MEASUREMENT REPORT

RSS-247 / Bluetooth

IC:	10004A-EDF155
Applicant:	Edifier International Limited
Application Type:	Certification
Product:	Portable Bluetooth Speaker
Model No.:	EDF100019
Brand Name:	EDIFIER
ISED Rule(s):	RSS-247 Issue 2, RSS-GEN Issue 5
Test Procedure(s):	ANSI C63.10-2013
Test Date:	August 25 ~ November 08 2021

Reviewed By: Sunny Sun

Approved By: Robin Wu

ACCREDITED
TESTING LABORATORY
CERTIFICATE #3628.02

The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.10-2013. Test results reported herein relate only to the item(s) tested.

Revision History

Report No.	Version	Description	Issue Date	Note
2108RSU067-C1	Rev. 01	Initial Report	11-12-2021	Valid

CONTENTS

1. GENERAL INFORMATION

1.1. Applicant

Edifier International Limited

P.O. Box 6264 General Post Office Hong Kong

1.2. Manufacturer

Beijing Edifier Technology Co., Ltd.

8th floor, ZuoAn Building, NO.68 BeiSiHuanXiLu, Haidian District, Beijing 100080, CHINA

1.3. Test Facility

☐	**Test Site – MRT Suzhou Laboratory**				
	Laboratory Location (Suzhou - Wuzhong)				
	D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China				
	Laboratory Location (Suzhou - SIP)				
	4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China				
	Laboratory Accreditations				
	A2LA: 3628.01		CNAS: L10551		
	FCC: CN1166		ISED: CN0001		
	VCCI:	☐R-20025	☐G-20034	☐C-20020	☐T-20020
		☐R-20141	☐G-20134	☐C-20103	☐T-20104
☒	**Test Site – MRT Shenzhen Laboratory**				
	Laboratory Location (Shenzhen)				
	1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen, China				
	Laboratory Accreditations				
	A2LA: 3628.02		CNAS: L10551		
	FCC: CN1284		ISED: CN0105		
☐	**Test Site – MRT Taiwan Laboratory**				
	Laboratory Location (Taiwan)				
	No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)				
	Laboratory Accreditations				
	TAF: L3261-190725				
	FCC: 291082, TW3261		ISED: TW3261		

1.4. Product Information

Product Name	Portable Bluetooth Speaker
Model No.	EDF100019
Test Device No.	SN: 1004000197815
Bluetooth Specification	v5.0 Single mode (BR/EDR)
Power By	USB (DC 5V)
Operating Temperature	0 ~ 45°C
Remark: The information of EUT was provided by the manufacturer, and the accuracy of the information shall be the responsibility of the manufacturer.	

1.5. Radio Specification

Operating Frequency	2402 ~ 2480MHz
Channel Number	79
Type of modulation	GFSK, π/4 DQPSK, 8DPSK
Data Rate	1Mbps (GFSK), 2Mbps (π/4 DQPSK), 3Mbps (8DPSK)
Antenna Type	PCB Antenna
Antenna Gain	2.59dBi

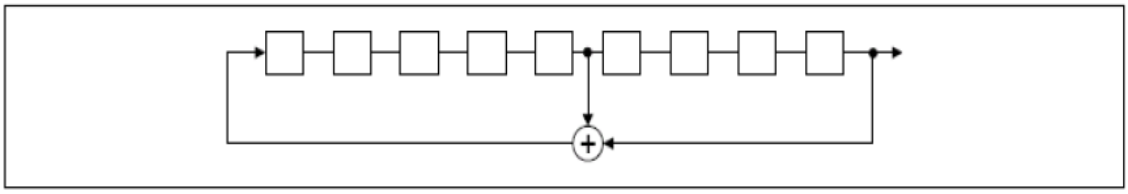
1.6. Working Frequencies

Channel	Frequency	Channel	Frequency	Channel	Frequency
00	2402 MHz	01	2403 MHz	02	2404 MHz
03	2405 MHz	04	2406 MHz	05	2407 MHz
06	2408 MHz	07	2409 MHz	08	2410 MHz
09	2411 MHz	10	2412 MHz	11	2413 MHz
12	2414 MHz	13	2415 MHz	14	2416 MHz
15	2417 MHz	16	2418 MHz	17	2419 MHz
18	2420 MHz	19	2421 MHz	20	2422 MHz
21	2423 MHz	22	2424 MHz	23	2425 MHz
24	2426 MHz	25	2427 MHz	26	2428 MHz
27	2429 MHz	28	2430 MHz	29	2431 MHz
30	2432 MHz	31	2433 MHz	32	2434 MHz
33	2435 MHz	34	2436 MHz	35	2437 MHz
36	2438 MHz	37	2439 MHz	38	2440 MHz
39	2441 MHz	40	2442 MHz	41	2443 MHz
42	2444 MHz	43	2445 MHz	44	2446 MHz
45	2447 MHz	46	2448 MHz	47	2449 MHz
48	2450 MHz	49	2451 MHz	50	2452 MHz
51	2453 MHz	52	2454 MHz	53	2455 MHz
54	2456 MHz	55	2457 MHz	56	2458 MHz
57	2459 MHz	58	2460 MHz	59	2461 MHz
60	2462 MHz	61	2463 MHz	62	2464 MHz
63	2465 MHz	64	2466 MHz	65	2467 MHz
66	2468 MHz	67	2469 MHz	68	2470 MHz
69	2471 MHz	70	2472 MHz	71	2473 MHz
72	2474 MHz	73	2475 MHz	74	2476 MHz
75	2477 MHz	76	2478 MHz	77	2479 MHz
78	2480 MHz	--	--	--	--

1.7. Pseudorandom Frequency Hopping Sequence

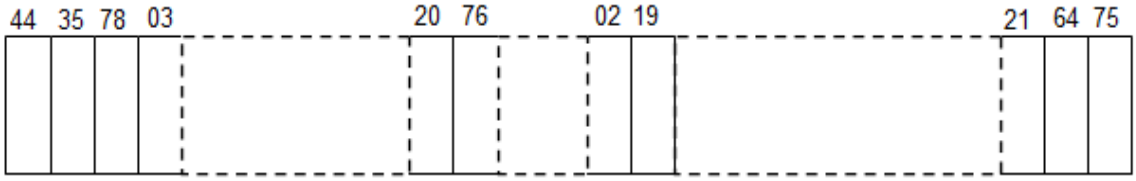
The pseudorandom sequence may be generated in a nine-stage shift register whose 5th and 9th stage outputs are added in a modulo-two addition stage. And the result is fed back to the input of the first stage. The sequence begins with the first ONE of 9 consecutive ONES, i.e. the shift register is initialized with nine ones.

- Number of shift register stages: 9
- Length of pseudo-random sequence: 2^9 - 1 = 511 bits
- Longest sequence of zeros: 8 (non-inverted signal)



Linear Feedback Shift Register for Generation of the PRBS sequence

An example of Pseudorandom Frequency Hopping Sequence as follow:



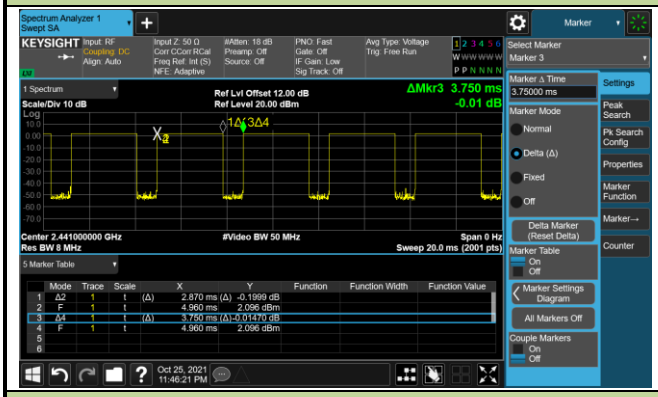
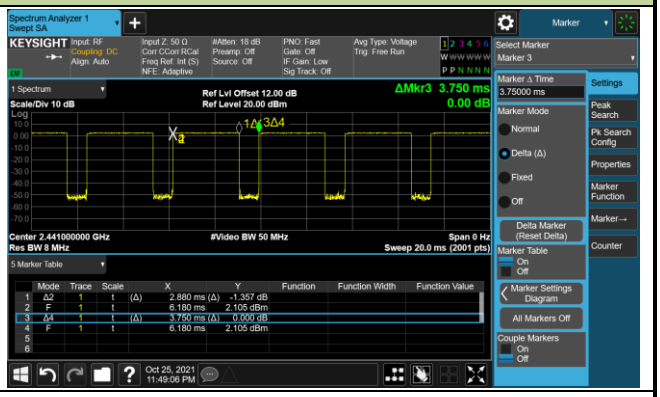
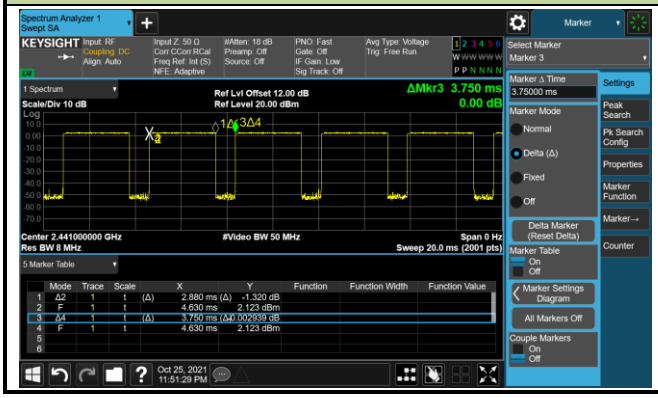
Each frequency used equally on the average by each transmitter.

The system receivers have input bandwidths that match the hopping channel bandwidths of their Corresponding transmitters and shift frequencies in synchronization with the transmitted signals.

1.8. Duty Cycle

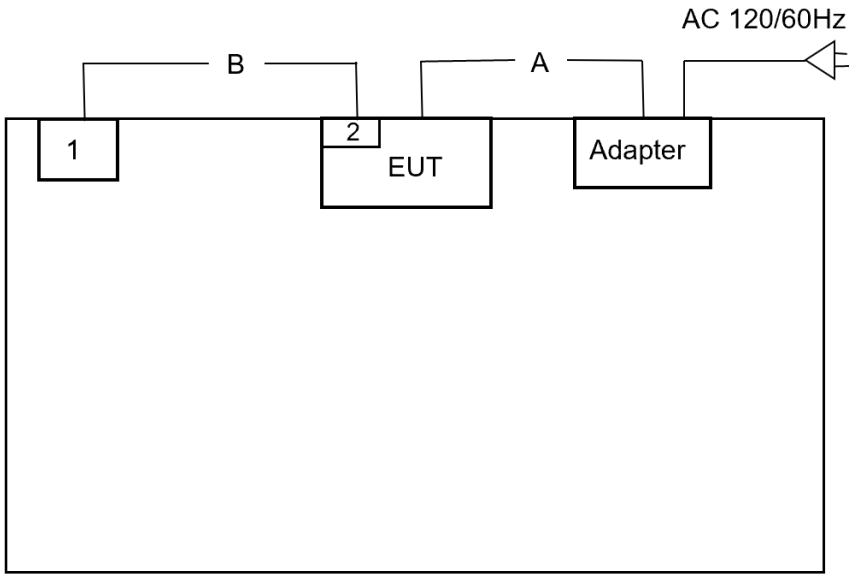
The maximum achievable duty cycle was determined based on measurements performed on a spectrum analyzer in zero-span mode with RBW = 8MHz, VBW = 50MHz. The RBW and VBW were both greater than 50/T, where T is the minimum transmission duration, and the number of sweep points across T was greater than 100. The duty cycles are as follows:

Test Mode	Duty Cycle
DH5	76.53%
2DH5	76.80%
3DH5	76.80%

Test Plot (T = Transmission Duration)	
DH5 (T = 2.870ms)	2DH5 (T = 2.880ms)
	
3DH5 (T = 2.880ms)	
	

1.9. Description of Test Configuration

The device was tested per the guidance ANSI C63.10 - 2013 that was used to reference the appropriate EUT setup for radiated spurious emissions and AC line conducted emission testing.

Setup for Radiated spurious emissions and AC conducted emissions


Cable Type		Cable Description
A	USB Cable	Non-Shielding, 0.9m
B	Audio Cable	Non-Shielding, 1.2m

Note 1: The test utility software used during testing was “BT FCC Tool”, and the version was V2.24.

Note 2: The adapter (M/N: TPA-46050200UU) was provided by test lab, the EUT will be sold without adapter.

1.10. Test System Details

Product		Manufacturer	Model No.
1	Mobile Phone	Redmi	Note 9 Pro
2	TF Card	Kingston	N/A

1.11. EMI Suppression Device(s) / Modifications

No EMI suppression device(s) were added and/or no modifications were made during testing.

1.12. Test Environment Condition

Ambient Temperature	15 ~ 35 °C
Relative Humidity	20 ~ 75 %RH

2. TEST EQUIPMENT CALIBRATION DATE

Conducted Emission (NS-SR2)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
EMI Test Receiver	R&S	ESL3	MRTSUE06576	1 year	2022/06/27
ENV216-LV-NETZNACHB	R&S	ENV216	MRTSUE06577	1 year	2022/07/04
ENV216-LV-NETZNACHB	R&S	ENV216	MRTSUE06578	1 year	2022/07/04
Temperature/Humidity Meter	deli	NO.8813	MRTSUE06587	1 year	2022/06/30
Shielding Anechoic Chamber	BOOMWAVE	SR2	MRTSUE06551	5 year	2024/06/04

Radiated Emission (NS-AC1)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cal. Due Date
EMI Test Receiver	R&S	ESR3	MRTSUE06575	1 year	2022/06/27
EXA Signal Analyzer	Keysight	N9010A	MRTSUE06195	1 year	2022/03/17
Horn Antenna	Schwarzbeck	BBHA 9170	MRTSUE06292	1 year	2022/03/14
Broad-Band Horn Antenna	Schwarzbeck	9120D	MRTSUE06572	1 year	2021/10/19
Broad-Band Horn Antenna	Schwarzbeck	9120D	MRTSUE06572	1 year	2022/10/20
Bilog Period Antenna	Schwarzbeck	VULB 9162	MRTSUE06573	1 year	2022/03/14
Preamplifier	Schwarzbeck	BBV 9721	MRTSUE06121	1 year	2022/06/29
Broadband Coaxial Preamplifier	Schwarzbeck	BBV 9718	MRTSUE06574	1 year	2022/06/09
Anechoic Chamber	BOOMWAVE	AC1	MRTSUE06496	1 year	2022/07/12
Temperature/Humidity Meter	deli	NO.8813	MRTSUE06588	1 year	2022/07/24

Conducted Test Equipment (NS-TR2)

Instrument	Manufacturer	Type No.	Asset No.	Cali. Interval	Cali. Due Date
electronic hygrothermograph	deli	No.8813	MRTSUE06813	1 year	2022/05/09
USB wideband power sensor	Keysight	U2021XA	MRTSUE06581	1 year	2022/08/15
10dB Attenuator	MVE	10dB	N/A	1 year	2022/08/19
EXA Signal Analyzer	Keysight	N9010A	MRTSUE06195	1 year	2022/03/17

Software	Version	Function
EMI Software	V3	EMI Test Software

3. MEASUREMENT UNCERTAINTY

Where relevant, the following test uncertainty levels have been estimated for tests performed on the EUT 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.

AC Conducted Emission Measurement
Measurement Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 9kHz~150kHz: 3.74dB 150kHz~30MHz: 3.44dB
Radiated Disturbance
Measurement Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): Horizontal: 30MHz~300MHz: 5.04dB 300MHz~1GHz: 4.95dB 1GHz~40GHz: 6.40dB Vertical: 30MHz~300MHz: 5.24dB 300MHz~1GHz: 6.03dB 1GHz~40GHz: 6.40dB
Spurious Emissions, Conducted
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 0.78dB
Output Power
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 1.13dB
Occupied Bandwidth
Measuring Uncertainty for a Level of Confidence of 95% (U=2Uc(y)): 0.28%

4. TEST RESULT

4.1. Summary

ISED Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
RSS-247 [5.1]	Occupied Bandwidth	No Limit	Conducted	Pass	Section 4.2
RSS-247 [5.4]	Peak Transmitter Output Power	<1 Watt if > 75 non-overlapping channels used		Pass	Section 4.3
RSS-247 [5.4]	EIRP	<4 Watt if > 75 non-overlapping channels used		Pass	Section 4.3
RSS-247 [5.1]	Channel Separation	> 2/3 of 20 dB BW for systems with Output Power < 125mW		Pass	Section 4.4
RSS-247 [5.1]	Number of Channels	≥ 15 Channels		Pass	Section 4.5
RSS-247 [5.1]	Time of Occupancy	≤ 0.4s in 31.6s period		Pass	Section 4.6
RSS-247 [5.5]	Band Edge / Out-of-Band Emissions	Conducted ≥ 20dBc		Pass	Section 4.7 Section 4.8
RSS-247 [5.5]	General Field Strength (Restricted Bands and Radiated Emission)	Emissions in restricted bands must meet the radiated limits detailed in RSS-Gen	Radiated	Pass	Section 4.9 Section 4.10
RSS-Gen [8.8]	AC Conducted Emissions 150kHz - 30MHz	< RSS-Gen limits>	Line Conducted	Pass	Section 4.11

Notes:

1) The analyzer plots shown in this section were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables and attenuators used as part of the system to connect the EUT to the analyzer at all frequencies of interest.

4.2. Occupied Bandwidth Measurement

4.2.1.Test Limit

N/A

4.2.2.Test Procedure Used

ANSI C63.10-2013 - Section 6.9.2 (20dB bandwidth)

ANSI C63.10-2013 - Section 6.9.3 (99% bandwidth)

4.2.3.Test Setting

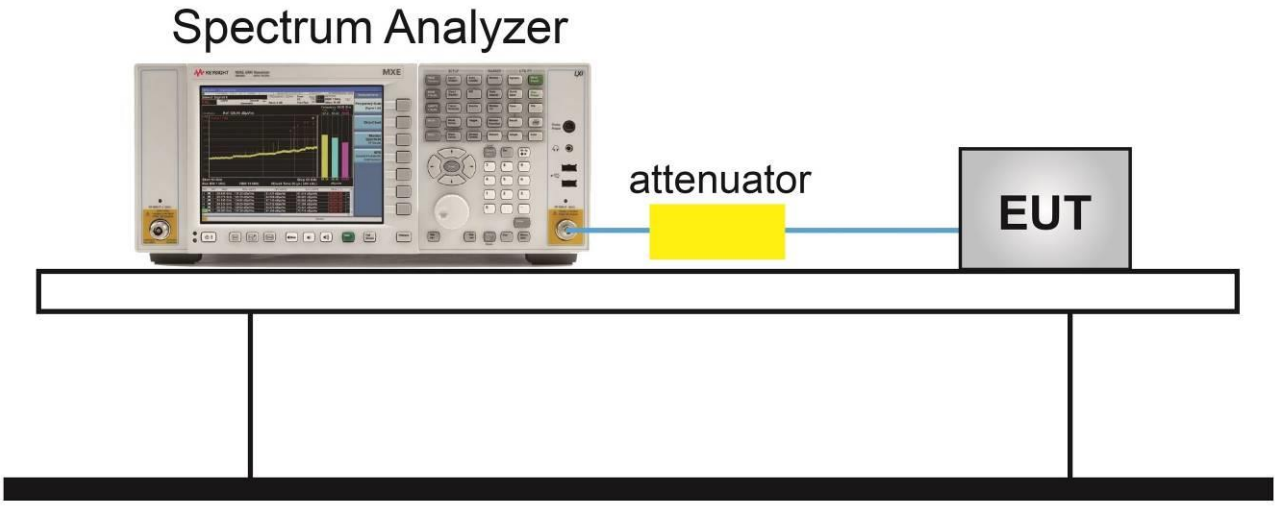
For 20dB bandwidth

1. Set RBW ≥ 1% to 5% of the OBW
2. VBW = Approximately three times RBW
3. Span = Approximately 2 to 5 times the OBW, centered on a hopping channel
4. Detector = Peak
5. Trace mode = Max hold
6. Sweep = Auto couple
7. Allow the trace to stabilize
8. 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 20 dB relative to the maximum level measured in the fundamental emission.

For 99% bandwidth

1. Span = 1.5 times to 5 times the OBW
2. Set RBW = 1% to 5% the OBW
3. VBW ≥ 3 × RBW
4. Detector = Peak
5. Trace mode = Max hold
6. Sweep = Auto couple
7. Allow the trace was allowed to stabilize

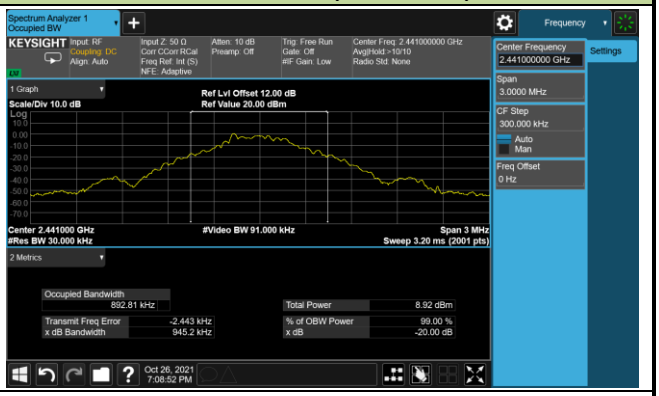
4.2.4.Test Setup

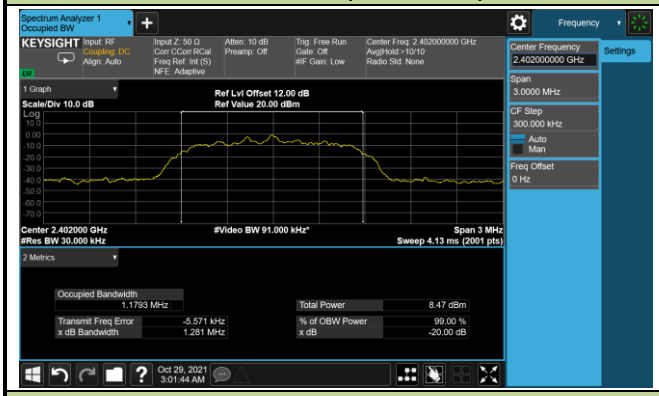
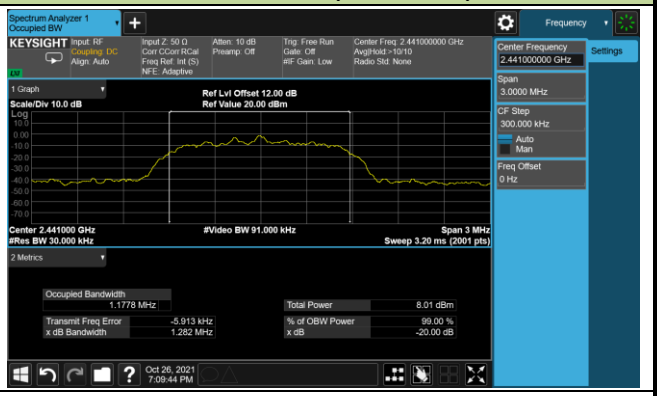
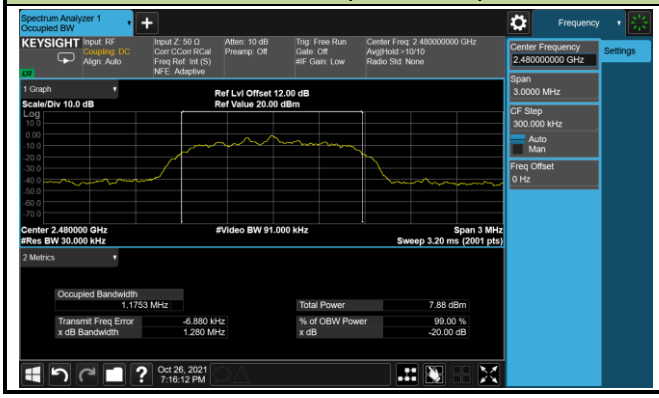


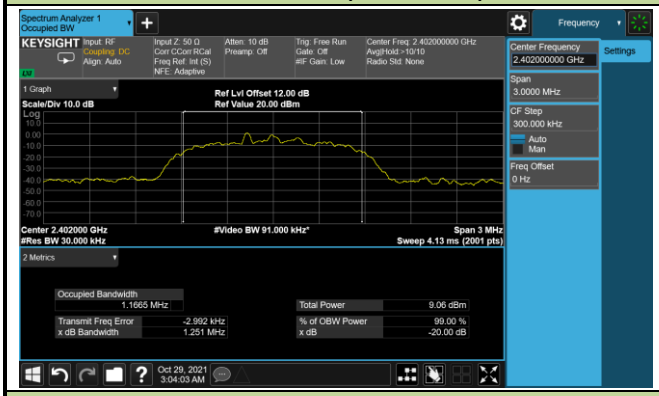
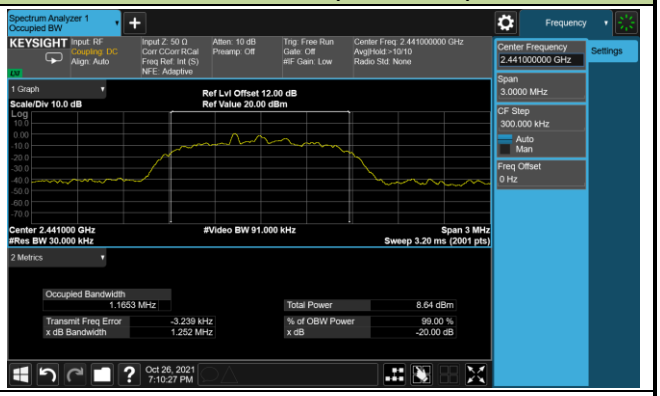
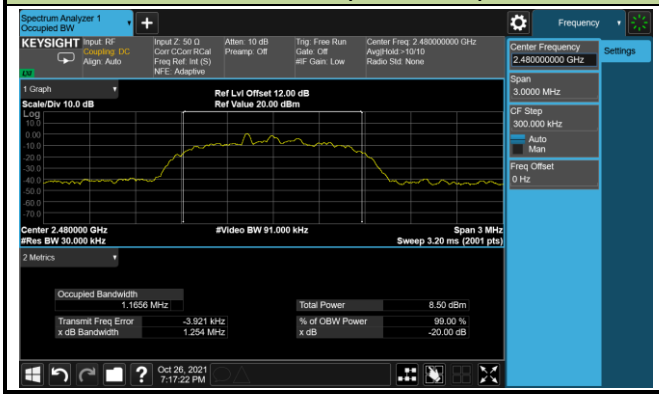
4.2.5.Test Result

Test Site	NS-TR2	Test Engineer	Dillon Diao
Test Date	2021/10/26 & 2021/10/29		

Test Mode	Channel No.	Frequency (MHz)	20dB Bandwidth (kHz)	99% Bandwidth (kHz)	Result
DH5	00	2402	942.1	891.1	Pass
	39	2441	945.2	892.8	Pass
	78	2480	944.6	892.0	Pass
2DH5	00	2402	1281.0	1179.3	Pass
	39	2441	1282.0	1177.8	Pass
	78	2480	1280.0	1175.3	Pass
3DH5	00	2402	1251.0	1166.5	Pass
	39	2441	1252.0	1165.3	Pass
	78	2480	1254.0	1165.6	Pass

DH5 Occupied Bandwidth	
Channel 00 (2402MHz)	Channel 39 (2441MHz)
	
Channel 78 (2480MHz)	
	

2DH5 Occupied Bandwidth	
Channel 00 (2402MHz)	Channel 39 (2441MHz)
	
Channel 78 (2480MHz)	
	

3DH5 Occupied Bandwidth	
Channel 00 (2402MHz)	Channel 39 (2441MHz)
	
Channel 78 (2480MHz)	
	

4.3. Output Power Measurement

4.3.1.Test Limit

The maximum out power permissible output power is 1 Watt for all frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels. The E.I.R.P shall not exceed 4 Watt.

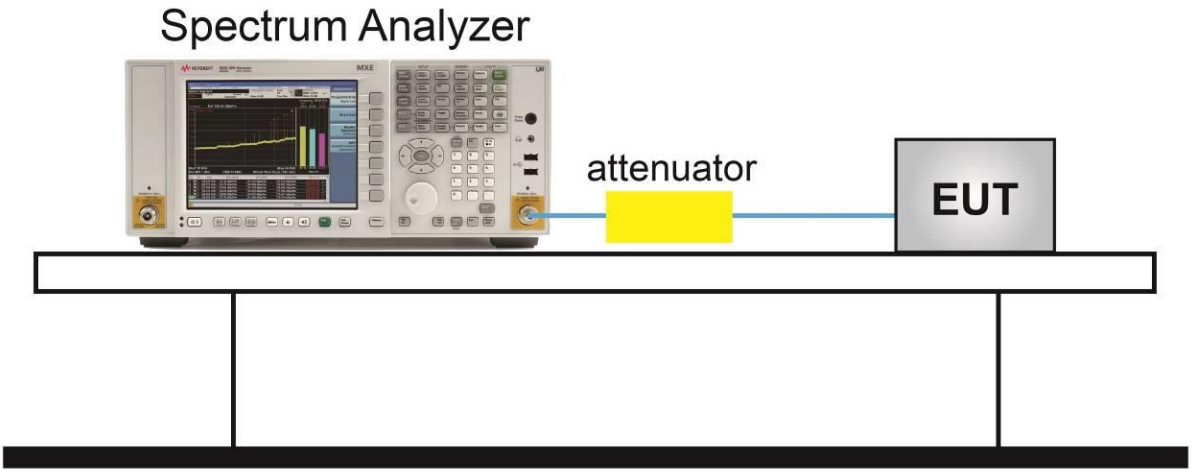
4.3.2.Test Procedure Used

ANSI C63.10-2013 - Section 7.8.5

4.3.3.Test Setting

1. Set RBW ≥ the 20 dB bandwidth of the emission being measured.
2. VBW ≥ RBW
3. Span = approximately five times the 20dB bandwidth, centered on a hopping channel
4. Detector = Peak
5. Trace mode = Max hold
6. Sweep = Auto couple
7. Allow the trace to stabilize. Use the marker-to-peak function to set the marker to the peak of the emission. The indicated level is the peak output power (don't forget added the external attenuation and cable loss)

4.3.4.Test Setup

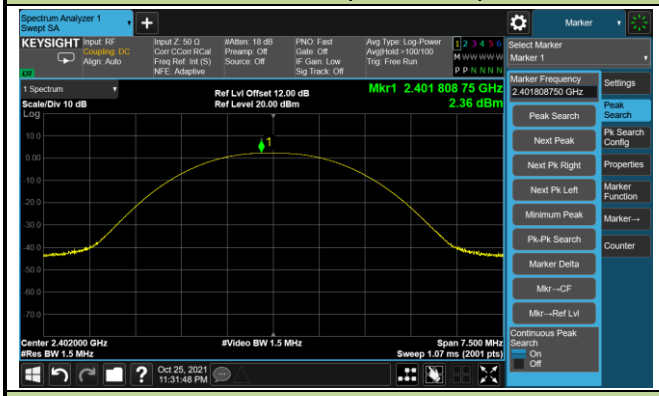
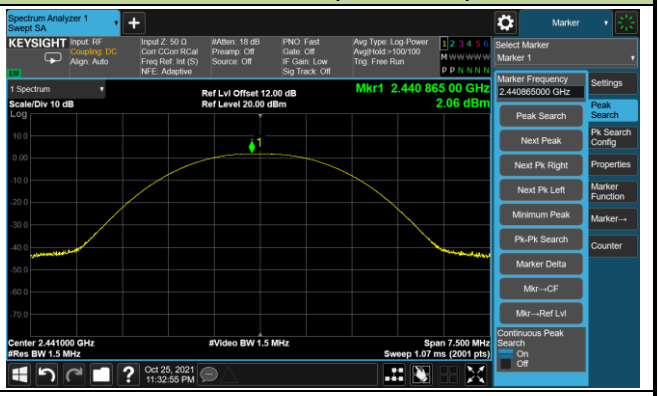
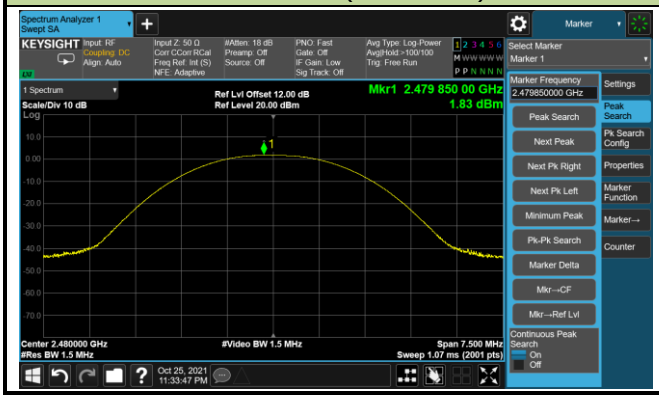


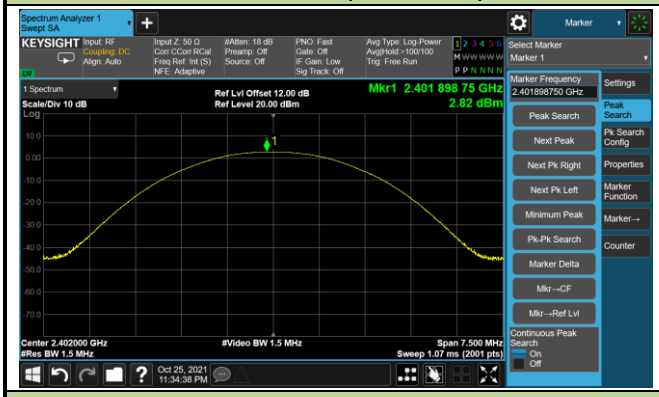
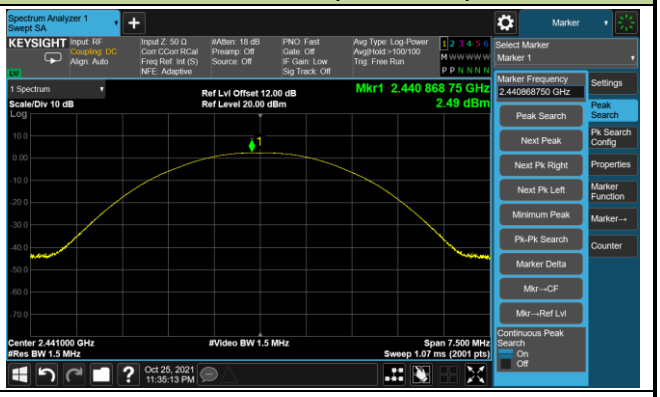
4.3.5.Test Result

Test Site	NS-TR2	Test Engineer	Dillon Diao
Test Date	2021/10/25		

Test Mode	Channel No.	Frequency (MHz)	Peak Power (dBm)	Peak Power Limit (dBm)	E.R.I.P (dBm)	E.I.R.P Limit (dBm)
DH5	00	2402	2.36	≤ 30.00	4.95	≤ 36.00
	39	2441	2.06	≤ 30.00	4.65	≤ 36.00
	78	2480	1.83	≤ 30.00	4.42	≤ 36.00
2DH5	00	2402	2.82	≤ 30.00	5.41	≤ 36.00
	39	2441	2.49	≤ 30.00	5.08	≤ 36.00
	78	2480	2.27	≤ 30.00	4.86	≤ 36.00
3DH5	00	2402	3.29	≤ 30.00	5.88	≤ 36.00
	39	2441	2.99	≤ 30.00	5.58	≤ 36.00
	78	2480	2.75	≤ 30.00	5.34	≤ 36.00

Note: E.I.R.P (dBm) = Peak Power (dBm) + Antenna Gain (dBi), Antenna Gain = 2.59 dBi.

DH5 Output Power	
Channel 00 (2402MHz)	Channel 39 (2441MHz)
	
Channel 78 (2480MHz)	
	

2DH5 Output Power	
Channel 00 (2402MHz)	Channel 39 (2441MHz)
	
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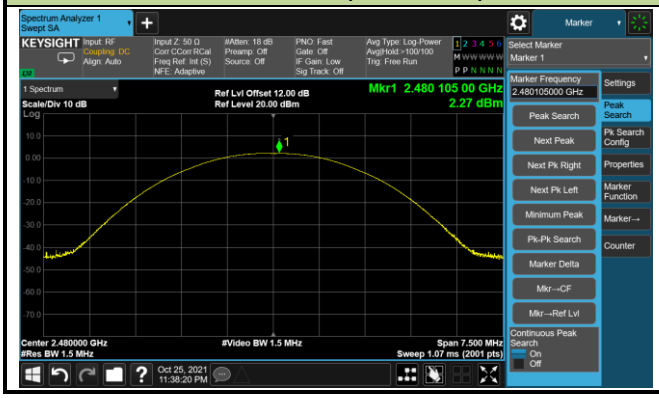
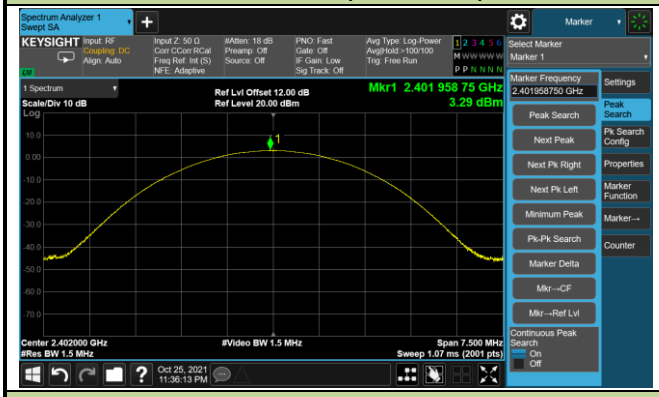
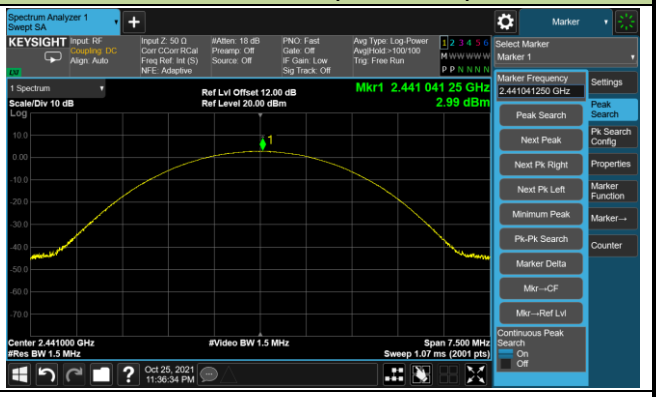
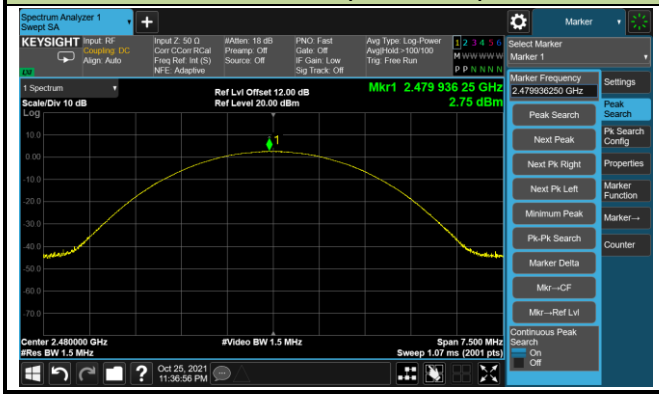
	

3DH5 Output Power	
Channel 00 (2402MHz)	Channel 39 (2441MHz)
	
Channel 78 (2480MHz)	
	

4.4. Carrier Frequency Separation Measurement

4.4.1.Test Limit

The minimum permissible channel separation for this system is 2/3 the value of the 20dB BW.

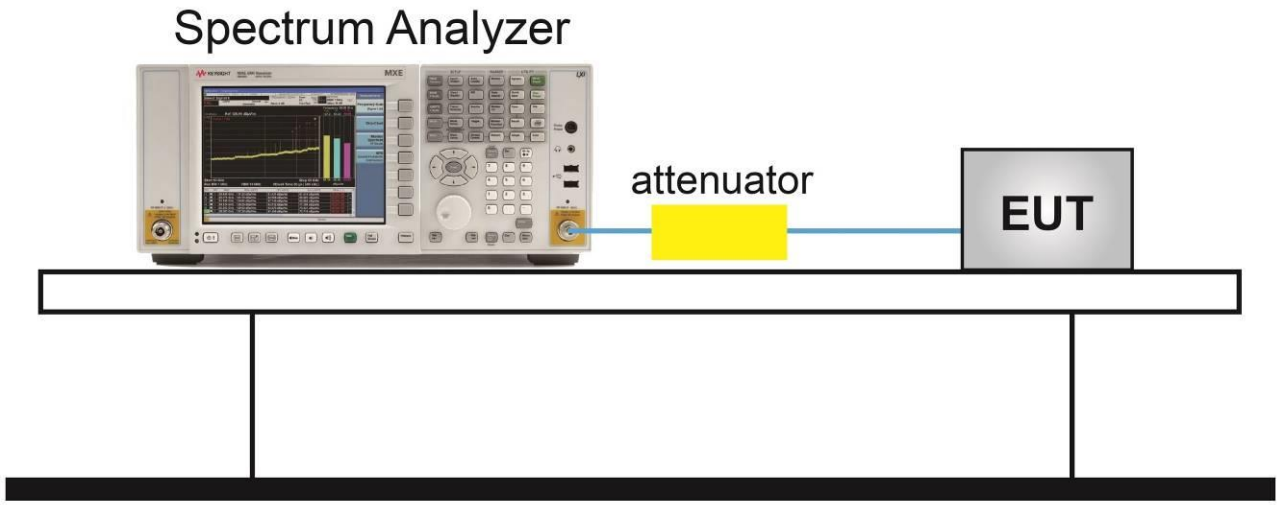
4.4.2.Test Procedure Used

ANSI C63.10-2013 - Section 7.8.2

4.4.3.Test Setting

1. Span = Wide enough to capture the peaks of two adjacent channels.
2. Start with the RBW set to approximately 30% of the channel spacing; adjust as necessary to best identify the center of each individual channel.
3. VBW ≥ RBW
4. Sweep time = Auto couple
5. Detector = Peak
6. Trace mode = Max hold
7. Allowed the trace to stabilize
8. Use the marker-delta function to determine the separation between the peaks of the adjacent channels.

4.4.4.Test Setup

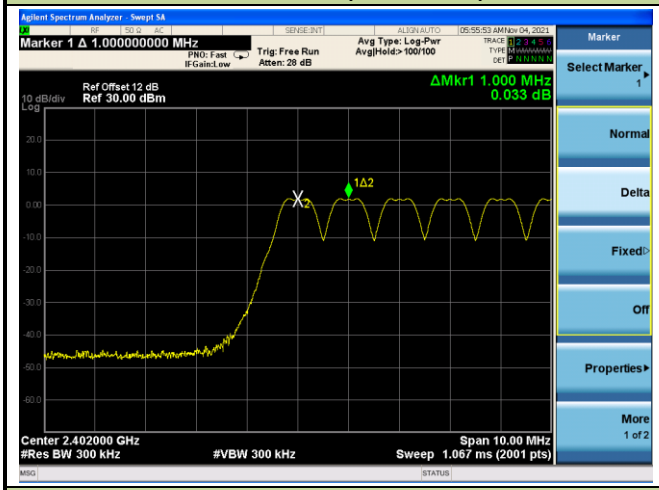
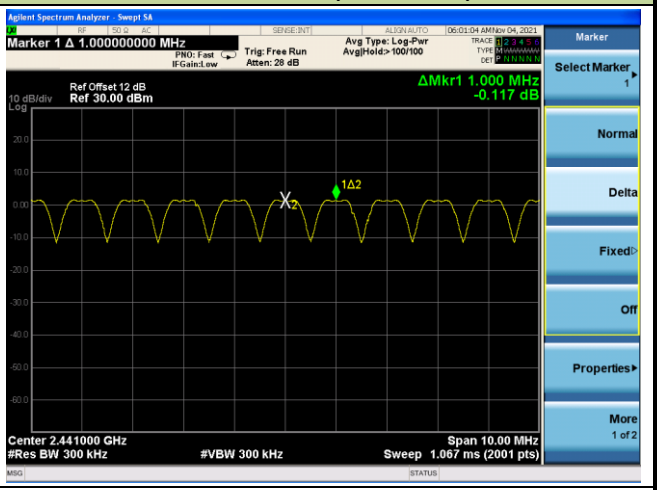
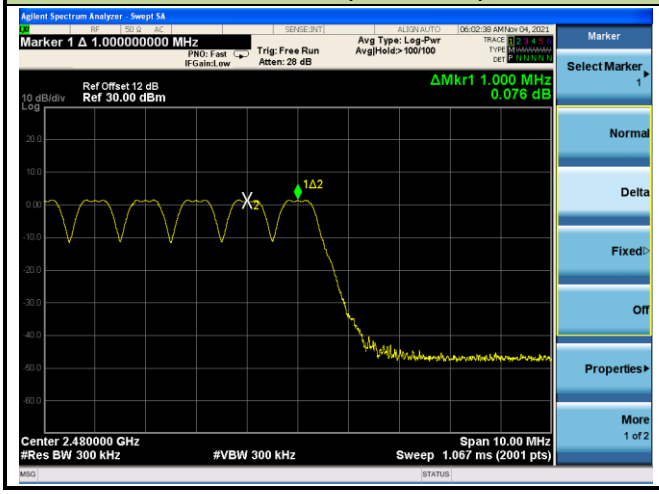


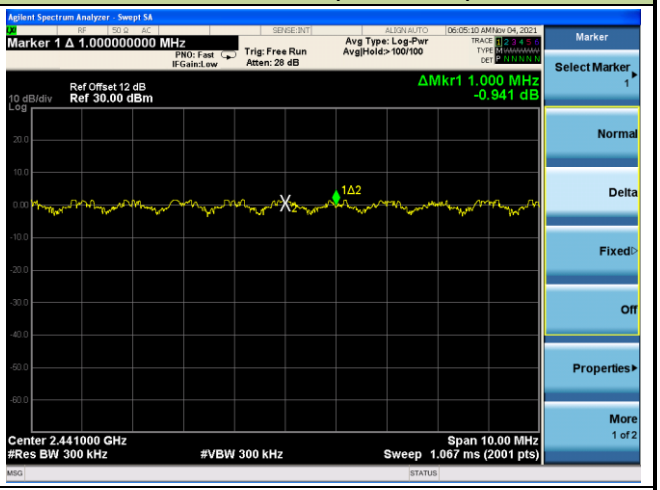
4.4.5.Test Result

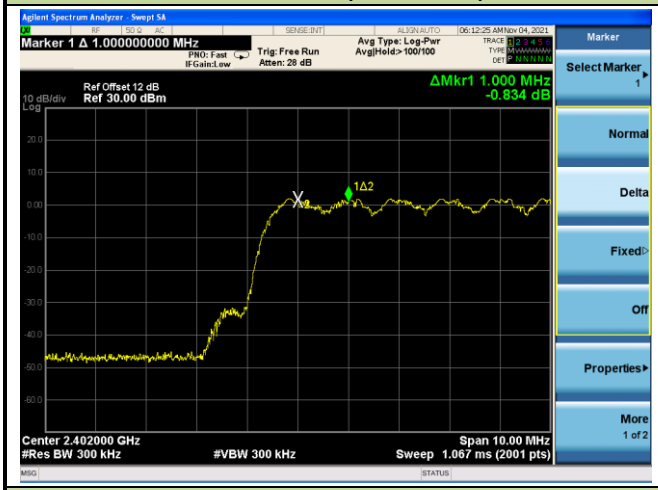
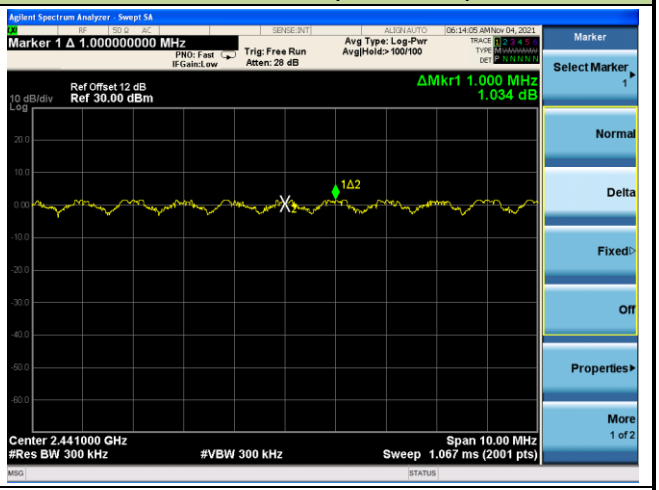
Test Site	NS-TR2	Test Engineer	Summer Tang
Test Date	2021/11/04		

Test Mode	Channel No.	Frequency (MHz)	Carrier Frequency Separation (kHz)	Limit (kHz)	Result
DH5	00	2402	1000	≥ 628.1	Pass
	39	2441	1000	≥ 630.1	Pass
	78	2480	1000	≥ 629.7	Pass
2DH5	00	2402	1000	≥ 854.0	Pass
	39	2441	1000	≥ 854.7	Pass
	78	2480	1000	≥ 853.3	Pass
3DH5	00	2402	1000	≥ 834.0	Pass
	39	2441	1000	≥ 834.7	Pass
	78	2480	1000	≥ 836.0	Pass

Note: The Limit is 2/3 the value of the 20dB BW.

DH5 Carrier Frequency Separation	
Channel 00 (2402MHz)	Channel 39 (2441MHz)
	
Channel 78 (2480MHz)	
	

2DH5 Carrier Frequency Separation	
Channel 00 (2402MHz)	Channel 39 (2441MHz)
	
Channel 78 (2480MHz)	
	

3DH5 Carrier Frequency Separation	
Channel 00 (2402MHz)	Channel 39 (2441MHz)
	
Channel 78 (2480MHz)	
	

4.5. Number of Hopping Channels Measurement

4.5.1.Test Limit

This frequency hopping system must employ a minimum of 15 hopping channels.

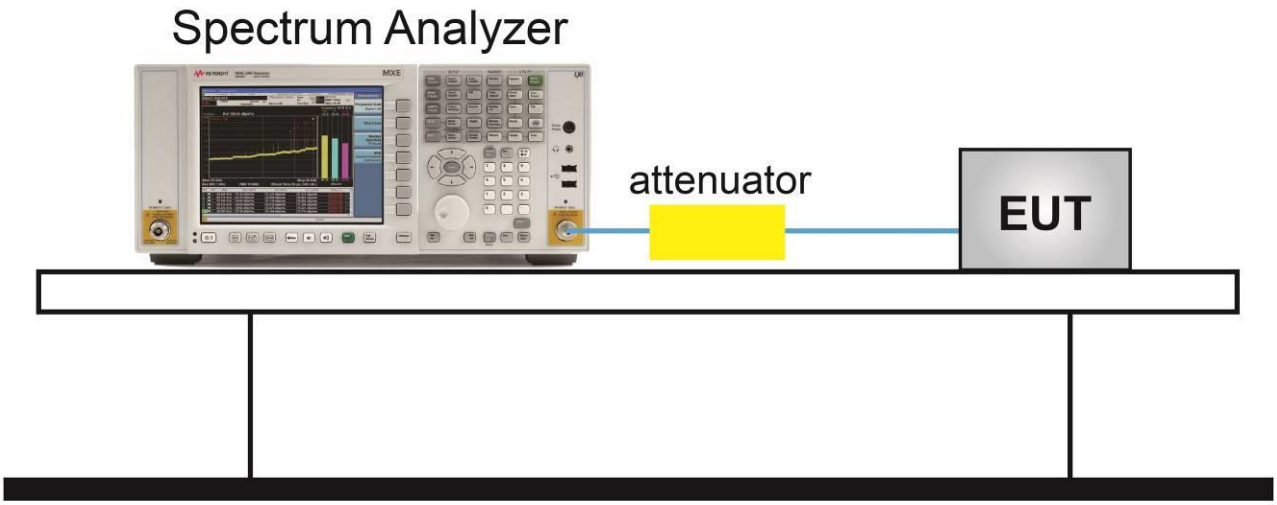
4.5.2.Test Procedure Used

ANSI C63.10-2013 - Section 7.8.3

4.5.3.Test Setting

1. Span = The frequency band of operation. Depending on the number of channels the device supports, it may be necessary to divide the frequency range of operation across multiple spans, to allow the individual channels to be clearly seen.
2. RBW: To identify clearly the individual channels, set the RBW to less than 30% of the channel spacing or the 20 dB bandwidth, whichever is smaller.
3. VBW ≥ RBW
4. Sweep time = Auto couple
5. Detector = Peak
6. Trace mode = Max hold
7. Allow the trace to stabilize

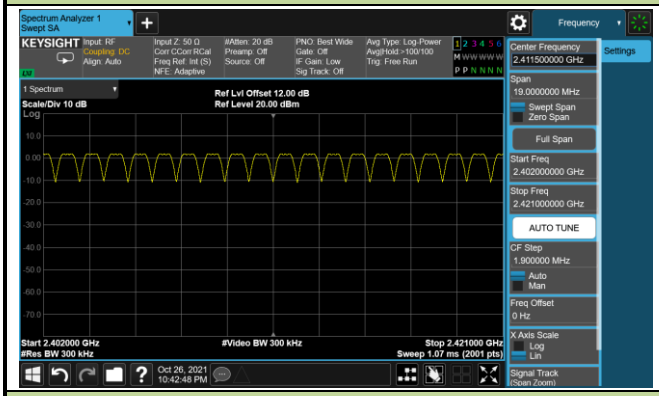
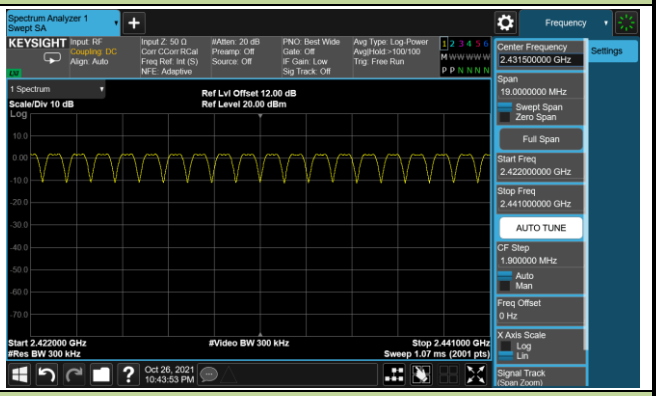
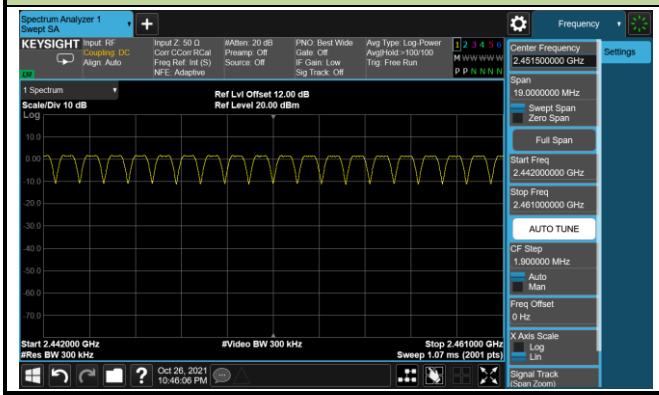
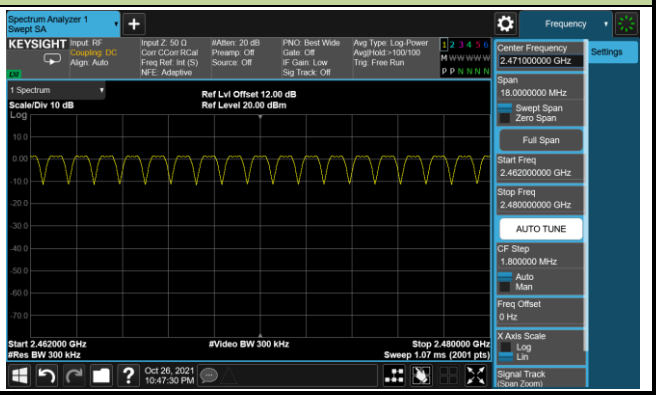
4.5.4.Test Setup

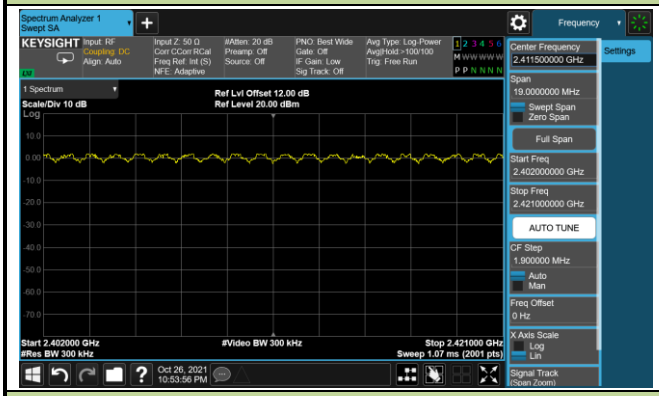
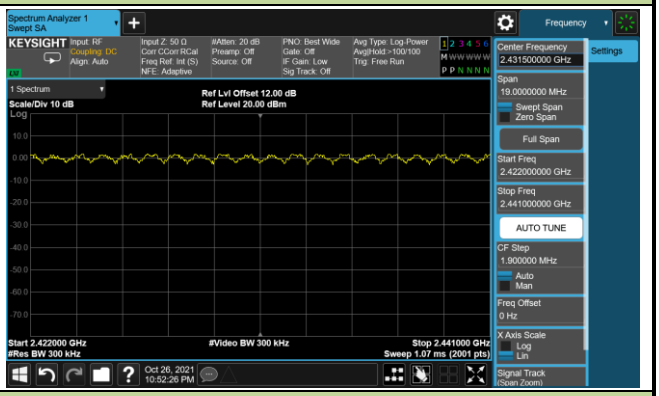
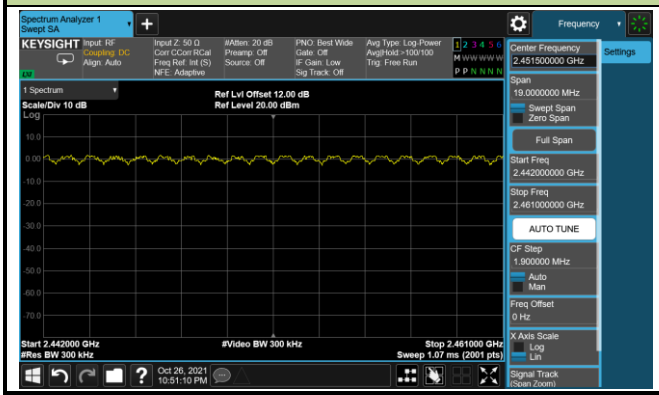
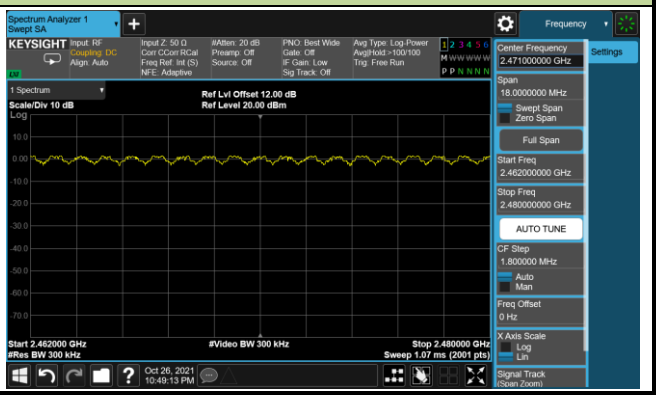


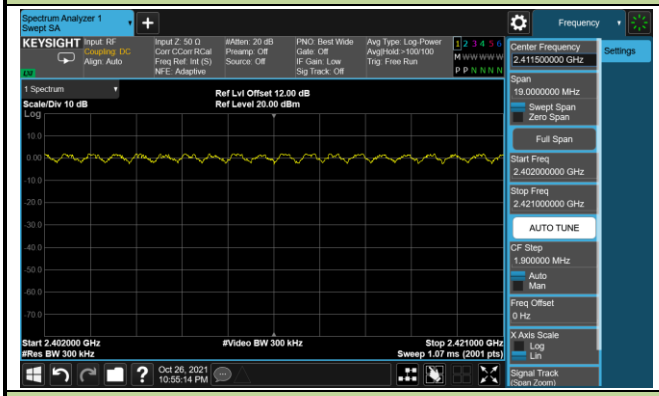
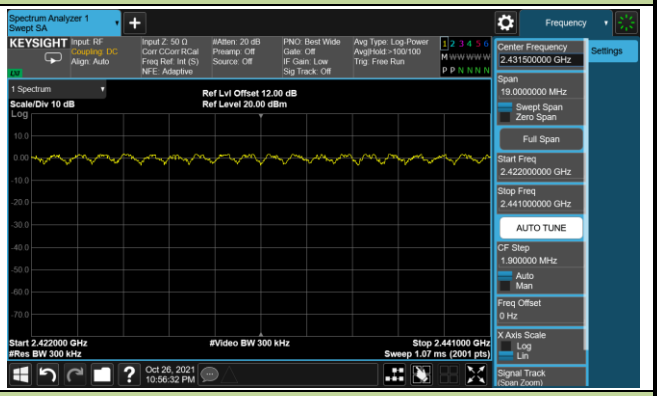
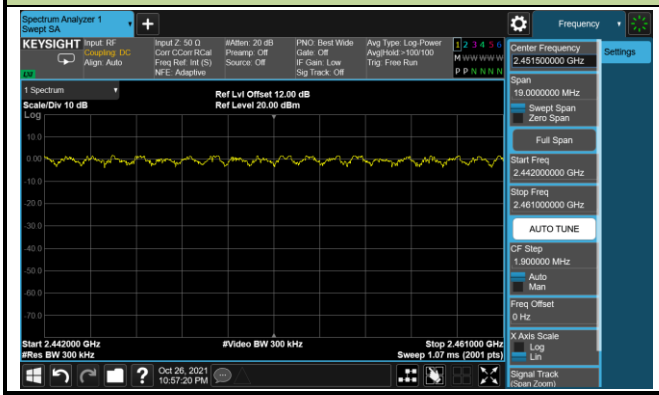
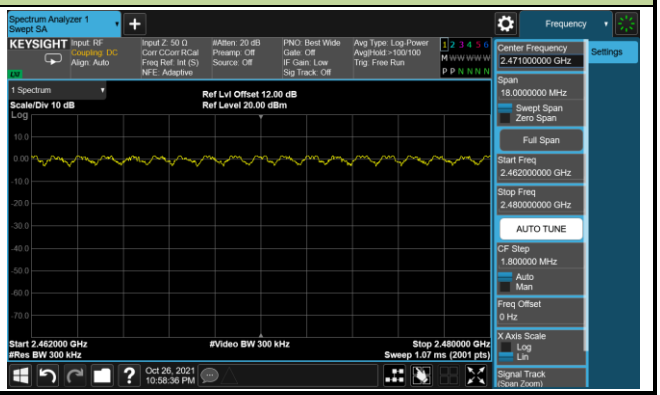
4.5.5.Test Result

Test Site	NS-TR2	Test Engineer	Dillon Diao
Test Date	2021/10/26		

Test Mode (Hopping)	Channel Numbers	Frequency (MHz)	Limit (Hopping Channels)	Result
DH5	79	2402 ~ 2480	≥ 15	Pass
2DH5	79	2402 ~ 2480	≥ 15	Pass
3DH5	79	2402 ~ 2480	≥ 15	Pass

DH5 Number of Hopping Channels	
2402 ~ 2421MHz	2422 ~ 2441MHz
	
2442 ~ 2461MHz	2462 ~ 2480MHz
	

2DH5 Number of Hopping Channels	
2402 ~ 2421MHz	2422 ~ 2441MHz
	
2442 ~ 2461MHz	2462 ~ 2480MHz
	

3DH5 Number of Hopping Channels	
2402 ~ 2421MHz	2422 ~ 2441MHz
	
2442 ~ 2461MHz	2462 ~ 2480MHz
	

4.6. Time of Occupancy Measurement

4.6.1.Test Limit

The maximum permissible time of occupancy is 400ms within a period of 400ms multiplied by the number of hopping channels employed.

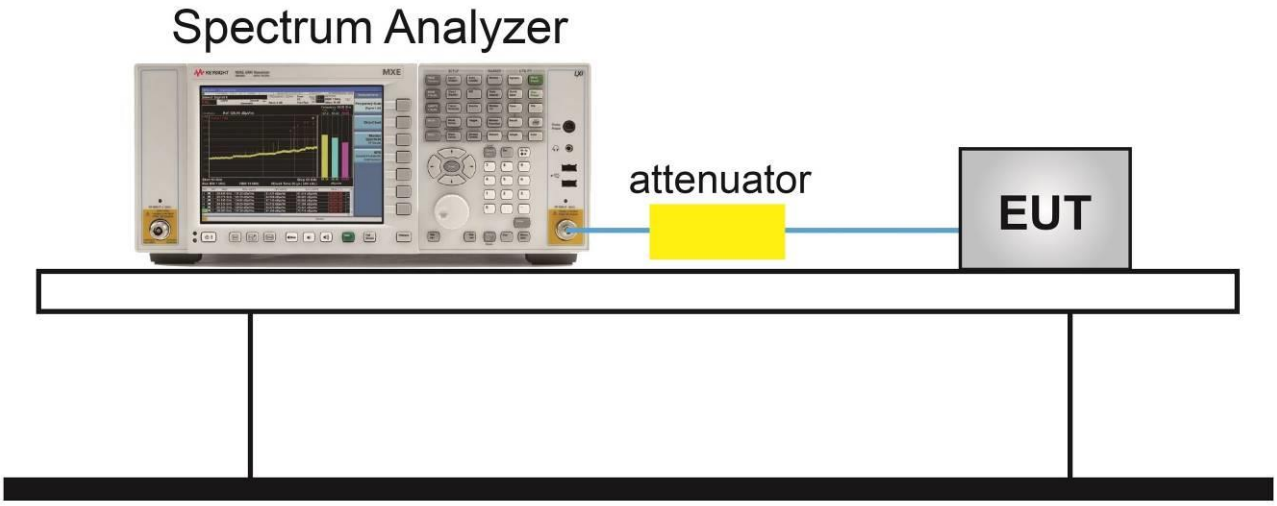
4.6.2.Test Procedure Used

ANSI C63.10-2013 - Section 7.8.4

4.6.3.Test Setting

1. Span = Zero span, centered on a hopping channel.
2. RBW shall be ≤ channel spacing and where possible RBW should be set >> 1 / T, where T is the expected dwell time per channel.
3. VBW ≥ RBW
4. Sweep time = As necessary to capture the entire dwell time per hopping channel
5. Detector = Peak
6. Trace mode = Free run
7. Use the marker-delta function to determine the transmit time per hop. If this value varies with different modes of operation (data rate, modulation format, number of hopping channels, etc.), then repeat this test for each variation in transmit time. An oscilloscope may be used instead of a spectrum analyzer. The EUT shall show compliance with the appropriate regulatory limit for the number of hopping channels. A plot of the data shall be included in the test report.

4.6.4.Test Setup



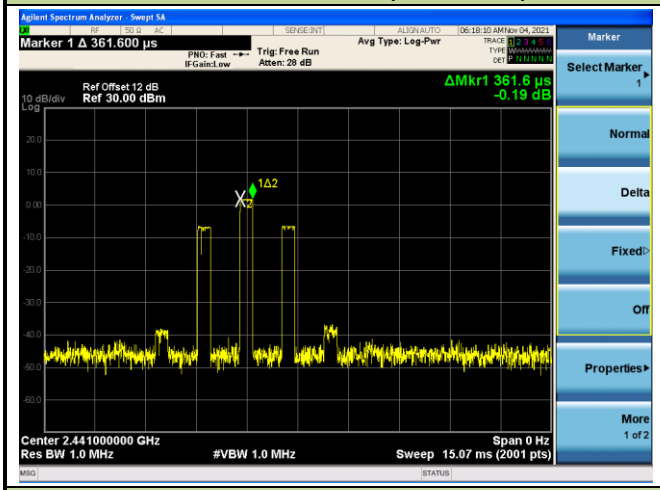
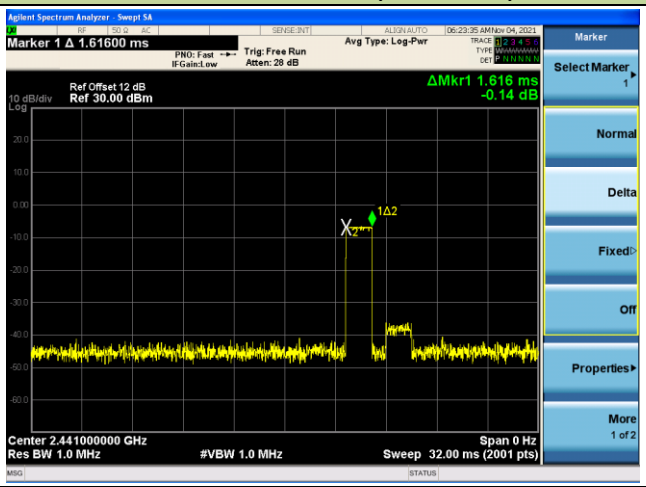
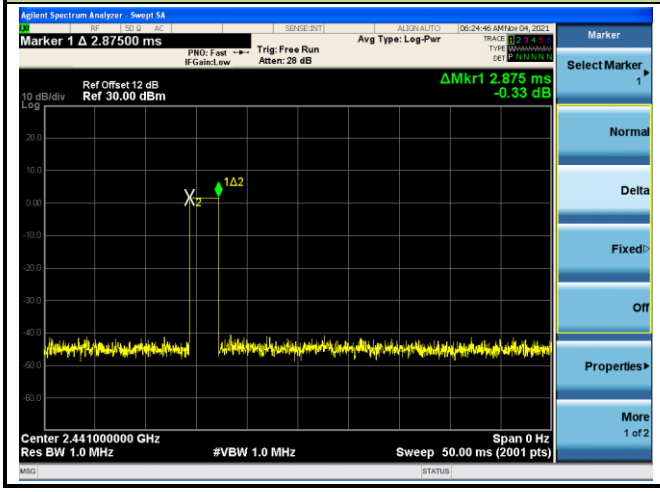
4.6.5.Test Result

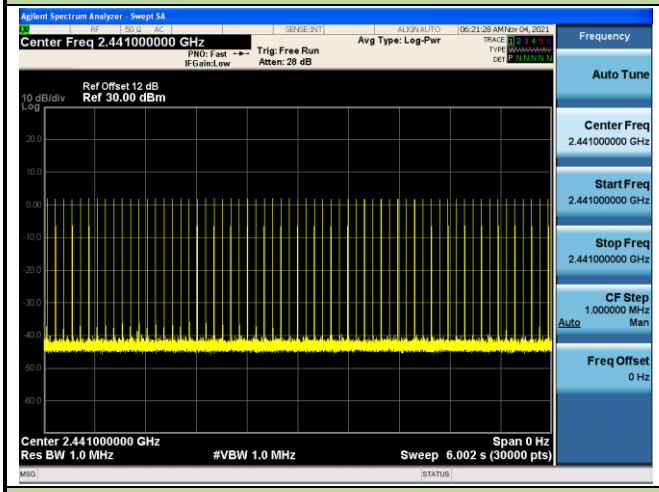
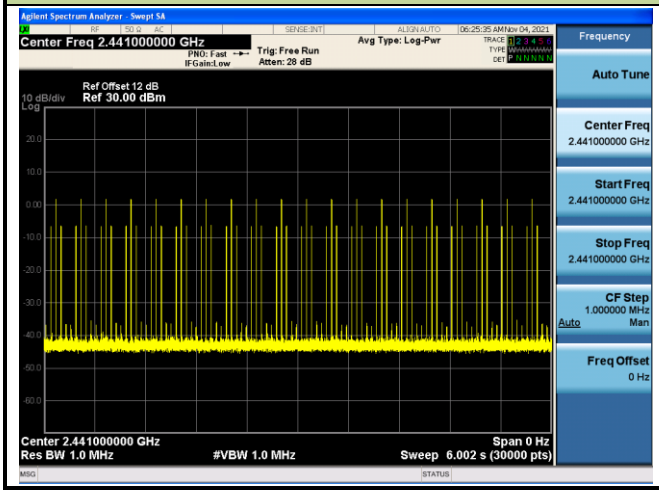
Test Site	NS-TR2	Test Engineer	Summer Tang
Test Date	2021/11/04		

Test Mode	Channel No.	Frequency (MHz)	Transmit Time Per Hop (ms)	Observation Period (s)	Number of Hops in Sweep Time	Time of Occupancy (ms)	Limit (ms)	Result
DH1	00 ~ 78	2402 ~ 2480	0.362	31.6	61	116.299	≤ 400	Pass
DH3	00 ~ 78	2402 ~ 2480	1.616	31.6	31	263.839	≤ 400	Pass
DH5	00 ~ 78	2402 ~ 2480	2.875	31.6	20	302.833	≤ 400	Pass

Note 1: Number of Hops in Observation Period = Number of Hops in Sweep Time * (Observation Period / Sweep Time), Sweep Time = 6s.

Note 2: Time of Occupancy (ms) = Transmit Time Per Hop (ms) * Number of Hops in Observation Period

Transmit Time Per Hop	
DH1 - Channel 39 (2441MHz)	DH3 - Channel 39 (2441MHz)
	
DH5 - Channel 39 (2441MHz)	
	

Number of Hops in Sweep Time	
DH1	DH3
	
DH5	
	

4.7. Band-edge Compliance Measurement

4.7.1.Test Limit

The maximum permissible emission level is 20dBc. Any emissions were lying outside of the emission bandwidth and in authorized band edges to a field strength limit specified in Section 15.209 of the Title 47 CFR.

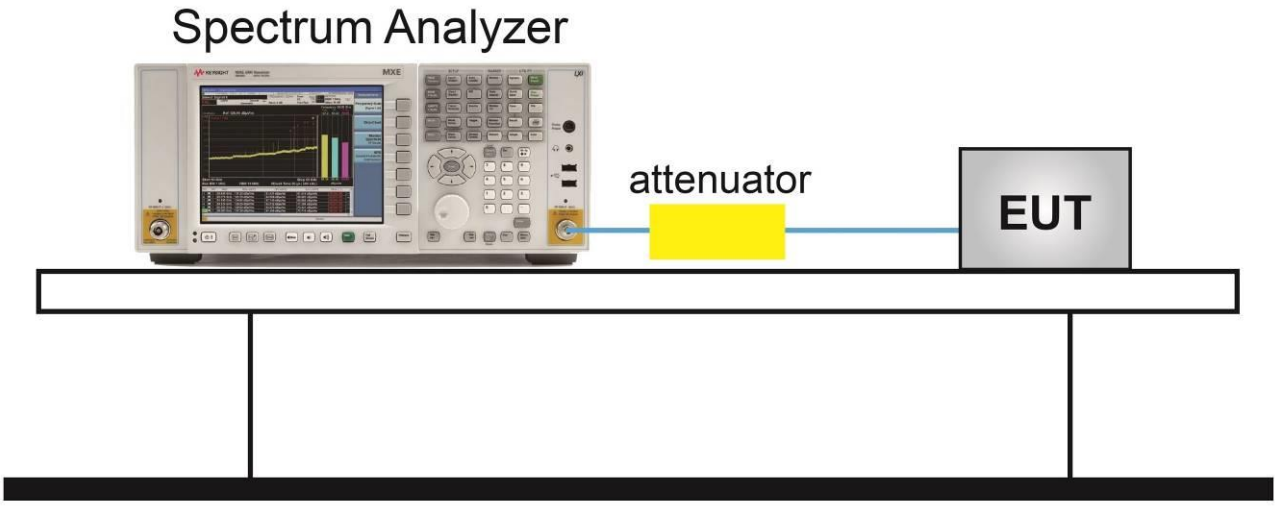
4.7.2.Test Procedure Used

ANSI C63.10-2013 - Section 6.10.4

4.7.3.Test Setting

1. Span = Wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products which fall outside of the authorized band of operation.
2. RBW = 100kHz
3. VBW = 300kHz
4. Detector = Peak
5. Sweep time = Auto couple
6. Trace mode = Max hold
7. Allow the trace to stabilize. Set the marker on the emission at the band edge, or on the highest modulation product outside of the band, if this level is greater than that at the band edge. Enable the marker-delta function, then use the marker-to-peak function to move the marker to the peak of the in-band emission.

4.7.4.Test Setup



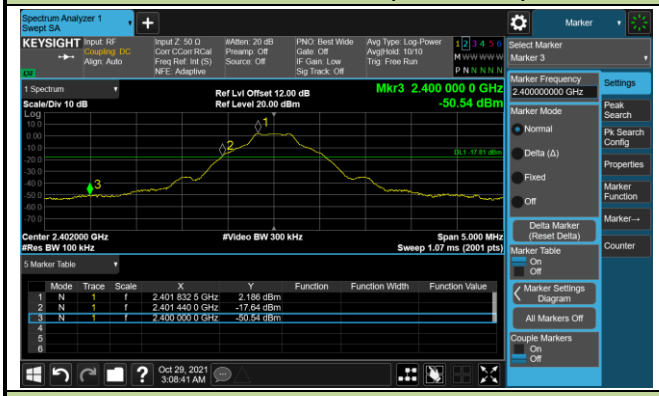
4.7.5.Test Result

Test Site	NS-TR2	Test Engineer	Dillon Diao
Test Date	2021/10/26 & 2021/10/29		

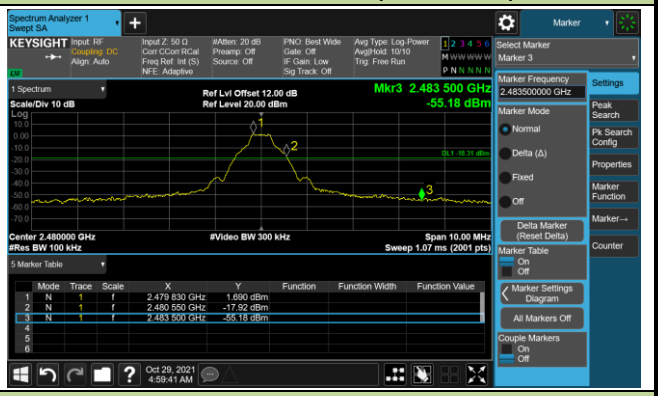
Test Mode	Channel No.	Frequency (MHz)	Limit	Result
DH5	00	2402	20dBc	Pass
	78	2480	20dBc	Pass
	00 ~ 78	2402 ~ 2480	20dBc	Pass
2DH5	00	2402	20dBc	Pass
	78	2480	20dBc	Pass
	00 ~ 78	2402 ~ 2480	20dBc	Pass
3DH5	00	2402	20dBc	Pass
	78	2480	20dBc	Pass
	00 ~ 78	2402 ~ 2480	20dBc	Pass

Band-edge Compliance

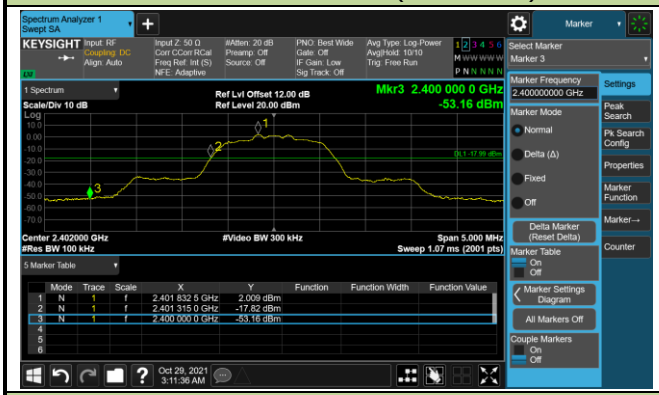
DH5 - Channel 00 (2402MHz)



DH5 - Channel 78 (2480MHz)

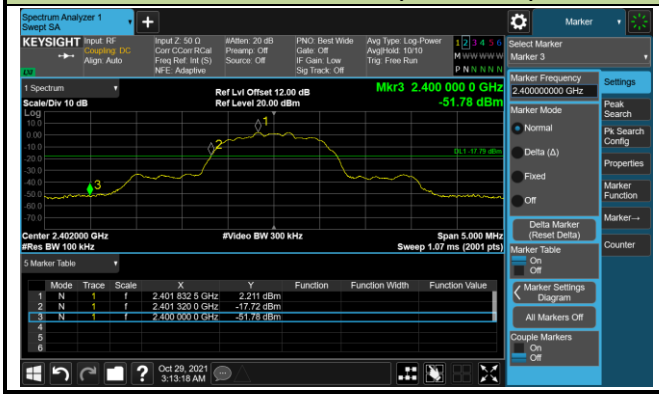


2DH5 - Channel 00 (2402MHz)



2DH5 - Channel 78 (2480MHz)

3DH5 - Channel 00 (2402MHz)



3DH5 - Channel 78 (2480MHz)