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13. Number Of Hopping Frequency

13.1 Block Diagram Of Test Setup



13.2 Limit

Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels.

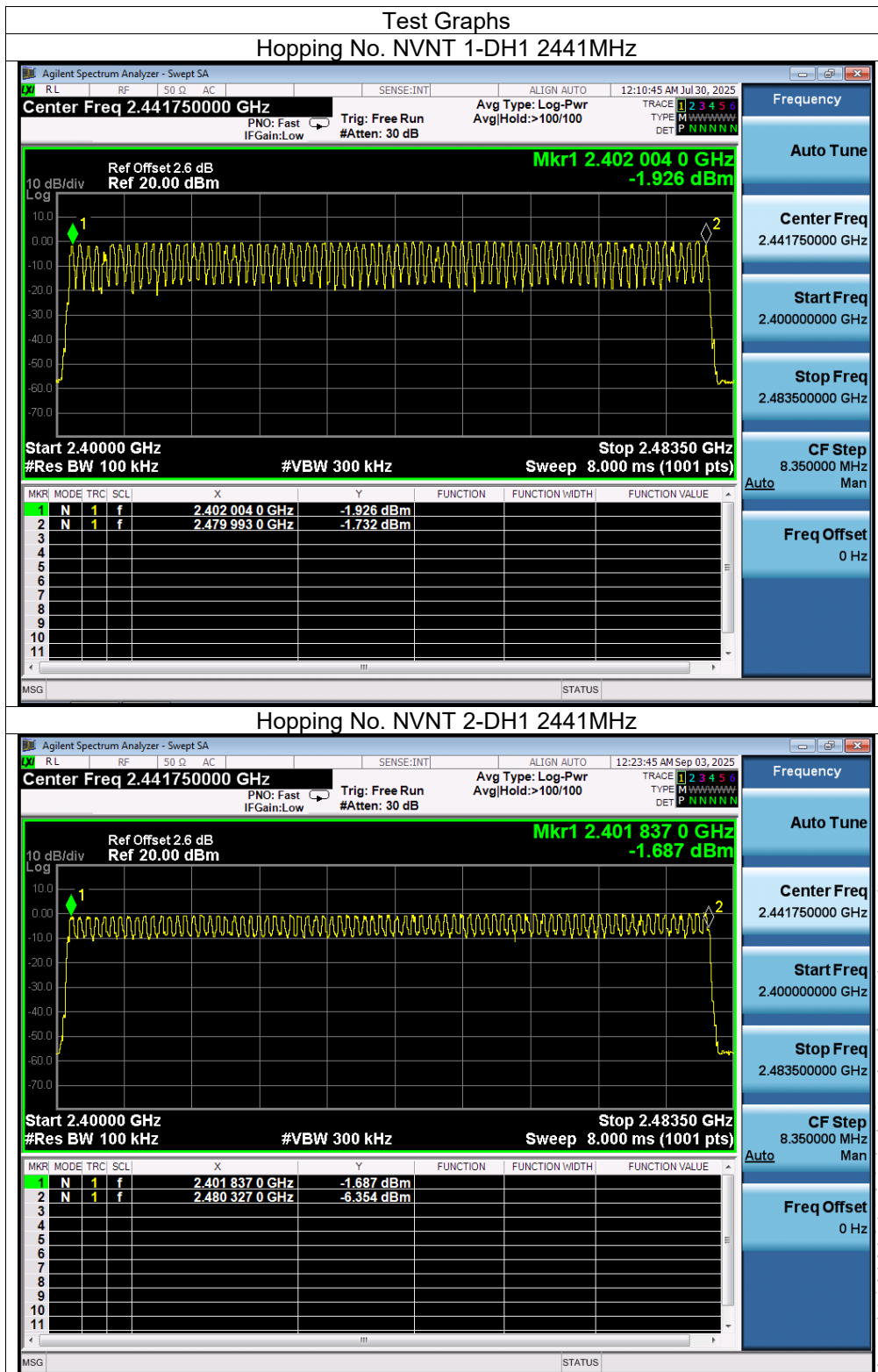
13.3 Test procedure

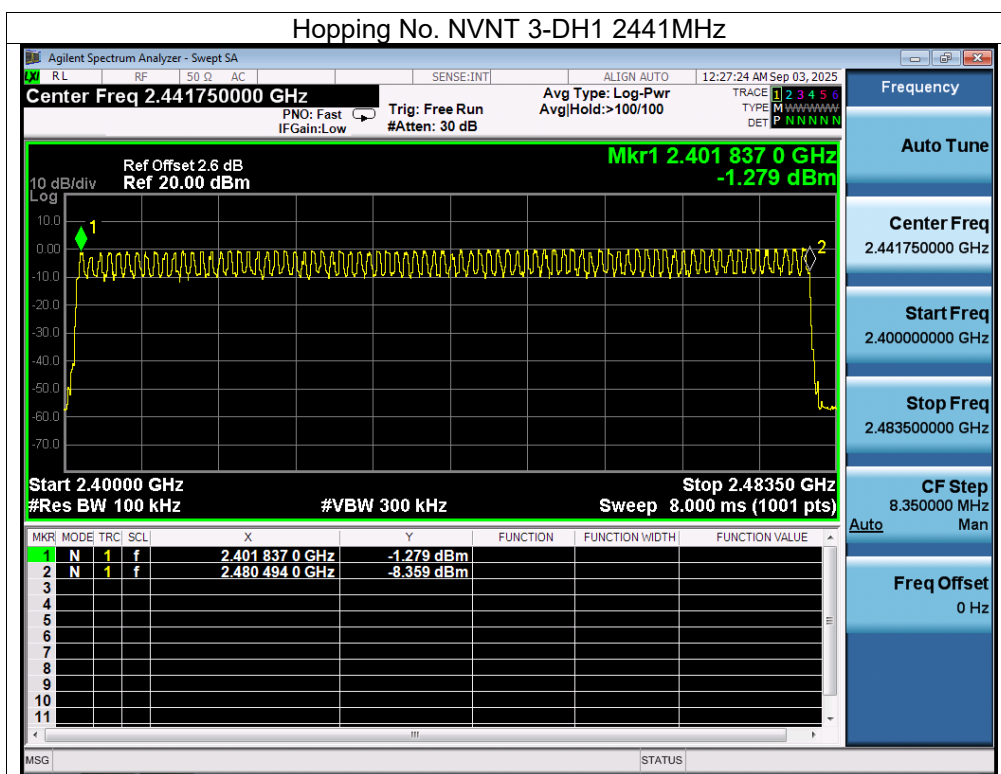
1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set the spectrum analyzer: RBW = 100 kHz. VBW = 300 kHz. Sweep = auto; Detector Function = Peak. Trace = Max hold.
3. Allow the trace to stabilize. It may prove necessary to break the span up to sections. in order to clearly show all of the hopping frequencies. The limit is specified in one of the subparagraphs of this Section.
4. Set the spectrum analyzer: Start Frequency = 2.4GHz, Stop Frequency = 2.4835GHz. Sweep=auto;

13.4 Test Result

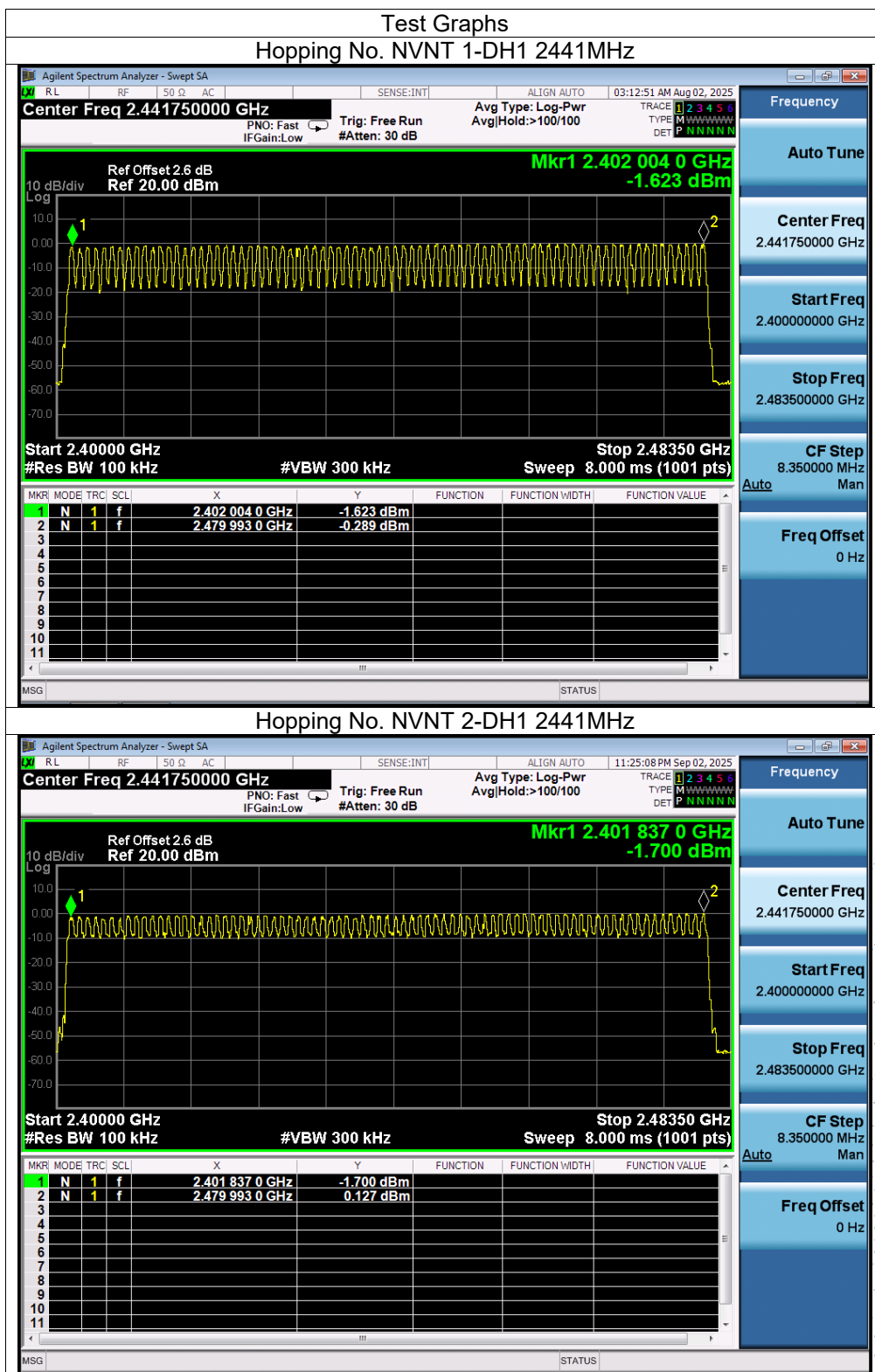
Condition	Mode	Hopping Number	Limit	Verdict
NVNT	1-DH1	79	15	Pass
NVNT	2-DH1	79	15	Pass
NVNT	3-DH1	79	15	Pass

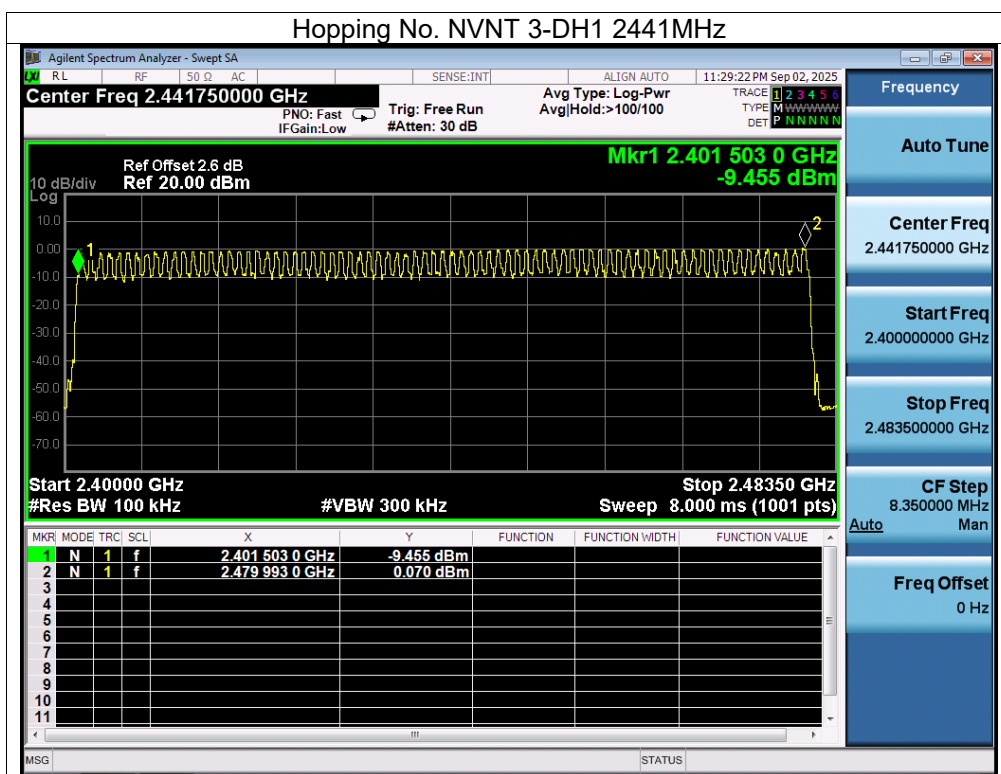
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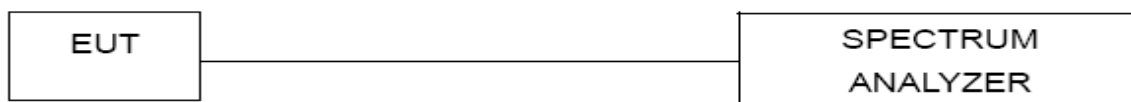
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14. Dwell Time

14.1 Block Diagram Of Test Setup



14.2 Limit

Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

14.3 Test procedure

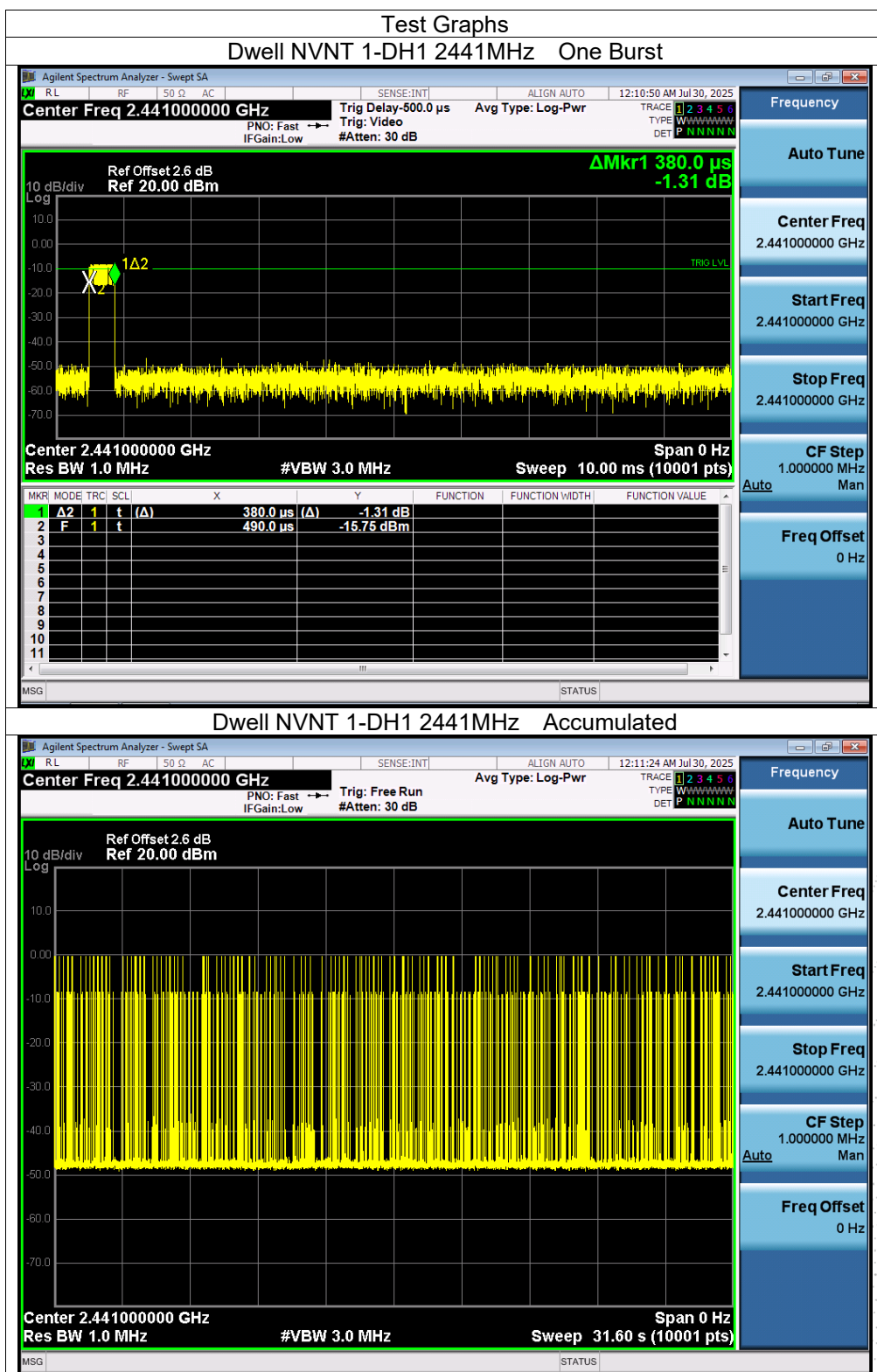
1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set spectrum analyzer span = 0. Centred on a hopping channel;
3. Set RBW = 1MHz and VBW = 3MHz. Sweep = as necessary to capture the entire dwell time per hopping channel. Set the EUT for DH5, DH3 and DH1 packet transmitting.
4. Use the marker-delta function to determine the dwell time. If this value varies with different modes of operation (e.g. data rate, modulation format, etc.), repeat this test for each variation. The limit is specified in one of the subparagraphs of this Section. Submit this plot(s).

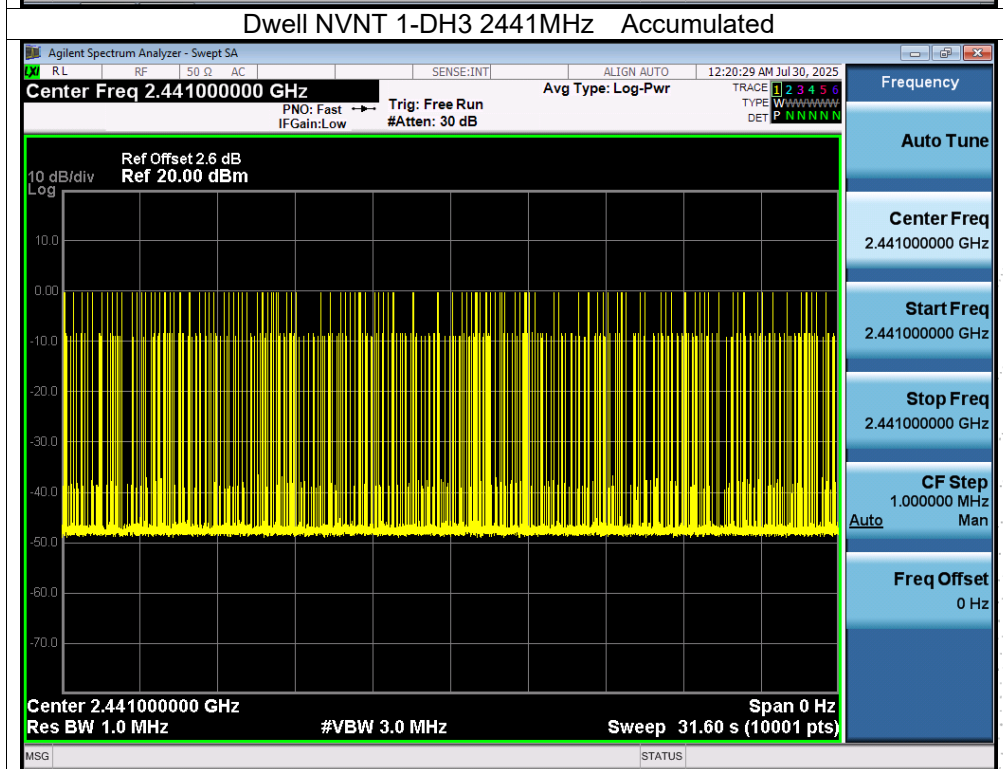
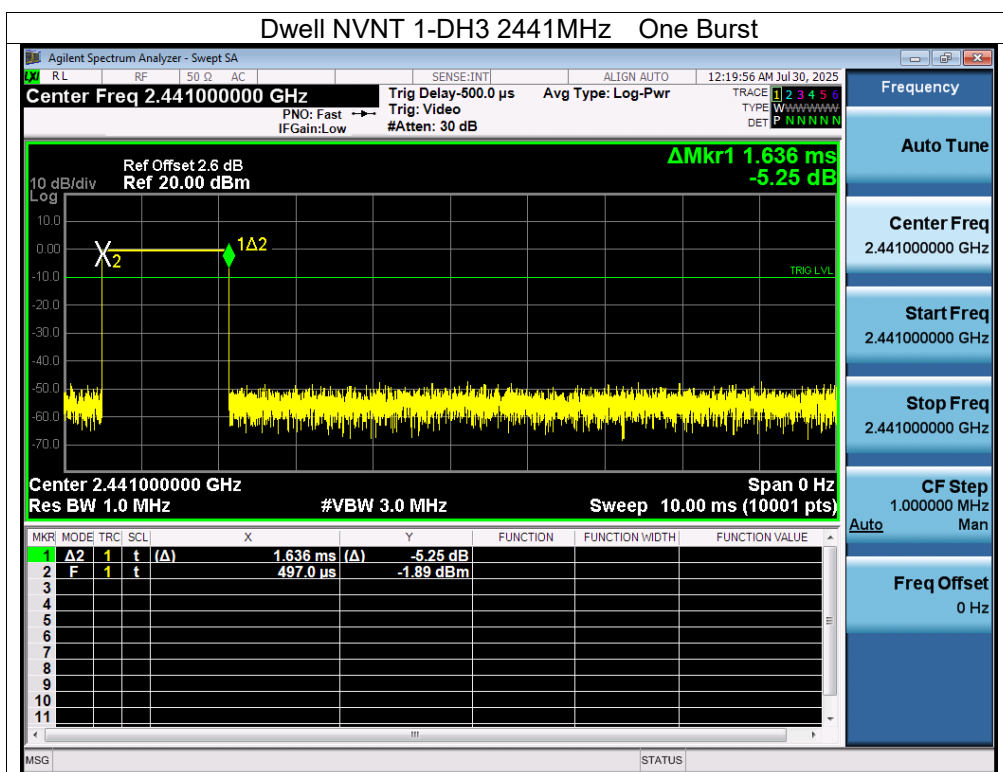
14.4 Test Result

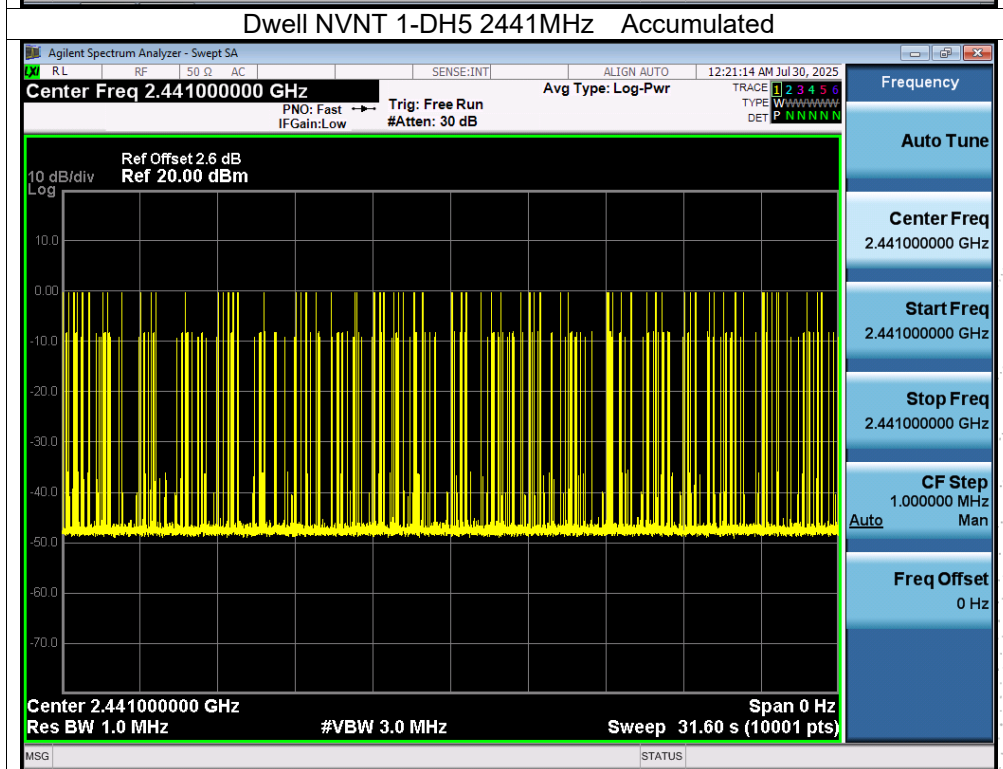
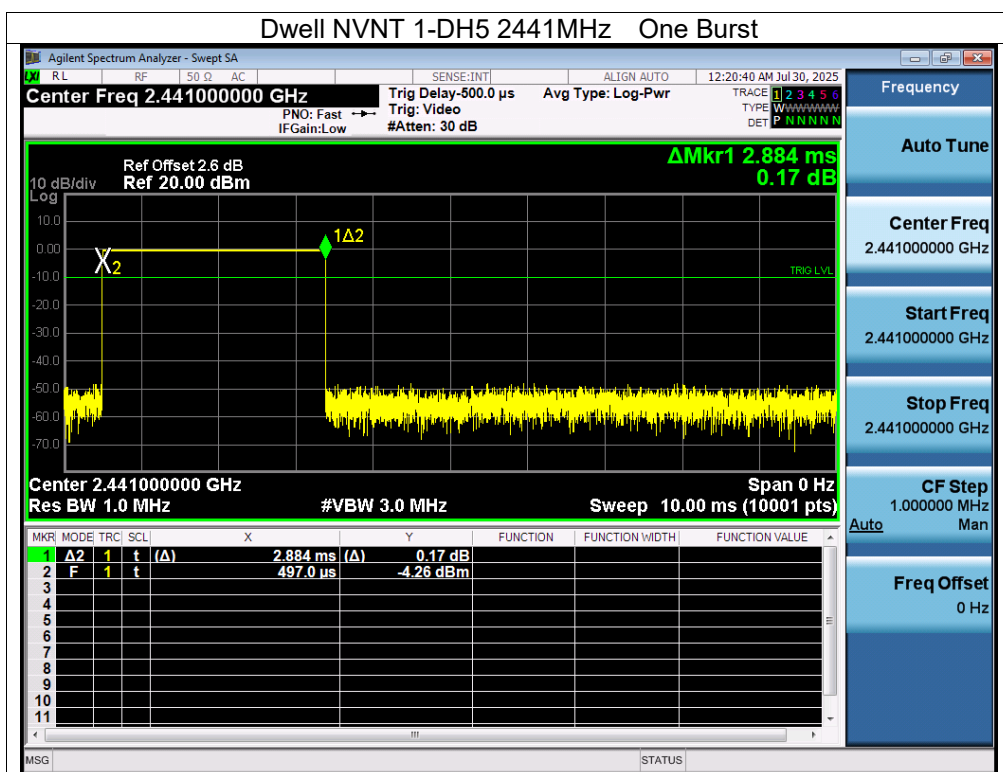
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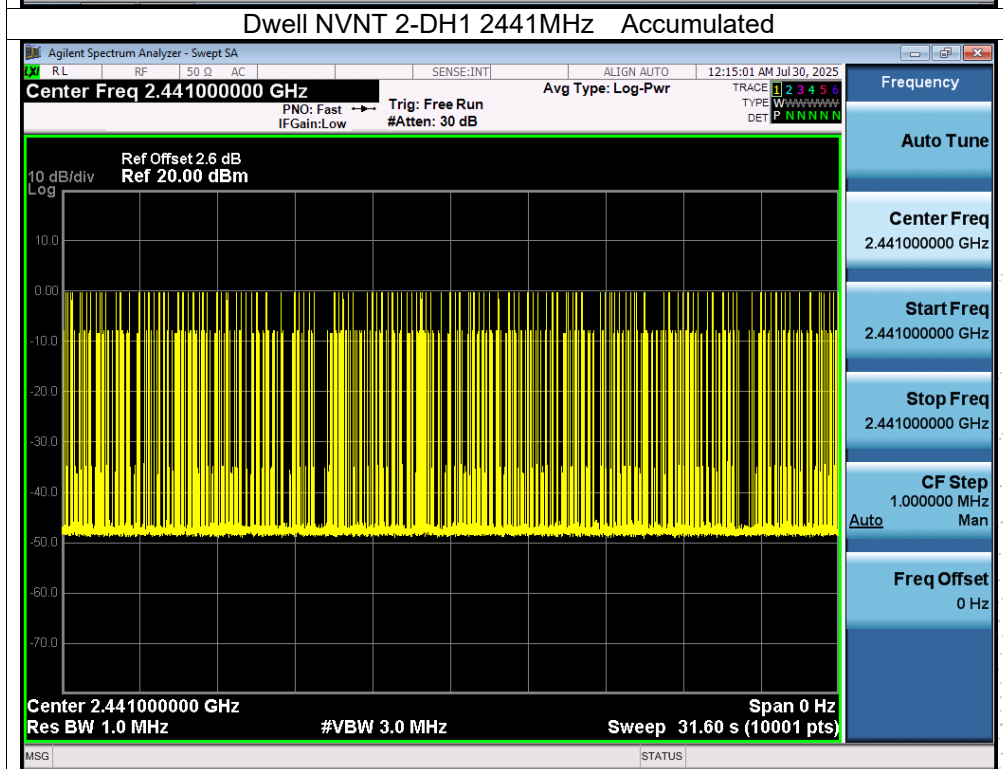
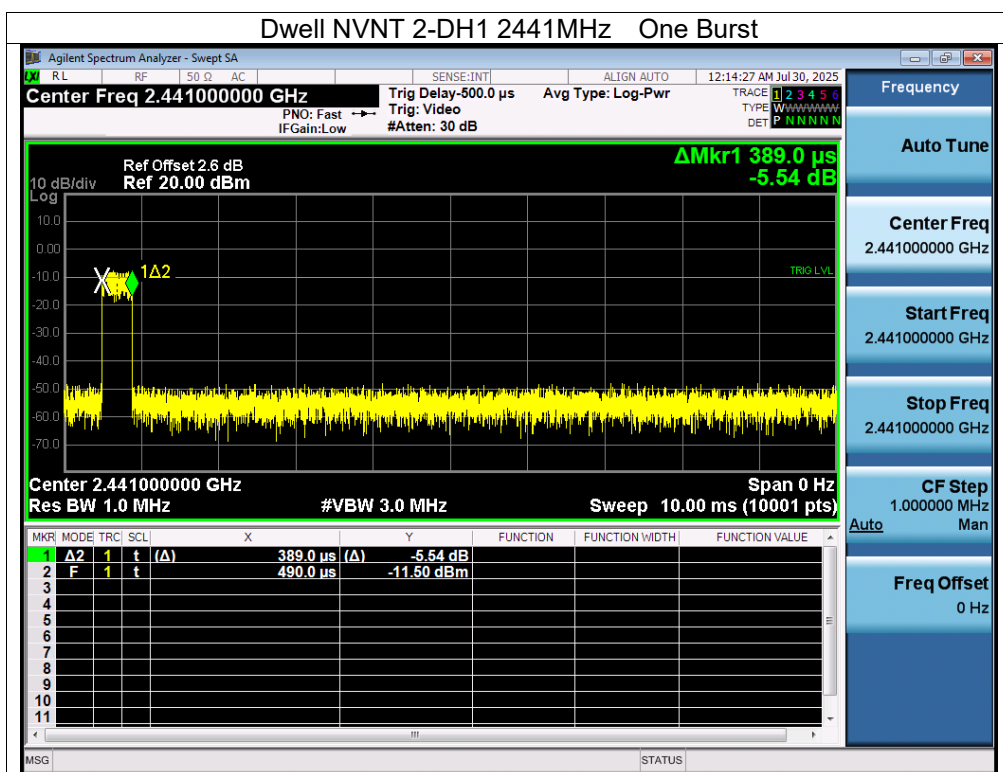
Condition	Mode	Frequency (MHz)	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	0.38	58.52	154	31600	400	Pass
NVNT	1-DH3	2441	1.636	188.14	115	31600	400	Pass
NVNT	1-DH5	2441	2.884	230.72	80	31600	400	Pass
NVNT	2-DH1	2441	0.389	61.462	158	31600	400	Pass
NVNT	2-DH3	2441	1.642	188.83	115	31600	400	Pass
NVNT	2-DH5	2441	2.889	193.563	67	31600	400	Pass
NVNT	3-DH1	2441	0.39	60.45	155	31600	400	Pass
NVNT	3-DH3	2441	1.64	190.24	116	31600	400	Pass
NVNT	3-DH5	2441	2.89	251.43	87	31600	400	Pass

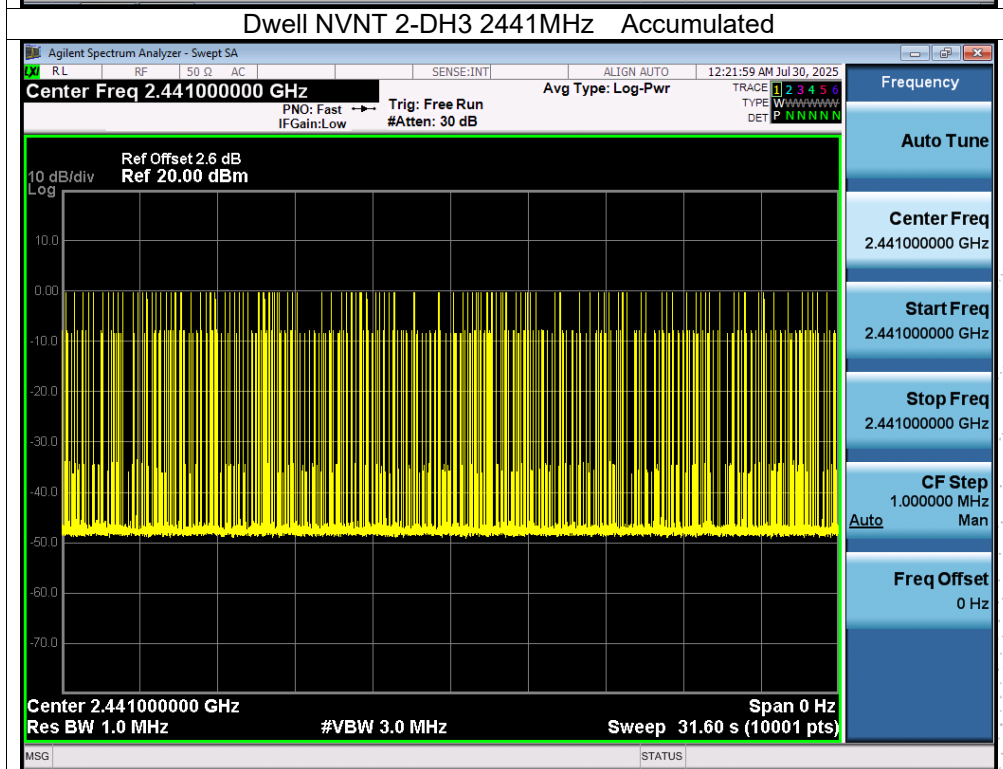
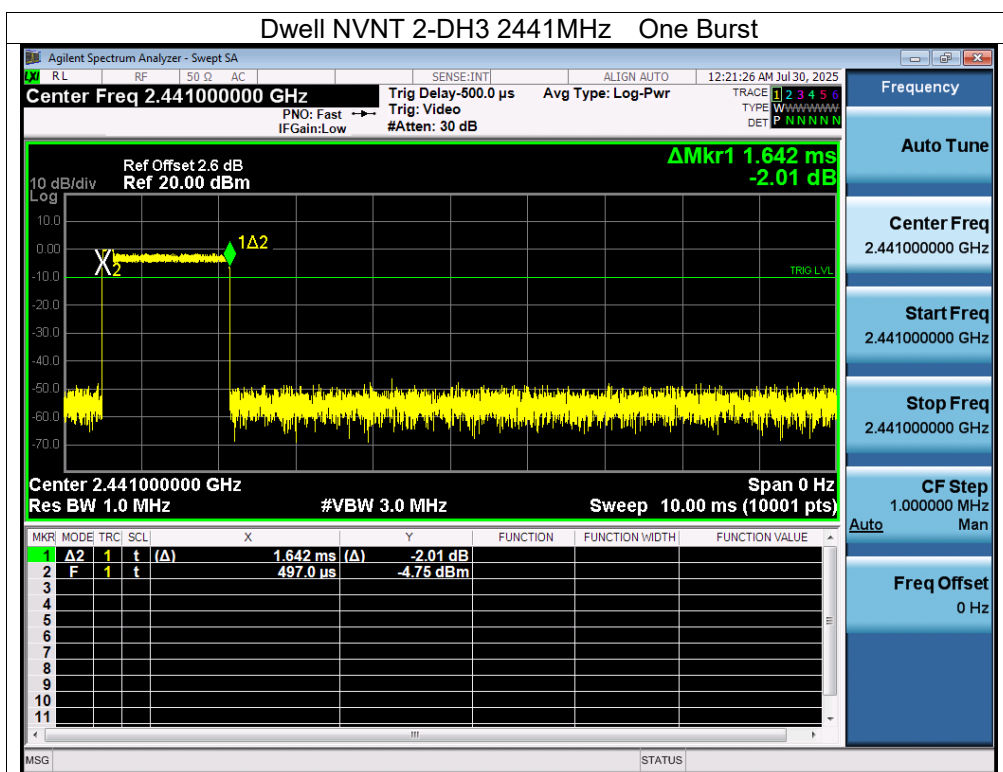
Note: Total Dwell Time (ms) = Pulse Time (ms)*Burst Count

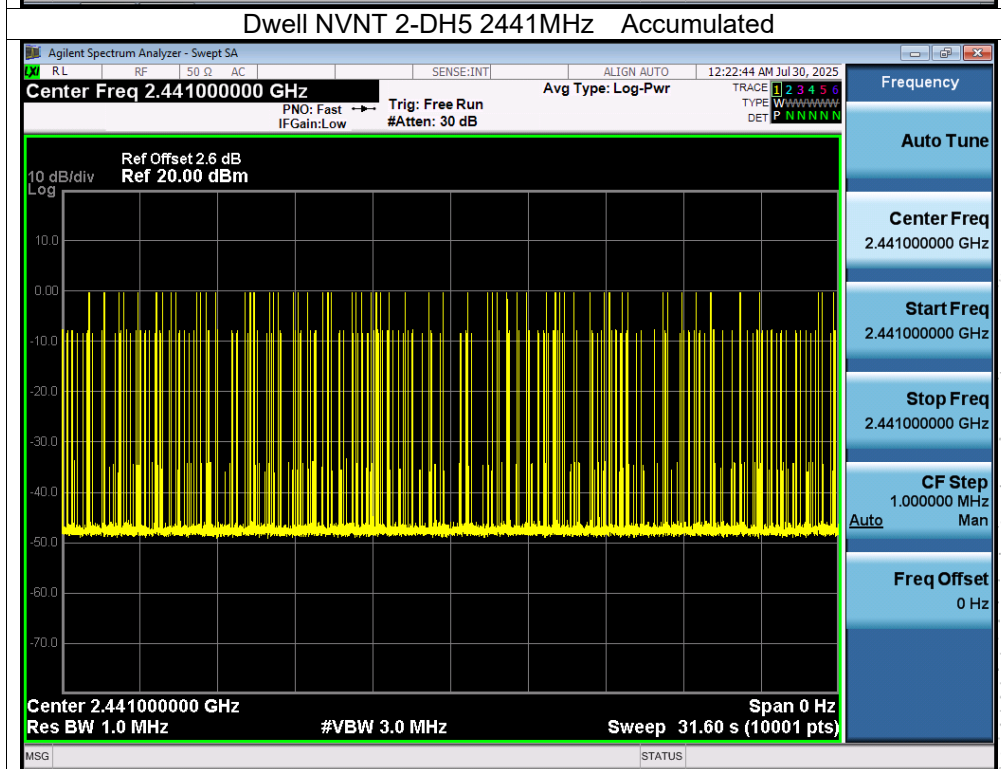
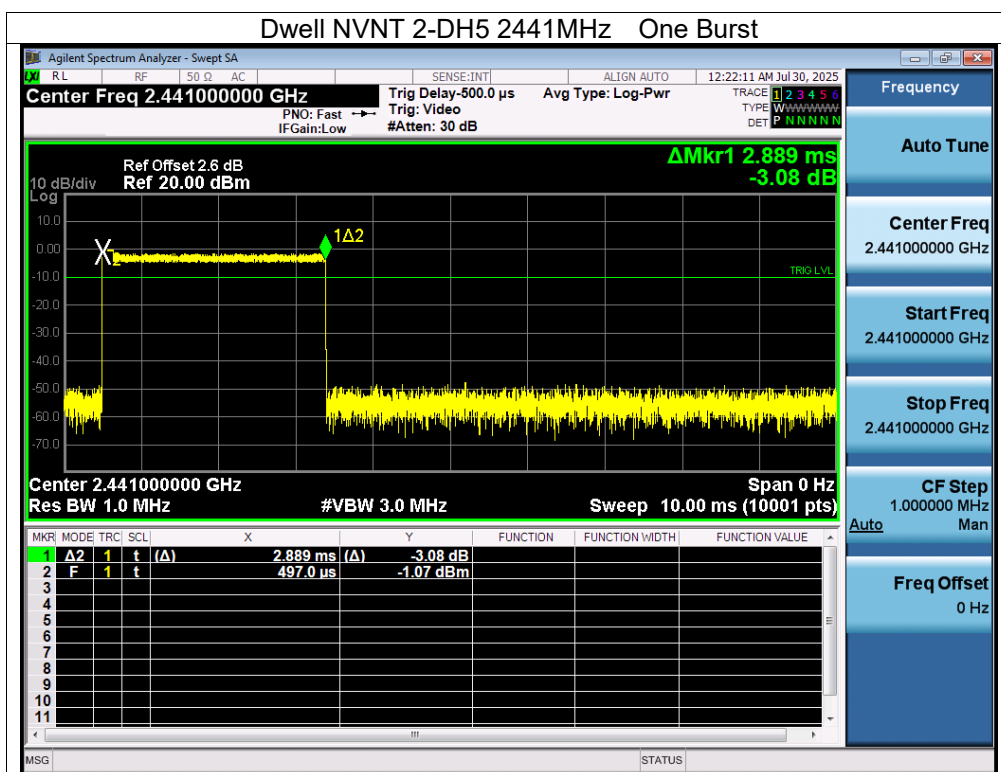


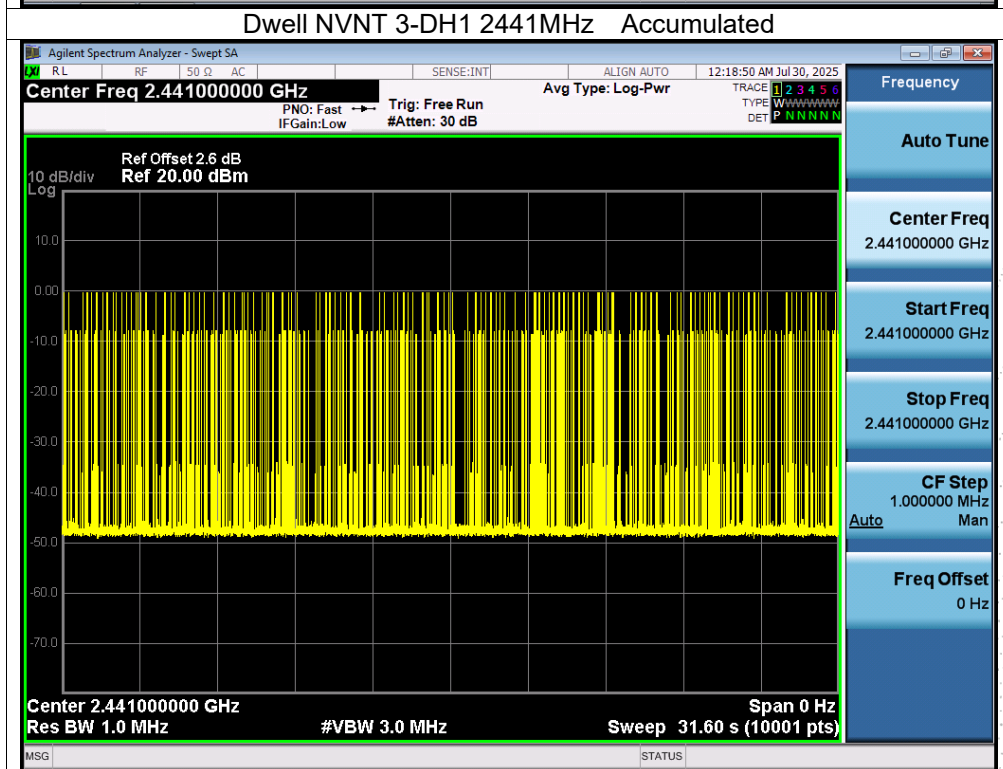
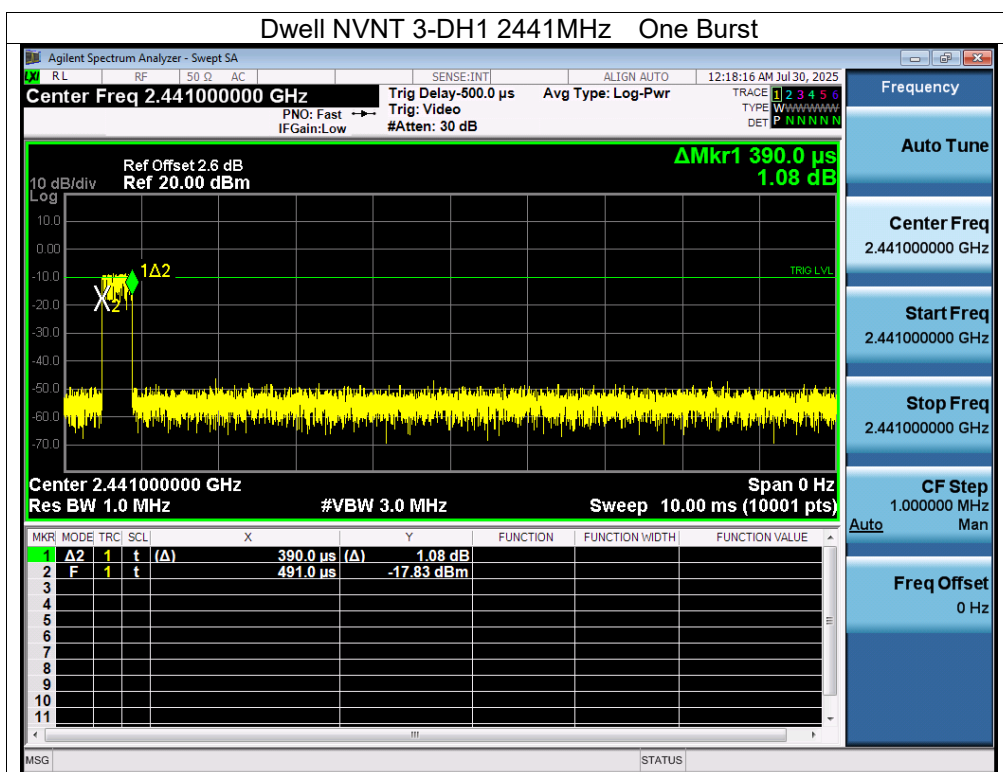




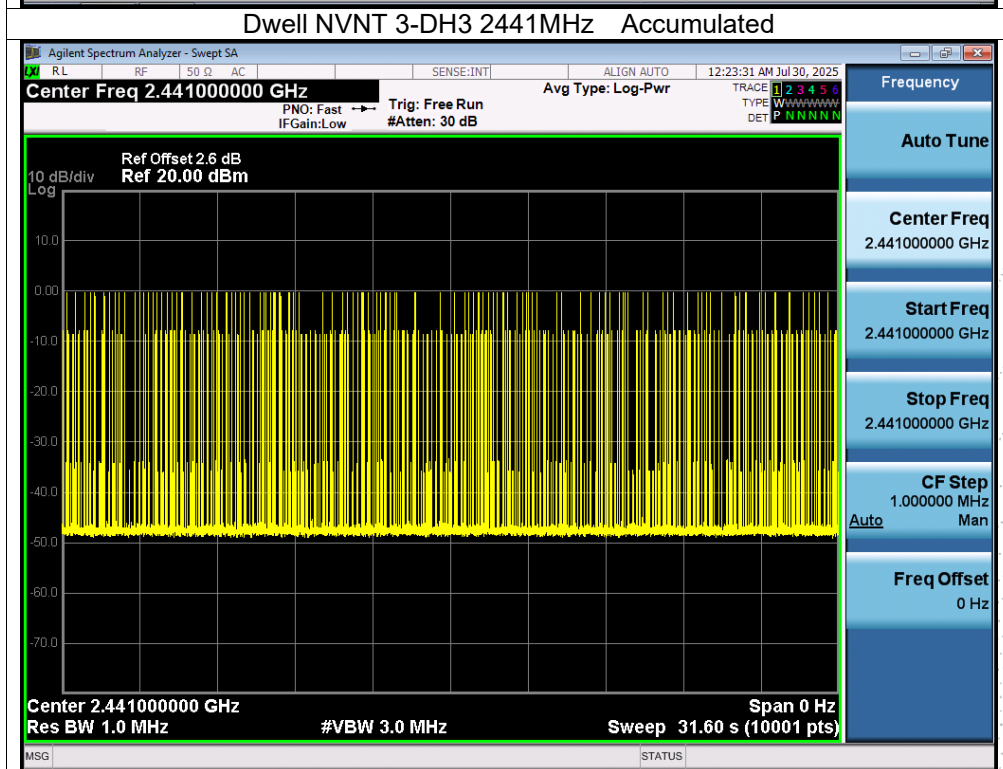
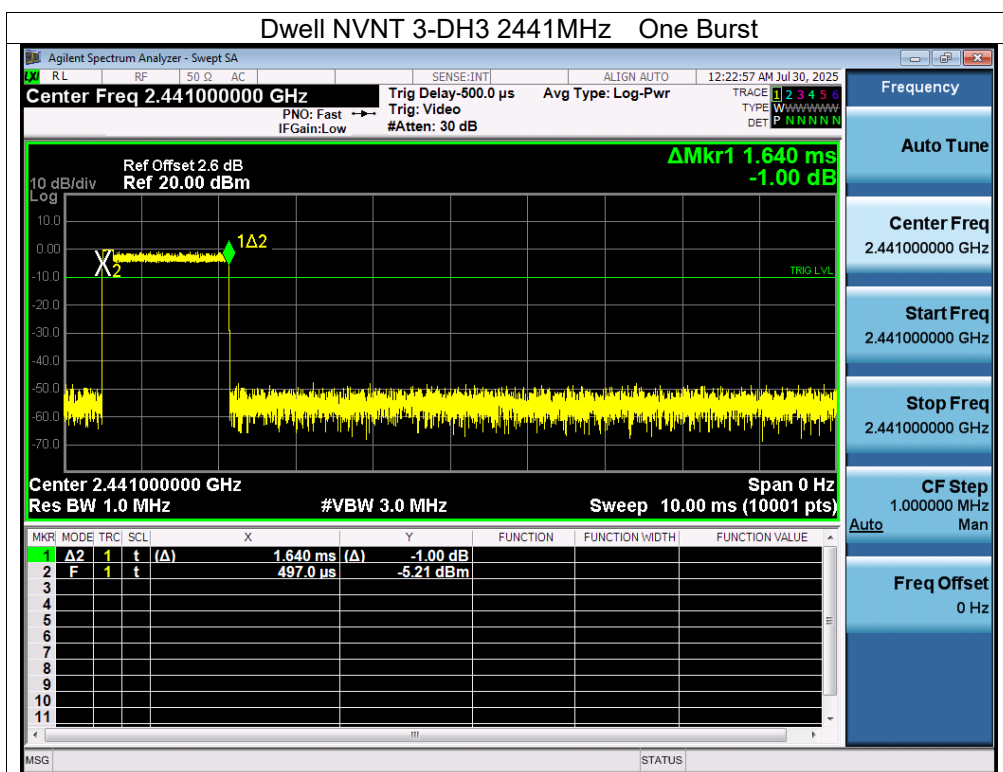


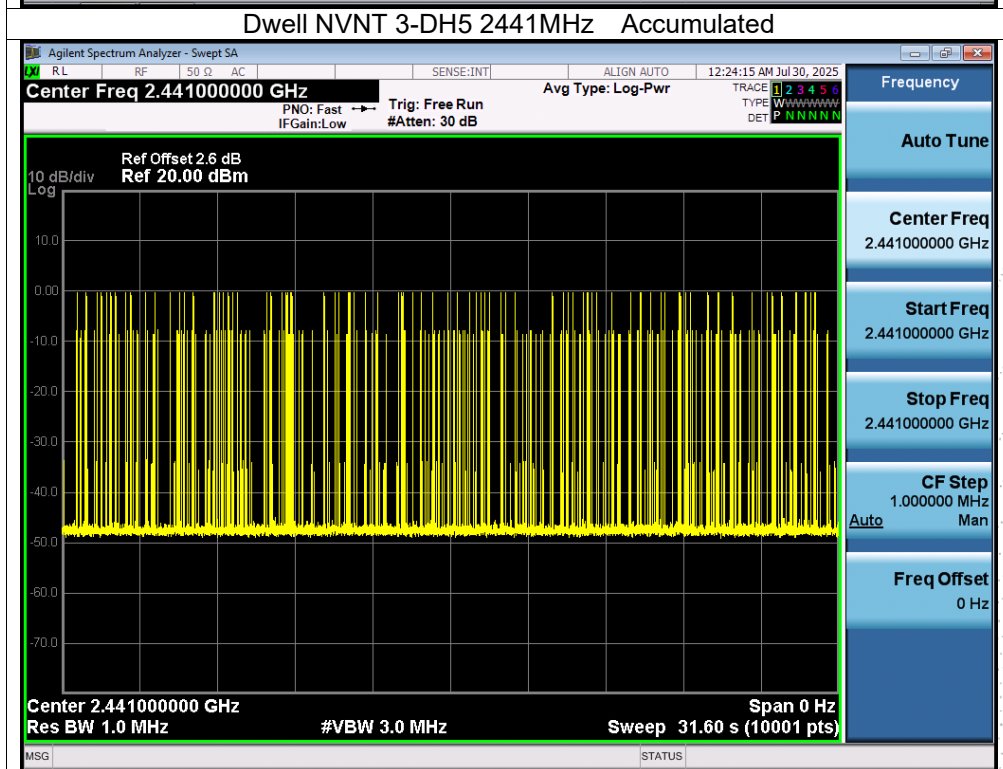
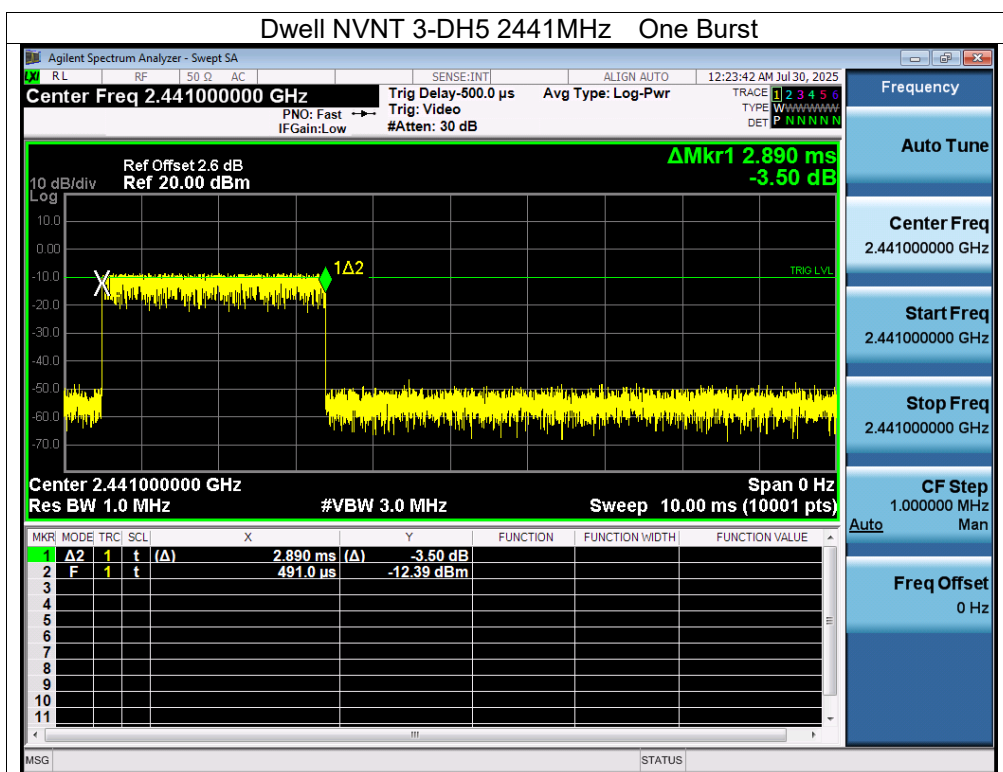






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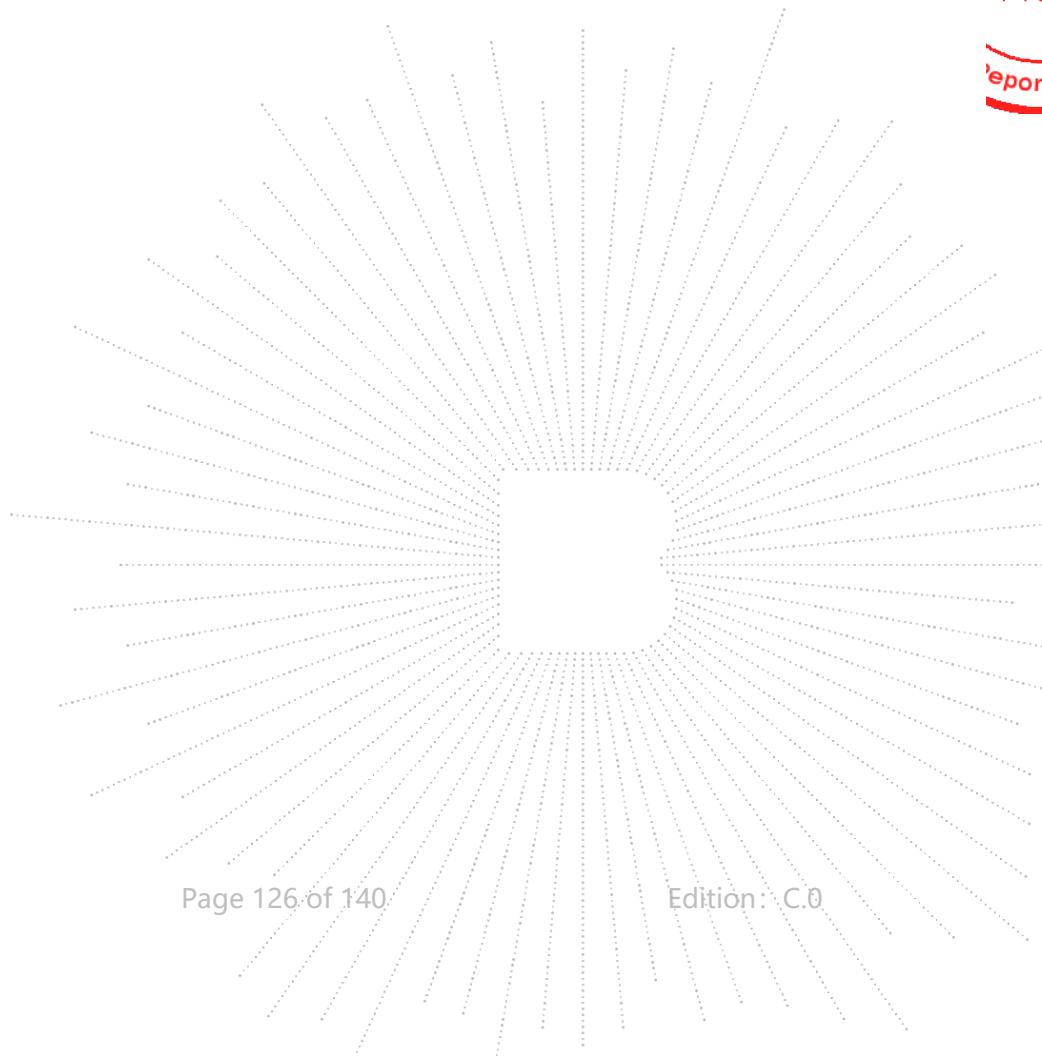


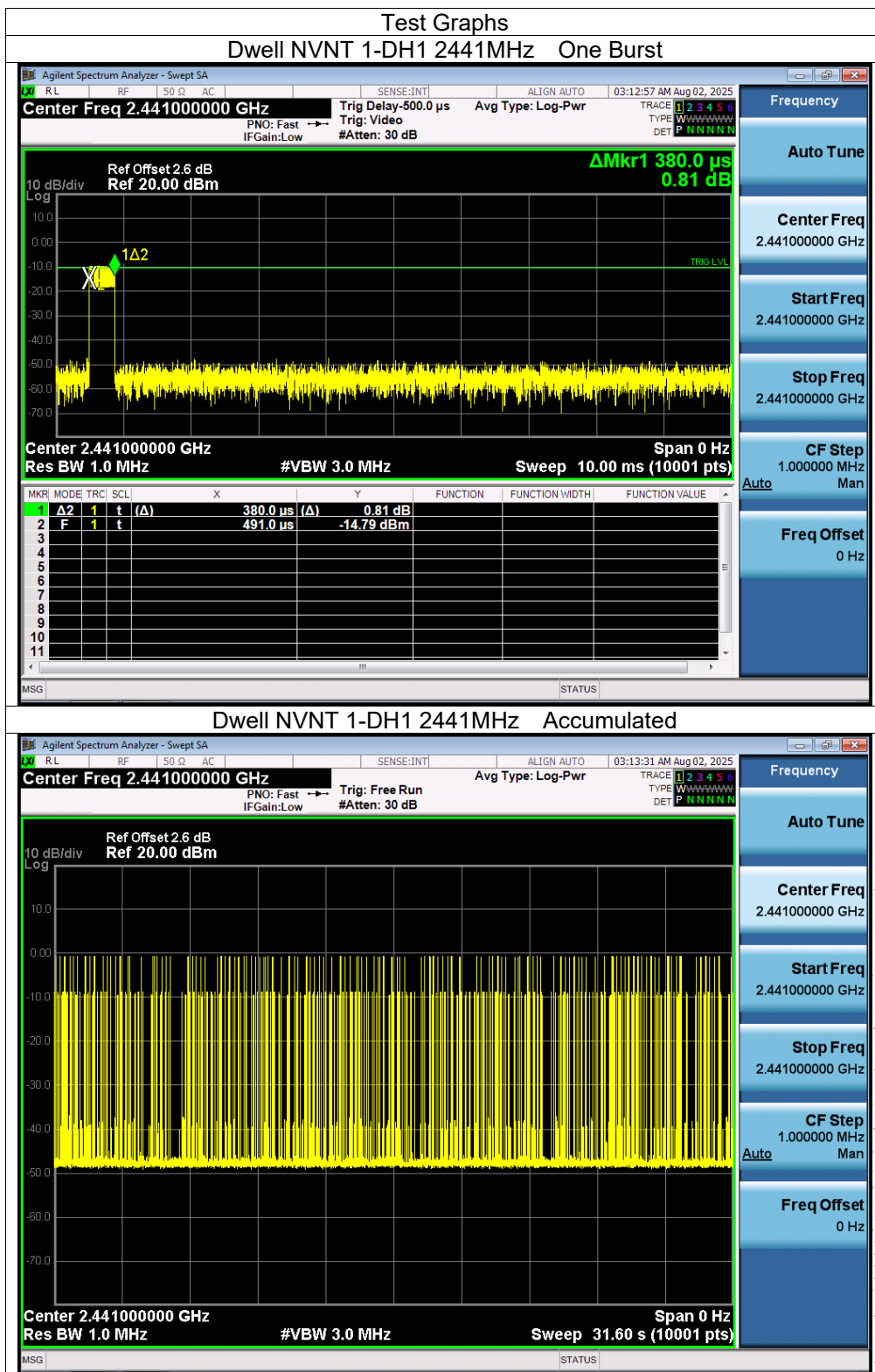


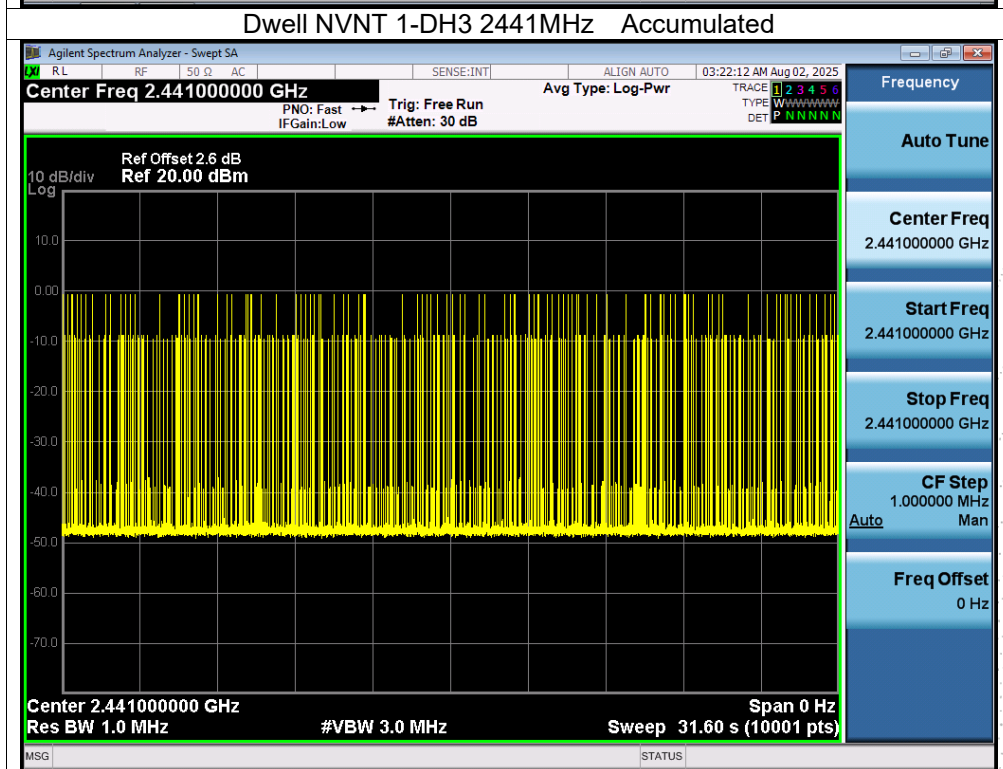
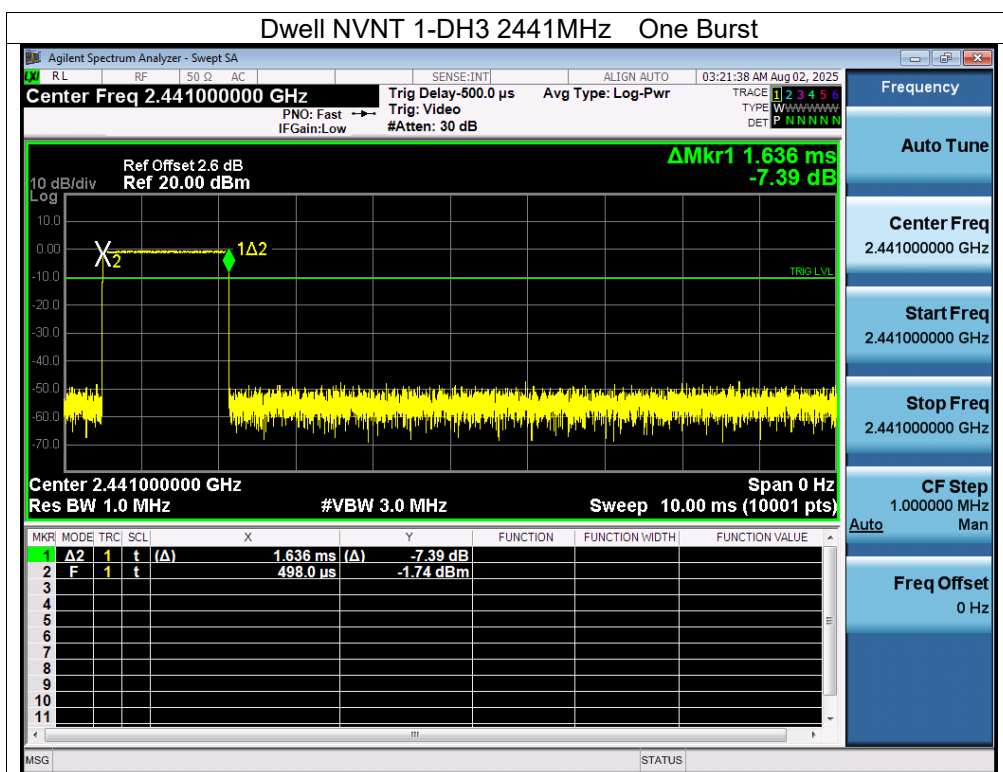
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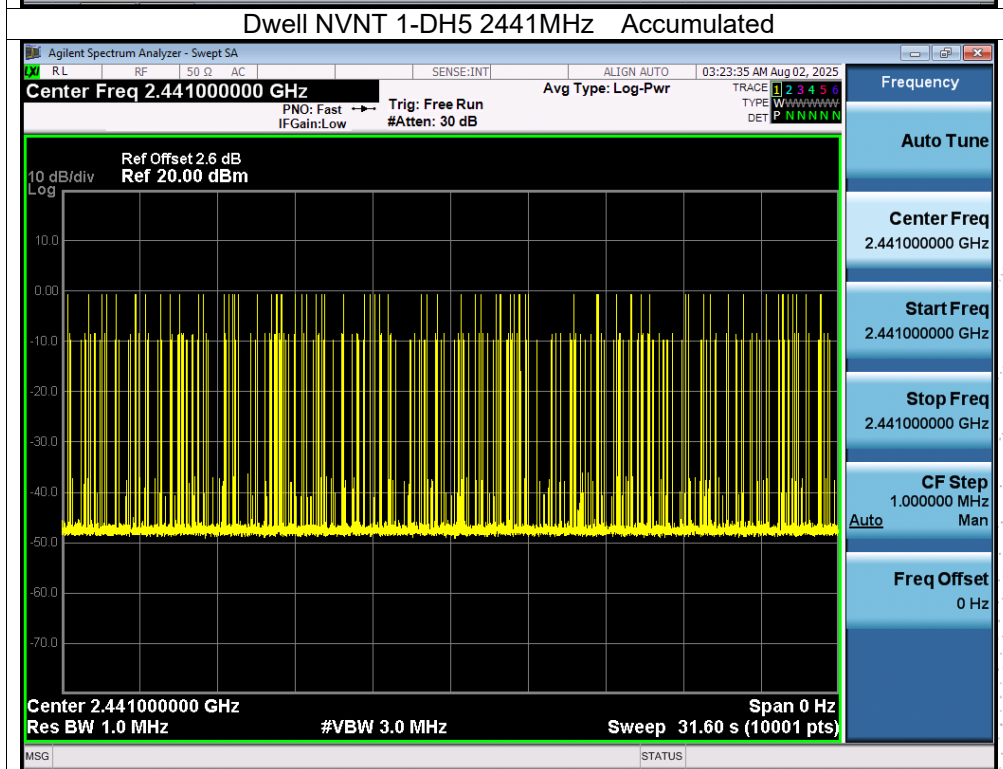
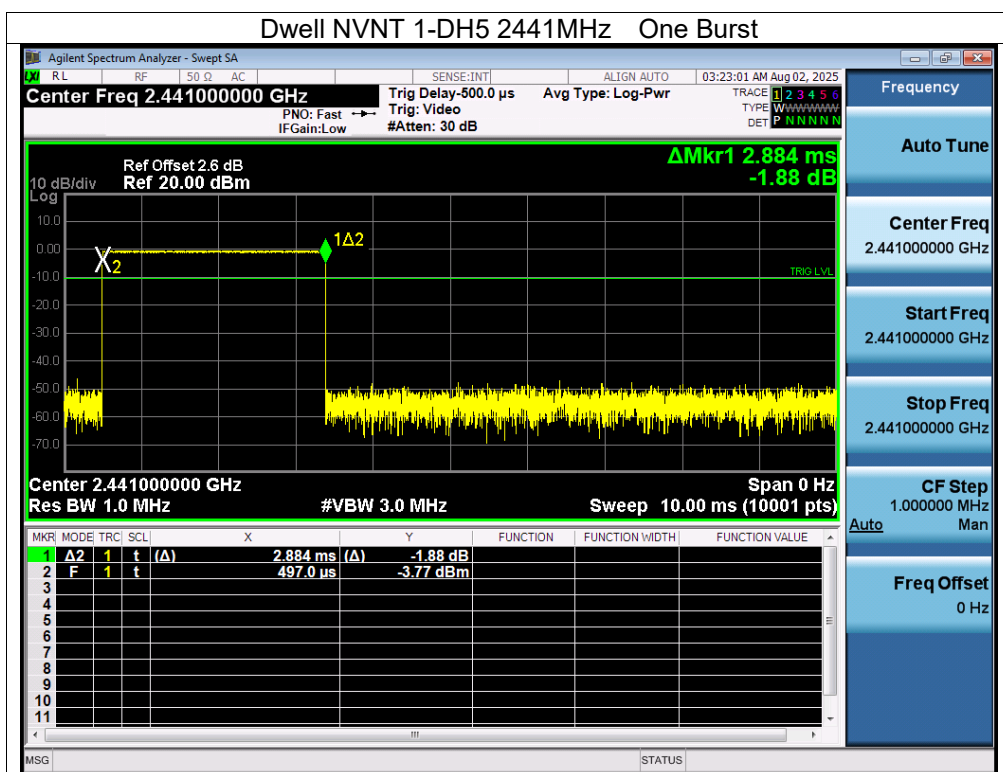
Condition	Mode	Frequency (MHz)	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	0.38	58.14	153	31600	400	Pass
NVNT	1-DH3	2441	1.636	158.692	97	31600	400	Pass
NVNT	1-DH5	2441	2.884	210.532	73	31600	400	Pass
NVNT	2-DH1	2441	0.39	62.4	160	31600	400	Pass
NVNT	2-DH3	2441	1.641	160.818	98	31600	400	Pass
NVNT	2-DH5	2441	2.889	251.343	87	31600	400	Pass
NVNT	3-DH1	2441	0.389	61.462	158	31600	400	Pass
NVNT	3-DH3	2441	1.639	172.095	105	31600	400	Pass
NVNT	3-DH5	2441	2.891	245.735	85	31600	400	Pass

Note: Total Dwell Time (ms) = Pulse Time (ms)*Burst Count

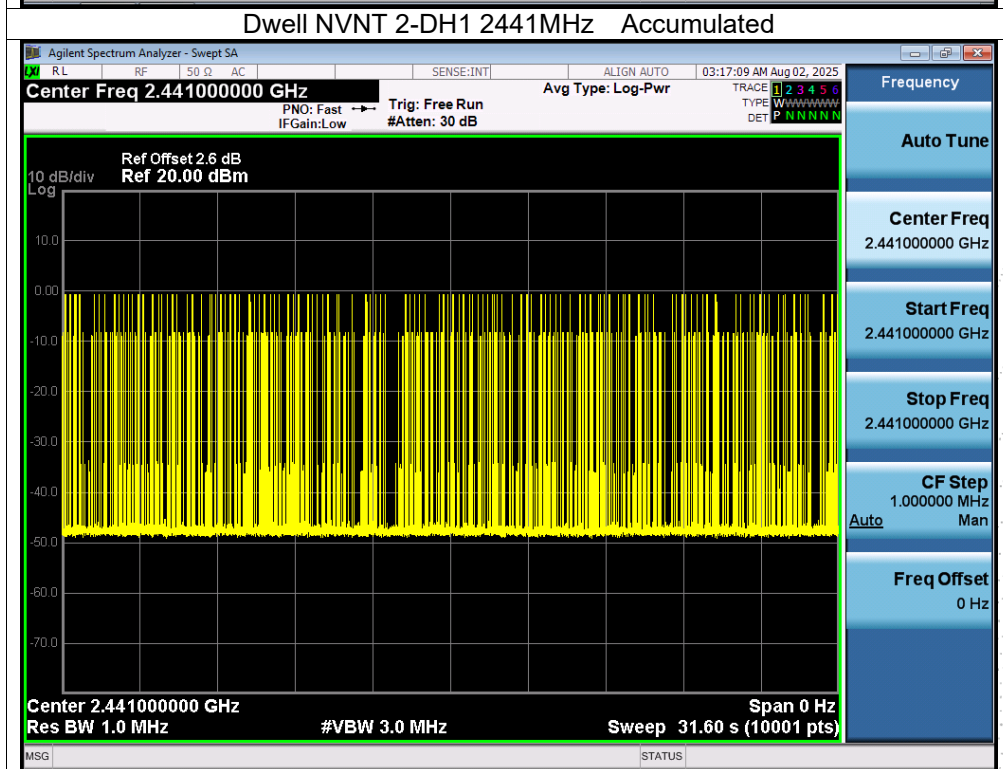
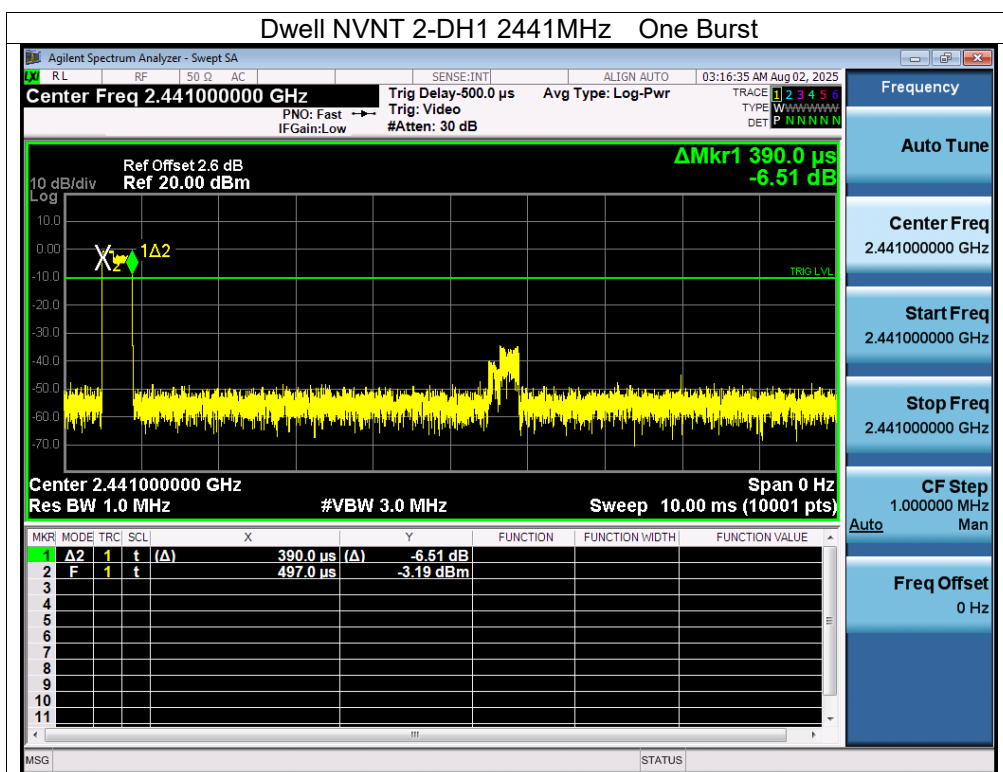


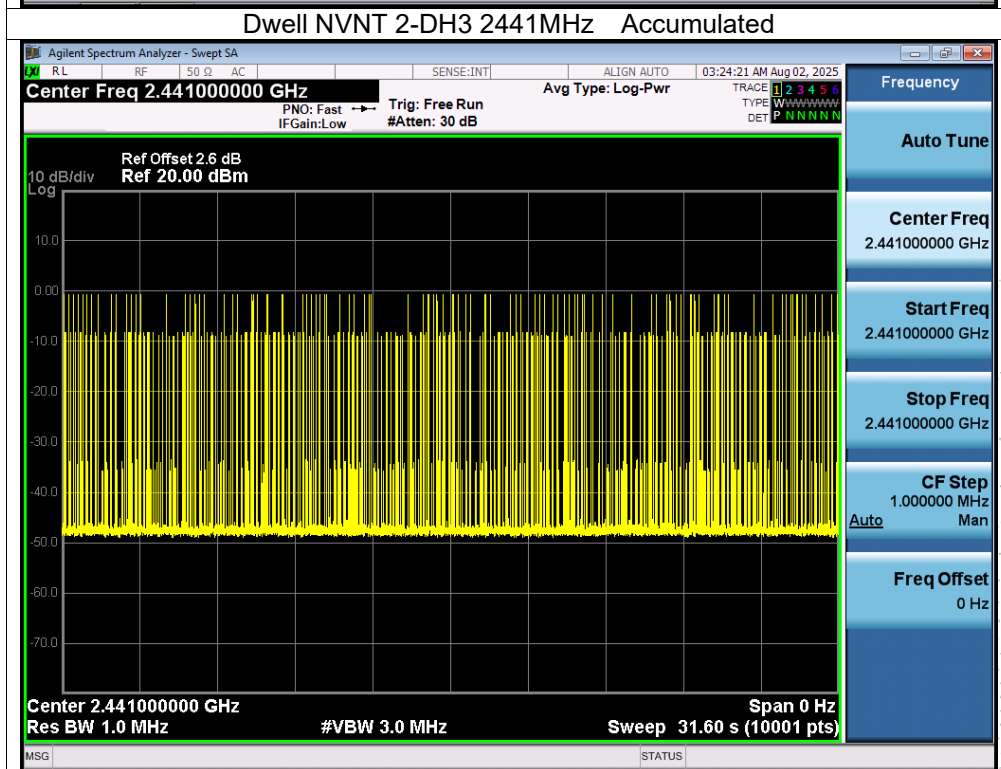
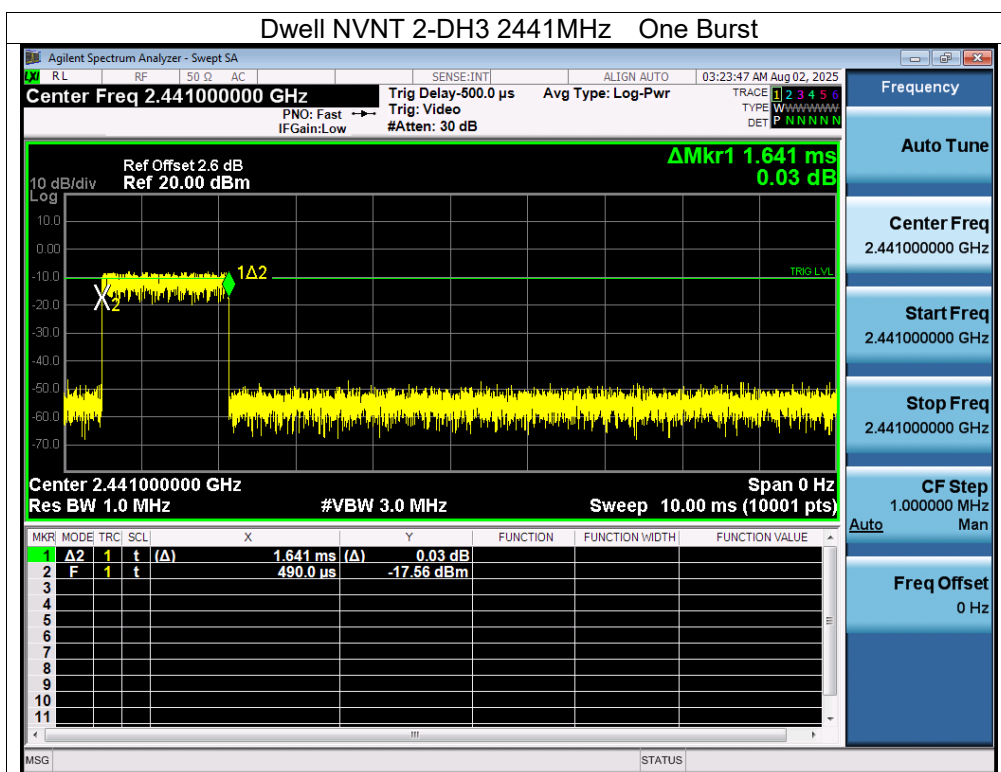


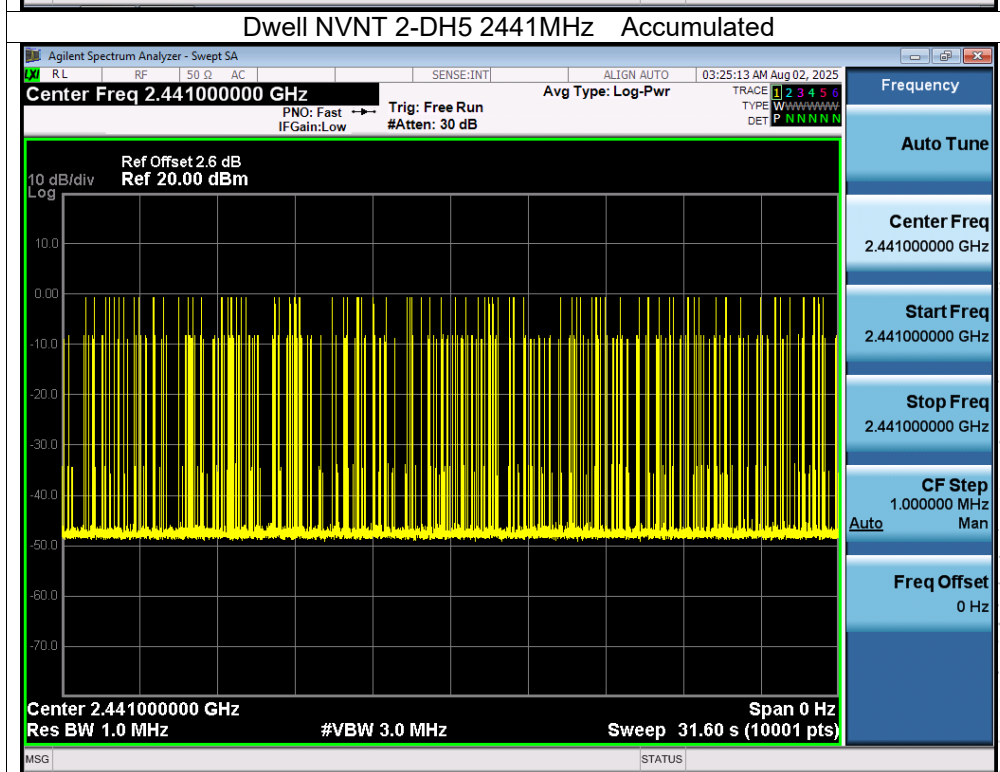
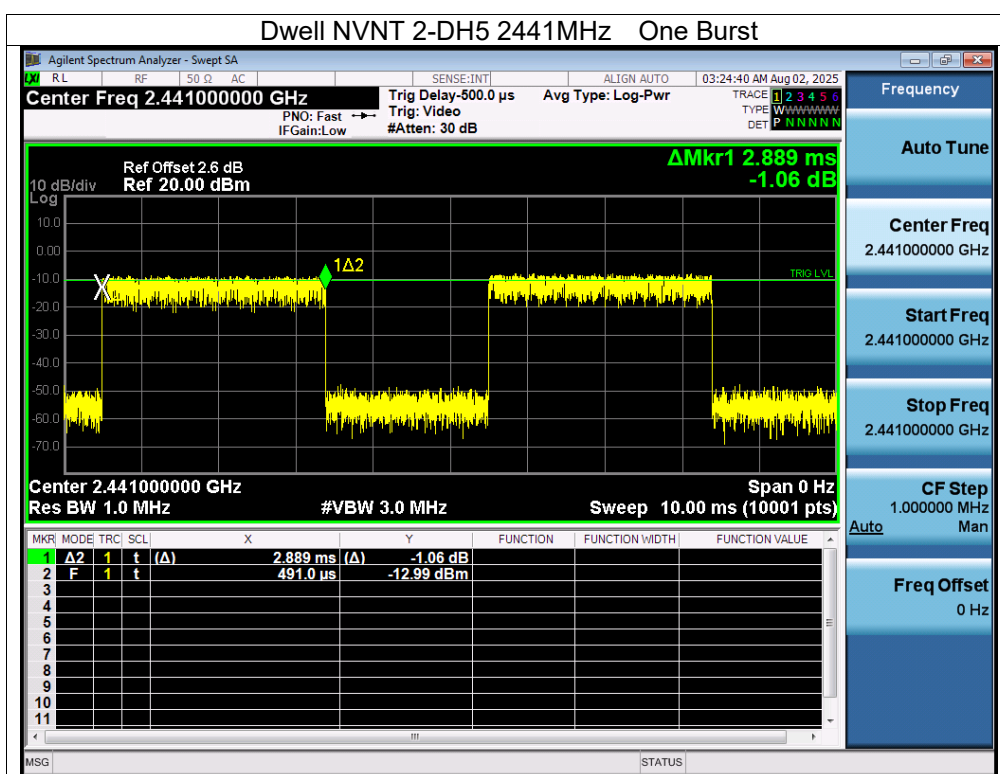


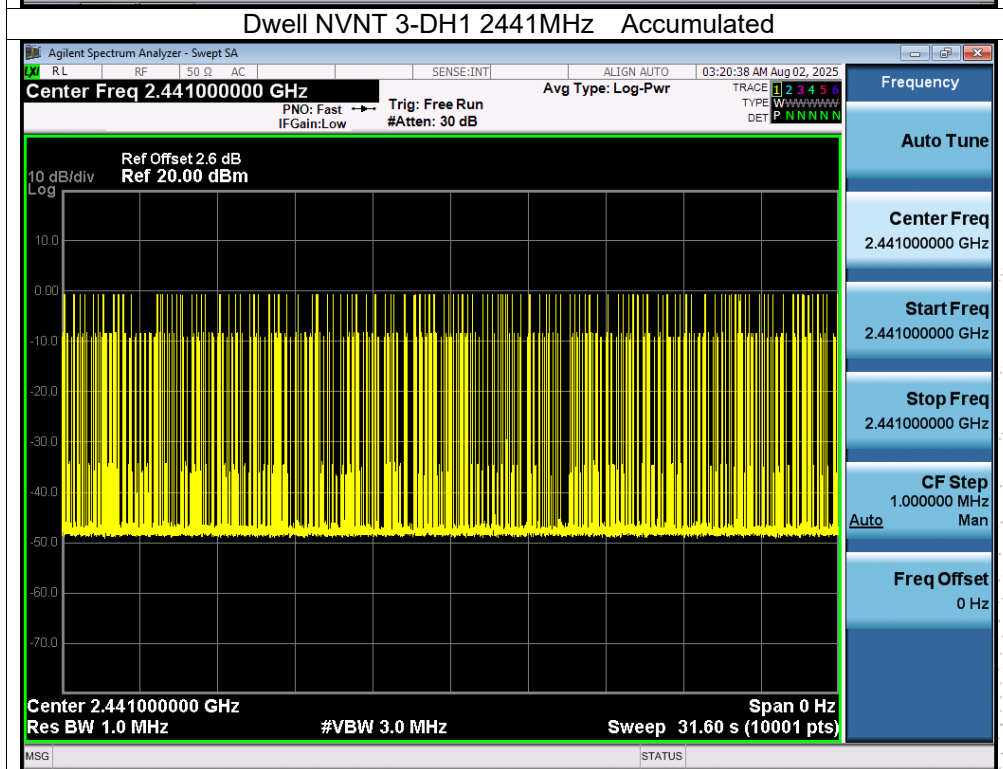
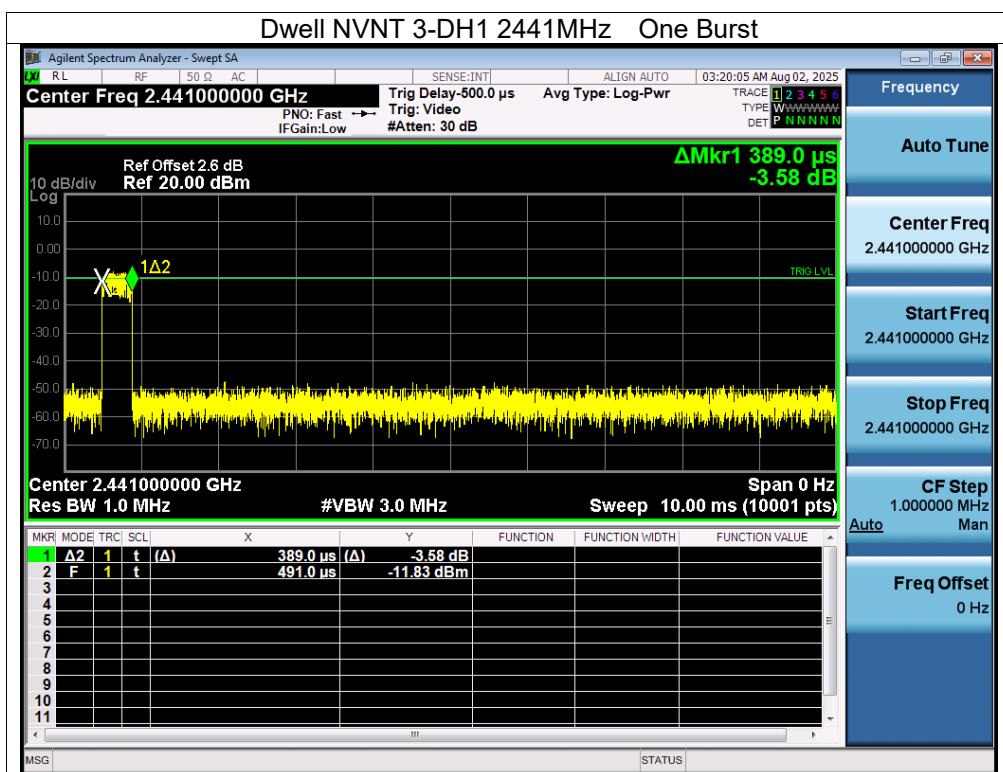


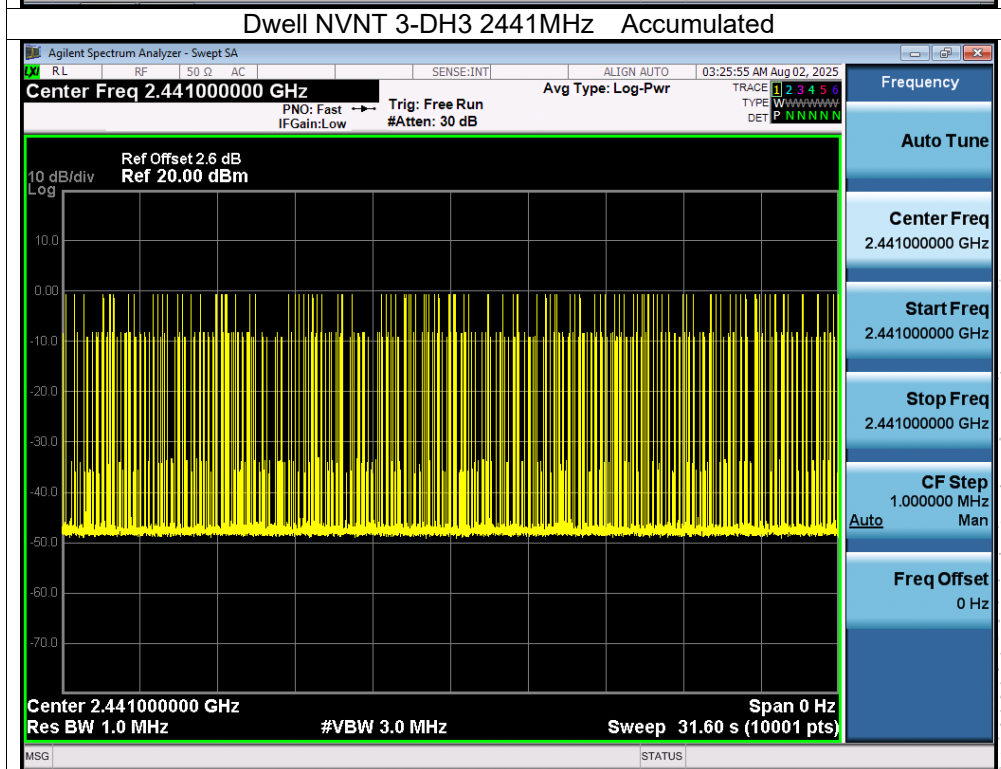
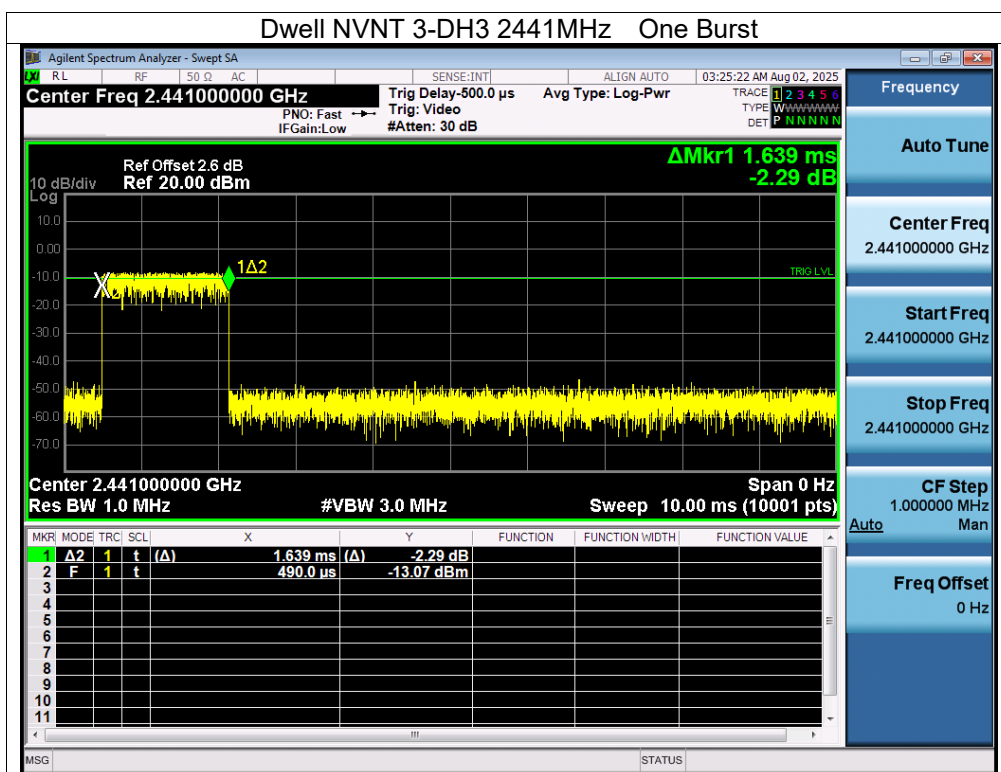
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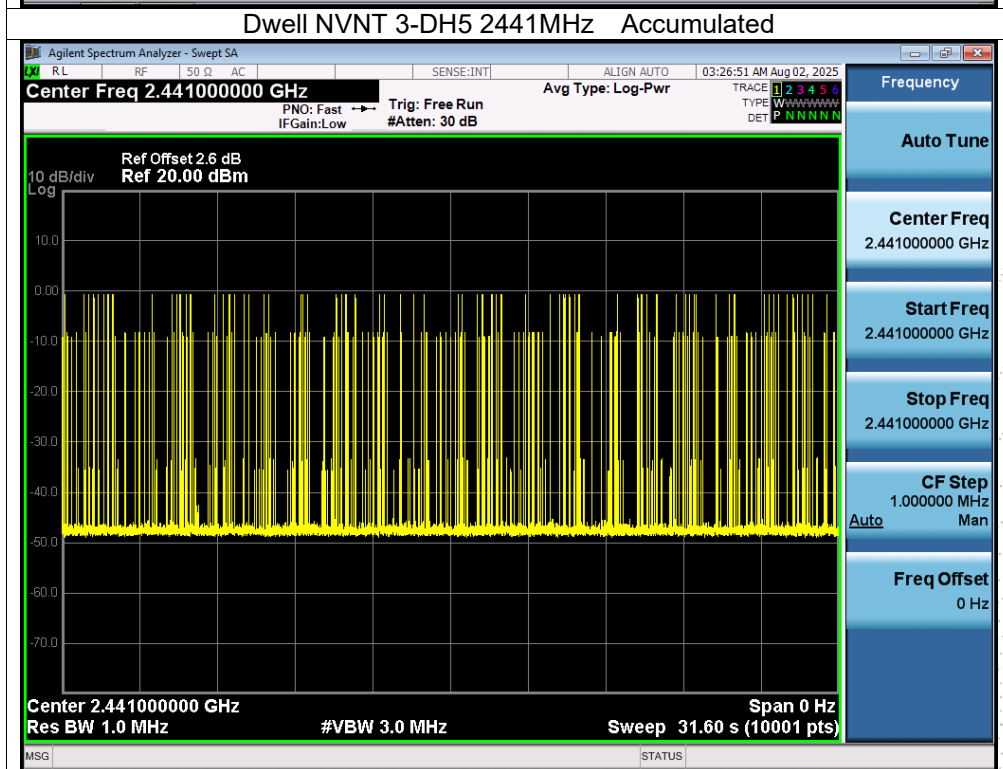
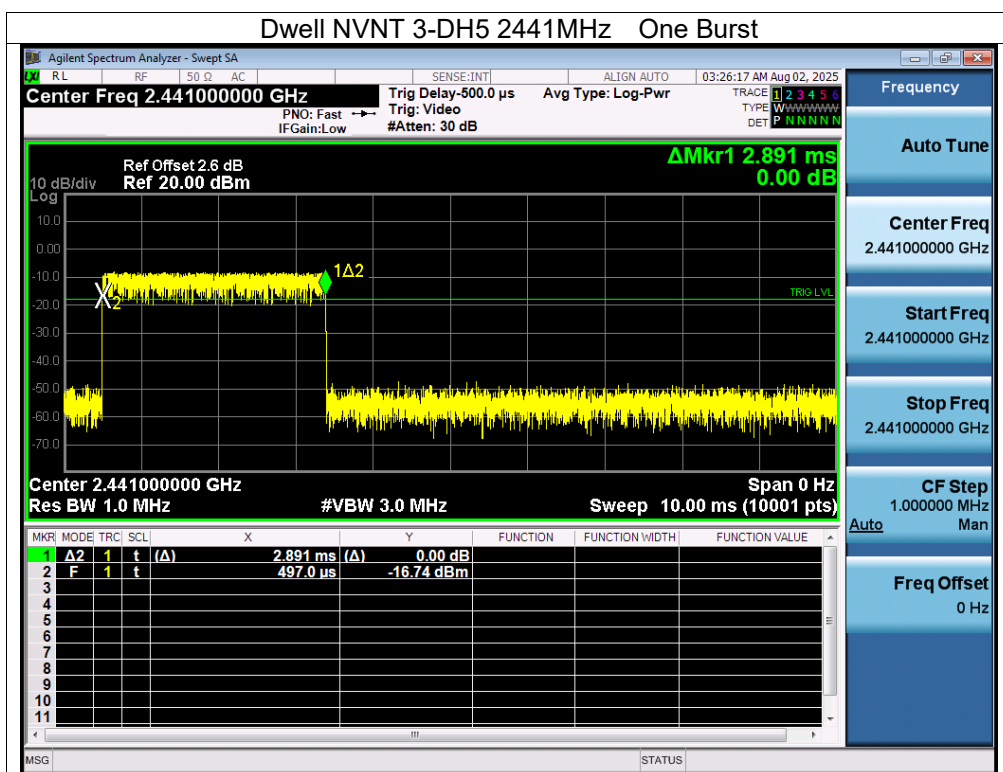












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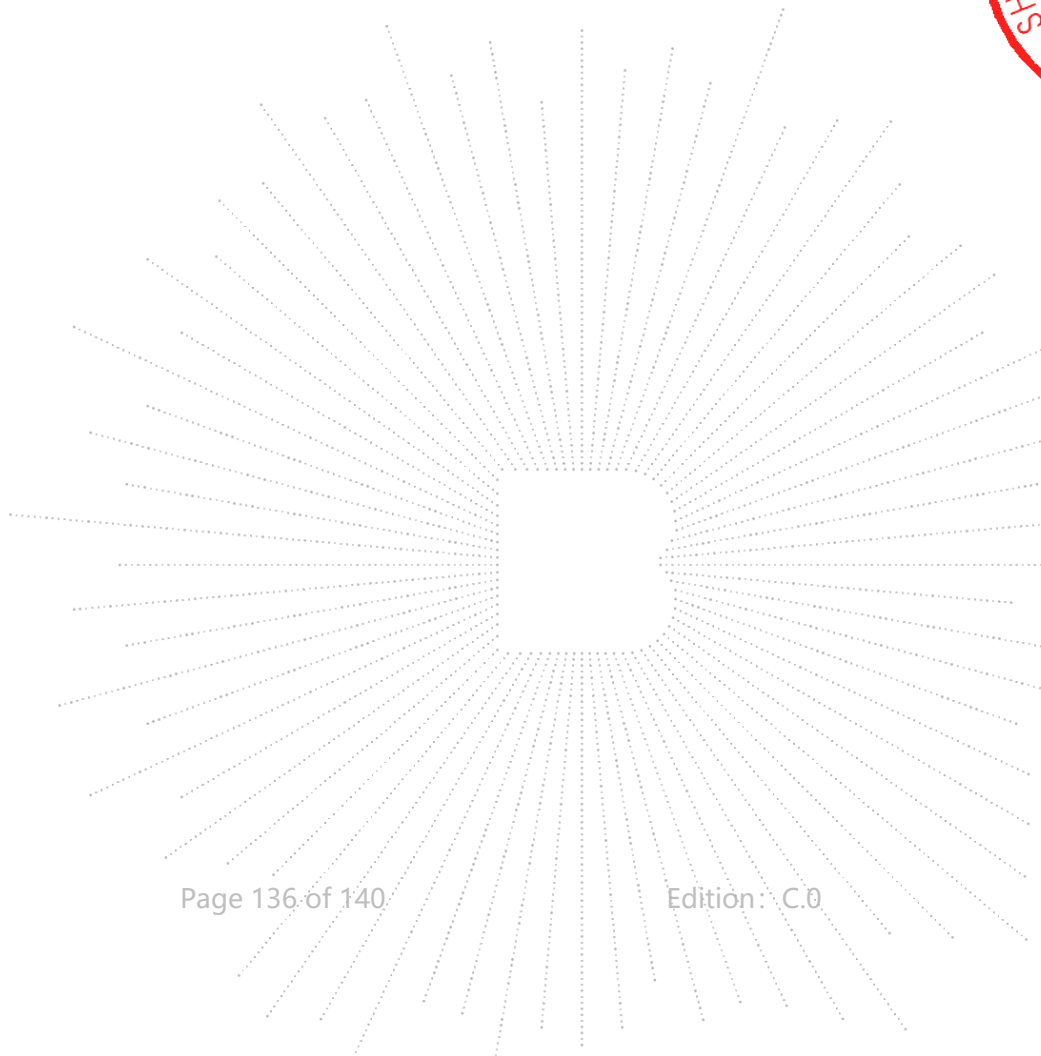
15. Antenna Requirement

15.1 Limit

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.

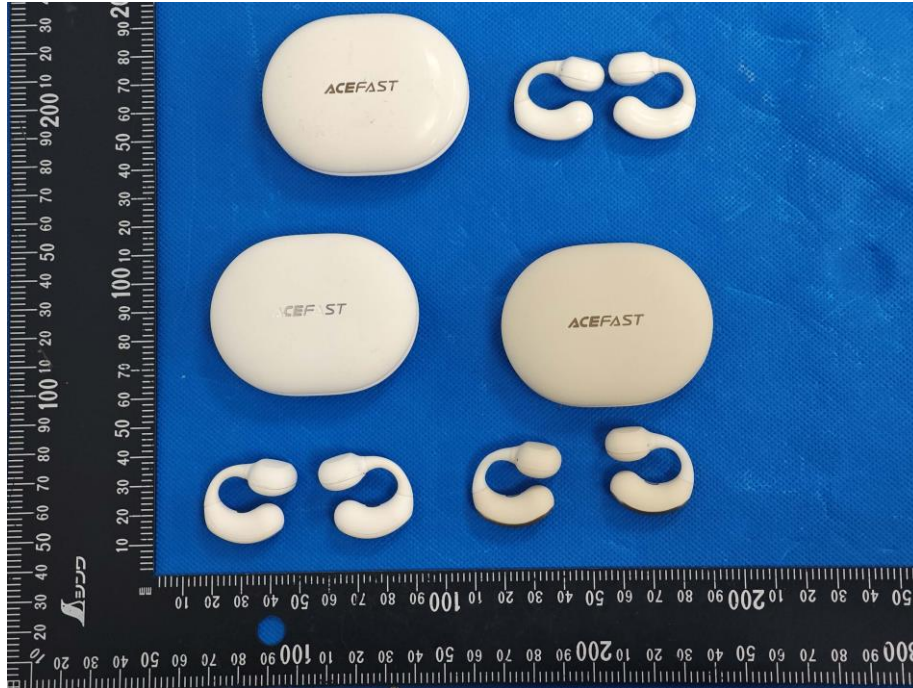
15.2 Test Result

The EUT antenna is Internal antenna, fulfill the requirement of this section.



16. EUT Photographs

EUT Photo 1



EUT Photo 2



NOTE: Appendix-Photographs Of EUT Constructional Details.

17. EUT Test Setup Photographs

Conducted Emissions Photo



Radiated Measurement Photos



Left



Right



STATEMENT

1. The equipment lists are traceable to the national reference standards.
2. The test report can not be partially copied unless prior written approval is issued from our lab.
3. The test report is invalid without the "special seal for inspection and testing".
4. The test report is invalid without the signature of the approver.
5. The test process and test result is only related to the Unit Under Test.
6. Sample information is provided by the client and the laboratory is not responsible for its authenticity.
7. The quality system of our laboratory is in accordance with ISO/IEC17025.
8. If there is any objection to this test report, the client should inform issuing laboratory within 15 days from the date of receiving test report.

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P.C.: 518103

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Website: <http://www.chnbctc.com>

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