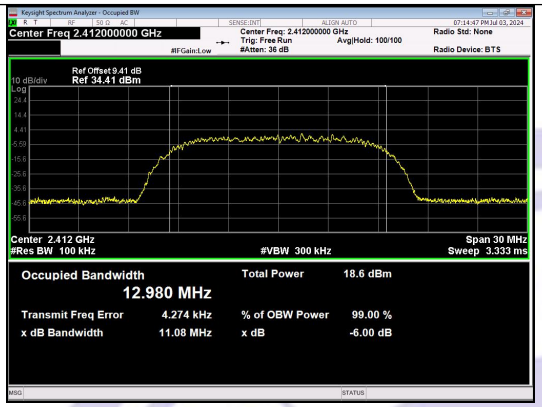
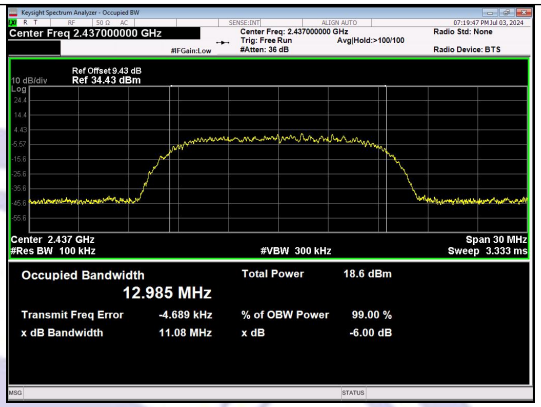
6dB Bandwidth



IEEE 802.11b_Channel 1_20MHz_Antenna 0



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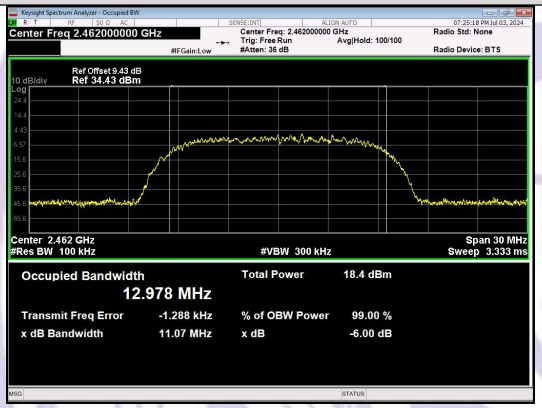

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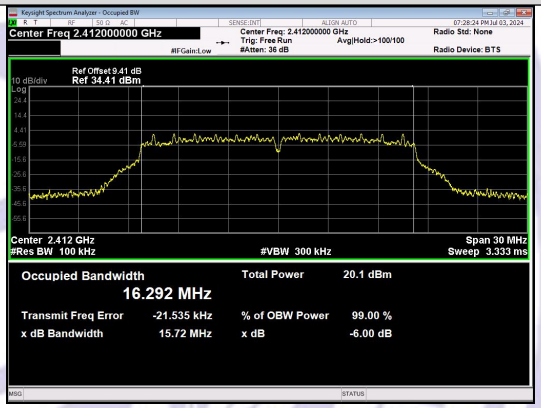

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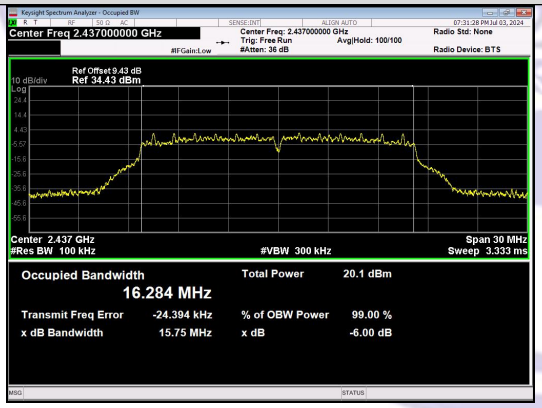

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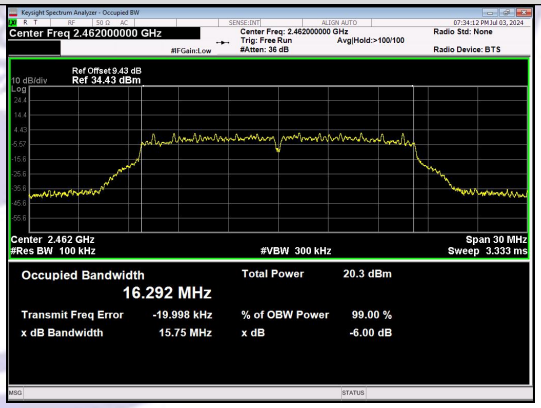

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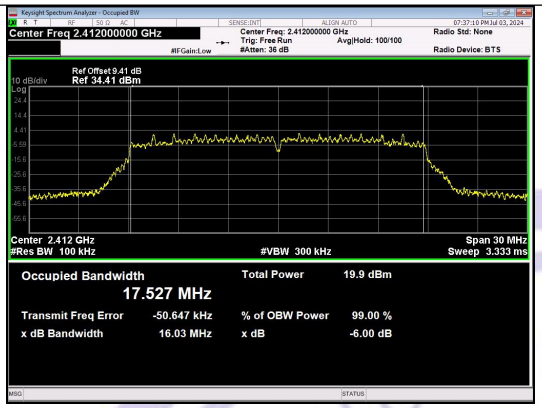
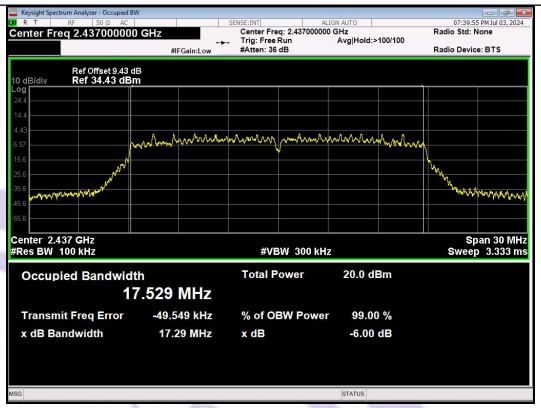


IEEE 802.11n_Channel 1_20MHz_Antenna 0



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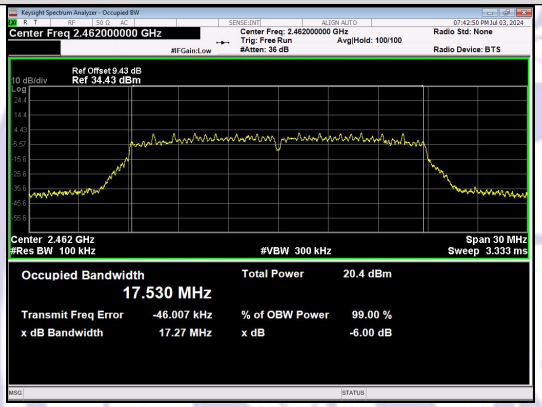

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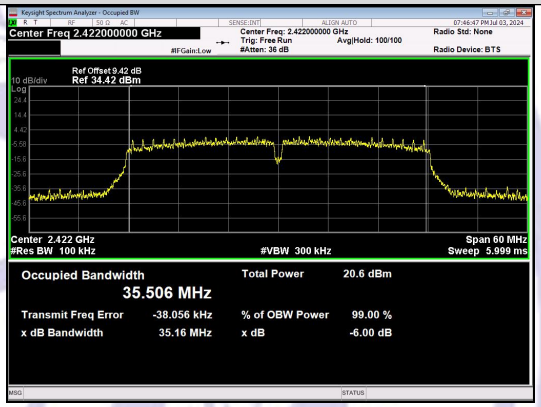
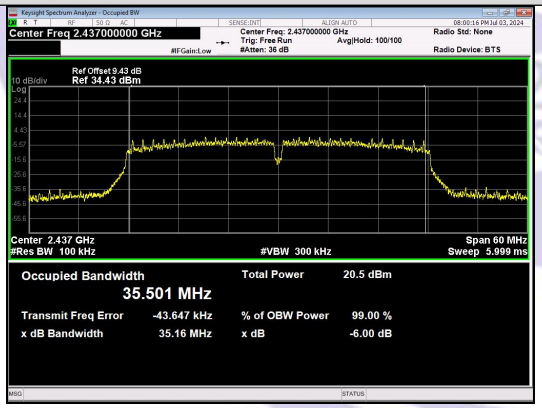
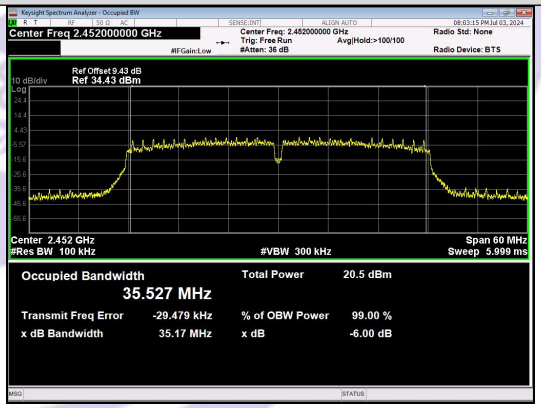


IEEE 802.11n_Channel 3_40MHz_Antenna 0

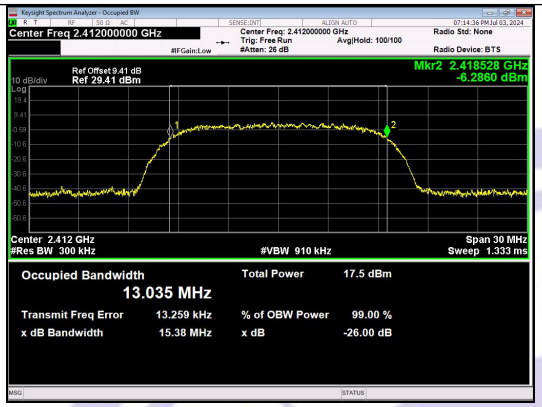


IEEE 802.11n_Channel 6_40MHz_Antenna 0

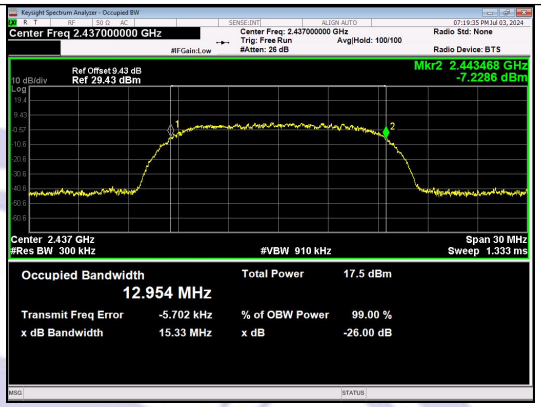


IEEE 802.11n_Channel 9_40MHz_Antenna 0

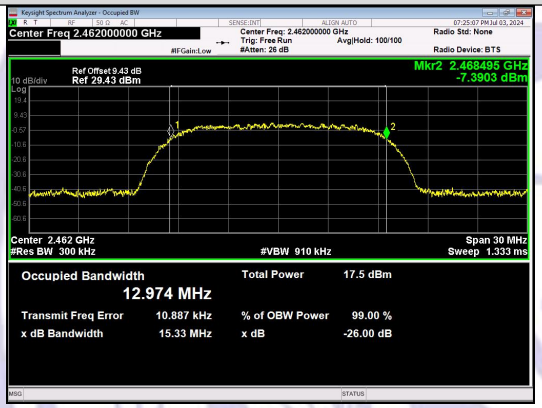
99% Bandwidth



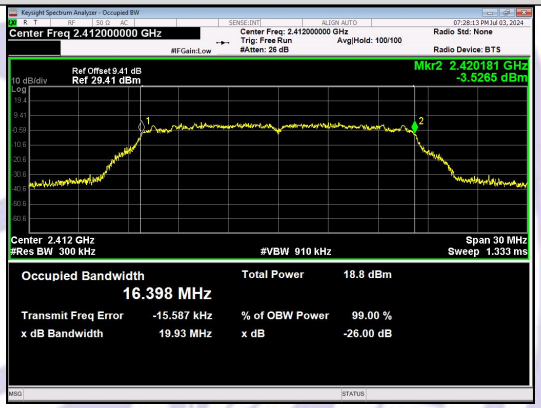
IEEE 802.11b_Channel 1_20MHz_Antenna 0



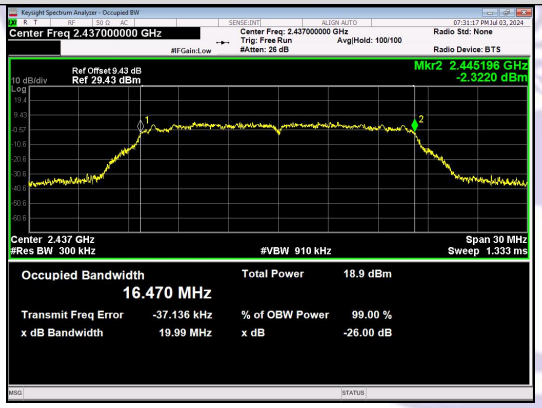
IEEE 802.11b_Channel 6_20MHz_Antenna 0



IEEE 802.11b_Channel 11_20MHz_Antenna 0



IEEE 802.11g_Channel 1_20MHz_Antenna 0



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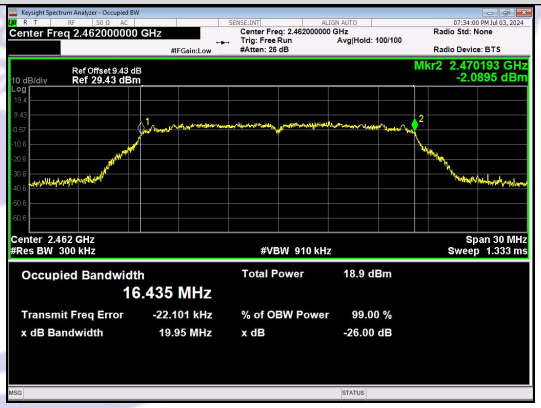
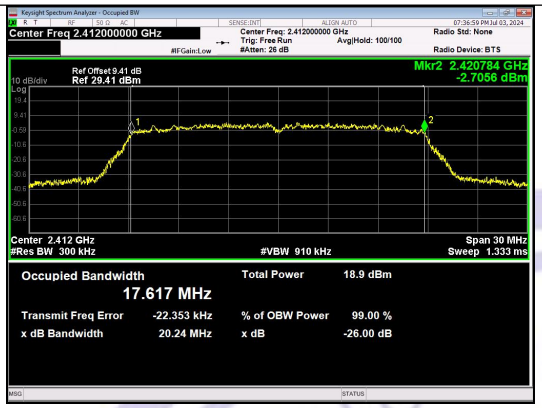
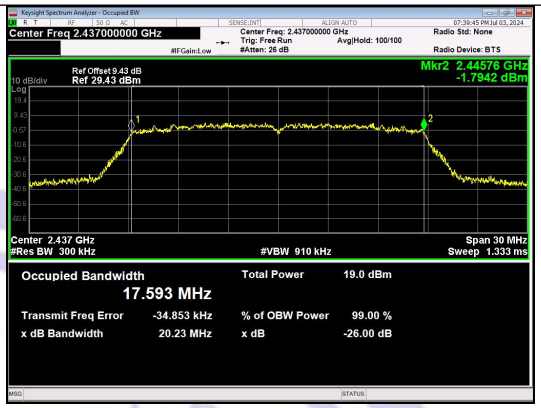


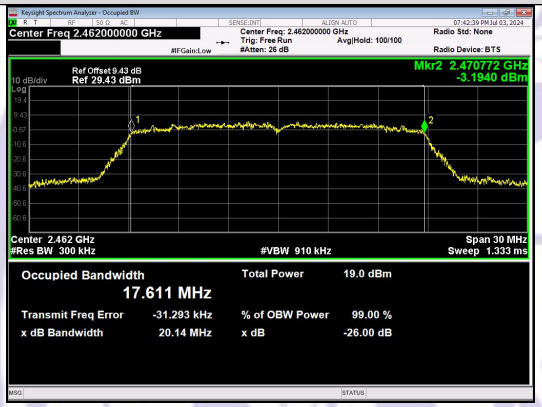
IEEE 802.11g_Channel 11_20MHz_Antenna 0



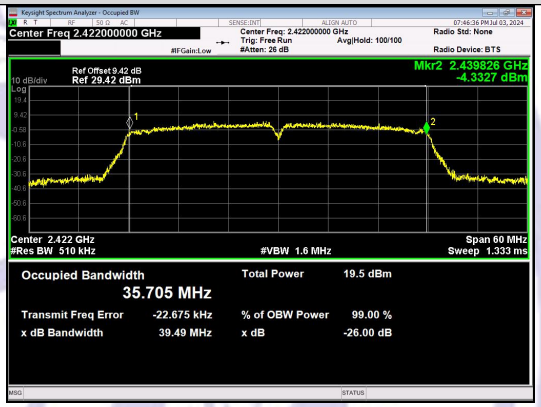
IEEE 802.11n_Channel 1_20MHz_Antenna 0



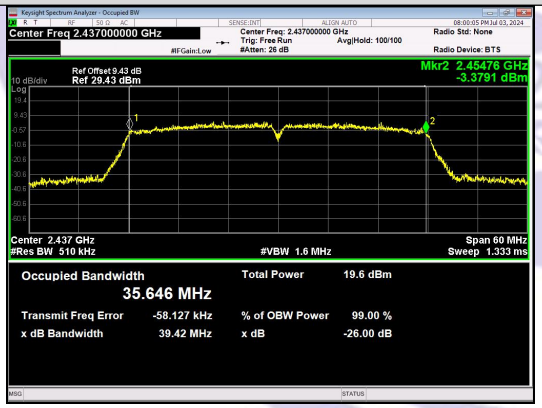
IEEE 802.11n_Channel 6_20MHz_Antenna 0



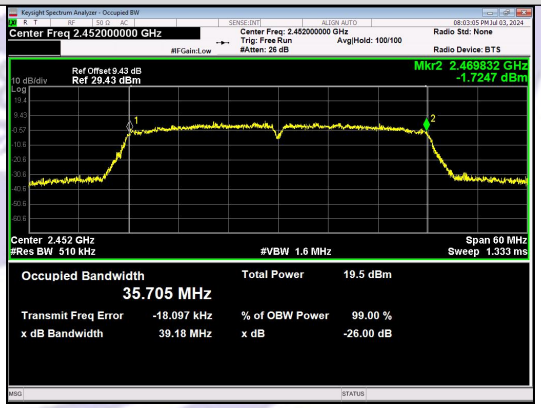
IEEE 802.11n_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 3_40MHz_Antenna 0



IEEE 802.11n_Channel 6_40MHz_Antenna 0



IEEE 802.11n_Channel 9_40MHz_Antenna 0

9 Maximum Peak Output Power

Test Requirement : FCC CFR47 Part 15 Section 15.247, RSS-247 § 5.4

Test Method : ANSI C63.10:2013

Test Limit : Regulation 15.247 (b)(3), For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power.

9.1 Test Procedure

The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall utilize a fast-responding diode detector.

9.2 Test Result

Mode	Test Channel	Peak Output Power (dBm)	LIMIT (dBm)	Antenna Gain（dBi）	EIRP (dBm)	EIRP Limit(dBm)	Result
802.11b	Low	16.79	30.00	3.62	20.41	36.02	**PASS**
	Moddle	16.85	30.00	3.62	20.47	36.02	**PASS**
	High	16.81	30.00	3.62	20.43	36.02	**PASS**
802.11g	Low	20.27	30.00	3.62	23.89	36.02	**PASS**
	Moddle	20.38	30.00	3.62	24.00	36.02	**PASS**
	High	20.33	30.00	3.62	23.95	36.02	**PASS**
802.11n HT20	Low	20.05	30.00	3.62	23.67	36.02	**PASS**
	Moddle	20.21	30.00	3.62	23.83	36.02	**PASS**
	High	20.28	30.00	3.62	23.90	36.02	**PASS**
802.11n HT40	Low	20.69	30.00	3.62	24.31	36.02	**PASS**
	Moddle	20.66	30.00	3.62	24.28	36.02	**PASS**

	High	20.63	30.00	3.62	24.25	36.02	**PASS**

Note:

1. For power test the duty cycle is 100% in continous transmitting mode;

2. TX means Transmit, RX means Receive.

Shenzhen NCT Testing Technology Co., Ltd.
2008

10 Power Spectral density

Test Requirement : FCC CFR47 Part 15 Section 15.247, RSS-247 §5.2

Test Method : ANSI C63.10:2013

Test Limit : Regulation 15.247(f) The power spectral density conducted from the intentional radiator to the antenna due to the digital modulation operation of the hybrid system, with the frequency hopping operation turned off, shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

10.1 Test Procedure

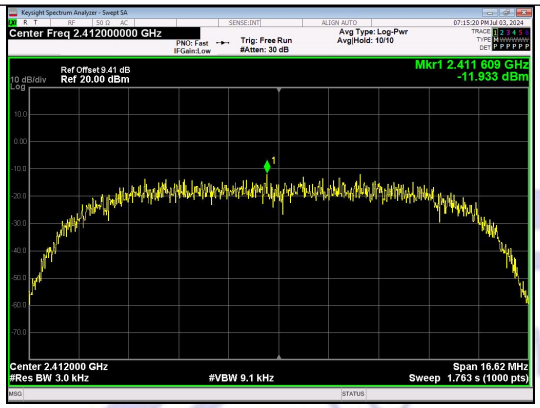
1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.

2. Set the spectrum analyzer: RBW = 3kHz. VBW = 9.1kHz, Span = 1.5 times the DTS channel bandwidth(6 dB bandwidth). Sweep = auto; Detector Function = Peak. Trace = Max hold.

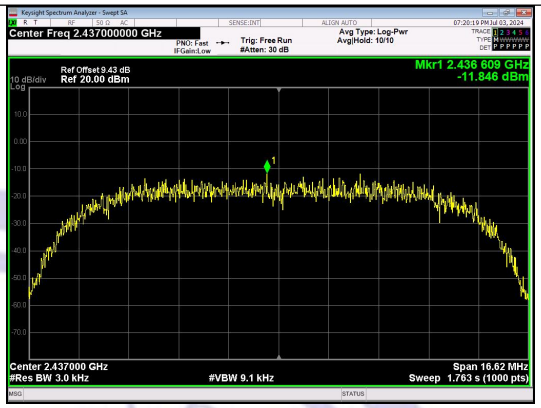
3. Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channels. The limit is specified in one of the subparagraphs of this Section Submit this plot.

10.2 Test Result

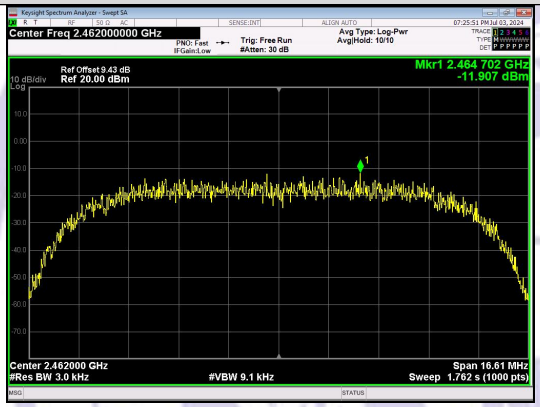
	Power Spectral density（dBm/3kHz）				Limit
	802.11b	802.11g	802.11n20	802.11n40	
Low Channel	-11.933	-11.163	-12.537	-13.783	8dBm/3kHz
Middle Channel	-11.846	-10.786	-11.541	-14.977	8dBm/3kHz
High Channel	-11.907	-11.889	-12.090	-15.300	8dBm/3kHz



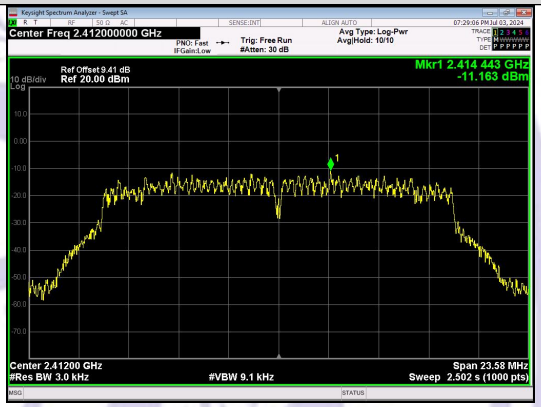
IEEE 802.11b_Channel 1_20MHz_Antenna 0



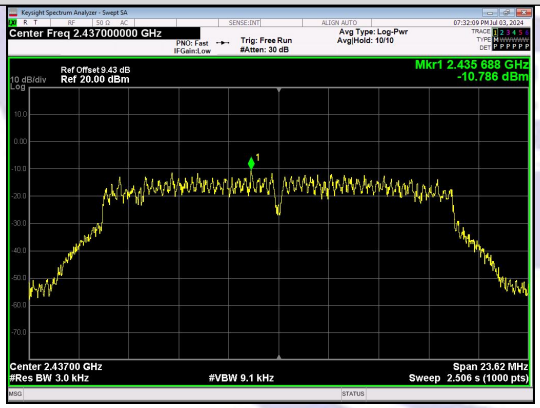
IEEE 802.11b_Channel 6_20MHz_Antenna 0



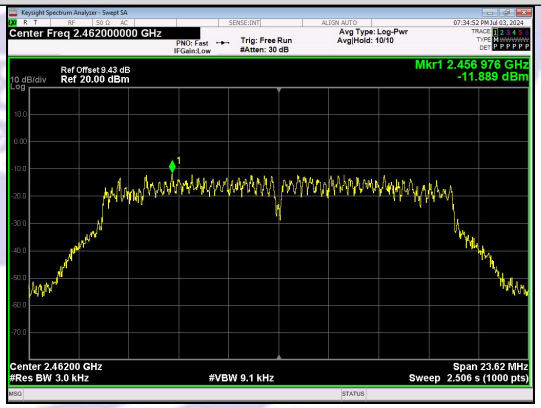
IEEE 802.11b_Channel 11_20MHz_Antenna 0



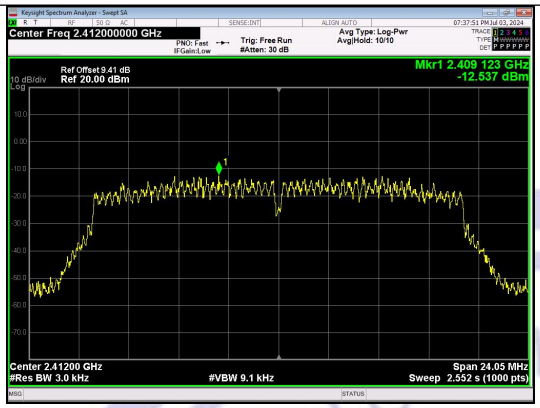
IEEE 802.11g_Channel 1_20MHz_Antenna 0



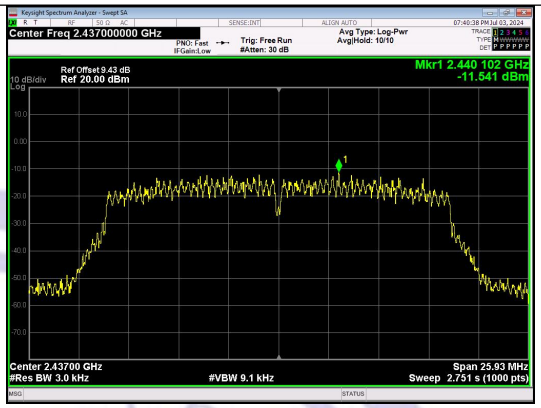
IEEE 802.11g_Channel 6_20MHz_Antenna 0



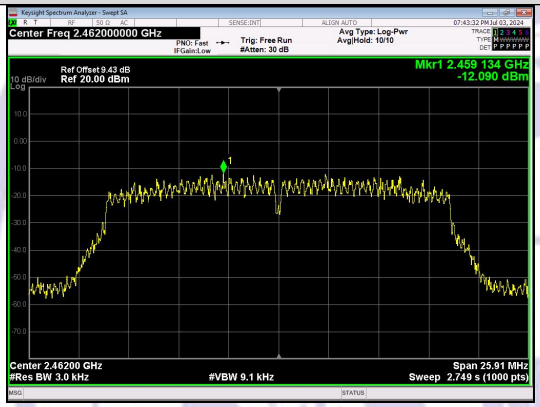
IEEE 802.11g_Channel 11_20MHz_Antenna 0



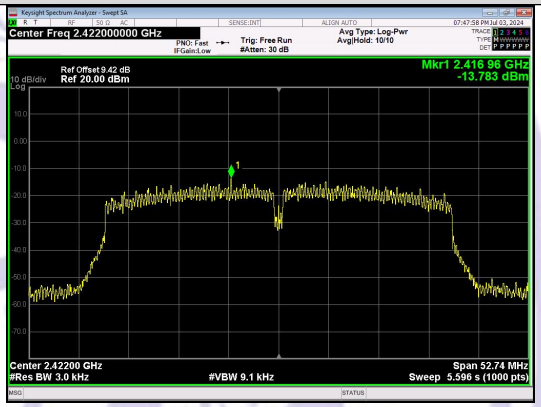
IEEE 802.11n_Channel 1_20MHz_Antenna 0



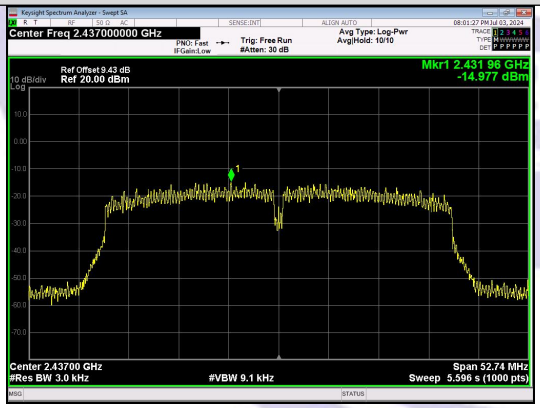
IEEE 802.11n_Channel 6_20MHz_Antenna 0



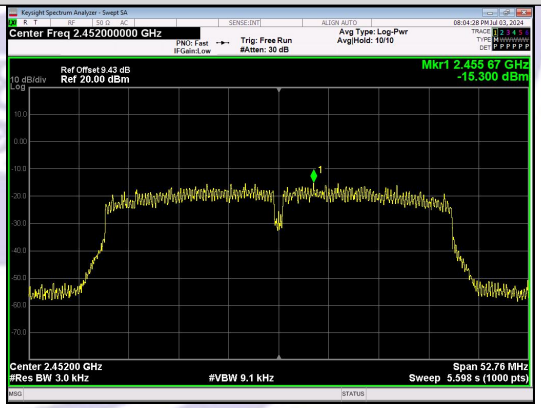
IEEE 802.11n_Channel 11_20MHz_Antenna 0



IEEE 802.11n_Channel 3_40MHz_Antenna 0



IEEE 802.11n_Channel 6_40MHz_Antenna 0



IEEE 802.11n_Channel 9_40MHz_Antenna 0

11 On Time and Duty Cycle

11.1 Standard Applicable

None: for reporting purpose only.

11.2 Measuring Instruments and Setting

Please refer to equipment's list in this report. The following table is the setting of the spectrum analyzer.

11.3 Test Procedures

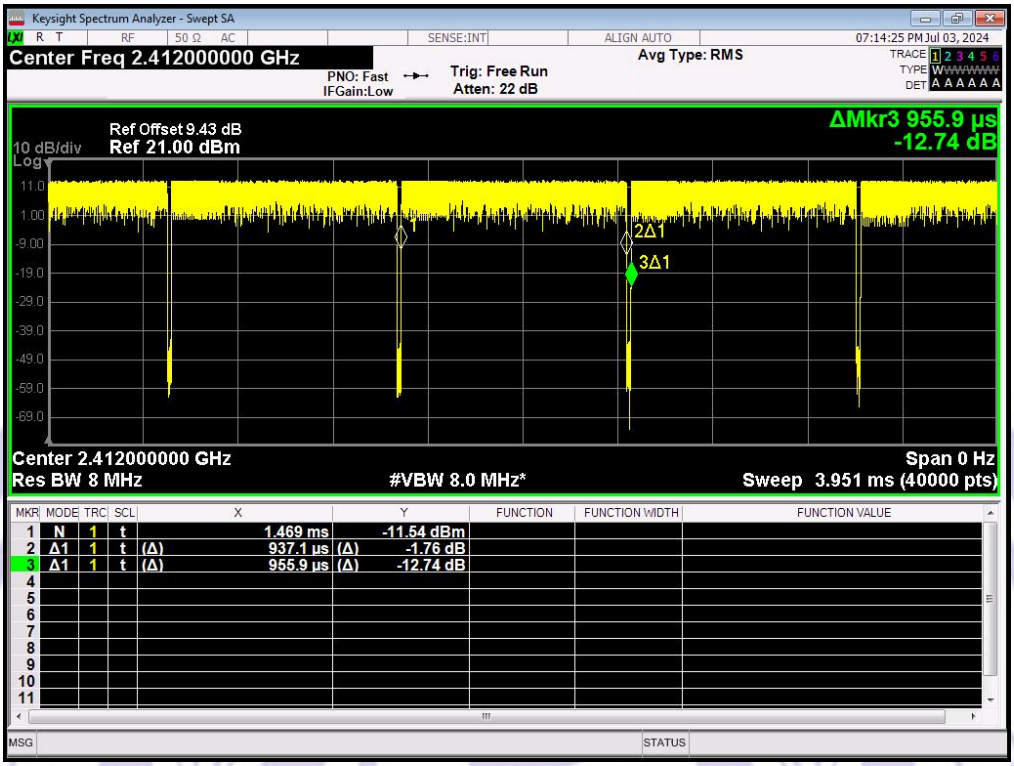
1. Set the centre frequency of the spectrum analyzer to the transmitting frequency;
2. Set the span=0MHz, RBW=8MHz, VBW=8MHz, Sweep time=40000pts;
3. Detector = RMS;
4. Trace mode = Single hold.

11.4 EUT Operation during Test

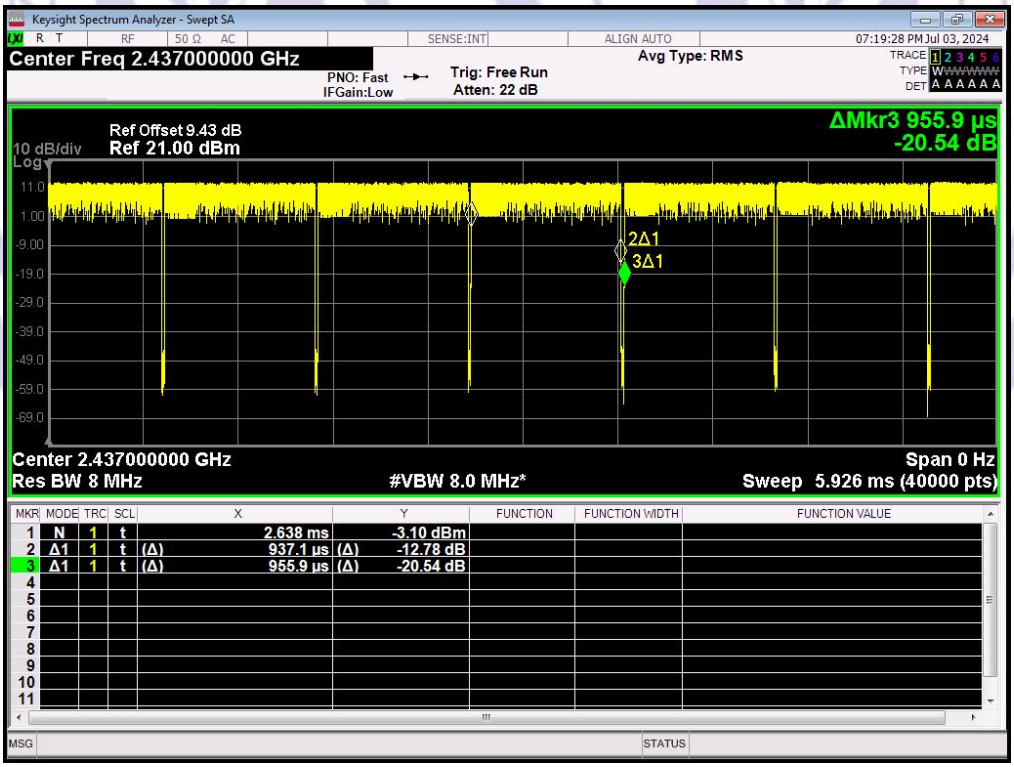
The EUT was programmed to be in continuously transmitting mode.

11.5 Test result

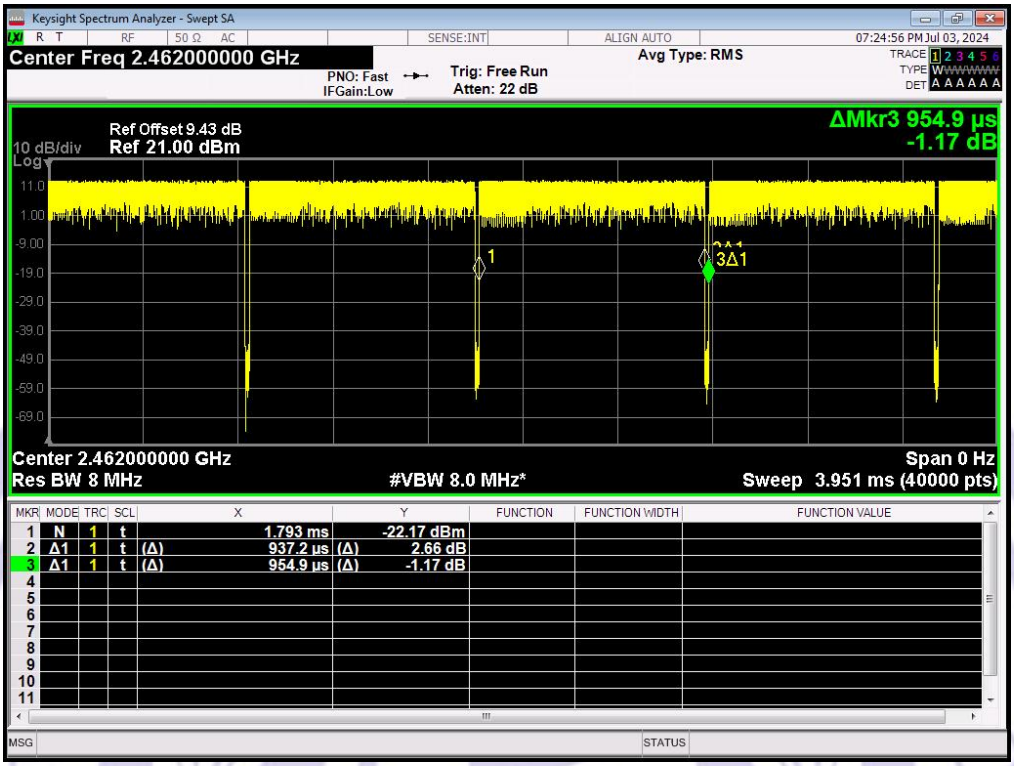
Mode	Data rates	Channel	Antenna	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle (linear)	Duty Cycle Factor (dB)
IEEE 802.11b	11	1	1	0.937	0.956	98.04	0.9804	0.086
		6		0.937	0.956	98.03	0.9803	0.0864
		11		0.937	0.955	98.15	0.9815	0.0811
IEEE 802.11g	54	1		0.177	0.194	91.24	0.9124	0.3981
		6		0.177	0.194	91.17	0.9117	0.4015
		11		0.177	0.194	91.24	0.9124	0.3981
IEEE 802.11n_20	MCS 7	1		0.545	0.562	97.05	0.9705	0.13
		6		0.545	0.562	97.05	0.9705	0.13
		11		0.545	0.562	97.05	0.9705	0.13
IEEE 802.11n_40		3		0.281	0.298	94.23	0.9423	0.2581
		6		0.281	0.298	94.17	0.9417	0.2609
		9		0.281	0.298	94.30	0.9430	0.2549



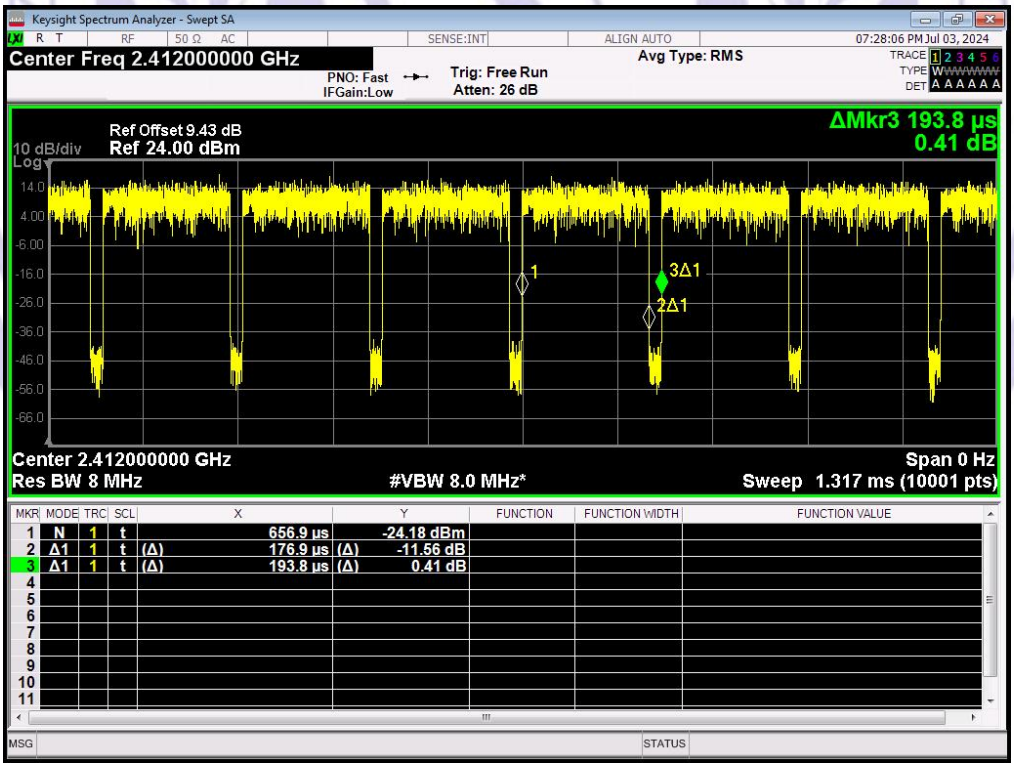
IEEE 802.11b_20MHz_Channel 1



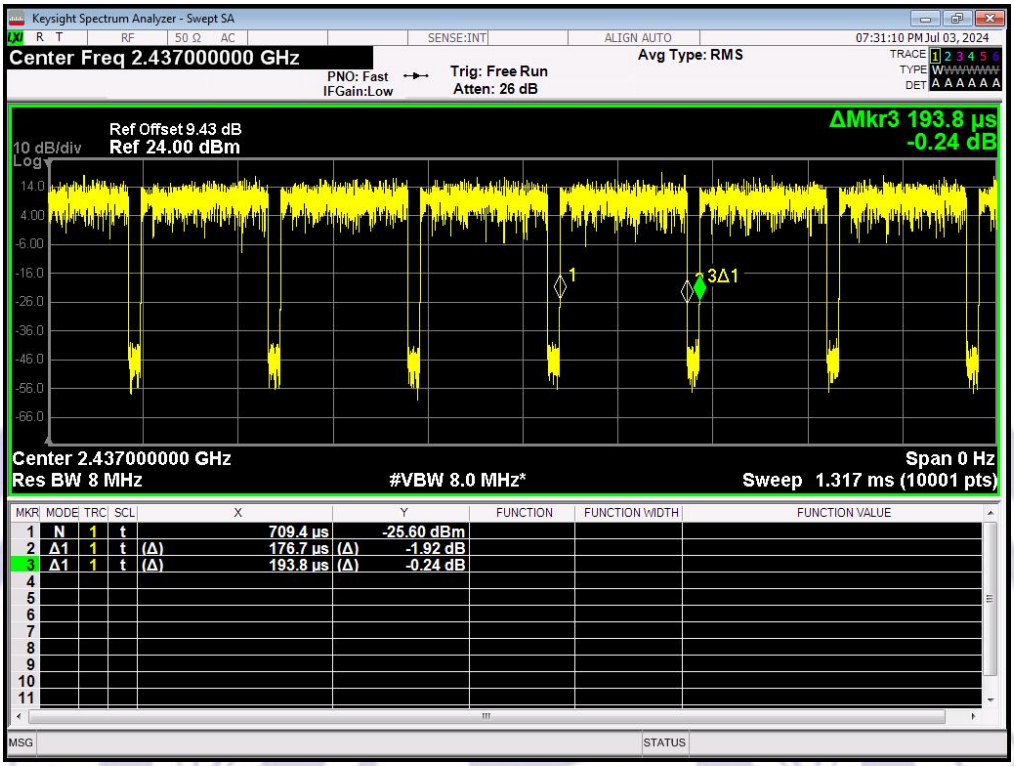
IEEE 802.11b_20MHz_Channel 6



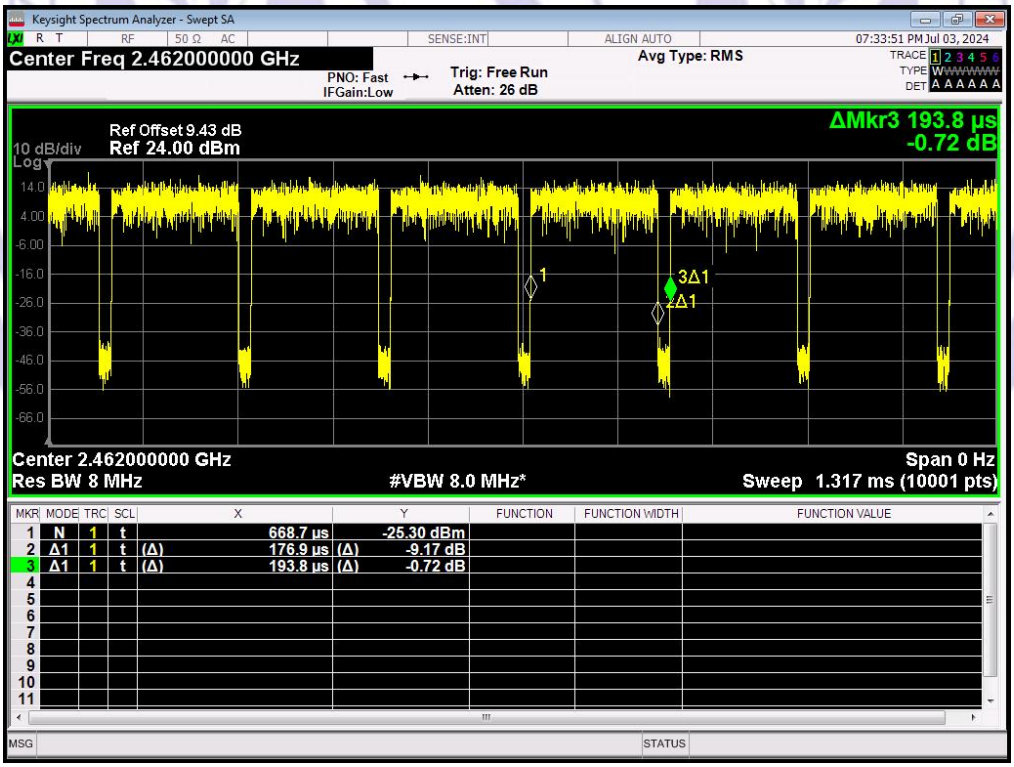
IEEE 802.11b_20MHz_Channel 11



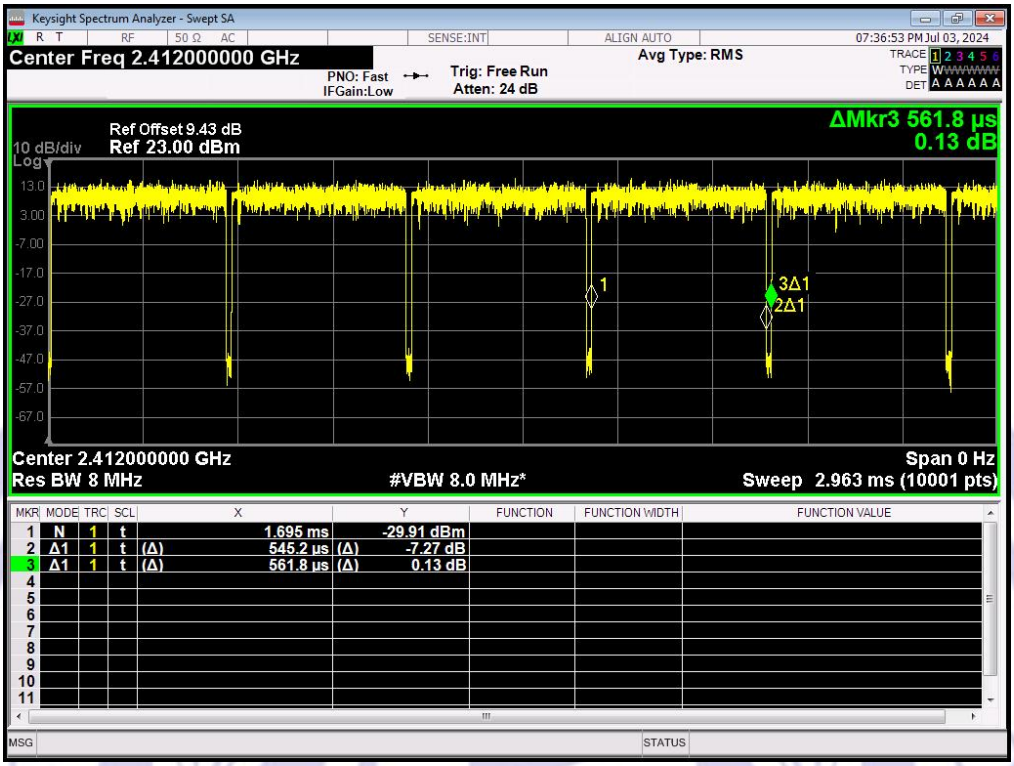
IEEE 802.11g_20MHz_Channel 1



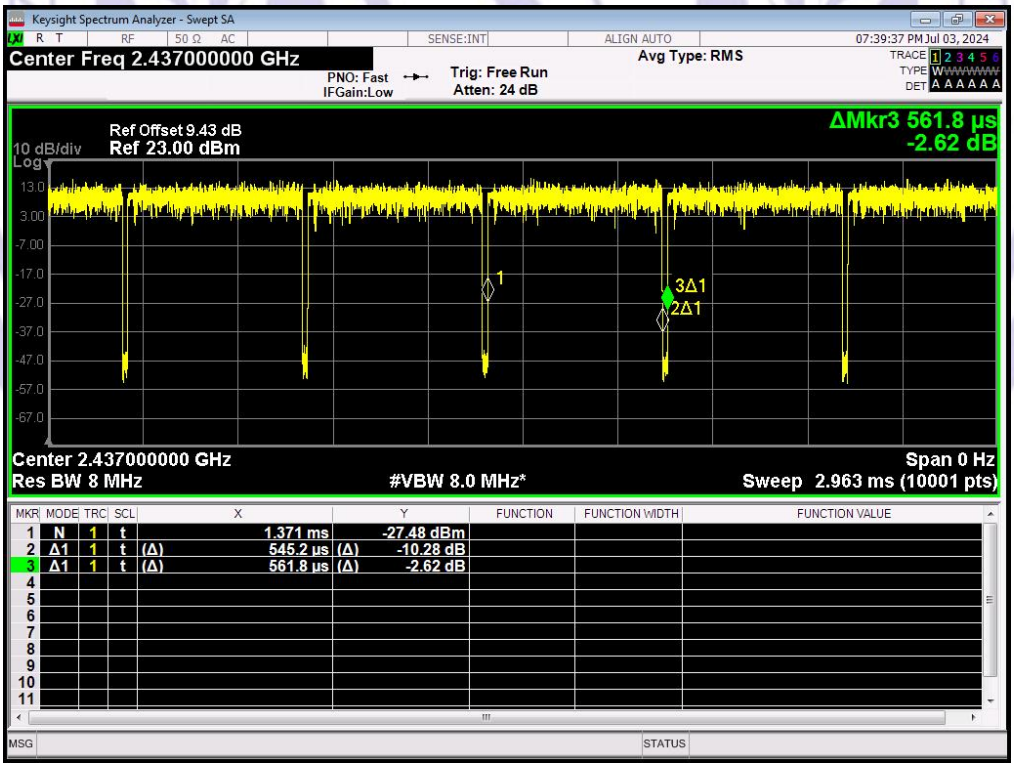
IEEE 802.11g_20MHz_Channel 6



IEEE 802.11g_20MHz_Channel 11



IEEE 802.11n_20MHz_Channel 1



IEEE 802.11n_20MHz_Channel 6