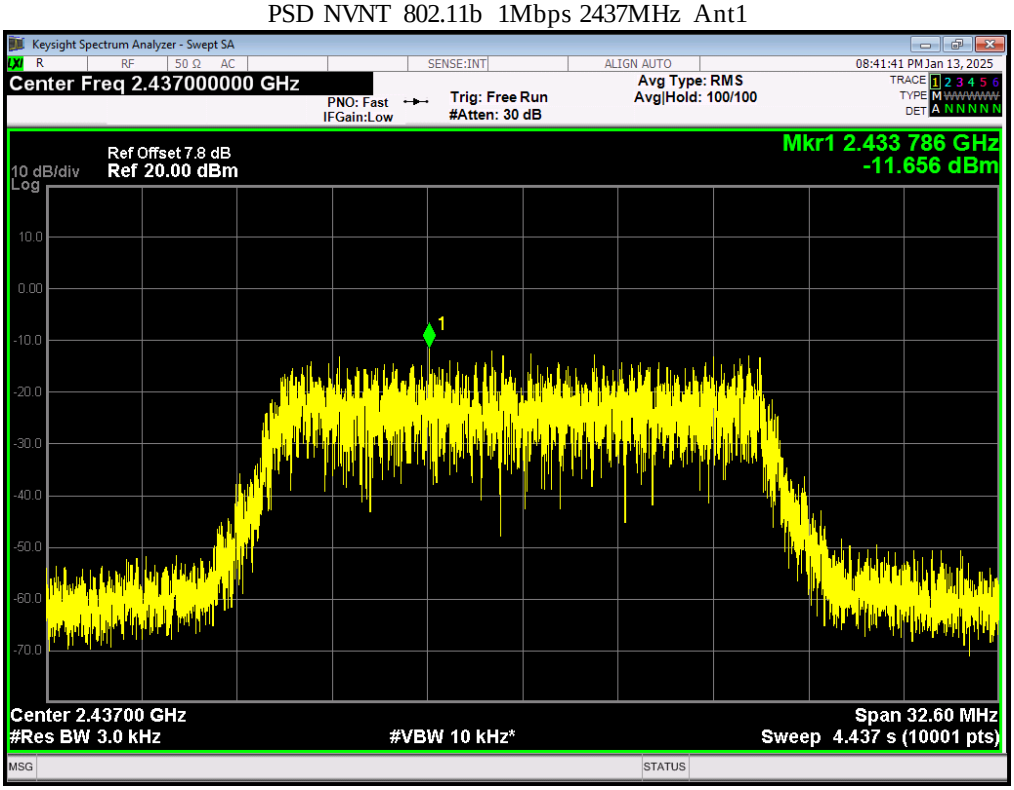
9.5. Test result

Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	802.11b 1Mbps	2412	Ant 1	-11.507	8	Pass
NVNT	802.11b 1Mbps	2437	Ant 1	-11.656	8	Pass
NVNT	802.11b 1Mbps	2462	Ant 1	-11.114	8	Pass

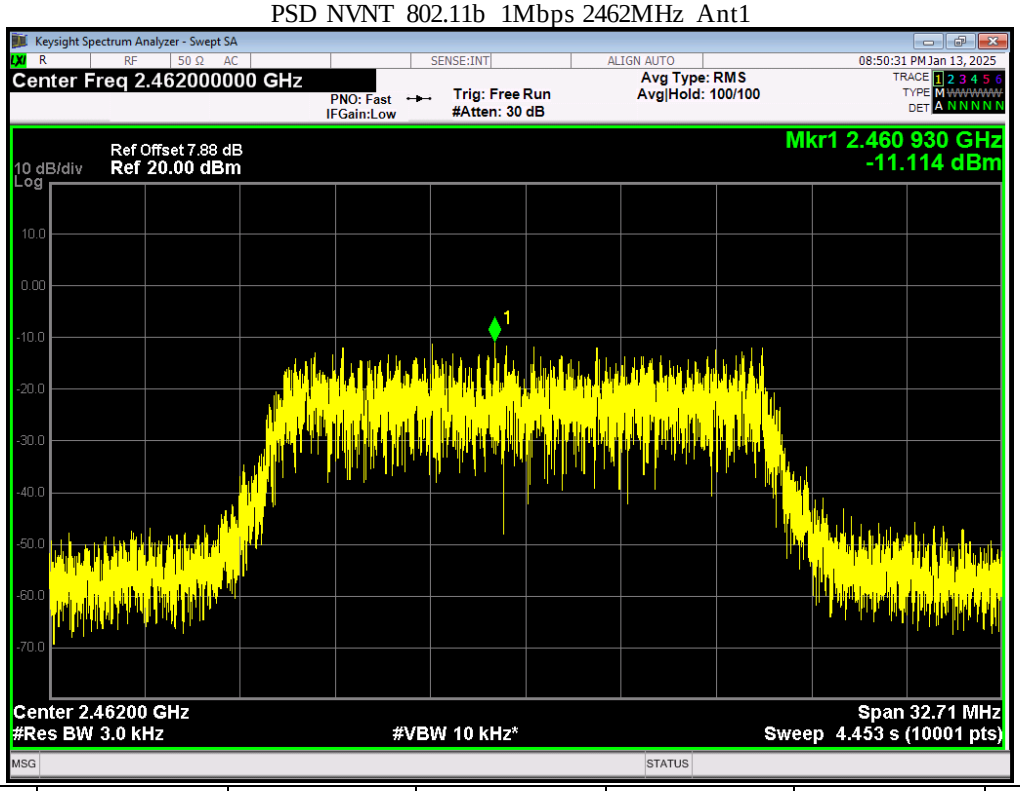
PSD NVNT 802.11b 1Mbps 2412MHz Ant1



PSD NVNT 802.11b 1Mbps 2437MHz Ant1

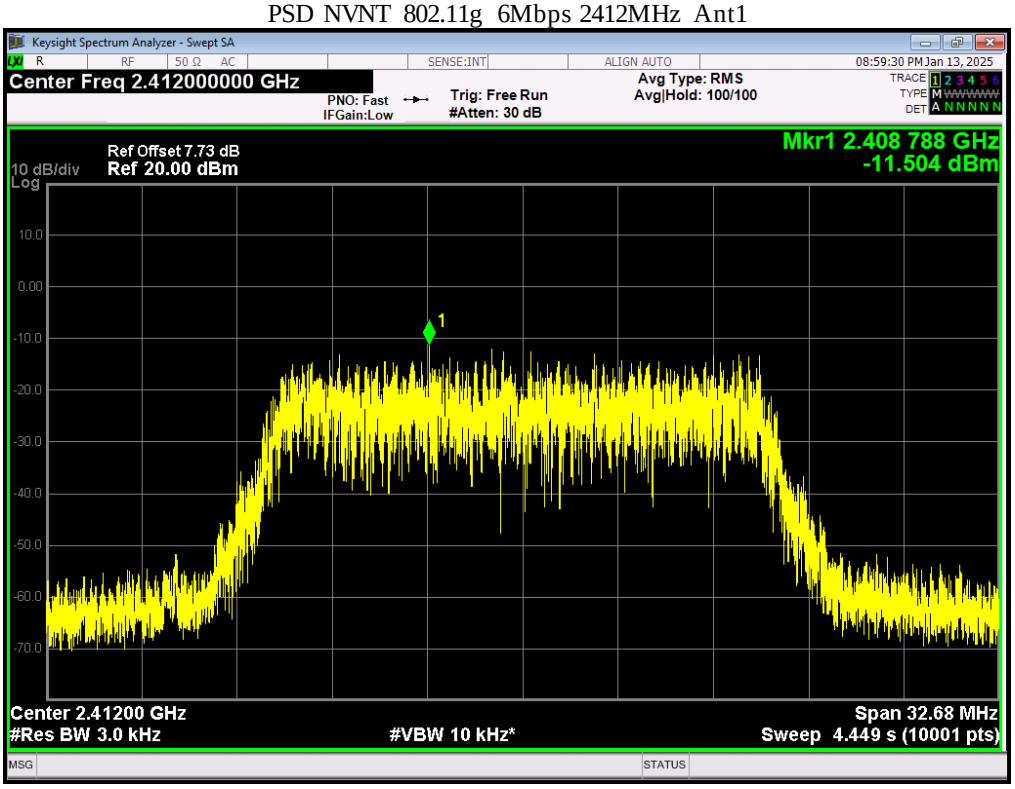


PSD NVNT 802.11b 1Mbps 2462MHz Ant1

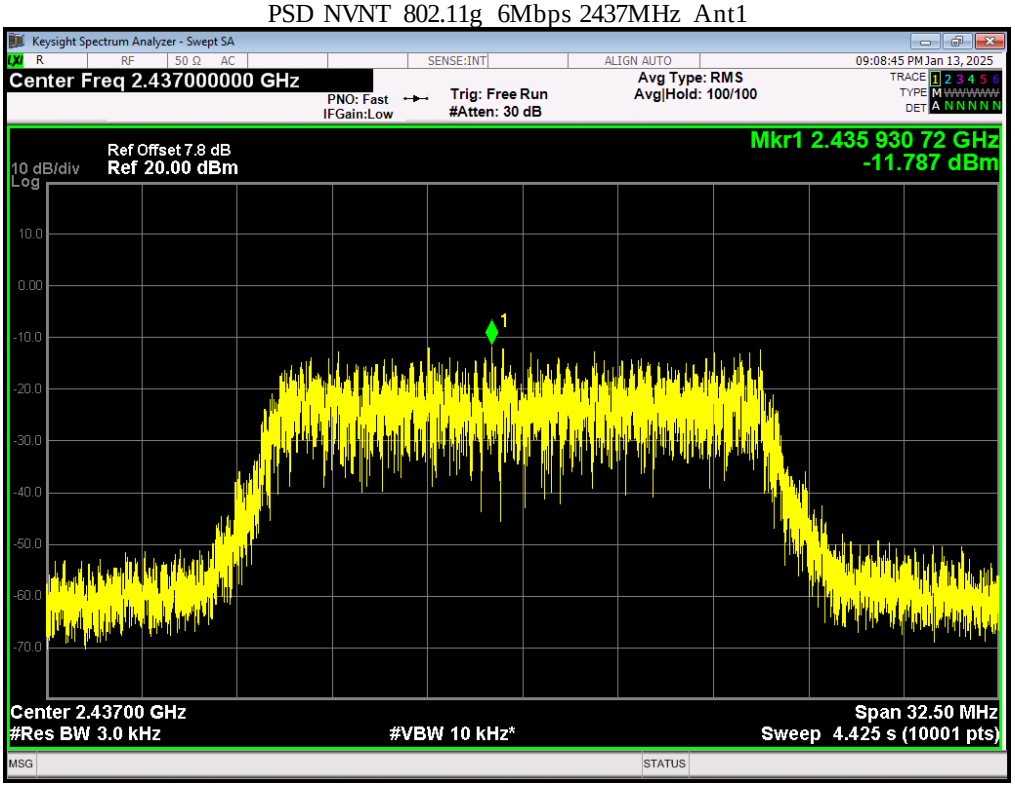


Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	802.11g 6Mbps	2412	Ant 1	-11.504	8	Pass
NVNT	802.11g 6Mbps	2437	Ant 1	-11.787	8	Pass
NVNT	802.11g 6Mbps	2462	Ant 1	-10.364	8	Pass

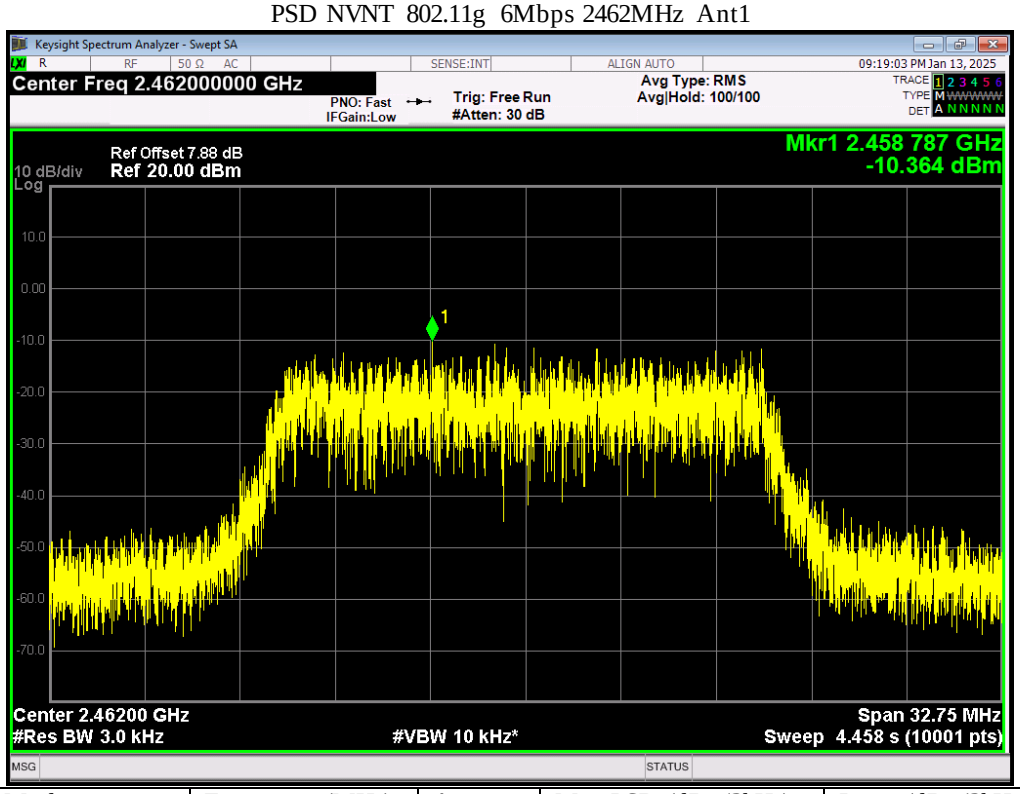
PSD NVNT 802.11g 6Mbps 2412MHz Ant1



PSD NVNT 802.11g 6Mbps 2437MHz Ant1

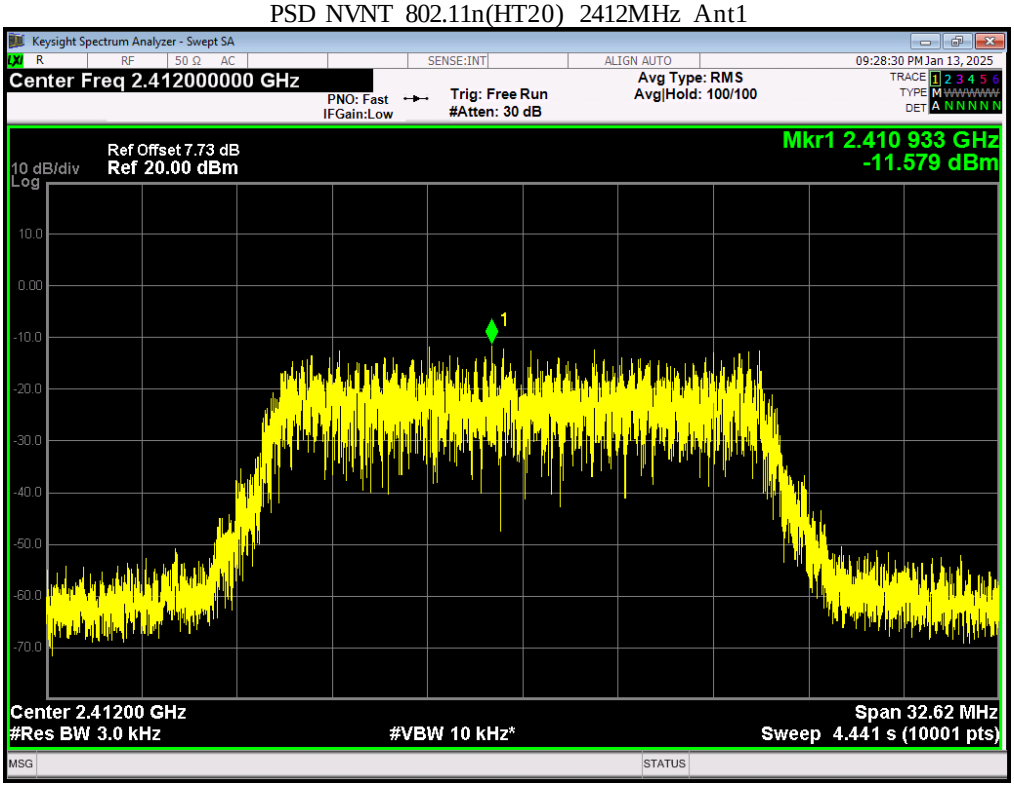


PSD NVNT 802.11g 6Mbps 2462MHz Ant1

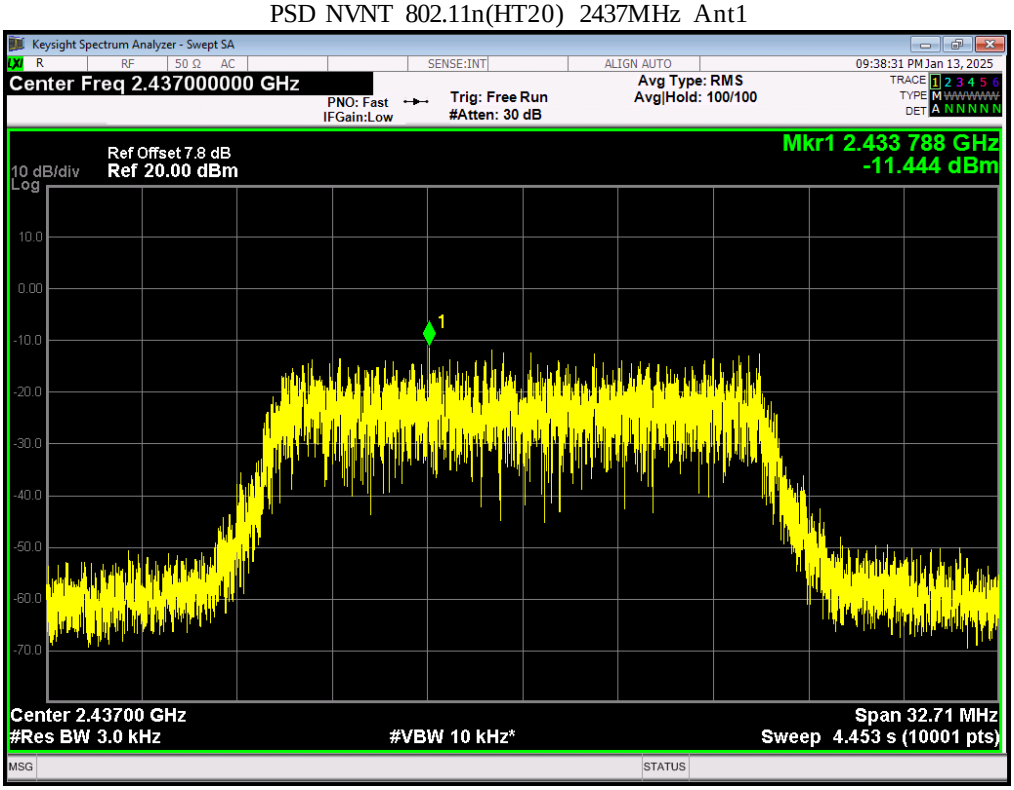


Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	802.11n(HT20)	2412	Ant 1	-11.579	8	Pass
NVNT	802.11n(HT20)	2437	Ant 1	-11.444	8	Pass
NVNT	802.11n(HT20)	2462	Ant 1	-10.359	8	Pass

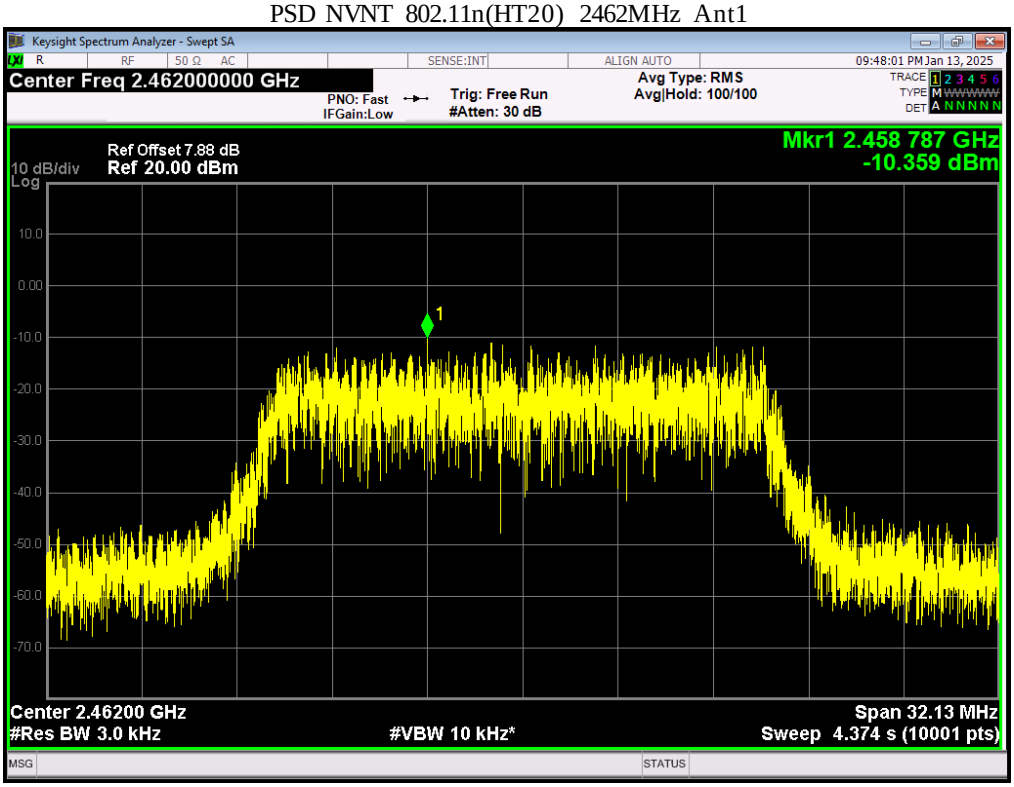
PSD NVNT 802.11n(HT20) 2412MHz Ant1



PSD NVNT 802.11n(HT20) 2437MHz Ant1



PSD NVNT 802.11n(HT20) 2462MHz Ant1



10. Antenna Requirement

10.1. 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.

15.247(c) (1)(i) requirement: (i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

10.2. EUT Antenna

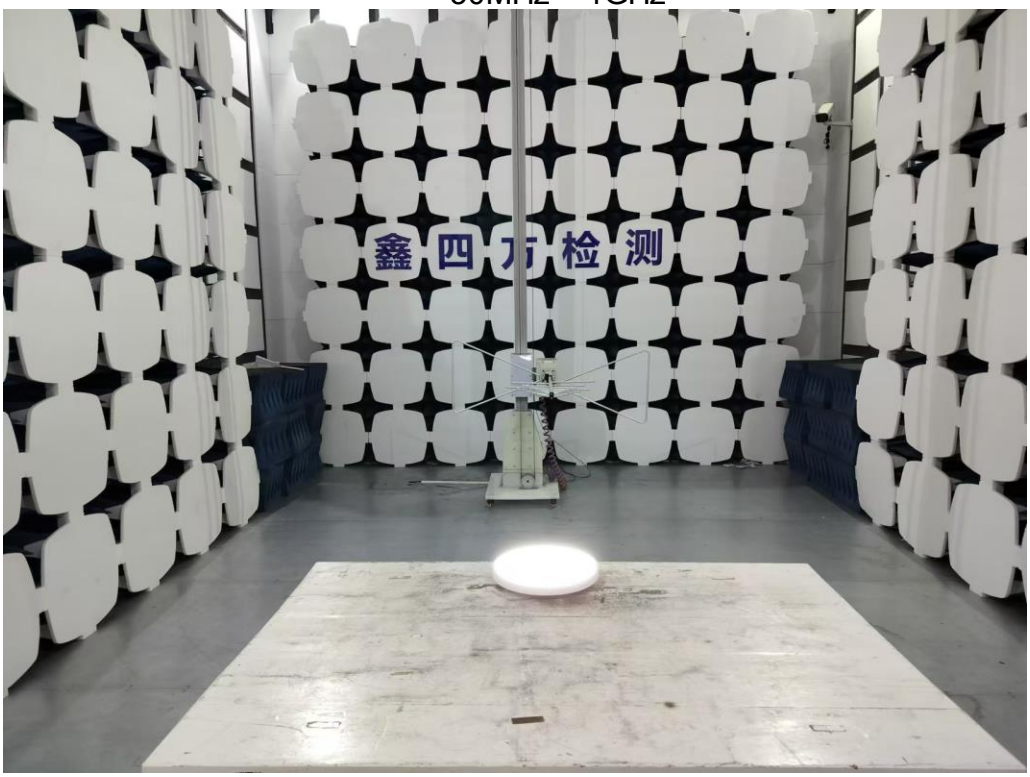
The antenna is Integral Antenna and no consideration of replacement. Antenna gain is Maximum 2.21dBi from 2.4GHz to 2.5GHz.

11. Test setup photograph

11.1. Photos of power line conducted emission test

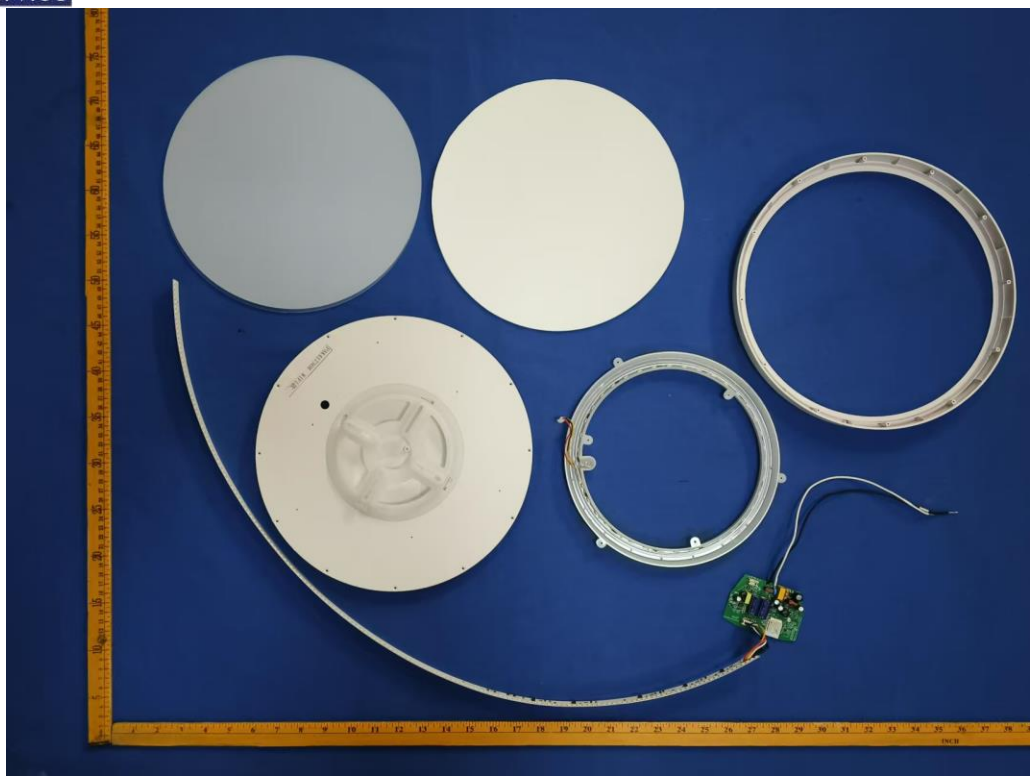
11.2. Photos of radiated emission test

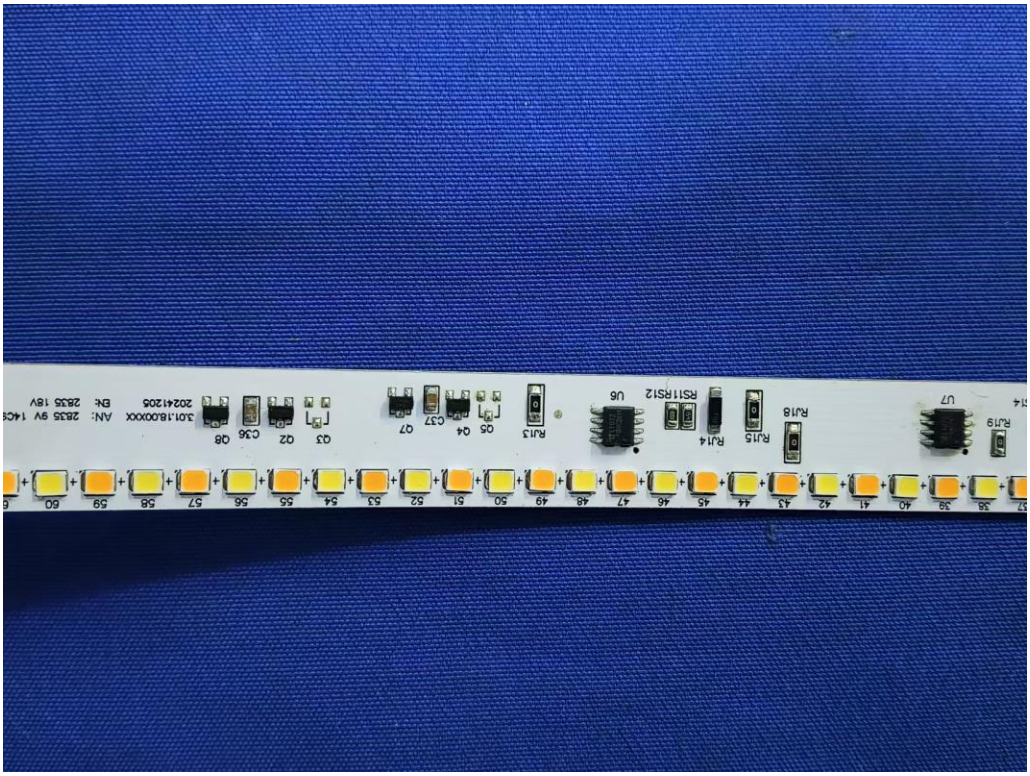
30MHz – 1GHz

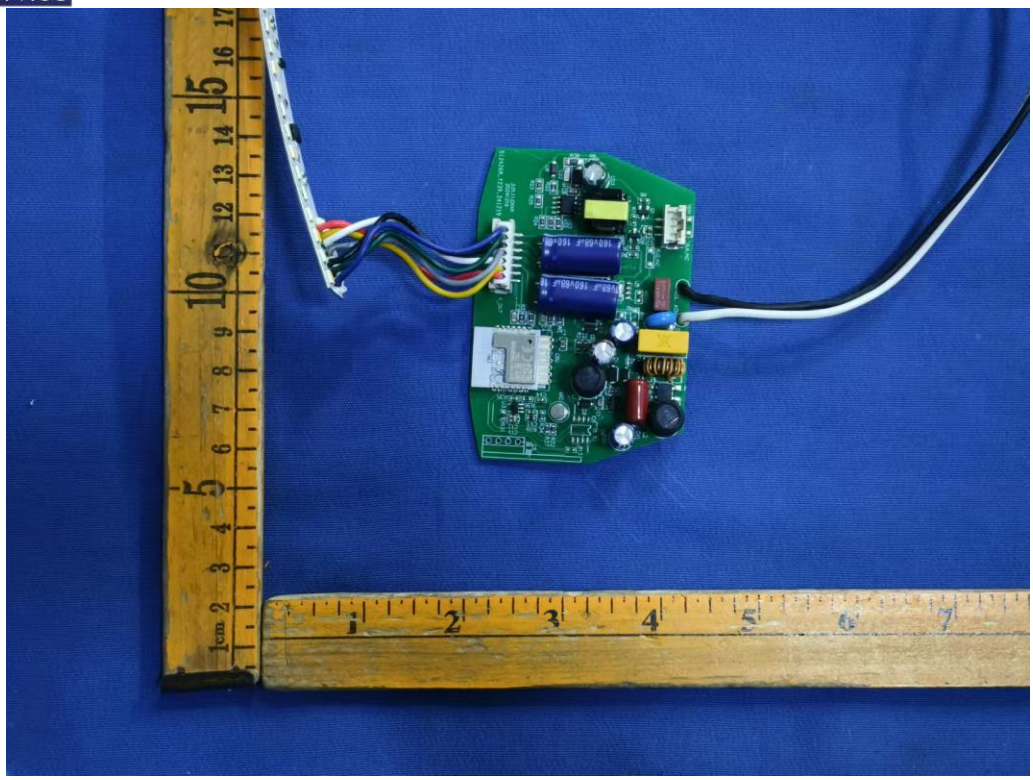


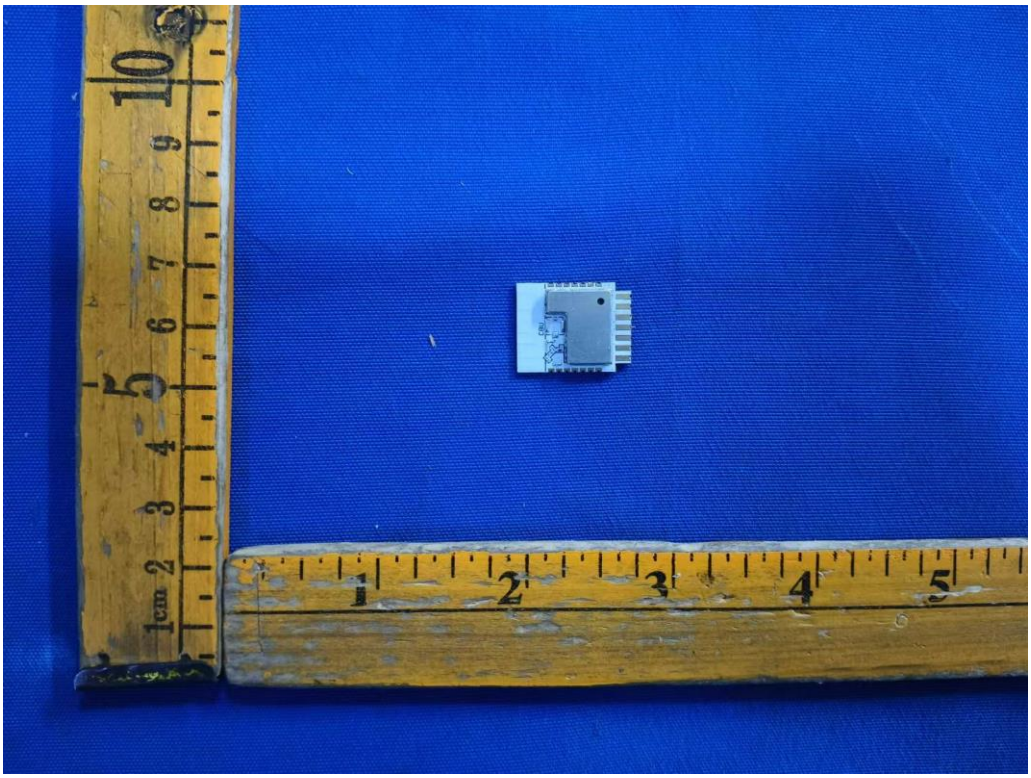
Above 1GHz

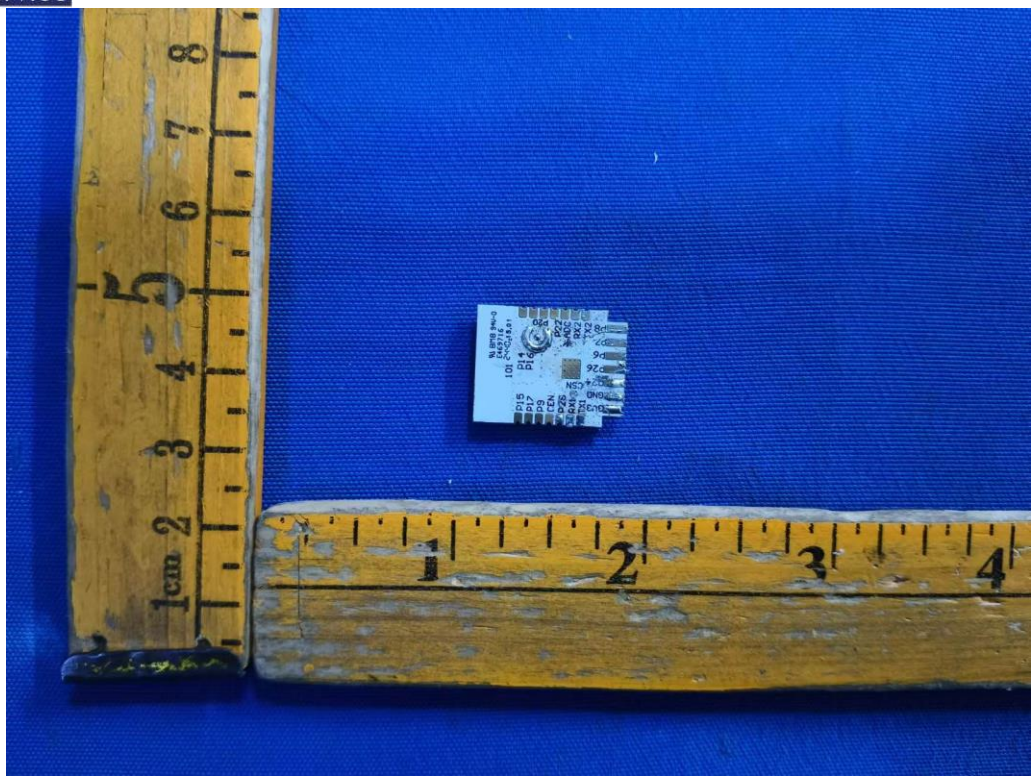
12. Photos of the EUT

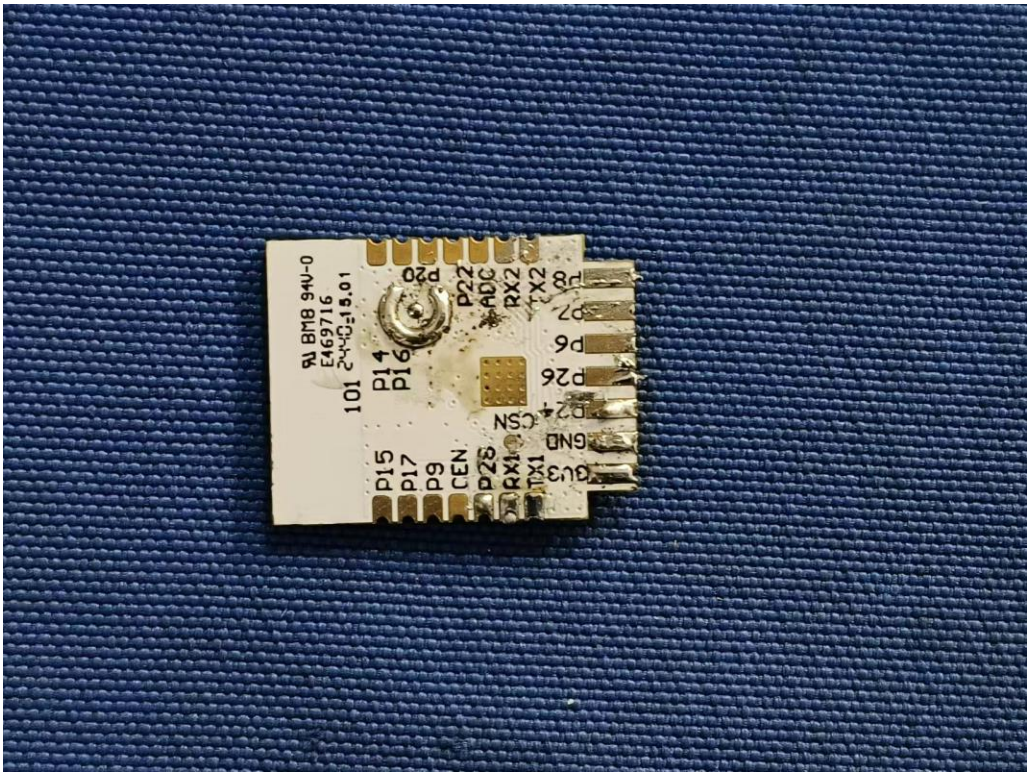


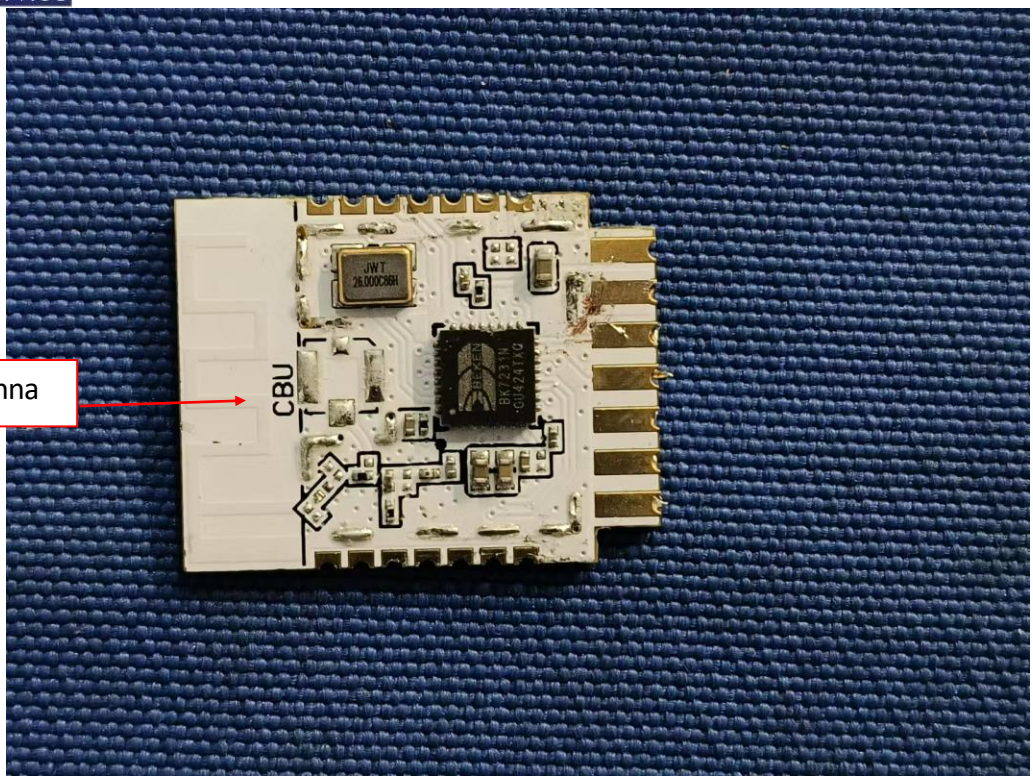









P20
P22
ADC
RX2
TX2
P8
P7
P6
P26
P24
CSN
GND
3V3
TX1
RX1
P28
CEN
P9
P17
P15
P14
P16



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