

TEST REPORT

Report No.:	BCTC2405793866E
Applicant:	SHENZHEN JUNYE ELECTRONICS CO LTD
Product Name:	Earphone
Test Model:	Y29
Tested Date:	2024-04-30 to 2024-05-07
Issued Date:	2024-05-21
She	enzhen BCTC Testing Co., Ltd.
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FCC ID: 2BB3B-TWSY29

Product Name:	Earphone
Trademark:	N/A
Model/Type Reference:	Y29,V80021 Earbuds
Prepared For:	SHENZHEN JUNYE ELECTRONICS CO LTD
Address:	201,Building 7,Xingye er Road,Fenghuang Village, Fuyong Town,Baoan District,Shenzhen City,Guangdong Province,China
Manufacturer:	SHENZHEN JUNYE ELECTRONICS CO LTD
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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:	2024-04-30
Sample Tested Date:	2024-04-30 to 2024-05-07
Report No.:	BCTC2405793866E
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 Zer

Brave Zeng/ Project Handler

Zero Zhou/Reviewer

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1. Version

Report No.	Issue Date	Description	Approved
BCTC2405793866E	2024-05-21	Original	Valid



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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
NOTEA	NI/A (Nist Ameliashis)	1	

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.

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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° ℃

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4. Product Information and Test Setup

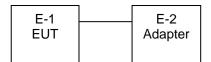
4.1 Product Information

Model/Type reference:	Y29,V80021 Earbuds
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, we finally have Y29 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:	-0.6dBi
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.
power supply:	DC 5V,0.5A
Battery:	Pod :DC 3.7V/200mAh, Headset :DC 3.7V/30mAh

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:



Radiated Spurious Emission



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4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
E-1	Earphone	N/A	Y29	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			

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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 15, 2023	May 14, 2024		
LISN	R&S	ENV216	101375	May 15, 2023	May 14, 2024		
Software	Frad	EZ-EMC	EMC-CON 3A1	/	/		
Attenuator	\	10dB DC-6GHz	1650	May 15, 2023	May 14, 2024		

RF Conducted Test						
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.	
Power Metter	Keysight	E4419	\	May 15, 2023	May 14, 2024	
Power Sensor (AV)	Keysight	E9300A	١	May 15, 2023	May 14, 2024	
Signal Analyzer20kH z-26.5GHz	Keysight	N9020A	MY49100060	May 15, 2023	May 14, 2024	
Spectrum Analyzer9kHz- 40GHz	R&S	FSP40	······································	May 15, 2023	May 14, 2024	

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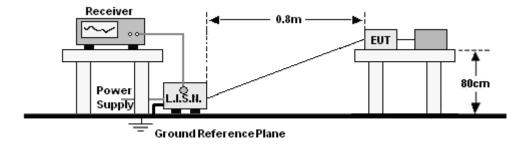
Radiated Emissions Test (966 Chamber)						
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.	
966 chamber	ChengYu	966 Room	966	May 15, 2023	May 14, 2026	
Receiver	R&S	ESR3	102075	May 15, 2023	May 14, 2024	
Receiver	R&S	ESRP	101154	May 15, 2023	May 14, 2024	
Amplifier	SKET	LAPA_01G18 G-45dB	١	May 15, 2023	May 14, 2024	
Amplifier	Schwarzbeck	BBV9744	9744-0037	May 15, 2023	May 14, 2024	
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	942	May 15, 2023	May 14, 2024	
Horn Antenna	Schwarzbeck	BBHA9120D	1541	May 15, 2023	May 14, 2024	
Horn Antenn(18GH z-40GHz)	Schwarzbeck	BBHA9170	00822	May 15, 2023	May 14, 2024	
Amplifier(18G Hz-40GHz)	MITEQ	TTA1840-35- HG	2034381	May 15, 2023	May 14, 2024	
Loop Antenna(9KHz -30MHz)	Schwarzbeck	FMZB1519B	00014	May 15, 2023	May 14, 2024	
RF cables1(9kHz- 30MHz)	Huber+Suhnar	9kHz-30MHz	B1702988-000 8	May 15, 2023	May 14, 2024	
RF cables2(30MH z-1GHz)	Huber+Suhnar	30MHz-1GHz	1486150	May 15, 2023	May 14, 2024	
RF cables3(1GHz -40GHz)	Huber+Suhnar	1GHz-40GHz	1607106	May 15, 2023	May 14, 2024	
Power Metter	Keysight	E4419	١	May 15, 2023	May 14, 2024	
Power Sensor (AV)	Keysight	E9300A	١	May 15, 2023	May 14, 2024	
Signal Analyzer20kH z-26.5GHz	Keysight	N9020A	MY49100060	May 15, 2023	May 14, 2024	
Spectrum Analyzer9kHz- 40GHz	R&S	FSP40	······································	May 15, 2023	May 14, 2024	
Software	Frad	EZ-EMC	FA-03A2 RE	λ	K	

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6. Conducted Emissions

6.1 Block Diagram Of Test Setup



6.2 Limit

Frequency (MHz)	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

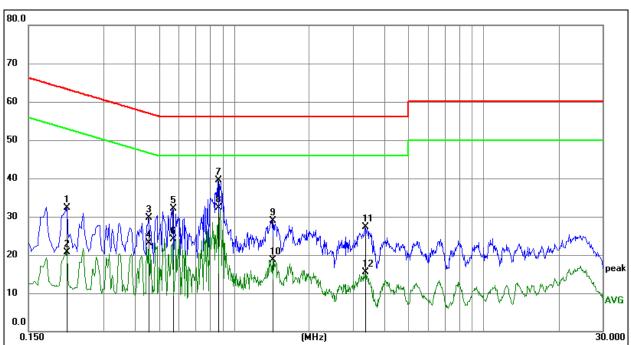
The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

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6.5 Test Result

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



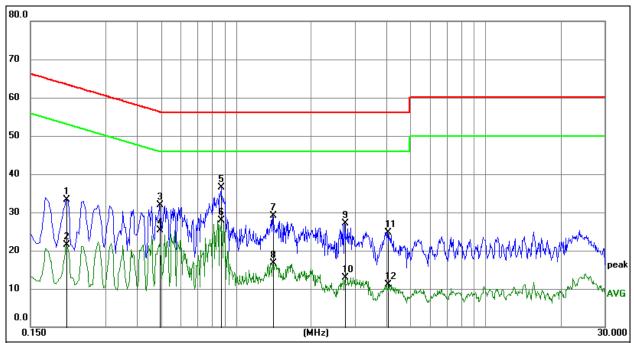
Remark:

- 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	0.2130	22.20	10.19	32.39	63.09	-30.70	QP		
2	0.2130	10.58	10.19	20.77	53.09	-32.32	AVG		
3	0.4560	19.59	10.19	29.78	56.77	-26.99	QP		
4	0.4560	12.97	10.19	23.16	46.77	-23.61	AVG		
5	0.5685	21.83	10.19	32.02	56.00	-23.98	QP		
6	0.5685	13.95	10.19	24.14	46.00	-21.86	AVG		
7	0.8655	29.31	10.21	39.52	56.00	-16.48	QP		
8 *	0.8655	22.17	10.21	32.38	46.00	-13.62	AVG		
9	1.4325	18.77	10.16	28.93	56.00	-27.07	QP		
10	1.4325	8.59	10.16	18.75	46.00	-27.25	AVG		
11	3.3630	17.07	10.23	27.30	56.00	-28.70	QP		
12	3.3630	5.28	10.23	15.51	46.00	-30.49	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	0.2085	23.18	10.19	33.37	63.26	-29.89	QP	
2	0.2085	11.31	10.19	21.50	53.26	-31.76	AVG	
3	0.4965	21.66	10.19	31.85	56.06	-24.21	QP	
4	0.4965	15.08	10.19	25.27	46.06	-20.79	AVG	
5	0.8745	26.31	10.21	36.52	56.00	-19.48	QP	
6 *	0.8745	17.74	10.21	27.95	46.00	-18.05	AVG	
7	1.4055	18.86	10.16	29.02	56.00	-26.98	QP	
8	1.4055	6.55	10.16	16.71	46.00	-29.29	AVG	
9	2.7330	16.92	10.15	27.07	56.00	-28.93	QP	
10	2.7330	2.76	10.15	12.91	46.00	-33.09	AVG	
11	4.0695	14.31	10.35	24.66	56.00	-31.34	QP	
12	4.0695	0.81	10.35	11.16	46.00	-34.84	AVG	

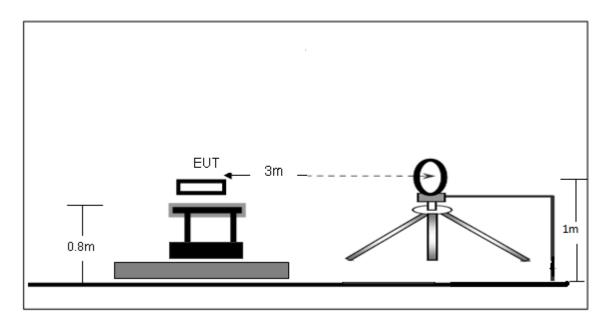
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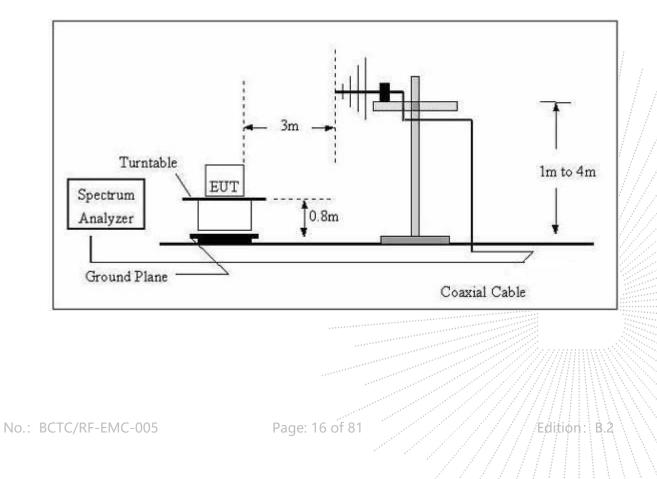
7. Radiated emissions

7.1 Block Diagram Of Test Setup

(A) Radiated Emission Test-Up Frequency Below 30MHz

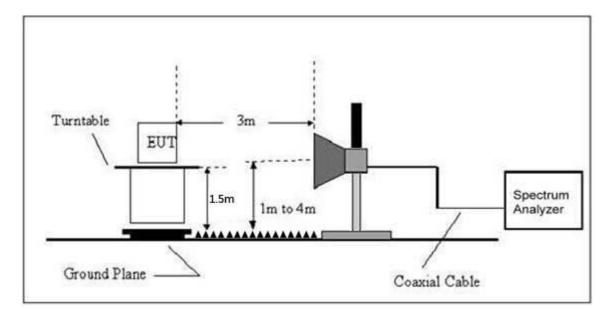


(B) Radiated Emission Test-Up Frequency 30MHz~1GHz





(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⁾		

Limits Of Radiated Emission Measurement (Above 1000MHz)

	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).

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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
1.25011-	RBW 1 MHz /VBW 1 MHz for Peak,
1-25GHz	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.

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7.5 Test Result

Below 30MHz

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

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.

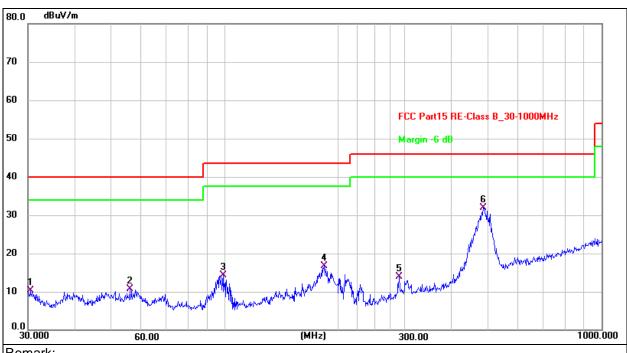
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Between 30MHz - 1GHz

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



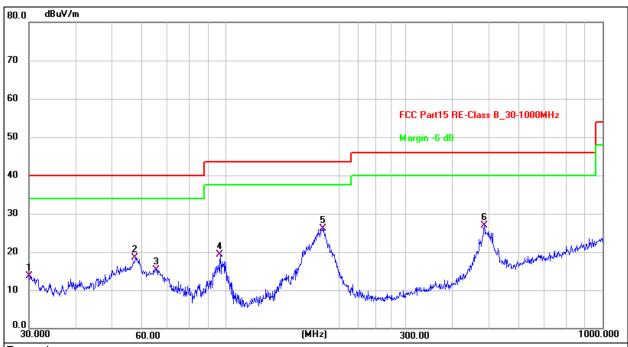
Remark:

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	30.4238	27.68	-17.46	10.22	40.00	-29.78	QP
2	56.0007	28.24	-17.53	10.71	40.00	-29.29	QP
3	98.8326	35.26	-20.89	14.37	43.50	-29.13	QP
4	183.8440	35.47	-18.76	16.71	43.50	-26.79	QP
5	290.0172	31.09	-17.24	13.85	46.00	-32.15	QP
6 *	485.6093	43.71	-11.83	31.88	46.00	-14.12	QP



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



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)	Detecto
1	30.0000	31.19	-17.43	13.76	40.00	-26.24	QP
2	57.5939	36.16	-17.67	18.49	40.00	-21.51	QP
3	65.3432	33.89	-18.51	15.38	40.00	-24.62	QP
4	96.7749	40.26	-20.94	19.32	43.50	-24.18	QP
5 *	180.6488	44.52	-18.38	26.14	43.50	-17.36	QP
6	485.6093	38.66	-11.83	26.83	46.00	-19.17	QP

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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 ch	annel			
V	4804.00	70.74	-19.99	50.75	74.00	-23.25	PK
V	4804.00	60.55	-19.99	40.56	54.00	-13.44	AV
V	7206.00	63.74	-14.22	49.52	74.00	-24.48	PK
V	7206.00	54.61	-14.22	40.39	54.00	-13.61	AV
Н	4804.00	68.89	-19.99	48.90	74.00	-25.10	PK
Н	4804.00	58.17	-19.99	38.18	54.00	-15.82	AV
Н	7206.00	61.86	-14.22	47.64	74.00	-26.36	PK
Н	7206.00	53.74	-14.22	39.52	54.00	-14.48	AV
		G	FSK Middle c	hannel			
V	4882.00	67.66	-19.84	47.82	74.00	-26.18	PK
V	4882.00	59.28	-19.84	39.44	54.00	-14.56	AV
V	7323.00	59.37	-13.90	45.47	74.00	-28.53	PK
V	7323.00	50.58	-13.90	36.68	54.00	-17.32	AV
Н	4882.00	64.31	-19.84	44.47	74.00	-29.53	PK
Н	4882.00	54.48	-19.84	34.64	54.00	-19.36	AV
Н	7323.00	56.49	-13.90	42.59	74.00	-31.41	PK
Н	7323.00	48.33	-13.90	34.43	54.00	-19.57	AV
			GFSK High ch	annel			
V	4960.00	70.03	-19.68	50.35	74.00	-23.65	PK
V	4960.00	59.52	-19.68	39.84	54.00	-14.16	AV
V	7440.00	63.10	-13.57	49.53	74.00	-24.47	PK
V	7440.00	53.96	-13.57	40.39	54.00	-13.61	AV
Н	4960.00	68.19	-19.68	48.51	74.00	-25.49	PK
Н	4960.00	57.97	-19.68	38.29	54.00	-15.71	AV
Н	7440.00	61.71	-13.57	48.14	74.00	-25.86	PK
Н	7440.00	52.77	-13.57	39.20	54.00	-14.80	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.

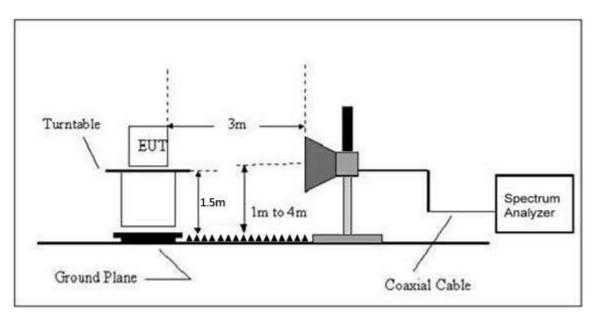
5.All the Modulation are test, the worst mode is GFSK, the data recording in the report.



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			

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Limits Of Radiated Emission Measurement (Above 1000MHz)

Frequency (MHz)	Limit (d	BuV/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							
GFSK	Н	2390.00	73.72	-25.43	48.29	74.00	54.00	PASS
	Н	2400.00	75.65	-25.40	50.25	74.00	54.00	PASS
	V	2390.00	73.93	-25.43	48.50	74.00	54.00	PASS
	V	2400.00	74.70	-25.40	49.30	74.00	54.00	PASS
	High Channel 2480MHz							
	Н	2483.50	71.78	-25.15	46.63	74.00	54.00	PASS
	Н	2500.00	70.68	-25.10	45.58	74.00	54.00	PASS
	V	2483.50	74.05	-25.15	48.90	74.00	54.00	PASS
	V	2500.00	70.16	-25.10	45.06	74.00	54.00	PASS
π/4DQPSK	Low Channel 2402MHz							
	Н	2390.00	73.25	-25.43	47.82	74.00	54.00	PASS
	Н	2400.00	75.93	-25.40	50.53	74.00	54.00	PASS
	V	2390.00	74.08	-25.43	48.65	74.00	54.00	PASS
	V	2400.00	74.66	-25.40	49.26	74.00	54.00	PASS
	High Channel 2480MHz							
	Н	2483.50	71.87	-25.15	46.72	74.00	54.00	PASS
	Н	2500.00	69.35	-25.10	44.25	74.00	54.00	PASS
	V	2483.50	72.29	-25.15	47.14	74.00	54.00	PASS
	V	2500.00	68.43	-25.10	43.33	74.00	54.00	PASS
8DPSK	Low Channel 2402MHz							
	Н	2390.00	72.16	-25.43	46.73	74.00	54.00	PASS
	Н	2400.00	74.52	-25.40	49.12	74.00	54.00	PASS
	V	2390.00	72.77	-25.43	47.34	74.00	54.00	PASS
	V	2400.00	73.23	-25.40	47.83	74.00	54.00	PASS
	High Channel 2480MHz							
	Н	2483.50	71.61	-25.15	46.46	74.00	54.00	PASS
	Н	2500.00	68.21	-25.10	43.11	74.00	54.00	PASS
	V	2483.50	71.93	-25.15	46.78	74.00	54.00	PASS
	V	2500.00	68.04	-25.10	42.94	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

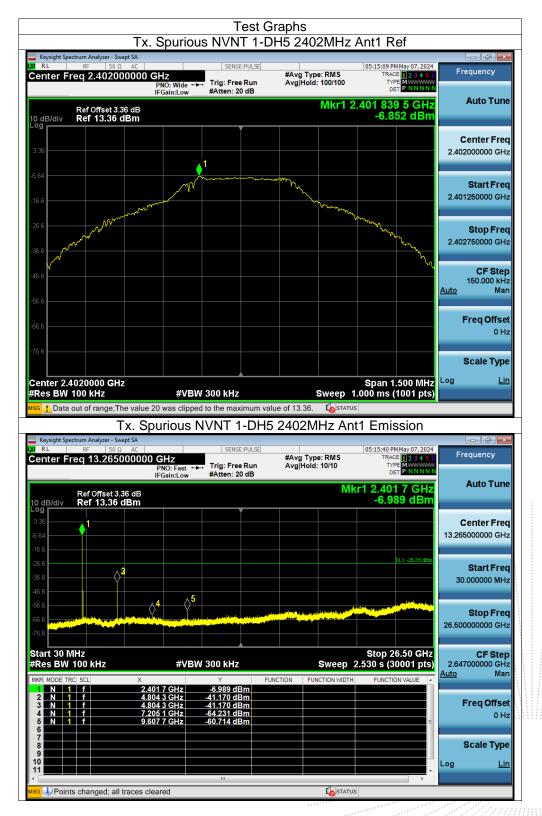
1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum;

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







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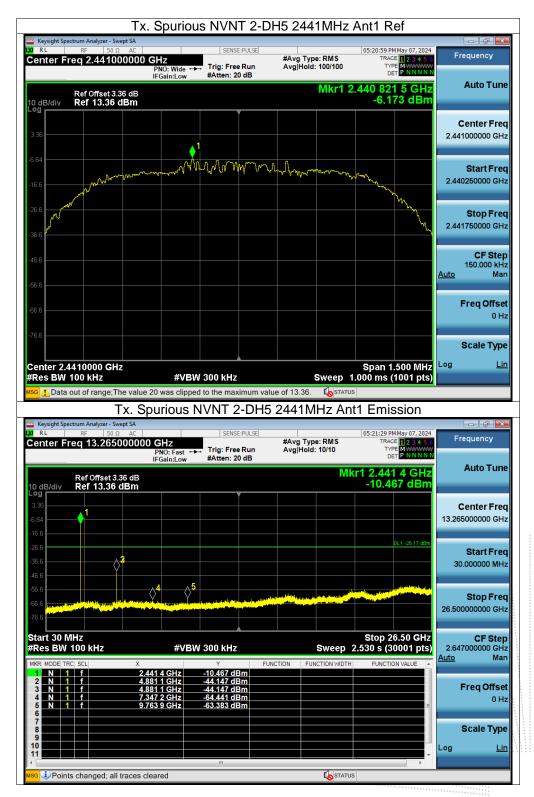




















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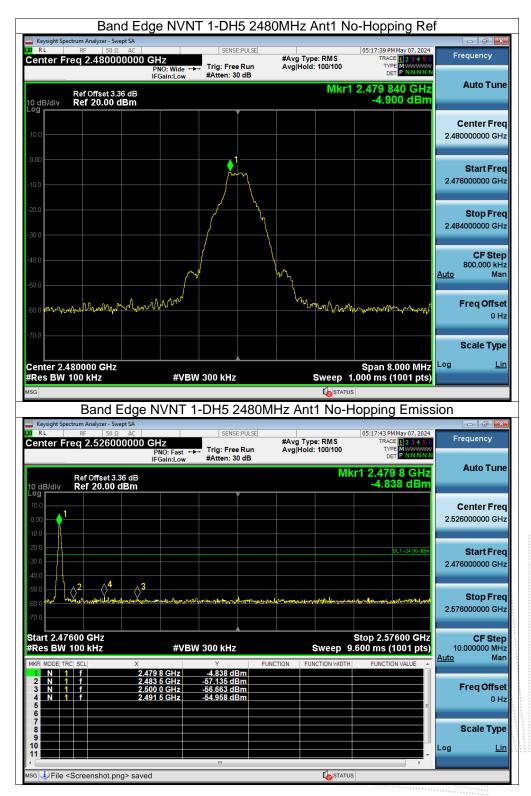


AC 000 GHz	SENSE:PULSE	#Avg Type: RMS	05:14:59 PM May 07, 2024 TRACE 1 2 3 4 5 6	Frequency
PNO: Wide ↔ IFGain:Low	Trig: Free Run #Atten: 30 dB	Avg Hold: 100/100	DET P NNNN	
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		AILT NO-T		
AC	SENSE:PULSE	#Avg Type: RMS	05:15:03 PM May 07, 2024	Frequency
PNO: Fast 🕂	Trig: Free Run #Atten: 30 dB	Avg Hold: 100/100	DET P NNNN	
		Mk	r1 2.402 0 GHz	Auto Tu
3m			-6.659 dBm	
				Center Fr
			1	
			DL1 -27 /d dBm	2.356000000 G Start Fr
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	Volume Andrew Constrained Andrew Constraine		01.1-27 / 46m	2.35600000 G Start Fr 2.30600000 G Stop Fr 2.40600000 G CF St 10.000000 M
#VBV	V 300 kHz		01 - 27 (r den comptand overview ¹³ m Stop 2.40600 GHz	2.356000000 G Start Fr 2.306000000 G Stop Fr 2.406000000 G CF St 10.000000 M Auto N
#VBV 2.402 0 GHz 2.400 0 GHz	V 300 kHz <u> </u>	skologistetternastationer	01 - 27 r den Aconyt-ul-resultion Stop 2.40600 GHz .600 ms (1001 pts)	2.356000000 G Start Fr 2.306000000 G Stop Fr 2.406000000 G CF St 10.000000 M Auto M
#VBW 2.402 0 GHz	V 300 kHz Y -6.659 dBm	skologistetternastationer	01 - 27 r den Aconyt-ul-resultion Stop 2.40600 GHz .600 ms (1001 pts)	2.356000000 G Start Fr 2.306000000 G Stop Fr 2.406000000 G CF St 10.000000 M <u>Auto</u> M
#VBW 2.402 0 GHz 2.400 0 GHz 2.400 0 GHz	V 300 kHz -6.659 dBm -58.681 dBm -58.681 dBm	skologistetternastationer	011-27 14 den 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4	2.35600000 G Start Fr 2.30600000 G Stop Fr 2.40600000 G CF St 10.000000 M
#VBW 2.402 0 GHz 2.400 0 GHz 2.400 0 GHz	V 300 kHz -6.659 dBm -58.681 dBm -58.681 dBm	skologistetternastationer	011-27 14 den 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4	2.356000000 G Start Fr 2.306000000 G Stop Fr 2.406000000 G CF St 10.000000 M <u>Auto</u> M
	PNO: Wide → IFGain:Low dB m dB fm fGain:Low dB dB dB dB	PNO: Wide IFGain:Low #Atten: 30 dB dB m dB m dB m #VBW 300 kHz #VBW 300 kHz dge NVNT 1-DH5 2402N sA AC SENSE:PULSE 000 GHZ IFGain:Low Trig: Free Run IFGain:Low #Atten: 30 dB dB	PNO: Wide \leftrightarrow Trig: Free Run #Atten: 30 dB Mkr1 dB m dB m dB m dB m dB m dB m dB m dB	Avg Hold: 100/100 The formula of the second

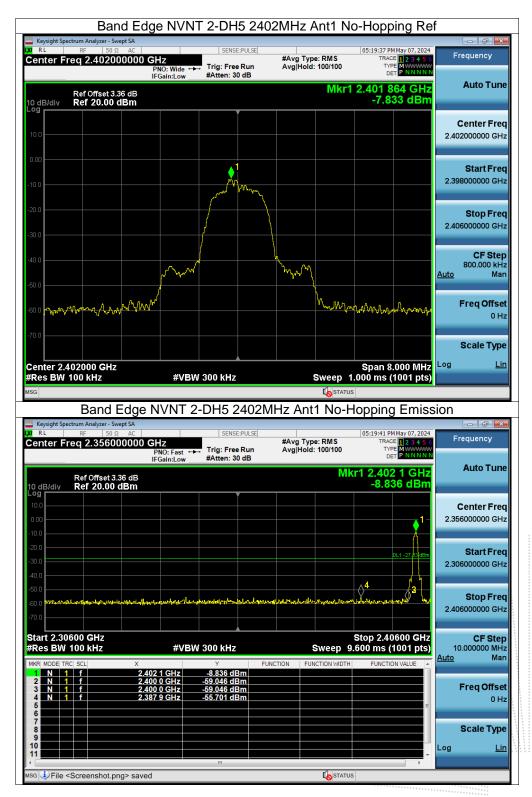
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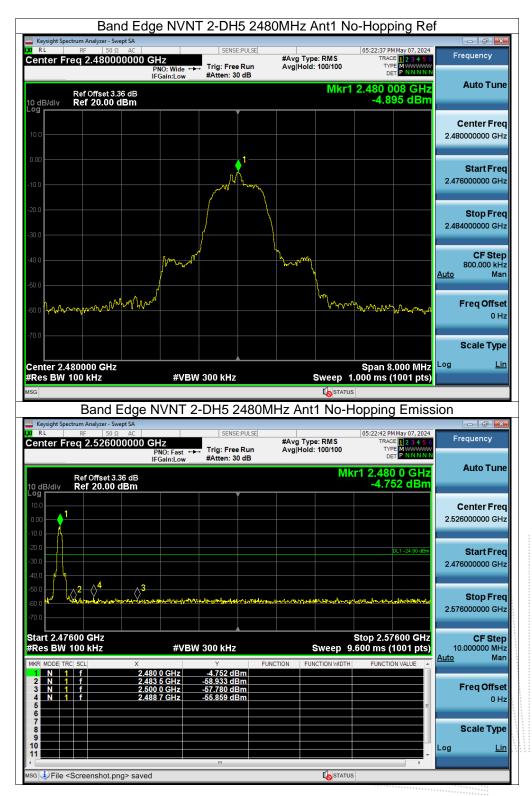




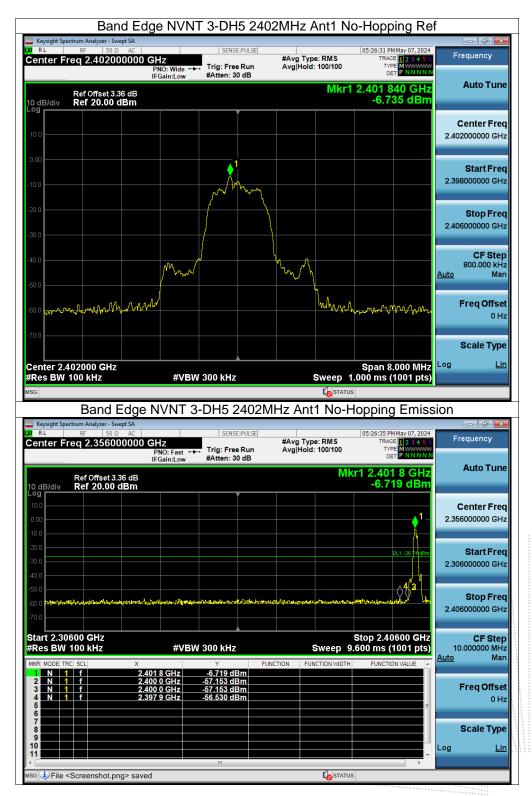




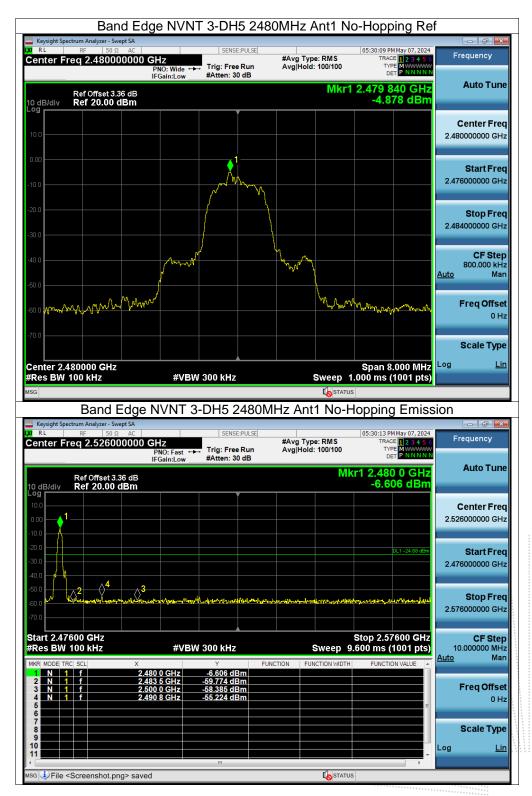
















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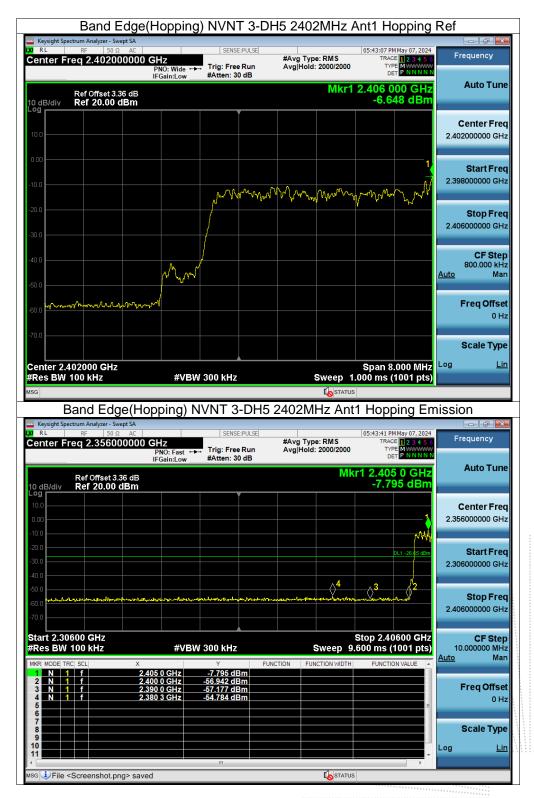


















10. 20 dB Bandwidth

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.

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10.4 Test Result

Condition	Mode	Frequency (MHz)	-20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	0.934	Pass
NVNT	1-DH5	2441	0.935	Pass
NVNT	1-DH5	2480	0.935	Pass
NVNT	2-DH5	2402	1.272	Pass
NVNT	2-DH5	2441	1.239	Pass
NVNT	2-DH5	2480	1.316	Pass
NVNT	3-DH5	2402	1.239	Pass
NVNT	3-DH5	2441	1.247	Pass
NVNT	3-DH5	2480	1.254	Pass

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11. Maximum Peak Output Power

11.1 Block Diagram Of Test Setup



11.2 Limit

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

11.3 Test procedure

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

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

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

11.4 Test Result

Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	-6.54	21	Pass
NVNT	1-DH5	2441	-5.32	21	Pass
NVNT	1-DH5	2480	-4.66	21	Pass
NVNT	2-DH5	2402	-5.85	21	Pass
NVNT	2-DH5	2441	-4.61	21	Pass
NVNT	2-DH5	2480	-4	21	Pass
NVNT	3-DH5	2402	-5.22	21	Pass
NVNT	3-DH5	2441	-4.2	21	Pass
NVNT	3-DH5	2480	-3.4	21	Pass

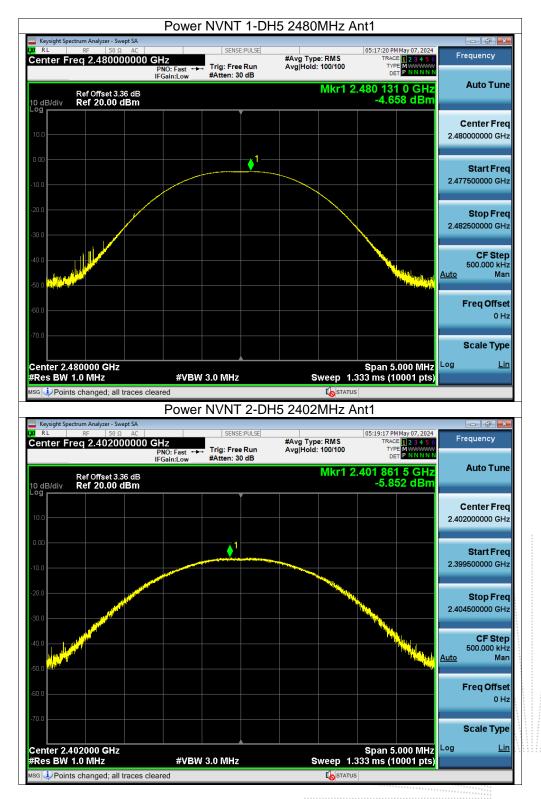
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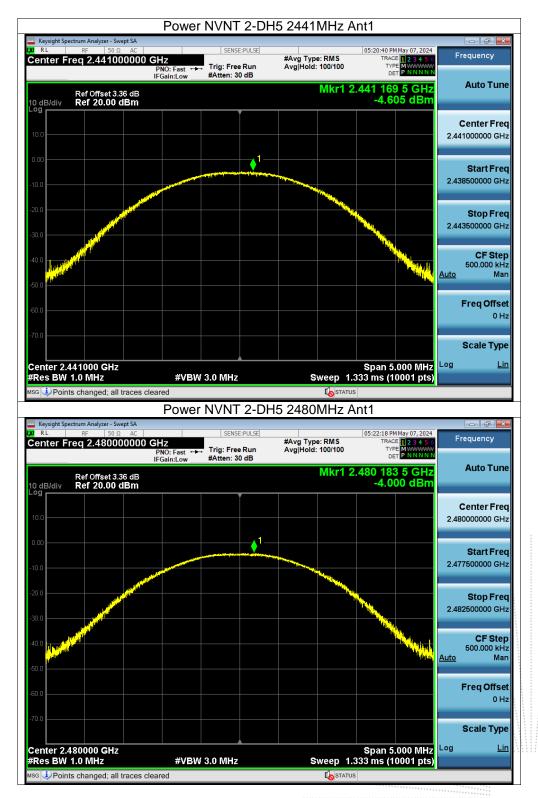
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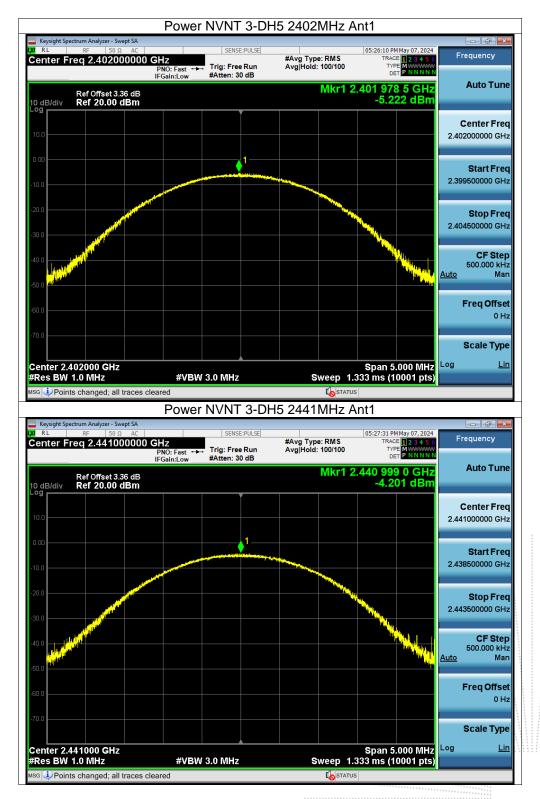




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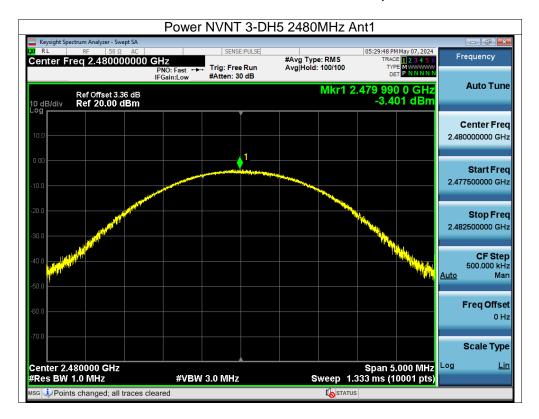
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12. Hopping Channel Separation

12.1 Block Diagram Of Test Setup



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	2402.002	2402.82	0.818	0.623	Pass
1-DH5	2440.83	2441.824	0.994	0.623	Pass
1-DH5	2478.838	2480.054	1.216	0.623	Pass
2-DH5	2402.12	2403.028	0.908	0.848	Pass
2-DH5	2441.104	2442.124	1.02	0.826	Pass
2-DH5	2478.826	2479.996	1.17	0.877	Pass
3-DH5	2401.942	2402.834	0.892	0.826	Pass
3-DH5	2440.83	2441.94	1.11	0.831	Pass
3-DH5	2478.978	2479.882	0.904	0.836	Pass
	1-DH5 1-DH5 1-DH5 2-DH5 2-DH5 3-DH5 3-DH5	Mode(MHz)1-DH52402.0021-DH52440.831-DH52478.8382-DH52402.122-DH52441.1042-DH52478.8263-DH52401.9423-DH52440.83	Mode (MHz) (MHz) 1-DH5 2402.002 2402.82 1-DH5 2440.83 2441.824 1-DH5 2478.838 2480.054 2-DH5 2402.12 2403.028 2-DH5 2441.104 2442.124 2-DH5 2478.826 2479.996 3-DH5 2401.942 2402.834	Mode(MHz)(MHz)(MHz)1-DH52402.0022402.820.8181-DH52440.832441.8240.9941-DH52478.8382480.0541.2162-DH52402.122403.0280.9082-DH52441.1042442.1241.022-DH52478.8262479.9961.173-DH52401.9422402.8340.8923-DH52440.832441.941.11	Mode(MHz)(MHz)(MHz)(MHz)1-DH52402.0022402.820.8180.6231-DH52440.832441.8240.9940.6231-DH52478.8382480.0541.2160.6232-DH52402.122403.0280.9080.8482-DH52441.1042442.1241.020.8262-DH52478.8262479.9961.170.8773-DH52401.9422402.8340.8920.8263-DH52440.832441.941.110.831

12.4 Test Result



	-	S NVNT 1-DH	5 2402MHz A	nt1	
Keysight Spectrum Analyzer - S RL RF 50	Swept SA Ω AC	SENSE:PULSE		05:33:21 PM May 07, 2024	
enter Freq 2.402		Talas Free Days	#Avg Type: RMS Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE M WWWW DET P N N N N	Frequency
	IFGain:Lo				Auto Tur
Ref Offset			Mkr1	2.402 002 GHz -7.918 dBm	Auto Tuli
0 dB/div Ref 20.00	dBm			-7.918 UBII	
10.0					Center Fre
0.00	¹		²		2.402500000 GH
20.0	man	<u>``</u>	minin	source and the second s	
30.0		man and a second		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Start Fre 2.401500000 GH
40.0					2.401500000 GP
50.0					Oton Eng
60.0					Stop Fre 2.403500000 GH
70.0					
enter 2.402500 GH				Span 2.000 MHz	CF Ste
Res BW 30 kHz	#\	/BW 100 kHz		2.133 ms (1001 pts)	200.000 kH <u>Auto</u> Ma
1 N 1 f	× 2.402 002 GHz		JNCTION FUNCTION WIDTH	FUNCTION VALUE	
2 N 1 f	2.402 820 GHz	-9.172 dBm			Freq Offs
4 5					0 H
6 7					
8					Scale Typ
10					Log <u>Li</u>
		m		•	
SG			STATU		
		" S NVNT 1-DH			
SG Keysight Spectrum Analyzer - S RL RF 50	Swept SA		5 2441MHz A	05:34:58 PM May 07, 2024	
Keysight Spectrum Analyzer - S	Swept SA Ω AC 500000 GHz	SNVNT 1-DH		05:34:58 PM May 07, 2024 TRACE 1 2 3 4 5 6 TYPE MWWWWW	Frequency
Keysight Spectrum Analyzer - 5	Swept SA Ω AC	SNVNT 1-DH	5 2441MHz Al #Avg Type: RMS Avg Hold:>100/100	05:34:58 PM May 07, 2024 TRACE 23 4 5 6 TYPE WWWWWW DET PNNNNN	Frequency
Keysight Spectrum Analyzer - RL RF 50 Center Freq 2.441 Ref Offset :	Swept SA Ω AC 500000 GHz PNO: Wid IFGain:Lo 3.36 dB	SNVNT 1-DH	5 2441MHz Al #Avg Type: RMS Avg Hold:>100/100	05:34:58 PM May 07, 2024 TRACE 12 3 4 5: 6 TYPE WWWWW DET PINNINN 2.4440 830 GHz	Frequency
Keysight Spectrum Analyzer - 5 RL RF 50 center Freq 2.441 Ref Offset 3 0 dB/div Ref 20.00	Swept SA Ω AC 500000 GHz PNO: Wid IFGain:Lo 3.36 dB	SNVNT 1-DH	5 2441MHz Al #Avg Type: RMS Avg Hold:>100/100	05:34:58 PM May 07, 2024 TRACE 23 4 5 6 TYPE WWWWWW DET PNNNNN	
Keysight Spectrum Analyzer - 5 RL RF SS ienter Freq 2.4415 Ref Offset: 3 Ref Offset: 3 0 dB/div Ref 20.00 og 10.0	Swept SA Ω AC 500000 GHz PNO: Wid IFGain:Lo 3.36 dB	SNVNT 1-DH	5 2441MHz Al #Avg Type: RMS Avg Hold:>100/100	05:34:58 PM May 07, 2024 TRACE 12 3 4 5: 6 TYPE WWWWW DET PINNINN 2.4440 830 GHz	Frequency Auto Tun Center Fre
Keysight Spectrum Analyzer - 5 RL RF 50 center Freq 2.4415 Ref Offset: 0 O dB/div Ref Offset: 0 0<	AC AC SOURCE SA AC	SNVNT 1-DH	5 2441MHz Al #Avg Type: RMS Avg Hold:>100/100	05:34:58 PM May 07, 2024 TRACE 12 3 4 5: 6 TYPE WWWWW DET PINNINN 2.4440 830 GHz	Frequency
Keysight Spectrum Analyzer - 5 RL RF SS ienter Freq 2.4415 Ref Offset: 3 Ref Offset: 3 0 dB/div Ref 20.00 og 10.0	Swept SA Ω AC 500000 GHz PNO: Wid IFGain:Lo 3.36 dB	SNVNT 1-DH	5 2441MHz Al #Avg Type: RMS Avg Hold:>100/100	05:34:58 PM May 07, 2024 TRACE 12 3 4 5: 6 TYPE WWWWW DET PINNINN 2.4440 830 GHz	Frequency Auto Tun Center Fre 2.441500000 GH
Keysight Spectrum Analyzer - 5 RL RF 50 center Freq 2.4415 Ref Offset3 0 dB/div Ref 20.00 0 g 0 0	AC AC SOURCE SA AC	SNVNT 1-DH	5 2441MHz Al #Avg Type: RMS Avg Hold:>100/100	05:34:58 PM May 07, 2024 TRACE 12 3 4 5: 6 TYPE WWWWW DET PINNINN 2.4440 830 GHz	Frequency Auto Tun Center Fre 2.441500000 GH Start Fre
Keysight Spectrum Analyzer - 5 RL RF Sol center Freq 2.4415 Ref Offset3 0 dB/div Ref 20.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AC AC SOURCE SA AC	SNVNT 1-DH	5 2441MHz Al #Avg Type: RMS Avg Hold:>100/100	05:34:58 PM May 07, 2024 TRACE 12 3 4 5: 6 TYPE WWWWW DET PINNINN 2.4440 830 GHz	Frequency Auto Tun Center Fre 2.441500000 GH
Keysight Spectrum Analyzer - S RL RF 50 Center Freq 2.4415 Ref Offset 3 0 dB/div Ref 20.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AC AC SUBJECT SA	SNVNT 1-DH	5 2441MHz Al #Avg Type: RMS Avg Hold:>100/100	05:34:58 PM May 07, 2024 TRACE 12 3 4 5: 6 TYPE WWWWW DET PINNINN 2.4440 830 GHz	Frequency Auto Tun Center Fre 2.441500000 GH Start Fre 2.440500000 GH
Keysight Spectrum Analyzer - S RL RF 50 Center Freq 2.4415 Ref Offset 30 30 0 dB/div Ref 20.00 30 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AC AC SUBJECT SA	SNVNT 1-DH	5 2441MHz Al #Avg Type: RMS Avg Hold:>100/100	05:34:58 PM May 07, 2024 TRACE 12 3 4 5: 6 TYPE WWWWW DET PINNING 2.4440 830 GHz	Frequency Auto Tun Center Fre 2.441500000 GH Start Fre
Keysight Spectrum Analyzer - S RL RF 50 Center Freq 2.4415 Ref Offset 3 0 dB/div Ref 20.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	AC AC SUBJECT SA	SNVNT 1-DH	5 2441MHz Al #Avg Type: RMS Avg Hold:>100/100	05:34:58 PM May 07, 2024 TRACE 12 3 4 5: 6 TYPE WWWWW DET PINNING 2.4440 830 GHz	Frequency Auto Tun Center Fre 2.441500000 GH Start Fre 2.440500000 GH
Reysight Spectrum Analyzer-3 Ref Offset Ref Offset Center Freq 2.441 Ref Offset O dB/div Ref Offset O dB/div Ref Offset O dB/div Ref Offset O dB/div Colspan="2">O dB/div Colspan="2">O diffet O diffet O diffet O diffet O diffet O diffet Colspan="2">O diffet Colspan="2">O diffet O diffet Colspan="2">O diffet O diffet O diffet Colspan="2">O diffet Colspan="2">O diffet Colspan="2">O diffet Colspan="2">O diffet Colspan="2">O diffet O diffet Colspan="2">O diffet O diffet	swept SA Q AC PRO-Wid FGaintLo 3.36 dB 0 dBm 1 1 2 2 2 2 2	SNVNT 1-DH	5 2441MHz Al	105:34:58 PM May 07, 2024 TRACE 2 2 3 5 6 TYPE 2 3 4 5 6 TYPE 2 3 5 6 TYPE 2 5 6 TYPE 2 5 6 TYPE 2 5 6 TYPE 2 5 6	Frequency Auto Tun Center Fre 2.441500000 GH Start Fre 2.440500000 GH Stop Fre 2.442500000 GH
Reysight Spectrum Analyzer -3 RL RF 50 Center Freq 2.4413 Ref Offset Center Freq 2.4413 0 dB/div Ref 20.00 Center 2.00 0 dB/div Ref 20.00 Center 2.00 0 dB/div Ref 20.00 Center 2.00 0 d0 Center 2.441500 GH Ref 20.00 Center 2.441500 GH Res BW 30 KHz Center 2.441500 GH	Swept SA Q AC PRO-Wid FGain:Lo 3.36 dB D dBm 1 1 2 2 X X	S NVNT 1-DH	5 2441MHz Al #Avg Type: RMS Avg Hold:>100/100 Mkr1	11 05:34:58 PMMay 07, 2024 TRACE 0 23 4 5 6 TPOE 0 20	Frequency Auto Tun Center Fre 2.441500000 GH Start Fre 2.440500000 GH Stop Fre 2.442500000 GH
Keysight Spectrum Analyzer - 5 RL RF SS center Freq 2.4415 Ref Offset: 3 0 dB/div Ref 20.00 0 g	x	SNVNT 1-DH	5 2441MHz Al	11 05:34:58 PMMay 07, 2024 TRACE 0 23 4 5 6 TPOE 0 20	Frequency Auto Tun Center Fre 2.441500000 GH Start Fre 2.440500000 GH Stop Fre 2.442500000 GH CF Ste 200.000 kH
Keysight Spectrum Analyzer - 3 RL RF 50 Ref Offset 3 Center Freq 2.4415 Ref Offset 3 0 dB/div Ref Offset 3 0 dV 0 dV Ref Offset 3	Swept SA Q AC PRO-Wid FGain:Lo 3.36 dB D dBm 1 1 2 2 X X	SNVNT 1-DH	5 2441MHz Al #Avg Type: RMS Avg Hold:>100/100 Mkr1	11 05:34:58 PMMay 07, 2024 TRACE 0 23 4 5 6 TPOE 0 20	Frequency Auto Tun Center Fre 2.441500000 GH Start Fre 2.440500000 GH Stop Fre 2.442500000 GH CF Ste 200.000 kH
Reysight Spectrum Analyzer -3 RL RF 50 Center Freq 2.4415 0 dB/div Ref 20.00 0 0 0 0 0 0 0 0 0 0 0 0 0 0	x	SNVNT 1-DH	5 2441MHz Al #Avg Type: RMS Avg Hold:>100/100 Mkr1	11 05:34:58 PMMay 07, 2024 TRACE 0 23 4 5 6 TPOE 0 20	Frequency Auto Tun Center Fre 2.441500000 GF Start Fre 2.440500000 GF Stop Fre 2.442500000 GF CF Ste 200.000 kF Auto Ma
Reysight Spectrum Analyzer -3 Ref Offset 3 Ref Offset 3 Ref Offset 3 Center Freq 2.4413 Ref Offset 3 Center Freq 2.4413 Ref Offset 3 Center 2.441500 GH Res BW 30 KHz MR MODE TRC SCL 1 1 2 N 1 Freq 2.441500 GH Ref BW 30 KHz MR MODE TRC SCL 1 1 1 1 2 N 1 Freq 2.441500 GH Ref BW 30 KHz XI 1 1 N 1 1 1 2 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	x	SNVNT 1-DH	5 2441MHz Al #Avg Type: RMS Avg Hold:>100/100 Mkr1	11 15:34:58 PM May 07, 2024 TRACE 12 23 4 5 6 TYPE 12 23 4 5 6 TYPE 12 14	Start Fre 2.441500000 GH Start Fre 2.440500000 GH Stop Fre 2.442500000 GH CF Ste 200.000 kH Auto Mato Freq Offse 0 H
Keysight Spectrum Analyzer - 5 RL RF SS Ref Offset: 0 Ref Offset: 0 O dB/div Ref Offset: 0 0 Colspan="2">Colspan="2">Colspan="2">Colspan="2">Colspan="2">Ref Offset: 0 0 Colspan="2">Colspan="2"Col	x	SNVNT 1-DH	5 2441MHz Al #Avg Type: RMS Avg Hold:>100/100 Mkr1	11 15:34:58 PM May 07, 2024 TRACE 12 23 4 5 6 TYPE 12 23 4 5 6 TYPE 12 14	Erequency Auto Tun Center Fre 2.441500000 GF Start Fre 2.440500000 GF Stop Fre 2.442500000 GF CF Ste 200.000 kF Auto Mathematical Auto Stop Fre 2.442500000 GF Freq Offsa
Keysight Spectrum Analyzer - 5 Ref Offset Ref Offset Center Freq 2.4415 Ref Offset O dB/div Ref Offset 0 dB/div Ref Offset 0 dB/div Ref Offset 0 dD Offset	x	SNVNT 1-DH	5 2441MHz Al #Avg Type: RMS Avg Hold:>100/100 Mkr1	11 15:34:58 PM May 07, 2024 TRACE 12 23 4 5 6 TYPE 12 23 4 5 6 TYPE 12 14	Start Fre 2.441500000 GH Start Fre 2.440500000 GH Stop Fre 2.442500000 GH CF Ste 200.000 kH Auto Mate Freq Offse 0 H

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Edition: B.2

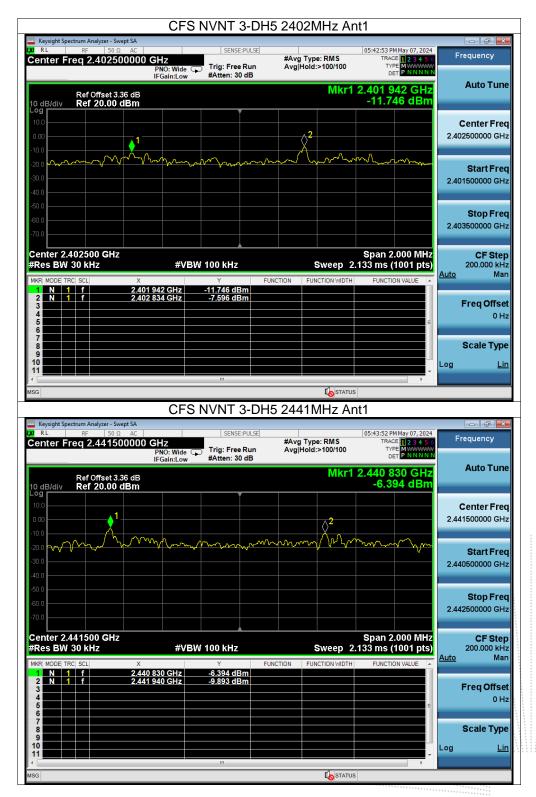
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	CFS NV	NT 3-DH5	5 2480MHz A	nt1	
Keysight Spectrum Analyzer - Swept SA					- đ <mark>-</mark>
M RL RF 50 Ω AC Center Freq 2.479500000	PNO: Wide C Tri	g: Free Run tten: 30 dB	#Avg Type: RMS Avg Hold:>100/100	05:44:55 PM May 07, 2024 TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P N N N N	Frequency
Ref Offset 3.36 dB 10 dB/div Ref 20.00 dBm			Mkr1	2.478 978 GHz -10.120 dBm	Auto Tune
			2		Center Freq 2.479500000 GHz
-20.0		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		m	Start Freq 2.478500000 GHz
-50.0 -60.0 -70.0					Stop Freq 2.480500000 GHz
Center 2.479500 GHz #Res BW 30 kHz	#VBW 100) kHz	Sweep 2	Span 2.000 MHz 2.133 ms (1001 pts)	CF Step 200.000 kHz Auto Man
MKR MODE TRC SCL X	8 978 GHz -10.	Y FUN 120 dBm	ICTION FUNCTION WIDTH	FUNCTION VALUE	Auto Man
		425 dBm			Freq Offset 0 Hz
7 8 9 9 10					Scale Type
MSG			K STATU	IS	

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

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	Honning	Test G	Fraphs -DH5 2402MH	z Ant1	
Keysight Spectrum Analyzer					
	50 Ω AC 1750000 GHz PNO: Fast	SENSE:PULSE	#Avg Type: RMS Avg Hold:>100/100	05:31:53 PM May 07, 2024 TRACE 1 2 3 4 5 6 TYPE MWWWW DET P NNNNN	Frequency
Ref Offse 0 dB/div Ref 20.0		#Allen: 30 dB	Mkr1 2.	402 171 0 GHz -6.798 dBm	Auto Tun
.og 10.0 0.00 → 1	AN	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	ALARA ARA ARA		Center Fre 2.441750000 GH
20.0		1141414141411	****		Start Fre 2.400000000 GH
60.0 					Stop Fre 2.483500000 GH
Start 2.40000 GHz Res BW 100 kHz	#VE	300 kHz Y FU		Stop 2.48350 GHz 000 ms (1001 pts)	CF Ste 8.350000 MH <u>Auto</u> Ma
1 N 1 f 2 N 1 f 3 4 5 6	2.402 171 0 GHz 2.480 160 0 GHz	-6.798 dBm -6.023 dBm		H.	Freq Offse 0 ⊢
7 8 9 10					Scale Typ
11		m			
SG			STATUS		
		<u>g No. NVNT 2</u>	-DH5 2402MH	z Ant1	
Keysight Spectrum Analyzer	50 Ω AC	SENSE:PULSE	#Avg Type: RMS Avg Hold:>100/100	05:38:06 PM May 07, 2024 TRACE 1 2 3 4 5 6 TYPE MWWWWW	Frequency
Ref Offse 0 dB/div Ref 20.0	IFGain:Low	#Atten: 30 dB		402 004 0 GHz -11.118 dBm	Auto Tun
0.00 1				^2	Center Fre 2.441750000 G⊦
10.0	handhaan	ALANNAA ANA MA	MULIANIANA	Mahala	
40.0					Start Fre 2.400000000 GH
50.0 60.0 70.0					Stop Fre 2.483500000 GH
Start 2.40000 GHz Res BW 100 kHz	Х			Stop 2.48350 GHz 000 ms (1001 pts)	CF Ste 8.350000 MH <u>Auto</u> Ma
MKR MODE TRC SCL	2 402 004 0 CHz	-11.118 dBm			Freq Offse
MKR MODE TRC SCL 1 N 1 f 2 N 1 f 3 4 5	2.402 004 0 GHz 2.480 327 0 GHz	-10.317 dBm		E	0 H
1 N 1 f 2 N 1 f 3 4	2.492 004 0 GHZ 2.480 327 0 GHz	-10.317 aBM			Scale Typ
N 1 f 2 N 1 f 3 - - - 4 - - - 5 - - - 6 - - - 7 - - - 8 - - - 9 - - -	2.480 327 0 GHz	-10.377 GBM			0⊢ Scale Typ Log Li



Но	opping No. NVNT 3	3-DH5 2402MH	Iz Ant1	
Keysight Spectrum Analyzer - Swept SA	SENSE:PULSE		05:46:26 PM May 07, 2024	
Center Freq 2.441750000 G		#Avg Type: RMS Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P NNNNN	Frequency
Ref Offset 3.36 dB		Mkr1 2	.401 670 0 GHz -11.028 dBm	Auto Tune
100 000 -100 -100	y Mangarang Marka	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Inn Man 2	Center Freq 2.441750000 GHz
-20.0			 	Start Freq 2.400000000 GHz
-60.0			h	Stop Freq 2.483500000 GHz
Start 2.40000 GHz #Res BW 100 kHz	#VBW 300 kHz	Sweep 8	Stop 2.48350 GHz 3.000 ms (1001 pts)	CF Step 8.350000 MHz
MKR MODE TRC SCL X 1 N 1 f 2.401 670 2 N 1 f 2.480 494	0 GHz -11.028 dBm	UNCTION FUNCTION WIDTH	FUNCTION VALUE	Auto Man Freq Offset
3 4 5 6 6			E	0 Hz
7 8 9 9				Scale Type
11				
MSG		K STATU	s	

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14. Dwell Time

14.1 Block Diagram Of Test Setup

EUT	SPECTRUM
	ANALYZER

14.2 Limit

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

14.3 Test procedure

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

2. Set spectrum analyzer span = 0. Centred on a hopping channel;

3. Set RBW = 1MHz and VBW = 3MHz.Sweep = as necessary to capture the entire dwell time per hopping channel. Set the EUT for DH5, DH3 and DH1 packet transmitting.

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

14.4 Test Result

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.

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Condition	Mode	Frequency (MHz)	Pulse Time (ms)	Total Dwell Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	0.401	128.320	400	Pass
NVNT	1-DH3	2441	1.655	264.800	400	Pass
NVNT	1-DH5	2441	2.903	309.653	400	Pass
NVNT	2-DH1	2441	0.408	130.560	400	Pass
NVNT	2-DH3	2441	1.662	265.920	400	Pass
NVNT	2-DH5	2441	2.889	308.160	400	Pass
NVNT	3-DH1	2441	0.413	132.160	400	Pass
NVNT	3-DH3	2441	1.661	265.760	400	Pass
NVNT	3-DH5	2441	2.912	310.613	400	Pass

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	Test (well NVNT 1-DH1 24	Graphs	o Durot	
weysight Spectrum Analyzer - Swept SA	weil INVINT T-DHT 24		ie Burst	
RL RF 50 Ω AC Center Freq 2.441000000	SENSE:PULSE O CHZ PNO: Fast ↔ IFGain:Low SENSE:PULSE Trig Delay-500.0 Trig: Video #Atten: 30 dB	µs #Avg Type: RMS	05:47:06 PM May 07, 2024 TRACE 1 2 3 4 5 6 TYPE WWWW DET P N N N N N	Frequency
Ref Offset 3.36 dB 10 dB/div Ref 20.00 dBm	ir Gain. Low with the up	Δ	Mkr1 401.0 µs -0.78 dB	Auto Tune
Log				Center Freq 2.44100000 GHz
-10.0 -20.0 VIII			TRIG LVL	
-30.0				Start Freq 2.441000000 GHz
-60.0 1991 01 00 01 01 01 01 01 01 01 01 01 01 01	<mark>ista la francés de la constanta de la constant Esta la francés de la constanta de la constanta</mark>	n hallen bestellen der Bestellen Bestellen Terforden bis die Bestellen Bestellen met Philipping im Bestellen Terforden Bestellen B	house faits produce the straig at the apple to the straight and s	Stop Freq 2.441000000 GHz
Center 2.441000000 GHz Res BW 1.0 MHz MKR MODE TRC SCL X		Sweep 10.	Span 0 Hz 00 ms (10001 pts) FUNCTION VALUE	CF Step 1.000000 MHz <u>Auto</u> Man
1 Δ2 1 t (Δ) 2 F 1 t 3 3 4 - - - 5 - - - - 6 - - - -	401.0 μs (Δ) -0.78 dB 481.0 μs -21.99 dBm			Freq Offset 0 Hz
7 8 9 10				Scale Type Log <u>Lin</u>
11	cleared	I STATUS	• •	
D	well NVNT 1-DH3 24	41MHz Ant1 Or	ne Burst	
Keysight Spectrum Analyzer - Swept SA μ RL RF 50 Ω AC Center Freq 2.441000000	0 GHz PN0: Fast ↔ Trig Delay-500.0 Trig: Video	µs #Avg Type: RMS	05:47:55 PM May 07, 2024 TRACE 123456 TYPE	Frequency
Ref Offset 3.36 dB 10 dB/div Ref 20.00 dBm	IFGain:Low #Atten: 30 dB	Δ	0.39 dB	Auto Tune
10.0	2		TRIG LVL	Center Freq 2.441000000 GHz
-20.0 -30.0 -40.0				Start Freq 2.441000000 GHz
-60.0 <mark></mark>	na per estante a posterio en la contra en la contra de la c Interna de la contra de la contra Interna de la contra	in his provident of the spin provident of the spin of the spin provident of the	ad with an in the produced in a legal	Stop Freq 2.441000000 GHz
Center 2.441000000 GHz Res BW 1.0 MHz	#VBW 3.0 MHz		Span 0 Hz 00 ms (10001 pts)	CF Step 1.000000 MHz <u>Auto</u> Man
MKR MODE TRC SCL X 1 Δ2 1 t (Δ) 2 F 1 t 3 4 4 4 4 4 5 6 6 6 6	1.655 ms (Δ) 0.39 dB 482.0 μs -21.42 dBm	FUNCTION FUNCTION WIDTH	FUNCTION VALUE	Freq Offset 0 Hz
7 8 9 10				Scale Type
11				

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D	well NVNT	1-DH5 24	41MHz Ant1	One Burst	
Keysight Spectrum Analyzer - Swept SA		SENSE:PULSE		05:33:28 PM May 07, 2024	
Center Freq 2.44100000	O GHz PNO: Fast ↔→ IFGain:Low	Trig Delay-500.0 µ Trig: Video #Atten: 30 dB	is #Avg Type: RMS	TRACE 1 2 3 4 5 6 TYPE WWWWW DET P N N N N N	Frequency
Ref Offset 3.36 dB 10 dB/div Ref 20.00 dBm				ΔMkr1 2.903 ms 0.37 dB	Auto Tune
10.0					Center Freq 2.441000000 GHz
-10.0	1Δ2			TRIG LVL	2.44100000 GH2
					Start Freq 2.441000000 GHz
-40.0 -50.0 <mark>#/by/)</mark>	and the second			an fa far stand a standard a stand Standard a standard a st	Stop Freq
-60.0	լ	and a state of the second		alon (,) a daga ng bah binda binda () daga () da	2.441000000 GHz
Center 2.441000000 GHz Res BW 1.0 MHz	#VBW	3.0 MHz	Sweep	Span 0 Hz 10.00 ms (10001 pts)	CF Step 1.000000 MHz <u>Auto</u> Man
MKR MODE TRC SCL X 1 Δ2 1 t (Δ) 2 F 1 t	2.903 ms (Δ) 482.0 μs	Y F 0.37 dB -21.36 dBm	UNCTION FUNCTION WID	TH FUNCTION VALUE	
3 4 5				=	Freq Offset 0 Hz
6 7 8 9					Scale Type
10 11 •					Log <u>Lin</u>
MSG Points changed; all traces	cleared			rus	
D	well NVNT	2-DH1 24	41MHz Ant1	One Burst	
Keysight Spectrum Analyzer - Swept SA Keysight Spectrum Analyzer - Swept SA Keysight Spectrum Analyzer - Swept SA Center Freq 2.441000000		SENSE:PULSE Trig Delay-500.0 µ Trig: Video	ıs #Avg Type: RMS	05:48:45 PM May 07, 2024 TRACE 1 2 3 4 5 6 TYPE WWWWWW DET P N N N N	Frequency
Ref Offset 3.36 dB	PNO: Fast +++ IFGain:Low	#Atten: 30 dB		ΔMkr1 408.0 μs	Auto Tune
10 dB/div Ref 20.00 dBm				0.91 dB	Center Freq
0.00 -10.01Δ2				TRIG LVL	2.441000000 GHz
-20.0					Start Freq 2.441000000 GHz
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.70.0	408.0 μs (Δ)	Y F 0.91 dB		10.00 ms (10001 pts)	CF Step 1.000000 MHz
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	Dwell NVN	T 2-DH3 244	11MHz Ant1 C	ne Burst	
Keysight Spectrum Analyzer - Sv					- F -
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Rt BF 90.0 AC Issuescentration [05:51:42 MMay 07.2024 enter Freq 2.441000000 GHz Frig. Video Trig. Video Trig. Video Trig. Video Trig. Video Auto Tune 0 dS/div Ref Offset3.36 dB AMkr1 1.661 ms 2.46 dB 2.441000000 GHz Auto Tune 0 dS/div Ref 20.00 dBm 1Δ2 Interview Interview Interview Interview Start Freq 0 dS/div Model and the start of		Dwell NVNT	- 3-DH3 244	1MHz Ant1 O	ne Burst	
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15. Antenna Requirement

15.1 Limit

15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

15.2 Test Result

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

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16. EUT Test Setup Photographs

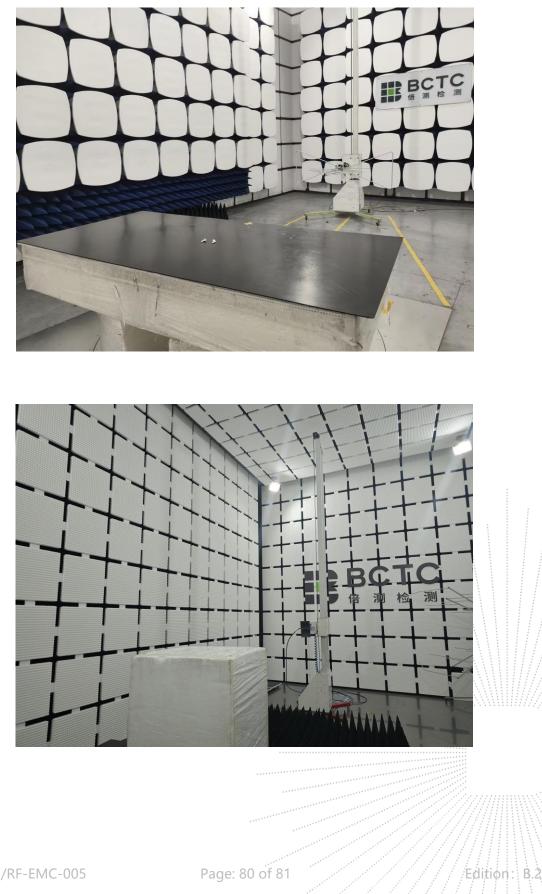
Conducted Emission Measurement Photos



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Radiated Measurement Photos



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 stamp of laboratory.

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

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

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

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

Address:

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

TEL: 400-788-9558

P.C.: 518103

FAX: 0755-33229357

Website: http://www.chnbctc.com

Consultation E-mail: bctc@bctc-lab.com.cn

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

******** END ******

No.: BCTC/RF-EMC-005

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