

TEST REPORT

Report No.:	BCTC2307919155-1E					
Applicant:	SHENZHEN YUNJI INTELLIGENT TECHNOLOGY CO.,LTD					
Product Name:	Smart Phone					
Model/Type reference:	C35					
Tested Date:	2023-07-18 to 2023-07-26					
Issued Date:	2023-07-27					
She	enzhen BCTC Testing Co., Ltd.					
No.: BCTC/RF-EMC-007	Page: 1 of 80					



FCC ID: 2ANMU-C35SPUT

Product Name:	Smart Phone
Trademark:	OUKITEL
Model/Type Reference:	C35 C35 S, C35 Pro, C35 Ultra
Prepared For:	SHENZHEN YUNJI INTELLIGENT TECHNOLOGY CO., LTD
Address:	A2 2F BUILDING ENET NEW INDUSTRIAL PARK, DAFU INDUSTRIAL ZONE, GUANLAN, LONGHUA SHENZHEN, 518XXX China
Manufacturer:	SHENZHEN YUNJI INTELLIGENT TECHNOLOGY CO., LTD
Address:	A2 2F BUILDING ENET NEW INDUSTRIAL PARK, DAFU INDUSTRIAL ZONE, GUANLAN, LONGHUA SHENZHEN, 518XXX China
Prepared By:	Shenzhen BCTC Testing Co., Ltd.
Address:	1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China
Sample Received Date:	2023-07-18
Sample tested Date:	2023-07-18 to 2023-07-26
Issue Date:	2023-07-27
Report No.:	BCTC2307919155-1E
Test Standards	FCC Part15.247 ANSI C63.10-2013
Test Results	PASS
Remark:	This is Bluetooth Classic radio test report.

Tested by:

Brave Zeng/ Project Handler

Approved by:

Zero Zhou/Reviewer

The test report is effective only with both signature and specialized stamp. This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen BCTC Testing Co., Ltd, this report can't be reproduced except in full. The tested sample(s) and the sample information are provided by the client.

Page: 2 of 80



Table Of Content

Test	Report Declaration P	age
1.	Version	5
2.	Test Summary	6
3.	Measurement Uncertainty	7
4.	Product Information And Test Setup	8
4.1	Product Information	
4.2	Test Setup Configuration	8
4.3	Support Equipment	
4.4	Channel List	
4.5	Test Mode	-
4.6	Table Of Parameters Of Text Software Setting	
5.	Test Facility And Test Instrument Used	
5.1	Test Facility	11
5.2	Test Instrument Used	
6.	Conducted Emissions	
6.1	Block Diagram Of Test Setup	13
6.2	Limit	
6.3	Test procedure	
6.4	EUT operating Conditions	
6.5	Test Result	
7.	Radiated emissions	
7.1	Block Diagram Of Test Setup	
7.2	Limit	
7.3	Test procedure	
7.4	EUT operating Conditions	
7.5	Test Result	
8.	Radiated Band Emission Measurement And Restricted Bands Of Operation	
8.1 8.2	Block Diagram Of Test Setup	
o.∠ 8.3	Limit	
o.s 8.4		
0.4 8.5	EUT operating Conditions	
8.5 9.	Spurious RF Conducted Emissions	
9.1	Block Diagram Of Test Setup	
9.1	Limit	20 26
9.3	Limit Test procedure	20 26
9.4	Test Result	20 27
10.	20 dB Bandwidth	48
10.1	20 dB Bandwidth Block Diagram Of Test Setup	48
10.2	Limit	48
10.2		48
10.4	Test Result	49
11.	Maximum Peak Output Power	55
11.1		
11.2		

Page: 3 of 80



11.3 Test procedure	55
11.4 Test Result	55
12. Hopping Channel Separation	61
12.1 Block Diagram Of Test Setup	61
12.2 Limit	61
12.3 Test procedure	61
12.4 Test Result	61
13. Number Of Hopping Frequency	67
13.1 Block Diagram Of Test Setup	67
13.2 Limit	
13.3 Test procedure	67
13.4 Test Result	67
14. Dwell Time	70
14.1 Block Diagram Of Test Setup	70
14.2 Limit	70
14.3 Test procedure	70
14.4 Test Result	70
15. Antenna Requirement	76
15.1 Limit	76
15.2 Test Result	76
16. EUT Photographs	77
17. EUT Test Setup Photographs	78

(Note: N/A Means Not Applicable)

Page: 4 of 80

Edition: B.0



1. Version

Report No.	Issue Date	Description	Approved
BCTC2307919155-1E	2023-07-27	Original	Valid

Edition: B.0



2. Test Summary

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	Hopping channel separation	§15.247(a)(1)	PASS
5	Number of hopping frequencies	§15.247(a)(1)(iii)	PASS
6	Dwell Time	§15.247(a)(1)(iii)	PASS
7	Spurious RF conducted emissions	§15.247(d)	PASS
8	Band edge	§15.247(d)	PASS
9	Spurious radiated emissions for transmitter	§15.247(d) & §15.209 & §15.205	PASS
10	Antenna Requirement	15.203	PASS



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:	C35 C35 S, C35 Pro, C35 Ultra
Model differences:	Only the model names are different.
Bluetooth Version:	5.0
Hardware Version:	FS311-MB-V1.0
Software Version:	OUKITEL_C35_EEA_V02_19062023
Operation Frequency:	2402-2480MHz
Type of Modulation:	GFSK, π/ 4 DQPSK, 8DPSK
Number Of Channel	79CH
Antenna installation:	Internal antenna
Antenna Gain:	0.22 dBi
Ratings:	DC 5V from adapter/DC 3.87V from battery
Adapter Information:	Model: HJ-0502000N2-US Input: 100-240V~50/60Hz 0.3A Output: 5.0V === 2.0A

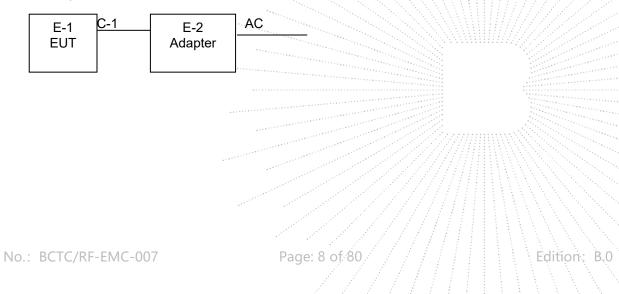
4.2 Test Setup Configuration

See test photographs attached in *EUT TEST SETUP PHOTOGRAPHS* for the actual connections between Product and support equipment.

Conducted Emission:

E-1	C-1	E-2	AC
EUT		Adapter	*·.,

Radiated Spurious Emission





4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
E-1	Smart Phone	OUKITEL	C35	N/A	EUT
E-2	Adapter	N/A	HJ-0502000N2- US	N/A	Auxiliary

ltem	Shielded Type	Ferrite Core	Length	Note
C-1	N/A	N/A	1M	DC cable unshielded

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 Facility And Test Instrument Used 5.

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, Zhancheng, 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

A2LA certificate registration number is: CN1212

ISED Registered No.: 23583

ISED CAB identifier: CN0017

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	١	١		
Attenuator	١	10dB DC-6GHz	1650	May 15, 2023	May 14, 2024		

5.2 Test Instrument Used

RF Conducted Test							
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.		
Power Meter	Keysight	E4419	l I	May 15, 2023	May 14, 2024		
Power Sensor (AV)	Keysight	E9300A		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	100363	May 15, 2023	May 14, 2024		
Communication test set	R&S	CMW500	126173	Nov. 08, 2022	Nov. 07, 2023		
Radio frequency control box	MAIWEI	MW200-RFC B			I		
Software	MAIWEI	MTS 8200			· · · · · · · · · · · · · · · · · · ·		



Radiated Emissions Test (966 Chamber01)							
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	Schwarzbeck	BBV9744	9744-0037	May 15, 2023	May 14, 2024		
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	942	May 29, 2023	May 28, 2024		
Loop Antenna(9KHz -30MHz)	Schwarzbeck	FMZB1519B	00014	May 31, 2023	May 30, 2024		
Amplifier	SKET	LAPA_01G18 G-45dB	١	May 15, 2023	May 14, 2024		
Horn Antenna	Schwarzbeck	BBHA9120D	1541	May 31, 2023	May 30, 2024		
Amplifier(18G Hz-40GHz)	MITEQ	TTA1840-35- HG	2034381	May 15, 2023	May 14, 2024		
Horn Antenna(18G Hz-40GHz)	Schwarzbeck	BBHA9170	00822	May 31, 2023	May 30, 2024		
Spectrum Analyzer9kHz- 40GHz	R&S	FSP40	100363	May 15, 2023	May 14, 2024		
Communication test set	R&S	CMW500	126173	Nov. 08, 2022	Nov. 07, 2023		
Software	Frad	EZ-EMC	FA-03A2 RE	١	\		

No.: BCTC/RF-EMC-007

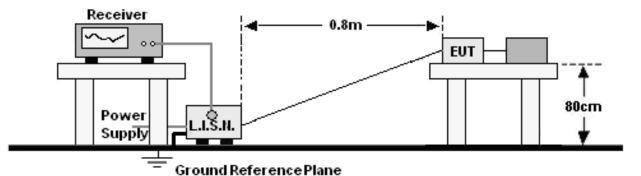
Page: 12 of 80

Edition: B.0



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	

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.

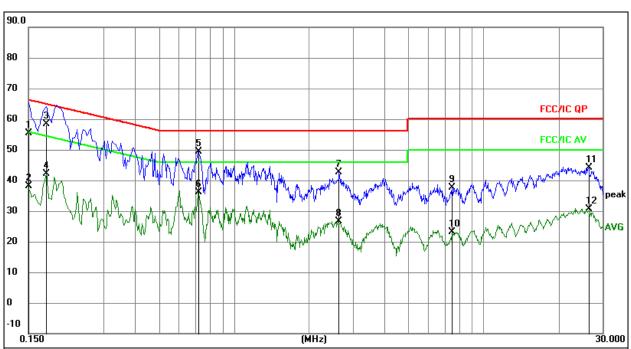
6.4 EUT operating Conditions

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	Detecto
1		0.1500	45.95	9.51	55.46	66.00	-10.54	QP
2		0.1500	28.50	9.51	38.01	56.00	-17.99	AVG
3	*	0.1760	48.77	9.56	58.33	64.67	-6.34	QP
4		0.1760	32.45	9.56	42.01	54.67	-12.66	AVG
5		0.7160	39.83	9.63	49.46	56.00	-6.54	QP
6		0.7160	26.46	9.63	36.09	46.00	-9.91	AVG
7		2.6360	32.87	9.76	42.63	56.00	-13.37	QP
8		2.6360	16.77	9.76	26.53	46.00	-19.47	AVG
9		7.4860	27.98	9.73	37.71	60.00	-22.29	QP
10		7.4860	13.31	9.73	23.04	50.00	-26.96	AVG
11		26.4178	34.29	9.73	44.02	60.00	-15.98	QP
12		26.4178	20.85	9.73	30.58	50.00	-19.42	AVG

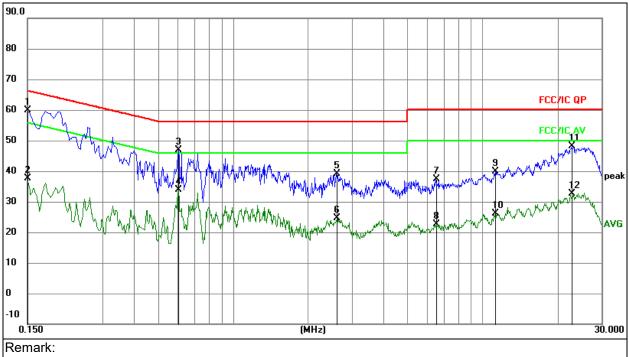
No.: BCTC/RF-EMC-007

Page: 14 of 80

Edition:



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



All readings are Quasi-Peak and Average values.
 Factor = Insertion Loss + Cable Loss.

	<u></u>	Measurement -	1
	$1 W \Delta r \equiv$	N/IDDELIFOMONT -	I Imit
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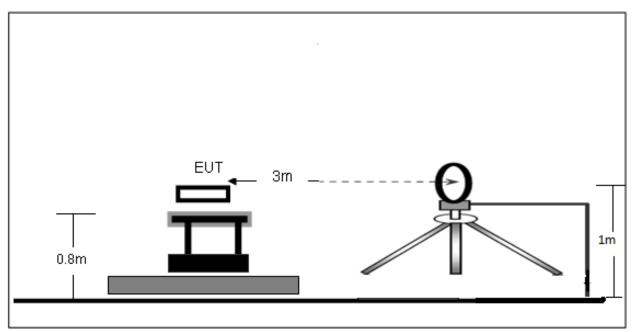
No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
	MHz		dB	dBuV	dBuV	dB	Detector
1 *	0.1500	50.32	9.51	59.83	66.00	-6.17	QP
2	0.1500	28.19	9.51	37.70	56.00	-18.30	AVG
3	0.6043	37.21	9.62	46.83	56.00	-9.17	QP
4	0.6043	24.35	9.62	33.97	46.00	-12.03	AVG
5	2.5945	29.33	9.76	39.09	56.00	-16.91	QP
6	2.5945	14.85	9.76	24.61	46.00	-21.39	AVG
7	6.4882	27.52	9.76	37.28	60.00	-22.72	QP
8	6.4882	12.81	9.76	22.57	50.00	-27.43	AVG
9	11.2572	30.19	9.66	39.85	60.00	-20.15	QP
10	11.2572	16.50	9.66	26.16	50.00	-23.84	AVG
11	22.7755	38.42	9.76	48.18	60.00	-11.82	QP
12	22.7755	22.89	9.76	32.65	50.00	-17.35	AVG



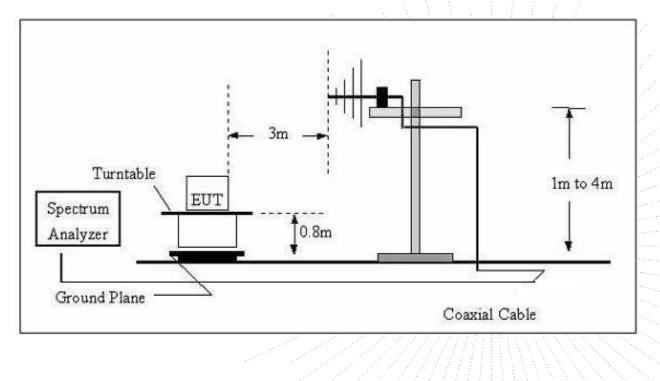
7. Radiated emissions

7.1 Block Diagram Of Test Setup

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

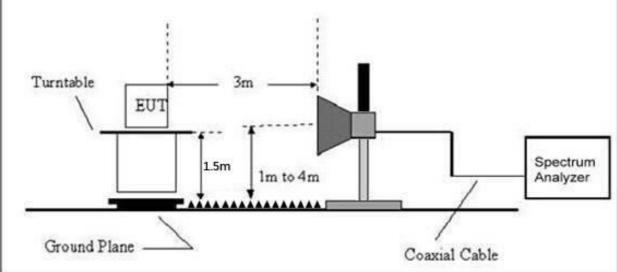


(B) Radiated Emission Test-Up Frequency 30MHz~1GHz





(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 Li	nit 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)

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

(b) 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	Test Voltage:	AC120V/60Hz
Test Mode:	Mode 4	Polarization :	

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.

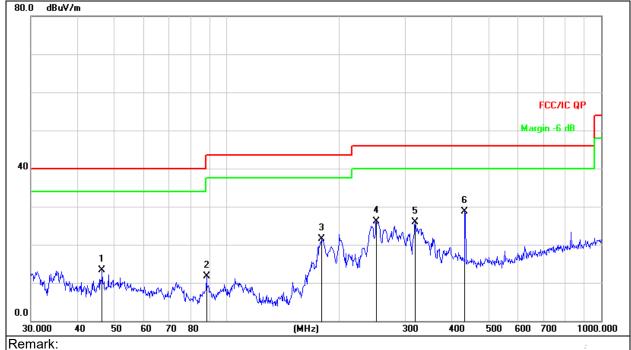
Distance extrapolation factor =40 log (specific distance/test distance)(dB);

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



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



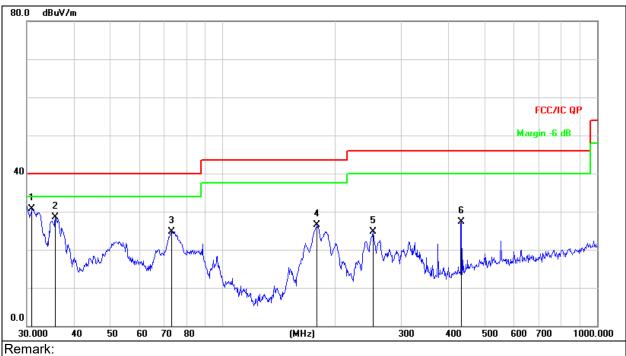


Factor = Antenna Factor + Cable Loss – Pre-amplifier.
 Measurement = Reading Level + Correct Factor
 Over = Measurement - Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		46.5030	29.22	-15.99	13.23	40.00	-26.77	QP
2		88.3421	31.35	-19.62	11.73	43.50	-31.77	QP
3		179.3863	40.42	-18.89	21.53	43.50	-21.97	QP
4	2	251.1804	41.81	-15.80	26.01	46.00	-19.99	QP
5		318.8170	39.87	-13.91	25.96	46.00	-20.04	QP
6	* 4	432.5457	40.38	-11.74	28.64	46.00	-17.36	QP



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



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

3. Over = Measurement - Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1	*	30.9619	48.87	-18.22	30.65	40.00	-9.35	QP
2		35.7490	45.93	-17.43	28.50	40.00	-11.50	QP
3		73.1025	45.17	-20.45	24.72	40.00	-15.28	QP
4		178.7584	45.34	-18.93	26.41	43.50	-17.09	QP
5	:	252.0627	40.51	-15.78	24.73	46.00	-21.27	QP
6		434.0651	39.00	-11.72	27.28	46.00	-18.72	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 ch	annel			
V	4804.00	66.00	-10.85	55.15	74.00	-18.85	PK
V	4804.00	57.09	-10.85	46.24	54.00	-7.76	AV
V	7206.00	57.65	-3.06	54.59	74.00	-19.41	PK
V	7206.00	47.20	-3.06	44.14	54.00	-9.86	AV
Н	4804.00	64.23	-10.85	53.38	74.00	-20.62	PK
Н	4804.00	54.20	-10.85	43.35	54.00	-10.65	AV
Н	7206.00	56.30	-3.06	53.24	74.00	-20.76	PK
Н	7206.00	47.61	-3.06	44.55	54.00	-9.45	AV
		G	FSK Middle c	hannel			
V	4882.00	62.75	-10.62	52.13	74.00	-21.87	PK
V	4882.00	53.84	-10.62	43.22	54.00	-10.78	AV
V	7323.00	55.17	-2.64	52.53	74.00	-21.47	PK
V	7323.00	45.26	-2.64	42.62	54.00	-11.38	AV
Н	4882.00	57.91	-10.62	47.29	74.00	-26.71	PK
Н	4882.00	47.98	-10.62	37.36	54.00	-16.64	AV
Н	7323.00	53.08	-2.64	50.44	74.00	-23.56	PK
Н	7323.00	45.15	-2.64	42.51	54.00	-11.49	AV
			GFSK High ch	annel			
V	4960.00	64.05	-10.38	53.67	74.00	-20.33	PK
V	4960.00	53.83	-10.38	43.45	54.00	-10.55	AV
V	7440.00	57.74	-2.22	55.52	74.00	-18.48	PK
V	7440.00	48.09	-2.22	45.87	54.00	-8.13	AV
Н	4960.00	62.54	-10.38	52.16	74.00	-21.84	PK
Н	4960.00	52.51	-10.38	42.13	54.00	-11.87	AV
Н	7440.00	55.43	-2.22	53.21	74.00	-20.79	PK
Н	7440.00	48.22	-2.22	46.00	54.00	-8.00	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 20dB4. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

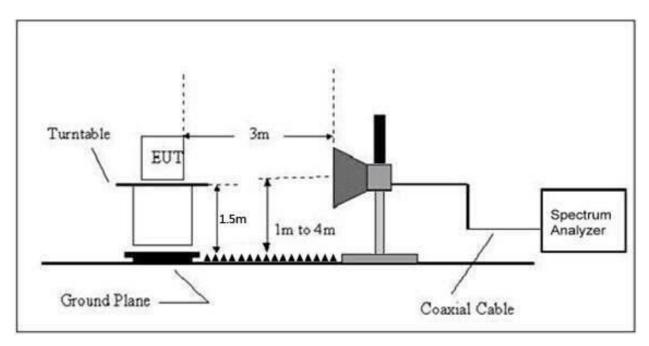
5.All the Modulation are test, the worst mode is GFSK, the data recording in the report.



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			



Limits Of Radiated Emission Measurement (Above 1000MHz)

	Limit (d	BuV/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).

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	Correct Factor	Measure- ment (dBuV/m)	Lin (dBu	nits V/m)	Result
	(1.1.4)	(11112)	(dBuV/m)	(dB)	PK	PK	AV	
			Low	Channel 24	102MHz	L		L
	Н	2390.00	53.45	-19.46	33.99	74.00	54.00	PASS
	Н	2400.00	57.63	-19.42	38.21	74.00	54.00	PASS
	V	2390.00	52.46	-19.46	33.00	74.00	54.00	PASS
GFSK	V	2400.00	56.81	-19.42	37.39	74.00	54.00	PASS
Gran			High	Channel 24	480MHz			
	Н	2483.50	56.52	-19.05	37.47	74.00	54.00	PASS
	Н	2500.00	52.71	-18.98	33.73	74.00	54.00	PASS
	V	2483.50	56.32	-19.05	37.27	74.00	54.00	PASS
	V	2500.00	53.39	-18.98	34.41	74.00	54.00	PASS
			Low	Channel 24	102MHz			
	Н	2390.00	53.71	-19.46	34.25	74.00	54.00	PASS
	Н	2400.00	57.18	-19.42	37.76	74.00	54.00	PASS
	V	2390.00	53.40	-19.46	33.94	74.00	54.00	PASS
π/4DQPSK	V	2400.00	57.60	-19.42	38.18	74.00	54.00	PASS
II/4DQP3K			High	Channel 24	480MHz			
	Н	2483.50	57.88	-19.05	38.83	74.00	54.00	PASS
	Н	2500.00	51.29	-18.98	32.31	74.00	54.00	PASS
	V	2483.50	55.65	-19.05	36.60	74.00	54.00	PASS
	V	2500.00	50.78	-18.98	31.80	74.00	54.00	PASS
			Low	Channel 24	102MHz			
	Н	2390.00	54.74	-19.46	35.28	74.00	54.00	PASS
	Н	2400.00	58.72	-19.42	39.30	74.00	54.00	PASS
	V	2390.00	54.38	-19.46	34.92	74.00	54.00	PASS
	V	2400.00	58.81	-19.42	39.39	74.00	54.00	PASS
8DPSK		*-,	High	Channel 24	480MHz			
	Н	2483.50	58.30	-19.05	39.25	74.00	54.00	PASS
	Н	2500.00	54.07	-18.98	35.09	74.00	54.00	PASS
	V	2483.50	56.83	-19.05	37.78	74.00	54.00	PASS
	V	2500.00	51.85	-18.98	32.87	74.00	54.00	PASS

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))

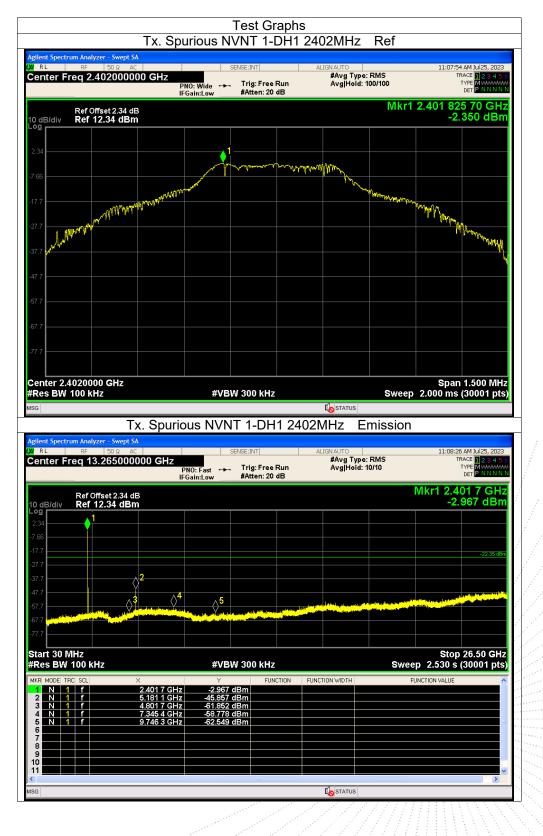
9.3 Test procedure

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



9.4 Test Result

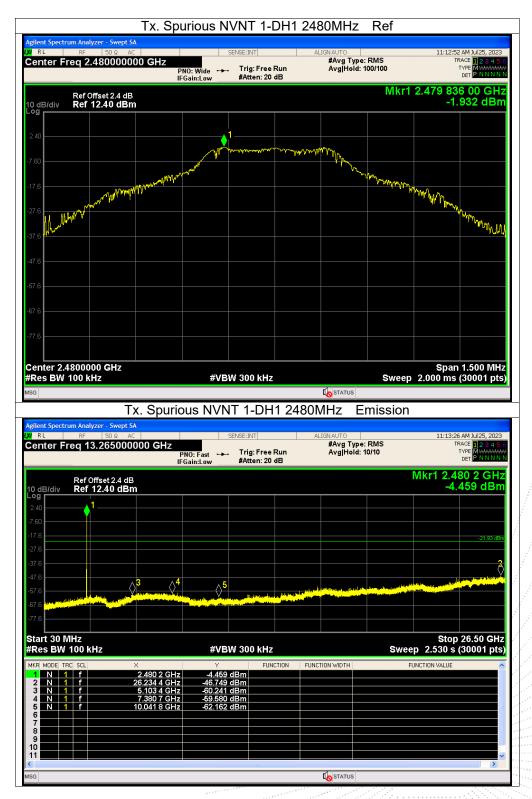






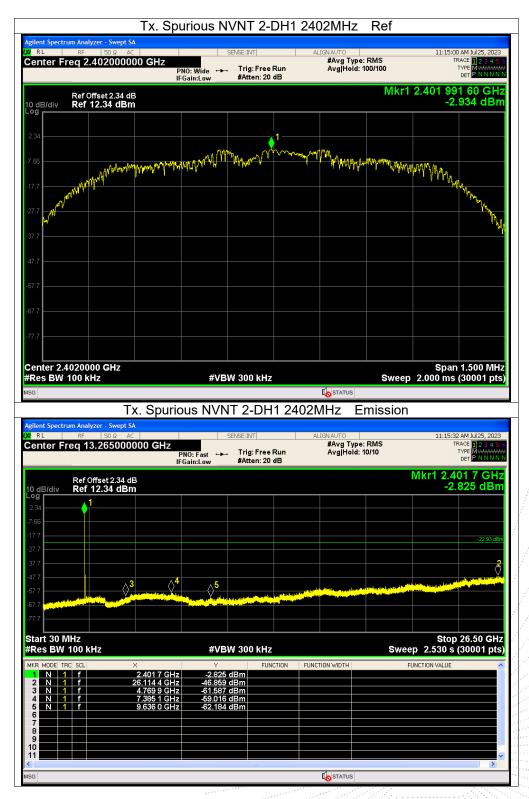
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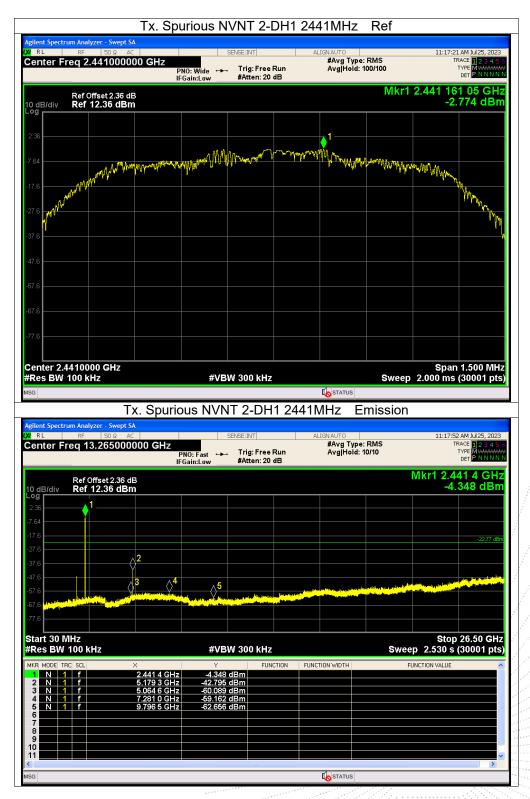
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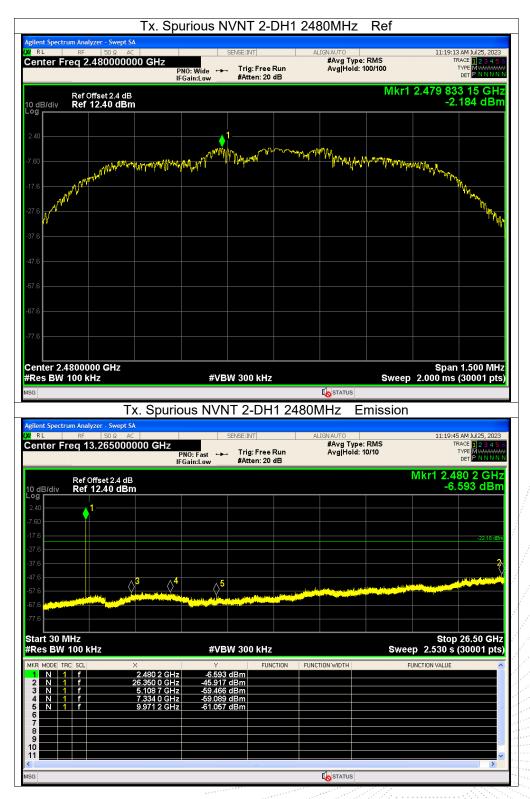
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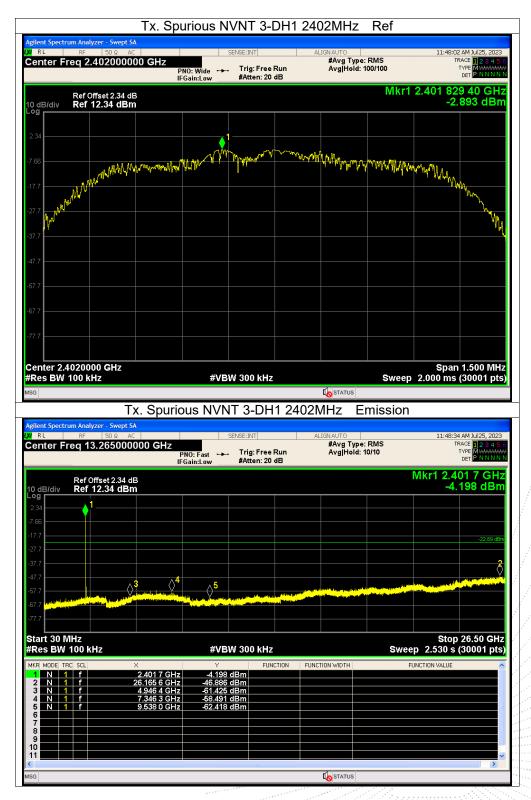


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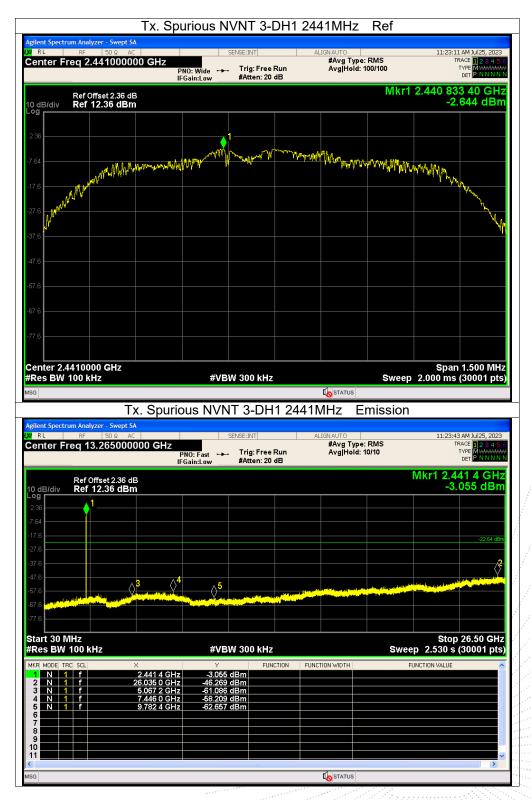






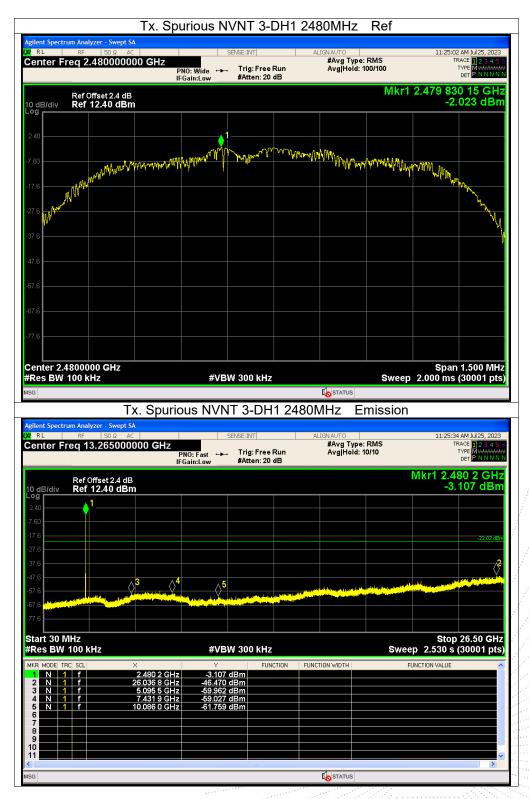






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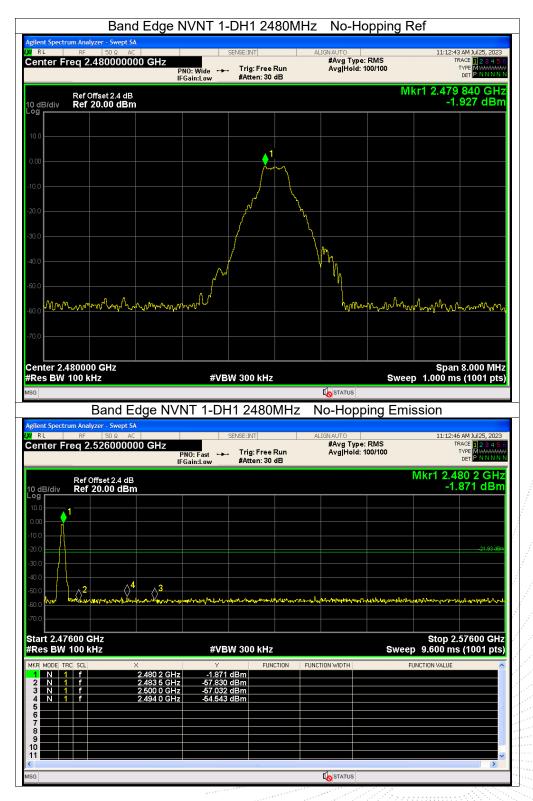
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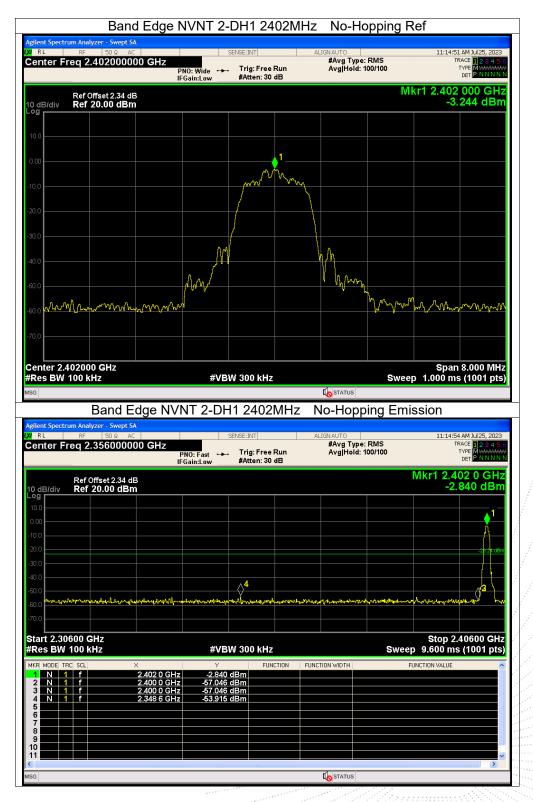
ilent Spectrum Analyzer - Swe RL RF 50Ω enter Freq 2.40200	AC	SENSE:IN		ALIGNAUTO #Avg Type		11:07:45 TI	5 AM Jul 25, 202 RACE 1 2 3 4 5
			: Free Run en: 30 dB	Avg Hold:	100/100		RACE 12345 TYPE MWWWW DET PNNNN
Ref Offset 2.3					Mk	r1 2.401 -2	840 GH 342 dBr
dB/div Ref 20.00 d							
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Res BW 100 kHz Band Ient Spectrum Analyzer - Swe RL RF Soc enter Freq 2.35600 Ref Offset 2.3 Ref 20.00 d Ref 20.00 d	AC AC PN FG: AC AC A	IT 1-DH1 24 SENSE:IN 10: Fast + Trig	402MHz	No-Hop	ping Emis ≅: RMS 100/100	1.000 ms ssion 11:07:48 T	3 AM JUI25, 2021 RACE 1 2 3 4 E TYPE M WWW DET P N N N N 01 8 GH
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Res BW 100 kHz Band Ient Spectrum Analyzer - Swe RL RF 50 Q enter Freq 2.35600 GB/G/G Ref 20.00 d GB/G/G Ref 20.00 d GB/G	AC OOO GHZ PN IFG	T 1-DH1 24 SENSE.IN 00: Fast → Trig ain:Low → #Attr 2 341 dBm	402MHz	No-Hop	ping Emis monocological monoco	1.000 ms ssion 11:07:44 ۳ ۷kr1 2.4 -2.	3 (1001 pt 3 AM Jul 25, 202 AACE 12 3 4 E 12 3 4 E 12 3 4 E 12 3 4 E 14 4 B 14
Res BW 100 kHz Band Ient Spectrum Analyzer - Swe RL RF 50 Q enter Freq 2.35600 GB/G/G Ref 20.00 d GB/G/G Ref 20.00 d GB/G	AC AC AC PN BC PN IFG PN 4 dB Bm 4 dB PN 2 d01 8 GHz PN 2 401 8 GHz 2.400 0 GHz	T 1-DH1 24 SENSE:IN 0: Fast ain:Low → Trig #Attr #VBW 300 ¥ 2,341 dBm 58 549 dBm 58 549 dBm	402MHz		ping Emis monocological monoco	1.000 ms ssion 1::07:44 ™ Wkr1 2.4 -2. Stop 2. 9.600 ms	3 (1001 pt 3 AM Jul 25, 202 AACE 12 3 4 E 12 3 4 E 12 3 4 E 12 3 4 E 14 4 B 14
Res BW 100 kHz Band Band Inter Spectrum Analyzer - Swe Ref Offset 2.3 Ref Offset 2.3 GB/div GB/div GB/div Ref Offset 2.3 GB/div GB/div GB/div GB/div GB/div GB/div R GB/div GB/div <td>AC OOO GHZ PN IFG</td> <td>T 1-DH1 24 SENSE.IN 00: Fast → Trig ain:Low → #Attr 2 341 dBm</td> <td>402MHz</td> <td></td> <td>ping Emis monocological monoco</td> <td>1.000 ms ssion 1::07:44 ™ Wkr1 2.4 -2. Stop 2. 9.600 ms</td> <td>3 (1001 pt 3 AM Jul 25, 202 AACE 12 3 4 E 12 3 4 E 12 3 4 E 12 3 4 E 14 4 B 14 4 B 14</td>	AC OOO GHZ PN IFG	T 1-DH1 24 SENSE.IN 00: Fast → Trig ain:Low → #Attr 2 341 dBm	402MHz		ping Emis monocological monoco	1.000 ms ssion 1::07:44 ™ Wkr1 2.4 -2. Stop 2. 9.600 ms	3 (1001 pt 3 AM Jul 25, 202 AACE 12 3 4 E 12 3 4 E 12 3 4 E 12 3 4 E 14 4 B 14
Res BW 100 kHz Band Ilent Spectrum Analyzer - Swe RL RF 50 Q enter Freq 2.35600 Ref Offset 2.3 Ref Offset 2.3 dB/div Ref 20.00 d dB/div Ref 20.00	AC AC AC PN BC PN IFG PN 4 dB Bm 4 dB PN 2 d01 8 GHz PN 2 401 8 GHz 2.400 0 GHz	T 1-DH1 24 SENSE:IN 0: Fast ain:Low → Trig #Attr #VBW 300 ¥ 2,341 dBm 58 549 dBm 58 549 dBm	402MHz		ping Emis monocological monoco	1.000 ms ssion 1::07:44 ™ Wkr1 2.4 -2. Stop 2. 9.600 ms	3 (1001 pt 3 AM Jul 25, 202 AACE 12 3 4 E 12 3 4 E 12 3 4 E 12 3 4 E 14 4 B 14

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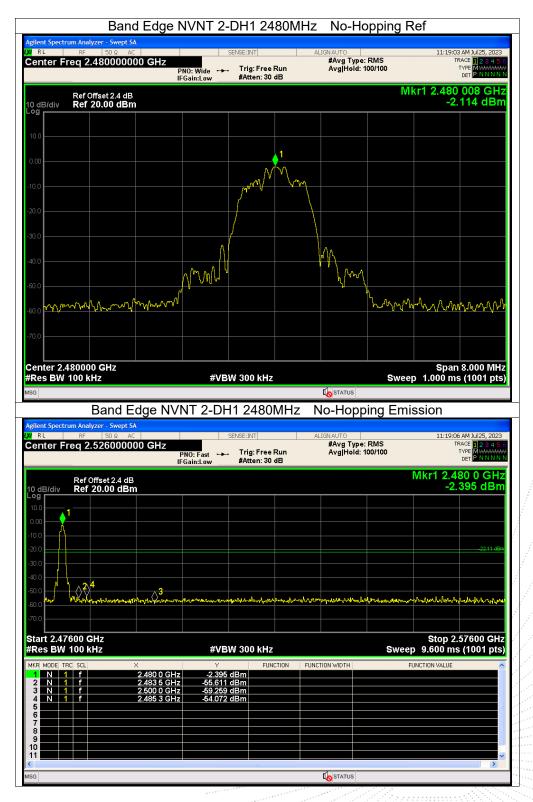




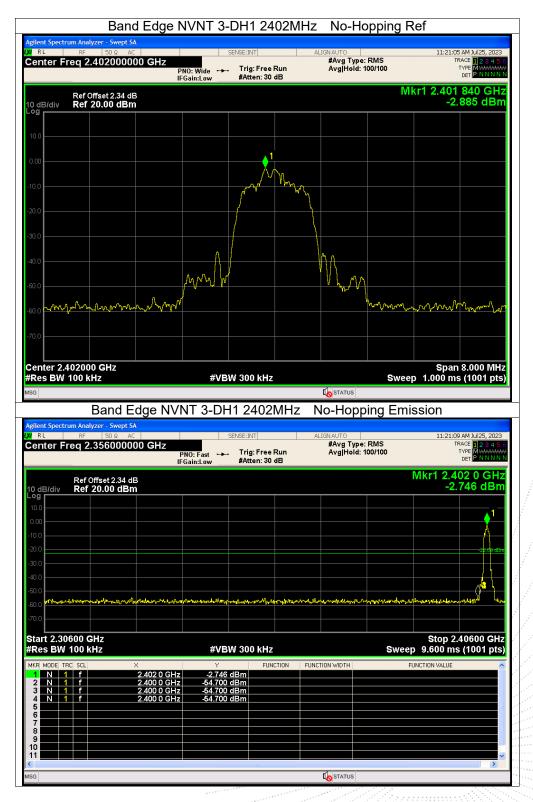




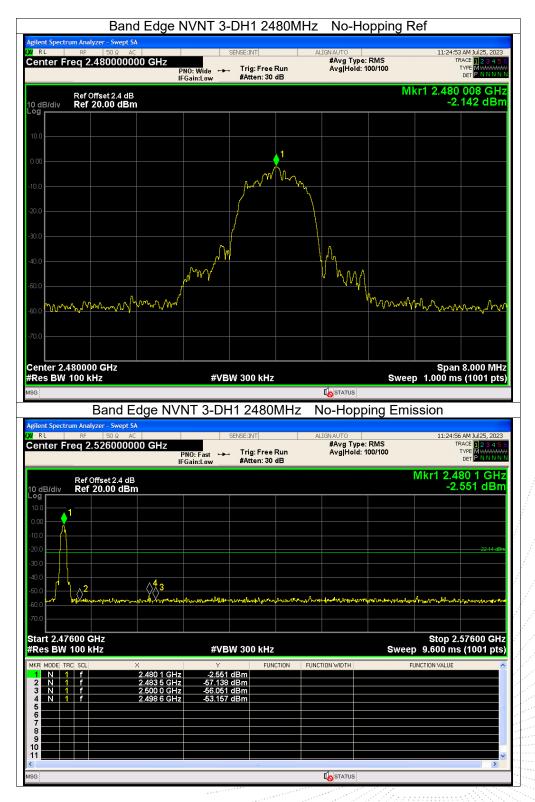




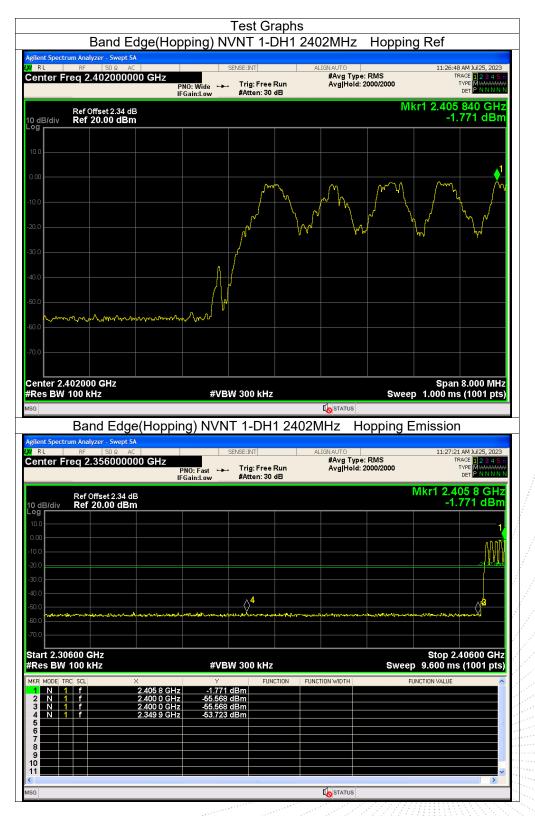












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10. 20 dB Bandwidth

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.

No.: BCTC/RF-EMC-007

Page: 48 of 80



10.4 Test Result

Condition	Mode	Frequency (MHz)	-20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	0.875	Pass
NVNT	1-DH1	2441	0.871	Pass
NVNT	1-DH1	2480	0.857	Pass
NVNT	2-DH1	2402	1.268	Pass
NVNT	2-DH1	2441	1.256	Pass
NVNT	2-DH1	2480	1.259	Pass
NVNT	3-DH1	2402	1.24	Pass
NVNT	3-DH1	2441	1.259	Pass
NVNT	3-DH1	2480	1.237	Pass

No.: BCTC/RF-EMC-007

Page: 49 of 80













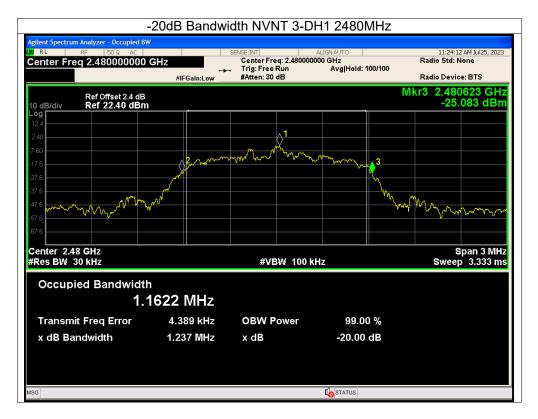
No.: BCTC/RF-EMC-007

Page: 52 of 80









No.: BCTC/RF-EMC-007

Page: 54 of 80



11. Maximum Peak Output Power

11.1 Block Diagram Of Test Setup

EUT	SPECTRUM
	ANALYZER

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.

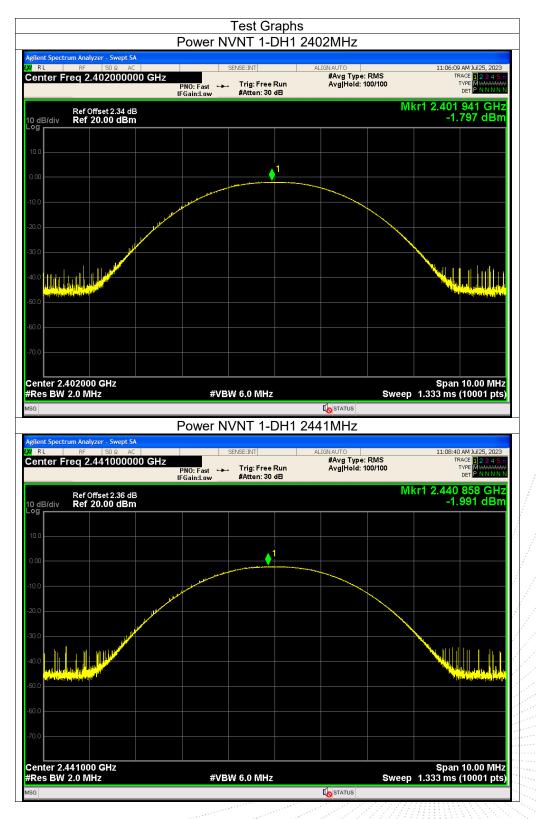
2. Set the spectrum analyzer: RBW = 2MHz. VBW = 6MHz. Sweep = auto; Detector Function = Peak.

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

11.4 Test Result

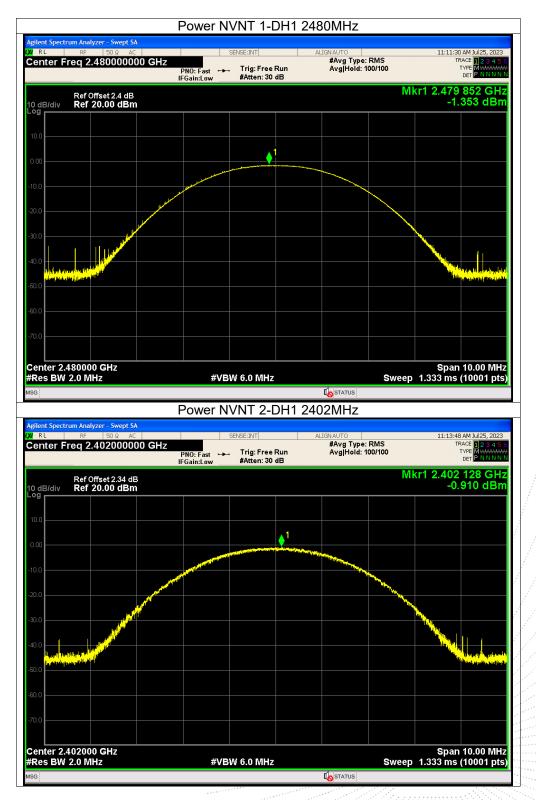
Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	-1.8	21	Pass
NVNT	1-DH1	2441	-1.99	21	Pass
NVNT	1-DH1	2480	-1.35	21	Pass
NVNT	2-DH1	2402	-0.91	21	Pass
NVNT	2-DH1	2441	-0.76	21	Pass
NVNT	2-DH1	2480	-0.21	21	Pass
NVNT	3-DH1	2402	-0.75	21	Pass
NVNT	3-DH1	2441	-0.65	21	Pass
NVNT	3-DH1		-0.15	21	Pass



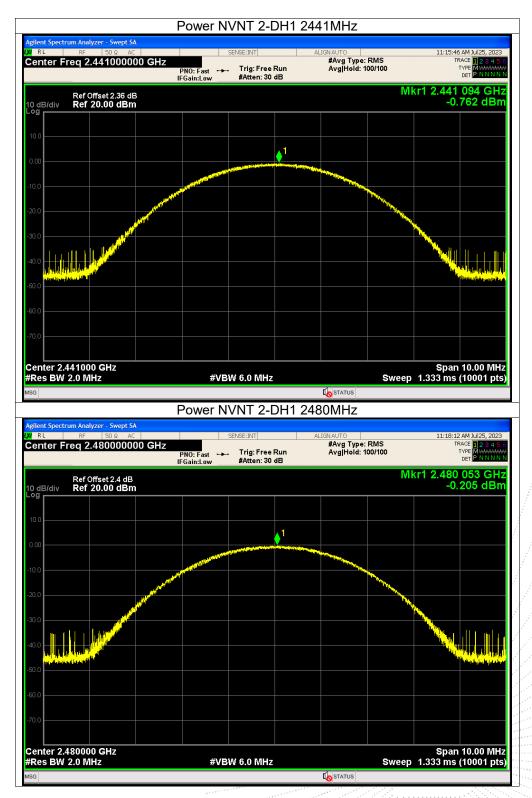


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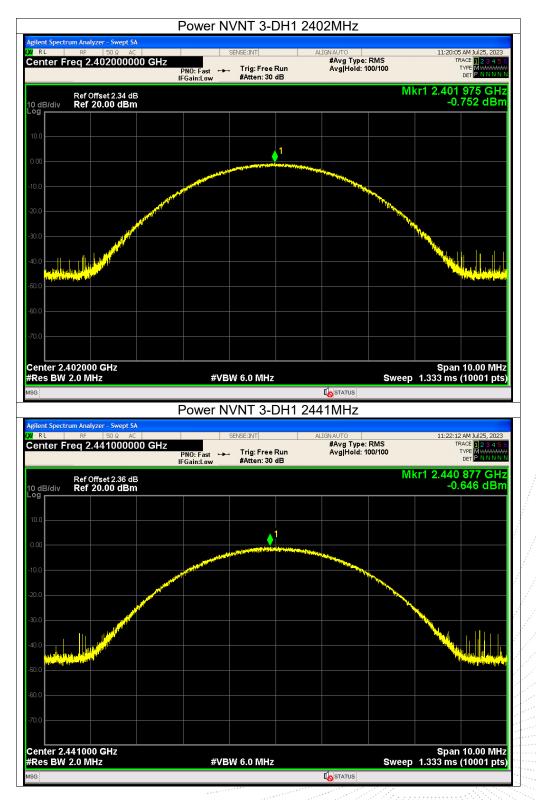




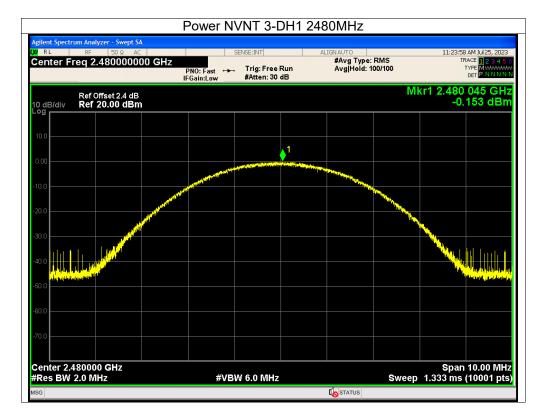












No.: BCTC/RF-EMC-007

Page: 60 of 80



12. Hopping Channel Separation

12.1 Block Diagram Of Test Setup



12.2 Limit

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

12.3 Test procedure

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

2. Set the spectrum analyzer: RBW = 30kHz. VBW = 100kHz , Span = 2.0MHz. Sweep = auto; Detector Function = Peak. Trace = Max hold.

3. Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channels. The limit is specified in one of the subparagraphs of this Section Submit this plot.

Condition	Mode	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	2401.828	2402.828	1	0.583	Pass
NVNT	1-DH1	2440.83	2441.828	0.998	0.581	Pass
NVNT	1-DH1	2478.828	2479.83	1.002	0.571	Pass
NVNT	2-DH1	2402.024	2403.022	0.998	0.845	Pass
NVNT	2-DH1	2441.022	2442.022	1	0.837	Pass
NVNT	2-DH1	2479.022	2480.024	1.002	0.839	Pass
NVNT	3-DH1	2402.022	2403.022	1	0.827	Pass
NVNT	3-DH1	2441.024	2442.024	1	0.839	Pass
NVNT	3-DH1	2479.024	2480.022	0.998	0.825	Pass

12.4 Test Result



;ilent Spectrum Analyzer - Swep		FS NVNT 1	Graph: -DH1 2				
RL RF 50Ω enter Freq 2.402500	AC 0000 GHz PN0	SENSE:INT : Wide Trig: F in:Low #Atter	Free Run h: 30 dB	ALIGNAUTO #Avg Type Avg Hold:		11:07:40 AM TRACE TYPI DE	1 Jul 25, 2023 1 2 3 4 5 (M WWWWWW P N N N N
Ref Offset 2.34 D dB/div Ref 20.00 d	4 dB Bm				Mk	1 2.401 8: 2.78-	28 GHz 15 dBm
og 10.0	1						
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0.0							
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0.0							
enter 2.402500 GHz Res BW 30 kHz		#VBW 100 I	kHz		Sweep	Span 2. 2.133 ms (1	000 MHz 001 pts
KR MODE TRC SCL	× 2.401 828 GHz	-2.785 dBm	FUNCTION	FUNCTION WIDTH	FUI	ICTION VALUE	^
2 N 1 f	2.402 828 GHz	-2.626 dBm					
4							=
6							
8							
0							
							×
G				<b>I</b> STATUS			
G	C	FS NVNT 1	-DH1 2	Kostatus 2441MHz			
ilent Spectrum Analyzer - Swep	pt SA	FS NVNT 1		2441MHz			
j <mark>lent Spectrum Analyzer - Swep</mark> R L RF 50 Ω	pt SA AC	SENSE:INT		2441MHz Alignauto #Avg Type	e: RMS	11:09:22 AM TRACE	Jul 25, 2023
ilent Spectrum Analyzer - Sweg R L RF 50 Ω	Pt SA AC 0000 GHz PNO	SENSE:INT		2441MHz ALIGNAUTO	e: RMS >100/100	TRACE	1 2 3 4 5 1 M WWWWW
Ilent Spectrum Analyzer - Swey           RL         RF         50.0           enter Freq 2.441500         8         8           Ref Offset 2.30         Ref Offset 2.30         8           0 dB/div         Ref 20.00 d         8         8	AC AC OOOO GHZ PNO IFGa 6 dB	SENSE:INT	- ree Run	2441MHz Alignauto #Avg Type	>100/100	TRACE TYPE DE	Jul 25, 2023
Ilent Spectrum Analyzer - Swep RL RF 50.9 enter Freq 2.44150 Ref Offset 2.3 Ref 20.00 d 9 0 0	AC AC OOOO GHZ PNO IFGa 6 dB	SENSE:INT	- ree Run	2441MHz Alignauto #Avg Type	>100/100	TRACE TYPE DE	Jul 25, 2023
Ilent Spectrum Analyzer - Swep RL RF 50.9 enter Freq 2.441500 Ref Offset 2.3 Ref 20.00 d	AC A	SENSE:INT	- ree Run	ALIGNAUTO #Åvg Typ- Åvg Hold:	>100/100	TRACE TYPE DE	Jul 25, 2023
G silent Spectrum Analyzer - Swey RL RF 50 @ enter Freq 2.441500 Ref Offset 2.30 Ref 20.00 d 9 0.00 0.00	AC A	SENSE:INT	- ree Run	ALIGNAUTO #Åvg Typ- Åvg Hold:	>100/100	TRACE TYPE DE	Jul 25, 2023 1 2 3 4 5 ( M <del>WWW</del> P N N N N
G ilent Spectrum Analyzer - Swey RL RF 50 @ enter Freq 2.441500 C dB/div Ref 20.00 d 00 00 00 00 00 00 00 00 00 0	AC A	SENSE:INT	- ree Run	ALIGNAUTO #Åvg Typ- Åvg Hold:	>100/100	TRACE TYPE DE	Jul 25, 2023 1 2 3 4 5 ( MWWWW P NNNN 30 GHz
G ilent Spectrum Analyzer - Swey RL RF 50@ enter Freq 2.441500 Ref Offset 2.30 Ref 20.00 d 00 00 00 00 00 00 00 00 00 0	AC A	SENSE:INT	- ree Run	ALIGNAUTO #Åvg Typ- Åvg Hold:	>100/100	TRACE TYPE DE	Jul 25, 2023 1 2 3 4 5 ( MWWWW P NNNN 30 GHz
G ilent Spectrum Analyzer - Swey RL RF 50 @ enter Freq 2.441500 C dB/div Ref 20.00 d 00 00 00 00 00 00 00 00 00 0	AC A	SENSE:INT	- ree Run	ALIGNAUTO #Åvg Typ- Åvg Hold:	>100/100	TRACE TYPE DE	Jul 25, 2023 1 2 3 4 5 ( MWWWW P NNNN 30 GHz
G glent Spectrum Analyzer - Swey RL RF 50 @ enter Freq 2.441500 C dB/div Ref 20.00 d 00 00 00 00 00 00 00 00 00 0	AC A	SENSE:INT	- ree Run	ALIGNAUTO #Åvg Typ- Åvg Hold:	>100/100	TRACE TYPE DE	Jul 25, 2023 1 2 3 4 5 ( MWWWW P NNNN 30 GHz
G ilent Spectrum Analyzer - Swer RL RF 50Ω enter Freq 2.441500 Ref Offset 2.30 0 dB/div Ref 20.00 d 0 d 0 d 0 d 0 d 0 d 0 d 0 d	AC A	SENSE:INT	- ree Run	ALIGNAUTO #Åvg Typ- Åvg Hold:	> 100/100	11 2.440 8: -2.98	30 GHz 7 dBm
G ilent Spectrum Analyzer - Swer RL RF 50Ω enter Freq 2.441500 C dB/div Ref 20.00 d 00 00 00 00 00 00 00 00 00 0	pt SA AC DO000 GHz PNO IFGa 6 dB Bm 1	SENSE:INT	free Run 1: 30 dB	2441MHz	>100/100	1 2.440 8 -2.98	30 GHz 7 dBm
G Sector Manager - Swey RL RF 50.0 enter Freq 2.441500 Ref Offset 2.3 Ref Offset 2.3 Ref 20.00 d 00 00 00 00 00 00 00 00 00 0	pt SA AC DO000 GH2 PNO IFGa 6 dB Bm 1 1 2.440 930 GH2	VBW 100 I	Free Run 1: 30 dB	ALIGNAUTO #Åvg Typ- Åvg Hold:	>100/100	11 2.440 8: -2.98	30 GHz 7 dBm
G G Sector Manalyzer - Swey RL RF 50 c enter Freq 2.441500 C dB/div Ref 20.00 d O d O d O d O d O d O d O d O	pt SA AC DOUOD GHZ PRO IFGa 6 dB Bm 1 1	SENSE:INT in:Low FAtter #Atter #VBW 100 I	free Run 1: 30 dB	2441MHz	>100/100	1 2.440 8 -2.98	30 GHz 7 dBm
enter Freq 2.441500 Ref Offset 2.36 Ref 20.00 d 9 9 9 9 9 9 9 9 9 9 9 9 9	pt SA AC DO000 GH2 PNO IFGa 6 dB Bm 1 1 2.440 930 GH2	SENSE:INT Wide Trig: F #Atter #Atter #VBW 100 I 2.987 dBm	free Run 1: 30 dB	2441MHz	>100/100	1 2.440 8 -2.98	30 GHz 7 dBm
G       Glent Spectrum Analyzer - Swey       Rel Ref Offset 2.30       enter Freq 2.441500       O dB/div Ref 20.00 d       Glenter Freq 2.441500       Glenter 2.300 d       Glenter 2.441500 d       Glenter 2.441500 GHz       Res BW 30 kHz       KR MODE TRC SCL       1       A 1       Glenter 2.441500 GHz       Res BW 30 kHz       KR MODE TRC SCL       1       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A       A	pt SA AC DO000 GH2 PNO IFGa 6 dB Bm 1 1 2.440 930 GH2	SENSE:INT Wide Trig: F #Atter #Atter #VBW 100 I 2.987 dBm	free Run 1: 30 dB	2441MHz	>100/100	1 2.440 8 -2.98	30 GHz 7 dBm
G	pt SA AC DO000 GH2 PNO IFGa 6 dB Bm 1 1 2.440 930 GH2	SENSE:INT Wide Trig: F #Atter #Atter #VBW 100 I 2.987 dBm	free Run 1: 30 dB	2441MHz	>100/100	1 2.440 8 -2.98	30 GHz 7 dBm
G Sector of the sector of the	pt SA AC DO000 GH2 PNO IFGa 6 dB Bm 1 1 2.440 930 GH2	SENSE:INT Wide Trig: F #Atter #Atter #VBW 100 I 2.987 dBm	free Run 1: 30 dB	2441MHz	>100/100	1 2.440 8 -2.98	30 GHz 7 dBm

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ilent Spectrum Analyzer R L RF !		SENSE:INT		ALIGNAUTO	14-10	:38 AM Jul 25, 2023
enter Freq 2.47	9500000 GHz PNO:	Wide Trig: Fi n:Low #Atten:	ree Run 30 dB	#Avg Type: RM Avg Hold:>100/	S 100	TRACE 12345 TYPE MWWWW DET PNNNN
Ref Offse dB/div Ref 20.0	et 2.4 dB 00 dBm				Mkr1 2.47 -2	8 828 GH: 2.355 dBn
0.0	1			<mark>2</mark>		
0.0					~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~
10.0			~~~			
0.0						
0.0						
enter 2.479500 G Res BW 30 kHz	Hz	#VBW 100 k	Hz		Spa Sweep 2.133 n	n 2.000 MH ns (1001 pts
KR MODE TRC SCL 1 N 1 F 2 N 1 F	× 2.478 828 GHz 2.479 830 GHz	Y -2.355 dBm -2.390 dBm	FUNCTION F	FUNCTION WIDTH	FUNCTION VALUE	
2 N 1 F 3 4 5	2.479 830 GHZ					
6 7 8						
9 0 1						
G				1		<u>&gt;</u>
				STATUS		
		FS NVNT 2-	DH1 24			
RL RF !	- Swept SA 50 Ω AC	SENSE:INT		ALIGNAUTO #Avg Type: RM	5	:46 AM Jul 25, 2023 TRACE 1 2 3 4 5
RL RF !	- Swept SA 50 Ω AC 2500000 GHz PNO:		ee Run	ALIGN AUTO	S 100	TRACE 12345 TYPE MWWWW DET PNNNN
RL RF S enter Freq 2.402 Ref Offse ) dB/div Ref 20.1	- Swept SA 50 g AC 2500000 GHz PNO: IFGai et 2.34 dB	SENSE:INT	ee Run	ALIGNAUTO #Avg Type: RM	s 100 Mkr1 2.40	TRACE 1 2 3 4 5 TYPE MWWWWW DET PNNNN 2 024 GH:
RL	- Swept SA 50 g AC 2500000 GHz PNO: IFGai et 2.34 dB	SENSE:INT	ee Run	ALIGNAUTO #Avg Type: RM	s Mkr1 2.40 -4	TRACE 1 2 3 4 5 TYPE MWWWWW DET PNNNN 2 024 GH:
RL         RF           enter Freq 2.40;         Ref Offse           0 dB/div         Ref 20.1           9	- Swept SA 50 Q AC   PNO: PNO: IFGai ot 2.34 dB 00 dBm	SENSE:INT	ee Run	ALIGNAUTO #Avg Type: RM	s 100 Mkr1 2.40	TRACE 1 2 3 4 5 TYPE M M M M M M DET P N N N N
RL         RF           enter Freq 2.40;           Ref Offse           0 dB/div         Ref 20.1           9           0.0           0.0           0.0           0.0	- Swept SA 50 Q AC   PNO: PNO: IFGai ot 2.34 dB 00 dBm	SENSE:INT	ee Run	ALIGNAUTO #Avg Type: RM	s Mkr1 2.40 -4	TRACE 1 2 3 4 5 TYPE M M M M M M DET P N N N N
RL         RF         III           enter Freq 2.40;         Ref Offse           0 dB/div         Ref 20.1           0 0         Ref 20.1	- Swept SA 50 Q AC   PNO: PNO: IFGai ot 2.34 dB 00 dBm	SENSE:INT	ee Run	ALIGNAUTO #Avg Type: RM	s Mkr1 2.40 -4	TRACE 1 2 3 4 5 TYPE M M M M M M DET P N N N N
RL         RF         I           enter Freq 2.40;         Ref Offse           0 dB/div         Ref 20.1           99	- Swept SA 50 Q AC   PNO: PNO: IFGai ot 2.34 dB 00 dBm	SENSE:INT	ee Run	ALIGNAUTO #Avg Type: RM	s Mkr1 2.40 -4	TRACE 1 2 3 4 5 TYPE MWWWWW DET PNNNN 2 024 GH:
RL         RF           enter Freq 2.402           Ref Offse           0 dB/div         Ref 20.1           00           00           00           00           00           00           00           00           00           00           00           00           00           00           00           00           00           00           00           00           00           00           00	- Swept SA 50 Q AC   2500000 GHz PNO: IFGai at 2.34 dB 00 dBm	SENSE:INT	ee Run	ALIGNAUTO #Avg Type: RM	Mkr1 2.40 	TRACE II 23 4 5 TYPE MANNE 2 024 GH: 4.688 dBn
RL         RF           enter Freq 2.402           0 dB/div         Ref Offse           0 dB/div         Ref 20.1           0 d         0           0 d         0           0 d         0           0 d         0           0 d         0           0 d         0           0 d         0           0 d         0           0 d         0           0 d         0           0 d         0           0 d         0           0 d         0           0 d         0           0 d         0           0 d         0           0 d         0           0 d         0           0 d         0           0 d         0           0 d         0           0 d         0           0 d         0           0 d         0           0 d         0           0 d         0           0 d         0           0 d         0           0 d         0           0 d         0 <t< td=""><td>- Swept SA 50 Q AC   PNO: IFGai at 2.34 dB 00 dBm</td><td>Wide Trig: Fi m:Low #VBW 100 k</td><td>ee Run 30 dB</td><td>ALIGNAUTO #Avg Type: RM Avg Hold&gt;100/</td><td>Mkr1 2.40 ~2 2 2 5 5 5 8 5 8 5 9 2 5 7 5 7 5 7 5 7 5 7 5 7 7 7 7 7 7 7 7</td><td>TRACE II 23 4 5 TYPE MANNA 2 024 GH: 4.688 dBn</td></t<>	- Swept SA 50 Q AC   PNO: IFGai at 2.34 dB 00 dBm	Wide Trig: Fi m:Low #VBW 100 k	ee Run 30 dB	ALIGNAUTO #Avg Type: RM Avg Hold>100/	Mkr1 2.40 ~2 2 2 5 5 5 8 5 8 5 9 2 5 7 5 7 5 7 5 7 5 7 5 7 7 7 7 7 7 7 7	TRACE II 23 4 5 TYPE MANNA 2 024 GH: 4.688 dBn
RL         RF         RF           enter Freq 2.402         Ref Offse           0 dB/div         Ref 20.1           0 dB/div	- Swept SA 50 Q AC   2500000 GHz PNO: IFGai at 2.34 dB 00 dBm	Wide Trig: Fi m:Low #VBW 100 k	ee Run 30 dB	ALIGNAUTO #Avg Type: RM	Since Mkr1 2.40 2 2 2 5 5 5 5 5	TRACE II 23 4 5 TYPE MUNICIPAL 2 024 GH 4.688 dBm
o dB/div         Ref 20.1           9g	- Swept SA 50 Q AC   2500000 GHz PNO: IFGai at 2.34 dB 00 dBm 1 1 4 2.402 024 GHz	Wide Trig: Fr n:Low #VBW 100 k	ee Run 30 dB	ALIGNAUTO #Avg Type: RM Avg Hold>100/	Mkr1 2.40 ~2 2 2 5 5 5 8 5 8 5 9 2 5 7 5 7 5 7 5 7 5 7 5 7 7 7 7 7 7 7 7	4.688 dBm
RL         RF         RF           enter Freq 2.402         Ref Offse           0 dB/div         Ref 20.1           2 N         <	- Swept SA 50 Q AC   2500000 GHz PNO: IFGai at 2.34 dB 00 dBm 1 1 4 2.402 024 GHz	Wide Trig: Fr n:Low #VBW 100 k	ee Run 30 dB	ALIGNAUTO #Avg Type: RM Avg Hold>100/	Mkr1 2.40 ~2 2 2 5 5 5 8 5 8 5 9 2 5 7 5 7 5 7 5 7 5 7 5 7 7 7 7 7 7 7 7	TRACE II 23 4 5 TYPE MANNA 2 024 GH: 4.688 dBn
RL         RF           enter Freq 2.402           Ref Offse           0 dB/div         Ref 20.1           1 N 1 f         F           2 N 1 f         F           3 d         B           6 d         B	- Swept SA 50 Q AC   2500000 GHz PNO: IFGai at 2.34 dB 00 dBm 1 1 4 2.402 024 GHz	Wide Trig: Fr n:Low #VBW 100 k	ee Run 30 dB	ALIGNAUTO #Avg Type: RM Avg Hold>100/	Mkr1 2.40 ~2 2 2 5 5 5 8 5 8 5 9 2 5 7 5 7 5 7 5 7 5 7 5 7 7 7 7 7 7 7 7	TRACE II 23 4 5 TYPE MUNICIPAL 2 024 GH 4.688 dBm



gilent Spectrum Analyzer - RL RF 50	DΩ AC	SENSE:I	NT	ALIGN AUTO	DMC	11:16:30 A	M Jul 25, 2023
enter Freq 2.441	Ph		g: Free Run ten: 30 dB	#Avg Type: Avg Hold:>1	100/100		CE 12345 PE MWWWW ET P N N N N
Ref Offset 0 dB/div Ref 20.0					Mkr	1 2.441 0 -4.5	22 GHz 34 dBm
	1						
	$\sim$	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~	^-		$\sim$	~~~~
30.0							
50.0							
50.0 70.0							
enter 2.441500 GH Res BW 30 kHz	lz	#VBW 10	0 kHz		Sweep	Span 2 2.133 ms (	.000 MHz 1001 pts)
IKR MODE TRC SCL	× 2.441 022 GHz	۲ -4.534 dBm	FUNCTION	FUNCTION WIDTH	-	TION VALUE	
2 N 1 f 3 4	2.442 022 GHz	-4.452 dBm					
5 6 6 7 C C C C C C C C C C C C C C C C C							
8 9 9 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10101010101010101010101010101010101010101010101010101010101010101010101010101010101010101010101010101010101010101010101010101010101010101010101010101010101010101010101010101010101010101010101010101010101010101010101010101010101010101010101010101010101010101010101010101010							
11			Ш				>
	(	CFS NVNT	2-DH1 2				
gilent Spectrum Analyzer - RL RF 50	DΩ AC	SENSE:II	VT	ALIGN AUTO		11·10·50 A	M Jul 25, 2023
enter Freq 2.479	500000 GHz					11.10.JU A	
	Pr IF(	10: Wide 🖵 Trig Gain:Low #At	g: Free Run ten: 30 dB	#Avg Type: Avg Hold:>*	RMS 100/100	TRAC TY D	2E 1 2 3 4 5 ( PE MWWWWW ET P N N N N 1
Ref Offset	2.4 dB		g: Free Run ten: 30 dB	#Avg Type: Avg Hold:>*	100/100	TRAG TY D 1 2.479 0	22 GHz
0 dB/div Ref 20.0	2.4 dB		g: Free Run ten: 30 dB	#Avg Type: Avg Hold:>^	100/100 Mkr	TRAG TY D 1 2.479 0	
0 dB/div Ref 20.0 99 10.0 0.00	2.4 dB		g: Free Run ten: 30 dB	#Avg Type: Avg Hold>	100/100	TRAG TY D 1 2.479 0	22 GHz
0 dB/div Ref 20.0 9 10.0 0.00 20.0 0 0 0 0 0 0 0 0 0 0 0 0 0	2.4 dB		g: Free Run ten: 30 dB	#AvgType: AvgHold>	100/100 Mkr	TRAG TY D 1 2.479 0	22 GHz
0 dB/div Ref 20.0 0 dB/div Ref 20.0 0 000 0 000	2.4 dB		g: Free Run ten: 30 dB	#Avg Type: Avg Hold>	100/100 Mkr	TRAG TY D 1 2.479 0	22 GHz
0 dB/div Ref 20.0 9 dB/div Ref 20.0 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	2.4 dB		g: Free Run ten: 30 dB	#Avg Type: Avg Hold>	100/100 Mkr	TRAG TY D 1 2.479 0	E 12 3 4 5 6 FT PANNAU FT PANNAU 34 dBm
o dB/div Ref 20.0 g	2.4 dB 0 dBm		g: Free Run ten: 30 dB	#Avg Type: Avg Hold>	100/100 Mkr	1 2.479 0 -3.9	22 GHz 34 dBm
o dB/div Ref 20.0 9 9 10 10 10 10 10 10 10 10 10 10	2.4 dB 0 dBm	Gain:Low #At	ten: 30 dB		Mkr 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1 2.479 0 -3.9 5 Span 2 2.133 ms (	22 GHz 34 dBm
o dB/div Ref 20.0 og 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2.4 dB 0 dBm	Gain:Low #At	ten: 30 dB	#Avg Type: Avg Hold> /	Mkr 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1 2.479 0 -3.9	22 GHz 34 dBm
0 dB/div Ref 20.0 0 g 0 dB/div Ref 20.0 0 g 0 d 0 d 0 d 0 d 0 d 0 d 0 d 0 d	12 2.4 dB 0 dBm 1 12 2.479 022 GHz	#VBW 10 برجاني 2334 dBm	ten: 30 dB		Mkr 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1 2.479 0 -3.9 5 Span 2 2.133 ms (	22 GHz 34 dBm
o dB/div Ref 20.0 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	12 2.4 dB 0 dBm 1 12 2.479 022 GHz	#VBW 10 برجاني 2334 dBm	ten: 30 dB		Mkr 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1 2.479 0 -3.9 5 Span 2 2.133 ms (	22 GHz 34 dBm
0 dB/div Ref 20.0 9 dB/div Ref 20.0 9 dV dV Ref 20.0 9 dV	12 2.4 dB 0 dBm 1 12 2.479 022 GHz	#VBW 10 برجاني 2334 dBm	ten: 30 dB		Mkr 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1 2.479 0 -3.9 5 Span 2 2.133 ms (	22 GHz 34 dBm

Edition: B.0



enter Freq 2.4025	00000 GHz		g: Free Run	ALIGNAUTO #Avg Type: Avg Hold:>		11:21:01 TR 1	AM Jul 25, 2023 ACE 12345 TYPE MWWWW DET PNNNN
	IFGa		ten: 30 dB			1 2.402	
Ref Offset 2. D dB/div Ref 20.00						-4.0	669 dBm
0.0					<mark>2</mark>		
0.0		$\sim$					
20.0							~~~~
0.0							
50.0							
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						Cnon	2 000 141
enter 2.402500 GHz Res BW 30 kHz		#VBW 10	0 kHz		Sweep	Span 2.133 ms	2.000 MH: (1001 pts
KR MODE TRC SCL	× 2.402 022 GHz	۲ -4.669 dBm	FUNCTION	FUNCTION WIDTH	FUN	ICTION VALUE	2
2 N 1 f	2.403 022 GHz	-4.553 dBm					
4 5 6 6							
7 8							
9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0							
G			111				>
	C	ES NVNT	3-DH1				
	vept SA	FS NVNT		2441MHz			
RL RF 50 S	vept SA 2 AC 00000 GHz	SENSE:II	NT	2441MHz	: RMS 100/100	11:23:05 TR	AM Jul 25, 2023 ACE 1 2 3 4 5 TYPE M WARAAN
RL RF 50 S	vept SA 2 AC 00000 GHz PN0			2441MHz	100/100	TR T	ACE 12345 TYPE MWAAAAA DET PNNNN
RL RF 50 ۵۵ enter Freq 2.4415 Ref Offset 2 0 dB/div Ref 20.00	vept SA 2 AC 00000 GHz PNO IFGa .36 dB	SENSE:II	ut] g: Free Run	2441MHz	100/100	יד 1 2.441	
RL RF 50 c enter Freq 2.4415 Ref Offset 2 0 dB/div Ref 20.00	vept SA 2 AC PRO PNO IFGa 36 dB dBm	SENSE:II	ut] g: Free Run	2441MHz	•100/100 Mkr	יד 1 2.441	
RL         RF         50 g           enter Freq 2.4415	vept SA 2 AC DOUDO GHZ PNO IFGa .36 dB	SENSE:II	ut] g: Free Run	2441MHz	100/100	יד 1 2.441	
RL         RF         50 g           enter Freq 2.4415         Ref 0ffset 2,           0 dB/div         Ref 0ffset 2,           0 dB/div         Ref 20.00	vept SA 2 AC PRO PNO IFGa 36 dB dBm	SENSE:II	ut] g: Free Run	2441MHz	•100/100 Mkr	יד 1 2.441	
RL         RF         50 g           enter Freq 2.4415         Ref Offset2.           0 dB/div         Ref 20.00           0 00         00           0.00         00           0.00         00	vept SA 2 AC PRO PNO IFGa 36 dB dBm	SENSE:II	ut] g: Free Run	2441MHz	•100/100 Mkr	יד 1 2.441	
RL         RF         50 g           enter Freq 2.4415           Ref Offset 2           0 dB/div         Ref 20.00           9           000           000           000           000           000           000           000           000           000           000           000	vept SA 2 AC PRO PNO IFGa 36 dB dBm	SENSE:II	ut] g: Free Run	2441MHz	•100/100 Mkr	יד 1 2.441	AM Jul 25, 2023 ACE 1 2 3 4 5 TYPE MANAGEM DET P NNN 024 GH2 562 dBm
RL         RF         50 g           enter Freq 2.4415           Ref Offset2           0 dB/div         Ref 20.00           9           000           000           000           000           000           000           000           000           000           000           000           000           000           000	vept SA 2 AC PRO PNO IFGa 36 dB dBm	SENSE:II	ut] g: Free Run	2441MHz	•100/100 Mkr	יד 1 2.441	
RL         RF         50 g           enter Freq 2.4415         Ref Offset2           0 dB/div         Ref 20.00           0 0         0           0 0         0           0 0         0           0 0         0           0 0         0	vept SA 2 AC PRO PNO IFGa 36 dB dBm	SENSE:II	ut] g: Free Run	2441MHz	•100/100 Mkr	יד 1 2.441	
RL         RF         50 c           enter Freq 2.4415         Ref Offset 2.           0 dB/div         Ref 20.00           0 d	vept SA 2 AC 3 AC 9 PNO IFGa 36 dB dBm 1	SENSE:II	yt g: Free Run ten: 30 dB	2441MHz		1 2.441 -4.5	2.000 MH:
RL         RF         50 g           enter Freq 2.4415         Ref Offset2.           0 dB/div         Ref 20.00           0 0         Ref 20.00 <td>xept SA 2 AC 2 AC PRO IFGa 36 dB dBm 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</td> <td>SENSE:II</td> <td>yt g: Free Run ten: 30 dB</td> <td>2441MHz</td> <td>Mkr</td> <td>1 2.441 -4.5</td> <td>2.000 MH:</td>	xept SA 2 AC 2 AC PRO IFGa 36 dB dBm 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	SENSE:II	yt g: Free Run ten: 30 dB	2441MHz	Mkr	1 2.441 -4.5	2.000 MH:
RL         RF         50 c           enter Freq 2.4415         Ref Offset 2.         Ref Offset 2.           0 dB/div         Ref 20.00         Ref 20.00           0 d         Ref 20.00         Ref 20.00           0 dB/div         Ref 20.00	vept SA 2 AC 3 AC 3 AC 4 B 4 B 4 B 4 B 1 1 1 1 1 1 1 1 1 2 2 2 36 dB 4 B 4 B 4 B 4 B 4 B 4 B 4 B 4 B 4 B 4	SENSE:II Wide Trig in:Low #Att	yt g: Free Run ten: 30 dB	2441MHz	Mkr	1 2.441 -4.4	2.000 MH:
RL         RF         50.9           enter Freq 2.4415         Ref Offset 2.           0 dB/div         Ref 20.00           0 d	vept SA 2 AC DOUBLE 2 AC PRO IFGa 36 dB dBm 1 1 1 2 Ad Du 1 2 Ad Du 4 2 Ad Du 4 2 Ad Du 4 2 Ad Du 4 2 Ad Du 4 2 AC DU 4 AC AC DU 4 AC DU 4 AC DU 4 AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC A	SENSE:II Wide Tris in:Low #Att #VBW 10 Y 4.562 dBm	yt g: Free Run ten: 30 dB	2441MHz	Mkr	1 2.441 -4.4	2.000 MH:
RL         RF         50 c           enter Freq 2.4415         Ref Offset 2.         Second 2.           0 dB/div         Ref 20.00         Ref 20.00           0 dB/div         Ref 20.00	vept SA 2 AC DOUBLE 2 AC PRO IFGa 36 dB dBm 1 1 1 2 Ad Du 1 2 Ad Du 4 2 Ad Du 4 2 Ad Du 4 2 Ad Du 4 2 Ad Du 4 2 AC DU 4 AC AC DU 4 AC DU 4 AC DU 4 AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC A	SENSE:II Wide Tris in:Low #Att #VBW 10 Y 4.562 dBm	yt g: Free Run ten: 30 dB	2441MHz	Mkr	1 2.441 -4.4	2.000 MH:
RL         RF         50.9           enter Freq 2.4415         Ref Offset 2.           0 dB/div         Ref 20.00           00	vept SA 2 AC DOUBLE 2 AC PRO IFGa 36 dB dBm 1 1 1 2 Ad Du 1 2 Ad Du 4 2 Ad Du 4 2 Ad Du 4 2 Ad Du 4 2 Ad Du 4 2 AC DU 4 AC AC DU 4 AC DU 4 AC DU 4 AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC AC A	SENSE:II Wide Tris in:Low #Att #VBW 10 Y 4.562 dBm	yt g: Free Run ten: 30 dB	2441MHz	Mkr	1 2.441 -4.4	2.000 MH:

Edition: B.0



	CFS NVNT	3-DH1 248	0MHz	
Agilent Spectrum Analyzer - Swept SA CAL RF 50 Ω AC Center Freq 2.479500000 G	PNO Mide 🔂 Ir	INT A ig: Free Run tten: 30 dB	LIGNAUTO #Avg Type: RMS Avg Hold>100/100	11:24:48 AM Jul 25, 2023 TRACE 1 2 3 4 5 6 TYPE M WWWWW DET P N N N N
Ref Offset 2.4 dB           10 dB/div         Ref 20.00 dBm           -10 dB/div         Ref 20.00 dBm           -20 dB/div         Ref 20.00 dBm           -30 dB/div         Ref 20.00 dBm           -40 dB/div         Ref 20.00 dBm				r1 2.479 024 GHz -3.911 dBm
-60.0 -70.0 Center 2.479500 GHz #Res BW 30 kHz MKR MODE TRC SCL X 1 N 1 f 2.4790	#VBW 10 Y 124 GHz	FUNCTION FUNC		Span 2.000 MHz 2.133 ms (1001 pts) NCTION VALUE
2 N 1 f 2.480 0 3 4 4 5 6 7 8 9 9 10 11 5 5 5 6 5 7 8 9 5 11 5 5 5 6 5 7 8 9 5 11 5 5 5 6 5 7 8 9 5 7 8 8 7 8 7 8 7 8 7 8 7 8 7 8 7	22 GHz 3.963 dBm			×
MSG			STATUS	

No.: BCTC/RF-EMC-007

Page: 66 of 80



# 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

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



	PNO: Fast Trig: Free Ru	#Avg Type: RMS n Avg Hold:>100/100	TRACE 123456 TYPE MWWWWW DET P N N N N
	PNO: Fast Free Ru IFGain:Low #Atten: 30 dE	3	
Ref Offset 2.36 dB dB/div Ref 20.00 dBm		IVIKET	2.402 004 0 GHz -2.329 dBm
			^ <b>2</b>
	<u>ากกกสสกุลคุณคุณคุณ</u> ภาณ	<u>ՆԱԳՐԱԿԱՆԱՆԱԳԻՆԻԳԻ</u>	เกิดกิลกิลกิลกิลกิลกิลกิลกิลกิลกิลกิลกิลกิลก
° \AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	AAAAAAAAAAAAAAAAAAAAAAAAAA	<u>AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA</u>	<u>AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA</u>
0			
art 2.40000 GHz			Stop 2.48350 GHz
es BW 100 kHz	#VBW 300 kHz	-	8.000 ms (1001 pts)
N         1         f         2.402 004 0 GH;           N         1         f         2.479 993 0 GH;		ON FUNCTION WIDTH FU	NCTION VALUE
			=
			~
		STATUS	
Ној	oping No. NVNT 2	-DH1 2441MHz	
ent Spectrum Analyzer - Swept SA R L RF 50 Ω AC	SENSE:INT	ALIGNAUTO	11:33:52 AM Jul 25, 2023
nter Freq 2.441750000 GHz	PNO: Fast 🖵 Trig: Free Ru IFGain:Low #Atten: 30 dB		TRACE 123456 TYPE MWWWWW DET PNNNNN
Ref Offset 2.36 dB		Mkr1	2.402 004 0 GHz -3.174 dBm
dB/div Ref 20.00 dBm			-3.174 dBm
	<u>ለሶሳሳሳ የሳሳታ የተቀላቀው የ</u>	www.www.www.www.	*^~~
0			
			<u>\</u>
0			<b>_</b>
0			
art 2.40000 GHz	#\(B)\\(200 k)		Stop 2.48350 GHz
es BW 100 kHz	#VBW 300 kHz	-	8.000 ms (1001 pts)
N 1 f 2.402 004 0 GH; N 1 f 2.480 160 0 GH;	z -3.174 dBm		



Нор	pping No. NVNT 3	-DH1 2441MHz	
Agilent Spectrum Analyzer - Swept SA	SENSE:INT	ALIGN AUTO	11:37:59 AM Jul 25, 2023
Center Freq 2.441750000 GHz	PNO: Fast Trig: Free Ru FGain:Low #Atten: 30 dB	#Avg Type: RMS n Avg Hold:>100/100	TRACE 1 2 3 4 5 6 TYPE MWWWWW DET P N N N N
Ref Offset 2.36 dB 10 dB/div Ref 20.00 dBm		N	lkr1 2.401 837 0 GHz -2.854 dBm
			2
-10.0 <u>Адаландаландар инч</u> ила -20.0	MANAMANAAAAA	WWWWWWWWWW	
-30.0			
-50.0 /			
-70.0 Start 2.40000 GHz			Stop 2.48350 GHz
#Res BW 100 kHz	#VBW 300 kHz	Sv	reep 8.000 ms (1001 pts)
MKR         MODE         TRC         SCL         X           1         N         1         f         2.401         837         0         GHz           2         N         1         f         2.480         327         0         GHz		DN FUNCTION WIDTH	FUNCTION VALUE
3 4 5 6			
7			
			× >
MSG		<b>I</b> o status	

No.: BCTC/RF-EMC-007

Page: 69 of 80



## 14. Dwell Time

### 14.1 Block Diagram Of Test Setup



### 14.2 Limit

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

### 14.3 Test procedure

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

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

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

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

### 14.4 Test Result

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).

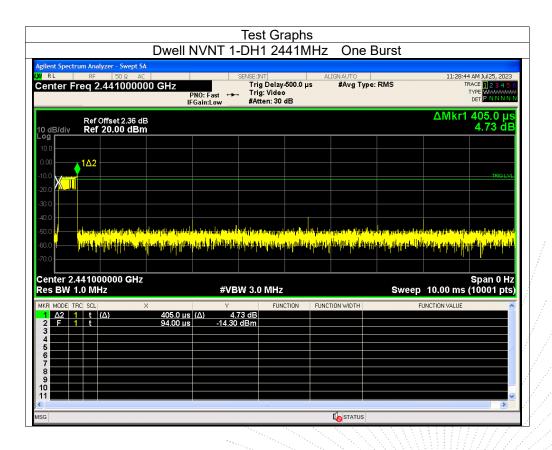
DH1 Packet permit maximum 1600 / 79 /2 hops per second in each channel (1 time slot RX, 1 time slot TX). So, the Dwell Time can be calculated as follows:

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.	

Page: 70 of 80



Condition	Mode	Frequency (MHz)	Pulse Time (ms)	Total Dwell Time (s)	Limit (s)	Verdict
NVNT	1-DH1	2441	0.405	0.130	0.4	Pass
NVNT	1-DH3	2441	1.662	0.266	0.4	Pass
NVNT	1-DH5	2441	2.909	0.310	0.4	Pass
NVNT	2-DH1	2441	0.398	0.127	0.4	Pass
NVNT	2-DH3	2441	1.65	0.264	0.4	Pass
NVNT	2-DH5	2441	2.898	0.309	0.4	Pass
NVNT	3-DH1	2441	0.396	0.127	0.4	Pass
NVNT	3-DH3	2441	1.646	0.263	0.4	Pass
NVNT	3-DH5	2441	2.897	0.309	0.4	Pass



No.: BCTC/RF-EMC-007

Page: 71 of 80

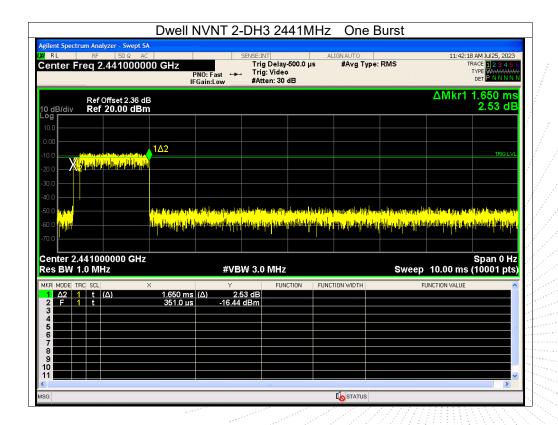


	Dwell N	NVNT 1-E	DH3 2441	MHz One	e Burst		
gilent Spectrum Analyzer - Swept SA	00 GHz	PNO: Fast Gain:Low	NSE:INT Trig Delay-500.0 Trig: Video #Atten: 30 dB	ALIGNAUTO )μs #Avg T	ype: RMS	11:39:58 AM Jul 25, 7 TRACE 12 3 TYPE WWW DET P N N	45
Ref Offset 2.36 dB 10 dB/div Ref 20.00 dBm						ΔMkr1 1.662 -3.70	
10.0 0.00 10.0 <b>X</b> 2	<b>1</b> Δ2 —					TR	÷L∀L
20.0							
-40.0		والمراجع والإرجاعية والمراجع	in the full tale				
		1		ng transforder for for the first for the second	distriction in surprise presentation (Experimentation of the surprise	etasten istensi fata fan inne eline berjetastek etasten istensi fata fan inne en internetistek etasten internetistek fan inne en inne en inne en inne en inne e	
40.0 	and a state of the	#VBW	William And	n na han dan kan dan sala na han pan dan sala sala sa pan na han pan dan sala sala sala sala sala sala sala sa	<mark>de, builty, a live of designed and and and and a state of the state o</mark>	Span (1000) 10.00 ms (1000)	Hz
40.0         1           50.0         1           60.0         1           70.0         1           Center 2.441000000 GHz           Res BW 1.0 MHz           MKR MODE TRC SCL           X2         1           40.0           7           1         42           1         t           3         1		Y	V 3.0 MHz		Sweep	Span 0	Hz
40.0 50.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	<	Υ (Δ) -3.70	V 3.0 MHz		Sweep	Span 0 10.00 ms (10001	Hz
40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 40.0 4	<	Υ (Δ) -3.70	V 3.0 MHz		Sweep	Span 0 10.00 ms (10001	Hz

[	Dwell NVNT 1-DH	5 2441MHz O	ne Burst	
Agilent Spectrum Analyzer - Swept SA           0d         RL         RF         50 Ω         AC           Center Freq 2.441000000	PN0: East +++ Tri		⊙ 11:41 g Type: RMS	24 AM Jul 25, 2023 TRACE 1 2 3 4 5 6 TYPE WWWWWW DET P N N N N N
Ref Offset 2.36 dB 10 dB/div Ref 20.00 dBm			ΔMkr1	2.909 ms -0.23 dB
10.0 0.00 10.0 <b>X</b> 2	1Δ2			TRIQ LVL
-20.0				
-40.0	di ng palikati katalari Katalari di saka katalari Katalari di saka katalari	er an Alfrickeler og heldeligt som en so Men som en so	r fan til en geneelde ferstelte gewikt de belge tij steat gewik De se van die fan eer daar dat in de sen die het de se steat eer de	ller the stript operator where a literate here to
-70.0	hardless date	Harden and a second	iyee bulki kaalaa ing tido ta aalaa hig	
Res BW 1.0 MHz	#VBW 3.0	) MHz	Sweep 10.00 m	Span 0 Hz s (10001 pts)
MKR         MODE         TRC         SCL         X           1         Δ2         1         t         Δ           2         F         1         t         Δ           3         -         -         -         -           4         -         -         -         -           5         -         -         -         -           6         -         -         -         -           7         -         -         -         -           9         -         -         -         -           10         -         -         -         -           11         -         -         -         -	2.909 ms (Δ) 0.23 dB 498.0 μs -3.22 dBm	FUNCTION FUNCTION WID	TH FUNCTION VALUE	
MSG		I sta	TUS	>



	Dwell N	VNT 2-DF	11 244 110	Inz One	Burst		
gilent Spectrum Analyzer - Swept SA							
RL RF 50 Ω AC Senter Freq 2.44100000	PNO	0:East +++ Tr	∷NT rig Delay-500.0µ rig: Video Atten: 30 dB	ALIGNAUTO JS #Avg Tyj	e: RMS	TI	3 AM Jul 25, 2023 RACE <b>1 2 3 4 5</b> TYPE WWWWWW DET PNNNN
Ref Offset 2.36 dB 0 dB/div Ref 20.00 dBm 9g						ΔMkr1	398.0 μ 1.51 dI
	n <mark>in </mark>						TRIG LV
80.0							
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0.0 <mark>de di </mark>		<mark>hilledina ka Konda kengebaran Anjiki _{ka}nda na <mark>kang dapat dapat</mark></mark>	ing ng pining ng pin Ng pining ng	nahili halan katina atau atau ¹ 11 halan katina atau atau		Nord (Astropological) Logic program (Attacks)	li lin manging ang kang kang Pangang kang kang kang kang kang kang kan
0.0 100 0000000000000000000000000000000		#VBW 3.				10.00 ms	Span 0 H
enter 2.441000000 GHz es BW 1.0 MHz		#VBW 3.	O MHz		Sweep		Span 0 H (10001 pt
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0.0         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1 <th1< th="">         1         <th1< th=""> <th1< th=""></th1<></th1<></th1<>	44 (* 14) (* 14 398.0 µs (2	#VBW 3. 1.51 dE	O MHZ	a alli hanni kana da pi da	Sweep	10.00 ms	Span 0 H (10001 pt
No.0         μμμ         μμμμ         μμμμμ         μμμμμμ         μμμμμμμ         μμμμμμμμμμμμμμμμμμμμμμμμμμμμμμμμμμμμ	44 (* 14) (* 14 398.0 µs (2	#VBW 3. 1.51 dE	O MHZ	a alli hanni kana da pi da	Sweep	10.00 ms	Span 0 H (10001 pt:

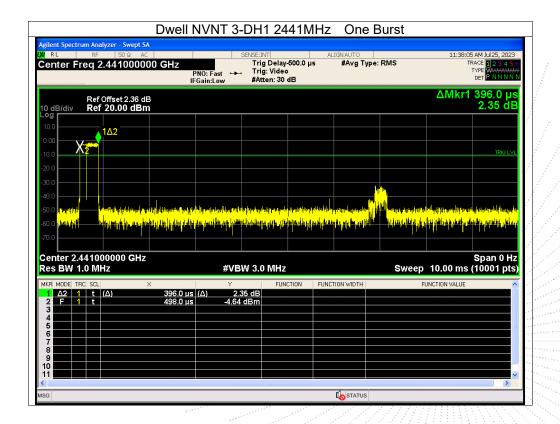


No.: BCTC/RF-EMC-007

Page: 73 of 80



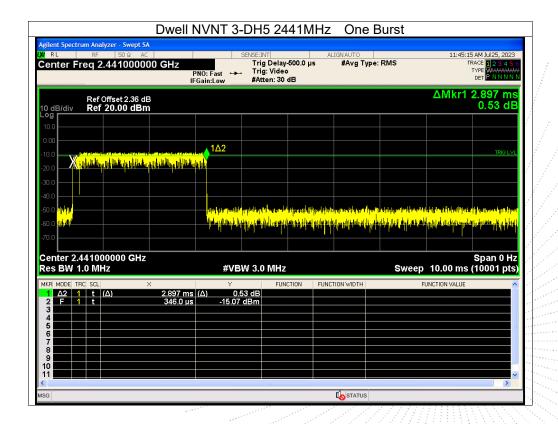
	Dwell NV	/NT 2-DH	5 2441M	Hz One	Burst		
gilent Spectrum Analyzer - Swept S		051.05.1	• 177			11 10 00 11	1 105 0000
enter Freq 2.4410000		Fast 🛶 Trig	g Delay-500.0 µs g: Video ten: 30 dB	ALIGNAUTO #Avg Ty	pe: RMS		12345 WWWWWWW PNNNN
Ref Offset 2.36 o 0 dB/div Ref 20.00 dB/						ΔMkr1 2.8 1	398 m .42 di
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	il na mba di Angeria di Angeri Proportal Proporta di Angeri	1Δ2					TRIG LV
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10.0 50.0 <mark>1484,0 50.0 1484,0</mark>					ula kaaloototopikk Kapinit Jonen († 19		
2000 Uler 2000 Uler 2000 Iler 2000 Iler			<mark>i, la ka alan di din dia dia manja</mark>		<mark>na hina an a</mark>	<mark>, ¹11 - 19 - 19 - 19 - 19 - 19 - 19 - 19 </mark>	an 0 H
10.0 Um 10.0 Um 10.0 MW 10.0 MW 10.0 MW 10.0 MHz		the second state of a second state of the seco	<mark>i, la ka alan di din dia dia manja</mark>		Sweep	Sp	oan 0 H 001 pt
10.0 Um 10.0 Um 10.0 MW 10.0 MW 10.0 MW 10.0 MHz	2	#VBW 3.0	o MHz	<mark>aliseon (1781, ande), Abrel</mark>	Sweep	Sp 10.00 ms (10	oan 0 H 001 pts
100         1           100         1           100         1           100         1           100         1           100         1           100         1           100         1           100         1           100         1           100         1           100         1           100         1           100         1           100         1           100         1           100         1           100         1           100         1           100         1           100         1           100         1           100         1           100         1           100         1           100         1           100         1           100         1           100         1           100         1           100         1           100         1           100         1	z × 2.898 ms (Δ)	#VBW 3.0	o MHz	<mark>aliseon (1781, ande), Abrel</mark>	Sweep	Sp 10.00 ms (10	oan 0 H 001 pt
10.0         1           10.0         1           10.0         1           10.0         1           10.0         1           10.0         1           10.0         1           10.0         1           10.0         1           10.0         1           10.0         1           10.0         1           10.0         1           10.0         1           10.0         1           10.0         1           10.0         1           10.0         1           10.0         1           10.0         1           10.0         1           10.0         1           10.0         1           10.0         1           10.0         1           10.0         1           10.0         1           10.0         1           10.0         1           10.0         1           10.0         1           10.0         1           10.0         1           10.0         1	z × 2.898 ms (Δ)	#VBW 3.0	o MHz	<mark>aliseon (1781, ande), Abrel</mark>	Sweep	Sp 10.00 ms (10	oan 0 H 001 pt
400         1           400         1           500         1           500         1           500         1           500         1           500         1           500         1           5         5           6         1           7         1           8         1	z × 2.898 ms (Δ)	#VBW 3.0	o MHz	<mark>aliseon (1781, ande), Abrel</mark>	Sweep	Sp 10.00 ms (10	an 0 H



No.: BCTC/RF-EMC-007



	Dwell NVNT 3	3-DH3 2441M	lHz One	Burst	
Agilent Spectrum Analyzer - Swept SA X RL RF 50Ω AC Center Freq 2.44100000	0 GHz PNO: Fast ↔ IFGain:Low	SENSE:INT Trig Delay-500.0 µs ⊢ Trig: Video #Atten: 30 dB	ALIGN AUTO S #Avg Typ	be: RMS	11:44:10 AM Jul 25, 2023 TRACE 1234 5 TYPE WWWWW DET P NNNN
Ref Offset 2.36 dB 10 dB/div Ref 20.00 dBm					ΔMkr1 1.646 ms 0.07 dE
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-20.0 X Selated by Low Market U.A. -30.0					
-40.0	a the second distribution of the second s	Workwiller Ja litt strees. It is not some	والاعارية والمحمد وترار والماد	ak rate rate film recented	ablatinta a atra da dat la Ultura acat
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600 100 100 100 100 100 100 100 100 100		BW 3.0 MHz	<mark>and Oli_s in the second se</mark>	<mark>dd ydyraethynybarynae</mark> d	span 0 Hz 10.00 ms (10001 pts
700         Center 2.441000000 GHz           Res BW 1.0 MHz         X           MKR MODE TRC SCL         X           1 A2 1 t (A)         X           2 F 1 t         X           3 4         X	#VI 1.646 ms (Δ) C	<mark>, bå litt på k</mark> alle som på en kolonikalstadet.	FUNCTION WIDTH	Sweep	<b>, politika a presidenti de </b>
70.0         Center 2.441000000 GHz           Res BW 1.0 MHz         MKR MODE TRC SCL           1 A2 1 t (A)         X           2 F 1 t         X	#VI 1.646 ms (Δ) C	BW 3.0 MHz FUNCTION	<mark>ault Diegenfetsenne seinen au</mark>	Sweep	<mark>, John Span 0 H:</mark> Span 0 H: 10.00 ms (10001 pts



Page: 75 of 80

No.: BCTC/RF-EMC-007



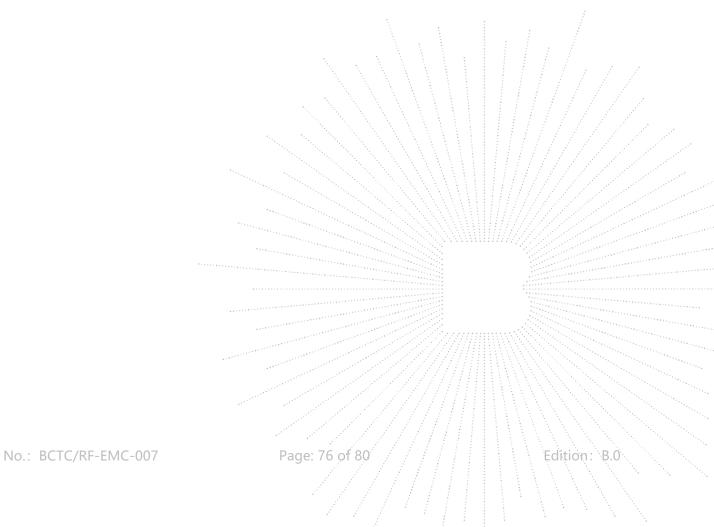
# 15. Antenna Requirement

#### 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.



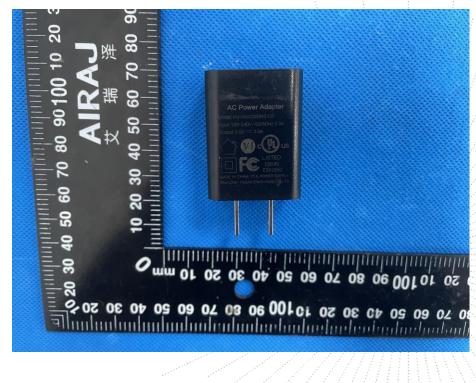


# 16. EUT Photographs

EUT Photo 1



EUT Photo 2



No.: BCTC/RF-EMC-007

Page: 77 of 80



# 17. EUT Test Setup Photographs

#### **Conducted Emissions Photo**



**Radiated Measurement Photos** 



No.: BCTC/RF-EMC-007

Page: 78 of 80





No.: BCTC/RF-EMC-007

Page: 79 of 80



# STATEMENT

1. The equipment lists are traceable to the national reference standards.

- 2. The test report can not be partially copied unless prior written approval is issued from our lab.
- 3. The test report is invalid without the "special seal for inspection and testing".
- 4. The test report is invalid without the signature of the approver.
- 5. The test process and test result is only related to the Unit Under Test.
- 6. Sample information is provided by the client and the laboratory is not responsible for its authenticity.
- 7. The quality system of our laboratory is in accordance with ISO/IEC17025.

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

#### Address:

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

TEL: 400-788-9558

P.C.: 518103

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No.: BCTC/RF-EMC-007

Page: 80 of 80

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