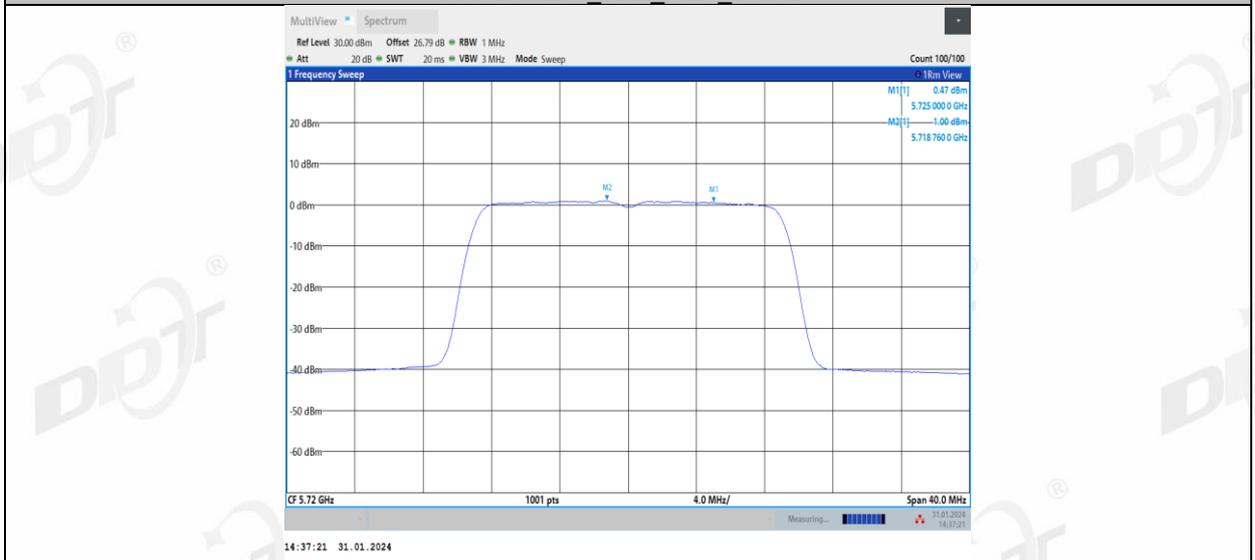
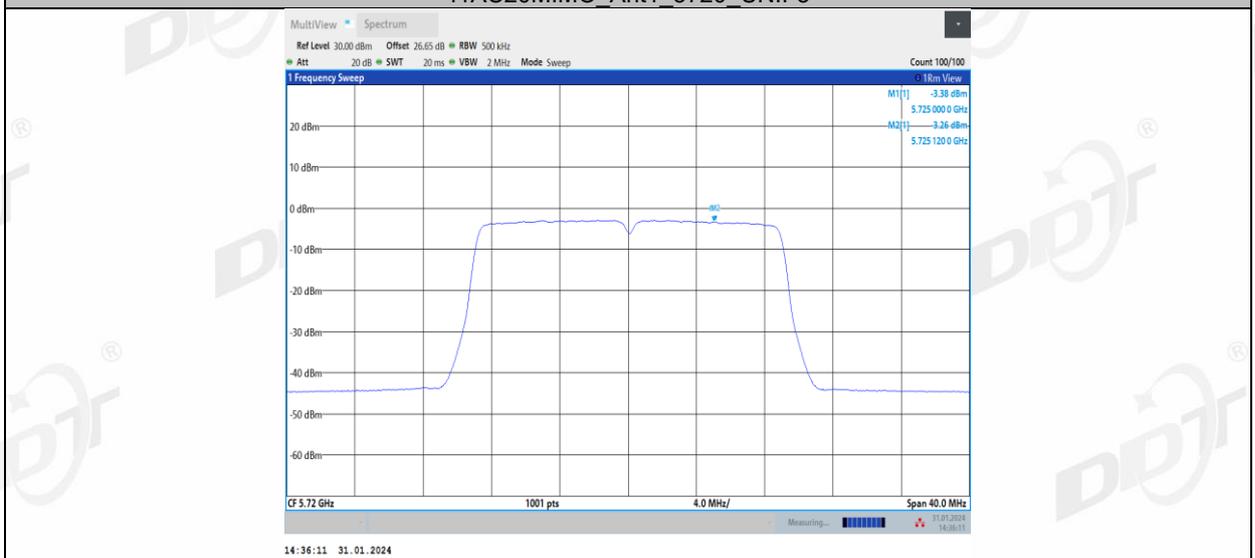


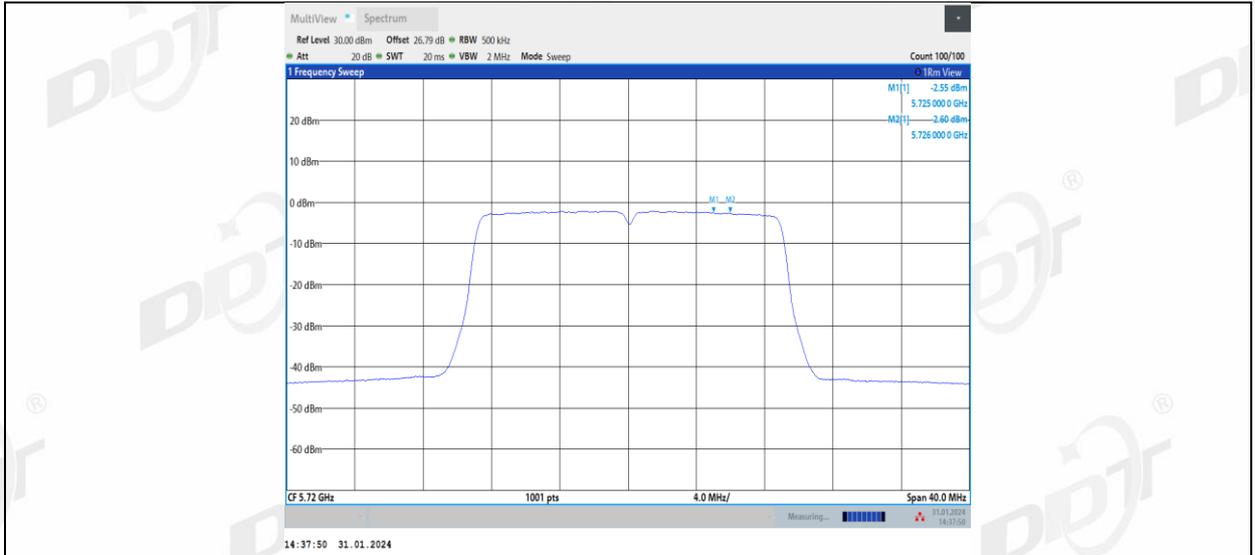
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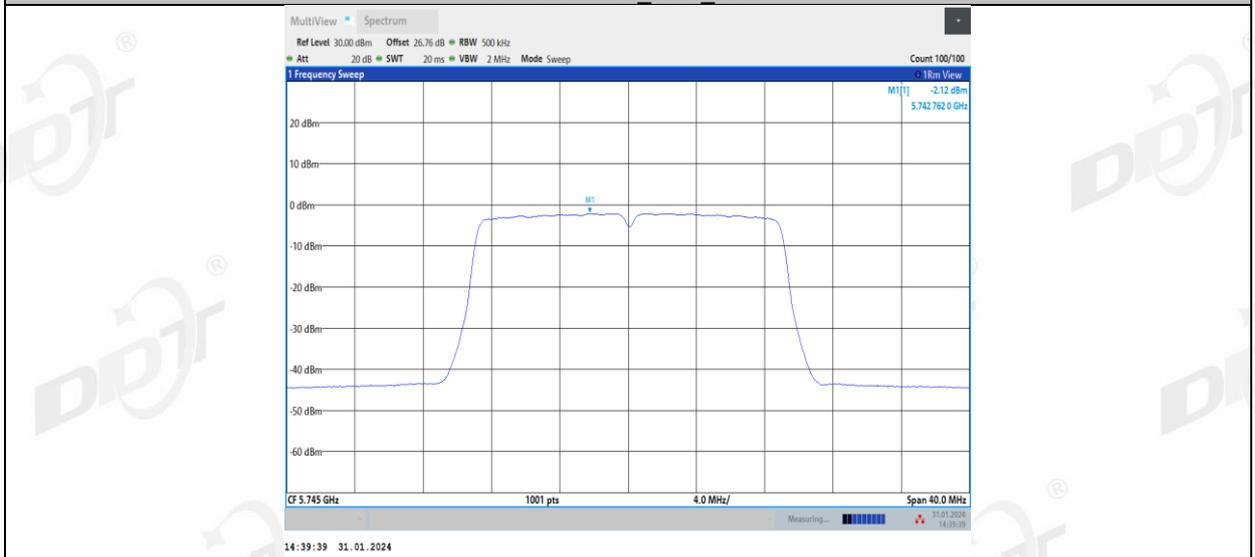
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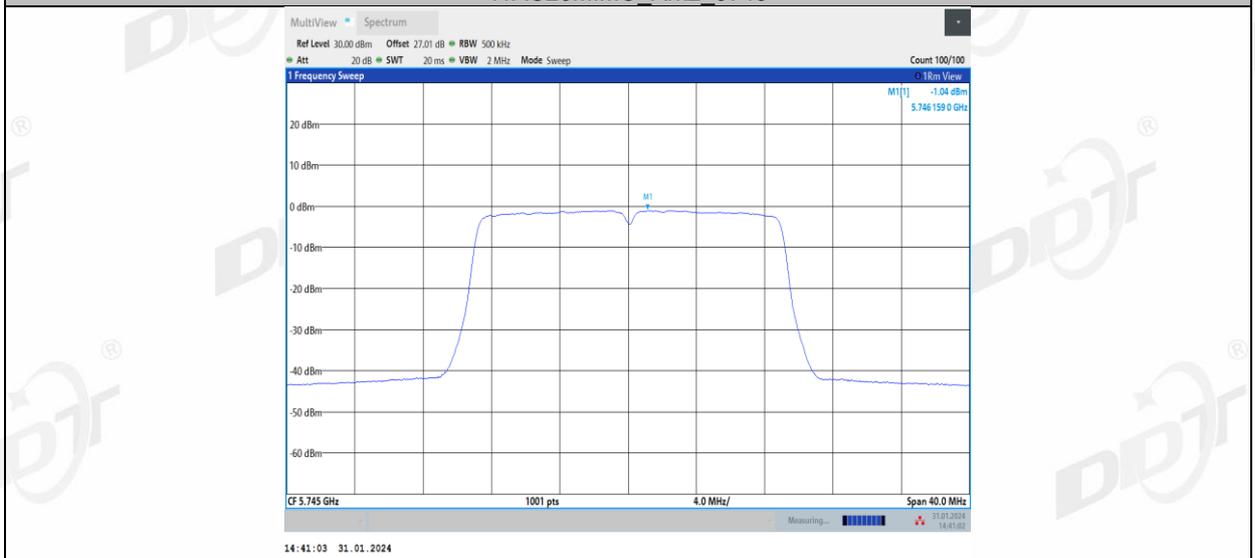
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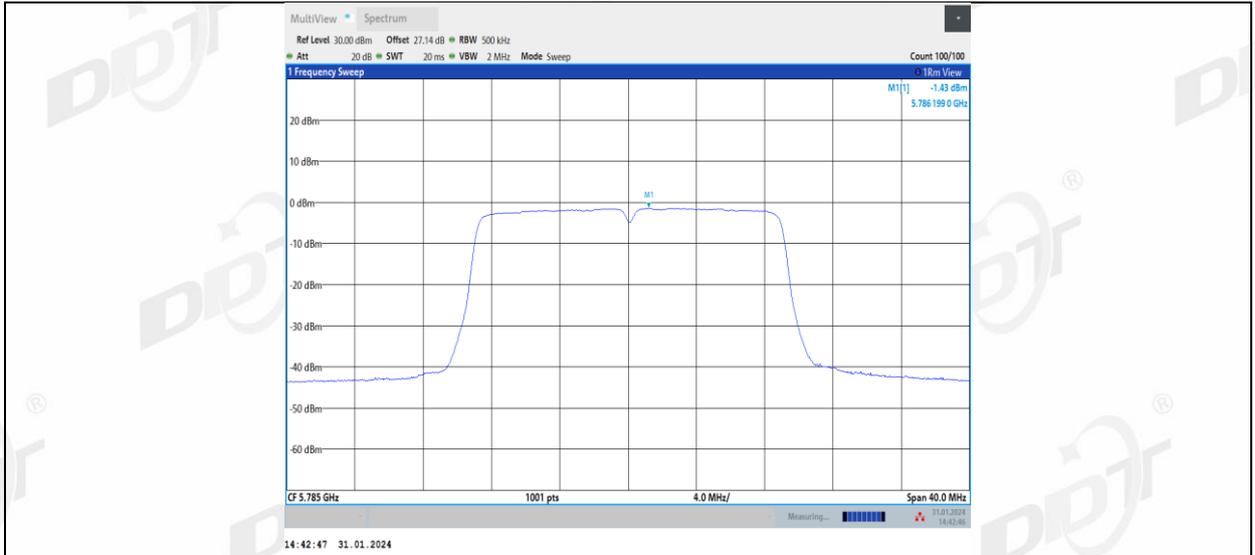
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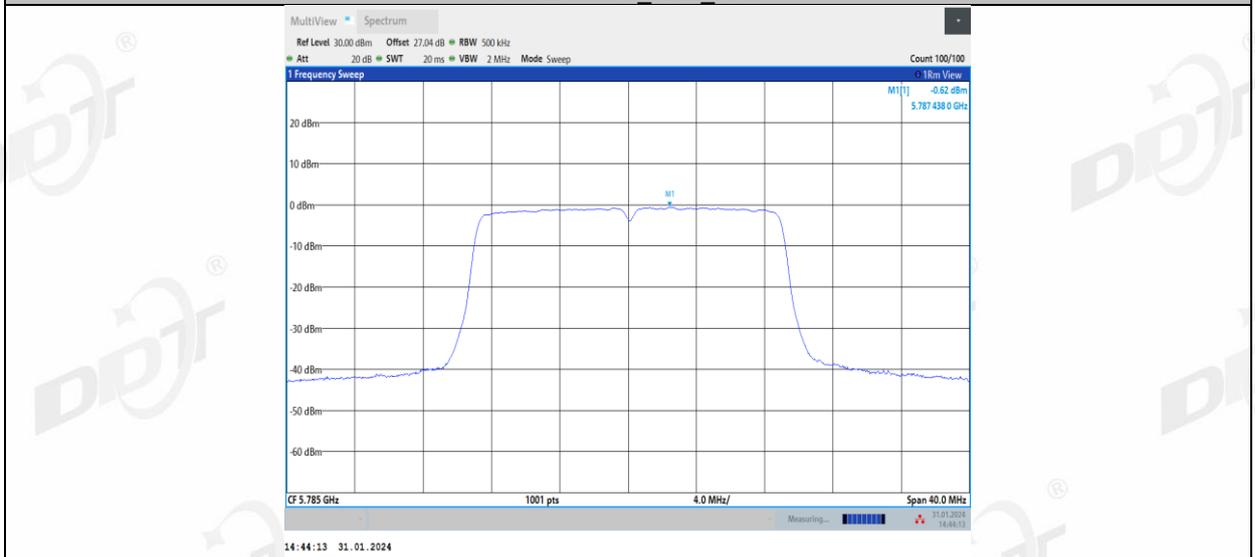
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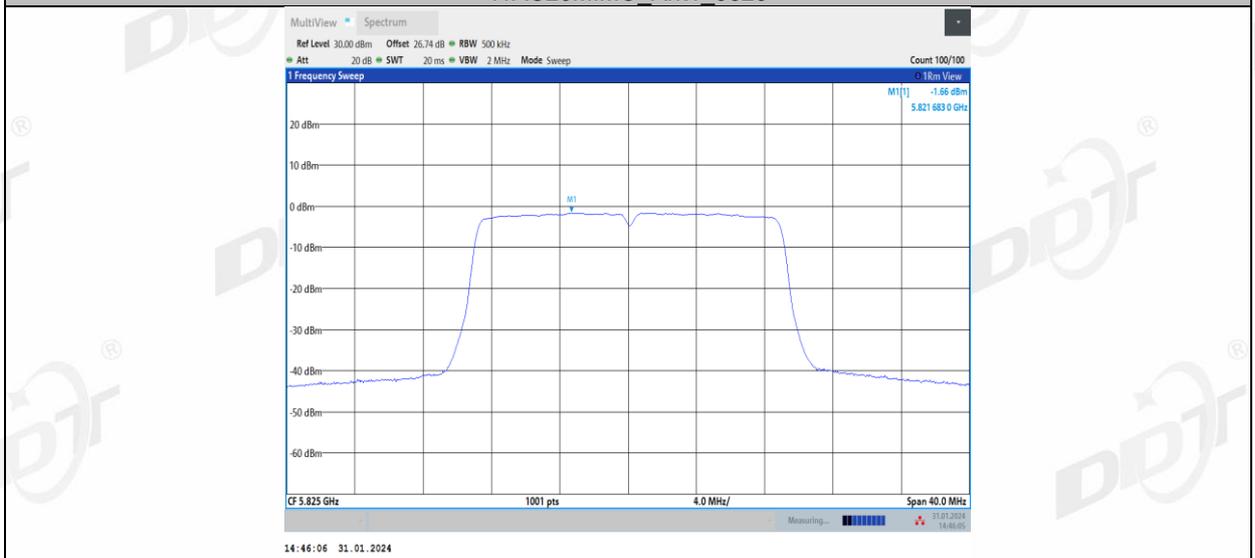
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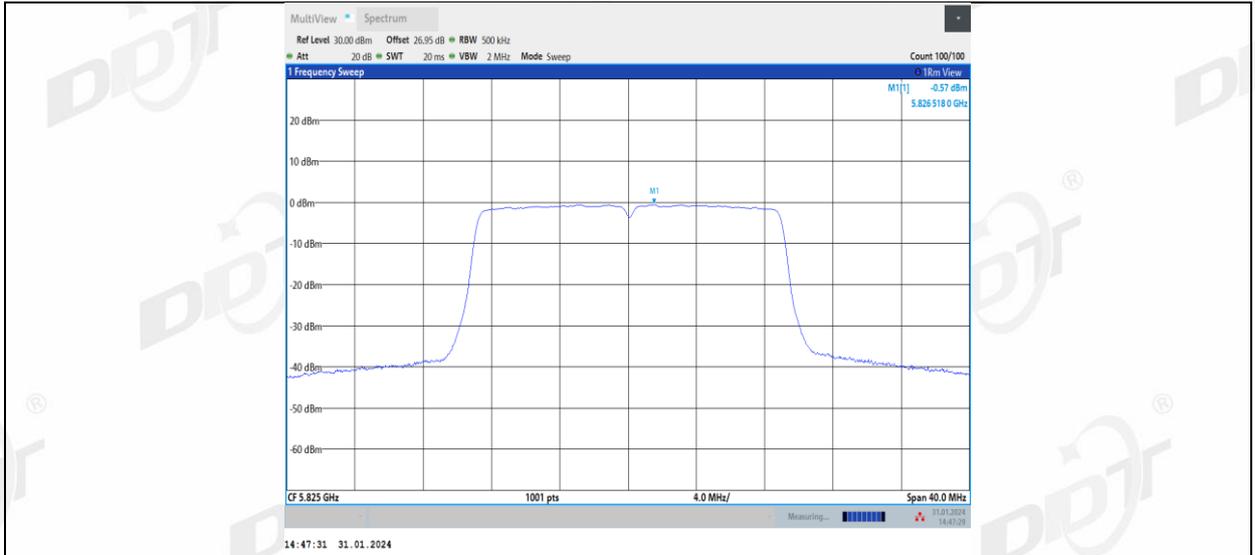
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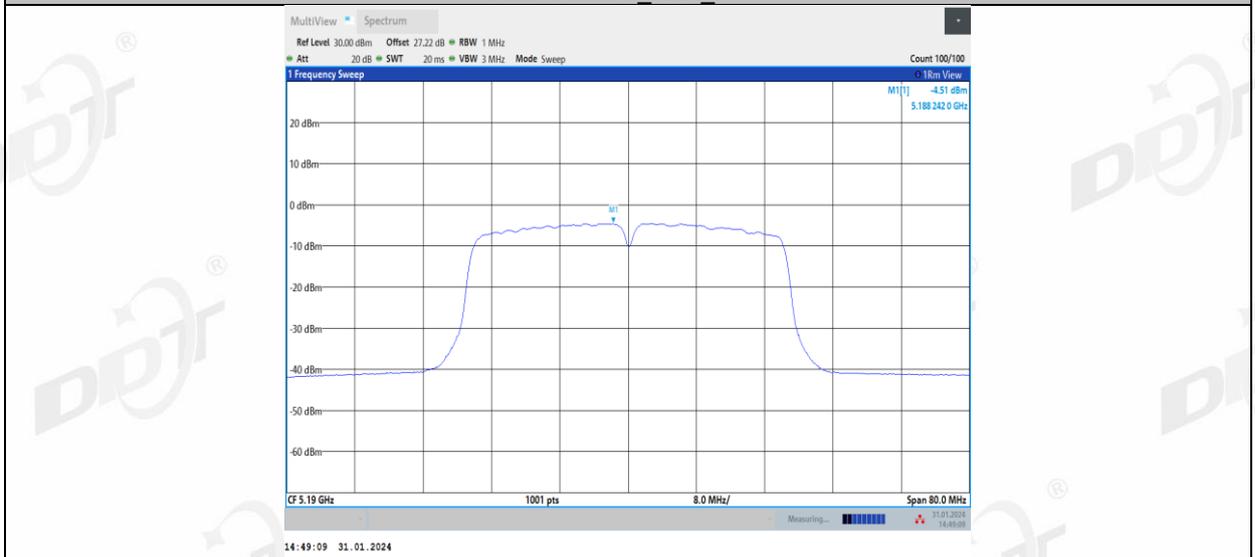
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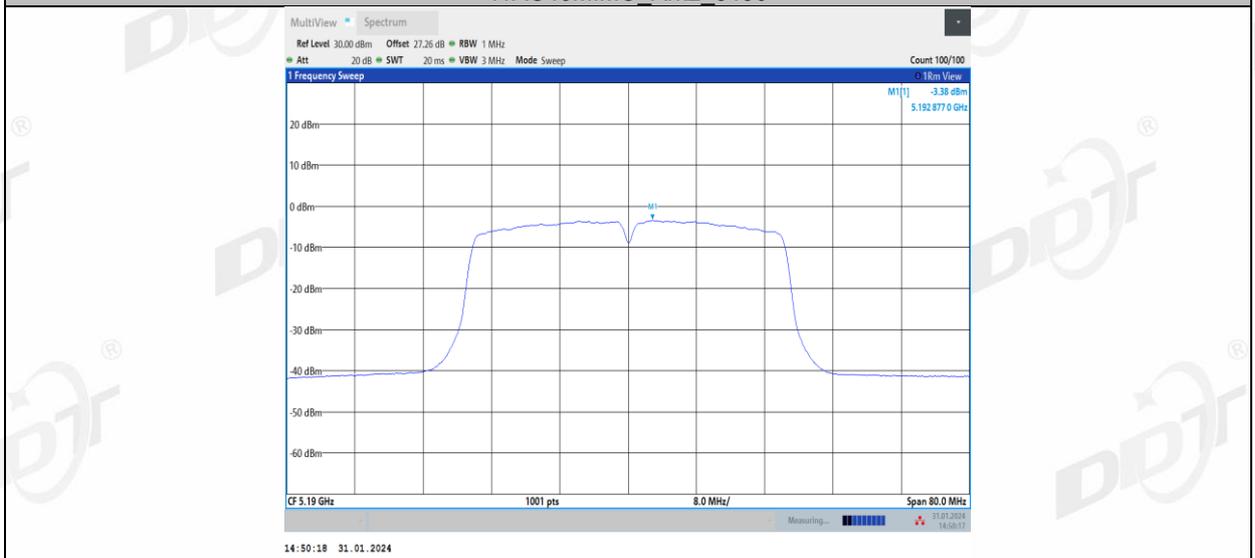
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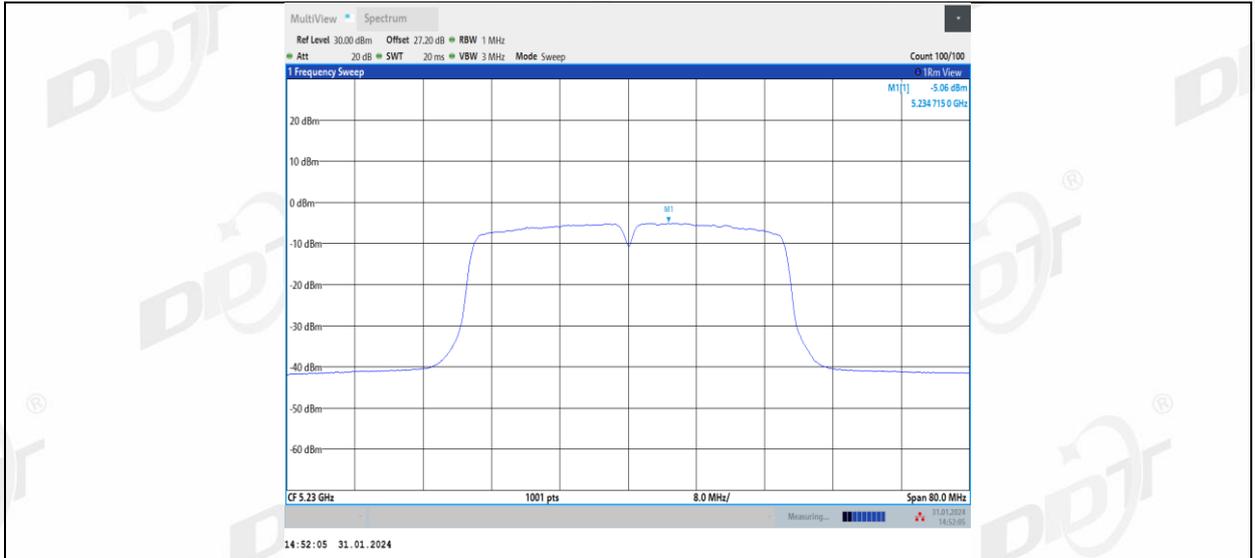
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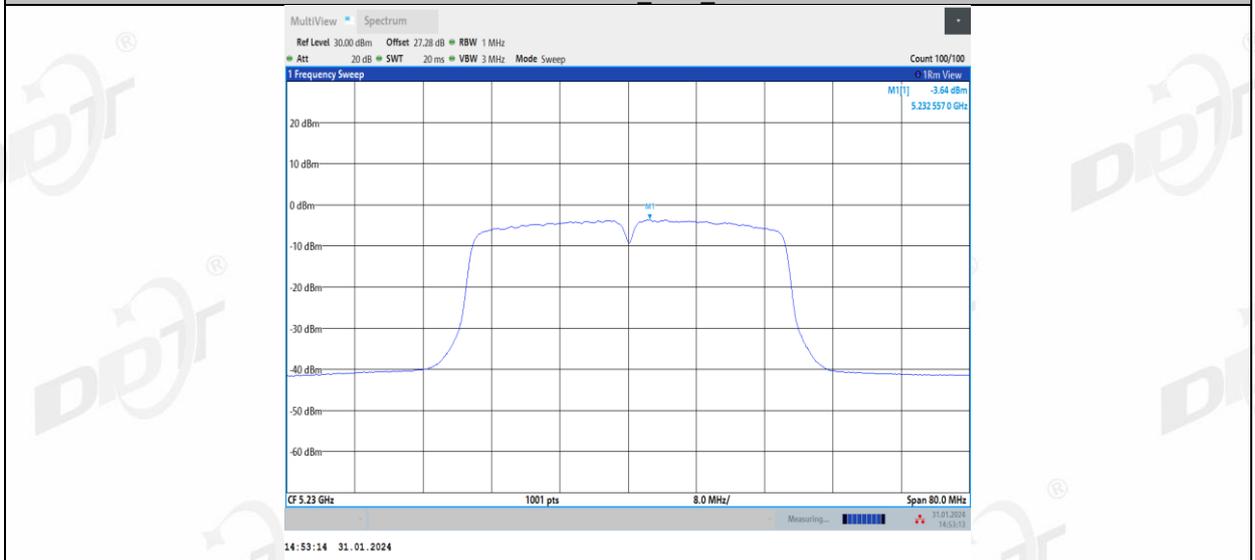
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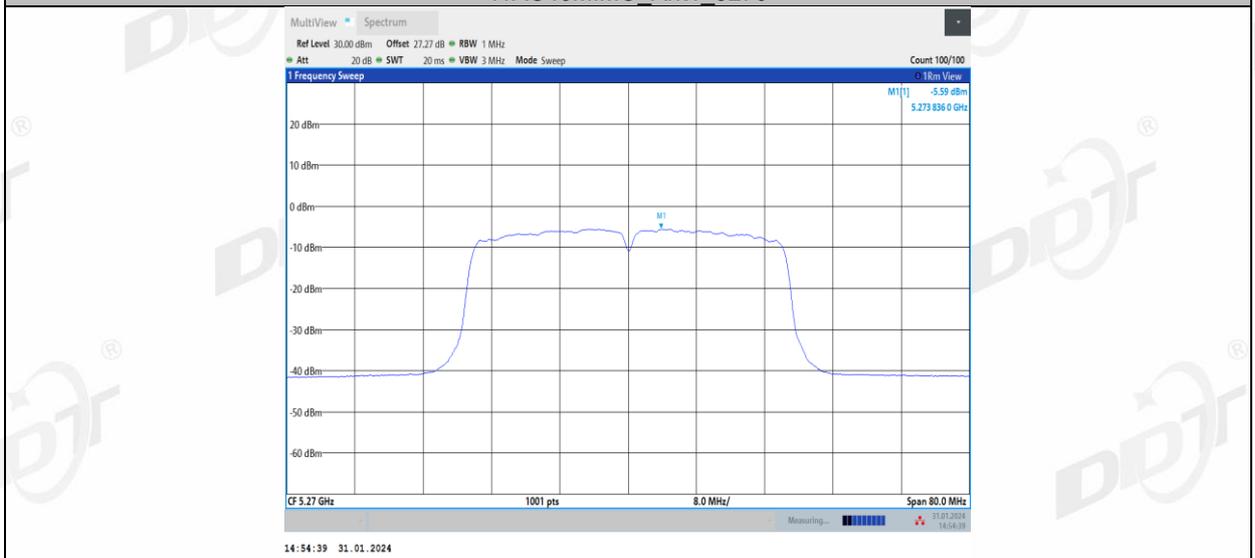
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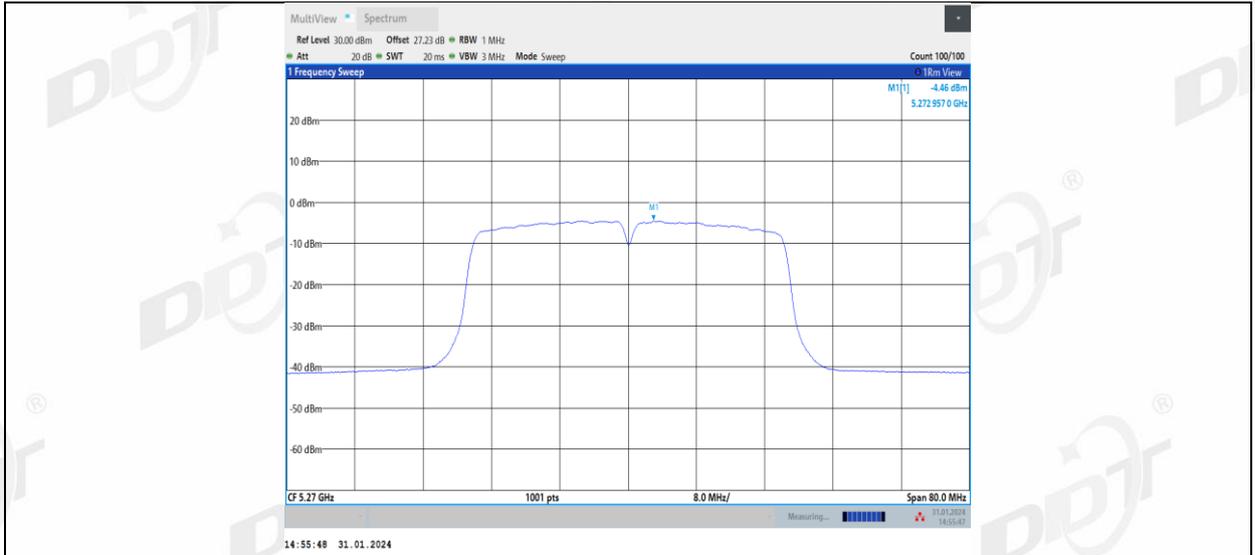
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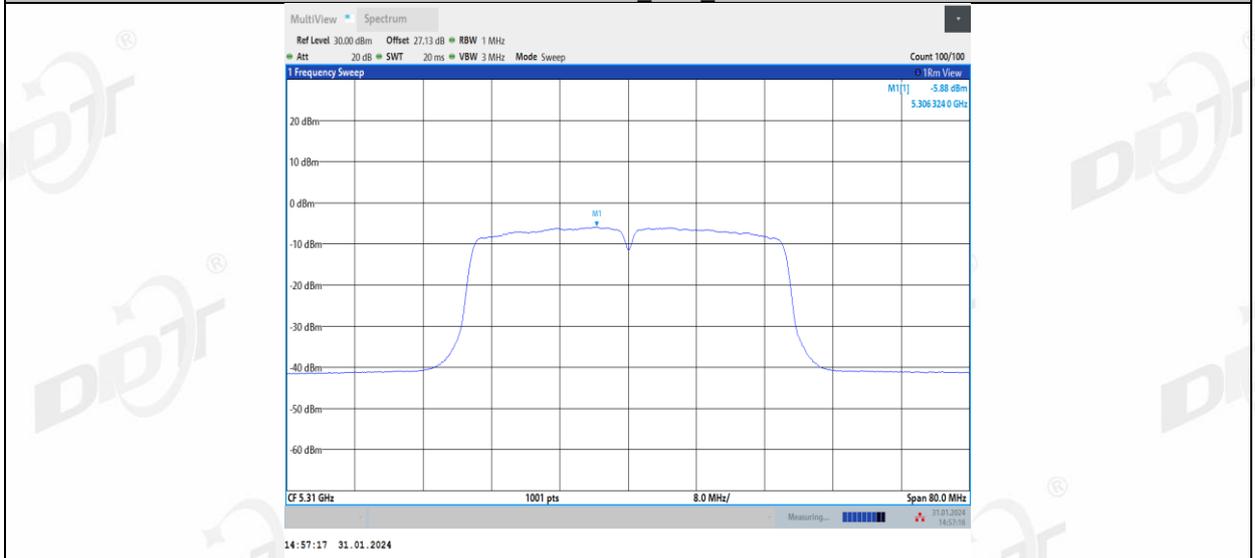
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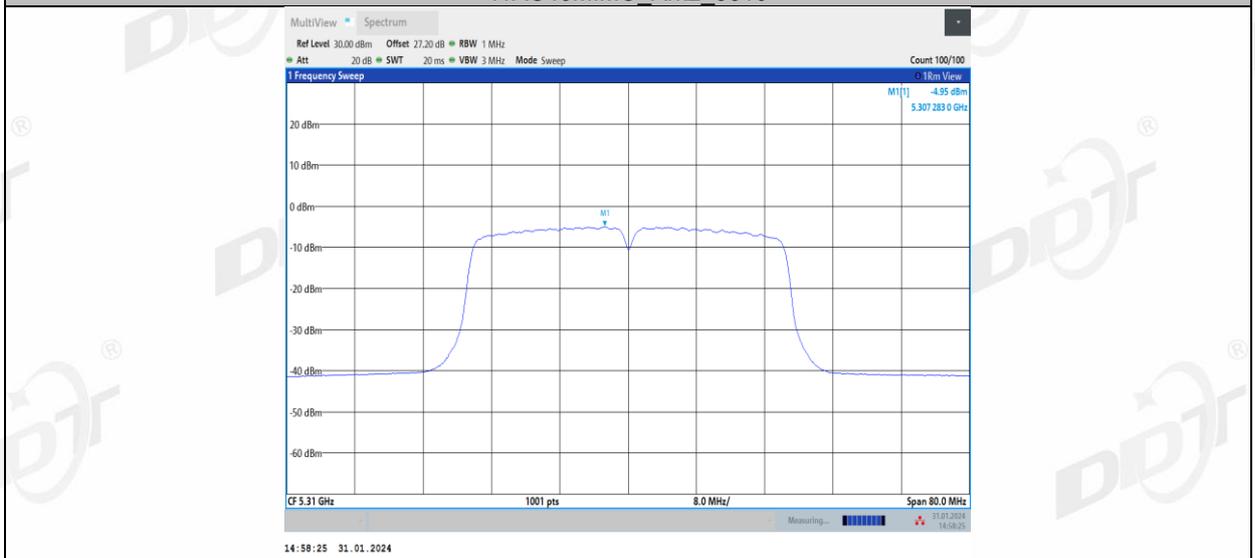
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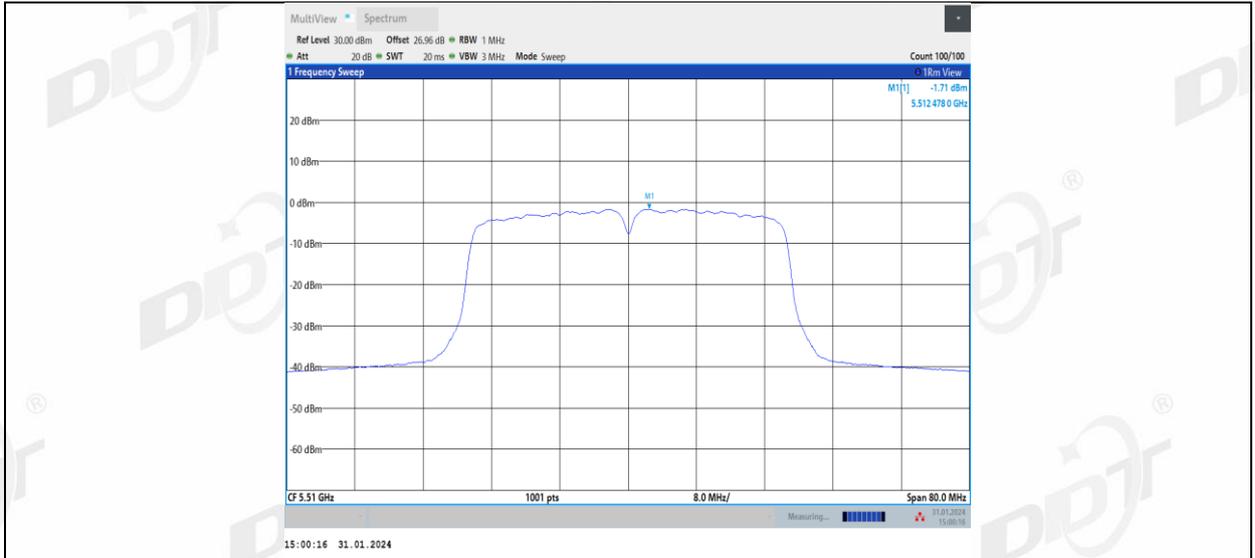
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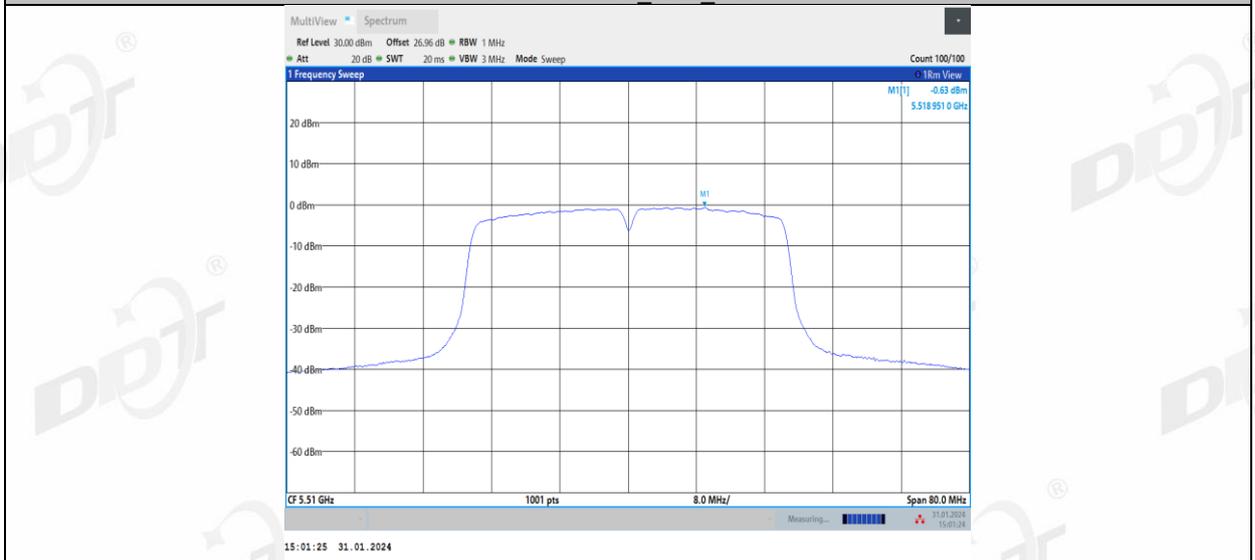
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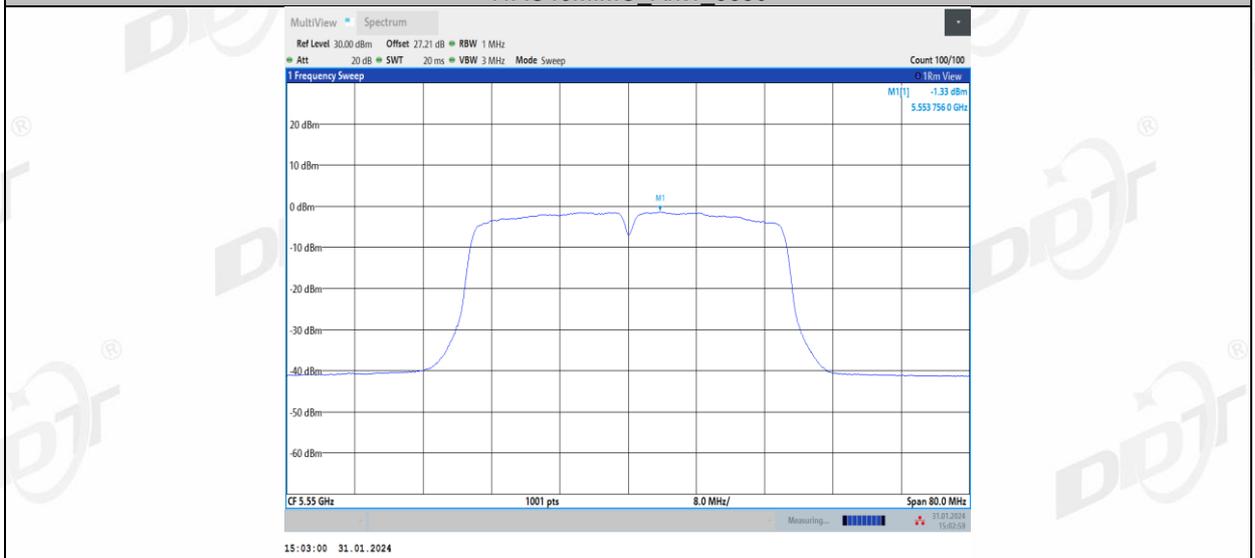
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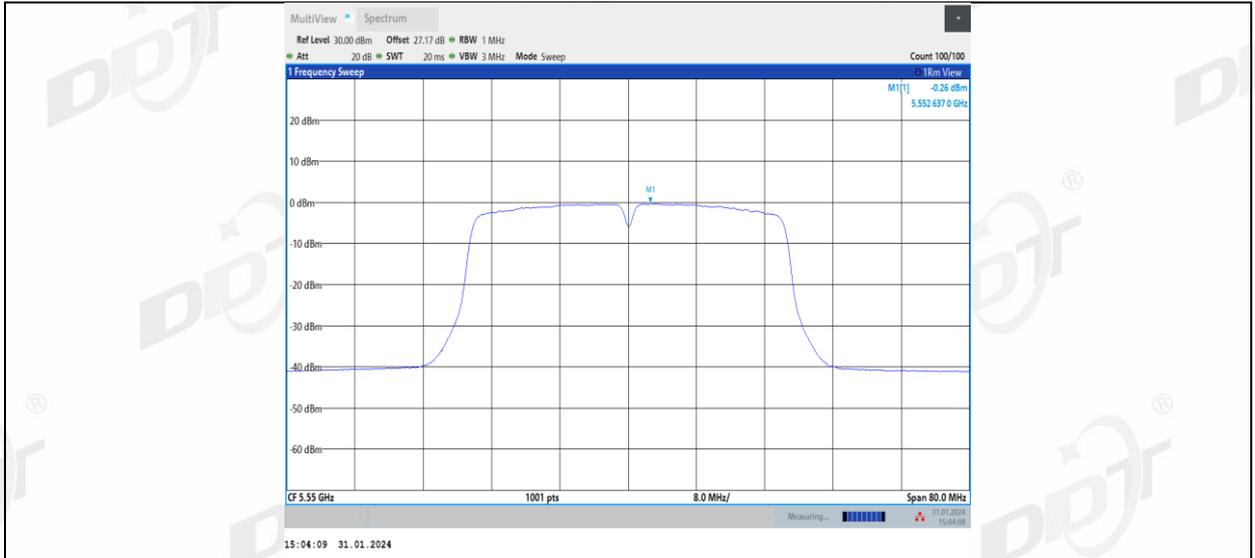
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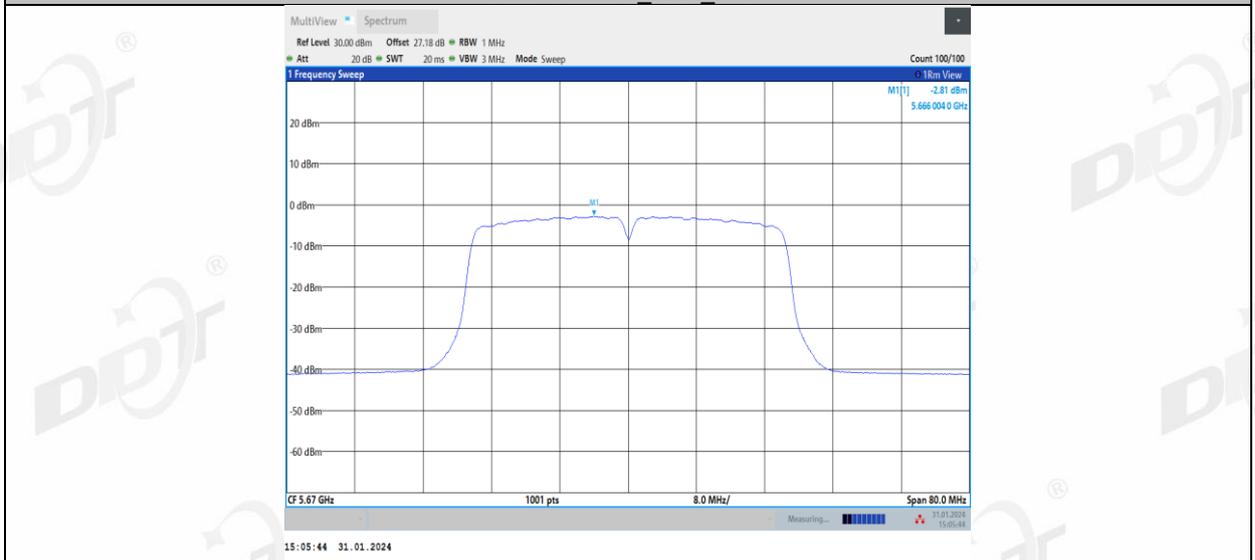
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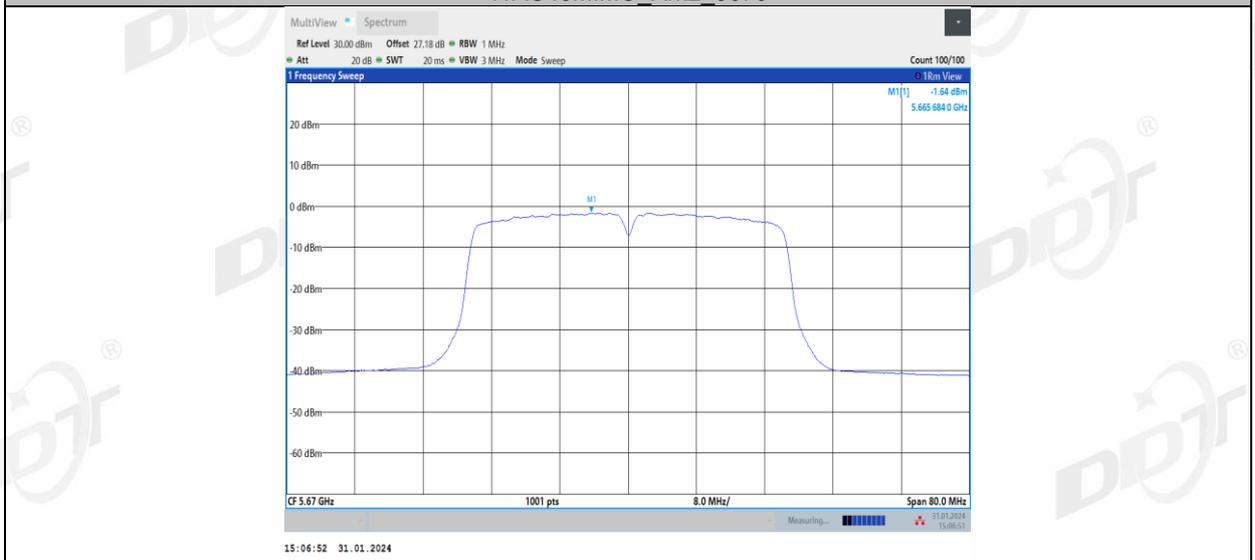
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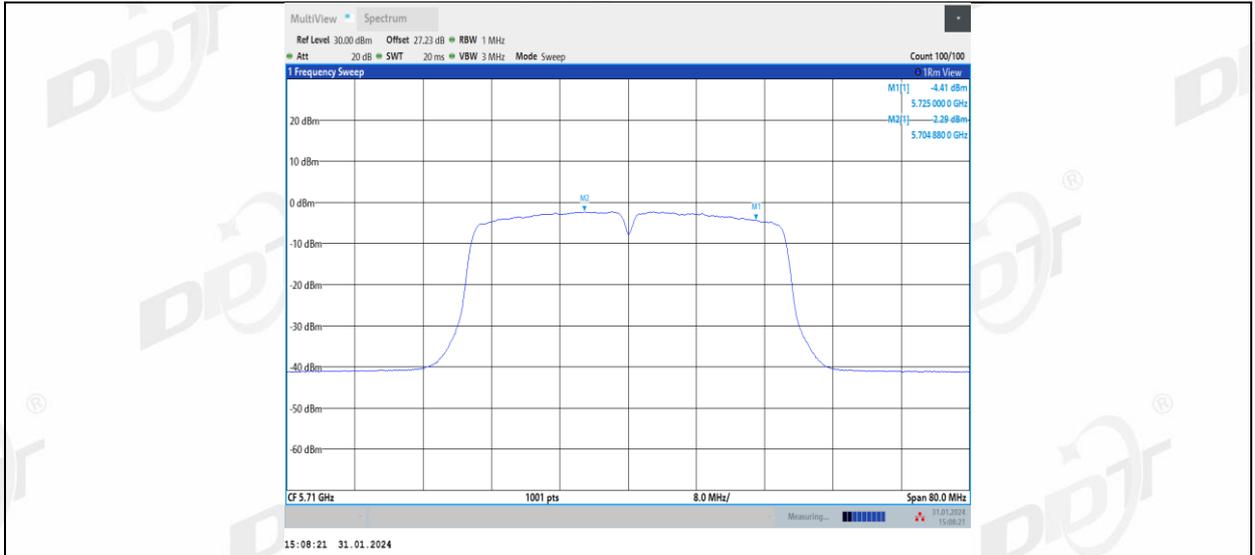
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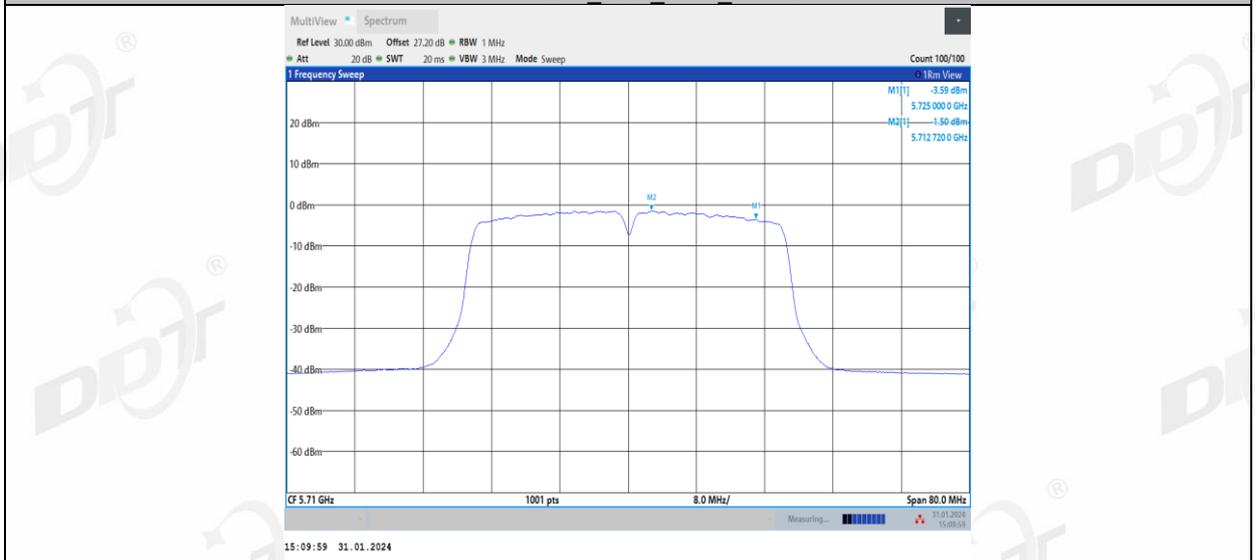
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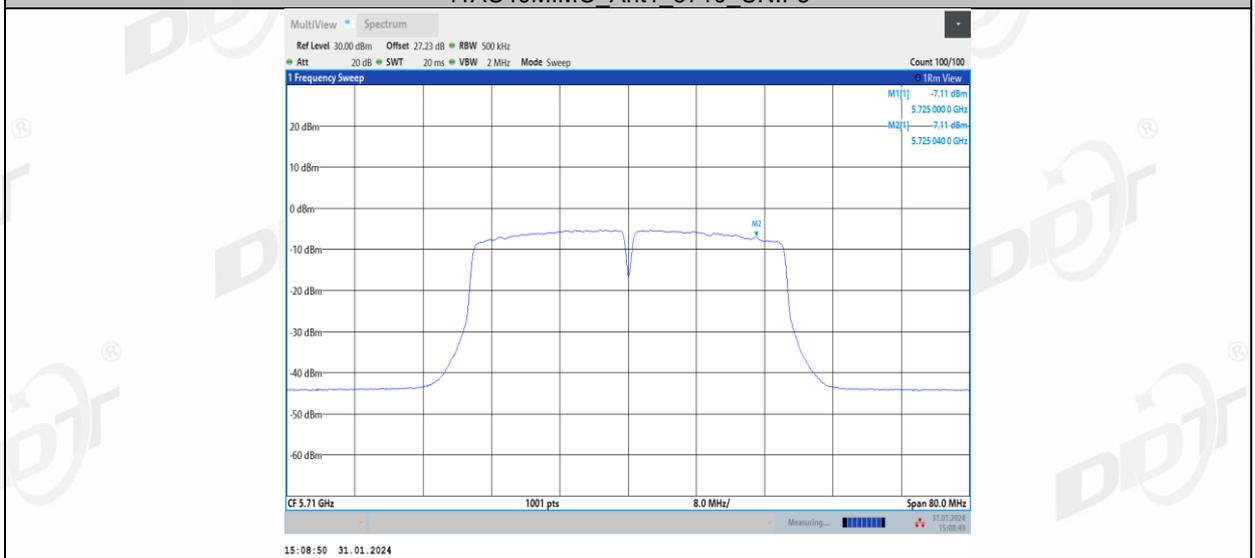
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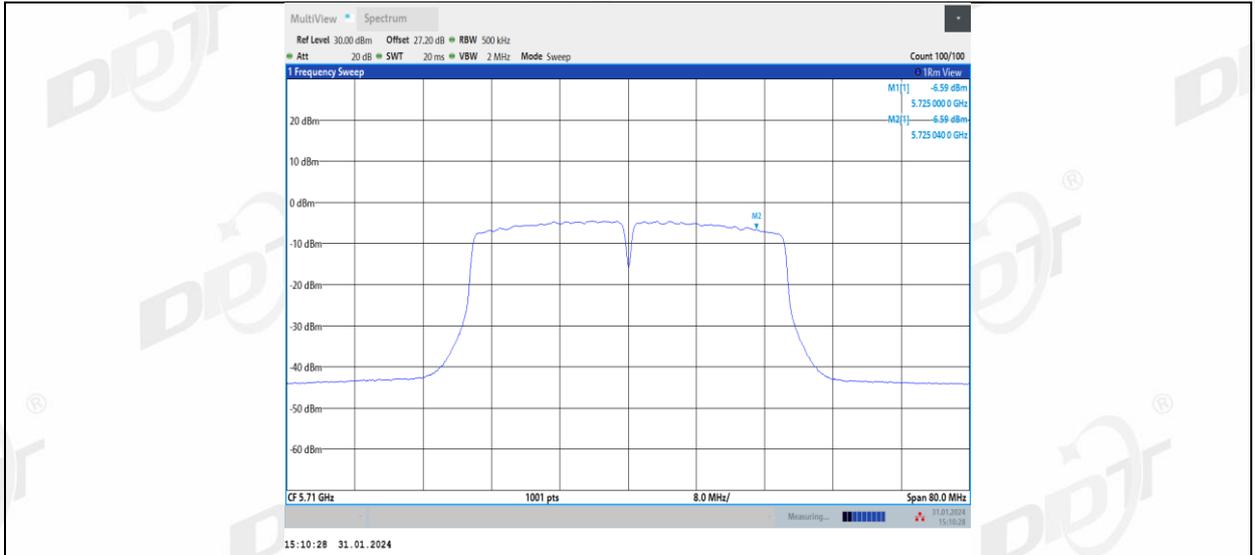
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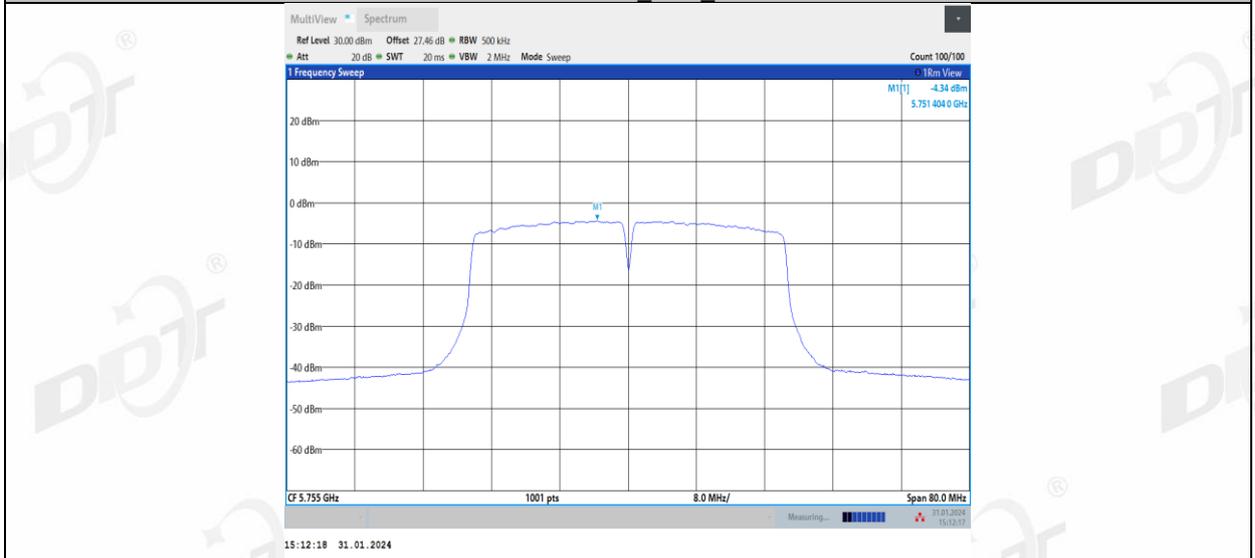
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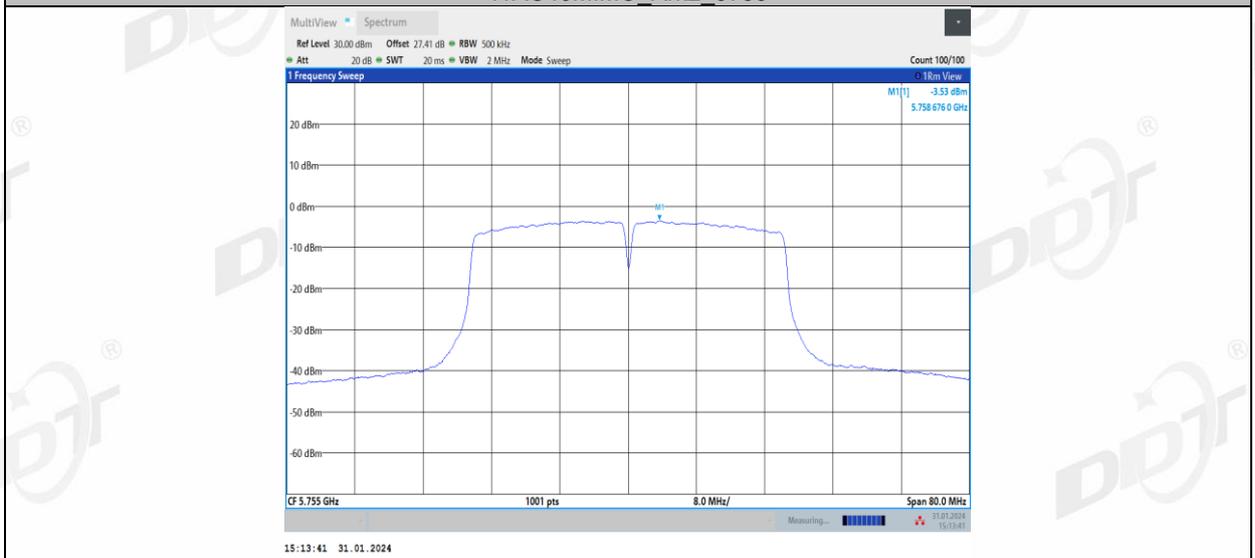
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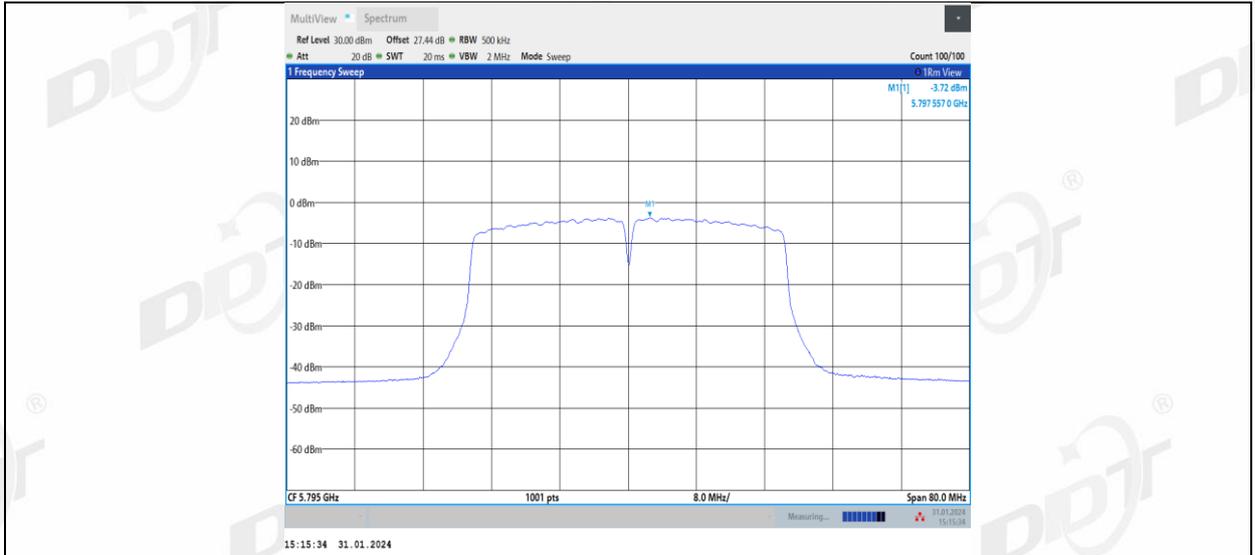
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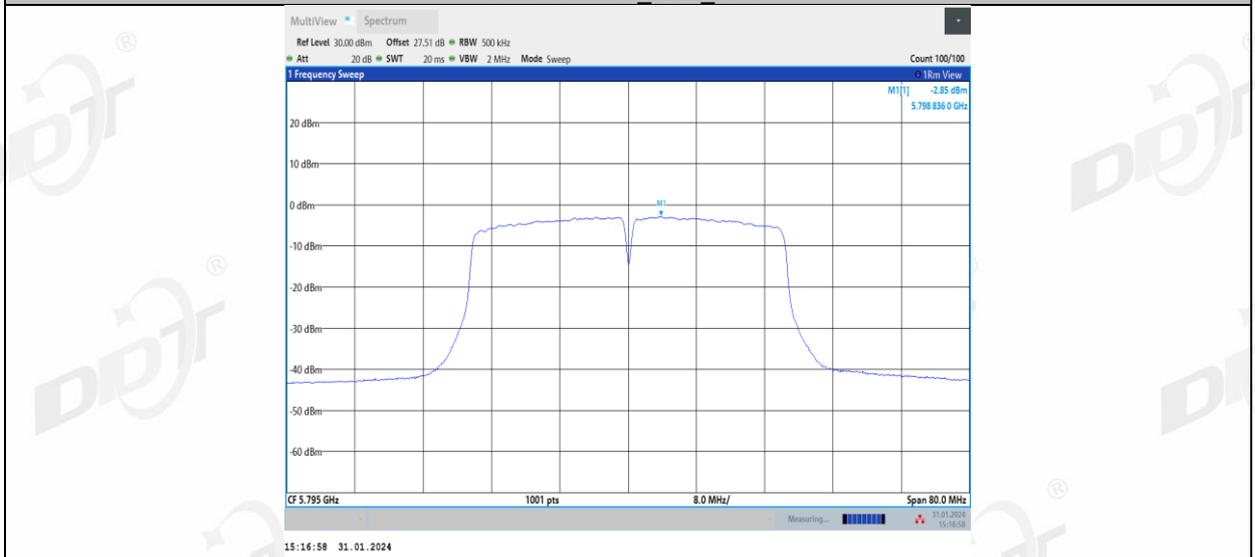
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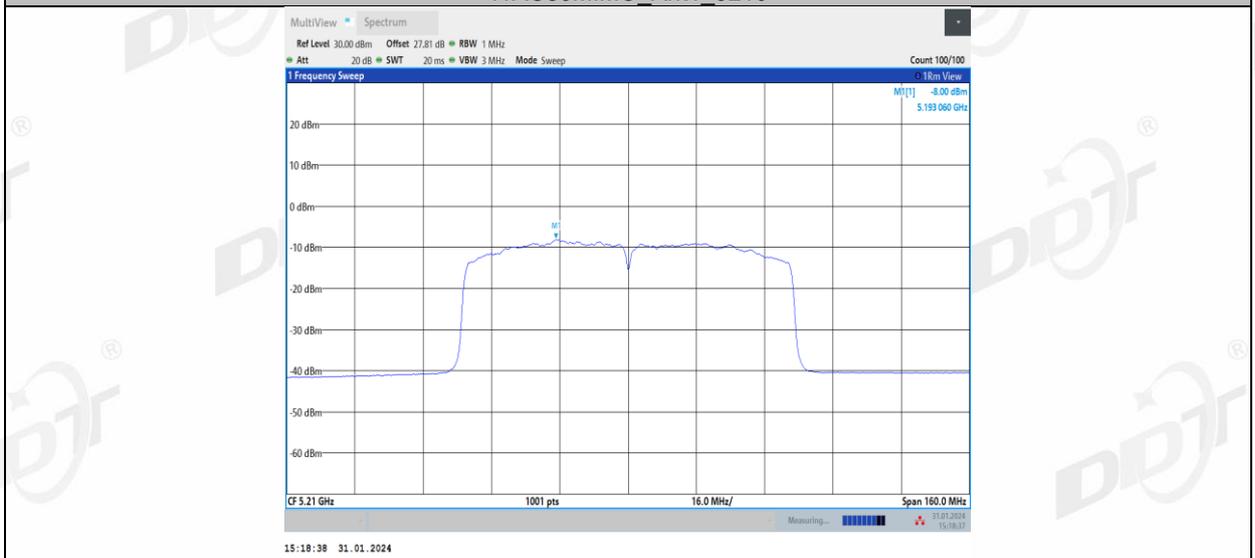
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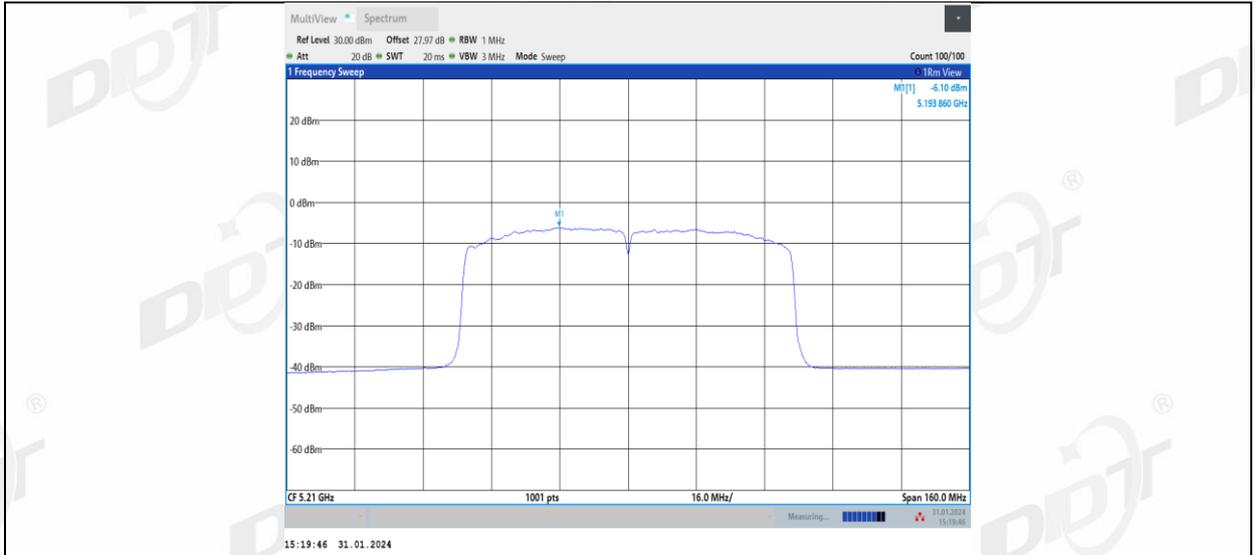
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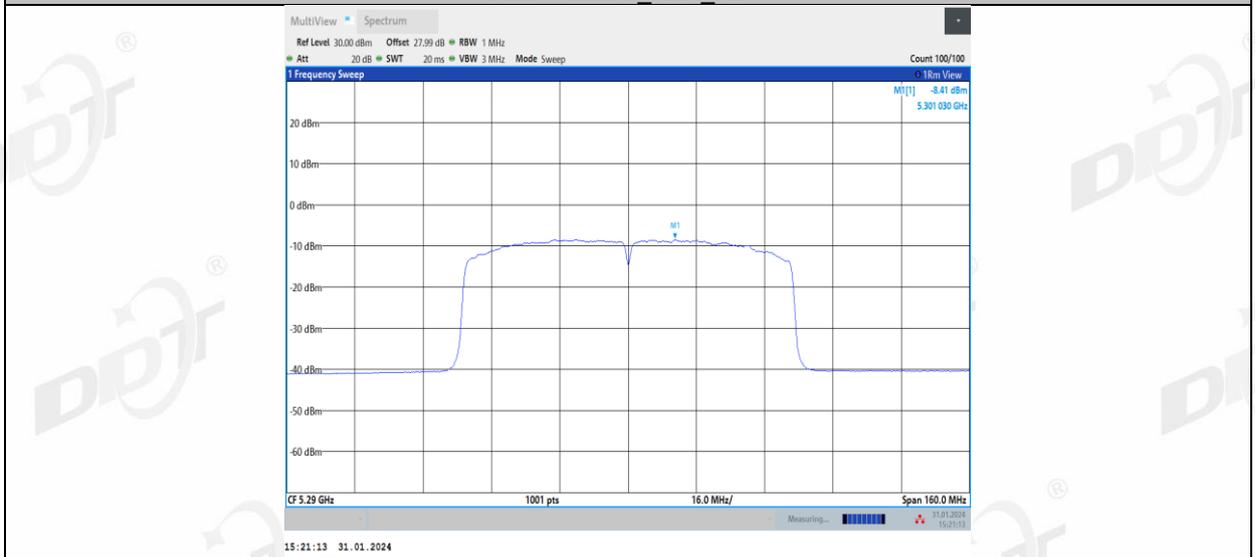
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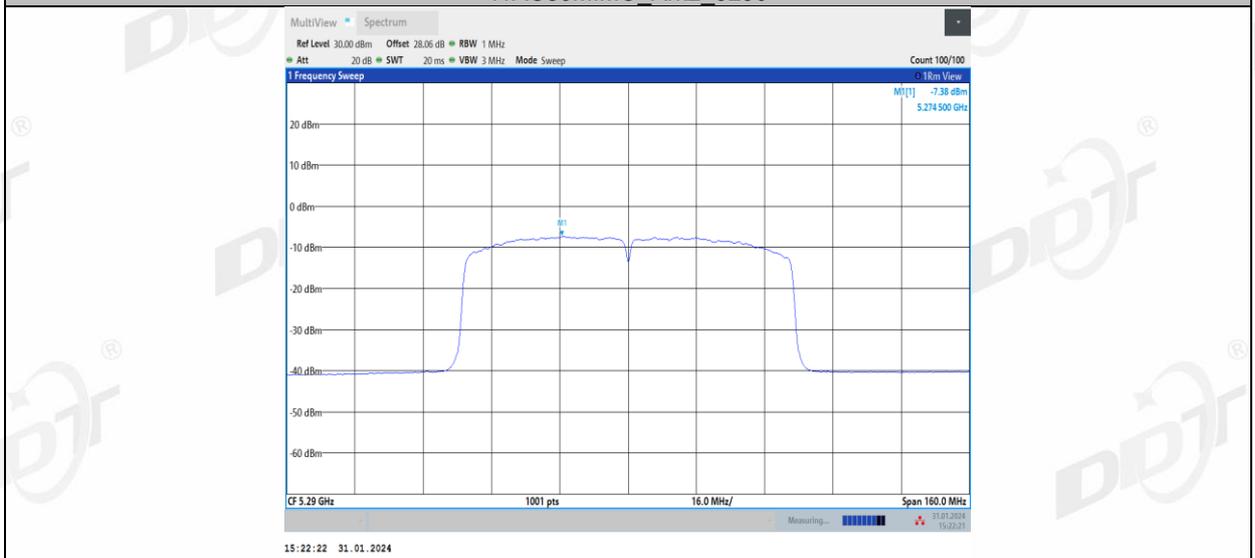
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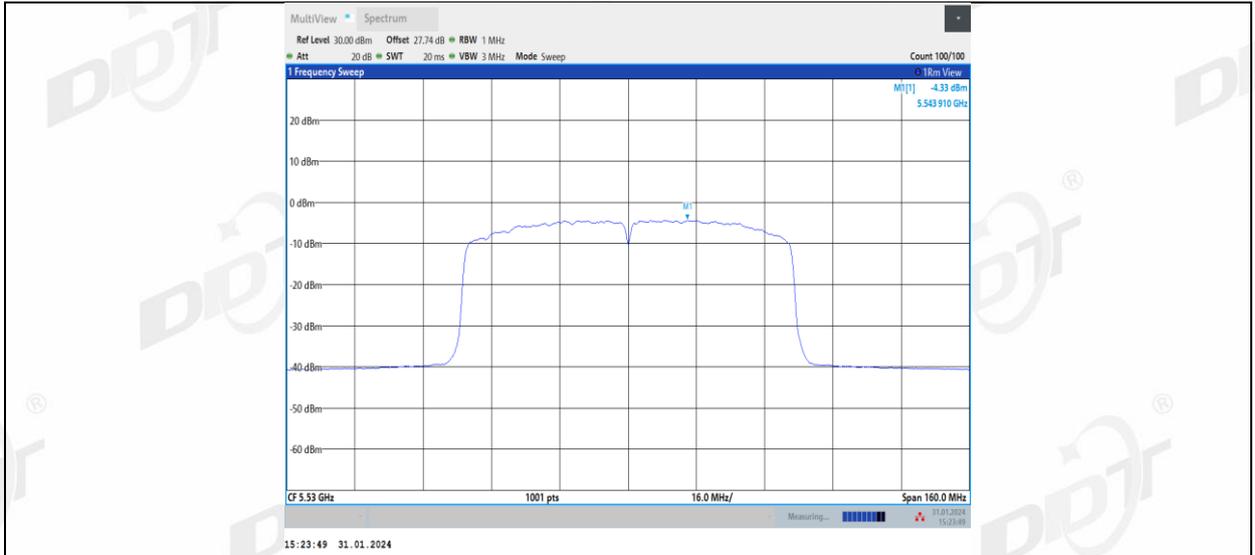
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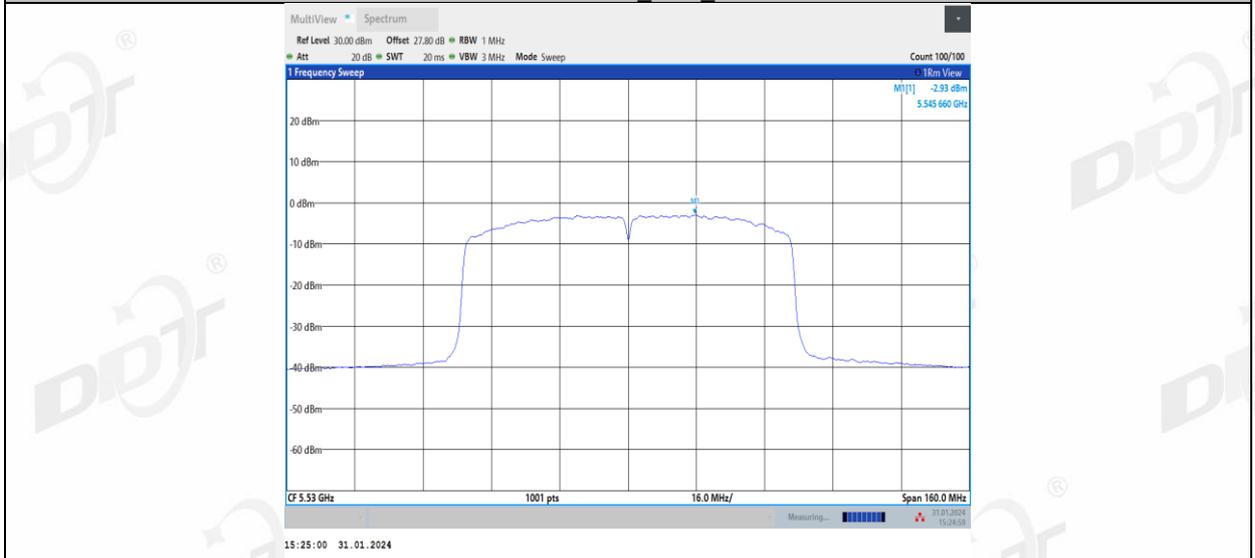
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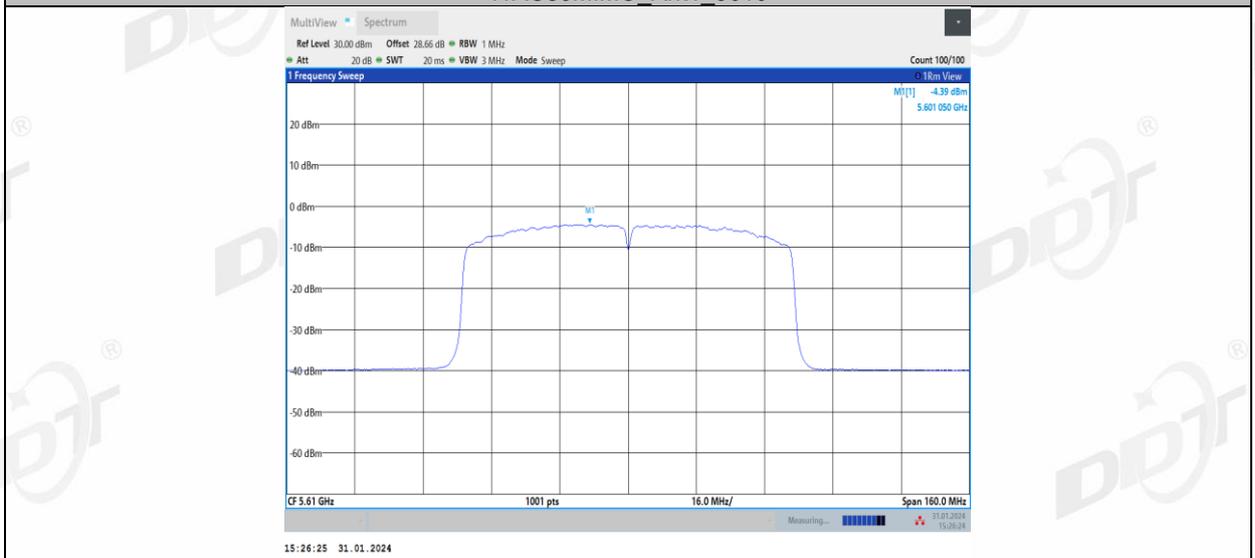
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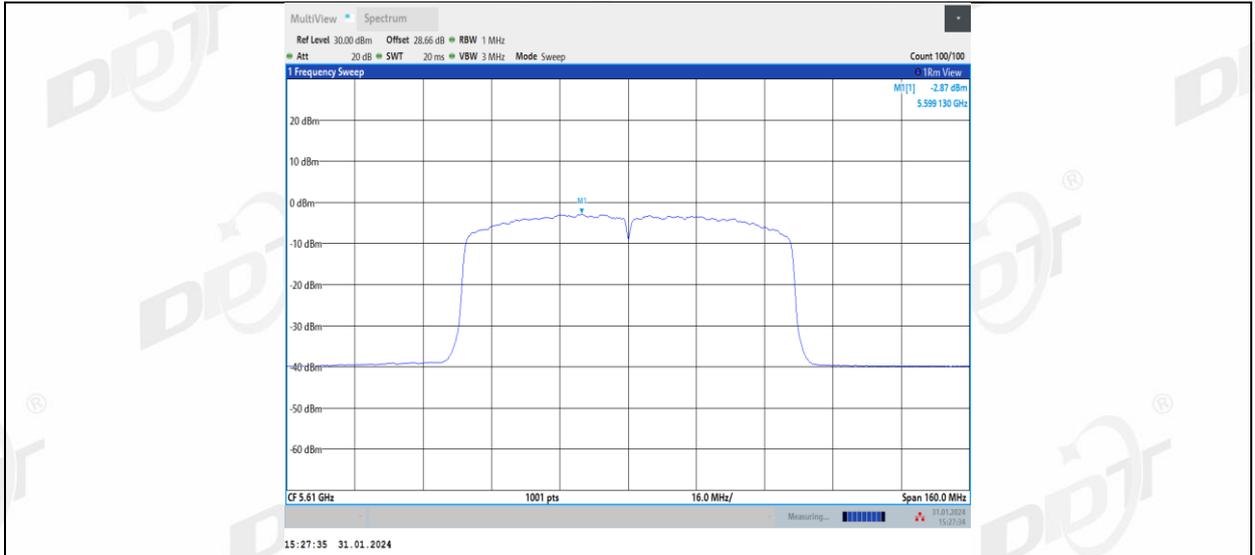
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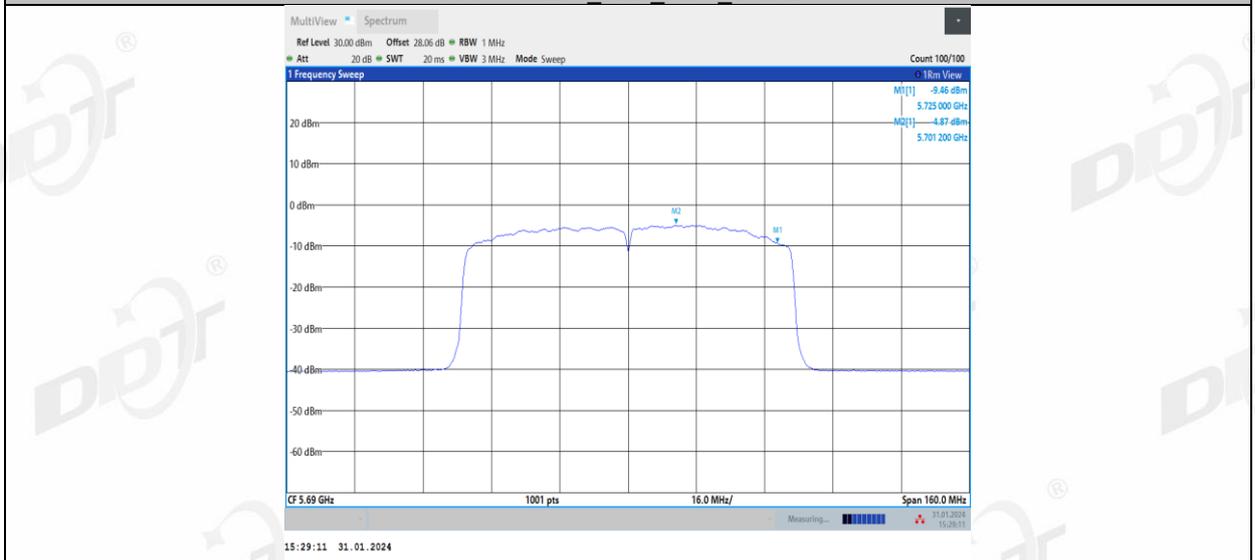
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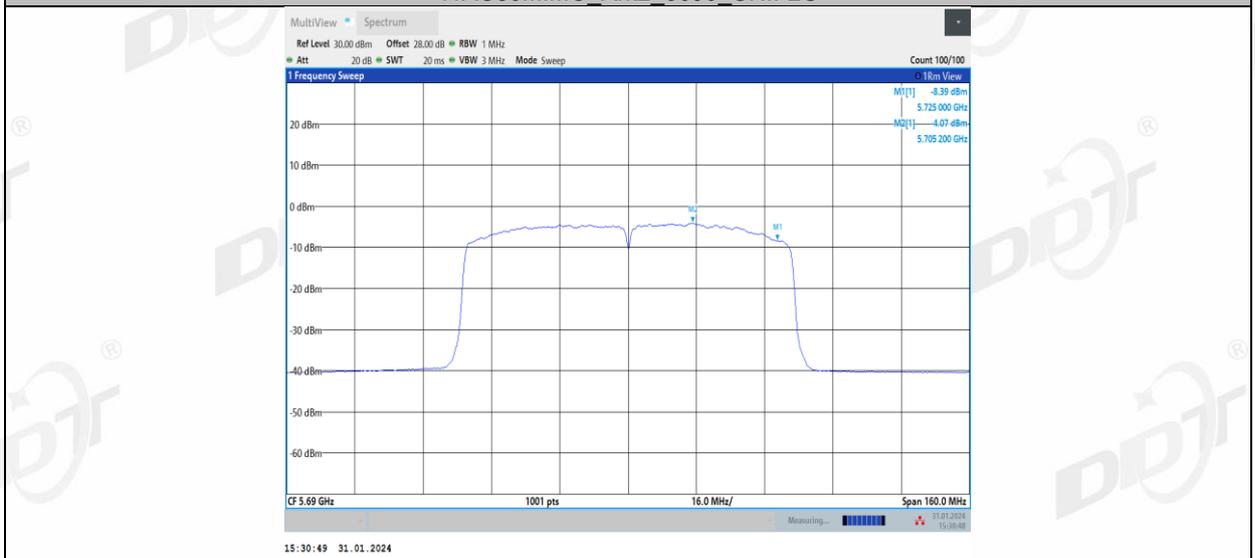
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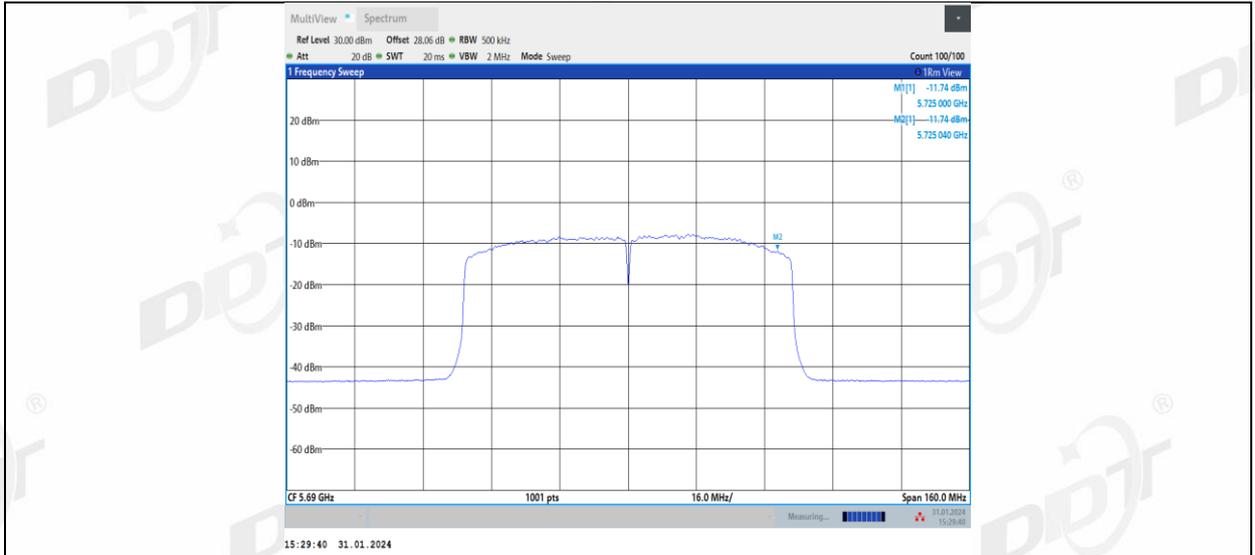
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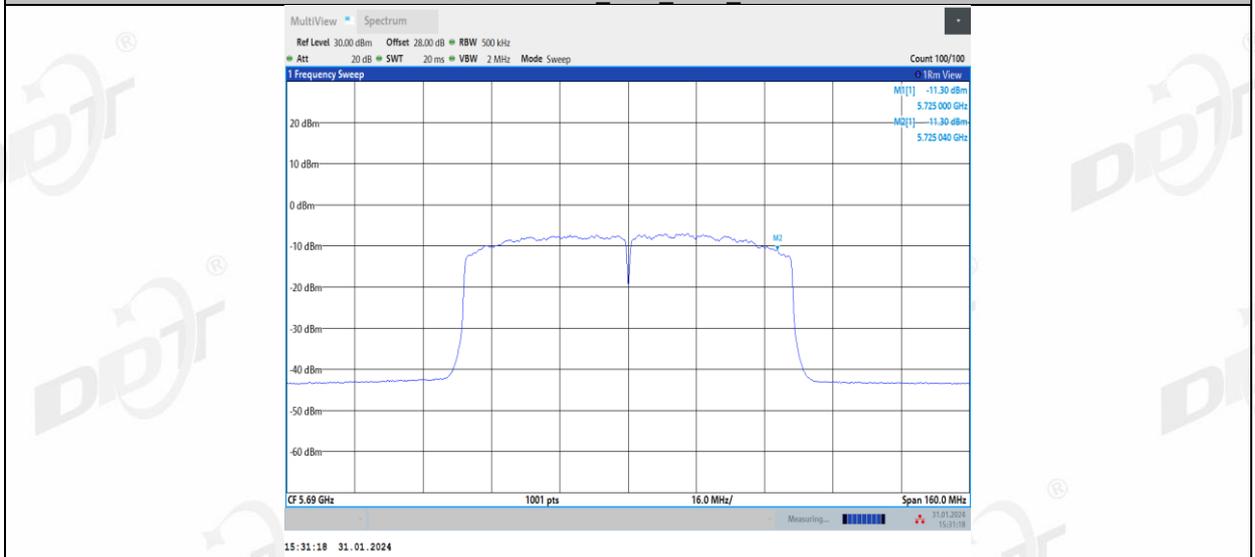
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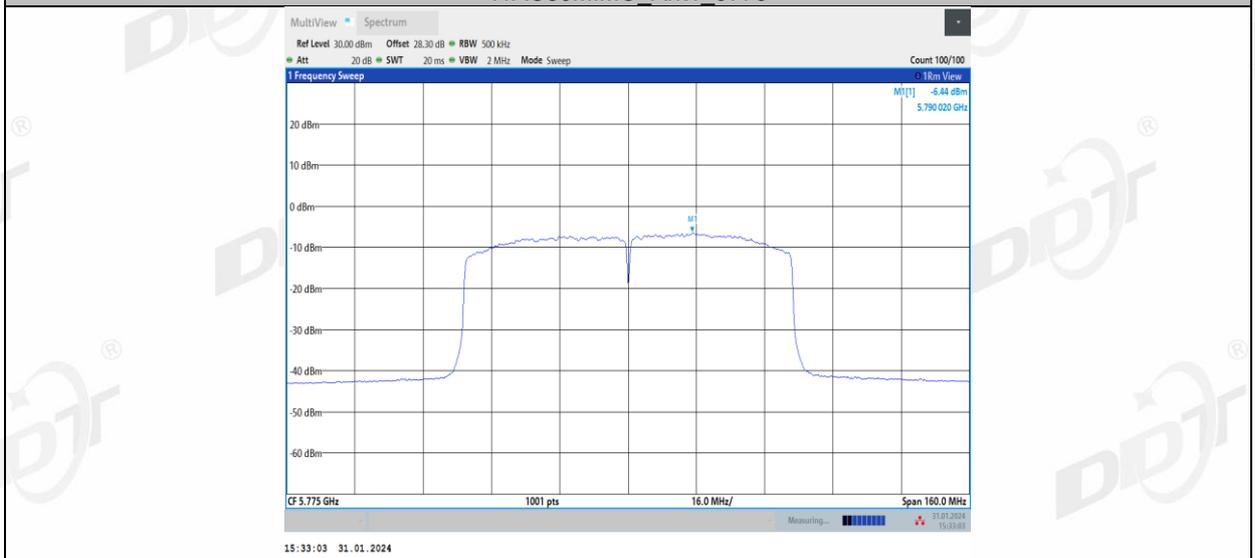
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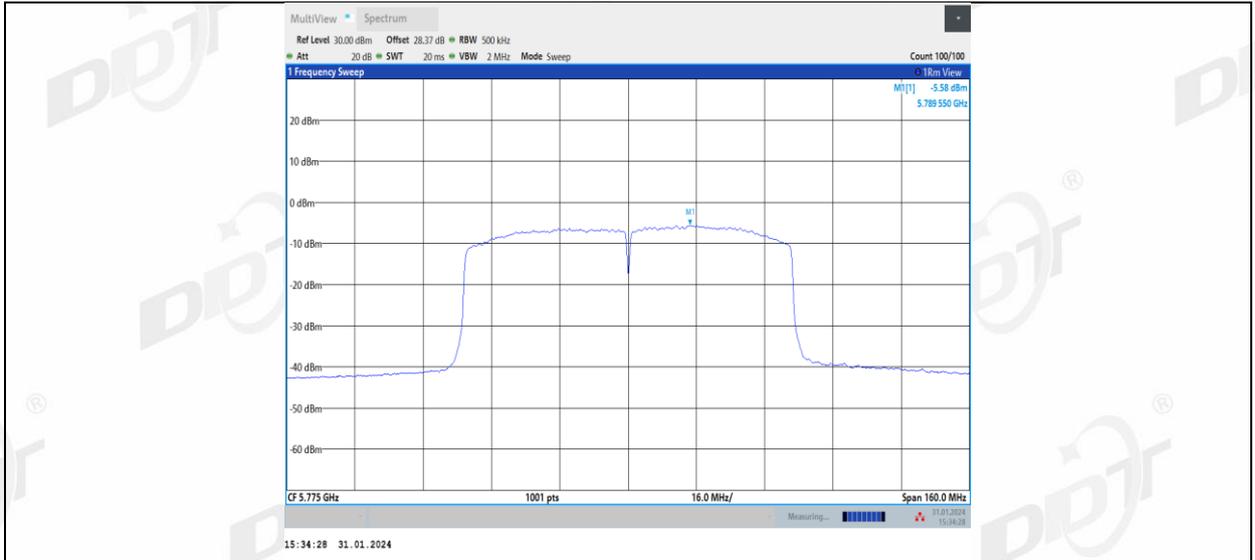
11AC80MIMO\_Ant2\_5690\_UNII-3



11AC80MIMO\_Ant1\_5775



11AC80MIMO\_Ant2\_5775



## 10. Frequency Stability Measurement

### 10.1. Limit of Frequency Stability

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

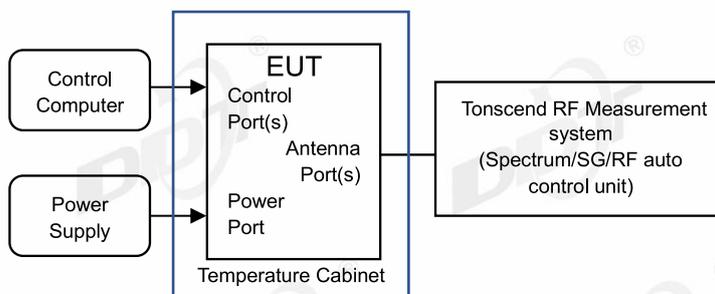
### 10.2. Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

### 10.3. Test procedures

- (1) To ensure emission at the band edge is maintained within the authorized band, those values shall be measured by radiation emissions at upper and lower frequency points, and finally compensated by frequency deviation as procedures below.
- (2) The EUT was operated at the maximum output power, and connected to the spectrum analyzer, which is set to maximum hold function and peak detector. The peak value of the power envelope was measured and noted. The upper and lower frequency points were respectively measured relatively 10 dB lower than the measured peak value.
- (3) The frequency deviation was calculated by adding the upper frequency point and the lower frequency point divided by two. Those detailed values of frequency deviation are provided in table below.

### 10.4. Test setup



10.5. Test result

Test Engineer:	Haofeng CHEN	Test Site:	RF Measurement System 4#
Ambient Condition:	23.6°C,51.2%RH	Test Date:	2024.01.22-2024.01.31
Test Power Supply:	DC 5V	EUT:	AIoT Edge Controller
Sample Number:	S23111537-05	Model No.:	MB41

Voltage								
Test Mode	Antenna	Frequency[MHz]	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11N20MIMO	Ant1	5180	NV	NT	0.00	0.000000	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	40000.00	7.722008	20	PASS
	Ant2	5180	NV	NT	0.00	0.000000	20	PASS
			LV	NT	20000.00	3.861004	20	PASS
			HV	NT	0.00	0.000000	20	PASS
	Ant1	5200	NV	NT	40000.00	7.692308	20	PASS
			LV	NT	20000.00	3.846154	20	PASS
			HV	NT	20000.00	3.846154	20	PASS
	Ant2	5200	NV	NT	40000.00	7.692308	20	PASS
			LV	NT	40000.00	7.692308	20	PASS
			HV	NT	40000.00	7.692308	20	PASS
	Ant1	5240	NV	NT	40000.00	7.633588	20	PASS
			LV	NT	40000.00	7.633588	20	PASS
			HV	NT	60000.00	11.450382	20	PASS
	Ant2	5240	NV	NT	60000.00	11.450382	20	PASS
			LV	NT	60000.00	11.450382	20	PASS
			HV	NT	60000.00	11.450382	20	PASS
	Ant1	5260	NV	NT	40000.00	7.604563	20	PASS
			LV	NT	40000.00	7.604563	20	PASS
			HV	NT	40000.00	7.604563	20	PASS
	Ant2	5260	NV	NT	60000.00	11.406844	20	PASS
			LV	NT	40000.00	7.604563	20	PASS
			HV	NT	40000.00	7.604563	20	PASS
	Ant1	5280	NV	NT	40000.00	7.575758	20	PASS
			LV	NT	60000.00	11.363636	20	PASS
			HV	NT	60000.00	11.363636	20	PASS
	Ant2	5280	NV	NT	40000.00	7.575758	20	PASS
			LV	NT	60000.00	11.363636	20	PASS
			HV	NT	60000.00	11.363636	20	PASS
	Ant1	5320	NV	NT	60000.00	11.278195	20	PASS
			LV	NT	40000.00	7.518797	20	PASS
			HV	NT	40000.00	7.518797	20	PASS
	Ant2	5320	NV	NT	40000.00	7.518797	20	PASS
			LV	NT	60000.00	11.278195	20	PASS
			HV	NT	60000.00	11.278195	20	PASS
	Ant1	5500	NV	NT	40000.00	7.272727	20	PASS
			LV	NT	40000.00	7.272727	20	PASS
			HV	NT	40000.00	7.272727	20	PASS
	Ant2	5500	NV	NT	80000.00	14.545455	20	PASS
			LV	NT	80000.00	14.545455	20	PASS
			HV	NT	60000.00	10.909091	20	PASS
	Ant1	5580	NV	NT	60000.00	10.752688	20	PASS
			LV	NT	80000.00	14.336918	20	PASS
			HV	NT	60000.00	10.752688	20	PASS
	Ant2	5580	NV	NT	20000.00	3.584229	20	PASS
			LV	NT	60000.00	10.752688	20	PASS
			HV	NT	80000.00	14.336918	20	PASS
Ant1	5700	NV	NT	60000.00	10.526316	20	PASS	
		LV	NT	40000.00	7.017544	20	PASS	
		HV	NT	40000.00	7.017544	20	PASS	
Ant2	5700	NV	NT	80000.00	14.035088	20	PASS	
		LV	NT	80000.00	14.035088	20	PASS	

11N40MIMO	Ant1	5720	HV	NT	80000.00	14.035088	20	PASS
			NV	NT	40000.00	6.993007	20	PASS
			LV	NT	60000.00	10.489510	20	PASS
	Ant2	5720	HV	NT	60000.00	10.489510	20	PASS
			NV	NT	40000.00	6.993007	20	PASS
			LV	NT	60000.00	10.489510	20	PASS
	Ant1	5745	HV	NT	60000.00	10.443864	20	PASS
			NV	NT	60000.00	10.443864	20	PASS
			LV	NT	60000.00	10.443864	20	PASS
	Ant2	5745	HV	NT	60000.00	10.443864	20	PASS
			NV	NT	60000.00	10.443864	20	PASS
			LV	NT	40000.00	6.962576	20	PASS
	Ant1	5785	HV	NT	80000.00	13.925152	20	PASS
			NV	NT	40000.00	6.914434	20	PASS
			LV	NT	40000.00	6.914434	20	PASS
	Ant2	5785	HV	NT	40000.00	6.914434	20	PASS
			NV	NT	100000.00	17.286085	20	PASS
			LV	NT	60000.00	10.371651	20	PASS
	Ant1	5825	HV	NT	80000.00	13.828868	20	PASS
			NV	NT	40000.00	6.866953	20	PASS
			LV	NT	40000.00	6.866953	20	PASS
	Ant2	5825	HV	NT	60000.00	10.300429	20	PASS
			NV	NT	60000.00	10.300429	20	PASS
			LV	NT	60000.00	10.300429	20	PASS
	Ant1	5190	HV	NT	60000.00	10.300429	20	PASS
			NV	NT	80000.00	15.414258	20	PASS
			LV	NT	40000.00	7.707129	20	PASS
	Ant2	5190	HV	NT	80000.00	15.414258	20	PASS
			NV	NT	40000.00	7.707129	20	PASS
			LV	NT	80000.00	15.414258	20	PASS
	Ant1	5230	HV	NT	40000.00	7.707129	20	PASS
			NV	NT	80000.00	15.296367	20	PASS
			LV	NT	40000.00	7.648184	20	PASS
	Ant2	5230	HV	NT	40000.00	7.648184	20	PASS
			NV	NT	40000.00	7.648184	20	PASS
			LV	NT	40000.00	7.648184	20	PASS
Ant1	5270	HV	NT	40000.00	7.648184	20	PASS	
		NV	NT	40000.00	7.590133	20	PASS	
		LV	NT	40000.00	7.590133	20	PASS	
Ant2	5270	HV	NT	40000.00	7.590133	20	PASS	
		NV	NT	40000.00	7.590133	20	PASS	
		LV	NT	40000.00	7.590133	20	PASS	
Ant1	5310	HV	NT	40000.00	7.590133	20	PASS	
		NV	NT	80000.00	15.065913	20	PASS	
		LV	NT	40000.00	7.532957	20	PASS	
Ant2	5310	HV	NT	80000.00	15.065913	20	PASS	
		NV	NT	0.00	0.000000	20	PASS	
		LV	NT	0.00	0.000000	20	PASS	
Ant1	5510	HV	NT	40000.00	7.532957	20	PASS	
		NV	NT	0.00	0.000000	20	PASS	
		LV	NT	0.00	0.000000	20	PASS	
Ant2	5510	HV	NT	0.00	0.000000	20	PASS	
		NV	NT	80000.00	14.519056	20	PASS	
		LV	NT	40000.00	7.259528	20	PASS	
Ant1	5550	HV	NT	80000.00	14.519056	20	PASS	
		NV	NT	40000.00	7.207207	20	PASS	
		LV	NT	80000.00	14.414414	20	PASS	
Ant2	5550	HV	NT	80000.00	14.414414	20	PASS	
		NV	NT	40000.00	7.207207	20	PASS	
		LV	NT	40000.00	7.207207	20	PASS	
Ant1	5670	HV	NT	40000.00	7.207207	20	PASS	
		NV	NT	0.00	0.000000	20	PASS	
		LV	NT	40000.00	7.054674	20	PASS	
			HV	NT	40000.00	7.054674	20	PASS

	Ant2	5670	NV	NT	80000.00	14.109347	20	PASS	
			LV	NT	80000.00	14.109347	20	PASS	
			HV	NT	80000.00	14.109347	20	PASS	
	Ant1	5710	NV	NT	80000.00	14.010508	20	PASS	
			LV	NT	80000.00	14.010508	20	PASS	
			HV	NT	40000.00	7.005254	20	PASS	
	Ant2	5710	NV	NT	40000.00	7.005254	20	PASS	
			LV	NT	80000.00	14.010508	20	PASS	
			HV	NT	80000.00	14.010508	20	PASS	
	Ant1	5755	NV	NT	80000.00	13.900956	20	PASS	
			LV	NT	80000.00	13.900956	20	PASS	
			HV	NT	40000.00	6.950478	20	PASS	
	Ant2	5755	NV	NT	40000.00	6.950478	20	PASS	
			LV	NT	80000.00	13.900956	20	PASS	
			HV	NT	80000.00	13.900956	20	PASS	
	Ant1	5795	NV	NT	40000.00	6.902502	20	PASS	
			LV	NT	40000.00	6.902502	20	PASS	
			HV	NT	40000.00	6.902502	20	PASS	
	Ant2	5795	NV	NT	80000.00	13.805004	20	PASS	
			LV	NT	80000.00	13.805004	20	PASS	
			HV	NT	80000.00	13.805004	20	PASS	
	11AC80MIMO	Ant1	5210	NV	NT	80000.00	15.355086	20	PASS
				LV	NT	80000.00	15.355086	20	PASS
				HV	NT	80000.00	15.355086	20	PASS
Ant2		5210	NV	NT	80000.00	15.355086	20	PASS	
			LV	NT	80000.00	15.355086	20	PASS	
			HV	NT	80000.00	15.355086	20	PASS	
Ant1		5290	NV	NT	0.00	0.000000	20	PASS	
			LV	NT	0.00	0.000000	20	PASS	
			HV	NT	0.00	0.000000	20	PASS	
Ant2		5290	NV	NT	0.00	0.000000	20	PASS	
			LV	NT	0.00	0.000000	20	PASS	
			HV	NT	0.00	0.000000	20	PASS	
Ant1		5530	NV	NT	80000.00	14.466546	20	PASS	
			LV	NT	80000.00	14.466546	20	PASS	
			HV	NT	80000.00	14.466546	20	PASS	
Ant2		5530	NV	NT	80000.00	14.466546	20	PASS	
			LV	NT	80000.00	14.466546	20	PASS	
			HV	NT	80000.00	14.466546	20	PASS	
Ant1		5610	NV	NT	80000.00	14.260250	20	PASS	
			LV	NT	0.00	0.000000	20	PASS	
			HV	NT	0.00	0.000000	20	PASS	
Ant2		5610	NV	NT	80000.00	14.260250	20	PASS	
			LV	NT	80000.00	14.260250	20	PASS	
			HV	NT	80000.00	14.260250	20	PASS	
Ant1	5690	NV	NT	0.00	0.000000	20	PASS		
		LV	NT	80000.00	14.059754	20	PASS		
		HV	NT	-80000.00	-14.059754	20	PASS		
Ant2	5690	NV	NT	0.00	0.000000	20	PASS		
		LV	NT	80000.00	14.059754	20	PASS		
		HV	NT	80000.00	14.059754	20	PASS		
Ant1	5775	NV	NT	0.00	0.000000	20	PASS		
		LV	NT	0.00	0.000000	20	PASS		
		HV	NT	0.00	0.000000	20	PASS		
Ant2	5775	NV	NT	0.00	0.000000	20	PASS		
		LV	NT	0.00	0.000000	20	PASS		
		HV	NT	0.00	0.000000	20	PASS		

Temperature								
Test Mode	Antenna	Frequency[MHz]	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11N20MIMO	Ant1	5180	NV	-30	40000.00	7.722008	20	PASS
			NV	-20	40000.00	7.722008	20	PASS
			NV	-10	20000.00	3.861004	20	PASS

			NV	0	40000.00	7.722008	20	PASS
			NV	10	40000.00	7.722008	20	PASS
			NV	20	40000.00	7.722008	20	PASS
			NV	30	20000.00	3.861004	20	PASS
			NV	40	40000.00	7.722008	20	PASS
			NV	50	40000.00	7.722008	20	PASS
	Ant2	5180	NV	-30	0.00	0.000000	20	PASS
			NV	-20	0.00	0.000000	20	PASS
			NV	-10	20000.00	3.861004	20	PASS
			NV	0	20000.00	3.861004	20	PASS
			NV	10	20000.00	3.861004	20	PASS
			NV	20	20000.00	3.861004	20	PASS
			NV	30	0.00	0.000000	20	PASS
			NV	40	20000.00	3.861004	20	PASS
	Ant1	5200	NV	50	0.00	0.000000	20	PASS
			NV	-30	40000.00	7.692308	20	PASS
			NV	-20	20000.00	3.846154	20	PASS
			NV	-10	20000.00	3.846154	20	PASS
			NV	0	40000.00	7.692308	20	PASS
			NV	10	40000.00	7.692308	20	PASS
			NV	20	40000.00	7.692308	20	PASS
			NV	30	40000.00	7.692308	20	PASS
	Ant2	5200	NV	40	40000.00	7.692308	20	PASS
			NV	50	40000.00	7.692308	20	PASS
NV			-30	40000.00	7.692308	20	PASS	
NV			-20	0.00	0.000000	20	PASS	
NV			-10	20000.00	3.846154	20	PASS	
NV			0	40000.00	7.692308	20	PASS	
NV			10	60000.00	11.538462	20	PASS	
NV			20	40000.00	7.692308	20	PASS	
Ant1	5240	NV	30	40000.00	7.692308	20	PASS	
		NV	40	60000.00	11.538462	20	PASS	
		NV	50	40000.00	7.692308	20	PASS	
		NV	-30	40000.00	7.633588	20	PASS	
		NV	-20	40000.00	7.633588	20	PASS	
		NV	-10	20000.00	3.816794	20	PASS	
		NV	0	40000.00	7.633588	20	PASS	
		NV	10	60000.00	11.450382	20	PASS	
Ant2	5240	NV	20	40000.00	7.633588	20	PASS	
		NV	30	40000.00	7.633588	20	PASS	
		NV	40	40000.00	7.633588	20	PASS	
		NV	50	40000.00	7.633588	20	PASS	
		NV	-30	40000.00	7.633588	20	PASS	
		NV	-20	60000.00	11.450382	20	PASS	
		NV	-10	60000.00	11.450382	20	PASS	
		NV	0	60000.00	11.450382	20	PASS	
Ant1	5260	NV	10	60000.00	11.450382	20	PASS	
		NV	20	40000.00	7.633588	20	PASS	
		NV	30	40000.00	7.633588	20	PASS	
		NV	40	40000.00	7.633588	20	PASS	
		NV	50	40000.00	7.633588	20	PASS	
		NV	-30	40000.00	7.604563	20	PASS	
		NV	-20	40000.00	7.604563	20	PASS	
		NV	-10	40000.00	7.604563	20	PASS	
Ant2	5260	NV	0	40000.00	7.604563	20	PASS	
		NV	10	40000.00	7.604563	20	PASS	
		NV	20	40000.00	7.604563	20	PASS	
		NV	30	60000.00	11.406844	20	PASS	
		NV	40	40000.00	7.604563	20	PASS	
		NV	50	40000.00	7.604563	20	PASS	
		NV	-30	40000.00	7.604563	20	PASS	
		NV	-20	60000.00	11.406844	20	PASS	
			NV	-10	60000.00	11.406844	20	PASS
			NV	0	60000.00	11.406844	20	PASS

		NV	10	60000.00	11.406844	20	PASS
		NV	20	40000.00	7.604563	20	PASS
		NV	30	60000.00	11.406844	20	PASS
		NV	40	60000.00	11.406844	20	PASS
		NV	50	60000.00	11.406844	20	PASS
Ant1	5280	NV	-30	40000.00	7.575758	20	PASS
		NV	-20	20000.00	3.787879	20	PASS
		NV	-10	80000.00	15.151515	20	PASS
		NV	0	60000.00	11.363636	20	PASS
		NV	10	60000.00	11.363636	20	PASS
		NV	20	60000.00	11.363636	20	PASS
		NV	30	60000.00	11.363636	20	PASS
		NV	40	60000.00	11.363636	20	PASS
		NV	50	40000.00	7.575758	20	PASS
		Ant2	5280	NV	-30	60000.00	11.363636
NV	-20			60000.00	11.363636	20	PASS
NV	-10			40000.00	7.575758	20	PASS
NV	0			40000.00	7.575758	20	PASS
NV	10			60000.00	11.363636	20	PASS
NV	20			60000.00	11.363636	20	PASS
NV	30			60000.00	11.363636	20	PASS
NV	40			60000.00	11.363636	20	PASS
NV	50			60000.00	11.363636	20	PASS
Ant1	5320			NV	-30	60000.00	11.278195
		NV	-20	60000.00	11.278195	20	PASS
		NV	-10	40000.00	7.518797	20	PASS
		NV	0	40000.00	7.518797	20	PASS
		NV	10	60000.00	11.278195	20	PASS
		NV	20	40000.00	7.518797	20	PASS
		NV	30	60000.00	11.278195	20	PASS
		NV	40	60000.00	11.278195	20	PASS
		NV	50	60000.00	11.278195	20	PASS
		Ant2	5320	NV	-30	60000.00	11.278195
NV	-20			60000.00	11.278195	20	PASS
NV	-10			60000.00	11.278195	20	PASS
NV	0			60000.00	11.278195	20	PASS
NV	10			60000.00	11.278195	20	PASS
NV	20			60000.00	11.278195	20	PASS
NV	30			60000.00	11.278195	20	PASS
NV	40			60000.00	11.278195	20	PASS
NV	50			60000.00	11.278195	20	PASS
Ant1	5500			NV	-30	40000.00	7.272727
		NV	-20	40000.00	7.272727	20	PASS
		NV	-10	40000.00	7.272727	20	PASS
		NV	0	40000.00	7.272727	20	PASS
		NV	10	40000.00	7.272727	20	PASS
		NV	20	40000.00	7.272727	20	PASS
		NV	30	40000.00	7.272727	20	PASS
		NV	40	40000.00	7.272727	20	PASS
		NV	50	40000.00	7.272727	20	PASS
		Ant2	5500	NV	-30	60000.00	10.909091
NV	-20			80000.00	14.545455	20	PASS
NV	-10			60000.00	10.909091	20	PASS
NV	0			80000.00	14.545455	20	PASS
NV	10			80000.00	14.545455	20	PASS
NV	20			80000.00	14.545455	20	PASS
NV	30			80000.00	14.545455	20	PASS
NV	40			60000.00	10.909091	20	PASS
NV	50			80000.00	14.545455	20	PASS
Ant1	5580			NV	-30	80000.00	14.336918
		NV	-20	80000.00	14.336918	20	PASS
		NV	-10	80000.00	14.336918	20	PASS
		NV	0	80000.00	14.336918	20	PASS
		NV	10	80000.00	14.336918	20	PASS

		NV	20	80000.00	14.336918	20	PASS			
		NV	30	80000.00	14.336918	20	PASS			
		NV	40	80000.00	14.336918	20	PASS			
		NV	50	80000.00	14.336918	20	PASS			
	Ant2	5580	NV	-30	60000.00	10.752688	20	PASS		
			NV	-20	80000.00	14.336918	20	PASS		
			NV	-10	60000.00	10.752688	20	PASS		
			NV	0	80000.00	14.336918	20	PASS		
			NV	10	60000.00	10.752688	20	PASS		
			NV	20	80000.00	14.336918	20	PASS		
			NV	30	80000.00	14.336918	20	PASS		
			NV	40	60000.00	10.752688	20	PASS		
			NV	50	60000.00	10.752688	20	PASS		
			Ant1	5700	NV	-30	60000.00	10.526316	20	PASS
					NV	-20	60000.00	10.526316	20	PASS
	NV	-10			60000.00	10.526316	20	PASS		
	NV	0			40000.00	7.017544	20	PASS		
	NV	10			60000.00	10.526316	20	PASS		
	NV	20			60000.00	10.526316	20	PASS		
	NV	30			60000.00	10.526316	20	PASS		
	NV	40			60000.00	10.526316	20	PASS		
	NV	50			60000.00	10.526316	20	PASS		
	Ant2	5700	NV	-30	80000.00	14.035088	20	PASS		
			NV	-20	80000.00	14.035088	20	PASS		
			NV	-10	80000.00	14.035088	20	PASS		
			NV	0	80000.00	14.035088	20	PASS		
			NV	10	80000.00	14.035088	20	PASS		
			NV	20	80000.00	14.035088	20	PASS		
			NV	30	60000.00	10.526316	20	PASS		
			NV	40	80000.00	14.035088	20	PASS		
			NV	50	60000.00	10.526316	20	PASS		
	Ant1	5720	NV	-30	40000.00	6.993007	20	PASS		
			NV	-20	60000.00	10.489510	20	PASS		
			NV	-10	80000.00	13.986014	20	PASS		
			NV	0	60000.00	10.489510	20	PASS		
			NV	10	60000.00	10.489510	20	PASS		
			NV	20	80000.00	13.986014	20	PASS		
			NV	30	60000.00	10.489510	20	PASS		
			NV	40	60000.00	10.489510	20	PASS		
			NV	50	60000.00	10.489510	20	PASS		
	Ant2	5720	NV	-30	60000.00	10.489510	20	PASS		
			NV	-20	40000.00	6.993007	20	PASS		
			NV	-10	40000.00	6.993007	20	PASS		
			NV	0	40000.00	6.993007	20	PASS		
			NV	10	60000.00	10.489510	20	PASS		
			NV	20	60000.00	10.489510	20	PASS		
			NV	30	40000.00	6.993007	20	PASS		
			NV	40	60000.00	10.489510	20	PASS		
			NV	50	60000.00	10.489510	20	PASS		
	Ant1	5745	NV	-30	80000.00	13.925152	20	PASS		
			NV	-20	80000.00	13.925152	20	PASS		
			NV	-10	80000.00	13.925152	20	PASS		
			NV	0	80000.00	13.925152	20	PASS		
			NV	10	80000.00	13.925152	20	PASS		
			NV	20	80000.00	13.925152	20	PASS		
			NV	30	80000.00	13.925152	20	PASS		
			NV	40	100000.00	17.406440	20	PASS		
			NV	50	80000.00	13.925152	20	PASS		
	Ant2	5745	NV	-30	80000.00	13.925152	20	PASS		
			NV	-20	80000.00	13.925152	20	PASS		
			NV	-10	60000.00	10.443864	20	PASS		
			NV	0	60000.00	10.443864	20	PASS		
			NV	10	60000.00	10.443864	20	PASS		
			NV	20	60000.00	10.443864	20	PASS		

11N40MIMO	Ant1	5785	NV	30	60000.00	10.443864	20	PASS		
			NV	40	80000.00	13.925152	20	PASS		
			NV	50	60000.00	10.443864	20	PASS		
			NV	-30	60000.00	10.371651	20	PASS		
			NV	-20	60000.00	10.371651	20	PASS		
			NV	-10	60000.00	10.371651	20	PASS		
			NV	0	60000.00	10.371651	20	PASS		
			NV	10	60000.00	10.371651	20	PASS		
			NV	20	80000.00	13.828868	20	PASS		
			NV	30	80000.00	13.828868	20	PASS		
			NV	40	80000.00	13.828868	20	PASS		
			NV	50	60000.00	10.371651	20	PASS		
	Ant2	5785	NV	-30	80000.00	13.828868	20	PASS		
			NV	-20	80000.00	13.828868	20	PASS		
			NV	-10	60000.00	10.371651	20	PASS		
			NV	0	60000.00	10.371651	20	PASS		
			NV	10	80000.00	13.828868	20	PASS		
			NV	20	60000.00	10.371651	20	PASS		
			NV	30	80000.00	13.828868	20	PASS		
			NV	40	60000.00	10.371651	20	PASS		
			NV	50	40000.00	6.914434	20	PASS		
			Ant1	5825	NV	-30	40000.00	6.866953	20	PASS
					NV	-20	40000.00	6.866953	20	PASS
					NV	-10	40000.00	6.866953	20	PASS
	NV	0			60000.00	10.300429	20	PASS		
	NV	10			40000.00	6.866953	20	PASS		
	NV	20			80000.00	13.733906	20	PASS		
	NV	30			80000.00	13.733906	20	PASS		
	NV	40			60000.00	10.300429	20	PASS		
	Ant2	5825	NV	50	80000.00	13.733906	20	PASS		
			NV	-30	60000.00	10.300429	20	PASS		
			NV	-20	60000.00	10.300429	20	PASS		
			NV	-10	60000.00	10.300429	20	PASS		
			NV	0	80000.00	13.733906	20	PASS		
			NV	10	60000.00	10.300429	20	PASS		
			NV	20	60000.00	10.300429	20	PASS		
			NV	30	60000.00	10.300429	20	PASS		
	Ant1	5190	NV	40	60000.00	10.300429	20	PASS		
			NV	50	60000.00	10.300429	20	PASS		
			NV	-30	80000.00	15.414258	20	PASS		
			NV	-20	40000.00	7.707129	20	PASS		
			NV	-10	40000.00	7.707129	20	PASS		
NV			0	40000.00	7.707129	20	PASS			
NV			10	40000.00	7.707129	20	PASS			
NV			20	80000.00	15.414258	20	PASS			
NV			30	80000.00	15.414258	20	PASS			
NV			40	80000.00	15.414258	20	PASS			
NV			50	80000.00	15.414258	20	PASS			
Ant2			5190	NV	-30	80000.00	15.414258	20	PASS	
	NV	-20		40000.00	7.707129	20	PASS			
	NV	-10		40000.00	7.707129	20	PASS			
	NV	0		40000.00	7.707129	20	PASS			
	NV	10		40000.00	7.707129	20	PASS			
	NV	20		40000.00	7.707129	20	PASS			
	NV	30		40000.00	7.707129	20	PASS			
	NV	40		40000.00	7.707129	20	PASS			
Ant1	5230	NV	50	40000.00	7.707129	20	PASS			
		NV	-30	80000.00	15.296367	20	PASS			
		NV	-20	40000.00	7.648184	20	PASS			
		NV	-10	80000.00	15.296367	20	PASS			
		NV	0	80000.00	15.296367	20	PASS			
		NV	10	80000.00	15.296367	20	PASS			
			NV	20	40000.00	7.648184	20	PASS		
			NV	30	80000.00	15.296367	20	PASS		

Ant2	5230	NV	40	80000.00	15.296367	20	PASS
		NV	50	40000.00	7.648184	20	PASS
		NV	-30	40000.00	7.648184	20	PASS
		NV	-20	40000.00	7.648184	20	PASS
		NV	-10	40000.00	7.648184	20	PASS
		NV	0	80000.00	15.296367	20	PASS
		NV	10	40000.00	7.648184	20	PASS
		NV	20	40000.00	7.648184	20	PASS
		NV	30	40000.00	7.648184	20	PASS
		NV	40	40000.00	7.648184	20	PASS
Ant1	5270	NV	50	40000.00	7.648184	20	PASS
		NV	-30	40000.00	7.590133	20	PASS
		NV	-20	40000.00	7.590133	20	PASS
		NV	-10	80000.00	15.180266	20	PASS
		NV	0	40000.00	7.590133	20	PASS
		NV	10	40000.00	7.590133	20	PASS
		NV	20	40000.00	7.590133	20	PASS
		NV	30	40000.00	7.590133	20	PASS
Ant2	5270	NV	40	40000.00	7.590133	20	PASS
		NV	50	40000.00	7.590133	20	PASS
		NV	-30	80000.00	15.180266	20	PASS
		NV	-20	40000.00	7.590133	20	PASS
		NV	-10	80000.00	15.180266	20	PASS
		NV	0	80000.00	15.180266	20	PASS
		NV	10	0.00	0.000000	20	PASS
		NV	20	40000.00	7.590133	20	PASS
Ant1	5310	NV	30	40000.00	7.590133	20	PASS
		NV	40	40000.00	7.590133	20	PASS
		NV	50	40000.00	7.590133	20	PASS
		NV	-30	80000.00	15.065913	20	PASS
		NV	-20	0.00	0.000000	20	PASS
		NV	-10	80000.00	15.065913	20	PASS
		NV	0	80000.00	15.065913	20	PASS
		NV	10	80000.00	15.065913	20	PASS
Ant2	5310	NV	20	80000.00	15.065913	20	PASS
		NV	30	80000.00	15.065913	20	PASS
		NV	40	80000.00	15.065913	20	PASS
		NV	50	80000.00	15.065913	20	PASS
		NV	-30	40000.00	7.532957	20	PASS
		NV	-20	0.00	0.000000	20	PASS
		NV	-10	0.00	0.000000	20	PASS
		NV	0	0.00	0.000000	20	PASS
Ant1	5510	NV	10	80000.00	15.065913	20	PASS
		NV	20	80000.00	15.065913	20	PASS
		NV	30	0.00	0.000000	20	PASS
		NV	40	0.00	0.000000	20	PASS
		NV	50	0.00	0.000000	20	PASS
		NV	-30	0.00	0.000000	20	PASS
		NV	-20	40000.00	7.259528	20	PASS
		NV	-10	0.00	0.000000	20	PASS
Ant2	5510	NV	0	0.00	0.000000	20	PASS
		NV	10	0.00	0.000000	20	PASS
		NV	20	0.00	0.000000	20	PASS
		NV	30	0.00	0.000000	20	PASS
		NV	40	40000.00	7.259528	20	PASS
		NV	50	40000.00	7.259528	20	PASS
		NV	-30	40000.00	7.259528	20	PASS
		NV	-20	80000.00	14.519056	20	PASS
Ant2	5510	NV	-10	80000.00	14.519056	20	PASS
		NV	0	80000.00	14.519056	20	PASS
		NV	10	80000.00	14.519056	20	PASS
		NV	20	80000.00	14.519056	20	PASS
		NV	30	80000.00	14.519056	20	PASS
		NV	40	80000.00	14.519056	20	PASS

Ant1	5550	NV	50	80000.00	14.519056	20	PASS
		NV	-30	80000.00	14.414414	20	PASS
		NV	-20	80000.00	14.414414	20	PASS
		NV	-10	80000.00	14.414414	20	PASS
		NV	0	40000.00	7.207207	20	PASS
		NV	10	40000.00	7.207207	20	PASS
		NV	20	80000.00	14.414414	20	PASS
		NV	30	80000.00	14.414414	20	PASS
		NV	40	80000.00	14.414414	20	PASS
Ant2	5550	NV	50	80000.00	14.414414	20	PASS
		NV	-30	80000.00	14.414414	20	PASS
		NV	-20	40000.00	7.207207	20	PASS
		NV	-10	80000.00	14.414414	20	PASS
		NV	0	80000.00	14.414414	20	PASS
		NV	10	80000.00	14.414414	20	PASS
		NV	20	40000.00	7.207207	20	PASS
		NV	30	80000.00	14.414414	20	PASS
		NV	40	80000.00	14.414414	20	PASS
Ant1	5670	NV	50	80000.00	14.414414	20	PASS
		NV	-30	40000.00	7.054674	20	PASS
		NV	-20	40000.00	7.054674	20	PASS
		NV	-10	80000.00	14.109347	20	PASS
		NV	0	80000.00	14.109347	20	PASS
		NV	10	80000.00	14.109347	20	PASS
		NV	20	40000.00	7.054674	20	PASS
		NV	30	80000.00	14.109347	20	PASS
		NV	40	40000.00	7.054674	20	PASS
Ant2	5670	NV	50	80000.00	14.109347	20	PASS
		NV	-30	80000.00	14.109347	20	PASS
		NV	-20	80000.00	14.109347	20	PASS
		NV	-10	80000.00	14.109347	20	PASS
		NV	0	80000.00	14.109347	20	PASS
		NV	10	80000.00	14.109347	20	PASS
		NV	20	80000.00	14.109347	20	PASS
		NV	30	80000.00	14.109347	20	PASS
		NV	40	40000.00	7.054674	20	PASS
Ant1	5710	NV	50	80000.00	14.109347	20	PASS
		NV	-30	80000.00	14.109347	20	PASS
		NV	-20	80000.00	14.109347	20	PASS
		NV	-10	80000.00	14.109347	20	PASS
		NV	0	80000.00	14.109347	20	PASS
		NV	10	80000.00	14.109347	20	PASS
		NV	20	80000.00	14.109347	20	PASS
		NV	30	80000.00	14.109347	20	PASS
		NV	40	80000.00	14.109347	20	PASS
Ant2	5710	NV	50	0.00	0.000000	20	PASS
		NV	-30	40000.00	7.005254	20	PASS
		NV	-20	40000.00	7.005254	20	PASS
		NV	-10	80000.00	14.010508	20	PASS
		NV	0	80000.00	14.010508	20	PASS
		NV	10	40000.00	7.005254	20	PASS
		NV	20	40000.00	7.005254	20	PASS
		NV	30	80000.00	14.010508	20	PASS
		NV	40	80000.00	14.010508	20	PASS
Ant1	5755	NV	50	40000.00	7.005254	20	PASS
		NV	-30	40000.00	7.005254	20	PASS
		NV	-20	80000.00	13.900956	20	PASS
		NV	-10	80000.00	13.900956	20	PASS
		NV	0	80000.00	13.900956	20	PASS
		NV	10	40000.00	6.950478	20	PASS
		NV	20	40000.00	6.950478	20	PASS
		NV	30	40000.00	6.950478	20	PASS
		NV	40	80000.00	13.900956	20	PASS
NV	50	80000.00	13.900956	20	PASS		

11AC80MIMO	Ant2	5755	NV	-30	80000.00	13.900956	20	PASS
			NV	-20	40000.00	6.950478	20	PASS
			NV	-10	40000.00	6.950478	20	PASS
			NV	0	40000.00	6.950478	20	PASS
			NV	10	80000.00	13.900956	20	PASS
			NV	20	40000.00	6.950478	20	PASS
			NV	30	40000.00	6.950478	20	PASS
			NV	40	40000.00	6.950478	20	PASS
	NV	50	40000.00	6.950478	20	PASS		
	Ant1	5795	NV	-30	80000.00	13.805004	20	PASS
			NV	-20	40000.00	6.902502	20	PASS
			NV	-10	40000.00	6.902502	20	PASS
			NV	0	80000.00	13.805004	20	PASS
			NV	10	80000.00	13.805004	20	PASS
			NV	20	40000.00	6.902502	20	PASS
			NV	30	40000.00	6.902502	20	PASS
			NV	40	80000.00	13.805004	20	PASS
	NV	50	40000.00	6.902502	20	PASS		
	Ant2	5795	NV	-30	80000.00	13.805004	20	PASS
			NV	-20	80000.00	13.805004	20	PASS
			NV	-10	40000.00	6.902502	20	PASS
			NV	0	80000.00	13.805004	20	PASS
			NV	10	80000.00	13.805004	20	PASS
			NV	20	80000.00	13.805004	20	PASS
			NV	30	80000.00	13.805004	20	PASS
			NV	40	40000.00	6.902502	20	PASS
	NV	50	80000.00	13.805004	20	PASS		
	Ant1	5210	NV	-30	80000.00	15.355086	20	PASS
NV			-20	80000.00	15.355086	20	PASS	
NV			-10	80000.00	15.355086	20	PASS	
NV			0	80000.00	15.355086	20	PASS	
NV			10	80000.00	15.355086	20	PASS	
NV			20	80000.00	15.355086	20	PASS	
NV			30	80000.00	15.355086	20	PASS	
NV			40	80000.00	15.355086	20	PASS	
NV	50	80000.00	15.355086	20	PASS			
Ant2	5210	NV	-30	80000.00	15.355086	20	PASS	
		NV	-20	80000.00	15.355086	20	PASS	
		NV	-10	80000.00	15.355086	20	PASS	
		NV	0	80000.00	15.355086	20	PASS	
		NV	10	80000.00	15.355086	20	PASS	
		NV	20	0.00	0.000000	20	PASS	
		NV	30	80000.00	15.355086	20	PASS	
		NV	40	80000.00	15.355086	20	PASS	
NV	50	80000.00	15.355086	20	PASS			
Ant1	5290	NV	-30	0.00	0.000000	20	PASS	
		NV	-20	0.00	0.000000	20	PASS	
		NV	-10	0.00	0.000000	20	PASS	
		NV	0	0.00	0.000000	20	PASS	
		NV	10	80000.00	15.122873	20	PASS	
		NV	20	80000.00	15.122873	20	PASS	
		NV	30	0.00	0.000000	20	PASS	
		NV	40	0.00	0.000000	20	PASS	
NV	50	80000.00	15.122873	20	PASS			
Ant2	5290	NV	-30	0.00	0.000000	20	PASS	
		NV	-20	0.00	0.000000	20	PASS	
		NV	-10	0.00	0.000000	20	PASS	
		NV	0	0.00	0.000000	20	PASS	
		NV	10	-80000.00	-15.122873	20	PASS	
		NV	20	0.00	0.000000	20	PASS	
		NV	30	0.00	0.000000	20	PASS	
		NV	40	0.00	0.000000	20	PASS	
NV	50	80000.00	15.122873	20	PASS			
Ant1	5530	NV	-30	80000.00	14.466546	20	PASS	

			NV	-20	80000.00	14.466546	20	PASS
			NV	-10	80000.00	14.466546	20	PASS
			NV	0	80000.00	14.466546	20	PASS
			NV	10	80000.00	14.466546	20	PASS
			NV	20	80000.00	14.466546	20	PASS
			NV	30	80000.00	14.466546	20	PASS
			NV	40	0.00	0.000000	20	PASS
			NV	50	0.00	0.000000	20	PASS
	Ant2	5530	NV	-30	80000.00	14.466546	20	PASS
			NV	-20	80000.00	14.466546	20	PASS
			NV	-10	80000.00	14.466546	20	PASS
			NV	0	80000.00	14.466546	20	PASS
			NV	10	80000.00	14.466546	20	PASS
			NV	20	80000.00	14.466546	20	PASS
			NV	30	80000.00	14.466546	20	PASS
			NV	40	80000.00	14.466546	20	PASS
			NV	50	80000.00	14.466546	20	PASS
	Ant1	5610	NV	-30	0.00	0.000000	20	PASS
			NV	-20	0.00	0.000000	20	PASS
			NV	-10	0.00	0.000000	20	PASS
			NV	0	80000.00	14.260250	20	PASS
			NV	10	80000.00	14.260250	20	PASS
			NV	20	0.00	0.000000	20	PASS
			NV	30	80000.00	14.260250	20	PASS
			NV	40	0.00	0.000000	20	PASS
			NV	50	80000.00	14.260250	20	PASS
	Ant2	5610	NV	-30	0.00	0.000000	20	PASS
			NV	-20	0.00	0.000000	20	PASS
			NV	-10	-80000.00	-14.260250	20	PASS
			NV	0	0.00	0.000000	20	PASS
			NV	10	0.00	0.000000	20	PASS
			NV	20	80000.00	14.260250	20	PASS
			NV	30	80000.00	14.260250	20	PASS
			NV	40	80000.00	14.260250	20	PASS
			NV	50	80000.00	14.260250	20	PASS
	Ant1	5690	NV	-30	80000.00	14.059754	20	PASS
			NV	-20	80000.00	14.059754	20	PASS
			NV	-10	80000.00	14.059754	20	PASS
			NV	0	0.00	0.000000	20	PASS
			NV	10	80000.00	14.059754	20	PASS
			NV	20	80000.00	14.059754	20	PASS
			NV	30	80000.00	14.059754	20	PASS
			NV	40	80000.00	14.059754	20	PASS
			NV	50	80000.00	14.059754	20	PASS
	Ant2	5690	NV	-30	80000.00	14.059754	20	PASS
			NV	-20	80000.00	14.059754	20	PASS
			NV	-10	80000.00	14.059754	20	PASS
			NV	0	80000.00	14.059754	20	PASS
			NV	10	-80000.00	-14.059754	20	PASS
			NV	20	80000.00	14.059754	20	PASS
			NV	30	80000.00	14.059754	20	PASS
			NV	40	80000.00	14.059754	20	PASS
			NV	50	80000.00	14.059754	20	PASS
	Ant1	5775	NV	-30	0.00	0.000000	20	PASS
			NV	-20	0.00	0.000000	20	PASS
			NV	-10	0.00	0.000000	20	PASS
			NV	0	0.00	0.000000	20	PASS
			NV	10	0.00	0.000000	20	PASS
			NV	20	0.00	0.000000	20	PASS
			NV	30	80000.00	13.852814	20	PASS
			NV	40	80000.00	13.852814	20	PASS
			NV	50	0.00	0.000000	20	PASS
	Ant2	5775	NV	-30	0.00	0.000000	20	PASS
			NV	-20	80000.00	13.852814	20	PASS

		NV	-10	0.00	0.000000	20	PASS
		NV	0	80000.00	13.852814	20	PASS
		NV	10	80000.00	13.852814	20	PASS
		NV	20	0.00	0.000000	20	PASS
		NV	30	0.00	0.000000	20	PASS
		NV	40	0.00	0.000000	20	PASS
		NV	50	0.00	0.000000	20	PASS

## 11. Dynamic Frequency Selection

### 11.1. Applicability of DFS requirements

Table 1: Applicability of DFS Requirements Prior to Use of a Channel

Requirement	Operational Mode		
	<input type="checkbox"/> Master	<input checked="" type="checkbox"/> Client Without Radar Detection	<input type="checkbox"/> Client with Radar Detection
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
U-NII Detection Bandwidth	Yes	Not required	Yes

Table 2: Applicability of DFS requirements during normal operation

Requirement	Operational Mode	
	<input type="checkbox"/> Master Device or Client with Radar Detection	<input checked="" type="checkbox"/> Client Without Radar Detection
DFS Detection Threshold	Yes	Not required
Channel Closing Transmission Time	Yes	Yes
Channel Move Time	Yes	Yes
U-NII Detection Bandwidth	Yes	Not required

Additional requirements for devices with multiple bandwidth modes	<input type="checkbox"/> Master Device or Client with Radar Detection	<input checked="" type="checkbox"/> Client Without Radar Detection
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other tests	Any single BW mode	Not required

Note: Frequencies selected for statistical performance check should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.

## 11.2. Limit

### (1) DFS Detection Thresholds

Table 3: DFS Detection Thresholds for Master Devices and Client Devices with Radar Detection

Maximum Transmit Power	Value (See Notes 1, 2, and 3)
EIRP $\geq$ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64 dBm

Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna.  
 Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response.  
 Note3: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.

### (2) DFS Response Requirements

Table 4: DFS Response Requirement Values

Parameter	Value
Non-occupancy period	Minimum 30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds See Note 1.
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.
U-NII Detection Bandwidth	Minimum 100% of the U-NII 99% transmission power bandwidth. See Note 3.

Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst.  
 Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required facilitating a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.  
 Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.

## 11.3. Parameters of radar test waveforms

This section provides the parameters for required test waveforms, minimum percentage of successful detections, and the minimum number of trials that must be used for determining DFS conformance. Step intervals of 0.1 microsecond for Pulse Width, 1 microsecond for PRI, 1 MHz for chirp width and 1 for the number of pulses will be utilized for the random determination of specific test waveforms.

Table 5 Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (μsec)	PRI (μsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number of Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A	Roundup $\left\{ \begin{array}{l} \frac{1}{360} \\ \frac{19 \cdot 10^6}{\text{PRI}_{\mu\text{sec}}} \end{array} \right\}$	60%	30
		Test B			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120
Note 1: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests.					
Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a					
Test B: 15 unique PRI values randomly selected within the range of 518-3066 μsec, with a minimum increment of 1 μsec, excluding PRI values selected in Test A					

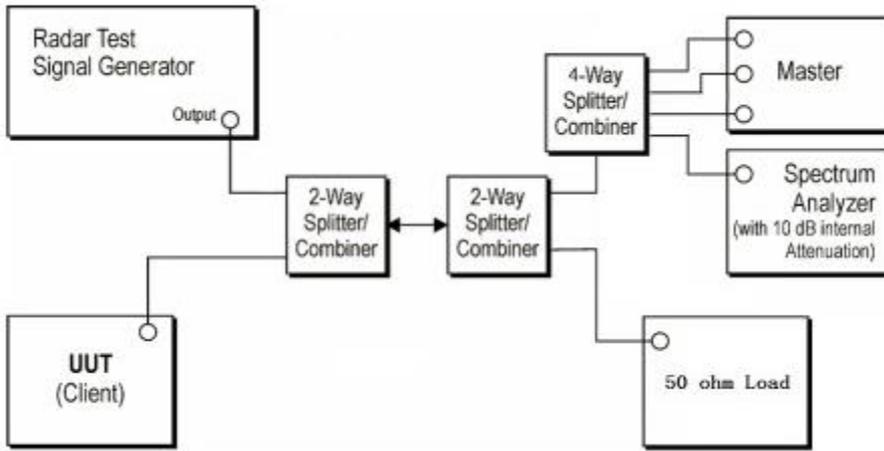
A minimum of 30 unique waveforms are required for each of the Short Pulse Radar Types 2 through 4. If more than 30 waveforms are used for Short Pulse Radar Types 2 through 4, then each additional waveform must also be unique and not repeated from the previous waveforms. If more than 30 waveforms are used for Short Pulse Radar Type 1, then each additional waveform is generated with Test B and must also be unique and not repeated from the previous waveforms in Tests A or B. Test aggregate is average of the percentage of successful detections of short pulse radar types 1-4

#### 11.4. Calibration of radar waveform

Radar Waveform Calibration Procedure:

- (1) A 50 ohm load is connected in place of the spectrum analyzer, and the spectrum analyzer is connected to place of the master
- (2) The interference Radar Detection Threshold Level is  $-62\text{dBm} + 0\text{dBi} + 1\text{dB} = -61\text{dBm}$  that had been taken into account the output power range and antenna gain.
- (3) The following equipment setup was used to calibrate the conducted radar waveform. A vector signal generator was utilized to establish the test signal level for radar type 0. During this process there were no transmissions by either the master or client device. The spectrum analyzer was switched to the zero spans (time domain) at the frequency of the radar waveform generator. Peak detection was used. The spectrum analyzer resolution bandwidth (RBW) and video bandwidth (VBW) were set to 3 MHz. The spectrum analyzer had offset  $-1.0\text{dB}$  to compensate RF cable loss  $1.0\text{dB}$ .
- (4) The vector signal generator amplitude was set so that the power level measured at the spectrum analyzer was  $-62\text{dBm} + 0\text{dBi} + 1\text{dB} = -61\text{dBm}$ . Capture the spectrum analyzer plots on short pulse radar waveform.

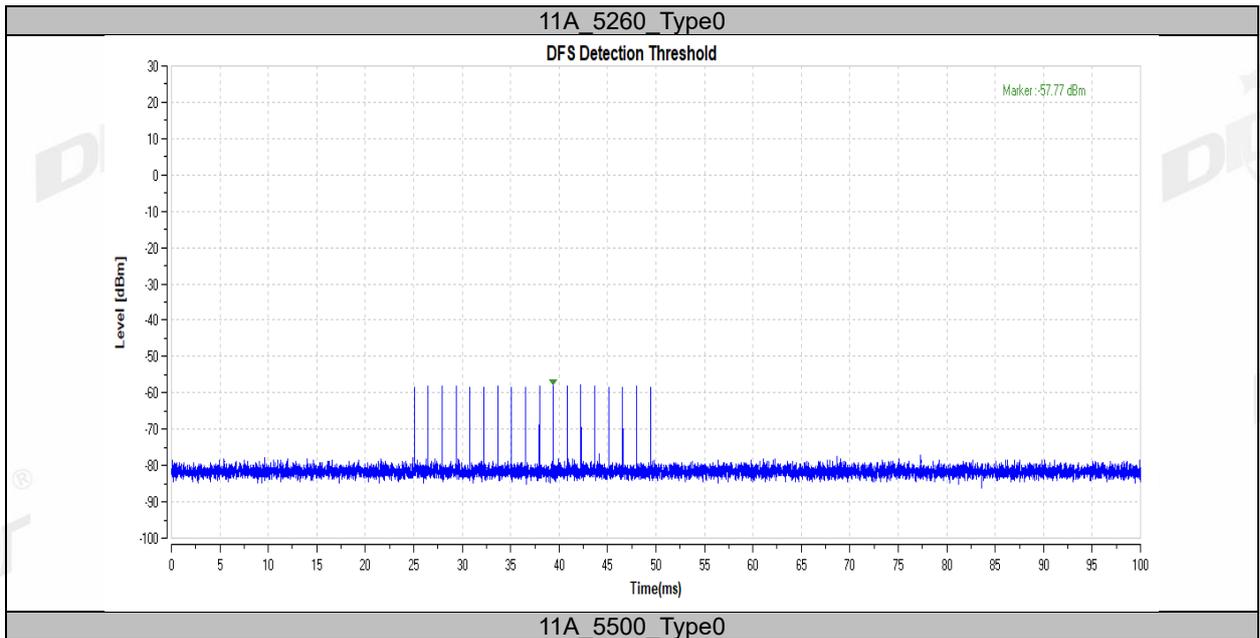
Conducted Calibration Setup:

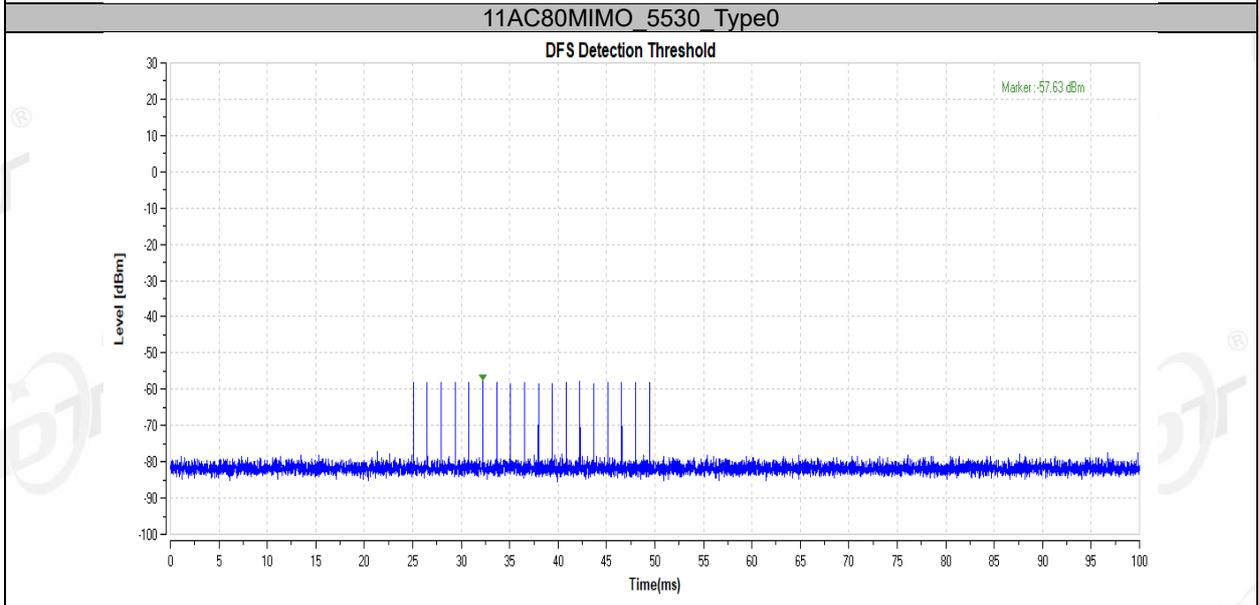
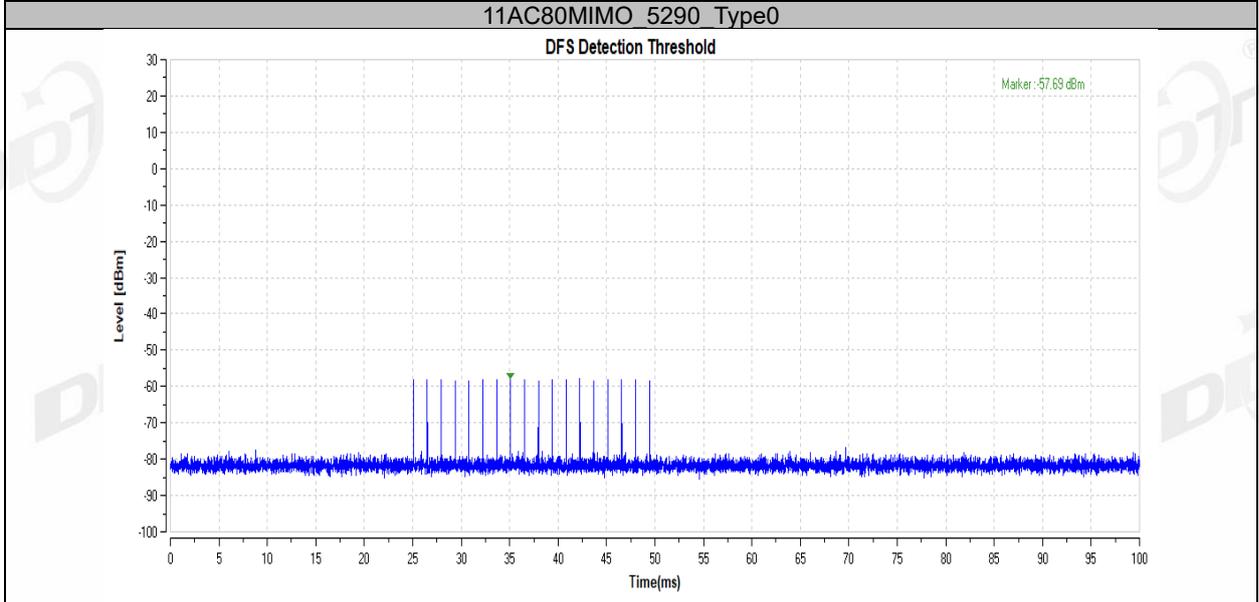
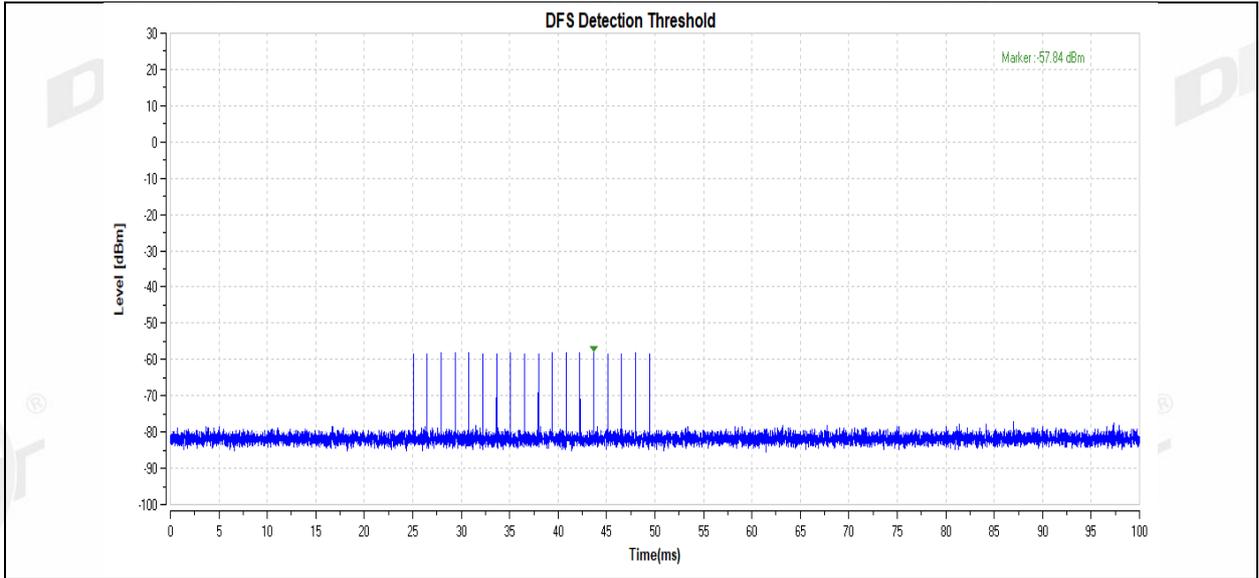


- Note: 1. Use the software "Web" to set the frequency channel.  
 2. EUT is not support TPC and not with Radar detection.

Radar Waveform Calibration Result:

Test Mode	Frequency[dbm]	Radar Type	Result	Limit[dbm]	Verdict
11A	5260	Type0	-57.77	-57.44	PASS
	5500	Type0	-57.84	-57.44	PASS
11AC80MIMO	5290	Type0	-57.69	-57.44	PASS
	5530	Type0	-57.63	-57.44	PASS





### 11.5. Channel closing transmission time, channel move time and non-occupancy period

Block diagram of test setup Test Procedure:

- (1) The radar pulse generator is setup to provide a pulse at frequency that the master and client are operating. A type 0 radar pulse with a 1us pulse width and a 1428us PRI is used for the testing.
- (2) The vector signal generator is adjusted to provide the radar burst (18 pulses) at the level of approximately -61dBm at the antenna port of the master device.
- (3) A trigger is provided from the pulse generator to the DFS monitoring system in order to capture the traffic and the occurrence of the radar pulse.
- (4) EUT will associate with the master at channel. The file "iperf.exe" specified by the FCC is streamed from the PC 2 through the master and the client device to the PC 1 and played in full motion video using Test Software in order to properly load the network for the entire period of the test.
- (5) When radar burst with a level equal to the DFS Detection Threshold +1dB is generated on the operating channel of the U-NII device. At time T0 the radar waveform generator sends a burst of pulse of the radar waveform at Detection Threshold +1dB.
- (6) Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel. Measure and record the transmissions from the UUT during the observation time (Channel Move Time). One 15 seconds plot is reported for the Short Pulse Radar Type 0. The plot for the Short Pulse Radar Types start at the end of the radar burst. The Channel Move Time will be calculated based on the zoom in 600ms plot of the Short Pulse Radar Type.
- (7) Measurement of the aggregate duration of the Channel Closed Transmission Time method. With the
- (8) spectrum analyzer set to zero span tuned to the center frequency of the EUT operating channel at the radar simulated frequency, peak detection, and max hold, the dwell time per bin is given by:  $Dwell (0.3ms) = S (12000ms) / B (4000)$ ; where Dwell is the dwell time per spectrum analyzer sampling bin, S is sweep time and B is the number of spectrum analyzer sampling bins. An upper bound of the aggregate duration of the intermittent control signals of Channel Closing Transmission Time is calculated by:  $C (ms) = N \times Dwell (0.3ms)$ ; where C is the Closing Time, N is the number of spectrum analyzer sampling bins (intermittent control signals) showing a U-NII transmission and Dwell is the dwell time per bin.

Measurement the EUT for more than 30 minutes following the channel move time to verify that no transmission or beacons occur on this channel.