

## Appendix A: DTS Bandwidth

### Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
1M	Ant1	2402	0.676	2401.660	2402.336	0.5	PASS
		2440	0.696	2439.636	2440.332	0.5	PASS
		2480	0.676	2479.644	2480.320	0.5	PASS

# Test Graphs

1M\_Ant1\_2402



1M\_Ant1\_2440



1M\_Ant1\_2480

Spectrum Analyzer 1  
Swept SA

KEYSIGHT Input: RF Input Z: 50 Ω #Atten: 40 dB PNO: Best Wide #Avg Type: Power (RMS) 1 2 3 4 5 6  
 R/L Coupling DC Corrections: Off Gate: Off Trig: Free Run  
 Align: Auto Freq Ref: Int (S) IF Gain: Low Sig Track: Off

Center Frequency 2.48000000 GHz  
 Span 4.00000000 MHz  
 Start Freq 2.478000000 GHz  
 Stop Freq 2.482000000 GHz  
 AUTO TUNE  
 CF Step 400.000 kHz  
 Auto Man  
 Freq Offset 0 Hz  
 X Axis Scale Log Lin  
 Signal Track Span Zoom

1 Spectrum Ref Lvl Offset 11.66 dB ΔMkr3 676 kHz  
 Scale/Div 10 dB Ref Level 30.00 dBm 0.14 dB

Center 2.480000 GHz #Video BW 300 kHz Span 4.000 MHz  
 #Res BW 100 kHz Sweep 1.00 ms (1001 pts)

5 Marker Table

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.479 644 GHz	-10.18 dBm		
2	N	1	f	2.479 748 GHz	-4.309 dBm		
3	Δ1	1	f (Δ)	676 kHz (Δ)	0.1405 dB		
4							
5							
6							

Apr 23, 2023 2:09:36 PM

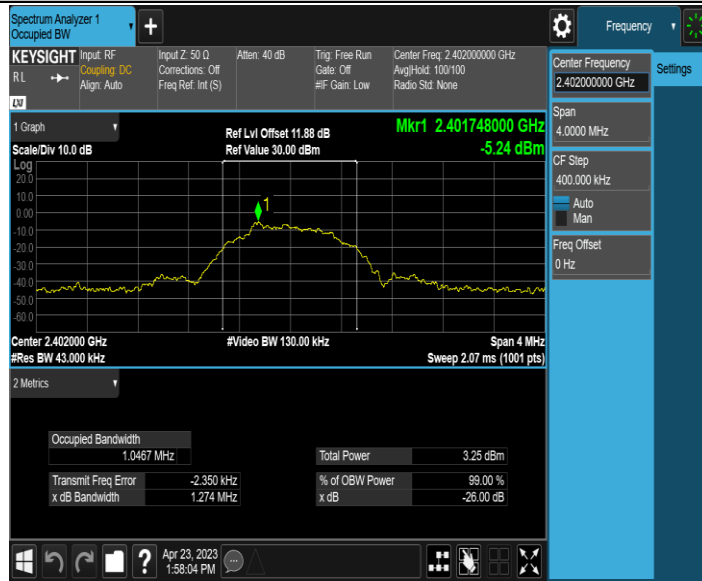
## Appendix B: Occupied Channel Bandwidth

### Test Result

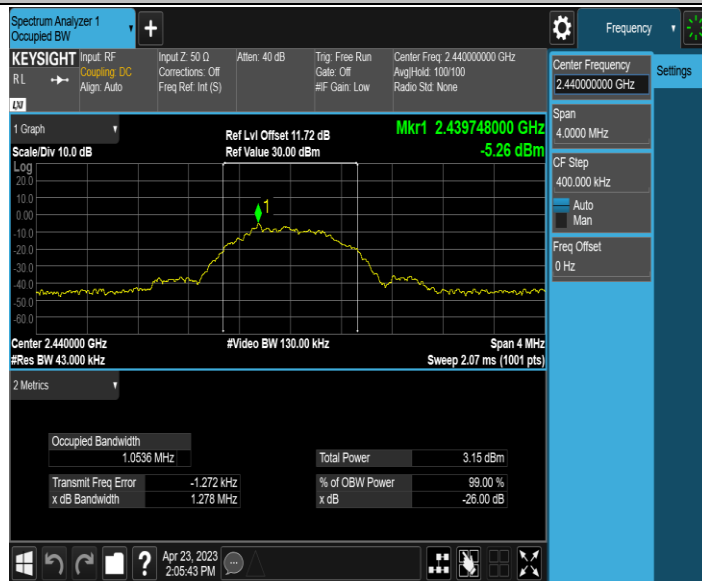
TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
1M	Ant1	2402	1.0467	2401.4743	2402.5210	---	---
		2440	1.0536	2439.4719	2440.5255	---	---
		2480	1.0479	2479.4753	2480.5232	---	---

# Test Graphs

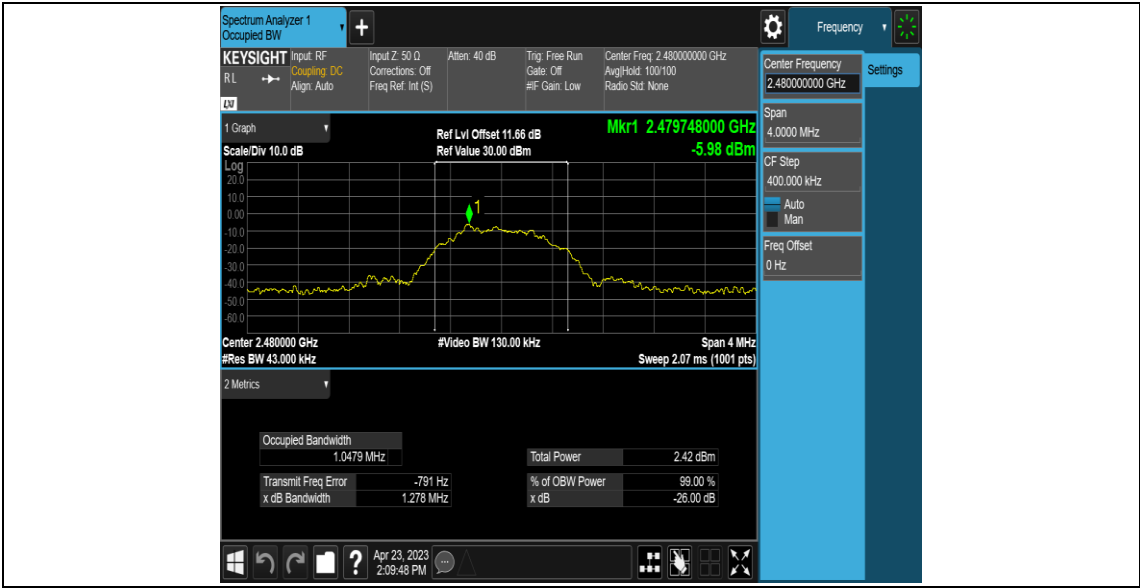
1M\_Ant1\_2402



1M\_Ant1\_2440



1M\_Ant1\_2480



## Appendix C: Maximum conducted output power

### Test Result Peak

TestMode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	EIRP[dBm]	EIRP Limit[dBm]	Verdict
1M	Ant1	2402	-2.74	≤30	-2.74	≤36	PASS
		2440	-2.86	≤30	-2.86	≤36	PASS
		2480	-3.53	≤30	-3.53	≤36	PASS

# Test Graphs Peak

## 1M\_Ant1\_2402

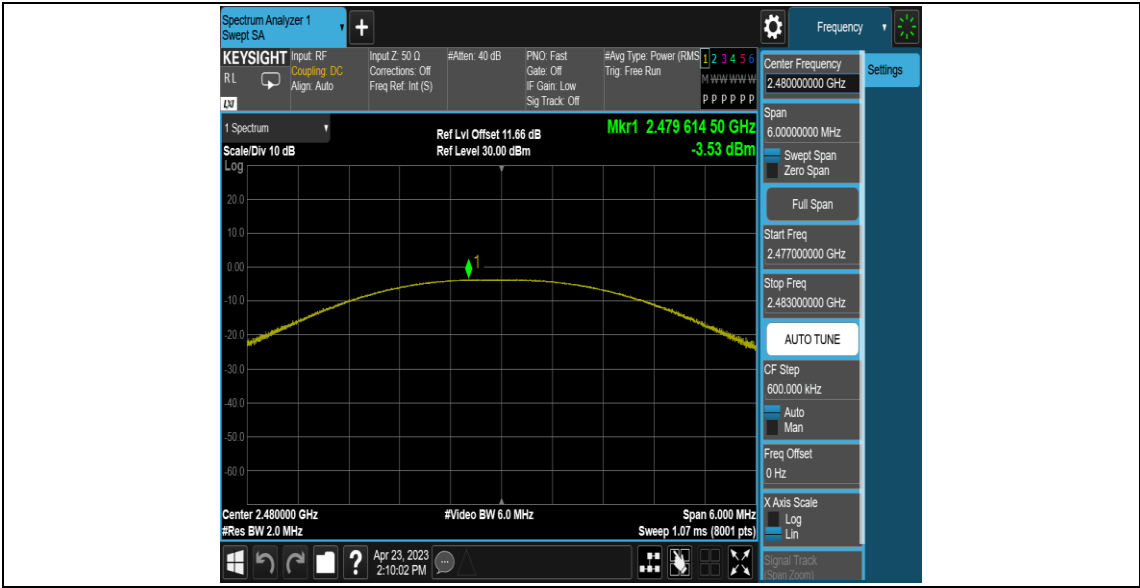


## 1M\_Ant1\_2440



## 1M\_Ant1\_2480





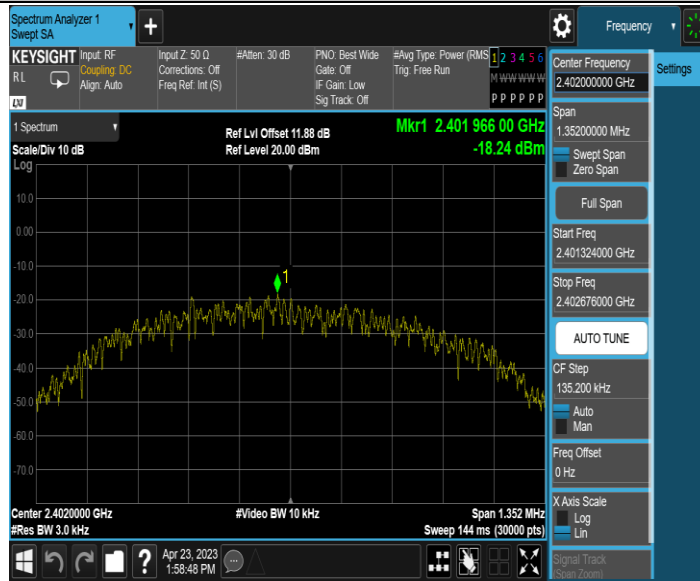
## Appendix D: Maximum power spectral density

### Test Result

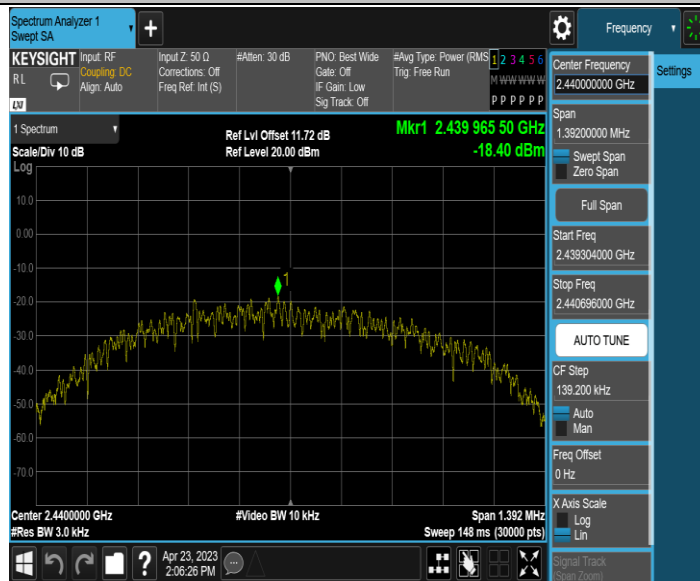
TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
1M	Ant1	2402	-18.24	≤8.00	PASS
		2440	-18.4	≤8.00	PASS
		2480	-19.05	≤8.00	PASS

# Test Graphs

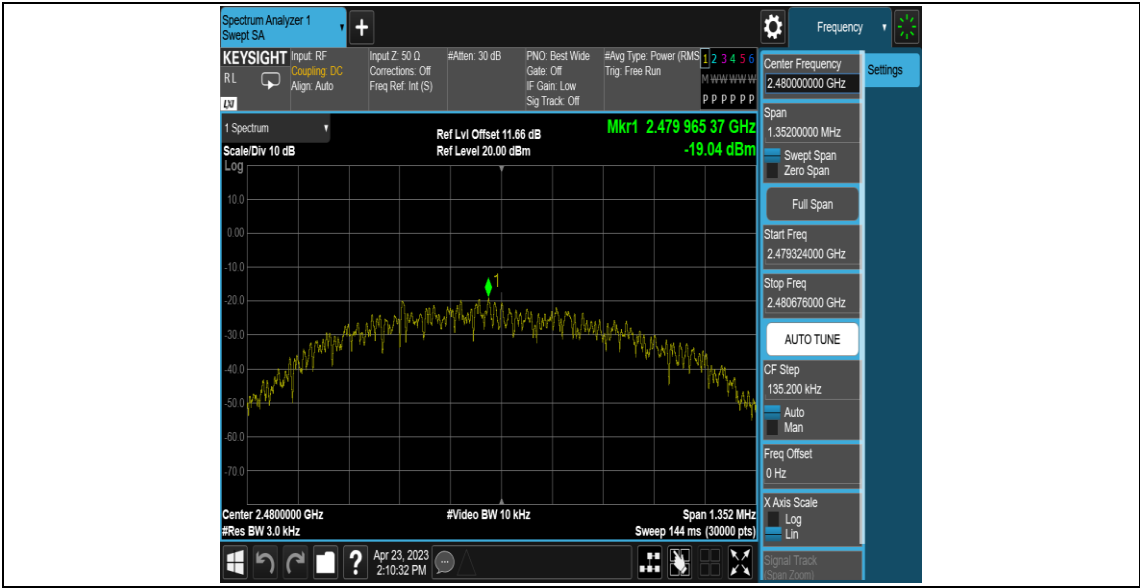
## 1M\_Ant1\_2402



## 1M\_Ant1\_2440



## 1M\_Ant1\_2480



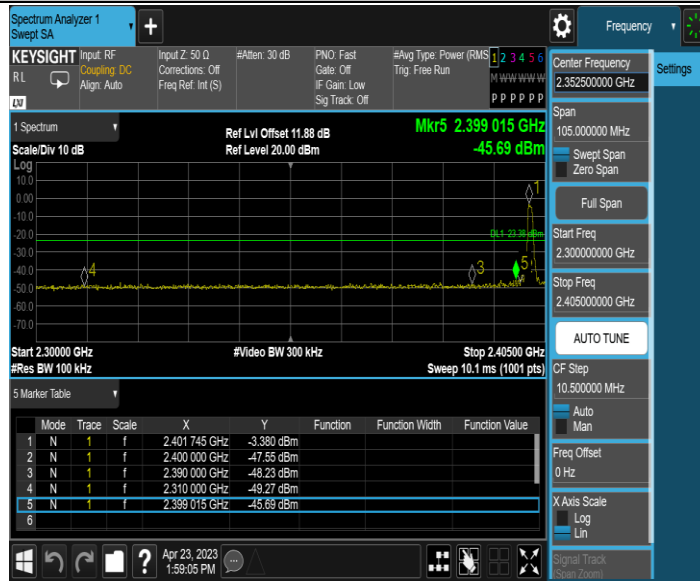
## Appendix E: Band edge measurements

### Test Result

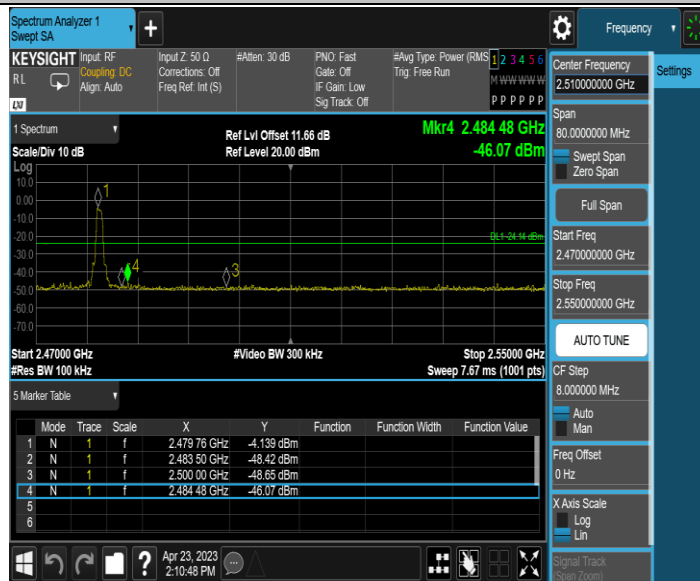
TestMode	Antenna	Channel	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
1M	Ant1	Low	2402	-3.38	-45.69	≤-23.38	PASS
		High	2480	-4.14	-46.07	≤-24.14	PASS

# Test Graphs

## 1M\_Ant1\_Low\_2402



## 1M\_Ant1\_High\_2480



## Appendix F: Conducted Spurious Emission

### Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
1M	Ant1	2402	Reference	-3.40	-3.40	---	PASS
			30~1000	-3.40	-58.03	≤-23.4	PASS
			1000~26500	-3.40	-49.73	≤-23.4	PASS
		2440	Reference	-3.48	-3.48	---	PASS
			30~1000	-3.48	-58.65	≤-23.48	PASS
			1000~26500	-3.48	-49.49	≤-23.48	PASS
		2480	Reference	-4.25	-4.25	---	PASS
			30~1000	-4.25	-57.71	≤-24.25	PASS
			1000~26500	-4.25	-49.86	≤-24.25	PASS

# Test Graphs



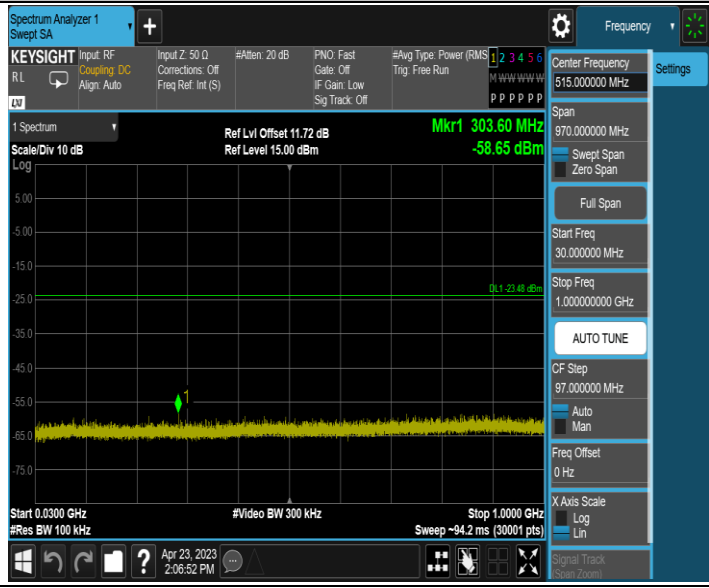




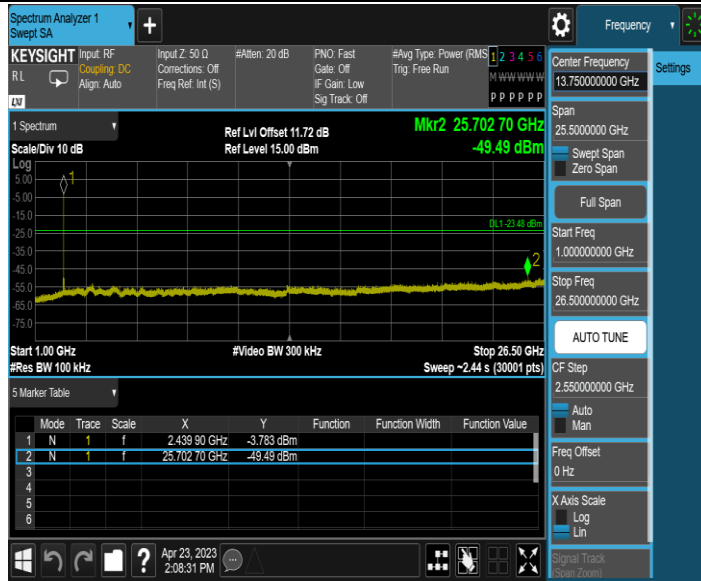
1M\_Ant1\_2440\_0~Reference



1M\_Ant1\_2440\_30~1000



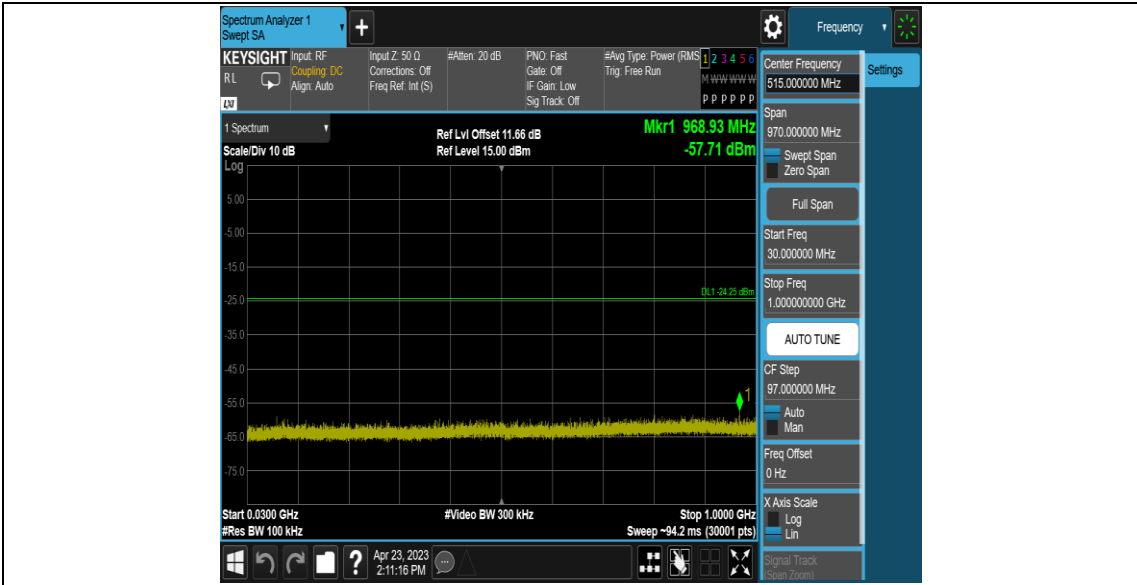
1M\_Ant1\_2440\_1000~26500



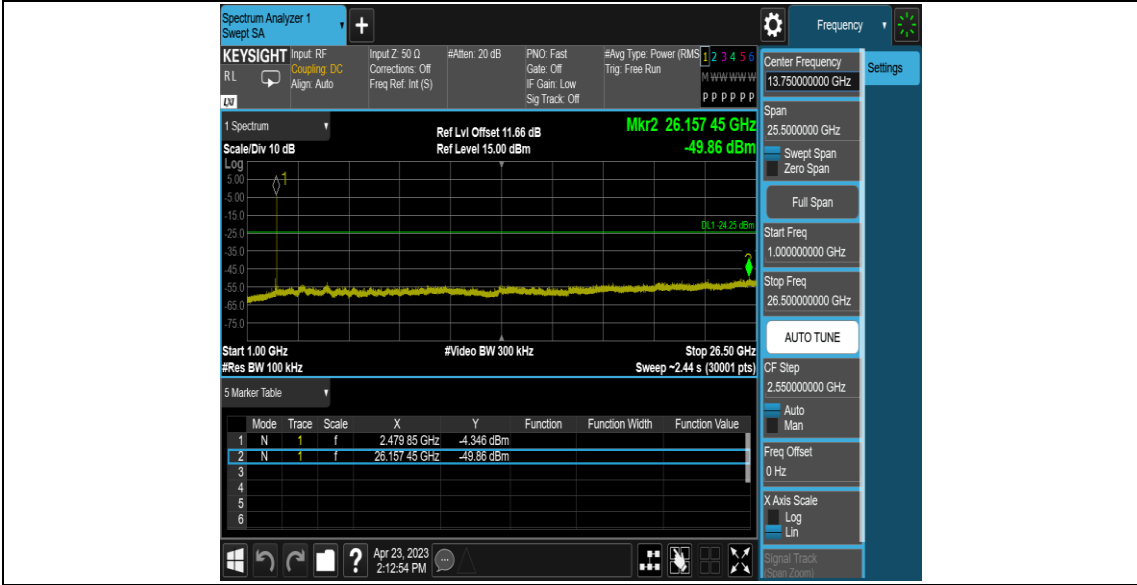
1M\_Ant1\_2480\_0~Reference



1M\_Ant1\_2480\_30~1000



1M\_Ant1\_2480\_1000~26500



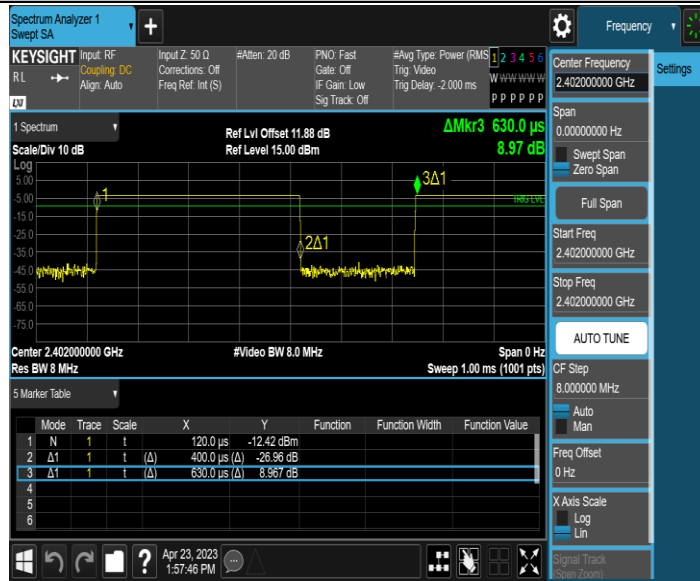
## Appendix G: Duty Cycle

### Test Result

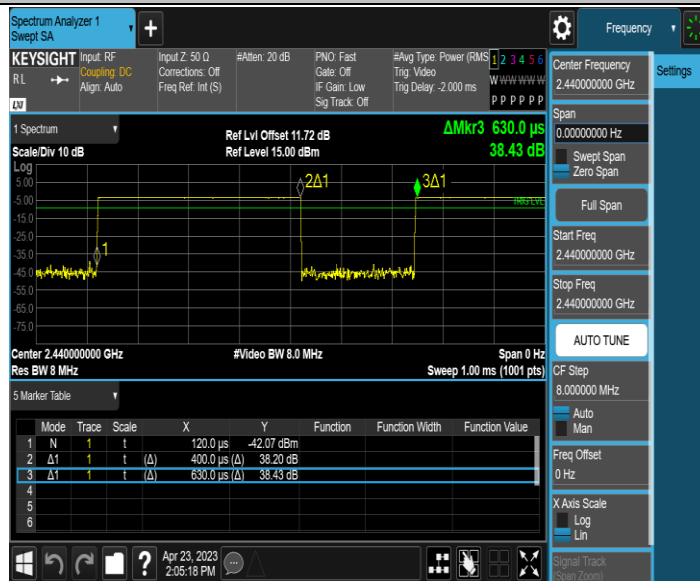
TestMode	Antenna	Frequency[MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]
1M	Ant1	2402	0.40	0.63	63.49	1.97
		2440	0.40	0.63	63.49	1.97
		2480	0.40	0.63	63.49	1.97

# Test Graphs

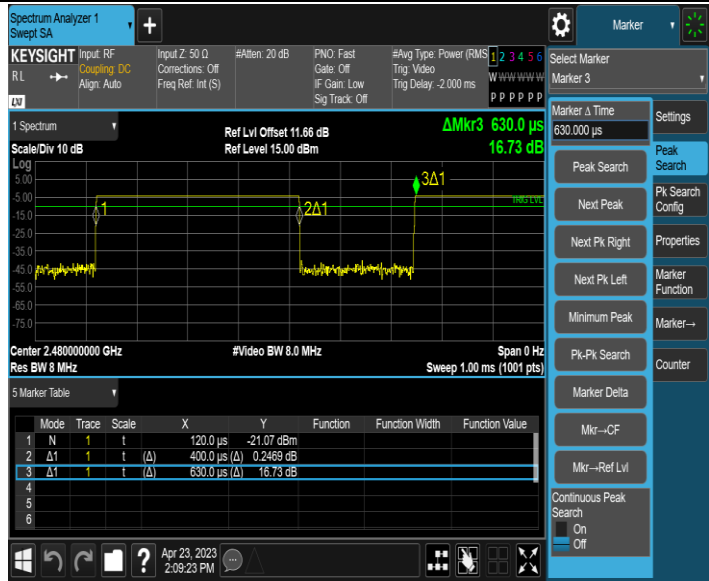
1M\_Ant1\_2402



1M\_Ant1\_2440



1M\_Ant1\_2480



## Appendix J: Radiated emissions for transmitter & Emissions in Restricted Bands

### Emissions in Restricted Bands Test Result

Mode:	2480
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PK Final Data List								
NO.	Freq. [MHz]	Factor [dB/m]	PK Value [dB $\mu$ V/m]	PK Limit [dB $\mu$ V/m]	PK Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2483.5	7.20	56.76	74.00	17.24	150	236	Horizontal
2	2485.75	7.22	63.66	74.00	10.34	105.1	18.3	Horizontal
3	2486.47	7.23	62.35	74.00	11.65	105.1	240.1	Horizontal
4	2491.80	7.25	60.61	74.00	13.39	154.1	14.7	Horizontal
5	2498.35	7.30	55.47	74.00	18.53	105	0	Horizontal
6	2500	7.31	44.91	74.00	29.09	150	5	Horizontal

AV Final Data List								
NO.	Freq. [MHz]	Factor [dB/m]	AV Value [dB $\mu$ V/m]	AV Limit [dB $\mu$ V/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2483.5	7.20	49.74	54.00	4.26	150	236	Horizontal
2	2485.75	7.22	53.31	54.00	0.69	105.1	18.3	Horizontal
3	2486.47	7.23	40.48	54.00	13.52	105.1	240.1	Horizontal
4	2491.80	7.25	38.37	54.00	15.63	154.1	14.7	Horizontal
5	2498.35	7.30	36.30	54.00	17.70	105	0	Horizontal
6	2500	7.31	42.47	54.00	11.53	150	5	Horizontal

Mode:	2480
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PK Final Data List								
NO.	Freq. [MHz]	Factor [dB/m]	PK Value [dB $\mu$ V/m]	PK Limit [dB $\mu$ V/m]	PK Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2483.5	7.20	44.62	74.00	29.38	150	286	Vertical
2	2485.82	7.22	48.84	74.00	25.16	150	134	Vertical
3	2486.14	7.22	49.64	74.00	24.36	150	134	Vertical
4	2491.58	7.25	46.30	74.00	27.70	150	239	Vertical
5	2495.87	7.29	46.22	74.00	27.78	150	214	Vertical
6	2500	7.31	43.79	74.00	30.21	150	40	Vertical



Mode:	2402
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Suspected Data List								
NO.	Freq. [MHz]	Level [dB $\mu$ V/m]	Factor [dB/m]	Limit [dB $\mu$ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2310	48.60	6.48	74.00	25.40	155	345	Horizontal
2	2353.8	53.87	6.56	74.00	20.13	155	354	Horizontal
3	2366.1	54.35	6.60	74.00	19.65	155	360	Horizontal
4	2372.2	54.91	6.60	74.00	19.09	155	360	Horizontal
5	2378.1	55.49	6.62	74.00	18.51	155	360	Horizontal
6	2384.1	56.79	6.62	74.00	17.21	155	347	Horizontal
7	2390	59.73	6.64	74.00	14.27	155	4	Horizontal

AV Final Data List								
NO.	Freq. [MHz]	Factor [dB/m]	AV Value [dB $\mu$ V/m]	AV Limit [dB $\mu$ V/m]	AV Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2353.80	6.56	46.82	54.00	7.18	204.9	347.1	Horizontal
2	2366.1	6.60	45.70	54.00	8.30	205	357.3	Horizontal
3	2372.19	6.60	46.61	54.00	7.39	110.1	357.5	Horizontal
4	2378.1	6.62	48.86	54.00	5.14	122.4	357.3	Horizontal
5	2384.10	6.62	48.72	54.00	5.28	110	357.3	Horizontal
6	2390.00	6.64	50.51	54.00	3.49	167.1	4.2	Horizontal

# Test Report

Mode:	2402
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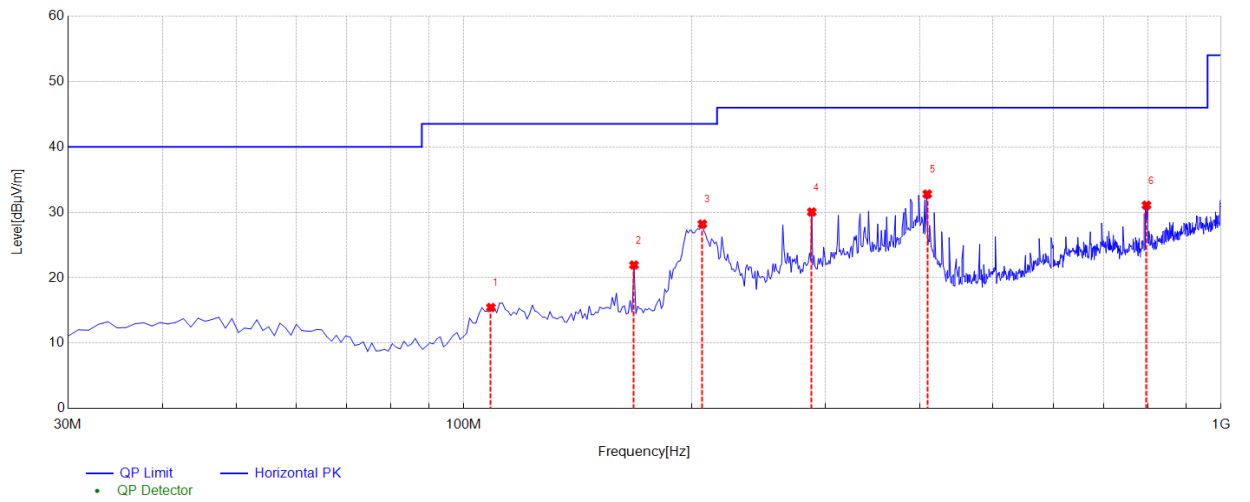
PK Final Data List								
NO.	Freq. [MHz]	Factor [dB/m]	PK Value [dB $\mu$ V/m]	PK Limit [dB $\mu$ V/m]	PK Margin [dB]	Height [cm]	Angle [°]	Polarity
1	2310	6.48	43.23	74.00	30.77	155	4	Vertical
2	2341	6.54	44.76	74.00	29.24	155	41	Vertical
3	2351.9	6.56	44.65	74.00	29.35	155	174	Vertical
4	2362	6.58	45.30	74.00	28.70	155	322	Vertical
5	2383	6.62	45.65	74.00	28.35	155	115	Vertical
6	2390	6.64	44.92	74.00	29.08	155	269	Vertical

Note:

1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

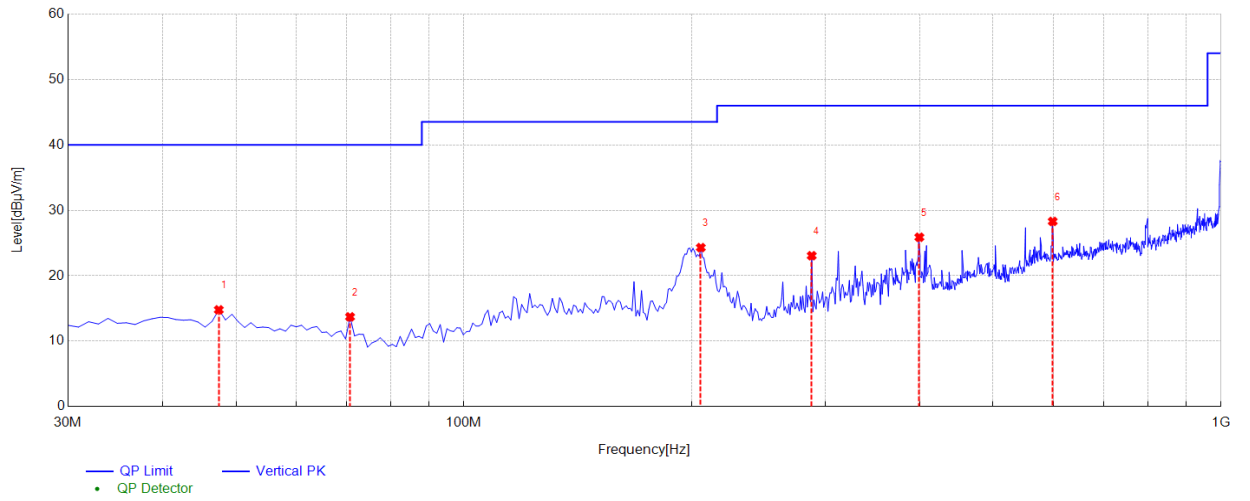
# Radiated emissions for transmitter Test Result

## Test Graph



NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	108.57	15.46	-19.13	43.50	28.04	100	178	Horizontal	PASS
2	167.74	21.95	-16.14	43.50	21.55	100	128	Horizontal	PASS
3	206.54	28.22	-18.87	43.50	15.28	100	274	Horizontal	PASS
4	288.02	30.05	-16.63	46.00	15.95	100	318	Horizontal	PASS
5	409.27	32.79	-13.17	46.00	13.21	100	0	Horizontal	PASS
6	797.27	31.09	-5.38	46.00	14.91	100	125	Horizontal	PASS

## Test Graph



NO.	Freq. [MHz]	Level [dBµV/m]	Factor [dB/m]	Limit [dBµV/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity	Verdict
1	47.46	14.80	-16.09	40.00	25.20	100	211	Vertical	PASS
2	70.74	13.73	-18.86	40.00	26.27	100	108	Vertical	PASS
3	205.57	24.31	-18.88	43.50	19.19	100	232	Vertical	PASS
4	288.02	23.07	-16.63	46.00	22.93	100	10	Vertical	PASS
5	399.57	25.89	-13.49	46.00	20.11	100	67	Vertical	PASS
6	599.39	28.31	-9.15	46.00	17.69	100	17	Vertical	PASS

Mode:	2402
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NO.	Freq. [MHz]	Level [dB $\mu$ V/m]	Factor [dB/m]	Limit [dB $\mu$ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1644	44.06	2.74	74.00	29.94	150	128	Horizontal
2	4285.97	43.76	-15.29	74.00	30.24	150	90	Horizontal
3	5673.86	44.29	-12.88	74.00	29.71	150	156	Horizontal
4	7205.63	51.11	-11.08	74.00	22.89	150	60	Horizontal
5	9609.71	47.35	-8.43	74.00	26.65	150	276	Horizontal
6	13263.7	49.81	-2.20	74.00	24.19	150	324	Horizontal

NO.	Freq. [MHz]	Level [dB $\mu$ V/m]	Factor [dB/m]	Limit [dB $\mu$ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1748	45.35	3.72	74.00	28.65	150	213	Vertical
2	3896.28	44.17	-14.57	74.00	29.83	150	356	Vertical
3	4936.45	44.27	-14.84	74.00	29.73	150	338	Vertical
4	7205.63	47.38	-11.08	74.00	26.62	150	77	Vertical
5	9025.17	46.17	-9.24	74.00	27.83	150	86	Vertical
6	12109.7	48.20	-3.47	74.00	25.80	150	25	Vertical

Mode:	2440
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NO.	Freq. [MHz]	Level [dB $\mu$ V/m]	Factor [dB/m]	Limit [dB $\mu$ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1442	43.54	1.38	74.00	30.46	150	229	Horizontal
2	4229.01	43.88	-14.92	74.00	30.12	150	79	Horizontal
3	5958.63	44.87	-11.75	74.00	29.13	150	129	Horizontal
4	7319.54	48.07	-12.05	74.00	25.93	150	51	Horizontal
5	11306.3	47.81	-5.63	74.00	26.19	150	31	Horizontal
6	14321.9	49.54	-1.17	74.00	24.46	150	88	Horizontal

NO.	Freq. [MHz]	Level [dB $\mu$ V/m]	Factor [dB/m]	Limit [dB $\mu$ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1806	46.02	4.37	74.00	27.98	150	80	Vertical
2	5050.35	43.42	-14.10	74.00	30.58	150	189	Vertical
3	6093.52	45.24	-11.33	74.00	28.76	150	356	Vertical
4	7139.68	45.58	-11.23	74.00	28.42	150	209	Vertical
5	10485.0	46.38	-7.30	74.00	27.62	150	174	Vertical
6	13113.9	49.38	-2.64	74.00	24.62	150	256	Vertical

Mode:	2480
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NO.	Freq. [MHz]	Level [dB $\mu$ V/m]	Factor [dB/m]	Limit [dB $\mu$ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1938	47.27	5.74	74.00	26.73	150	202	Horizontal
2	3863.30	43.90	-14.90	74.00	30.10	150	144	Horizontal
3	6141.48	45.91	-11.60	74.00	28.09	150	7	Horizontal
4	7439.44	47.34	-11.25	74.00	26.66	150	62	Horizontal
5	9918.46	48.58	-7.27	74.00	25.42	150	280	Horizontal
6	12085.7	48.71	-3.51	74.00	25.29	150	79	Horizontal

NO.	Freq. [MHz]	Level [dB $\mu$ V/m]	Factor [dB/m]	Limit [dB $\mu$ V/m]	Margin [dB]	Height [cm]	Angle [°]	Polarity
1	1722	44.84	3.44	74.00	29.16	150	48	Vertical
2	3671.46	44.25	-15.71	74.00	29.75	150	249	Vertical
3	4960.43	45.51	-14.69	74.00	28.49	150	197	Vertical
4	7439.44	47.58	-11.25	74.00	26.42	150	96	Vertical
5	9363.90	46.47	-8.36	74.00	27.53	150	322	Vertical
6	13035.9	49.73	-3.25	74.00	24.27	150	241	Vertical