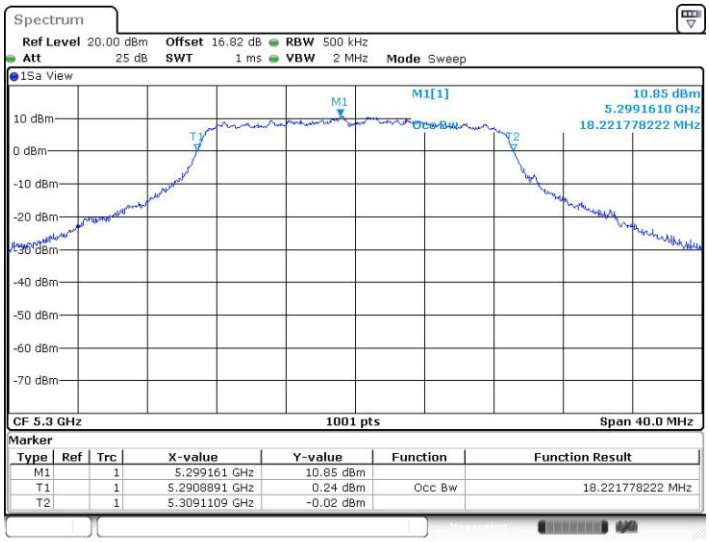
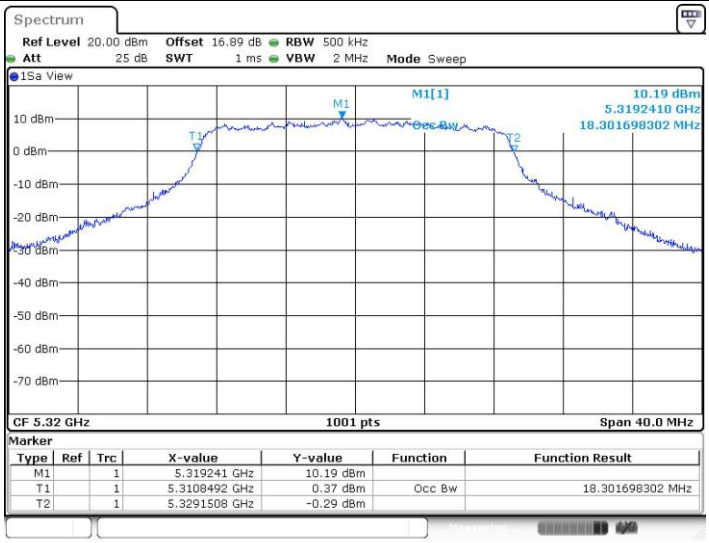
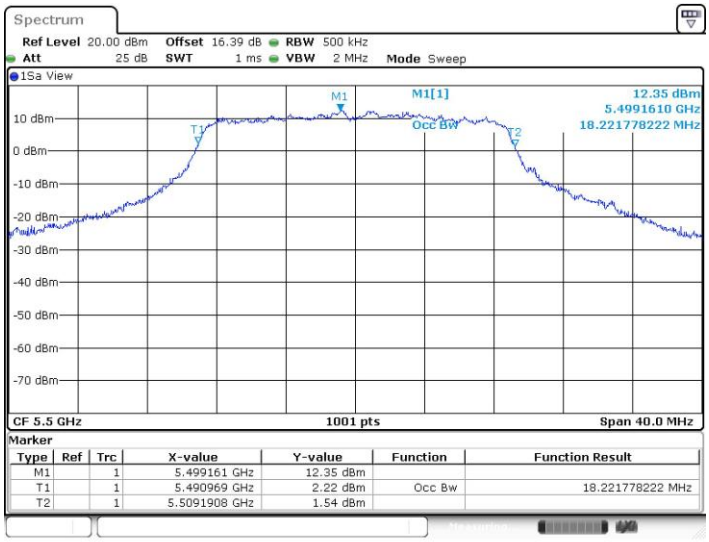


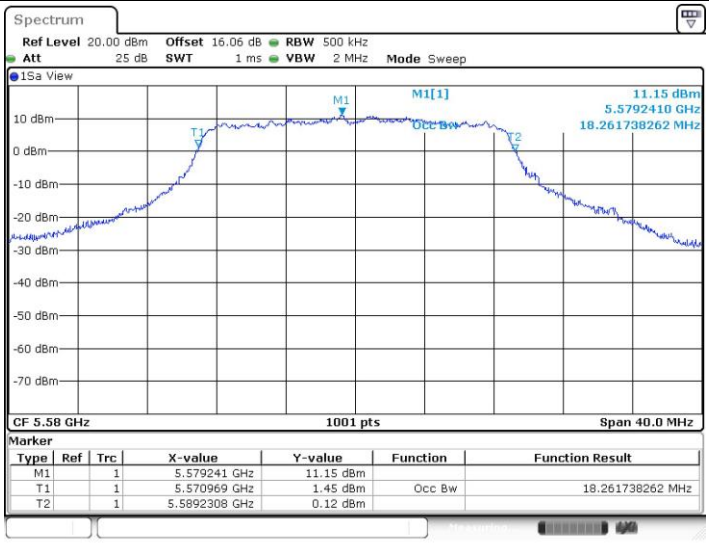
11AC20SISO_Ant1_5320



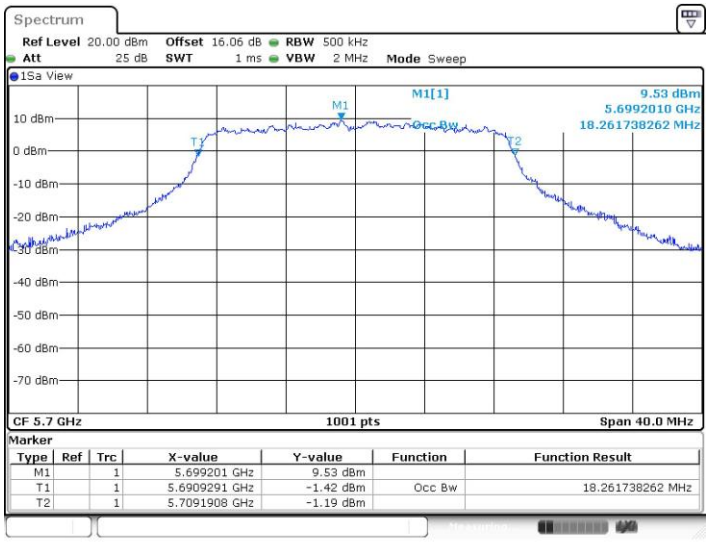
11AC20SISO_Ant1_5500



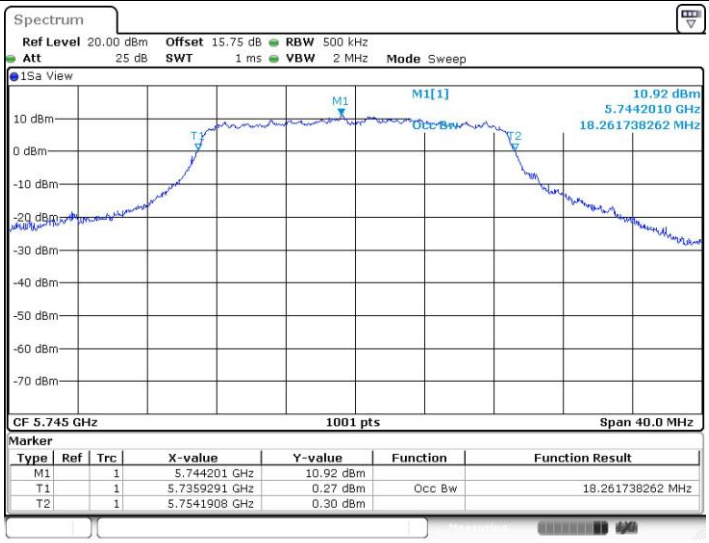
11AC20SISO_Ant1_5580



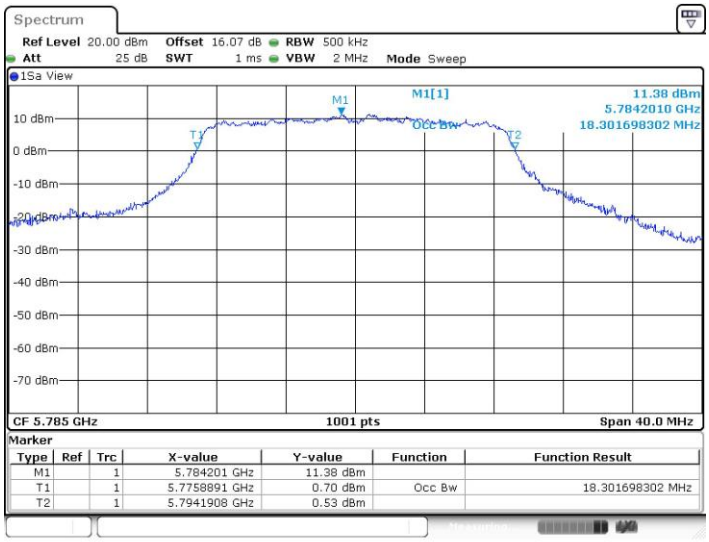
11AC20SISO_Ant1_5700



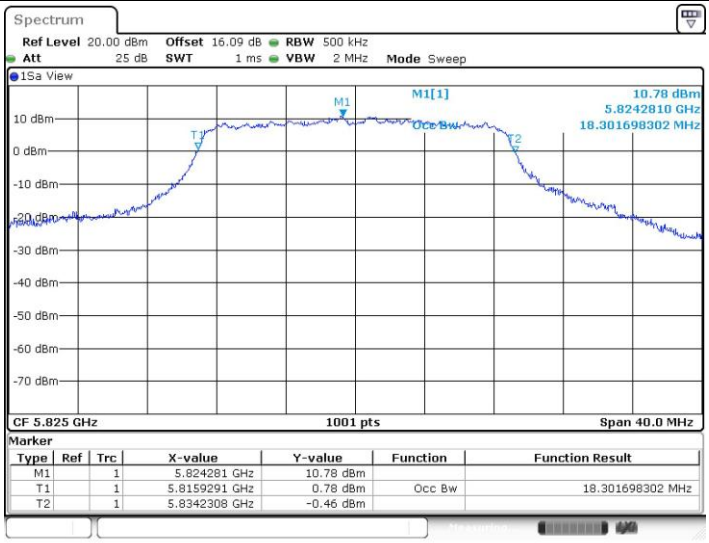
11AC20SISO_Ant1_5745



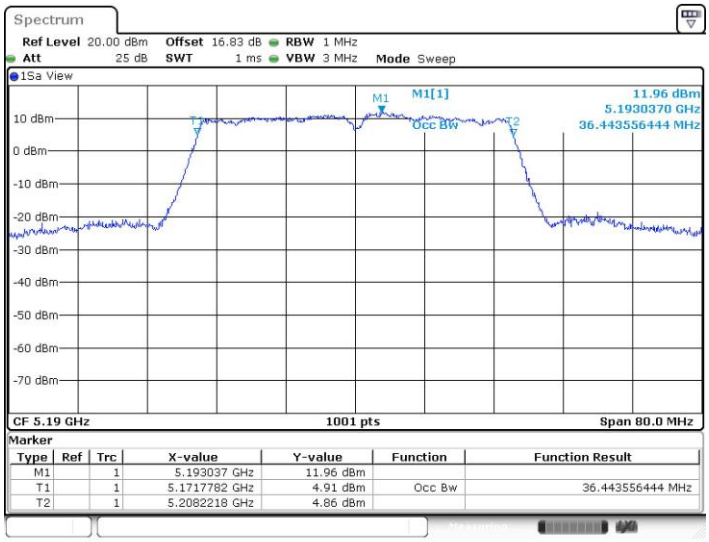
11AC20SISO_Ant1_5785



11AC20SISO_Ant1_5825



11AC40SISO_Ant1_5190



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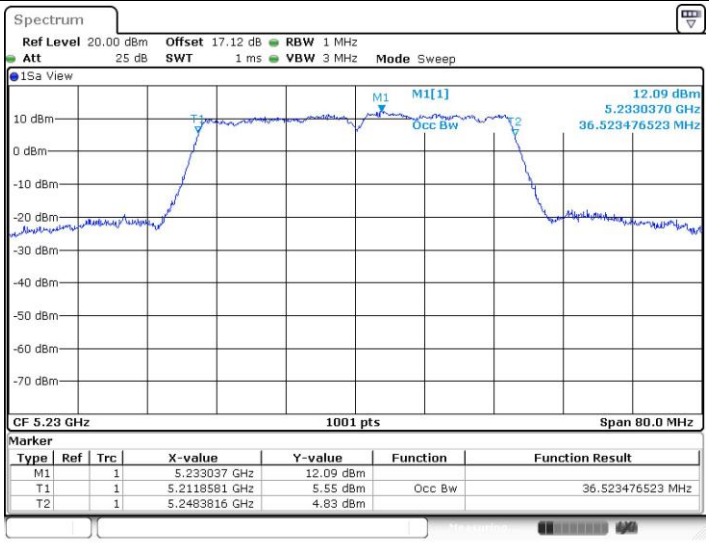

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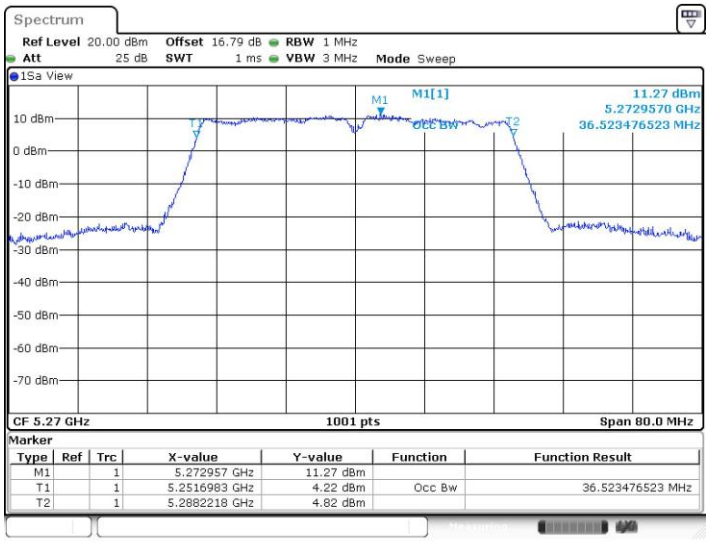

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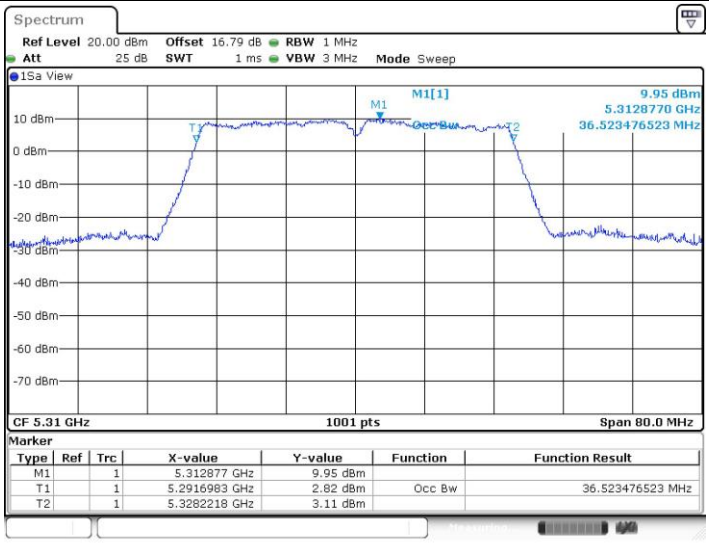
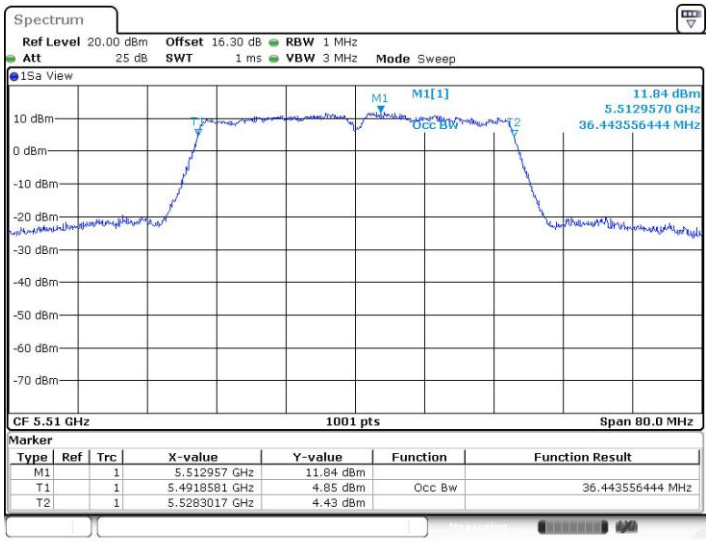
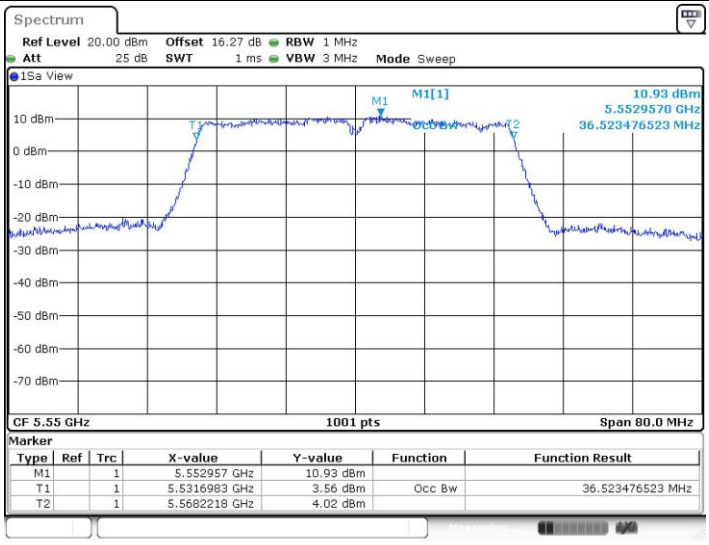


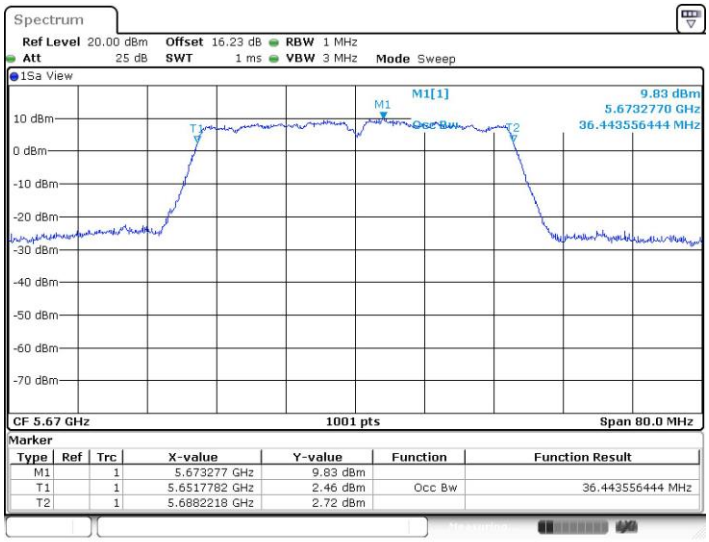
11AC40SISO_Ant1_5510



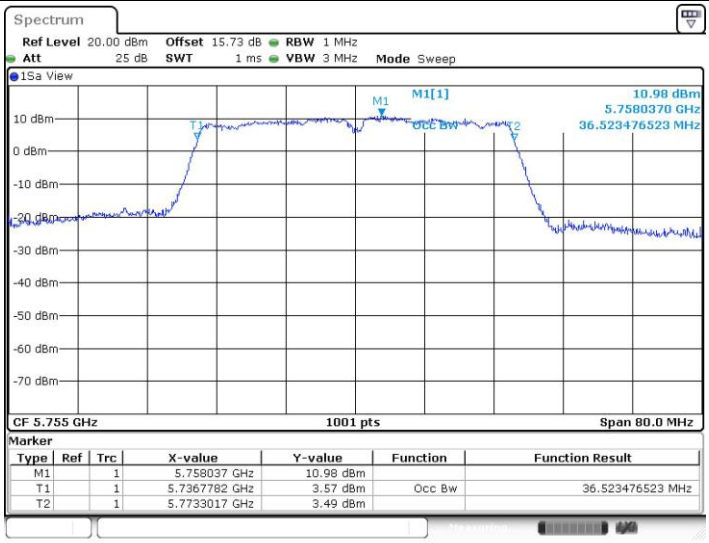
11AC40SISO_Ant1_5550



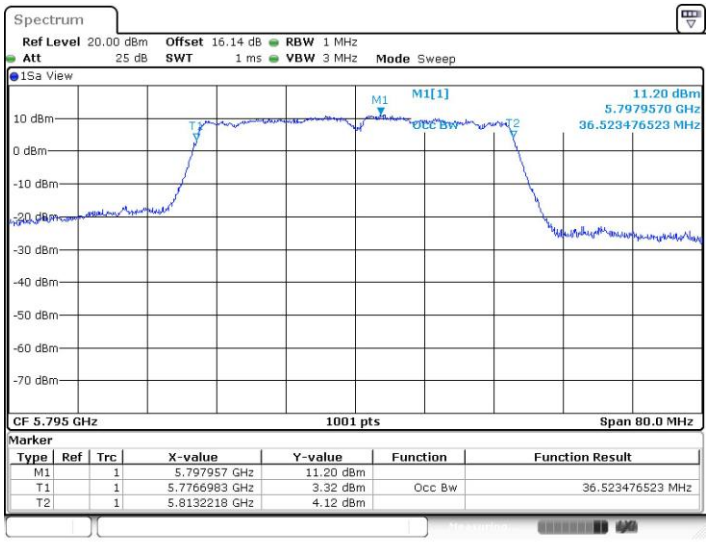
11AC40SISO_Ant1_5670



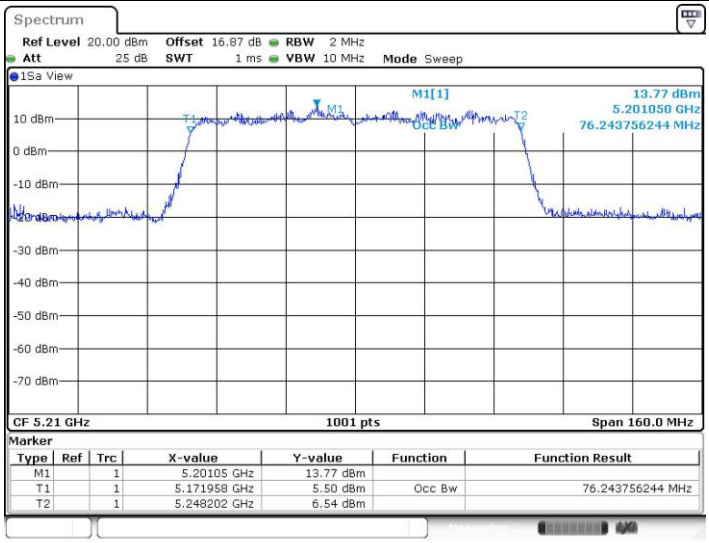
11AC40SISO_Ant1_5755



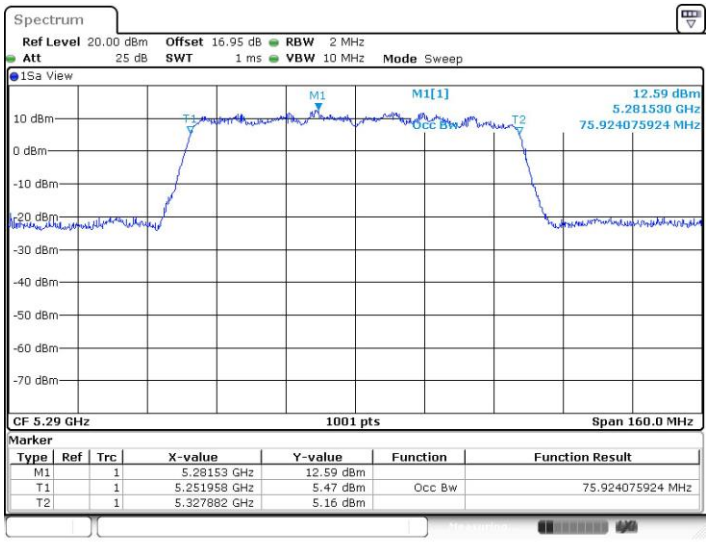
11AC40SISO_Ant1_5795



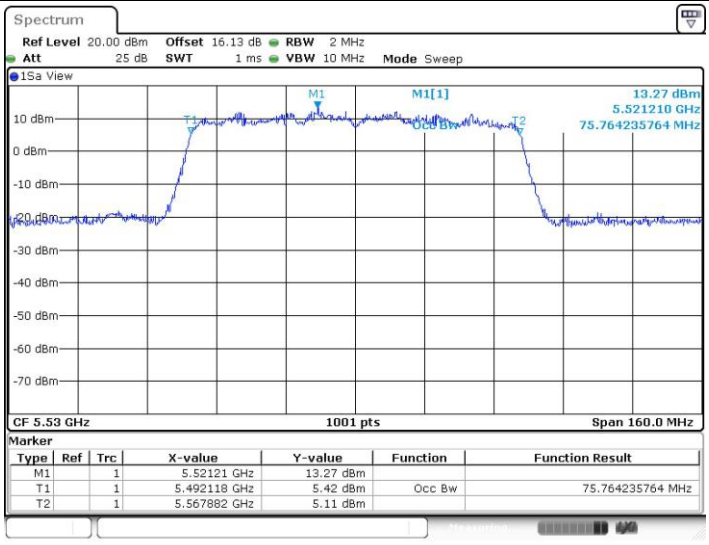
11AC80SISO_Ant1_5210



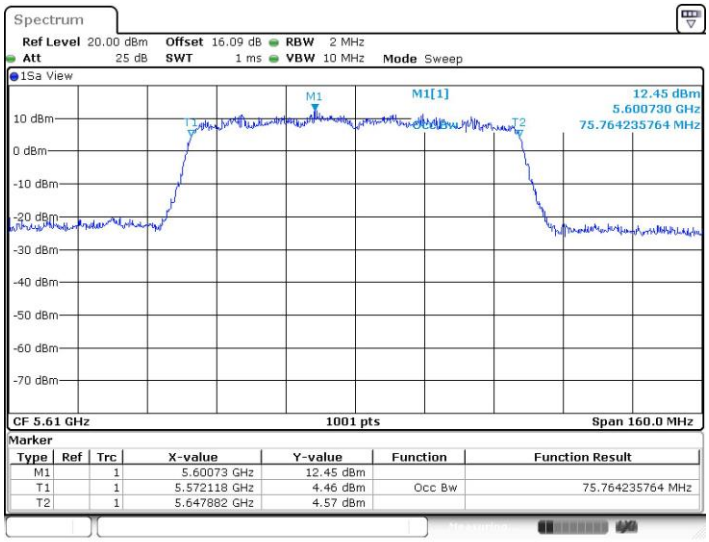
11AC80SISO_Ant1_5290



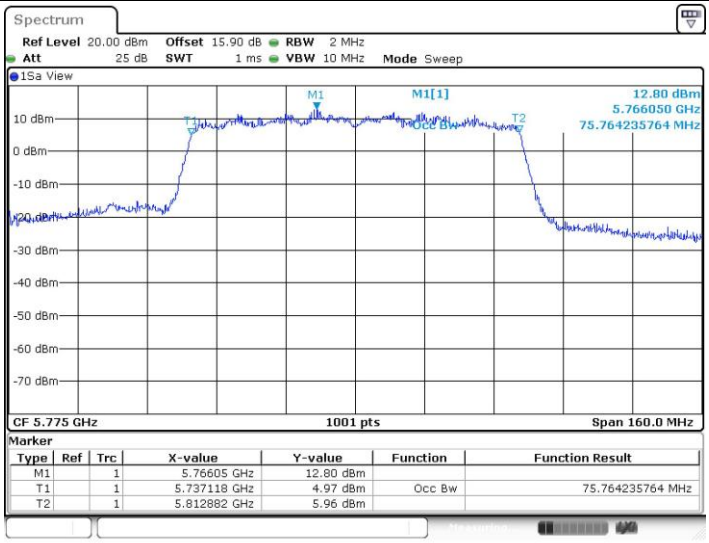
11AC80SISO_Ant1_5530



11AC80SISO_Ant1_5610



11AC80SISO_Ant1_5775



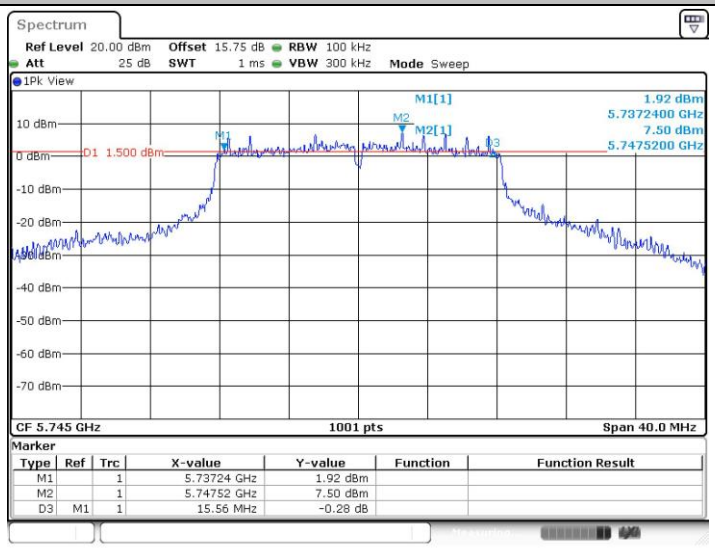
Min emission bandwidth

Test Result B4

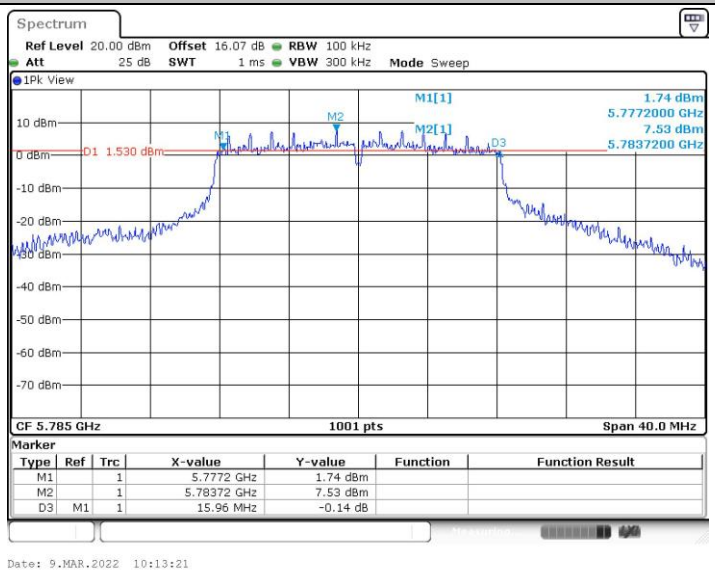
TestMode	Antenna	Frequency[MHz]	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	15.56	5737.24	5752.80	0.5	PASS
		5785	15.96	5777.20	5793.16	0.5	PASS
		5825	15.32	5817.24	5832.56	0.5	PASS
11AC20SISO	Ant1	5745	15.12	5737.44	5752.56	0.5	PASS
		5785	15.96	5776.64	5792.60	0.5	PASS
		5825	15.12	5817.44	5832.56	0.5	PASS
11AC40SISO	Ant1	5755	35.12	5737.48	5772.60	0.5	PASS
		5795	35.36	5777.24	5812.60	0.5	PASS
11AC80SISO	Ant1	5775	75.20	5737.40	5812.60	0.5	PASS

Test Graphs B4

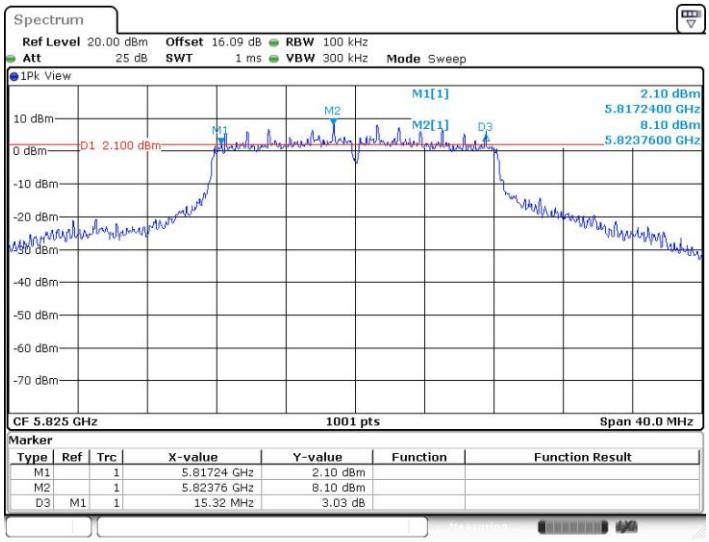
11A_Ant1_5745



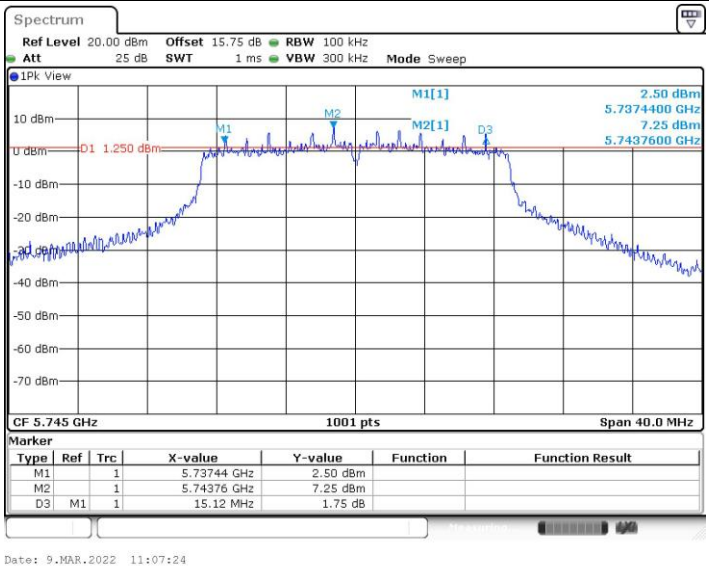
11A_Ant1_5785



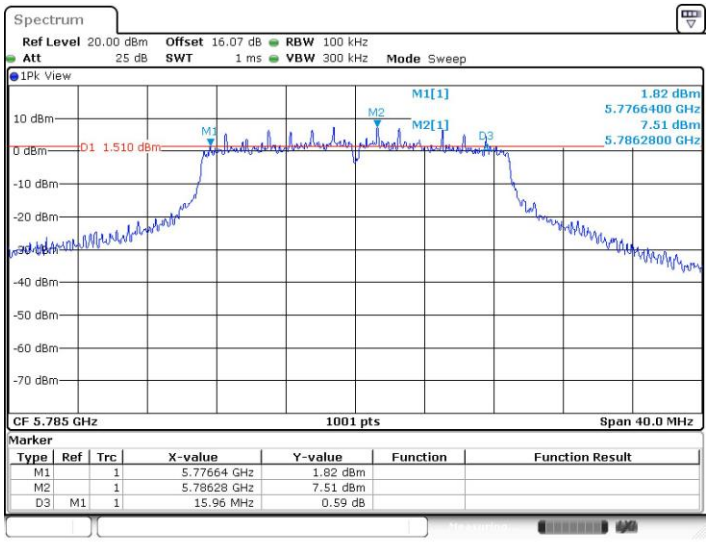
11A_Ant1_5825



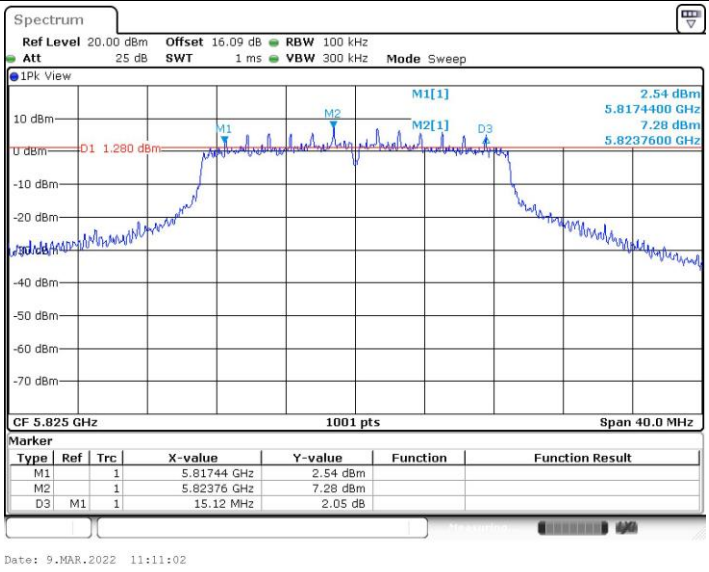
11AC20SISO_Ant1_5745



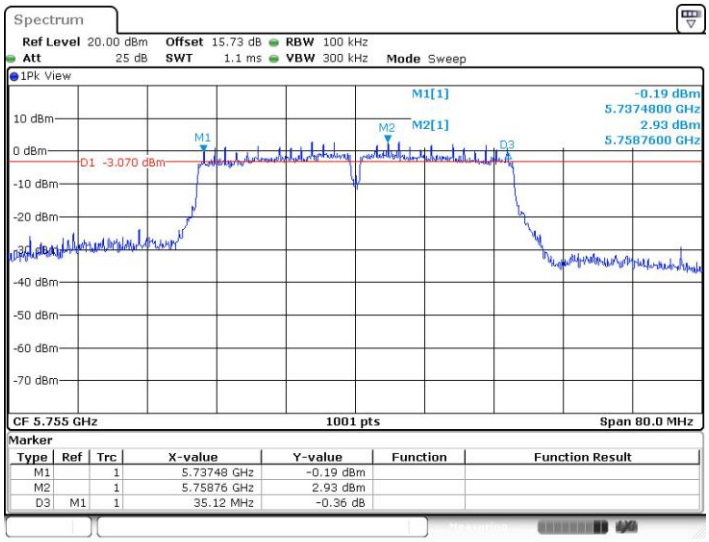
11AC20SISO_Ant1_5785



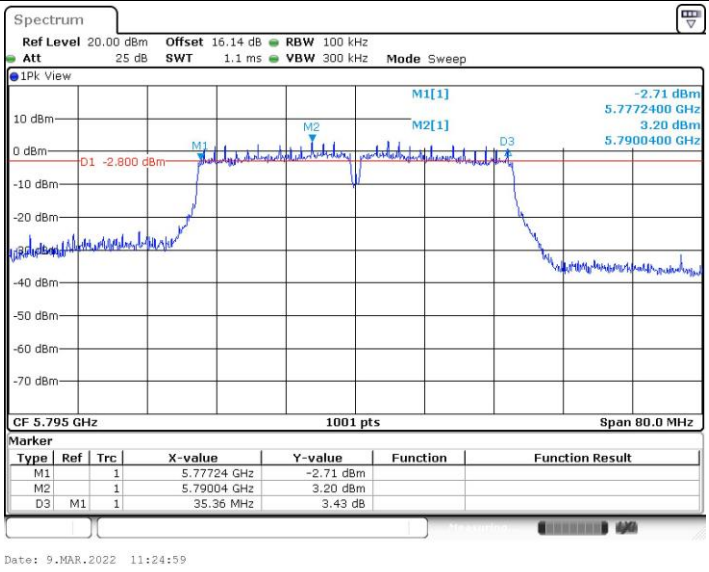
11AC20SISO_Ant1_5825



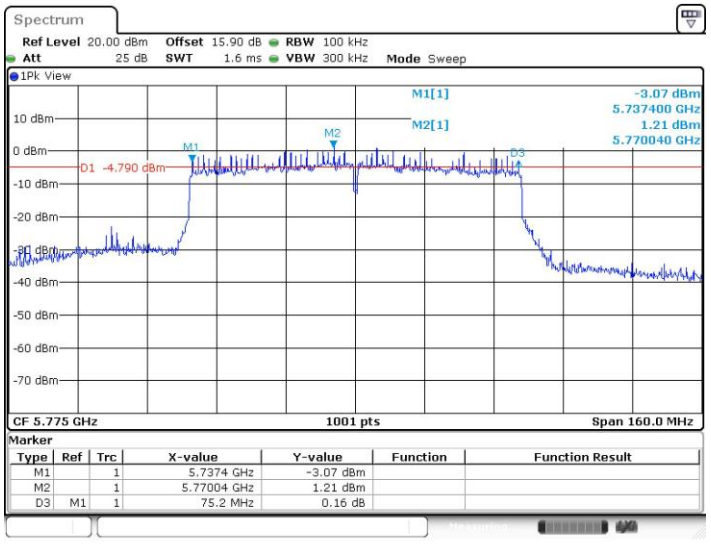
11AC40SISO_Ant1_5755



11AC40SISO_Ant1_5795



11AC80SISO_Ant1_5775


Spectrum
Ref Level 20.00 dBm Offset 15.90 dB RBW 100 kHz
Att 25 dB SWT 1.6 ms VBW 300 kHz Mode Sweep
1Pk View
M1[1] -3.07 dBm
5.737400 GHz
M2[1] 1.21 dBm
5.770040 GHz
D1 -4.790 dBm
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
CF 5.775 GHz
1001 pts
Span 160.0 MHz
Marker
Type Ref Trc X-value Y-value Function Function Result
M1 1 5.7374 GHz -3.07 dBm
M2 1 5.77004 GHz 1.21 dBm
D3 M1 1 75.2 MHz 0.16 dB
Date: 9.MAR.2022 11:32:02

Maximum power spectral density

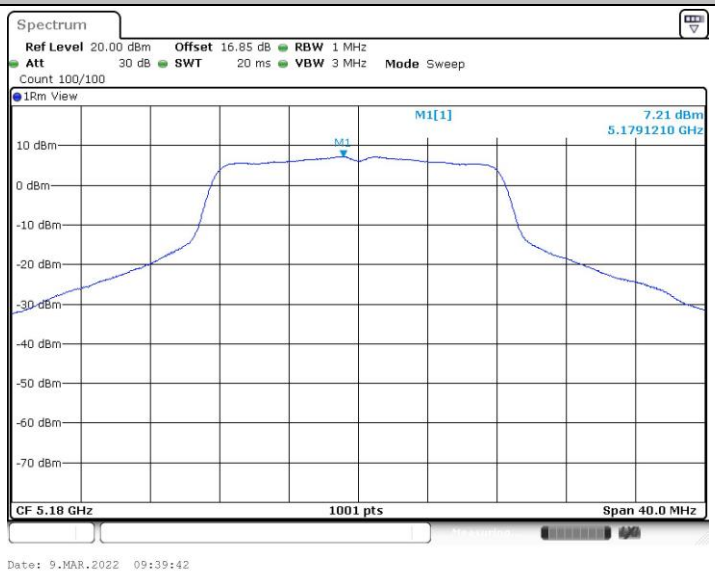
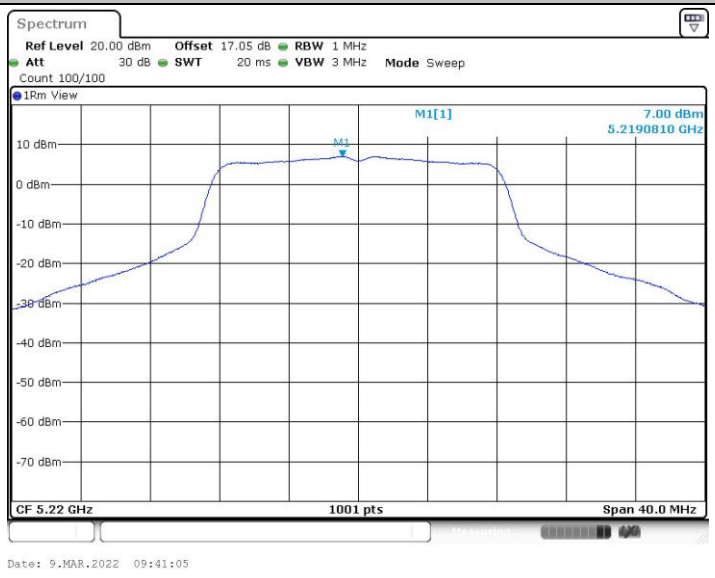
Test Result

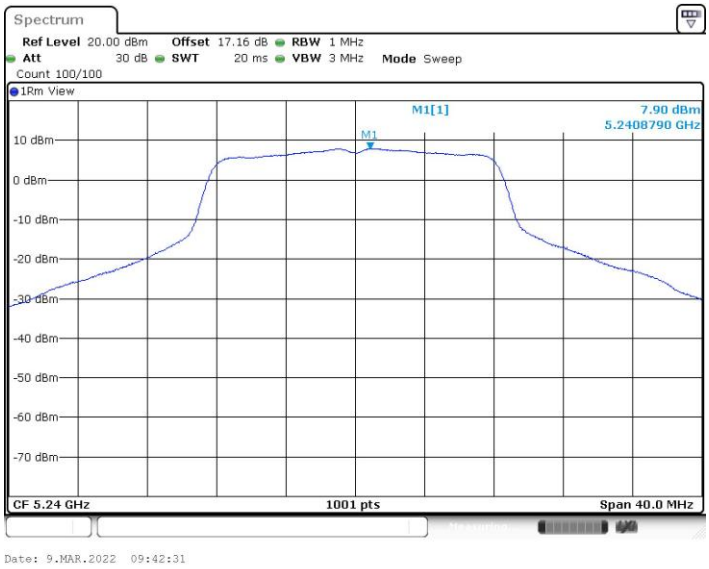
TestMode	Antenna	Frequency[MHz]	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5180	7.21	≤11.00	PASS
		5220	7	≤11.00	PASS
		5240	7.9	≤11.00	PASS
		5260	7.2	≤11.00	PASS
		5300	6.32	≤11.00	PASS
		5320	5.52	≤11.00	PASS
		5500	8.11	≤11.00	PASS
		5580	6.76	≤11.00	PASS
		5700	5.18	≤11.00	PASS
		5745	3.93	≤30.00	PASS
		5785	4.38	≤30.00	PASS
		5825	3.77	≤30.00	PASS
11AC20SISO	Ant1	5180	5.97	≤11.00	PASS
		5220	5.8	≤11.00	PASS
		5240	6.78	≤11.00	PASS
		5260	6.05	≤11.00	PASS
		5300	5.08	≤11.00	PASS
		5320	4.31	≤11.00	PASS
		5500	6.85	≤11.00	PASS
		5580	5.51	≤11.00	PASS
		5700	3.75	≤11.00	PASS
		5745	2.5	≤30.00	PASS
		5785	3.02	≤30.00	PASS
		5825	2.44	≤30.00	PASS
11AC40SISO	Ant1	5190	2.67	≤11.00	PASS
		5230	2.82	≤11.00	PASS
		5270	2.17	≤11.00	PASS
		5310	1.06	≤11.00	PASS
		5510	2.94	≤11.00	PASS
		5550	2.04	≤11.00	PASS
		5670	0.69	≤11.00	PASS
		5755	-1.13	≤30.00	PASS
		5795	-0.79	≤30.00	PASS
11AC80SISO	Ant1	5210	-1.17	≤11.00	PASS

		5290	-4.46	≤11.00	PASS
		5530	-3.89	≤11.00	PASS
		5610	-1.38	≤11.00	PASS
		5775	-4.11	≤30.00	PASS

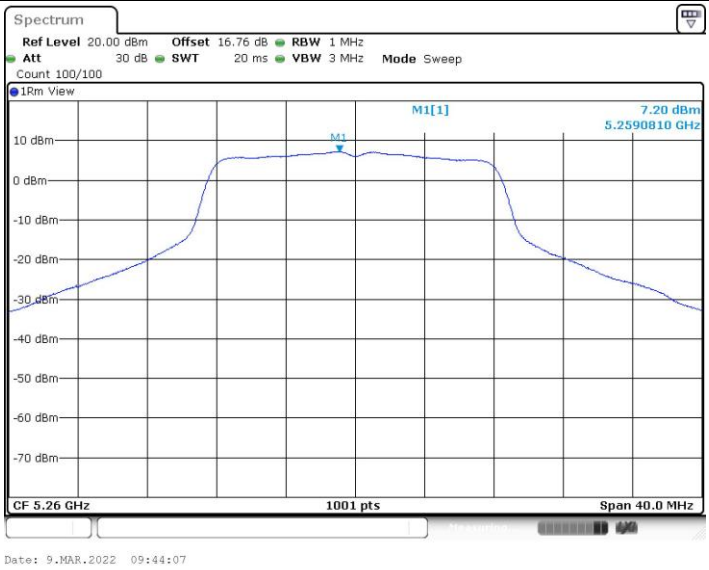
Note：1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.
2.The Duty Cycle Factor and RBW Factor is compensated in the graph.

Test Graphs

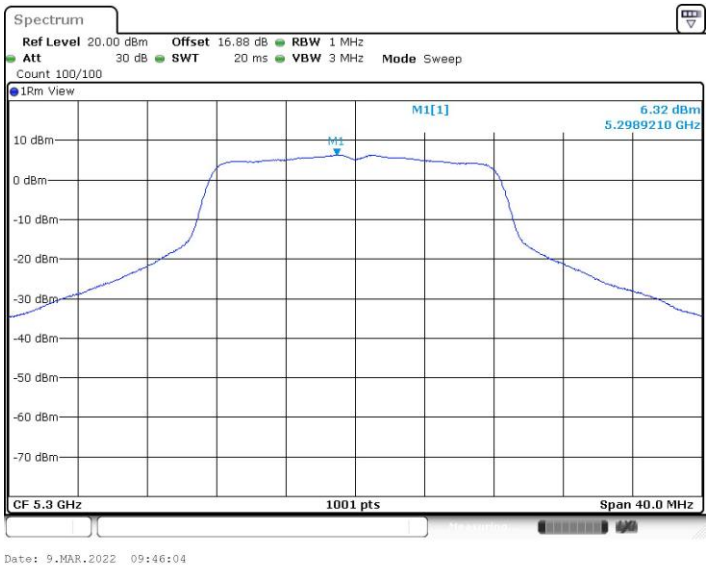
11A_Ant1_5180

11A_Ant1_5220

11A_Ant1_5240



11A_Ant1_5260

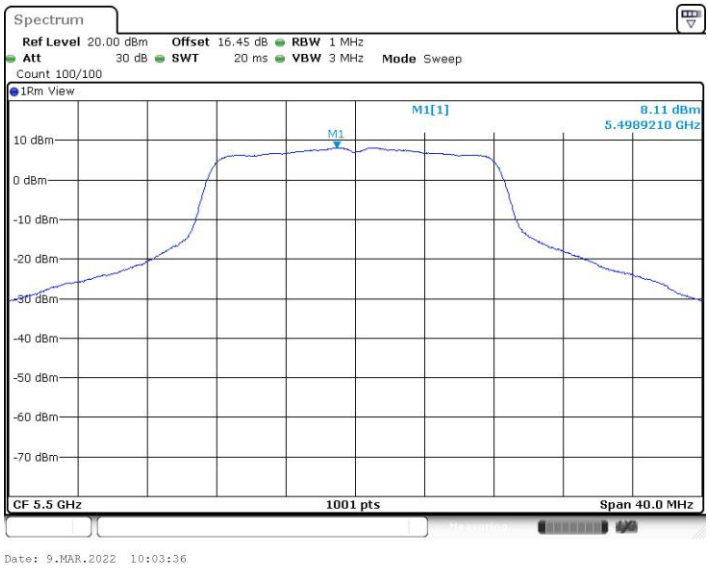


11A_Ant1_5300

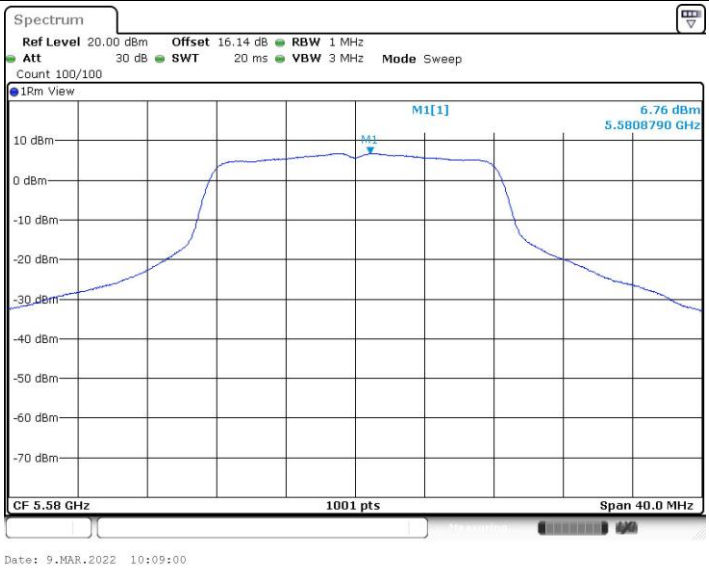


11A_Ant1_5320

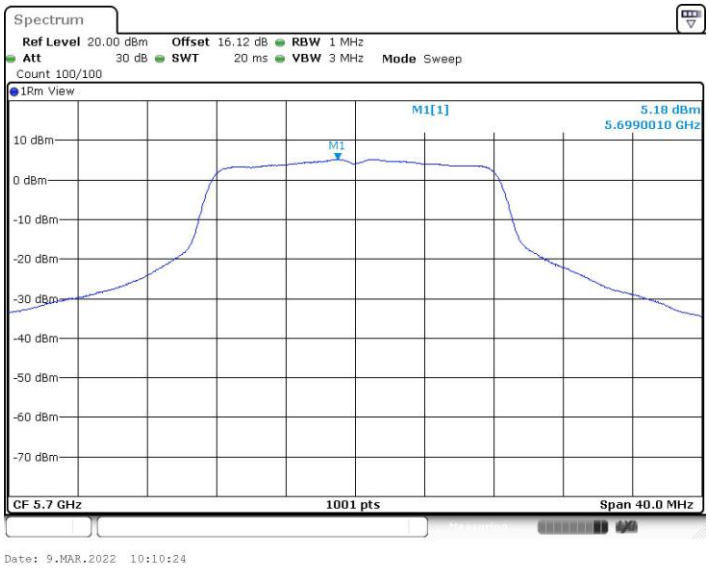
11A_Ant1_5500



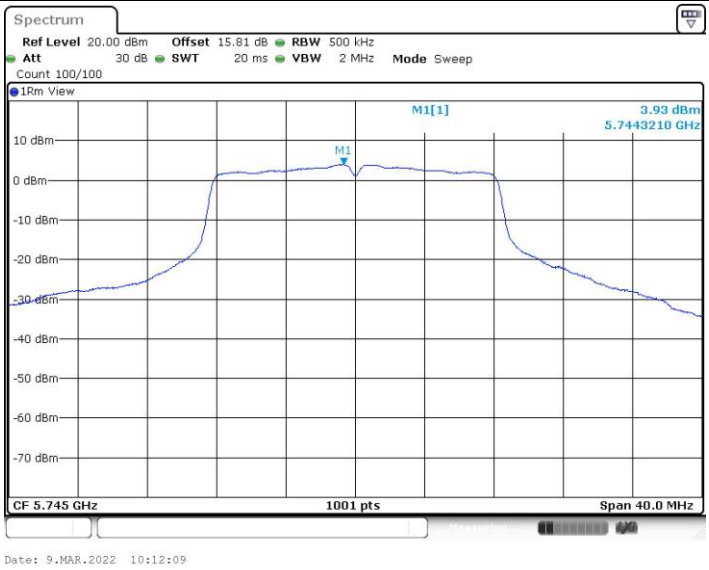
11A_Ant1_5580



11A_Ant1_5700

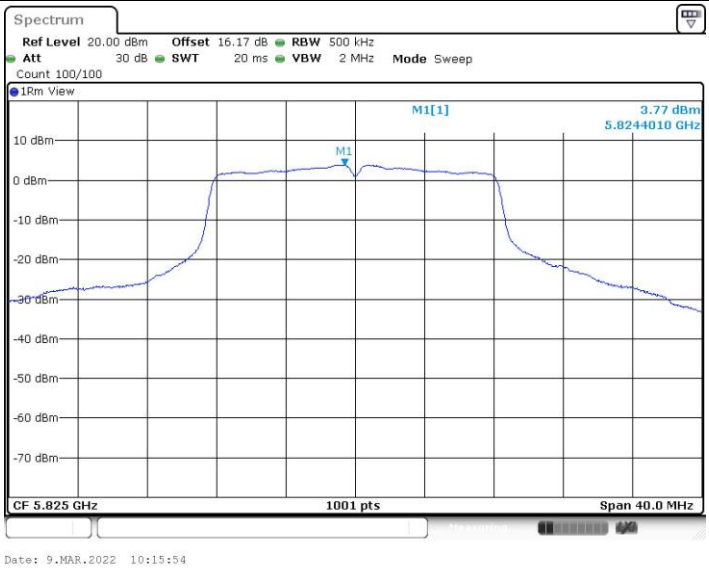


11A_Ant1_5745



11A_Ant1_5785

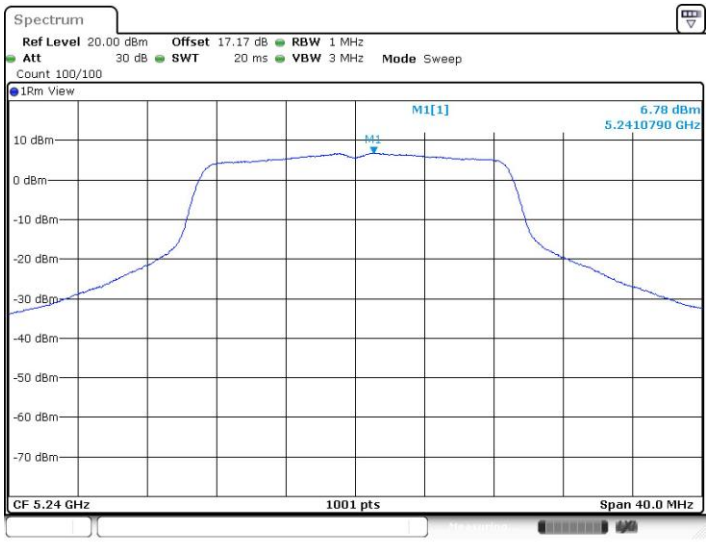
11A_Ant1_5825



11AC20SISO_Ant1_5180

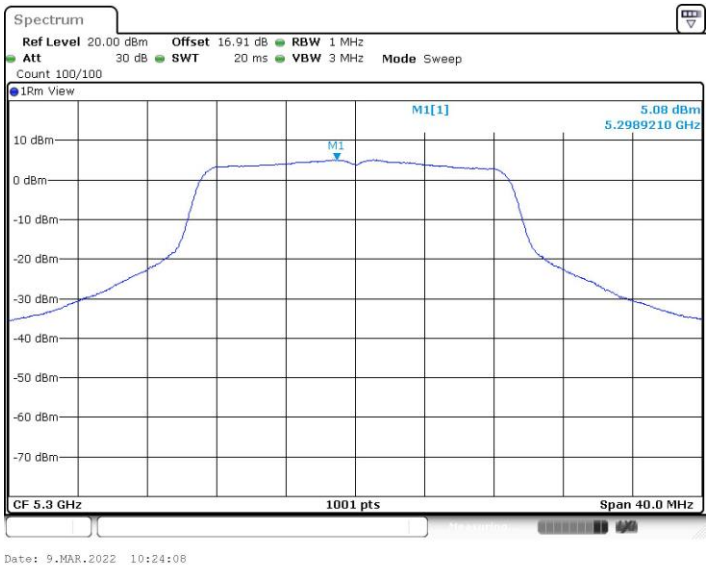
11AC20SISO_Ant1_5220

11AC20SISO_Ant1_5240

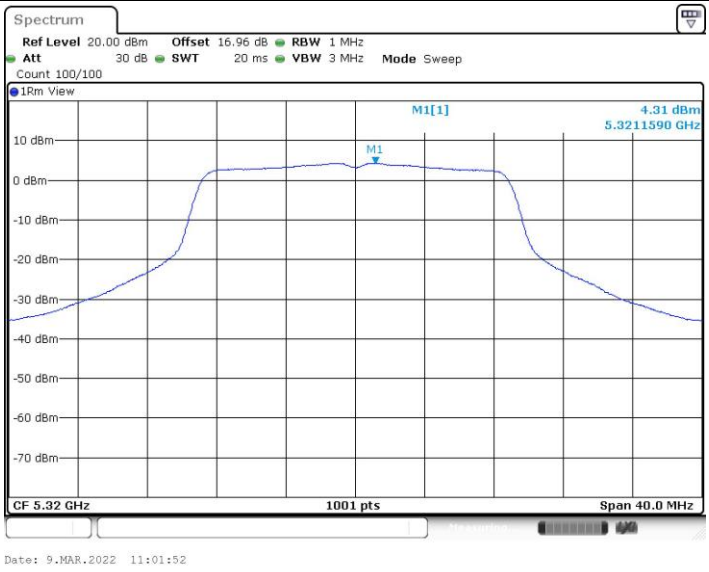


11AC20SISO_Ant1_5260

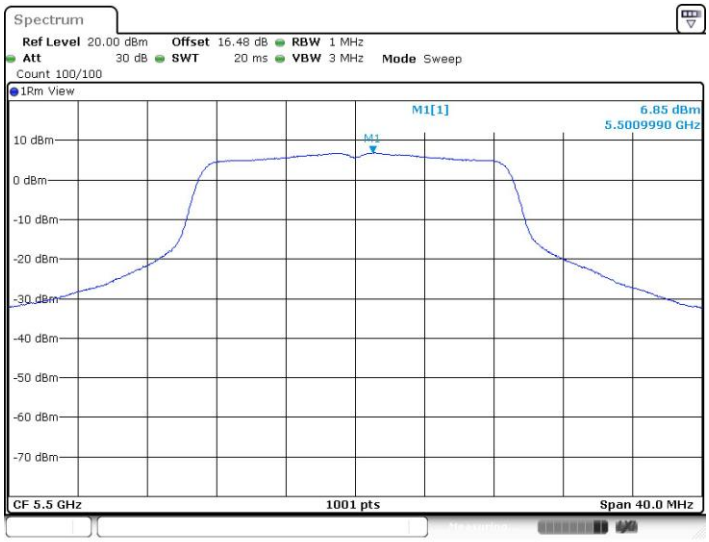
11AC20SISO_Ant1_5300



11AC20SISO_Ant1_5320

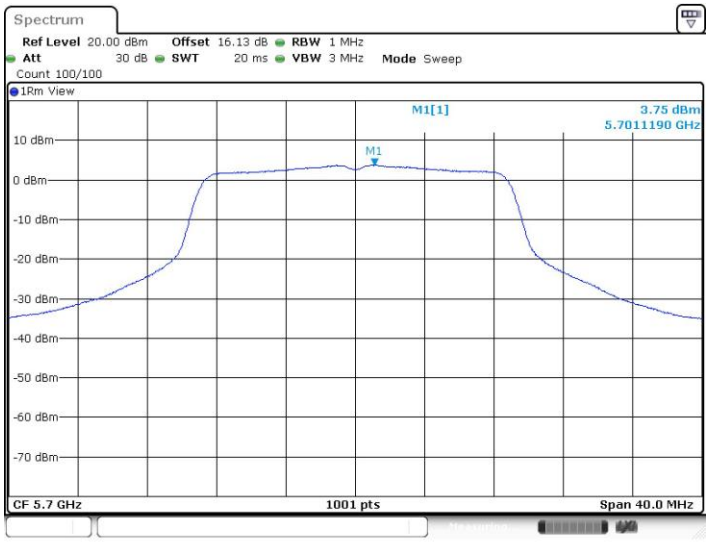


11AC20SISO_Ant1_5500



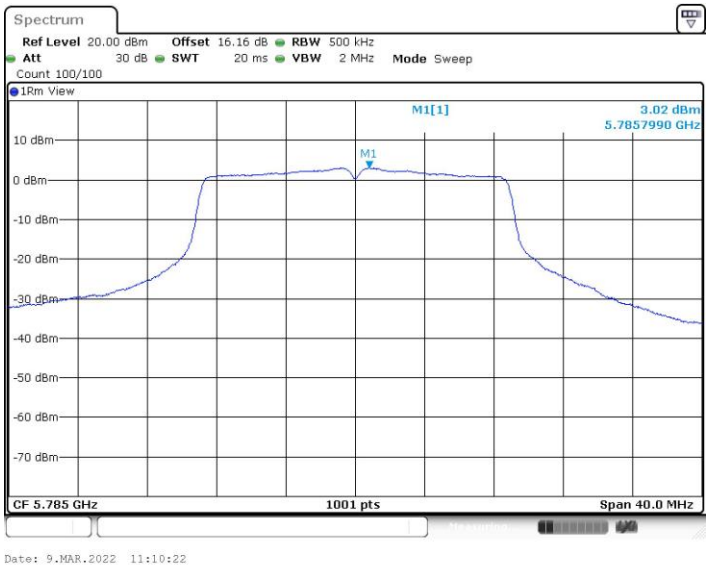
11AC20SISO_Ant1_5580

11AC20SISO_Ant1_5700

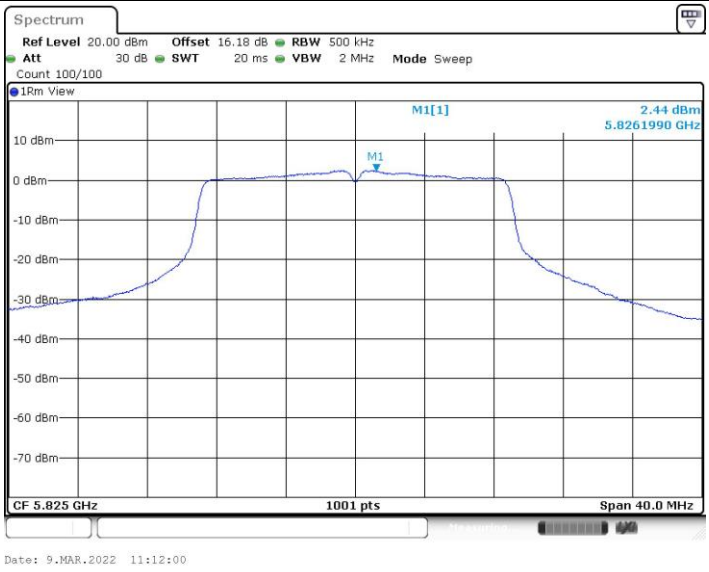


11AC20SISO_Ant1_5745

11AC20SISO_Ant1_5785



11AC20SISO_Ant1_5825



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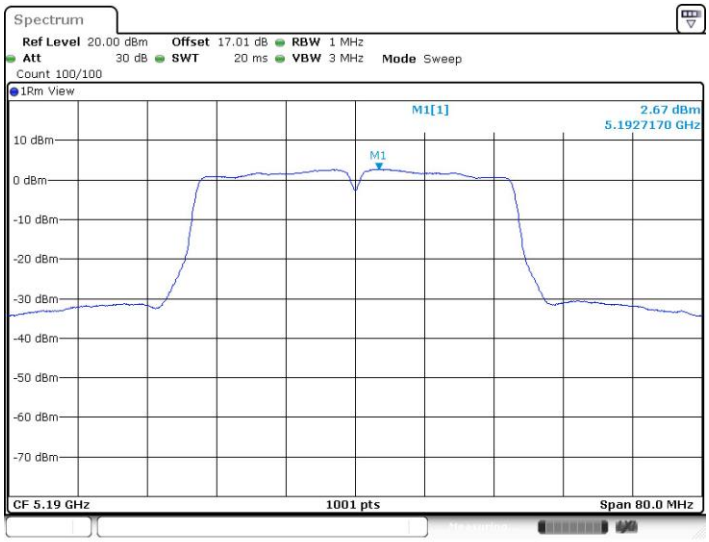

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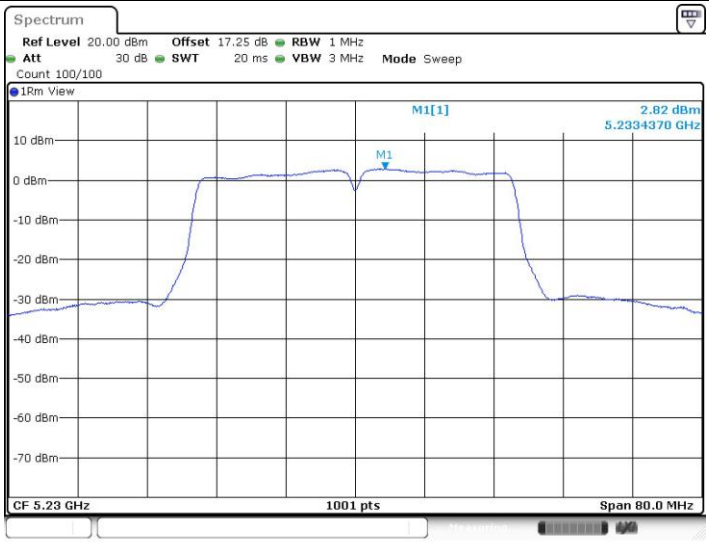

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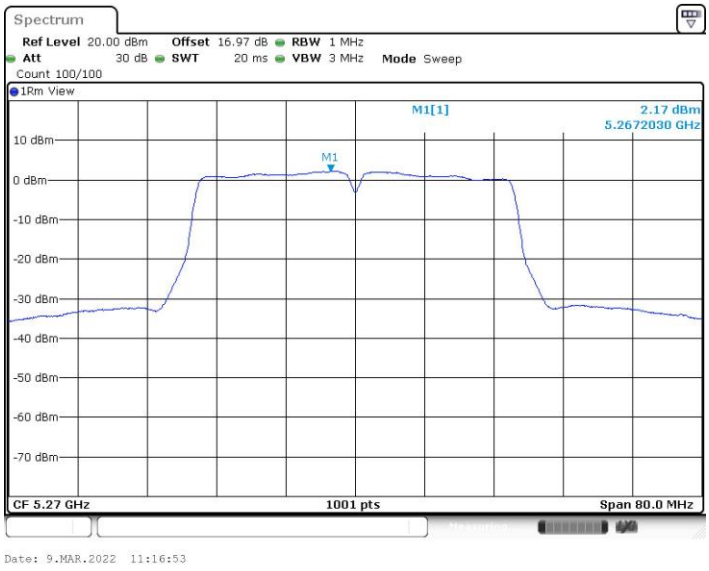
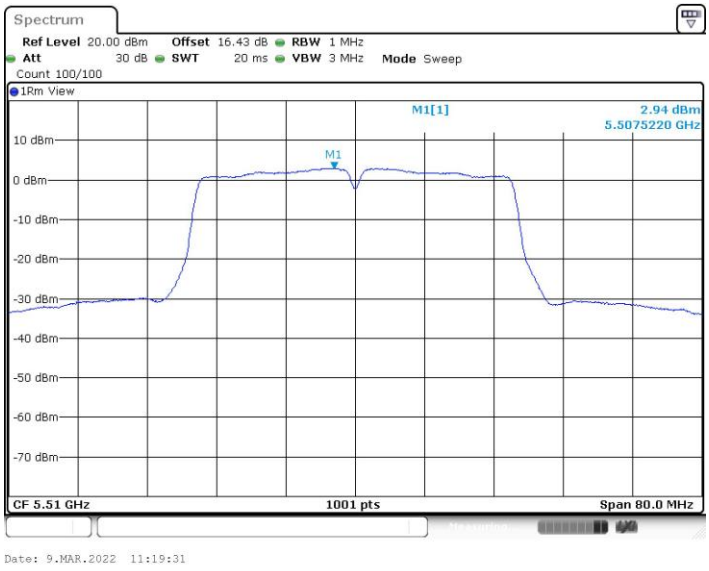


11AC40SISO_Ant1_5310

11AC40SISO_Ant1_5510



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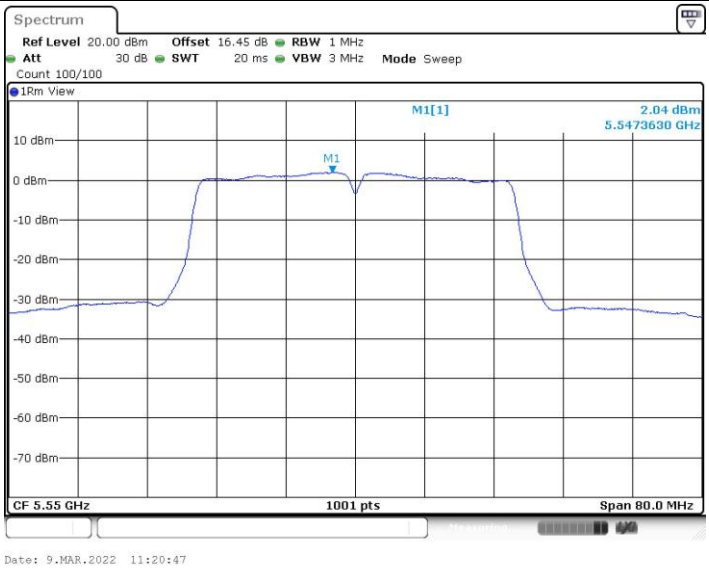

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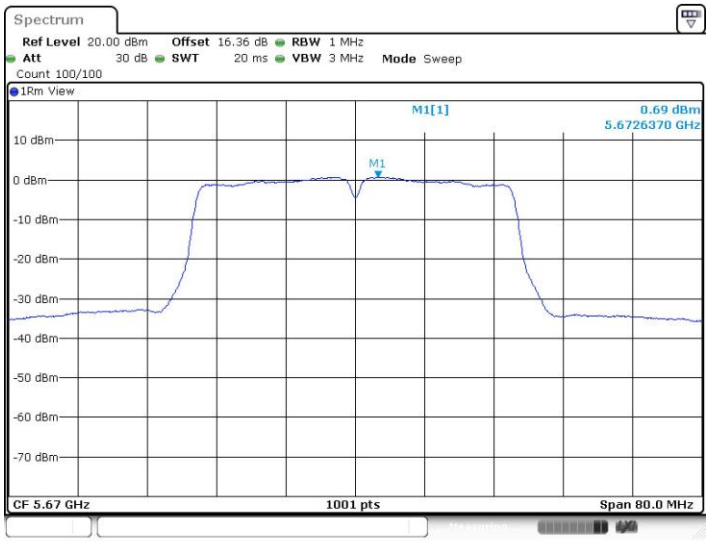

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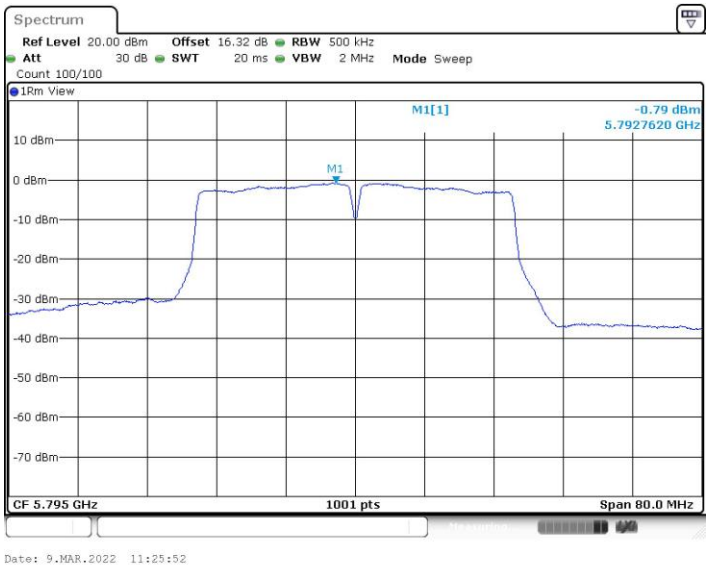
11AC40SISO_Ant1_5795



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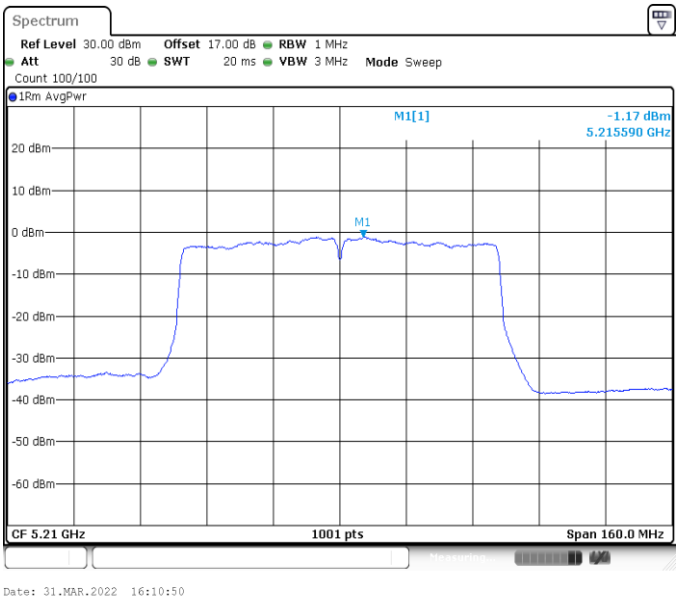

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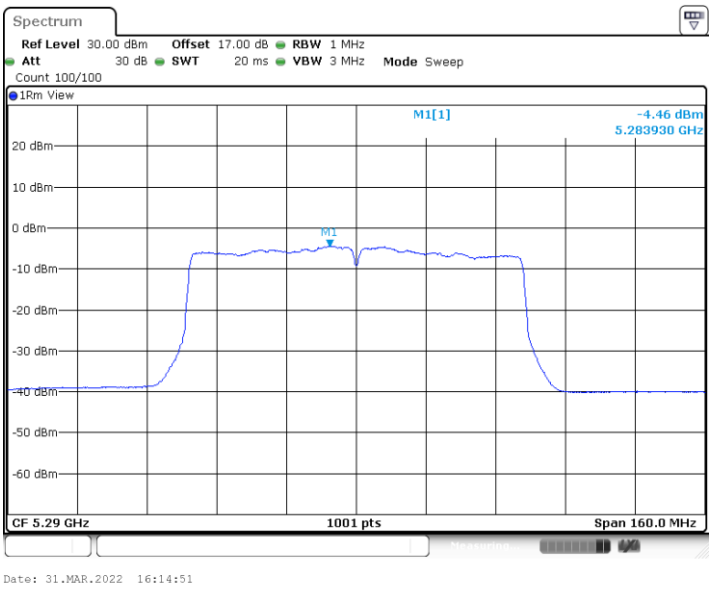

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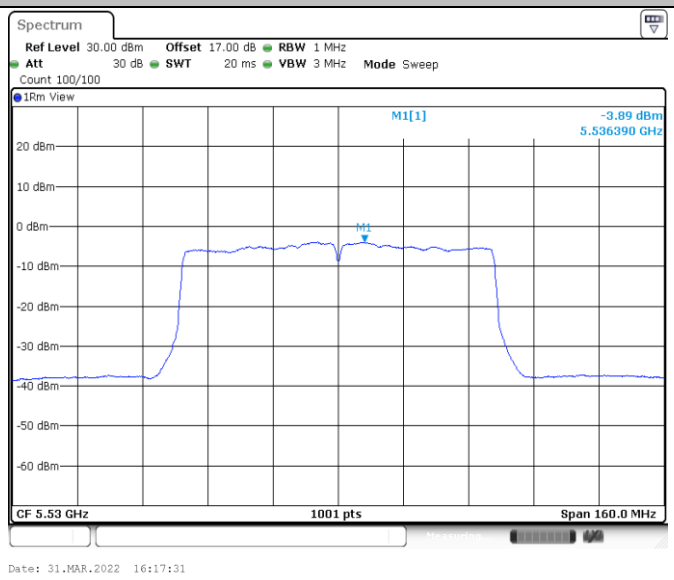

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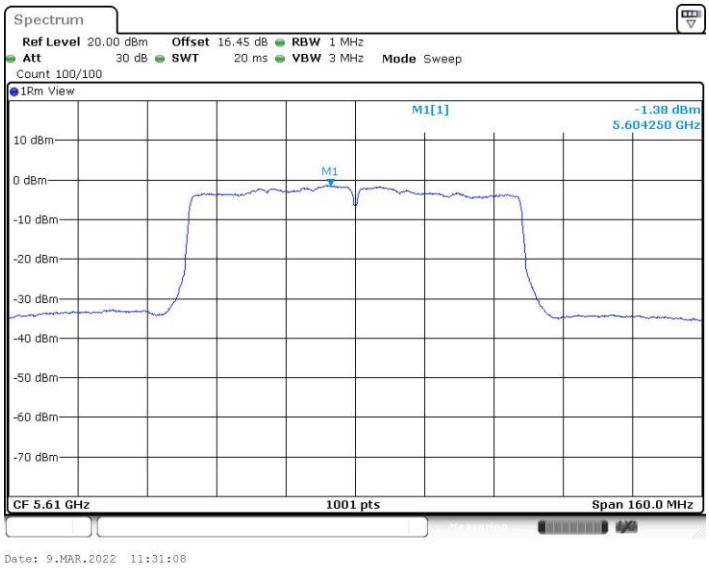

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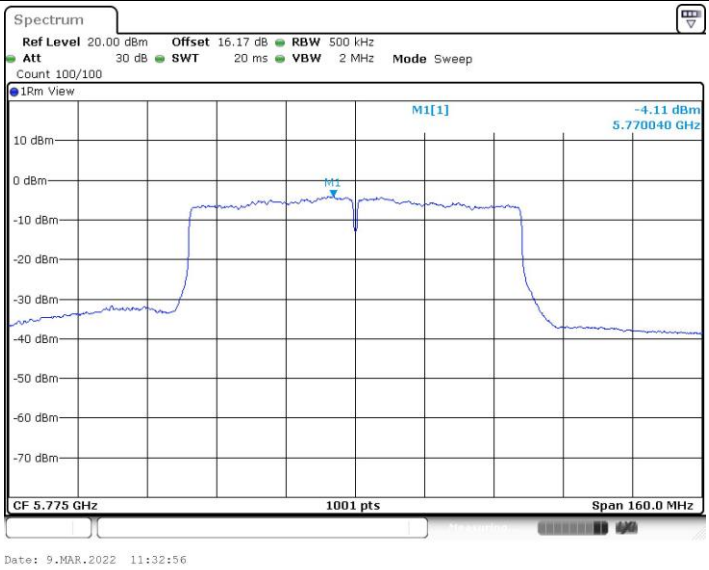
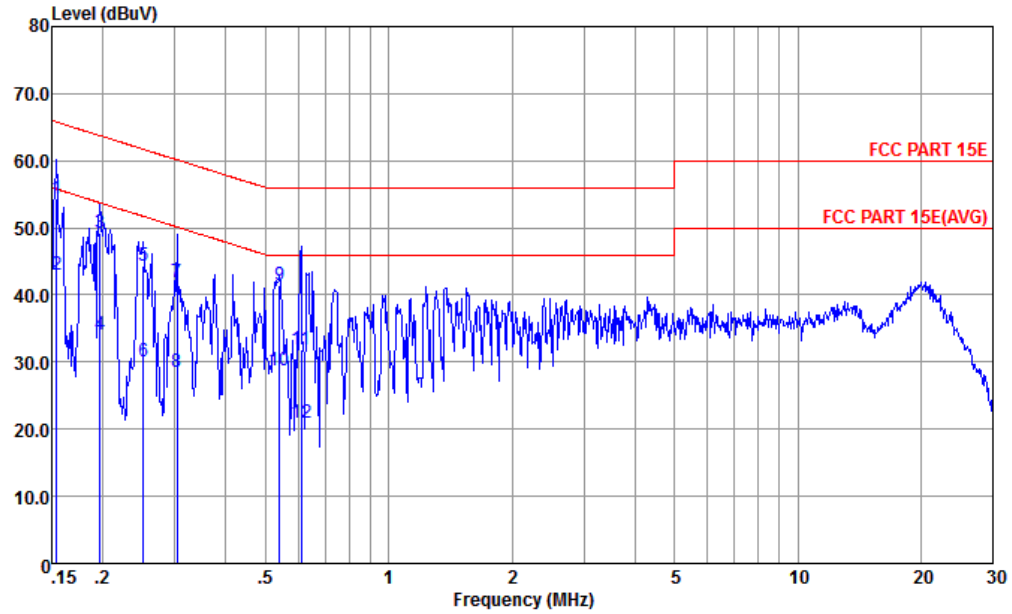


Appendix B. AC Conducted Emission Test Results

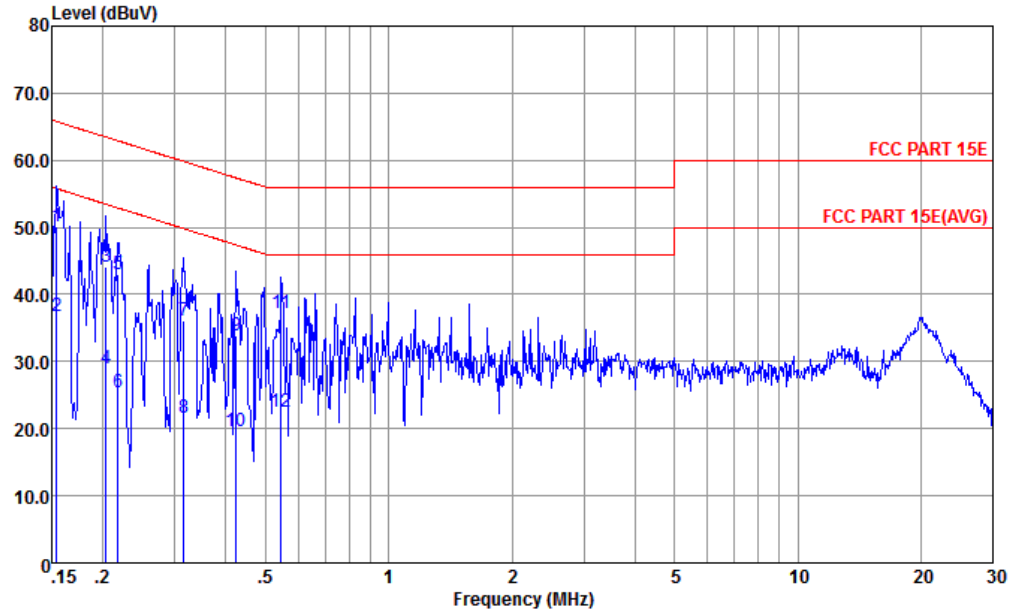
Test Engineer :	Amos Zhang	**Temperature :**	25.3~26.2℃
		Relative Humidity :	38~40%
Test Voltage :	120Vac / 60Hz	**Phase :**	Line
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : CO01-KS
Condition : FCC PART 15E LISN-060105-L LINE

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	*	0.154	54.39	-11.39	65.78	43.90	0.02	10.47	QP
2		0.154	43.09	-12.69	55.78	32.60	0.02	10.47	Average
3		0.197	49.31	-14.45	63.76	38.90	0.04	10.37	QP
4		0.197	34.01	-19.75	53.76	23.60	0.04	10.37	Average
5		0.251	44.29	-17.44	61.73	33.90	0.06	10.33	QP
6		0.251	29.99	-21.74	51.73	19.60	0.06	10.33	Average
7		0.303	41.88	-18.27	60.15	31.50	0.07	10.31	QP
8		0.303	28.58	-21.57	50.15	18.20	0.07	10.31	Average
9		0.541	41.44	-14.56	56.00	31.10	0.10	10.24	QP
10		0.541	28.84	-17.16	46.00	18.50	0.10	10.24	Average
11		0.611	31.84	-24.16	56.00	21.49	0.11	10.24	QP
12		0.611	20.84	-25.16	46.00	10.49	0.11	10.24	Average

Test Engineer :	Amos Zhang	**Temperature :**	25.3~26.2℃
		Relative Humidity :	38~40%
Test Voltage :	120Vac / 60Hz	**Phase :**	Neutral
Remark :	All emissions not reported here are more than 10 dB below the prescribed limit.		



Site : CO01-KS
Condition : FCC PART 15E LISN-060105-N NEUTRAL

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	*	0.154	50.18	-15.60	65.78	39.60	0.11	10.47	QP
2		0.154	36.78	-19.00	55.78	26.20	0.11	10.47	Average
3		0.204	44.06	-19.39	63.45	33.60	0.10	10.36	QP
4		0.204	28.96	-24.49	53.45	18.50	0.10	10.36	Average
5		0.217	43.05	-19.87	62.92	32.60	0.10	10.35	QP
6		0.217	25.35	-27.57	52.92	14.90	0.10	10.35	Average
7		0.315	36.20	-23.64	59.84	25.80	0.10	10.30	QP
8		0.315	21.60	-28.24	49.84	11.20	0.10	10.30	Average
9		0.424	33.96	-23.41	57.37	23.59	0.11	10.26	QP
10		0.424	19.56	-27.81	47.37	9.19	0.11	10.26	Average
11		0.546	37.15	-18.85	56.00	26.80	0.11	10.24	QP
12		0.546	22.55	-23.45	46.00	12.20	0.11	10.24	Average

Note:

1. Level(dBμV) = Read Level(dBμV) + LISN Factor(dB) + Cable Loss(dB)
2. Over Limit(dB) = Level(dBμV) – Limit Line(dBμV)

Appendix C. Radiated Spurious Emission

Test Engineer :	Henzy LI	**Temperature :**	22~23°C
		Relative Humidity :	41~42%

Band 2 - 5250~5350MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 64 5320MHz	*	5326	111.65	-	-	102.92	34.55	10.74	36.56	100	106	P	H
		5326	104.75	-	-	96.02	34.55	10.74	36.56	100	106	A	H
		5353.9	65.76	-8.24	74	56.95	34.58	10.75	36.52	100	106	P	H
		5350	50.79	-3.21	54	41.98	34.58	10.75	36.52	100	106	A	H
	*	5320	106.51	-	-	97.79	34.55	10.73	36.56	118	4	P	V
		5320	99.17	-	-	90.45	34.55	10.73	36.56	118	4	A	V
		5358.5	60.25	-13.75	74	51.44	34.58	10.75	36.52	118	4	P	V
		5350	45.63	-8.37	54	36.82	34.58	10.75	36.52	118	4	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 2 5250~5350MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 64 5320MHz		7088	52.45	-15.85	68.3	69.32	35.82	12.56	65.25	300	0	P	H
		10641	57.22	-16.78	74	70.76	37.58	15.7	66.82	100	240	P	H
		10641	48.57	-5.43	54	62.11	37.58	15.7	66.82	100	240	A	H
		7088	52.18	-16.12	68.3	69.05	35.82	12.56	65.25	100	0	P	V
		10641	57.63	-16.37	74	71.17	37.58	15.7	66.82	109	246	P	V
		10641	48.53	-5.47	54	62.07	37.58	15.7	66.82	109	246	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11ac VHT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT40 CH 102 5510MHz		5457.2	59.28	-14.72	74	50.19	34.66	10.85	36.42	112	106	P	H
		5469.84	63.27	-5.03	68.3	54.15	34.67	10.85	36.4	112	106	P	H
		5460	50.28	-3.72	54	41.19	34.66	10.85	36.42	112	106	A	H
	*	5506	106.34	-	-	97.12	34.7	10.89	36.37	112	106	P	H
		5506	98	-	-	88.78	34.7	10.89	36.37	112	106	A	H
		5740.36	50.02	-18.28	68.3	40.47	34.99	11.18	36.62	112	106	P	H
		5454.96	59.28	-14.72	74	50.22	34.66	10.82	36.42	101	5	P	V
		5470	61.61	-6.69	68.3	52.49	34.67	10.85	36.4	101	5	P	V
		5459.76	48.7	-5.3	54	39.61	34.66	10.85	36.42	101	5	A	V
	*	5512	104.5	-	-	95.28	34.7	10.89	36.37	101	5	P	V
		5512	96.36	-	-	87.14	34.7	10.89	36.37	101	5	A	V
		5746.84	49.61	-18.69	68.3	40.03	34.99	11.21	36.62	101	5	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11ac VHT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT40 CH 102 5510MHz		10223	44.85	-23.45	68.3	59.34	37.29	15.31	67.09	300	0	P	H
		10223	44.92	-23.38	68.3	59.41	37.29	15.31	67.09	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 5470~5725MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 106 5530MHz		5450.32	60.54	-13.46	74	51.48	34.66	10.82	36.42	105	94	P	H
		5461.04	60.19	-8.11	68.3	51.1	34.66	10.85	36.42	105	94	P	H
		5458.32	50.87	-3.13	54	41.78	34.66	10.85	36.42	105	94	A	H
	*	5536	100.48	-	-	91.22	34.74	10.93	36.41	105	94	P	H
		5536	92.48	-	-	83.22	34.74	10.93	36.41	105	94	A	H
		5731.88	49.21	-19.09	68.3	39.66	34.97	11.18	36.6	105	94	P	H
		5455.44	58.52	-15.48	74	49.46	34.66	10.82	36.42	100	5	P	V
		5460.88	58.25	-10.05	68.3	49.16	34.66	10.85	36.42	100	5	P	V
		5458.16	49.05	-4.95	54	39.96	34.66	10.85	36.42	100	5	A	V
	*	5518	99.66	-	-	90.42	34.72	10.91	36.39	100	5	P	V
		5518	90.99	-	-	81.75	34.72	10.91	36.39	100	5	A	V
		5739.56	50.72	-17.58	68.3	41.17	34.99	11.18	36.62	100	5	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 5470~5725MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 106 5530MHz		11059	44.75	-29.25	74	57.31	37.85	16.08	66.49	300	0	P	H
		11059	44.62	-29.38	74	57.18	37.85	16.08	66.49	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

5GHz WIFI 802.11ac VHT80 (LF)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
5GHz 802.11ac VHT80 LF		30	20.39	-19.61	40	27.51	24.8	0.88	32.8	-	-	P	H
		76.56	19.94	-20.06	40	38.49	12.97	1.39	32.91	-	-	P	H
		156.1	25.49	-18.01	43.5	39.67	16.74	1.99	32.91	-	-	P	H
		240.49	29.5	-16.5	46	42.23	17.79	2.49	33.01	-	-	P	H
		408.3	29.33	-16.67	46	37.33	21.81	3.23	33.04	-	-	P	H
		640.13	31.8	-14.2	46	34.96	26.1	4.04	33.3	-	-	P	H
		157.07	31.14	-12.36	43.5	45.36	16.7	1.99	32.91	-	-	P	V
		167.74	33.14	-10.36	43.5	47.79	16.22	2.06	32.93	-	-	P	V
		451.95	30.64	-15.36	46	37.6	22.84	3.4	33.2	-	-	P	V
		498.51	35.29	-10.71	46	41.33	23.76	3.57	33.37	-	-	P	V
		600.36	33.3	-12.7	46	36.97	25.7	3.91	33.28	-	-	P	V
		640.13	34.36	-11.64	46	37.52	26.1	4.04	33.3	-	-	P	V
Remark	1. No other spurious found. 2. All results are PASS against limit line.												

Band 4 - 5725~5850MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 165 5825MHz		5824	109.51	-	-	99.81	35.09	11.31	36.7	100	144	P	H
		5824	101.19	-	-	91.49	35.09	11.31	36.7	100	144	P	H
		5850.4	62.26	-59.13	121.39	52.54	35.11	11.33	36.72	100	144	P	H
		5856.8	61.2	-49.2	110.4	51.47	35.13	11.34	36.74	100	144	P	H
		5876	55.32	-49.24	104.56	45.56	35.16	11.36	36.76	100	144	P	H
		5962.8	51.57	-16.73	68.3	41.72	35.26	11.43	36.84	100	144	A	H
		5824	107.08	-	-	97.38	35.09	11.31	36.7	346	56	P	V
		5824	98.44	-	-	88.74	35.09	11.31	36.7	346	56	P	V
		5851.6	57.97	-60.68	118.65	48.25	35.11	11.33	36.72	346	56	P	V
		5859.6	56.62	-52.99	109.61	46.89	35.13	11.34	36.74	346	56	P	V
		5882.4	51.15	-48.65	99.8	41.39	35.16	11.36	36.76	346	56	P	V
		5928.8	50.24	-18.06	68.3	40.43	35.22	11.4	36.81	346	56	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 165 5825MHz		11653	46.65	-27.35	74	58.24	38.29	16.46	66.34	300	0	P	H
		11653	47.39	-26.61	74	58.98	38.29	16.46	66.34	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11ac VHT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT40 CH 151 5755MHz		5646.8	52.74	-15.56	68.3	43.3	34.87	11.08	36.51	100	180	P	H
		5671.6	56.44	-27.88	84.32	46.97	34.91	11.11	36.55	100	180	P	H
		5719.6	65.07	-45.72	110.79	55.54	34.97	11.16	36.6	100	180	P	H
		5724.4	66.91	-54.02	120.93	57.36	34.97	11.18	36.6	100	180	P	H
		5758	104.65	-	-	95.06	35.01	11.21	36.63	100	180	P	H
		5758	96.59	-	-	87	35.01	11.21	36.63	100	180	A	H
		5850.37	51.2	-70.26	121.46	41.48	35.11	11.33	36.72	100	180	P	H
		5861.6	50.17	-58.88	109.05	40.44	35.13	11.34	36.74	100	180	P	H
		5896.4	50.89	-38.54	89.43	41.1	35.18	11.38	36.77	100	180	P	H
		5931.2	50.13	-18.17	68.3	40.3	35.22	11.42	36.81	100	180	P	H
		5615.6	51.49	-16.81	68.3	42.11	34.84	11.03	36.49	334	74	P	V
		5699.6	50.34	-54.67	105.01	40.84	34.93	11.13	36.56	334	74	P	V
		5719.2	60.76	-49.92	110.68	51.23	34.97	11.16	36.6	334	74	P	V
		5720.4	61.73	-50.08	111.81	52.2	34.97	11.16	36.6	334	74	P	V
		5758	101.36	-	-	91.77	35.01	11.21	36.63	334	74	P	V
		5758	93.86	-	-	84.27	35.01	11.21	36.63	334	74	A	V
		5854	49.63	-63.55	113.18	39.91	35.13	11.33	36.74	334	74	P	V
		5856.4	50.08	-60.43	110.51	40.35	35.13	11.34	36.74	334	74	P	V
		5878	50.02	-53.05	103.07	40.26	35.16	11.36	36.76	334	74	P	V
		5996.8	50.39	-17.91	68.3	40.5	35.3	11.47	36.88	334	74	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11ac VHT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT40 CH 151 5755MHz		11510	45.61	-28.39	74	57.52	38.2	16.37	66.48	300	0	P	H
		11510	45.55	-28.45	74	57.46	38.2	16.37	66.48	100	0	P	V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 155 5775MHz		5636	51.48	-16.82	68.3	42.07	34.87	11.05	36.51	104	207	P	H
		5688	63.83	-32.62	96.45	54.33	34.93	11.13	36.56	104	207	P	H
		5718.8	67.23	-43.33	110.56	57.7	34.97	11.16	36.6	104	207	P	H
		5720	65.46	-45.44	110.9	55.93	34.97	11.16	36.6	104	207	P	H
		5782	101.8	-	-	92.16	35.03	11.26	36.65	104	207	P	H
		5782	93.42	-	-	83.78	35.03	11.26	36.65	104	207	A	H
		5852.4	66	-50.83	116.83	56.28	35.11	11.33	36.72	104	207	P	H
		5858.4	65.85	-44.1	109.95	56.12	35.13	11.34	36.74	104	207	P	H
		5876.8	61.78	-42.18	103.96	52.02	35.16	11.36	36.76	104	207	P	H
		5968.4	52.18	-16.12	68.3	42.33	35.26	11.43	36.84	104	207	P	H
		5630.4	50.06	-18.24	68.3	40.66	34.84	11.05	36.49	299	72	P	V
		5671.2	54.69	-29.34	84.03	45.22	34.91	11.11	36.55	299	72	P	V
		5718	59.38	-50.96	110.34	49.85	34.97	11.16	36.6	299	72	P	V
		5720.4	62.85	-48.96	111.81	53.32	34.97	11.16	36.6	299	72	P	V
		5764	99.07	-	-	89.45	35.01	11.24	36.63	299	72	P	V
		5764	90.47	-	-	80.85	35.01	11.24	36.63	299	72	A	V
		5852.8	57.16	-58.76	115.92	47.44	35.11	11.33	36.72	299	72	P	V

		5860.8	59.16	-50.11	109.27	49.43	35.13	11.34	36.74	299	72	P	V
		5880	55.17	-46.42	101.59	45.41	35.16	11.36	36.76	299	72	P	V
		5925.2	49.7	-18.6	68.3	39.89	35.22	11.4	36.81	299	72	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 4 5725~5850MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		11554	44.34	-29.66	74	56.15	38.23	16.39	66.43	300	0	P	H
VHT80		11554	45.89	-28.11	74	57.7	38.23	16.39	66.43	100	0	P	V
CH 155													
5775MHz													
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Emission below 1GHz

5GHz WIFI 802.11ac VHT80 (LF)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
5GHz 802.11ac VHT80 LF		83.35	25.7	-14.3	40	43.49	13.66	1.45	32.9	-	-	P	H
		173.56	25.71	-17.79	43.5	40.59	15.96	2.1	32.94	-	-	P	H
		201.69	27.49	-16.01	43.5	43.26	14.94	2.28	32.99	-	-	P	H
		299.66	31.98	-14.02	46	42.99	19.2	2.79	33	-	-	P	H
		532.46	34.3	-11.7	46	39.33	24.64	3.68	33.35	-	-	P	H
		640.13	33.35	-12.65	46	36.51	26.1	4.04	33.3	-	-	P	H
		32.91	36.43	-3.57	40	44.97	23.36	0.93	32.83	-	-	P	V
		179.38	28.43	-15.07	43.5	43.53	15.71	2.14	32.95	-	-	P	V
		195.87	27.07	-16.43	43.5	42.84	14.97	2.24	32.98	-	-	P	V
		233.7	21.49	-24.51	46	34.74	17.29	2.46	33	-	-	P	V
		481.05	25.25	-20.75	46	31.63	23.42	3.51	33.31	-	-	P	V
		607.15	26.55	-19.45	46	30.12	25.77	3.94	33.28	-	-	P	V
Remark	3. No other spurious found. 4. All results are PASS against limit line.												

<Simultaneous transmission>

2.4GHz 2400~2483.5MHz

WIFI 802.11ac VHT80&BLE (Band Edge @ 3m)

BLE	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BLE CH 39 2480MHz		2483.5	57.81	-16.19	74	54.4	32.98	7.25	36.82	123	242	P	H
		2483.5	49.62	-4.38	54	46.21	32.98	7.25	36.82	123	242	A	H
	*	2480	101.84	-	-	98.43	32.98	7.25	36.82	123	242	P	H
	*	2480	100.37	-	-	96.96	32.98	7.25	36.82	123	242	A	H
													H
													H
		2483.62	54.17	-19.83	74	50.76	32.98	7.25	36.82	361	289	P	V
		2483.5	47.22	-6.78	54	43.81	32.98	7.25	36.82	361	289	A	V
	*	2480	98.79	-	-	95.38	32.98	7.25	36.82	361	289	P	V
	*	2480	97.48	-	-	94.07	32.98	7.25	36.82	361	289	A	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

2.4GHz 2400~2483.5MHz

WIFI 802.11ac VHT80*&BLE* (Harmonic @ 3m)

BLE	Note	Frequency	Level	Over Limit	Limit Line	Read Level	Antenna Factor	Path Loss	Preamp Factor	Ant Pos	Table Pos	Peak Avg.	Pol.
		(MHz)	(dBµV/m)	(dB)	(dBµV/m)	(dBµV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BLE CH 39 2480MHz		4965	40.52	-33.48	74	61.3	34.28	10.41	65.47	300	0	P	H
		7440	42.26	-31.74	74	59.89	35.89	12.79	66.31	300	0	P	H
		4965	41.12	-32.88	74	61.9	34.28	10.41	65.47	100	0	P	V
		7440	43.45	-30.55	74	61.08	35.89	12.79	66.31	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

Band 3 - 5470~5725MHz

WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
		5444.72	62.75	-11.25	74	53.72	34.65	10.82	36.44	123	103	P	H
		5465.52	60.79	-7.51	68.3	51.67	34.67	10.85	36.4	123	103	P	H
		5457.68	50.74	-3.26	54	41.65	34.66	10.85	36.42	123	103	A	H
	*	5518	98.32	-	-	89.08	34.72	10.91	36.39	123	103	P	H
802.11ac		5518	90.6	-	-	81.36	34.72	10.91	36.39	123	103	A	H
VHT80		5752.52	49.96	-18.34	68.3	40.37	35.01	11.21	36.63	123	103	P	H
CH 106		5454.96	61.06	-12.94	74	52	34.66	10.82	36.42	100	4	P	V
5530MHz		5462.48	58.38	-9.92	68.3	49.29	34.66	10.85	36.42	100	4	P	V
		5458.8	48.7	-5.3	54	39.61	34.66	10.85	36.42	100	4	A	V
	*	5542	96.57	-	-	87.31	34.74	10.93	36.41	100	4	P	V
		5542	89.56	-	-	80.3	34.74	10.93	36.41	100	4	A	V
		5751.08	49.7	-18.6	68.3	40.12	34.99	11.21	36.62	100	4	P	V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												

Band 3 5470~5725MHz

WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBµV/m)	Over Limit (dB)	Limit Line (dBµV/m)	Read Level (dBµV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac		11059	45.38	-28.62	74	57.94	37.85	16.08	66.49	300	0	P	H
VHT80 CH 106 5530MHz		11059	44.45	-29.55	74	57.01	37.85	16.08	66.49	100	0	P	V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												

Note symbol

*	**Fundamental Frequency** which can be ignored. However, the level of any unwanted emissions shall not exceed the level of the fundamental frequency.
!	Test result is **over limit** line.
P/A	**P**eak or **A**verage
H/V	**H**orizontal or **V**ertical

A calculation example for radiated spurious emission is shown as below:

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 01 2412MHz		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	P	H
		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	A	H

1. Path Loss(dB) = Cable loss(dB) + Filter loss(dB) + Attenuator loss(dB)
2. Level(dBμV/m) = Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)
3. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

For Peak Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 54.51(dBμV) – 35.86 (dB)

= 55.45 (dBμV/m)

2. Over Limit(dB)

= Level(dBμV/m) – Limit Line(dBμV/m)

= 55.45(dBμV/m) – 74(dBμV/m)

= -18.55(dB)

For Average Limit @ 2390MHz:

1. Level(dBμV/m)

= Antenna Factor(dB/m) + Path Loss(dB) + Read Level(dBμV) - Preamp Factor(dB)

= 32.22(dB/m) + 4.58(dB) + 42.6(dBμV) – 35.86 (dB)

= 43.54 (dBμV/m)

2. Over Limit(dB) = Level(dBμV/m) – Limit Line(dBμV/m)

= 43.54(dBμV/m) – 54(dBμV/m)

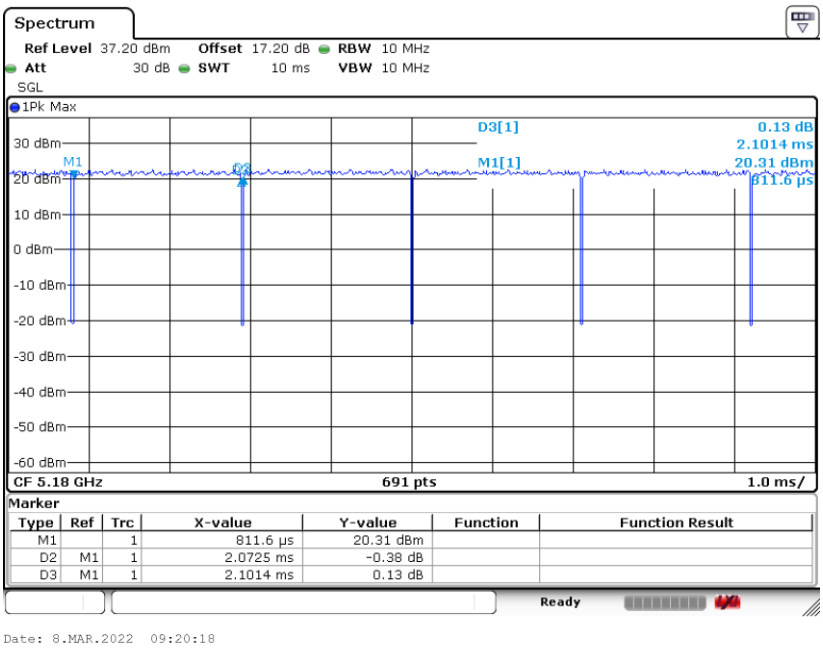
= -10.46(dB)

Both peak and average measured complies with the limit line, so test result is “PASS”.

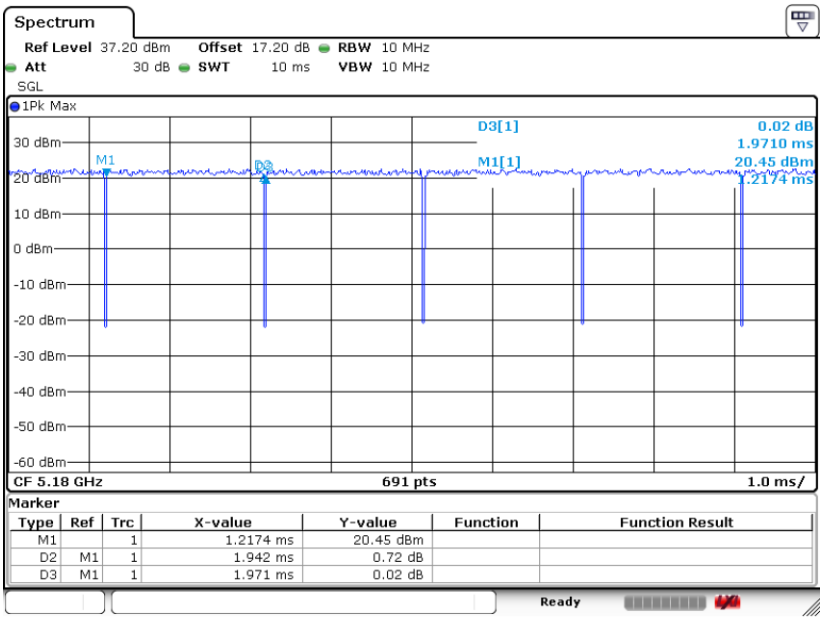
Appendix D. Duty Cycle Plots

Band	Duty Cycle(%)	T(ms)	1/T(kHz)	VBW Setting
802.11a	98.62	-	-	10Hz
802.11ac VHT20	98.53	-	-	10Hz
802.11ac VHT40	96.35	0.957	1.045	1.1KHz
802.11ac VHT80	92.75	0.464	2.156	2.2KHz

802.11a



802.11ac VHT20



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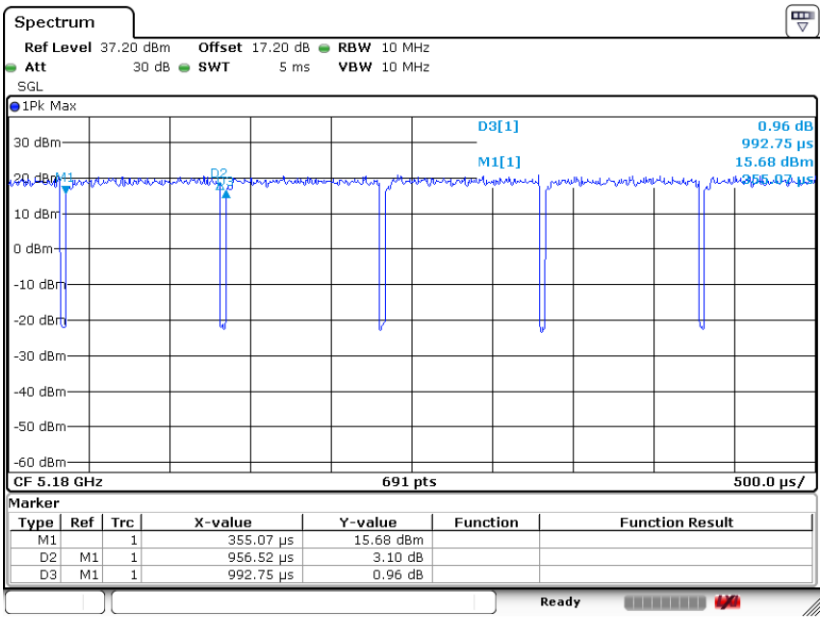
802.11ac VHT40



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802.11ac VHT80