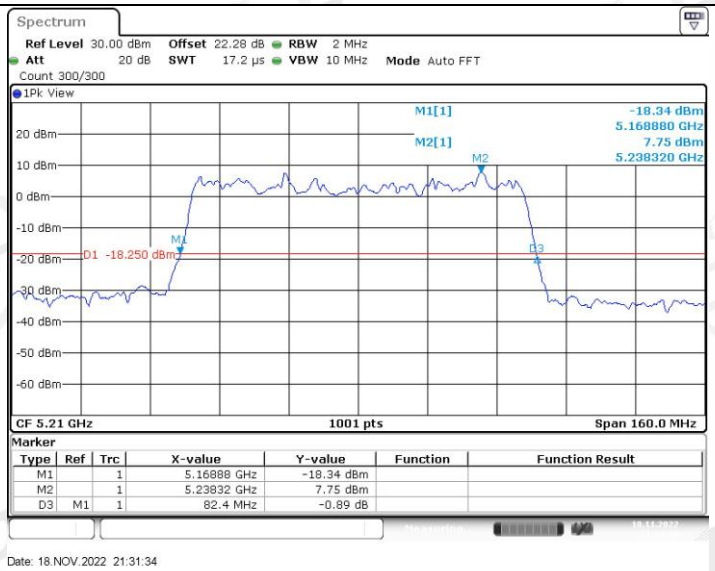

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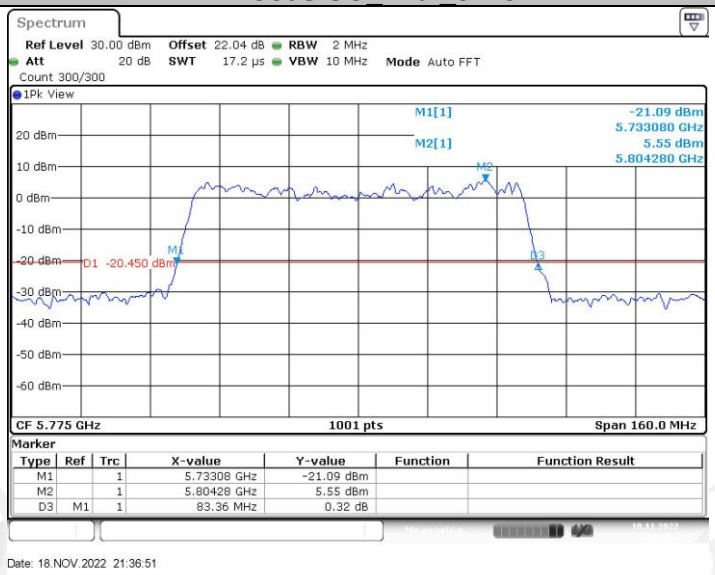

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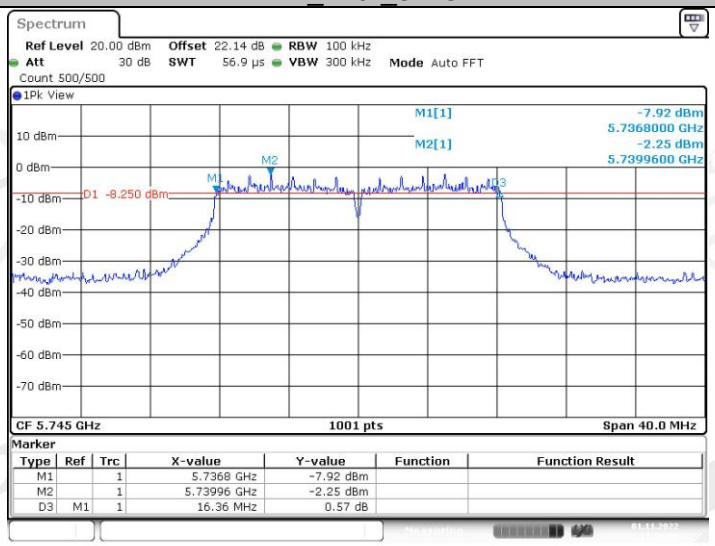

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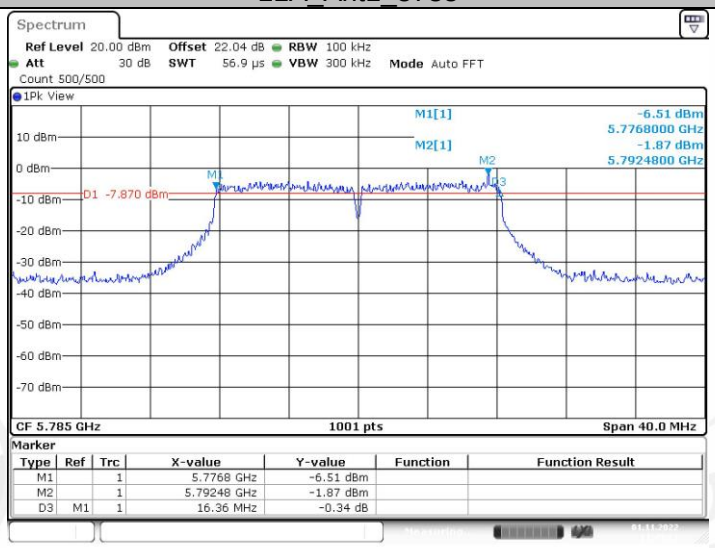

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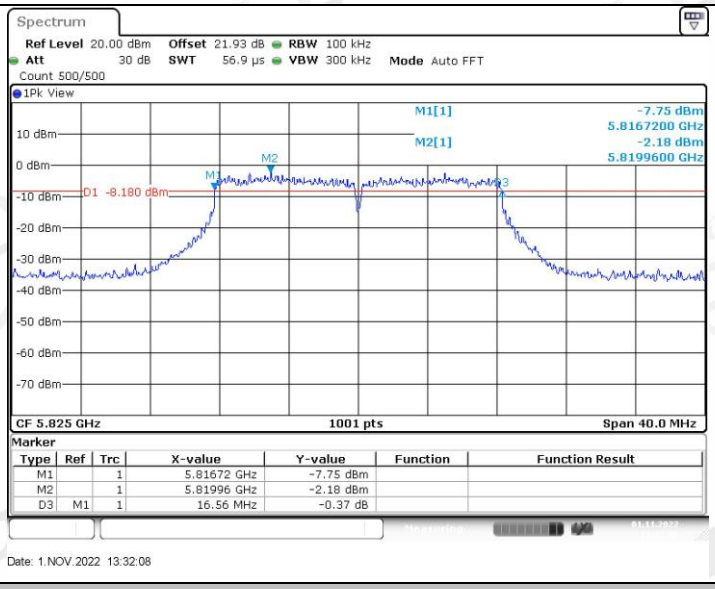

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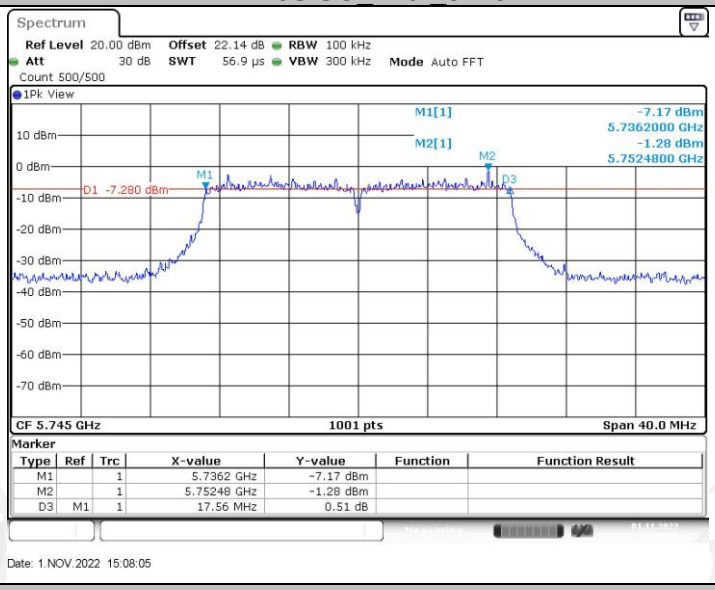

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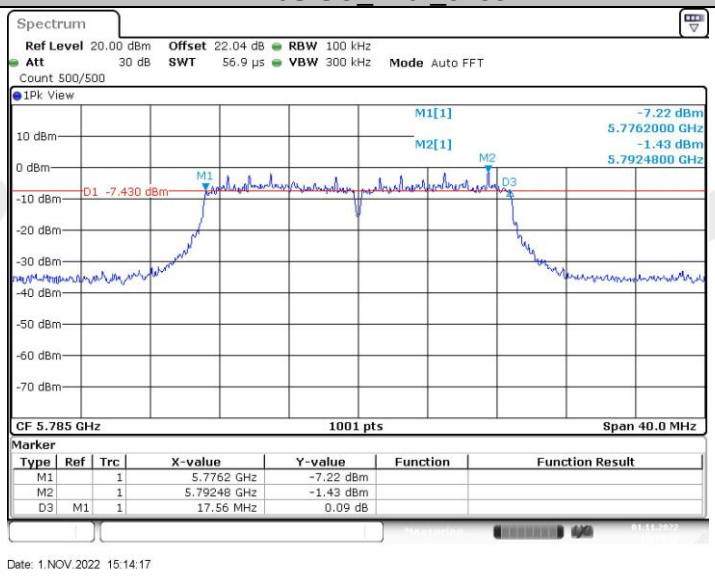

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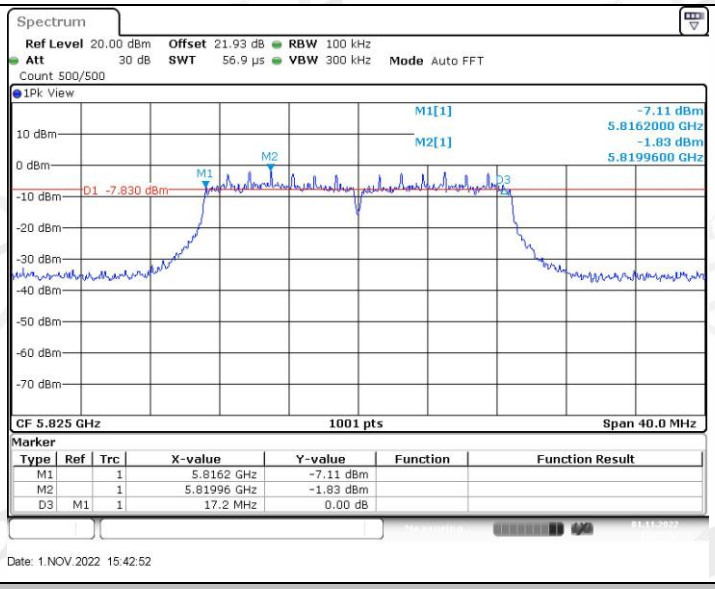

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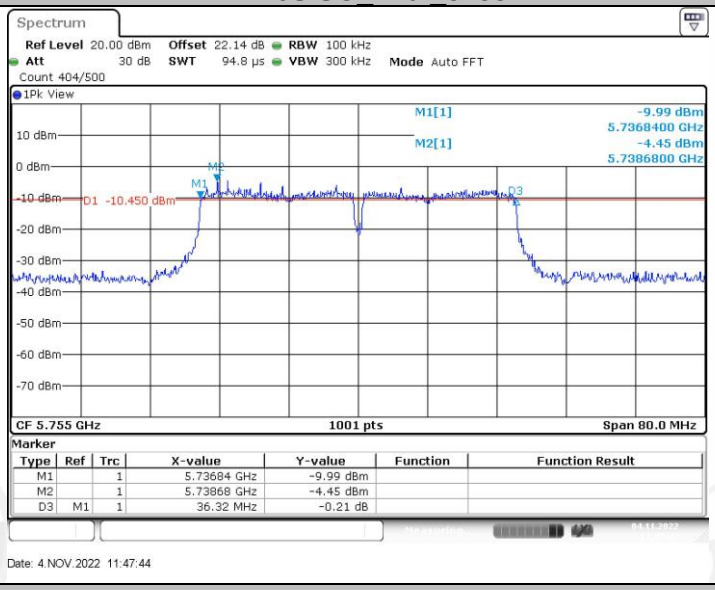

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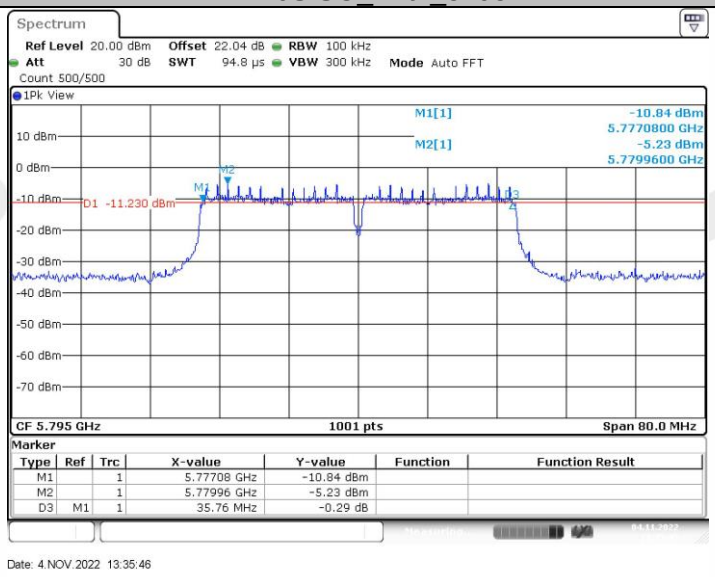

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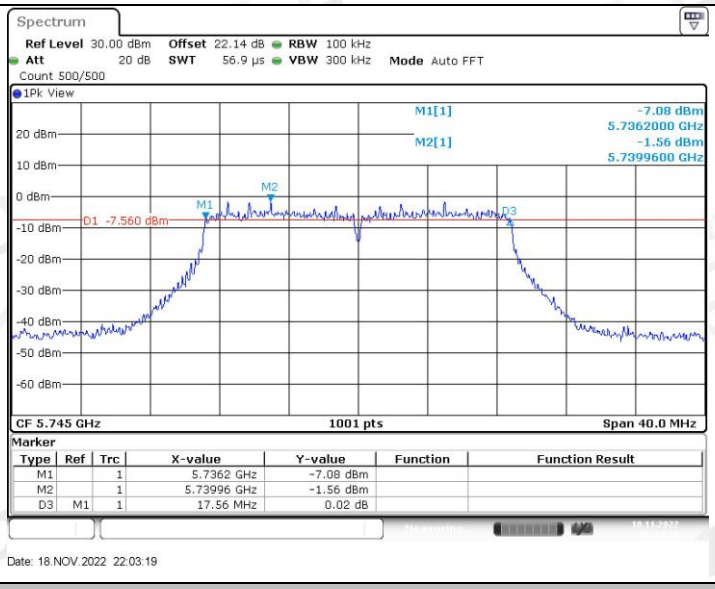

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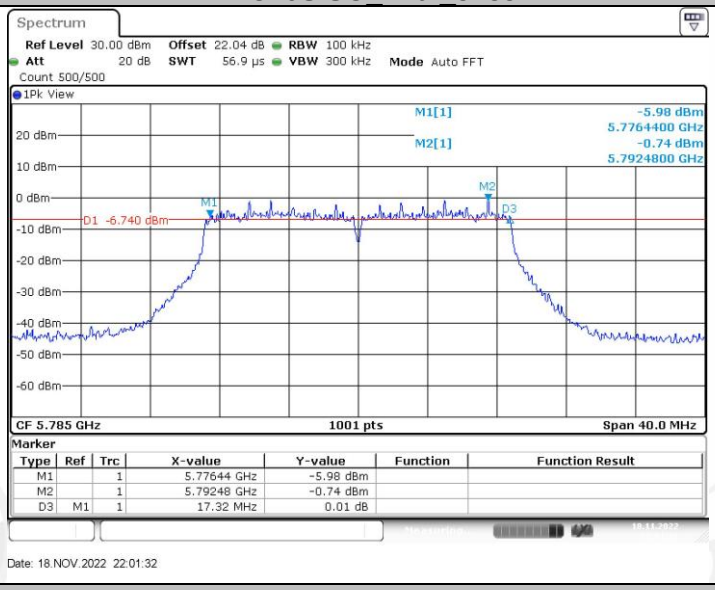

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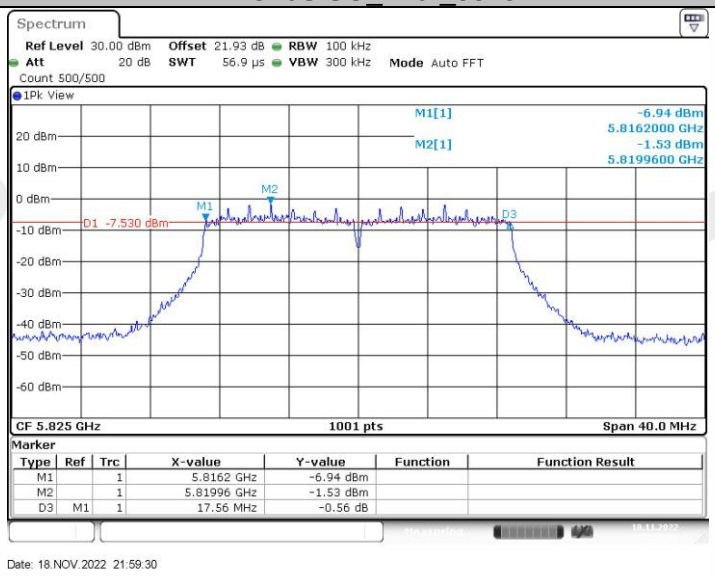

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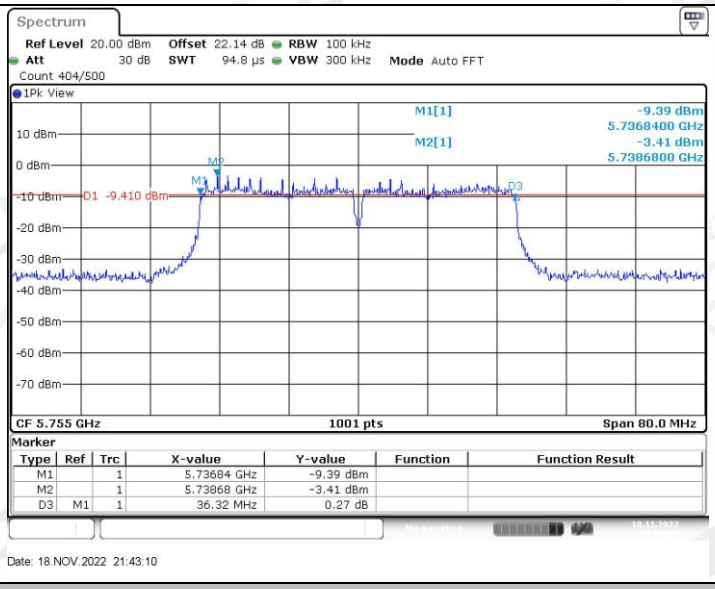

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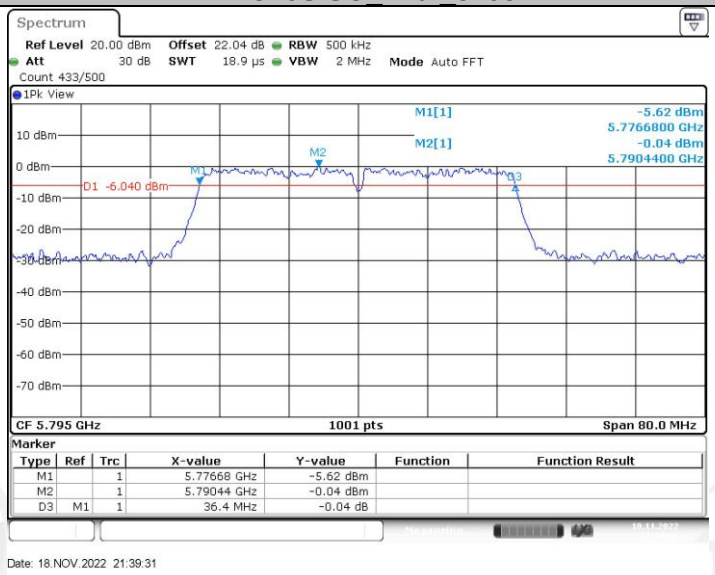

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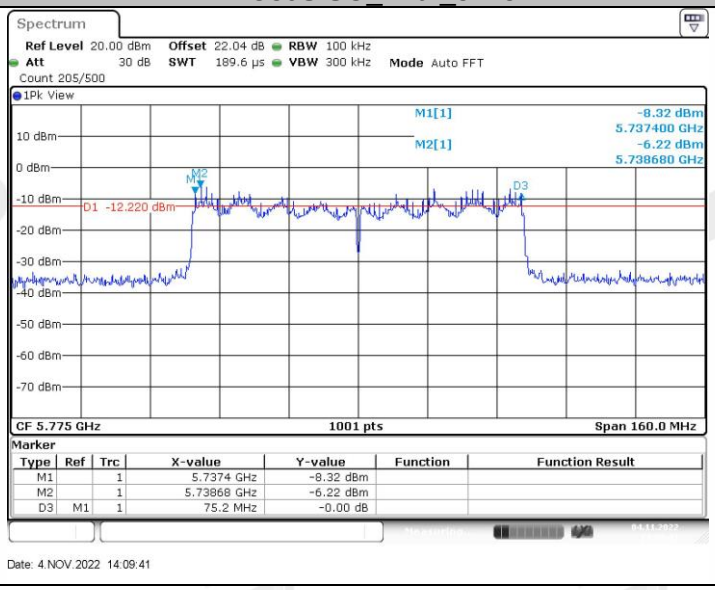
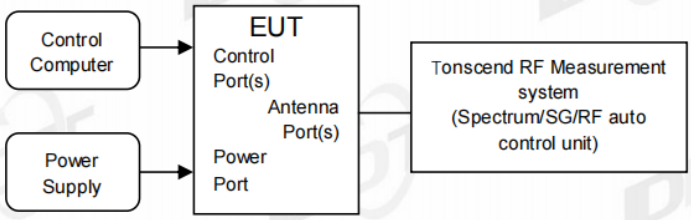


5. Duty Cycle

5.1. Block diagram of test setup



5.2. Limit

Just for Report.

5.3. Test procedure

(1) Connected the EUT's antenna port to the Spectrum Analyzer by suitable attenuator, The cable loss and attenuator loss have been put into spectrum analyzer as amplitude offset.

set the Spectrum Analyzer as below:

Centre Frequency: The centre frequency of the middle hopping channel.

Resolution BW: 10 MHz.

Video BW: 10 MHz.

Span: Zero span.

Detector: Peak.

Trace Mode: Max Hold.

Sweep: Video Trigger

(2) When the trace is complete, measure the sending time of 1 burst and the duty cycle of 1 burst cycle.

(3) Calculate dwell time follow below formula:

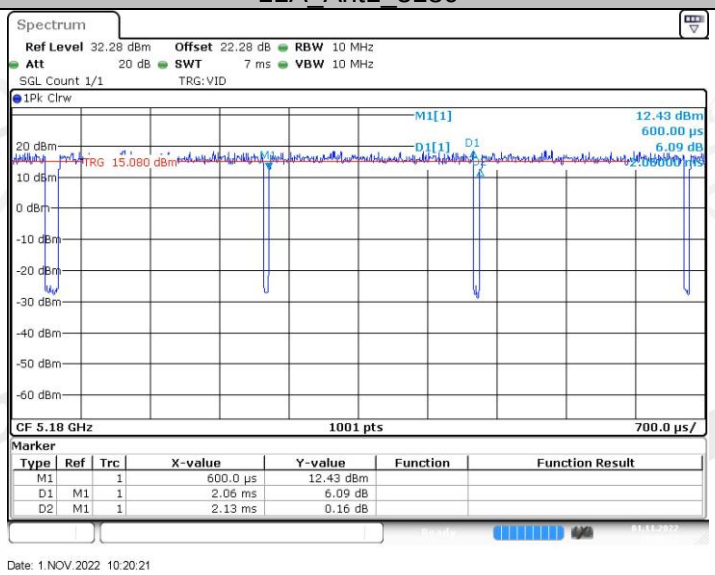
Duty cycle= Pulse's on time / Burst cycle

5.4. Test result

Test Mode	Antenna	Channel	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
11A	Ant1	5180	2.06	2.13	96.71
		5200	2.06	2.24	91.96
		5240	2.06	2.20	93.64
		5745	2.07	2.22	93.24
		5785	2.06	2.21	93.21
		5825	2.06	2.20	93.64
11N20SISO	Ant1	5180	1.92	2.06	93.20
		5200	1.92	2.09	91.87
		5240	1.92	2.09	91.87
		5745	1.91	2.05	93.17
		5785	1.91	2.08	91.83
		5825	1.92	2.10	91.43
11N40SISO	Ant1	5190	0.94	1.07	87.85
		5230	0.94	1.07	87.85
		5755	0.95	1.00	95.00
		5795	0.94	1.07	87.85
11AC20SISO	Ant1	5180	1.93	2.02	95.54
		5200	1.93	2.07	93.24
		5240	1.94	2.07	93.72
		5745	1.93	2.02	95.54
		5785	1.93	2.04	94.61
		5825	1.93	2.10	91.90
11AC40SISO	Ant1	5190	0.95	1.05	90.48
		5230	0.95	1.03	92.23
		5755	0.95	1.06	89.62
		5795	0.95	1.04	91.35
11AC80SISO	Ant1	5210	0.46	0.62	74.19
		5775	0.46	0.57	80.70

5.5. Test Graphs

11A_Ant1_5180



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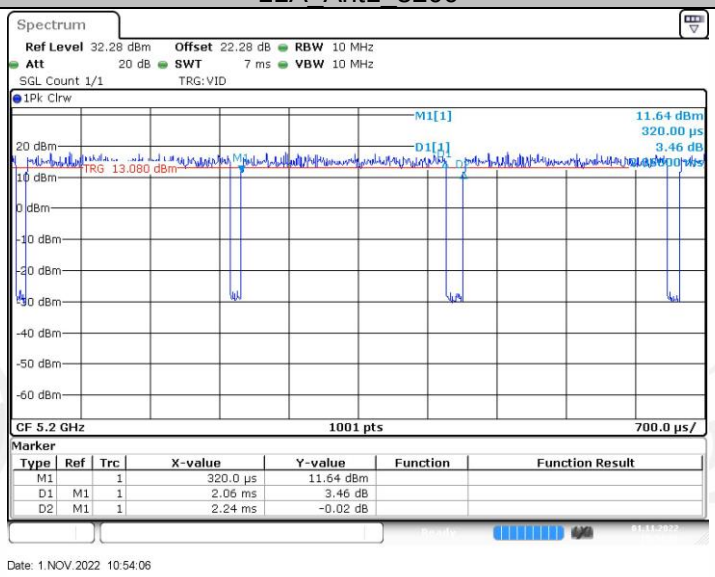

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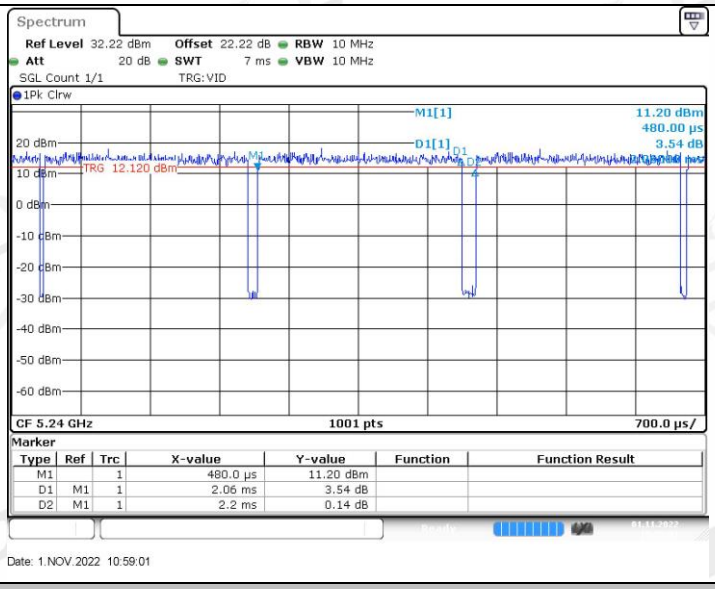

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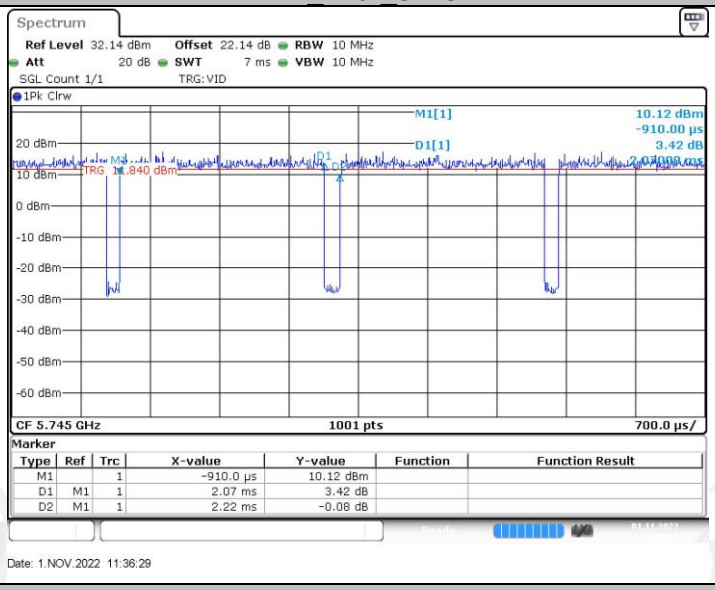

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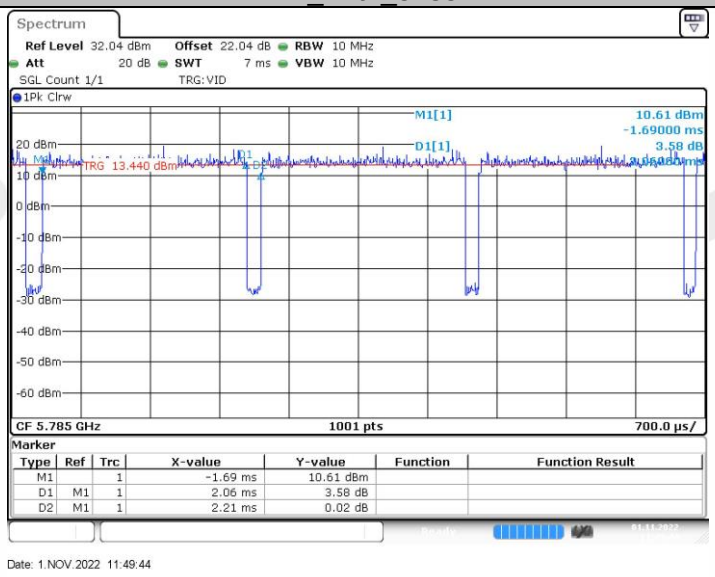

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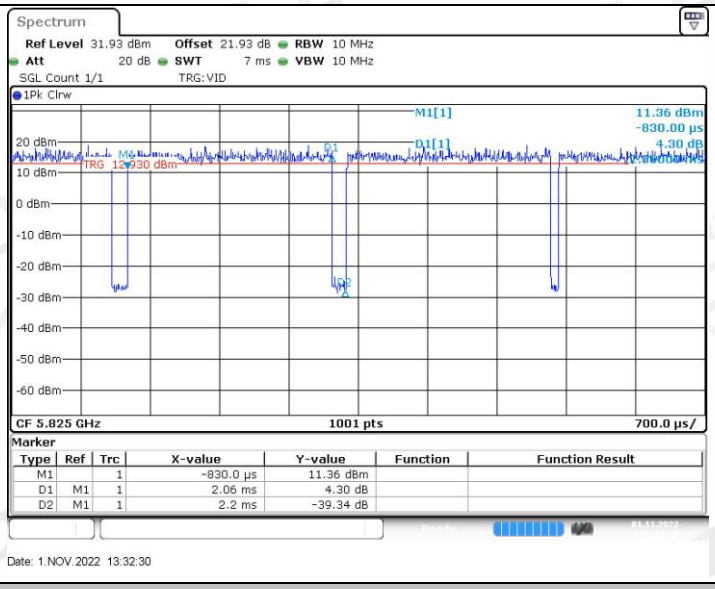

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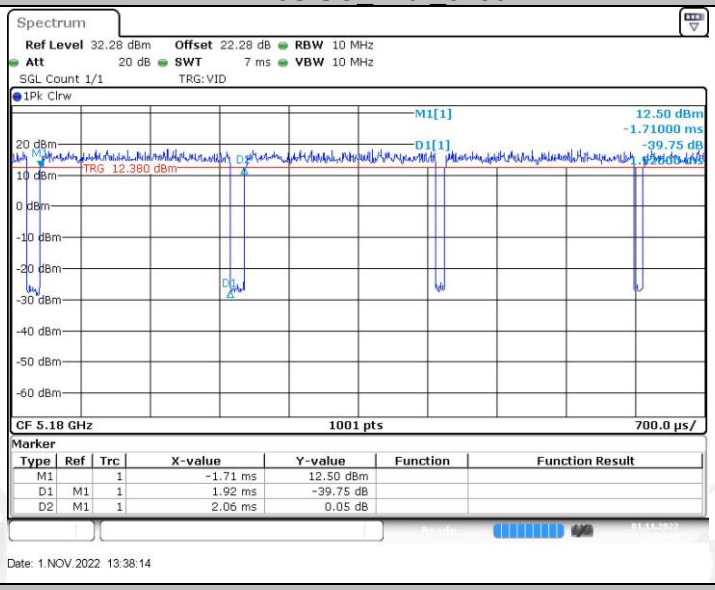

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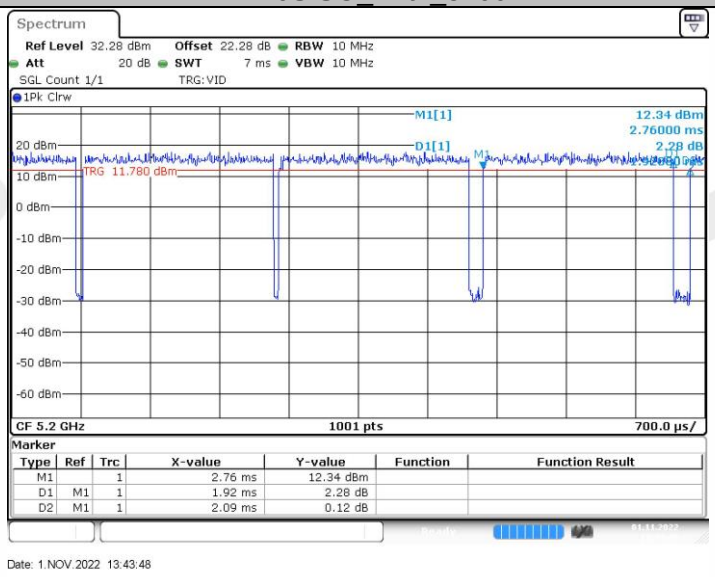

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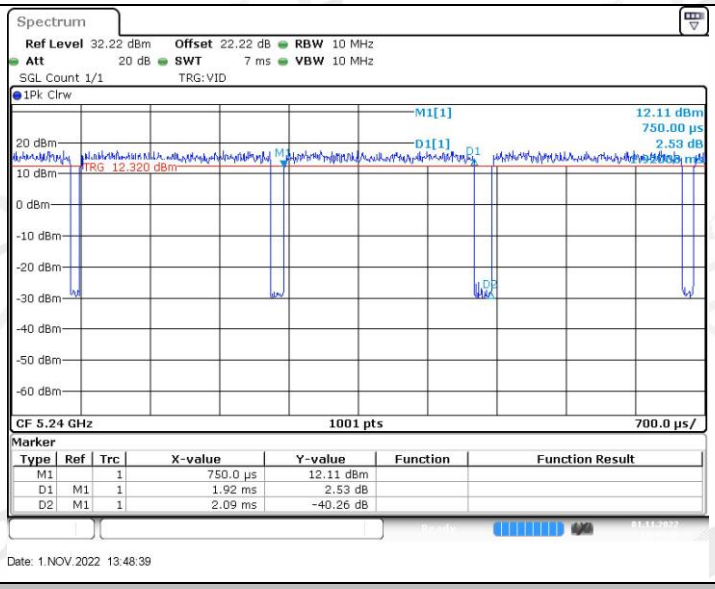

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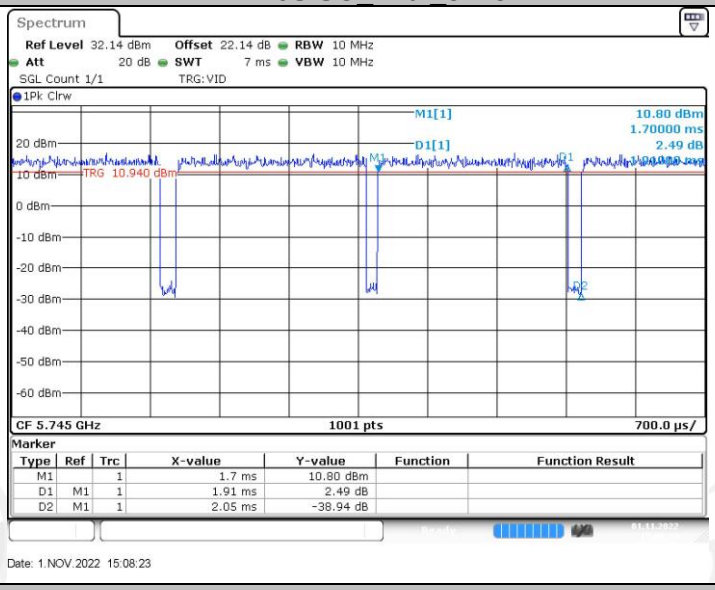

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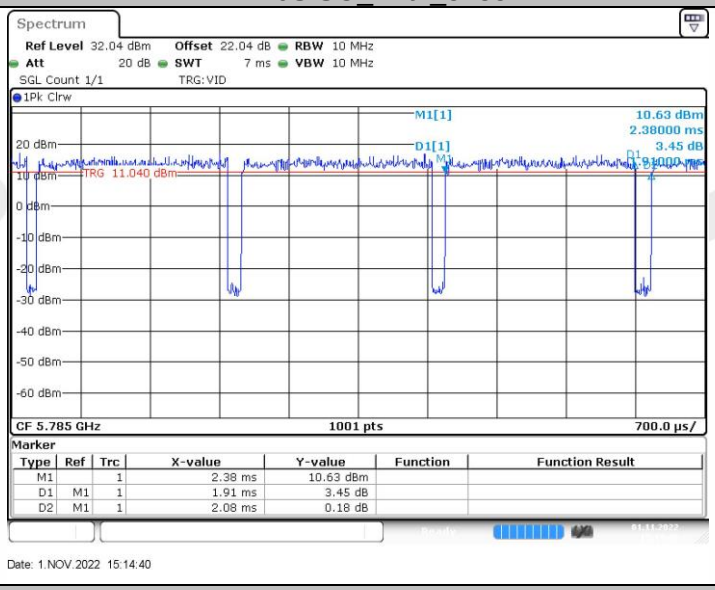

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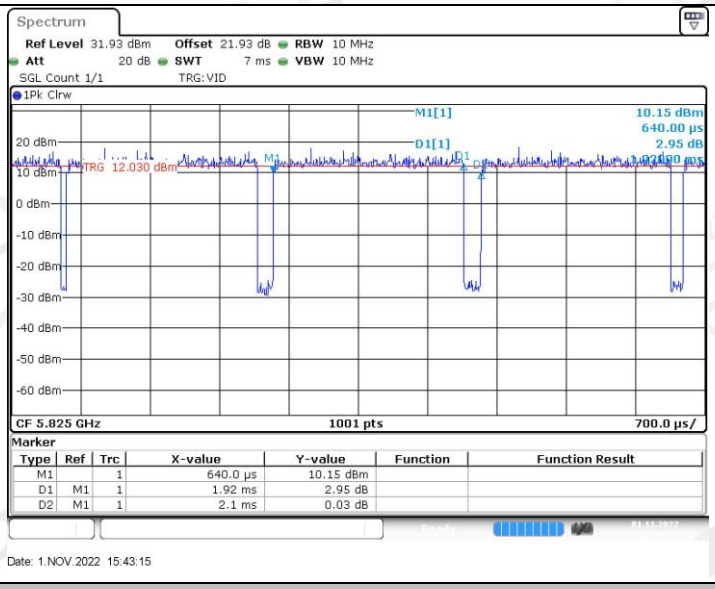

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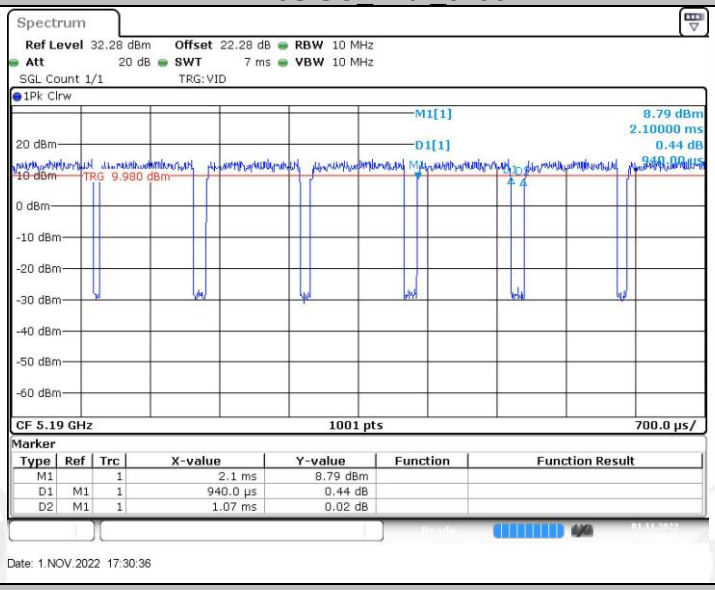

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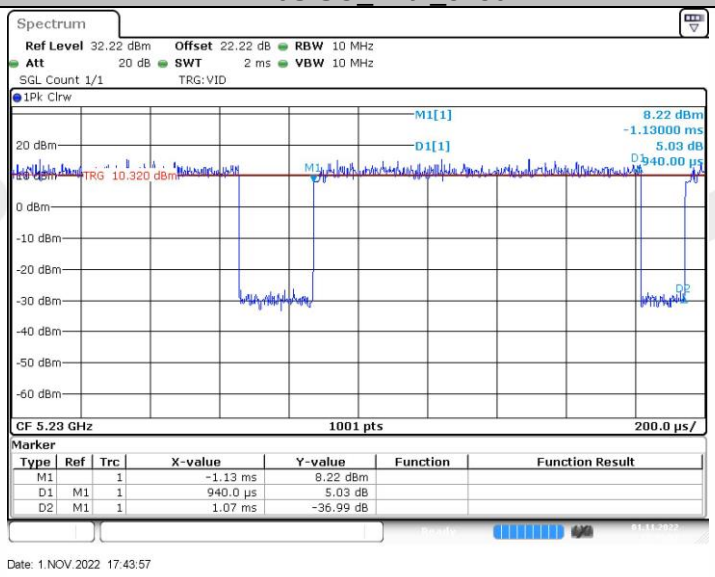

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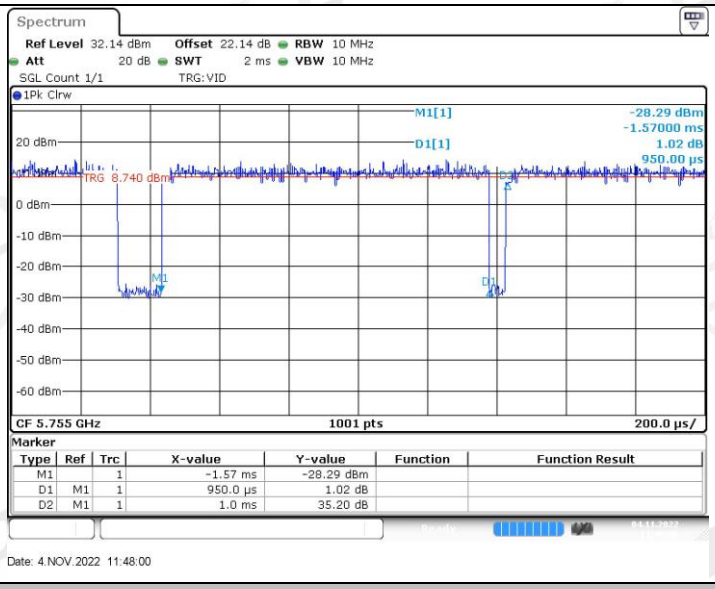

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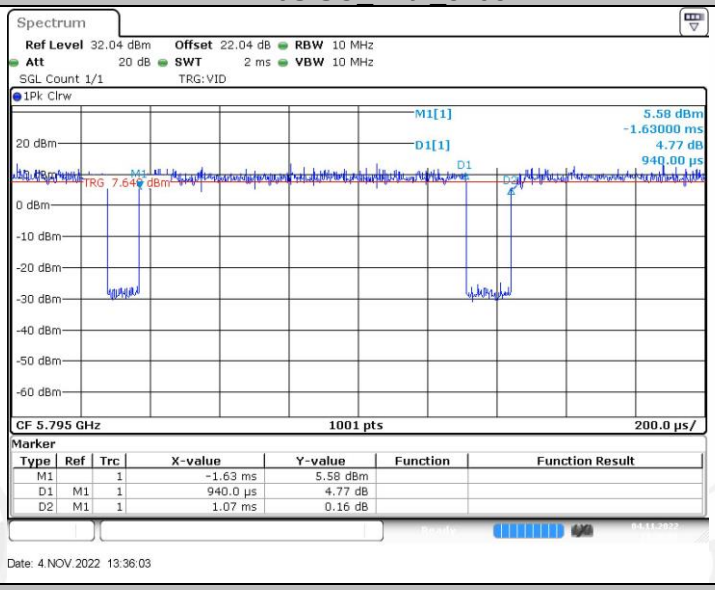

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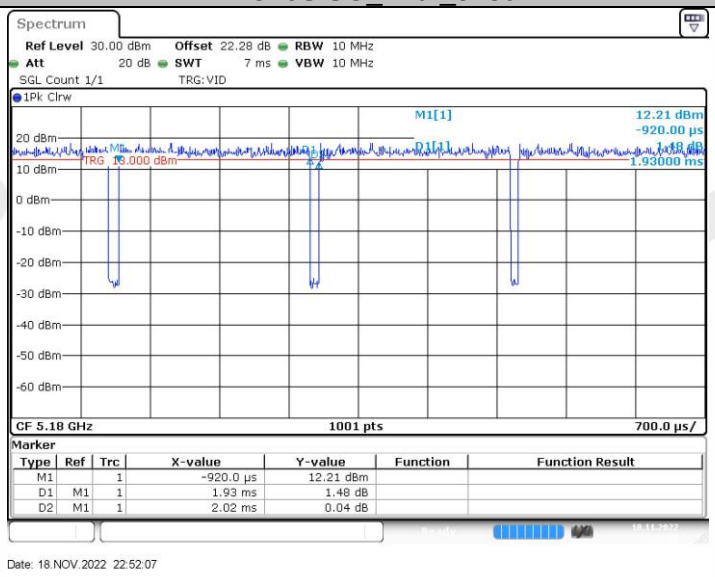

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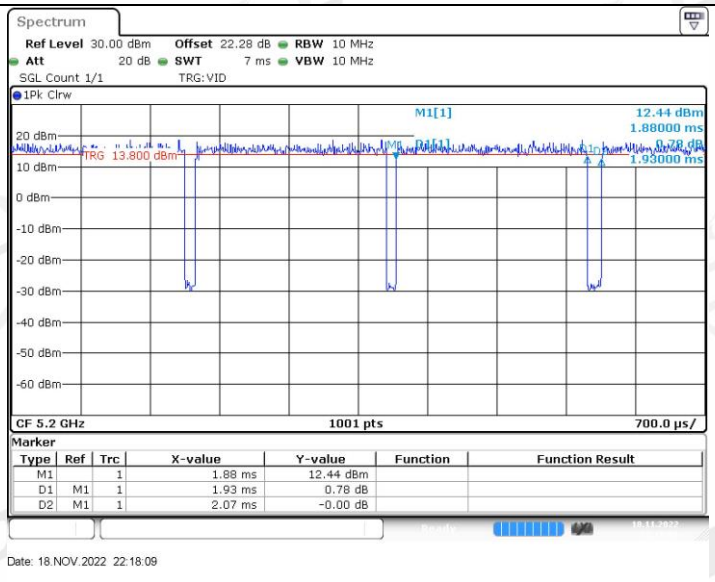

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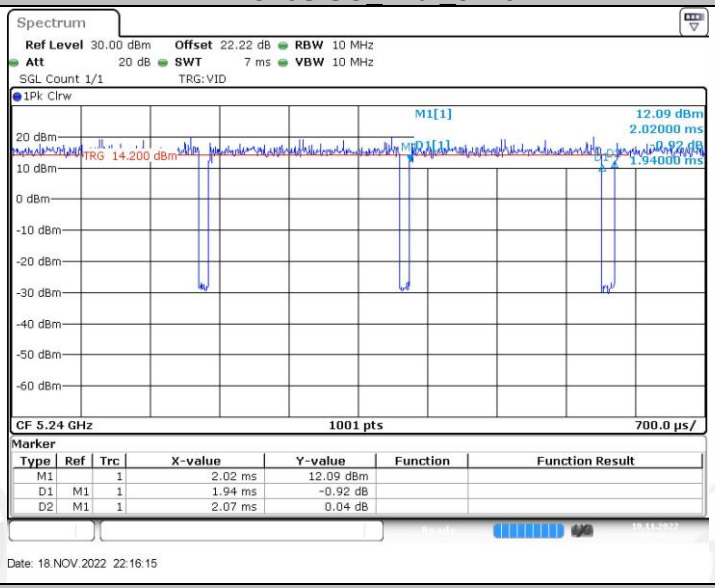

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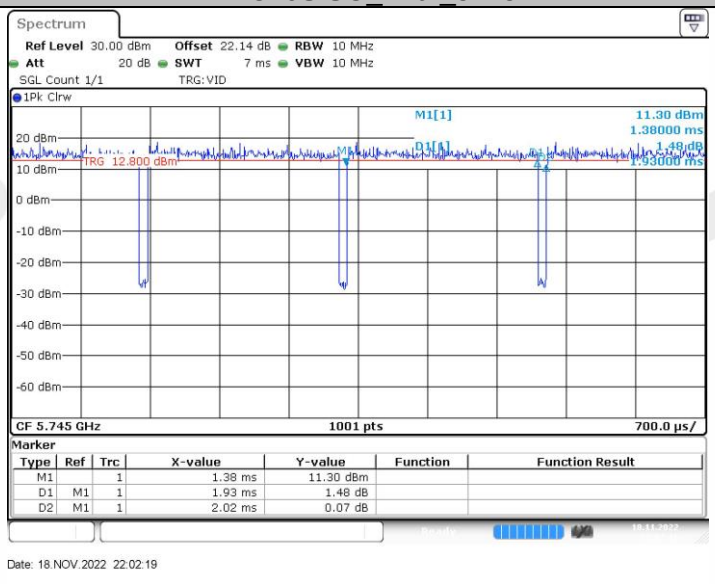

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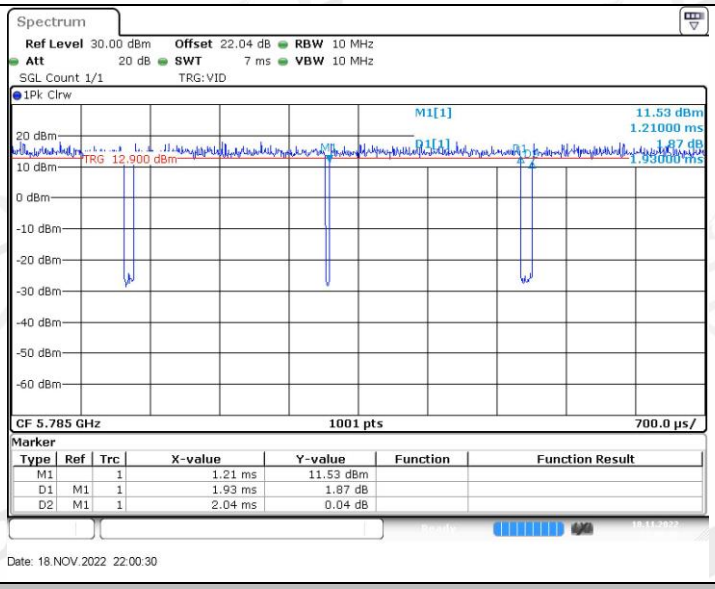

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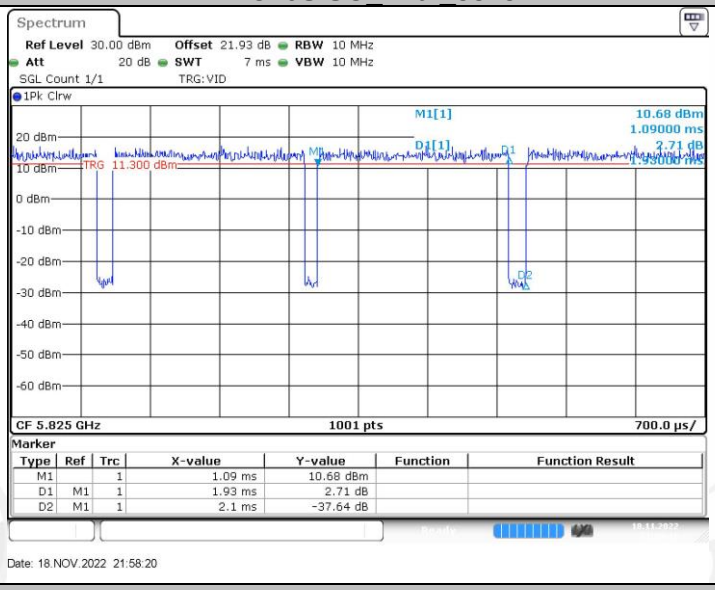

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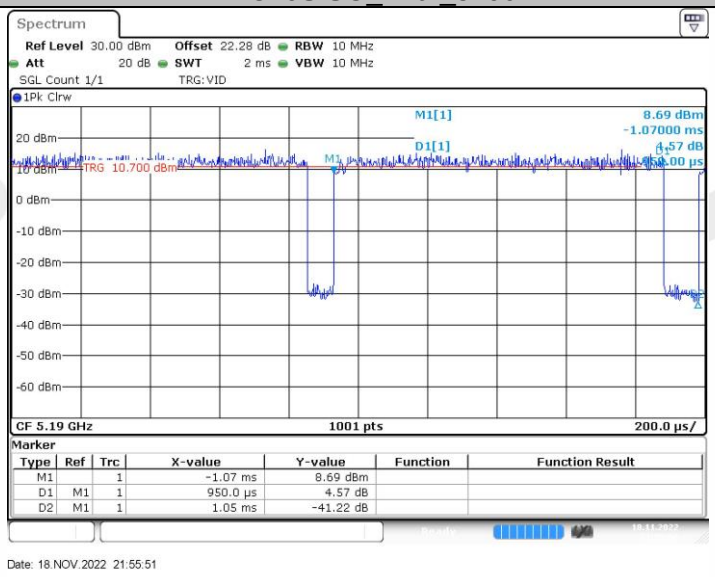

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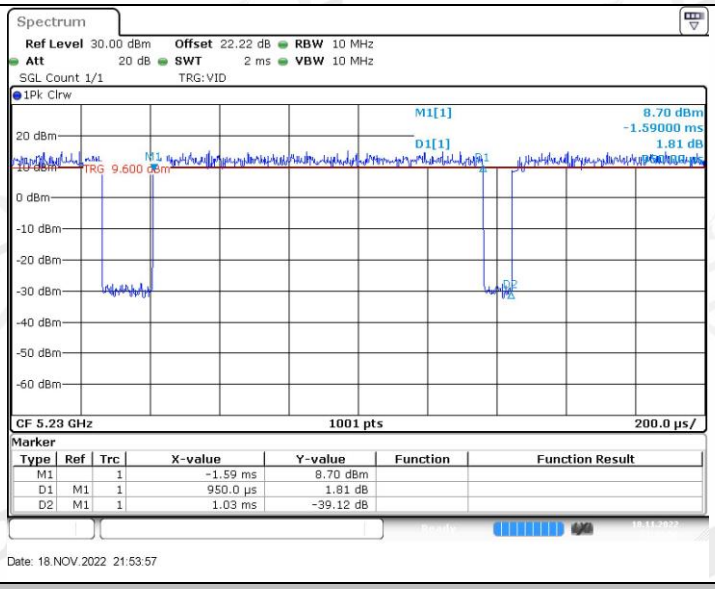

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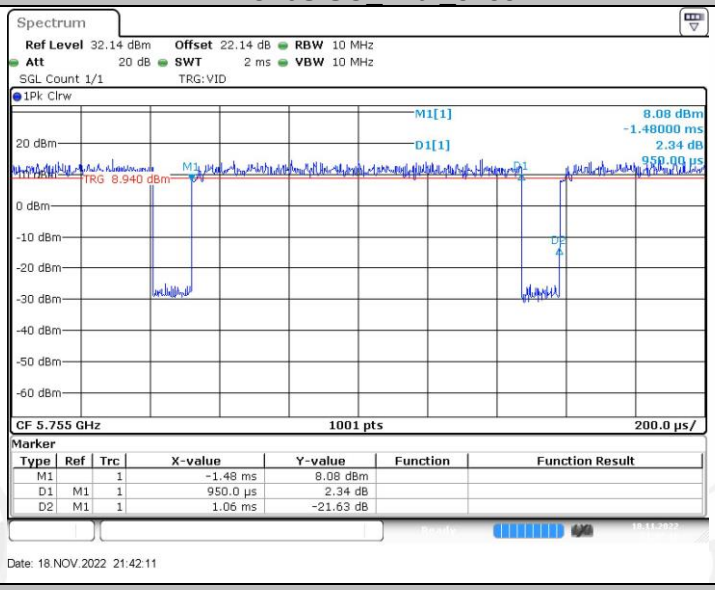

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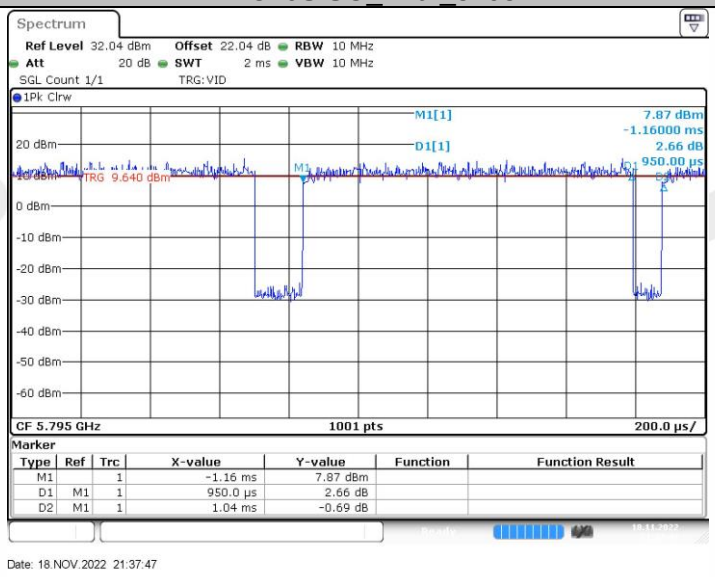

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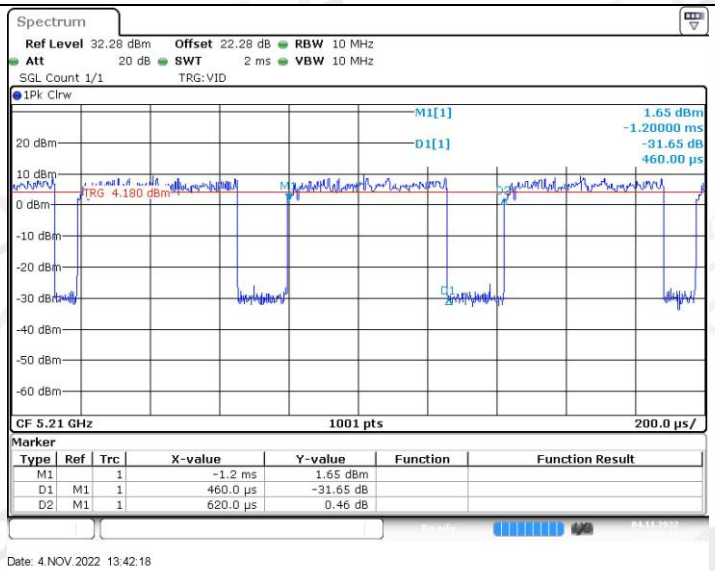

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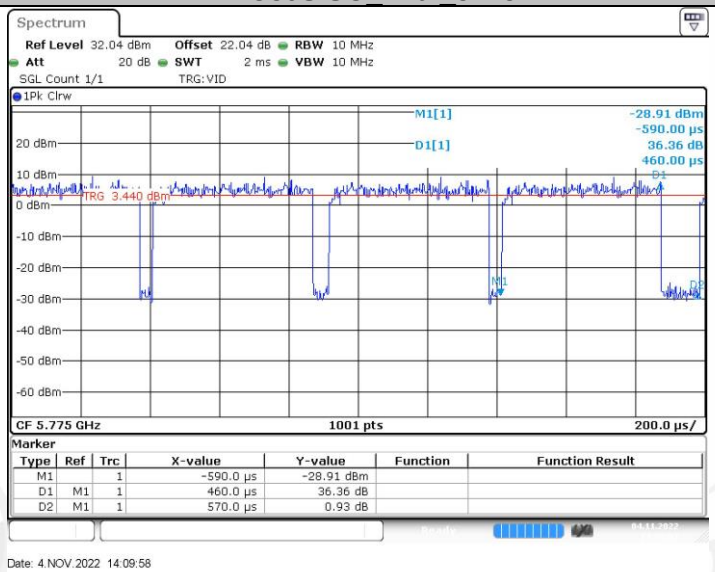


6. Maximum Output Power

6.1. Block diagram of test setup

Same as section 4.1

6.2. Limits

FCC Part15, Subpart E/ RSS-247		
Test Item	Limit	Frequency Range (MHz)
Conducted Output Power	For FCC client devices: 250 mW (24 dBm)	5150-5250
	For RSS: e.i.r.p. power: not exceed 200 mW (23 dBm) or 10 + 10 $\log_{10}$ B, whichever is less	
	For FCC: 250 mW (24 dBm) or 11 + 10 $\log_{10}$ B, whichever is lower	5250-5350
	For RSS: e.i.r.p. power: not exceed 1.0 W (30 dBm) or 17 + 10 $\log_{10}$ B, whichever is less	
	For FCC: 250 mW (24 dBm) or 11 + 10 $\log_{10}$ B, whichever is lower	For FCC:5470-5725 For IC:5470-5600 5650-5725
	For RSS: e.i.r.p. power: not exceed 1.0 W (30 dBm) or 17 + 10 $\log_{10}$ B, whichever is less	
	1 Watt (30 dBm)	5725-5850
Note: 1. For FCC: B=26 bandwidth; For ISED: B=99% bandwidth. 2. For ISED e.i.r.p. power only for 5725-5850 Band		

6.3. Test Procedure

Connect each EUT's antenna output to power sensor by RF cable and attenuator

Measure the output power by power sensor.

6.4. Test Result

Test Mode	Antenna	Channel	Channel Powert [dBm]	Duty Cycle [%]	DC Factor [dBm]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	5180	10.94	96.71	0.15	11.09	<=24	Pass
		5200	9.96	91.96	0.36	10.32	<=24	Pass
		5240	9.84	93.64	0.29	10.13	<=24	Pass
		5745	8.39	93.24	0.30	8.69	<=30	Pass
		5785	9.38	93.21	0.31	9.69	<=30	Pass
		5825	10.33	93.64	0.29	10.62	<=30	Pass
11N20SISO	Ant1	5180	10.85	93.20	0.31	11.16	<=24	Pass
		5200	10.68	91.87	0.37	11.05	<=24	Pass
		5240	10.43	91.87	0.37	10.80	<=24	Pass
		5745	9.12	93.17	0.31	9.43	<=30	Pass
		5785	9.20	91.83	0.37	9.57	<=30	Pass
		5825	8.73	91.43	0.39	9.12	<=30	Pass
11N40SISO	Ant1	5190	10.57	87.85	0.56	11.13	<=24	Pass
		5230	10.30	87.85	0.56	10.86	<=24	Pass
		5755	9.15	95.00	0.22	9.37	<=30	Pass
		5795	8.56	87.85	0.56	9.12	<=30	Pass
11AC20SISO	Ant1	5180	10.70	95.54	0.20	10.90	<=24	Pass
		5200	10.77	93.24	0.30	11.07	<=24	Pass
		5240	10.67	93.72	0.28	10.95	<=24	Pass
		5745	9.89	95.54	0.20	10.09	<=30	Pass
		5785	10.12	94.61	0.24	10.36	<=30	Pass
		5825	9.60	91.90	0.37	9.97	<=30	Pass
11AC40SISO	Ant1	5190	10.96	90.48	0.43	**11.39**	<=24	Pass
		5230	10.90	92.23	0.35	11.25	<=24	Pass
		5755	10.31	89.62	0.48	10.79	<=30	Pass
		5795	10.01	91.35	0.39	10.40	<=30	Pass
11AC80SISO	Ant1	5210	9.52	74.19	1.30	10.82	<=24	Pass
		5775	8.66	80.70	0.93	9.59	<=30	Pass

7. Power Spectral Density

7.1. Block diagram of test setup

Same with 4.1

7.2. Limits

FCC Part15, Subpart E/ RSS-247		
Test Item	Limit	Frequency Range (MHz)
Power Spectral Density	For FCC: Other than Mobile and portable:17 dBm/MHz Mobile and portable client devices:11 dBm/MHz	5150-5250
	For RSS eirp:10 dBm/MHz	
	11 dBm/MHz	5250-5350
	11 dBm/MHz	For FCC:5470-5725 For IC:5470-5600 5650-5725
	30 dBm/500 kHz	5725-5850

7.3. Test Procedure

The transmitter output was connected to a spectrum analyzer. Power density was measured by spectrum analyzer with 1MHz RBW and 3MHz VBW.
Connect the UUT to the spectrum analyser and use the following settings:

5150 MHz~5250 MHz, 5250 MHz~5350 MHz, 5470 MHz~5725 MHz

Center Frequency	The centre frequency of the channel under test
Detector	RMS
RBW	1MHz
VBW	≥3 × RBW
Span	Encompass the entire emissions bandwidth (EBW) of the signal
Trace	Max hold
Sweep time	Auto

5725 MHz-5850 MHz

Center Frequency	The centre frequency of the channel under test
Detector	RMS
RBW	500 kHz
VBW	≥3 × RBW
Span	Encompass the entire emissions bandwidth (EBW) of the signal
Trace	Max hold
Sweep time	Auto

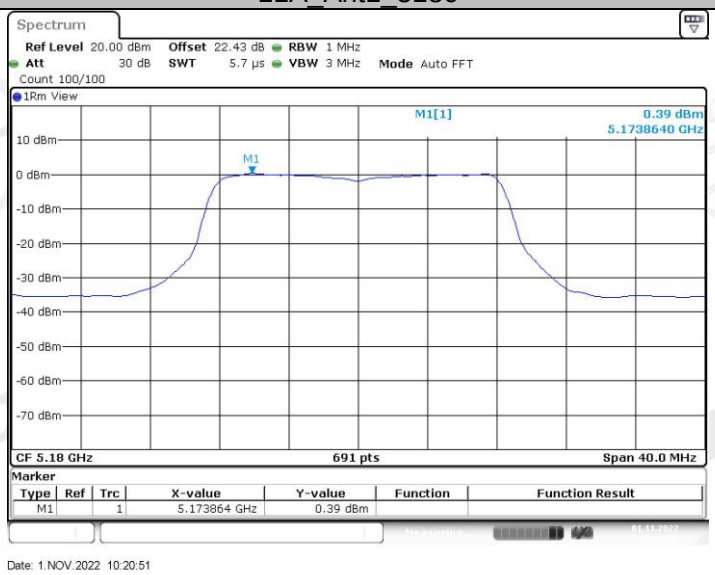
7.4. Test Result

Test Mode	Antenna	Channel	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5180	0.39	≤11	PASS
		5200	-0.19	≤11	PASS
		5240	-0.47	≤11	PASS
		5745	-4.76	≤30	PASS
		5785	-4.42	≤30	PASS
		5825	-3.42	≤30	PASS
11N20SISO	Ant1	5180	0.01	≤11	PASS
		5200	0.20	≤11	PASS
		5240	-0.29	≤11	PASS
		5745	-4.57	≤30	PASS
		5785	-4.59	≤30	PASS
		5825	-4.67	≤30	PASS
11N40SISO	Ant1	5190	-2.73	≤11	PASS
		5230	-2.98	≤11	PASS
		5755	-7.74	≤30	PASS
		5795	-8.69	≤30	PASS
11AC20SISO	Ant1	5180	0.05	≤11	PASS
		5200	-0.16	≤11	PASS
		5240	-0.23	≤11	PASS
		5745	-3.71	≤30	PASS
		5785	-3.72	≤30	PASS
		5825	-4.16	≤30	PASS
11AC40SISO	Ant1	5190	-2.54	≤11	PASS
		5230	-2.99	≤11	PASS
		5755	-6.30	≤30	PASS
		5795	-6.79	≤30	PASS
11AC80SISO	Ant1	5210	-5.19	≤11	PASS
		5775	-9.37	≤30	PASS

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

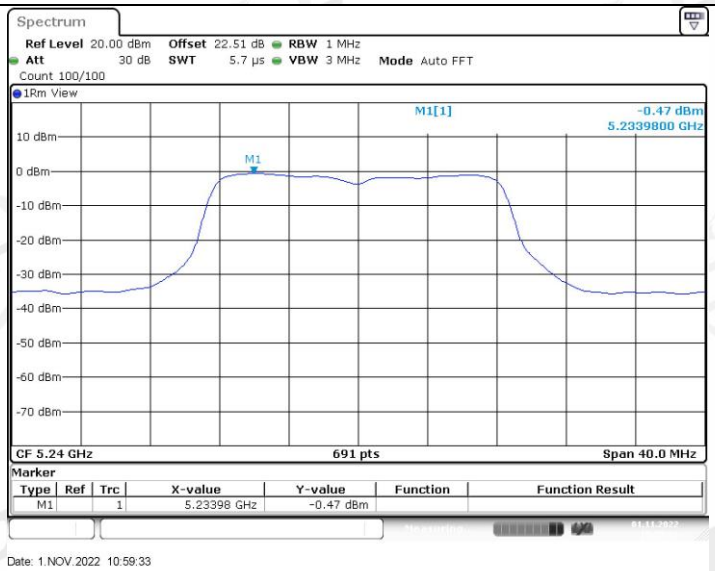
7.5. Original test data

11A_Ant1_5180

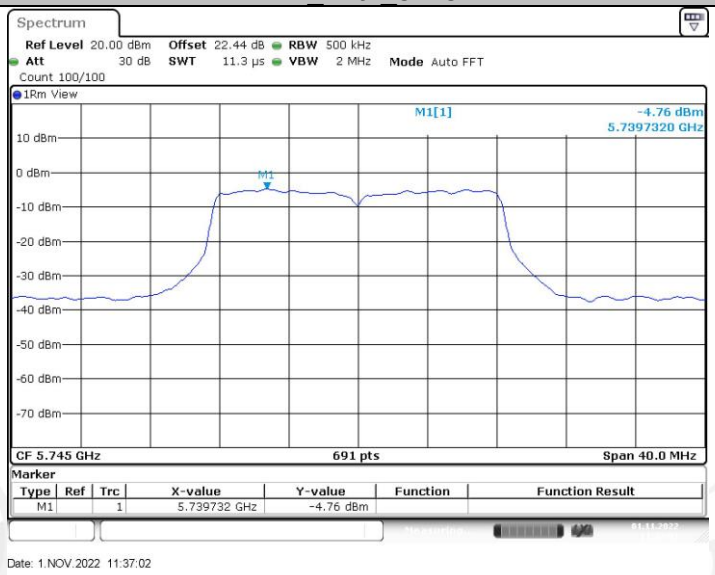


11A_Ant1_5200

11A_Ant1_5240

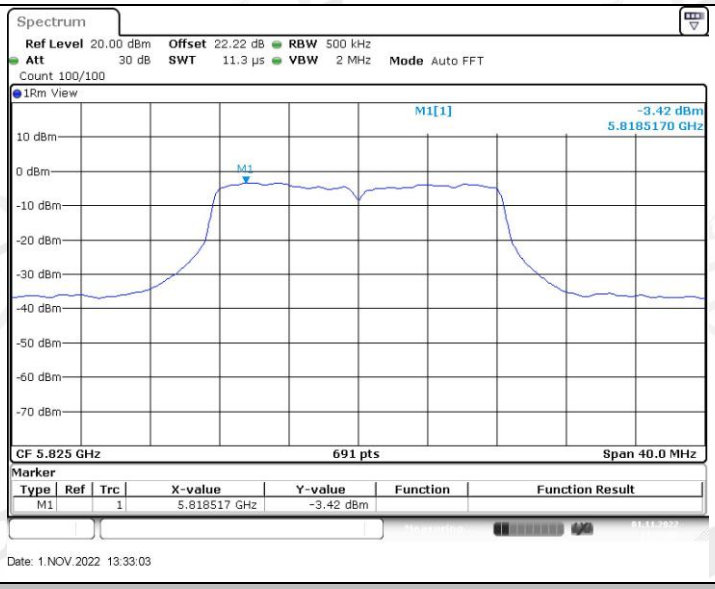


11A_Ant1_5745

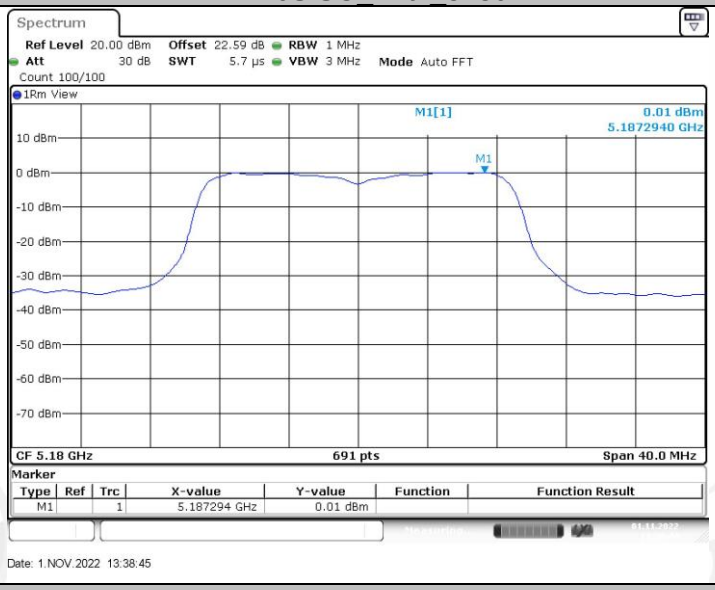


11A_Ant1_5785

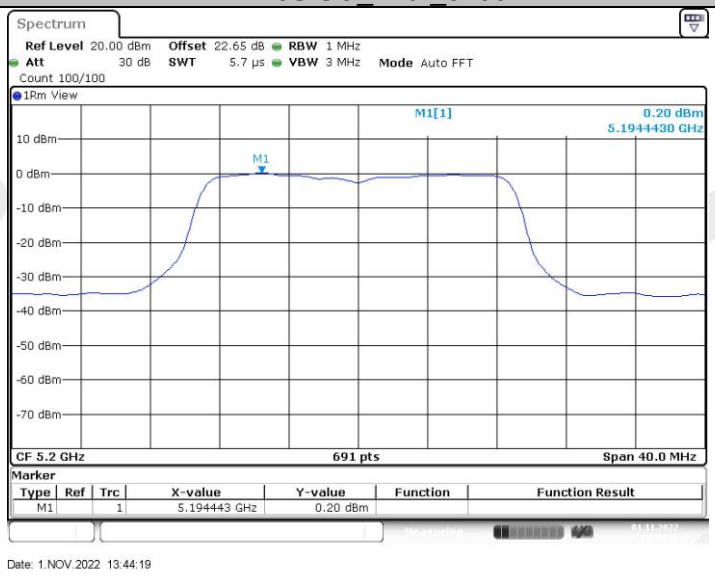
11A_Ant1_5825



11N20SISO_Ant1_5180



11N20SISO_Ant1_5200



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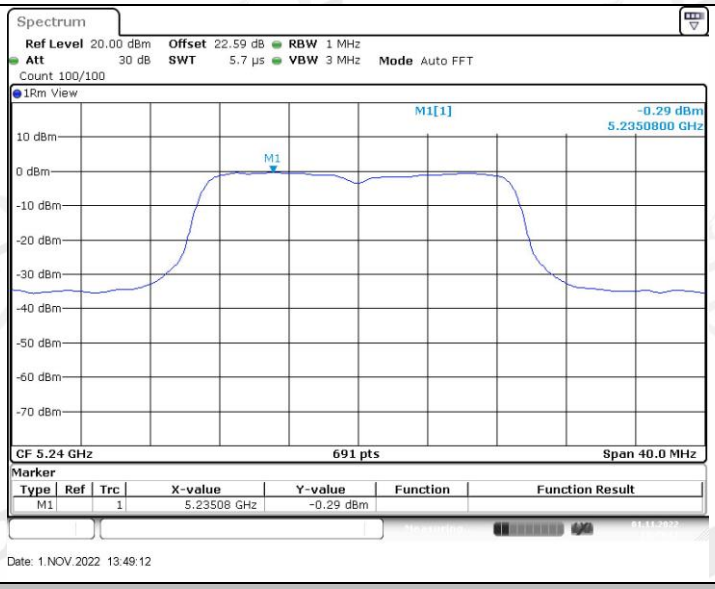
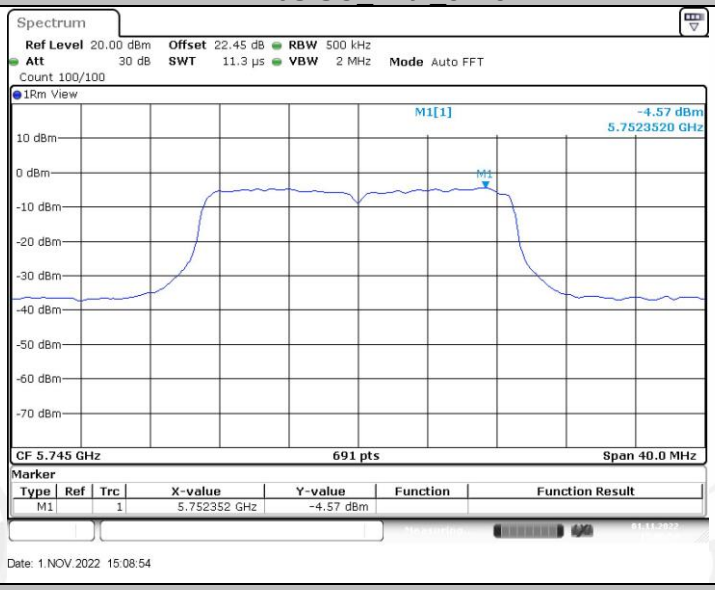
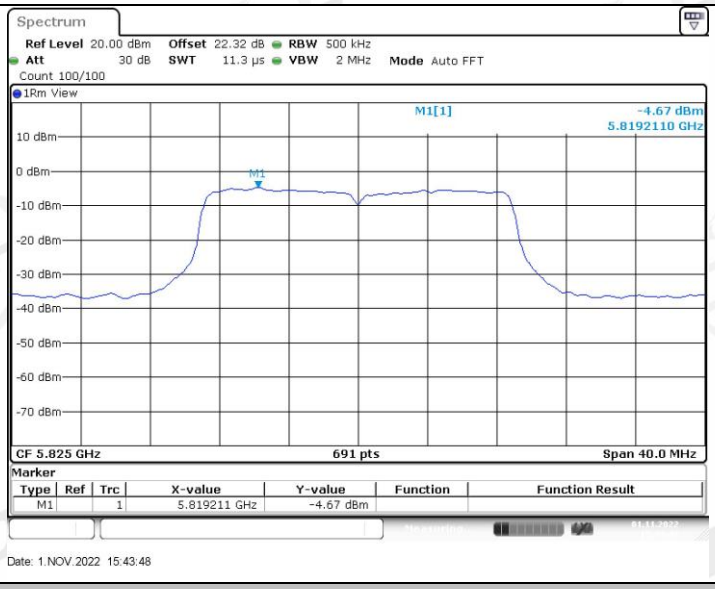


11N20SISO_Ant1_5745

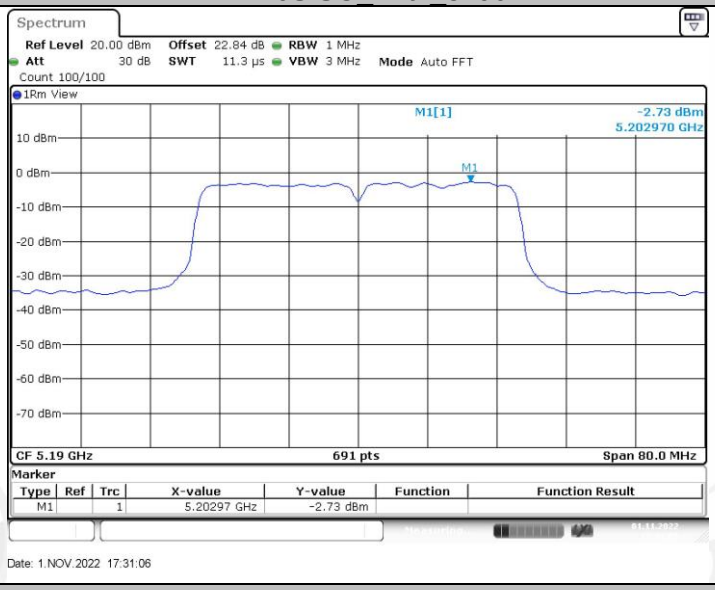


11N20SISO_Ant1_5785

11N20SISO_Ant1_5825

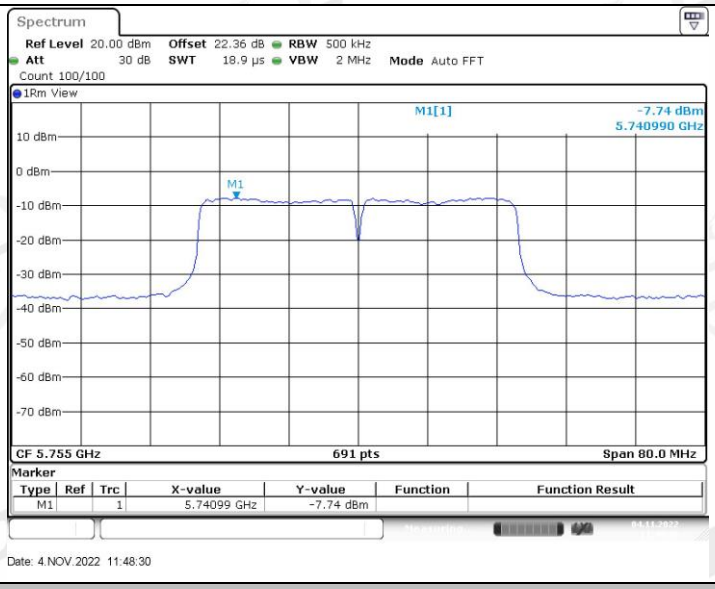


11N40SISO_Ant1_5190

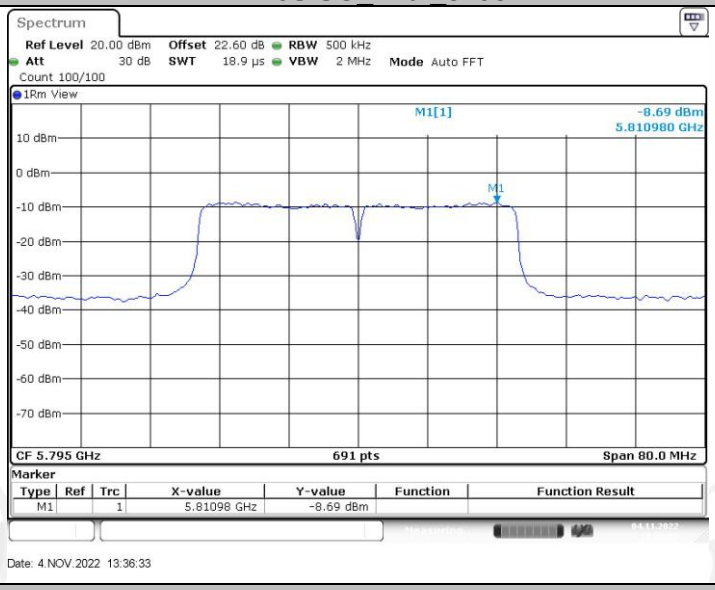


11N40SISO_Ant1_5230

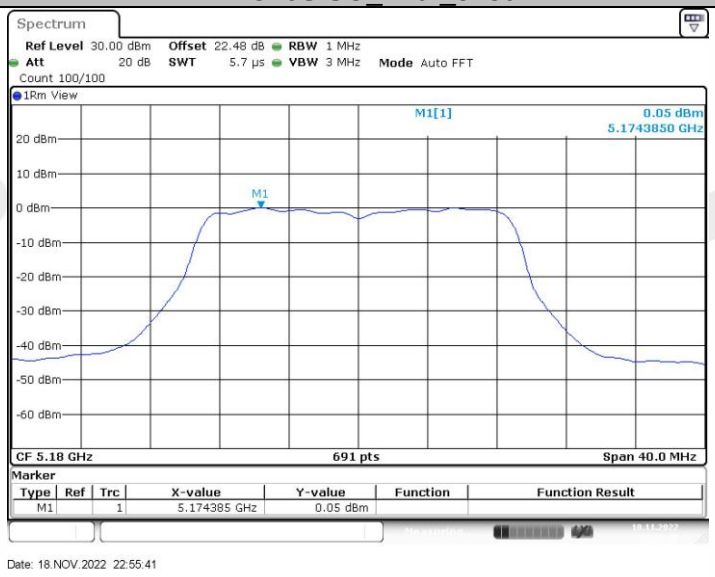
11N40SISO_Ant1_5755



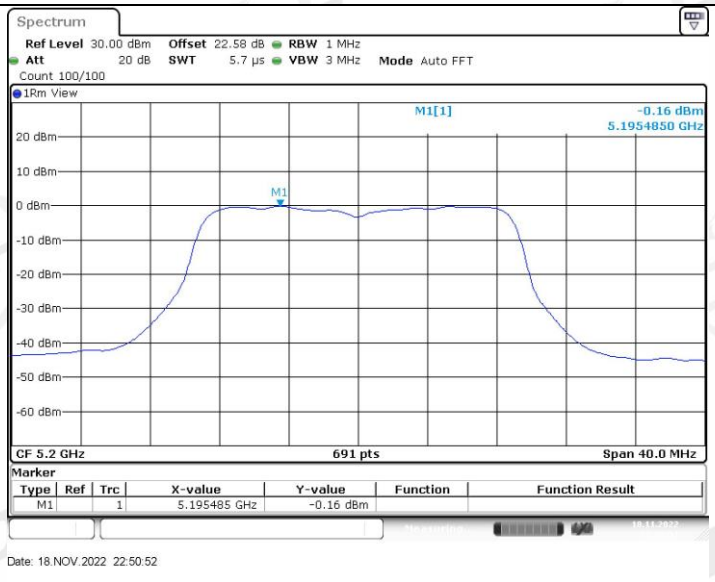
11N40SISO_Ant1_5795



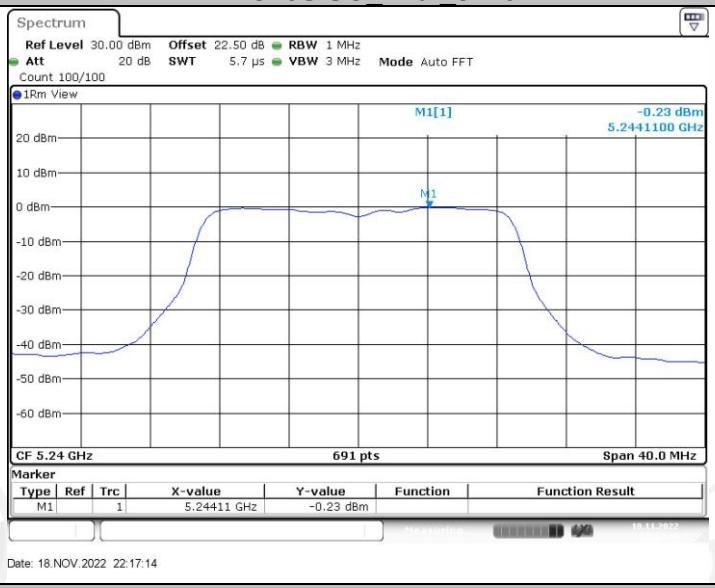
11AC20SISO_Ant1_5180



11AC20SISO_Ant1_5200



11AC20SISO_Ant1_5240



11AC20SISO_Ant1_5745

11AC20SISO_Ant1_5785