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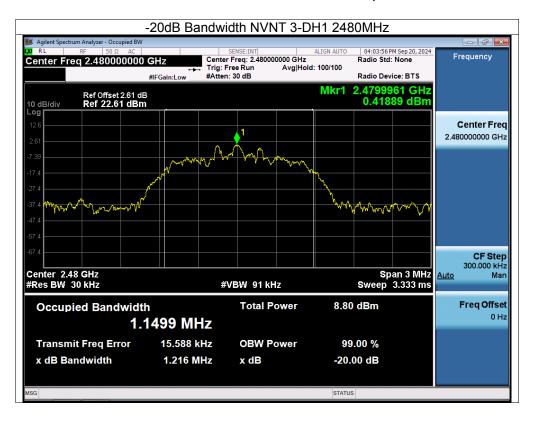
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11. Maximum Peak Output Power

11.1 Block Diagram Of Test Setup



11.2 Limit

FCC Part15 (15.247) , Subpart C					
Section Test Item		Limit	Frequency Range (MHz)	Result	
15.247(b)(1)	Peak Output Power	0.125 watt or 21dBm	2400-2483.5	PASS	

11.3 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 = 2MHz. VBW = 6MHz. Sweep = auto; Detector Function = Peak.
- 3. Keep the EUT in transmitting at lowest, medium and highest channel individually. Record the max value.

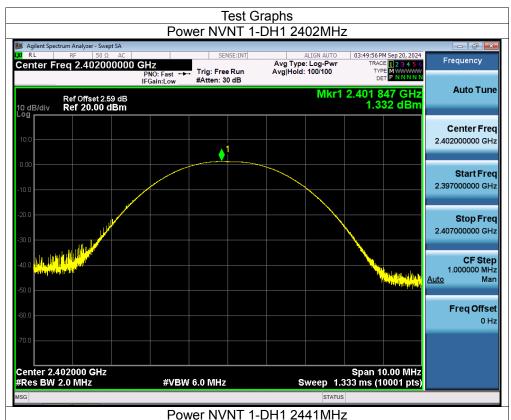
11.4 Test Result

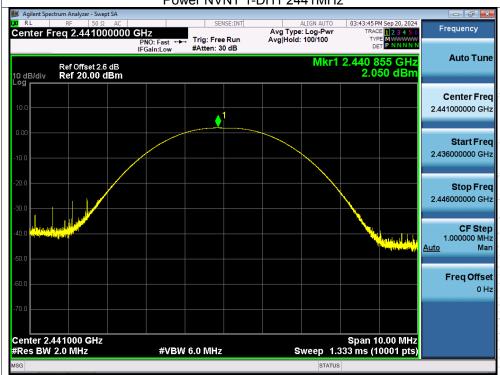
Temperature:	26 ℃	Relative Humidity:	54%RH
Pressure:	101KPa 📉 📉	Test Voltage :	DC 3.8V

Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	1.33	21	Pass
NVNT	1-DH1	2441	2.05	21	Pass
NVNT	1-DH1	2480	2.42	21	Pass
NVNT	2-DH1	2402	2.11	21	Pass
NVNT	2-DH1	2441	2.74	21	Pass
NVNT	2-DH1	2480	2.94	21	Pass
NVNT	3-DH1	2402	2.64	21	Pass
NVNT	3-DH1	2441	3.15	21	Pass
NVNT	3-DH1	2480	3.24	21	Pass

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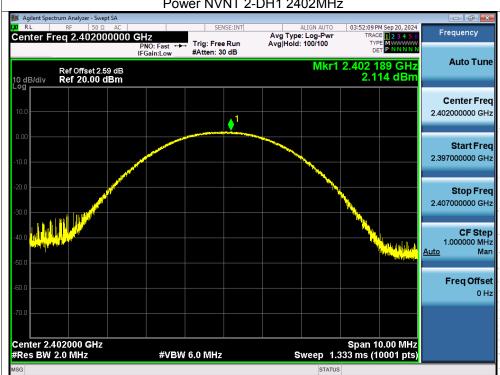




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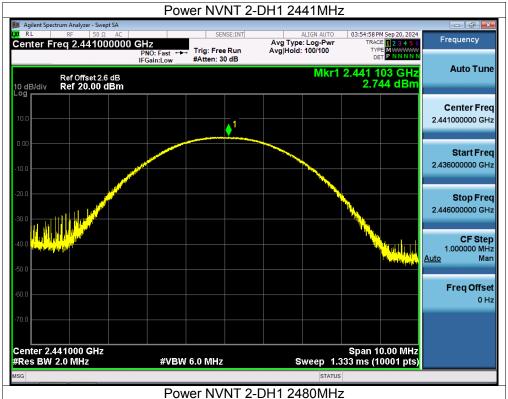


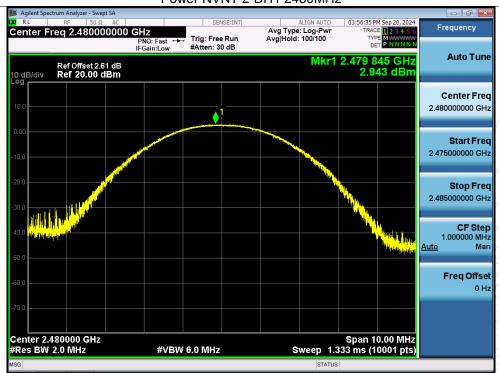




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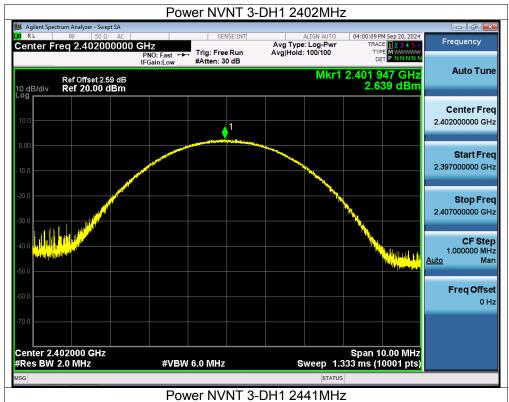
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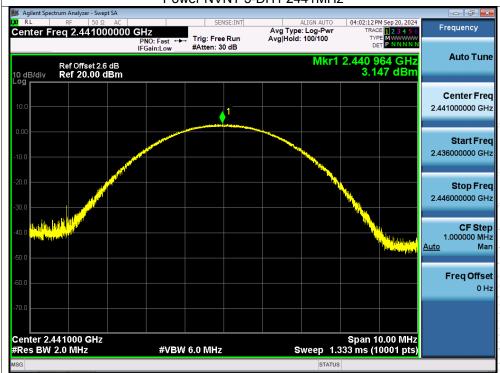
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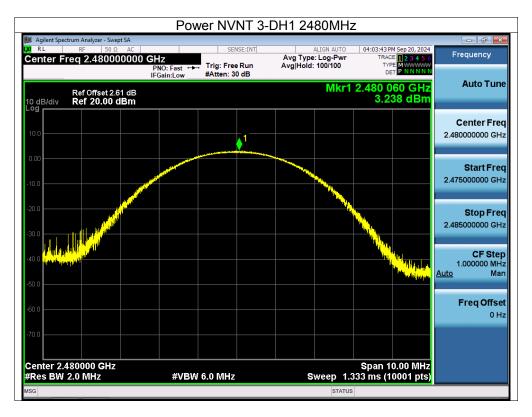






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12. Hopping Channel Separation

12.1 Block Diagram Of Test Setup

EUT SPECTRUM ANALYZER

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12.2 Limit

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 0.125W.

12.3 Test procedure

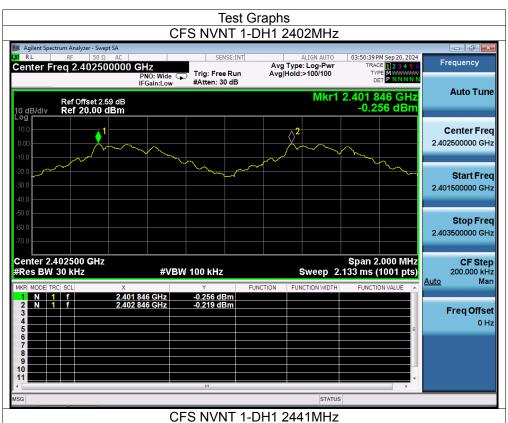
- 1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
- 2. Set the spectrum analyzer: RBW = 30kHz. VBW = 100kHz , Span = 2.0MHz. Sweep = auto; Detector Function = Peak. Trace = Max hold.
- 3. Allow the trace to stabilize. Use the marker-delta function 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.

12.4 Test Result

Mode	Test Channel	Separation (MHz)	Limit(MHz)	Result
1-DH1	Low	1.000	0.579	PASS
1-DH1	Middle	0.996	0.569	PASS
1-DH1	High	1.000	0.581	PASS
2-DH1	Low	1.002	0.830	PASS
2-DH1	Middle	1.002	0.815	PASS
2-DH1	High	0.996	0.815	PASS
3-DH1	Low	1.000	0.812	PASS
3-DH1	Middle	1.006	0.811	PASS
3-DH1	High	1.002	0.811	PASS

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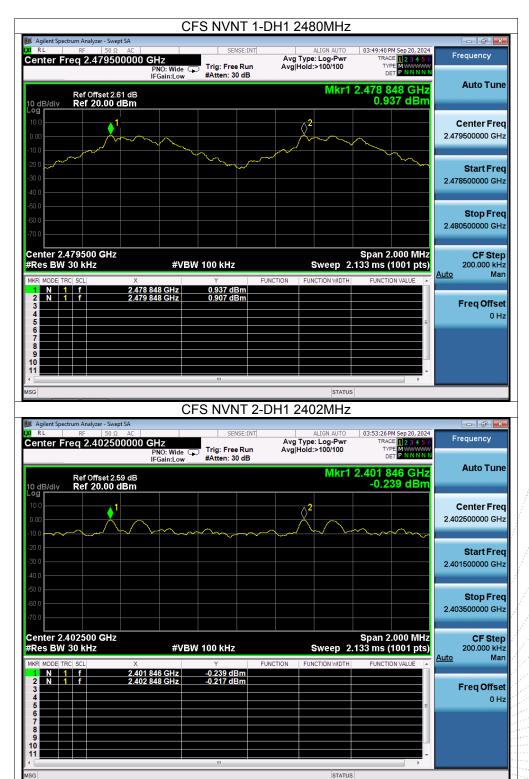






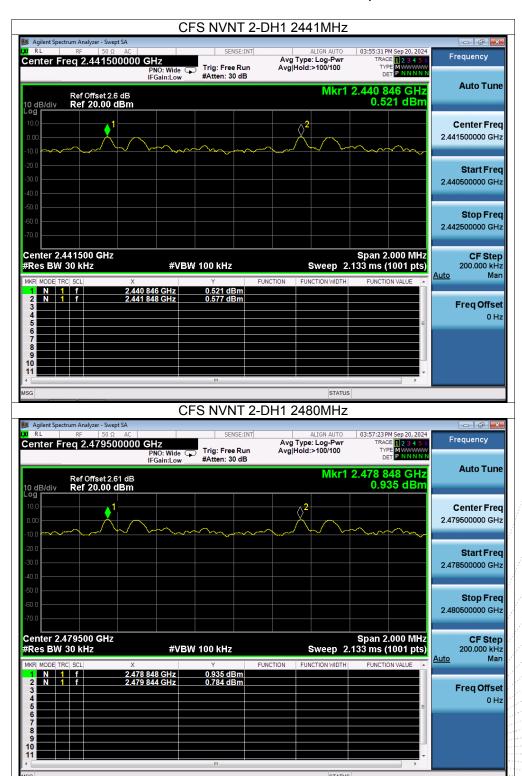
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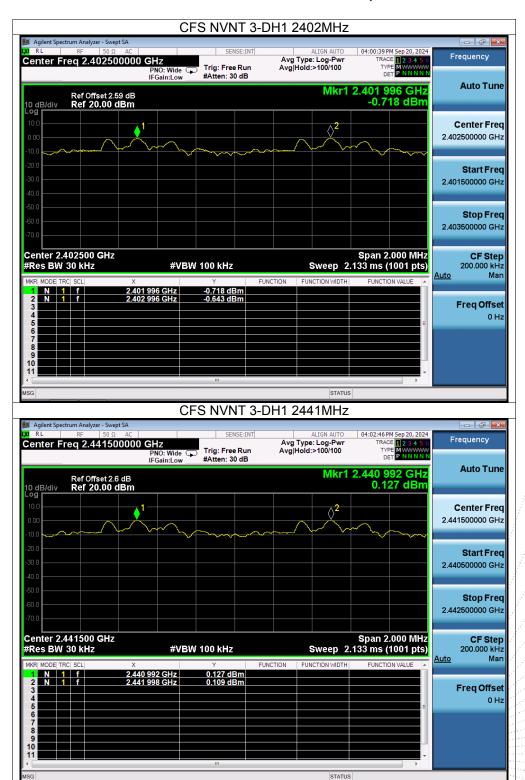


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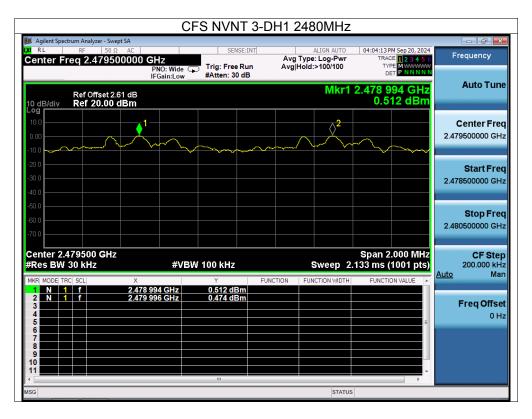
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13. Number Of Hopping Frequency

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

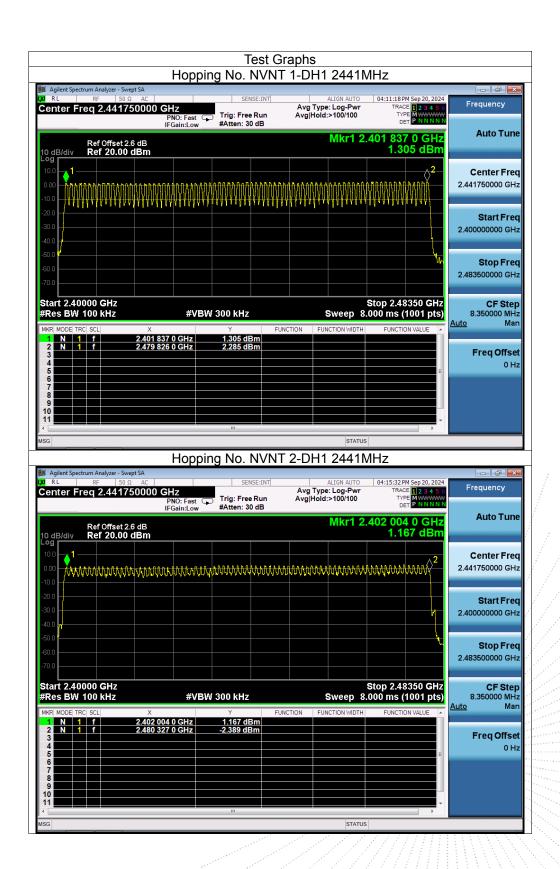
- 1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
- 2. Set the spectrum analyzer: RBW = 100kHz. VBW = 300kHz. Sweep = auto; Detector Function = Peak. Trace = Max hold.
- 3. Allow the trace to stabilize. It may prove necessary to break the span 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

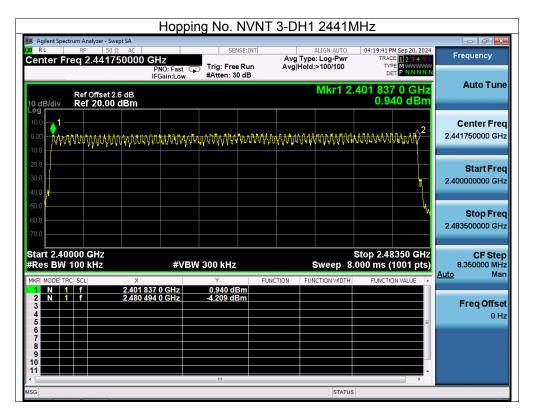
Condition	Mode	Hopping Number	Limit	Verdict
NVNT	1-DH1	79	15	Pass
NVNT	2-DH1	79	15	Pass
NVNT	3-DH1	79	15	Pass

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14. Dwell Time

14.1 Block Diagram Of Test Setup

EUT	SPECTRUM		
	ANALYZER		

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

Mode	Frequency (MHz)	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
1-DH1	2441	0.383	121.794	318	31600	400	Pass
1-DH3	2441	1.637	257.009	157	31600	400	Pass
1-DH5	2441	2.886	248.196	86	31600	400	Pass
2-DH1	2441	0.392	125.048	319	31600	400	Pass
2-DH3	2441	1.643	262.88	160	31600	400	Pass
2-DH5	2441	2.885	294.27	102	31600	400	Pass
3-DH1	2441	0.391	124.338	318	31600	400	Pass
3-DH3	2441	1.642	257.794	157	31600	400	Pass
3-DH5	2441	2.893	341.374	118	31600	400	Pass

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

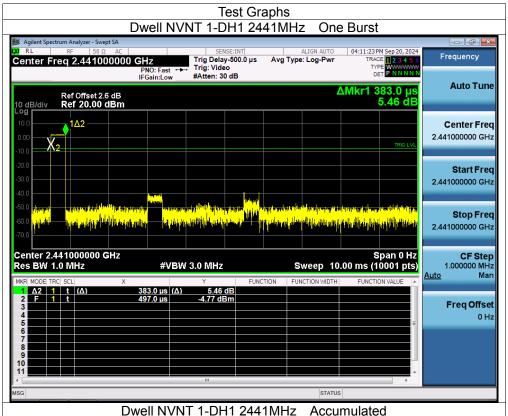
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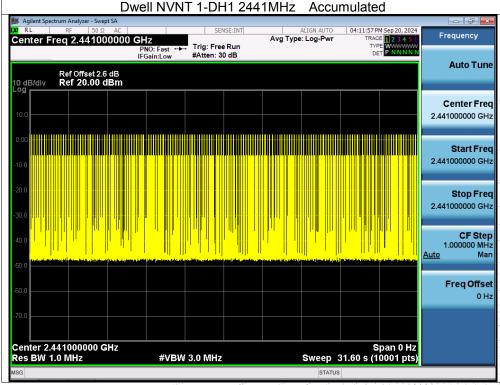
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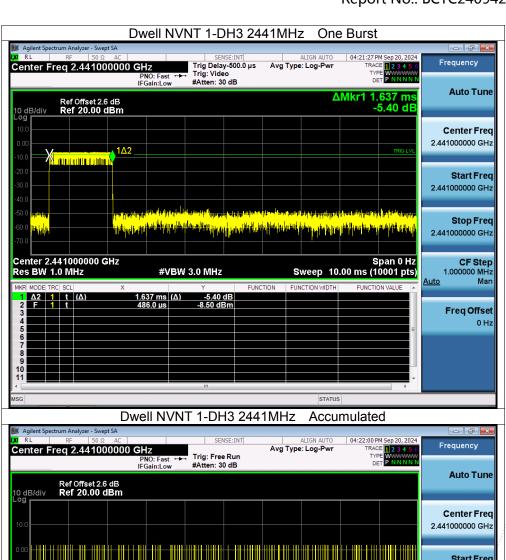


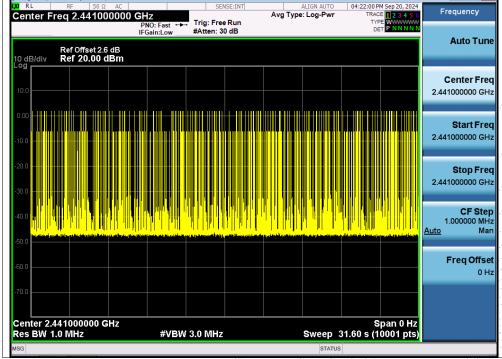




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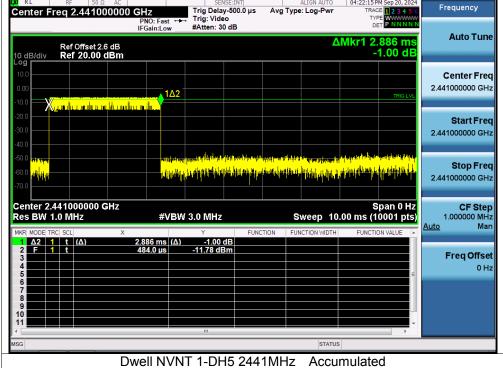


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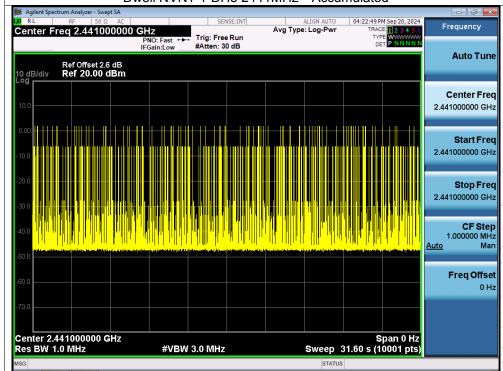
One Burst

Report No.: BCTC2409426417-1E



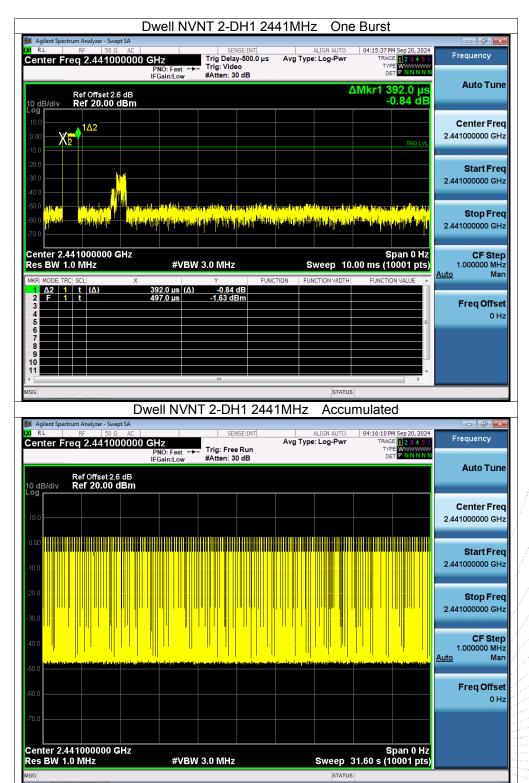
Dwell NVNT 1-DH5 2441MHz

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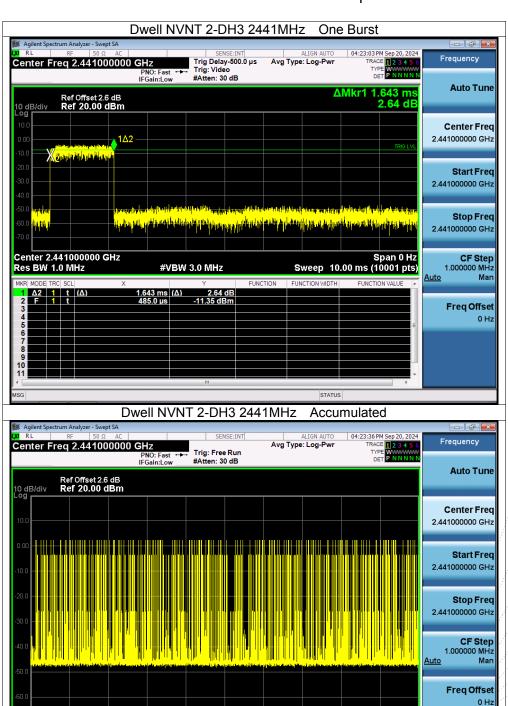




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Center 2.441000000 GHz Res BW 1.0 MHz Report No.: BCTC2409426417-1E



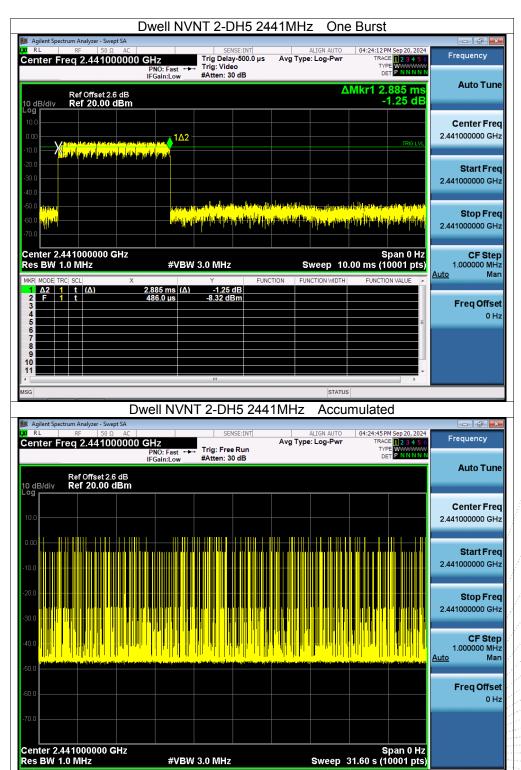
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#VBW 3.0 MHz

Span 0 Hz Sweep 31.60 s (10001 pts)

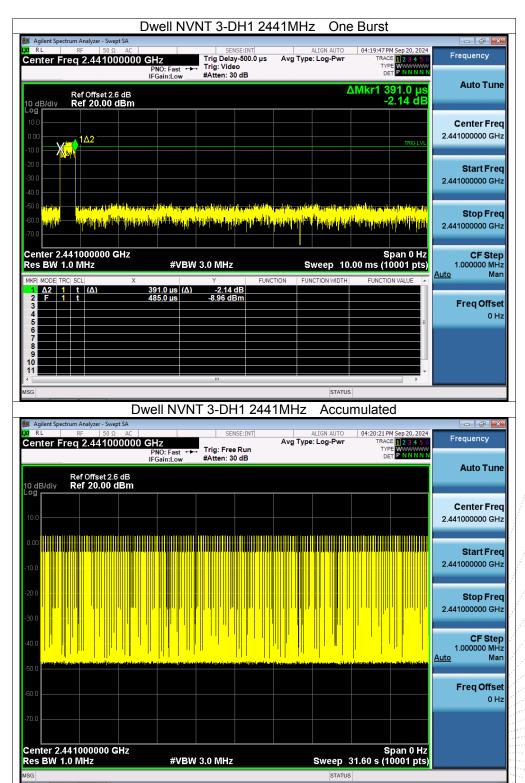


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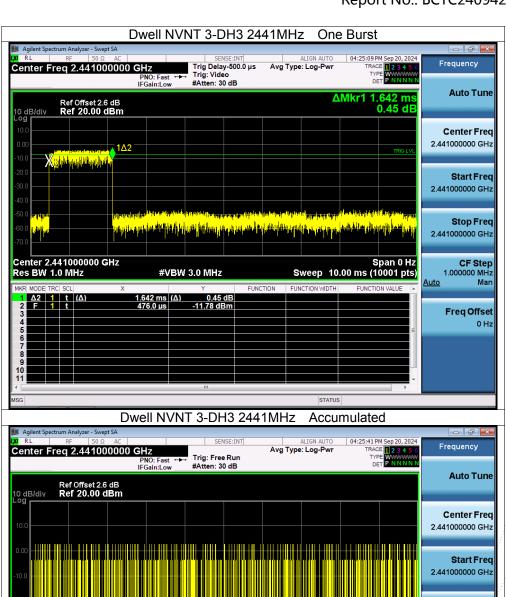
Center 2.441000000 GHz Res BW 1.0 MHz Report No.: BCTC2409426417-1E

Stop Freq 2.441000000 GHz

CF Step 1.000000 MHz Man

Freq Offset 0 Hz

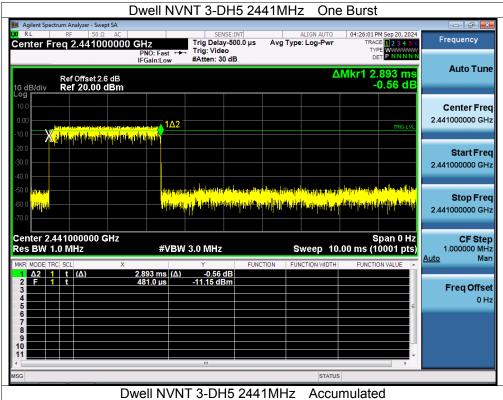
Span 0 Hz Sweep 31.60 s (10001 pts)



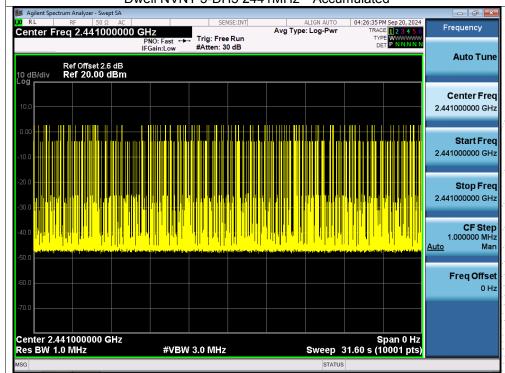
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#VBW 3.0 MHz





BCTC



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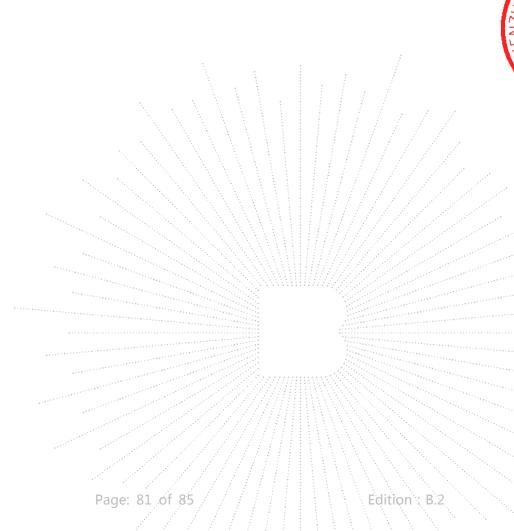
15. Antenna Requirement

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.



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16. EUT Photographs

EUT Photo



NOTE: Appendix-Photographs Of EUT Constructional Details



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17. EUT Test Setup Photographs

Conducted emissions



Radiated Measurement Photos



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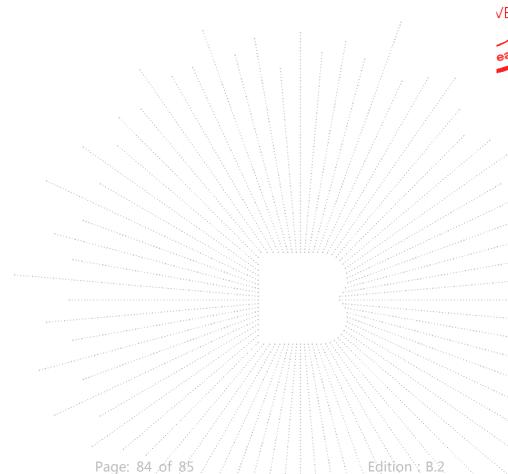
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ort :









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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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Complaint/Advice E-mail: advice@bctc-lab.com.cn

**** END ****

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