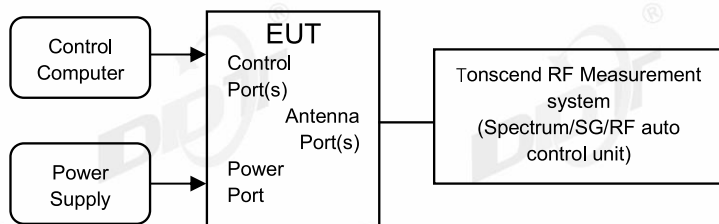


## 7. Duty Cycle

### 7.1. Block diagram of test setup



### 7.2. Limit

Just for Report.

### 7.3. 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: Clear Write.

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

7.4. Test result

Test Engineer:	Haofeng	Test Site:	RF Measurement System 4#
Ambient Condition:	20.4-25.1℃,32.2-50.2%RH	Test Date:	2023.11.25-2023.11.28/2024.02.01-2024.02.02
Test Power Supply:	Battery	EUT:	Wireless Speaker
Sample Number:	S23111312-01	Model No.:	BOOMBOX3 Wi-Fi

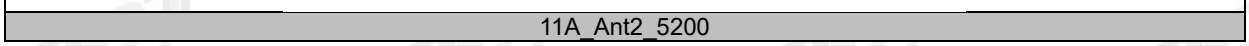
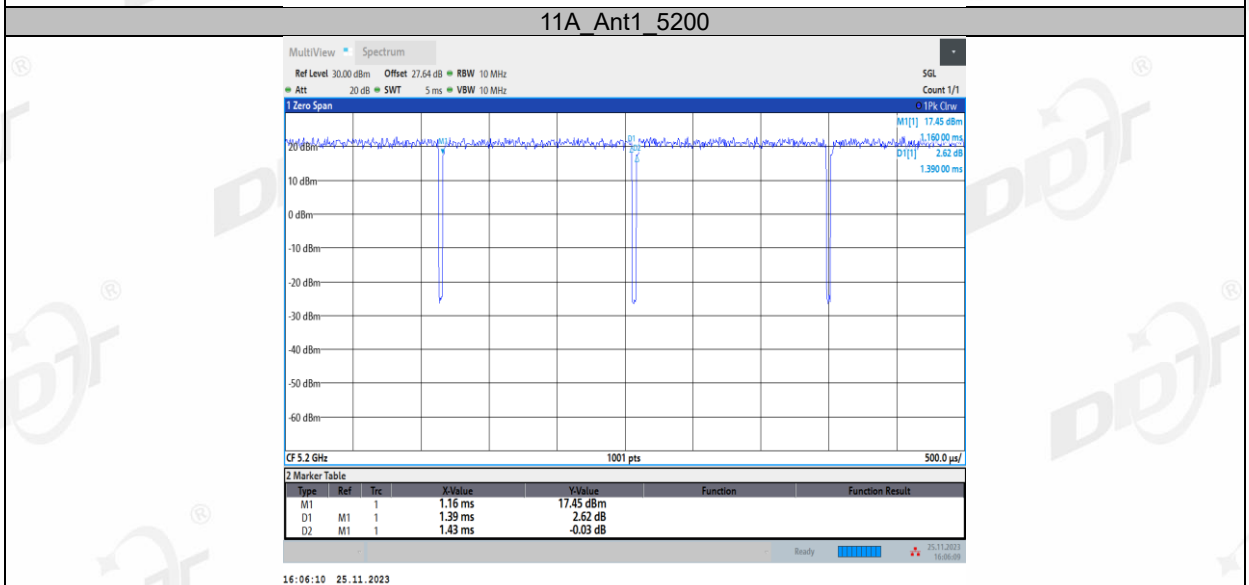
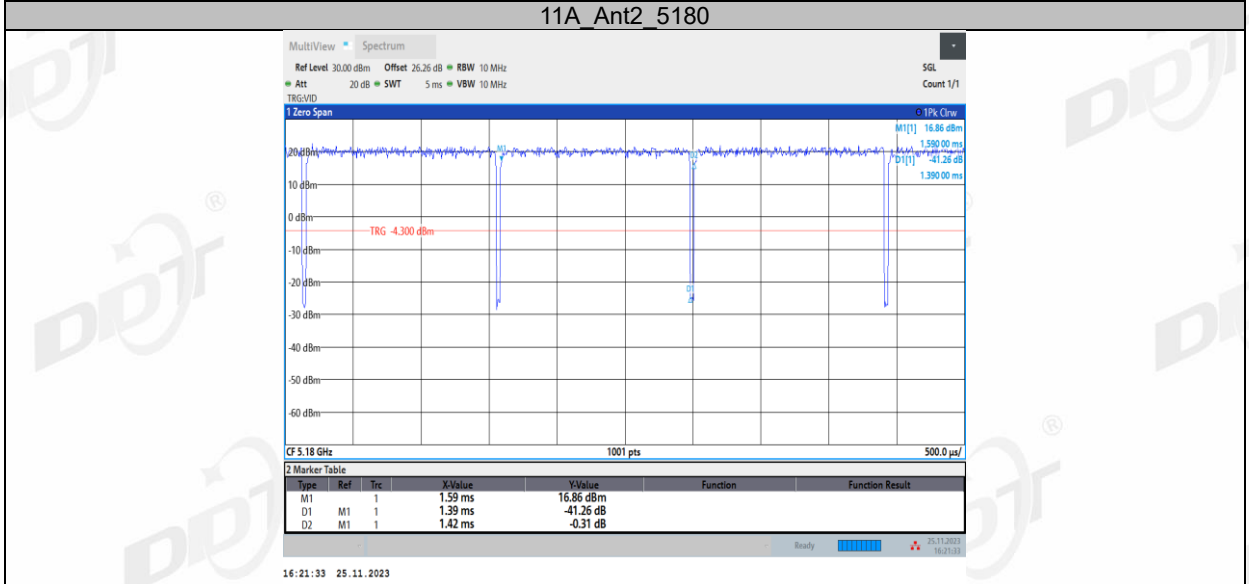
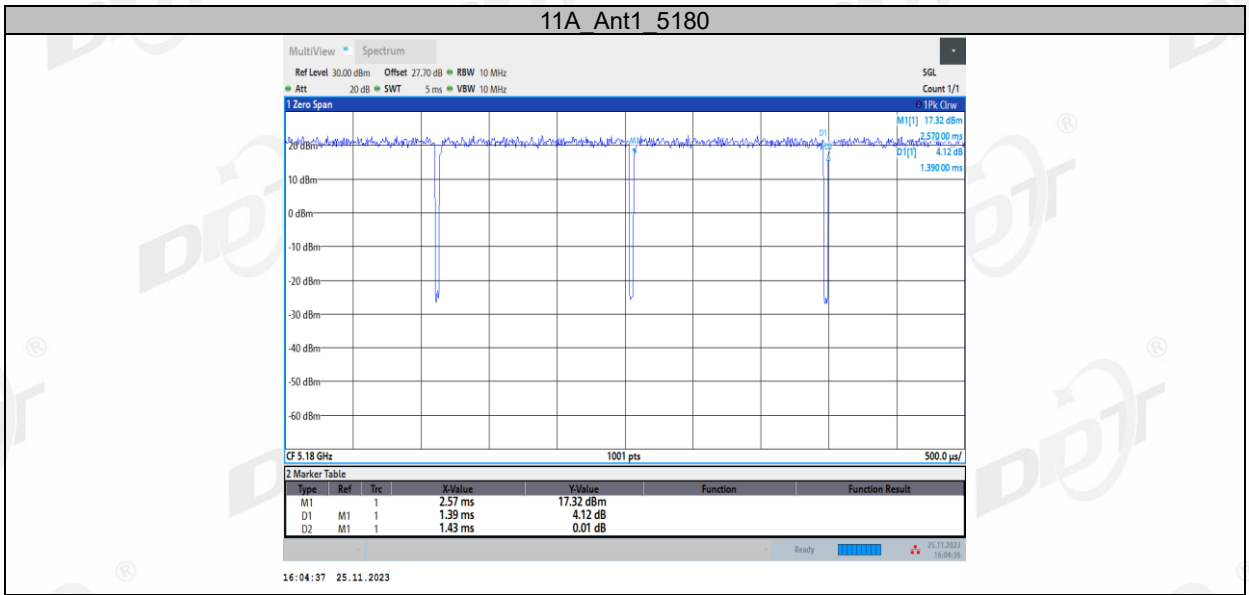
Test Mode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
11A	Ant1	5180	1.39	1.43	97.20
	Ant2	5180	1.39	1.42	97.89
	Ant1	5200	1.39	1.43	97.20
	Ant2	5200	1.39	1.42	97.89
	Ant1	5240	1.39	1.43	97.20
	Ant2	5240	1.39	1.43	97.20
	Ant1	5260	1.39	1.43	97.20
	Ant2	5260	1.39	1.42	97.89
	Ant1	5280	1.39	1.42	97.89
	Ant2	5280	1.39	1.43	97.20
	Ant1	5320	1.39	1.43	97.20
	Ant2	5320	1.39	1.43	97.20
	Ant1	5500	1.39	1.42	97.89
	Ant2	5500	1.39	1.43	97.20
	Ant1	5580	1.39	1.42	97.89
	Ant2	5580	1.39	1.42	97.89
	Ant1	5700	1.39	1.43	97.20
	Ant2	5700	1.39	1.43	97.20
	Ant1	5720	1.39	1.42	97.89
	Ant2	5720	1.39	1.43	97.20
	Ant1	5745	1.39	1.43	97.20
	Ant2	5745	1.39	1.42	97.89
	Ant1	5785	1.40	1.43	97.90
	Ant2	5785	1.39	1.42	97.89
Ant1	5825	1.39	1.43	97.20	
Ant2	5825	1.39	1.42	97.89	
11N20MIMO	Ant1	5180	0.67	0.70	95.71
	Ant2	5180	0.67	0.70	95.71
	Ant1	5200	0.67	0.71	94.37
	Ant2	5200	0.67	0.70	95.71
	Ant1	5240	0.67	0.71	94.37
	Ant2	5240	0.67	0.71	94.37
	Ant1	5260	0.67	0.71	94.37
	Ant2	5260	0.67	0.70	95.71
	Ant1	5280	0.67	0.71	94.37
	Ant2	5280	0.67	0.70	95.71
	Ant1	5320	0.67	0.70	95.71
	Ant2	5320	0.67	0.70	95.71
	Ant1	5500	0.67	0.71	94.37
	Ant2	5500	0.67	0.70	95.71
	Ant1	5580	0.67	0.71	94.37
	Ant2	5580	0.67	0.70	95.71
	Ant1	5700	0.67	0.70	95.71
	Ant2	5700	0.67	0.71	94.37
	Ant1	5720	0.67	0.71	94.37
	Ant2	5720	0.67	0.70	95.71
	Ant1	5745	0.67	0.71	94.37
	Ant2	5745	0.67	0.70	95.71
	Ant1	5785	0.67	0.71	94.37
	Ant2	5785	0.67	0.70	95.71
Ant1	5825	0.67	0.71	94.37	
Ant2	5825	0.67	0.70	95.71	
11N40MIMO	Ant1	5190	0.35	0.38	92.11
	Ant2	5190	0.34	0.38	89.47

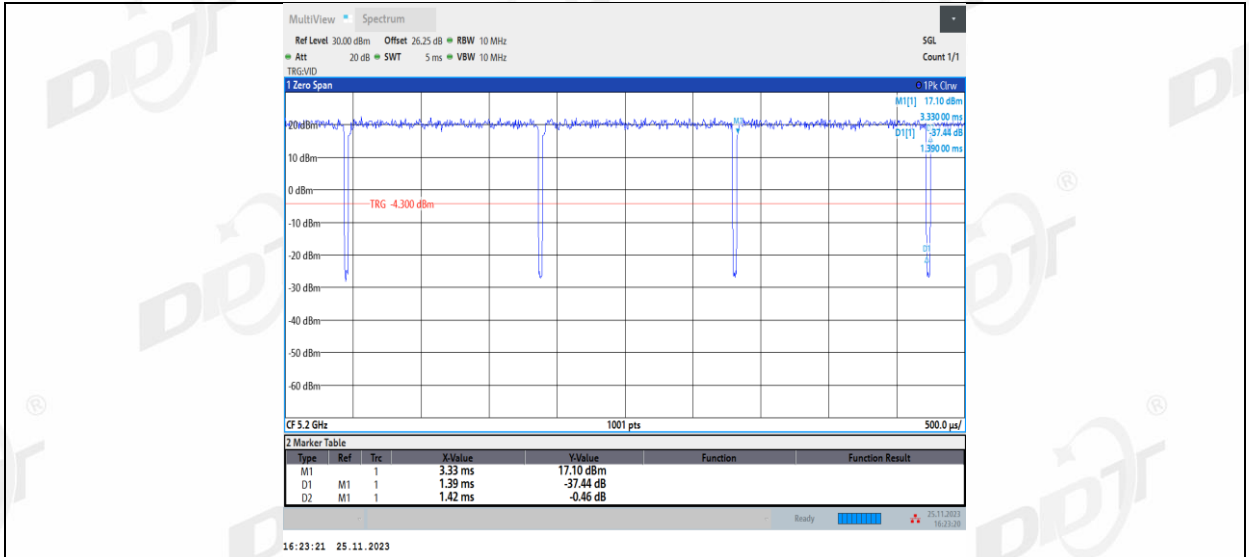
	Ant1	5230	0.34	0.38	89.47	
	Ant2	5230	0.35	0.39	89.74	
	Ant1	5270	0.34	0.38	89.47	
	Ant2	5270	0.34	0.38	89.47	
	Ant1	5310	0.35	0.38	92.11	
	Ant2	5310	0.35	0.39	89.74	
	Ant1	5510	0.35	0.38	92.11	
	Ant2	5510	0.35	0.39	89.74	
	Ant1	5550	0.35	0.38	92.11	
	Ant2	5550	0.34	0.38	89.47	
	Ant1	5670	0.35	0.38	92.11	
	Ant2	5670	0.34	0.38	89.47	
	Ant1	5710	0.35	0.38	92.11	
	Ant2	5710	0.35	0.38	92.11	
	Ant1	5755	0.34	0.38	89.47	
	Ant2	5755	0.34	0.38	89.47	
	Ant1	5795	0.35	0.39	89.74	
	Ant2	5795	0.34	0.38	89.47	
	11AC20MIMO	Ant1	5180	1.31	1.35	97.04
		Ant2	5180	1.31	1.34	97.76
Ant1		5200	1.32	1.35	97.78	
Ant2		5200	1.31	1.34	97.76	
Ant1		5240	1.31	1.35	97.04	
Ant2		5240	1.31	1.35	97.04	
Ant1		5260	1.31	1.34	97.76	
Ant2		5260	1.31	1.34	97.76	
Ant1		5280	1.31	1.34	97.76	
Ant2		5280	1.31	1.35	97.04	
Ant1		5320	1.31	1.34	97.76	
Ant2		5320	1.31	1.34	97.76	
Ant1		5500	1.31	1.35	97.04	
Ant2		5500	1.31	1.34	97.76	
Ant1		5580	1.31	1.35	97.04	
Ant2		5580	1.31	1.35	97.04	
Ant1		5700	1.31	1.34	97.76	
Ant2		5700	1.31	1.35	97.04	
Ant1		5720	1.31	1.35	97.04	
Ant2		5720	1.31	1.34	97.76	
11AC40MIMO	Ant1	5745	1.31	1.35	97.04	
	Ant2	5745	1.31	1.35	97.04	
	Ant1	5785	1.31	1.35	97.04	
	Ant2	5785	1.31	1.34	97.76	
	Ant1	5825	1.31	1.34	97.76	
	Ant2	5825	1.31	1.35	97.04	
	Ant1	5190	0.65	0.68	95.59	
	Ant2	5190	0.65	0.69	94.20	
	Ant1	5230	0.65	0.69	94.20	
	Ant2	5230	0.65	0.69	94.20	
	Ant1	5270	0.65	0.68	95.59	
	Ant2	5270	0.65	0.69	94.20	
	Ant1	5310	0.65	0.68	95.59	
	Ant2	5310	0.65	0.69	94.20	
	Ant1	5510	0.65	0.69	94.20	
	Ant2	5510	0.65	0.69	94.20	
	Ant1	5550	0.65	0.68	95.59	
	Ant2	5550	0.65	0.68	95.59	
	Ant1	5670	0.65	0.68	95.59	
	Ant2	5670	0.65	0.69	94.20	
Ant1	5710	0.65	0.69	94.20		
Ant2	5710	0.65	0.69	94.20		
Ant1	5755	0.65	0.68	95.59		
Ant2	5755	0.65	0.69	94.20		
Ant1	5795	0.65	0.69	94.20		
Ant2	5795	0.65	0.68	95.59		

11AC80MIMO	Ant1	5210	1.14	1.17	97.44	
	Ant2	5210	1.14	1.17	97.44	
	Ant1	5290	1.13	1.17	96.58	
	Ant2	5290	1.14	1.17	97.44	
	Ant1	5530	1.13	1.17	96.58	
	Ant2	5530	1.14	1.17	97.44	
	Ant1	5610	1.14	1.17	97.44	
	Ant2	5610	1.14	1.17	97.44	
	Ant1	5690	1.13	1.17	96.58	
	Ant2	5690	1.14	1.17	97.44	
	Ant1	5775	1.13	1.17	96.58	
	Ant2	5775	1.13	1.17	96.58	
11AX20MIMO	Ant1	5180	1.02	1.05	97.14	
	Ant2	5180	1.01	1.05	96.19	
	Ant1	5200	1.01	1.05	96.19	
	Ant2	5200	1.01	1.05	96.19	
	Ant1	5240	1.01	1.05	96.19	
	Ant2	5240	1.02	1.06	96.23	
	Ant1	5260	1.01	1.05	96.19	
	Ant2	5260	1.02	1.05	97.14	
	Ant1	5280	1.01	1.05	96.19	
	Ant2	5280	1.02	1.05	97.14	
	Ant1	5320	1.01	1.05	96.19	
	Ant2	5320	1.01	1.05	96.19	
	Ant1	5500	1.02	1.05	97.14	
	Ant2	5500	1.02	1.05	97.14	
	Ant1	5580	1.01	1.05	96.19	
	Ant2	5580	1.02	1.05	97.14	
	Ant1	5700	1.01	1.05	96.19	
	Ant2	5700	1.01	1.05	96.19	
	Ant1	5720	1.02	1.05	97.14	
	Ant2	5720	1.02	1.05	97.14	
	Ant1	5745	1.02	1.05	97.14	
	Ant2	5745	1.02	1.05	97.14	
	Ant1	5785	1.01	1.05	96.19	
	Ant2	5785	1.02	1.05	97.14	
	Ant1	5825	1.01	1.05	96.19	
	Ant2	5825	1.02	1.05	97.14	
	11AX40MIMO	Ant1	5190	0.53	0.57	92.98
		Ant2	5190	0.53	0.57	92.98
Ant1		5230	0.53	0.57	92.98	
Ant2		5230	0.53	0.57	92.98	
Ant1		5270	0.53	0.57	92.98	
Ant2		5270	0.53	0.57	92.98	
Ant1		5310	0.53	0.57	92.98	
Ant2		5310	0.53	0.57	92.98	
Ant1		5510	0.53	0.57	92.98	
Ant2		5510	0.53	0.57	92.98	
Ant1		5550	0.53	0.57	92.98	
Ant2		5550	0.53	0.57	92.98	
Ant1		5670	0.53	0.57	92.98	
Ant2		5670	0.53	0.57	92.98	
Ant1		5710	0.53	0.57	92.98	
Ant2		5710	0.53	0.57	92.98	
Ant1		5755	0.53	0.57	92.98	
Ant2		5755	0.53	0.57	92.98	
Ant1	5795	0.53	0.57	92.98		
Ant2	5795	0.53	0.57	92.98		
11AX80MIMO	Ant1	5210	0.29	0.32	90.63	
	Ant2	5210	0.28	0.32	87.50	
	Ant1	5290	0.29	0.32	90.63	
	Ant2	5290	0.29	0.33	87.88	
	Ant1	5530	0.29	0.32	90.63	
	Ant2	5530	0.29	0.32	90.63	

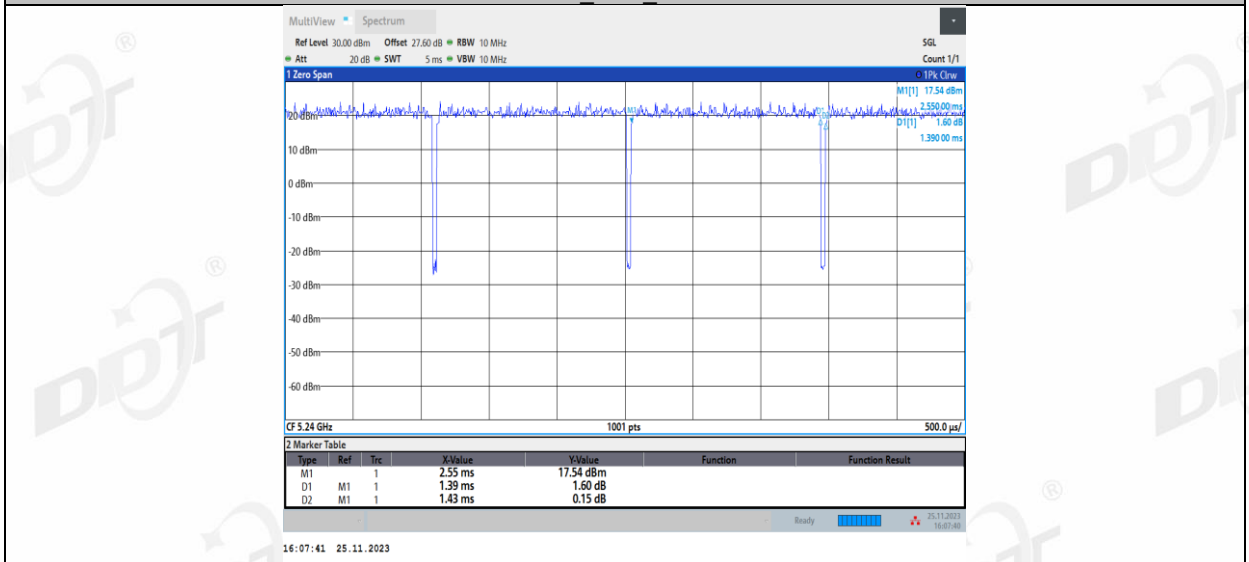
Ant1	5610	0.29	0.32	90.63
Ant2	5610	0.29	0.32	90.63
Ant1	5690	0.29	0.32	90.63
Ant2	5690	0.29	0.32	90.63
Ant1	5775	0.29	0.32	90.63
Ant2	5775	0.28	0.32	87.50

### 7.5. Test graphs

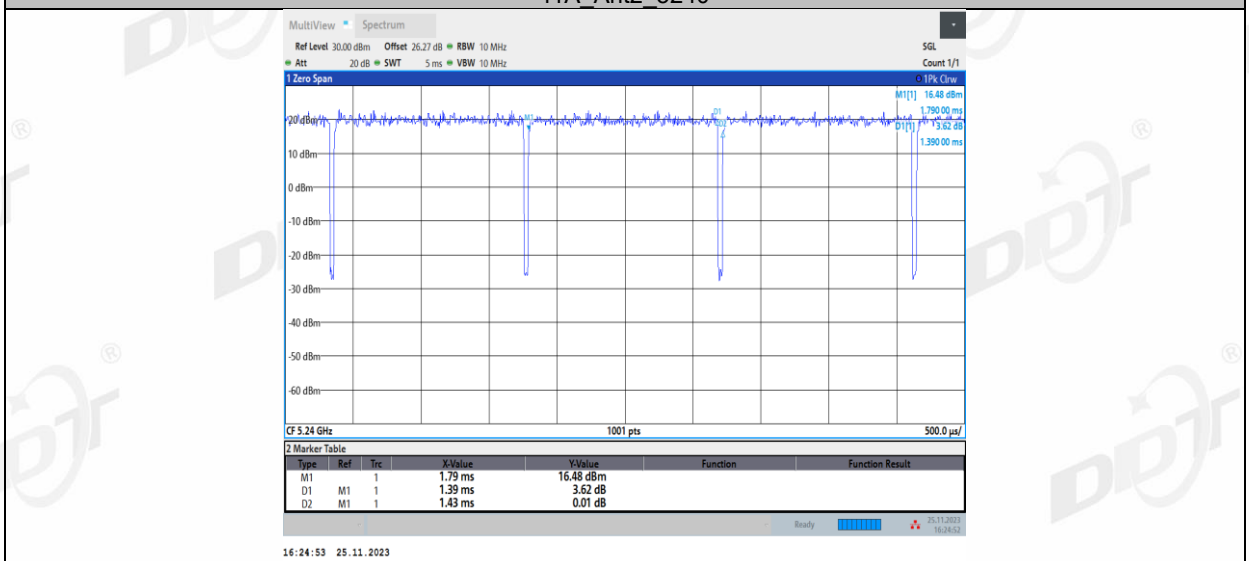




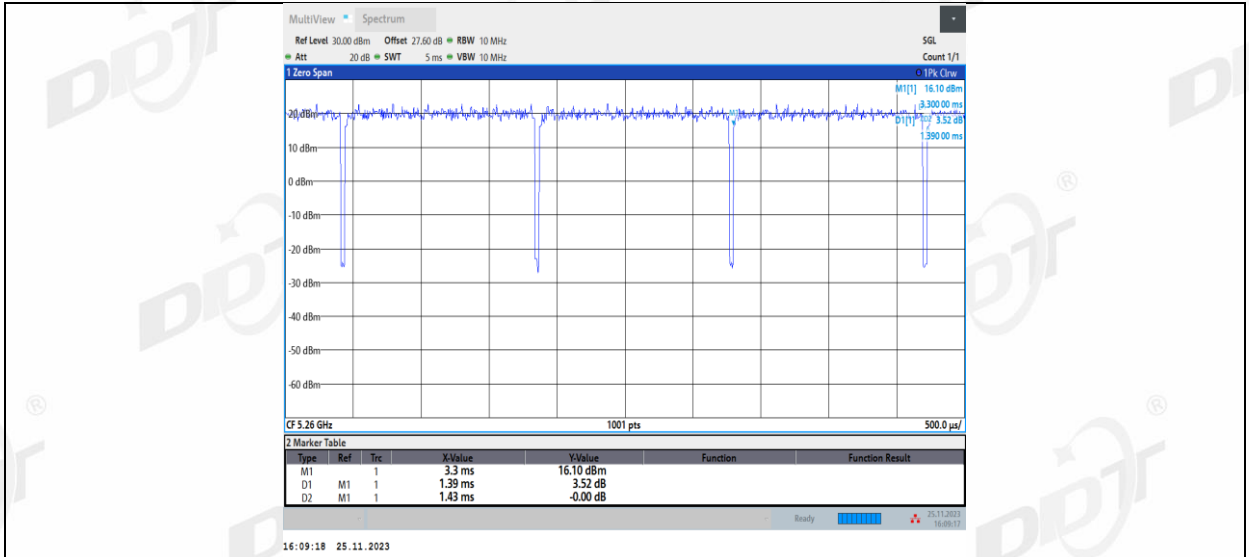
11A\_Ant1\_5240



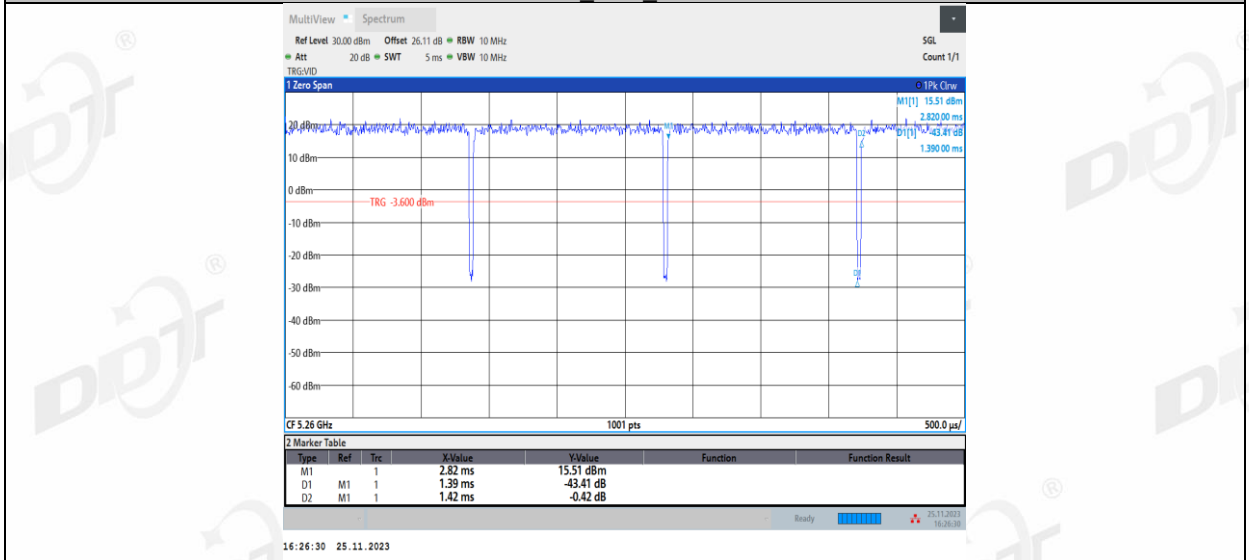
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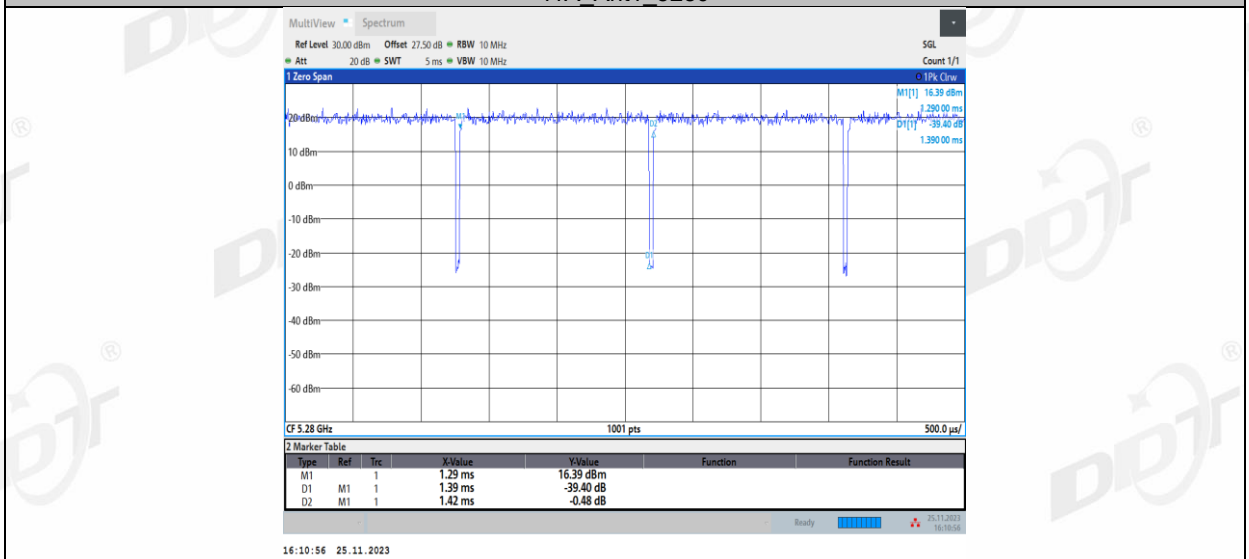
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11A\_Ant2\_5260

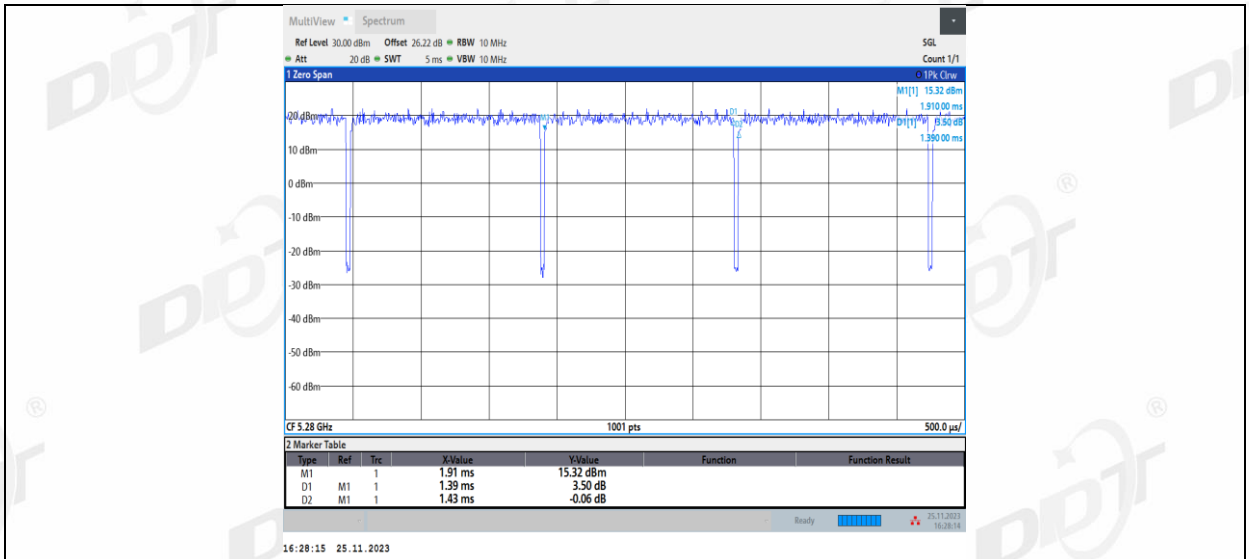


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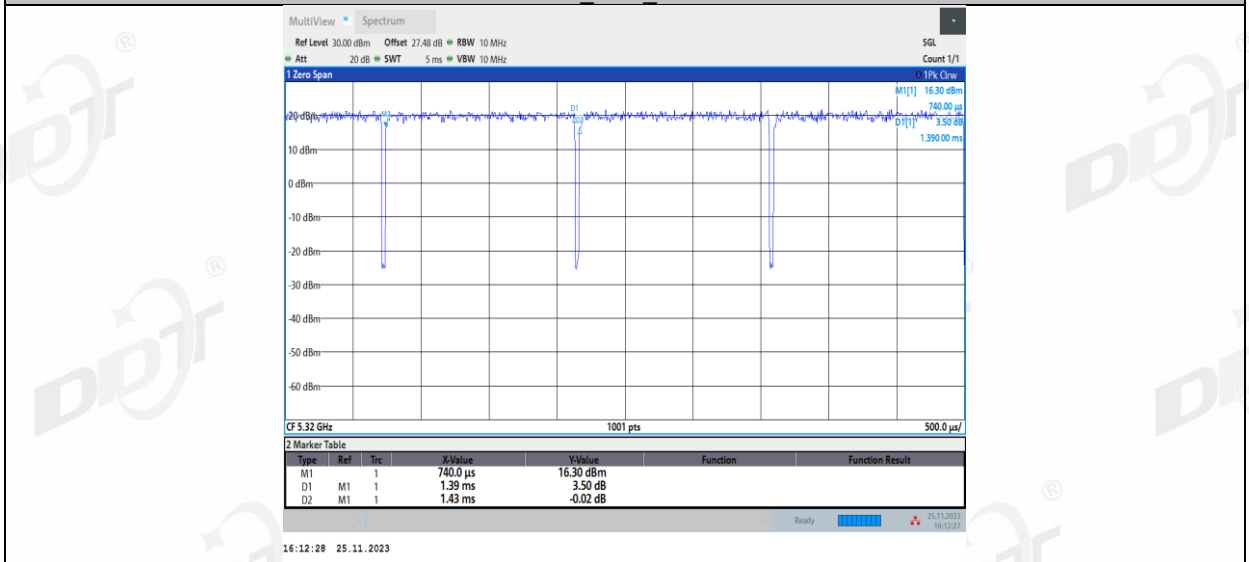


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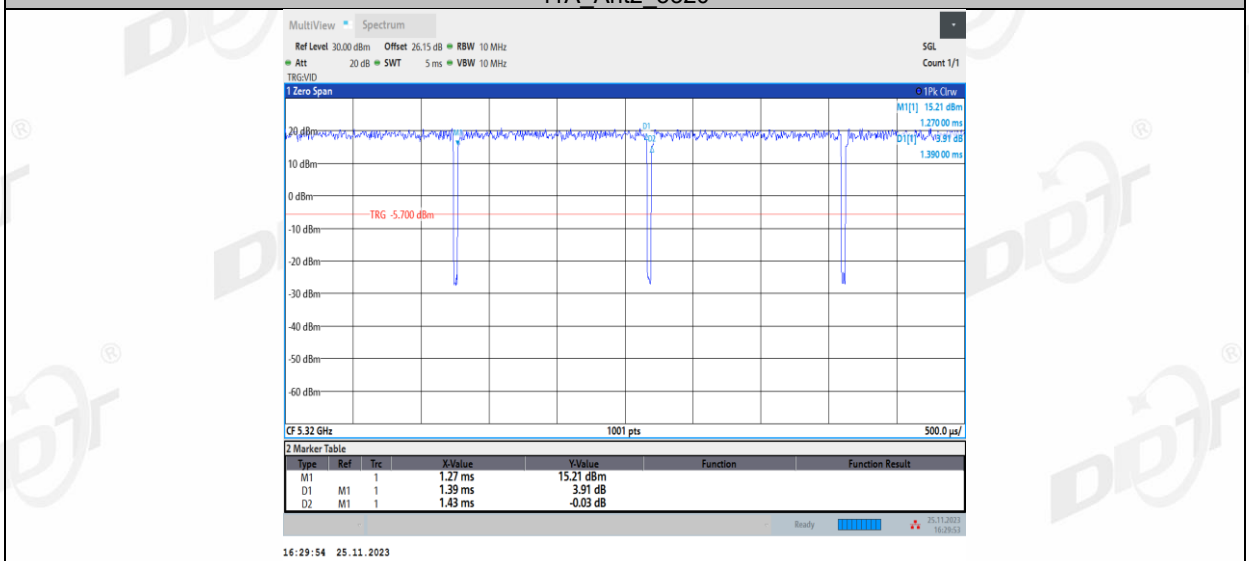




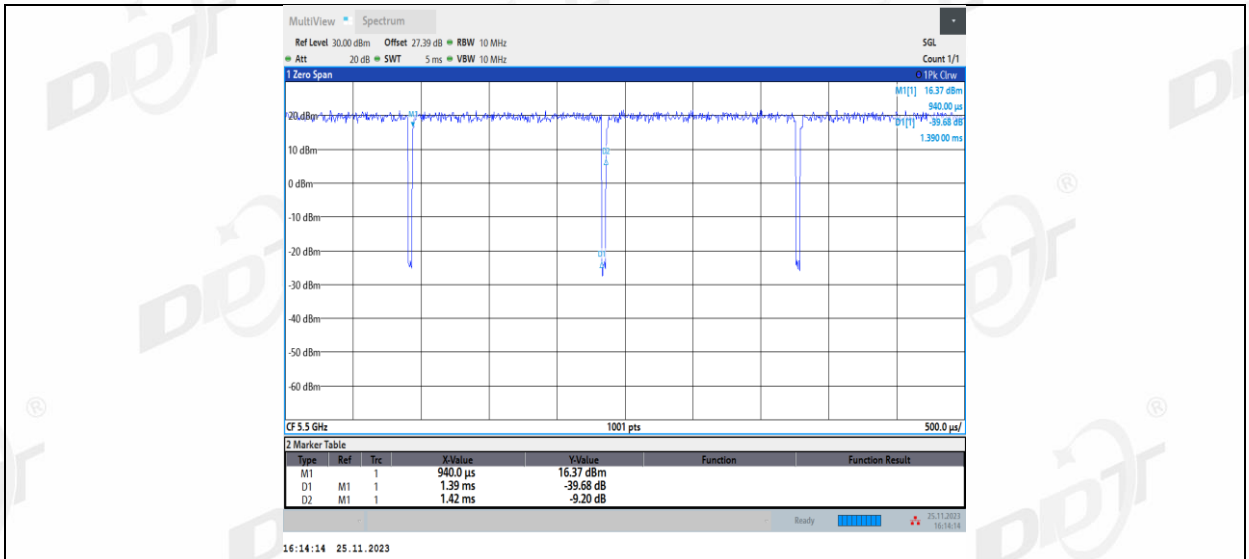
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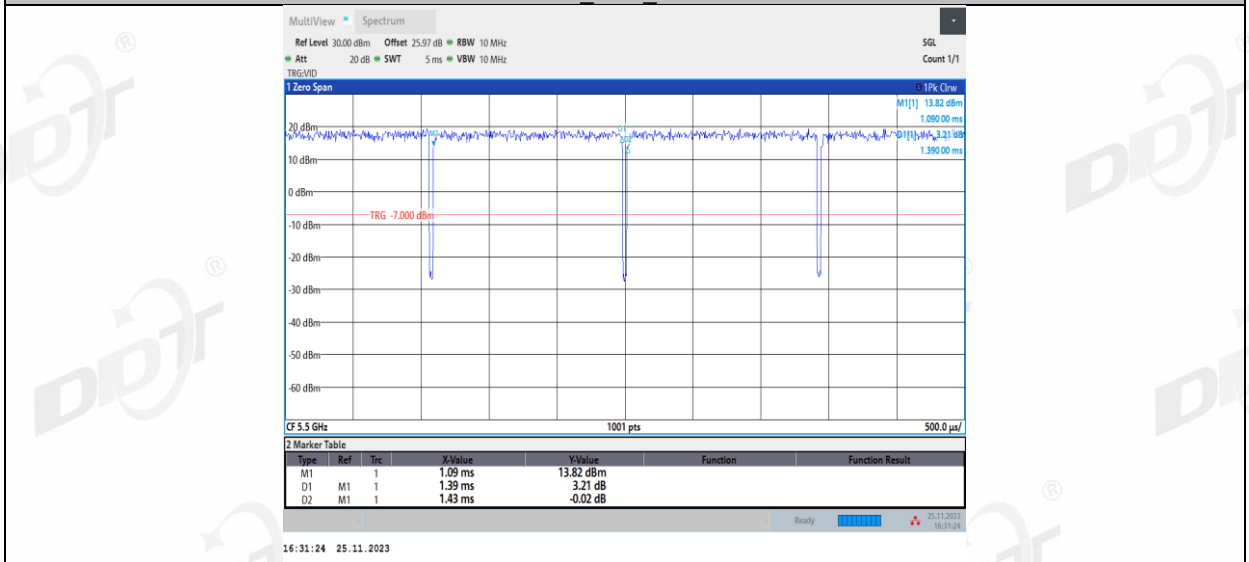
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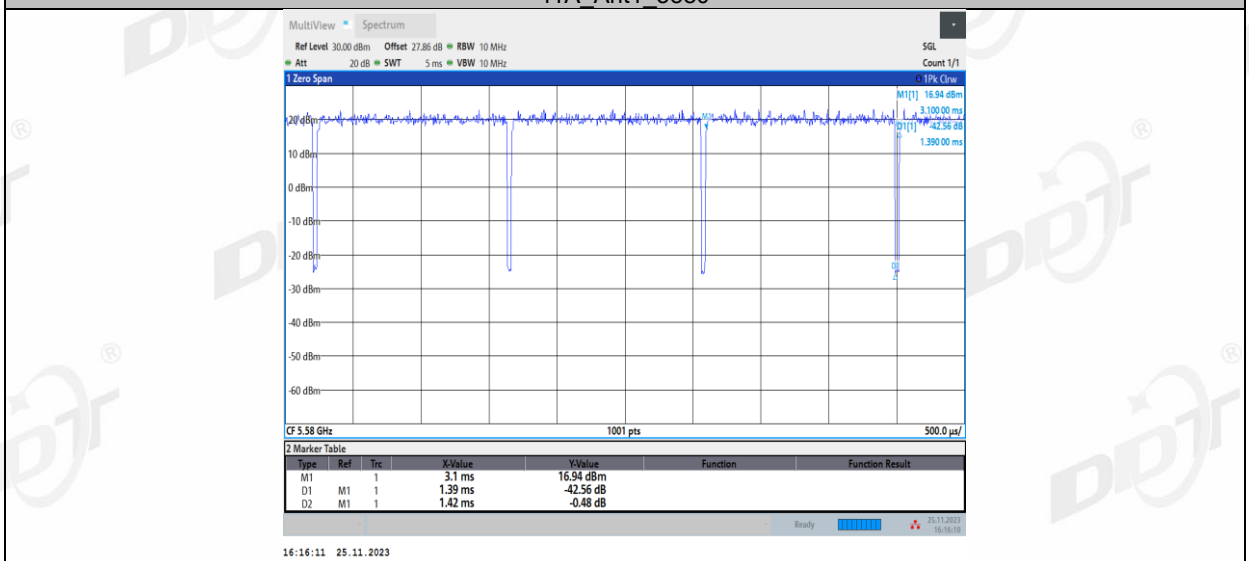
11A\_Ant1\_5500



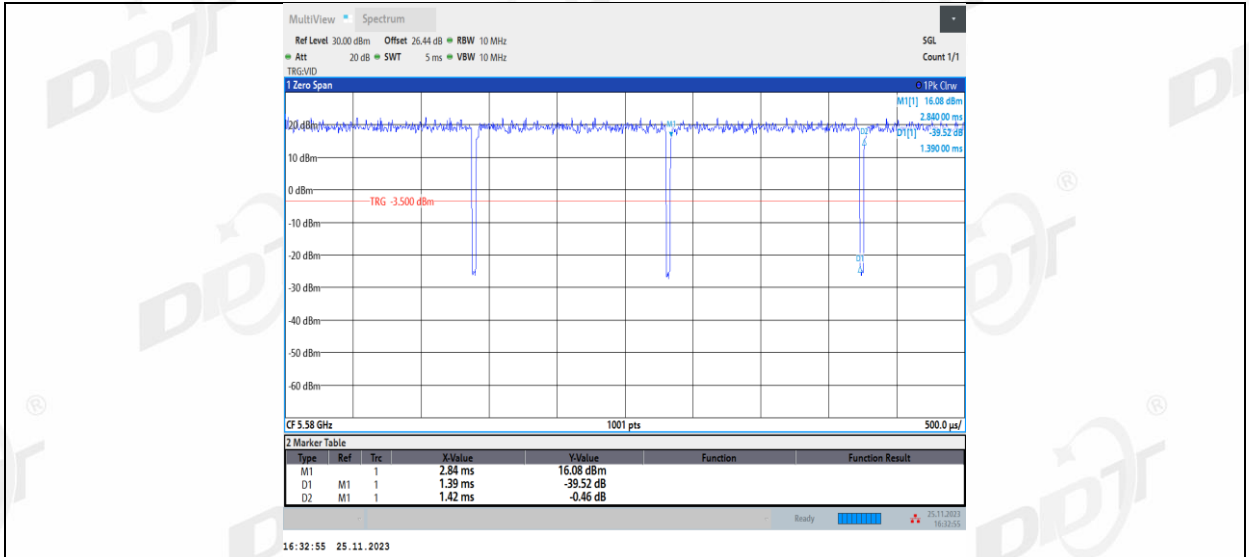
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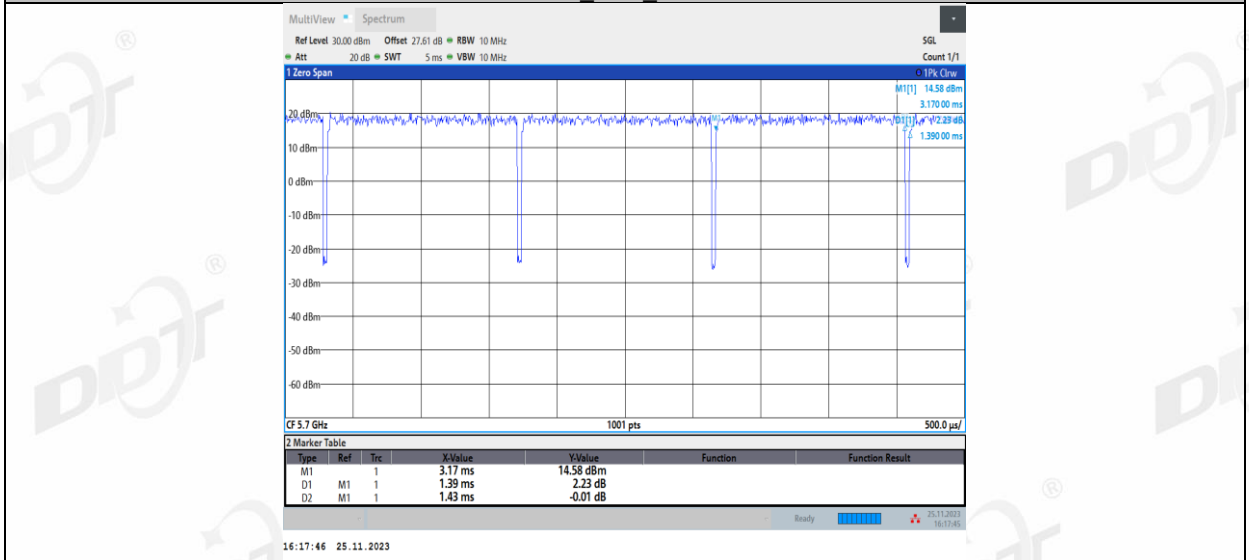
11A\_Ant1\_5580



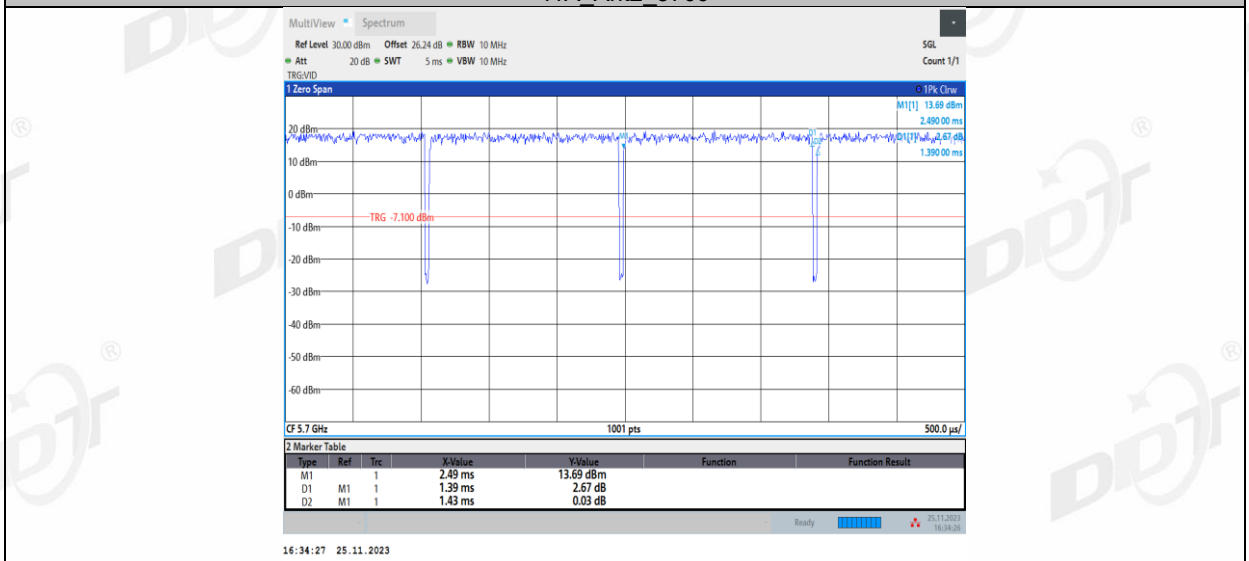
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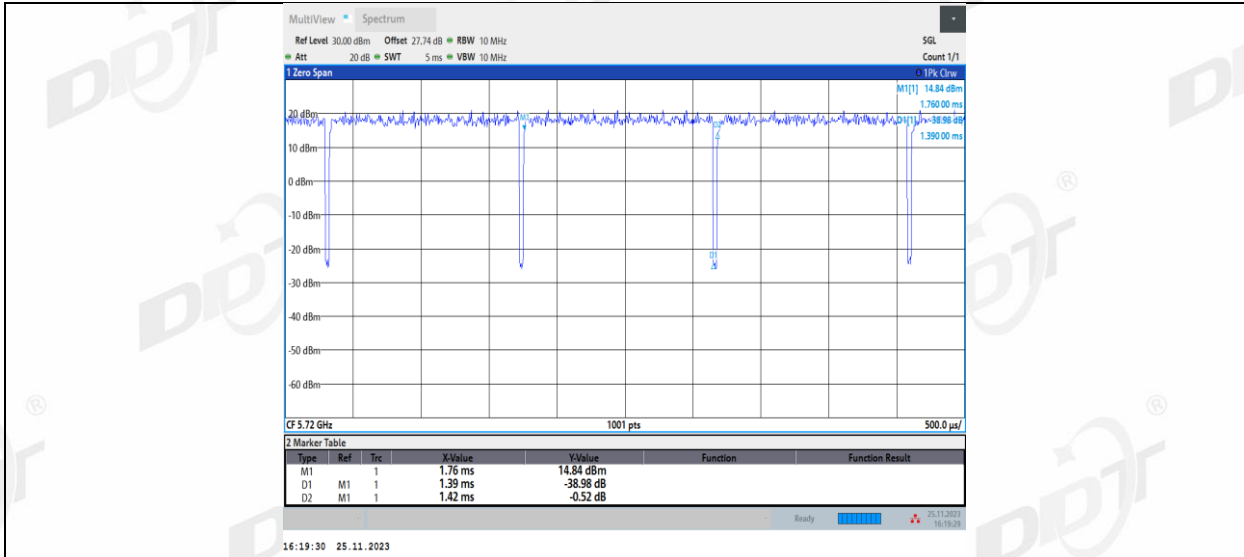
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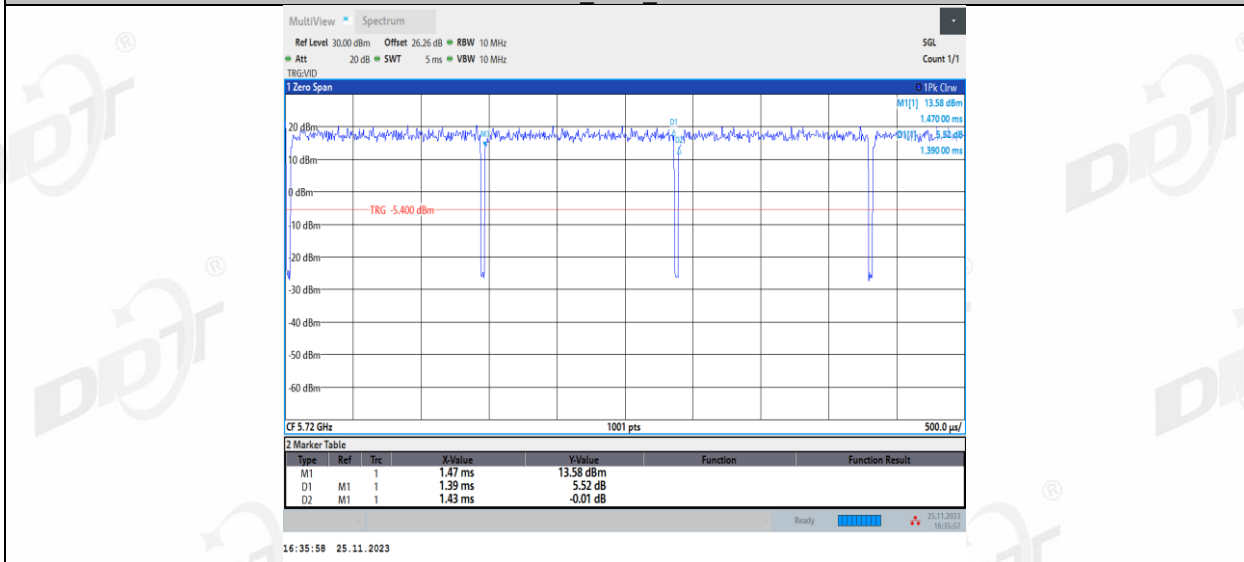
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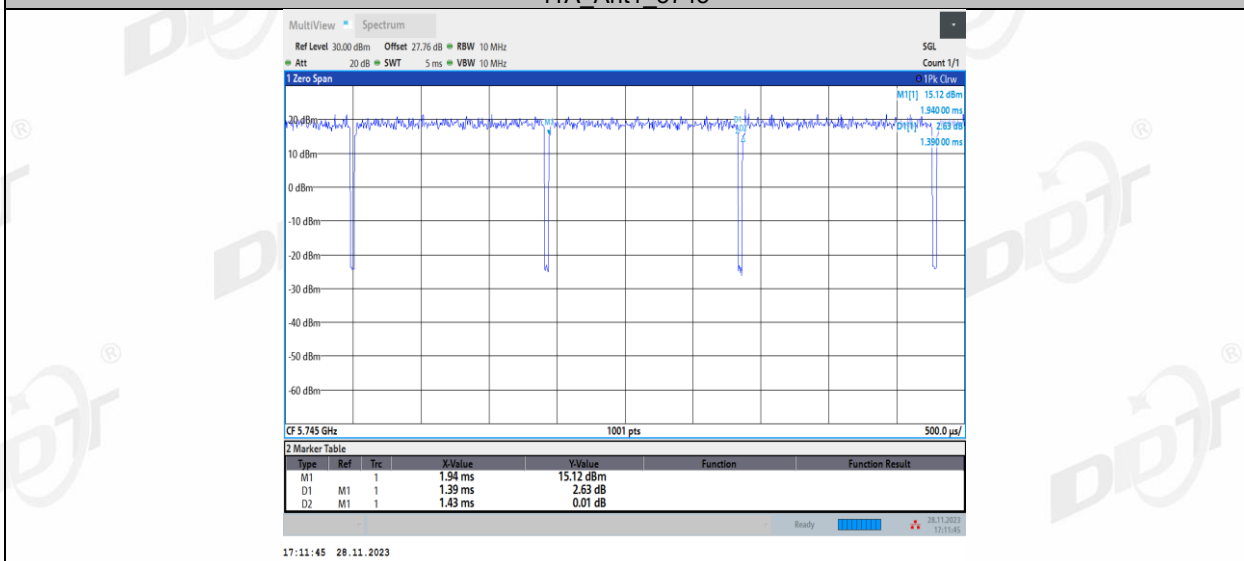
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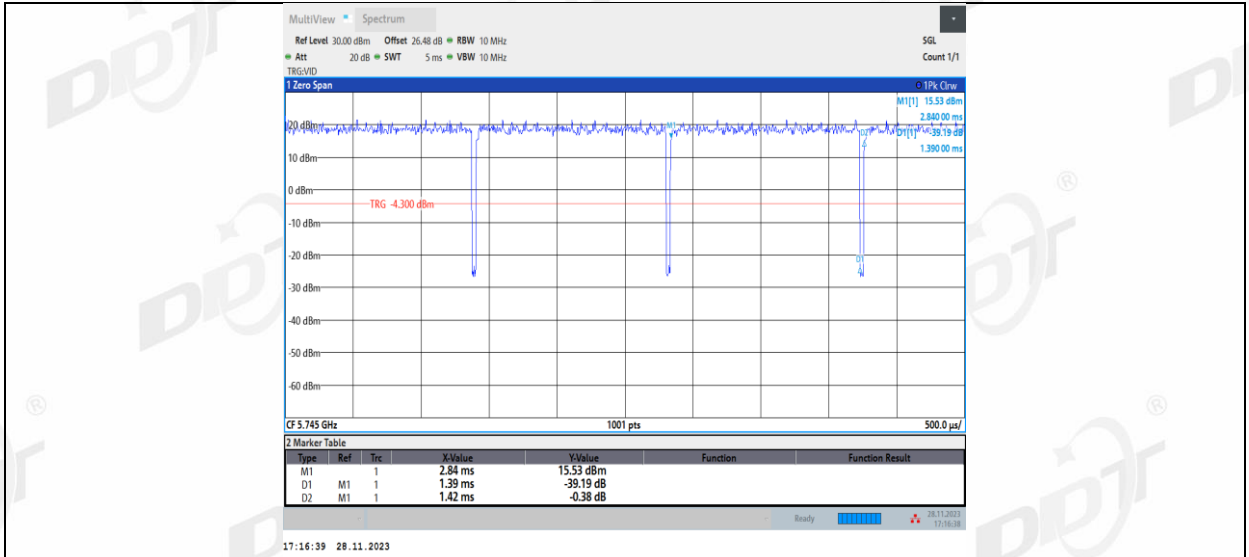
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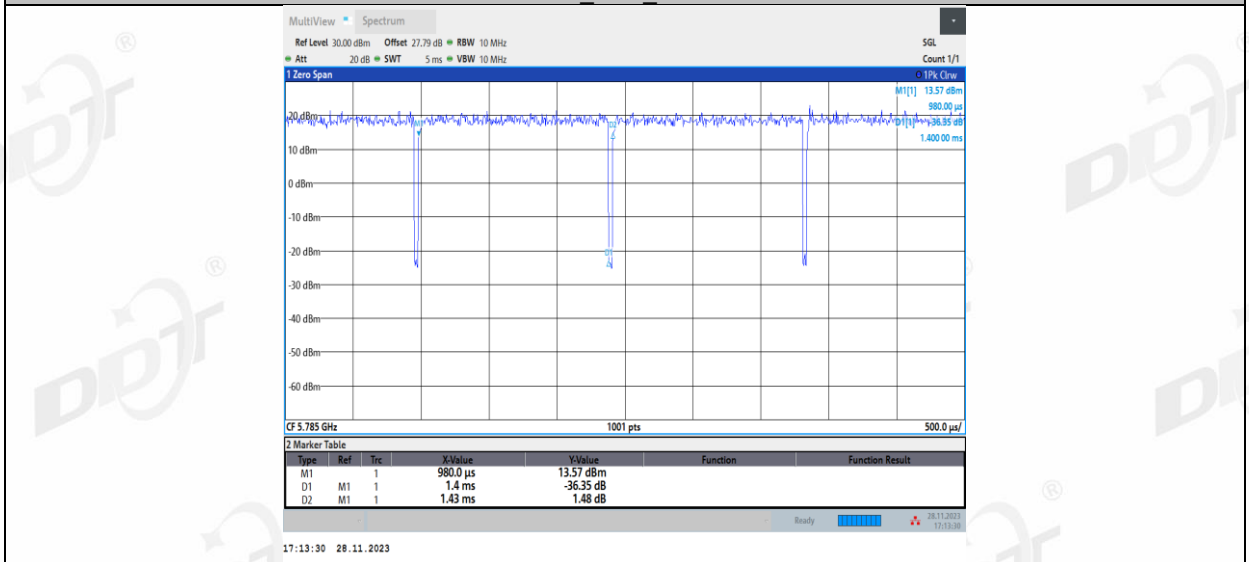
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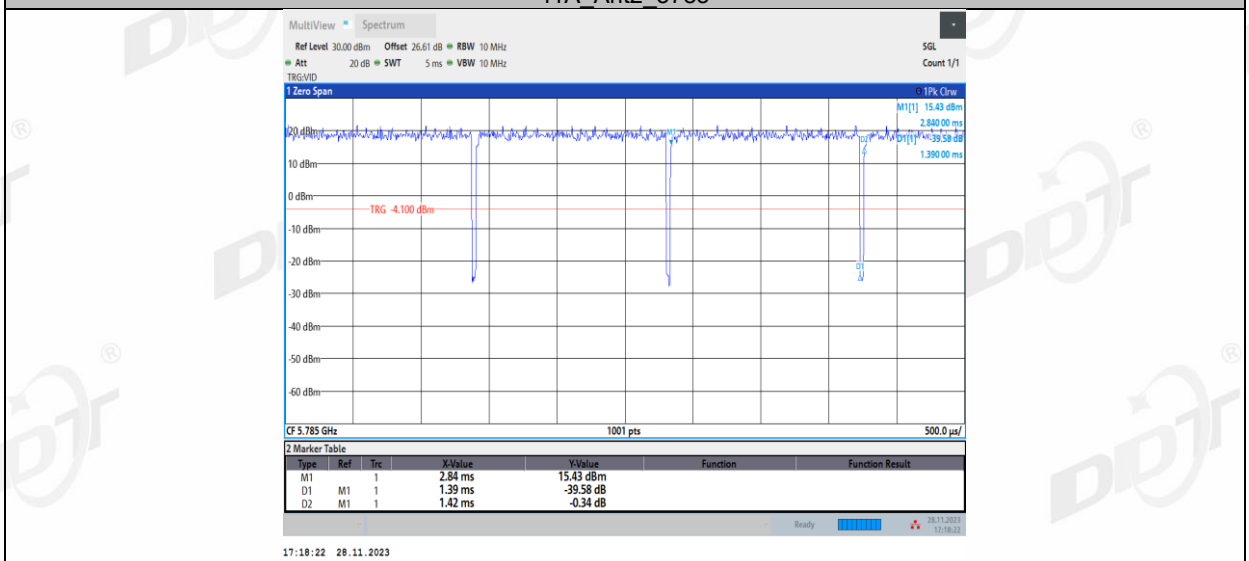
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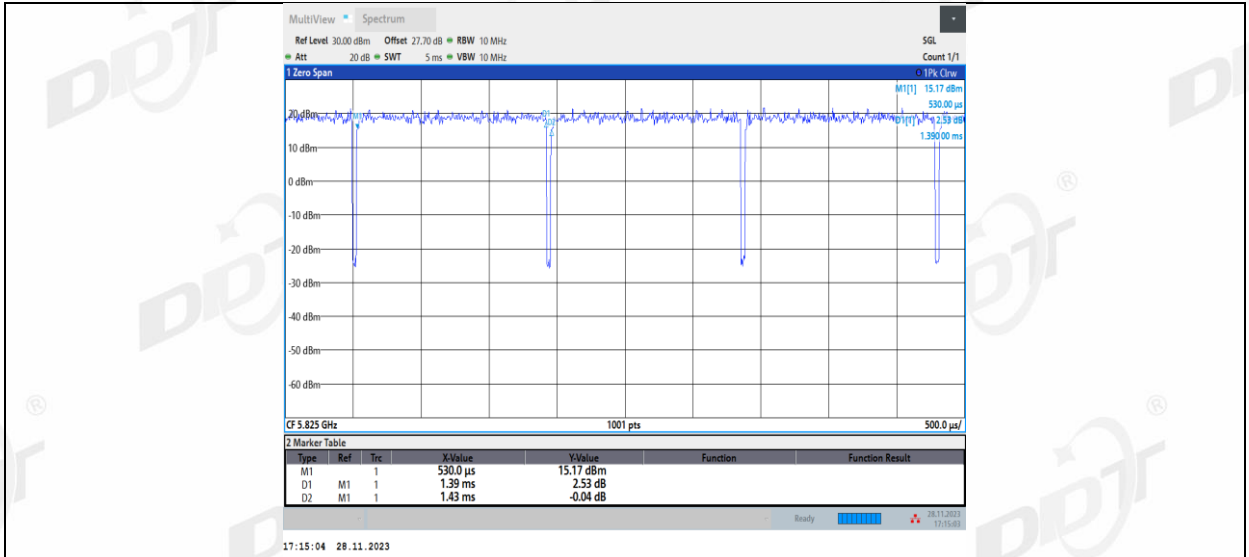
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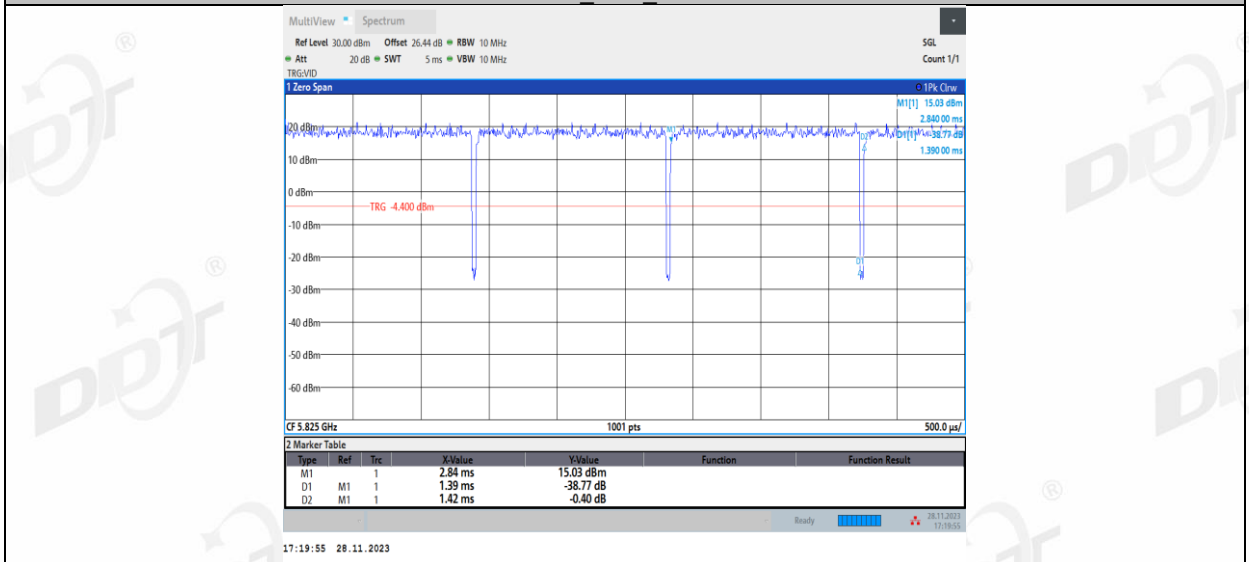
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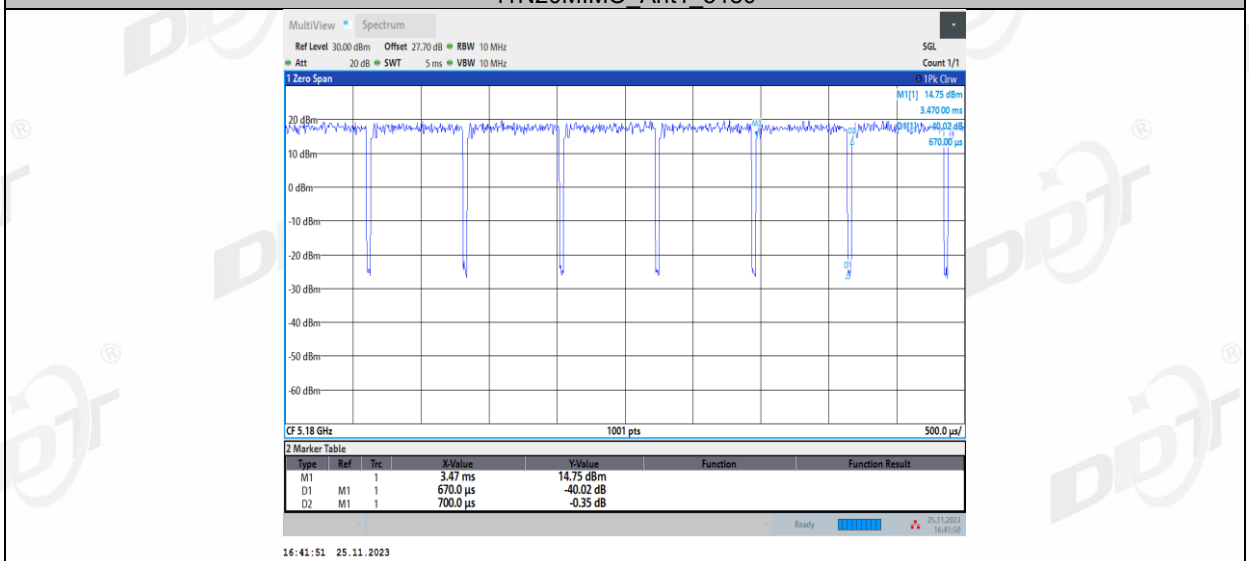
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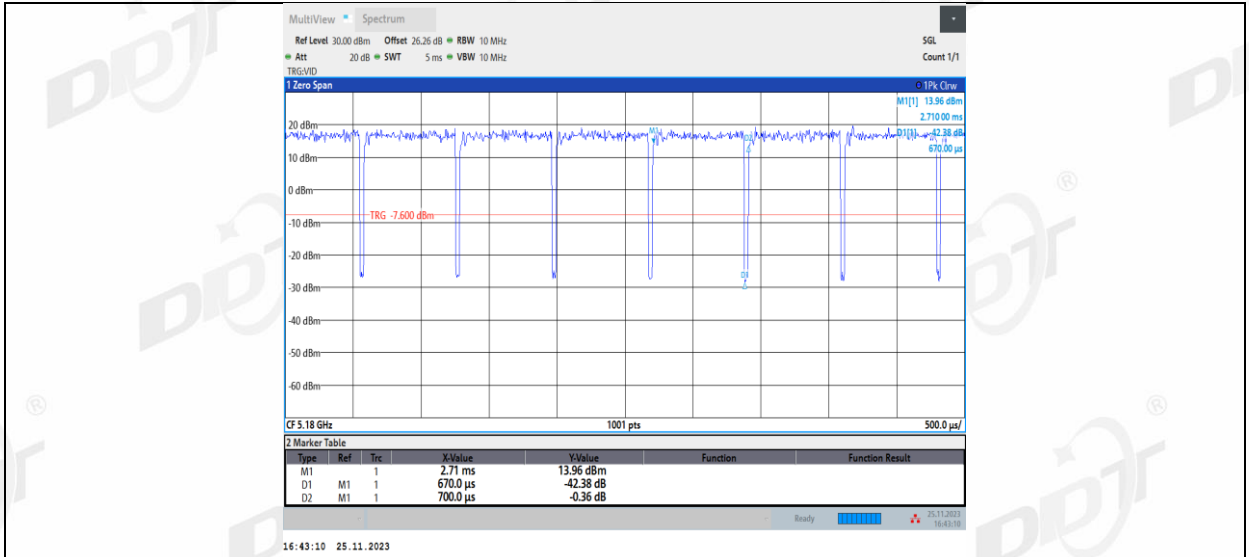
11A\_Ant2\_5825



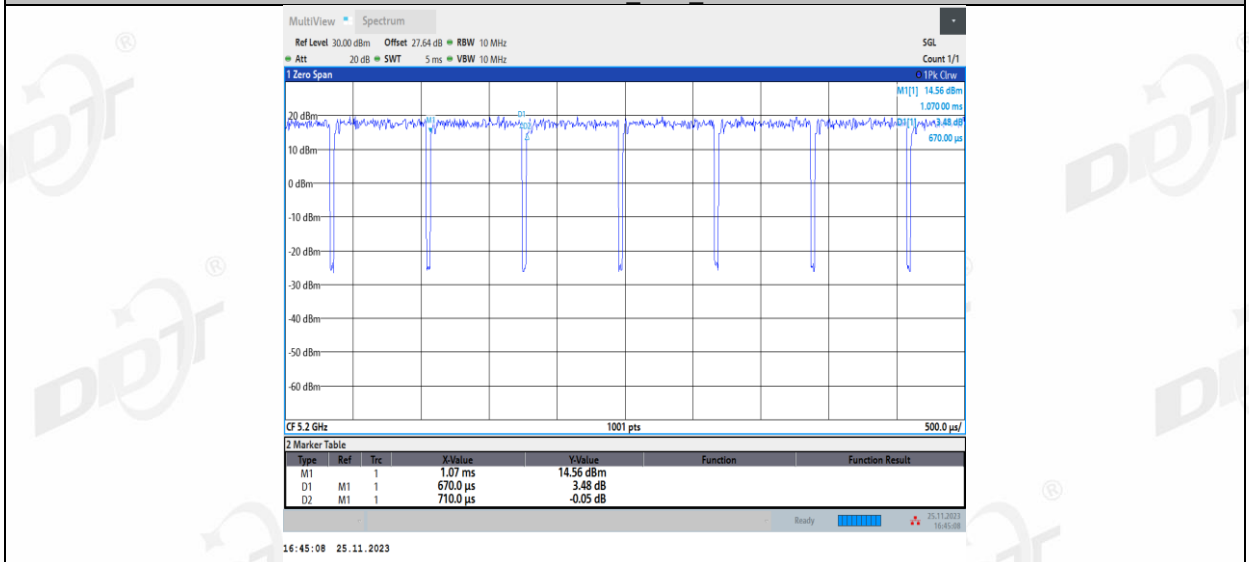
11N20MIMO\_Ant1\_5180



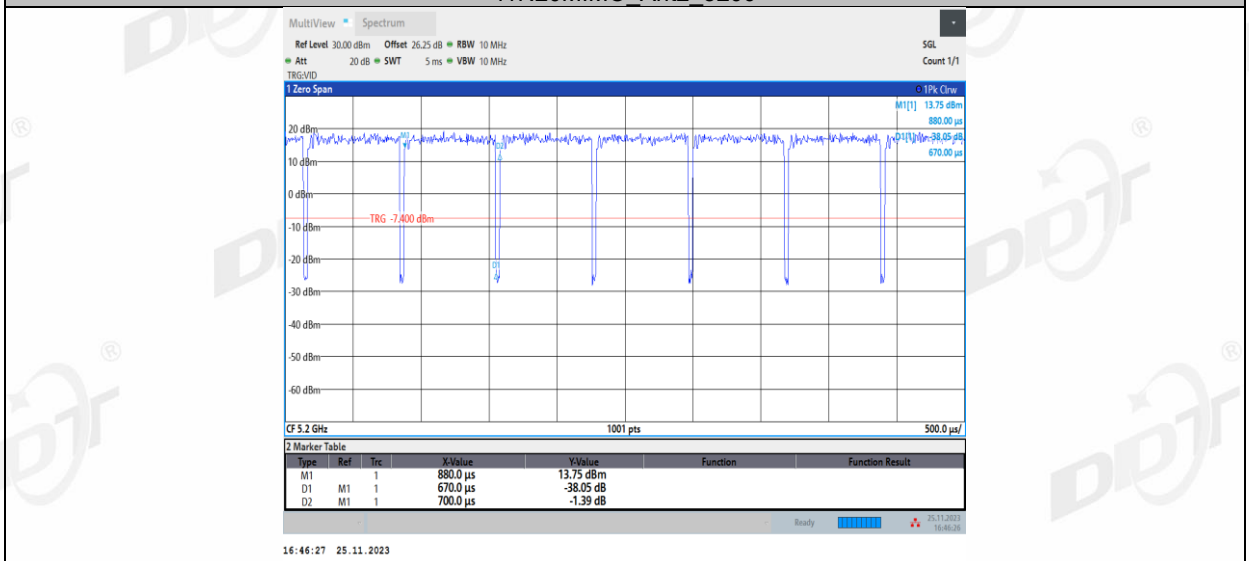
11N20MIMO\_Ant2\_5180



11N20MIMO\_Ant1\_5200

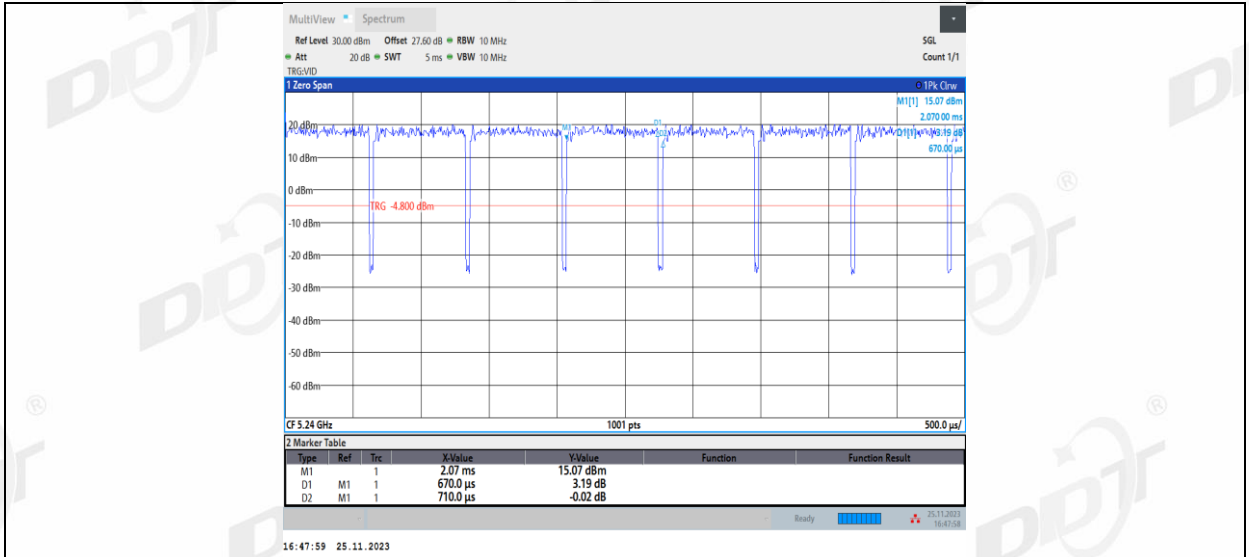


11N20MIMO\_Ant2\_5200

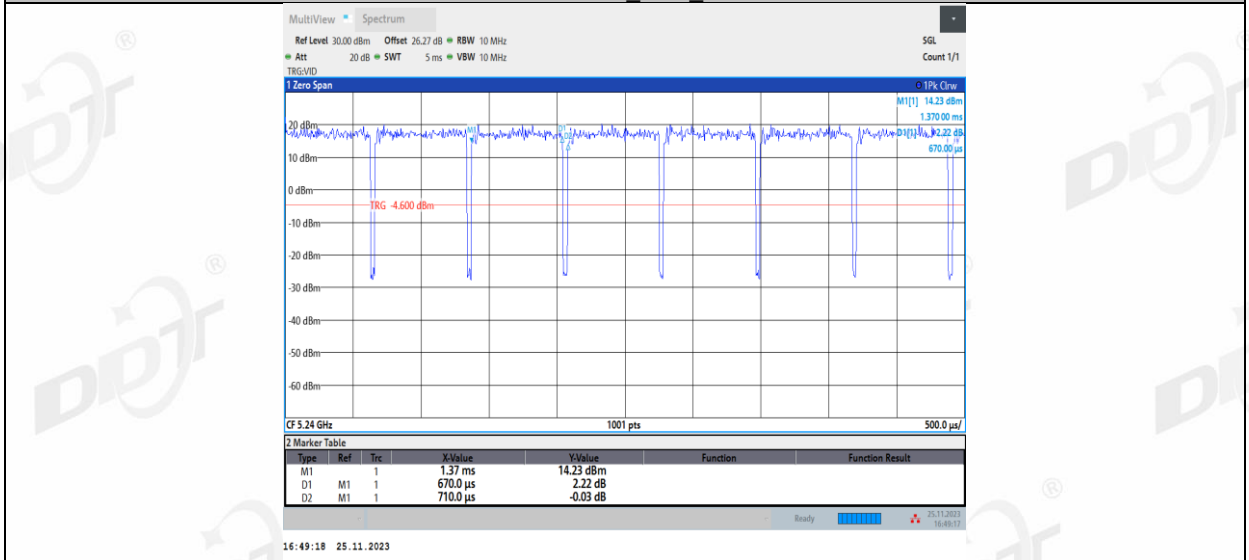


11N20MIMO\_Ant1\_5240

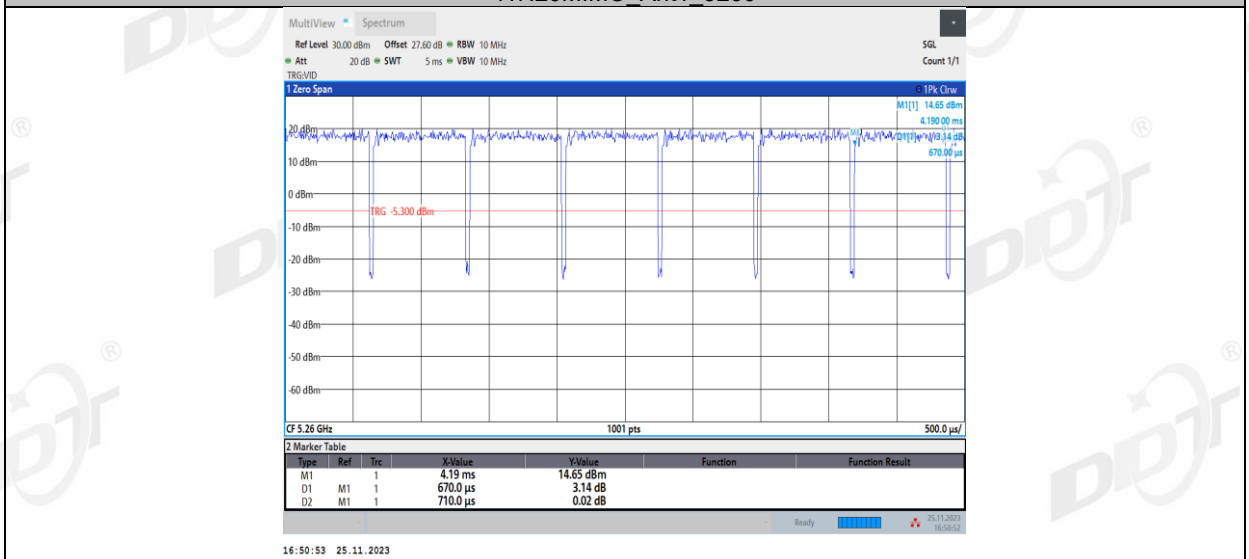




11N20MIMO\_Ant2\_5240

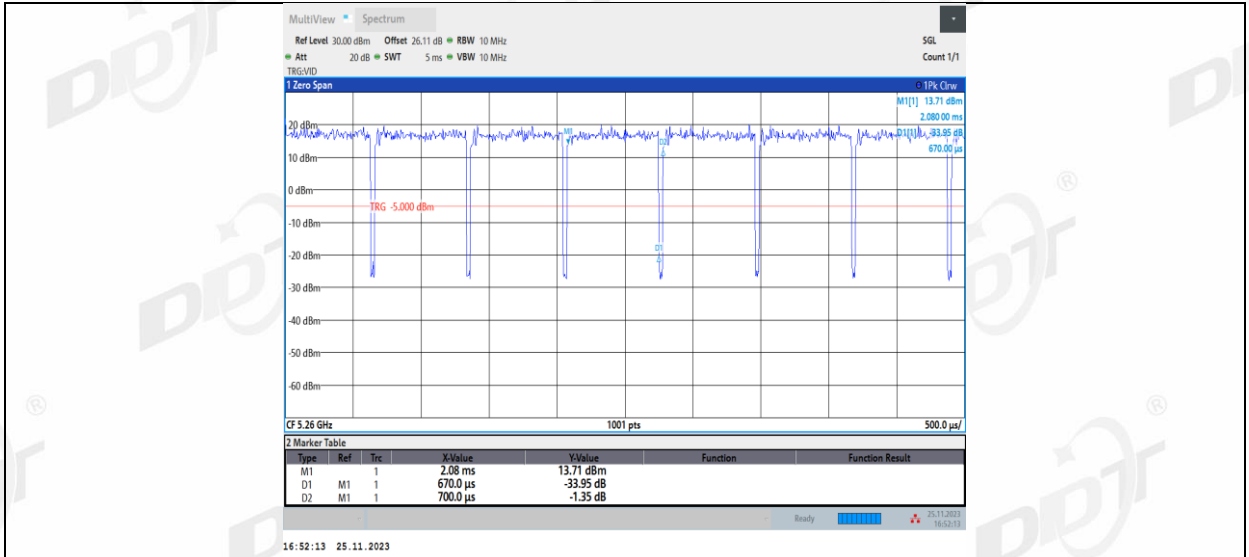


11N20MIMO\_Ant1\_5260

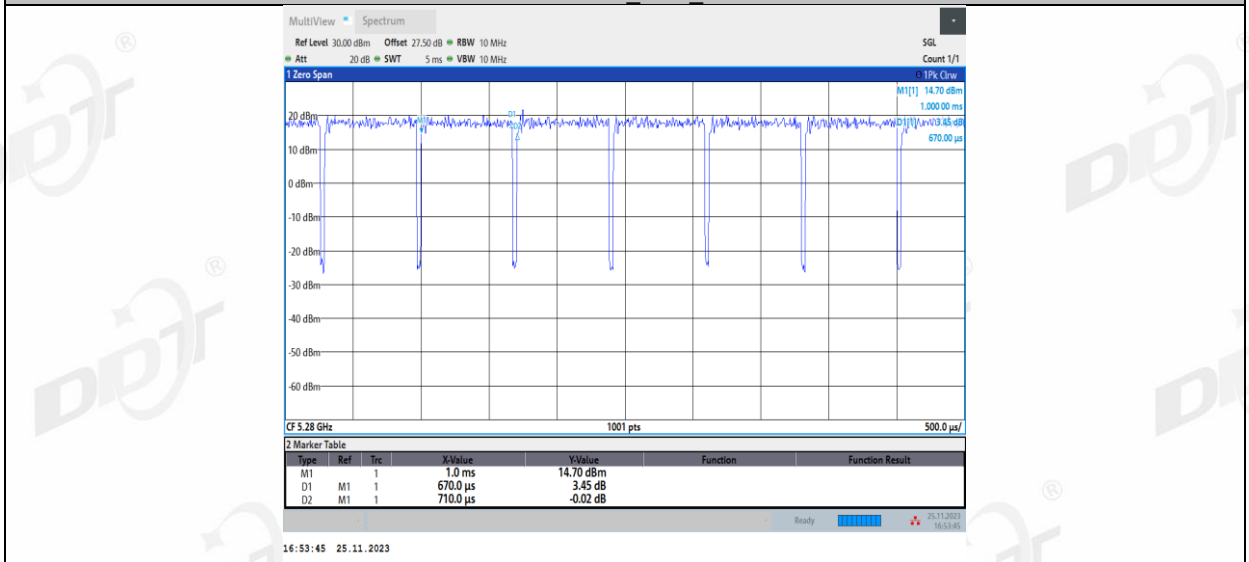


11N20MIMO\_Ant2\_5260

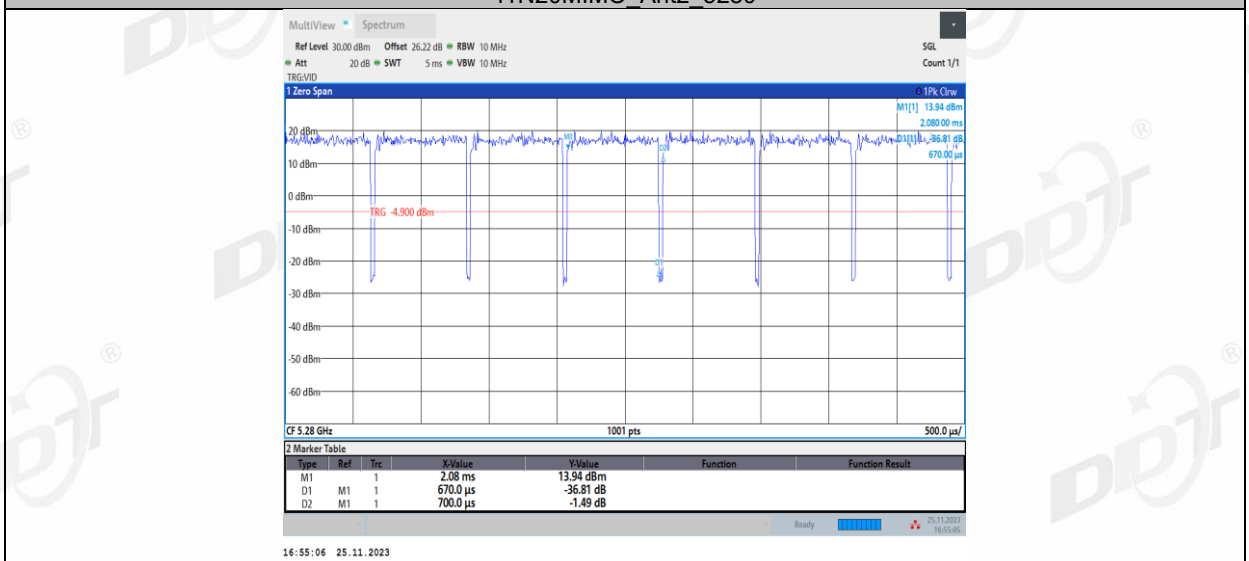




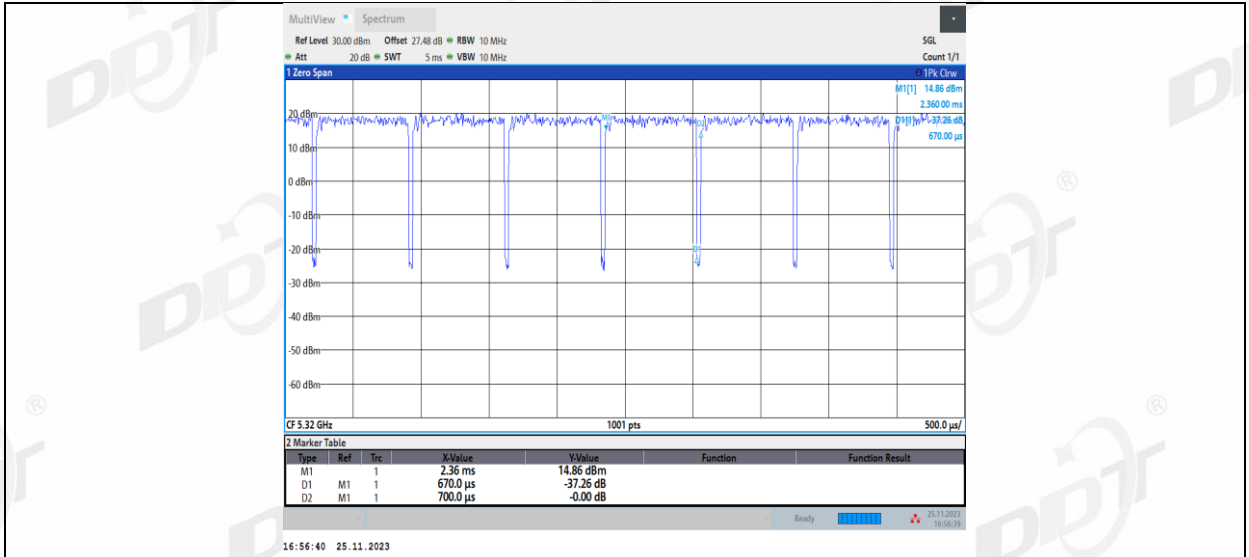
11N20MIMO\_Ant1\_5280



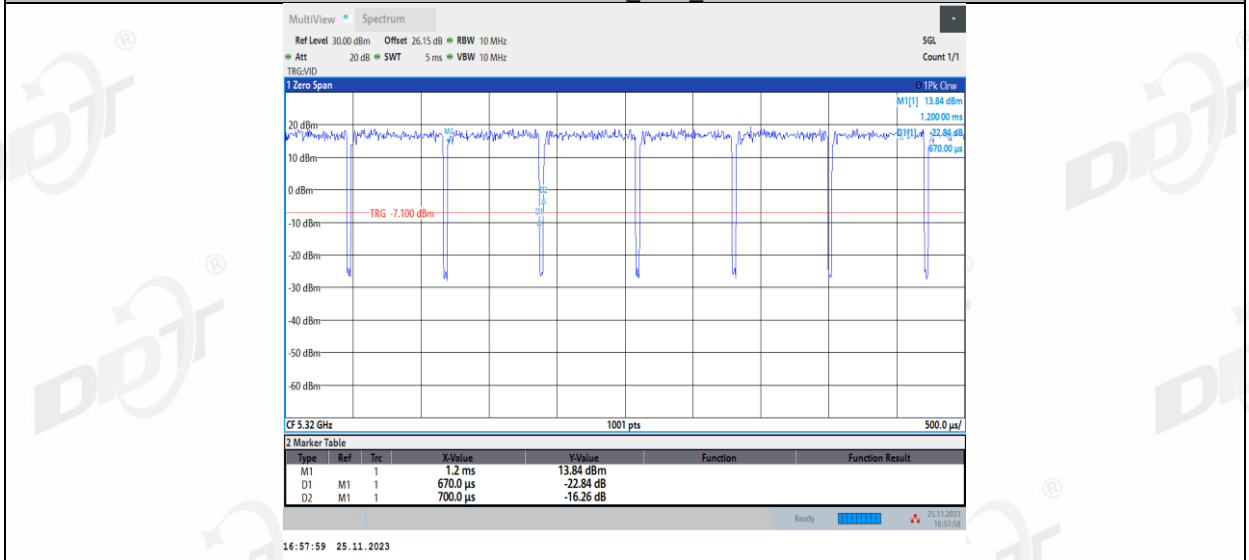
11N20MIMO\_Ant2\_5280



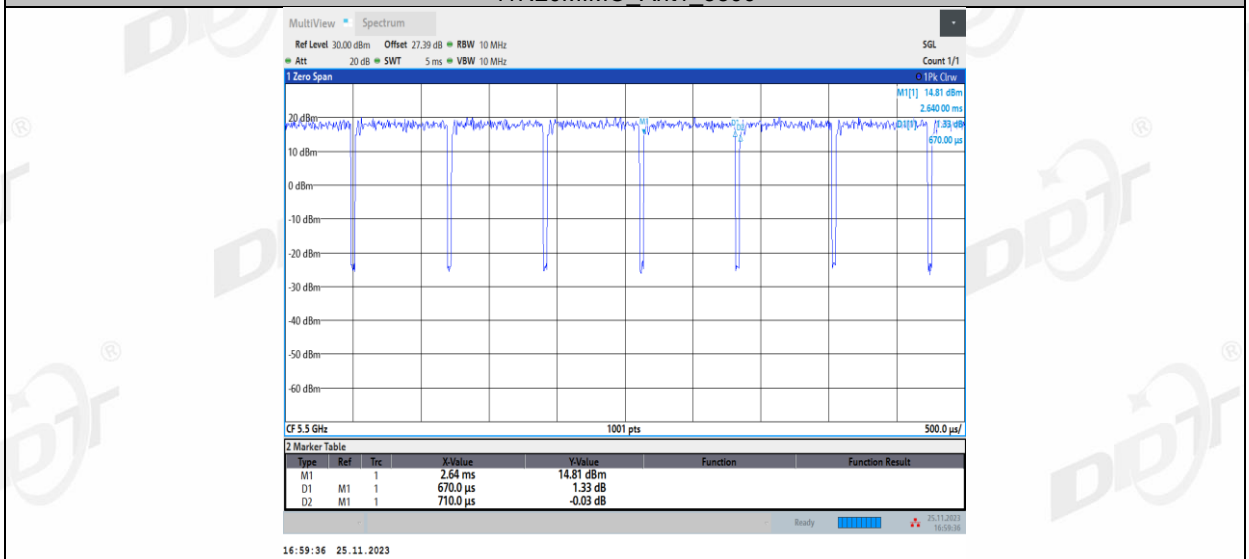
11N20MIMO\_Ant1\_5320



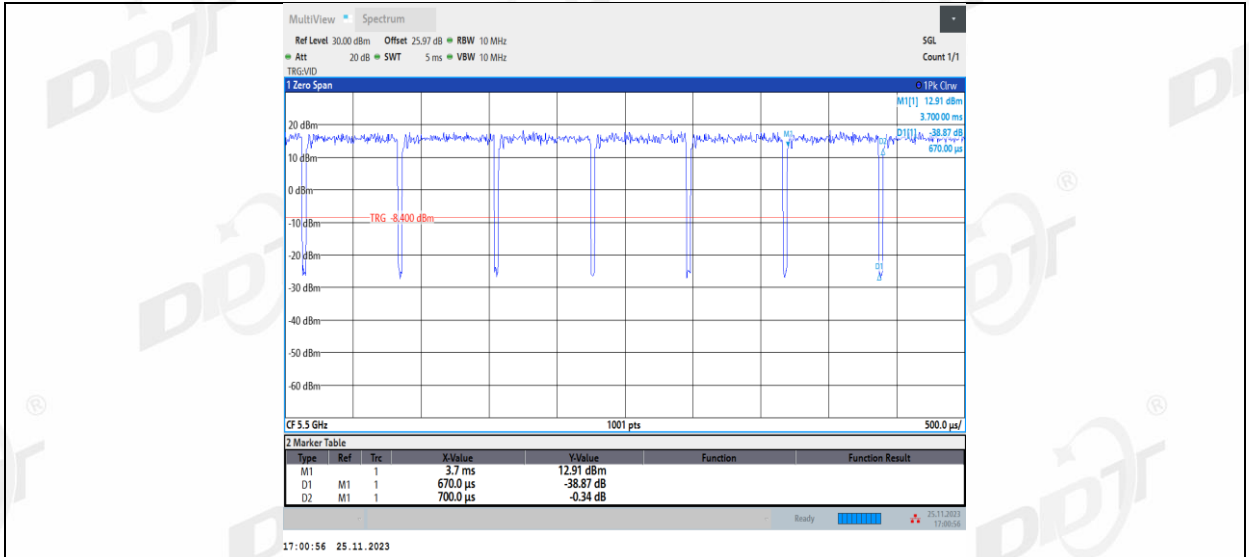
11N20MIMO\_Ant2\_5320



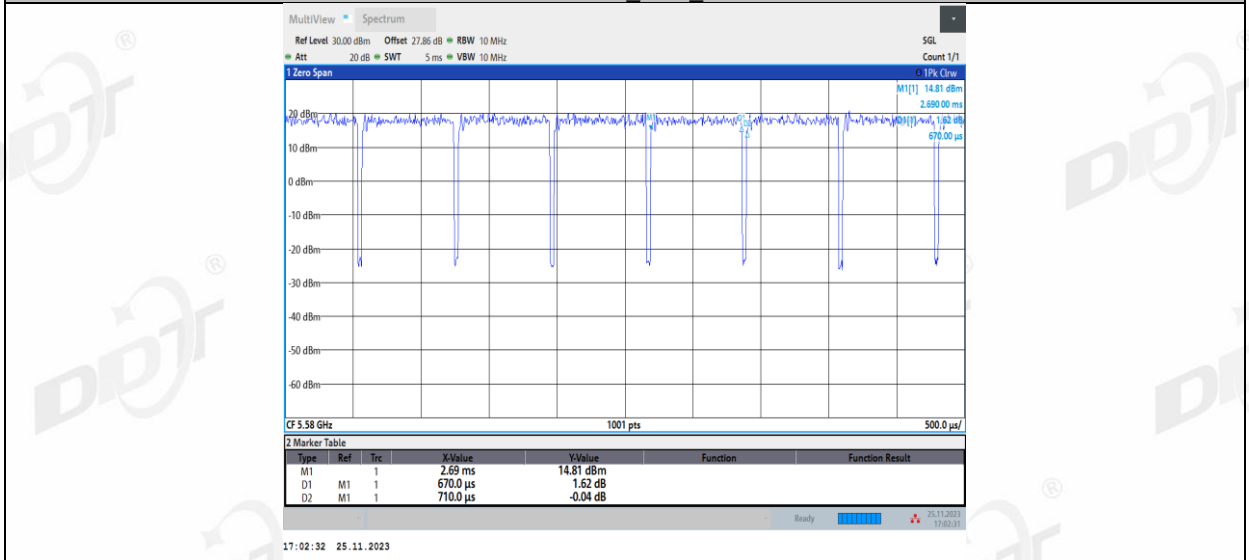
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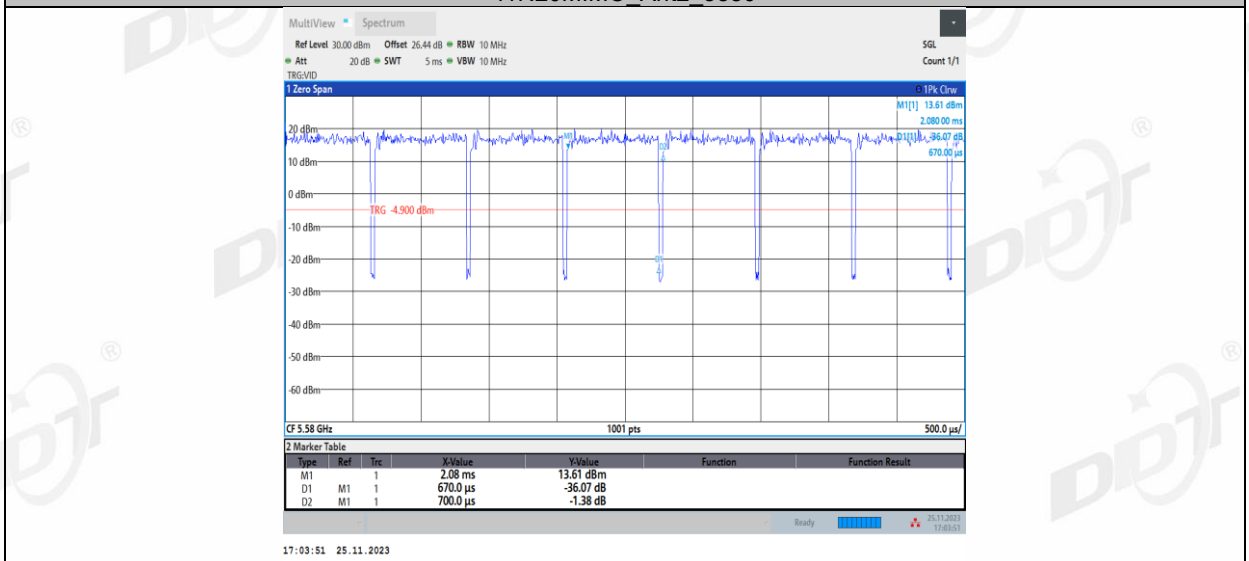
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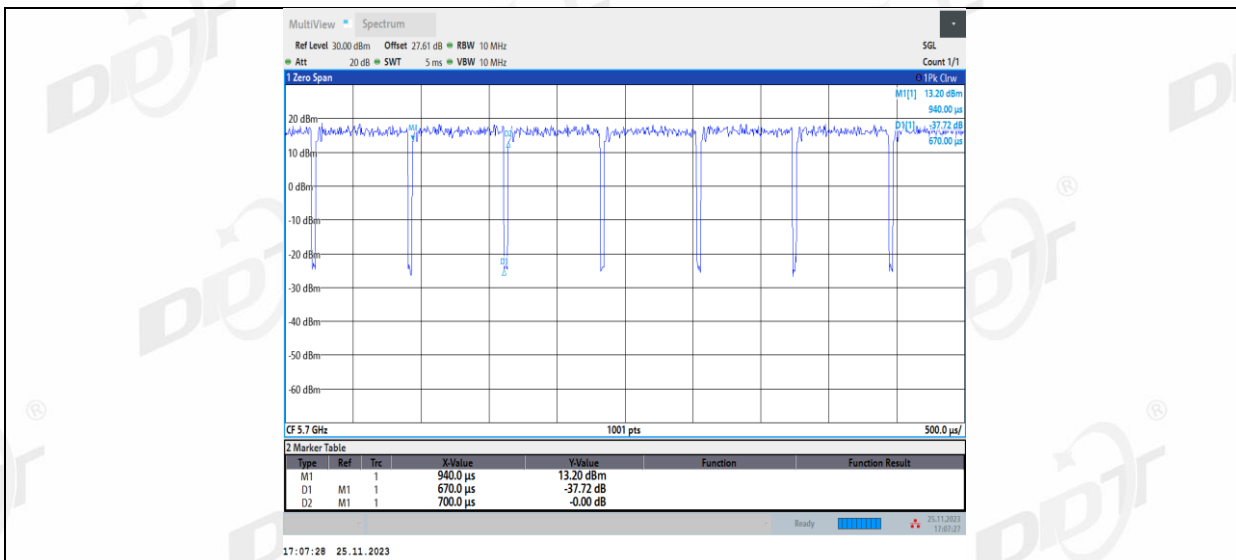
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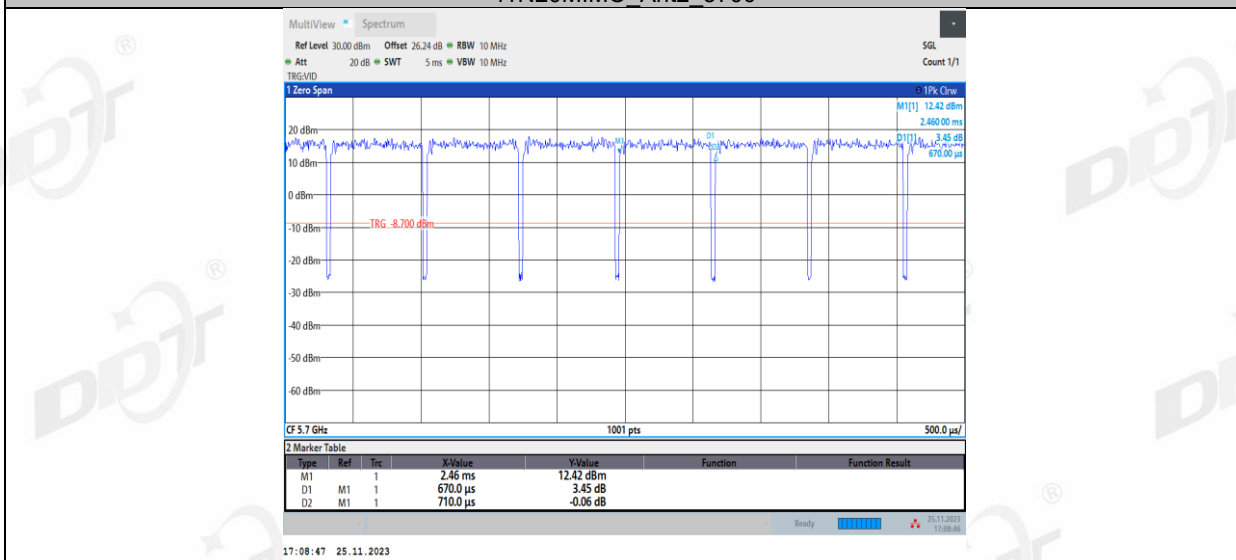
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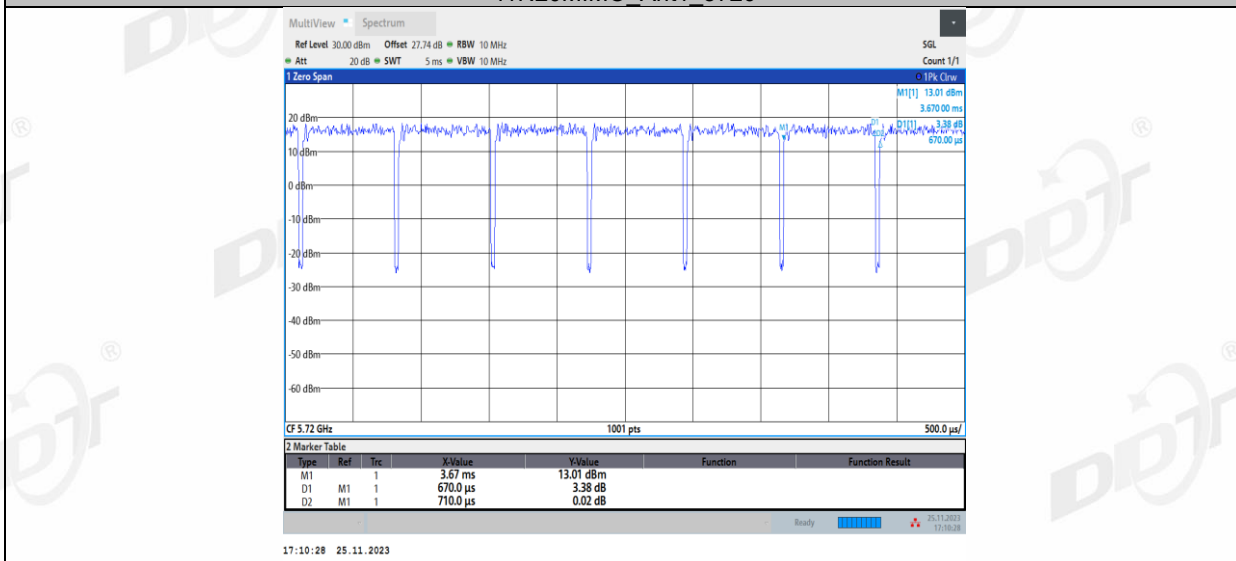
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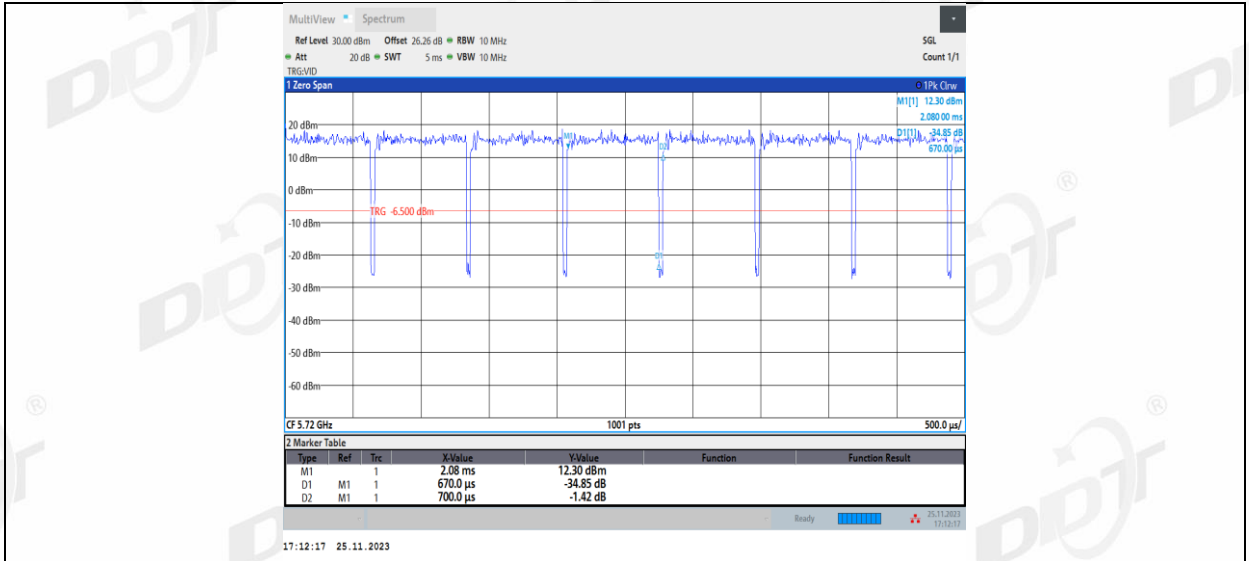
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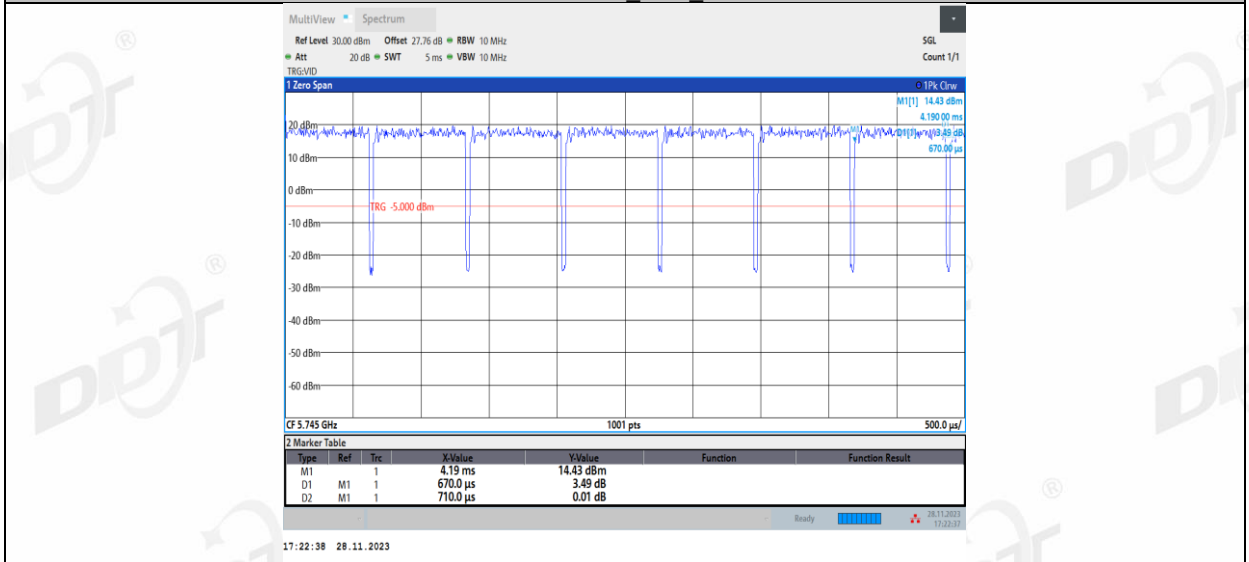
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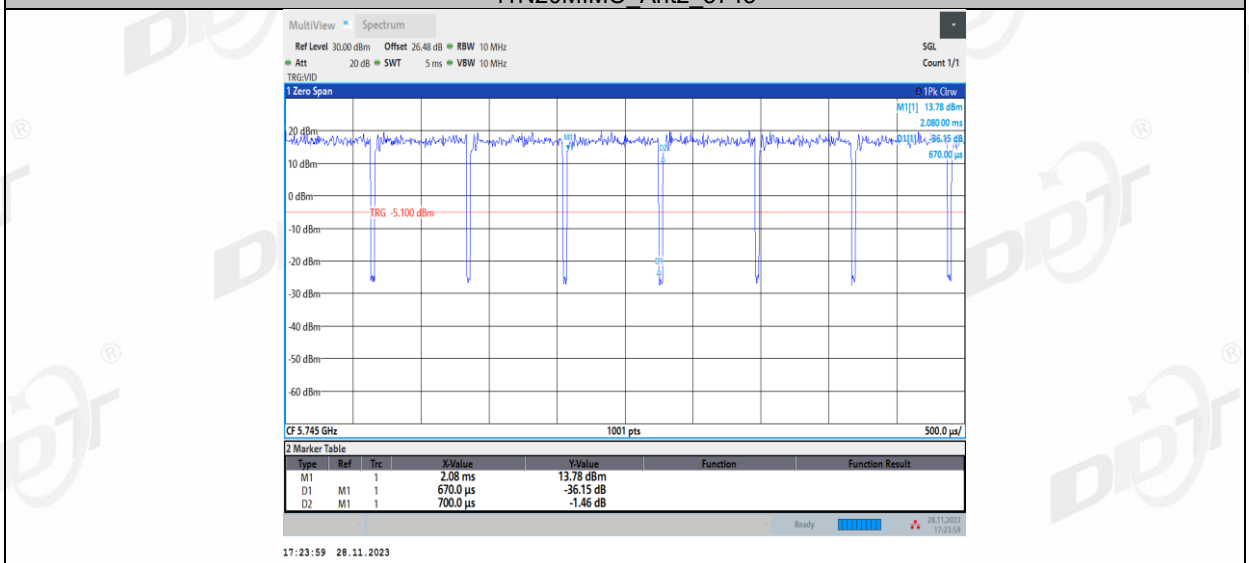
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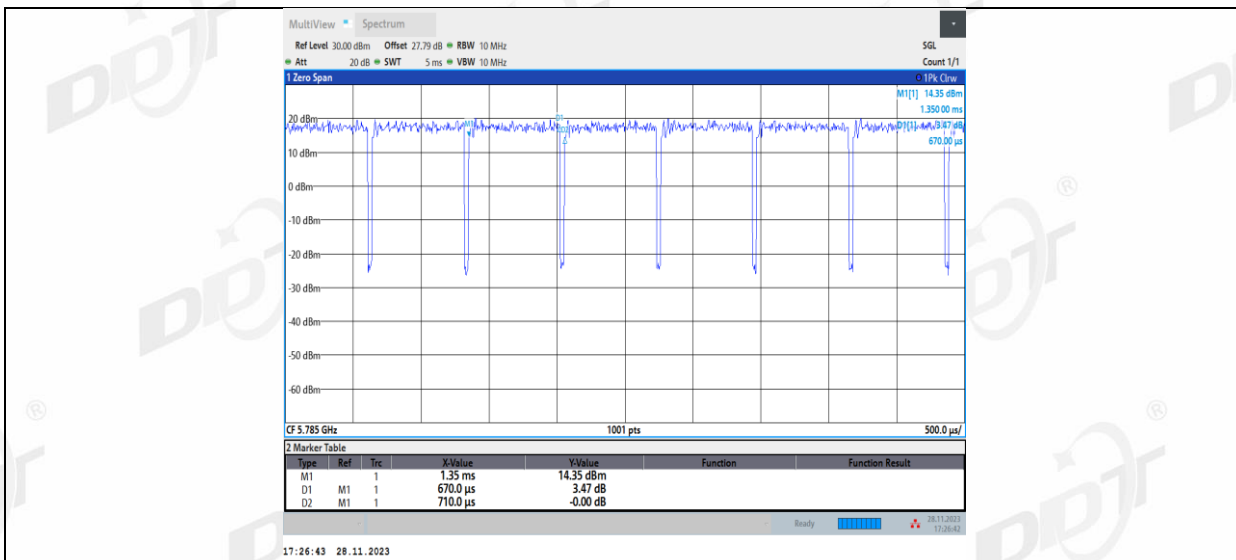
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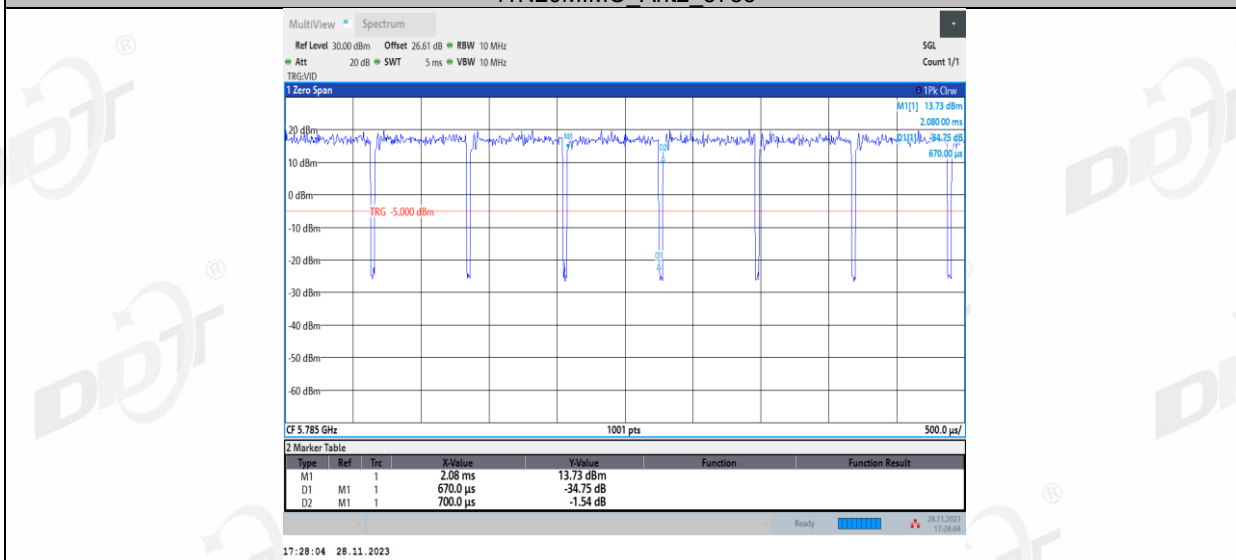
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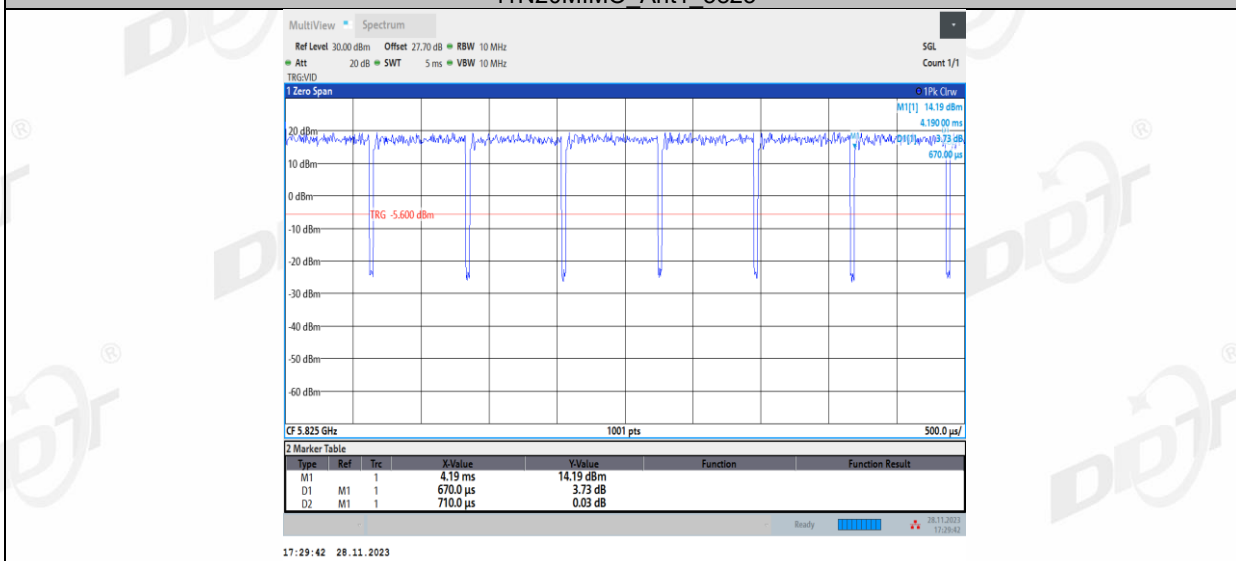
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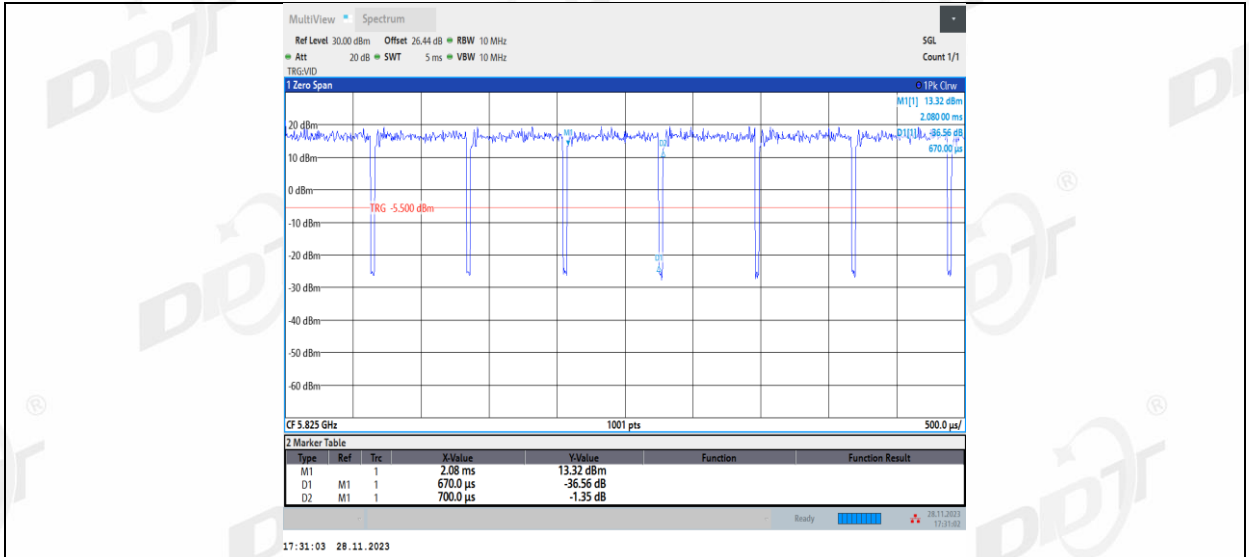
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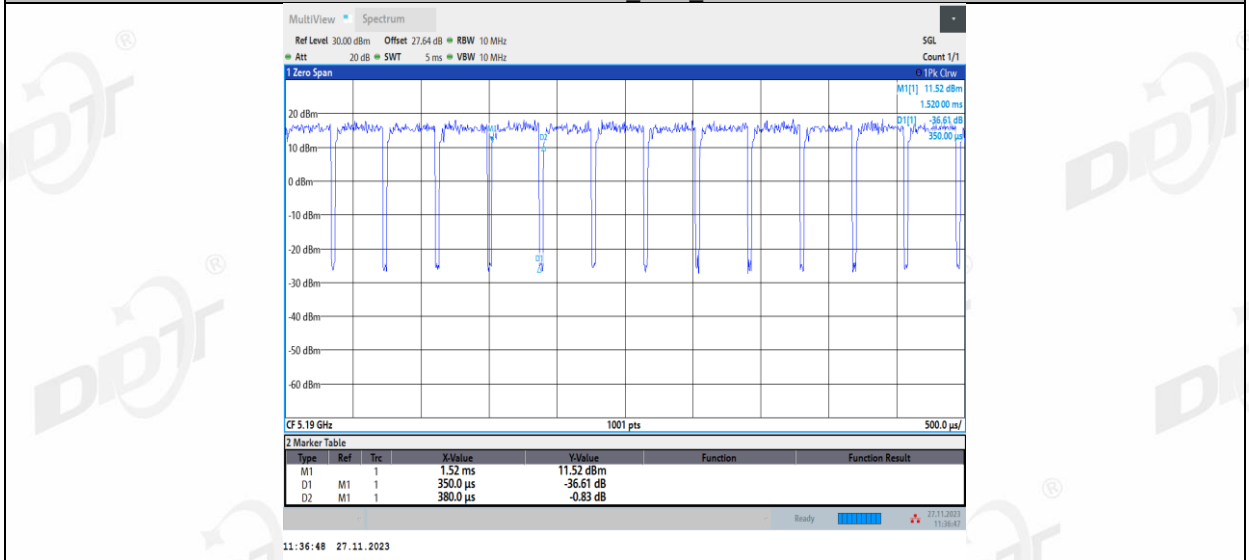
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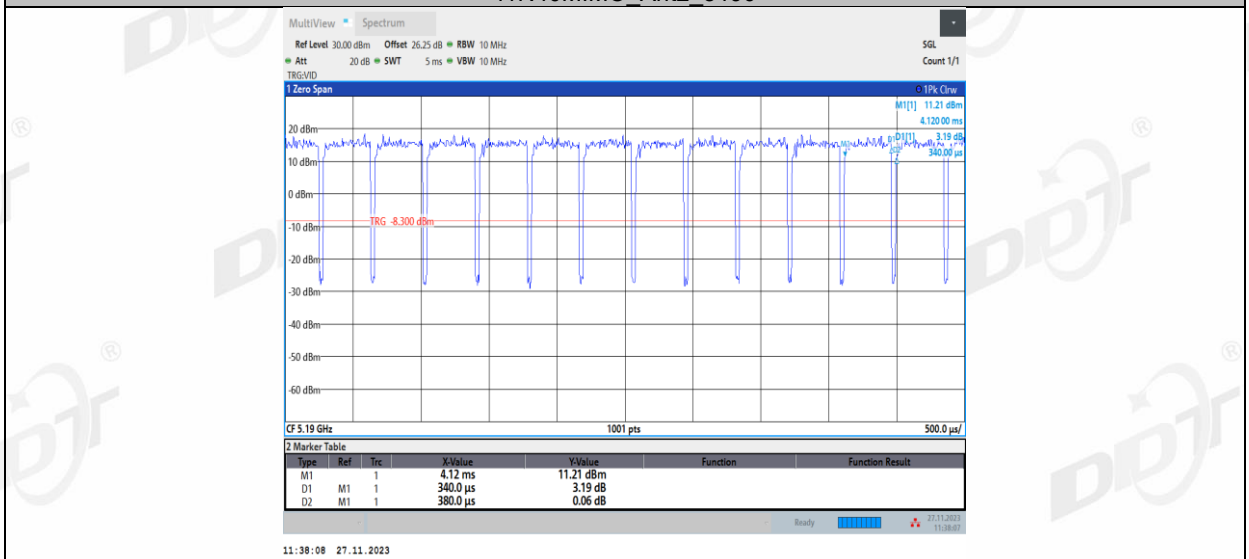
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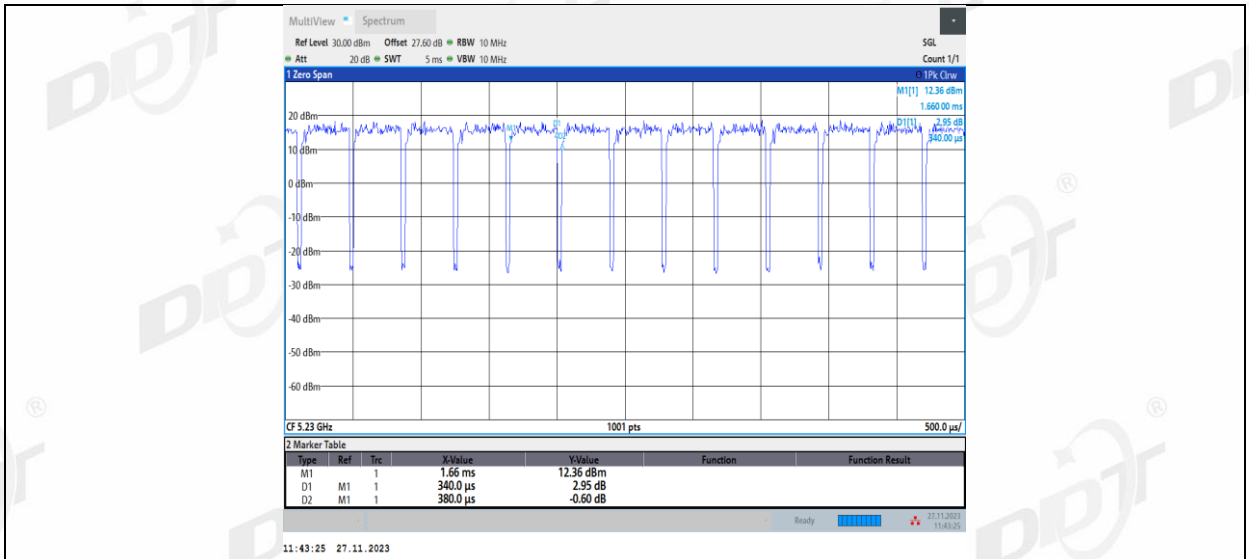


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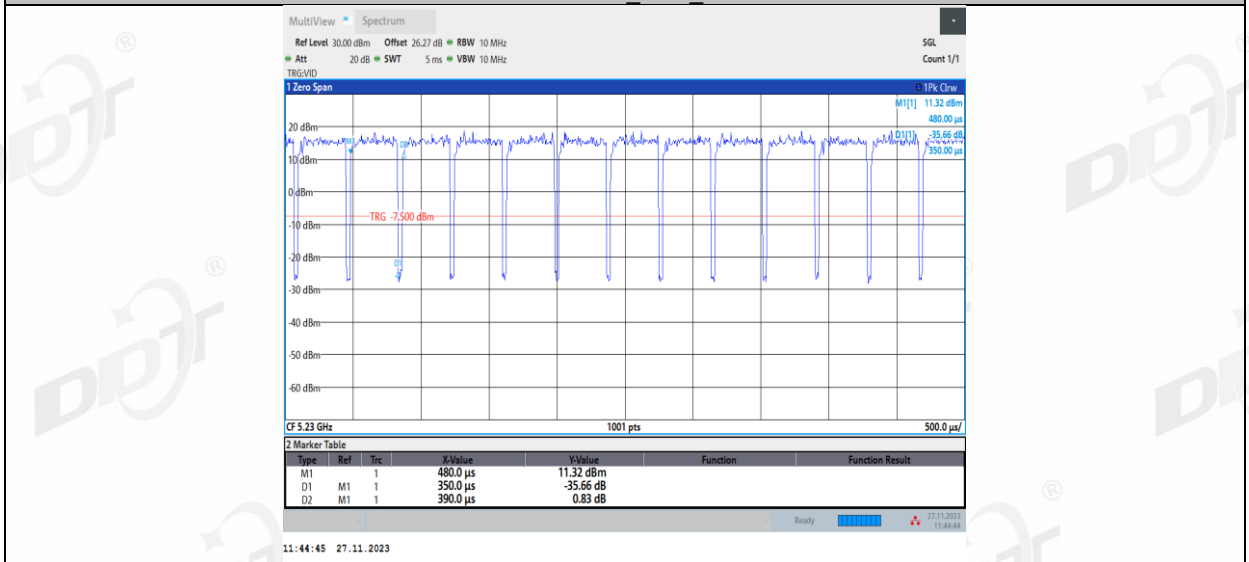


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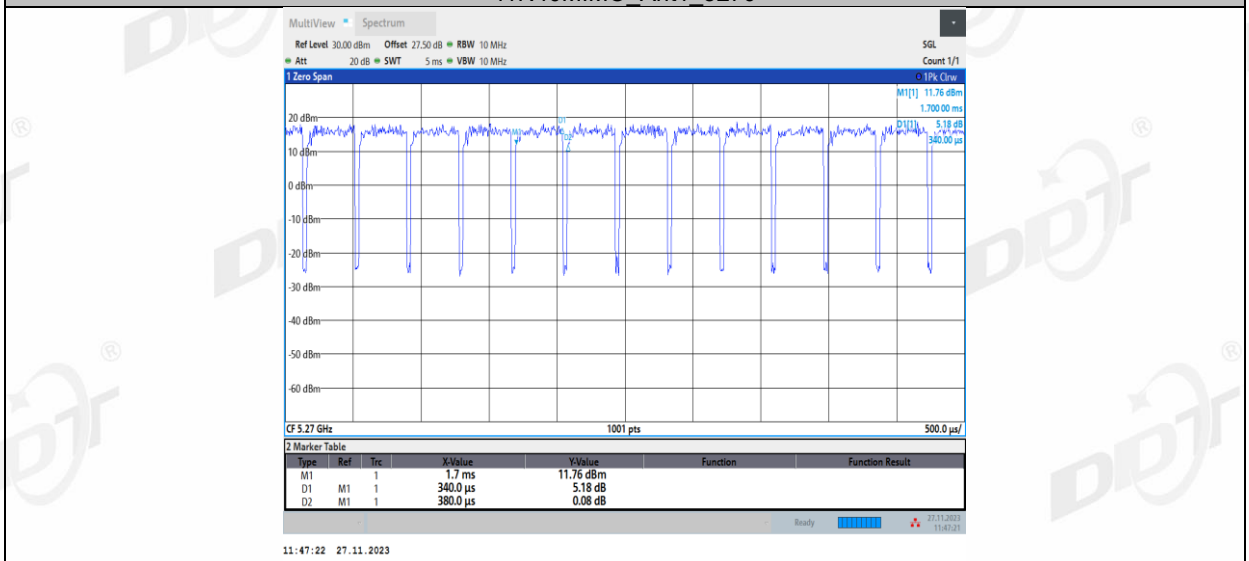




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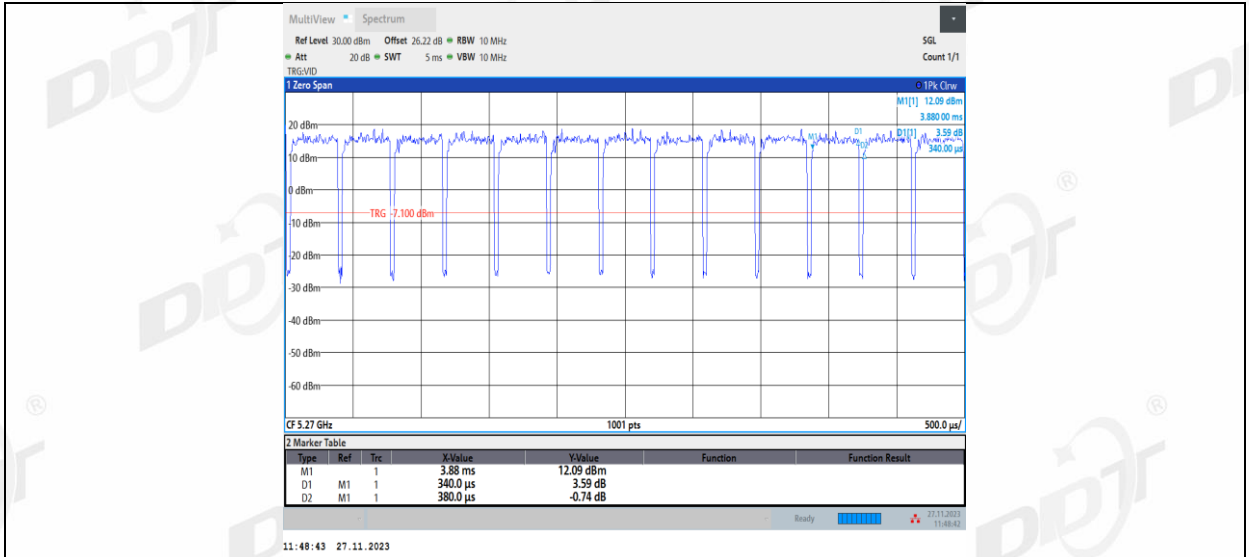


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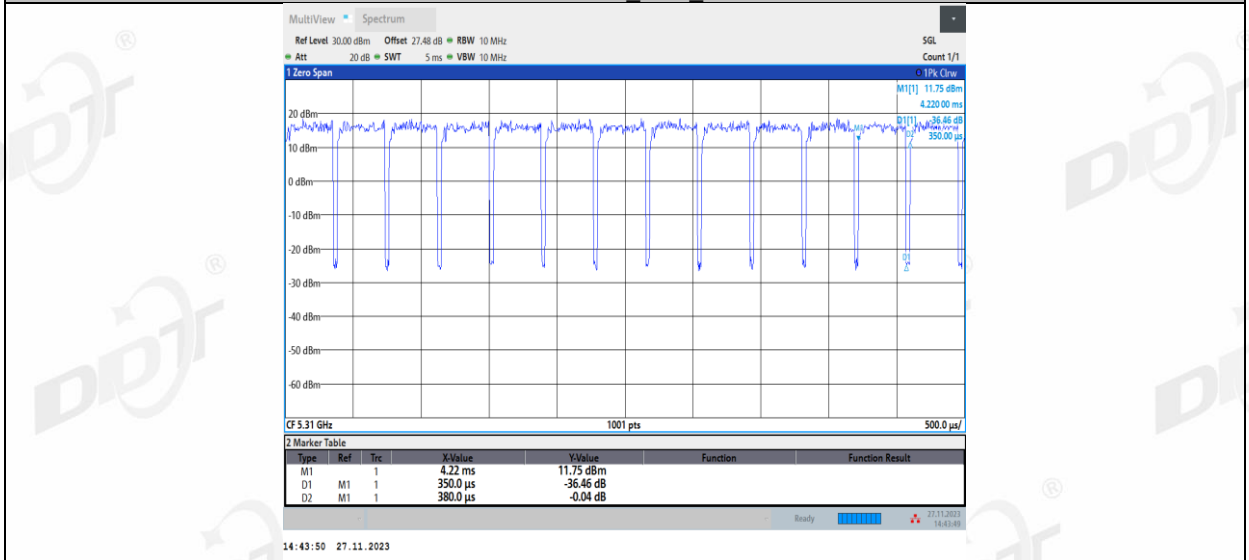


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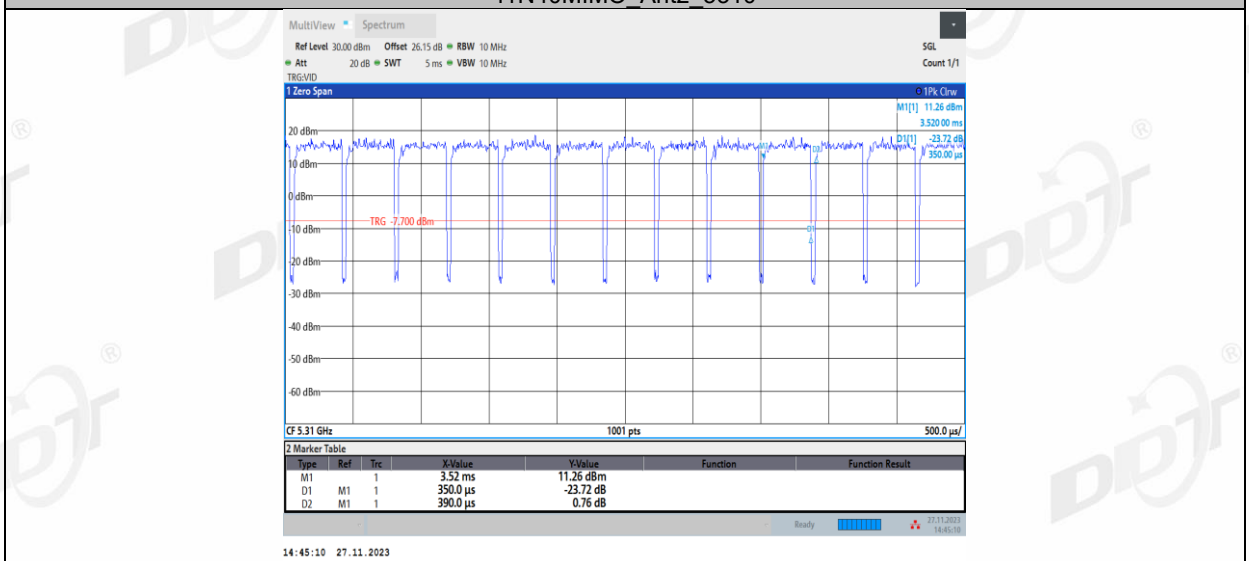




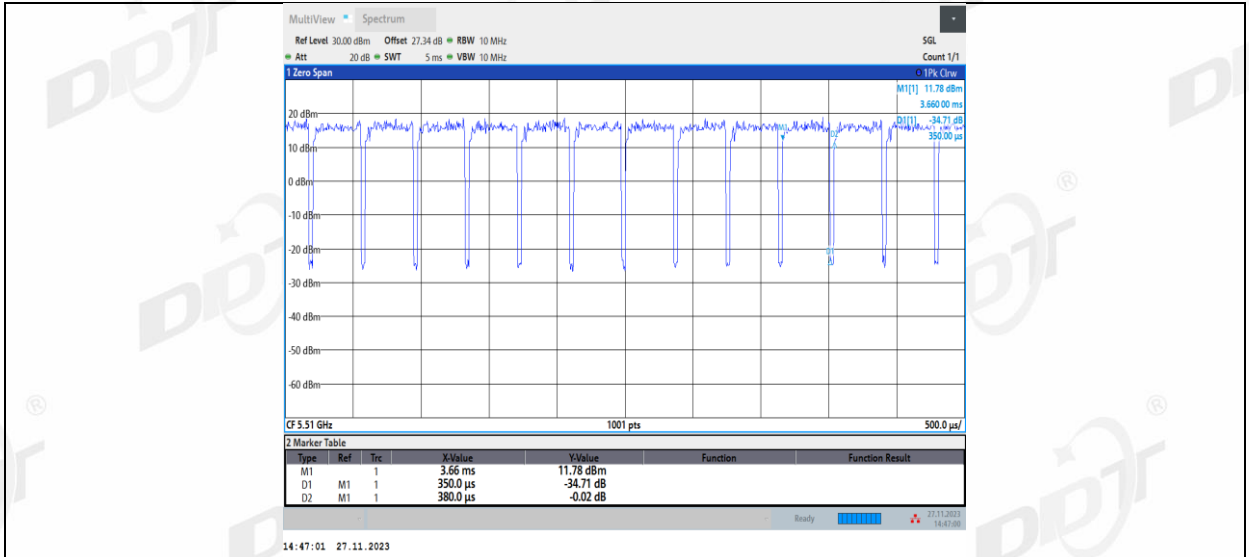
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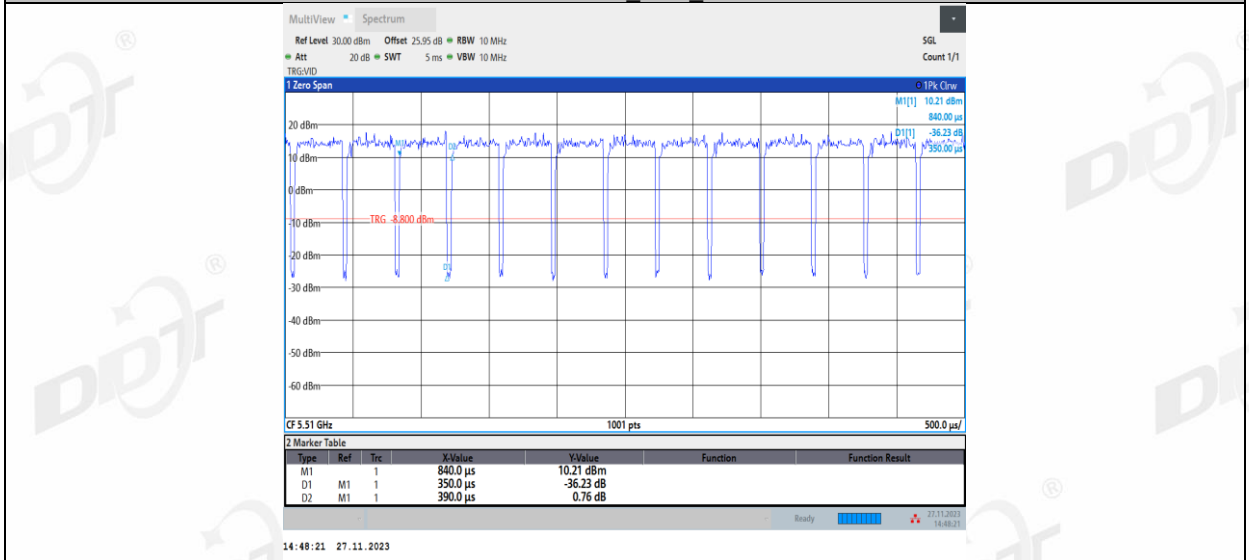
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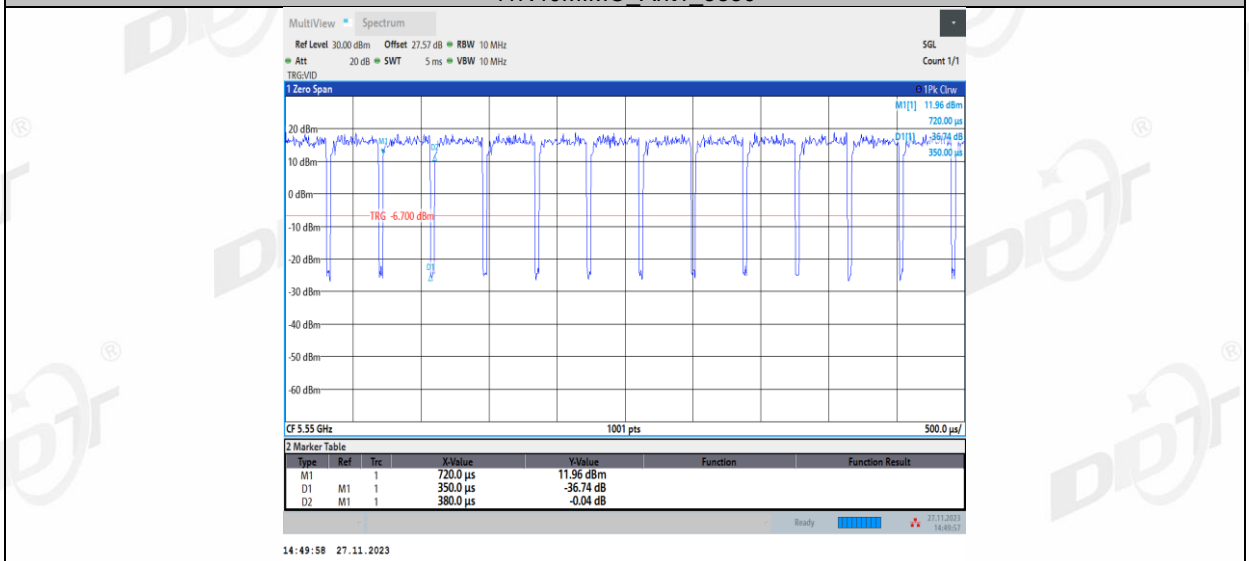
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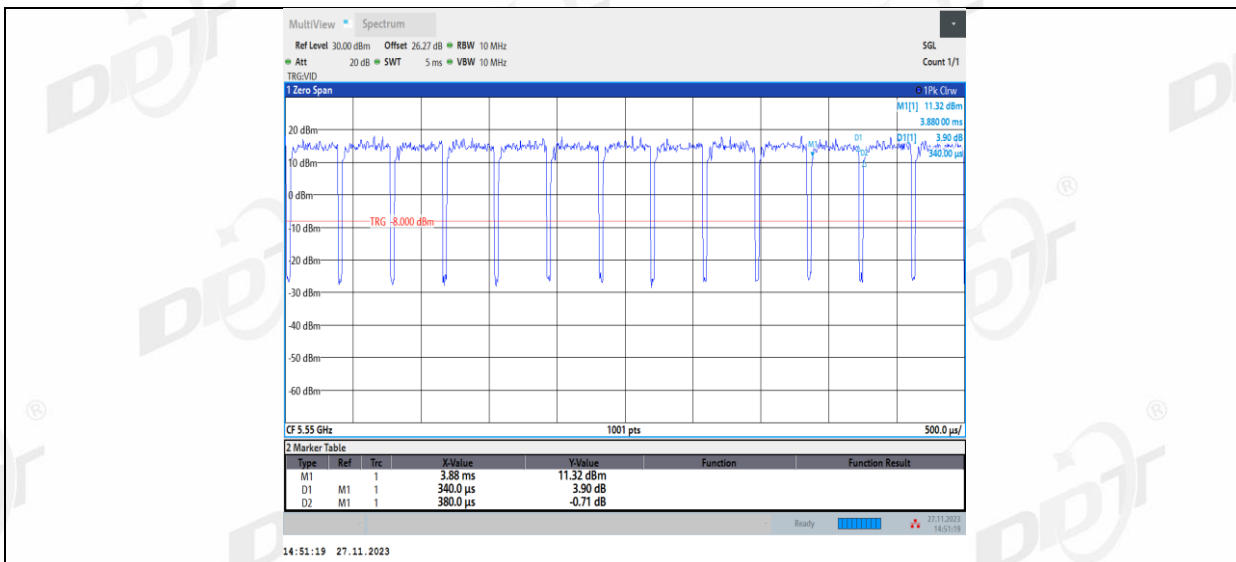
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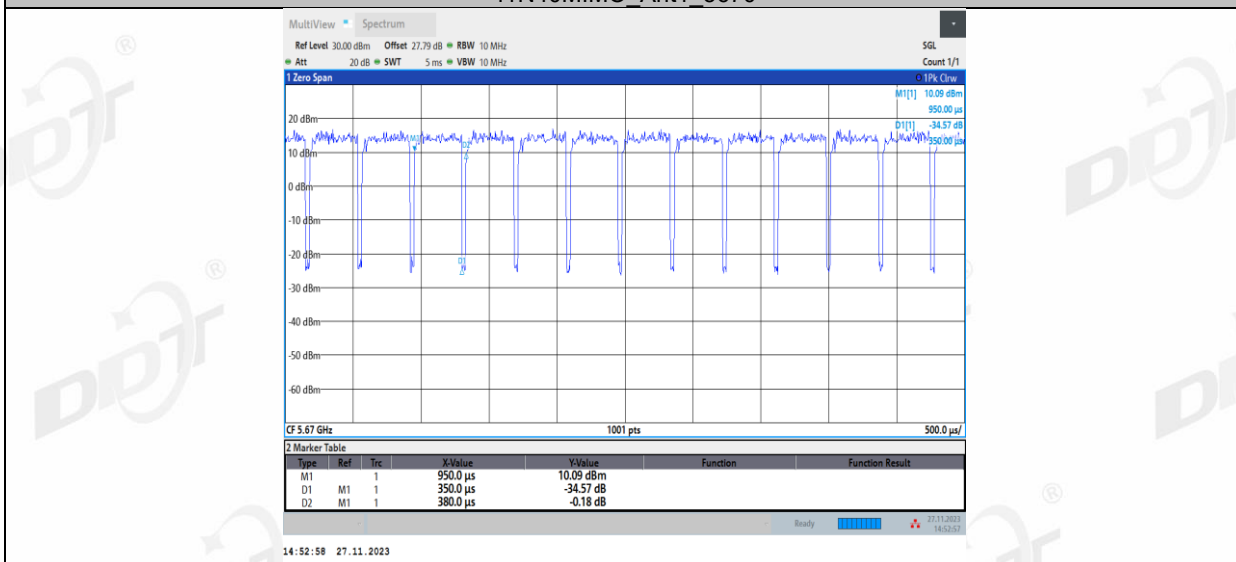
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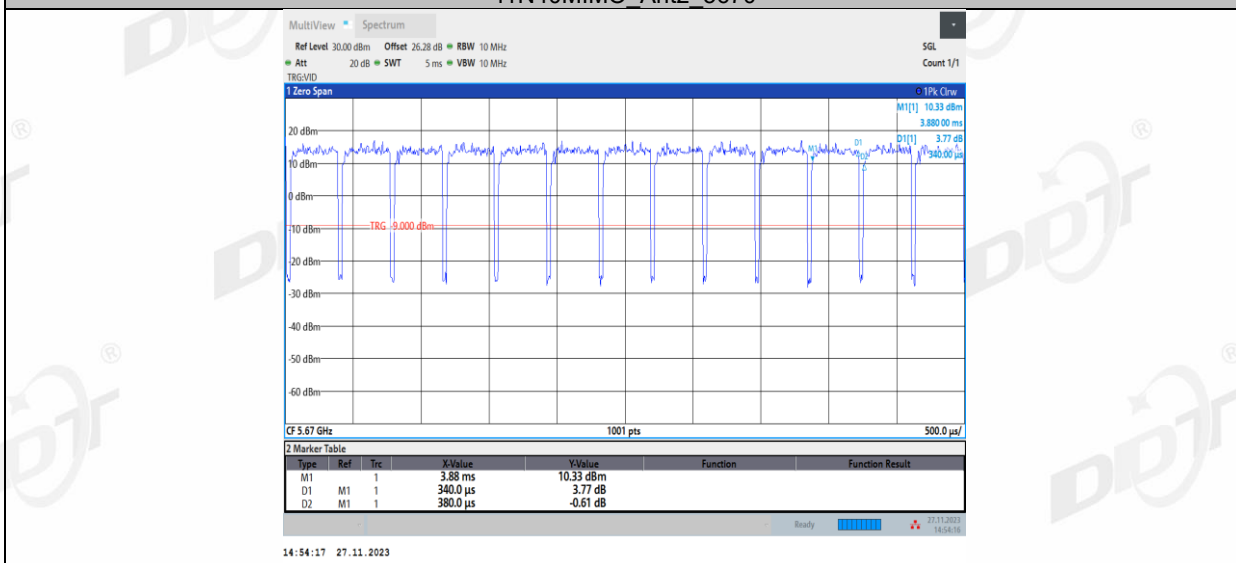
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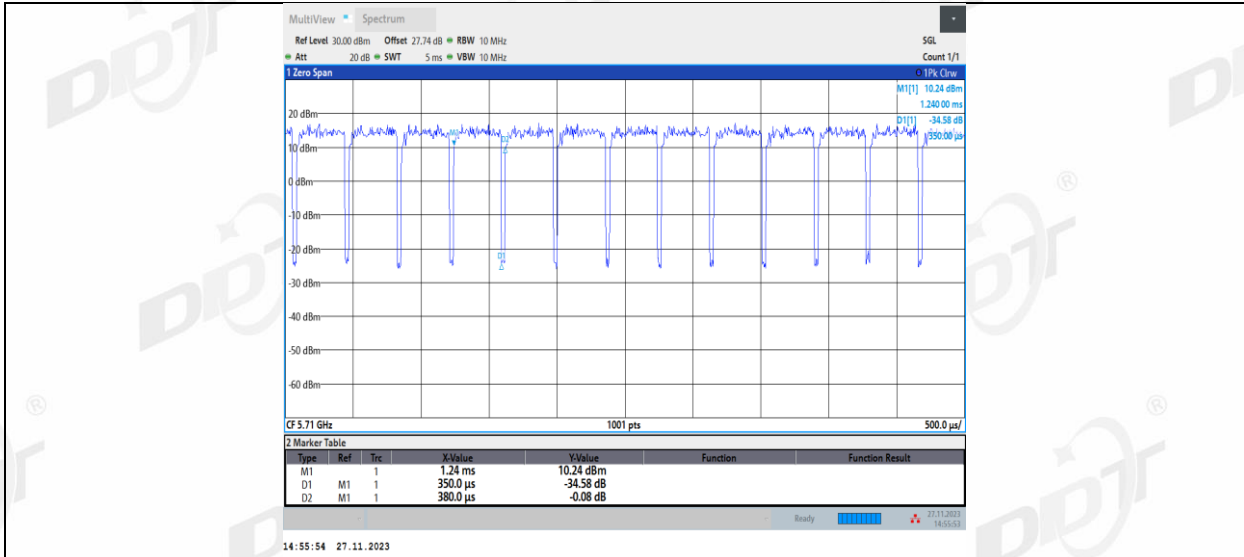
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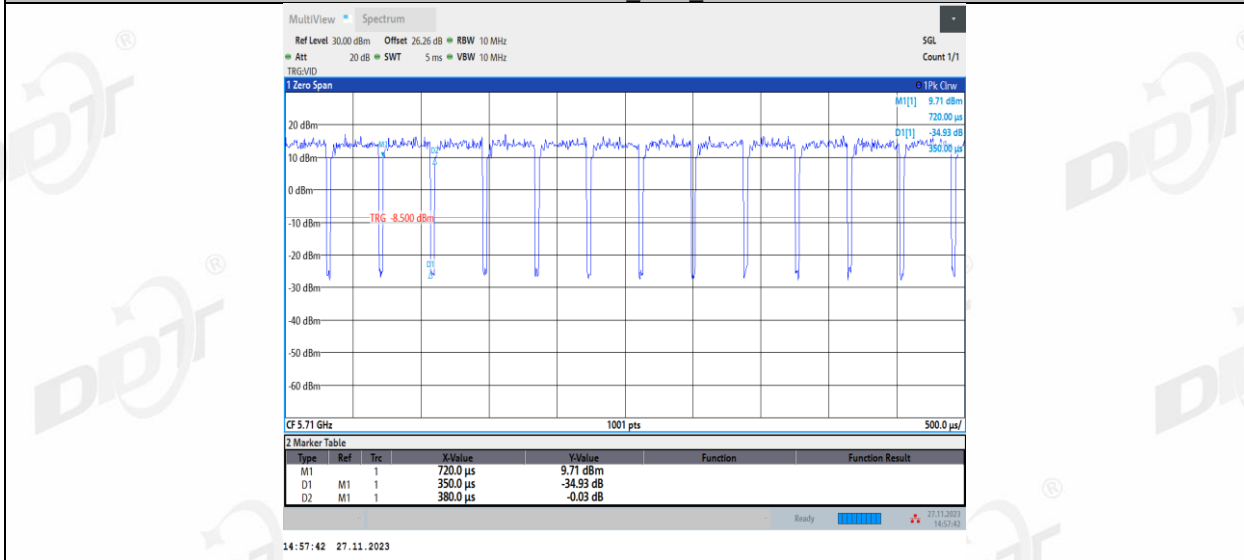
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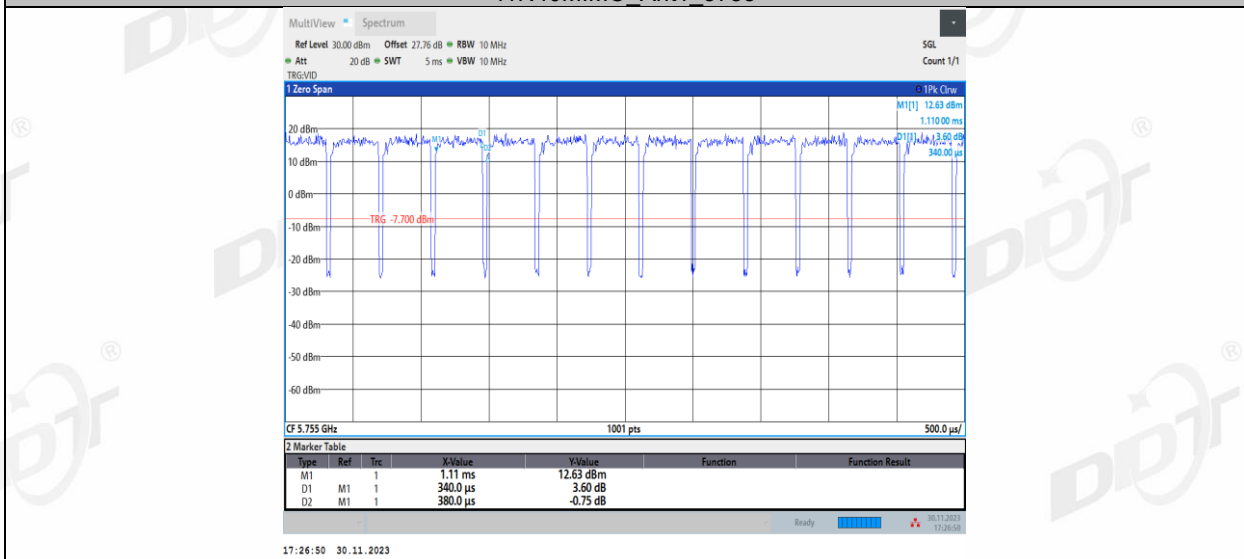
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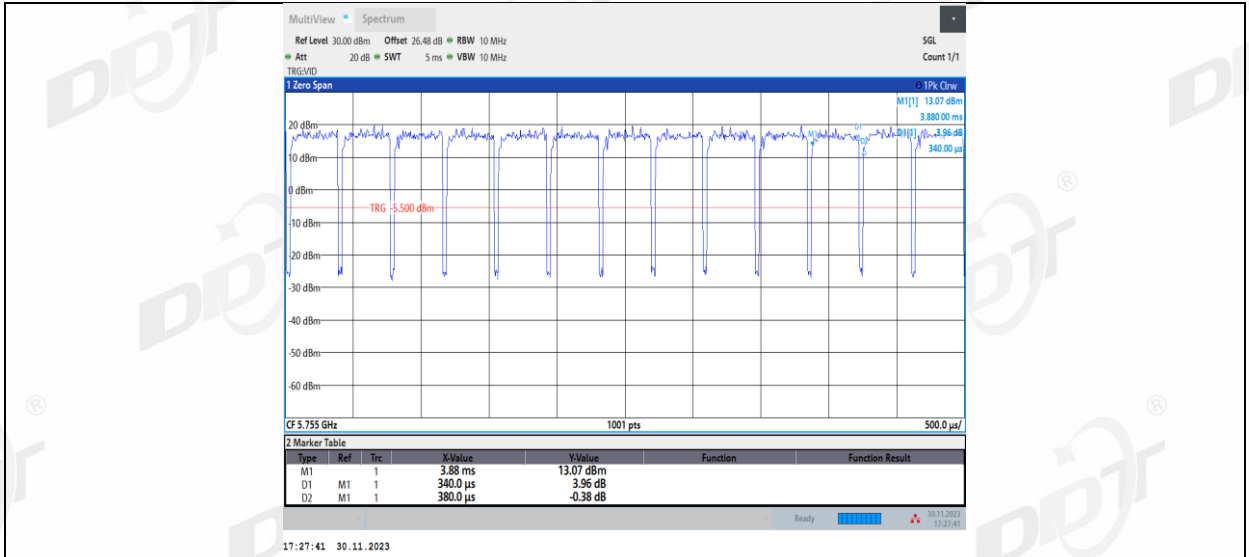
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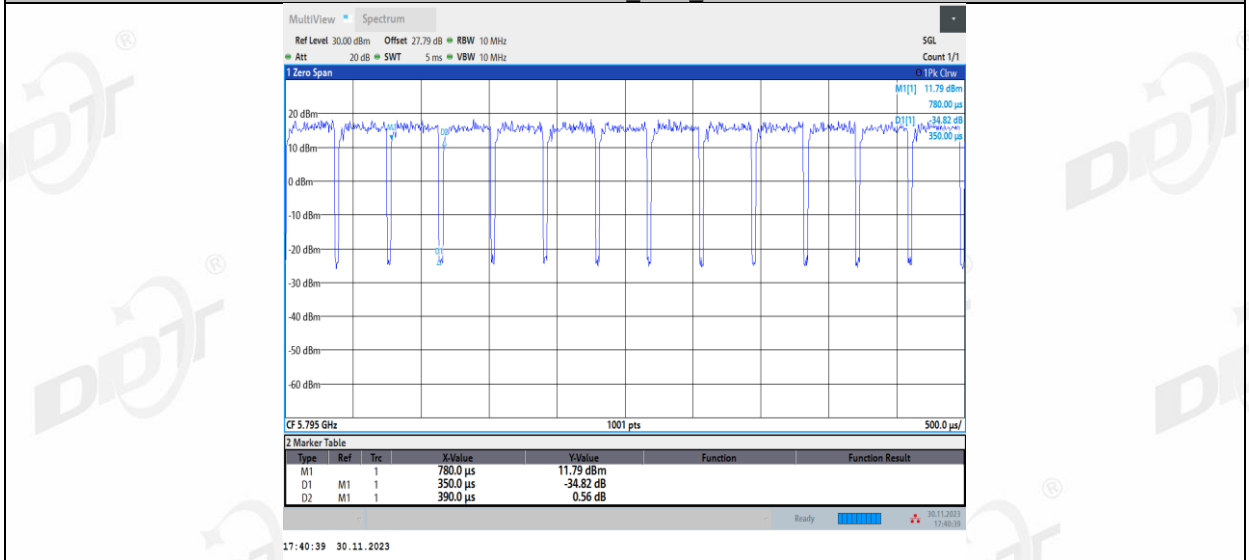
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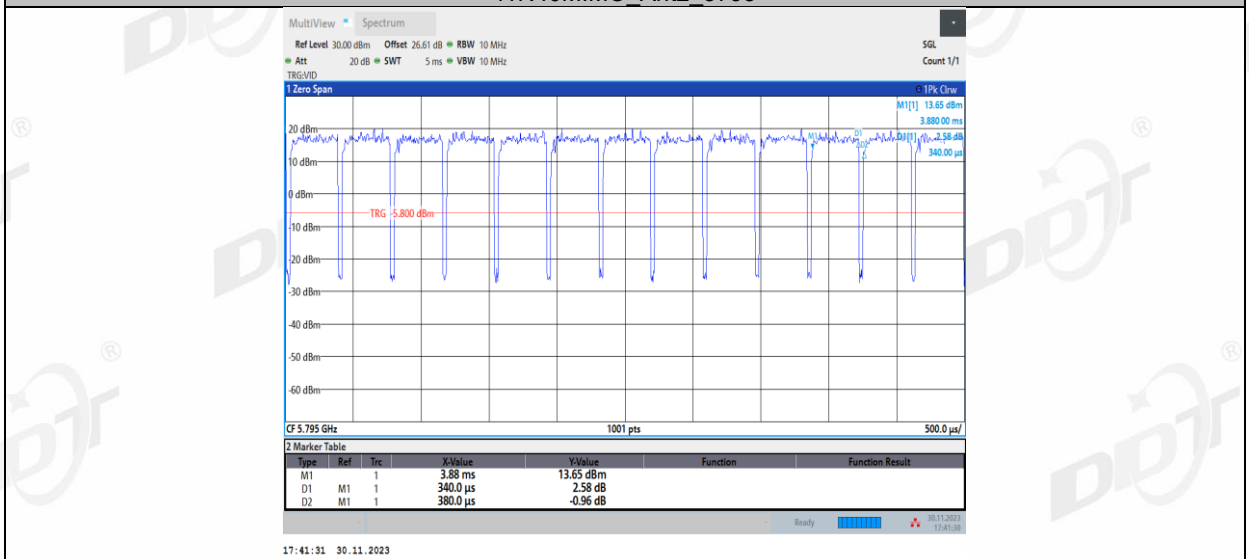
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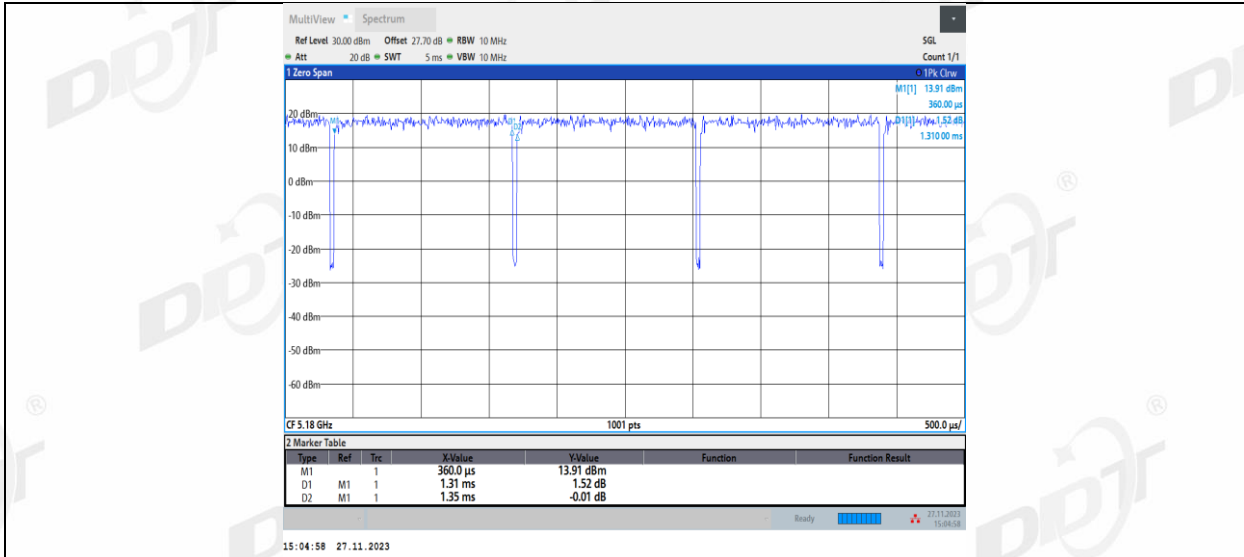
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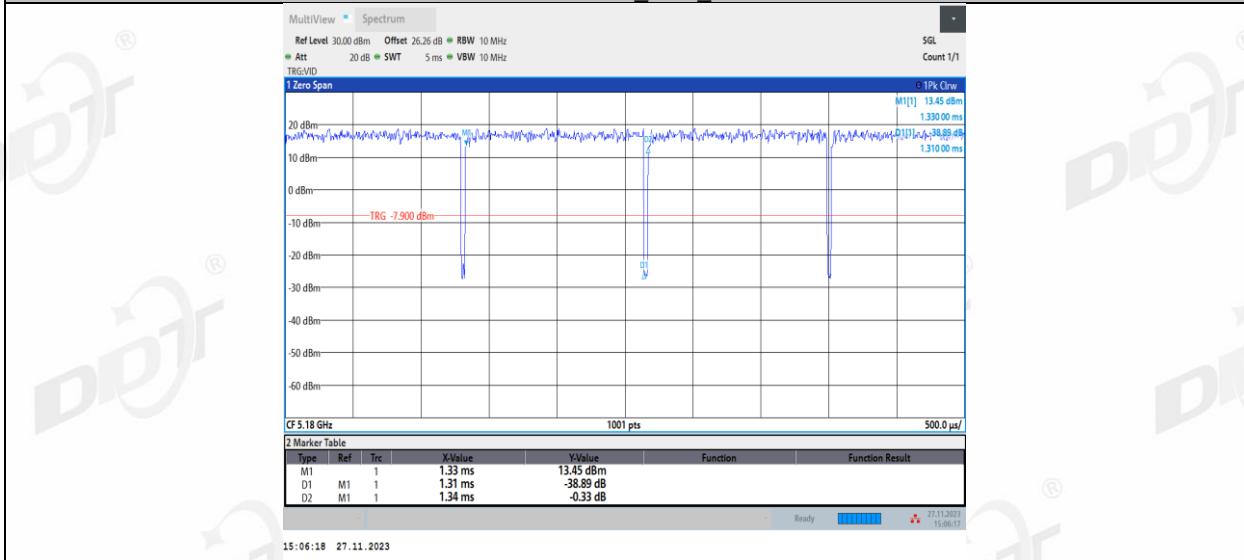
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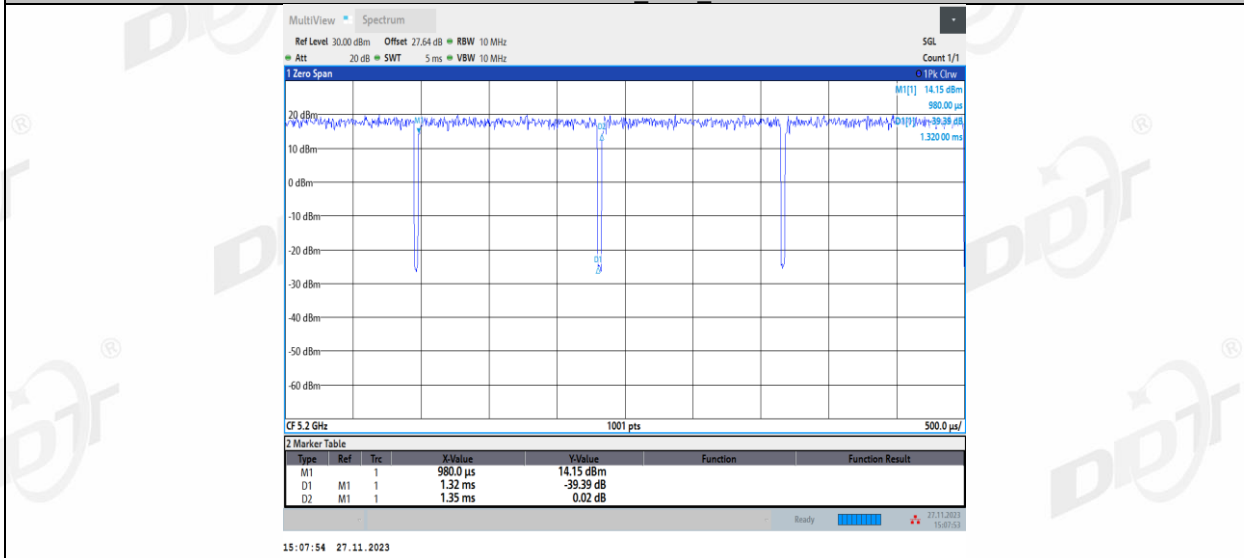
11AC20MIMO\_Ant1\_5180



11AC20MIMO\_Ant2\_5180



11AC20MIMO\_Ant1\_5200



11AC20MIMO\_Ant2\_5200