



Number of Pulses in 31.6 seconds  
n/4DQPSK\_2-DH5



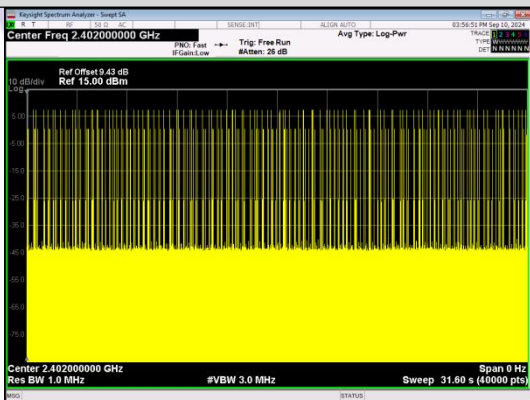
Pulse Width  
n/4DQPSK\_2-DH5



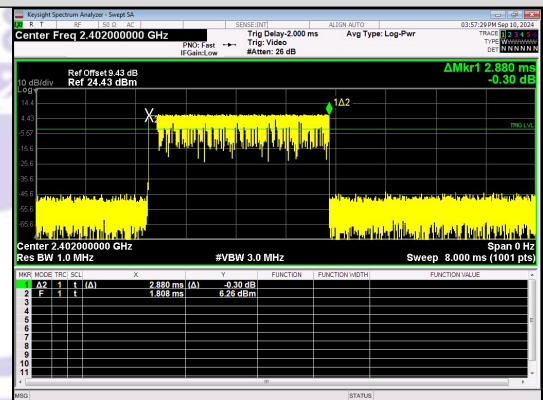
Number of Pulses in 31.6 seconds  
n/4DQPSK\_2-DH5



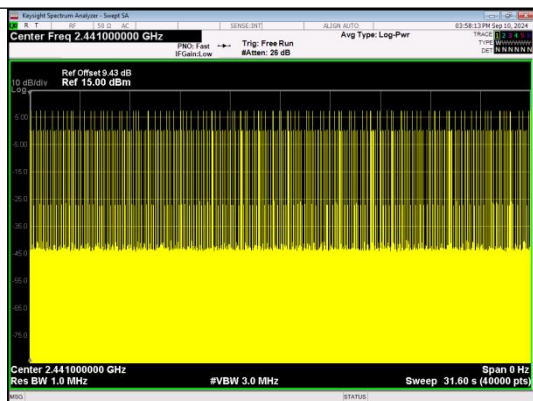
Pulse Width  
n/4DQPSK\_2-DH5



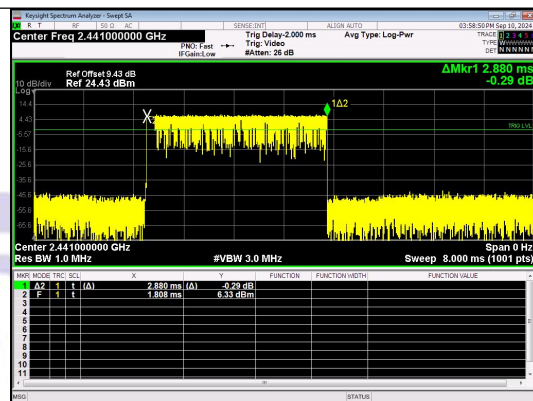
Number of Pulses in 31.6 seconds  
8DPSK\_3-DH5



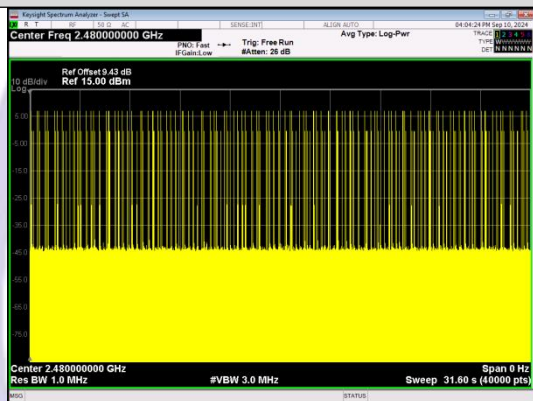
Pulse Width  
8DPSK\_3-DH5



Number of Pulses in 31.6 seconds  
8DPSK\_3-DH5



Pulse Width  
8DPSK\_3-DH5



Number of Pulses in 31.6 seconds  
8DPSK\_3-DH5



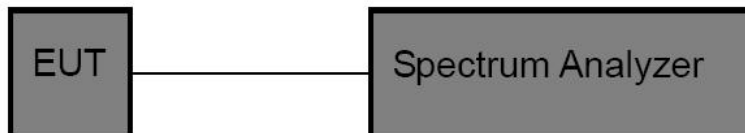
Pulse Width  
8DPSK\_3-DH5

## 13 100kHz Bandwidth of Frequency Band Edge Requirement

### 13.1 Test Standard and Limit

Test Standard	FCC Part15 C Section 15.247 (d)
Test Limit	in any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in 15.209(a).

### 13.2 Test Setup



### 13.3 Test Procedure

The EUT must have its hopping/Non-hopping function enabled. Using the following spectrum analyzer setting:

1. Set the RBW = 100kHz.
2. Set the VBW = 300kHz.
3. Sweep time = auto couple.
4. Detector function = peak.
5. Trace mode = max hold.
6. Allow trace to fully stabilize.



### 13.4 Test Data

#### Non-Hopping

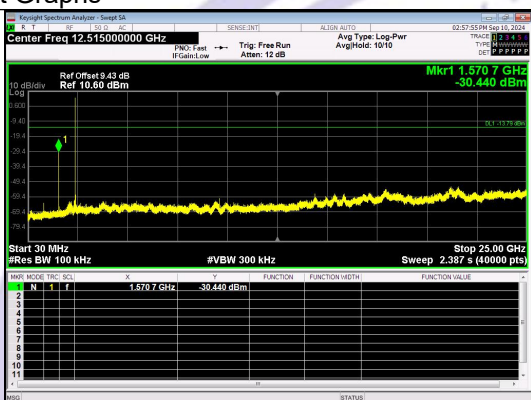
Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH1	0	1570.69	-30.440	-13.79	-16.650	PASS
			2400.00	-49.310	-13.79	-35.520	PASS
		39	1570.69	-29.649	-13.77	-15.879	PASS
		78	1569.44	-45.014	-14.1	-30.914	PASS
			2483.50	-53.442	-14.1	-39.342	PASS
$\pi/4$ DQPSK	2-DH1	0	1571.30	-36.387	-13.77	-22.617	PASS
			2398.23	-49.589	-13.77	-35.819	PASS
			2400.00	-49.592	-13.77	-35.822	PASS
		39	1571.27	-30.475	-13.88	-16.595	PASS
		78	1570.69	-40.827	-14.1	-26.727	PASS
			2483.50	-52.224	-14.1	-38.124	PASS
8DPSK	3-DH1	0	1571.30	-39.445	-13.8	-25.645	PASS
			2398.93	-50.043	-13.8	-36.243	PASS
			2400.00	-50.979	-13.8	-37.179	PASS
		39	1565.65	-45.044	-13.7	-31.345	PASS
		78	1571.31	-30.688	-14.07	-16.617	PASS
			2483.50	-52.137	-14.07	-38.067	PASS

#### Hopping

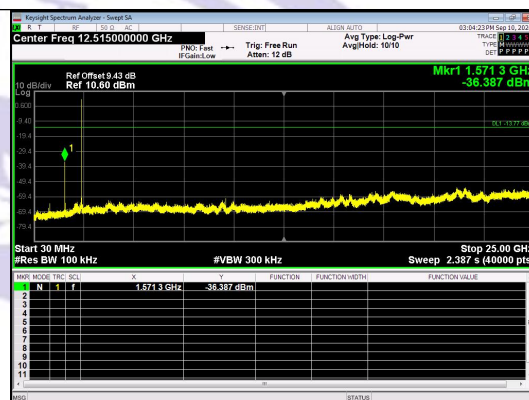
Modulation	Packet	Channel	OOB Emission Frequency (MHz)	OOB Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result
GFSK	DH1	Hopping	2398.87	-51.516	-23.89	-27.626	PASS
			2400.00	-53.599	-23.89	-29.709	PASS

$\pi/4$ DQPSK	2-DH1		2483.50	-53.811	-24.21	-29.601	PASS
			2400.00	-49.063	-13.82	-35.243	PASS
			2483.50	-53.521	-14.19	-39.331	PASS
8DPSK	3-DH1		2400.00	-49.499	-13.81	-35.689	PASS
			2483.50	-53.723	-14.11	-39.613	PASS

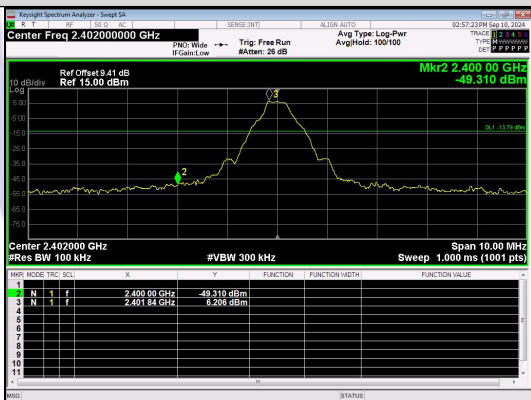
## Test Graphs



30.0 MHz - 25000.0 MHz  
GFSK\_DH1\_Channel 0



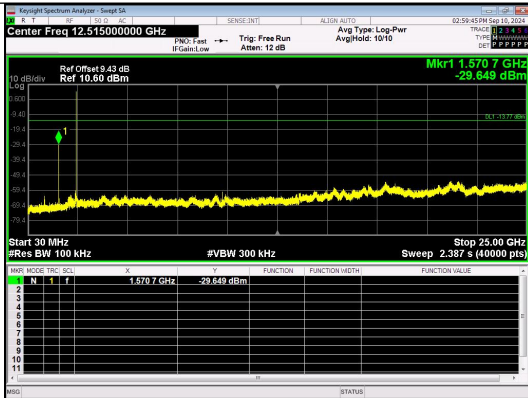
30.0 MHz - 25000.0 MHz  
n/4DQPSK\_2-DH1\_Channel 0



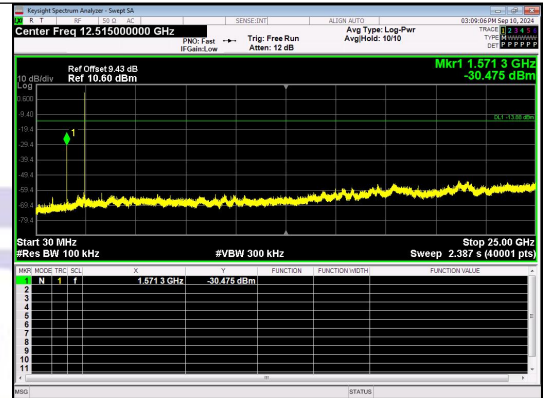
Out Of Band Emission  
GFSK\_DH1\_Channel 0



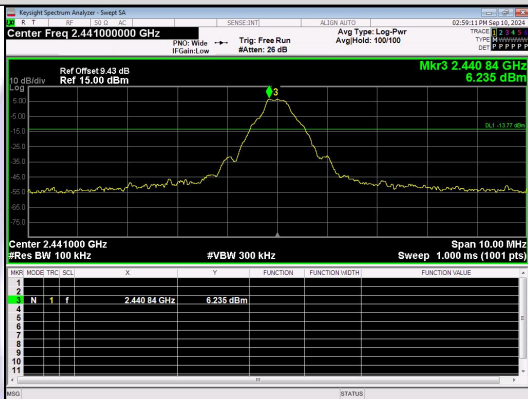
Out Of Band Emission  
n/4DQPSK\_2-DH1\_Channel 0



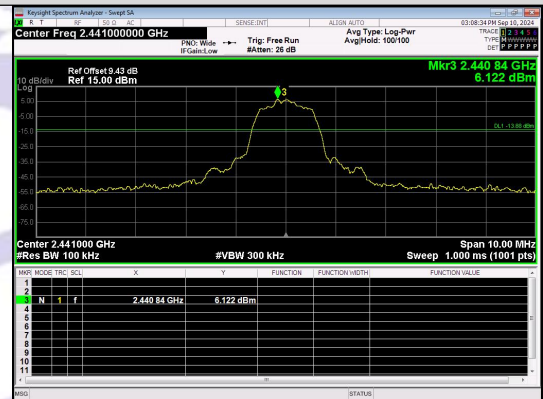
30.0 MHz - 25000.0 MHz  
GFSK\_DH1\_Channel 39



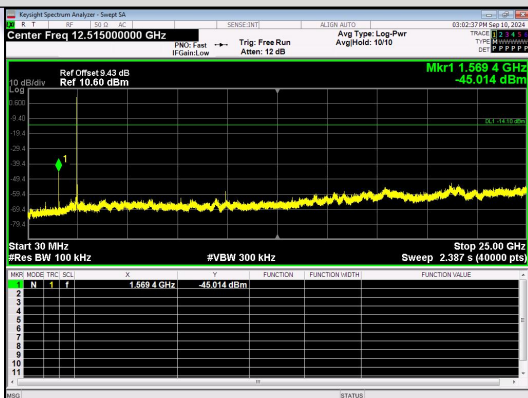
30.0 MHz - 25000.0 MHz  
n/4QPSK\_2-DH1\_Channel 39



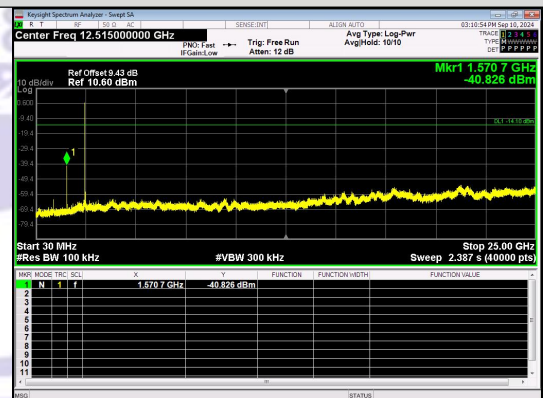
Out Of Band Emission  
GFSK\_DH1\_Channel 39



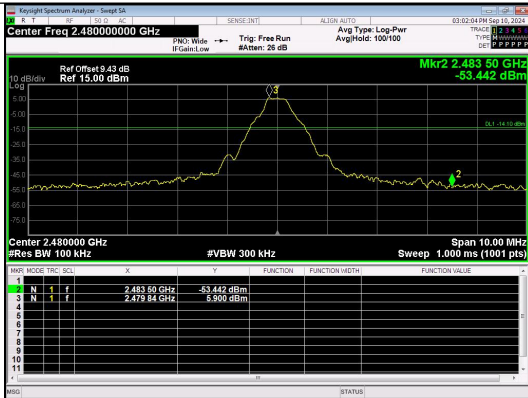
Out Of Band Emission  
n/4QPSK\_2-DH1\_Channel 39



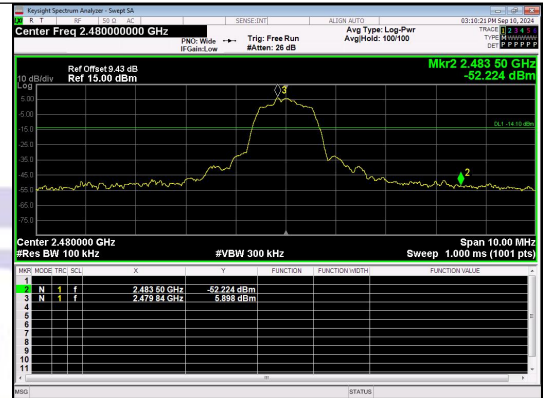
30.0 MHz - 25000.0 MHz  
GFSK\_DH1\_Channel 78



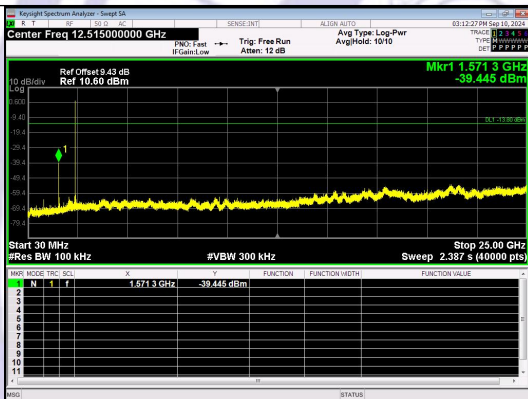
30.0 MHz - 25000.0 MHz  
n/4QPSK\_2-DH1\_Channel 78



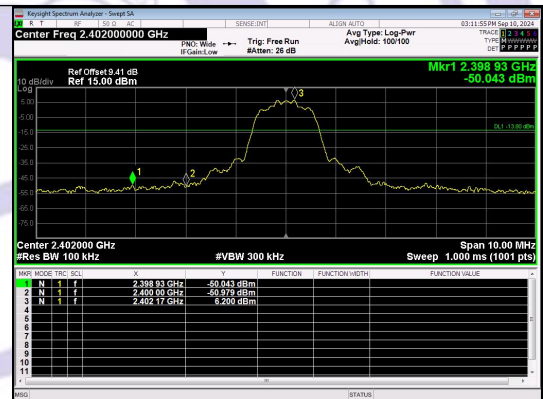
**Out Of Band Emission  
GFSK\_DH1\_Channel 78**



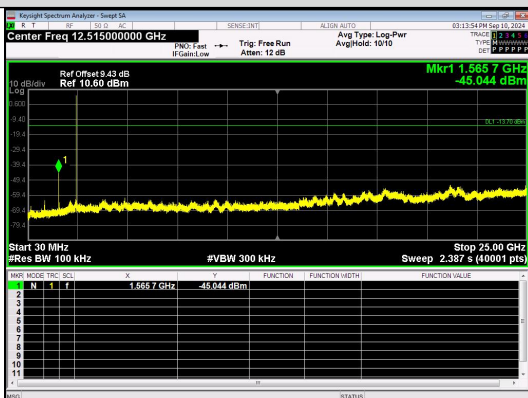
**Out Of Band Emission  
n/4DQPSK\_2-DH1\_Channel 78**



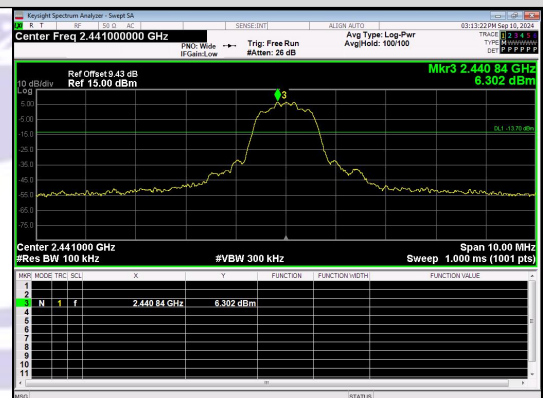
**30.0 MHz - 25000.0 MHz  
8DPSK\_3-DH1\_Channel 0**



**Out Of Band Emission  
8DPSK\_3-DH1\_Channel 0**

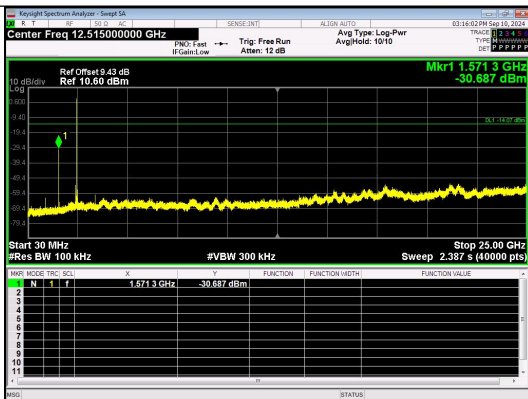


**30.0 MHz - 25000.0 MHz  
8DPSK\_3-DH1\_Channel 39**

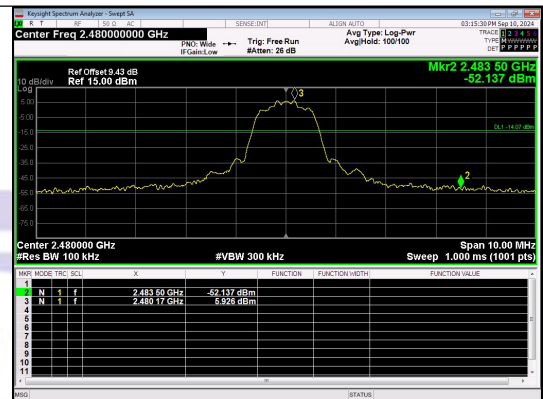


**Out Of Band Emission  
8DPSK\_3-DH1\_Channel 39**

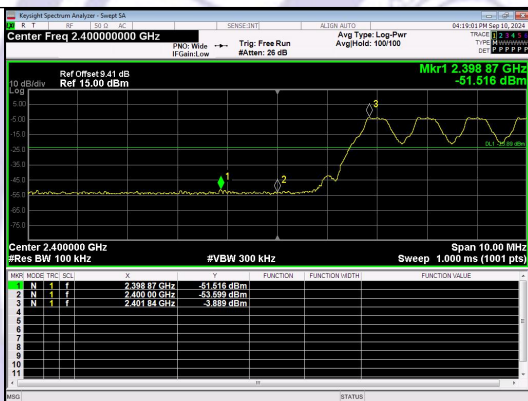




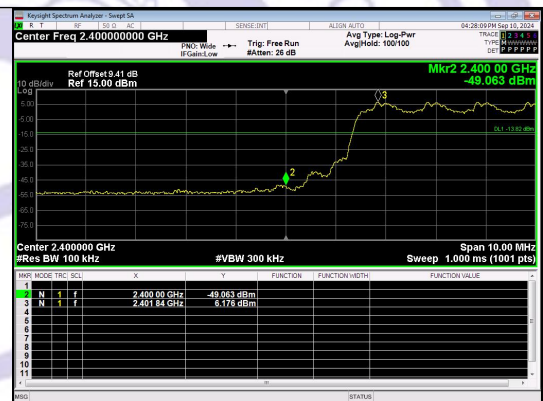
**30.0 MHz - 25000.0 MHz  
8DPSK\_3-DH1\_Channel 78**



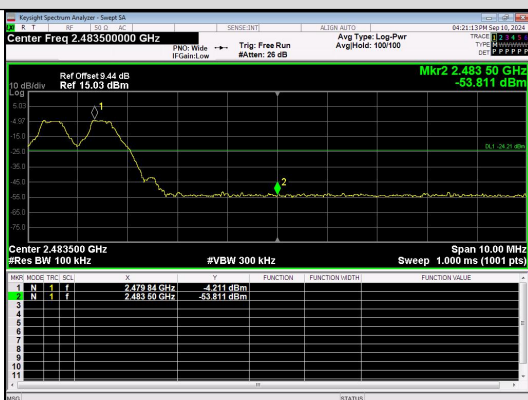
**Out Of Band Emission  
8DPSK\_3-DH1\_Channel 78**



**Out Of Band Emission(Left)  
GFSK\_DH1\_Channel Hopping**



**Out Of Band Emission(Left)  
n/4DQPSK\_2-DH1\_Channel Hopping**

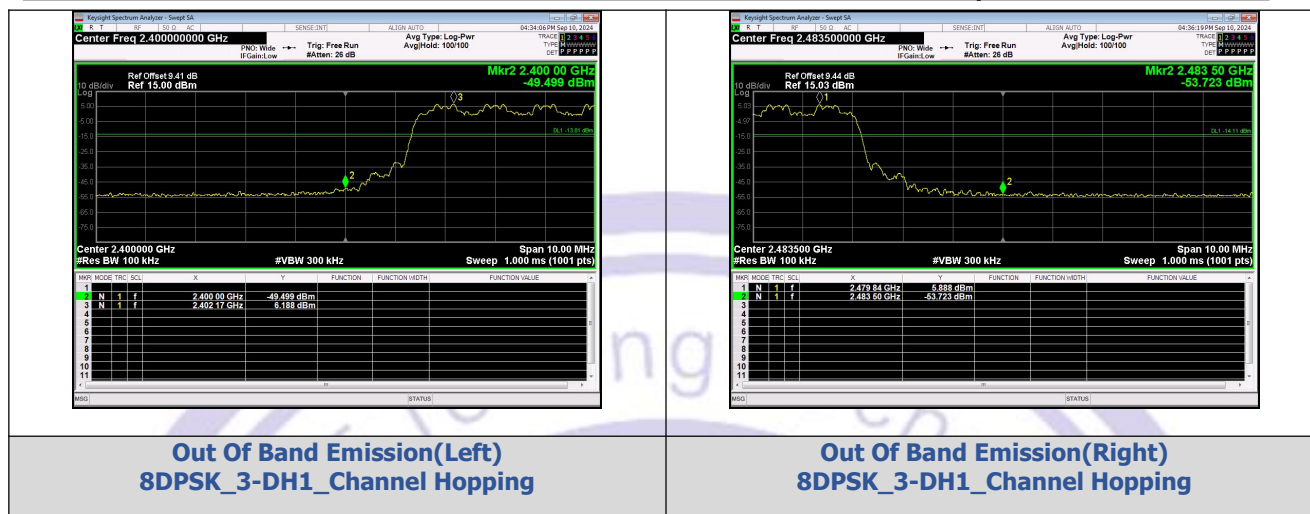


**Out Of Band Emission(Right)  
GFSK\_DH1\_Channel Hopping**



**Out Of Band Emission(Right)  
n/4DQPSK\_2-DH1\_Channel Hopping**





## 14 Antenna Requirement

### 14.1 Test Standard and Requirement

Test Standard	FCC Part15 Section 15.203 /247(c)
Requirement	<p>1) 15.203 requirement:</p> <p>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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.</p> <p>2) 15.247(c) (1)(i) requirement:</p> <p>Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.</p>

### 14.2 Antenna Connected Construction

The antenna is Internal Antenna which permanently attached, and the best case gain of the antenna is 2dBi. It complies with the standard requirement.

## 15 APPENDIX I -- TEST SETUP PHOTOGRAPH

Please see the attachment for details.



## 16 APPENDIX II -- EUT PHOTOGRAPH

Please see the attachment for details.

----- End of Report -----

