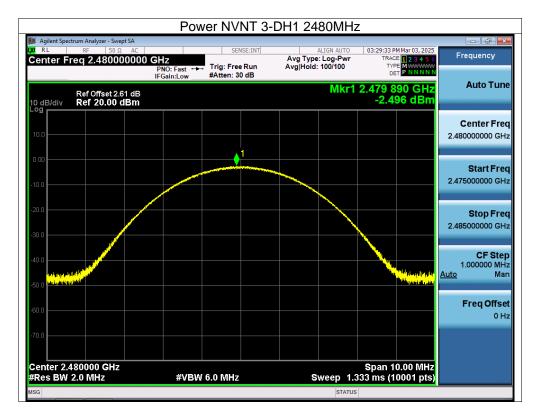


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### 12. Hopping Channel Separation

#### 12.1 Block Diagram Of Test Setup



#### 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.

Condition	Mode	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	2401.988	2402.988	1	0.635	Pass
NVNT	1-DH1	2440.986	2441.99	1.004	0.639	Pass
NVNT	1-DH1	2478.99	2479.988	0.998	0.641	Pass
NVNT	2-DH1	2402.156	2403.156	1	0.911	Pass
NVNT	2-DH1	2441.158	2442.156	0.998	0.911	Pass
NVNT	2-DH1	2479.16	2480.152	0.992	0.91	Pass
NVNT	3-DH1	2401.924	2402.926	1.002	0.896	Pass
NVNT	3-DH1	2440.928	2441.926	0.998	0.897	Pass
NVNT	3-DH1	2478.922	2479.926	1.004	0.896	Pass

#### 12.4 Test Result











	С	FS NVNT 2-[	DH1 2441MHz		
📕 Agilent Spectrum Analyzer - Swe 🖉 R L 🔋 RF 50 Ω		SENSE:INT	ALIGN AUTO	03:19:52 PM Mar 03, 2025	
Center Freq 2.4415			Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE MWWWW DET P NNNN	Frequency
Ref Offset 2. 0 dB/div Ref 20.00	6 dB		Mkr1	2.441 158 GHz -11.463 dBm	Auto Tur
- <b>og</b> 10.0					Center Fre
0.00				<sup>2</sup>	2.441500000 GH
20.0				$\sim$	Start Fre
40.0					2.440500000 GH
50.0					Stop Fre
50.0					2.442500000 GI
enter 2.441500 GHz				Span 2.000 MHz	CF Ste
Res BW 30 kHz		W 100 kHz	-	.133 ms (1001 pts)	200.000 kl Auto M
IKR MODE TRC SCL 1 N 1 f 2 N 1 f	× 2.441 158 GHz 2.442 156 GHz	Y FU -11.463 dBm -11.484 dBm	INCTION FUNCTION WIDTH	FUNCTION VALUE	
3 4					Freq Offs 01
5 6 7				=	
8 9 10					
		III			
SG			STATUS		
	С	FS NVNT 2-E	DH1 2480MHz		
Agilent Spectrum Analyzer - Swe RL RF 50 Ω	2 AC	SENSE:INT	ALIGN AUTO	03:22:11 PM Mar 03, 2025	Frequency
enter Freq 2.47950	PNO: Wide C IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE MWWWW DET P N N N N N	
Ref Offset 2. 0 dB/div Ref 20.00			Mkr1	2.479 160 GHz -11.792 dBm	Auto Tui
og 10.0					Center Fre
0.00	1			2	2.479500000 GI
20.0		·~~~~		×	Start Fr
30.0					2.478500000 G
10.0 50.0					0te # 7
50.0 70.0					<b>Stop Fr</b> 2.480500000 GI
enter 2.479500 GHz				Span 2.000 MHz	CF Ste
Res BW 30 kHz		W 100 kHz		.133 ms (1001 pts)	200.000 kl Auto M
IKR MODE TRC SCL	× 2.479 160 GHz	-11.792 dBm	INCTION FUNCTION WIDTH	FUNCTION VALUE	
2 N 1 f 3 4	2.480 152 GHz	-11.541 dBm			Freq Offs
5 6				E	
7 8 9					
7 8					



RL RF 50 enter Freg 2.402	wept SA	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr	03:24:36 PM Mar 03, 2025	Frequency
	PNO: Wide IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Hold:>100/100	DET PNNNN	
Ref Offset 0 dB/div Ref 20.00	2.59 dB 0 dBm		Mkr1	2.401 924 GHz -11.864 dBm	Auto Tur
<b>og</b> 10.0					Center Fre
0.00	1				2.402500000 GH
20.0	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
30.0					Start Fre 2.401500000 GH
40.0					
50.0					Stop Fre
70.0					2.403500000 GH
Center 2.402500 GH Res BW 30 kHz		3W 100 kHz	Sweep 2.	Span 2.000 MHz 133 ms (1001 pts)	CF Ste 200.000 kH
IKR MODE TRC SCL	X		UNCTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Ma
1 N 1 f 2 N 1 f 3	2.401 924 GHz 2.402 926 GHz	-11.864 dBm -11.846 dBm			Freq Offs
4 5				E	01
6 7 8					
9 10					
11					
SG			STATUS		
		CFS NVNT 3-I	DH1 2441MHz		
Agilent Spectrum Analyzer - Si RL RF 50	Ω AC	SENSE:INT	ALIGN AUTO	03:27:37 PM Mar 03, 2025	Frequency
enter Freq 2.441	5000000 GHZ PNO: Wide IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Type: Log-Pwr Avg Hold:>100/100	TRACE 123456 TYPE MWWWWW DET PNNNNN	
Ref Offset 0 dB/div Ref 20.00			Mkr1	2.440 928 GHz -10.351 dBm	Auto Tur
.og 10.0					Center Fre
	1				
10.0	1		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Center Fre 2.441500000 GH
0.00	1	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	2.441500000 GF Start Fre
			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	2.441500000 GF Start Fre
			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		2.441500000 GH Start Fre 2.440500000 GH Stop Fre
			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		2.441500000 GH Start Fre 2.440500000 GH Stop Fre
10.0 0.00 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0				Span 2.000 MHz	2.44150000 GH Start Fre 2.440500000 GH Stop Fre 2.442500000 GH
10.0 0.00 20.0 40.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0 50.0	#VI	3W 100 kHz	Sweep 2.	133 ms (1001 pts)	2.441500000 GH
10.0 0.00 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	#VI × 2.440 928 GHz	Y FU -10.351 dBm			2.441500000 GH Start Fre 2.440500000 GH Stop Fre 2.442500000 GH CF Ste 200.000 kH
10.0 10.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0 20.0	#VI	Y FL	Sweep 2.	133 ms (1001 pts)	2.441500000 GH Start Fre 2.440500000 GH 2.442500000 GH 200.000 KH Auto Ma Freq Offse
100 000 100 200 200 200 200 200	#VI × 2.440 928 GHz	Y FU -10.351 dBm	Sweep 2.	133 ms (1001 pts)	2.441500000 GH Start Fre 2.440500000 GH 2.442500000 GH 2.442500000 GH CF Ste 200.000 kH Auto Ma
10.0 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	#VI × 2.440 928 GHz	Y FU -10.351 dBm	Sweep 2.	133 ms (1001 pts)	2.441500000 GH Start Fre 2.440500000 GH 2.442500000 GH 200.000 kH <u>Auto</u> Ma Freq Offs



	CFS NVNT 3	-DH1 2480MHz		
Agilent Spectrum Analyzer - Swept SA				- 2 -
Center Freq 2.479500000	) GHz	ALIGN AUTO Avg Type: Log-Pwr	03:30:01 PM Mar 03, 2025 TRACE 1 2 3 4 5 6 TYPE M WWWW	Frequency
	PNO: Wide Trig: Free Run IFGain:Low #Atten: 30 dB	Avg Hold:>100/100		
Ref Offset 2.61 dB 10 dB/div Ref 20.00 dBm		Mkr1 :	2.478 922 GHz -11.085 dBm	Auto Tune
10.0				Center Freq
0.00				2.479500000 GHz
-10.0		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	m.	
-20.0				Start Freq
-30.0				2.478500000 GHz
-40.0				
-50.0				Stop Freq
-70.0				2.480500000 GHz
Center 2.479500 GHz			Span 2.000 MHz	OF Otom
#Res BW 30 kHz	#VBW 100 kHz	Sweep 2.	133 ms (1001 pts)	CF Step 200.000 kHz
MKR MODE TRC SCL X	Y	FUNCTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Man
2 N 1 f 2.47	78 922 GHz -11.085 dBm 79 926 GHz -11.156 dBm			Freq Offset
3 4				0 Hz
5 6			E	
7 8				
9				
11				
MSG		STATUS		

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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

No.: BCTC/RF-EMC-005



	Hopping	Test Grap No. NVNT 1-	ohs -DH1 2441MH	Z	
J Agilent Spectrum Analyzer - S	wept SA				
Center Freq 2.441	PNO: Fast Tr		ALIGN AUTO 0 Avg Type: Log-Pwr Avg Hold:>100/100	3:33:30 PM Mar 03, 2025 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P N N N N N	Frequency
Ref Offset 10 dB/div Ref 20.0	2.6 dB		Mkr1 2.40	1 920 5 GHz -2.715 dBm	Auto Tune
					<b>Center Freq</b> 2.441750000 GHz
-20.0					<b>Start Freq</b> 2.400000000 GHz
-60.0					Stop Fred 2.483500000 GHz
Start 2.40000 GHz #Res BW 100 kHz	#VBW 30	0 kHz Y Functio	Sweep 8.000	p 2.48350 GHz ms (1001 pts)	CF Step 8.350000 MHz <u>Juto</u> Man
1         N         1         f           2         N         1         f           3         -         -         -           4         -         -         -           5         -         -         -           6         -         -         -         -	2.401 920 5 GHz -2 2.480 243 5 GHz -3	.715 dBm .257 dBm		E	<b>Freq Offset</b> 0 Hz
7 8 9 10 11					
MSG	Hopping	No. NVNT 2 <sup>.</sup>	DH1 2441MH	Z	
Agilent Spectrum Analyzer - S R RL RF 50 Center Freq 2.441	wept SA 0 Ω AC 750000 GHz	SENSE:INT	ALIGN AUTO 0 Avg Type: Log-Pwr	3:38:17 PM Mar 03, 2025	Frequency
Ref Offset 10 dB/div Ref 20.0	IFGain:Low #A	rig: Free Run A Atten: 30 dB	Mkr1 2.40	1 586 5 GHz -9.636 dBm	Auto Tune
	0 dBm				
10.0	O dBm	www.www.www			
10.0		ANTAN NAAAAAAA	งณณะจากสารการ		2.441750000 GHz Start Free
10.0 0.00 -10.0 -20.0 -30.0					2.441750000 GH2 Start Frec 2.400000000 GH2 Stop Frec
10.0 -10.0 -20.0 -30.0 -40.0 -50.0 -70.0 Start 2.40000 GHz #Res BW 100 KHz	μήτη τη τ	0 KHz	Sto Sweep 8.00	VMIN MAA P 2.48350 GHz 0 ms (1001 pts)	2.441750000 GH2 Start Free 2.40000000 GH2 Stop Free 2.483500000 GH2 CF Step 8.350000 MH2
10.0 0.00 1 -10.0 -20.0 -30.0 -30.0 -40.0 -50.0 -50.0 -50.0 -50.0 -70.0 Start 2.40000 GHz #Res BW 100 KHz MKR MODE TRC SCL 1 N 1 f 2 N 1 f 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	<u>برم کی مرکب میں محمد محمد محمد میں محمد محمد محمد محمد میں محمد محمد محمد میں محمد محمد محمد محمد میں محمد محمد محمد محمد محمد محمد محمد محم</u>		Sto Sweep 8.000	P 2.48350 GHz 0 ms (1001 pts)	2.441750000 GH; Start Free 2.40000000 GH; Stop Free 2.483500000 GH; CF Step 8.350000 MH; Mar Freq Offset
10.0 0.00 -10.0 -20.0 -20.0 -30.0 -40.0 -50.0 -40.0 -50.0 -50.0 -70.0 Start 2.40000 GHz #Res BW 100 KHz MKR MODE TRC SCL 1 1 5 3 4 5 5 6 7 8 8 9 9 9 10 10 10 10 10 10 10 10 10 10 10 10 10	<u>برم کی مرکب میں محمد محمد محمد میں محمد محمد محمد محمد میں محمد محمد محمد میں محمد محمد محمد محمد میں محمد محمد محمد محمد محمد محمد محمد محم</u>	0 kHz	Sto Sweep 8.00	VMIN MAA P 2.48350 GHz 0 ms (1001 pts)	2.441750000 GHz Start Free 2.40000000 GHz 2.483500000 GHz 2.483500000 GHz 2.483500000 GHz CF Step 8.350000 MHz Mar Freq Offset
10 0 10 0	<u>برم کی مرکب میں محمد محمد محمد میں محمد محمد محمد محمد میں محمد محمد محمد میں محمد محمد محمد محمد میں محمد محمد محمد محمد محمد محمد محمد محم</u>	0 kHz	Sto Sweep 8.00	VMIN MAA P 2.48350 GHz 0 ms (1001 pts)	Center Freq 2.441750000 GHz 2.400000000 GHz 2.400000000 GHz 2.483500000 GHz 8.350000 MHz 8.350000 MHz 8.350000 MHz 0 Hz



	Hopping No. NV	NT 3-DH1 2441	ИНz	
Agilent Spectrum Analyzer - Swept SA				
Center Freg 2.441750000	GHz	Avg Type: Log-Pwr	03:42:24 PM Mar 03, 2025 TRACE 1 2 3 4 5 6	Frequency
	PNO: Fast Trig: Free Run IFGain:Low #Atten: 30 dB	Avg Hold:>100/100	DET P NNNN	
Ref Offset 2.6 dB 10 dB/div Ref 20.00 dBm		Mkr1 2	.401 670 0 GHz -7.583 dBm	Auto Tune
10.0 0.00 -10.0 -10.0	<u>avvdvvvvvvvv</u>	AMAMAMANA ANA ANA ANA ANA ANA ANA ANA AN		Center Freq 2.441750000 GHz
-20.0				<b>Start Freq</b> 2.400000000 GHz
-60.0				<b>Stop Freq</b> 2.483500000 GHz
Start 2.40000 GHz #Res BW 100 kHz	#VBW 300 kHz	Sweep 8	Stop 2.48350 GHz .000 ms (1001 pts)	CF Step 8.350000 MHz Auto Man
	70 0 GHz -7.583 dBm 10 5 GHz -8.487 dBm	FUNCTION FUNCTION WIDTH	FUNCTION VALUE	Freq Offset
4 5 6 7 8 9 9 9 10 11				0 Hz
MSG	III	STATUS	\$	

No.: BCTC/RF-EMC-005

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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.

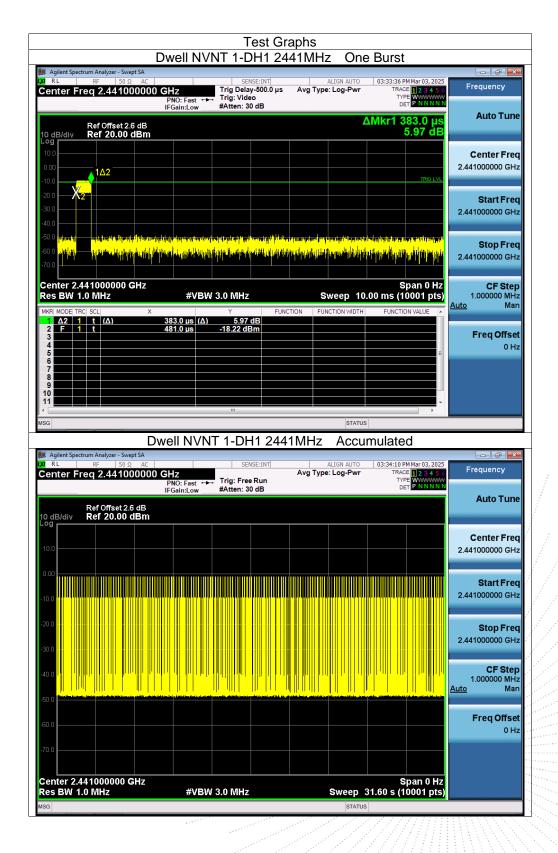
4. Use the marker-delta function to determine the dwell time. If this value varies with different modes of operation (e.g. data rate. modulation format. etc.). repeat this test for each variation. The limit is specified in one of the subparagraphs of this Section. Submit this plot(s).

#### 14.4 Test Result

Condition	Mode	Frequency (MHz)	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	0.383	121.794	318	31600	400	Pass
NVNT	1-DH3	2441	1.639	281.908	172	31600	400	Pass
NVNT	1-DH5	2441	2.887	378.197	131	31600	400	Pass
NVNT	2-DH1	2441	0.392	124.656	318	31600	400	Pass
NVNT	2-DH3	2441	1.643	269.452	164	31600	400	Pass
NVNT	2-DH5	2441	2.892	254.496	88	31600	400	Pass
NVNT	3-DH1	2441	0.392	125.048	319	31600	400	Pass
NVNT	3-DH3	2441	1.642	256.152	156	31600	400	Pass
NVNT	3-DH5	2441	2.893	295.086	102	31600	400	Pass

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







		<u>/NT 1-DH3 2</u>	441MHz	One Burst	
Jack Contemporation Analyzer - Swe Agilent Spectrum Analyzer - Swe		SENSE:INT	ALIGN	AUTO 03:44:06 PM Mar 03, 20	25
Center Freq 2.44100	00000 GHz PNO: Fast ↔ IFGain:Low	Trig Delay-500.0 µs	Avg Type: Log	-Pwr TRACE 1 2 3 4 5 TYPE WWWW DET P N N N	
Ref Offset 2. 10 dB/div Ref 20.00	.6 dB			ΔMkr1 1.639 m -8.06 dl	
10.0 0.00 X2	<u>1Δ2</u>				Center Freq 2.441000000 GHz
-10.0				TRIG L\	Start Freq
-30.0					2.441000000 GHz
-50.0 400000	a tana ang ang ang ang ang ang ang ang ang		tellendele de delentration ( <mark>la vel</mark> ador rella, de popula	nan pengendahan padapan kerdarian Manan pengendahan dari padapahan bertari k	<b>Stop Freq</b> 2.441000000 GHz
Center 2.441000000 C				Span 0 H	
Res BW 1.0 MHz		V 3.0 MHz		p 10.00 ms (10001 pt	) 1.000000 MHz <u>Auto</u> Man
MKR MODE TRC SCL 1 A2 1 t (A) 2 F 1 t 3 4	× <u>1.639 ms</u> (Δ) 498.0 μs		NCTION FUNCTION	WDTH FUNCTION VALUE	Freq Offset
5 6 7 7 7 7					
9 00 00 00 00 00 00 00 00 00 00 00 00 00					- -
MSG				STATUS	
				STATUS	
	Dwell NVN	JT 1-DH3 24	41MHz A		
🎉 Agilent Spectrum Analyzer - Swe	ept SA	IT 1-DH3 24	41MHz A	ccumulated	
M Agilent Spectrum Analyzer - Swe M RL RF 50 Ω Center Freq 2.44100	ept SA 2 AC       000000 GHz PNO: Fast ↔	SENSE:INT	41MHz A Align Avg Type: Log	Ccumulated	Frequency
00 RL RF 50 Ω Center Freq 2.44100 Ref Offset 2.6	ept SA 2 AC 000000 GHz PNO: Fast ↔ IFGain:Low 6 dB	SENSE:INT	ALIGN	CCUMULATED	Frequency
04 RL RF 50 Ω Center Freq 2.44100 Ref Offset 2.6	ept SA 2 AC 000000 GHz PNO: Fast ↔ IFGain:Low 6 dB	SENSE:INT	ALIGN	CCUMULATED	Frequency
XI         RF         50 Q           Center Freq 2.44100         Ref Offset 2.6           10 dB/div         Ref 20.00 d           10 0         0 0	ept SA 2 AC 000000 GHz PNO: Fast ↔ IFGain:Low 6 dB	SENSE:INT	ALIGN	CCUMULATED	25 6 Auto Tune Center Freq
DX         RL         RF         50 Q           Center Freq 2.44100         Ref 0ffset2.6         Ref 0ffset2.6           10 dB/div         Ref 20.00 (         Ref 20.00 (           10 0         10 0         Ref 20.00 (	ept SA 2 AC 000000 GHz PNO: Fast ↔ IFGain:Low 6 dB	SENSE:INT	ALIGN	CCUMULATED	25 Frequency Auto Tune Center Freq 2.441000000 GHz 2.441000000 GHz
XI         RF         50 Q           Center Freq 2.44100         Ref Offset 2.6           10 dB/div         Ref 20.00 d           10 0	ept SA 2 AC 000000 GHz PNO: Fast ↔ IFGain:Low 6 dB	SENSE:INT	ALIGN	CCUMULATED	22 5 5 6 7 7 7 7 7 7 7 7 7 7 7 7 7
XI         RF         50 Q           Center Freq 2.44100         Ref Offset 2.6           10 dB/div         Ref 20.00 d           10 0	ept SA 2 AC 000000 GHz PNO: Fast ↔ IFGain:Low 6 dB	SENSE:INT	ALIGN	CCUMULATED	22 5 5 5 5 5 5 5 5 5 5 5 5 5
XI         RF         50 Ω           Center Freq 2.44100         Ref Offset 2.4           10 dB/div         Ref 20.00 d           10 0	ept SA 2 AC 000000 GHz PNO: Fast ↔ IFGain:Low 6 dB	SENSE:INT	ALIGN	CCUMULATED	22 5 5 5 5 5 5 5 5 5 5 5 5 5
KI         RF         50 Q           Center Freq 2.44100         Ref Offset 2.6           10 dB/div         Ref 20.00 d           10 0	ept SA 2 AC 000000 GHz PNO: Fast ↔ IFGain:Low 6 dB	SENSE:INT	ALIGN	CCUMULATED	25 6 7 7 7 7 7 7 7 7 7 7 7 7 7
IX         RF         50 Q           Center Freq 2.44100         Ref Offset 2.4         Ref Offset 2.6           10 dB/div         Ref 20.00 (         0           10.0	ept SA 2 AC 2 MC PN0: Fast ↔ IFGain:Low 6 dB dBm 4 MA 4 M	SENSE:INT	ALIGN	AUTO 03:44:40 PM Mar 03, 20 -Pwr TRACE 2.3 + 5 TYPE V DET VINNA DET VINNA	<ul> <li>Frequency</li> <li>Auto Tune</li> <li>Center Freq</li> <li>2.441000000 GHz</li> <li>Start Freq</li> <li>2.44100000 GHz</li> <li>Stop Freq</li> <li>2.441000000 GHz</li> <li>CF Step</li> <li>1.00000 MHz</li> <li>Auto Man</li> <li>Freq Offset</li> <li>0 Hz</li> </ul>
XY         RL         RF         50 Q           Center Freq 2.44100         Ref Offset 2.6         Ref Offset 2.6           10 dB/div         Ref 20.00 d         Ref 0000 d           10 0	ept SA 2 AC PN0: Fast ↔ IFGain:Low 6 dB dBm 6 dB dBm 6 dB dBm 6 dB dBm 6 dB dBm 6 dB dBm 6 dB dBm 6 dB dBm 6 dB 6 dB	SENSE:INT	ALIGN Avg Type: Log	CCUMULATED	<ul> <li>Frequency</li> <li>Auto Tune</li> <li>Center Freq</li> <li>2.441000000 GHz</li> <li>Start Freq</li> <li>2.441000000 GHz</li> <li>Stop Freq</li> <li>2.441000000 GHz</li> <li>CF Step</li> <li>1.000000 MHz</li> <li>Auto Man</li> <li>Freq Offset</li> <li>0 Hz</li> </ul>

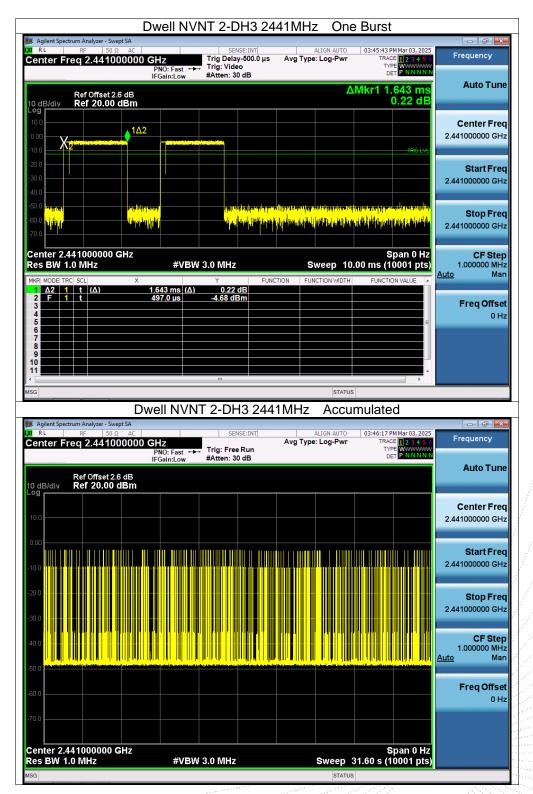


Dwell NVNT 1-DH5 2441MHz One Burst	
脚 Agilent Spectrum Analyzer - Swept SA	
Image: Note of the second s	5 6 Frequency
Ref Offset 2.6 dB         ΔMkr1 2.887 m           10 dB/div         Ref 20.00 dBm         -4.78 d	S Auto Tune B
	Center Freq 2.441000000 GHz
-30.0	Start Freq 2.441000000 GHz
-50.0 https://www.communication.com/withinkerstration/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/conduction/c	StopFred
	2.441000000 GHz
Center 2.441000000 GHz         Span 0 H           Res BW 1.0 MHz         #VBW 3.0 MHz         Sweep 10.00 ms (10001 pt	
MKR         MODE         TRC         Scl         X         Y         FUNCTION         FUNCTION WIDTH         FUNCTION VALUE           1         Δ2         1         t         (Δ)         2.887 ms         (Δ)         -4.78 dB         482.0 μs         -12.68 dBm         -12.68 dBm <td>Freq Offset</td>	Freq Offset
3	= 0 Hz
	•
MSG	
Dwell NVNT 1-DH5 2441MHz Accumulated	
Jiii Agilent Spectrum Analyzer - Swept SA           Jiii RL         RF         50 Ω         AC         SENSE:INT         ALIGN AUTO         03:45:28 PM Mar 03, 24           Center Erect 2.441000000 GHz         Avg Type: Log-Pwr         TRACE         172:34	5 6 Frequency
Agilent Spectrum Analyzer - Swept SA       AliGN AUTO       03:45:28 PM Mar 03, 22         RL       RF       50.0       AC       SENSE:INT       ALIGN AUTO       03:45:28 PM Mar 03, 22         Center Freq 2.441000000 GHz       PNO: Fast       →       Trig: Free Run       Avg Type: Log-Pwr       Trace       12:34         PNO: Fast       →       IFGain:Low       #Atten: 30 dB       Der       Der       PNNN         Ref Offset 2.6 dB       B       B       Der       Der       Der       Der	Frequency
Image: Agricent Spectrum Analyzer - Swept SA     SENSE:INT     ALIGN AUTO     03:45:28 PM Mar 03, 20       Image: Center Freq 2.4410000000 GHz     PNO: Fast →→     Trig: Free Run     Avg Type: Log-Pwr     TRACE     TRACE     Trig: Free Run       IFGain:Low     IFGain:Low     #Atten: 30 dB     Det     Det     NN	Auto Tune
Mailent Spectrum Analyzer - Swept SA       SENSE:INT       ALIGN AUTO       03:45:28 PM Mar 03, 20         Center Freq 2:441000000 GHz       PNO: Fast       Trig: Free Run       Avg Type: Log-Pwr       Trace 12:34         PNO: Fast       IFGain:Low       #Atten: 30 dB       Det P NNN         Ref Offset 2:6 dB       Ref 20.00 dBm       03:45:28 PM Mar 03, 20	5 6 NNN
Agilent Spectrum Analyzer - Swept SA         SEINSE:INT         ALIGN AUTO         03:45:28 PM Mar 03, 2           Center Freq 2.4410000000 GHz         PNO: Fast → IFGain:Low         Trig: Free Run #Atten: 30 dB         Avg Type: Log-Pwr Trig: Free Run #Atten: 30 dB         Trig: Free Run DeT P NNN           Ref Offset 2.6 dB 10 dB/div         Ref 20.00 dBm         Image: Comparison of the second seco	225 5 0 6 0 7 1 7 1 7 1 7 1 7 1 7 1 7 1 7 1
Agilent Spectrum Analyzer - Swept SA       SENSE:INT       ALIGN AUTO       03:45:28 PM Mar 03, 20         Center Freq 2.441000000 GHz       PNO: Fast       →       Trig: Free Run #Atten: 30 dB       Avg Type: Log-Pwr       Trace       23:45:28 PM Mar 03, 20         0 dB/div       Ref Offset 2.6 dB       Trig: Free Run #Atten: 30 dB       Avg Type: Log-Pwr       Trace       23:45:28 PM Mar 03, 20         10 dB/div       Ref 20.00 dBm	225       Frequency         Auto Tune         Center Freq         2.441000000 GHz         Start Freq         2.441000000 GHz
Agilent Spectrum Analyzer - Swept SA         SEINSE:INT         ALIGN AUTO         03:45:28 PM Mar 03, 2           Center Freq 2.4410000000 GHz         PNO: Fast → IFGain:Low         Trig: Free Run #Atten: 30 dB         Avg Type: Log-Pwr Trig: Free Run #Atten: 30 dB         Trig: Free Run DeT P NNN           Ref Offset 2.6 dB 10 dB/div         Ref 20.00 dBm         Image: Comparison of the second seco	225 5 0 6 0 7 0 7 0 7 0 7 0 7 0 7 0 7 0 7
Agilent Spectrum Analyzer - Swept SA       ALIGN AUTO       03:45:28 PM Mar 03: 20         Center Freq 2.441000000 GHz       SENSE:INT       ALIGN AUTO       03:45:28 PM Mar 03: 20         PNO: Fast       PNO	225       Frequency         Auto Tune         Center Freq         2.441000000 GHz         Start Freq         2.441000000 GHz         Stop Freq         2.441000000 GHz         CF Step         1.000000 MHz
Agilent Spectrum Analyzer - Swept SA       SENSE:INT       ALIGN AUTO       03:45:28 PM Mar 03, 20         Center Freq 2.441000000 GHz IFGain:Low       Trig: Free Run #Atten: 30 dB       Avg Type: Log-Pwr UTRACE       Trace       2 3 44         Ref Offset 2.6 dB 10 dB/div       Ref 20.00 dBm       Auton auton       3 44       3 44       3 44       3 44         10.0       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       0000       0000       000       000	225       Frequency         Auto Tune         Center Freq         2.441000000 GHz         Start Freq         2.441000000 GHz         Stop Freq         2.441000000 GHz         CF Step         1.000000 MHz         Auto         Man
Agilent Spectrum Analyzer - Swept SA       SEINSE:INT       ALIGN AUTO       03:45:28 PM Mar 03, 22         Center Freq 2.441000000 GHz IFGain:Low       Frig: Free Run #Atten: 30 dB       Avg Type: Log-Pwr Trace       Trace       12:34         0 dB/div       Ref Offset 2.6 dB       Condition       Free Run #Atten: 30 dB       Automatic       Trace       12:34         10 dB/div       Ref Offset 2.6 dB       Condition       Free Run #Atten: 30 dB       Condition       Free Run #Atten: 30 dB       Condition         10 dB/div       Ref Offset 2.6 dB       Condition       Condition       Condition       Free Run #Atten: 30 dB       Condition       Condin       Condition       Con	225       Frequency         Auto Tune         Center Freq         2.441000000 GHz         Start Freq         2.441000000 GHz         Stop Freq         2.441000000 GHz         CF Step         1.000000 MHz
Agilent Spectrum Analyzer - Swept SA         SEINSE:INT         ALIGN AUTO         03:45:28 PM Mar 03,2 (2)           Center Freq 2.441000000 GHz         PNO: Fast         Trig: Free Run #Atten: 30 dB         Avg Type: Log-Pwr         Trace [] 2:34           Ref Offset 2.6 dB         Ref 20.00 dBm         Trig: Free Run         Autom au	<ul> <li>Frequency</li> <li>Auto Tune</li> <li>Center Freq</li> <li>2.441000000 GHz</li> <li>Start Freq</li> <li>2.441000000 GHz</li> <li>Stop Freq</li> <li>2.441000000 GHz</li> <li>CF Step</li> <li>1.000000 MHz</li> <li>Auto Man</li> <li>Freq Offset</li> </ul>
Agilent Spectrum Analyzer - Swept SA         SEINSE:INT         ALIGN AUTO         03:45:28 PM Mar 03; 21           Center Freq 2.441000000 GHz         PNO: Fast → IFGain:Low         Trig: Free Run #Atten: 30 dB         Avg Type: Log-Pwr Trig: Free Run #Atten: 30 dB         Trig: Free Run trig: Free Run #Atten: 30 dB         Trig: Free Run trig: Free Run #Atten: 30 dB         Trig: Free Run trig: Free Run #Atten: 30 dB           0 dB/div         Ref Offset 2.6 dB Ref 20.00 dBm         Image: State of the state of	225       Frequency         Auto Tune         Auto Tune         Center Freq         2.441000000 GHz         Start Freq         2.441000000 GHz         Stop Freq         2.441000000 GHz         Stop Freq         2.441000000 GHz         Freq Offset         0 Hz



Dwell NVNT 2-DH1 2441MHz One Burst	
Image: Sectrum Analyzer - Swept SA         Sectrum Analyzer - Swept SA           Image: Sectrum Analyzer - Swept SA         SENSE: INT         ALIGN AUTO         03:38:22 PM Mar 03, 2022           Image: Sectrum Analyzer - Swept SA         SENSE: INT         ALIGN AUTO         03:38:22 PM Mar 03, 2022           Image: Sectrum Analyzer - Swept SA         SENSE: INT         ALIGN AUTO         03:38:22 PM Mar 03, 2022           Image: Sectrum Analyzer - Swept SA         SENSE: INT         ALIGN AUTO         03:38:22 PM Mar 03, 2022           Image: Sectrum Analyzer - Swept SA         Sense: Int         ALIGN AUTO         03:38:22 PM Mar 03, 2022           Image: Sectrum Analyzer - Swept SA         Sense: Int         ALIGN AUTO         03:38:22 PM Mar 03, 2022           Image: Sectrum Analyzer - Swept SA         Sense: Int         ALIGN AUTO         03:38:22 PM Mar 03, 2022           Image: Sectrum Analyzer - Swept SA         Sense: Int         ALIGN AUTO         03:38:22 PM Mar 03, 2022           Image: Sectrum Analyzer - Swept SA         Sense: Int         ALIGN AUTO         03:38:22 PM Mar 03, 2022           Image: Sectrum Analyzer - Swept SA         Sense: Int         ALIGN AUTO         03:38:22 PM Mar 03, 2022	
Center Freq 2.441000000 GHz PNO: Fast →→ IFGain:Low Trig Evideo #Atten: 30 dB Avg Type: Log-Pwr Trige Video Det PNNNN Det PNNNN	
Ref Offset 2.6 dB         ΔMkr1 392.0 μs           10 dB/div         Ref 20.00 dBm         -2.10 dB	Auto Tune
Log	
	Center Freq 2.441000000 GHz
	Start Freq
-30.0	2.441000000 GHz
-50.0 month - a high grant to be reaction and the construction of the grant and the gr	Stop Freq
-co.o. fir fan - o area han her na war e freshiren fir and de far de fierde fierde af daarde referende is en de bûnderde ûnderde de ferende in de fierde. - zo o	2.441000000 GHz
Center 2.441000000 GHz Span 0 Hz	CE Stop
Res BW 1.0 MHz #VBW 3.0 MHz Sweep 10.00 ms (10001 pts)	CF Step 1.000000 MHz Auto Man
MKR         MODE[TRC] SCI         X         Y         FUNCTION         FUNCTION WIDTH         FUNCTION VALUE           1         Δ2         1         t         (Δ)         392.0 µs         (Δ)         -2.10 dB         -2.10 dB	
2 F 1 t 477.0 µs -16.24 dBm 3 4	Freq Offset 0 Hz
5	0 H2
7 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	
	l
MSG STATUS	
Dwell NVNT 2-DH1 2441MHz Accumulated	
M Agilent Spectrum Analyzer - Swept SA           M RL         RF         50 Ω         AC         SENSE:INT         ALIGN AUTO         03:38:56 PM Mar 03, 2025	
Center Freq 2.441000000 GHz PNO: Fast Trig: Free Run trig: Free Run trig: Free Run trig: Free Run trig: Free Run trig: Free Run	# [
IFGain:Low #Atten: 30 dB DET Ended to	Auto Tune
lo dB/div Ref 20.00 dBm	
	Center Freq
	2.441000000 GHz
	Start Freq
	2.441000000 GHz
-200	Ctop Erog
	<b>Stop Freq</b> 2.441000000 GHz
	CF Step 1.000000 MHz
	<u>Auto</u> Man
	Freq Offset
-60.0	Freq Offset 0 Hz
-60.0	0 Hz







	Dwell NVNT 2-DH5		e Burst	
Agilent Spectrum Analyzer - Swept SA           K         RL         RF         50 Ω         AC	SENSE:INT	ALIGN AUTO	03:46:32 PM Mar 03, 2025	
Center Freq 2.441000000	GHz       Trig Delay-500.0         PNO: Fast       ←⊷         IFGain:Low       #Atten: 30 dB	μs Avg Type: Log-Pwr	TRACE 123456 TYPE WWWWW DET PNNNN	Frequency
Ref Offset 2.6 dB 10 dB/div Ref 20.00 dBm		۵	Mkr1 2.892 ms -0.49 dB	Auto Tune
Log 10.0				Center Freq
0.00				2.441000000 GHz
-10.0	1Δ2 Δ.ε		TRIC LVL	
-30.0				Start Freq 2.441000000 GHz
-40.0				
-60.0 (min) -60.0 (juli)	a moduli profiticati ca differenzia da con			Stop Freq
-70.0	and the second	, to have a state of the second second		2.441000000 GHz
Center 2.441000000 GHz Res BW 1.0 MHz	#VBW 3.0 MHz	Sween 10	Span 0 Hz .00 ms (10001 pts)	CF Step 1.000000 MHz
	#VBW 5.0 MI12	FUNCTION FUNCTION WIDTH	FUNCTION VALUE	Auto Man
1 Δ2 1 t (Δ) 2 F 1 t	2.892 ms (Δ) -0.49 dB 477.0 μs -17.03 dBm			Ener Offerst
3 4 5				Freq Offset 0 Hz
			=	
8				
10			-	
MSG	m	STATU	5	
D	well NVNT 2-DH5 2	441MHz Accu	mulated	
Agilent Spectrum Analyzer - Swept SA				
X RL RF 50 Ω AC	SENSE:INT	ALIGN AUTO	03:47:06 PM Mar 03, 2025	
XIRL RF 50Ω AC	BNO: Fast →→ IFGain:Low #Atten: 30 dB	ALIGN AUTO Avg Type: Log-Pwr	03:47:06 PM Mar 03, 2025 TRACE 1 2 3 4 5 6 TYPE WWWWWW DET P N N N N	Frequency
22 RL RF 50 Ω AC Center Freq 2.441000000 Ref Offset 2.6 dB 10 dB/div Ref 20.00 dBm	PNO: Fast +++ Trig: Free Run		TRACE 1 2 3 4 5 6	Frequency
RL         RF         50 Ω         AC           Center Freq 2.441000000         Ref Offset 2.6 dB         Ref Offset 2.6 dB	PNO: Fast +++ Trig: Free Run		TRACE 1 2 3 4 5 6	Frequency Auto Tune
24 RL RE 50 Ω AC Center Freq 2.441000000 Ref Offset 2.6 dB 10 dB/div Ref 20.00 dBm	PNO: Fast +++ Trig: Free Run		TRACE 1 2 3 4 5 6	Frequency Auto Tune Center Freq
24 RL RF 50 Ω AC   Center Freq 2.441000000 Ref Offset 2.6 dB 10 dB/div Ref 20.00 dBm	PNO: Fast +++ Trig: Free Run		TRACE 1 2 3 4 5 6	Frequency Auto Tune Center Freq
Rf         SO         AC           Center Freq 2.441000000         Ref Offset 2.6 dB           10 dB/div         Ref 20.00 dBm           10.0         0.00	PNO: Fast +++ Trig: Free Run		TRACE 1 2 3 4 5 6	Frequency Auto Tune Center Freq 2.441000000 GHz Start Freq
Rf         S0.0         AC           Center Freq 2.441000000         Ref Offset 2.6 dB           10 dB/div         Ref 20.00 dBm           10.0         Ref 20.00 dBm	PNO: Fast +++ Trig: Free Run		TRACE 1 2 3 4 5 6	Frequency Auto Tune Center Freq 2.441000000 GHz Start Freq
Rf         SO         AC           Center Freq 2.441000000         Ref Offset 2.6 dB           10 dB/div         Ref 20.00 dBm           10.0         0.00	PNO: Fast +++ Trig: Free Run		TRACE 1 2 3 4 5 6	Frequency Auto Tune Center Freq 2.441000000 GHz 2.441000000 GHz
RE         50 Q         AC           Center Freq 2.441000000         Ref Offset 2.6 dB           10 dB/div         Ref 20.00 dBm           000	PNO: Fast +++ Trig: Free Run		TRACE 1 2 3 4 5 6	Frequency Auto Tune Center Freq 2.441000000 GHz 2.441000000 GHz 2.441000000 GHz
Rt         SO Q         AC           Center Freq 2.441000000         Ref Offset 2.6 dB           10 dB/div         Ref 20.00 dBm           10 0	PNO: Fast +++ Trig: Free Run		TRACE 1 2 3 4 5 6	Frequency Auto Tune Center Freq 2.441000000 GHz Start Freq 2.441000000 GHz 2.441000000 GHz
RE         SO AC           Center Freq 2.441000000           10 dB/div           Ref Offset 2.6 dB           10.0	PNO: Fast +++ Trig: Free Run		TRACE 1 2 3 4 5 6	Frequency           Auto Tune           Center Freq           2.441000000 GHz           Start Freq           2.441000000 GHz           Stop Freq           2.441000000 GHz           CF Step           1.000000 MHz
RE         SO Q         AC           Center Freq 2.441000000         Ref Offset 2.6 dB           10 dB/div         Ref 20.00 dBm           10.0	PNO: Fast +++ Trig: Free Run		TRACE 1 2 3 4 5 6	Frequency           Auto Tune           Center Freq           2.441000000 GHz           Start Freq           2.441000000 GHz           Stop Freq           2.441000000 GHz           CF Step           1.000000 MHz
DX         Rf         50 Q         AC           Center Freq 2.441000000         Ref Offset 2.6 dB         Ref 20.00 dBm           10 dB/div         Ref 20.00 dBm         Ref 20.00 dBm           10.0	PNO: Fast +++ Trig: Free Run		TRACE 1 2 3 4 5 6	Frequency Auto Tune Center Freq 2.441000000 GHz Start Freq 2.441000000 GHz Stop Freq 2.441000000 GHz CF Step 1.000000 MHz Auto Man
XI         RF         50.0         AC           Center Freq 2.441000000         Ref Offset 2.6 dB         Ref 20.00 dBm           10         0.00         0.00         0.00           -10         0.00         0.00         0.00           -20         0.00         0.00         0.00           -40         0         0.00         0.00           -60.0         0.00         0.00         0.00	PNO: Fast +++ Trig: Free Run		TRACE 1 2 3 4 5 6	Frequency Auto Tune Center Freq 2.441000000 GHz Start Freq 2.441000000 GHz Stop Freq 2.441000000 GHz CF Step 1.000000 MHz Auto Man
RE         SO (a) AC           Center Freq 2.441000000           IO dB/div         Ref Offset 2.6 dB           10 dB/div         Ref 20.00 dBm           10 0	PNO: Fast +++ Trig: Free Run		TRACE 1 2 3 4 5 6	Frequency Auto Tune Center Freq 2.441000000 GHz Start Freq 2.441000000 GHz Stop Freq 2.441000000 GHz CF Step 1.000000 MHz Auto Man
Rf         SO Q         AC           Center Freq 2.441000000         Ref Offset 2.6 dB         Ref 20.00 dBm           100         Ref 20.00 dBm         Ref 20.00 dBm  <	PNO: Fast +++ Trig: Free Run	Avg Type: Log-Pwr		Frequency Auto Tune Center Freq 2.441000000 GHz Start Freq 2.441000000 GHz Stop Freq 2.441000000 GHz CF Step 1.000000 MHz Auto Man
Ref         50 Q         AC           Center Freq 2.441000000         Ref Offset 2.6 dB         Ref 20.00 dBm           10 dB/div         Ref 20.00 dBm         Ref 20.00 dBm           10.0	PNO: Fast +++ Trig: Free Run	Avg Type: Log-Pwr	TRACE 12 24 5 6 TYPE WARNAWAY DET 2 NNNNN 0 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Frequency           Auto Tune           Center Freq           2.441000000 GHz           Start Freq           2.441000000 GHz           Stop Freq           2.441000000 GHz           CF Step           1.000000 MHz



	well NVNT 3-DH1	2441MHz On	e Burst	
Magilent Spectrum Analyzer - Swept SA	SENSE:INT	ALIGN AUTO	03:42:29 PM Mar 03, 2025	Frequency
Center Freq 2.441000000	PNO: Fast ↔ IFGain:Low Trig: Video #Atten: 30 dB	IS Avg Type: Log-Pwr	TRACE 1 2 3 4 5 6 TYPE WWWWWW DET P NNNN	Trequency
Ref Offset 2.6 dB	irGain:Low #Atten: oo ub		ΔMkr1 392.0 μs 4.43 dB	Auto Tune
10 dB/div Ref 20.00 dBm			4.43 dB	
10.0				Center Freq
			TRICILIA	2.441000000 GHz
-20.0				Start Freq
-30.0				2.441000000 GHz
-40.0				
-50.0 <mark>ppropies - statute propies in the statute propies - statute</mark>	nder franzen er en standen er en standen Ander på forer at synfisierten er en standen er forer forer forer forer for at standen er en standen er en stand	a she has the area and then a	and have used the second probability	Stop Freq
-70.0		waanahali kadaalka	oder of a street of a	2.441000000 GHz
Center 2.441000000 GHz			Span 0 Hz	CF Step
Res BW 1.0 MHz	#VBW 3.0 MHz	Sweep 10	0.00 ms (10001 pts)	1.000000 MHz <u>Auto</u> Man
<b>1</b> Δ2 <b>1</b> t (Δ)	392.0 μs (Δ) 4.43 dB 497.0 μs -11.30 dBm			
3 4				Freq Offset 0 Hz
5 6 7			Ξ	
8				
10			-	
∢ [	m	STATU	4	
	vell NVNT 3-DH1 24			
			imulated	
🎉 Agilent Spectrum Analyzer - Swept SA			Imulated	
	GHz	ALIGN AUTO Avg Type: Log-Pwr	03:43:02 PM Mar 03, 2025 TRACE 1 2 3 4 5 6	Frequency
Gilent Spectrum Analyzer - Swept SA     RI   RF   50 Ω AC       Center Freq 2.441000000 C	SENSE:INT	ALIGN AUTO	03:43:02 PM Mar 03, 2025	Frequency
Majlent Spectrum Analyzer - Swept SA           RL         RF         50 Ω         AC           Center Freq 2.441000000 C           Ref Offset 2.6 dB           10 dB/div         Ref 20.00 dBm	HZ PNO: Fast ↔ Trig: Free Run	ALIGN AUTO	03:43:02 PM Mar 03, 2025 TRACE 1 2 3 4 5 6 TYPE WWWWWW	
Agilent Spectrum Analyzer - Swept SA           RL         RF         50.Ω         AC           Center Freq 2.441000000 C           Ref Offset 2.6 dB	HZ PNO: Fast ↔ Trig: Free Run	ALIGN AUTO	03:43:02 PM Mar 03, 2025 TRACE 1 2 3 4 5 6 TYPE WWWWWW	Frequency Auto Tune
Majlent Spectrum Analyzer - Swept SA           RL         RF         50 Ω         AC           Center Freq 2.441000000 C           Ref Offset 2.6 dB           10 dB/div         Ref 20.00 dBm	HZ PNO: Fast ↔ Trig: Free Run	ALIGN AUTO	03:43:02 PM Mar 03, 2025 TRACE 1 2 3 4 5 6 TYPE WWWWWW	Frequency
Agilent Spectrum Analyzer - Swept SA           RL         RF         50.0. AC           Center Freq 2.441000000 C           Ref Offset 2.6 dB           10 dB/div         Ref 20.00 dBm           10.0	HZ PNO: Fast ↔ Trig: Free Run	ALIGN AUTO	03:43:02 PM Mar 03, 2025 TRACE 1 2 3 4 5 6 TYPE WWWWWW	Frequency Auto Tune Center Freq
Millent Spectrum Analyzer - Swept SA           RL         RF         50 Ω         AC           Center Freq 2.441000000 (           Ref Offset 2.6 dB           10 dB/div         Ref 20.00 dBm	HZ PNO: Fast ↔ Trig: Free Run	ALIGN AUTO	03:43:02 PM Mar 03, 2025 TRACE 1 2 3 4 5 6 TYPE WWWWWW	Frequency Auto Tune Center Freq 2.441000000 GHz Start Freq
Agilent Spectrum Analyzer - Swept SA           RL         RF         50.0. AC           Center Freq 2.441000000 C           Ref Offset 2.6 dB           10 dB/div         Ref 20.00 dBm           10.0	HZ PNO: Fast ↔ Trig: Free Run	ALIGN AUTO	03:43:02 PM Mar 03, 2025 TRACE 1 2 3 4 5 6 TYPE WWWWWW	Frequency Auto Tune Center Freq 2.441000000 GHz
Agilent Spectrum Analyzer - Swept SA           IX         RF         50.0         AC           Center Freq 2.441000000 (           Ref Offset 2.6 dB           10 dB/div         Ref 20.00 dBm           0.00	HZ PNO: Fast ↔ Trig: Free Run	ALIGN AUTO	03:43:02 PM Mar 03, 2025 TRACE 1 2 3 4 5 6 TYPE WWWWWW	Frequency Auto Tune Center Freq 2.441000000 GHz 2.441000000 GHz
Agilent Spectrum Analyzer - Swept SA           K         RF         50 Ω         AC           Center Freq 2.441000000 C           Ref Offset 2.6 dB         Ref Offset 2.6 dB           10 dB/div         Ref 20.00 dBm           000         Addition           10.0         Addition           -20.0         Addition	HZ PNO: Fast ↔ Trig: Free Run	ALIGN AUTO	03:43:02 PM Mar 03, 2025 TRACE 1 2 3 4 5 6 TYPE WWWWWW	Frequency Auto Tune Center Freq 2.441000000 GHz Start Freq
Agilent Spectrum Analyzer - Swept SA     X RL RF 50.0. AC     Center Freq 2.441000000 C     Ref Offset 2.6 dB     10 dB/div Ref 20.00 dBm     0.00     0.00     0.00     0.00     0.00	HZ PNO: Fast ↔ Trig: Free Run	ALIGN AUTO	03:43:02 PM Mar 03, 2025 TRACE 1 2 3 4 5 6 TYPE WWWWWW	Frequency Auto Tune Center Freq 2.441000000 GHz 2.441000000 GHz Stop Freq 2.441000000 GHz
Agilent Spectrum Analyzer - Swept SA           K         RF         50 Ω         AC           Center Freq 2.441000000 C         Ref Offset 2.6 dB         C           0 dB/div         Ref Offset 2.0 dB         C         C           10 dB/div         Ref 20.00 dBm         -         -           -20.0         -         -         -         -	HZ PNO: Fast ↔ Trig: Free Run	ALIGN AUTO	03:43:02 PM Mar 03, 2025 TRACE 1 2 3 4 5 6 TYPE WWWWWW	Frequency Auto Tune Center Freq 2.441000000 GHz 2.441000000 GHz Stop Freq 2.441000000 GHz CF Step 1.000000 MHz
Agilent Spectrum Analyzer - Swept SA           K         Rt         RF         50 Ω         AC           Center Freq 2.441000000 (           Io         Ref Offset 2.6 dB           10 dB/div         Ref 20.00 dBm           0 00         Agiliant 2000 (Bm)           -10.0         Agiliant 2000 (Bm)           -20.0         Agiliant 2000 (Bm)	HZ PNO: Fast ↔ Trig: Free Run	ALIGN AUTO	03:43:02 PM Mar 03, 2025 TRACE 1 2 3 4 5 6 TYPE WWWWWW	Frequency Auto Tune Center Freq 2.441000000 GHz Start Freq 2.441000000 GHz 2.441000000 GHz CF Step
Agilent Spectrum Analyzer - Swept SA           RL         RF         50.0         AC           Center Freq 2.441000000 (           Ref Offset 2.6 dB         10 dB/div         Ref 20.00 dBm           10.0	HZ PNO: Fast ↔ Trig: Free Run	ALIGN AUTO	03:43:02 PM Mar 03, 2025 TRACE 1 2 3 4 5 6 TYPE WWWWWW	Frequency         Auto Tune         Center Freq         2.441000000 GHz         Start Freq         2.441000000 GHz         Stop Freq         2.441000000 GHz         CF Step         1.000000 MHz         Auto         Man         Freq Offset
Agilent Spectrum Analyzer - Swept SA           RL         RF         50.0         AC           Center Freq 2.441000000 (           Ref Offset 2.6 dB           10 dB/div         Ref 20.00 dBm           0.00	HZ PNO: Fast ↔ Trig: Free Run	ALIGN AUTO	03:43:02 PM Mar 03, 2025 TRACE 1 2 3 4 5 6 TYPE WWWWWW	Frequency Auto Tune Center Freq 2.441000000 GHz Start Freq 2.441000000 GHz 2.441000000 GHz 2.441000000 GHz CF Step 1.000000 MHz Auto Man
Agilent Spectrum Analyzer - Swept SA           RL         RF         50.0         AC           Center Freq 2.441000000 (           Ref Offset 2.6 dB         10 dB/div         Ref 20.00 dBm           10.0	HZ PNO: Fast ↔ Trig: Free Run	ALIGN AUTO	03:43:02 PM Mar 03, 2025 TRACE 1 2 3 4 5 6 TYPE WWWWWW	Frequency         Auto Tune         Center Freq         2.441000000 GHz         Start Freq         2.441000000 GHz         Stop Freq         2.441000000 GHz         CF Step         1.000000 MHz         Auto         Man         Freq Offset
Agilent Spectrum Analyzer - Swept SA           RL         RF         50.0         AC           Center Freq 2.441000000 (           Ref Offset 2.6 dB         10 dB/div         Ref 20.00 dBm           10.0	HZ PNO: Fast ↔ Trig: Free Run	ALIGN AUTO	03:43:02 PM Mar 03, 2025 TRACE 1 2 3 4 5 6 TYPE WWWWWWW DET PNNN N N	Frequency         Auto Tune         Center Freq         2.441000000 GHz         Start Freq         2.441000000 GHz         Stop Freq         2.441000000 GHz         CF Step         1.000000 MHz         Auto         Man         Freq Offset
Agilent Spectrum Analyzer - Swept SA           RL         RF         50.0         AC           Center Freq 2.441000000 (           Ref Offset 2.6 dB         10 dB/div         Ref 20.00 dBm           ID         ID         ID         ID           10.0         ID         ID         ID         ID           -10.0         ID         ID         ID         ID         ID           -20.0         ID	HZ PNO: Fast ↔ Trig: Free Run	ALIGN AUTO Avg Type: Log-Pwr	03:43:02 PM Mar 03, 2025 TRACE 1 2 3 4 5 6 TYPE WWWWWW	Frequency         Auto Tune         Center Freq         2.441000000 GHz         Start Freq         2.441000000 GHz         Stop Freq         2.441000000 GHz         CF Step         1.000000 MHz         Auto         Man         Freq Offset



Dwell NVNT 3-D	H3 2441MHz Or	ne Burst	
Ju Agilent Spectrum Analyzer - Swept SA			
Center Freq 2.441000000 GHz PNO: Fast Trig Delay Trig: Video			Frequency
Ref Offset 2.6 dB	ab	ΔMkr1 1.642 ms 0.40 dB	Auto Tune
10.0			Center Freq
		TRIGLVL	2.441000000 GHz
-30.0			<b>Start Freq</b> 2.441000000 GHz
-40.0			Stop Freq
-60.0 [hg/h]	ellin hinne ellin tellin a fin ellin a fin ellin a serie elle elle elle elle elle elle elle	alah adalah kata	2.441000000 GHz
Center 2.441000000 GHz Res BW 1.0 MHz #VBW 3.0 MHz	Sweep 7	Span 0 Hz 0.00 ms (10001 pts)	CF Step 1.000000 MHz Auto Man
MKR         MODE         TRC         SCL         X         Y           1         Δ2         1         t         (Δ)         1.642 ms         (Δ)         0.40 d           2         F         1         t         461.0 μs         -15.72 dBr		H FUNCTION VALUE	
3 4 5 6		E	Freq Offset 0 Hz
7 8 9			
		-	
		•	
MSG	STA		
Dwell NVNT 3-DH		umulated	
Msg         Dwell NVNT 3-DH           M Agilent Spectrum Analyzer - Swept SA         M           R L<	3 2441MHz Acc	03:47:57 PM Mar 03, 2025	Frequency
MSG Dwell NVNT 3-DH MG Agilent Spectrum Analyzer - Swept SA M RL RF 50Ω AC Center Freq 2.441000000 GHz PNO: Fast →→ IFGain:Low Ref Offset 2.6 dB	3 2441MHz Acc E:INT ALIGN AUT Avg Type: Log-Pw Run	03:47:57 PM Mar 03, 2025	
MSG Dwell NVNT 3-DH Majient Spectrum Analyzer - Swept SA RL RF 50 Ω AC SENS Center Freq 2.441000000 GHz PNO: Fast → IFGain:Low Trig: Free #Atten: 30	3 2441MHz Acc E:INT ALIGN AUT Avg Type: Log-Pw Run	03:47:57 PM Mar 03, 2025	Frequency Auto Tune
Msg       Dwell NVNT 3-DH	3 2441MHz Acc E:INT ALIGN AUT Avg Type: Log-Pw Run	03:47:57 PM Mar 03, 2025	Frequency
MSG Dwell NVNT 3-DH MG Agilent Spectrum Analyzer - Swept SA MRL RF 50 Ω AC SENS Center Freq 2.441000000 GHz PNO: Fast → IFGain:Low Ref Offset 2.6 dB 10 dB/div Ref 20.00 dBm PNO: Fast → IFGain:Low Ref Offset 2.6 dB 10 dB/div Ref 20.00 dBm PNO: Fast → IFGain:Low Ref Offset 2.6 dB PNO: Fast → IFGain:Low Ref Offset 2.6 dB PNO: Fast → IFGain:Low PNO:	3 2441MHz Acc E:INT ALIGN AUT Avg Type: Log-Pw Run	03:47:57 PM Mar 03, 2025	Frequency Auto Tune Center Freq 2.441000000 GHz Start Freq
MSG Dwell NVNT 3-DH Magient Spectrum Analyzer - Swept SA W RL RF 50 Ω AC Center Freq 2.441000000 GHz PNO: Fast →→ IFGain:Low Ref Offset 2.6 dB 10 dB/div Ref 20.00 dBm 10.0 10.0 10.0 10.0 10.0	3 2441MHz Acc E:INT ALIGN AUT Avg Type: Log-Pw Run	03:47:57 PM Mar 03, 2025	Frequency Auto Tune Center Freq 2.441000000 GHz 2.441000000 GHz
MSG Dwell NVNT 3-DH MG Agilent Spectrum Analyzer - Swept SA MRL RF 50 Ω AC SENS Center Freq 2.441000000 GHz PNO: Fast → IFGain:Low Ref Offset 2.6 dB 10 dB/div Ref 20.00 dBm PNO: Fast → IFGain:Low Ref Offset 2.6 dB 10 dB/div Ref 20.00 dBm PNO: Fast → IFGain:Low Ref Offset 2.6 dB PNO: Fast → IFGain:Low Ref Offset 2.6 dB PNO: Fast → IFGain:Low PNO:	3 2441MHz Acc E:INT ALIGN AUT Avg Type: Log-Pw Run	03:47:57 PM Mar 03, 2025	Frequency Auto Tune Center Freq 2.441000000 GHz Start Freq
MSG         Dwell NVNT 3-DH	3 2441MHz Acc E:INT ALIGN AUT Avg Type: Log-Pw Run	03:47:57 PM Mar 03, 2025	Frequency Auto Tune Center Freq 2.44100000 GHz Start Freq 2.441000000 GHz Stop Freq 2.441000000 GHz
MSG         Dwell NVNT 3-DH           Image: Aglient Spectrum Analyzer - Swept SA         Sent So Q         Trig: Free I #Atten: 30         Trig: Free I #Atten: 30         Trig: Free I #Atten: 30         Sent So Q         Sent So Q<	3 2441MHz Acc E:INT ALIGN AUT Avg Type: Log-Pw Run	03:47:57 PM Mar 03, 2025	Frequency Auto Tune Center Freq 2.441000000 GHz 2.441000000 GHz Stop Freq 2.441000000 GHz
Msg         Dwell NVNT 3-DH           Image: Spectrum Analyzer - Swept SA         Sensor           Image: Spectrum Analyzer - Swept SA         PNO: Fast → Free           Image: Spectrum Analyzer - Swept SA         PNO: Fast → Free           Image: Spectrum Analyzer - Swept SA         PNO: Fast → Free           Image: Spectrum Analyzer - Swept SA         PNO: Fast → Free           Image: Spectrum Analyzer - Swept SA         PNO: Fast → Free           Image: Spectrum Analyzer - Swept SA         PNO: Fast → Free           Image: Spectrum Analyzer - Swept SA         PNO: Fast → Free           Image: Spectrum Analyzer - Swept SA         PNO: Fast → Free           Image: Spectrum Analyzer - Swept SA         PNO: Fast → Free           Image: Spectrum Analyzer - Swept SA         PNO: Fast → Free           Image: Spectrum Analyzer - Swept SA         PNO: Fast → Free           Image: Spectrum Analyzer - Swept SA         PNO: Fast → Free           Image: Spectrum Analyzer - Swept SA         PNO: Fast → Free           Image: Spectrum Analyzer - Swept SA         PNO: Fast → Free      <	3 2441MHz Acc E:INT ALIGN AUT Avg Type: Log-Pw Run	03:47:57 PM Mar 03, 2025	Erequency           Auto Tune           Center Freq           2.441000000 GHz           Start Freq           2.441000000 GHz           Stop Freq           2.441000000 GHz
MSG       Dwell NVNT 3-DH	3 2441MHz Acc E:INT ALIGN AUT Avg Type: Log-Pw Run	03:47:57 PM Mar 03, 2025	Frequency Auto Tune Center Freq 2.44100000 GHz Start Freq 2.44100000 GHz Stop Freq 2.441000000 GHz CF Step 1.000000 MHz Auto Man
Msg         ■ Aglient Spectrum Analyzer - Swept SA         W RL       RF       SO Ω       AC       SENS         Center Freq 2.441000000 GHz       PNO: Fast →→       Trig: Free       #Atten: 30         10 dB/div       Ref 20.00 dBm       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000       000	3 2441MHz Acc	03:47:57 PM Mar 03, 2025	Frequency Auto Tune Center Freq 2.441000000 GHz Start Freq 2.441000000 GHz 2.441000000 GHz 2.441000000 GHz CF Step 1.000000 MHz Auto Man



Dw	ell NVNT 3-DH5 2	2441MHz On	e Burst	
📕 Agilent Spectrum Analyzer - Swept SA				
	Irig: Video	ALIGN AUTO	03:48:15 PM Mar 03, 2025 TRACE 1 2 3 4 5 6 TYPE WWWWW DET P N N N N N	Frequency
Ref Offset 2.6 dB	Gain:Low #Atten: 30 dB	L	Mkr1 2.893 ms 0.52 dB	Auto Tune
Log 10.0 0.00	1Δ2			Center Freq 2.441000000 GHz
-10.0 <b>2</b> -20.0				Start Freq 2.441000000 GHz
-40.0	n general in platication processor (in		and the second	Stop Freq
-60.0	<mark>   \$1  1  1   1   1   1   1   1   1   1 </mark>	and a set it desire the set of the desired at	Span 0 Hz	2.441000000 GHz CF Step
Res BW 1.0 MHz		Sweep 10	.00 ms (10001 pts)	1.000000 MHz Auto Man
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	93 ms (Δ) 0.52 dB 7.0 μs -4.76 dBm			Freq Offset 0 Hz
6 7 8 9				
	III			
MSC		STATU		
MSG		STATU		
Dwe	II NVNT 3-DH5 24		mulated	
Dwe Agilent Spectrum Analyzer - Swept SA RL RF 50 Ω AC Center Freq 2.4441000000 GH	Z NO: Fast +++ Trig: Free Run		03:48:48 PM Mar 03, 2025	Frequency
Dwe                ■ Agilent Spectrum Analyzer - Swept SA                 ₩ RL               𝒴 / S0.0. AC                 Center Freq 2.441000000 GH               ₽P                 № RL               𝒴 / S0.0. AC                 Center Freq 2.4410000000 GH               ₽P                 Pro               𝒴 / S0.0. AC                 Center Freq 2.4410000000 GH               PP                 Pro               PC                 Dot dB/div               Ref Offset 2.6 dB	Z SENSE:INT	141MHz Accu	mulated	
Dwe	Z NO: Fast +++ Trig: Free Run	141MHz Accu	03:48:48 PM Mar 03, 2025	Frequency
Dwe Bill Agilent Spectrum Analyzer - Swept SA (X) RL RF S0 Q AC Center Freq 2.441000000 GH PP IFC 10 dB/div Ref Offset 2.6 dB Log	Z NO: Fast +++ Trig: Free Run	141MHz Accu	03:48:48 PM Mar 03, 2025	Frequency Auto Tune Center Freq
Dwe Agilent Spectrum Analyzer - Swept SA M RL RF 50 Ω AC Center Freq 2.441000000 GH PP IFC Ref Offset 2.6 dB 10 dB/div Ref 20.00 dBm 10 0 -10 0 -20 0 -	Z NO: Fast +++ Trig: Free Run	141MHz Accu	03:48:48 PM Mar 03, 2025	Frequency Auto Tune Center Freq 2.44100000 GHz Start Freq
Dwe Agilent Spectrum Analyzer - Swept SA  Center Freq 2.441000000 GH  PP  IC  Center Freq 2.441000000 GH  PP IC  Center Freq 2.441000000 GH  PP IC  Center Freq 2.441000000 GH  PP IC  Center Freq 2.441000000 GH  PP IC  Center Freq 2.441000000 GH  PP IC  Center Freq 2.441000000 GH  PP IC  Center Freq 2.441000000 GH  PP IC  Center Freq 2.441000000 GH  PP IC  Center Freq 2.441000000 GH  PP IC  Center Freq 2.441000000 GH  PP IC  Center Freq 2.441000000 GH  PP IC  Center Freq 2.441000000 GH  PP IC  Center Freq 2.441000000 GH  PP IC  Center Freq 2.441000000 GH  PP IC  Center Freq 2.441000000 GH  PP IC  Center Freq 2.441000000 GH  PP IC  Center Freq 2.441000000 GH  PP IC  Center Freq 2.441000000 GH  PP IC  Center Freq 2.441000000 GH  PP IC  Center Freq 2.441000000 GH  PP IC  Center Freq 2.441000000 GH  PP IC  Center Freq 2.441000000 GH  PP IC  Center Freq 2.441000000 GH  PP IC  Center Freq 2.441000000 GH  PP IC  Center Freq 2.441000000 GH  PP IC  Center Freq 2.441000000 GH  PP IC  Center Freq 2.4410000000 GH  PP IC  Center Freq 2.44100000000 GH  PP IC  Center Freq 2.4410000000 GH  PP IC  CenteF	Z NO: Fast +++ Trig: Free Run	141MHz Accu	03:48:48 PM Mar 03, 2025	Frequency Auto Tune Center Freq 2.441000000 GHz Start Freq 2.441000000 GHz Stop Freq 2.441000000 GHz CF Step 1.000000 MHz
Dwe M Agilent Spectrum Analyzer - Swept SA M RL RF 50 Q AC Center Freq 2.441000000 GH PP IFC Ref Offset 2.6 dB 10 dB/div Ref 20.00 dBm -0 0 -10 0 -10 0 -20 0 -30 0 -30 0 -4	Z NO: Fast +++ Trig: Free Run	141MHz Accu	03:48:48 PM Mar 03, 2025	Frequency Auto Tune Center Freq 2.441000000 GHz Start Freq 2.441000000 GHz Stop Freq 2.441000000 GHz CF Step 1.000000 MHz Auto Man
Dwe	Z NO: Fast +++ Trig: Free Run	141MHz Accu	03:48:48 PM Mar 03, 2025	Frequency Auto Tune Center Freq 2.441000000 GHz Start Freq 2.441000000 GHz Stop Freq 2.441000000 GHz CF Step 1.000000 MHz Auto Man
Image: sectrum Analyzer - Swept SA         M RL       RF       50 Ω       AC         Center Freq 2.441000000 GH         Preside       Preside       Preside         10 dB/div       Ref Offset 2.6 dB       0         10 0       0.00       0.00       0.00         -10 0       0.00       0.00       0.00         -20 0       0.00       0.00       0.00         -30 0       0.00       0.00       0.00         -30 0       0.00       0.00       0.00         -60 0       0.00       0.00       0.00	Z NO: Fast +++ Trig: Free Run	41MHz Accu ALIGN AUTO Avg Type: Log-Pwr	03:48:48 PM Mar 03, 2025	Frequency Auto Tune Center Freq 2.441000000 GHz Start Freq 2.441000000 GHz Stop Freq 2.441000000 GHz CF Step 1.000000 MHz Auto Man Freq Offset



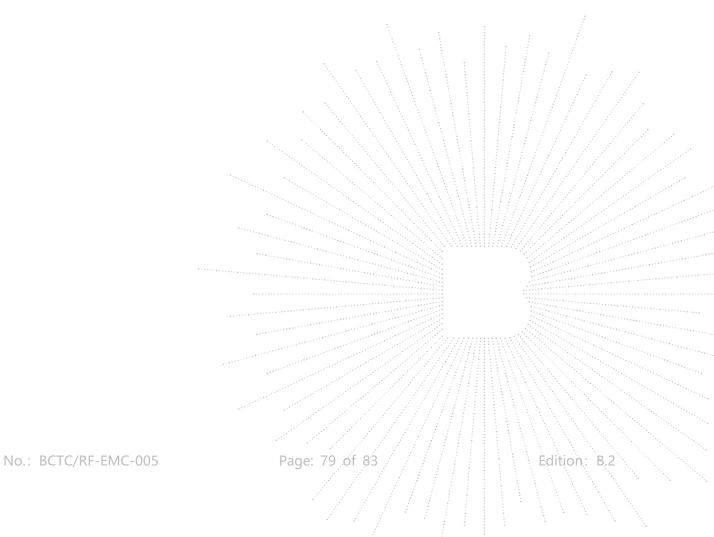
### 15. Antenna Requirement

#### 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

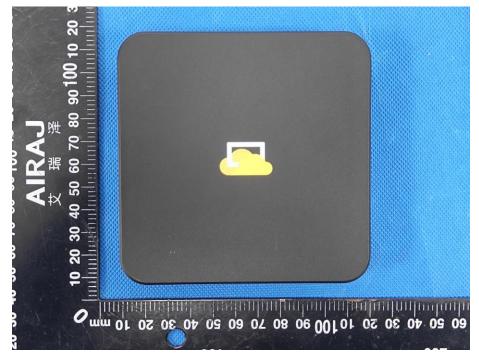
The EUT antenna is FPC antenna, fulfill the requirement of this section.



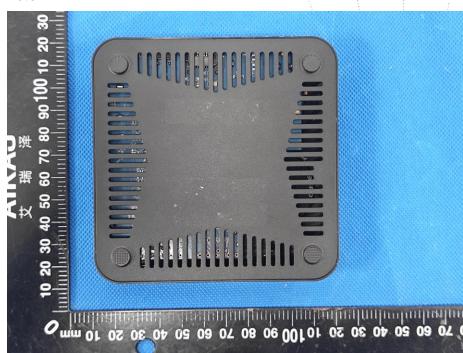


### 16. EUT Photographs

EUT Photo 1



EUT Photo 2



### NOTE: Appendix-Photographs Of EUT Constructional Details.

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# 17. EUT Test Setup Photographs

### **Conducted Measurement Photo**



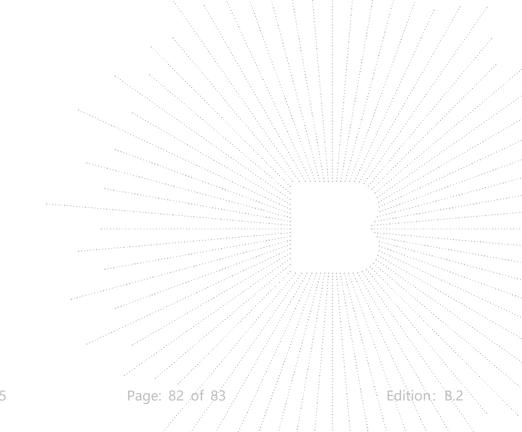
#### **Radiated Measurement Photos**



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No.: BCTC/RF-EMC-005



### 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.

Address:

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

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

\*\*\*\*\* END \*\*\*\*\*

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