

TEST REPORT

Report No.:	BCTC2408361536-1E
Applicant:	Shenzhen Hengchuang Intelligent Electronic Technology Co.,Ltd
Product Name:	Bluetooth speaker
Test Model:	H08
Tested Date:	2024-08-16 to 2024-08-22
Issued Date:	2024-09-07
	enzhen CTC Testing Co., Ltd. BCTC APPROVED Peport Seal
No.: BCTC/RF-EMC-005	Page 1 of 83



FCC ID:2A5AQ-HCZNSPK

Product Name:	Bluetooth speaker
Trademark:	RSSIDOL
Model/Type Reference:	H08, H01, H02, H03, H04, H05, H06, H07, H09, H10, H201,H202,EL230/H204, H205,H206,H207,H208,H209,210
Prepared For:	Shenzhen Hengchuang Intelligent Electronic Technology Co.,Ltd
Address:	15A061, Building C, No. 3 Langjing Road, Xinshi Community, Dalang Street, Longhua District, Shenzhen City, Guangdong China 518109
Manufacturer:	Shenzhen Hengchuang Intelligent Electronic Technology Co.,Ltd
Address:	15A061, Building C, No. 3 Langjing Road, Xinshi Community, Dalang Street, Longhua District, Shenzhen City, Guangdong China 518109
Prepared By:	Shenzhen BCTC Testing Co., Ltd
Address:	1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Tangwei, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China
Sample Received Date:	2024-08-16
Sample Tested Date:	2024-08-16 to 2024-08-22
Report No.:	BCTC2408361536-1E
Test Standards	FCC Part15.247 ANSI C63.10-2013
Test Results	PASS
Remark:	This is Bluetooth Classic radio test report,
Tested	by: Approved by:

Brave

Brave Zeng/ Project Handler

Zero Zhou/Reviewer

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1. Version

Report No.	Issue Date	Description	Approved
BCTC2408361536-1E	2024-09-07	Original	Valid





Test Summary 2.

The Product has been tested according to the following specifications:

No.	Test Parameter	Clause No.	Results
1	Conducted emission AC power port	§15.207	PASS
2	Conducted peak output power for FHSS	§15.247(b)(1)	PASS
3	20dB Occupied bandwidth	§15.247(a)(1)	PASS
4	Number of hopping frequencies	§15.247(a)(1)(iii)	PASS
5	Dwell Time	§15.247(a)(1)(iii)	PASS
6	Spurious RF conducted emissions	§15.247(d)	PASS
7	Band edge	§15.247(d)	PASS
8	Spurious radiated emissions for transmitter	§15.247(d) & §15.209 & §15.205	PASS
9	Antenna Requirement	15.203	PASS
NOTE4.			

NOTE1: N/A (Not Applicable) NOTE2: According to FCC OET KDB 558074, the report use radiated measurements in the restricted frequency bands. In addition, the radiated test is also performed to ensure the emissions emanating from the device cabinet also comply with the applicable limits.



3. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

No.	Item	Uncertainty
1	3m chamber Radiated spurious emission(30MHz-1GHz)	U=4.3dB
2	3m chamber Radiated spurious emission(9KHz-30MHz)	U=3.7dB
3	3m chamber Radiated spurious emission(1GHz-18GHz)	U=4.5dB
4	3m chamber Radiated spurious emission(18GHz-40GHz)	U=3.34dB
5	Conducted Emission (150kHz-30MHz)	U=3.20dB
6	Conducted Adjacent channel power	U=1.38dB
7	Conducted output power uncertainty Above 1G	U=1.576dB
8	Conducted output power uncertainty below 1G	U=1.28dB
9	humidity uncertainty	U=5.3%
10	Temperature uncertainty	U=0.59° C



4. Product Information and Test Setup

4.1 Product Information

Model/Type reference:	H08, H01, H02, H03, H04, H05, H06, H07, H09, H10, H201,H202,EL230/H204, H205,H206,H207,H208,H209,210
Model differences:	The following models of units we produce are identical in electrical, mechanical and physical structure; The difference is only in the model name and product appearance, we finally have H08 as test model.
Hardware Version:	N/A
Software Version:	N/A
Operation Frequency:	Bluetooth: 2402-2480MHz
Type of Modulation:	Bluetooth: GFSK, π/ 4 DQPSK, 8DPSK
Number Of Channel	79CH
Antenna installation:	Internal antenna
Antenna Gain:	1.9dBi
Remark:	The antenna gain of the product comes from the antenna report provided by the customer, and the test data is affected by the customer information.
Ratings:	DC 5V/1A
Battery:	Speaker battery: DC 3.7V, 1200mAh Microphone battery: DC 3.7V, 500mAh

4.2 Test Setup Configuration

See test photographs attached in eut test setup photographs for the actual connections between product and support equipment.

Conducted Emission:

E-1 EUT		E-2 Adapter
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Radiated Spurious Emission







4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
E-1	Bluetooth speaker	N/A	H08	N/A	EUT
E-2	Adapter	N/A	N/A	N/A	Auxiliary

ltem	Shielded Type	Ferrite Core	Length	Note
C-1	N/A	N/A	N/A	N/A

Notes:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.

2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4.4 Channel List

СН	Frequency (MHz)	СН	Frequency (MHz)	СН	Frequency (MHz)	СН	Frequency (MHz)
0	2402	1	2403	2	2404	3	2405
4	2406	5	2407	6	2408	7	2409
8	2410	9	2411	10	2412	11	2413
12	2414	13	2415	14	2416	15	2417
16	2418	17	2419	18	2420	19	2421
20	2422	21	2423	22	2424	23	2425
24	2426	25	2427	26	2428	27	2429
28	2430	29	2431	30	2432	31	2433
32	2434	33	2435	34	2436	35	2437
36	2438	37	2439	38	2440	39	2441
40	2442	41	2443	42	2444	43	2445
44	2446	45	2447	46	2448	47	2449
48	2450	49	2451	50	2452	51	2453
52	2454	53	2455	54	2456	55	2457
56	2458	57	2459	58	2460	59	2461
60	2462	61	2463	62	2464	63	2465
64	2466	65	2467	66	2468	67	2469
68	2470	69	2471	70	2472	71	2473
72	2474	73	2475	74	2476	75	2477
76	2478	77	2479	78	2480	79	



4.5 Test Mode

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Test Mode	Test mode	Low channel	Middle channel	High channel		
1	Transmitting(GFSK)	2402MHz	2441MHz	2480MHz		
2	Transmitting(π/ 4 DQPSK)	2402MHz	2441MHz	2480MHz		
3	Transmitting(8DPSK)	2402MHz	2441MHz	2480MHz		
4	Transmitting (Conducted emission & Radiated emission)					

Note:

- (1) The measurements are performed at the highest, middle, lowest available channels.
- (2) Fully-charged battery is used during the test

4.6 Table Of Parameters Of Text Software Setting

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters

Test software Version	FCC_assist 1.0.1.2				
Frequency	2402 MHz	2441 MHz	2480 MHz		
Parameters	DEF	DEF	DEF		



5. Test Facility And Test Instrument Used

5.1 Test Facility

All measurement facilities used to collect the measurement data are located at Shenzhen BCTC Testing Co., Ltd. Address: 1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Tangwei, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards. FCC Test Firm Registration Number: 712850 IC Registered No.: 23583

5.2 Test Instrument Used

	Conducted Emissions Test									
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.					
Receiver	R&S	ESR3	102075	May 16, 2024	May 15, 2025					
LISN	R&S	ENV216	101375	May 16, 2024	May 15, 2025					
Software	Frad	EZ-EMC	EMC-CON 3A1	/	/					
Pulse limiter	Schwarzbeck	VTSD9561-F	01323	May 16, 2024	May 15, 2025					

	RF Conducted Test									
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.					
Power meter	Keysight	E4419	/	May 16, 2024	May 15, 2025					
Power Sensor (AV)	Keysight	E9300A	/	May 16, 2024	May 15, 2025					
Signal Analyzer20kH z-26.5GHz	Keysight	N9020A	MY49100060	May 16, 2024	May 15, 2025					
Spectrum Analyzer9kHz- 40GHz	R&S	FSP40	100363	May 16, 2024	May 15, 2025					



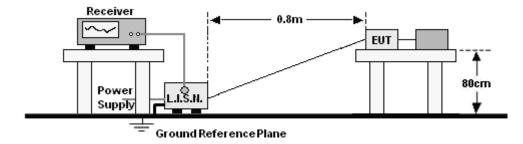
	Radiated Emissions Test (966 Chamber)									
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.					
966 chamber	ChengYu	966 Room	966	May 16, 2024	May 15, 2025					
Receiver	R&S	ESR3	102075	May 16, 2024	May 15, 2025					
Receiver	R&S	ESRP	101154	May 16, 2024	May 15, 2025					
Amplifier	Schwarzbeck	BBV9744	9744-0037	May 16, 2024	May 15, 2025					
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	942	May 21, 2024	May 20, 2025					
Loop Antenna(9KHz -30MHz)	Schwarzbeck	FMZB1519B	00014	May 21, 2024	May 20, 2025					
Amplifier	SKET	LAPA_01G1 8G-45dB	SK202104090 1	May 16, 2024	May 15, 2025					
Horn Antenna	Schwarzbeck	BBHA9120D	1541	May 21, 2024	May 20, 2025					
Amplifier(18G Hz-40GHz)	MITEQ	TTA1840-35- HG	2034381	May 16, 2024	May 15, 2025					
Horn Antenn(18GH z-40GHz)	Schwarzbeck	BBHA9170	00822	May 21, 2024	May 20, 2025					
Spectrum Analyzer9kHz- 40GHz	R&S	FSP40	100363	May 16, 2024	May 15, 2025					
Software	Frad	EZ-EMC	FA-03A2 RE	\	\					

Edition: B.2



6. Conducted Emissions

6.1 Block Diagram Of Test Setup



6.2 Limit

	Limit	(dBuV)
Frequency (MHz)	Quas-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

Notes:

1. *Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

6.3 Test procedure

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

a. The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).

b. The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak and AVG detector in Max Hold mode. Run the receiver's pre-scan to record the maximum disturbance generated from Product in all power lines in the full band.

c. For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.

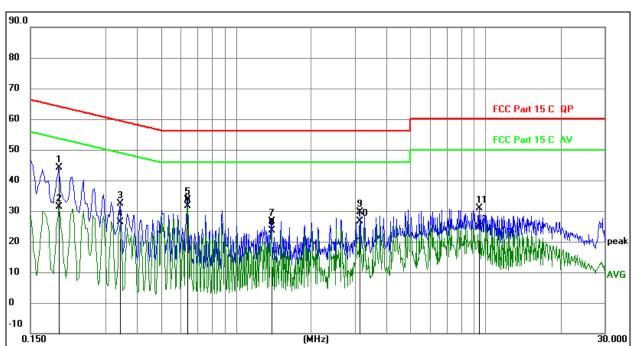
6.4 EUT operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.



6.5 Test Result

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Phase :	L
Test Mode:	Mode 4	Test Voltage :	AC120V/60Hz



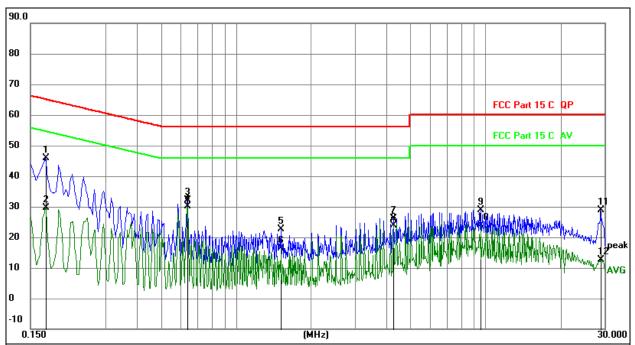
Remark:

All readings are Quasi-Peak and Average values.
 Factor = Insertion Loss + Cable Loss.
 Measurement = Reading Level + Correct Factor
 Over = Measurement - Limit

No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz		dB	dBuV	dBuV	dB	Detector	Comment
1	0.1945	24.03	20.07	44.10	63.84	-19.74	QP	
2	0.1945	11.30	20.07	31.37	53.84	-22.47	AVG	
3	0.3428	12.21	20.07	32.28	59.14	-26.86	QP	
4	0.3428	6.29	20.07	26.36	49.14	-22.78	AVG	
5	0.6372	13.44	20.09	33.53	56.00	-22.47	QP	
6 *	0.6372	11.42	20.09	31.51	46.00	-14.49	AVG	
7	1.3884	6.52	20.09	26.61	56.00	-29.39	QP	
8	1.3884	3.54	20.09	23.63	46.00	-22.37	AVG	
9	3.1396	9.44	20.12	29.56	56.00	-26.44	QP	
10	3.1396	6.53	20.12	26.65	46.00	-19.35	AVG	
11	9.4513	10.59	20.17	30.76	60.00	-29.24	QP	
12	9.4513	4.45	20.17	24.62	50.00	-25.38	AVG	



Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Phase :	Ν
Test Mode:	Mode 4	Test Voltage :	AC120V/60Hz



Remark:

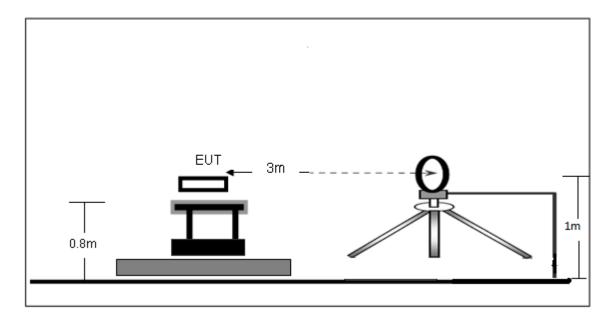
- All readings are Quasi-Peak and Average values.
 Factor = Insertion Loss + Cable Loss.
 Measurement = Reading Level + Correct Factor
 Over = Measurement Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz		dB	dBuV	dBuV	dB	Detector	Comment
1		0.1725	25.70	20.07	45.77	64.84	-19.07	QP	
2		0.1725	9.68	20.07	29.75	54.84	-25.09	AVG	
3		0.6405	11.97	20.09	32.06	56.00	-23.94	QP	
4	*	0.6405	9.92	20.09	30.01	46.00	-15.99	AVG	
5		1.5135	2.55	20.10	22.65	56.00	-33.35	QP	
6		1.5135	-3.64	20.10	16.46	46.00	-29.54	AVG	
7		4.2900	6.01	20.14	26.15	56.00	-29.85	QP	
8		4.2900	3.79	20.14	23.93	46.00	-22.07	AVG	
9		9.5910	8.78	20.17	28.95	60.00	-31.05	QP	
10		9.5910	3.72	20.17	23.89	50.00	-26.11	AVG	
11		29.0309	8.72	20.28	29.00	60.00	-31.00	QP	
12		29.0309	-7.70	20.28	12.58	50.00	-37.42	AVG	

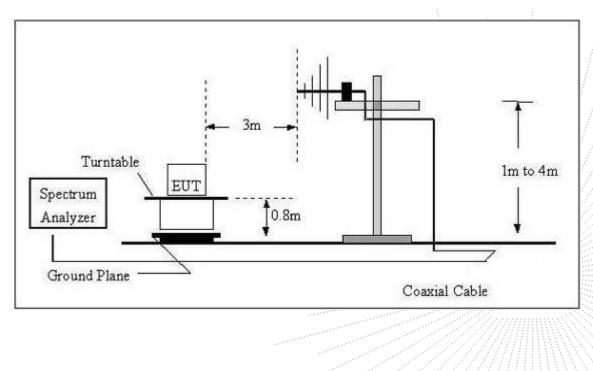


7. Radiated emissions

- 7.1 Block Diagram Of Test Setup
 - (A) Radiated Emission Test-Up Frequency Below 30MHz

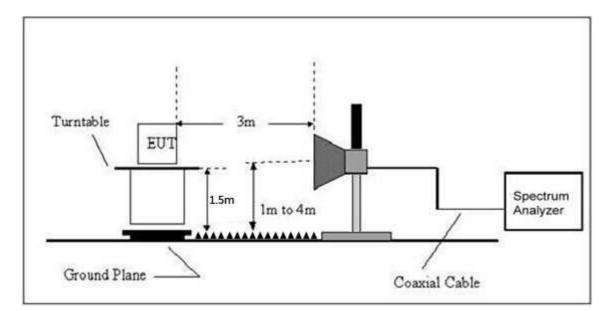


(B) Radiated Emission Test-Up Frequency 30MHz~1GHz





(C) Radiated Emission Test-Up Frequency Above 1GHz



7.2 Limit

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequency	Field Strength	Distance	Field Strength Limit at 3m Distance				
(MHz)	uV/m	(m)	uV/m	dBuV/m			
0.009 ~ 0.490	2400/F(kHz)	300	10000 * 2400/F(kHz)	20log ^{(2400/F(kHz))} + 80			
0.490 ~ 1.705	24000/F(kHz)	30	100 * 24000/F(kHz)	20log ^{(24000/F(kHz))} + 40			
1.705 ~ 30	30	30	100 * 30	20log ⁽³⁰⁾ + 40			
30 ~ 88	100	3	100	20log ⁽¹⁰⁰⁾			
88 ~ 216	150	3	150	20log ⁽¹⁵⁰⁾			
216 ~ 960	200	3	200	20log ⁽²⁰⁰⁾			
Above 960	500	3	500	20log ⁽⁵⁰⁰⁾			
imits Of Radiated En	nission Measureme	nt (Above 100	DOMHz)	XXXII <i>III///</i> /			

	Sec.	Limit (dBuV/m) (at 3M)
Frequency (MHz)	Peak	Average
Above 1000	74	54

Notes:

(1)The limit for radiated test was performed according to FCC PART 15C.

(2)The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

Frequency Range Of Radiated Measurement



(a) For an intentional radiator the spectrum shall be investigated from the lowest radio frequency signal generated in the device, without going below 9 kHz, up to at least the frequency shown in this paragraph:

(1) If the intentional radiator operates below 10 GHz: to the tenth harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower.

(2) If the intentional radiator operates at or above 10 GHz and below 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 100 GHz, whichever is lower.

(3) If the intentional radiator operates at or above 30 GHz: to the fifth harmonic of the highest fundamental frequency or to 200 GHz, whichever is lower, unless specified otherwise elsewhere in the rules.

(4) If the intentional radiator operates at or above 95 GHz: To the third harmonic of the highest fundamental frequency or to 750 GHz, whichever is lower, unless specified otherwise elsewhere in the rules.

(5) If the intentional radiator contains a digital device, regardless of whether this digital device controls the functions of the intentional radiator or the digital device is used for additional control or function purposes other than to enable the operation of the intentional radiator, the frequency range shall be investigated up to the range specified in paragraphs (a) (1)through (4) of this section or the range applicable to the digital device, as shown in paragraph (b)(1) of this section, whichever is the higher frequency range of investigation.

7.3 Test procedure

Receiver Parameter	Setting
Attenuation	Auto
9kHz~150kHz	RBW 200Hz for QP
150kHz~30MHz	RBW 9kHz for QP
30MHz~1000MHz	RBW 120kHz for QP

Spectrum Parameter	Setting
1-25GHz	RBW 1 MHz /VBW 1 MHz for Peak, RBW 1 MHz / VBW 10Hz for Average

Below 1GHz test procedure as below:

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.



e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Above 1GHz test procedure as below:

a. The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.

b.The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c.The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d.For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.

e.The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

g. Test the EUT in the lowest channel, the middlest channel, the Highest channel.

Note:

Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

7.4 EUT operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.



7.5 Test Result

Below 30MHz

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Tost Voltago :	DC 3.7V
Test Mode:	Mode 4	Test Voltage :	DC 3.7 V

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
				PASS
				PASS

Note:

The amplitude of spurious emissions which are attenuated by more than 20dB below the

permissible value has no need to be reported.

Distance extrapolation factor =40 log (specific distance/test distance)(dB);

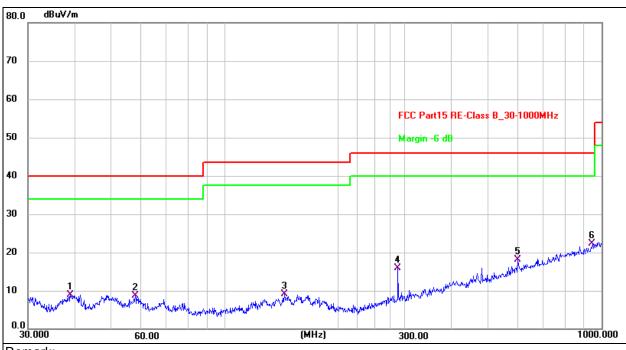
Limit line = specific limits(dBuv) + distance extrapolation factor.

No.: BCTC/RF-EMC-005



Between 30MHz - 1GHz

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Phase :	Horizontal
Test Mode:	Mode 4	Test Voltage :	DC 3.7V



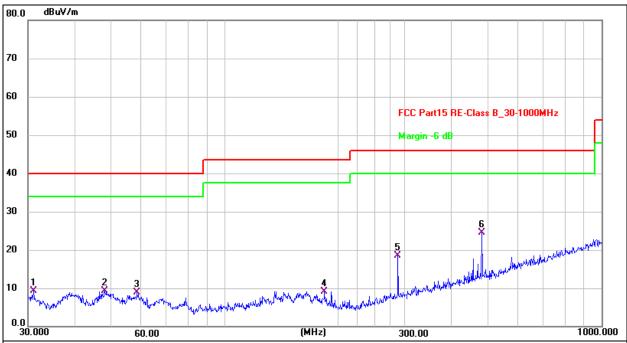
Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.
 Measurement = Reading Level + Correct Factor
 Over = Measurement - Limit

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	38.8878	26.19	-17.37	8.82	40.00	-31.18	QP
2	57.7962	26.32	-17.69	8.63	40.00	-31.37	QP
3	143.8295	26.59	-17.58	9.01	43.50	-34.49	QP
4	287.9904	33.28	-17.31	15.97	46.00	-30.03	QP
5	599.3212	26.71	-8.68	18.03	46.00	-27.97	QP
6 *	945.4399	24.82	-2.50	22.32	46.00	-23.68	QP



Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Phase :	Vertical
Test Mode:	Mode 4	Test Voltage :	DC 3.7V



Remark:

Factor = Antenna Factor + Cable Loss – Pre-amplifier.
 Measurement = Reading Level + Correct Factor

			0
3.	Over =	Measurement -	- Limit
•••	••••		

2 47.9940 26.46 -17.10 9.36 40.00 -30.64 QF 3 58.4074 26.66 -17.75 8.91 40.00 -31.09 QF 4 183.8440 27.90 -18.76 9.14 43.50 -34.36 QF 5 287.9904 35.82 -17.31 18.51 46.00 -27.49 QF	No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)		Margin (dB)	Detector
3 58.4074 26.66 -17.75 8.91 40.00 -31.09 QF 4 183.8440 27.90 -18.76 9.14 43.50 -34.36 QF 5 287.9904 35.82 -17.31 18.51 46.00 -27.49 QF	1	31.0706	26.86	-17.48	9.38	40.00	-30.62	QP
4 183.8440 27.90 -18.76 9.14 43.50 -34.36 QF 5 287.9904 35.82 -17.31 18.51 46.00 -27.49 QF	2	47.9940	26.46	-17.10	9.36	40.00	-30.64	QP
5 287.9904 35.82 -17.31 18.51 46.00 -27.49 QF	3	58.4074	26.66	-17.75	8.91	40.00	-31.09	QP
	4	183.8440	27.90	-18.76	9.14	43.50	-34.36	QP
6 * 480.5276 36.31 -11.89 24.42 46.00 -21.58 QF	5	287.9904	35.82	-17.31	18.51	46.00	-27.49	QP
	6 *	480.5276	36.31	-11.89	24.42	46.00	-21.58	QP



Polar	Frequency	Reading Level	Correct Factor	Measure- ment	Limits	Over	Detector			
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/ m)	(dB)	Туре			
	GFSK Low channel									
V	4804.00	70.43	-19.99	50.44	74.00	-23.56	PK			
V	4804.00	62.08	-19.99	42.09	54.00	-11.91	AV			
V	7206.00	63.42	-14.22	49.20	74.00	-24.80	PK			
V	7206.00	53.91	-14.22	39.69	54.00	-14.31	AV			
Н	4804.00	69.34	-19.99	49.35	74.00	-24.65	PK			
Н	4804.00	59.39	-19.99	39.40	54.00	-14.60	AV			
Н	7206.00	60.58	-14.22	46.36	74.00	-27.64	PK			
Н	7206.00	52.00	-14.22	37.78	54.00	-16.22	AV			
		G	FSK Middle c	hannel						
V	4882.00	68.46	-19.84	48.62	74.00	-25.38	PK			
V	4882.00	62.36	-19.84	42.52	54.00	-11.48	AV			
V	7323.00	57.57	-13.90	43.67	74.00	-30.33	PK			
V	7323.00	49.50	-13.90	35.60	54.00	-18.40	AV			
Н	4882.00	63.87	-19.84	44.03	74.00	-29.97	PK			
Н	4882.00	54.83	-19.84	34.99	54.00	-19.01	AV			
Н	7323.00	55.37	-13.90	41.47	74.00	-32.53	PK			
Н	7323.00	47.75	-13.90	33.85	54.00	-20.15	AV			
			GFSK High ch	annel						
V	4960.00	69.81	-19.68	50.13	74.00	-23.87	PK			
V	4960.00	60.51	-19.68	40.83	54.00	-13.17	AV			
V	7440.00	62.08	-13.57	48.51	74.00	-25.49	PK			
V	7440.00	52.77	-13.57	39.20	54.00	-14.80	AV			
Н	4960.00	67.98	-19.68	48.30	74.00	-25.70	PK			
Н	4960.00	58.06	-19.68	38.38	54.00	-15.62	AV			
Н	7440.00	59.76	-13.57	46.19	74.00	-27.81	PK			
Н	7440.00	51.15	-13.57	37.58	54.00	-16.42	AV			

Between 1GHz – 25GHz

Remark:

1.Emission Level = Meter Reading + Factor, Factor = Antenna Factor + Cable Loss – Pre-amplifier. Over= Emission Level - Limit

2.If peak below the average limit, the average emission was no test.

3. In restricted bands of operation, The spurious emissions below the permissible value more than 20dB

4. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



Polar	Frequency	, Reading Correct Level Factor	Correct Factor	Measure- ment	Limits	Over	Detector				
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/ m)	(dB)	Туре				
	π/4 DQPSK Low channel										
V	4804.00	72.20	-19.99	52.21	74.00	-21.79	PK				
V	4804.00	61.80	-19.99	41.81	54.00	-12.19	AV				
V	7206.00	63.47	-14.22	49.25	74.00	-24.75	PK				
V	7206.00	53.87	-14.22	39.65	54.00	-14.35	AV				
Н	4804.00	70.22	-19.99	50.23	74.00	-23.77	PK				
Н	4804.00	59.80	-19.99	39.81	54.00	-14.19	AV				
Н	7206.00	61.62	-14.22	47.40	74.00	-26.60	PK				
Н	7206.00	53.83	-14.22	39.61	54.00	-14.39	AV				
		π/4 Ι	DQPSK Middl	e channel	•	•	•				
V	4882.00	69.61	-19.84	49.77	74.00	-24.23	PK				
V	4882.00	63.09	-19.84	43.25	54.00	-10.75	AV				
V	7323.00	61.43	-13.90	47.53	74.00	-26.47	PK				
V	7323.00	53.12	-13.90	39.22	54.00	-14.78	AV				
Н	4882.00	66.98	-19.84	47.14	74.00	-26.86	PK				
Н	4882.00	57.64	-19.84	37.80	54.00	-16.20	AV				
Н	7323.00	58.83	-13.90	44.93	74.00	-29.07	PK				
Н	7323.00	50.94	-13.90	37.04	54.00	-16.96	AV				
		π/4	DQPSK High	channel							
V	4960.00	71.35	-19.68	51.67	74.00	-22.33	PK				
V	4960.00	60.95	-19.68	41.27	54.00	-12.73	AV				
V	7440.00	63.25	-13.57	49.68	74.00	-24.32	PK				
V	7440.00	52.74	-13.57	39.17	54.00	-14.83	AV				
Н	4960.00	68.91	-19.68	49.23	74.00	-24.77	PK				
Н	4960.00	58.85	-19.68	39.17	54.00	-14.83	AV				
Н	7440.00	61.73	-13.57	48.16	74.00	-25.84	PK				
Н	7440.00	54.71	-13.57	41.14	54.00	-12.86	AV				

Remark:

1.Emission Level = Meter Reading + Factor, Factor = Antenna Factor + Cable Loss – Pre-amplifier. Over= Emission Level - Limit

2.If peak below the average limit, the average emission was no test.

3. In restricted bands of operation, The spurious emissions below the permissible value more than 20dB

4. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



Polar (H/V)	Frequency	Reading Level	Correct Factor	Measure- ment	Limits	Over	Detector	
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/ m)	(dB)	Туре	
8DPSK Low channel								
V	4804.00	72.04	-19.99	52.05	74.00	-21.95	PK	
V	4804.00	62.86	-19.99	42.87	54.00	-11.13	AV	
V	7206.00	61.21	-14.22	46.99	74.00	-27.01	PK	
V	7206.00	50.41	-14.22	36.19	54.00	-17.81	AV	
Н	4804.00	70.78	-19.99	50.79	74.00	-23.21	PK	
Н	4804.00	61.06	-19.99	41.07	54.00	-12.93	AV	
Н	7206.00	60.17	-14.22	45.95	74.00	-28.05	PK	
Н	7206.00	52.36	-14.22	38.14	54.00	-15.86	AV	
	8DPSK Middle channel							
V	4882.00	69.79	-19.84	49.95	74.00	-24.05	PK	
V	4882.00	62.82	-19.84	42.98	54.00	-11.02	AV	
V	7323.00	60.79	-13.90	46.89	74.00	-27.11	PK	
V	7323.00	51.24	-13.90	37.34	54.00	-16.66	AV	
Н	4882.00	68.32	-19.84	48.48	74.00	-25.52	PK	
Н	4882.00	58.15	-19.84	38.31	54.00	-15.69	AV	
Н	7323.00	57.90	-13.90	44.00	74.00	-30.00	PK	
Н	7323.00	49.46	-13.90	35.56	54.00	-18.44	AV	
		8	DPSK High c	hannel				
V	4960.00	72.63	-19.68	52.95	74.00	-21.05	PK	
V	4960.00	64.17	-19.68	44.49	54.00	-9.51	AV	
V	7440.00	64.34	-13.57	50.77	74.00	-23.23	PK	
V	7440.00	53.60	-13.57	40.03	54.00	-13.97	AV	
Н	4960.00	69.74	-19.68	50.06	74.00	-23.94	PK	
Н	4960.00	59.72	-19.68	40.04	54.00	-13.96	AV	
Н	7440.00	61.74	-13.57	48.17	74.00	-25.83	PK	
Н	7440.00	52.89	-13.57	39.32	54.00	-14.68	AV	

Remark:

1.Emission Level = Meter Reading + Factor, Factor = Antenna Factor + Cable Loss – Pre-amplifier. Over= Emission Level - Limit

2.If peak below the average limit, the average emission was no test.

3. In restricted bands of operation, The spurious emissions below the permissible value more than 20dB

4. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

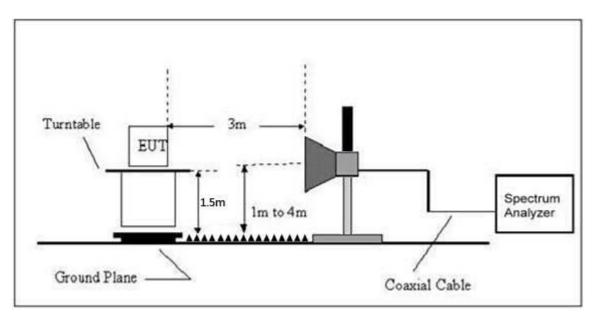
Edition: B.2



8. Radiated Band Emission Measurement and Restricted Bands of Operation

8.1 Block Diagram Of Test Setup

Radiated Emission Test-Up Frequency Above 1GHz



8.2 Limit

FCC Part15 C Section 15.209 and 15.205

(a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz	
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15	
¹ 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46	
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75	
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5	
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2	
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5	
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7	
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4	
6.31175-6.31225	123-138	2200-2300	14.47-14.5	
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2	
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4	
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12	
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0	
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8	
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5	
12.57675-12.57725	322-335.4	3600-4400	(²)	
13.36-13.41				



Limits Of Radiated Emission Measurement (Above 1000MHz)

Frequency (MHz)	Limit (dBuV/m) (at 3M)				
Frequency (MIRZ)	Peak	Average			
Above 1000	74	54			

Notes:

(1)The limit for radiated test was performed according to FCC PART 15C.

(2)The tighter limit applies at the band edges.

(3)Emission level (dBuV/m)=20log Emission level (uV/m).

8.3 Test procedure

Receiver Parameter	Setting				
Attenuation	Auto				
Start Frequency	2300MHz				
Stop Frequency	2520				
RB / VB (Emission In Restricted Band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average				

Above 1GHz test procedure as below:

a. The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.

b.The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c.The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d.For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.

e.The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

g. Test the EUT in the lowest channel, the middlest channel, the Highest channel.

Note:

Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported.

8.4 EUT operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.



8.5 Test Result

Test mode	Polar (H/V)	Frequency (MHz)	Reading Level (dBuV/m)	Correct Factor (dB)	Measure- ment (dBuV/m)	Limits (dBuV/m)		Result
					РК	PK	AV	
	Low Channel 2402MHz							
	Н	2390.00	73.04	-25.43	47.61	74.00	54.00	PASS
	Н	2400.00	74.66	-25.40	49.26	74.00	54.00	PASS
	V	2390.00	73.71	-25.43	48.28	74.00	54.00	PASS
GFSK	V	2400.00	74.83	-25.40	49.43	74.00	54.00	PASS
0151	High Channel 2480MHz							
	H	2483.50	71.77	-25.15	46.62	74.00	54.00	PASS
	Н	2500.00	69.82	-25.10	44.72	74.00	54.00	PASS
	V	2483.50	73.49	-25.15	48.34	74.00	54.00	PASS
	V	2500.00	69.08	-25.10	43.98	74.00	54.00	PASS
			Low	<u>/ Channel 2</u>	402MHz			
	Н	2390.00	73.05	-25.43	47.62	74.00	54.00	PASS
	Н	2400.00	74.44	-25.40	49.04	74.00	54.00	PASS
	V	2390.00	72.16	-25.43	46.73	74.00	54.00	PASS
π/4DQPSK	V	2400.00	73.07	-25.40	47.67	74.00	54.00	PASS
	High Channel 2480MHz							
	Н	2483.50	72.38	-25.15	47.23	74.00	54.00	PASS
	Н	2500.00	69.71	-25.10	44.61	74.00	54.00	PASS
	V	2483.50	72.29	-25.15	47.14	74.00	54.00	PASS
	V	2500.00	68.55	-25.10	43.45	74.00	54.00	PASS
	Low Channel 2402MHz							
	Н	2390.00	72.35	-25.43	46.92	74.00	54.00	PASS
	Н	2400.00	73.82	-25.40	48.42	74.00	54.00	PASS
	V	2390.00	72.13	-25.43	46.70	74.00	54.00	PASS
8DPSK	V	2400.00	73.35	-25.40	47.95	74.00	54.00	PASS
ODEON	High Channel 2480MHz							
	Н	2483.50	71.03	-25.15	45.88	74.00	54.00	PASS
	Н	2500.00	67.47	-25.10	42.37	74.00	54.00	PASS
	V	2483.50	71.06	-25.15	45.91	74.00	54.00	PASS
Damaarla	V	2500.00	67.36	-25.10	42.26	74.00	54.00	PASS

Remark:

1. Emission Level = Meter Reading + Factor, Factor = Antenna Factor + Cable Loss - Pre-amplifier. Over= Emission Level - Limit

2. If the PK measured levels comply with average limit, then the average level were deemed to comply with average limit.

3 In restricted bands of operation, The spurious emissions below the permissible value more than 20dB

4. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.



9. Spurious RF Conducted Emissions

9.1 Block Diagram Of Test Setup



9.2 Limit

Regulation 15.247 (d),In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.205(c))

9.3 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: Below 30MHz: RBW = 100kHz, VBW = 300kHz, Sweep = auto Detector function = peak, Trace = max hold Above 30MHz: RBW = 100KHz, VBW = 300KHz, Sweep = auto Detector function = peak, Trace = max hold

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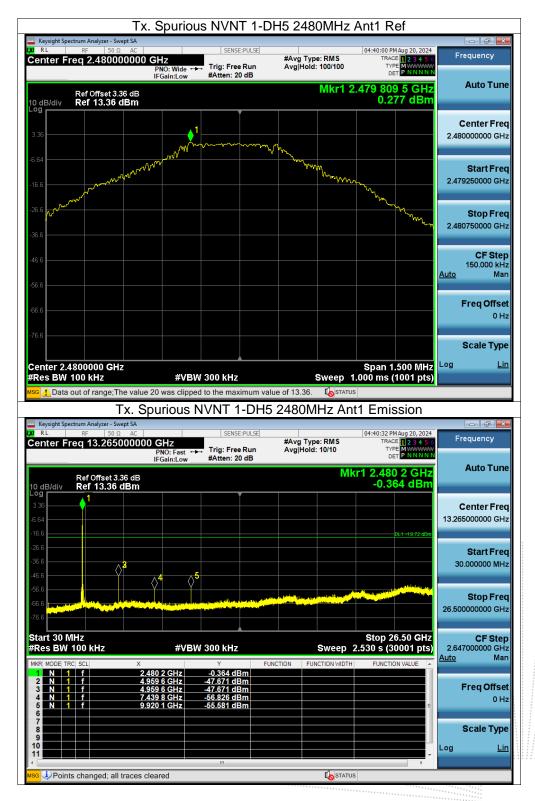
9.4 Test Result



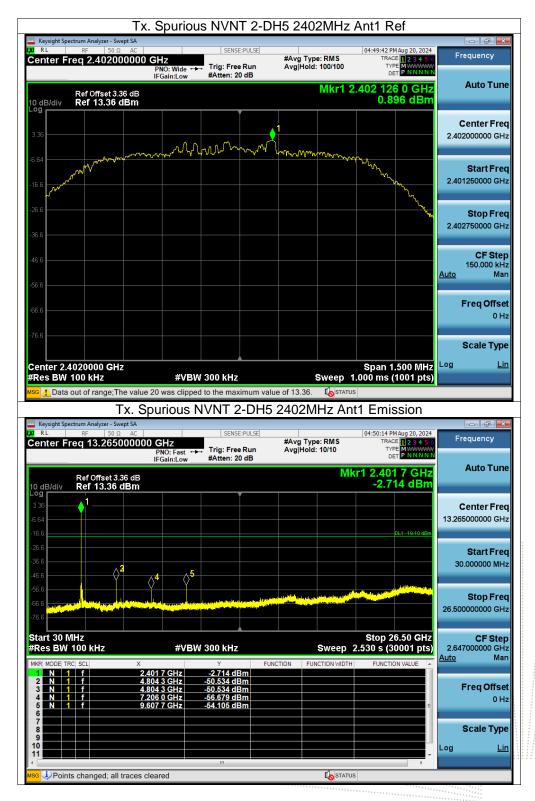




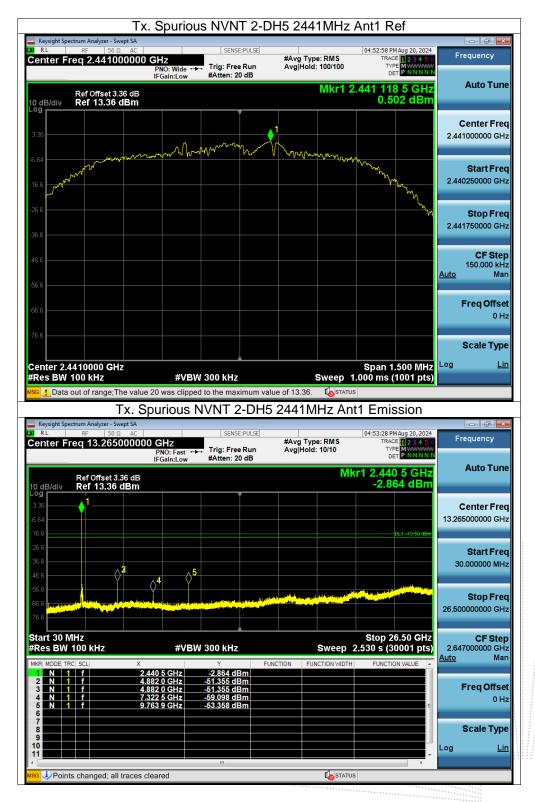




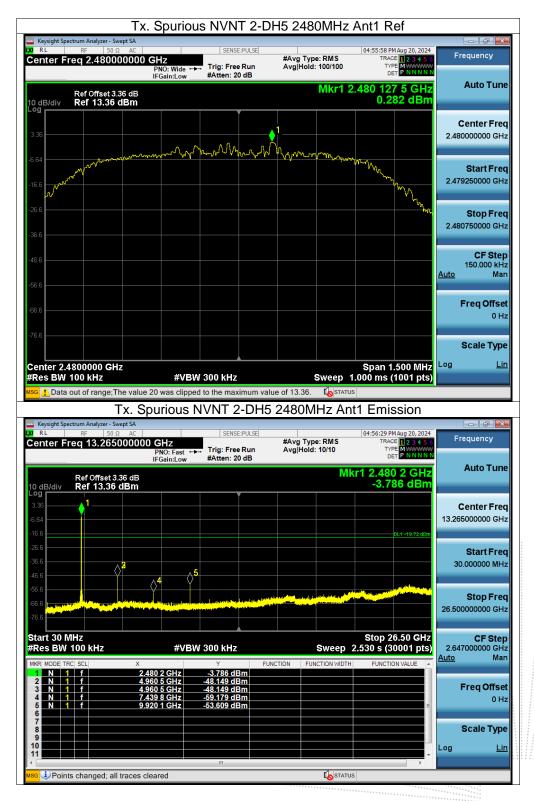








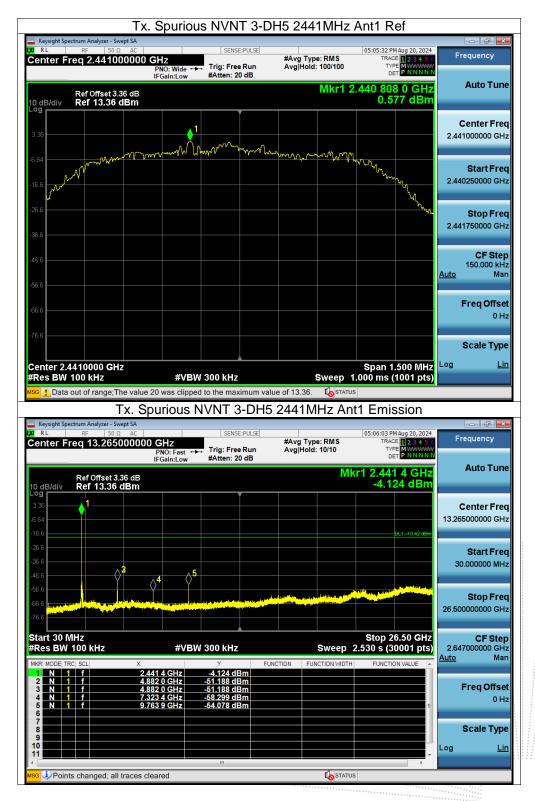




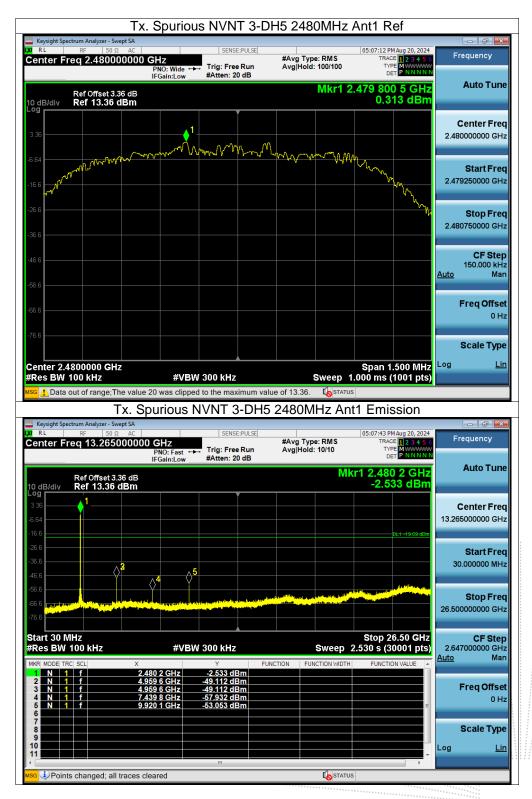




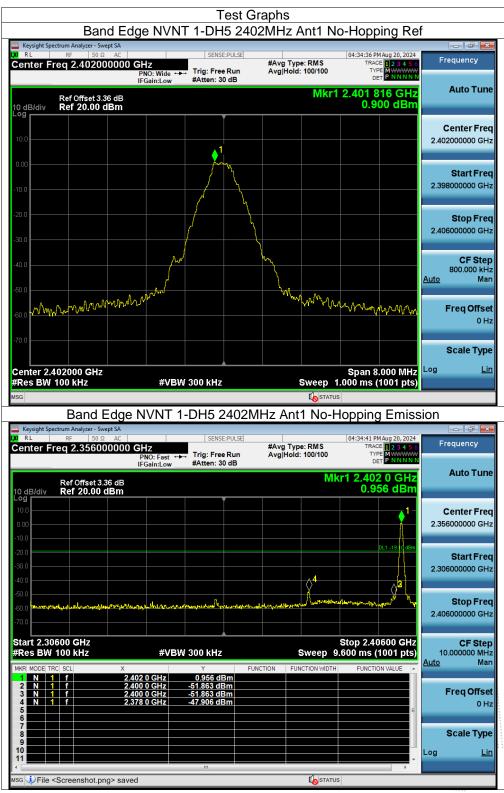




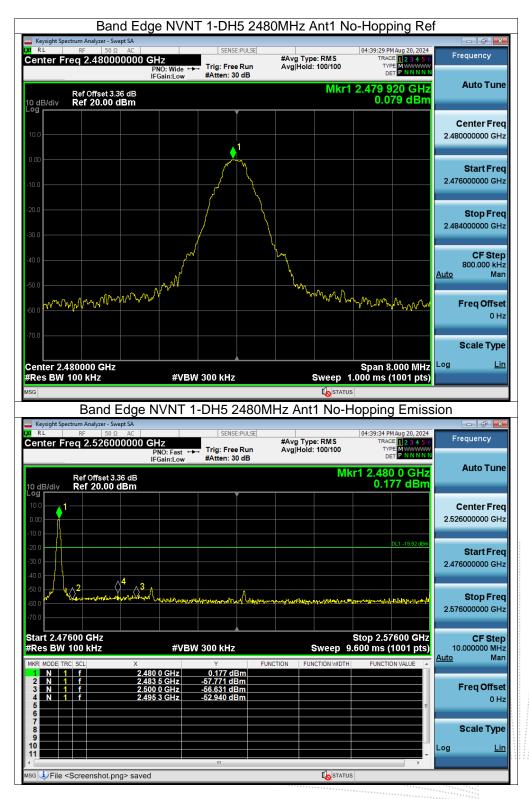




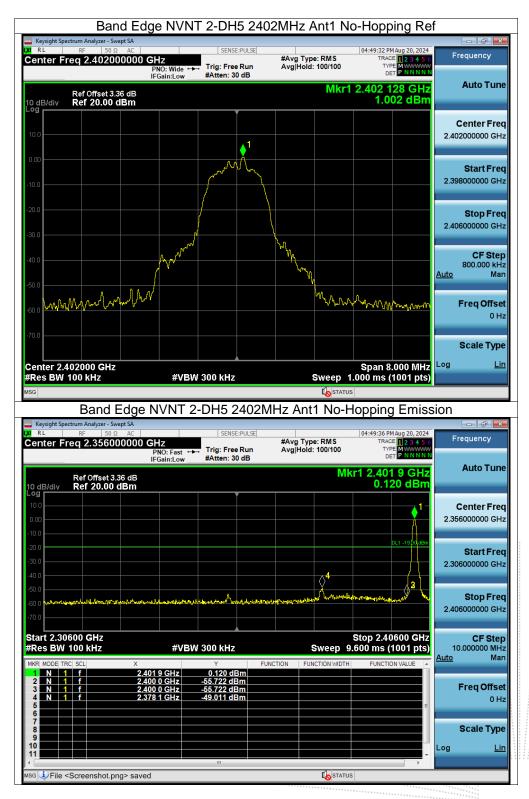




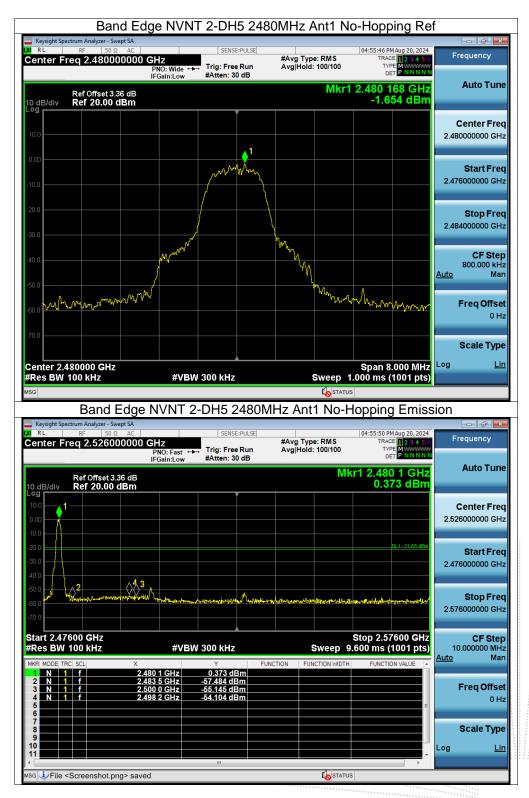




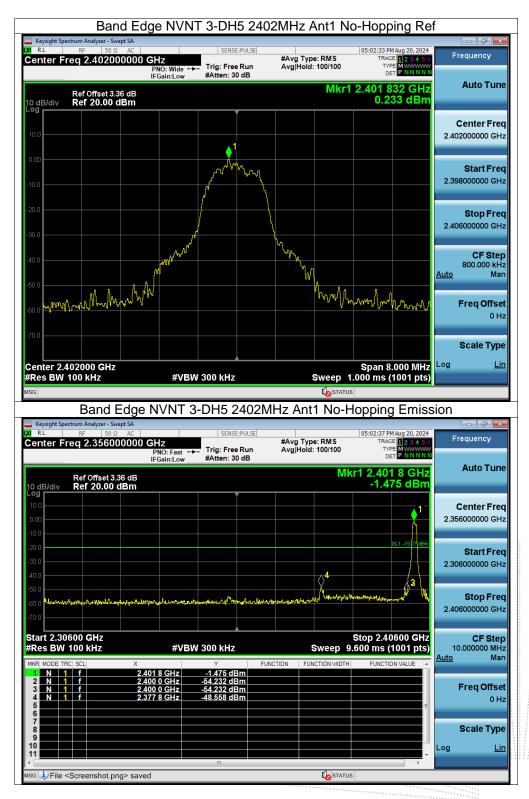




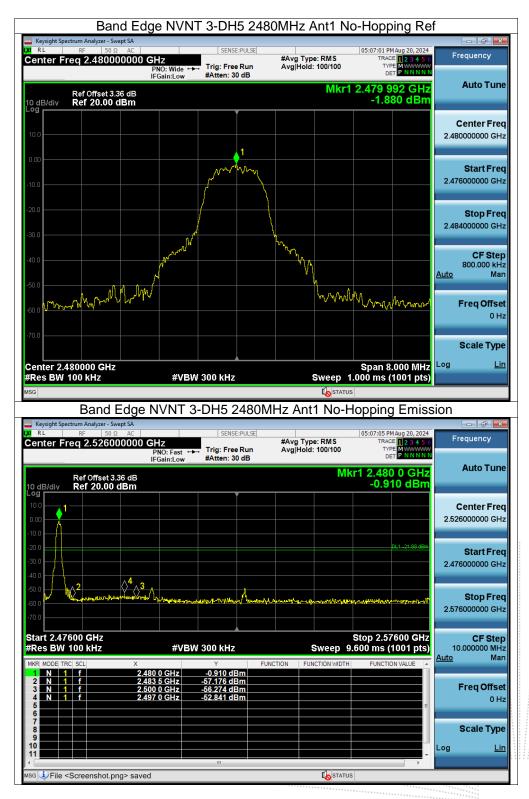














Band Edge	e(Hopping	Test G a) NVNT 1-D	iraphs H5 2402MHz A	Ant1 Hopping	Ref
Keysight Spectrum Analyzer - Swept SA					
RL RF 50 Ω AC enter Freg 2.40200000	0 GHz	SENSE:PULSE	#Avg Type: RMS	04:41:27 PM Aug 20, 2024 TRACE 1 2 3 4 5 6	Frequency
ontor 1109 240200000	PNO: Wide ↔ IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Hold: 2000/2000	TYPE MWWWWWW DET P N N N N N	
Ref Offset 3.36 dB dB/div Ref 20.00 dBm	ir Sain:LOW		Mkr1	2.405 808 GHz 0.716 dBm	Auto Tur
a a a a a a a a a a a a a a a a a a a					Center Fre
00				↓ 1	2.402000000 GH
.0				/V	Start Fre 2.398000000 GH
0.0				∿/ \v⁄	Stop Fre
0.0					2.406000000 GH
		ſ			CF Ste 800.000 kH Auto Ma
0.0 Manual Card Angel	milin				Freq Offs 0 F
3.0					Scale Typ
				Span 8.000 MHz	
enter 2.402000 GHz Res BW 100 kHz	#\/B\/			SIDDE X UUU MHZ	
G		v 300 kHz NVNT 1-DH5	Sweep 1. Status 2402MHz Ant	.000 ms (1001 pts)	
G	lopping) N 0 GHz PNO: Fast ↔			0000 ms (1001 pts)	nission
Band Edge(H Keysight Spectrum Analyzer - Swept SA RL RF 500 AC enter Freq 2.356000000 Ref Offset 3.36 dB Ref 20.00 dBm	lopping) N 0 GHz	IVNT 1-DH5	2402MHz Ant #Avg Type: RMS Avg Hold: 1000/1000	.000 ms (1001 pts) 1 Hopping En	nission Frequency
Band Edge(H Keysight Spectrum Analyzer - Swept SA RL RF 50 Q AC enter Freq 2.356000000	lopping) N 0 GHz PNO: Fast ↔		2402MHz Ant #Avg Type: RMS Avg Hold: 1000/1000	000 ms (1001 pts) 1 Hopping Em 04:41:46 PM Aug 20, 2024 TRACE 12 3 4 5 6 TYPE WWWWW PET WWWWWN TT 2,403 8 GHz	nission Frequency Auto Tur Center Fre
a Band Edge(H Keysight Spectrum Analyzer - Swept SA RL PF 50.2 AC enter Freq 2.356000000 Ref Offset 3.36 dB gB/div Ref 20.00 dBm	lopping) N 0 GHz PNO: Fast ↔		2402MHz Ant #Avg Type: RMS Avg Hold: 1000/1000	0000 ms (1001 pts) 1 Hopping Em 04:41:46 PM Aug 20, 2024 TRACE 22 4 4 5 6 TYPE P HANN N r1 2,403 8 GHz 0.931 dBm	nission Frequency Auto Tur Center Fre
s Band Edge(H Keysight Spectrum Analyzer - Swept SA RL PF 500 AC enter Freq 2.356000000 Ref Offset 3.36 dB Ref 20.00 dBm	lopping) N 0 GHz PNO: Fast ↔		2402MHz Ant #Avg Type: RMS Avg Hold: 1000/1000	000 ms (1001 pts) 1 Hopping Em 04:41:46 PM Aug 20, 2024 TRACE 12 3 4 5 6 TYPE WWWWW PET WWWWWN TT 2,403 8 GHz	nission
s Band Edge(H Keysight Spectrum Analyzer - Swept SA RL RF 500 AC enter Freq 2.356000000 Ref Offset 3.36 dB 0 dB/div Ref 20.00 dBm 0 dB/div Ref 20.00 dBm	lopping) N O GHz PNO: Fast → IFGain:Low	JVNT 1-DH5	2402MHz Ant #Avg Type: RMS Avg Hold: 1000/1000	0000 ms (1001 pts) 1 Hopping Em 04:41:46 PM Aug 20, 2024 TRACE 1 23 4 5 6 TYPE WINNINN r1 2,403 8 GHz 0.931 dBm 0.01.139 6 den 4 3	Auto Tur Center Fre 2.356000000 GH
s Band Edge(H Keysight Spectrum Analyzer - Swept SA RL RF 500 AC enter Freq 2.356000000 Ref Offset 3.36 dB 0 dB/div Ref 20.00 dBm 0 dB/div Ref 20.00 dBm	lopping) N O GHz PNO: Fast → IFGain:Low	JVNT 1-DH5	2402MHz Ant #Avg Type: RMS Avg Hold: 1000/1000	0000 ms (1001 pts) 1 Hopping Em 04:41:46 PM Aug 20, 2024 TRACE 1 23 4 5 6 TYPE WINNINN r1 2,403 8 GHz 0.931 dBm 0.01.139 6 den 4 3	nission Frequency Auto Tur Center Fre 2.356000000 GH
S Band Edge(H Keysight Spectrum Analyzer - Swept SA RL RF 500 AC enter Freq 2.356000000 Ref Offset 3.36 dB dB/dIV Ref 20.00 dBm 000 000 000 0000 0000 00000000	lopping) N O GHz PNO: Fast → IFGain:Low	VNT 1-DH5	2402MHz Ant #Avg Type: RMS Avg Hold: 1000/1000 Mk	0000 ms (1001 pts) 1 Hopping Em 1 Hopping Em 1 Hopping Em 1 Hopping Em 1 Hopping Em 1 2:4 9 May 20, 2024 Trace 1 2:4 9 G Trace 1 2:4 9	nission Frequency Auto Tur 2.356000000 GH 2.306000000 GH Start Fre 2.306000000 GH
S Band Edge(H Keysight Spectrum Analyzer - Swept SA RL PF BP 50.0. AC enter Freq 2.356000000 Ref Offset 3.36 dB dB/div Ref 20.00 dBm 00 00	lopping) N 0 GHz PNO: Fast → IFGain:Low #VBV 2.403 8 GHz 2.403 8 GHz 2.400 0 GHz	VNT 1-DH5	2402MHz Ant #Avg Type: RMS Avg Hold: 1000/1000	0000 ms (1001 pts) 1 Hopping Em 04:41:46 PM Aug 20, 2024 TRACE 12 3:45 6 TRACE 12 3:45 7 TRACE 12 3:45	hission Frequency Auto Tur 2.356000000 GH 2.306000000 GH 2.406000000 GH 2.406000000 GH CF Ste 10.00000 MH Auto Ma
Similar Band Edge(H Keysight Spectrum Analyzer - Swept SA RL PF PF 500 Acc enter Freq 2.356000000 Ref Offset 3.36 dB dB/div Ref 20.00 dBm 00 Ref 20.00 dBm	lopping) N 0 GHz PN0: Fast → IFGain:Low #VBV #VBV 2.403 8 GHz 2.403 8 GHz	VNT 1-DH5	2402MHz Ant #Avg Type: RMS Avg Hold: 1000/1000 Mk	0000 ms (1001 pts) 1 Hopping Em 1 Hopping Em 1 Hopping Em 1 Hopping Em 1 Hopping Em 1 2:4 9 May 20, 2024 Trace 1 2:4 9 G Trace 1 2:4 9	nission Frequency Auto Tur Center Fre 2.356000000 Gl Start Fre 2.306000000 Gl Stop Fre 2.406000000 Gl CF Ste 10.00000 Mi Auto Mi Freq Offs 0 I
Residut Spectrum Analyzer - Swept SA Rk BF 50 A C enter Freq 2.356000000 Comparison Compa	lopping) N 0 GHz PNO: Fast → IFGain:Low #VBV 2.403 8 GHz 2.403 8 GHz 2.400 0 GHz	VNT 1-DH5	2402MHz Ant #Avg Type: RMS Avg Hold: 1000/1000 Mk	0000 ms (1001 pts) 1 Hopping Em 1 2 40 3 8 GHz 0.931 dBm 1 0.	hission Frequency Auto Tur Center Fre 2.356000000 Gl Start Fre 2.306000000 Gl Stop Fre 2.406000000 Gl CF Ste 10.000000 Mi Auto Mi Freq Offs 0 H
S Band Edge(H Keysight Spectrum Analyzer - Swept SA RL RF RE SO AC enter Freq 2.356000000 Ref Offset 3.36 dB 0 dB/div Ref 20.00 dBm 1 m 1 m 1 m 1 m 2 m 1 m 3 m 1 m 3 m 1 m 3 m 1 m 3 m	lopping) N 0 GHz PNO: Fast → IFGain:Low #VBV 2.403 8 GHz 2.403 8 GHz 2.400 0 GHz	VNT 1-DH5	2402MHz Ant #Avg Type: RMS Avg Hold: 1000/1000 Mk	0000 ms (1001 pts) 1 Hopping Em 1 2 40 3 8 GHz 0.931 dBm 1 0.	nission Frequency Auto Tur Center Fre 2.356000000 GH Start Fre 2.306000000 GH Stop Fre 2.406000000 GH























10. 20 dB Bandwidth

10.1 Block Diagram Of Test Setup



10.2 Limit

N/A

10.3 Test procedure

- 1. Set RBW = 30kHz.
- 2. Set the video bandwidth (VBW) \ge 3 x RBW.
- 3. Detector = Peak.
- 4. Trace mode = max hold.
- 5. Sweep = auto couple.
- 6. Allow the trace to stabilize.

7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

Edition: B.2

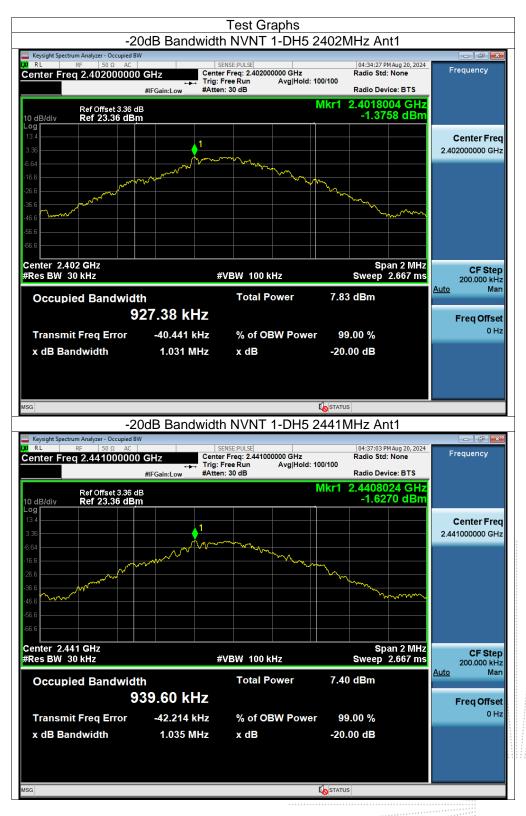


10.4 Test Result

Condition	Mode	Frequency (MHz)	-20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	1.031	Pass
NVNT	1-DH5	2441	1.035	Pass
NVNT	1-DH5	2480	1.033	Pass
NVNT	2-DH5	2402	1.324	Pass
NVNT	2-DH5	2441	1.326	Pass
NVNT	2-DH5	2480	1.353	Pass
NVNT	3-DH5	2402	1.307	Pass
NVNT	3-DH5	2441	1.301	Pass
NVNT	3-DH5	2480	1.293	Pass











Edition: B.2













Edition: B.2



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.

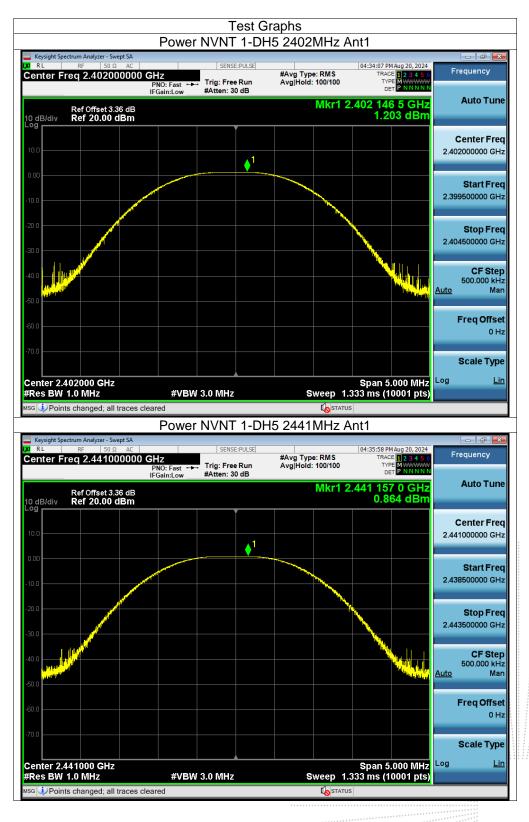
2. Set the spectrum analyzer: RBW = 2MHz. VBW = 6MHz. Sweep = auto; Detector Function = Peak.

3. Keep the EUT in transmitting at lowest, medium and highest channel individually. Record the max value.

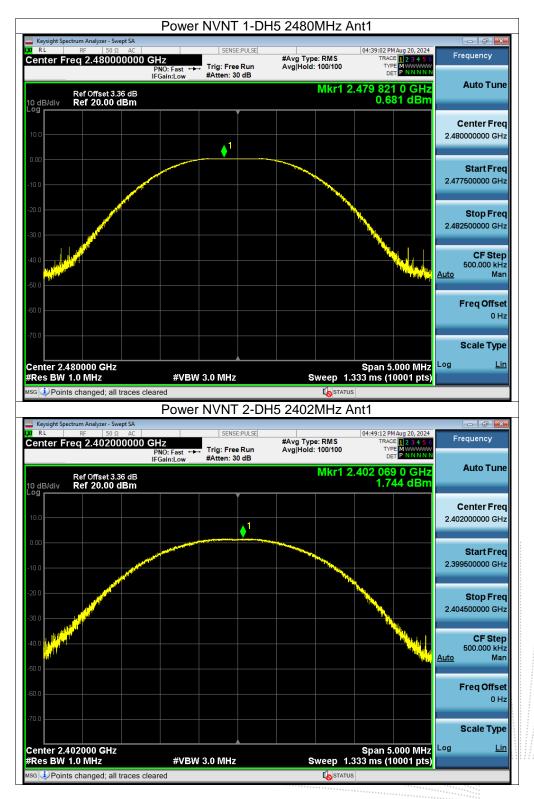
11.4 Test Result

1.4 Test	Result				
Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	1.2	21	Pass
NVNT	1-DH5	2441	0.86	21	Pass
NVNT	1-DH5	2480	0.68	21	Pass
NVNT	2-DH5	2402	1.74	21	Pass
NVNT	2-DH5	2441	1.45	21	Pass
NVNT	2-DH5	2480	1.27	21	Pass
NVNT	3-DH5	2402	2.04	21	Pass
NVNT	3-DH5	2441	1.74	21	Pass
NVNT	3-DH5	2480	1.56	21	Pass

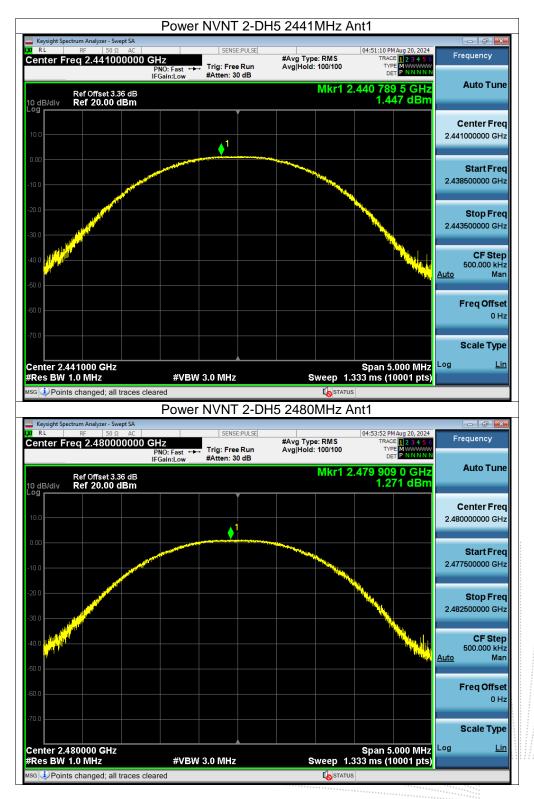






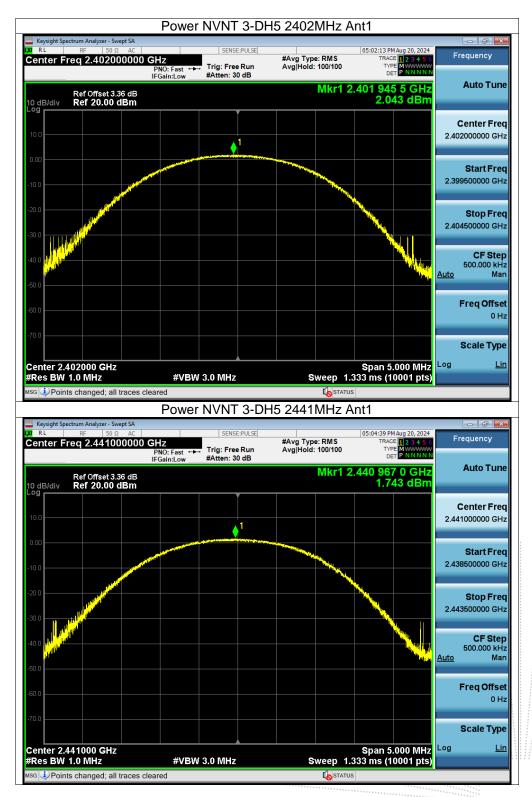




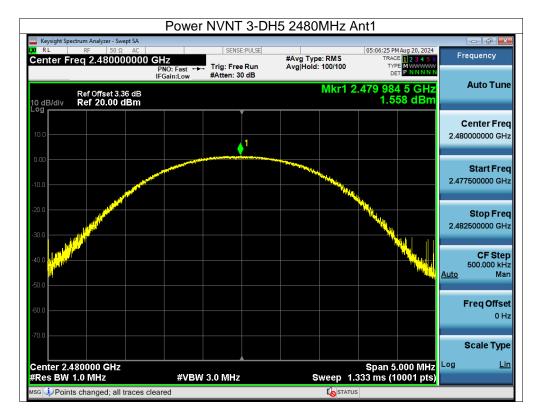


Edition: B.2









Edition: B.2



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.

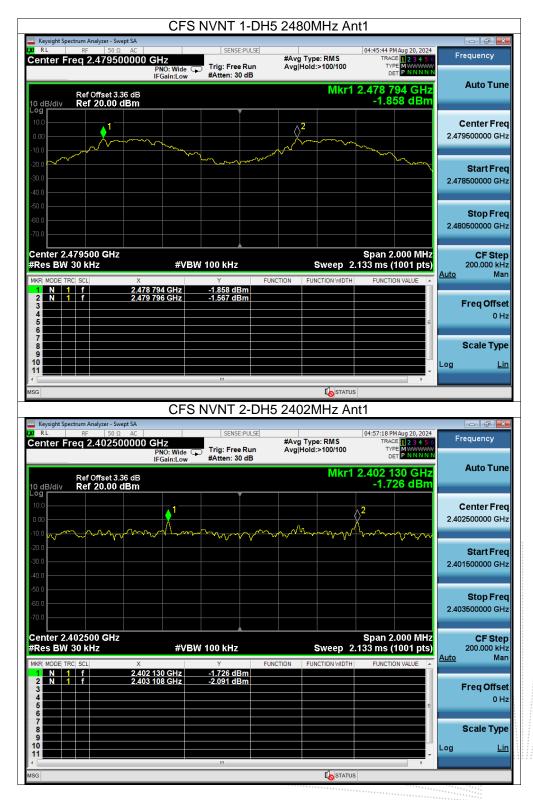
Mode	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
1-DH5	2402.022	2402.8	0.778	0.687	Pass
1-DH5	2440.964	2441.956	0.992	0.69	Pass
1-DH5	2478.794	2479.796	1.002	0.689	Pass
2-DH5	2402.13	2403.108	0.978	0.883	Pass
2-DH5	2440.956	2441.956	1	0.884	Pass
2-DH5	2479.118	2480.126	1.008	0.902	Pass
3-DH5	2401.794	2402.954	1.16	0.871	Pass
3-DH5	2440.798	2441.964	1.166	0.867	Pass
3-DH5	2478.806	2480.068	1.262	0.862	Pass
	1-DH5 1-DH5 1-DH5 2-DH5 2-DH5 3-DH5 3-DH5	Mode (MHz) 1-DH5 2402.022 1-DH5 2440.964 1-DH5 2478.794 2-DH5 2402.13 2-DH5 2440.956 2-DH5 2479.118 3-DH5 2401.794 3-DH5 2440.798	Mode (MHz) (MHz) 1-DH5 2402.022 2402.8 1-DH5 2440.964 2441.956 1-DH5 2478.794 2479.796 2-DH5 2402.13 2403.108 2-DH5 2440.956 2441.956 2-DH5 2479.118 2480.126 3-DH5 2401.794 2402.954 3-DH5 2440.798 2441.964	Mode(MHz)(MHz)(MHz)1-DH52402.0222402.80.7781-DH52440.9642441.9560.9921-DH52478.7942479.7961.0022-DH52402.132403.1080.9782-DH52440.9562441.95612-DH52479.1182480.1261.0083-DH52401.7942402.9541.163-DH52440.7982441.9641.166	Mode(MHz)(MHz)(MHz)(MHz)1-DH52402.0222402.80.7780.6871-DH52440.9642441.9560.9920.691-DH52478.7942479.7961.0020.6892-DH52402.132403.1080.9780.8832-DH52440.9562441.95610.8842-DH52479.1182480.1261.0080.9023-DH52401.7942402.9541.160.8713-DH52440.7982441.9641.1660.867

12.4 Test Result

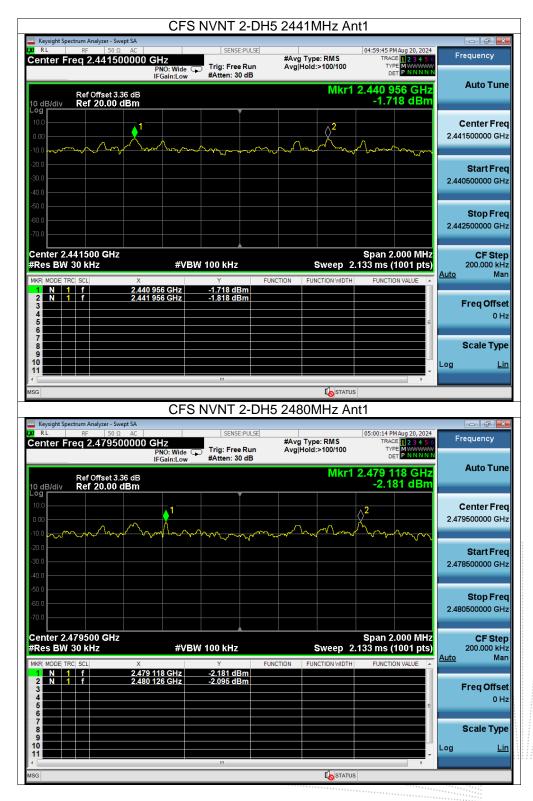


	05		Graphs		
		S NVNT 1-DF	15 2402MHz Ar	111	
Keysight Spectrum Analyzer	50 Ω AC	SENSE:PULSE		04:42:24 PM Aug 20, 2024	
Center Freq 2.402	2500000 GHz PNO: Wide	Trig: Free Run	#Avg Type: RMS Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE MWWWW DET P N N N N	Frequency
	IFGain:Lov		Mket	2.402 022 GHz	Auto Tune
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0.00			2 2		2.402500000 GH
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-20.0		- man we have			Start Free
-30.0					2.401500000 GH:
-50.0					
-60.0					Stop Fred 2.403500000 GH;
-70.0					2.403500000 GH
Center 2.402500 G				Span 2.000 MHz	CF Step
#Res BW 30 kHz		'BW 100 kHz	-	.133 ms (1001 pts)	200.000 kH Auto Mar
MKR MODE TRC SCL	× 2.402 022 GHz	Y F -1.683 dBm	UNCTION FUNCTION WIDTH	FUNCTION VALUE	
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Keysight Spectrum Analyzer	- Swept SA 50 Ω AC	" SNVNT 1-DH	15 2441MHz Ar	04:43:17 PM Aug 20, 2024	Frequency
	- Swept SA 50 Ω AC 1500000 GHz PNO: Wide	SENSE:PULSE		nt1	
Keysight Spectrum Analyzer	- Swept SA 50 Ω AC 1500000 GHz PNO: Wide IFGain:Lov	SENSE:PULSE	15 2441MHz Ar #Avg Type: RMS Avg Hold:>100/100	04:43:17 PM Aug 20, 2024 TRACE 2 3 4 5 6 TYPE MWWWWWW DET PHNNNNN	
Keysight Spectrum Analyzer 20 RL RF S Center Freq 2.441 Ref Offse	- Swept SA 50 Ω AC 1500000 GHz PNO: Wide IFGain:Lov et 3.36 dB	SENSE:PULSE	15 2441MHz Ar #Avg Type: RMS Avg Hold:>100/100	04:43:17 PM Aug 20, 2024	Frequency
Keysight Spectrum Analyzer RL RF S Center Freq 2.441 Ref Offse	- Swept SA 50 Ω AC 1500000 GHz PNO: Wide IFGain:Lov et 3.36 dB	SENSE:PULSE	15 2441MHz Ar #Avg Type: RMS Avg Hold:>100/100 Mkr1	04:43:17 PM Aug 20, 2024 TRACE 2 3 4 5 6 TYPE MWWWW DET P NNNN N 2.440 964 GHz	Frequency Auto Tune
Keysight Spectrum Analyzer R RL RF S Center Freq 2.441 Ref Offse 10 dB/div Ref 20.0 10.0	- Swept SA 50 Q AC 1500000 GHz PNO: Wide IFGain:Lov et 3.36 dB 00 dBm	SENSE:PULSE	15 2441MHz Ar #Avg Type: RMS Avg Hold:>100/100 Mkr1	04:43:17 PM Aug 20, 2024 TRACE 2 3 4 5 6 TYPE MWWWW DET P NNNN N 2.440 964 GHz	Frequency
Reysight Spectrum Analyzer Ref Offse Center Freq 2.441 Center Freq 2.441 Ref Offse 10 dB/div Ref 20.0 10.0 10.0	- Swept SA 50 Q AC 1500000 GHz PNO: Wide IFGain:Lov et 3.36 dB 00 dBm	SENSE:PULSE	15 2441MHz Ar #Avg Type: RMS Avg Hold:>100/100 Mkr1	04:43:17 PM Aug 20,2024 TRACE 1 2:3 4 5 6 TYPE MUNIMWY OCT P NUNN N 2.440 964 GHz -2.462 dBm	Frequency Auto Tune
Reysight Spectrum Analyzer	- Swept SA 50 Q AC 1500000 GHz PNO: Wide IFGain:Lov et 3.36 dB 00 dBm	SENSE:PULSE	15 2441MHz Ar #Avg Type: RMS Avg Hold:>100/100 Mkr1	04:43:17 PM Aug 20, 2024 TRACE 11 23 4 5 6 TYPE 10 23 4 5 6 TYPE 10 20 4 5 6 TYPE 10 10 10 10 10 10 10 10 10 10 10 10 10	Frequency Auto Tune Center Freq 2.441500000 GH Start Freq
Reysight Spectrum Analyzer Resolution Ref 2.441 Center Freq 2.441 Ref Offse 10.0	- Swept SA 50 Q AC 1500000 GHz PNO: Wide IFGain:Lov et 3.36 dB 00 dBm	SENSE:PULSE	15 2441MHz Ar #Avg Type: RMS Avg Hold:>100/100 Mkr1	04:43:17 PM Aug 20,2024 TRACE 1 2:3 4 5 6 TYPE MUNIMWY OCT P NUNN N 2.440 964 GHz -2.462 dBm	Frequency Auto Tune Center Freq 2.441500000 GH
Reysight Spectrum Analyzer	- Swept SA 50 Q AC 1500000 GHz PNO: Wide IFGain:Lov et 3.36 dB 00 dBm	SENSE:PULSE	15 2441MHz Ar #Avg Type: RMS Avg Hold:>100/100 Mkr1	04:43:17 PM Aug 20,2024 TRACE 1 2:3 4 5 6 TYPE MUNIMWY OCT P NUNN N 2.440 964 GHz -2.462 dBm	Frequency Auto Tune Center Free 2.441500000 GH: Start Free 2.440500000 GH:
Reysight Spectrum Analyzer RL RF S Center Freq 2.441 Ref Offse S 10 dB/div Ref 20.0 S 10.0	- Swept SA 50 Q AC 1500000 GHz PNO: Wide IFGain:Lov et 3.36 dB 00 dBm	SENSE:PULSE	15 2441MHz Ar #Avg Type: RMS Avg Hold:>100/100 Mkr1	04:43:17 PM Aug 20,2024 TRACE 1 2:3 4 5 6 TYPE MUNIMWY OCT P NUNN N 2.440 964 GHz -2.462 dBm	Frequency Auto Tune Center Freq 2.441500000 GH: Start Freq 2.440500000 GH: Stop Freq
Reysight Spectrum Analyzer Ref Offse Center Freq 2.441 Ref Offse 10 dB/div Ref 20.0 1	- Swept SA 50 Q AC 1500000 GHz PNO: Wide IFGain:Lov et 3.36 dB 00 dBm	SENSE:PULSE	15 2441MHz Ar #Avg Type: RMS Avg Hold:>100/100 Mkr1	04:43:17 PM Aug 20,2024 TRACE 1 2:3 4 5 6 TYPE MUNIMWY OCT P NUNN N 2.440 964 GHz -2.462 dBm	Frequency Auto Tune Center Free 2.441500000 GH: Start Free 2.440500000 GH:
Keysight Spectrum Analyzer Ref Offse Center Freq 2.441 Ref Offse 10 dB/div Ref 20.0 10 0	- Swept SA 50 Q AC 1500000 GHz PNO: Wide IFGain:Lov et 3.36 dB 00 dBm	SENSE:PULSE	15 2441MHz Ar #Avg Type: RMS Avg Hold:>100/100 Mkr1	111 14:3:17 PM Aug 20, 2024 17RACE 1 2 3 4 5 6 17VE 1 2.440 964 GHz -2.462 dBm 4.40 4.40 4.40 5pan 2.000 MHz	Frequency Auto Tune Center Free 2.441500000 GH: Start Free 2.440500000 GH: Stop Free 2.442500000 GH: CF Step
Keysight Spectrum Analyzer Ref Offse Center Freq 2.441	- Swept SA 50 Q. AC 1500000 GHz PNO: Wide IFGain:Lov ot 3.36 dB 00 dBm	SENSE:PULSE	15 2441MHz Ar #Avg Type: RMS Avg Hold:>100/100 Mkr1	11 14:43:17 PM Aug 20, 2024 TRACE 12 23 45 6 TYPE 12 7	Center Free 2.441500000 GH: Start Free 2.442500000 GH:
Keysight Spectrum Analyzer Ref Offse Center Freq 2.441 Ref Offse IO dB/div Ref 20.0 IO dB/div IO dB/div IN dV IO dB/div	- Swept SA 50 Q AC 1500000 GHz PN0: Wide IFGain:Lov et 3.36 dB 00 dBm 	SENSE:PULSE	15 2441MHz Ar #Avg Type: RMS Avg Hold:>100/100 Mkr1	111 14:43:17 PM Aug 20, 2024 17RACE 1 2 3 4 5 6 17VE 1 2.440 964 GHz -2.462 dBm 4.400 964 GHz -2.462 dBm 4.400 964 GHz -2.462 dBm	Frequency Auto Tune Center Free 2.441500000 GH: 2.440500000 GH: Stop Free 2.442500000 GH: CF Step 200.000 kH:
Keysight Spectrum Analyzer Ref Offse Center Freq 2.441 Ref Offse 10 dB/div Ref 20.0 11 dF 11 11 dF 11	- Swept SA 50 @ AC 1500000 GHz PNO: Wide IFGain:Lov et 3.36 dB 00 dBm 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	SENSE:PULSE	15 2441MHz Ar #Avg Type: RMS Avg Hold:>100/100 Mkr1	11 14:43:17 PM Aug 20, 2024 TRACE 12 23 45 6 TYPE 12 7	Frequency Auto Tune Center Free 2.441500000 GH: 2.440500000 GH: Stop Free 2.442500000 GH: CF Step 200.000 kH:
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Keysight Spectrum Analyzer Ref Offse Center Freq 2.441 Ref Offse IO dB/div Ref 20.0 IO dB/div IO dB/div Res BW 30 kHz IO dB/div MRR MODE TRC SCL I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I I<	- Swept SA 50 Q AC 1500000 GHz PN0: Wide IFGain:Lov et 3.36 dB 00 dBm 	SENSE:PULSE	15 2441MHz Ar #Avg Type: RMS Avg Hold:>100/100 Mkr1	11 14:43:17 PM Aug 20, 2024 TRACE 12 23 45 6 TYPE 12 7	Frequency Auto Tune Center Freq 2.441500000 GH: 2.440500000 GH: 2.442500000 GH: 2.442500000 GH: 2.442500000 GH: CF Step 200.000 kH: Auto Mar Freq Offse 0 H: Scale Type
Keysight Spectrum Analyzer Ref Offse Center Freq 2.441 Ref Offse 10 dB/div Ref 20.0 10 0 Ref 20.0 20 0 Ref 20.0	- Swept SA 50 Q AC 1500000 GHz PN0: Wide IFGain:Lov et 3.36 dB 00 dBm 	SENSE:PULSE	15 2441MHz Ar #Avg Type: RMS Avg Hold:>100/100 Mkr1	111 194:43:17 PM Aug 20, 2024 TRACE 12 23 45 6 TYPE WINNING 2.440 964 GHz -2.462 dBm Span 2.000 MHz 133 ms (1001 pts) FUNCTION VALUE	Frequency Auto Tune Center Freq 2.441500000 GH: 2.440500000 GH: 2.442500000 GH: 2.442500000 GH: 2.442500000 GH: CF Step 200.000 kH: Auto Mar Freq Offse 0 H: Scale Type











	CFS	NVNT 3-DF	15 2402MHz Ant	:1	
Keysight Spectrum Analyzer - Sv					
Center Freq 2.4025	Ω AC 000000 GHz PNO: Wide ⊂ IFGain:Low	Trig: Free Run #Atten: 30 dB	#Avg Type: RMS Avg Hold:>100/100	05:12:25 PM Aug 20, 2024 TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P N N N N N	Frequency
Ref Offset 3 10 dB/div Ref 20.00	.36 dB		Mkr1 2	2.401 794 GHz -1.606 dBm	Auto Tune
10.0 10.0 10.0 10.0	M	- Coronomico	2 mmm n	Wy box all the start	Center Freq 2.402500000 GHz
-20.0 -30.0 -40.0					Start Freq 2.401500000 GHz
-50.0 -60.0 -70.0					Stop Freq 2.403500000 GHz
Center 2.402500 GHz #Res BW 30 kHz	#VB1	W 100 kHz	-	Span 2.000 MHz 33 ms (1001 pts)	CF Step 200.000 kHz <u>Auto</u> Man
MKR MODE TRC SCL 1 N 1 F 2 N 1 F 3 4 5 6 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	× 2.401 794 GHz 2.402 954 GHz	-1.606 dBm -1.384 dBm		FUNCTION VALUE	Freq Offset 0 Hz
7 8 9 10					Scale Type
11 <				▼ ►	
MSG					
	CFS	NVNT 3-DF	15 2441MHz Ant	:1	
Keysight Spectrum Analyzer - St KKI RL RF 50 9	wept SA Ω AC	SENSE:PULSE		05:10:25 PM Aug 20, 2024	
Center Freq 2.4415		Trim Free Days	#Avg Type: RMS Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE MWWWW DET P NNNNN	Frequency
Ref Offset 3 10 dB/div Ref 20.00			Mkr1 2	2.440 798 GHz -1.477 dBm	Auto Tune
-10.0			^2	A	Center Freq 2.441500000 GHz
			^2	^~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
-10.0					2.441500000 GHz Start Freq
-10.0 -20.0 -30.0 -40.0 -50.0 -60.0		W 100 KHz		Span 2.000 MHz 33 ms (1001 pts)	2.441500000 GHz Start Freq 2.440500000 GHz Stop Freq 2.442500000 GHz CF Step 200.000 kHz
-10.0				I33 ms (1001 pts)	2.441500000 GHz Start Freq 2.440500000 GHz Stop Freq 2.442500000 GHz CF Step



	CFS	NVNT 3-	DH5 248	30MHz Ai	nt1			
Keysight Spectrum Analyzer - Swep							_	- ē ×
RL RF 50 Ω Center Freq 2.47950		SENSE:PUL	#Avg	Type: RMS	TRAC	Aug 20, 2024 E 1 2 3 4 5 6 E M WWWW	F	requency
	PNO: Wide C IFGain:Low	Trig: Free Ru #Atten: 30 dE		Hold:>100/100	DE			
Ref Offset 3.3 10 dB/div Ref 20.00 d				Mkr1	2.478 8 -2.12	06 GHz 29 dBm		Auto Tune
Log 10.0								Center Freq
0.00	0				2			9500000 GHz
-10.0	man	mann	\sim	www	m n	\sim		
-20.0								Start Freq
-40.0							2.47	'8500000 GHz
-50.0								
-60.0							2.48	Stop Freq
-70.0								
Center 2.479500 GHz #Res BW 30 kHz	#VB	W 100 kHz		Sweep 2	Span 2. .133 ms (.000 MHz 1001 pts)		CF Step 200.000 kHz
MKR MODE TRC SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTIO	N VALUE	<u>Auto</u>	Man
1 N 1 f 2 N 1 f	2.478 806 GHz 2.480 068 GHz	-2.129 dBm -7.016 dBm						Freq Offset
4								0 Hz
6 7								
8								Scale Type
10						-	Log	<u>Lin</u>
		III				+		
MSG					S			



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-DH5	79	15	Pass
NVNT	2-DH5	79	15	Pass
NVNT	3-DH5	79	15	Pass



		t Graphs	A	
	Hopping No. NVNT	1-DH5 2402MHz	z Ant1	
Keysight Spectrum Analyzer - Swept SA	SENSE:PULSE	E	04:41:13 PM Aug 20, 2024	
Center Freq 2.44175000		#Avg Type: RMS Avg Hold:>100/100	TRACE 1 2 3 4 5 6	Frequency
	PNO: Fast Free Run IFGain:Low #Atten: 30 dB	Avg 1010.2100/100	DET P NNNN	
		Mkr1 2.	401 920 5 GHz	Auto Tune
Ref Offset 3.36 dB 10 dB/div Ref 20.00 dBm			-0.126 dBm	
Log				
10.0			\wedge^2	Center Free
	ብሌለአስላለካለስለአስስስላለላለስለአስበብ	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	ANAAAAAAAAA	2.441750000 GH
-10.0 - <u>?</u>¥ŸÜŸŰÜŸŸÜŰÜŸŰŸŰŸŸŸĬ		<u>Voli na ka ka</u>	<u>YAAAAAAAAAAAAAAAAAAAA (</u>	
-20.0				Start Free
-30.0				2.400000000 GH
-40.0				
-50.0				Stop Free
-60.0				2.483500000 GH
-70.0				
Start 2.40000 GHz			Stop 2.48350 GHz	CF Ster
#Res BW 100 kHz	#VBW 300 kHz		000 ms (1001 pts)	8.350000 MH
MKR MODE TRC SCL X	Y	FUNCTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Mai
1 N 1 f 2.40 [°]	1 920 5 GHz -0.126 dBm 0 076 5 GHz 0.081 dBm			
3	0.081 dBm			Freq Offse
4 5			E	0 H:
6 7				
8				Scale Type
10				Log <u>Lir</u>
MSG				
	Hopping No. NVNT		z Apt1	
Keysight Spectrum Analyzer - Swept SA		2-0115 240210112	Anti	
LX/ RL RF 50 Ω AC	SENSE:PULSE		04:57:34 PM Aug 20, 2024	
Center Freq 2.44175000	0 GHz PNO: Fast Trig: Free Run	#Avg Type: RMS Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE MWWWWW	Frequency
	IFGain:Low #Atten: 30 dB		DET PNNNN	Auto Tur
Ref Offset 3.36 dB		Mkr1 2.	401 586 5 GHz	Auto Tune
10 dB/div Ref 20.00 dBm			-4.942 dBm	
10.0				Center Free
0.00			^2	2.441750000 GH
-10.0	pany was way was well for the	ᡧᡗᡊ᠋ᡎ᠇ᡄᢛᢑᠼᡢᠴᡰ᠘ᡀᡐᢑᢑᡘᡆ᠋᠋ᡃᠧ᠕ᠯᢛᠬ᠙ᠰᡃᡪᠰᠩᡧ	whichberry	
-20.0				Of and East
-20.0				
-20.0				Start Free 2.400000000 GH:
-20.0				2.400000000 GH: Stop Free
-20.0 -30.0 -40.0 -50.0				2.400000000 GH:
-20.0 - -30.0 - -40.0 - -60.0 - -70.0 -				2.400000000 GH Stop Fre 2.483500000 GH
-20.0 -30.0 -40.0 -50.0 -60.0 -70.0 Start 2.40000 GHz	#VBW 300 kHz		Stop 2.48350 GHz	2.40000000 GH: Stop Free 2.48350000 GH: CF Step
20.0 30.0 40.0 50.0	#VBW 300 kHz	Sweep 8.	Stop 2.48350 GHz 200 ms (1001 pts)	2.40000000 GH Stop Free 2.48350000 GH CF Step 8.350000 MH
-20.0 -30.0 -40.0 -40.0 -5	Y 1 586 5 GHz -4.942 dBm		Stop 2.48350 GHz	2.40000000 GH Stop Free 2.48350000 GH CF Step 8.350000 MH
-20.0 -30.0 -40.0 -50.0 -50.0 -60.0 -70.0 Start 2.40000 GHz #Res BW 100 kHz WKR MODE TRC SCL X -1 N 1 f 2.400	Y	Sweep 8.	Stop 2.48350 GHz 200 ms (1001 pts)	2.40000000 GH Stop Free 2.48350000 GH CF Ste 8.350000 MH <u>Auto</u> Mai
20.0 30.0 40.0 50.0	Y 1 586 5 GHz -4.942 dBm	Sweep 8.	Stop 2.48350 GHz 200 ms (1001 pts) FUNCTION VALUE	2.40000000 GH Stop Free 2.48350000 GH CF Steg 8.350000 MH <u>Auto</u> Mar Freq Offse
20.0 30.0 40.0 50.0	Y 1 586 5 GHz -4.942 dBm	Sweep 8.	Stop 2.48350 GHz 200 ms (1001 pts)	2.40000000 GH Stop Free 2.48350000 GH CF Steg 8.350000 MH <u>Auto</u> Mar Freq Offse
200 300 400 500 500 500 500 500 500 5	Y 1 586 5 GHz -4.942 dBm	Sweep 8.	Stop 2.48350 GHz 200 ms (1001 pts) FUNCTION VALUE	2.40000000 GH: Stop Free 2.48350000 GH: CF Step 8.350000 MH:
20.0 30.0 40.0 50.0	Y 1 586 5 GHz -4.942 dBm	Sweep 8.	Stop 2.48350 GHz 200 ms (1001 pts) FUNCTION VALUE	2.40000000 GH: Stop Free 2.483500000 GH: 8.350000 MH: <u>Auto</u> Mar Freq Offse 0 H: Scale Type
20.0 30.0 40.0 50.0	Y 1 586 5 GHz -4.942 dBm	Sweep 8.	Stop 2.48350 GHz 200 ms (1001 pts) FUNCTION VALUE	2.40000000 GH Stop Free 2.48350000 GH CF Stej 8.350000 MH <u>Auto</u> Ma Freq Offse 0 H
-20.0 -30.0 -40.0 -40.0 -40.0 -5	Y 1 586 5 GHz -4.942 dBm	Sweep 8.	Stop 2.48350 GHz 200 ms (1001 pts) FUNCTION VALUE	2.40000000 GH Stop Fre 2.48350000 GH CF Ste 8.350000 MH <u>Auto</u> Ma Freq Offse 0 H Scale Typ



Ној	pping No. NVNT 3-	DH5 2402MH	z Ant1	
Keysight Spectrum Analyzer - Swept SA	SENSE:PULSE		05:08:17 PM Aug 20, 2024	- 6 -
Center Freq 2.441750000 GH	Z Z Z	#Avg Type: RMS AvglHold:>100/100	TRACE 1 2 3 4 5 6 TYPE M WWWWW	Frequency
	IO: Fast Trig: Free Run ain:Low #Atten: 30 dB	Avg Hold:>100/100	DET	
Ref Offset 3.36 dB 10 dB/div Ref 20.00 dBm		Mkr1 2	.401 753 5 GHz -2.741 dBm	Auto Tune
10.0				Center Freg
0.00 A A A A A A A A A A A A A A A A A A	Mahalwichtannersterhichtynthyperten	human	mylmilighedurranter	2.441750000 GHz
-10.0				
-30.0				Start Freq 2.40000000 GHz
-40.0			\	2.40000000 6112
-50.0			L	Stop Freq
-60.0				2.483500000 GHz
-70.0				
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
MKR MODE TRC SCL X		CTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Man
1 N 1 f 2.401 753 5 2 2 N 1 f 2.480 410 5 1 5	5 GHz -2.741 dBm 5 GHz -8.423 dBm			Freg Offset
3				0 Hz
5 6 7				
8				Scale Type
10				Log <u>Lin</u>
MSG			3	

Edition: B.2



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

DH5 Packet permit maximum 1600 / 79 / 6 hops per second in each channel (5 time slots RX, 1 time slot TX).

DH3 Packet permit maximum 1600 / 79 / 4 hops per second in each channel (3 time slots RX, 1 time slot TX).

DH1 Packet permit maximum 1600 / 79 /2 hops per second in each channel (1 time slot RX, 1 time slot TX). So, the Dwell Time can be calculated as follows:

DH5:1600/79/6*0.4*79*(MkrDelta)/1000 DH3:1600/79/4*0.4*79*(MkrDelta)/1000 DH1:1600/79/2*0.4*79*(MkrDelta)/1000 Remark: Mkr Delta is once pulse time.



Condition	Mode	Frequency (MHz)	Pulse Time (ms)	Total Dwell Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	0.376	119.944	400	Pass
NVNT	1-DH3	2441	1.632	262.752	400	Pass
NVNT	1-DH5	2441	2.88	282.24	400	Pass
NVNT	2-DH1	2441	0.386	123.134	400	Pass
NVNT	2-DH3	2441	1.638	266.994	400	Pass
NVNT	2-DH5	2441	2.886	303.03	400	Pass
NVNT	3-DH1	2441	0.387	123.453	400	Pass
NVNT	3-DH3	2441	1.637	243.913	400	Pass
NVNT	3-DH5	2441	2.887	337.779	400	Pass

Edition: B.2



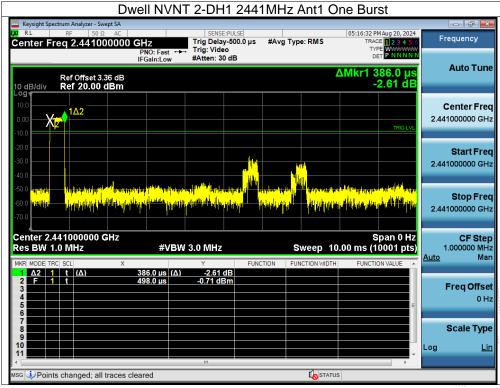
	Test G	Fraphs		
Dwell	NVNT 1-DH1 244	11MHz Ant1 C	ne Burst	
Keysight Spectrum Analyzer - Swept SA	SENSE:PULSE		05:12:54 PM Aug 20, 2024	
Center Freq 2.441000000 GHz	Trig Delay-500.0 µs	s #Avg Type: RMS	TRACE 1 2 3 4 5 6	Frequency
	D: Fast ↔ Trig: Video in:Low #Atten: 30 dB		DET PNNNN	
Ref Offset 3.36 dB			ΔMkr1 376.0 μs	Auto Tune
10 dB/div Ref 20.00 dBm			-1.03 ḋB	
10.0				Center Freq
			TRIG LVL	2.441000000 GHz
-10.0			TRIGLYL	
-20.0				Start Freq
-30.0				2.441000000 GHz
	alline and a stable as a stable state	Petholic policity of the second state of the s		
	ان والمراجع بين من المانية المراجع بين من المراجع بين المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع	e napis e per e per per per per per per per per	. An all the statement of the little state	Stop Freq
-70.0	The second s	vi all'abit e la sal	I WE SHOULD HAVE	2.441000000 GHz
Center 2.441000000 GHz			Snop 0 Ha	05.04.0
Res BW 1.0 MHz	#VBW 3.0 MHz	Sweep 1	Span 0 Hz 0.00 ms (10001 pts)	CF Step 1.000000 MHz
MKR MODE TRC SCL X		INCTION FUNCTION WIDTH	FUNCTION VALUE	<u>Auto</u> Man
	.0 μs (Δ) -1.03 dB .0 μs -1.05 dBm			
3				Freq Offset 0 Hz
5			E	0 H2
7				Scale Type
9				
10 11			-	Log <u>Lin</u>
MSG Deints changed; all traces cleared		STATU	•	

		Dwell	NVN	T 1-DH3	3 244	1MHz	Ant1 C	Dne Bu	rst		
	n Analyzer - Swept S	SA AC		SENSE:F				05:13:51	PM Aug 20, 2024	_	
Center Freq		000 GHz	:Fast ↔	Trig Delay-	500.0 µs	#Avg Ty	pe: RMS	TR	ACE 1 2 3 4 5 6 YPE WWWWWW	Fr	equency
			in:Low	#Atten: 30				1	DET PNNNNN		Auto Tune
	ef Offset 3.36 ef 20.00 dB							ΔMkr1 1	1.632 ms 1.72 dB		Autorune
10.0		1Δ2									Center Freq
0.00 X2									TRIG LVL	2.44	1000000 GHz
-10.0									HIG LYL		
-30.0										2.44	Start Freq 1000000 GHz
-40.0										2.44	1000000 GH2
-50.0 <mark>- gruptings</mark>		in the state of the	ha datu ta ba Ala a								Stop Freq
-60.0 <mark>p.,php</mark>		and a start of the					""had file	in the state of th	ىرى <u>كاركى كى م</u> اتيكانا كا	2.44	1000000 GHz
-70.0											
Center 2.441 Res BW 1.0 I		Z	#VBW	/ 3.0 MHz		ç	weep 1		Span 0 Hz 10001 pts)	1	CF Step .000000 MHz
MKR MODE TRC SO		Х		Y			INCTION WIDT		FION VALUE	<u>Auto</u>	Man
2 F 1 t	<u>(Δ)</u>	<u>1.632</u> 498.0	2 ms (Δ) 0 μs	1.72 d -2.35 dBr							Ero a Offect
3											Freq Offset 0 Hz
5 6									E		
7 8											Scale Type
9 10										Log	Lin
11											
мsg 🗼 Points ch	nanged; all trad	ces cleared					I o stat	US			

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	Dwell NV	NT 1-DH5	2441MHz	z Ant1 O	ne Burst	
Keysight Spectrum Analyzer - Swe						ē 🔁
RL RF 50 Ω Center Freg 2.44100		SENSE:PUL Trig Delay-50		Type: RMS	04:42:31 PM Aug 20, 20 TRACE 1 2 3 4	
	PNO: Fast					ww-
	IFGain:Low	#Atten: 30 dB				Auto Tun
Ref Offset 3.3				Δ	Mkr1 2.880 m -4.37 d	
10 dB/div Ref 20.00 d Log	dBm				-4.57 u	
10.0						Center Fre
0.00 X2	<u>12</u>	12				2.441000000 GH
-10.0					TRIG LY	<u>^_</u>
-20.0						Otant Euro
-30.0						Start Fre 2.441000000 G⊢
-40.0						2.441000000 GF
-50.0 stated			واردار أوافنا وأحار أرادور وم	hadan	and the strands the still and st	
		n en e presenta de la del calenda de la desta de la Compositiva de la desta de l	والمحالية المراطي والمحادية المطاعد	la lla sut de primerer e de	, illuindeir ach in tha to thaile bin bin	Stop Fre
-60.0 -60.0	100			. In Call adadh		2.441000000 GH
-70.0						
Center 2.441000000 G	SHz				Span 0 H	Z CF Ste
Res BW 1.0 MHz	#VI	3W 3.0 MHz		Sweep 10	.00 ms (10001 pt	s) 1.000000 M⊢
MKR MODE TRC SCL	Х	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE	Auto Ma
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	2.880 ms (499.0 us	Δ) -4.37 dB 0.23 dBm				
	499.0 µs	0.25 dBm				Freq Offse
4						OH
6						
7 8						Scale Typ
9						
10						Log <u>Li</u>
•					4	
MSG 🔱 Points changed; all t	traces cleared				5	





Dwell NVNT 2-DH3 2441MHz Ant1 One E	urst
Keysight Spectrum Analyzer - Swept SA	- ē 💌
Center Freg 2.441000000 GHz Trig Delay-500.0 µs #Avg Type: RMS	04 PM Aug 20, 2024 TRACE 1 2 3 4 5 6 Frequency
PN0: Fast ↔ Trig: Video IFGain:Low #Atten: 30 dB	
AMkr	1.638 ms Auto Tune
10 dB/div Ref 20.00 dBm	1.55 dB
	Center Freq
	2,441000000 GHz
-10.0 X2	TRIG LVL
-20.0	
-30.0	Start Freq 2.441000000 GHz
-40.0	2.441000000 GH2
-50.0 where the second se	to see between the second
- 60.0 مار <u>بار مار مار مار مار مار مار مار مار از مار مار مار مار مار مار مار مار مار مار</u>	Stop Freq
	2.441000000 GHz
Center 2.441000000 GHz Res BW 1.0 MHz #VBW 3.0 MHz Sweep 10.00 m	Span 0 Hz CF Step (10001 pts) 1.000000 MHz
	Auto Man
1 Δ2 1 t (Δ) 1.638 ms (Δ) 1.55 dB	
2 F 1 t 498.0 µs -3.02 dBm	Freq Offset
	0 Hz
6	
	Scale Type
9	Log Lin
	Log <u>Lin</u>
MSG DPoints changed; all traces cleared	

Keysight Spectrum Ana	2 I I I I I I I I I I I I I I I I I I I								
RL RF Center Freq 2.4		NO: East +++ T	SENSE:PULSE rig Delay-500.0 µ rig: Video Atten: 30 dB	ıs #AvgTyp	e: RMS	TRACI	Aug 20, 2024 1 2 3 4 5 6 W P N N N N N	F	requency
10 dB/div Ref 2	ffset 3.36 dB 20.00 dBm				Δ	Mkr1 2. (886 ms).15 dB		Auto Tui
10.0 0.00 10.0	142						TRIG LVL		Center Fr 1000000 G
20.0 30.0 -40.0								2.44	Start Fr 1000000 G
-50.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		latiniti konordiniti n <mark>hijaniti kanya</mark> n hije	i lan i Manua a tang dina talah Ariti tang sajad para dina talah sa	n stevet bereiter stellen sin p tydeler af paner, daar de te		and Philipping and and philipping and phi and philipping and philipping		2.44	
-60.0 11.	0000 GHz		0 MHz	<mark>iah uipan kasaka</mark> S		a <mark>ktariutu</mark> Si	pan 0 Hz 0001 pts)		CF Sto 1.000000 G
Center 2.441000 Res BW 1.0 MHz MKR MODE TRC SCL 2 F 1 t (2 3 4 5	00000 GHz z 2.81	#VBW 3.1	0 MHz	<mark>iah uipan kasaka</mark> S	weep 15.	<mark>. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.</mark>	pan 0 Hz 0001 pts)	Auto	CF Sto 1.000000 G 1.000000 M M Freq Offs
60.0 1 70.0	00000 GHz z 2.81	#VBW 3.1	0 MHz	<mark>iah uipan kasaka</mark> S	weep 15.	<mark>. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.</mark>	pan 0 Hz 0001 pts)	Auto	CF Sta CF Sta 1.000000 M M Freq Offs 0
Center 2.441000 Res BW 1.0 MHz MKR MODE TRC SCL 1 A2 1 t (A 2 F 1 t 3 4 5 5 6 7 7 8	00000 GHz z 2.81	#VBW 3.1	0 MHz	<mark>iah uipan kasaka</mark> S	weep 15.	<mark>. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.</mark>	pan 0 Hz 0001 pts)	Auto	Stop Fra 11000000 G CF Sta 1.000000 M M Freq Offs 01 Scale Tyj



]	Dwell NVNT 3-DH1 244	1MHz Ant1 One Burst	
🔤 Keysight Spectrum Analyzer - Swept SA			- ē 🔀
Center Freg 2.4410000		05:19:26 PM Aug 20, 2024 #Avg Type: RMS TRACE 1 2 3 4 5 6	Frequency
Center Freq 2.44 10000	PNO: Fast +++ Trig: Video		
	IFGain:Low #Atten: 30 dB		Auto Tune
Ref Offset 3.36 di 10 dB/div Ref 20.00 dBn		ΔMkr1 387.0 μs 1.51 dB	Auto Tune
10.0 10.2			Center Freq
			2.441000000 GHz
-10.0		TRIG LVL	
-20.0			
-30.0	ath ath		Start Freq
-40.0	l l l l l l l l l l l l l l l l l l l		2.441000000 GHz
	a subline is an and in the little		
-50.0 million the station of the second	al angen tier politiken in der beiter einer beiter beiter in der beiter beiter. Die einen der beiter beiter beiter beiter beiter beiter beiter beiter.		Stop Freq
-60.0 <mark>phty/n - stapping shift of h</mark>			2.441000000 GHz
-70.0			
Center 2.441000000 GHz		Span 0 Hz	CF Step
Res BW 1.0 MHz	#VBW 3.0 MHz	Sweep 10.00 ms (10001 pts)	1.000000 MHz
MKR MODE TRC SCL	X Y FUN	NCTION FUNCTION WIDTH FUNCTION VALUE	<u>Auto</u> Man
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	387.0 μs (Δ) 1.51 dB 498.0 μs -2.83 dBm		
2 F 1 t	498.0 µs -2.83 dBm		Freq Offset
4 5			0 Hz
6			
8			Scale Type
9			
10			Log <u>Lin</u>
•		•	
MSG Deints changed; all trace	es cleared	I o STATUS	

	Dwell NV	'NT 3-DH3	2441MH	lz Ant1 O	ne Burst	
Keysight Spectrum Analyzer - Swep RL RF 50 Ω Center Freq 2.441000	AC		00.0 µs #Avg	Type: RMS	05:20:53 PM Aug 20, 202 TRACE 1 2 3 4 5 TYPE WWWWW DET P N N N	6 ₩
Ref Offset 3.3 10 dB/div Ref 20.00 d				Δ	Mkr1 1.637 m -2.34 dl	
10.0 0.00 -10.0	<u>1</u> Δ2				TRIG LV	Center Fre 2.441000000 G
-10.0 X 2, 100 1 4, 100 100 100 100 100 100 100 100 100 10						Start Fr 2.441000000 G
-40.0	and the spectra of the second	United and the state	and the state of the state of the			
P 1 P	- And produced and a second	linalian, sector de la construction de la construction de la construction de la construction de la construction La construction de la construction d	<mark>, e santalisteren parte</mark> ta 1	and an a state of the second	uli fili di di anda a di padi di d	Stop Fr 2.441000000 GI
-70.0	Hz	BW 3.0 MHz	n han an a	Sweep 10	Span 0 H: .00 ms (10001 pts	2.441000000 GI Z CF Ste S) 1.000000 MI
-60 0 Center 2.441000000 G Res BW 1.0 MHz MRR MODE TRC SCL 1 A2 1 t (A) 2 F 1 t (A) 3 4 5 6	Hz	BW 3.0 MHz	FUNCTION	Sweep 10	Span 0 H	2.441000000 GI
70.0 Center 2.441000000 Gi Center 2.441000000 Gi Center 2.441000000 Gi MKR MODE TRC SCL 1 1 A2 1 t 2 F 1 t 3 3 5 - - -	Hz #V X 1.637 ms	BW 3.0 MHz (Δ) -2.34 dB	FUNCTION		Span 0 H: 0.00 ms (10001 pts	2.441000000 Gi CF Ste 1.000000 Mi Auto Mi

Edition: B.2



Dwel	I NVNT 3-DH5 244	1MHz Ant1 O	ne Burst	
Weysight Spectrum Analyzer - Swept SA	SENSE:PULSE		05:10:31 PM Aug 20, 2024	
	Z Trig Delay-500.0 µs IO: Fast ↔ Trig: Video #Atten: 30 dB	#Avg Type: RMS	TRACE 1 2 3 4 5 6 TYPE WWWWWW DET P NNNNN	Frequency
Ref Offset 3.36 dB 10 dB/div Ref 20.00 dBm		۵	Mkr1 2.887 ms -0.38 dB	Auto Tune
Log	1Δ2		TRIG LVL	Center Freq 2.441000000 GHz
-20.0 X Althour du trait interdal la cal ife -30.0				Start Freq 2.441000000 GHz
-50.0 g ¹ hq ₁ d -60.0 <mark>get/ge</mark> -70.0	den militärstan som för den körde som för den körde som High med den er produktionen som förstande produktionen som körde produktionen som som som som som som som som s	n part part in a part part of the second second In part of the second	ingi yang pang pang pang pang pang pang pang p	Stop Freq 2.441000000 GHz
Center 2.441000000 GHz Res BW 1.0 MHz	#VBW 3.0 MHz	Sweep 10	Span 0 Hz 0.00 ms (10001 pts)	CF Step 1.000000 MHz Auto Man
MKR MODE TRC SCL X	Υ FUN 87 ms (Δ) -0.38 dB	CTION FUNCTION WIDTH	FUNCTION VALUE	
	4.0 µs -12.77 dBm		н	Freq Offset 0 Hz
7 7 8 8 9 9 10				Scale Type
				Log <u>Lin</u>
MSG 🗼 Points changed; all traces cleare	ed		s	



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.

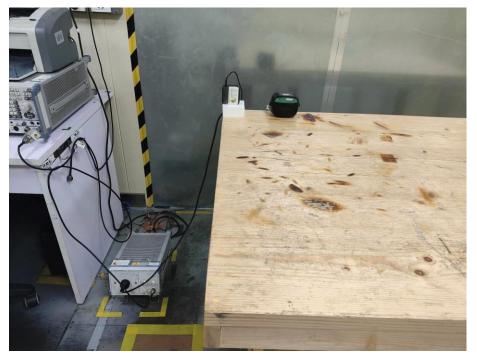
15.2 Test Result

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



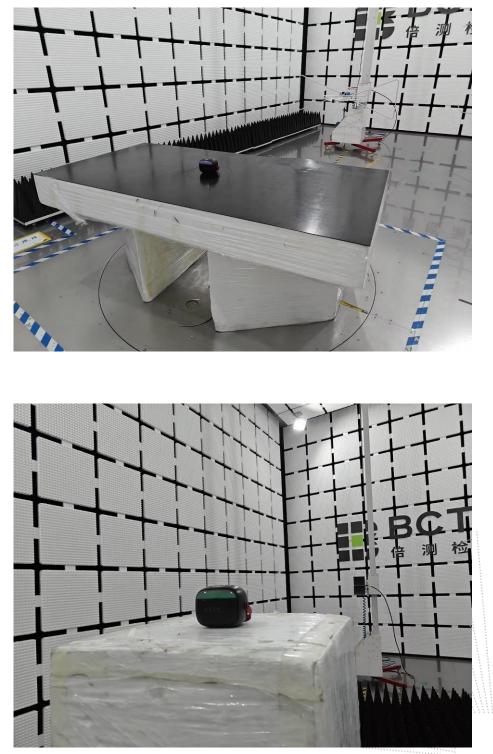
16. EUT Test Setup Photographs

Conducted Emission Measurement Photos





Radiated Measurement Photos





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.

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Website: http://www.chnbctc.com

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

***** END *****

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