

	CFS NVNT 3-E	0H1 2480MHz		
	IO: Wide Trig: Free Run Atten: 20 dB	ALIGN AUTO Avg Type: Log-Pwr Avg Hold:>100/100	08:05:17 PM Dec 15, 2021 TRACE 1 2 3 4 5 6 TYPE MWWWWW DET PNNNNN	Peak Search
Ref Offset 0.5 dB 10 dB/div Ref 10.00 dBm		ΔMk	r1 1.000 MHz 0.034 dB	NextPeak
0.00 X2				Next Pk Righ
-10.0				Next Pk Lef
-30.0				Marker Delta
-60.0				Mkr→Cf
-70.0				Mkr→RefLv
Center 2.479500 GHz #Res BW 30 kHz	#VBW 100 kHz	Sweep 2.13	Span 2.000 MHz 33 ms (1001 pts)	Mor 1 of:
MSG				



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

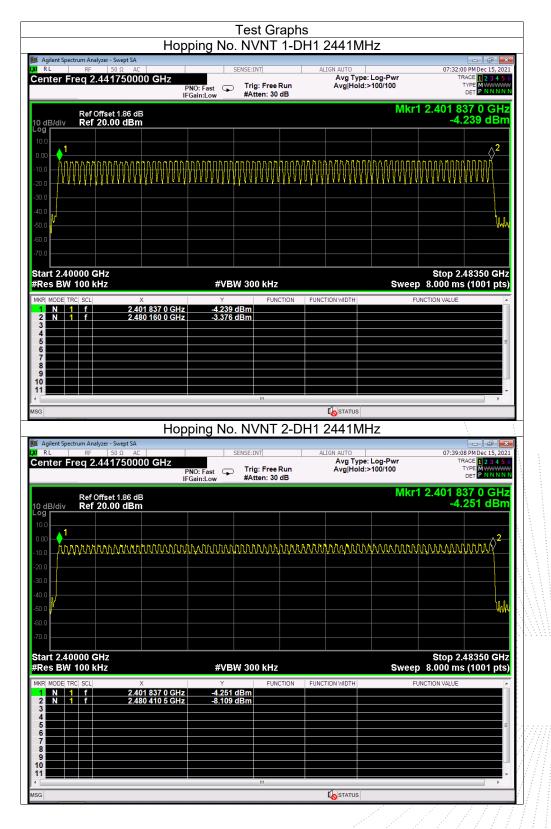
1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.

2. Set the spectrum analyzer: RBW = 100kHz. VBW = 300kHz. Sweep = auto; Detector Function = Peak. Trace = Max hold.

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.
Set the spectrum analyzer: Start Frequency = 2.4GHz, Stop Frequency = 2.4835GHz. Sweep=auto;



13.4 Test Result







🕻 Agilent Spec												- ē 론
RL	RF	50 Ω AC			S	SENSE:INT		A	LIGN AUTO	e: Log-Pwr		:48 PM Dec 15, 202 TRACE 1 2 3 4 5
enter F	req 2.4	4175000		PNO: Fast		Trig: F	ree Run			i:>100/100		TYPE MWWWW
				FGain:Low	+	#Atten	: 30 dB					DET
	PofOff	set 1.86 dB								Mkr		503 0 GHz
0 dB/div	Ref 20	0.00 dBm) 								-10).881 dBm
.og												
10.0												
0.00 - 1 -												a^2
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20.0												
30.0												
40.0												10.0
50.0												
60.0												
70.0												
start 2.40										-		2.48350 GHz
Res BW	100 KH	Z		#	VB	N 300 k	HZ			Swee	p 8.000 m	ns (1001 pts)
IKR MODE T			X		Y		FUNCTION	I FUNC	TION WIDTH	F	UNCTION VALUE	A
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3												
4												
6												
7 8												
9												
10												
11												



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).

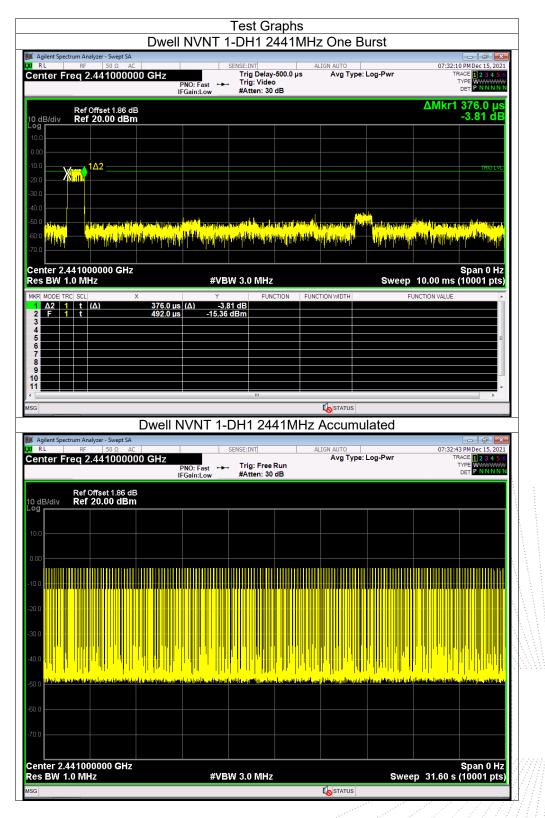
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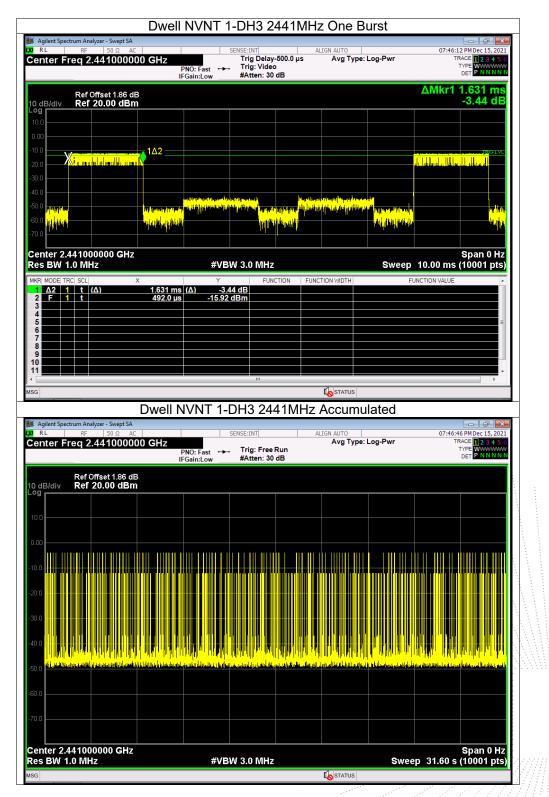
14.4 Test Result

Modulation	Channel Data	Packet	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
		DH1	0.376	119.568	318	31600	400	Pass
GFSK	GFSK Middle	DH3	1.631	257.698	158	31600	400	Pass
		DH5	2.88	279.36	97	31600	400	Pass
		2DH1	0.386	122.362	317	31600	400	Pass
π/4DQPSK	Middle	2DH3	1.629	255.753	157	31600	400	Pass
		2DH5	2.885	297.155	103	31600	400	Pass
		3DH1	0.387	121.905	315	31600	400	Pass
8DPSK	Middle	3DH3	1.636	258.488	158	31600	400	Pass
		3DH5	2.887	294.474	102	31600	400	Pass

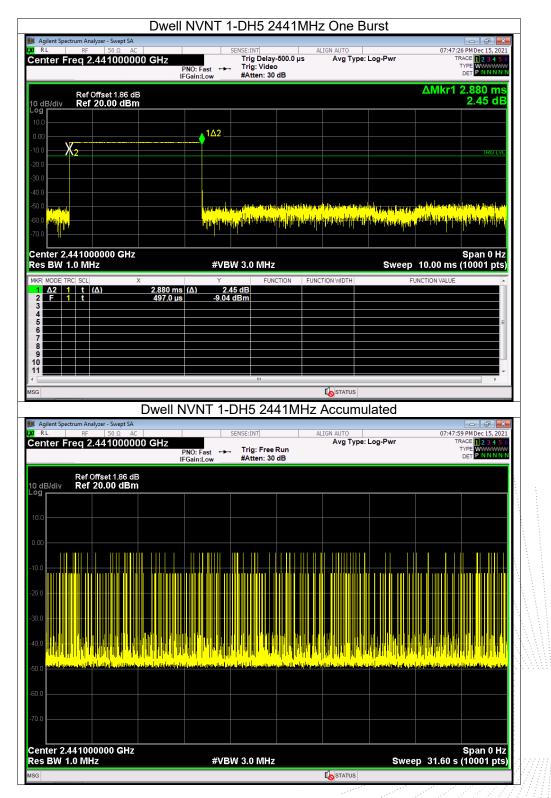








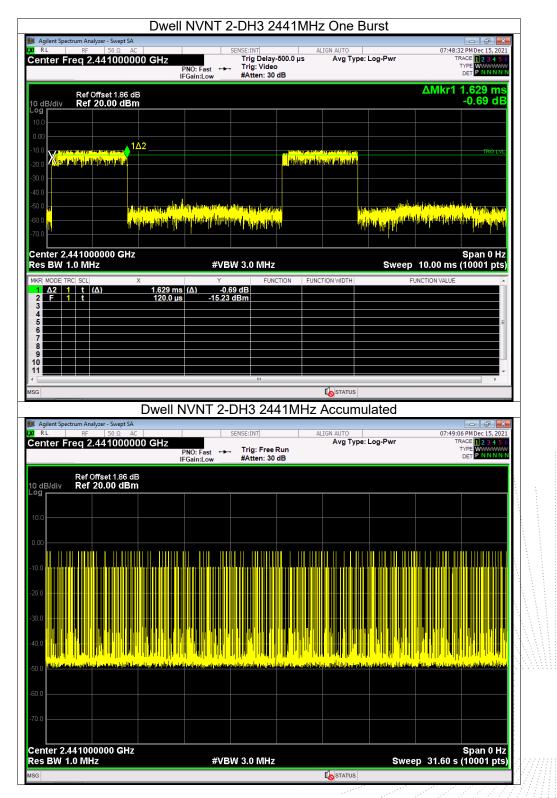




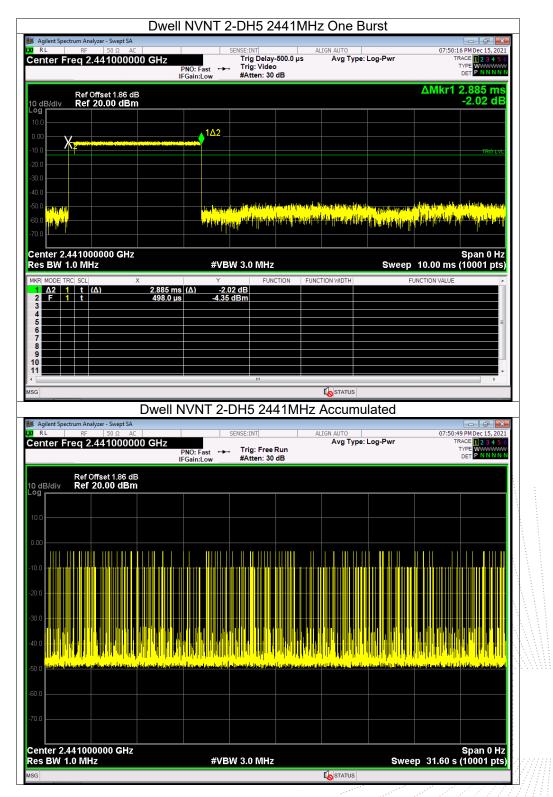


Agilent Spectrum Analyzer - Swept SA RL RF 50.0, AC enter Freq 2.441000000 GHz	SENSE:INT Trig Delay-5 ast		Avg Type:	Log-Pwr	т	L9 PM Dec 15, 2021 RACE 1 2 3 4 5 6 TYPE WWWWWW
PNO: 1 IFGain		в				DET P NNNNN
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dB/div Ref 20.00 dBm						1.00 UB
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			STATUS			
Dwell NVN	NT 2-DH1 244	1MHz A	ccumu	lated		
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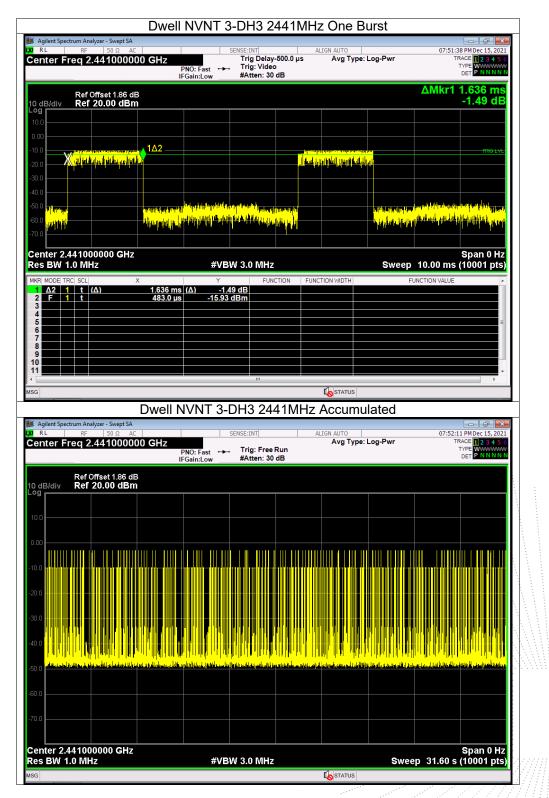






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enter Freq 2.441000000	GHz PNO: Fast IFGain:Low	Trig Delay-500.0 Trig: Video #Atten: 30 dB		e: Log-Pwr	TR	ACE 1 2 3 4 5 6 YPE WWWWWW DET P N N N N N
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		de la la de la competencia de		a mh. b		
enter 2.441000000 GHz						Span 0 Hz
es BW 1.0 MHz	#\	/BW 3.0 MHz	FUNCTION	· · · ·	10.00 ms (10001 pts)
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5 6						=
7						
9 0 0						
1						
G			🚺 STATUS			
[Well NVNT 3	3-DH1 2441N	1Hz Accum	ulated		
Agilent Spectrum Analyzer - Swept SA R L RF 50 Ω AC		SENSE:INT	ALIGN AUTO			B PM Dec 15, 2021
enter Freq 2.441000000	GHz PNO: Fast IFGain:Low	→ Trig: Free Run #Atten: 30 dB	Avg Typ	e: Log-Pwr	TR T	ACE 123456 YPE WWWWWW DET PNNNN
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Dwe	II NVNT 3-DH5 :	2441MHz Acc	umulated		
Agilent Spectrum Analyzer - Swept SA R L RF 50 Ω AC	SENSE:INT			07:53:03	PM Dec 15, 2021
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Ref Offset 1.86 dB					
odB/div Ref 20.00 dBm					
0.0					
					Span 0 Hz



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 PCB antenna, fulfill the requirement of this section.

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16. EUT Photographs

EUT Photo 1



EUT Photo 2



EUT Photo 3





EUT Photo 4





17. EUT Test Setup Photographs

Conducted Measurement Photos



Radiated Measurement Photos



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Edition:

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 stamp of laboratory.

4. The test report is invalid without signature of person(s) testing and authorizing.

5. The test process and test result is only related to the Unit Under Test.

6.The quality system of our laboratory is in accordance with ISO/IEC17025.

7.If there is any objection to report, the client should inform issuing laboratory within 15 days from the date of receiving test report.

Address:

1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Tangwei, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China

TEL: 400-788-9558

P.C.: 518103

FAX: 0755-33229357

Website: http://www.chnbctc.com

E-Mail: bctc@bctc-lab.com.cn

***** END *****

No.: BCTC/RF-EMC-005

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