

TEST REPORT

Report No.:	BCTC2411918682-2E
Applicant:	RockTek Co., Ltd.
Product Name:	UHD Streamer
Test Model:	RT-GX1
Tested Date:	2024-11-11 to 2024-12-05
Issued Date:	2024-12-05
She	nzhen BCTC Testing Co., Ltd.

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FCC ID: 2AFIV-RT-GX1

Product Name:	UHD Streamer
Trademark:	RockTek
Model/Type reference:	RT-GX1 RT-GX1 Elite, RT-GT1, RT-GT1s, HPR312
Prepared For:	RockTek Co., Ltd.
Address:	16F-9, NO. 184, Zhongyang Rd., Changhua City, Changhua County, 50056, Taiwan
Manufacturer:	Shenzhen Skyworth Digital Technology Co., LTD.
Address:	14/F, Unit A, Skyworth Building, Gaoxin Ave.1.S., Nanshan District, Shenzhen, 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:	2024-11-11
Sample tested Date:	2024-11-11 to 2024-12-05
Issue Date:	2024-12-05
Report No.:	BCTC2411918682-2E
Test Standards:	FCC Part15.247 ANSI C63.10-2013
Test Results:	PASS
Remark:	This is Bluetooth BLE radio test report.

Tested by:

Chen

Lei Chen/Project Handler

Approved by:

Zero Zhou/Reviewer

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No.: BCTC/RF-EMC-005



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(Note: N/A Means Not Applicable)



Version 1.

Report No.	Issue Date	Description	Approved
BCTC2411918682-2E	2024-12-05	Original	Valid

Edition: B.2

No.: BCTC/RF-EMC-005



2. Test Summary

The Product has been tested according to the following specifications:

No.	Test Parameter	Clause No	Results
1	Conducted Emission	15.207	PASS
2	6dB Bandwidth	15.247 (a)(2)	PASS
3	Peak Output Power	15.247 (b)	PASS
4	Radiated Spurious Emission	15.247 (d), 15.205	PASS
5	Power Spectral Density	15.247 (e)	PASS
6	Restricted Band of Operation	15.205	PASS
7	Band Edge (Out of Band Emissions)	15.247(d)	PASS
8	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(9kHz-30MHz)	U=3.7dB
2	3m chamber Radiated spurious emission(30MHz-1GHz)	U=4.3dB
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	Ú=0.59°C



4. Product Information And Test Setup

4.1 Product Information

Model/Type reference:	RT-GX1 RT-GX1 Elite, RT-GT1, RT-GT1s, HPR312
Model differences:	All the model are the same circuit and RF module, except model names and appearance of the color.
Hardware Version:	N/A
Software Version:	N/A
Operation Frequency:	2402-2480MHz
Type of Modulation:	GFSK (1Mbps, 2Mbps)
Number Of Channel	40CH
Antenna installation:	PCB antenna
	1.88dBi
Antenna Gain:	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. The antenna gain of the product is provided by the customer, and the test data is affected by the customer information.
Ratings:	DC 12V from adapter
Adapter Information:	Model No.: RJ-SKY120100U60S Input: AC 100-240V 50/60Hz 0.5A Output: DC 12V 1A

4.2 Test Setup Configuration

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

4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
E-1	UHD Streamer	RockTek	RT-GX1	N/A	EUT
E-2	Adapter	/	RJ-SKY120100 U60S	N/A	Auxiliary

ltem	Shielded Type	Ferrite Core	Length	Note
C-1	NO	NO	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

	Channel List					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	
01	2402	11	2422	21	2442	
02	2404	12	2424	22	2444	
03	2406	13	2426	23	2446	
~	~	~	~	~	~	
09	2418	19	2438	39	2478	
10	2420	20	2440	40	2480	

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.

For All Mode	Description	Modulation Type	
Mode 1	CH01		
Mode 2	CH20	GFSK 1Mbps	
Mode 3	CH40		
Mode 4	CH01		
Mode 5	CH20	GFSK 2Mbps	
Mode 6	CH40		
Mode 7	BT Linking (Conducted emission & Radiated emission)		

Note:

(1) The measurements are performed at the highest, middle, lowest available channels.



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	SecureCRT			
Frequency	2402 MHz 2440 MHz 2480 MHz			
Parameters	DEF	DEF	DEF	



5. Test Facility And Test Instrument Used

5.1 Test Facility

All measurement facilities used to collect the measurement data are located at Shenzhen BCTC Testing Co., Ltd. Address: 1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, 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	Equipment Manufacturer Model# Serial# Last Cal. Next Cal.						
Receiver	R&S	ESR3	102075	May 16, 2024	May 15, 2025		
LISN	R&S	ENV216	101375	May 16, 2024	May 15, 2025		
Software	Frad	EZ-EMC	EMC-CON 3A1	\	١		
Pulse limiter	Schwarzbeck	VTSD9561-F	01323	May 16, 2024	May 15, 2025		

5.2 Test Instrument Used

RF Conducted Test							
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.		
Power meter	Keysight	E4419	١	May 16, 2024	May 15, 2025		
Power Sensor (AV)	Keysight	E9300A	/	May 16, 2024	May 15, 2025		
Signal Analyzer20kH z-26.5GHz	Keysight	N9020A	MY49100060	May 16, 2024	May 15, 2025		
Spectrum Analyzer9kHz- 40GHz	R&S	FSP40	100363	May 16, 2024	May 15, 2025		
Radio frequency control box	MAIWEI	MW100-RFC B	L man				
Software	MAIWEI	MTS 8310	Λ	······································	4		

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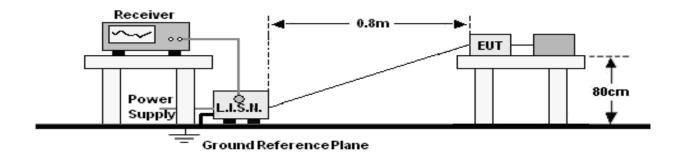
Radiated Emissions Test (966 Chamber01)							
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.		
966 chamber	ChengYu	966 Room	966	May 16, 2024	May 15, 2025		
Receiver	R&S	ESR3	102075	May 16, 2024	May 15, 2025		
Receiver	R&S	ESRP	101154	May 16, 2024	May 15, 2025		
Amplifier	Schwarzbeck	BBV9744	9744-0037	May 16, 2024	May 15, 2025		
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	942	May 21, 2024	May 20, 2025		
Loop Antenna(9KHz -30MHz)	Schwarzbeck	FMZB1519B	00014	May 21, 2024	May 20, 2025		
Amplifier	SKET	SKET LAPA_01G18 SK20 G-45dB		May 16, 2024	May 15, 2025		
Horn Antenna	Schwarzbeck	BBHA9120D	1541	May 21, 2024	May 20, 2025		
Amplifier(18G Hz-40GHz)	MITEQ	TTA1840-35- HG	2034381	May 16, 2024	May 15, 2025		
Horn Antenna(18G Hz-40GHz)	Schwarzbeck	BBHA9170	00822	May 21, 2024	May 20, 2025		
Spectrum Analyzer9kHz- 40GHz	R&S	FSP40	100363	May 16, 2024	May 15, 2025		
Software	Frad	EZ-EMC	FA-03A2 RE	\	\		

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6. Conducted Emissions

6.1 Block Diagram Of Test Setup



6.2 Limit

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

Notes:

1. *Decreasing linearly with logarithm of frequency.

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

6.3 Test Procedure

Setting
10 dB
0.15 MHz
30 MHz
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.

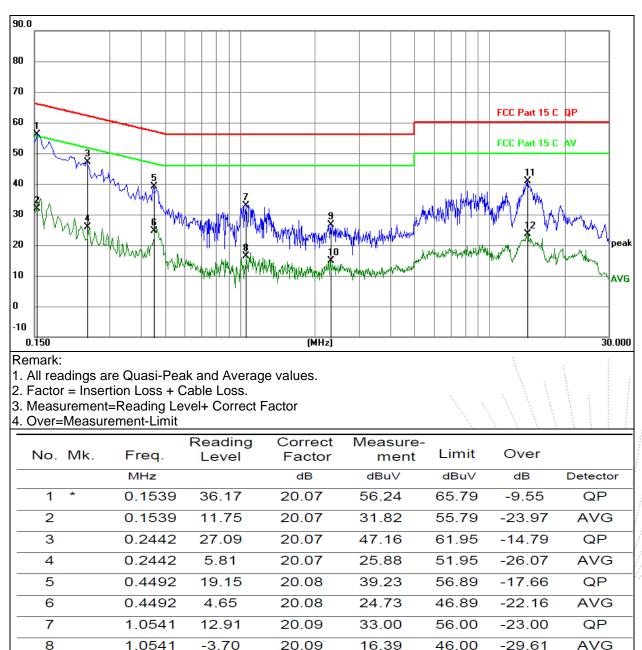
6.4 EUT Operating Conditions

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 7	Test Voltage :	AC 120V/60Hz



2.3090

2.3090

14.1376

14.1376

6.59

-5.13

20.65

3.43

9

10

11

12

26.70

14.98

40.94

23.72

56.00

46.00

60.00

50.00

-29.30

-31.02

-19.06

-26.28

20.11

20.11

20.29

20.29

QP

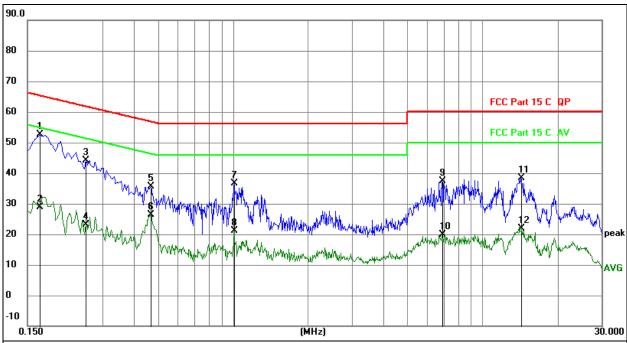
AVG

QP

AVG



Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Phase :	Ν
Test Mode:	Mode 7	Test Voltage :	AC 120V/60Hz



Remark:

1. All readings are Quasi-Peak and Average values.

2. Factor = Insertion Loss + Cable Loss.

3. Measurement=Reading Level+ Correct Factor

4. Over=Measurement-Limit

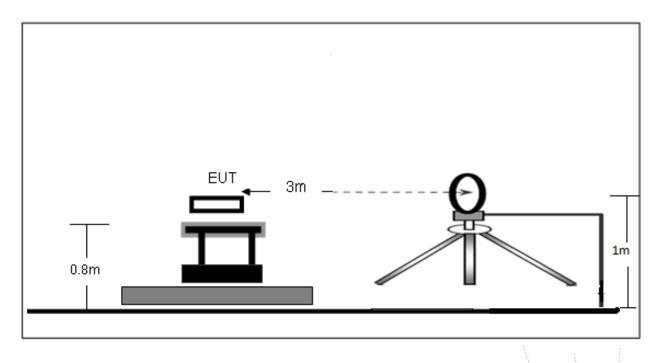
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over	
		MHz		dB	dBu∨	dBuV	dB	Detector
1	*	0.1677	32.47	20.07	52.54	65.07	-12.53	QP
2		0.1677	8.84	20.07	28.91	55.07	-26.16	AVG
3		0.2575	24.08	20.07	44.15	61.51	-17.36	QP
4		0.2575	2.94	20.07	23.01	51.51	-28.50	AVG
5		0.4686	15.63	20.08	35.71	56.54	-20.83	QP
6		0.4686	6.42	20.08	26.50	46.54	-20.04	AVG
7		1.0103	16.46	20.09	36.55	56.00	-19.45	QP
8		1.0103	1.09	20.09	21.18	46.00	-24.82	AVG
9		6.8776	17.17	20.16	37.33	60.00	-22.67	QP
10		6.8776	-0.24	20.16	19.92	50.00	-30.08	AVG
11		14.2127	18.05	20.29	38.34	60.00	-21.66	QP
12		14.2127	1.64	20.29	21.93	50.00	-28.07	AVG



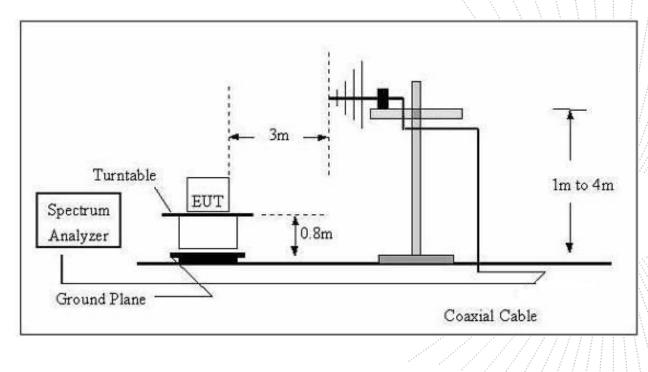
7. Radiated Emissions

7.1 Block Diagram Of Test Setup

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

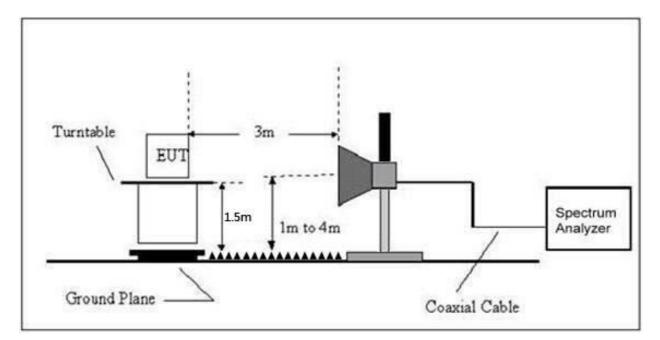


(B) Radiated Emission Test-Up Frequency 30MHz~1GHz





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



7.2 Limit

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

Frequency	Field Strength	Distance	Field Strength Limit at 3m Distance		
(MHz)	uV/m	(m)	uV/m	dBuV/m	
0.009 ~ 0.490	2400/F(kHz)	300	10000 * 2400/F(kHz)	20log ^{(2400/F(kHz))} + 80	
0.490 ~ 1.705	24000/F(kHz)	30	100 * 24000/F(kHz)	20log ^{(24000/F(kHz))} + 40	
1.705 ~ 30	30	30	100 * 30	20log ⁽³⁰⁾ + 40	
30 ~ 88	100	3	100	20log ⁽¹⁰⁰⁾	
88 ~ 216	150	3	150	20log ⁽¹⁵⁰⁾	
216 ~ 960	200	3	200	20log ⁽²⁰⁰⁾	
Above 960	500	3	500	20log ⁽⁵⁰⁰⁾	

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Limit (dBuV/m) (at 3M)			
FREQUENCY (MHZ)	PEAK			
Above 1000	74	54		

Notes:

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

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

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



FREQUENCY RANGE OF RADIATED MEASUREMENT (For unintentional radiators)

Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz)	Range (MHz)
Below 1.705	30
1.705 – 108	1000
108 – 500	2000
500 – 1000	5000
Above 1000	5 th harmonic of the highest frequency or 40 GHz, whichever is lower

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 chamber. 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:

g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 metre to 1.5 metre (Above 18GHz the distance is 1 meter and table is 1.5 metre).

h. Test the EUT in the lowest channel, the middle 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.

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 chamber. 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 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:	24%
Pressure:	101KPa	Test Voltage :	AC 120V/60Hz
Test Mode:	Mode 7	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.

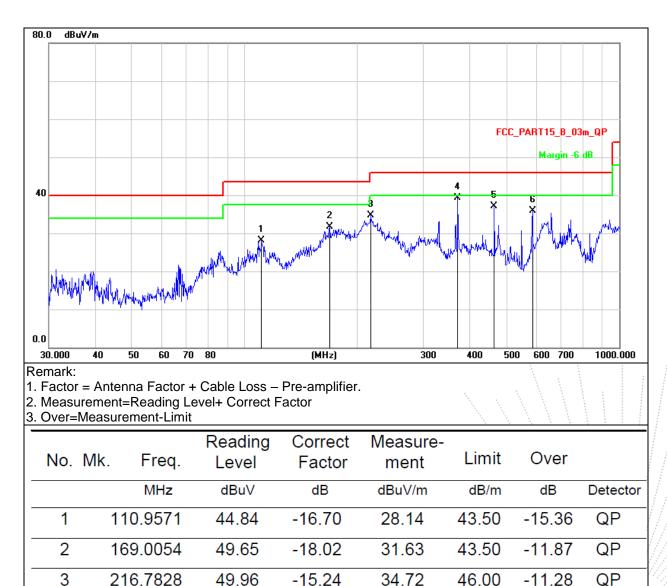
Distance extrapolation factor =40 log (specific distance/test distance)(dB);

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



Between 30MHz - 1GHz

Temperature:	26° ℃	Relative Humidity:	54%
Pressure:	101KPa	Phase :	Horizontal
Test Mode:	Mode 7	Test Voltage :	AC 120V/60Hz



4 *

5

6

370.7023

463.9696

586.8437

50.56

46.58

43.73

-11.21

-9.51

-7.90

39.35

37.07

35.83

46.00

46.00

46.00

-6.65

-8.93

-10.17

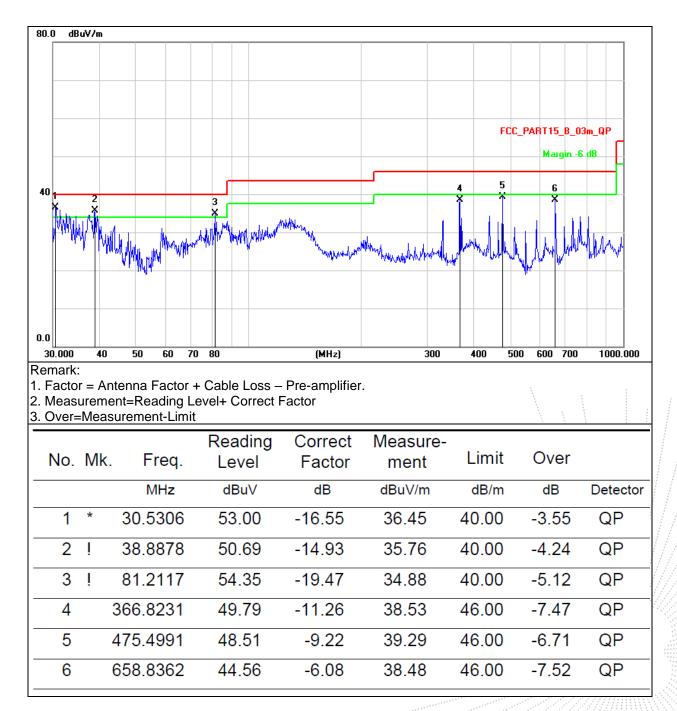
QP

QP

QP



Temperature:	26° ℃	Relative Humidity:	54%
Pressure:	101KPa	Phase :	Vertical
Test Mode:	Mode 7	Test Voltage :	AC 120V/60Hz





			GFS	K(2M)			
Polar	Fre- quency	Reading Level	Correct Factor	Measure- ment	Limits	Over	Detector
(H/V)	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	Туре
	·		Low c	hannel			
V	4804.00	67.64	-19.99	47.65	74.00	-26.35	PK
V	4804.00	54.32	-19.99	34.33	54.00	-19.67	AV
V	7206.00	68.56	-14.22	54.34	74.00	-19.66	PK
V	7206.00	53.74	-14.22	39.52	54.00	-14.48	AV
Н	4804.00	67.13	-19.99	47.14	74.00	-26.86	PK
Н	4804.00	52.79	-19.99	32.80	54.00	-21.20	AV
Н	7206.00	68.88	-14.22	54.66	74.00	-19.34	PK
Н	7206.00	52.92	-14.22	38.70	54.00	-15.30	AV
			Middle	channel			
V	4880.00	68.33	-19.84	48.49	74.00	-25.51	PK
V	4880.00	52.43	-19.84	32.59	54.00	-21.41	AV
V	7320.00	69.84	-13.90	55.94	74.00	-18.06	PK
V	7320.00	53.61	-13.90	39.71	54.00	-14.29	AV
Н	4880.00	69.60	-19.84	49.76	74.00	-24.24	PK
Н	4880.00	53.26	-19.84	33.42	54.00	-20.58	AV
Н	7320.00	68.88	-13.90	54.98	74.00	-19.02	PK
Н	7320.00	52.43	-13.90	38.53	54.00	-15.47	AV
			High c	hannel			
V	4960.00	67.49	-19.68	47.81	74.00	-26.19	PK
V	4960.00	53.32	-19.68	33.64	54.00	-20.36	AV
V	7440.00	67.10	-13.57	53.53	74.00	-20.47	PK
V	7440.00	52.81	-13.57	39.24	54.00	-14.76	AV
Н	4960.00	69.17	-19.68	49.49	74.00	-24.51	PK
Н	4960.00	53.90	-19.68	34.22	54.00	-19.78	AV
Н	7440.00	69.61	-13.57	56.04	74.00	-17.96	PK
Н	7440.00	52.56	-13.57	38.99	54.00	-15.01	AV

Between 1GHz – 25GHz

Remark:

1.Measurement = Reading Level + Correct Factor,

Correct Factor = Antenna Factor + Cable Loss - Pre-amplifier,

Over= Measurement - 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.

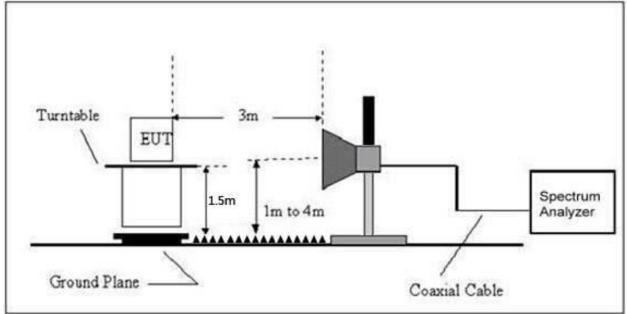
5. This report only shows the worst case test data.



8. Radiated Band Emission Measurement And Restricted Bands Of Operation

8.1 Block Diagram Of Test Setup

Radiated Emission Test-Up Frequency Above 1GHz



8.2 Limit

FCC Part15 C Section 15.209 and 15.205

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

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



LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Limit (dBuV/m) (at 3M)		
FREQUENCY (WHZ)	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 chamber. 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 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

	Polar	Frequency	Reading Level	Correct Factor	Measure- ment (dBuV/m)		Limits (dBuV/m)	
	(H/V)	(MHz)	(dBuV/m)	(dB)	PK	PK	AV	
		-	L	ow Channel	2402MHz			
	Н	2390.00	72.74	-25.43	47.31	74.00	54.00	PASS
	Н	2400.00	73.23	-25.40	47.83	74.00	54.00	PASS
	V	2390.00	74.99	-25.43	49.56	74.00	54.00	PASS
GFSK	V	2400.00	76.20	-25.40	50.80	74.00	54.00	PASS
2Mbps			Н	igh Channel	2480MHz			
	Н	2483.50	74.22	-25.15	49.07	74.00	54.00	PASS
	Н	2500.00	72.58	-25.10	47.48	74.00	54.00	PASS
	V	2483.50	73.71	-25.15	48.56	74.00	54.00	PASS
	V	2500.00	70.78	-25.10	45.68	74.00	54.00	PASS

Remark:

1.Measurement = Reading Level + Correct Factor,

Correct Factor = Antenna Factor + Cable Loss - Pre-amplifier,

Over= Measurement - 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.

5. This report only shows the worst case test data.

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9. Power Spectral Density Test

9.1 Block Diagram Of Test Setup



9.2 Limit

	FCC Part15 (15.247) , Subpart C						
Section	Test Item	Limit	Frequency Range (MHz)	Result			
15.247	Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS			

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

9.3 Test Procedure

- 1. Set analyzer center frequency to DTS channel center frequency.
- 2. Set the span to 1.5 times the DTS bandwidth.
- 3. Set the RBW to: 3 kHz
- 4. Set the VBW \geq 3 x RBW.
- 5. Detector = peak.
- 6. Sweep time = auto couple.
- 7. Trace mode = max hold.
- 8. Allow trace to fully stabilize.
- 9. Use the peak marker function to determine the maximum amplitude level within the RBW.
- 10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

9.4 EUT Operating Conditions

The EUT tested system was configured as the statements of 4.6 Unless otherwise a special operating condition is specified in the follows during the testing. Note: Power Spectral Density(dBm)=Reading+Cable Loss

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9.5 Test Result

Temperature:	26 ℃		Relative Humidity:	54%	
Test Mode:	GFSK		Test Voltage:	DC 12V	
Condition	Mode	Frequency (MHz)	Conducted PSD (dBm/3kHz)	Limit (dBm/3kHz)	Result
NVNT	BLE 1M	2402	-10.4	8	PASS
NVNT	BLE 1M	2440	-9.96	8	PASS
NVNT	BLE 1M	2480	-9.68	8	PASS
NVNT	BLE 2M	2402	-11.54	8	PASS
NVNT	BLE 2M	2440	-12.37	8	PASS
NVNT	BLE 2M	2480	-12.61	8	PASS





		PSI		est Gr Γ BLE	1M 2402	2MHz			
Agilent Spect	rum Analyzer - Swept SA RF 50 Ω AC		SEN	SE:INT	ALIG	GN AUTO	10:45:29 AM [Dec 02 2024	- ¢ 🗾
	eq 2.402000000 0	GHz PNO:Wide ↔	Tring		Avg Type: Lo Avg Hold: 10	og-Pwr	TRACE	1 2 3 4 5 6 M WWWW P N N N N N	Frequency
		IFGain:Low	#Atten: 30	dB					Auto Tune
0 dB/div	Ref Offset 2.59 dB Ref 20.00 dBm				IVI	lkr1 2.4	02 028 -10.40	o GHZ 3 dBm	
^{og}									
10.0									Center Free 2.402000000 GH;
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10.0			0000 <u>0</u> 010	1 ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~					2.401472750 GH
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Mm Www w	r ግምሌ እየሞሆ	. HANANAA	ᠰᢇᠻᢧᡁᡗᡵᠬᠬ᠈ᡃᡅ᠋ᡕ	ᡃᠬᠬᡀᡎᠬ	W.m.		
20.0	A-WAN PARTY						* ዝዋውብ	warn-vym	Stop Free 2.402527250 GH
30.0								· · ·	2.402527250 GH
40.0									CF Step
10.0									105.450 kH <u>Auto</u> Mar
50.0									_
60.0									Freq Offse
									0 H:
70.0									
Res BW	020000 GHz 3.0 kHz	#VRM	10 kHz				Span 1.0		
		# <b>U</b> D V V	10 KH2		Sw	/eep 111	.2 ms (1)	001 pts)	
SG		<i></i>	TO KIIZ		Sw	STATUS	.2 ms (10	001 pts)	
SG				ΓBLE	sw 1M 2440	STATUS	.2 ms (10	001 pts)	
Agilent Spect	rum Analyzer - Swept SA RF 50 Ω AC		D NVN		1M 2440	status DMHz	10:50:30 AM [	Dec 02, 2024	
I Agilent Spect		PSI	D NVN SEN	SE:INT	1M 2440		10:50:30 AMI TRACE	Dec 02, 2024	Frequency
C Agilent Spect	RF 50 Ω AC eq 2.440000000 C	PSI		SE:INT	ALLIC AVg Type: Lc Avg Hold: 10	STATUS OMHZ SN AUTO Og-Pwr 0/100	10:50:30 AMI TRACE TYPE DET	Dec 02, 2024 <b>1 2 3 4 5 6</b> M WWWW P N N N N N	Frequency
Agilent Spect	RF 50 Ω AC eq 2.440000000 C	PS[ GHz PNO: Wide ↔	D NVN SEN	SE:INT	ALLIC AVg Type: Lc Avg Hold: 10		10:50:30 AMI TRACE TYPE DET <b>40 026</b>	Dec 02, 2024 <b>1 2 3 4 5 6</b> M WWWW P N N N N N	Frequency
Agilent Spect	RF 50 Ω AC eq 2.440000000 C Ref Offset 2.6 dB	PS[ GHz PNO: Wide ↔	D NVN SEN	SE:INT	ALLIC AVg Type: Lc Avg Hold: 10	STATUS OMHZ SN AUTO Og-Pwr 0/100	10:50:30 AMI TRACE TYPE DET <b>40 026</b>	Dec 02, 2024 1 2 3 4 5 6 MWWWWW P NNNNN 9 GHZ	Frequency Auto Tuno
RL	RF 50 Ω AC eq 2.440000000 C Ref Offset 2.6 dB	PS[ GHz PNO: Wide ↔	D NVN SEN	SE:INT	ALLIC AVg Type: Lc Avg Hold: 10	STATUS OMHZ SN AUTO Og-Pwr 0/100	10:50:30 AMI TRACE TYPE DET <b>40 026</b>	Dec 02, 2024 1 2 3 4 5 6 MWWWWW P NNNNN 9 GHZ	Frequency Auto Tuno Center Freq
Agilent Spect RL Center Fr 0 dB/div	RF 50 Ω AC eq 2.440000000 C Ref Offset 2.6 dB	PS[ GHz PNO: Wide ↔	D NVN SEN	SE:INT	ALLIC AVg Type: Lc Avg Hold: 10	STATUS OMHZ SN AUTO Og-Pwr 0/100	10:50:30 AMI TRACE TYPE DET <b>40 026</b>	Dec 02, 2024 1 2 3 4 5 6 MWWWWW P NNNNN 9 GHZ	Frequency Auto Tuno Center Freq
Agilent Spect RL Center Fr 0 dB/div	RF   50 Ω AC   eq 2.440000000 C Ref Offset 2.6 dB Ref 20.00 dBm	PSI BHZ PNO: Wide → IFGain:Low	D NVN ⁻ Sen Trig: Free #Atten: 30	SE:INT	ALLIC AVg Type: Lc Avg Hold: 10	STATUS OMHZ SN AUTO Og-Pwr 0/100	10:50:30 AMI TRACE TYPE DET <b>40 026</b>	Dec 02, 2024 1 2 3 4 5 6 MWWWWW P NNNNN 9 GHZ	Frequency Auto Tune Center Free 2.44000000 GH: Start Free
Agilent Spect     RL     Center Fr      O dB/div     O	RF   50 Ω AC   eq 2.440000000 C Ref Offset 2.6 dB Ref 20.00 dBm	PSI BHZ PNO: Wide → IFGain:Low	D NVN ⁻ Sen Trig: Free #Atten: 30	SE:INT Run dB	1M 2440	STATUS DMHz SN AUTO Org.Pwr 0/100	10:50:30 AM TRACE TYPE DET <b>40 026</b> -9.950	Dec 02, 2024 1 2 3 4 5 6 MWWWWW P NNNNN 9 GHZ	Center Free 2.44000000 GH Start Free 2.439519250 GH
C dB/div	Ref Offset 2.6 dB           Ref Offset 2.6 dB           Ref 20.00 dBm	PSI BHZ PNO: Wide → IFGain:Low	D NVN ⁻ Sen Trig: Free #Atten: 30	SE:INT Run dB	1M 2440	STATUS DMHz SN AUTO Org.Pwr 0/100	10:50:30 AM TRACE TYPE DET 40 026 -9.950	9 GHz 6 dBm	Frequency Auto Tune Center Free 2.44000000 GH Start Free 2.439519250 GH
Agilent Spect     RL     O dB/div     o	Ref Offset 2.6 dB           Ref Offset 2.6 dB           Ref 20.00 dBm	PSI BHZ PNO: Wide → IFGain:Low	D NVN ⁻ Sen Trig: Free #Atten: 30	SE:INT Run dB	1M 2440	STATUS OMHZ SN AUTO Og-Pwr 0/100	10:50:30 AM TRACE TYPE DET 40 026 -9.950	Dec 02, 2024 1 2 3 4 5 6 MWWWWW P NNNNN 9 GHZ	Frequency Auto Tune Center Free 2.44000000 GH Start Free 2.439519250 GH Stop Free
O dB/div O dB/div O dB/div O 0 O 0 O 0 O 0 O 0 O 0 O 0 O 0 O 0 O 0	Ref Offset 2.6 dB           Ref Offset 2.6 dB           Ref 20.00 dBm	PSI BHZ PNO: Wide → IFGain:Low	D NVN ⁻ Sen Trig: Free #Atten: 30	SE:INT Run dB	1M 2440	STATUS DMHz SN AUTO Org.Pwr 0/100	10:50:30 AM TRACE TYPE DET <b>40 026</b> -9.950	9 GHz 6 dBm	Frequency Auto Tune Center Frec 2.44000000 GH2 Start Frec
Agilent Spect     RL     O dB/div     O dB/div     O d     O dB/div     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O	Ref Offset 2.6 dB           Ref Offset 2.6 dB           Ref 20.00 dBm	PSI BHZ PNO: Wide → IFGain:Low	D NVN ⁻ Sen Trig: Free #Atten: 30	SE:INT Run dB	1M 2440	STATUS DMHz SN AUTO Org.Pwr 0/100	10:50:30 AM TRACE TYPE DET <b>40 026</b> -9.950	9 GHz 6 dBm	Frequency Auto Tune Center Free 2.44000000 GH: Start Free 2.439519250 GH: Stop Free 2.440480750 GH: CF Step
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Agilent Spect     RL     O dB/div     O dB/div     O d     O dB/div     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O	Ref Offset 2.6 dB           Ref Offset 2.6 dB           Ref 20.00 dBm	PSI BHZ PNO: Wide → IFGain:Low	D NVN ⁻ Sen Trig: Free #Atten: 30	SE:INT Run dB	1M 2440	STATUS DMHz SN AUTO O'100 Ikr1 2.4	10:50:30 AM TRACE TYPE DET <b>40 026</b> -9.950	9 GHz 6 dBm	Frequency Auto Tune Center Fred 2.440000000 GH: 2.439519250 GH: 2.439519250 GH: 2.440480750 GH: 2.440480750 GH: 2.440480750 GH: 96.150 kH: Auto Mar
Agilent Spect     RL     Center Fr      O dB/div     O	Ref Offset 2.6 dB           Ref Offset 2.6 dB           Ref 20.00 dBm	PSI BHZ PNO: Wide → IFGain:Low	D NVN ⁻ Sen Trig: Free #Atten: 30	SE:INT Run dB	1M 2440	STATUS DMHz SN AUTO O'100 Ikr1 2.4	10:50:30 AM TRACE TYPE DET <b>40 026</b> -9.950	9 GHz 6 dBm	Frequency Auto Tune Center Fred 2.440000000 GH: 2.439519250 GH: 2.439519250 GH: 2.440480750 GH: 2.440480750 GH: 2.440480750 GH: 96.150 kH: Auto Mar
Agilent Spect RL     O dB/div     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O     O	Ref Offset 2.6 dB           Ref Offset 2.6 dB           Ref 20.00 dBm	PSI BHZ PNO: Wide → IFGain:Low	D NVN ⁻ Sen Trig: Free #Atten: 30	SE:INT Run dB	1M 2440	STATUS DMHz SN AUTO O'100 Ikr1 2.4	10:50:30 AM TRACE TYPE DET <b>40 026</b> -9.950	9 GHz 6 dBm	Frequency Auto Tune Center Fred 2.440000000 GH: 2.439519250 GH: 2.439519250 GH: 2.440480750 GH: 2.440480750 GH: 2.440480750 GH: 96.150 kH: Auto Mar
Agilent Spect     RL     RL     O dB/div     O dB/div     O dB/div     O d     O dB/div     O d     O d     O dB/div     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d	Ref Offset 2.6 dB           Ref Offset 2.6 dB           Ref 20.00 dBm	PSI BHZ PNO: Wide → IFGain:Low	D NVN ⁻ Sen Trig: Free #Atten: 30	SE:INT Run dB	1M 2440	STATUS DMHZ SN AUTO Og.Pwr 0/100 Ikr1 2.4	10:50:30 AM TRACE TYPE DET 40 026 -9.95	9 GHz 6 dBm	Frequency Auto Tune Center Fred 2.440000000 GH: 2.439519250 GH: 2.439519250 GH: 2.440480750 GH: 2.440480750 GH: 2.440480750 GH: 96.150 kH: Auto Mar
Agilent Spect     RL     RL     O dB/div     O dB/div     O dB/div     O d     O dB/div     O d     O d     O dB/div     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d     O d	Ref 0ffset 2.6 dB           Ref 0ffset 2.6 dB           Ref 20.00 dBm	PSI PNO: Wide → IFGain:Low	D NVN ⁻ Sen Trig: Free #Atten: 30	SE:INT Run dB	1M 2440	STATUS DMHZ SN AUTO Og.Pwr 0/100 Ikr1 2.4	10:50:30 AM TRACE TYPE DET 40 026 -9.95	Pic 02, 2024 1 2 3 4 5 6 PINNNN 9 GHz 6 dBm	Frequency Auto Tune Center Freq 2.44000000 GH Start Freq 2.439519250 GH Stop Freq 2.440480750 GH CF Step 96.150 kH



Agilent Spectrum Analyzer - Si       RL     RF     50       enter Freq 2.4800	Ω AC 000000 GHz PNO: Wide ←	SENSE:INT	ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 100/100	10:54:42 AM Dec 02, 2024 TRACE 1 2 3 4 5 6 TYPE M WWWW DET P N N N N N	Frequency
Ref Offset2 0 dB/div Ref 20.00	IFGain:Low 2.61 dB 0 dBm	#Atten: 30 dB	Mkr1 2.	480 004 9 GHz -9.681 dBm	Auto Tune
					<b>Center Fred</b> 2.480000000 GHz
0.0	A at the sec	1	alaa aaha		<b>Start Fred</b> 2.479511750 GH:
20.0 - WWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWWW	Marinalafithan	A CLUME OF CONTRACT	a har a party of her for the form	www.pp.au	<b>Stop Fred</b> 2.480488250 GH:
0.0					CF Step 97.650 kH: <u>Auto</u> Mar
0.0					Freq Offse 0 H
'0.0					
				Span 976.5 kHz	
Res BW 3.0 kHz		W 10 kHz	Sweep 10	Span 976.5 kHz 03.0 ms (1001 pts)	
Res BW 3.0 kHz	#VB		STATUS	03.0 ms (1001 pts)	
Res BW 3.0 KHz	#VB) PS wept SA	D NVNT BLE	status 2M 2402MHz	03.0 ms (1001 pts)	
Res BW 3.0 kHz G Agilent Spectrum Analyzer - Si R L RF 50	#VB PS wept SA		STATUS	03.0 ms (1001 pts)	Frequency
Res BW 3.0 kHz           IG           Agilent Spectrum Analyzer - Si           RL         RF           IS           enter Freq 2.4020           Ref Offset           C GE/div	#VB1 PS wept SA Ω AC PNO: Wide – IFGain:Low 2.59 dB	SENSE:INT	STATUS 2M 2402MHz ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 100/100	03.0 ms (1001 pts)	Frequency
Res BW 3.0 kHz G Agilent Spectrum Analyzer - Sr RL RF 50 enter Freq 2.4020 Ref Offset 2 dB/div Ref 20.00	#VB1 PS wept SA Ω AC PNO: Wide – IFGain:Low 2.59 dB	SENSE:INT	STATUS 2M 2402MHz ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 100/100	10:58:28 AMDec 02, 2024 TRACE 12 3 4 5 6 TYPE MWANNE DET PINNINN 401 978 3 GHZ	Frequency Auto Tune Center Free
Res BW 3.0 kHz  G Agilent Spectrum Analyzer -Si RL RF 50 enter Freq 2.402( C O GE/div Ref Offset 2	#VB1 PS wept SA Ω AC PNO: Wide – IFGain:Low 2.59 dB	SENSE:INT	STATUS 2M 2402MHz ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 100/100	10:58:28 AMDec 02, 2024 TRACE 12 3 4 5 6 TYPE MWANNE DET PINNINN 401 978 3 GHZ	Frequency Auto Tune Center Free 2.40200000 GH
Res BW 3.0 kHz  IG  Agilent Spectrum Analyzer - Si RL RF S0 enter Freq 2.4020  D dB/div Ref Offset 3	#VBA PS wept SA Q. AC PNO: Wide - IFGain:Low 2.59 dB 0 dBm	CD NVNT BLE SENSE:INT → Trig: Free Run #Atten: 30 dB	STATUS 2M 2402MHz ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 100/100 Mkr1 2.	10:58:28 AMDec 02, 2024 TRACE 12 3 4 5 6 TYPE MWANNE DET PINNINN 401 978 3 GHZ	Frequency Auto Tune Center Free 2.40200000 GH Start Free 2.401015250 GH Stop Free
Res BW 3.0 kHz  IG  Agilent Spectrum Analyzer - Si RL RF 55 enter Freq 2.4020  D dB/div Ref 20.00  O o	#VBA PS wept SA Q. AC PNO: Wide - IFGain:Low 2.59 dB 0 dBm	CD NVNT BLE SENSE:INT → Trig: Free Run #Atten: 30 dB	STATUS 2M 2402MHz ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 100/100 Mkr1 2.	10:58:28 AMDec 02, 2024 TRACE    2:3:4:5:6 TYPE MUNITORN d01 978 3 GHz -11.536 dBm	Frequency Auto Tune Center Free 2.402000000 GH Start Free 2.401015250 GH Stop Free 2.402984750 GH CF Step 196.950 kH
Res BW 3.0 kHz           Image: Section Analyzer - Signed to the section of t	#VBA PS wept SA Q. AC PNO: Wide - IFGain:Low 2.59 dB 0 dBm	CD NVNT BLE SENSE:INT → Trig: Free Run #Atten: 30 dB	STATUS 2M 2402MHz ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 100/100 Mkr1 2.	10:58:28 AMDec 02, 2024 TRACE    2:3:4:5:6 TYPE MUNITORN d01 978 3 GHz -11.536 dBm	Frequency Auto Tune Center Free 2.402000000 GH: Start Free 2.401015250 GH: Stop Free 2.402984750 GH: CF Step 196.950 kH: Auto Mar
Ref Offset 2 0 dB/div Ref 20.00	#VBA PS wept SA Q. AC PNO: Wide - IFGain:Low 2.59 dB 0 dBm	CD NVNT BLE SENSE:INT → Trig: Free Run #Atten: 30 dB	STATUS 2M 2402MHz ALIGN AUTO Avg Type: Log-Pwr Avg Hold: 100/100 Mkr1 2.	10:58:28 AMDec 02, 2024 TRACE    2:3:4:5:6 TYPE MUNITORN d01 978 3 GHz -11.536 dBm	Auto Tune Center Frec 2.40200000 GHz Start Frec 2.401015250 GHz Stop Frec 2.402984750 GHz CF Step 196.950 kHz



RL	ectrum Analyzer - Swept RF 50 Ω Freq 2.440000	AC 0000 GH PI	IZ NO:Wide ↔ Gain:Low	. Trig: Free #Atten: 30		Avg Type: I Avg Hold: 1		TRA	M Dec 02, 2024 DE <b>1 2 3 4 5 6</b> PE <b>M</b> WWWWW ET <b>P</b> N N N N N	Frequency
0 dB/div og	Ref Offset 2.6 <b>Ref 20.00 d</b>	dB Bm				ľ	<b>Mkr1 2</b> .	439 98 -12.3	6 7 GHz 72 dBm	Auto Tuno
10.0										Center Fred 2.440000000 GH
0.00				h o (11	1					<b>Start Free</b> 2.439169000 GH:
0.0 //////	www. Andrew Afrikanse	y	nnhan Mh	nnen Nin VI	rolliner	www.durllunlow	with the the the test of test	ᠬᠬᡛᡣᡎᠰᢧᡁᢔ	mh.h.M.h.h.	<b>Stop Free</b> 2.440831000 GH:
0.0										CF Step 166.200 kH <u>Auto</u> Mar
0.0										Freq Offse 0 H:
	.4400000 GHz							Span 1	.662 MHz	
Res BW	.4400000 GHz / 3.0 kHz		#VBW	10 kHz		S	weep 1	Span 1 75.3 ms	.662 MHz (1001 pts)	
Res BW					ΓBLE	s 2M 248	STATUS	75.3 ms	.662 MHz (1001 pts)	
Res BW G Agilent Spe R L		SA AC   0000 GH	PSI	D NVN	SE:INT	2M 248	STATUS SOMHZ IGN AUTO Log-Pwr	75.3 ms	(1001 pts) MDec 02, 2024	Frequency
Agilent Spe RL enter F	r 3.0 kHz ectrum Analyzer - Swept RF 50 Ω Freq 2.480000 Ref Offset 2.67	- SA AC 00000 GH IF0 I dB	PSI	D NVN	SE:INT Run	2M 248 Avg Type: I Avg Hold: 1	STATUS COMHZ IGN AUTO Log-Pwr 00/100	75.3 ms	( <b>1001 pts</b> )	Frequency Auto Tune
Res BW G Agilent Spe RL enter F 0 dB/div	7 3.0 kHz ectrum Analyzer - Swept RF 50 Ω Freq 2.480000	- SA AC 00000 GH IF0 I dB	PS[ Iz NO: Wide ↔	D NVN	SE:INT Run	2M 248 Avg Type: I Avg Hold: 1	STATUS COMHZ IGN AUTO Log-Pwr 00/100	75.3 ms	(1001 pts) MDec 02,2024 E 1 2 3 4 5 G M NN N N 3 9 GHz	Frequency Auto Tune Center Free
Res BW G Agilent Spe RL enter F 0 dB/div 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	r 3.0 kHz ectrum Analyzer - Swept RF 50 Ω Freq 2.480000 Ref Offset 2.67	- SA AC 00000 GH IF0 I dB	PS[ Iz NO: Wide ↔	D NVN	SE:INT Run	2M 248 Avg Type: I Avg Hold: 1	STATUS COMHZ IGN AUTO Log-Pwr 00/100	75.3 ms	(1001 pts) MDec 02,2024 E 1 2 3 4 5 G M NN N N 3 9 GHz	Frequency Auto Tune Center Free 2.48000000 GH Start Free
Agilent Spe RL enter F	1 3.0 kHz ectrum Analyzer - Swept RF 50Ω Freq 2.480000 Ref Offset 2.6' Ref 20.00 d	I dB Bm	PS[ Iz NO: Wide ↔	D NVN	SE:INT Run dB	2M 248 Avg Type: I Avg Hold: 1	STATUS	75.3 ms	(1001 pts) MDec 02,2024 E 1 2 3 4 5 G M NN N N 3 9 GHz	Frequency Auto Tune Center Free 2.48000000 GH Start Free 2.479060250 GH Stop Free
Res BW G Agilent Spec RL enter F O dB/div O 0 O 0 O 0 O 0 O 0 O 0 O 0 O 0	1 3.0 kHz ectrum Analyzer - Swept RF 50Ω Freq 2.480000 Ref Offset 2.6' Ref 20.00 d	I dB Bm	PSI Iz V0: Wide ↔	D NVN SEN Trig: Free #Atten: 30	SE:INT Run dB	2M 248 Avg Type: Avg Hold: 1	STATUS	11:09:41/ 11:09:41/ TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TR	MDec 02, 2024 2€ 12 2 4 5 6 27 NNNNN 3 9 GHz 07 dBm	Frequency Auto Tune Center Free 2.48000000 GH: Start Free 2.479060250 GH: Stop Free 2.480939750 GH: CF Step 187.950 kH
Res BW ag Agilent Spe RL enter F 0 dB/div g 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1 3.0 kHz ectrum Analyzer - Swept RF 50Ω Freq 2.480000 Ref Offset 2.6' Ref 20.00 d	I dB Bm	PSI Iz V0: Wide ↔	D NVN SEN Trig: Free #Atten: 30	SE:INT Run dB	2M 248 Avg Type: Avg Hold: 1	STATUS	11:09:41/ 11:09:41/ TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TR	MDec 02, 2024 2€ 12 2 4 5 6 27 NNNNN 3 9 GHz 07 dBm	Frequency Auto Tune Center Freq 2.48000000 GH Start Freq 2.479060250 GH Stop Freq 2.480939750 GH 187.950 kH Auto Mar
Res BW Agilent Spe RL RL O dB/div O	1 3.0 kHz ectrum Analyzer - Swept RF 50Ω Freq 2.480000 Ref Offset 2.6' Ref 20.00 d	I dB Bm	PSI Iz V0: Wide ↔	D NVN SEN Trig: Free #Atten: 30	SE:INT Run dB	2M 248 Avg Type: Avg Hold: 1	STATUS	11:09:41/ 11:09:41/ TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TRAI TR	MDec 02, 2024 2€ 12 2 4 5 6 27 NNNNN 3 9 GHz 07 dBm	Center Free 2.48000000 GH Start Free 2.479060250 GH Stop Free 2.480939750 GH CF Step 187.950 kH



## 10. Bandwidth Test

#### 10.1 Block Diagram Of Test Setup



#### 10.2 Limit

FCC Part15 (15.247) , Subpart C						
Section	Test Item	Limit	Frequency Range (MHz)	Result		
15.247(a)(2)	Bandwidth	>= 500KHz (6dB bandwidth)	2400-2483.5	PASS		

#### 10.3 Test Procedure

- 1. Set RBW = 100 kHz.
- 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.

## 10.4 EUT Operating Conditions

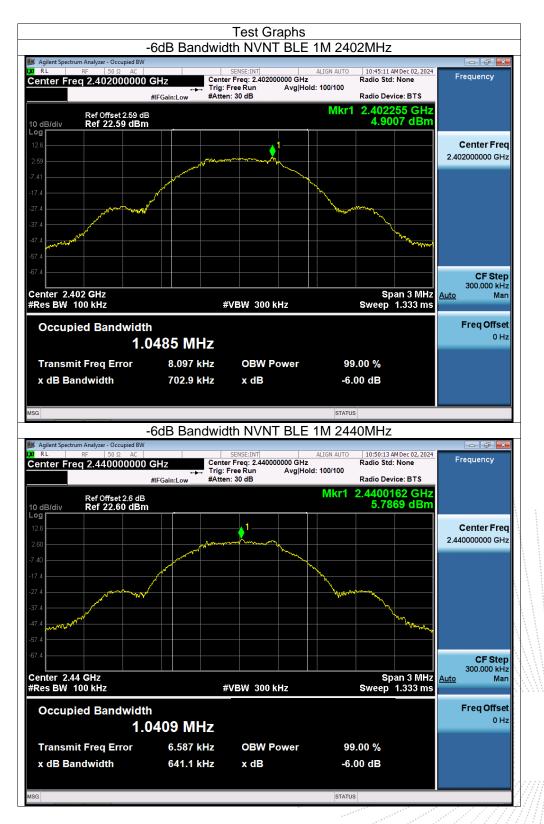
The EUT tested system was configured as the statements of 4.6 Unless otherwise a special operating condition is specified in the follows during the testing. Note: Power Spectral Density(dBm)=Reading+Cable Loss



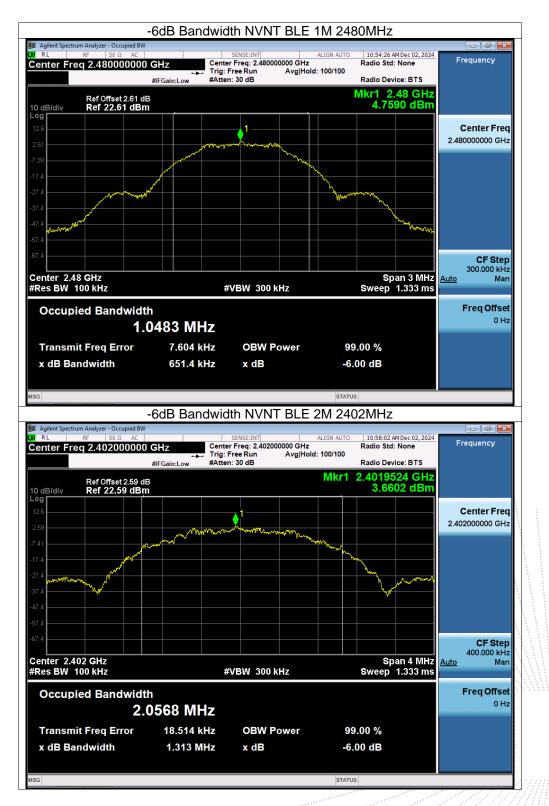
## 10.5 Test Result

Temperature:	<b>26</b> ℃		Relative Humidity	r: 54%	54%	
Test Mode:	GFSK		Test Voltage:	DC 12V		
Condition	Mode	Frequency (MHz)	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict	
NVNT	BLE 1M	2402	0.703	0.5	Pass	
NVNT	BLE 1M	2440	0.641	0.5	Pass	
NVNT	BLE 1M	2480	0.651	0.5	Pass	
NVNT	BLE 2M	2402	1.313	0.5	Pass	
NVNT	BLE 2M	2440	1.108	0.5	Pass	
NVNT	BLE 2M	2480	1.253	0.5	Pass	

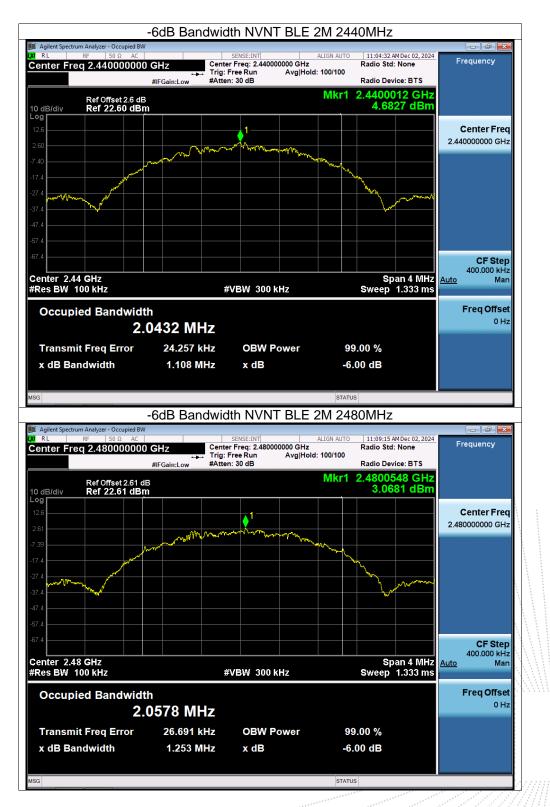














## **11. Peak Output Power Test**

#### 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)(3)	Peak Output Power	1 watt or 30dBm	2400-2483.5	PASS			

#### 11.3 Test Procedure

a. The EUT was directly connected to the Power meter

## 11.4 EUT Operating Conditions

The EUT tested system was configured as the statements of 4.6 Unless otherwise a special operating condition is specified in the follows during the testing. Note: Power Spectral Density(dBm)=Reading+Cable Loss

#### 11.5 Test Result

Temperature:	<b>26</b> ℃	Relative Humidity:	54%
Test Mode:	GFSK	Test Voltage:	DC 12V
	-		

Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	5.98		Pass
NVNT	BLE 1M	2440	-5.95	30	Pass
NVNT	BLE 1M	2480	4.96	30	Pass
NVNT	BLE 2M	2402	5.96	30	Pass
NVNT	BLE 2M	2440	5.91	30	Pass
NVNT	BLE 2M	2480	5	30	Pass



### 12. 100 KHz Bandwidth Of Frequency Band Edge

#### 12.1 Block Diagram Of Test Setup



#### 12.2 Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum 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.

#### 12.3 Test Procedure

Using the following spectrum analyzer setting:

- a) Set the RBW = 100KHz.
- b) Set the VBW = 300KHz.
- c) Sweep time = auto couple.
- d) Detector function = peak.
- e) Trace mode = max hold.
- f) Allow trace to fully stabilize.

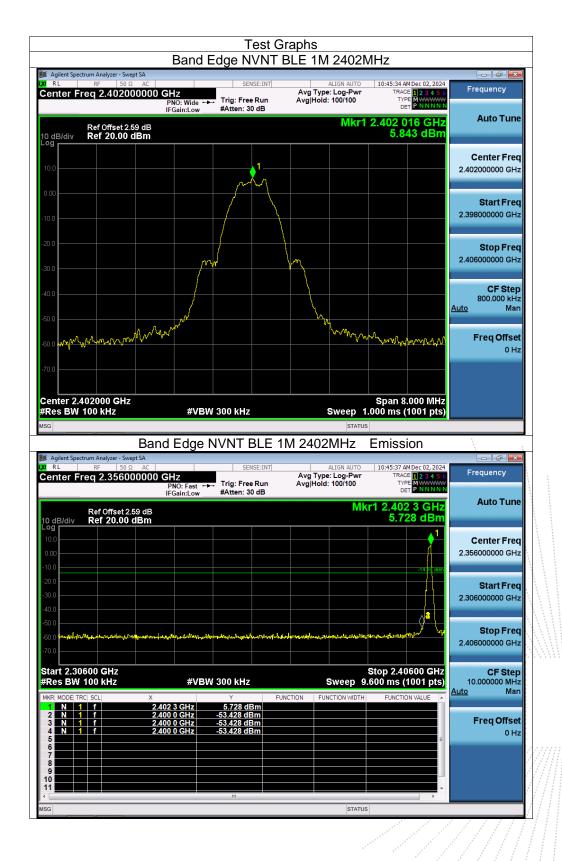
#### 12.4 EUT Operating Conditions

The EUT tested system was configured as the statements of 4.6 Unless otherwise a special operating condition is specified in the follows during the testing. Note: Power Spectral Density(dBm)=Reading+Cable Loss

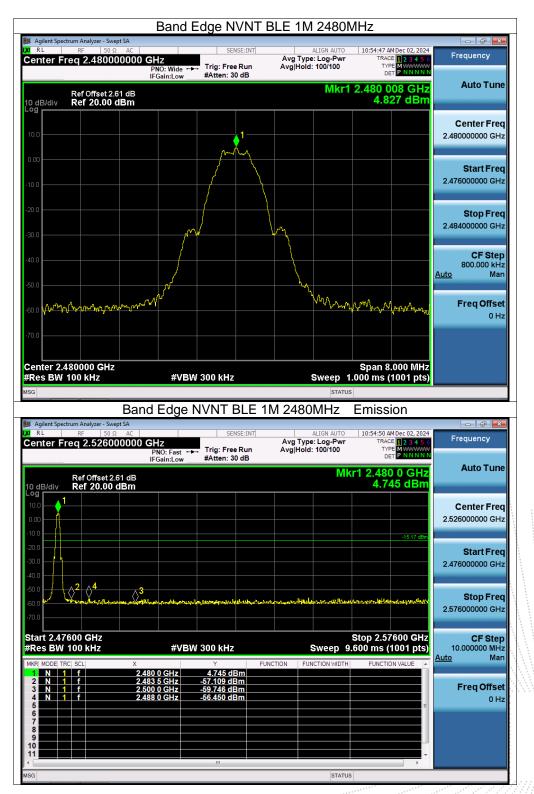
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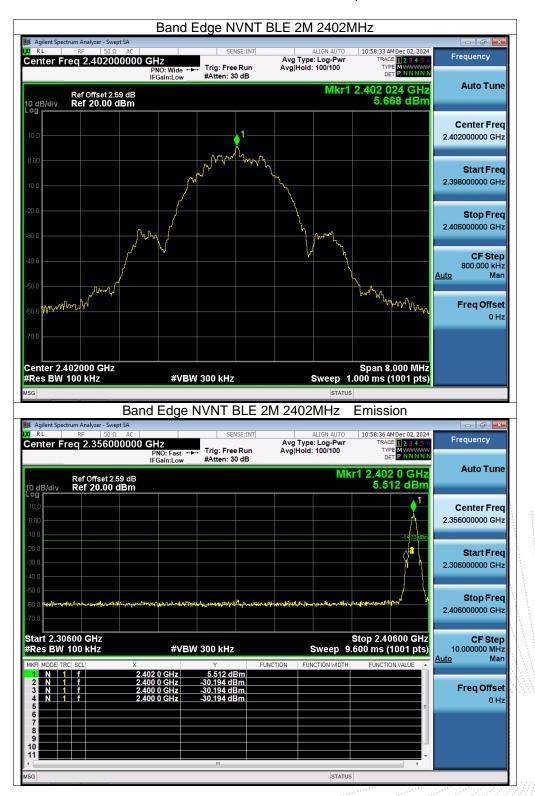
## 12.5 Test Result



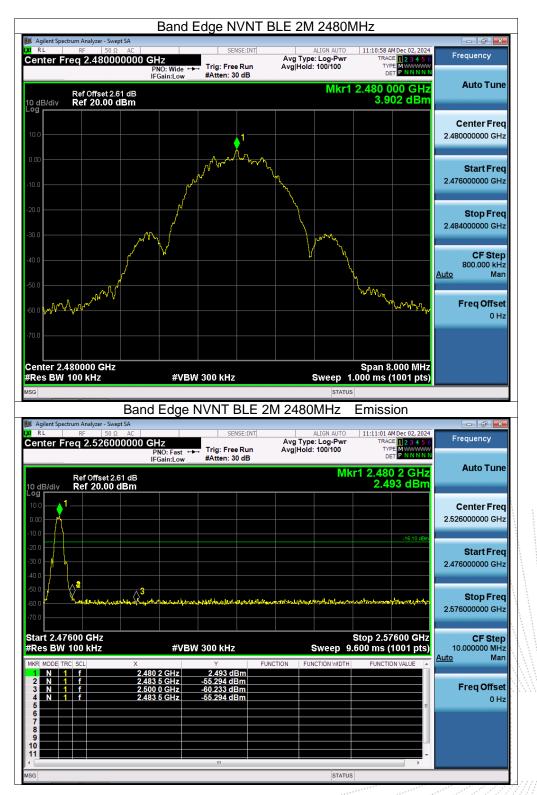












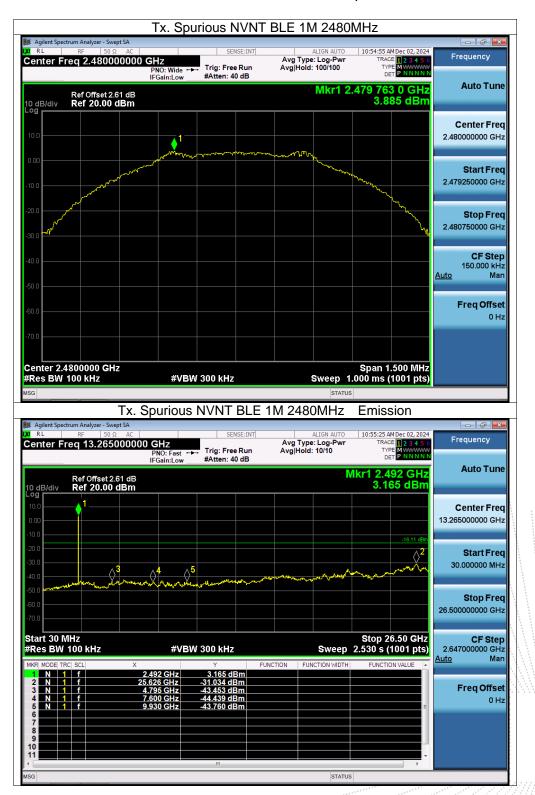




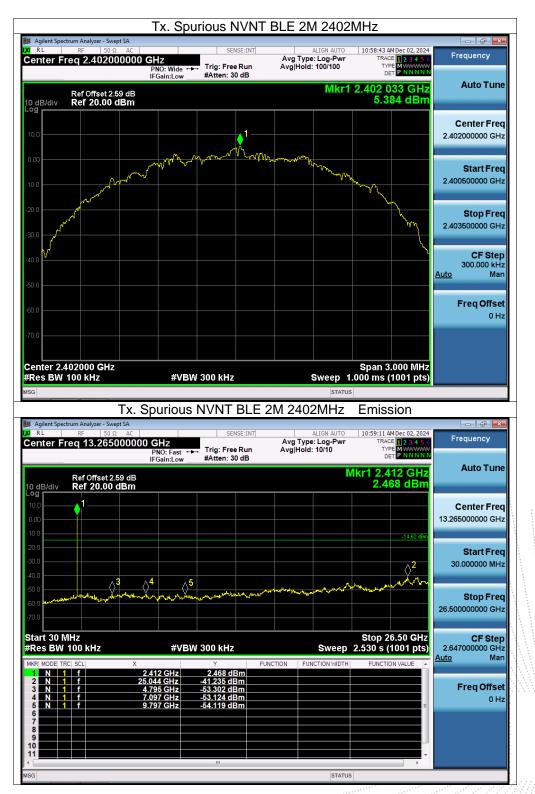






















# 13. Antenna Requirement

#### 13.1 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.

#### 13.2 Test Result

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

No.: BCTC/RF-EMC-005

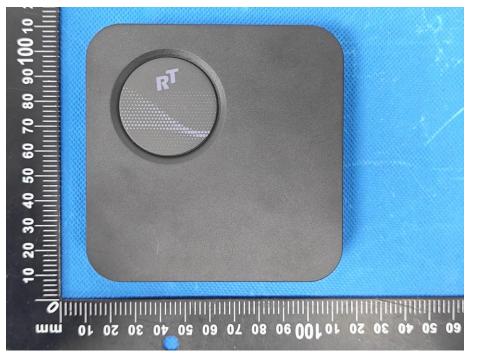
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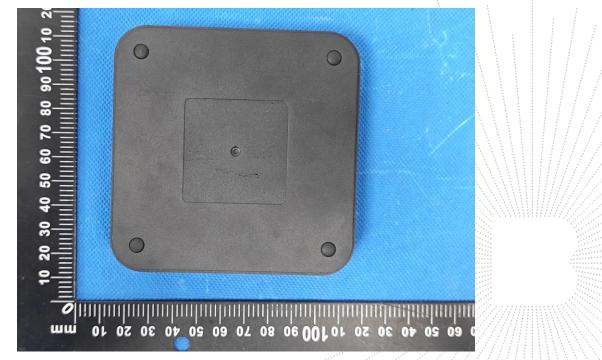


# 14. EUT Photographs





EUT Photo 2



NOTE: Appendix-Photographs Of EUT Constructional Details.

No.: BCTC/RF-EMC-005

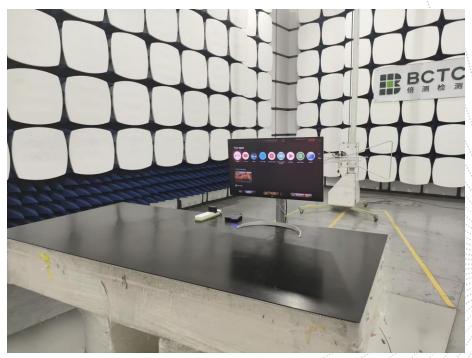


## **15. EUT Test Setup Photographs**

## **Conducted Emissions Photo**



**Radiated Measurement Photos** 



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## 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.

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***** END *****