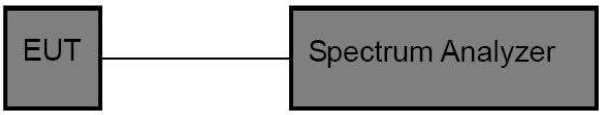
12 Dwell Time Test

12.1 Test Standard and Limit

Test Standard	FCC Part15 C Section 15.247 (a)(1)
Test Limit	0.4 sec

12.2 Test Setup



12.3 Test Procedure

The EUT must have its hopping function enabled. Use the following spectrum analyzer settings:

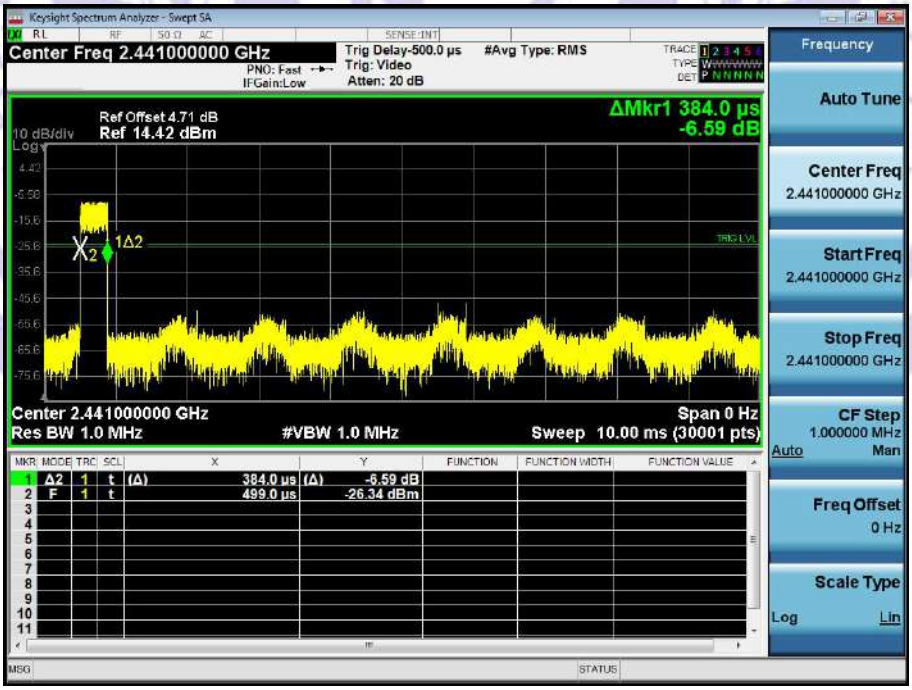
1. Span= zero span, centered on a hopping channel
2. Set the RBW = 1 MHz.
3. Set the VBW = 1 MHz.
4. Sweep time = as necessary to capture the entire dwell time per hopping channel.
5. Detector function = peak.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.

12.4 Test Data

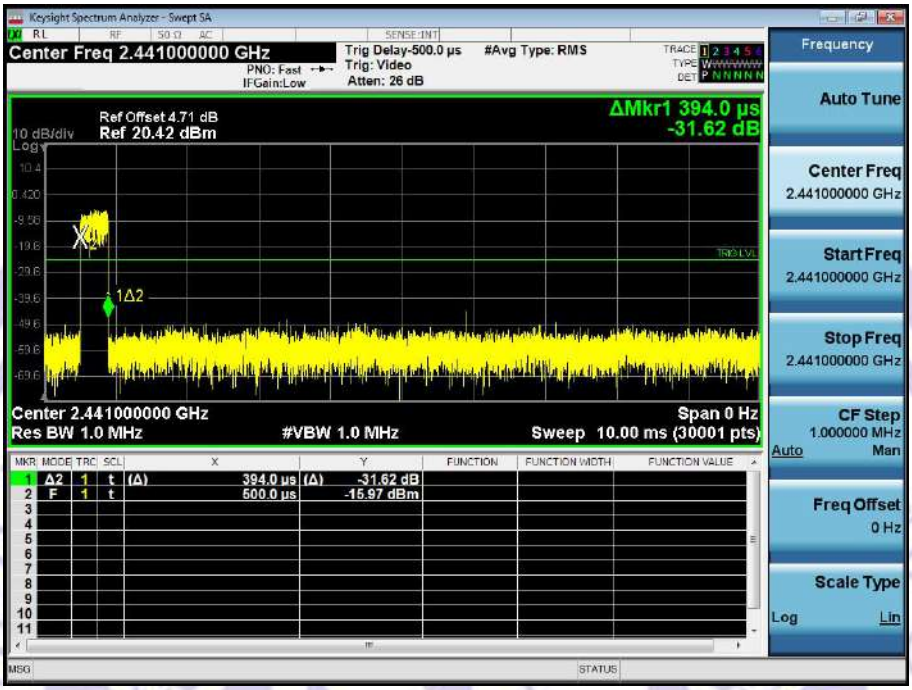
Package Type	Pulse width (ms)	Time slot length(ms)	Dwell time (ms)	Limit (s)	Remark
DH1	0.384	time slot length *1600/2 /79 * 31.6	122.88	0.4	Pass
2DH1	0.394	time slot length *1600/4 /79 * 31.6	126.08	0.4	Pass
3DH1	0.394	time slot length *1600/6 /79 * 31.6	126.08	0.4	Pass
DH3	1.641	time slot length *1600/2 /79 * 31.6	262.56	0.4	Pass
2DH3	1.646	time slot length *1600/4 /79 * 31.6	263.36	0.4	Pass
3DH3	1.645	time slot length *1600/6 /79 * 31.6	263.20	0.4	Pass
DH5	2.889	time slot length *1600/2 /79 * 31.6	308.16	0.4	Pass
2DH5	2.894	time slot length *1600/4 /79 * 31.6	308.69	0.4	Pass
3DH5	2.896	time slot length *1600/6 /79 * 31.6	308.91	0.4	Pass

Test Plots

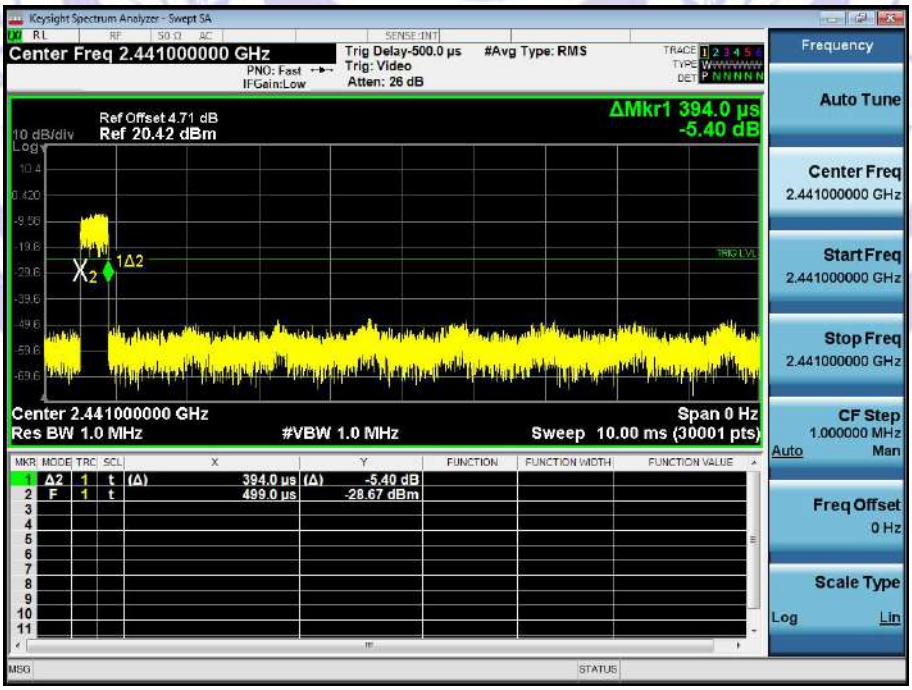
DH1 2441MHz



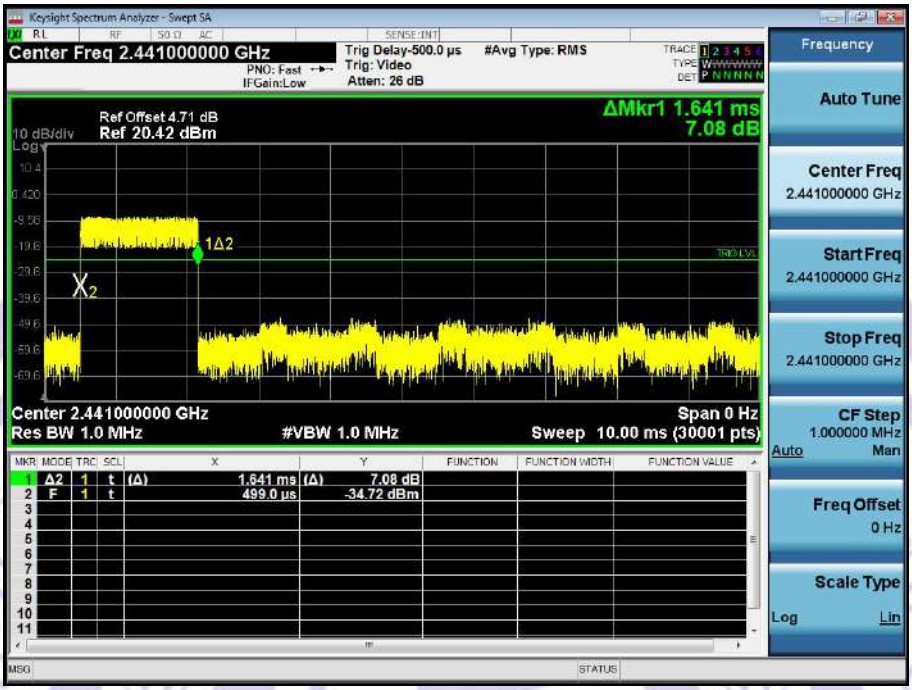
2DH1 2441MHz



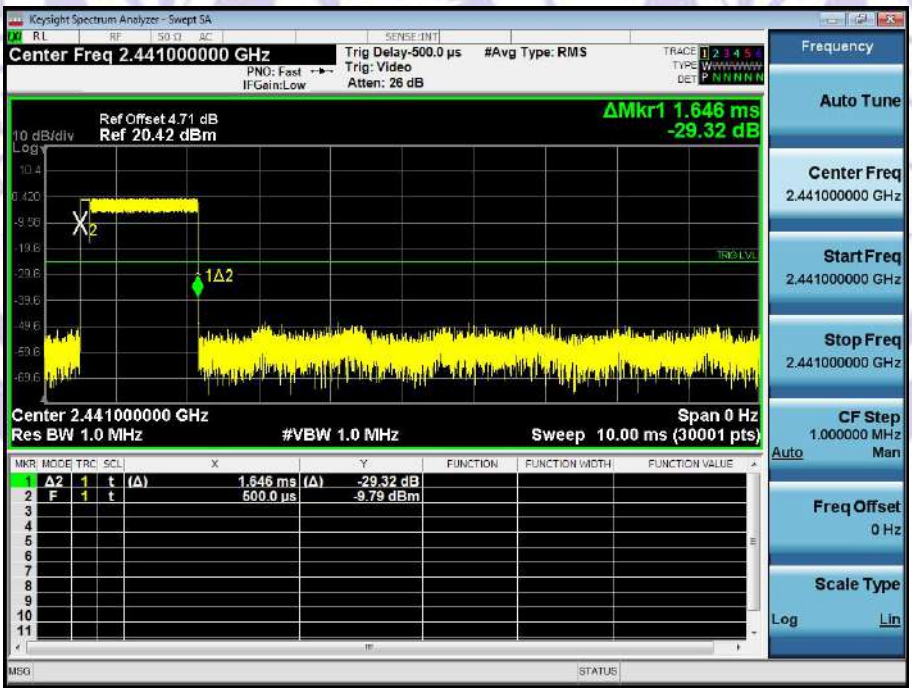
3DH1 2441MHz



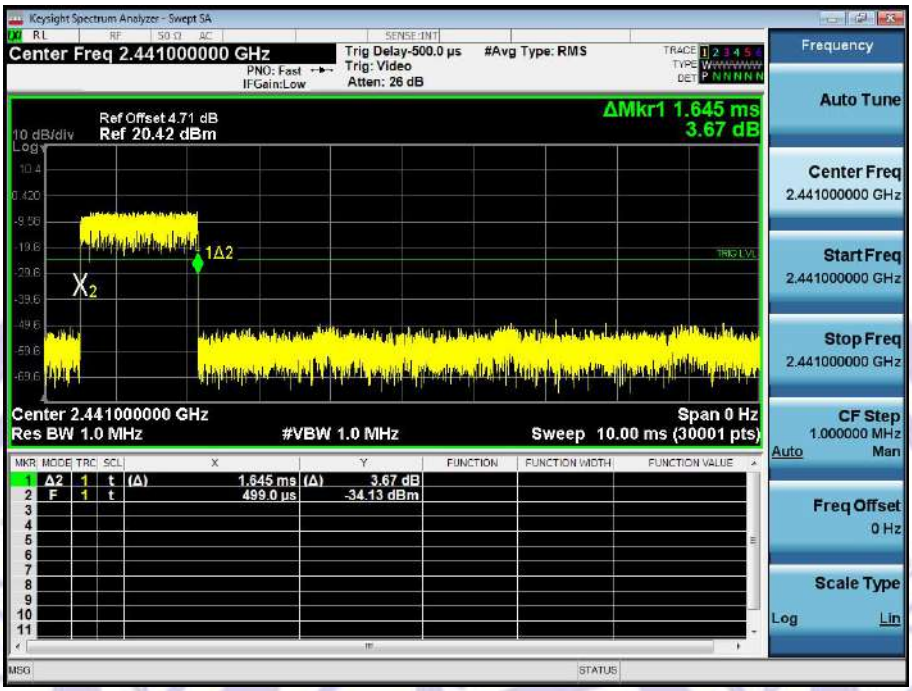
DH3 2441MHz



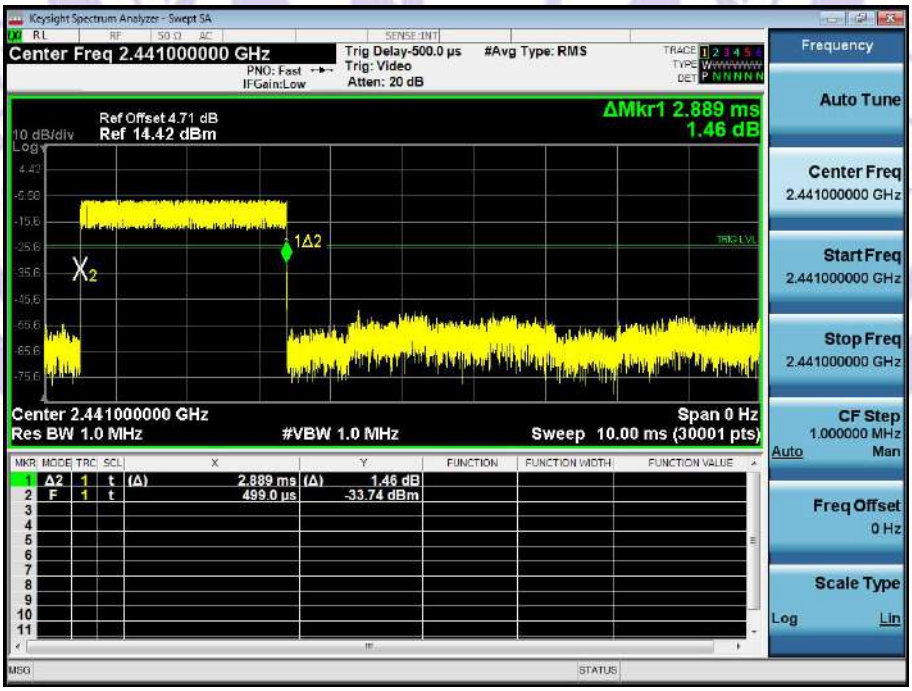
2DH3 2441MHz



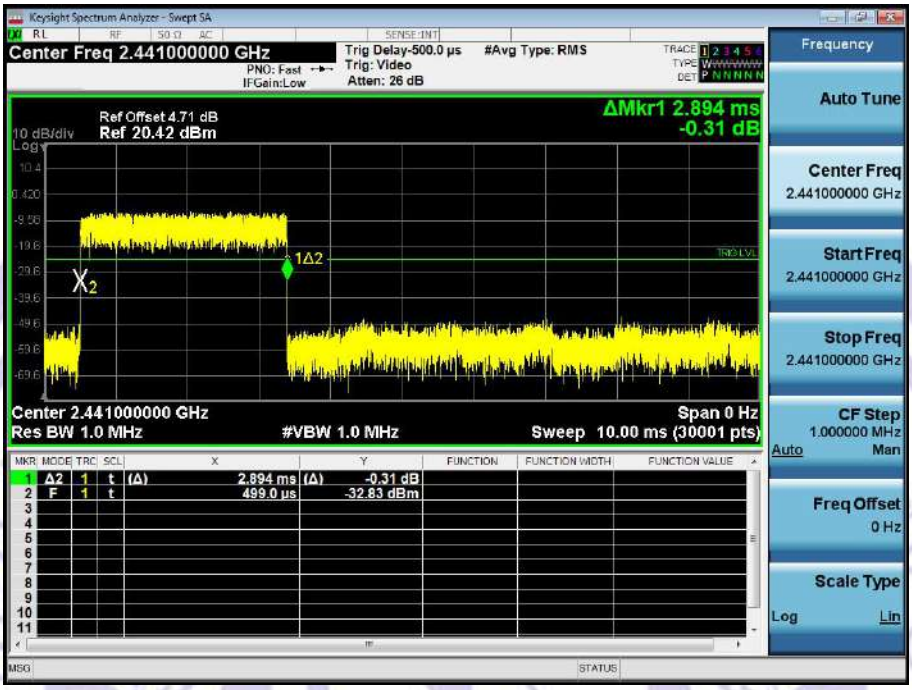
3DH3 2441MHz



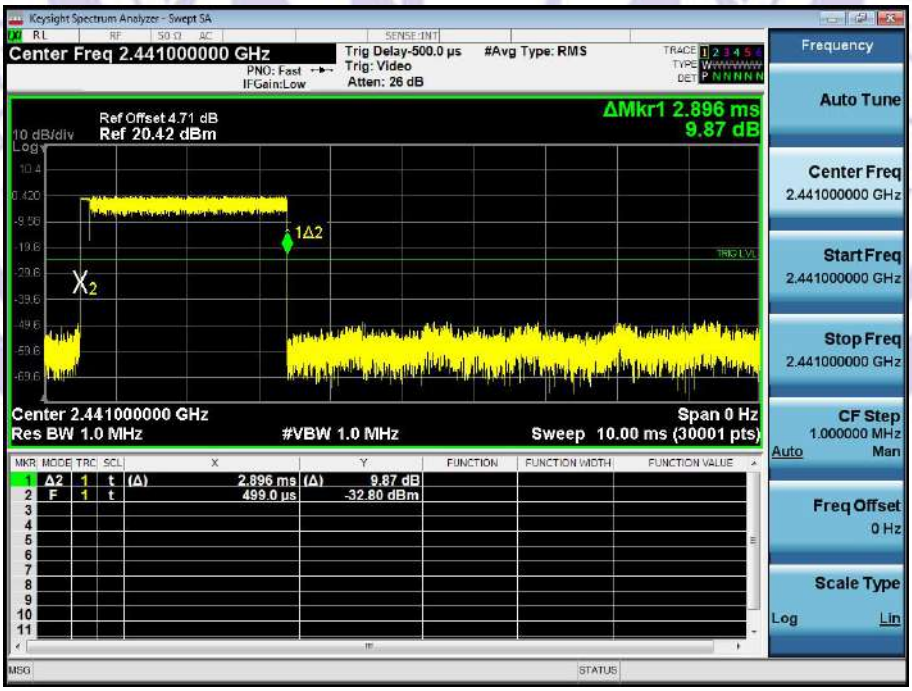
DH5 2441MHz



2DH5 2441MHz



3DH5 2441MHz

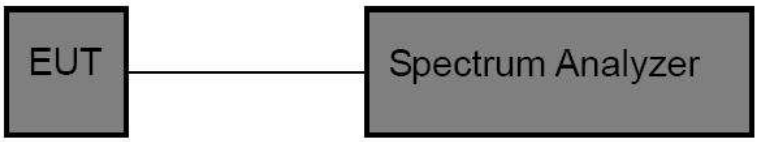


13 100kHz Bandwidth of Frequency Band Edge Requirement

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 in 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

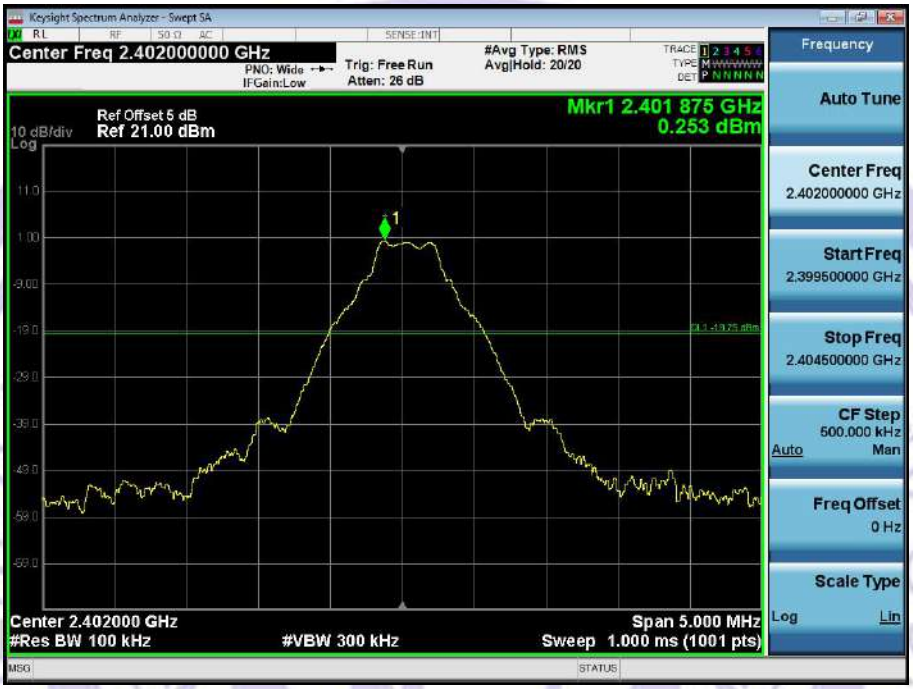
The EUT must have its hopping/Non-hopping function enabled. Using the following spectrum analyzer setting:

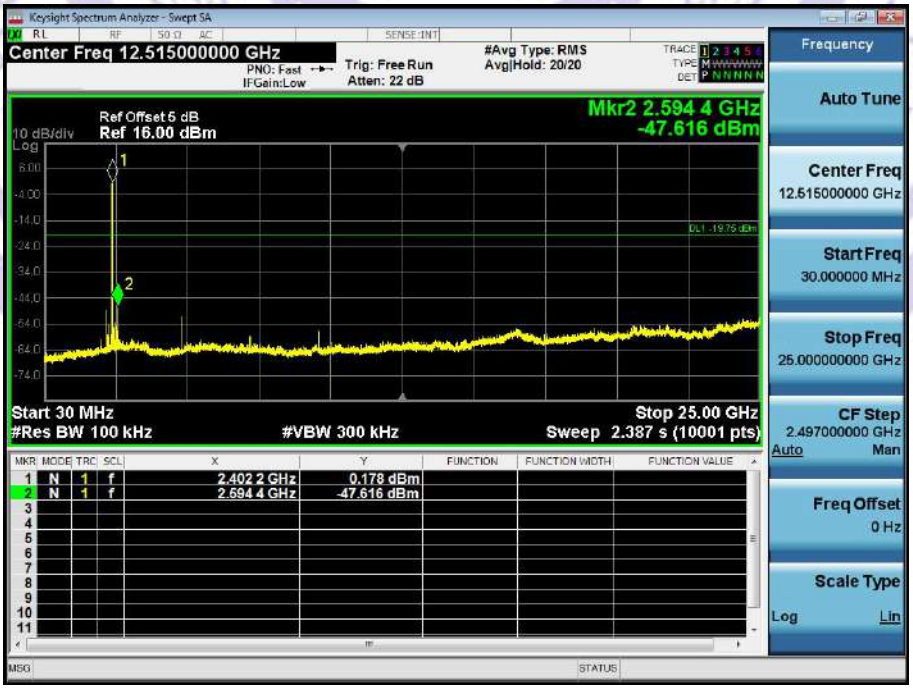
1. Set the RBW = 100kHz.
2. Set the VBW = 300kHz.
3. Sweep time = auto couple.
4. Detector function = peak.
5. Trace mode = max hold.
6. Allow trace to fully stabilize.

13.4 Test Data

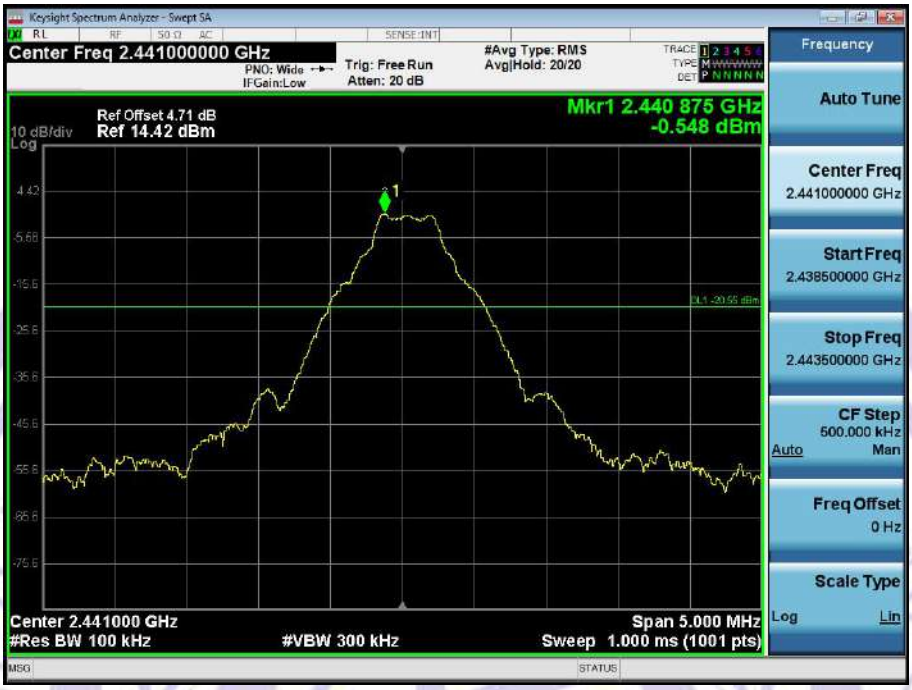
GFSK mode:

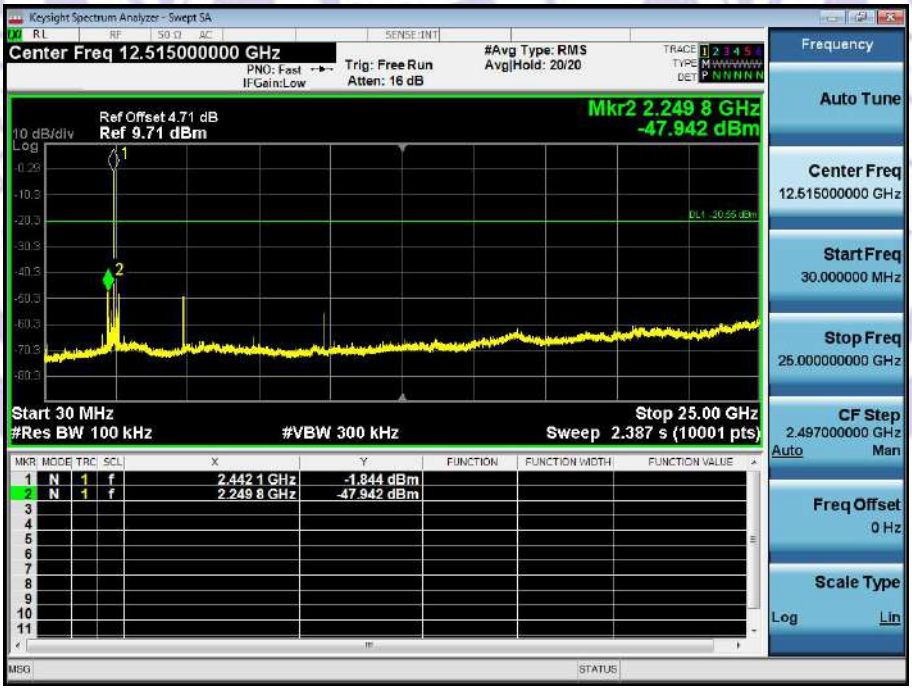
Lowest channel



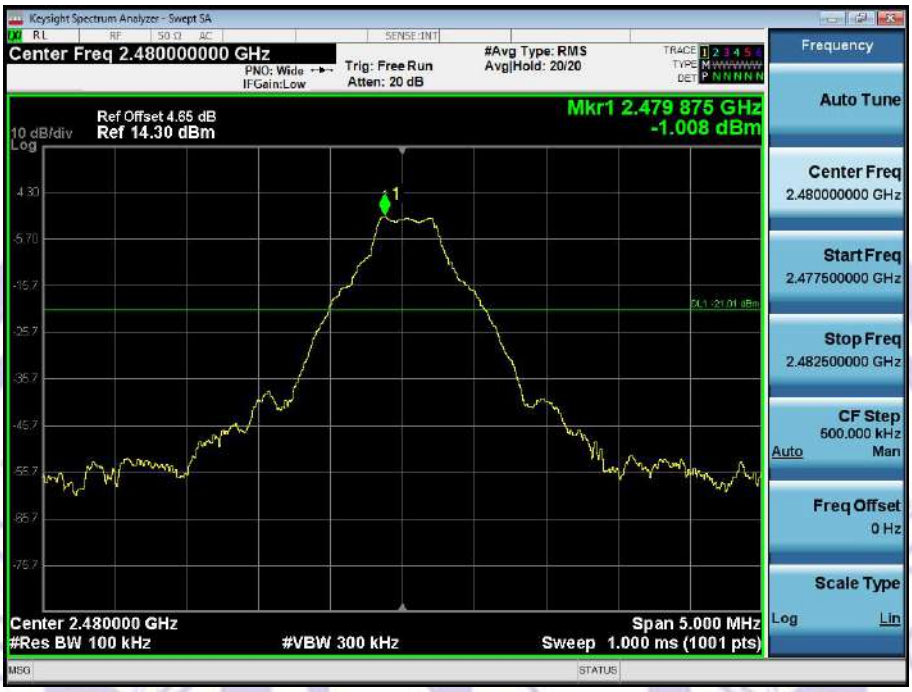


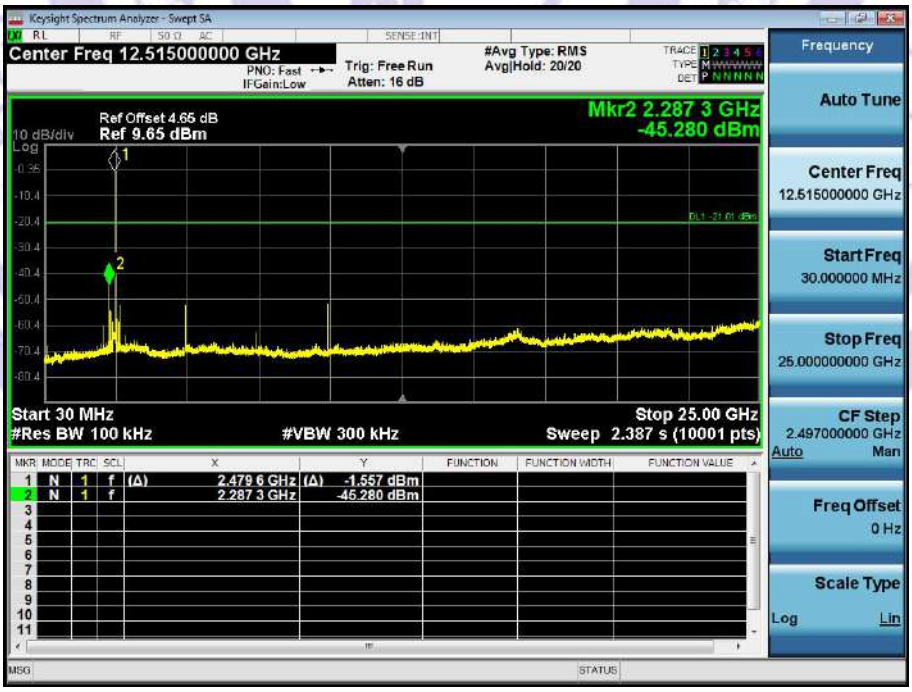
Middle channel





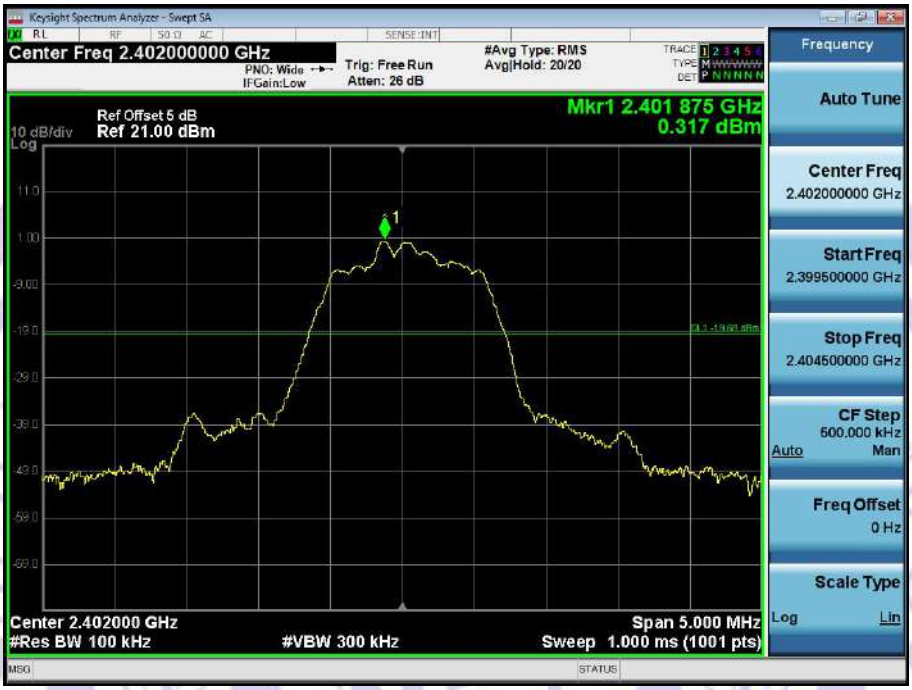
Highest channel

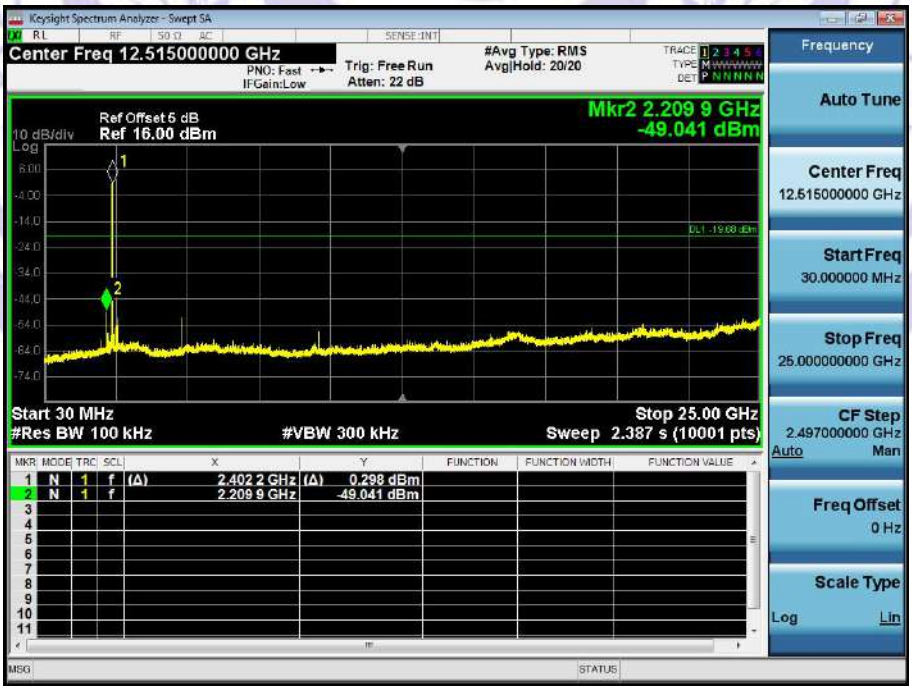




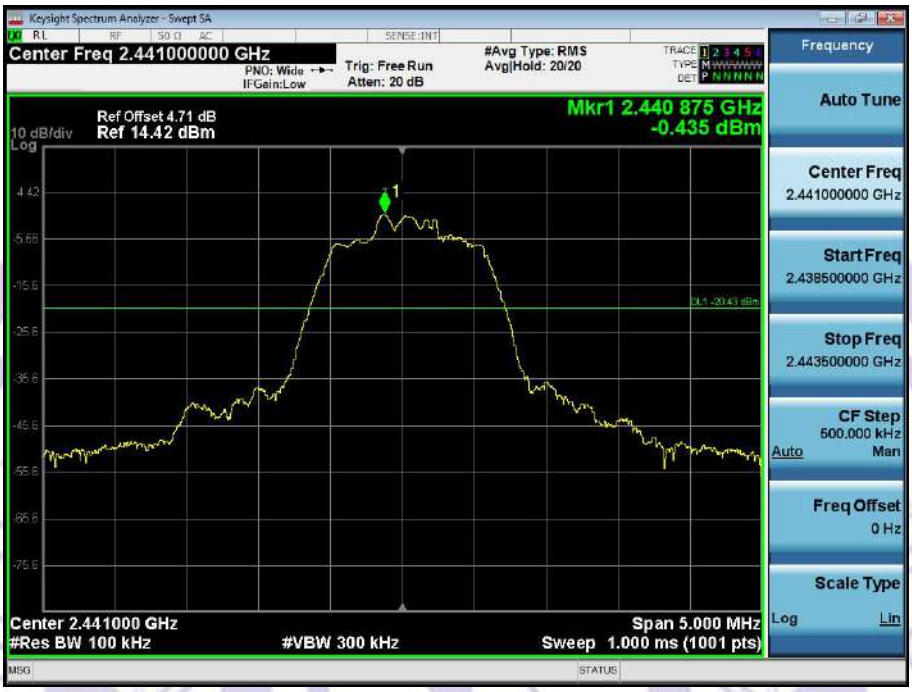
π/4-DQPSK mode:

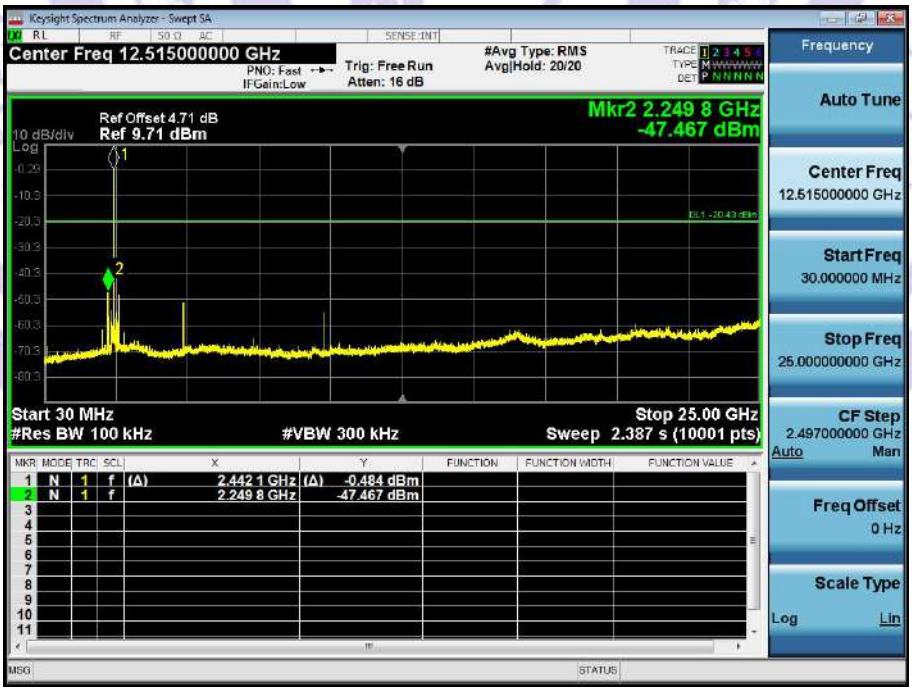
Lowest channel



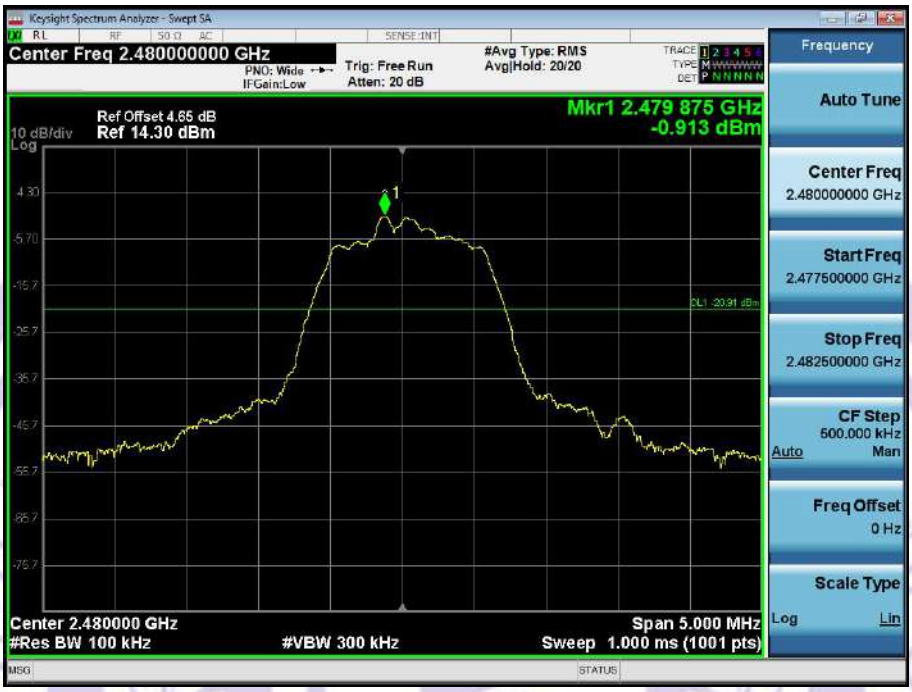


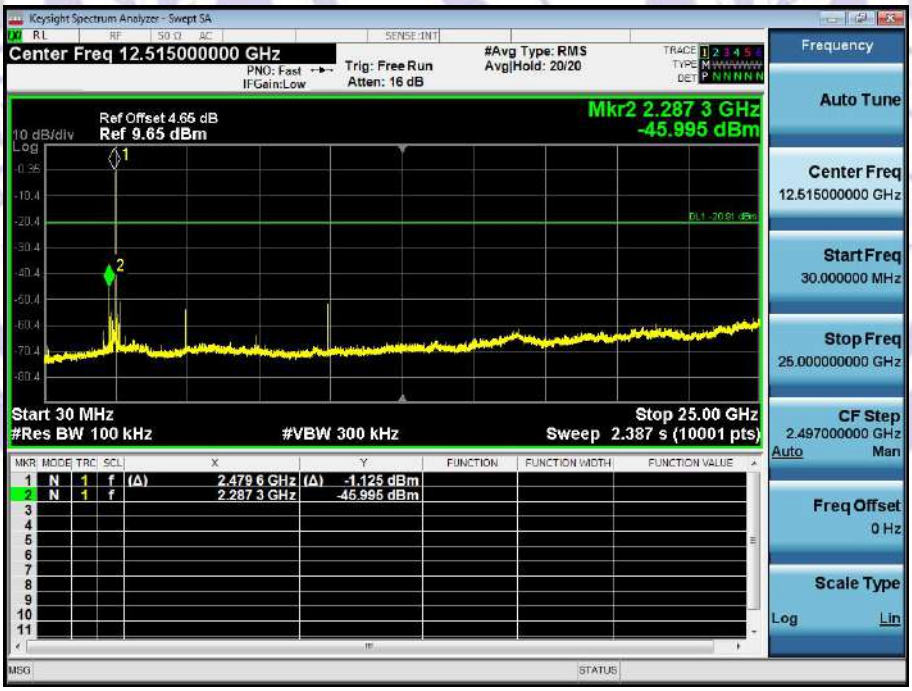
Middle channel





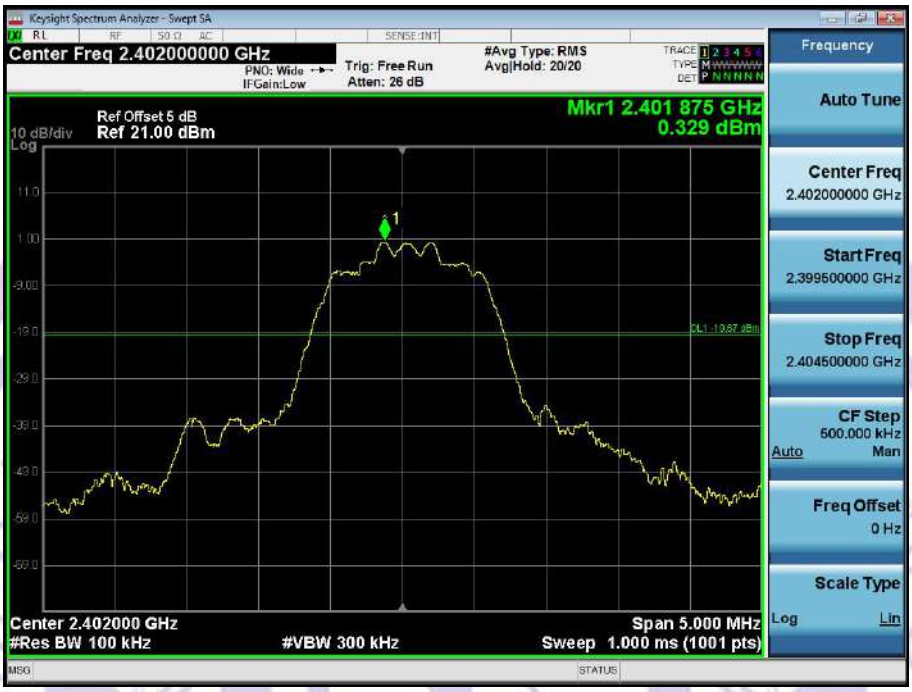
Highest channel

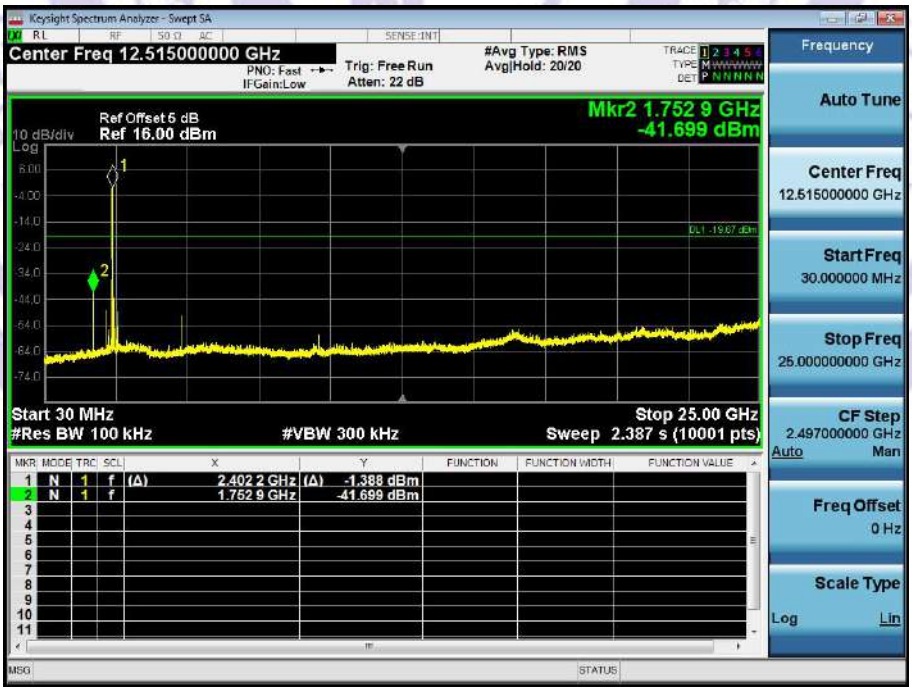




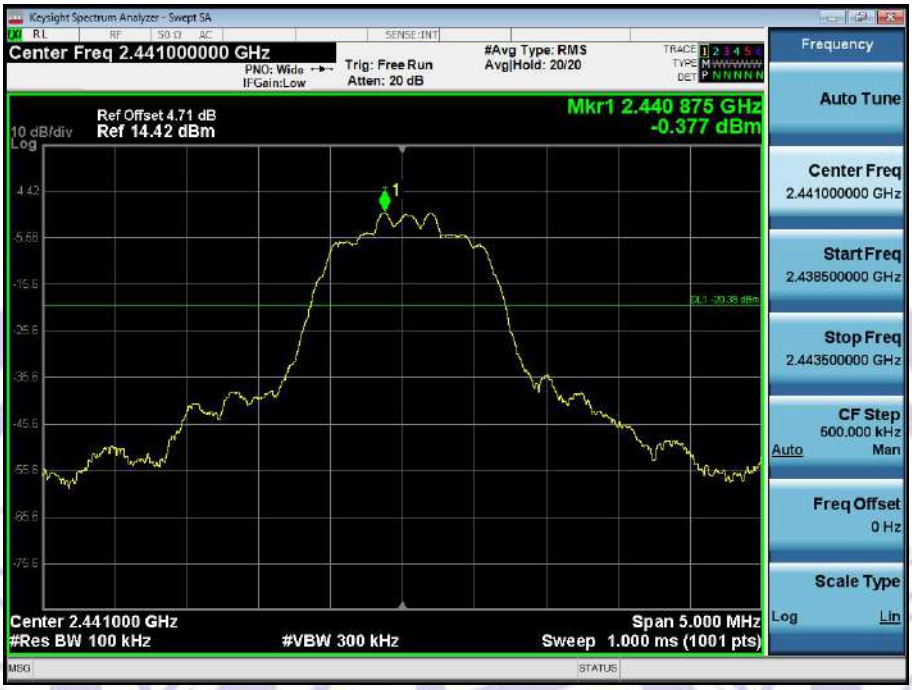
8-DPSK mode:

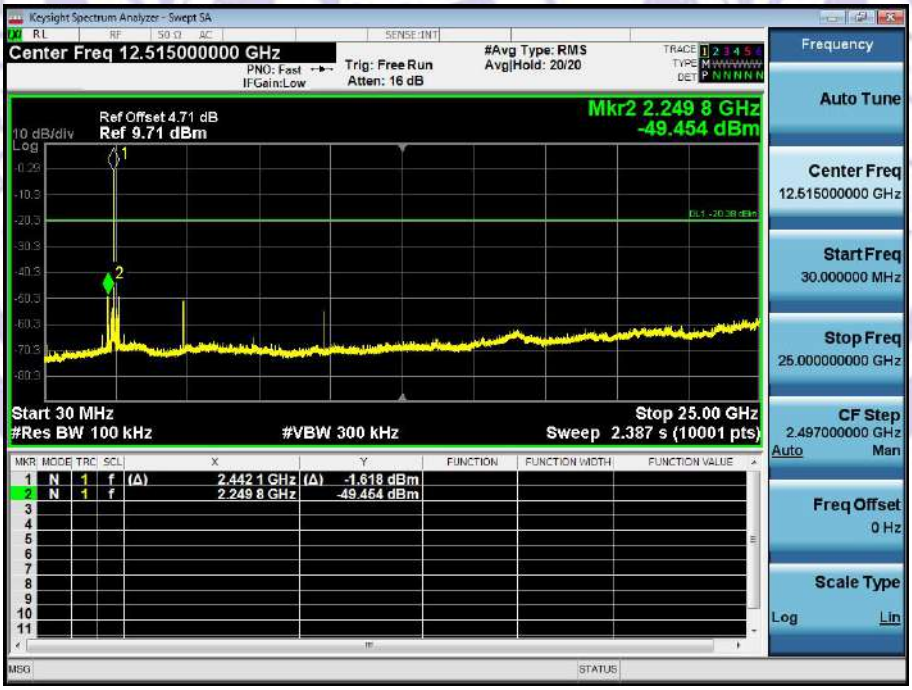
Lowest channel



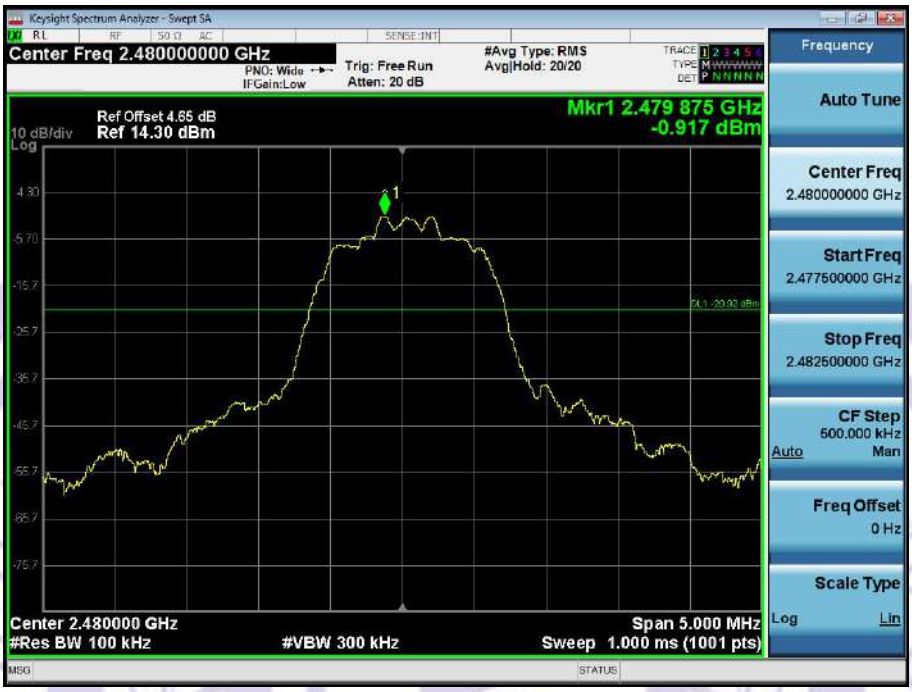


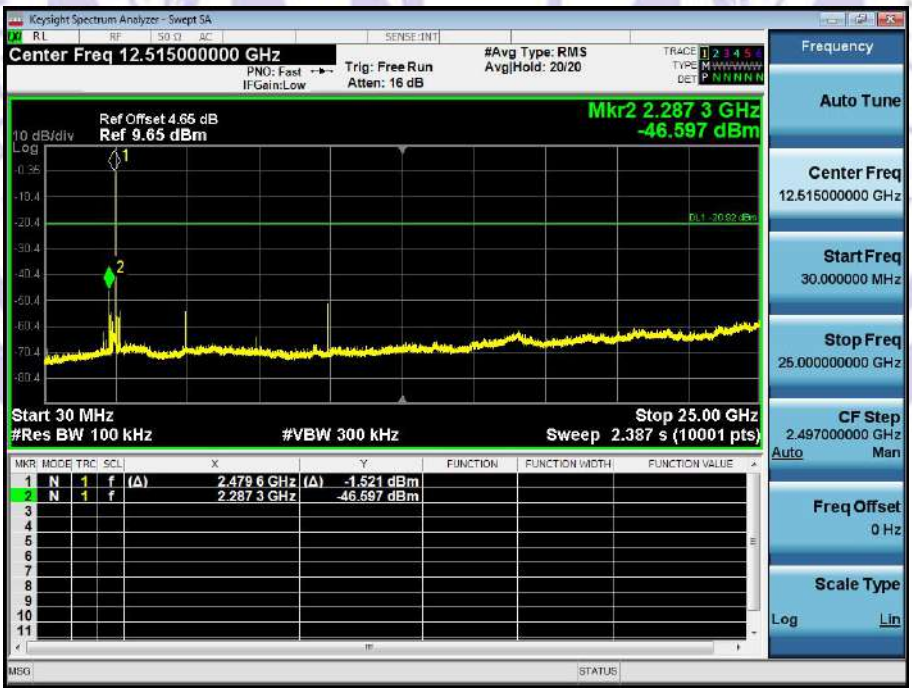
Middle channel



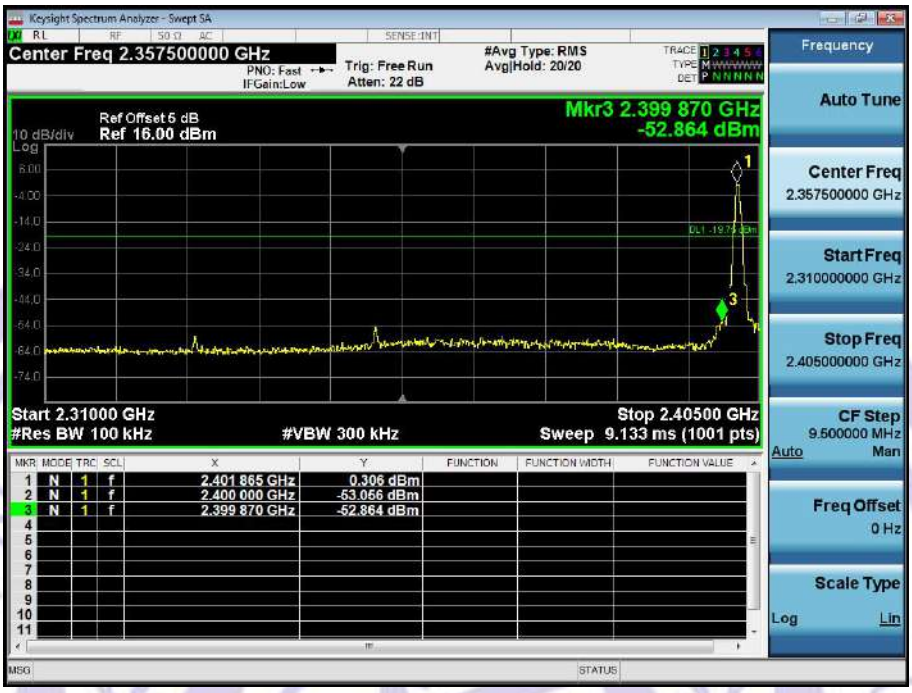


Highest channel

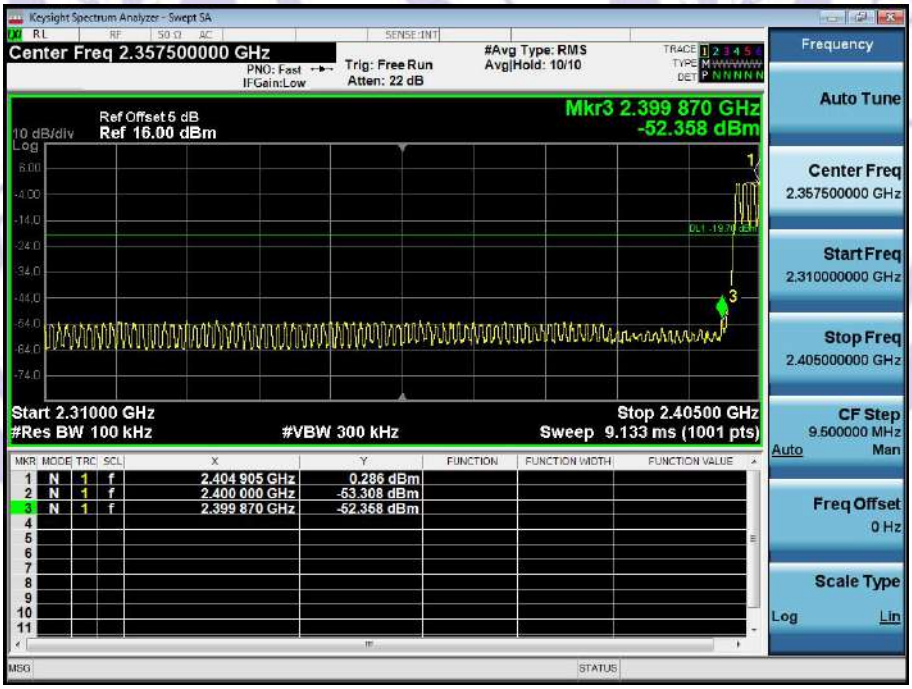




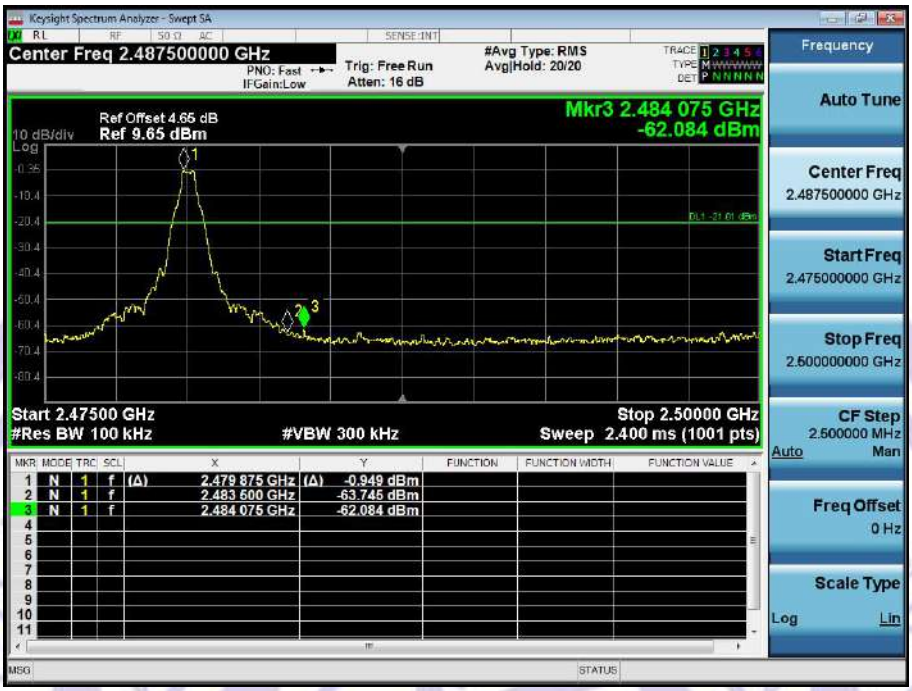
GFSK No-hopping Band edge-left side



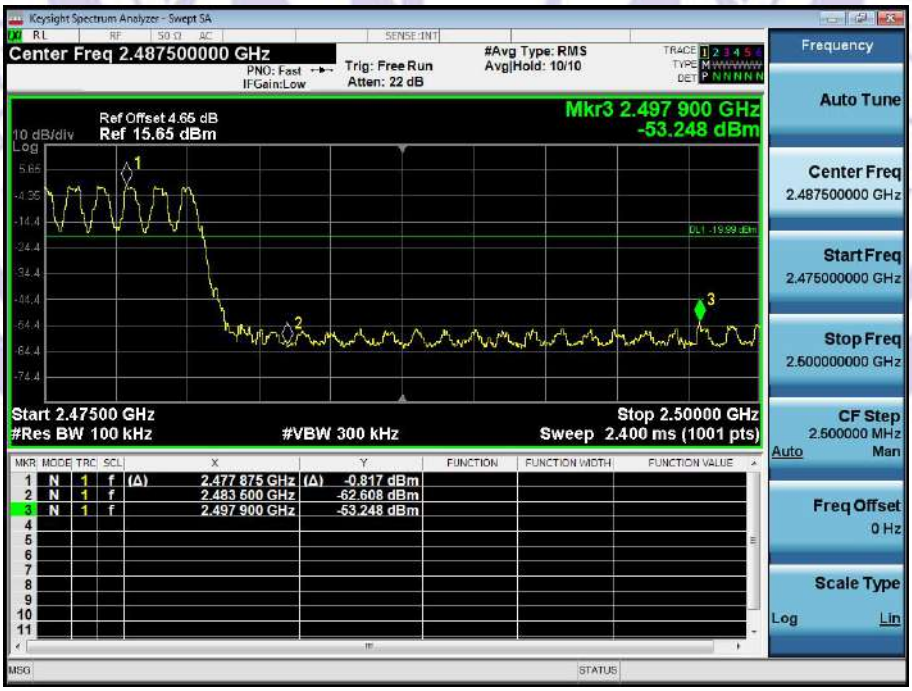
GFSK Hopping Band edge-left side



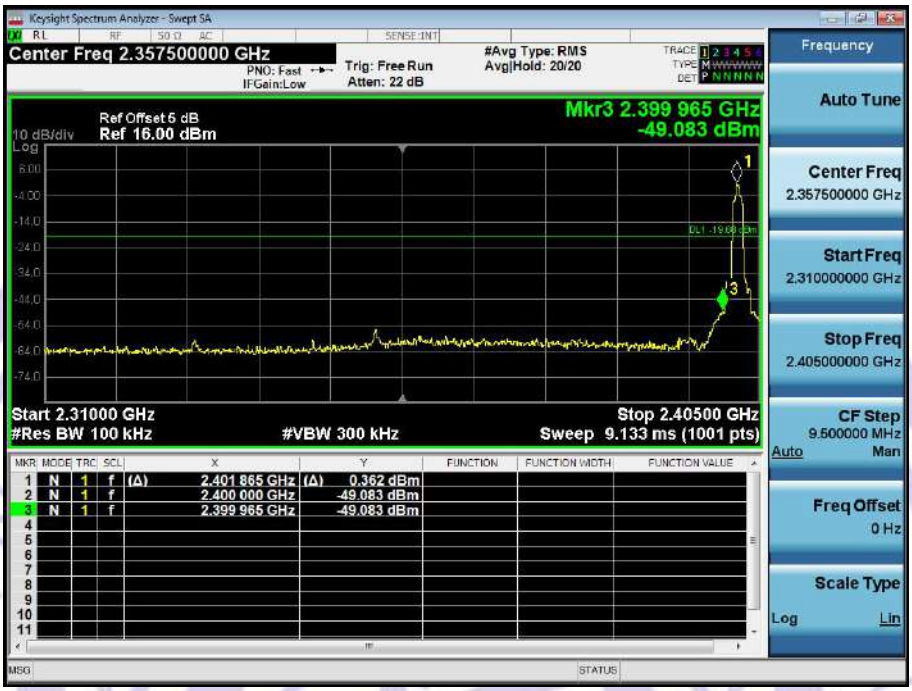
GFSK No-hopping Band edge-right side



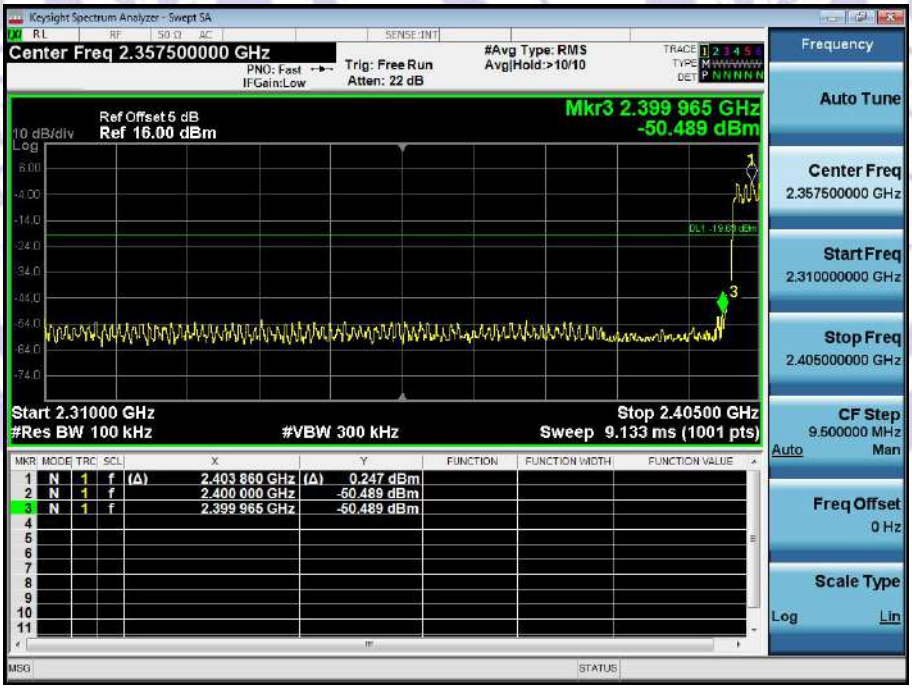
GFSK Hopping Band edge-right side



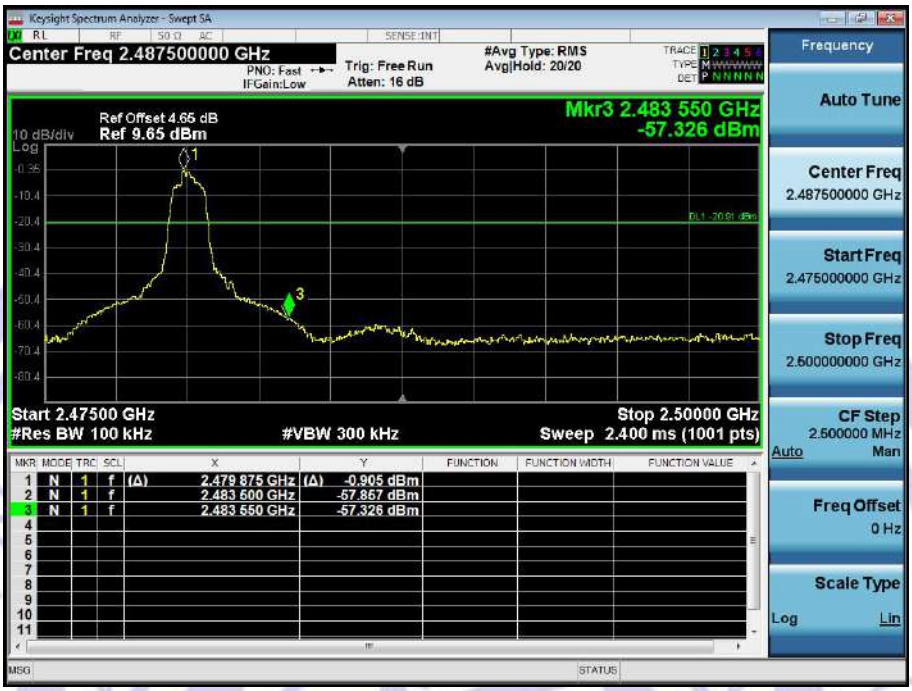
π/4-DQPSK No-hopping Band edge-left side



π/4-DQPSK Hopping Band edge-left side

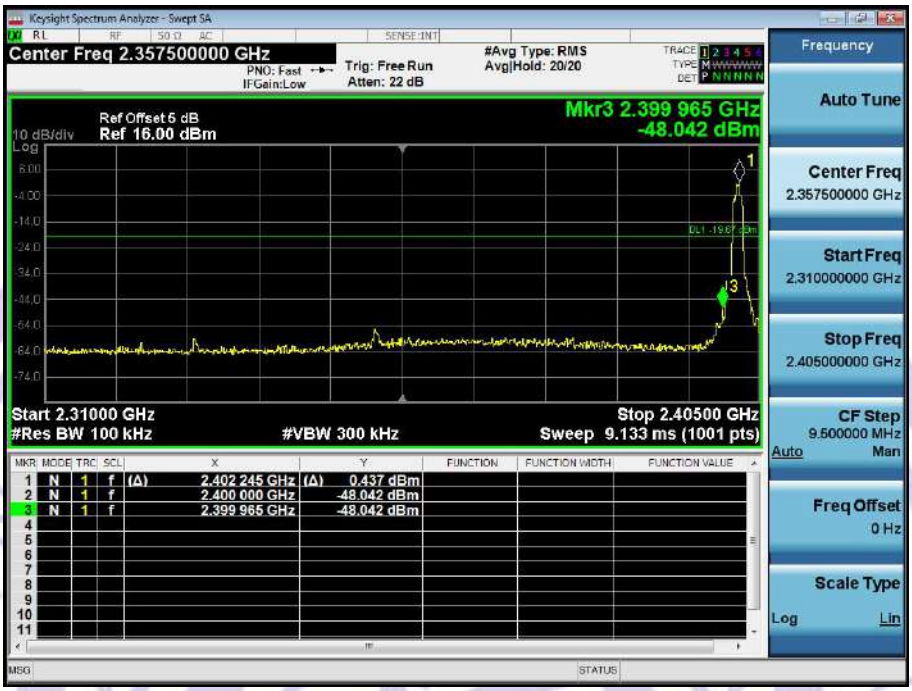


π/4-DQPSK No-hopping Band edge-right side

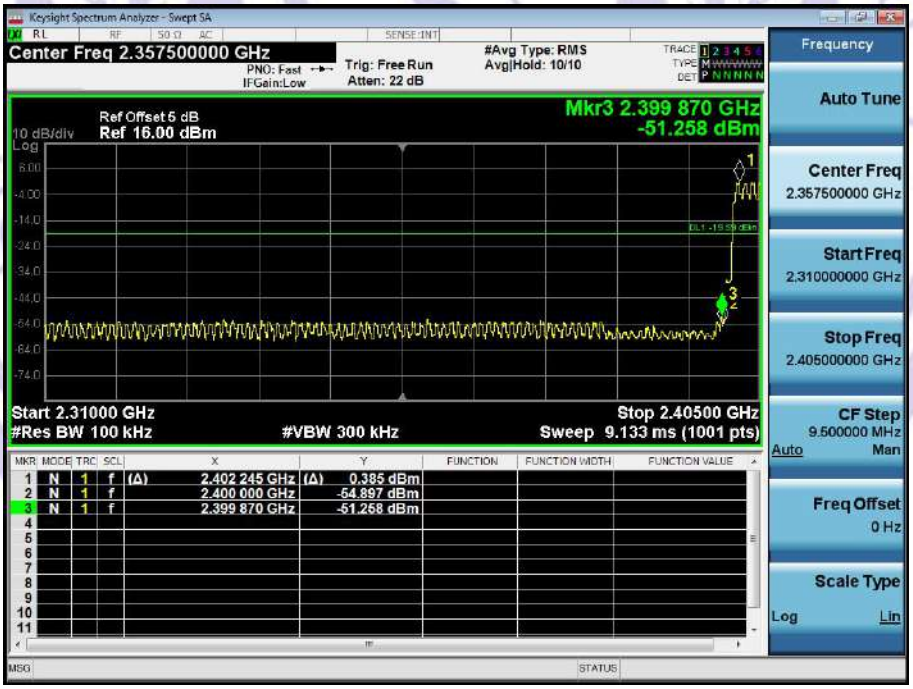


π/4-DQPSK Hopping Band edge-right side

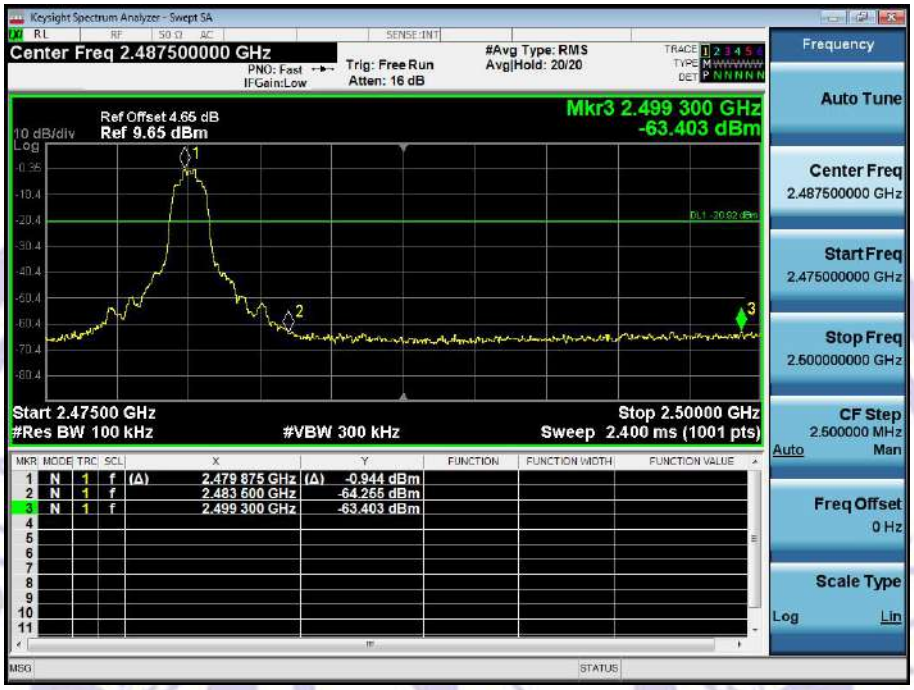
8-DPSK No-hopping Band edge-left side



8-DPSK Hopping Band edge-left side



8-DPSK No-hopping Band edge-right side



8-DPSK Hopping Band edge-right side

14 Antenna Requirement

14.1 Test Standard and Requirement

Test Standard	FCC Part15 Section 15.203 /247(c)
Requirement	1) 15.203 requirement: 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. 2) 15.247(c) (1)(i) requirement: 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.

14.2 Antenna Connected Construction

The antenna is Chip Antenna which permanently attached, and the Max. gain of the antenna is 1.06 dBi. It complies with the standard requirement.

15 TEST SETUP &EUT PHOTOGRAPH

Please see the attachment for details.

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

Shenzhen NCT Testing Technology Co., Ltd.
2008