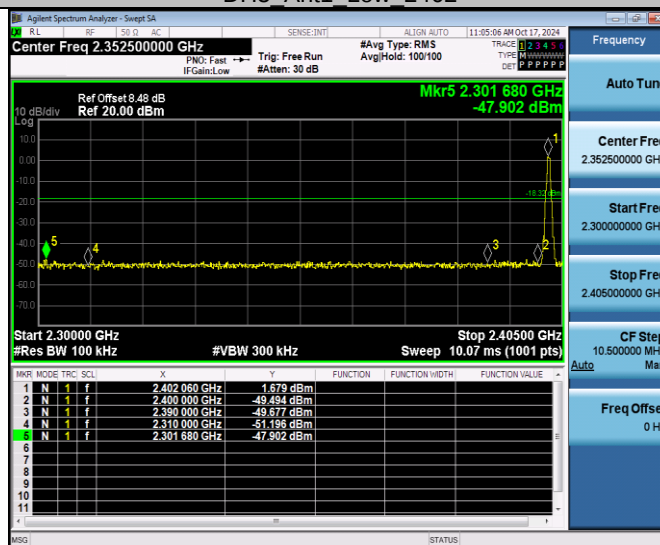
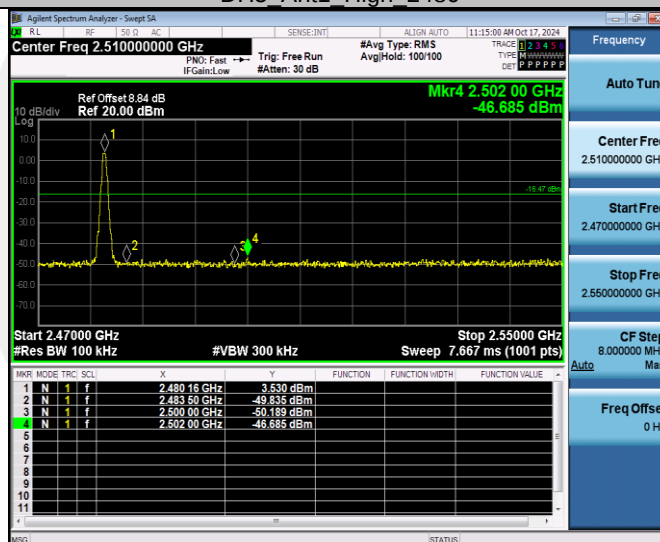


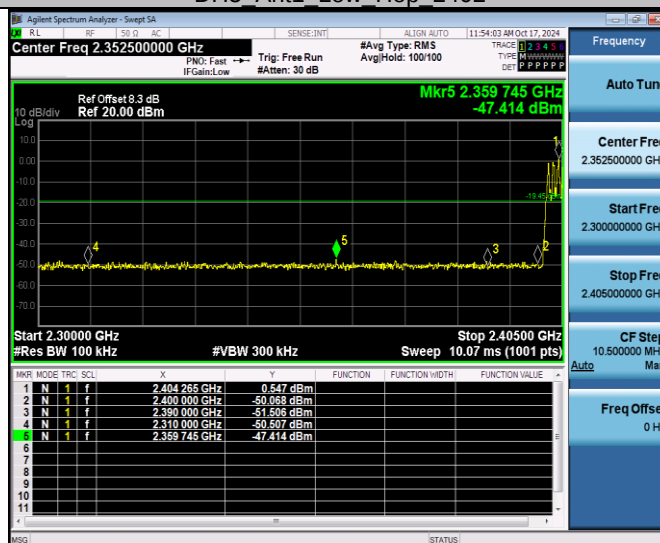
DH5 Ant1 Low 2402



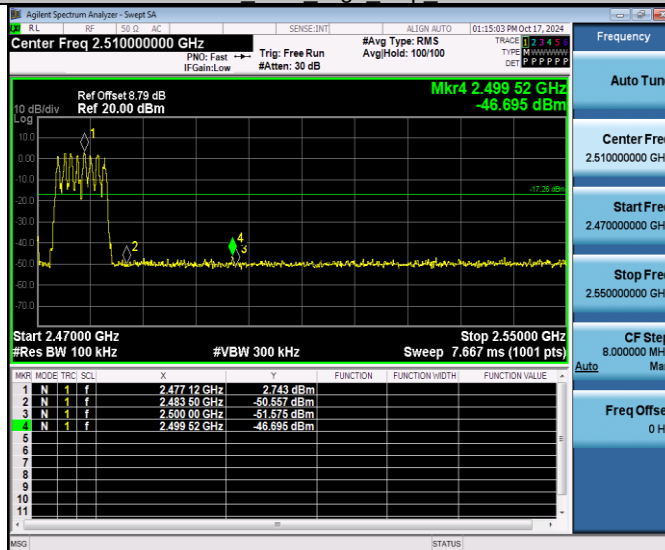
DH5 Ant1 High 2480



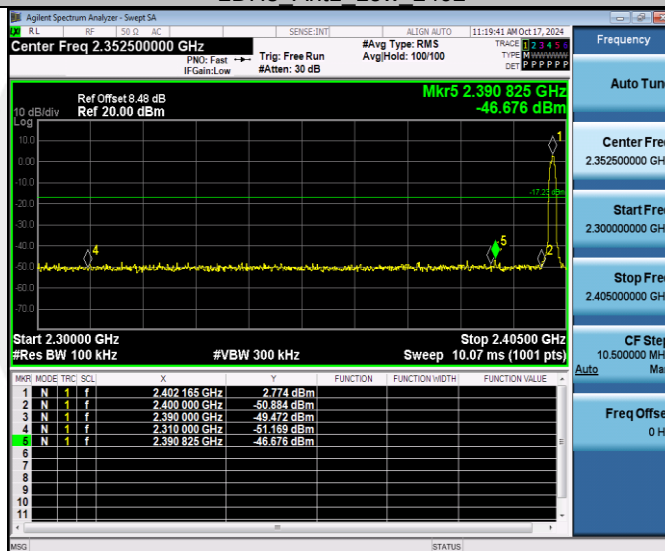
DH5 Ant1 Low Hop 2402



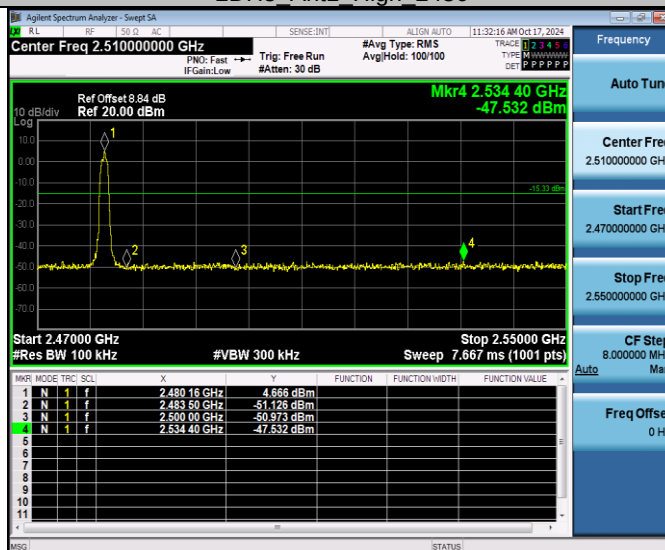
DH5 Ant1_High Hop 2480



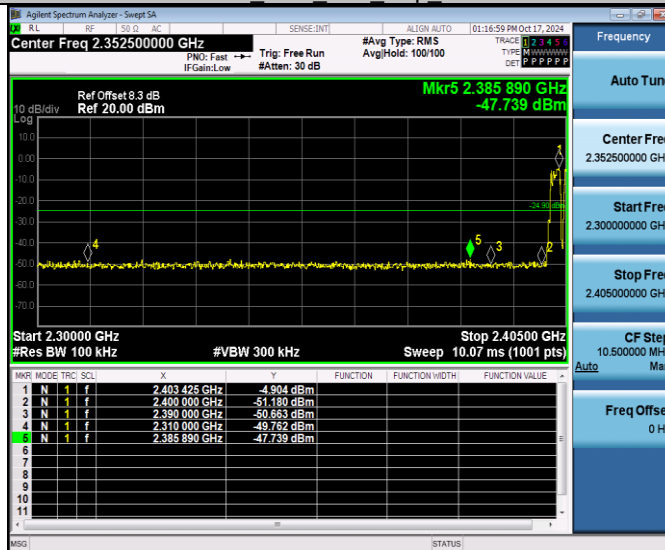
2DH5 Ant1_Low 2402



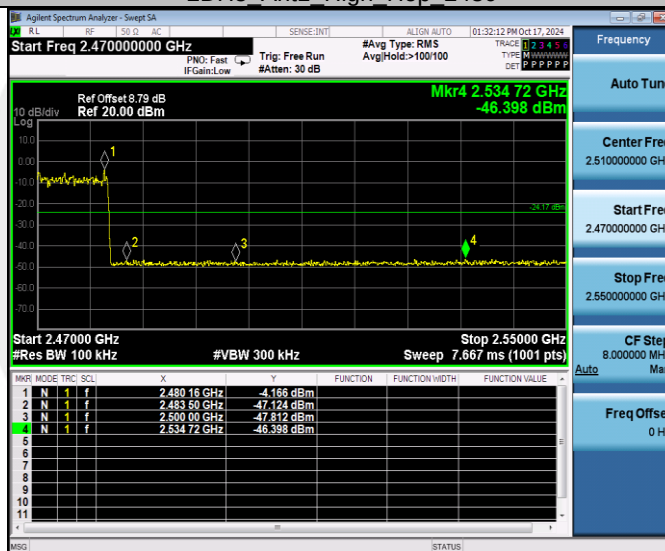
2DH5 Ant1_High 2480



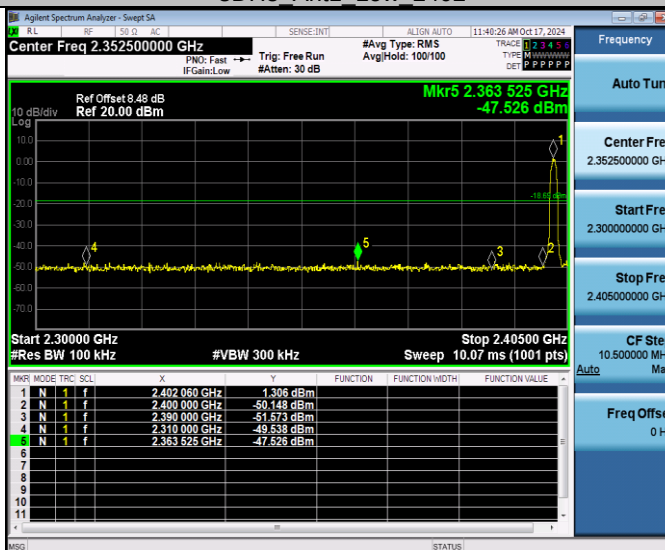
2DH5 Ant1 Low Hop 2402



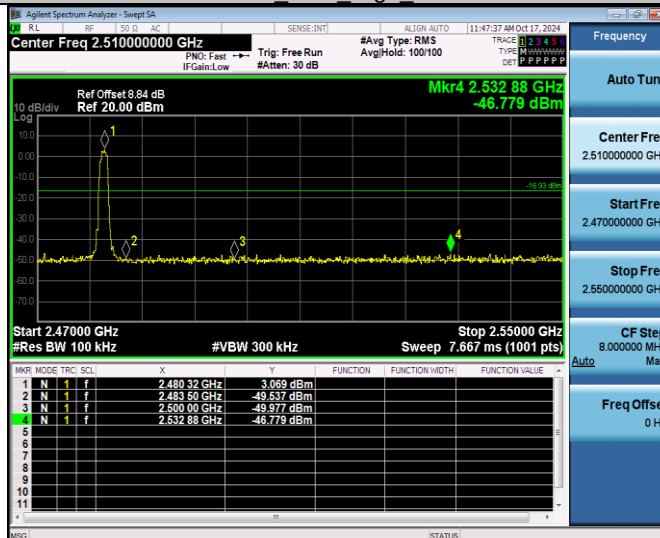
2DH5 Ant1 High Hop 2480



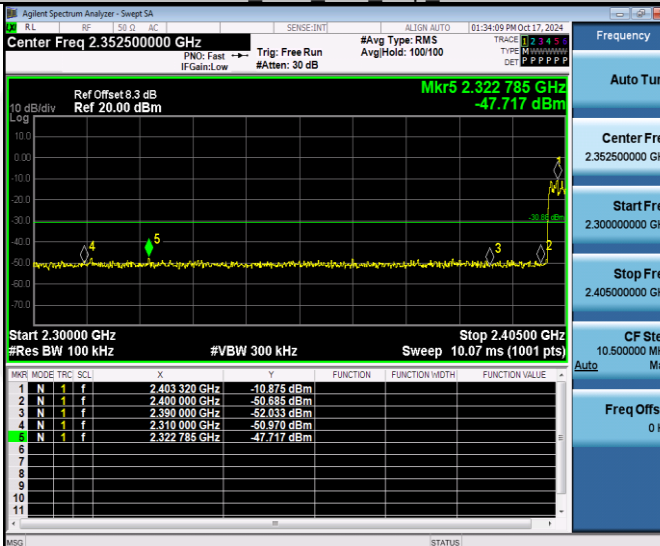
3DH5 Ant1 Low 2402



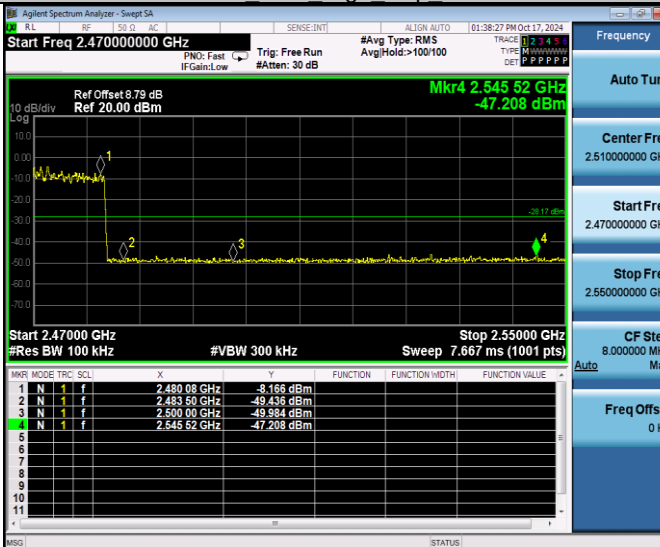
3DH5 Ant1 High 2480



3DH5 Ant1 Low Hop 2402

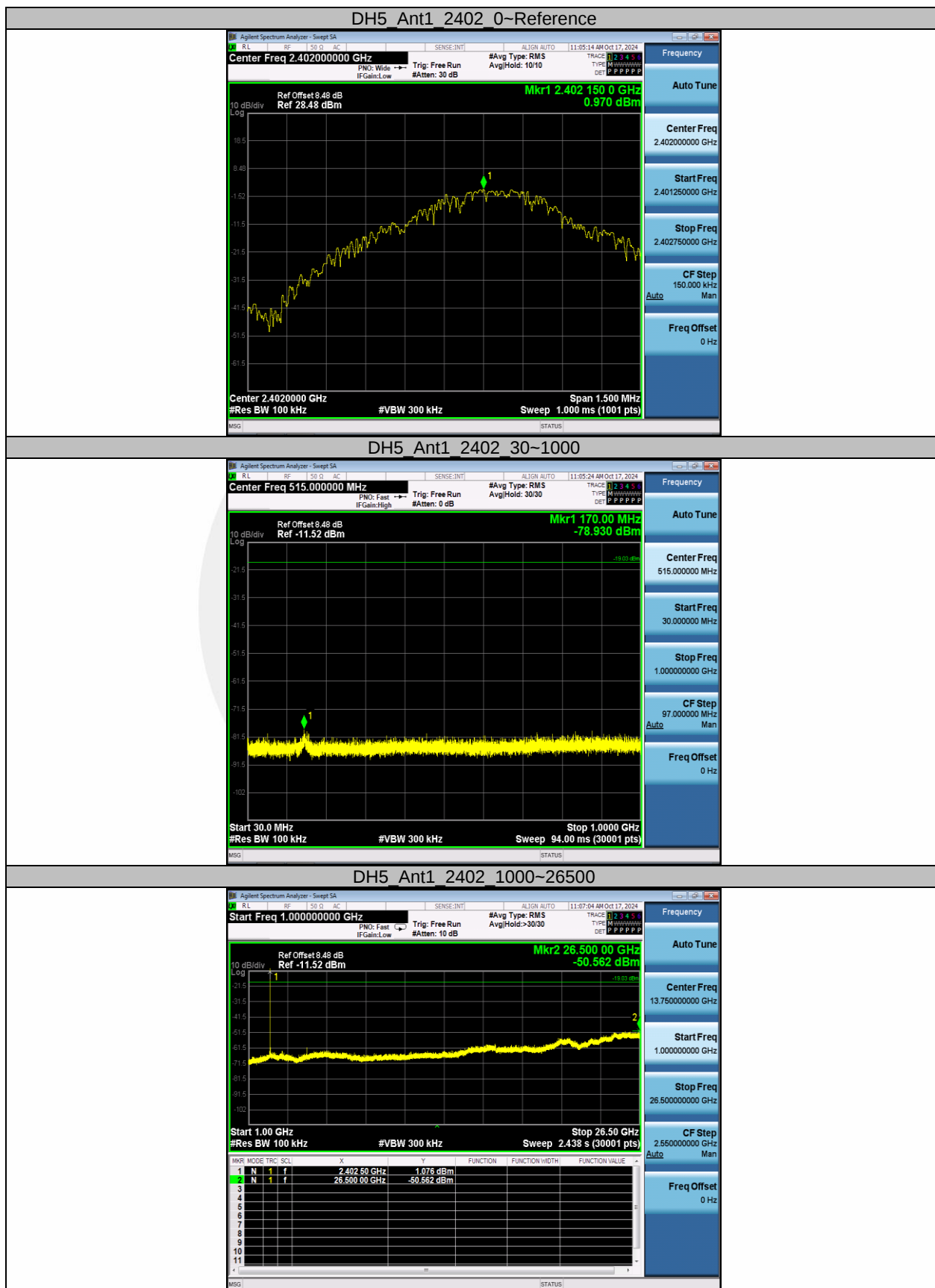


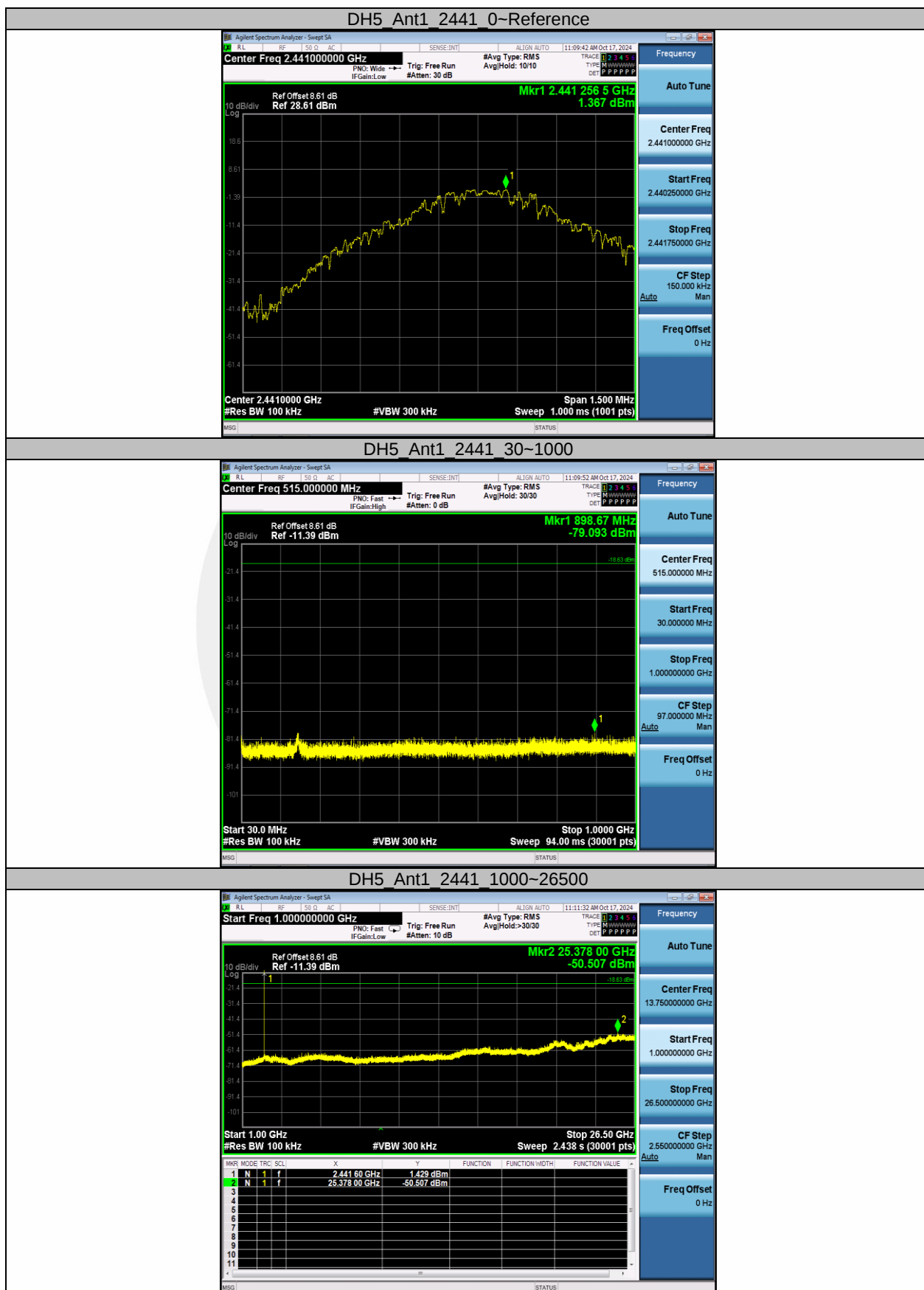
3DH5 Ant1 High Hop 2480



Conduceted Spurious Emission

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
DH5	Ant1	2402	Reference	0.97	0.97	---	PASS
			30~1000	0.97	-78.93	≤-19.03	PASS
			1000~26500	0.97	-50.56	≤-19.03	PASS
		2441	Reference	1.37	1.37	---	PASS
			30~1000	1.37	-79.09	≤-18.63	PASS
			1000~26500	1.37	-50.51	≤-18.63	PASS
		2480	Reference	3.04	3.04	---	PASS
			30~1000	3.04	-78.66	≤-16.96	PASS
			1000~26500	3.04	-50.41	≤-16.96	PASS
2DH5	Ant1	2402	Reference	1.45	1.45	---	PASS
			30~1000	1.45	-79.38	≤-18.55	PASS
			1000~26500	1.45	-50.65	≤-18.55	PASS
		2441	Reference	0.97	0.97	---	PASS
			30~1000	0.97	-78.56	≤-19.03	PASS
			1000~26500	0.97	-50.19	≤-19.03	PASS
		2480	Reference	1.95	1.95	---	PASS
			30~1000	1.95	-78.32	≤-18.05	PASS
			1000~26500	1.95	-50.35	≤-18.05	PASS
3DH5	Ant1	2402	Reference	-0.05	-0.05	---	PASS
			30~1000	-0.05	-78.39	≤-20.05	PASS
			1000~26500	-0.05	-50.51	≤-20.05	PASS
		2441	Reference	0.01	0.01	---	PASS
			30~1000	0.01	-78.75	≤-19.99	PASS
			1000~26500	0.01	-49.42	≤-19.99	PASS
		2480	Reference	1.89	1.89	---	PASS
			30~1000	1.89	-78.09	≤-18.11	PASS
			1000~26500	1.89	-50.49	≤-18.11	PASS

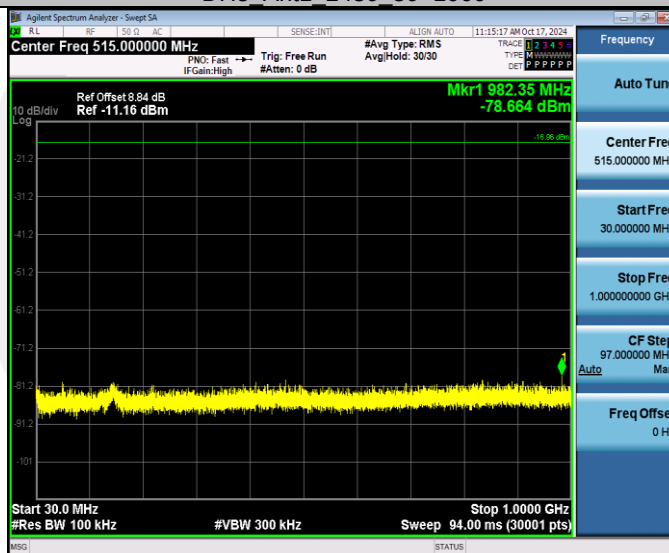




DH5 Ant1 2480 0-Reference



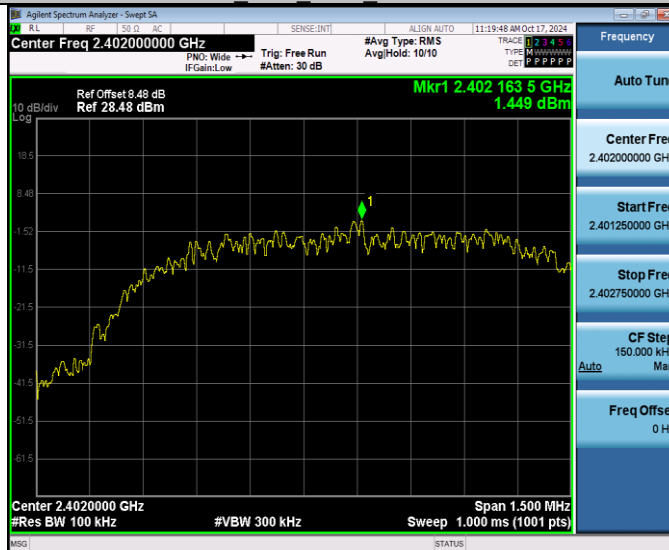
DH5 Ant1 2480 30-1000



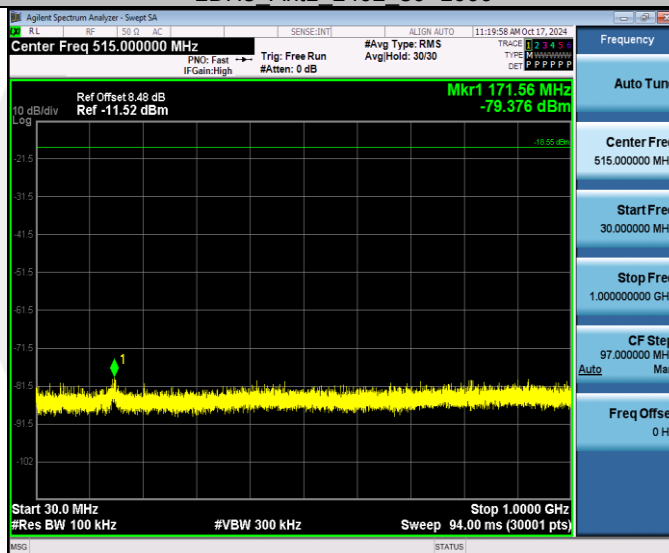
DH5 Ant1 2480 1000-26500



2DH5_Ant1_2402_0~Reference



2DH5_Ant1_2402_30~1000



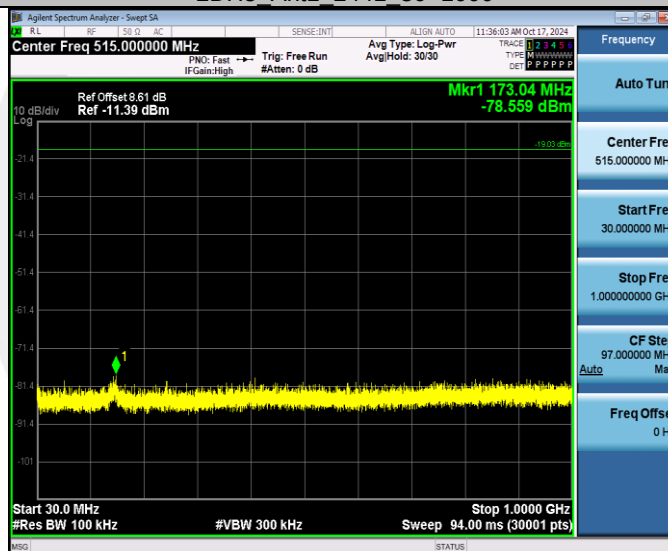
2DH5_Ant1_2402_1000~26500



2DH5_Ant1_2441_0~Reference



2DH5_Ant1_2441_30~1000



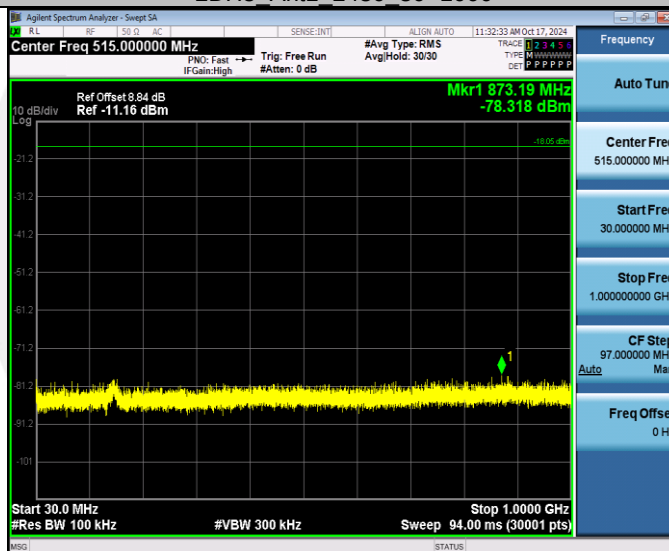
2DH5_Ant1_2441_1000~26500



2DH5 Ant1 2480 0~Reference



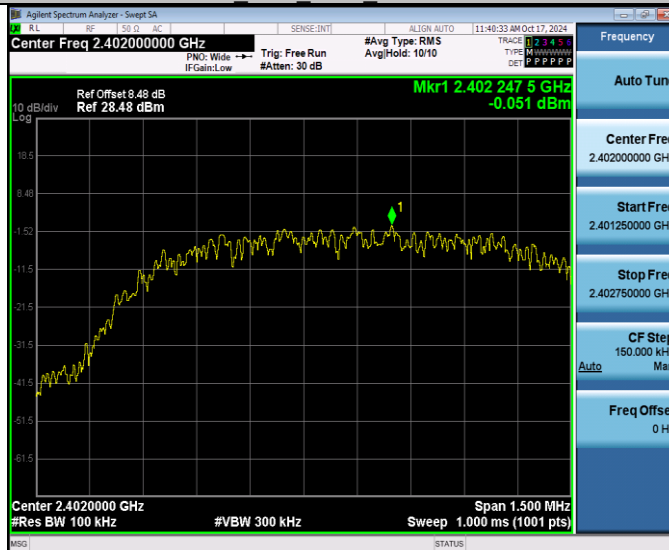
2DH5 Ant1 2480 30~1000



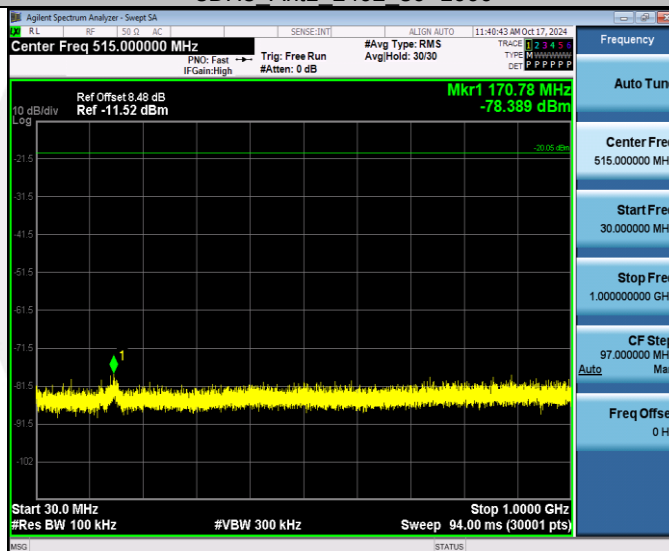
2DH5 Ant1 2480 1000~26500



3DH5_Ant1_2402_0~Reference



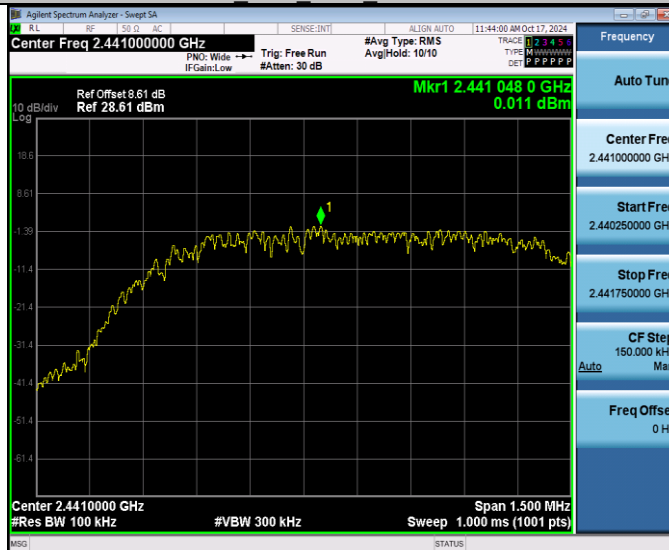
3DH5_Ant1_2402_30~1000



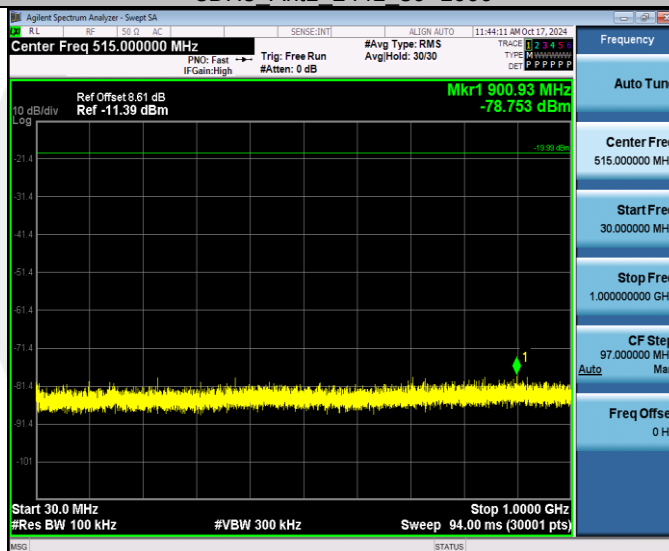
3DH5_Ant1_2402_1000~26500



3DH5_Ant1_2441_0~Reference



3DH5_Ant1_2441_30~1000



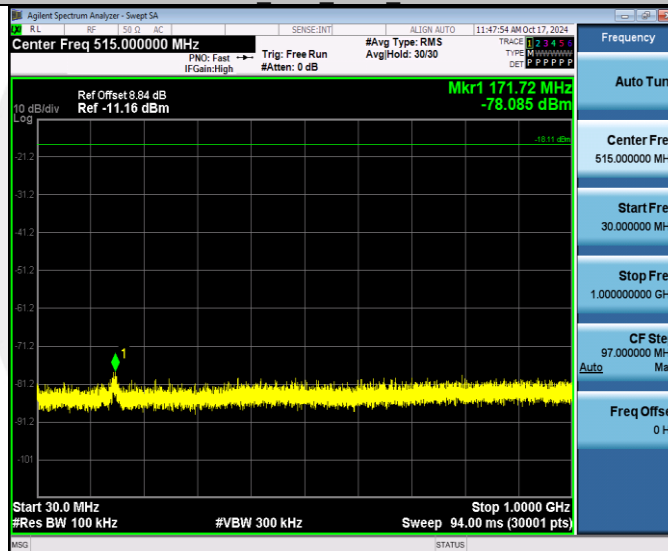
3DH5_Ant1_2441_1000~26500



3DH5 Ant1 2480 0~Reference



3DH5 Ant1 2480 30~1000



3DH5 Ant1 2480 1000~26500



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
10.495-0.505	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	(2)
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 C63.10-2013 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

■ 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

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
6945	V	55.50	74.00	18.50	peak
8521.87	V	59.38	74.00	14.62	peak
17017.5	V	63.63	74.00	10.37	peak
6945	V	40.38	54.00	13.62	AVG
8521.87	V	37.81	54.00	16.19	AVG
17017.5	V	45.65	54.00	8.35	AVG
7156.87	H	57.03	74.00	16.97	peak
9969.37	H	61.99	74.00	12.01	peak
16141.8	H	63.78	74.00	10.22	peak
7156.87	H	40.51	54.00	13.49	AVG
9969.37	H	42.38	54.00	11.62	AVG
16141.8	H	42.41	54.00	11.59	AVG

Test mode: GFSK Frequency: Channel 39: 2441MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
7895.62	V	59.16	74.00	14.84	peak
9913.12	V	62.34	74.00	11.66	peak
17478.7	V	64.40	74.00	9.60	peak
7895.62	V	42.12	54.00	11.88	AVG
9913.12	V	42.47	54.00	11.53	AVG
17478.7	V	44.61	54.00	9.39	AVG
8463.75	H	58.67	74.00	15.33	peak
9930	H	61.66	74.00	12.34	peak
16824.3	H	64.96	74.00	9.04	peak
8463.75	H	42.40	54.00	11.60	AVG
9930	H	42.01	54.00	11.99	AVG
16824.3	H	43.29	54.00	10.71	AVG

Test mode: GFSK Frequency: Channel 78: 2480MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
7856.25	V	58.74	74.00	15.26	peak
9881.25	V	62.08	74.00	11.92	peak
17990.6	V	65.06	74.00	8.94	peak
7856.25	V	42.00	54.00	12.00	AVG
9881.25	V	42.31	54.00	11.69	AVG
17990.	V	47.64	54.00	6.36	AVG
7980	H	59.05	74.00	14.95	peak
9916.87	H	62.04	74.00	11.96	peak
17641.8	H	64.66	74.00	9.34	peak
7980	H	41.71	54.00	12.29	AVG
9916.87	H	42.39	54.00	11.61	AVG
17641.8	H	43.50	54.00	10.50	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.

■ Spurious Emission in Restricted Band 2310-2390MHz and 2483.5-2500MHz

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

Test mode: GFSK Frequency: Channel 0: 2402MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
2385.75	V	49.30	74.00	24.70	peak
2385.75	V	42.41	54.00	11.59	AVG
2384.07	H	49.52	74.00	24.48	peak
2384.07	H	42.81	54.00	11.19	AVG

Test mode: GFSK Frequency: Channel 78: 2480MHz

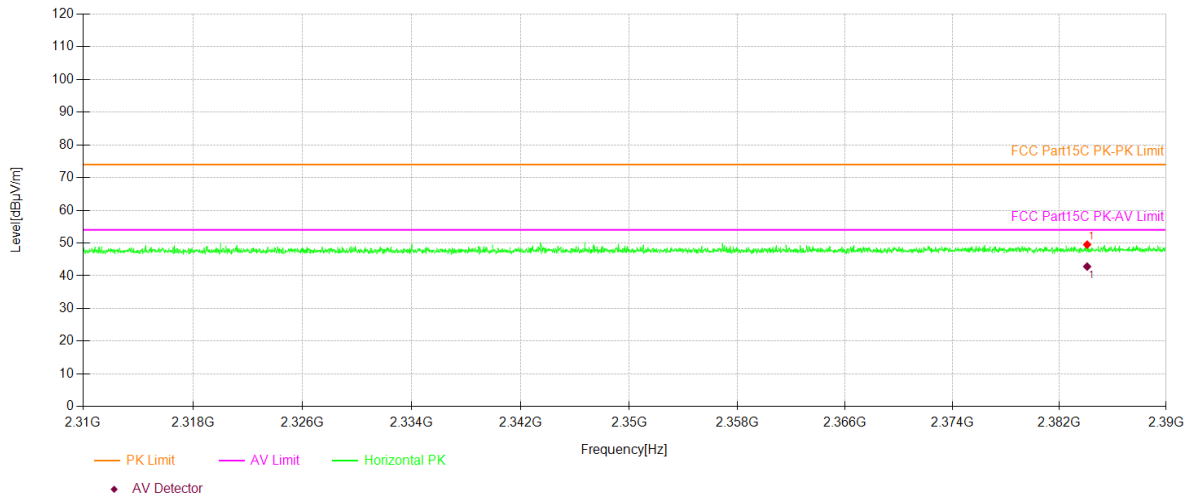
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
2484.31	V	50.05	74.00	23.95	peak
2484.31	V	42.16	54.00	11.84	AVG
2484.79	H	50.49	74.00	23.51	peak
2484.79	H	42.41	54.00	11.59	AVG

Test mode: GFSK Frequency: Hopping

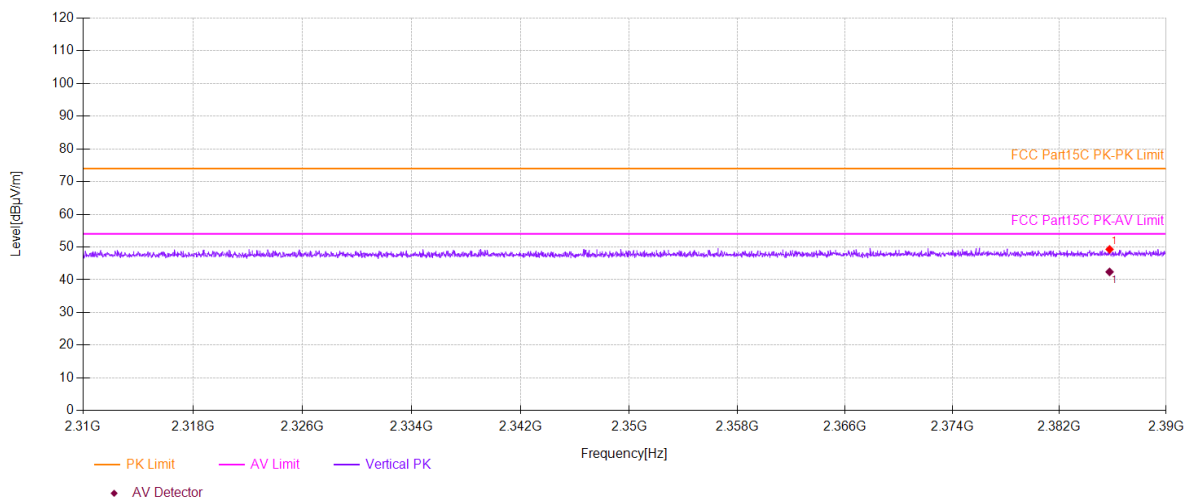
Freq. (MHz)	Ant.Pol.	Emission Level(dBuV/m)	Limit 3m(dBuV/m)	Over(dB)	Detector
2388.87	V	48.94	54.00	5.06	peak
2484.85	V	50.14	54.00	3.86	peak
2388.87	V	42.49	54.00	11.51	AVG
2484.85	V	42.73	54.00	11.27	AVG
2386.72	H	48.97	54.00	5.03	peak
2485.55	H	50.12	54.00	3.88	peak
2386.72	H	42.92	54.00	11.08	AVG
2485.55	H	42.37	54.00	11.63	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) Data of measurement within this frequency range shown “ -- ” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

Test Model	Spurious Emission in Restricted Band 2310-2390MHz		
	BT		
	Channel 0: 2402MHz	GFSK	H
		Test By: CZF	



Test Model	Spurious Emission in Restricted Band 2310-2390MHz		
	BT		
	Channel 0: 2402MHz	GFSK	V
		Test By: CZF	



Test Model

Spurious Emission in Restricted Band 2483.5-2500MHz

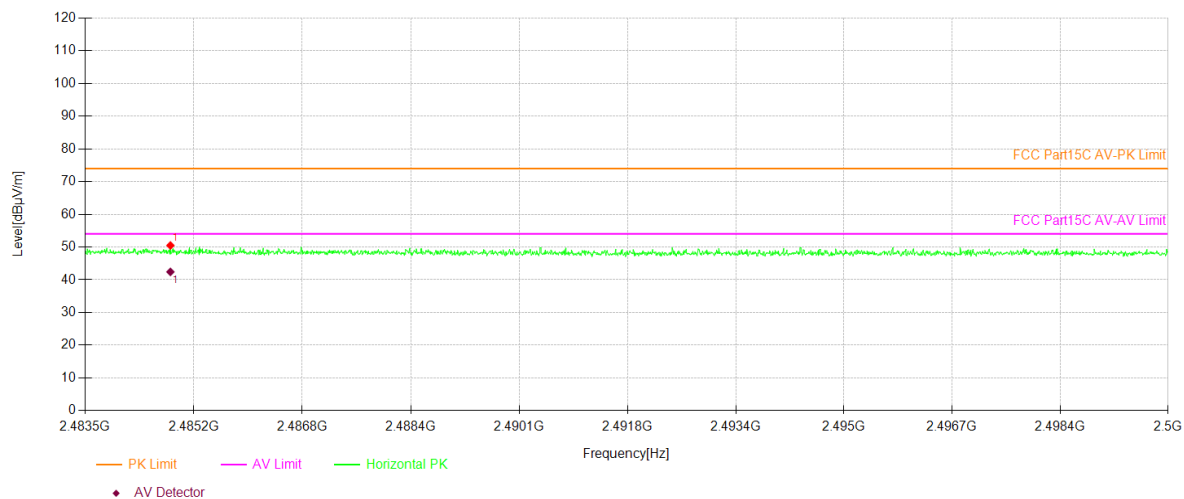
BT

Channel 78: 2480MHz

GFSK

H

Test By: CZF



Test Model

Spurious Emission in Restricted Band 2483.5-2500MHz

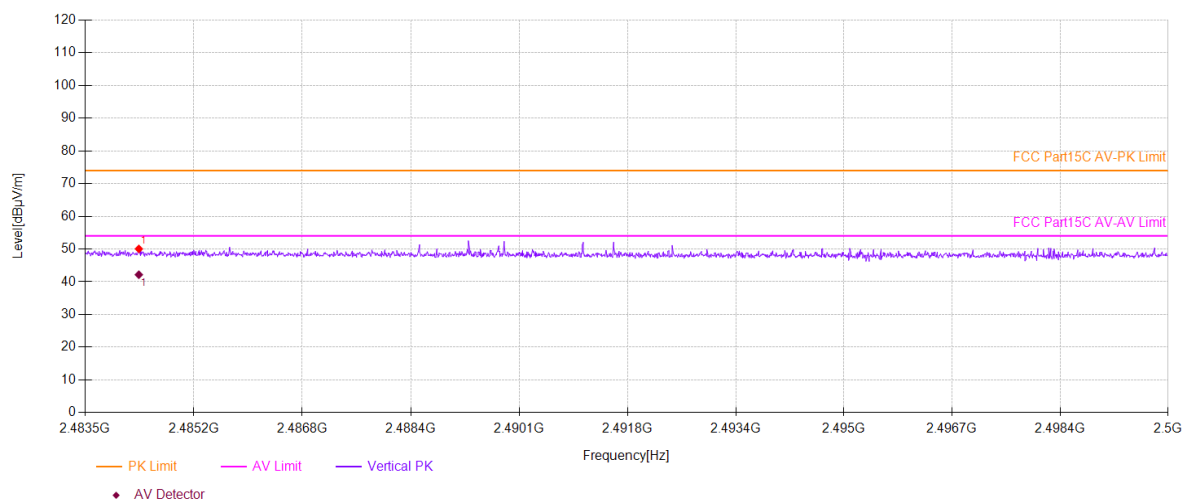
BT

Channel 78: 2480MHz

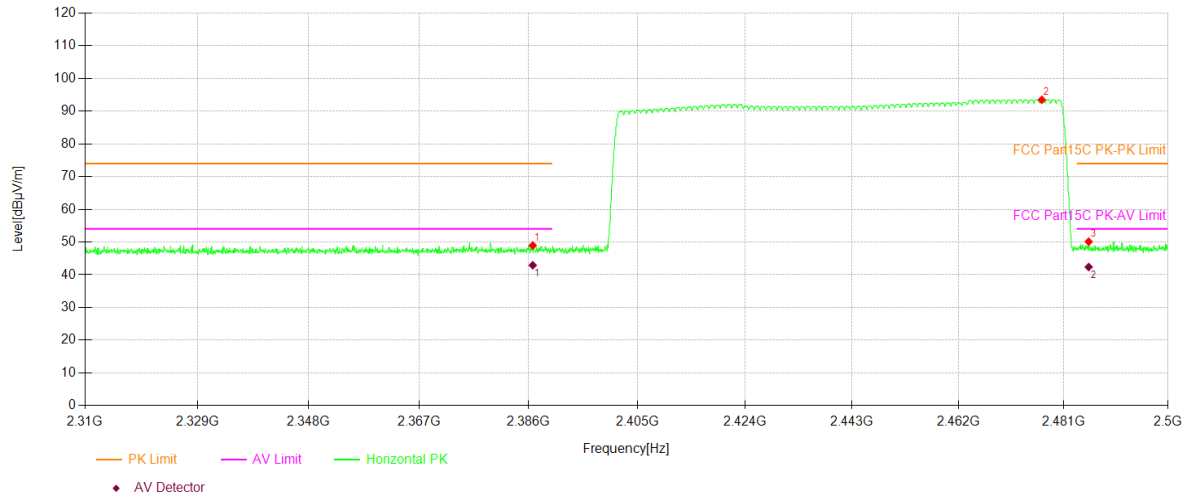
GFSK

V

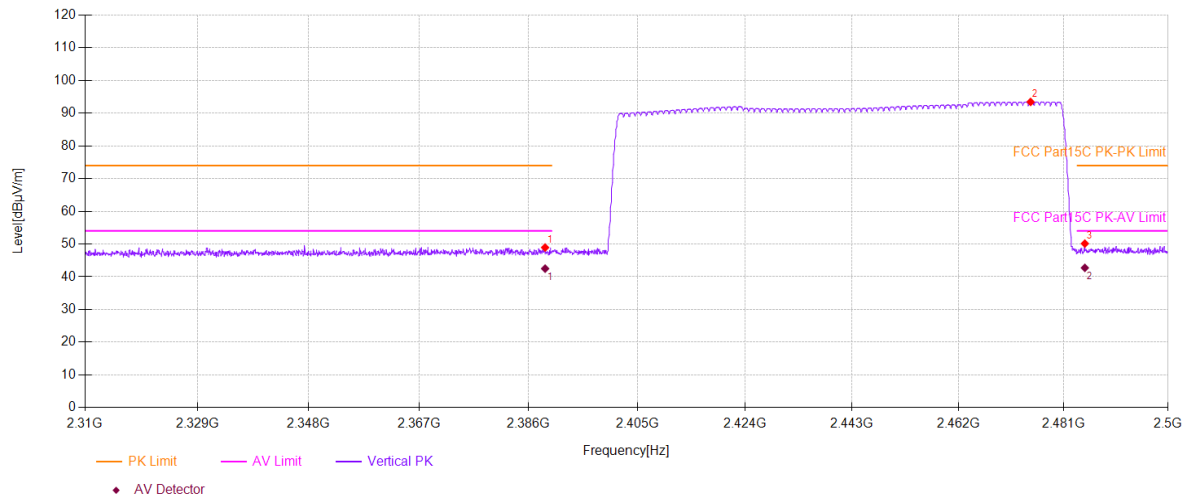
Test By: CZF



Test Model	Spurious Emission in Restricted Band 2310-2390MHz and 2400-2483.5MHz		
	BT		
	Hopping	GFSK	H
	Test By: CZF		



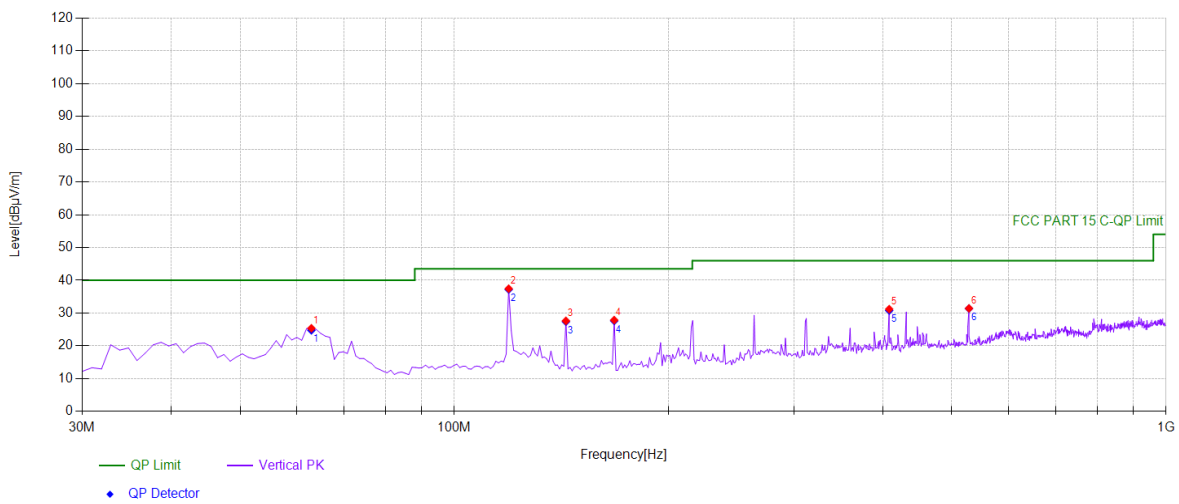
Test Model	Spurious Emission in Restricted Band 2310-2390MHz and 2400-2483.5MHz		
	BT		
	Hopping	GFSK	V
	Test By: CZF		



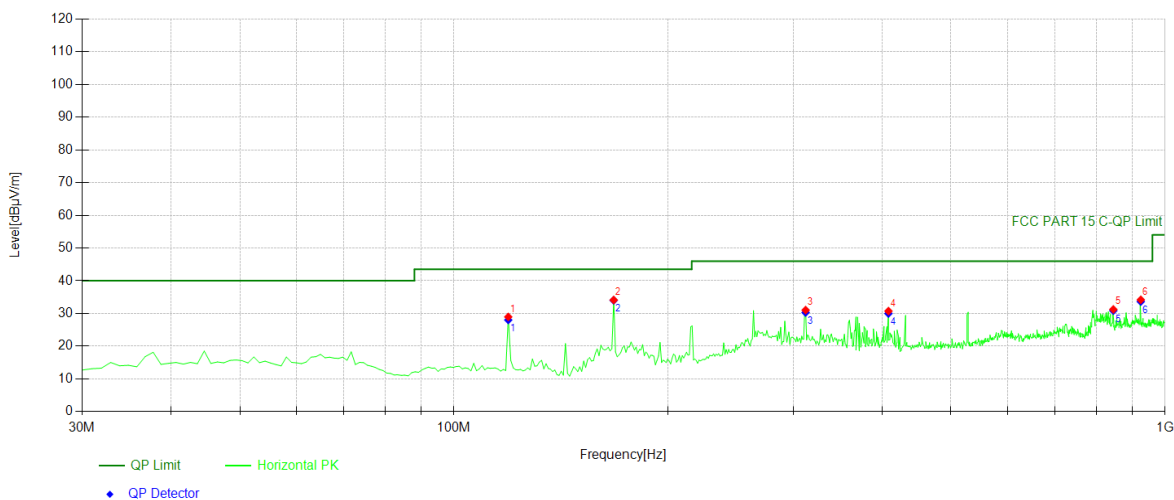
■ Spurious Emission below 1GHz (30MHz to 1GHz)

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

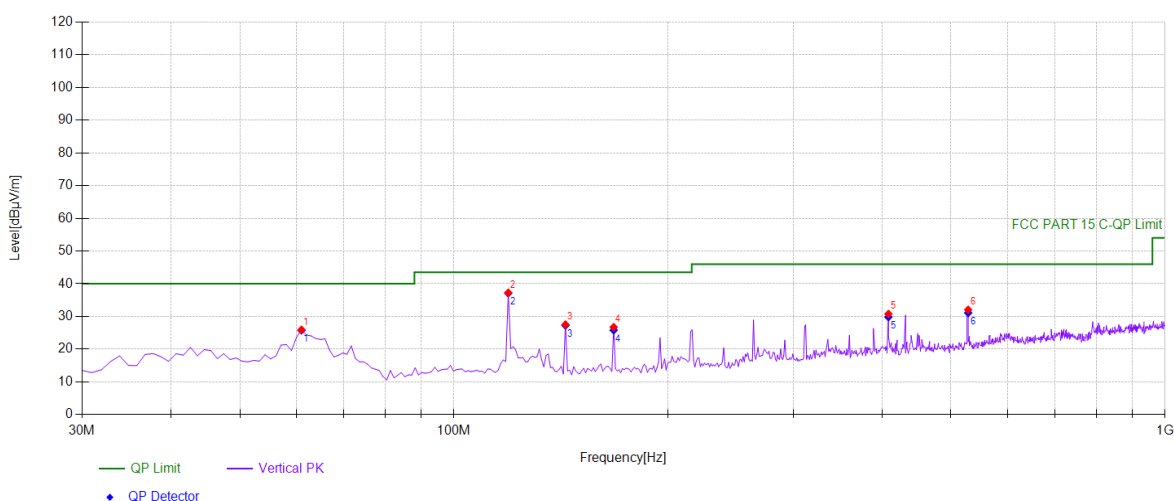


Suspected Data List								
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Detector	Limit [dBμV/m]	Margin [dB]	Polarity
1	62.98	43.11	-17.73	25.38	PK	40.00	14.62	Vertical
2	119.24	55.93	-18.47	37.46	PK	43.50	6.04	Vertical
3	143.49	47.28	-19.65	27.63	PK	43.50	15.87	Vertical
4	167.74	46.90	-19.02	27.88	PK	43.50	15.62	Vertical
5	408.3	42.75	-11.53	31.22	PK	46.00	14.78	Vertical
6	528.58	40.97	-9.52	31.45	PK	46.00	14.55	Vertical



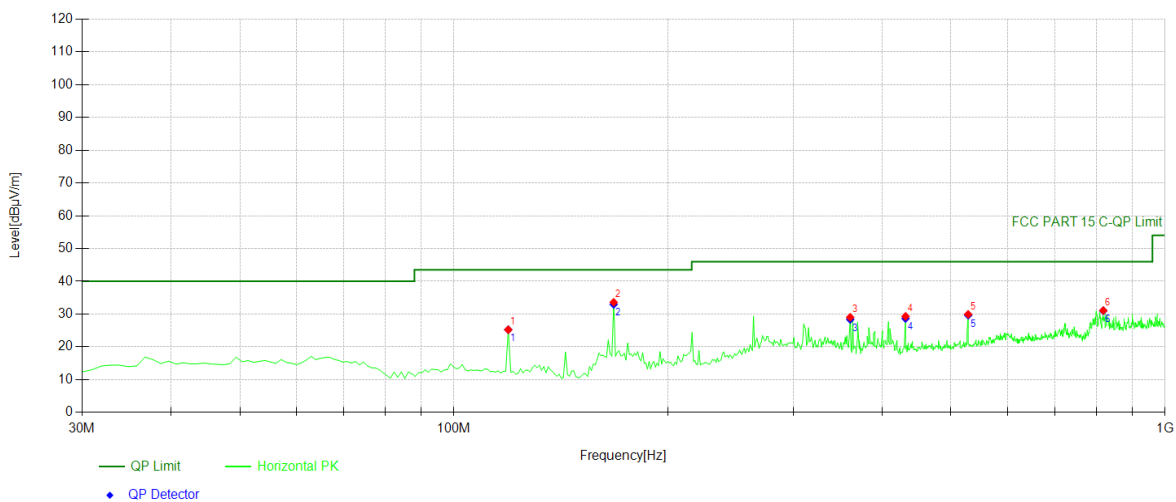
Suspected Data List								
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Detector	Limit [dBμV/m]	Margin [dB]	Polarity
1	119.24	47.43	-18.47	28.96	PK	43.50	14.54	Horizontal
2	167.74	53.15	-19.02	34.13	PK	43.50	9.37	Horizontal
3	312.27	44.81	-13.77	31.04	PK	46.00	14.96	Horizontal
4	408.3	42.27	-11.53	30.74	PK	46.00	15.26	Horizontal
5	845.77	35.63	-4.37	31.26	PK	46.00	14.74	Horizontal
6	924.34	37.27	-3.07	34.20	PK	46.00	11.80	Horizontal

Test mode: GFSK Frequency: Channel 39: 2441MHz



Suspected Data List

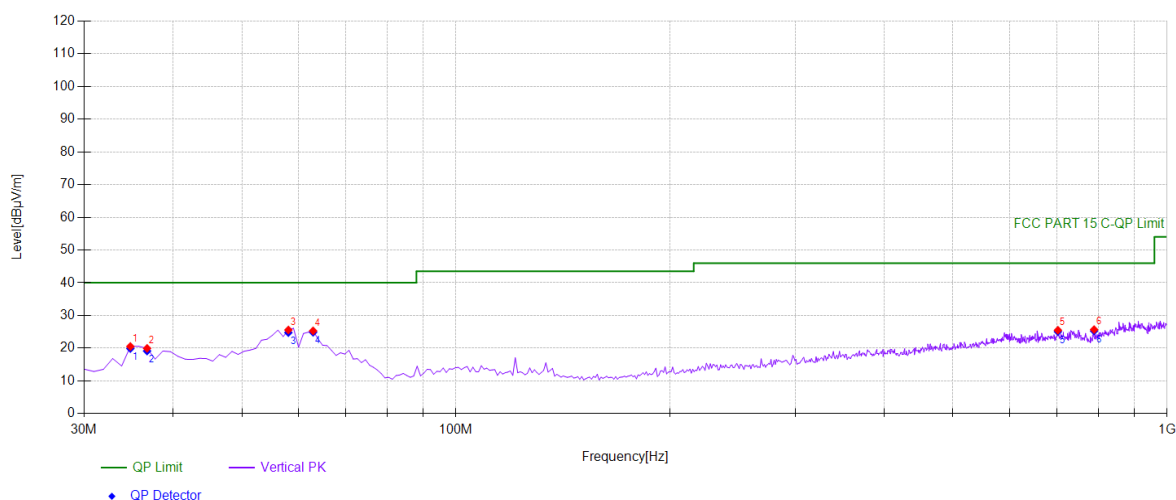
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Detector	Limit [dBμV/m]	Margin [dB]	Polarity
1	61.04	43.39	-17.46	25.93	PK	40.00	14.07	Vertical
2	119.24	55.73	-18.47	37.26	PK	43.50	6.24	Vertical
3	143.49	47.20	-19.65	27.55	PK	43.50	15.95	Vertical
4	167.74	45.78	-19.02	26.76	PK	43.50	16.74	Vertical
5	408.3	42.31	-11.53	30.78	PK	46.00	15.22	Vertical
6	528.58	41.58	-9.52	32.06	PK	46.00	13.94	Vertical



Suspected Data List

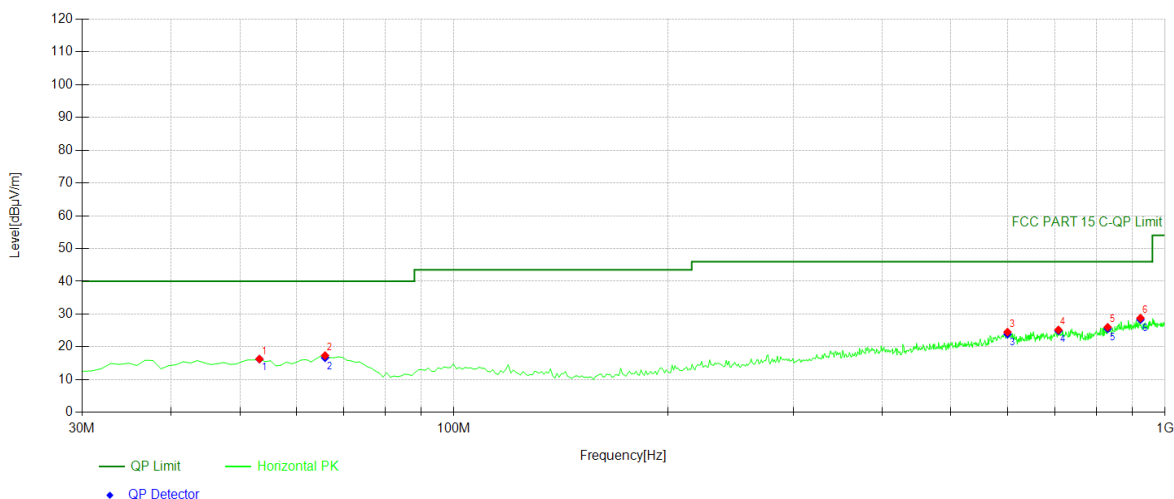
NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Detector	Limit [dBμV/m]	Margin [dB]	Polarity
1	119.24	43.71	-18.47	25.24	PK	43.50	18.26	Horizontal
2	167.74	52.64	-19.02	33.62	PK	43.50	9.88	Horizontal
3	360.77	41.35	-12.32	29.03	PK	46.00	16.97	Horizontal
4	431.58	40.70	-11.39	29.31	PK	46.00	16.69	Horizontal
5	528.58	39.46	-9.52	29.94	PK	46.00	16.06	Horizontal
6	818.61	36.22	-5.11	31.11	PK	46.00	14.89	Horizontal

Test mode: GFSK Frequency: Channel 78: 2480MHz



Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Detector	Limit [dBμV/m]	Margin [dB]	Polarity
1	34.85	38.63	-18.09	20.54	PK	40.00	19.46	Vertical
2	36.79	37.79	-17.83	19.96	PK	40.00	20.04	Vertical
3	58.13	42.65	-17.07	25.58	PK	40.00	14.42	Vertical
4	62.98	43.04	-17.73	25.31	PK	40.00	14.69	Vertical
5	702.21	31.64	-6.13	25.51	PK	46.00	20.49	Vertical
6	789.51	32.02	-6.31	25.71	PK	46.00	20.29	Vertical



Suspected Data List

NO.	Freq. [MHz]	Reading [dBμV]	Factor [dB/m]	Level [dBμV/m]	Detector	Limit [dBμV/m]	Margin [dB]	Polarity
1	53.28	32.73	-16.43	16.30	PK	40.00	23.70	Horizontal
2	65.89	35.49	-18.13	17.36	PK	40.00	22.64	Horizontal
3	600.36	30.99	-6.46	24.53	PK	46.00	21.47	Horizontal
4	708.03	31.31	-6.10	25.21	PK	46.00	20.79	Horizontal
5	830.25	30.92	-4.91	26.01	PK	46.00	19.99	Horizontal
6	923.37	31.85	-3.05	28.80	PK	46.00	17.20	Horizontal

9.8 CONDUCTED EMISSION TEST

9.8.1 Applicable Standard

According to FCC Part 15.207(a)

9.8.2 Conformance Limit

Conducted Emission Limit		
Frequency(MHz)	Quasi-peak	Average
0.15-0.5	66-56	56-46
0.5-5.0	56	46
5.0-30.0	60	50
Note: 1. The lower limit shall apply at the transition frequencies 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.		

9.8.3 Test Configuration

Test according to clause 7.3 conducted emission test setup

9.8.4 Test Procedure

The EUT was placed on a table which is 0.8m above ground plane.
Maximum procedure was performed on the highest emissions to ensure EUT compliance.
Repeat above procedures until all frequency measured were complete.

9.8.5 Test Results

N/A

Note: Industrial Video Endoscope do not work while charging.

9.9 ANTENNA APPLICATION

9.9.1 Antenna Requirement

Standard	Requirement
FCC CRF Part 15.203	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 shall be considered sufficient to comply with the provisions of this section. 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. This requirement does not apply to carrier current devices or to devices operated under the provisions of §15.211, §15.213, §15.217, §15.219, or §15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

For intentional device, according to FCC 47 CFR Section 15.203, 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. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

9.9.2 Result

PASS

- ☒ Antenna use a permanently attached antenna which is not replaceable.
- ☐ Not using a standard antenna jack or electrical connector for antenna replacement
- ☐ The antenna has to be professionally installed (please provide method of installation)

Note: Please refer to the attached document Internal Photos to show the antenna connector.

Detail of factor for radiated emission

Frequency(MHz)	Ant F(dB)	Cab L(dB)	Preamp(dB)	Correct Factor(dB)
0.009	20.6	0.03	\	20.63
0.15	20.7	0.1	\	20.8
1	20.9	0.15	\	21.05
10	20.1	0.28	\	20.38
30	18.8	0.45	\	19.25
30	11.7	0.62	27.9	-15.58
100	12.5	1.02	27.8	-14.28
300	12.9	1.91	27.5	-12.69
600	19.2	2.92	27	-4.88
800	21.1	3.54	26.6	-1.96
1000	22.3	4.17	26.2	0.27
1000	25.6	1.76	41.4	-14.04
3000	28.9	3.27	43.2	-11.03
5000	31.1	4.2	44.6	-9.3
8000	36.2	5.95	44.7	-2.55
10000	38.4	6.3	43.9	0.8
12000	38.5	7.14	42.3	3.34
15000	40.2	8.15	41.4	6.95
18000	45.4	9.02	41.3	13.12
18000	37.9	1.81	47.9	-8.19
21000	37.9	1.95	48.7	-8.85
25000	39.3	2.01	42.8	-1.49
28000	39.6	2.16	46.0	-4.24
31000	41.2	2.24	44.5	-1.06
34000	41.5	2.29	46.6	-2.81
37000	43.8	2.30	46.4	-0.3
40000	43.2	2.50	42.2	3.5

--- End of Report ---