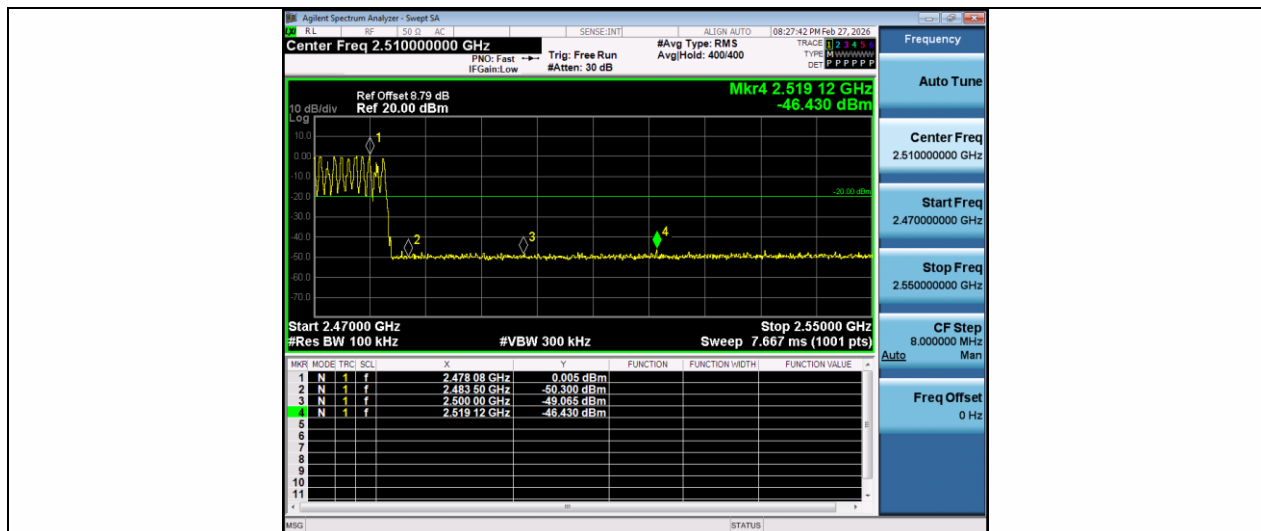
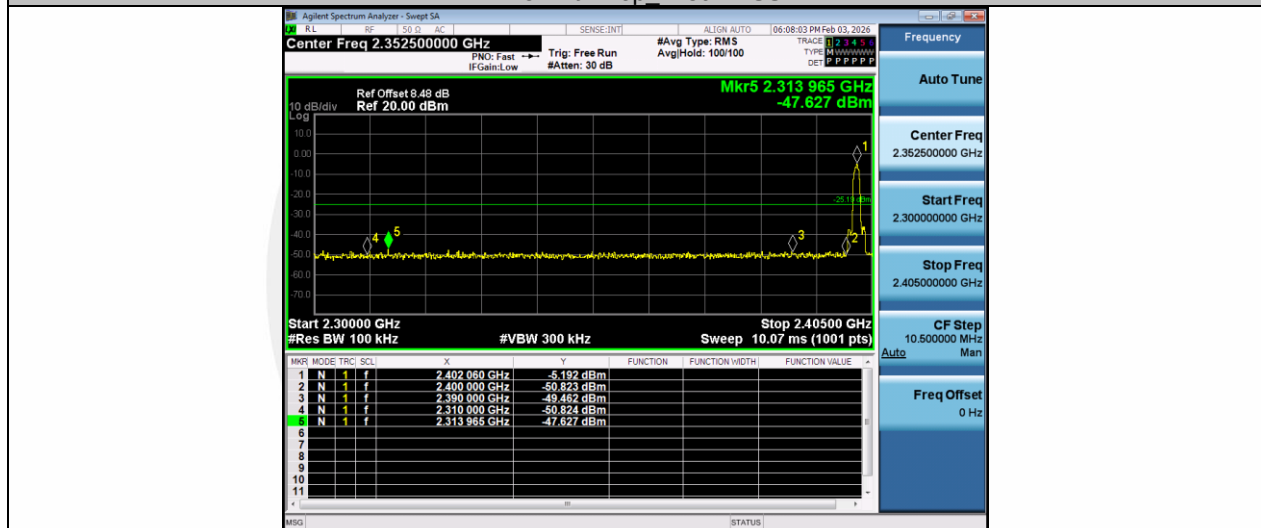
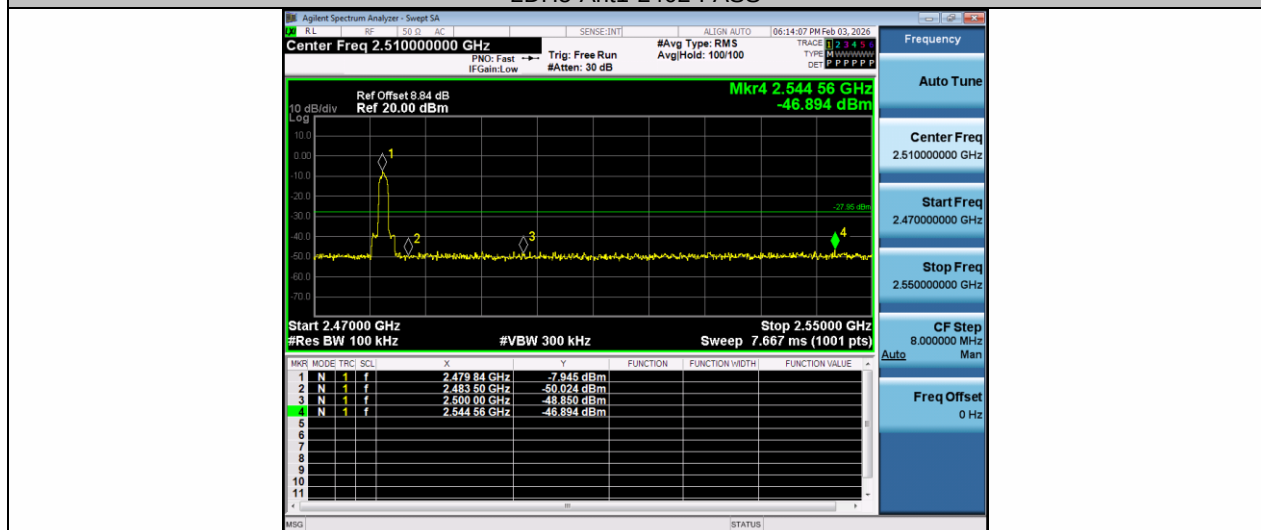




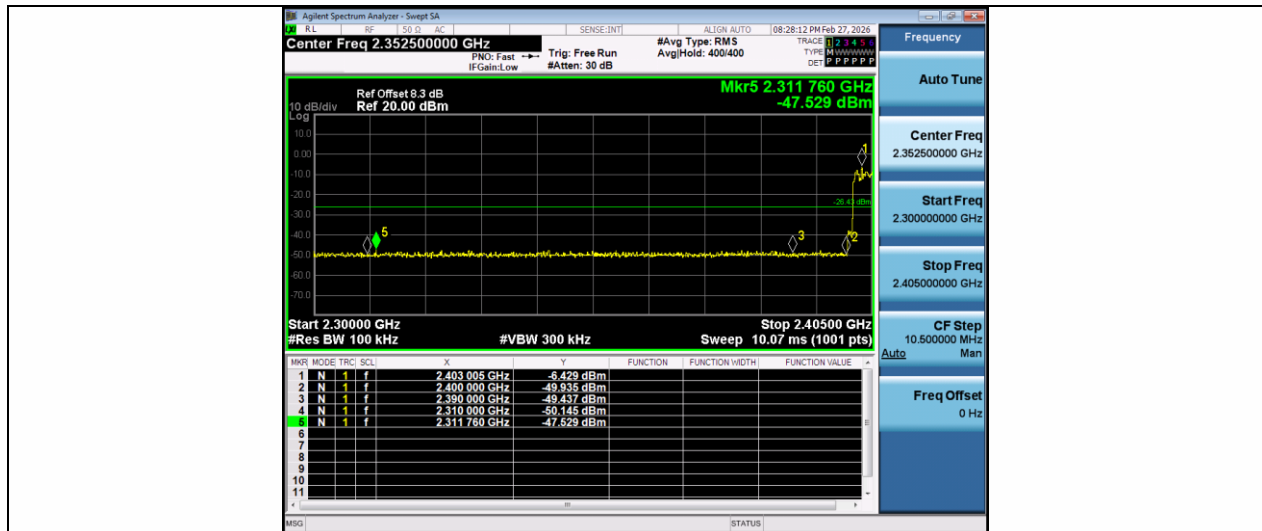
DH5-Ant1-Hop_2480-PASS



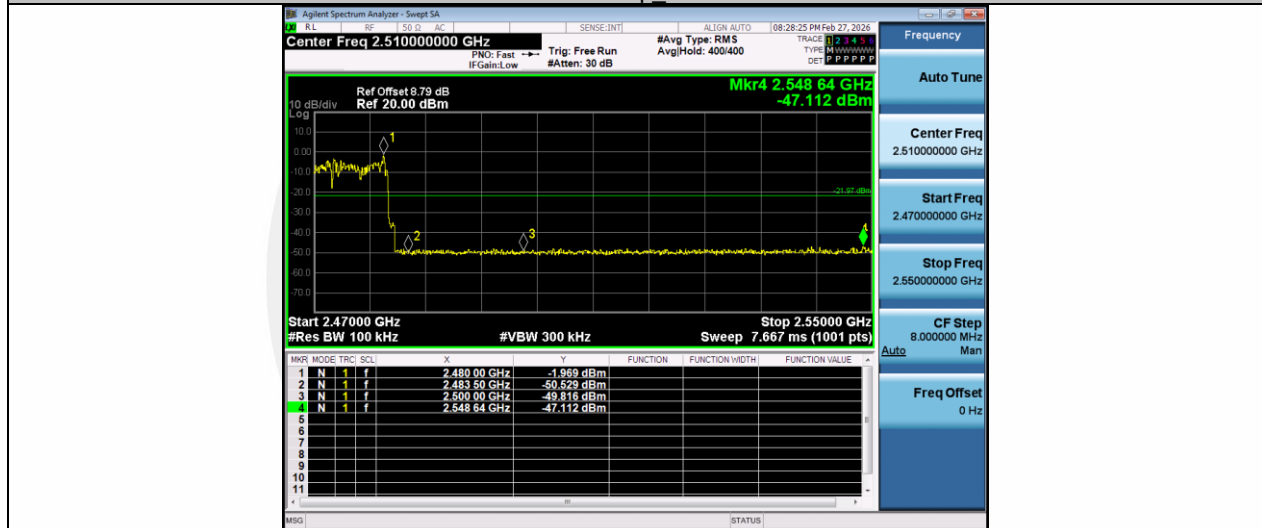
2DH5-Ant1-2402-PASS



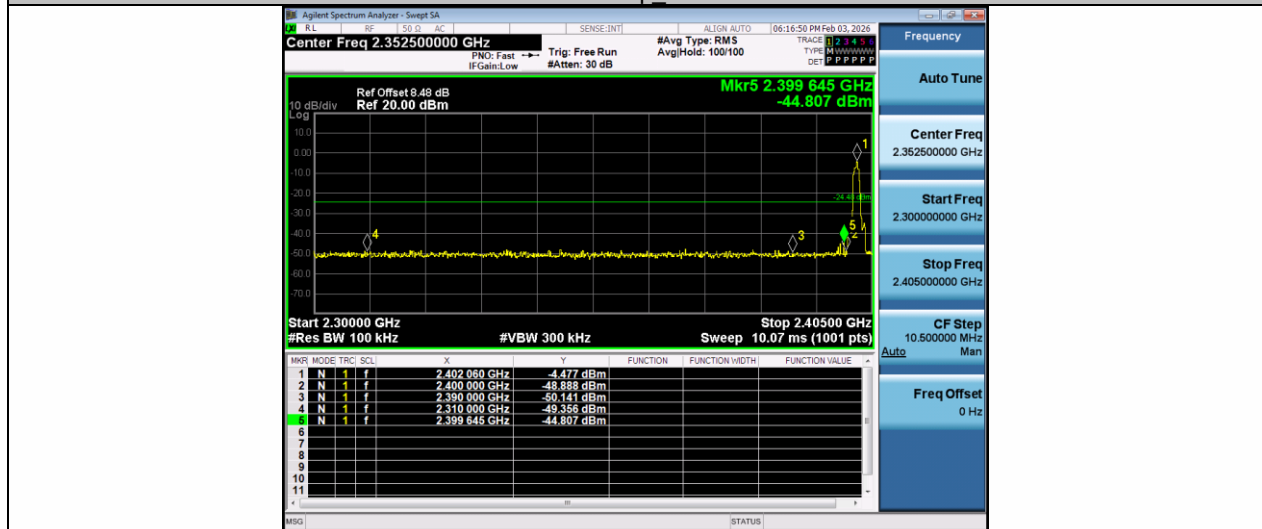
2DH5-Ant1-2480-PASS



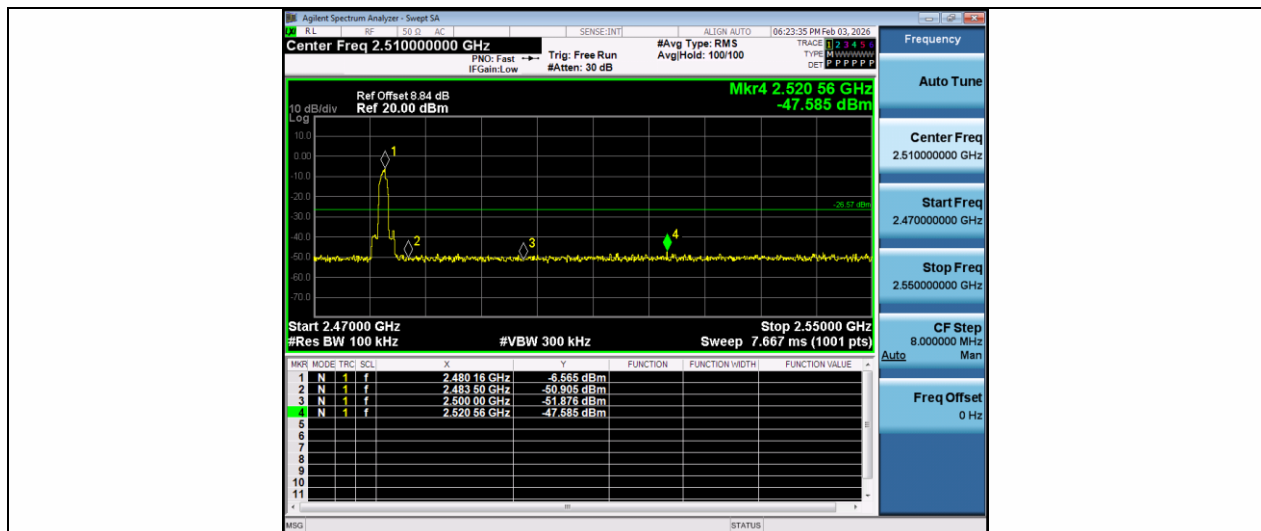
2DH5-Ant1-Hop 2402-PASS



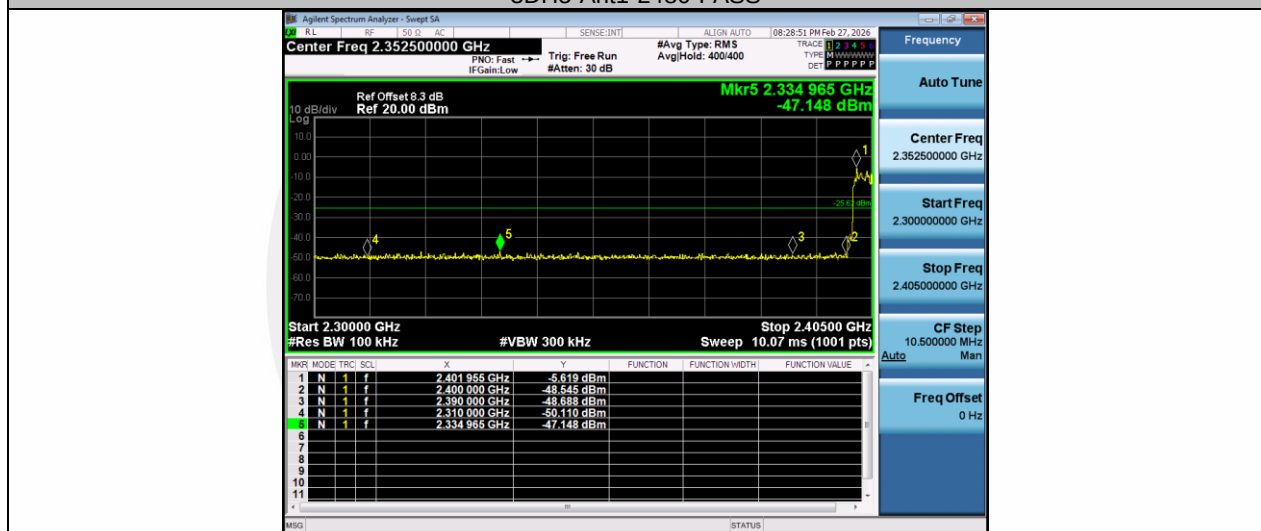
2DH5-Ant1-Hop 2480-PASS



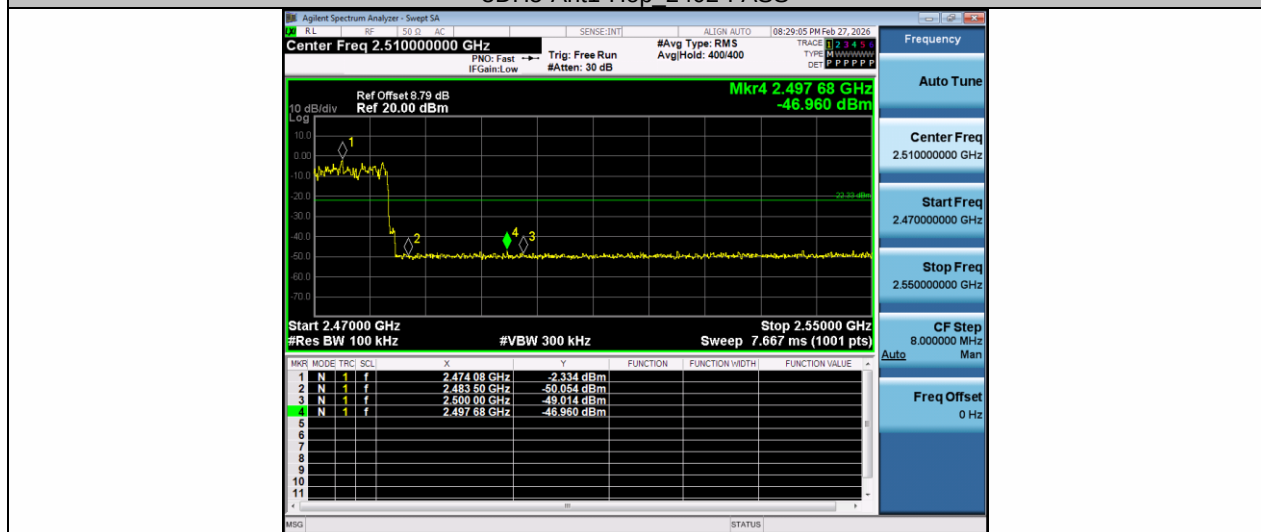
3DH5-Ant1-2402-PASS



3DH5-Ant1-2480-PASS



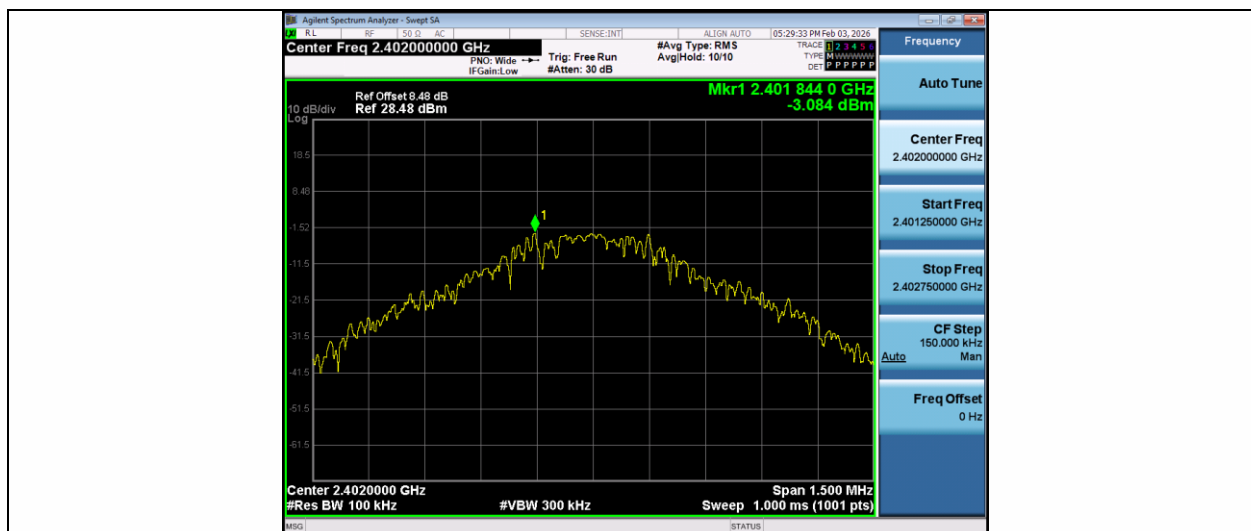
3DH5-Ant1-Hop 2402-PASS



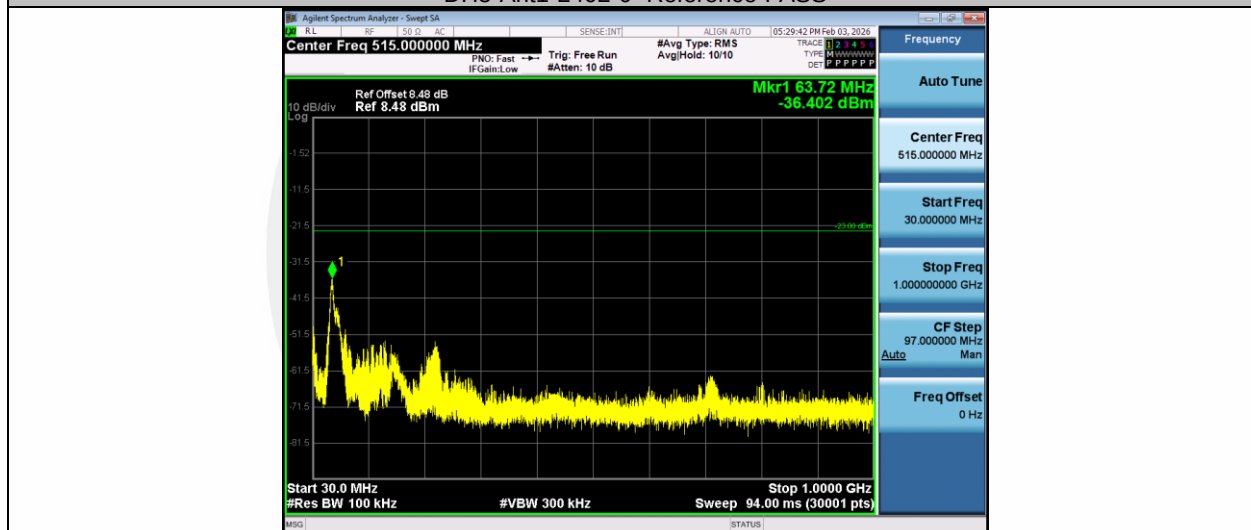
3DH5-Ant1-Hop 2480-PASS

Conduceted Spurious Emission

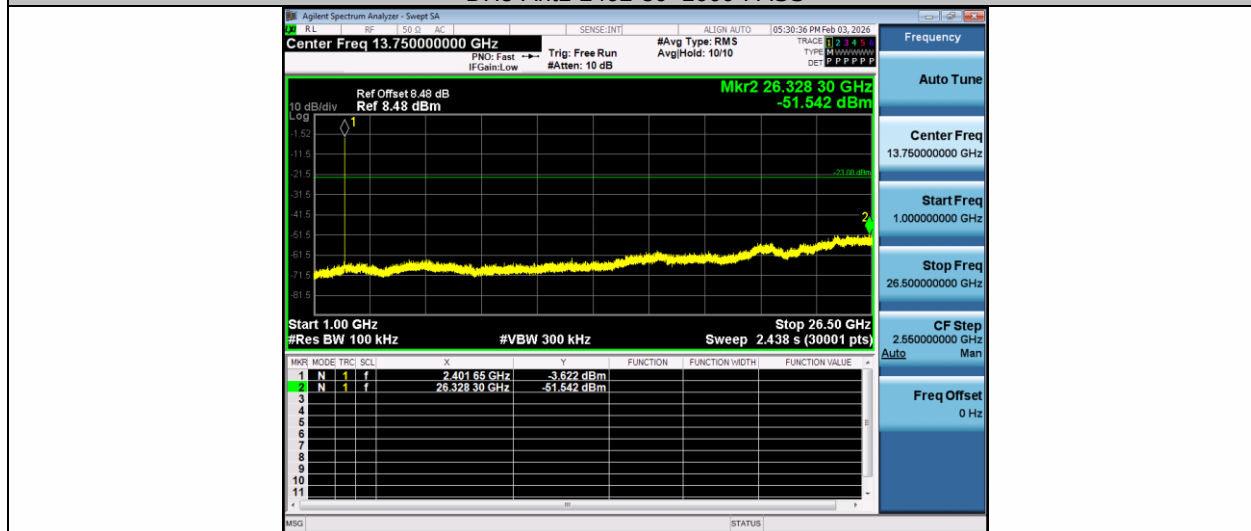
TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	0~Reference	-3.08	-3.08	---	PASS
			30~1000	-3.08	-36.4	≤-23.08	PASS
			1000~26500	-3.08	-51.54	≤-23.08	PASS
		2441	0~Reference	-0.84	-0.84	---	PASS
			30~1000	-0.84	-37.02	≤-20.84	PASS
			1000~26500	-0.84	-51.31	≤-20.84	PASS
		2480	0~Reference	-5.12	-5.12	---	PASS
			30~1000	-5.12	-36.38	≤-25.12	PASS
			1000~26500	-5.12	-50.83	≤-25.12	PASS
2DH5	Ant1	2402	0~Reference	-4.54	-4.54	---	PASS
			30~1000	-4.54	-37.46	≤-24.54	PASS
			1000~26500	-4.54	-50.88	≤-24.54	PASS
		2441	0~Reference	-5.49	-5.49	---	PASS
			30~1000	-5.49	-37.11	≤-25.49	PASS
			1000~26500	-5.49	-50.89	≤-25.49	PASS
		2480	0~Reference	-7.37	-7.37	---	PASS
			30~1000	-7.37	-36.95	≤-27.37	PASS
			1000~26500	-7.37	-51.04	≤-27.37	PASS
3DH5	Ant1	2402	0~Reference	-6.43	-6.43	---	PASS
			30~1000	-6.43	-37.3	≤-26.43	PASS
			1000~26500	-6.43	-50.81	≤-26.43	PASS
		2441	0~Reference	-4.18	-4.18	---	PASS
			30~1000	-4.18	-37.14	≤-24.18	PASS
			1000~26500	-4.18	-51.1	≤-24.18	PASS
		2480	0~Reference	-9.29	-9.29	---	PASS
			30~1000	-9.29	-36.75	≤-29.29	PASS
			1000~26500	-9.29	-50.6	≤-29.29	PASS



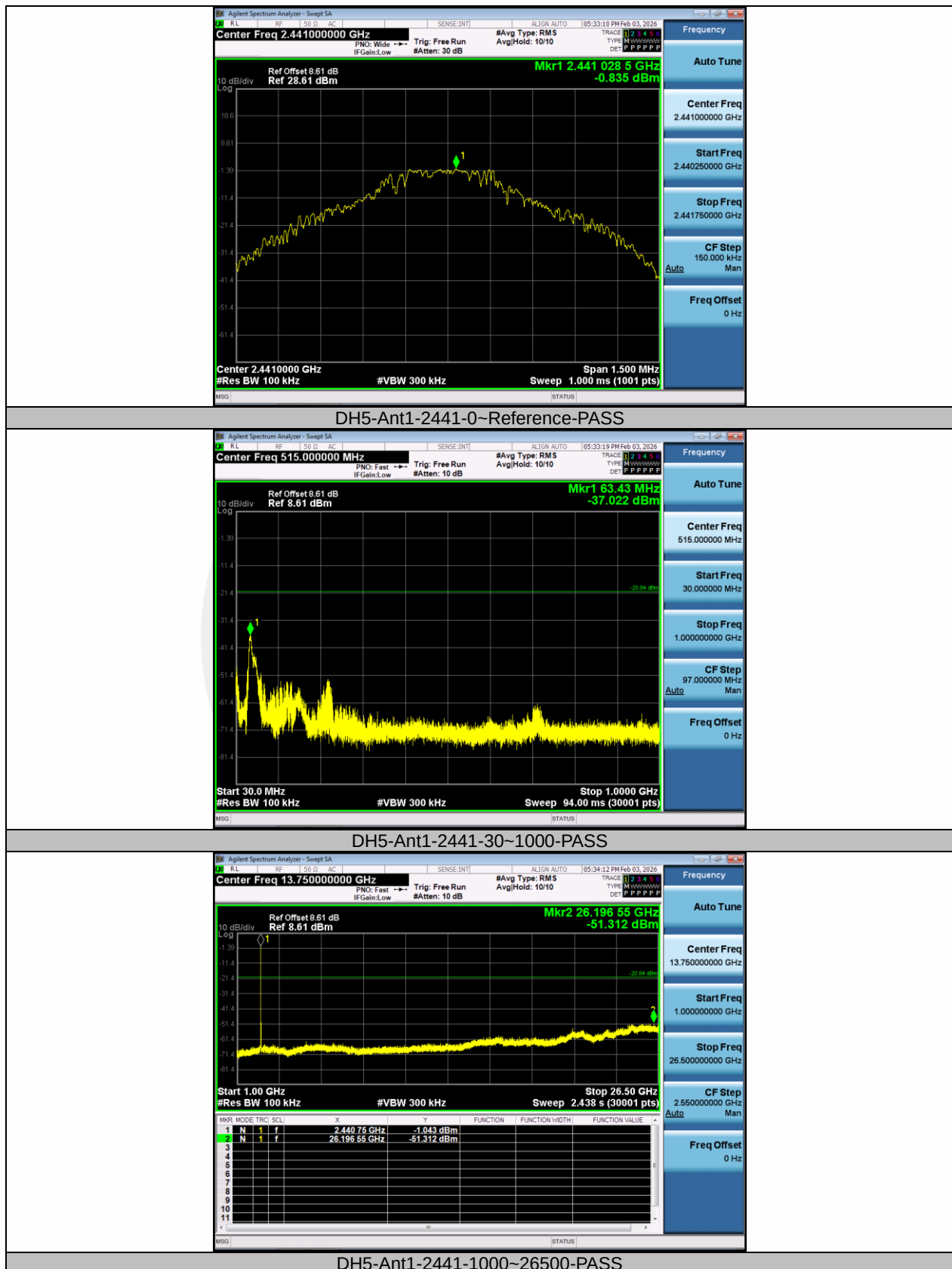
DH5-Ant1-2402-0~Reference-PASS

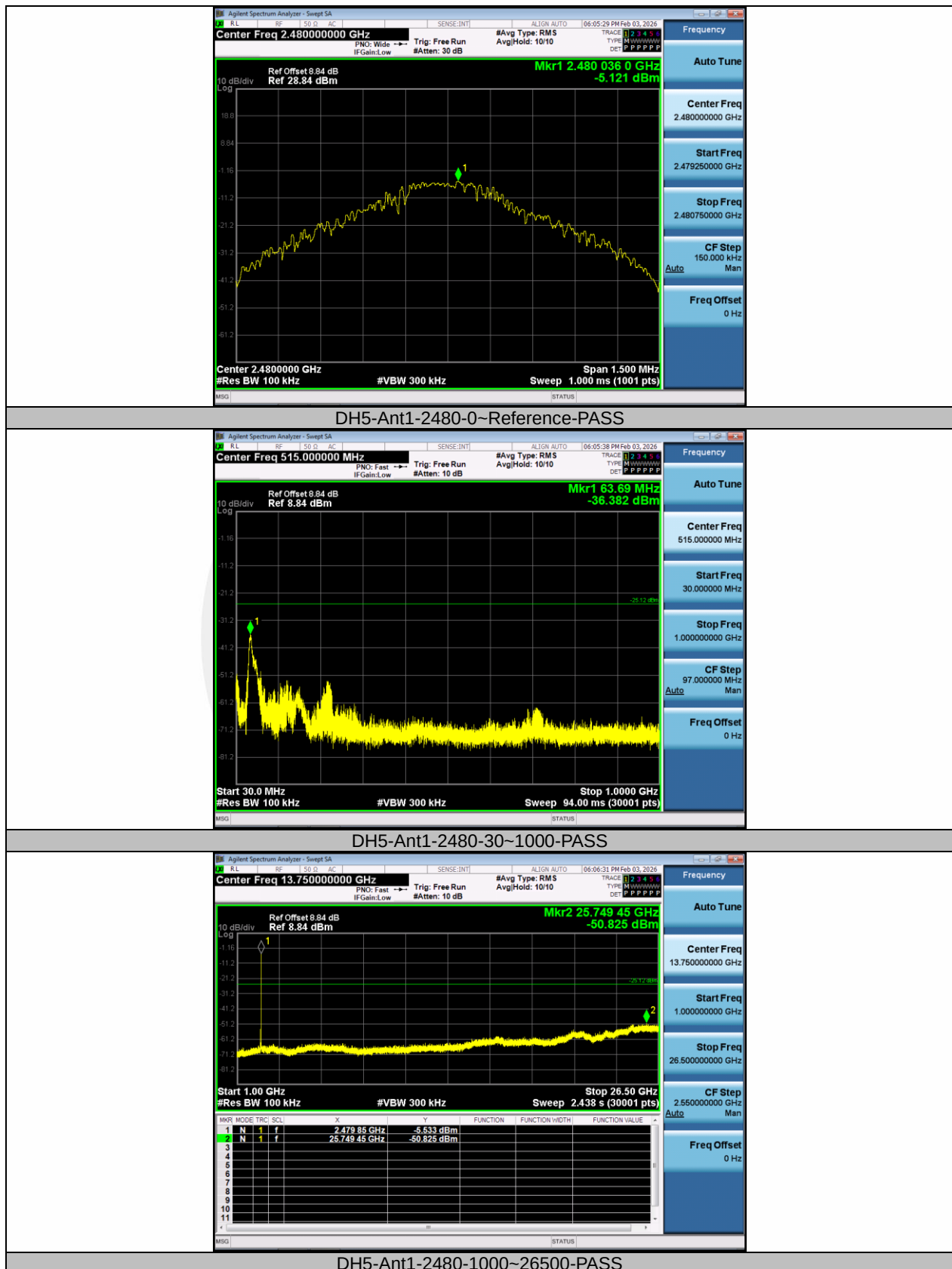


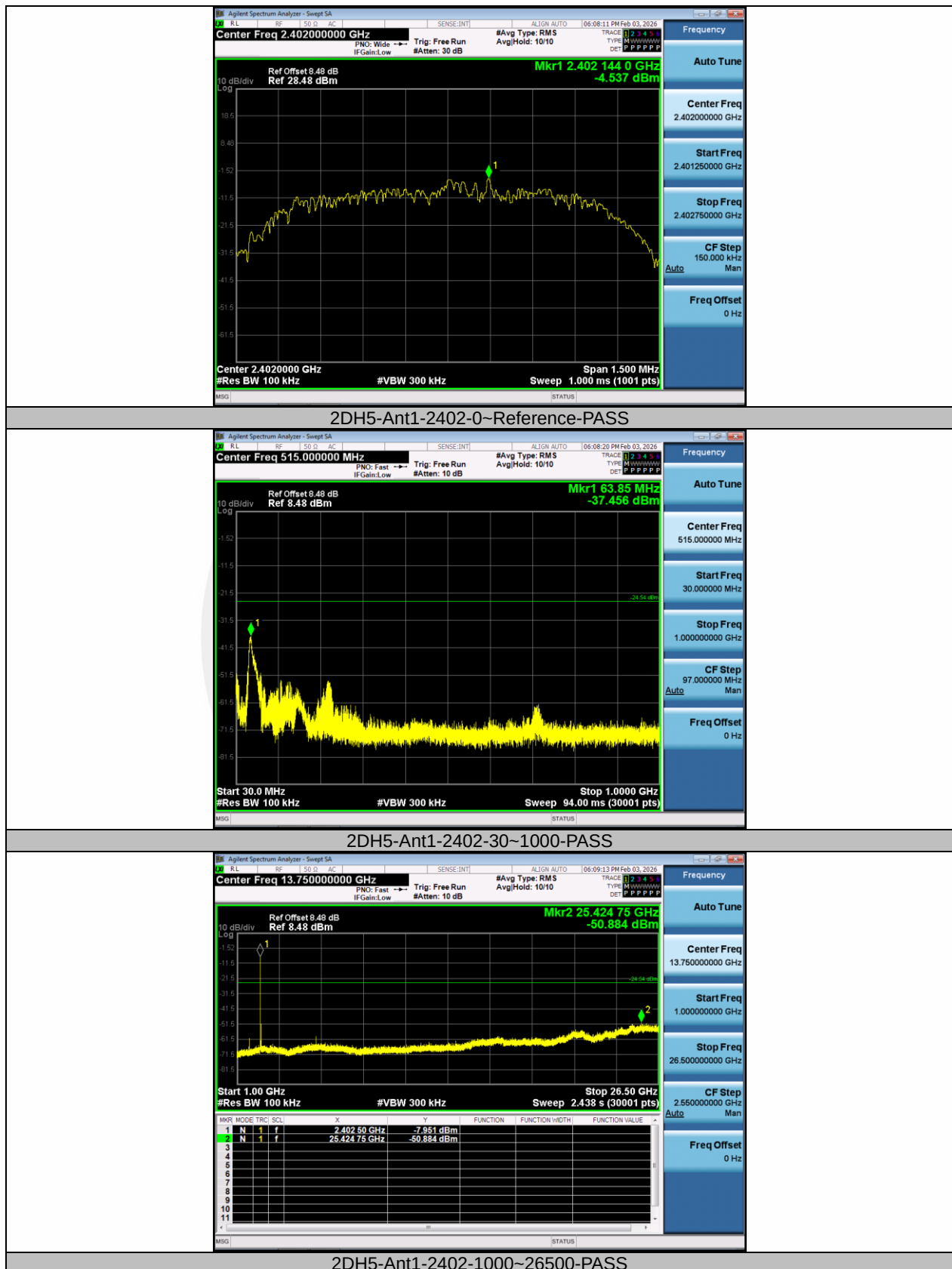
DH5-Ant1-2402-30~1000-PASS

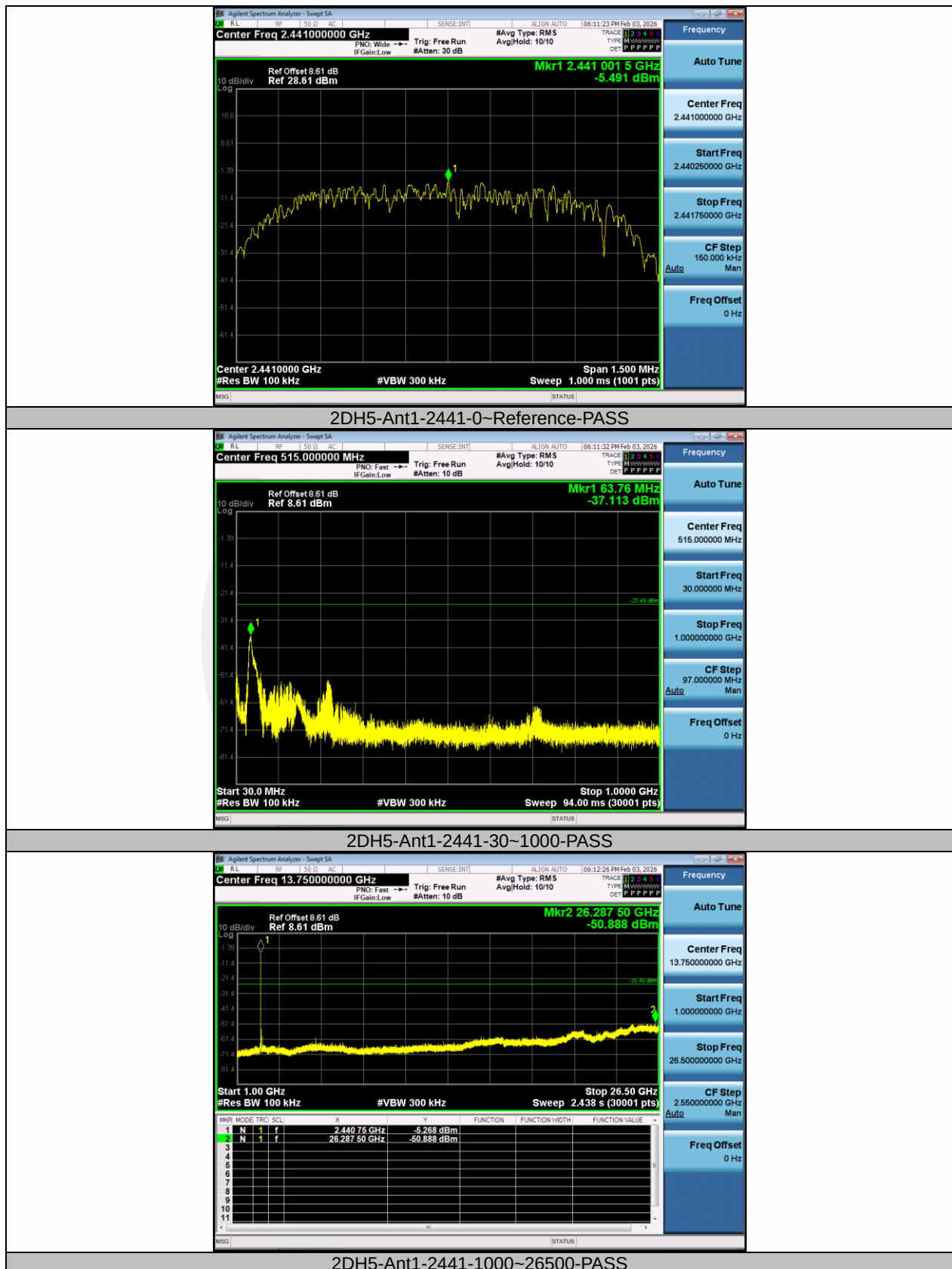


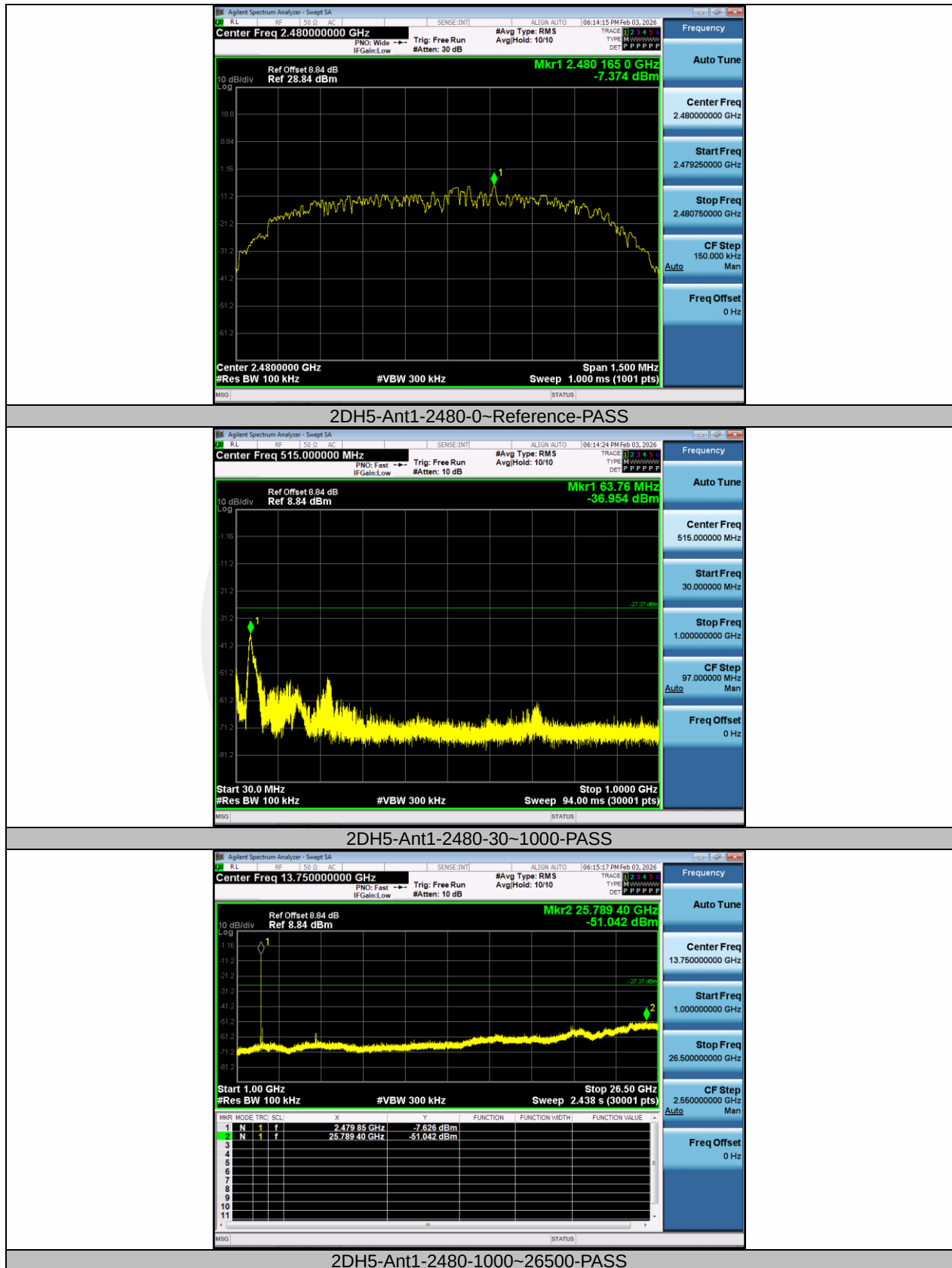
DH5-Ant1-2402-1000~26500-PASS

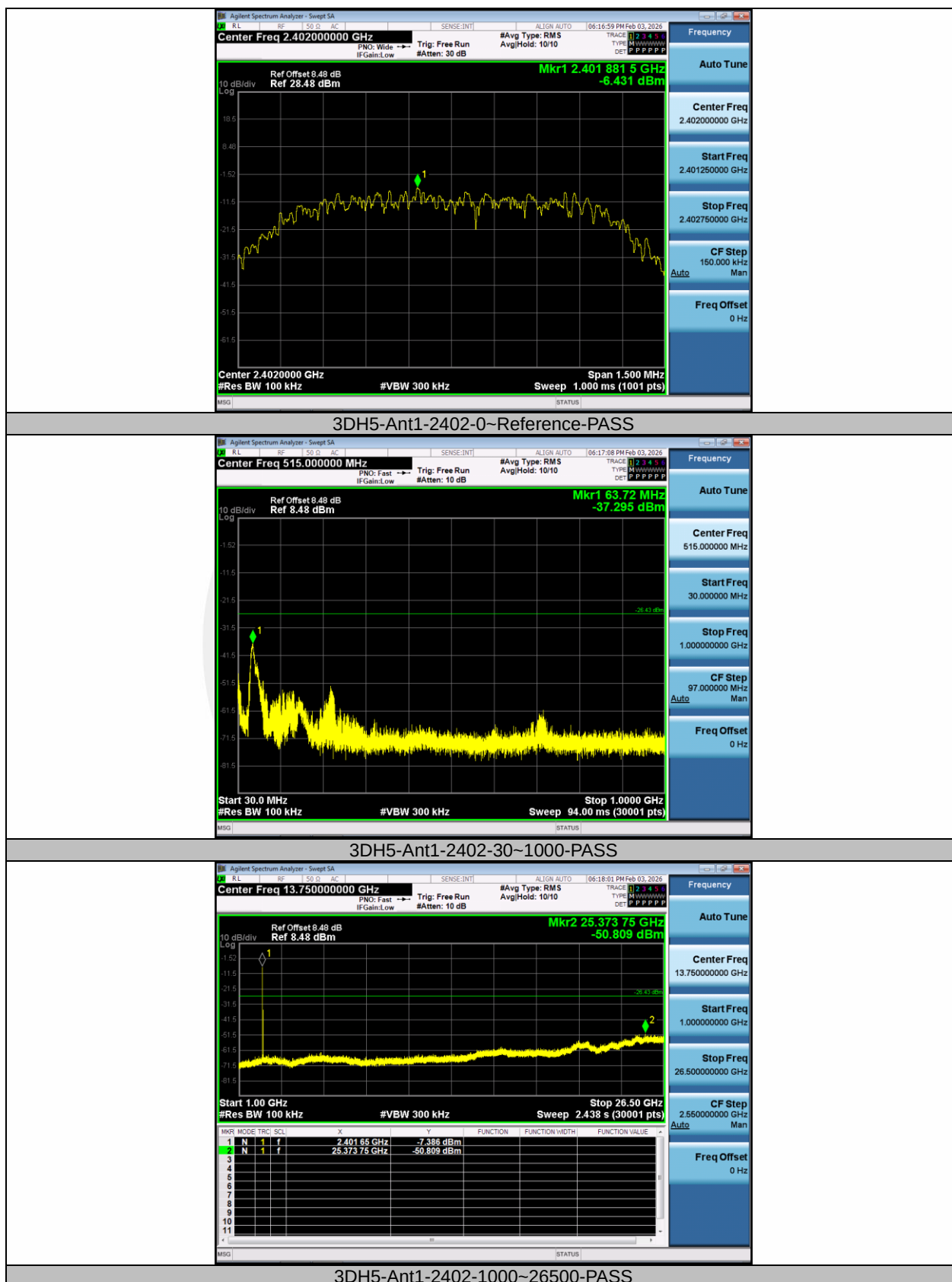


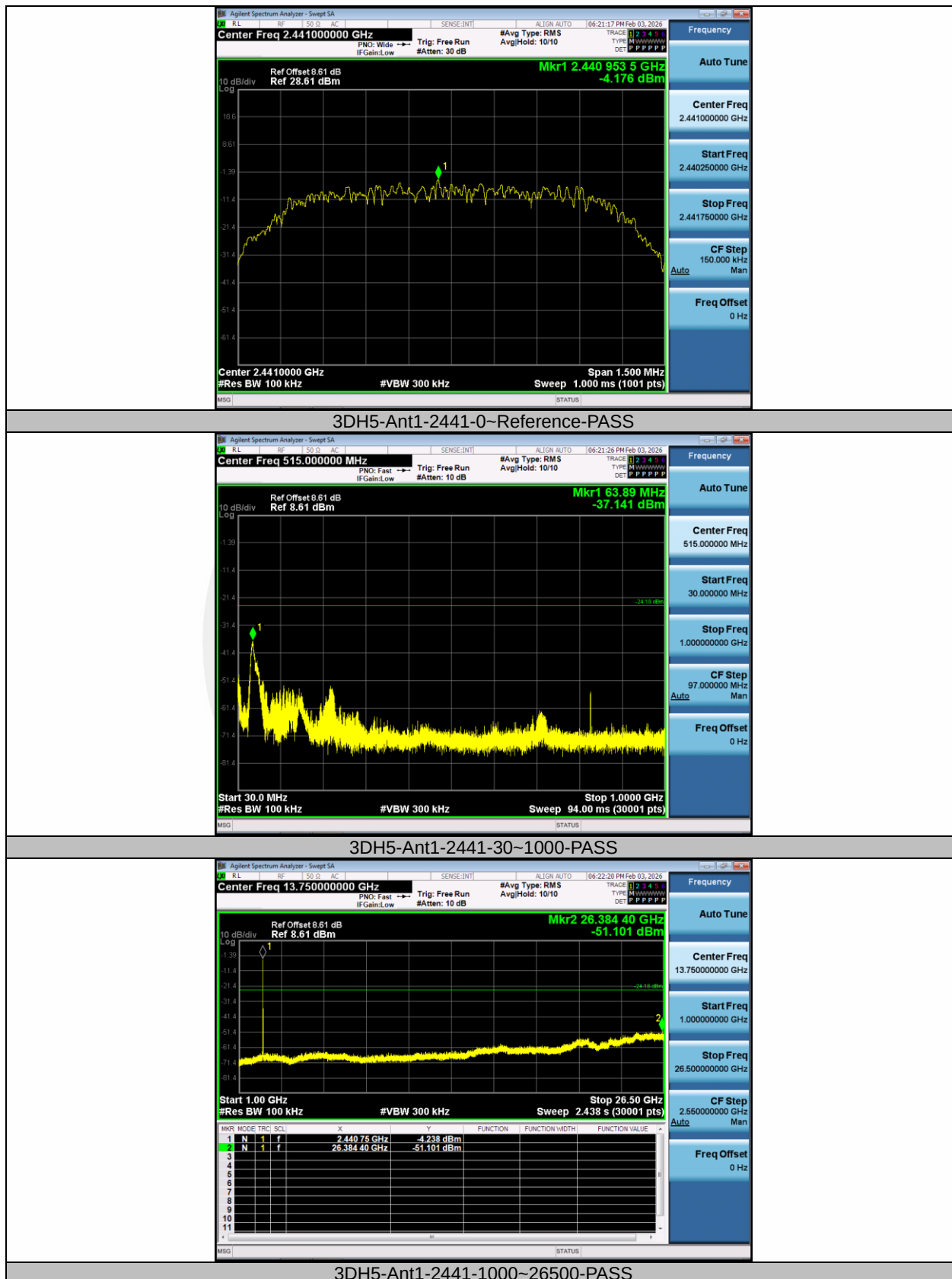


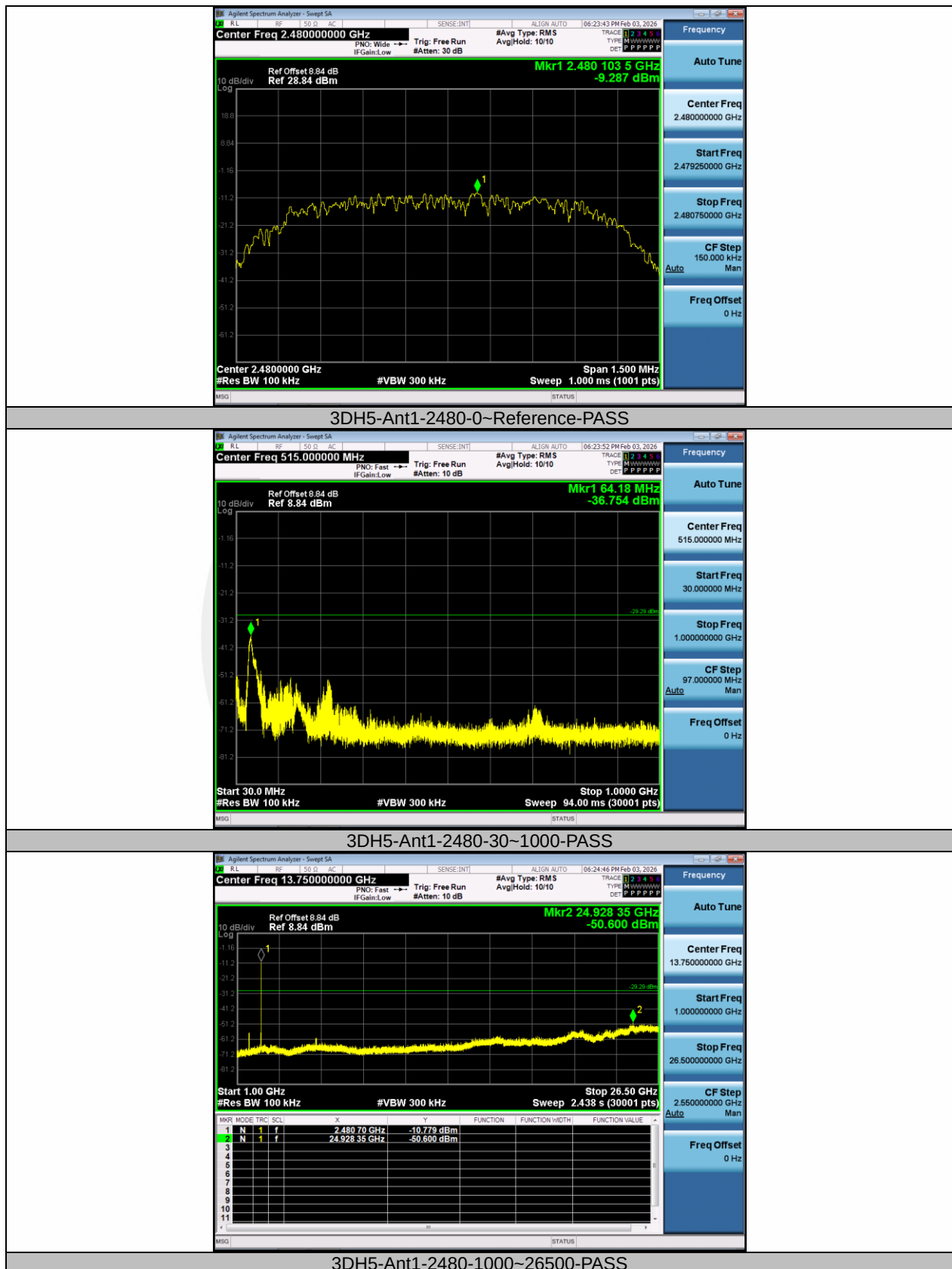












9.7 RADIATED SPURIOUS EMISSION

9.7.1 Applicable Standard

According to FCC Part 15.247(d) and 15.209 and KDB 558074 D01 15.247 MEAS GUIDANCE v05r02

9.7.2 Conformance Limit

According to FCC Part 15.247(d): 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) (see §15.205(c)).

According to FCC Part 15.205, Restricted bands

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
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	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	Above 38.6
13.36-13.41			

According to FCC Part 15.205, the level of any transmitter spurious emission in Restricted bands shall not exceed the level of the emission specified in the following table

Restricted Frequency(MHz)	Field Strength (μV/m)	Field Strength (dBμV/m)	Measurement Distance
0.009-0.490	2400/F(KHz)	20 log (uV/m)	300
0.490-1.705	24000/F(KHz)	20 log (uV/m)	30
1.705-30	30	29.5	30
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

9.7.3 Test Configuration

Test according to clause 7.2 radio frequency test setup 2

9.7.4 Test Procedure

This test is required for any spurious emission that falls in a Restricted Band, as defined in Section 15.205. It must be performed with the highest gain of each type of antenna proposed for use with the EUT. Use the following spectrum analyzer settings:

For Above 1GHz:

The EUT was placed on a turn table which is 1.5m above ground plane.

Maximum procedure was performed on the highest emissions to ensure EUT compliance.

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz

VBW ≥ RBW

Sweep = auto

Detector function = peak

Trace = max hold

For Below 1GHz:

The EUT was placed on a turn table which is 0.8m above ground plane.

Maximum procedure was performed on the highest emissions to ensure EUT compliance.

Span = wide enough to fully capture the emission being measured

RBW = 100 kHz for

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

For Below 30MHz:

The EUT was placed on a turn table which is 0.8m above ground plane.

Maximum procedure was performed on the highest emissions to ensure EUT compliance.

Span = wide enough to fully capture the emission being measured

RBW = 9kHz

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

For Below 150KHz:

The EUT was placed on a turn table which is 0.8m above ground plane.

Maximum procedure was performed on the highest emissions to ensure EUT compliance.

Span = wide enough to fully capture the emission being measured

RBW = 200Hz

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

Follow the guidelines in ANSI C63.10 with respect to maximizing the emission by rotating the EUT, measuring the emission while the EUT is situated in three orthogonal planes (if appropriate), adjusting the measurement antenna height and polarization, etc. A pre-amp and a high pass filter are required for this test, in order to provide the measuring system with sufficient sensitivity. Allow the trace to stabilize. The peak reading of the emission, after being corrected by the antenna factor, cable loss, pre-amp gain, etc., is the peak field strength, which must comply with the limit specified in Section 15.35(b). Submit this data.

Now set the VBW to 10 Hz, while maintaining all of the other instrument settings. This peak level, once corrected, must comply with the limit specified in Section 15.209. If the dwell time per channel of the hopping signal is less than 100 ms, then the reading obtained with the 10 Hz VBW may be further adjusted by a "duty cycle correction factor", derived from $20\log(\text{dwell time}/100 \text{ ms})$, in an effort to demonstrate compliance with the 15.209 limit. Submit this data.

Repeat above procedures until all frequency measured was complete.

9.7.5 Test Results

Pass

■ Spurious Emission below 30MHz (9KHz to 30MHz)

Temperature:	25° C
Relative Humidity:	60%
ATM Pressure:	1011 mbar

Freq. (MHz)	Ant.Pol. H/V	Emission Level(dBuV/m)		Limit 3m(dBuV/m)		Over(dB)	
		PK	AV	PK	AV	PK	AV
--	--	--	--	--	--	--	--

Note: the amplitude of spurious emission that is attenuated by more than 20dB below the permissible limit has no need to be reported.

Distance extrapolation factor = $40 \log(\text{Specific distance} / \text{test distance})$ (dB);

Limit line = Specific limits(dBuV) + distance extrapolation factor

■ Spurious Emission Above 1GHz (1GHz to 25GHz)

Bluetooth (GFSK, $\pi/4$ -DQPSK, 8DPSK) mode have been tested, and the worst result(GFSK) was report as below:

Test mode:	GFSK	Frequency:	Channel 0: 2402MHz
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Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
4725	V	49.48	74.00	24.52	peak
8332.5	V	58.50	74.00	15.50	peak
17109.375	V	67.31	74.00	6.69	peak
4725	V	32.35	54.00	21.65	AVG
8332.5	V	37.62	54.00	16.38	AVG
17109.375	V	48.95	54.00	5.05	AVG
4781.25	H	49.60	74.00	24.40	peak
8448.75	H	59.11	74.00	14.89	peak
17060.625	H	67.05	74.00	6.95	peak
4781.25	H	31.99	54.00	22.01	AVG
8448.75	H	38.71	54.00	15.29	AVG
17060.625	H	49.57	54.00	4.43	AVG

Test mode:	GFSK	Frequency:	Channel 39: 2441MHz
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Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
4680	V	50.85	74.00	23.15	peak
8341.875	V	58.96	74.00	15.04	peak
17285.625	V	67.86	74.00	6.14	peak
4680	V	32.16	54.00	21.84	AVG
8341.875	V	38.07	54.00	15.93	AVG
17285.625	V	48.88	54.00	5.12	AVG
3155.625	H	45.11	74.00	28.89	peak
8325	H	58.56	74.00	15.44	peak
17460	H	67.17	74.00	6.83	peak
3155.625	H	28.16	54.00	25.84	AVG
8325	H	38.29	54.00	15.71	AVG
17460	H	50.36	54.00	3.64	AVG

Test mode: GFSK Frequency: Channel 78: 2480MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
3181.875	V	44.81	74.00	29.19	peak
8439.375	V	58.98	74.00	15.02	peak
17926.875	V	67.34	74.00	6.66	peak
3181.875	V	27.55	54.00	26.45	AVG
8439.375	V	38.97	54.00	15.03	AVG
17926.875	V	49.36	54.00	4.64	AVG
3103.125	H	44.56	74.00	29.44	peak
8338.125	H	58.91	74.00	15.09	peak
16966.875	H	67.11	74.00	6.89	peak
3103.125	H	28.17	54.00	25.83	AVG
8338.125	H	38.64	54.00	15.36	AVG
16966.875	H	50.06	54.00	3.94	AVG

- Note:**
- (1) All Readings are Peak Value (VBW=3MHz) and Peak Value (VBW=10Hz).
 - (2) Emission Level= Reading Level+Probe Factor +Cable Loss.
 - (3) The reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
 - (4) Only records the worst data in tabular form.