



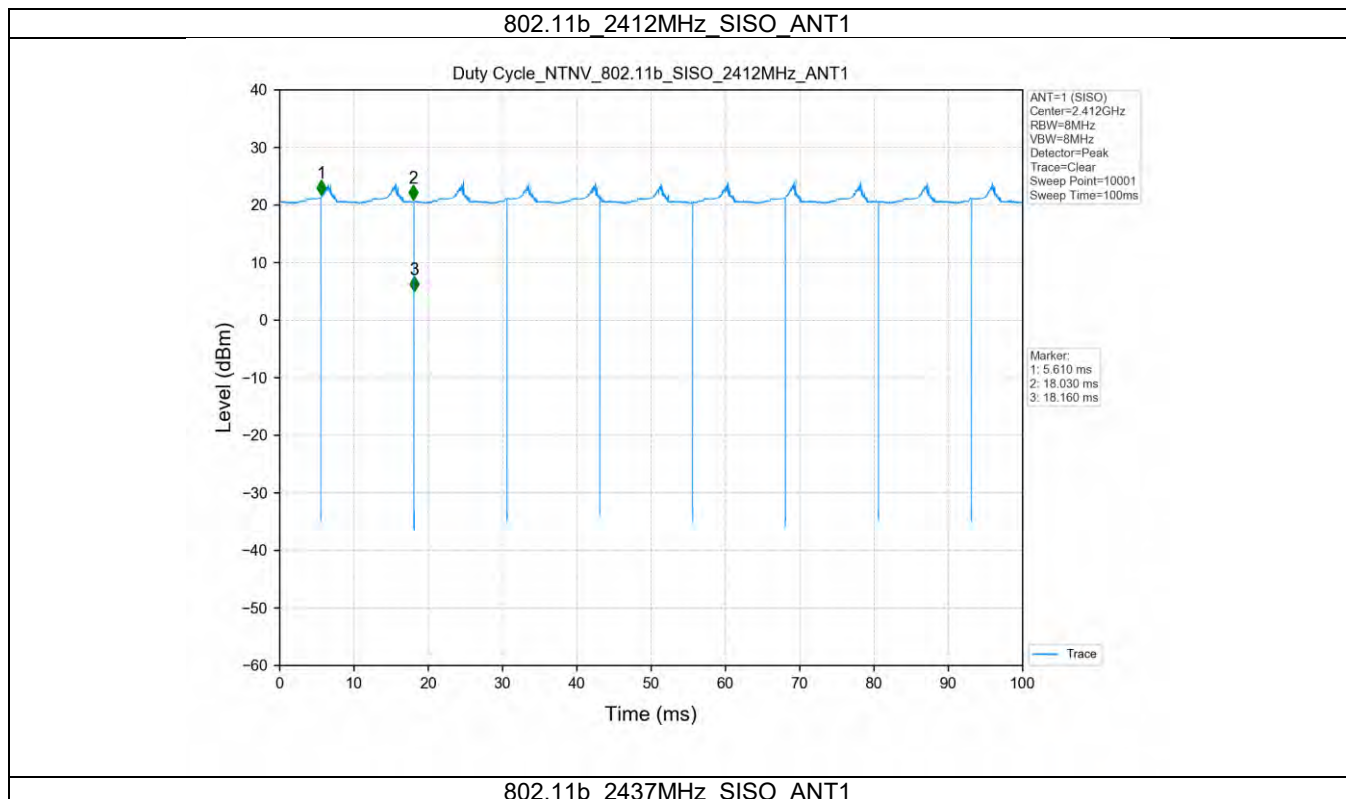
Appendix A for SHEM191201998201

1. Duty Cycle

1.1 Test Result

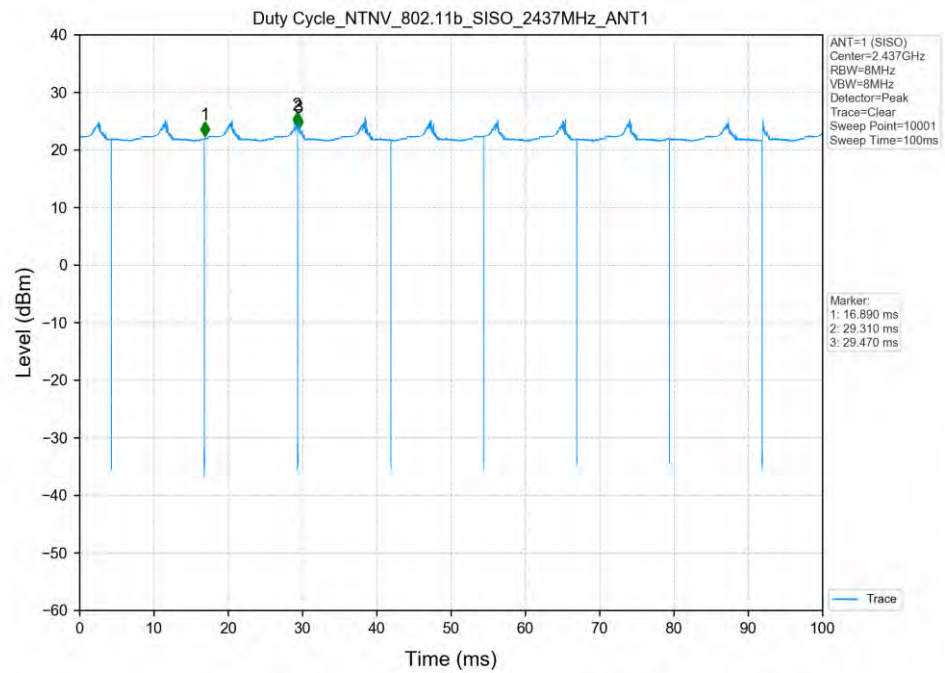
Test Mode	Channel Frequency(MHz)	TX Type	ANT No.	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
802.11b	2412	SISO	1	12.420	12.550	98.96	0.05
	2437	SISO	1	12.420	12.580	98.73	0.06
	2462	SISO	1	12.420	12.590	98.65	0.06
802.11g	2412	SISO	1	2.066	2.192	94.25	0.26
	2437	SISO	1	2.064	2.235	92.35	0.35
	2462	SISO	1	2.063	2.235	92.30	0.35
802.11n(HT20)	2412	SISO	1	1.890	2.058	91.84	0.37
	2437	SISO	1	1.920	2.090	91.87	0.37
	2462	SISO	1	1.890	2.058	91.84	0.37
802.11n(HT40)	2422	SISO	1	0.916	1.038	88.25	0.54
	2437	SISO	1	0.917	1.083	84.67	0.72
	2452	SISO	1	0.916	1.056	86.74	0.62

1.2 Test Graph

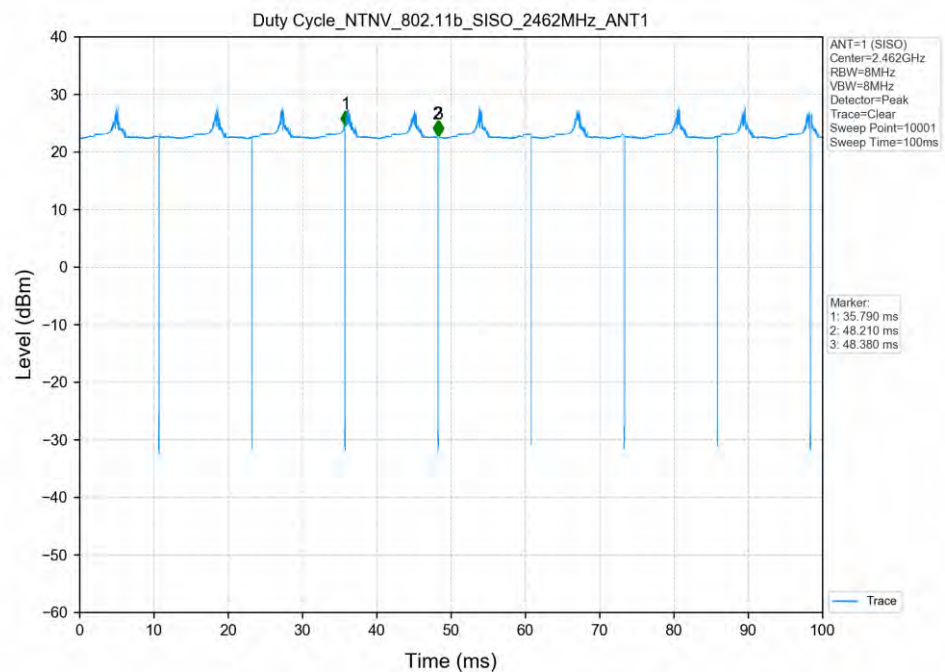




SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch



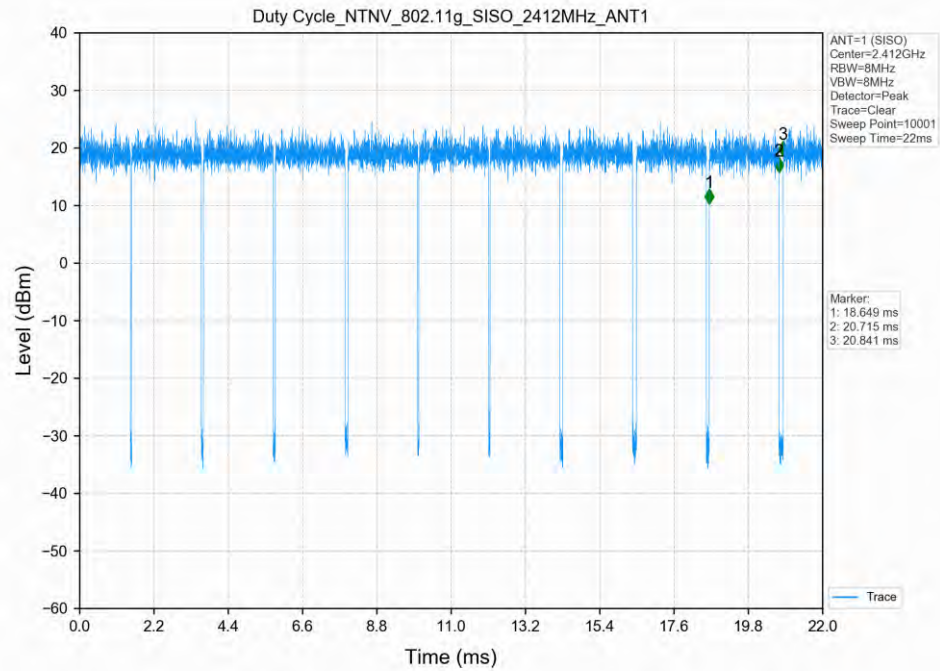
802.11b_2462MHz_SISO_ANT1



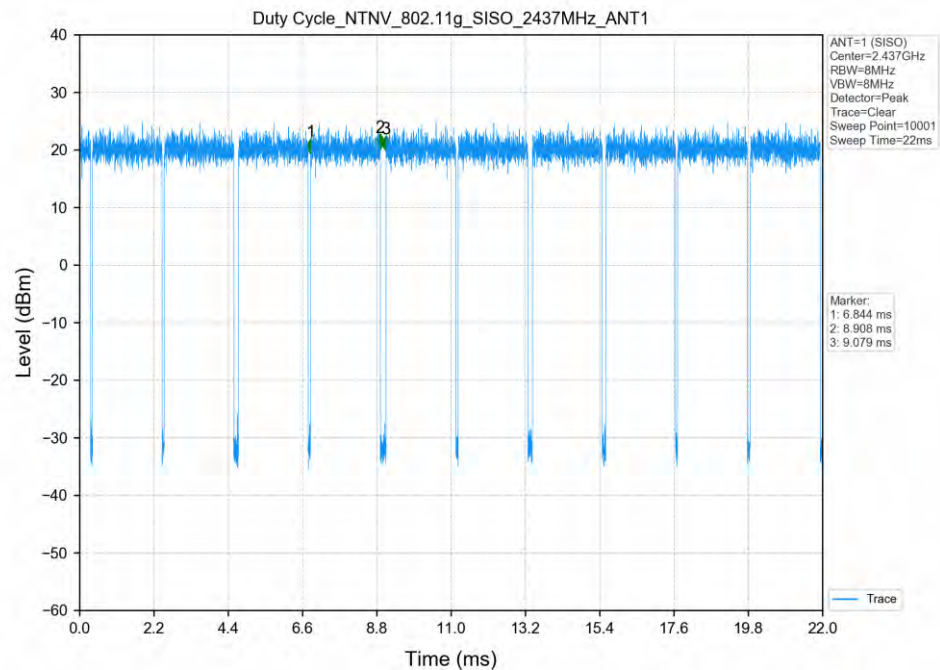
802.11g_2412MHz_SISO_ANT1



SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch



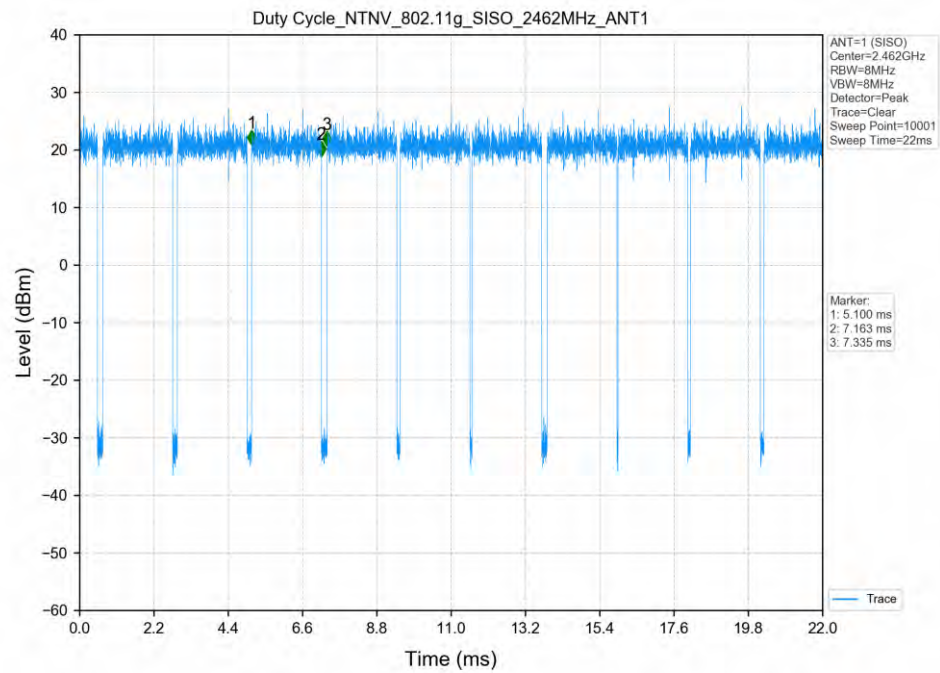
802.11g_2437MHz_SISO_ANT1



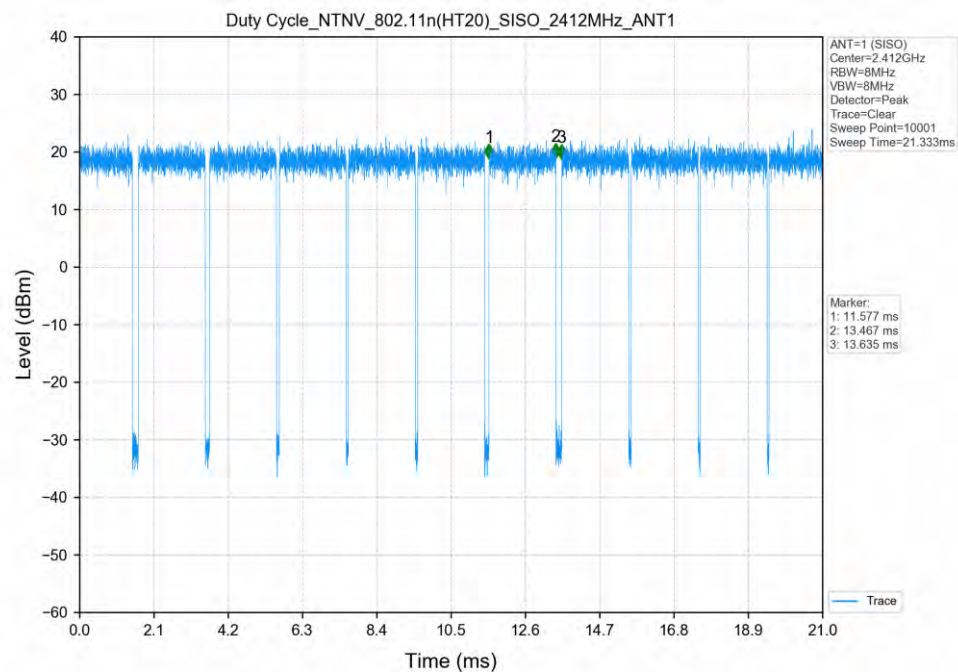
802.11g_2462MHz_SISO_ANT1



SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch



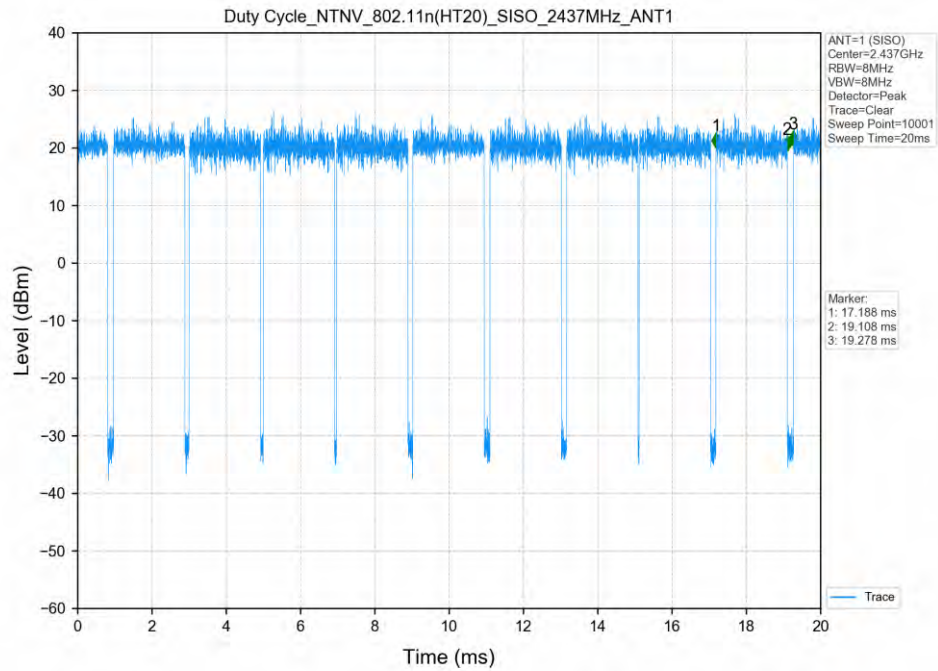
802.11n(HT20)_2412MHz_SISO_ANT1



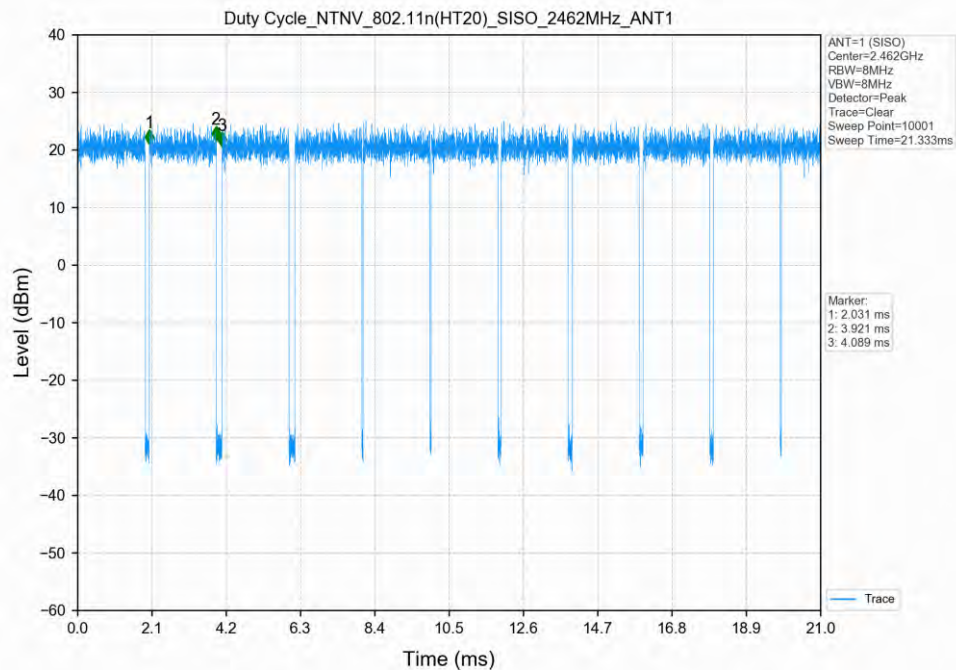
802.11n(HT20)_2437MHz_SISO_ANT1



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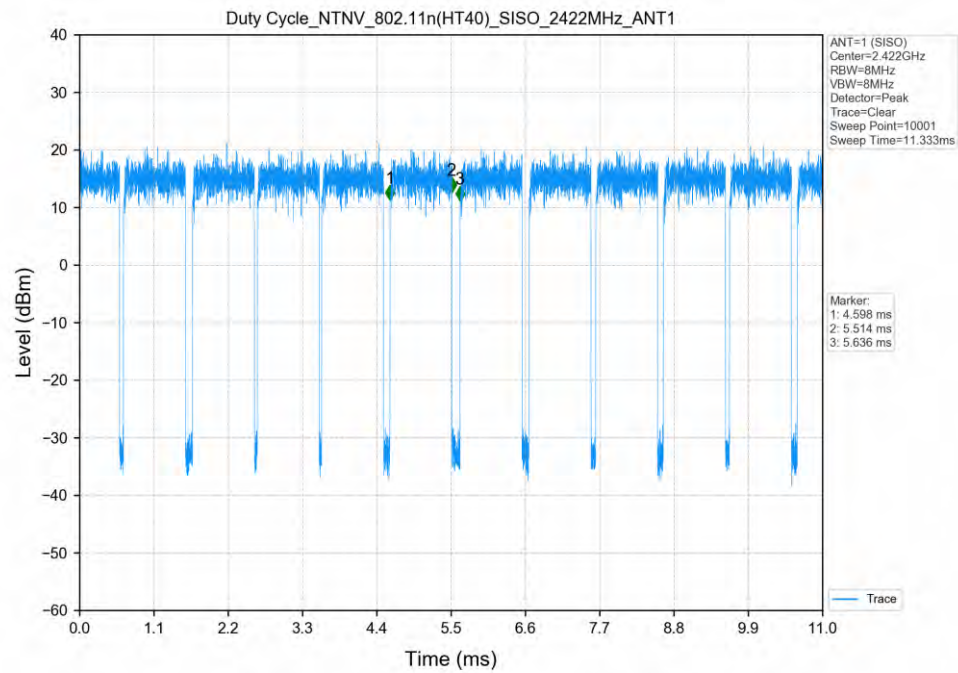
802.11n(HT20)_2462MHz_SISO_ANT1



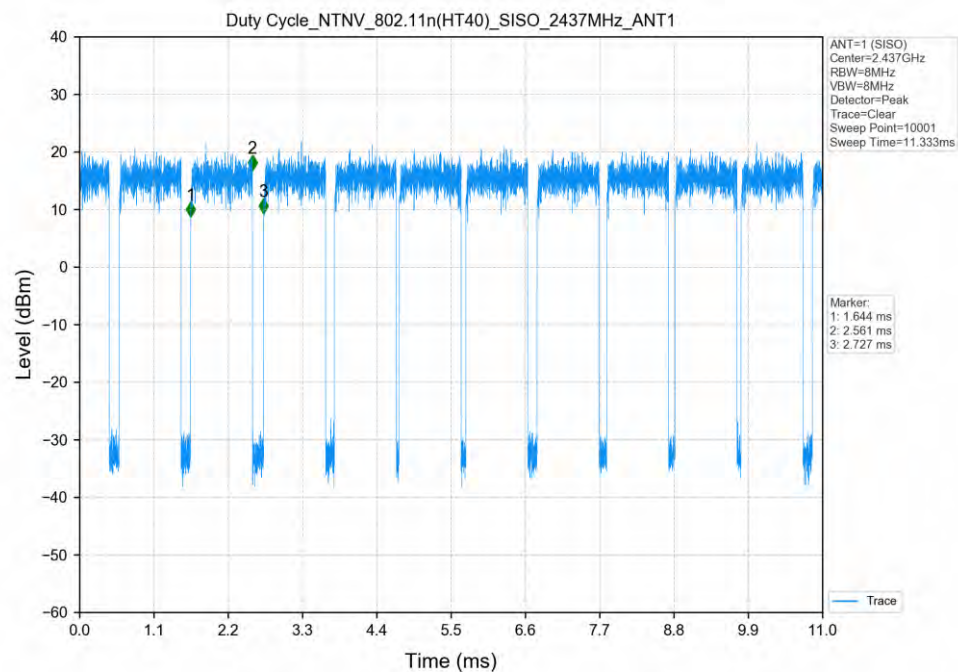
802.11n(HT40)_2422MHz_SISO_ANT1



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802.11n(HT40)_2437MHz_SISO_ANT1



802.11n(HT40)_2452MHz_SISO_ANT1



Test Mode	Frequency (MHz)	TX Type	ANT No.	6dB Bandwidth		Verdict
				Test Result (MHz)	Limits (MHz)	
802.11b	2412	SISO	1	10.061	≥0.5	PASS
	2437	SISO	1	10.089	≥0.5	PASS
	2462	SISO	1	10.002	≥0.5	PASS
802.11g	2412	SISO	1	16.398	≥0.5	PASS
	2437	SISO	1	16.392	≥0.5	PASS
	2462	SISO	1	16.401	≥0.5	PASS
802.11n(HT20)	2412	SISO	1	17.608	≥0.5	PASS
	2437	SISO	1	17.595	≥0.5	PASS
	2462	SISO	1	17.567	≥0.5	PASS
802.11n(HT40)	2422	SISO	1	35.427	≥0.5	PASS
	2437	SISO	1	35.202	≥0.5	PASS
	2452	SISO	1	35.201	≥0.5	PASS

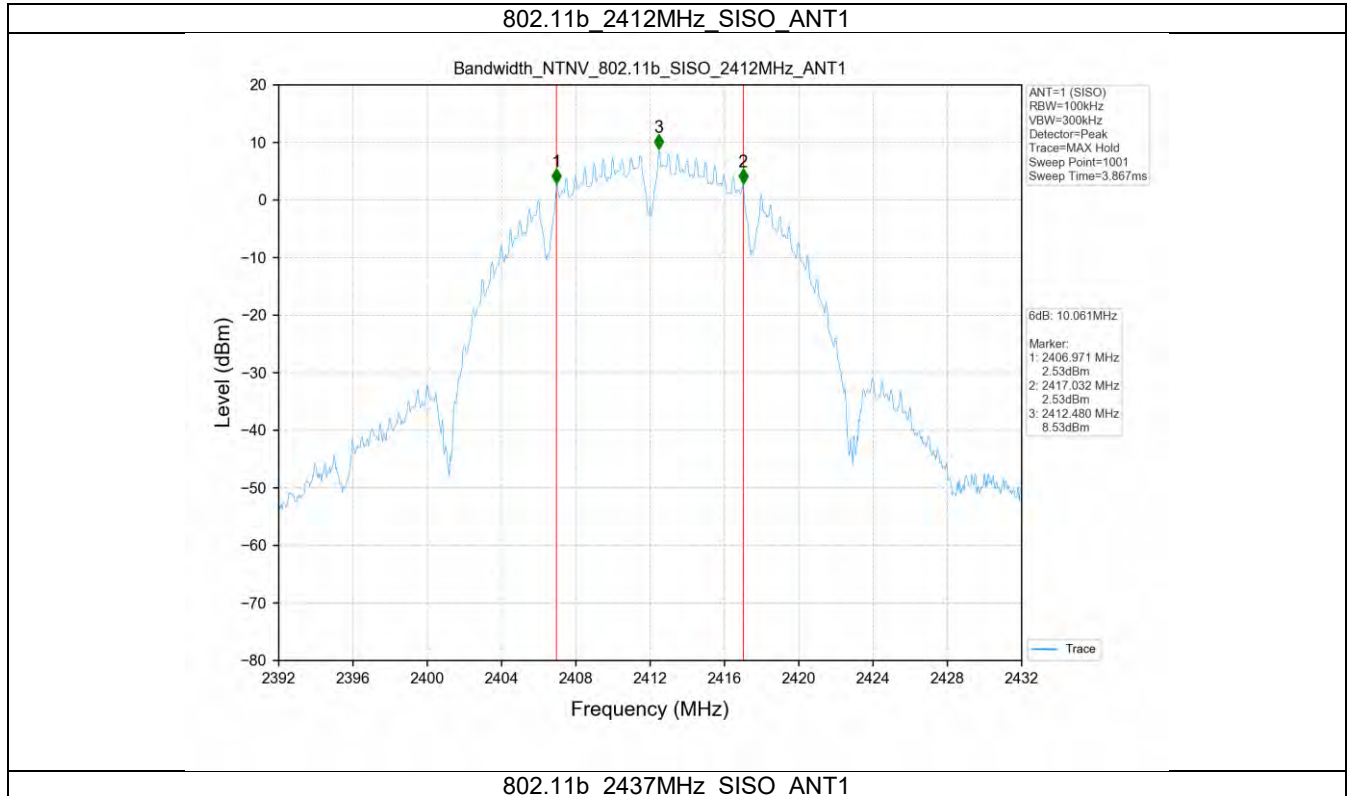
Test Mode	Frequency (MHz)	TX Type	ANT No.	99% Occupied Bandwidth	
				Test Result (MHz)	
802.11b	2412	SISO	1	15.022	Only for Report Use
	2437	SISO	1	14.985	Only for Report Use
	2462	SISO	1	14.980	Only for Report Use
802.11g	2412	SISO	1	17.036	Only for Report Use
	2437	SISO	1	17.024	Only for Report Use
	2462	SISO	1	16.936	Only for Report Use



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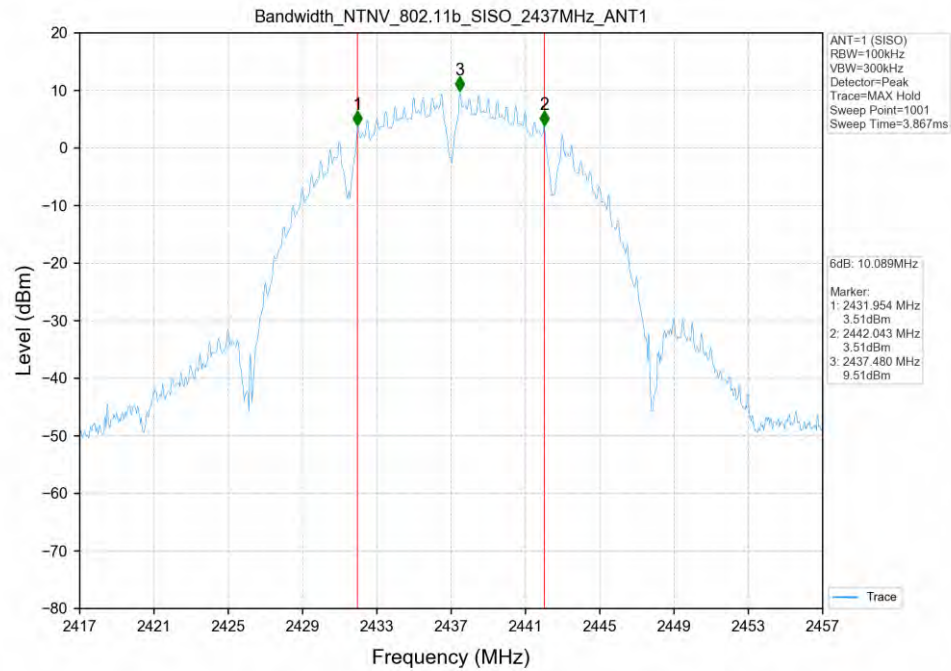
802.11n(HT20)	2412	SISO	1	17.986	Only for Report Use
	2437	SISO	1	18.039	Only for Report Use
	2462	SISO	1	17.938	Only for Report Use
802.11n(HT40)	2422	SISO	1	36.373	Only for Report Use
	2437	SISO	1	36.233	Only for Report Use
	2452	SISO	1	36.232	Only for Report Use

2.2 Test Graph - 6dB Bandwidth

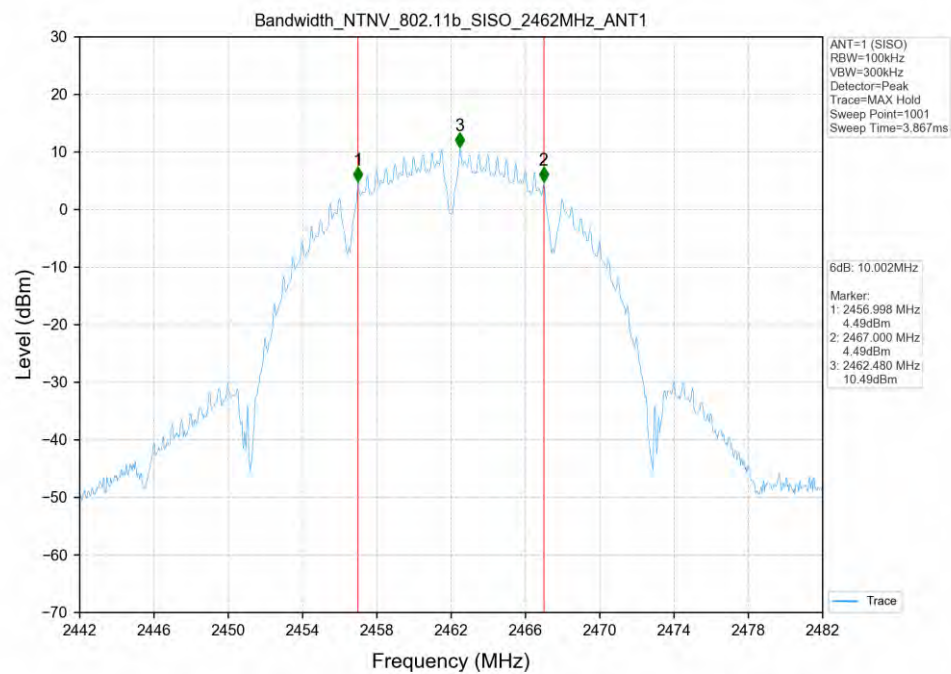




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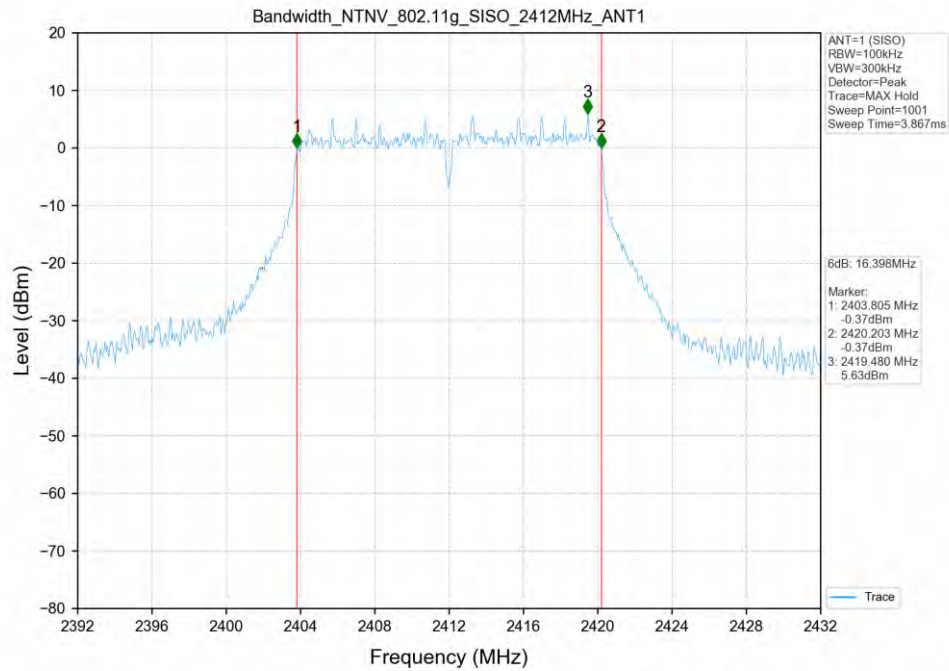
802.11b_2462MHz_SISO_ANT1



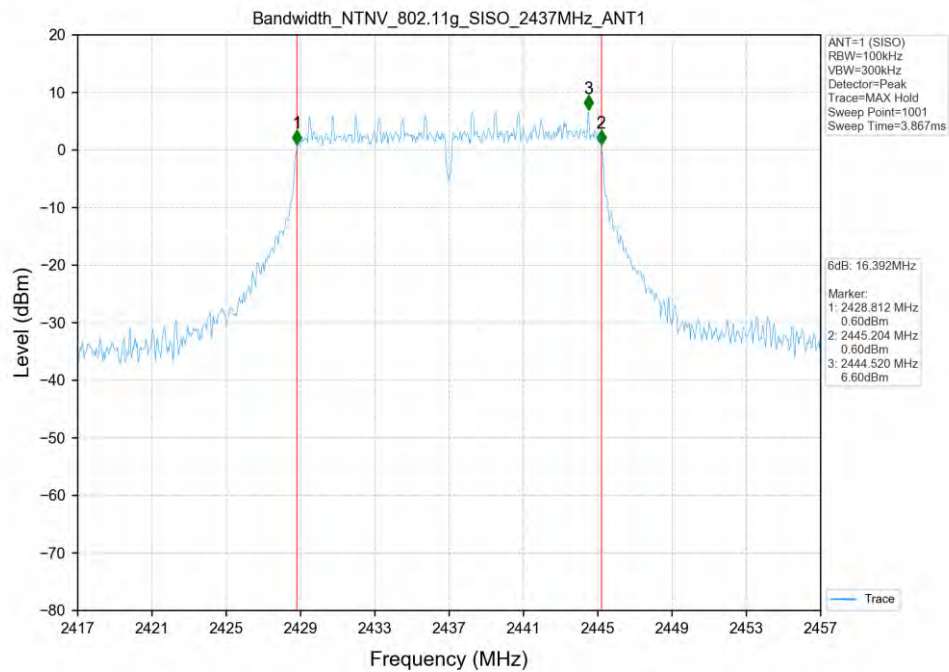
802.11g_2412MHz_SISO_ANT1



SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch



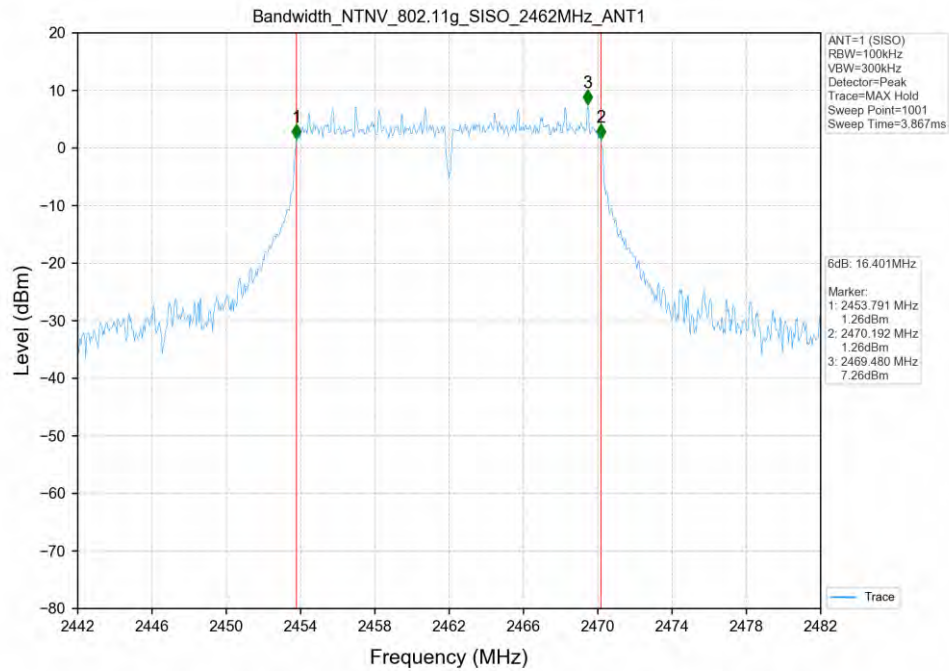
802.11g_2437MHz_SISO_ANT1



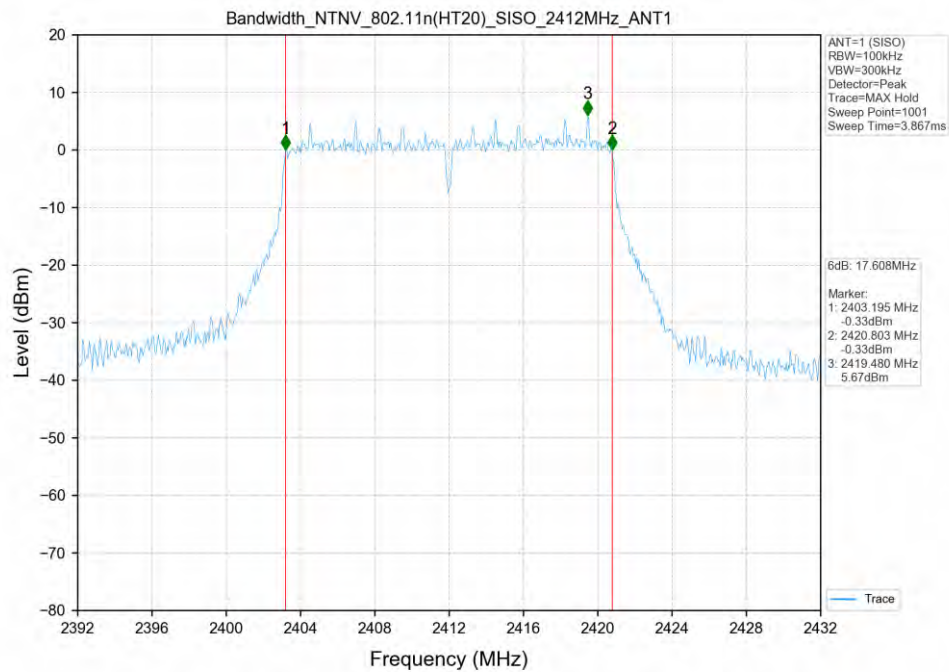
802.11g_2462MHz_SISO_ANT1



SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch



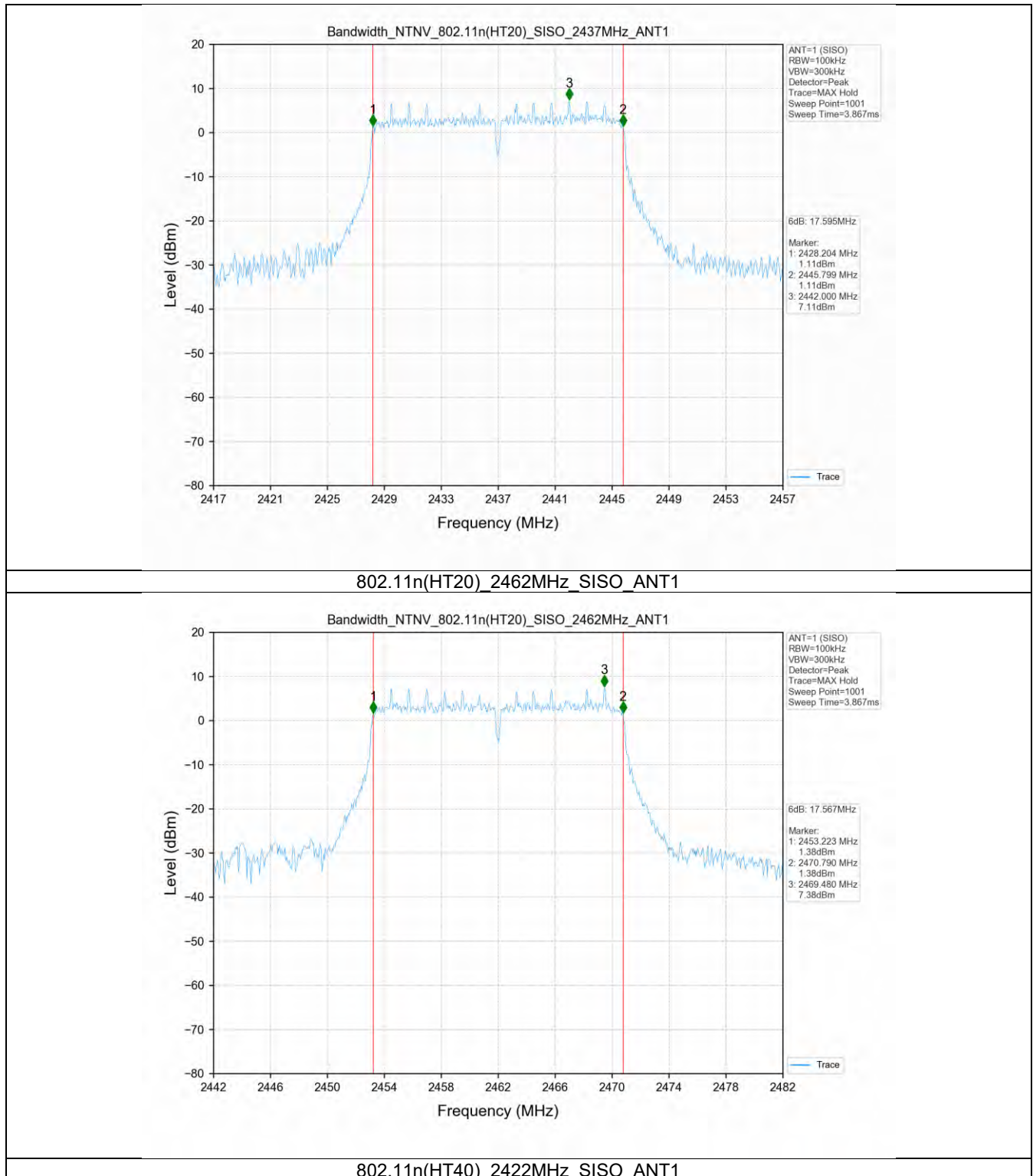
802.11n(HT20)_2412MHz_SISO_ANT1



802.11n(HT20)_2437MHz_SISO_ANT1

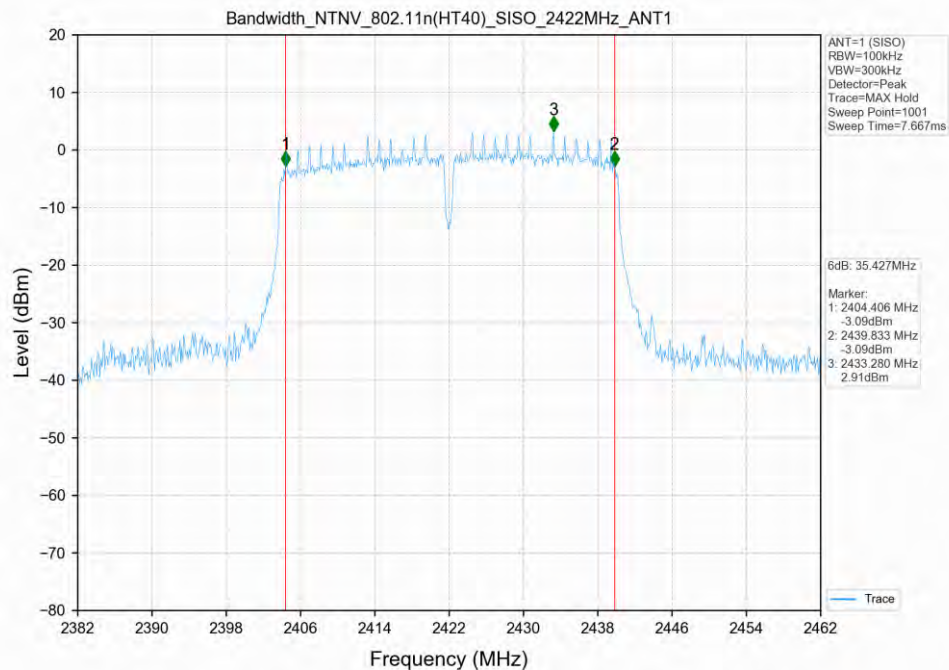


SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch

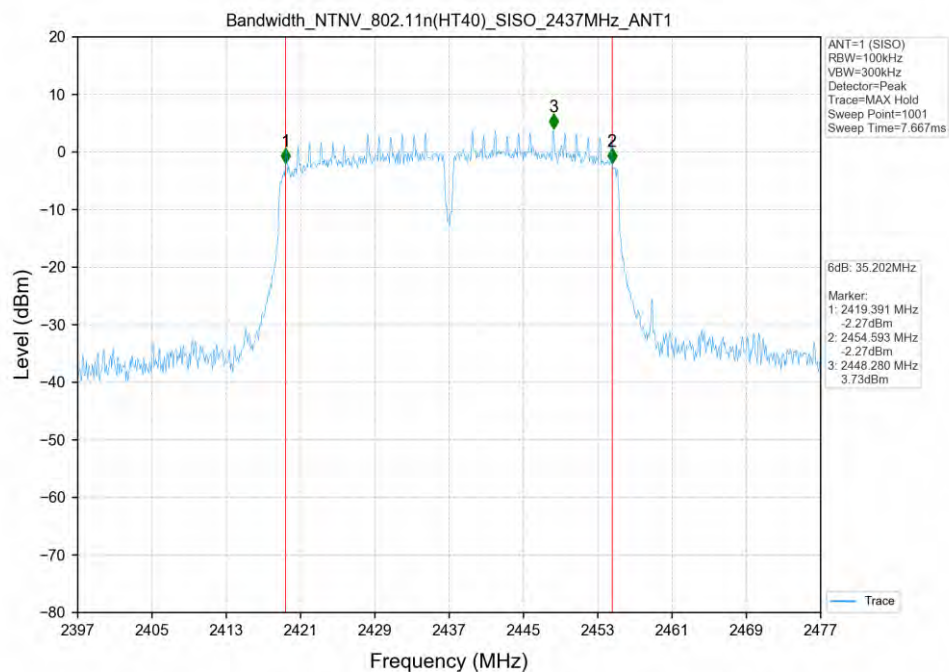




SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch



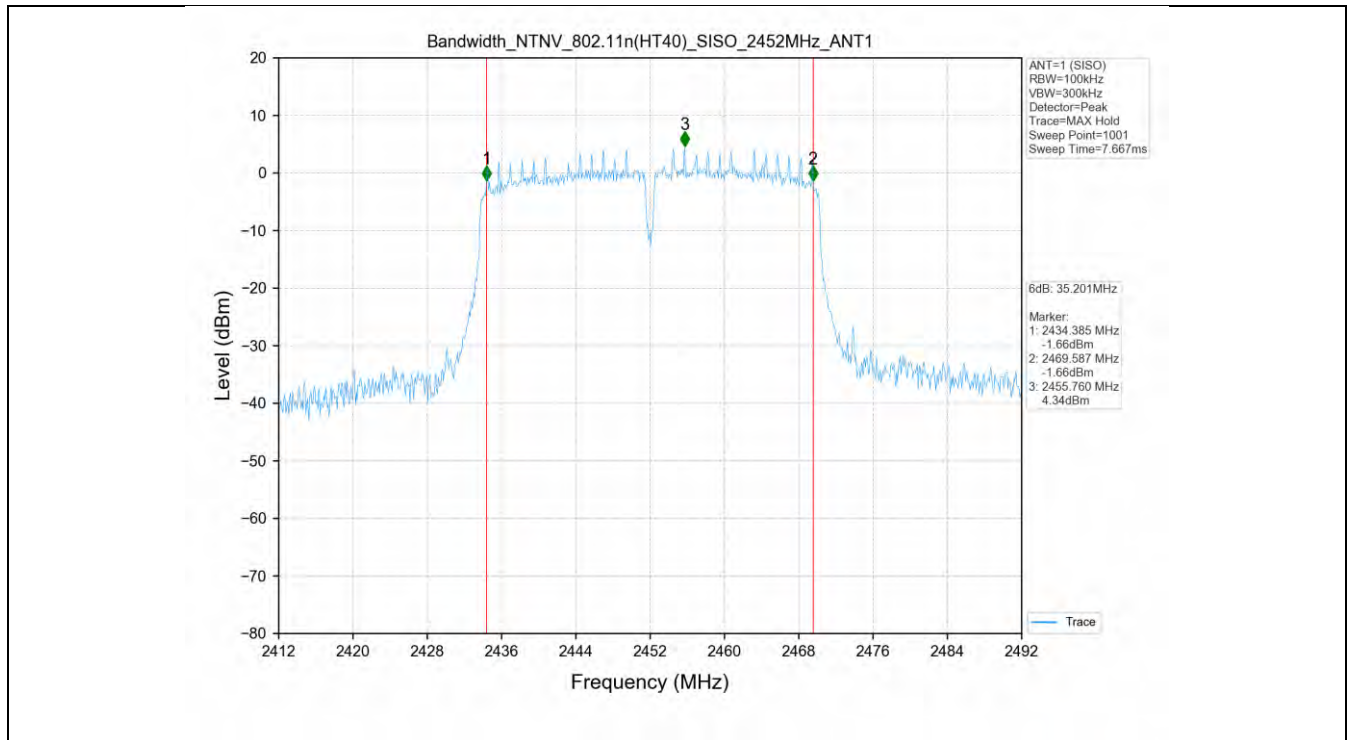
802.11n(HT40)_2437MHz_SISO_ANT1



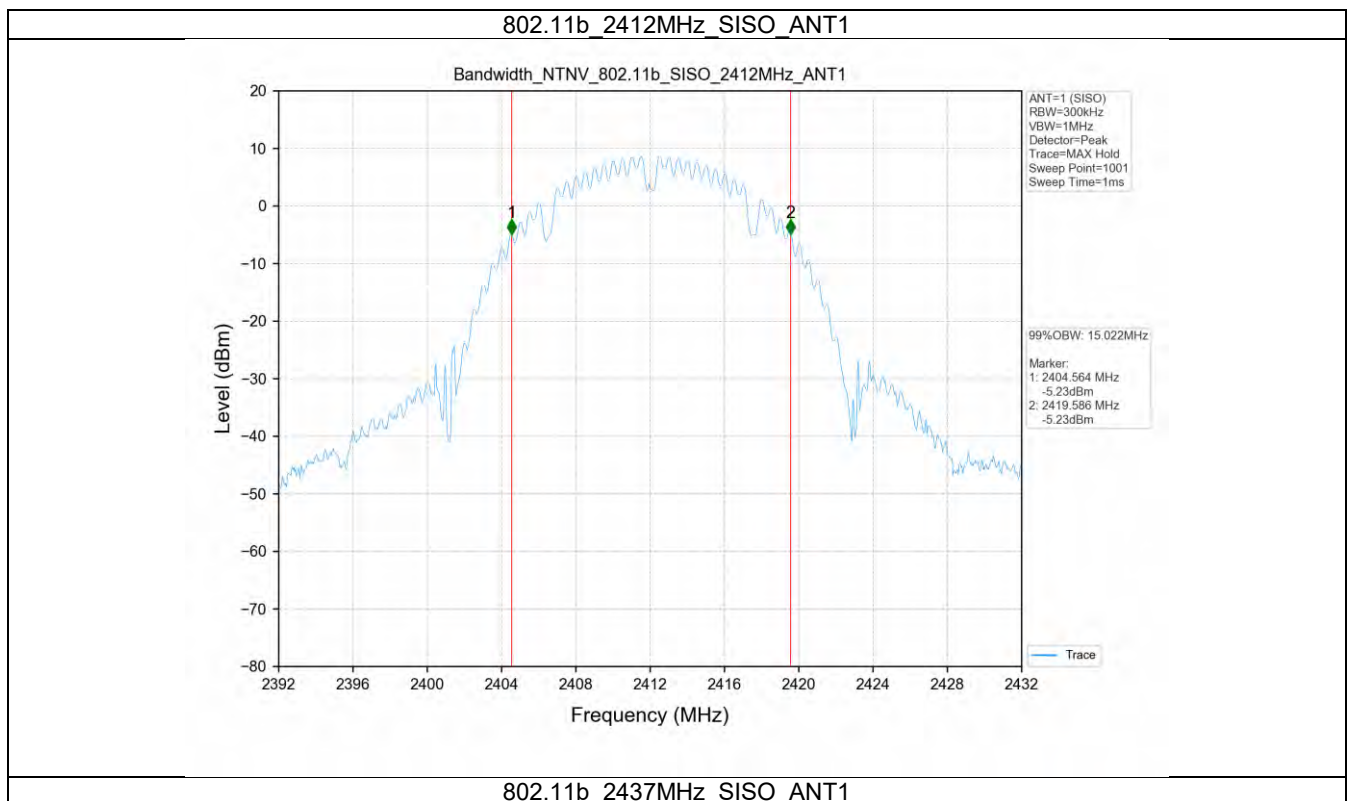
802.11n(HT40)_2452MHz_SISO_ANT1



SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch

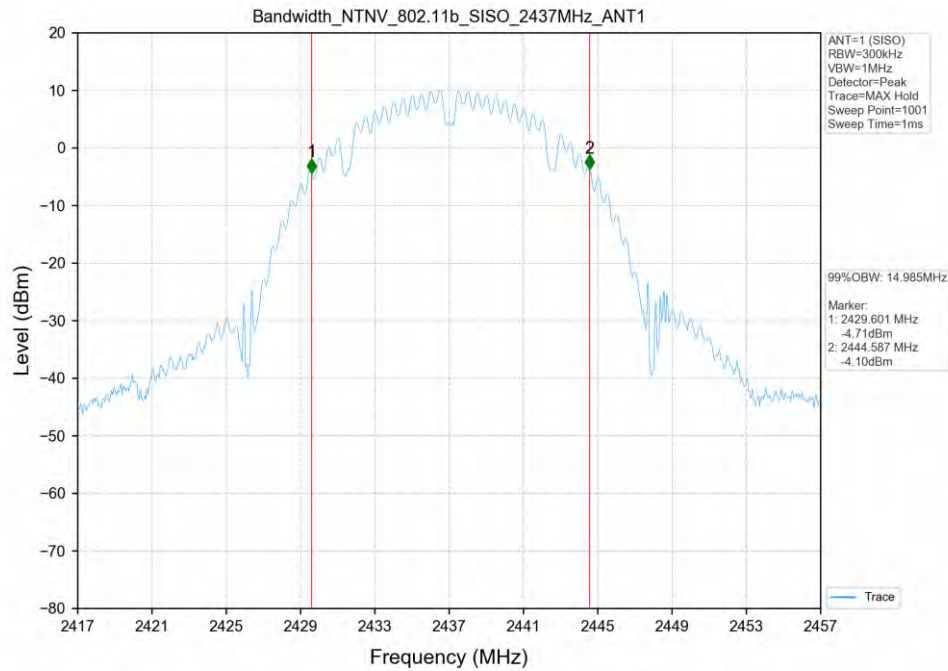


2.3 Test Graph - 99% Occupied Bandwidth

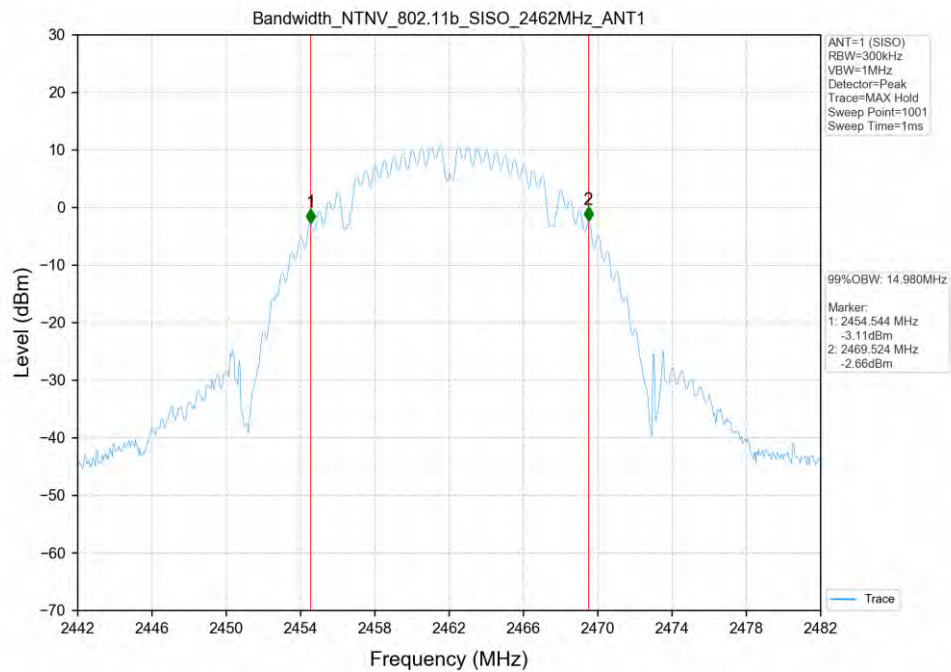




SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch



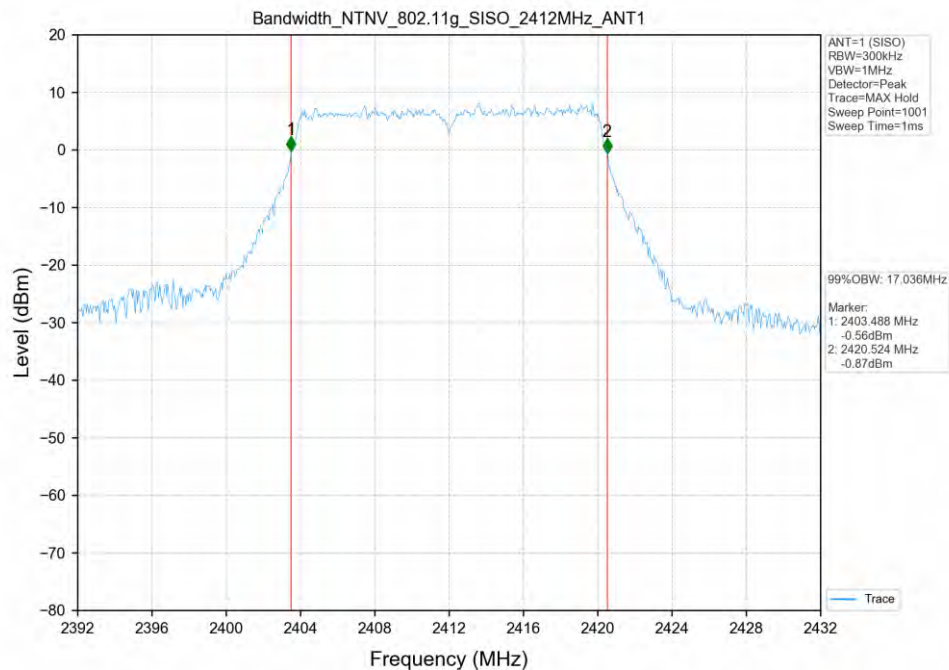
802.11b_2462MHz_SISO_ANT1



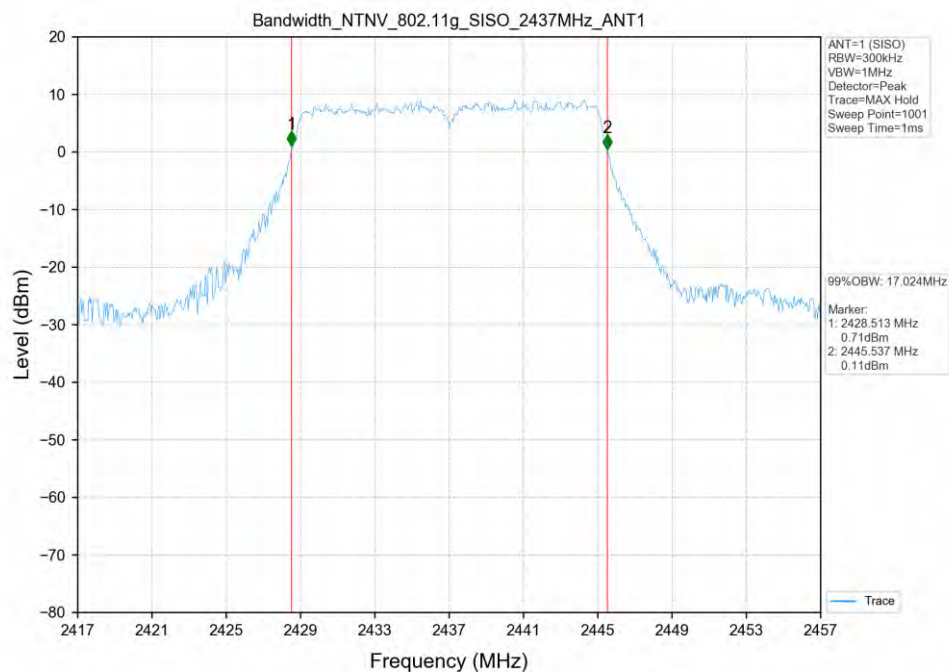
802.11g_2412MHz_SISO_ANT1



SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch



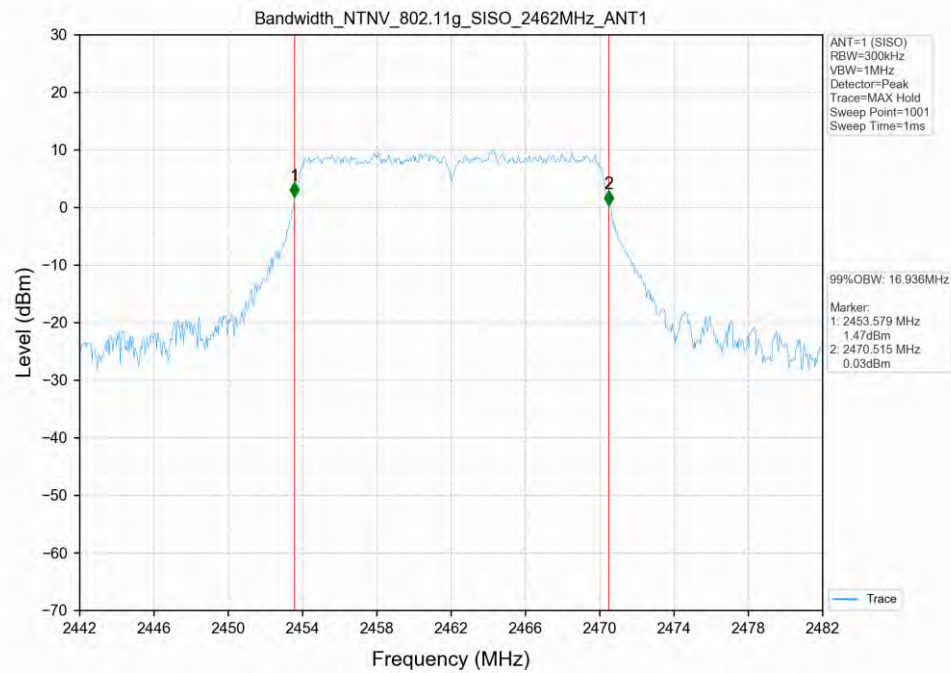
802.11g_2437MHz_SISO_ANT1



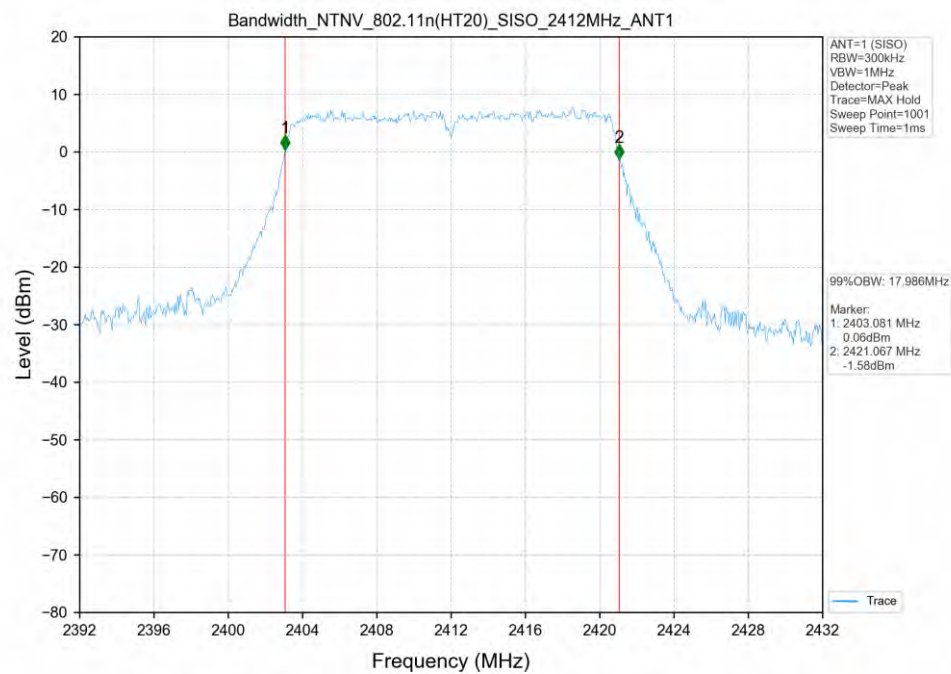
802.11g_2462MHz_SISO_ANT1



SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch



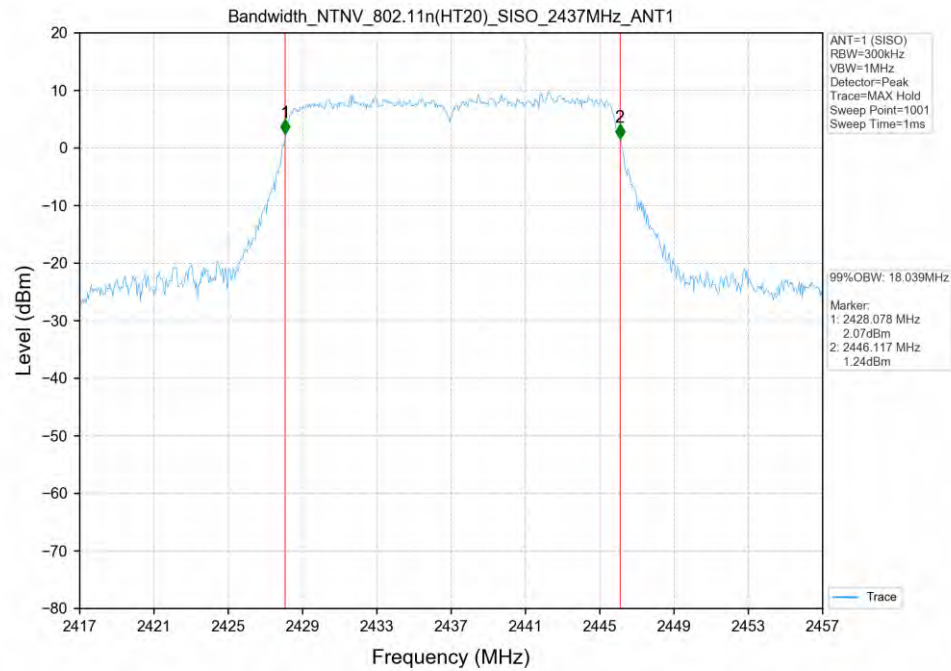
802.11n(HT20)_2412MHz_SISO_ANT1



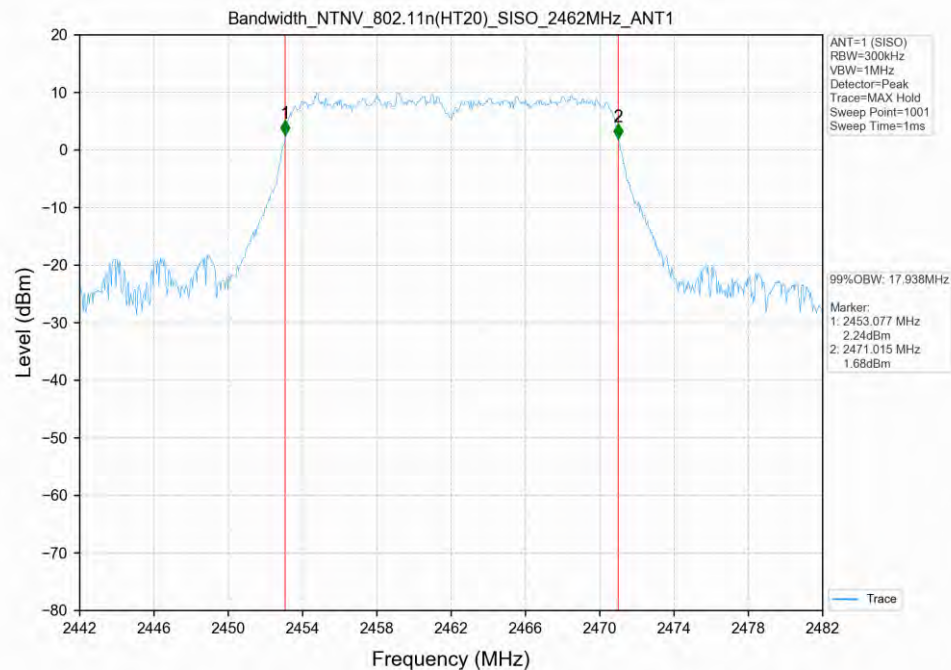
802.11n(HT20)_2437MHz_SISO_ANT1



SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch



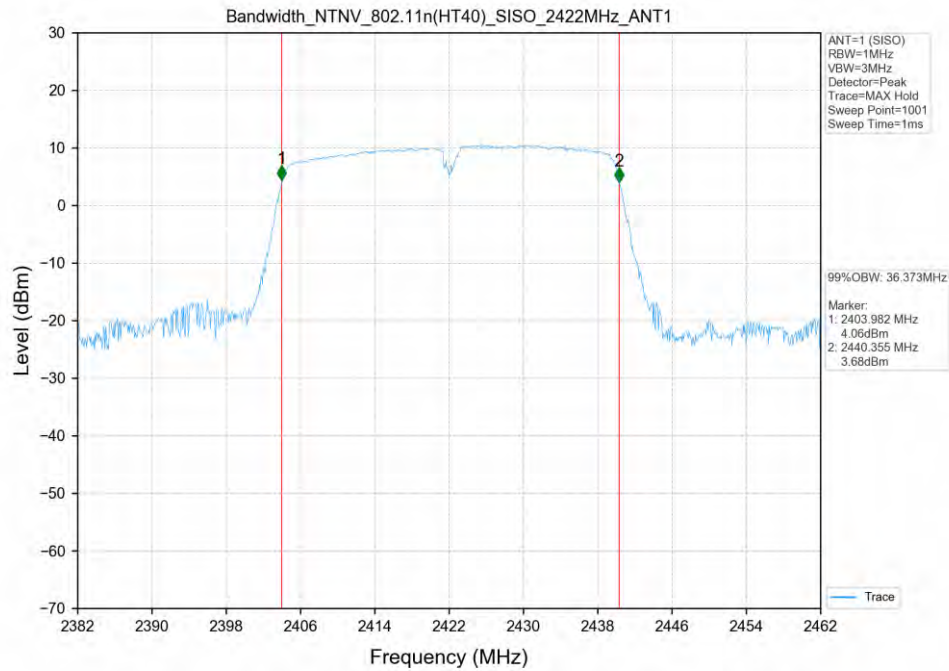
802.11n(HT20)_2462MHz_SISO_ANT1



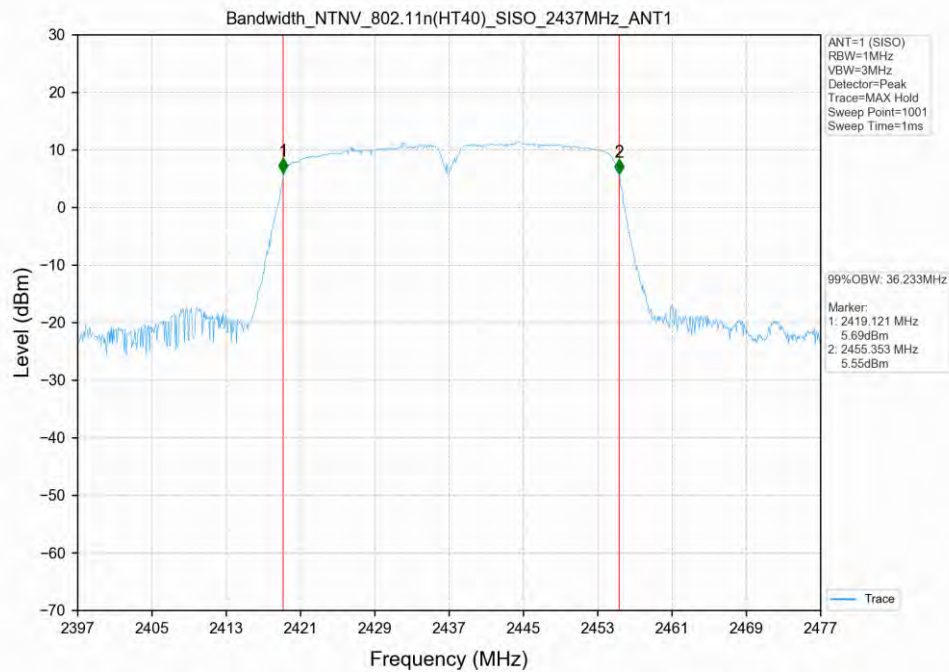
802.11n(HT40)_2422MHz_SISO_ANT1



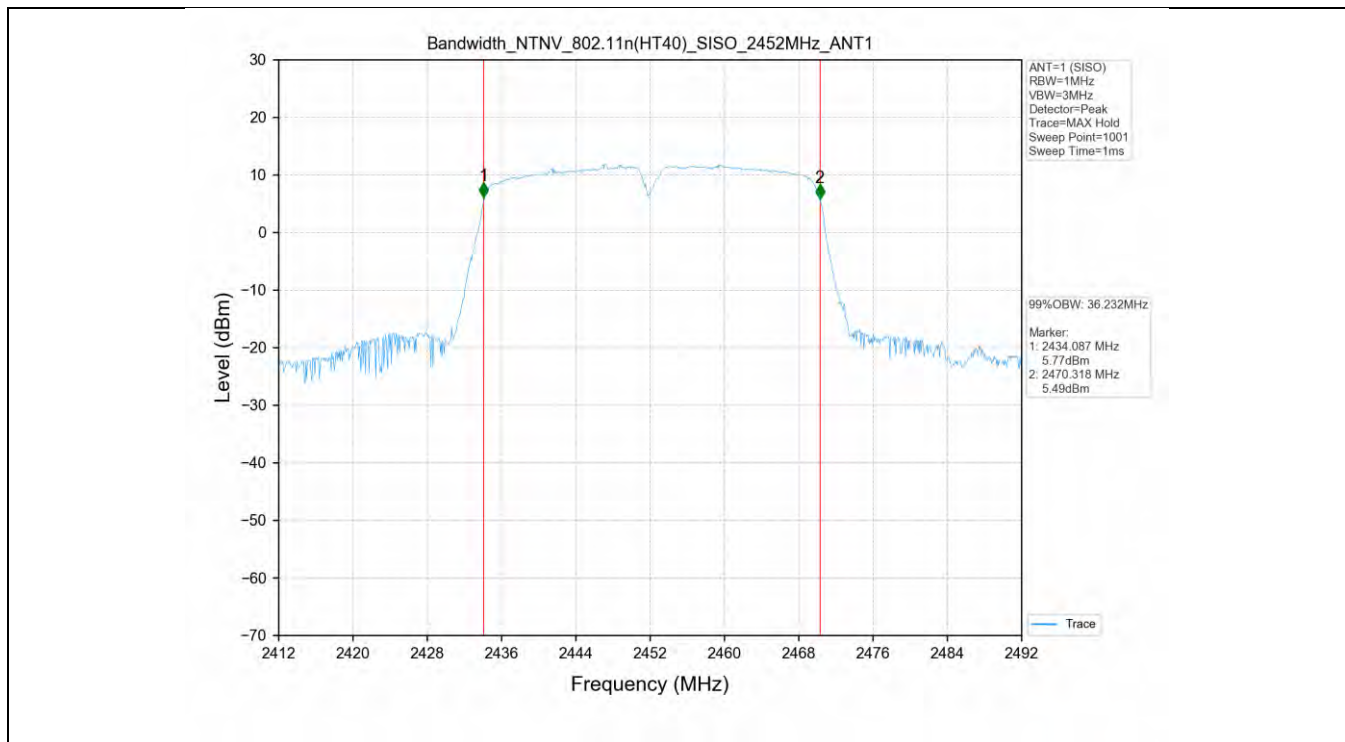
SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch



802.11n(HT40)_2437MHz_SISO_ANT1



802.11n(HT40)_2452MHz_SISO_ANT1



3. Maximum Conducted Output Power

3.1 Test Result

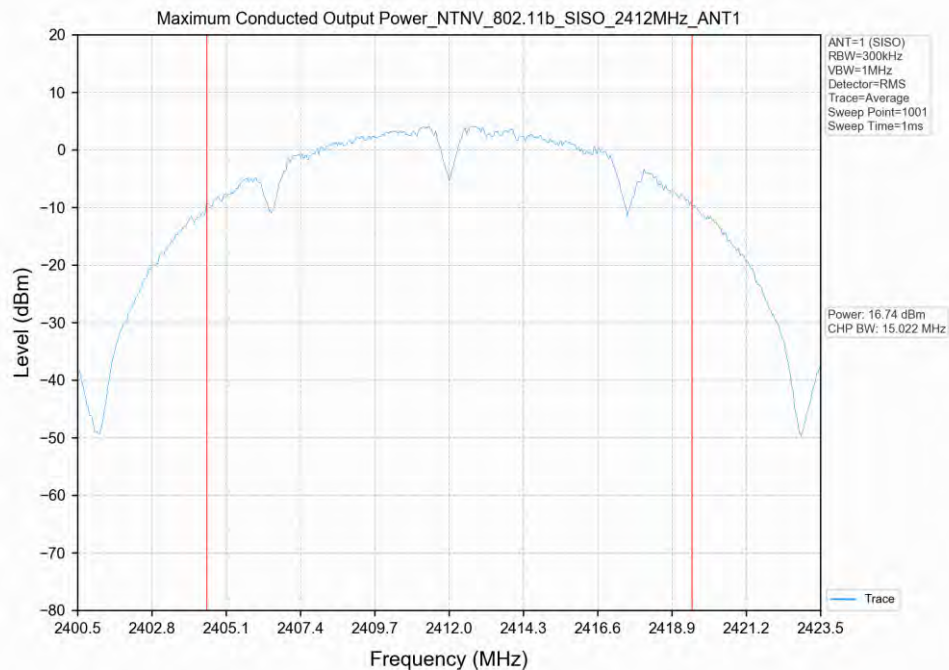
Test Mode	Frequency (MHz)	Tx Type	Measured Average Output Power (dBm)	Limits (dBm)	Verdict
			Ant 1		
802.11b	2412	SISO	16.74	30	PASS
	2437	SISO	17.95	30	PASS
	2462	SISO	18.69	30	PASS
802.11g	2412	SISO	16.53	30	PASS
	2437	SISO	17.70	30	PASS
	2462	SISO	18.45	30	PASS
802.11n(HT20)	2412	SISO	16.46	30	PASS
	2437	SISO	18.05	30	PASS
	2462	SISO	18.51	30	PASS
802.11n(HT40)	2422	SISO	16.59	30	PASS
	2437	SISO	17.30	30	PASS
	2452	SISO	17.82	30	PASS

3.2 Test Graph

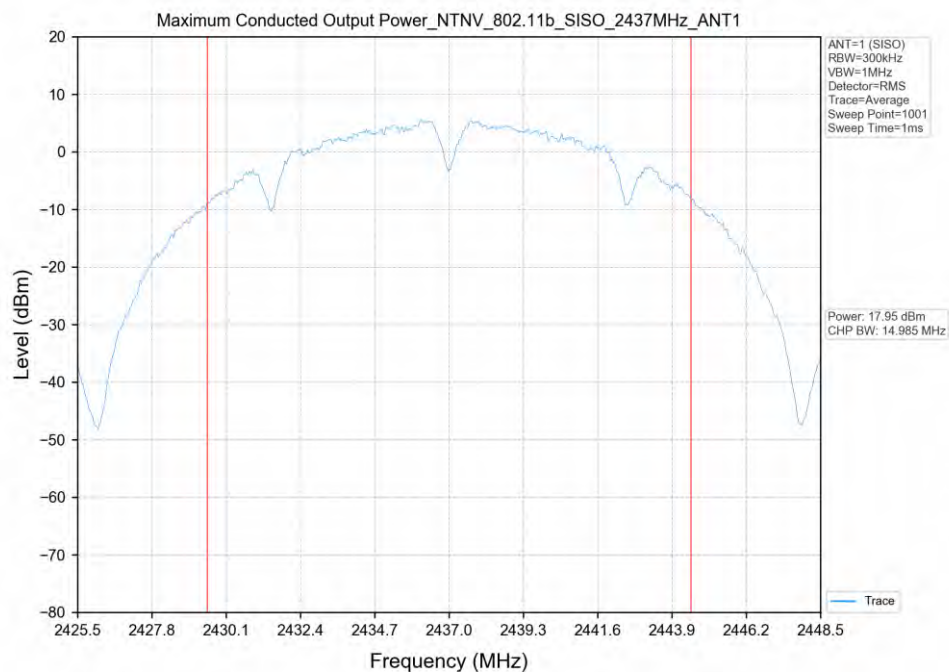
802.11b_2412MHz_SISO_ANT1



SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch



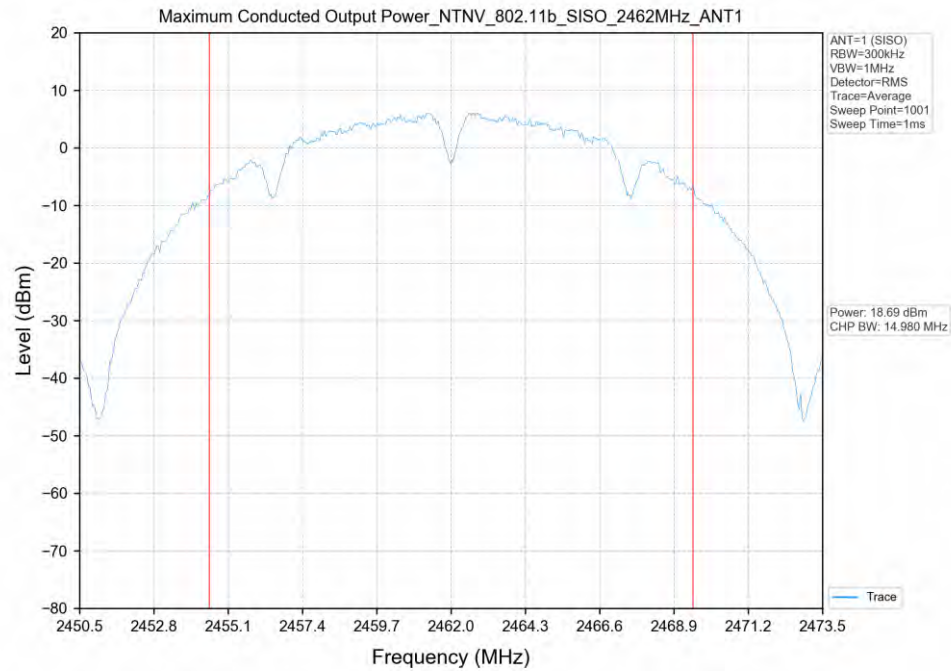
802.11b_2437MHz_SISO_ANT1



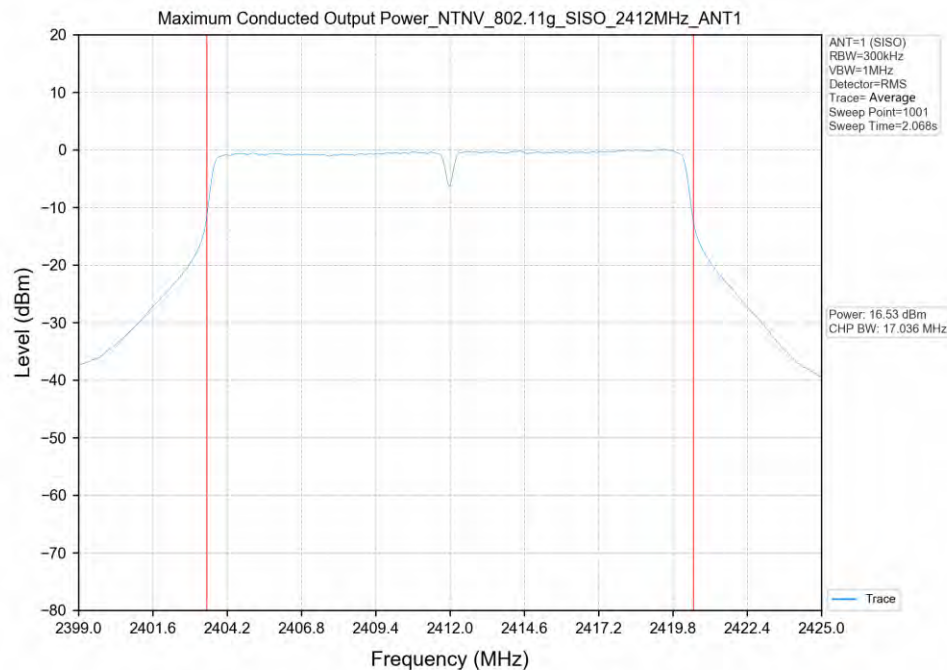
802.11b_2462MHz_SISO_ANT1



SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch



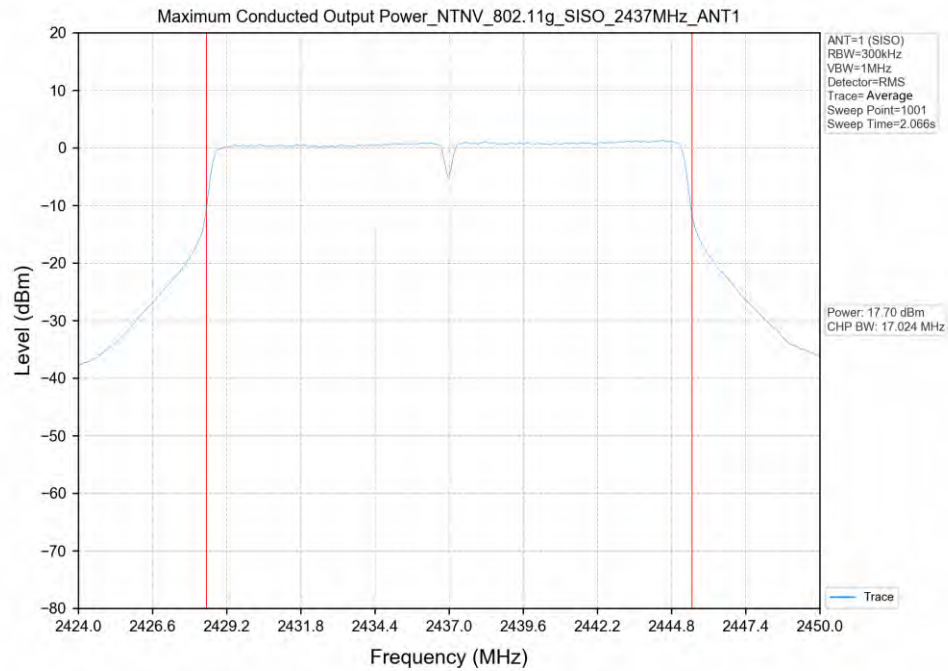
802.11g_2412MHz_SISO_ANT1



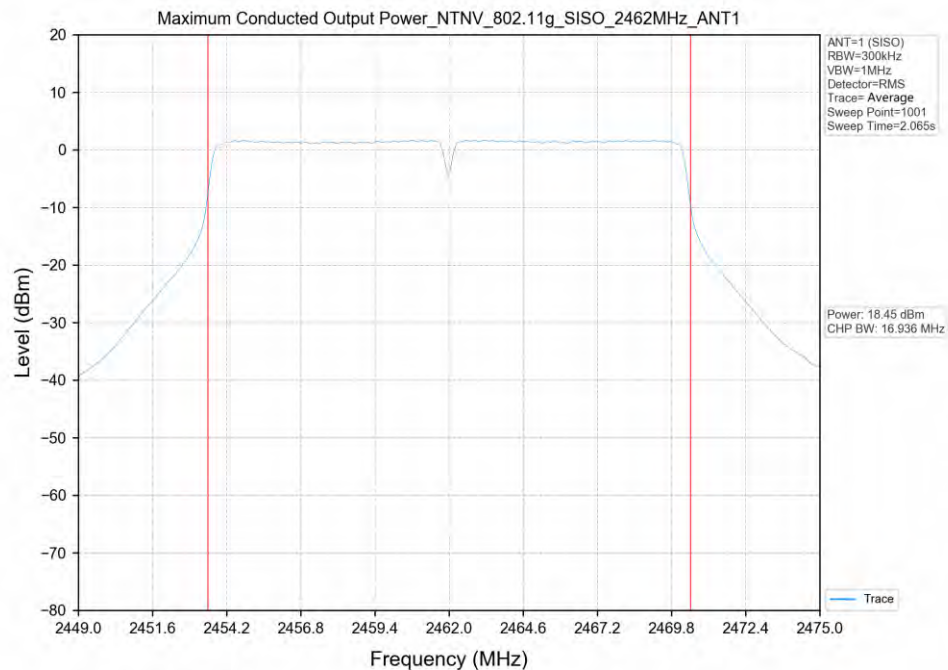
802.11g_2437MHz_SISO_ANT1



SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch



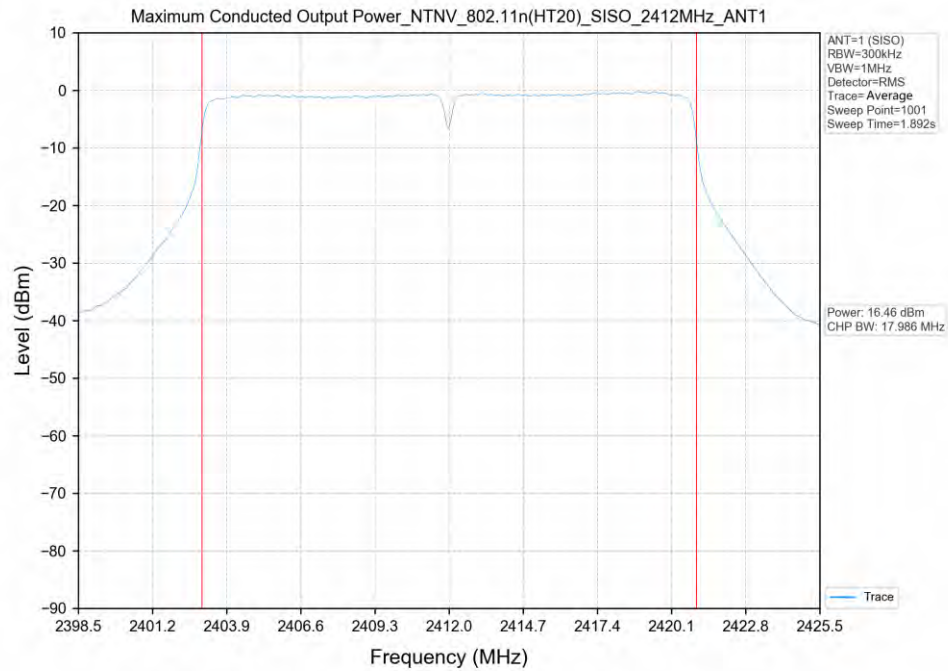
802.11g_2462MHz_SISO_ANT1



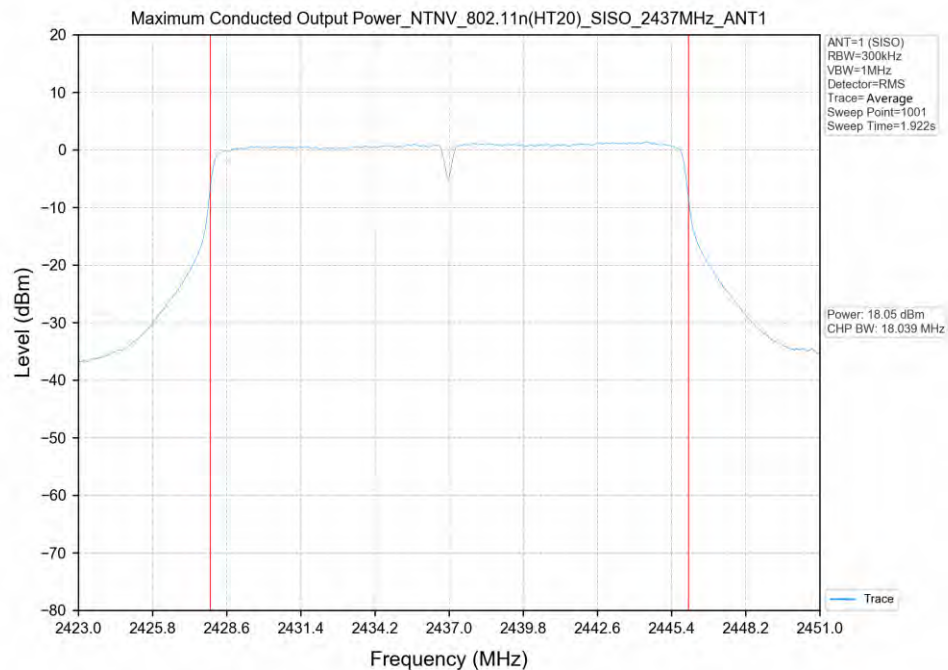
802.11n(HT20)_2412MHz_SISO_ANT1



SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch



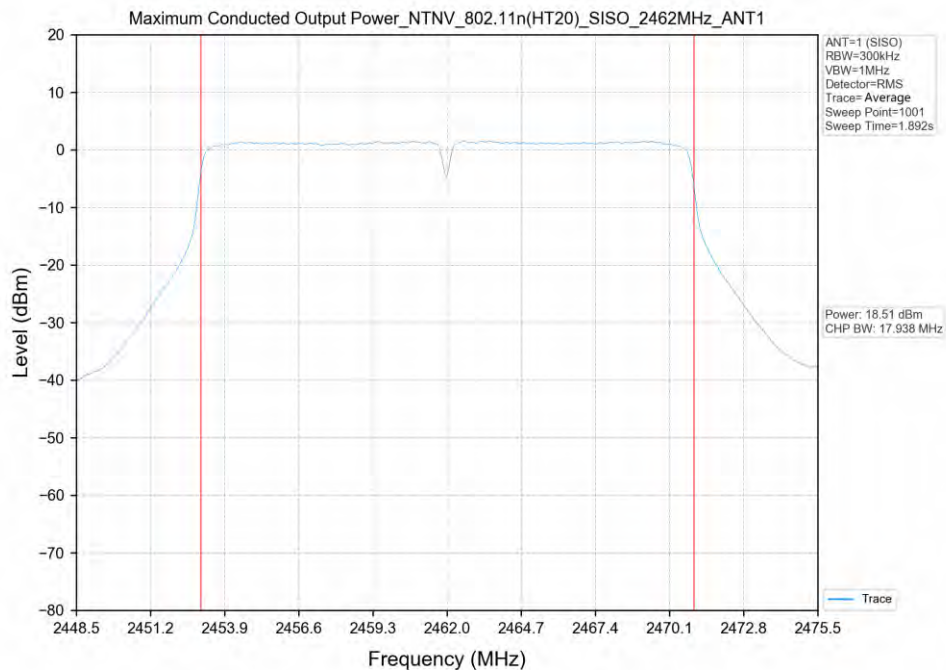
802.11n(HT20)_2437MHz_SISO_ANT1



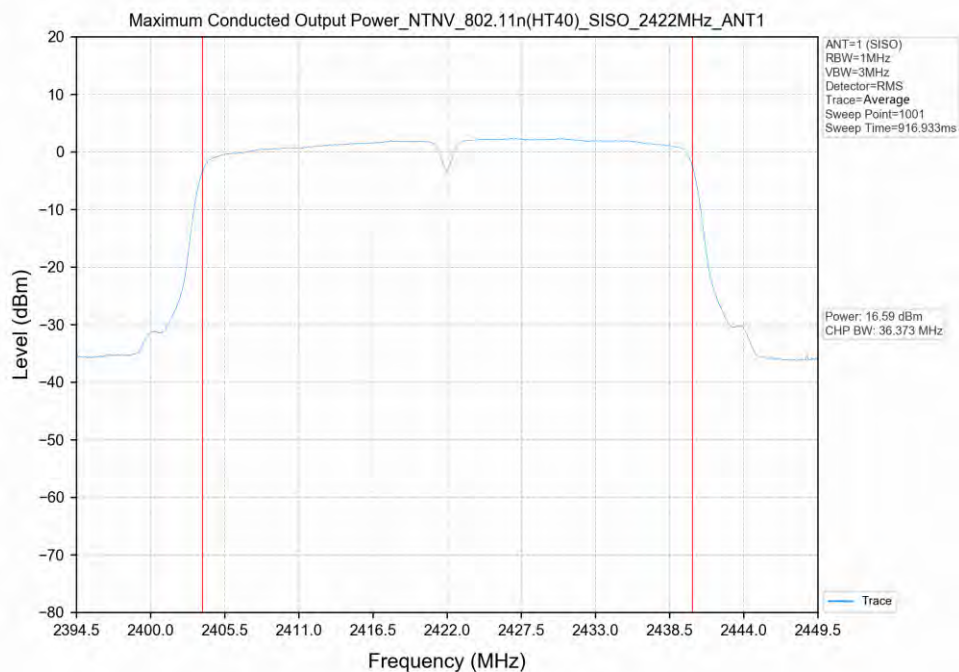
802.11n(HT20)_2462MHz_SISO_ANT1



SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch



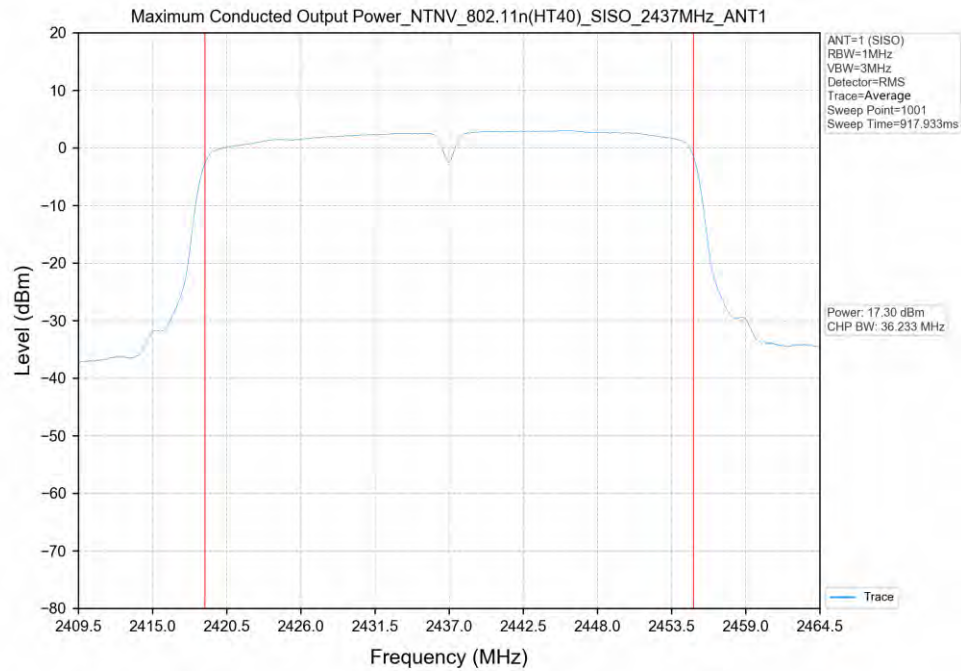
802.11n(HT40)_2422MHz_SISO_ANT1



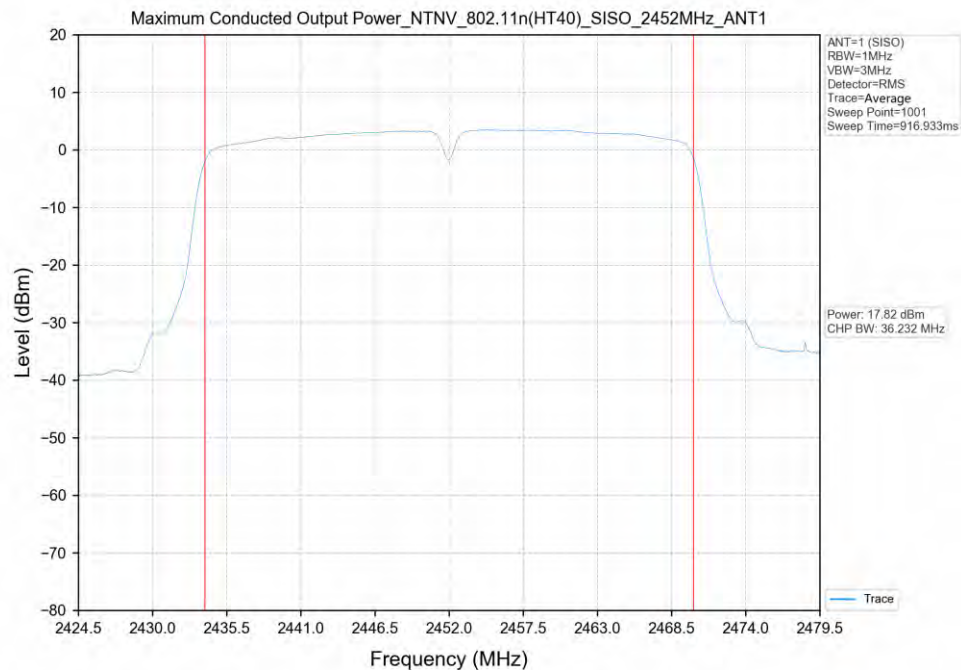
802.11n(HT40)_2437MHz_SISO_ANT1



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802.11n(HT40)_2452MHz_SISO_ANT1



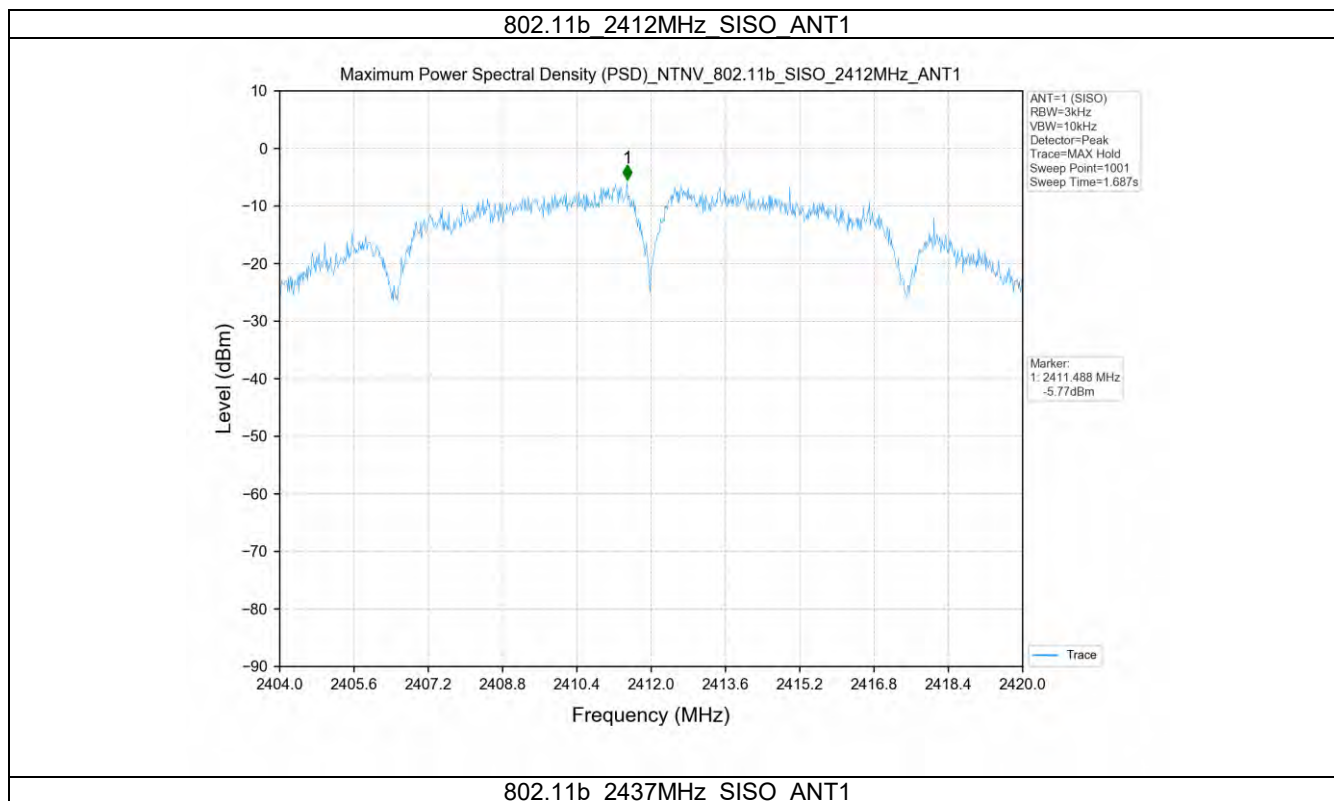


4. Maximum Power Spectral Density (PSD)

4.1 Test Result

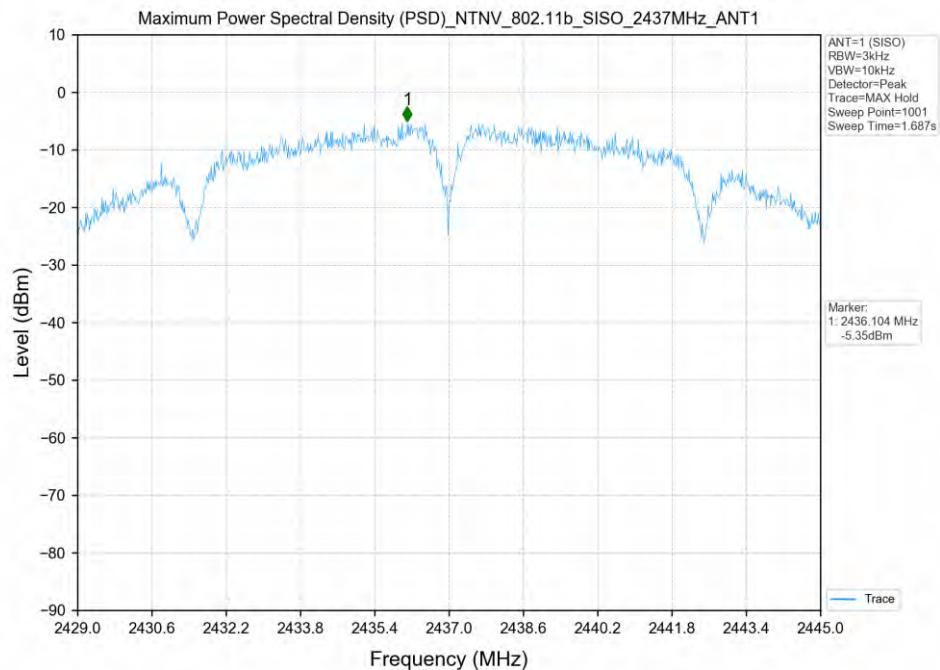
Test Mode	Frequency (MHz)	Tx Type	Maximum Power Spectral Density (dBm/3KHz)	Limits (dBm/3kHz)	Verdict
			Ant 1		
802.11b	2412	SISO	-5.77	≤8	PASS
	2437	SISO	-5.35	≤8	PASS
	2462	SISO	-3.78	≤8	PASS
802.11g	2412	SISO	-8.40	≤8	PASS
	2437	SISO	-6.49	≤8	PASS
	2462	SISO	-6.44	≤8	PASS
802.11n(HT20)	2412	SISO	-8.22	≤8	PASS
	2437	SISO	-7.56	≤8	PASS
	2462	SISO	-7.31	≤8	PASS
802.11n(HT40)	2422	SISO	-11.11	≤8	PASS
	2437	SISO	-9.83	≤8	PASS
	2452	SISO	-8.82	≤8	PASS

4.2 Test Graph

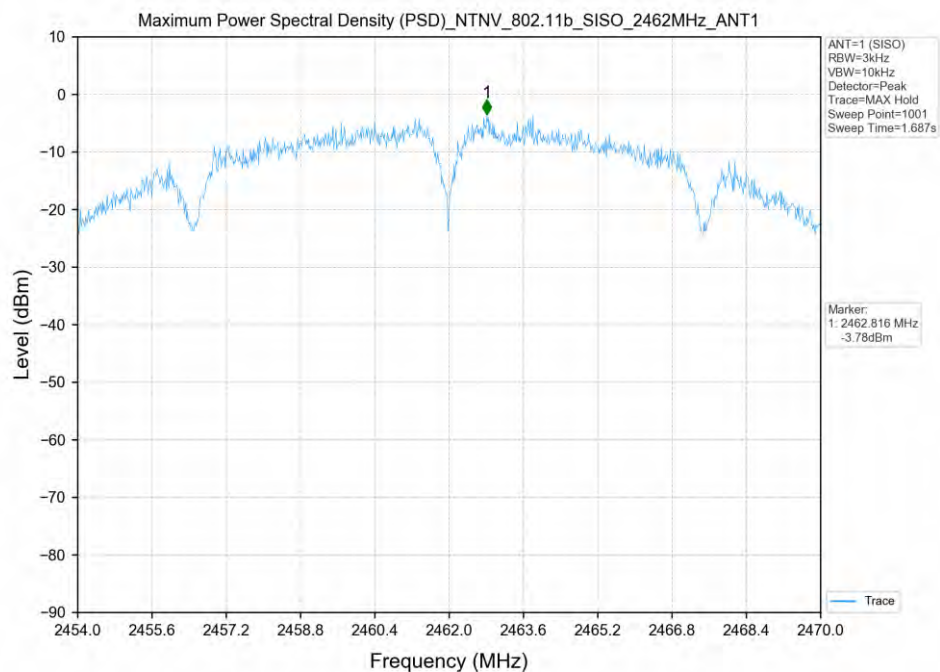




SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch



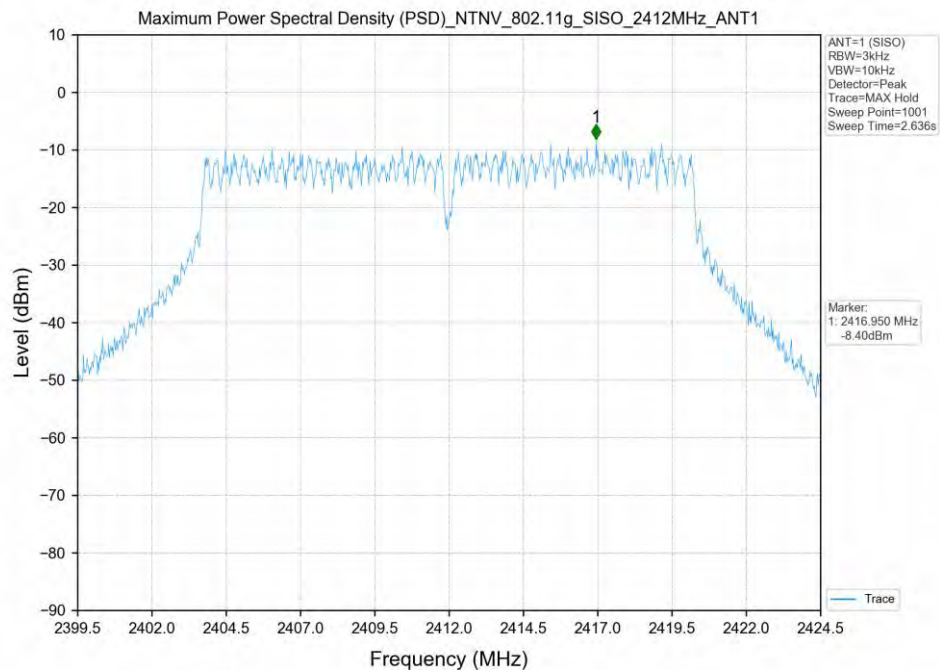
802.11b_2462MHz_SISO_ANT1



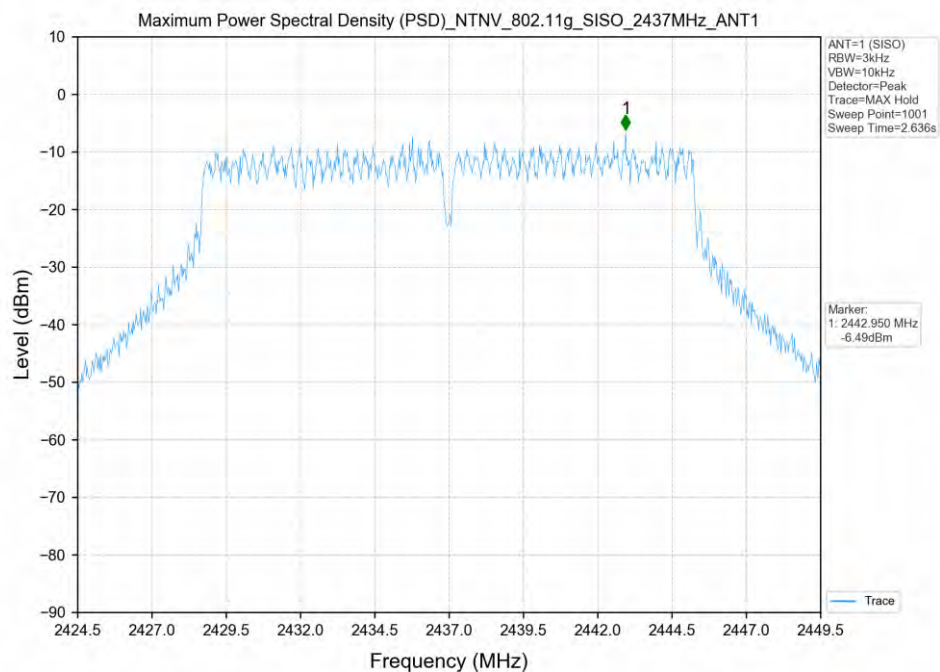
802.11g_2412MHz_SISO_ANT1



SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch



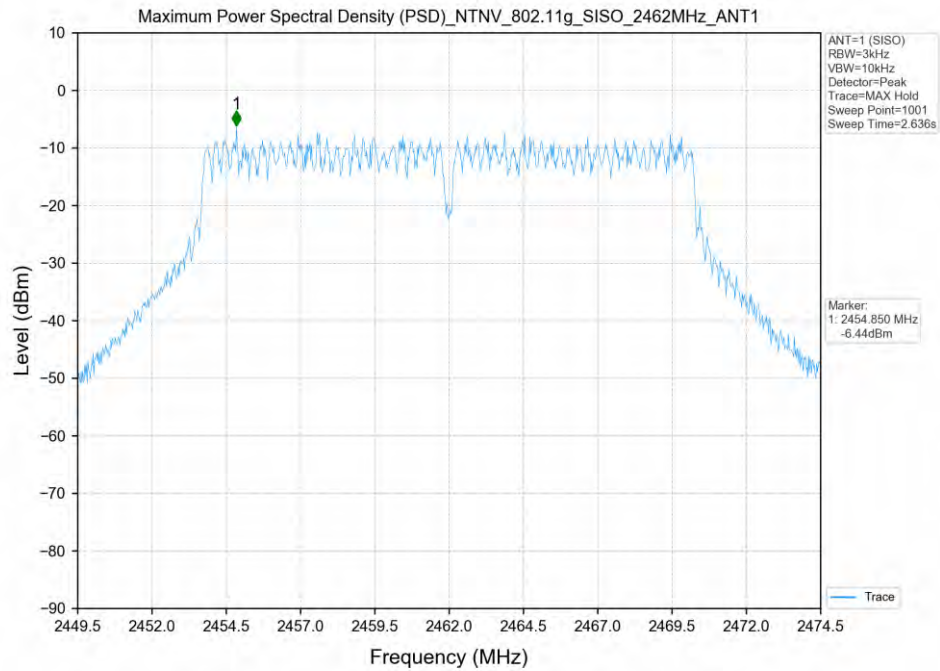
802.11g_2437MHz_SISO_ANT1



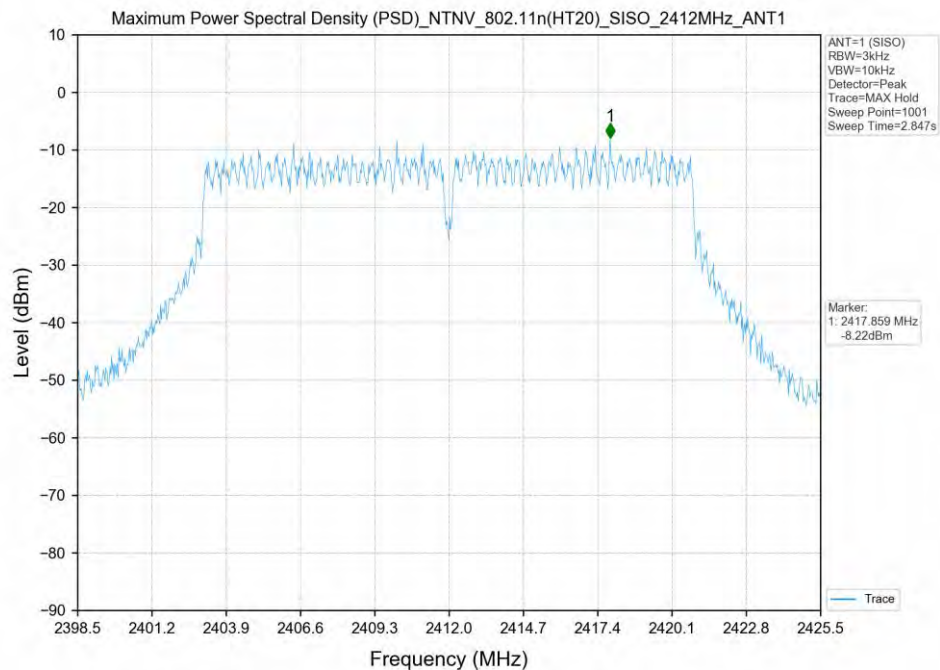
802.11g_2462MHz_SISO_ANT1



SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch



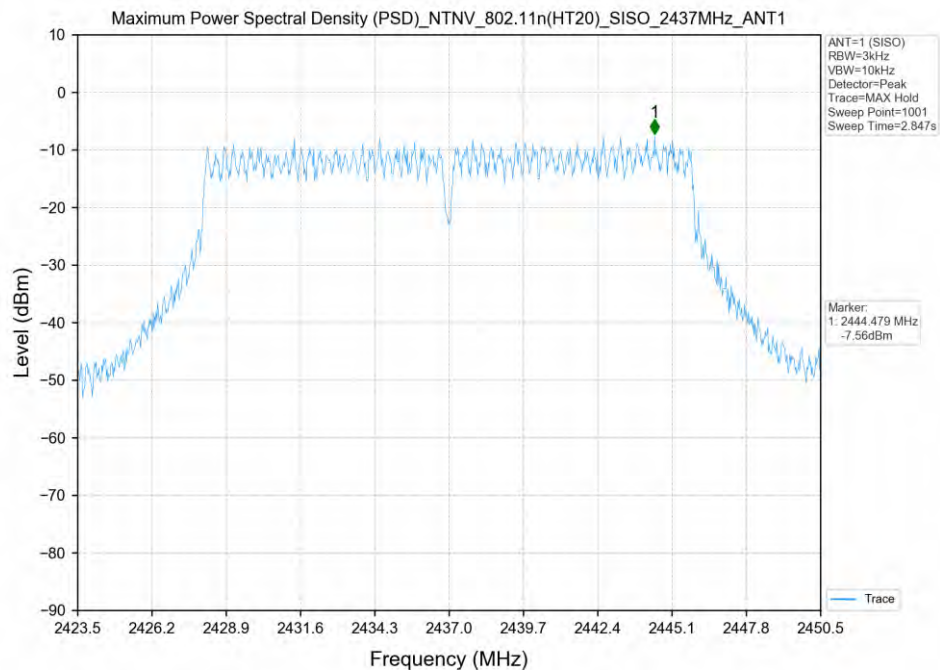
802.11n(HT20)_2412MHz_SISO_ANT1



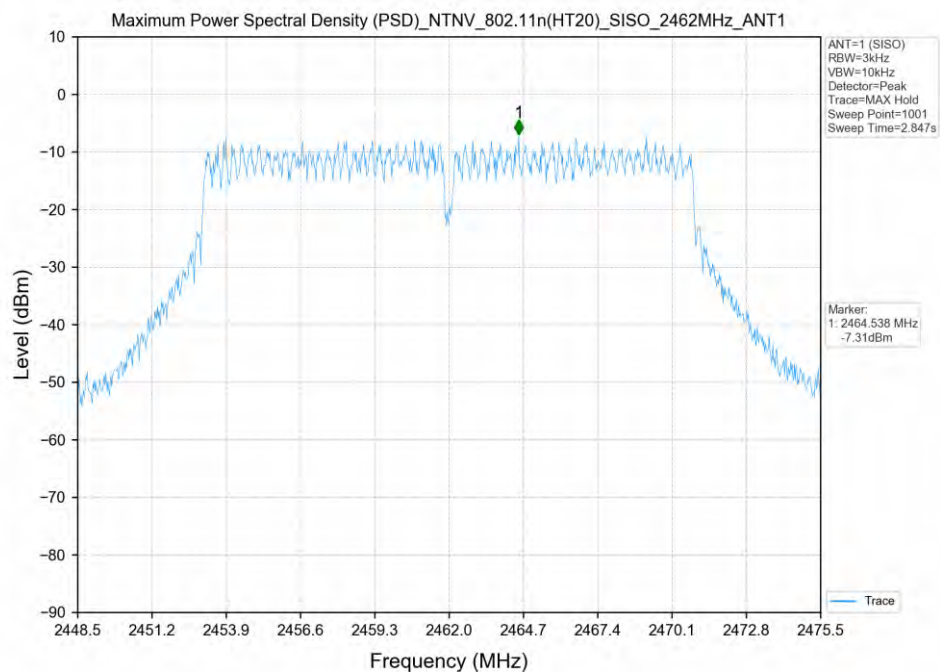
802.11n(HT20)_2437MHz_SISO_ANT1



SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch



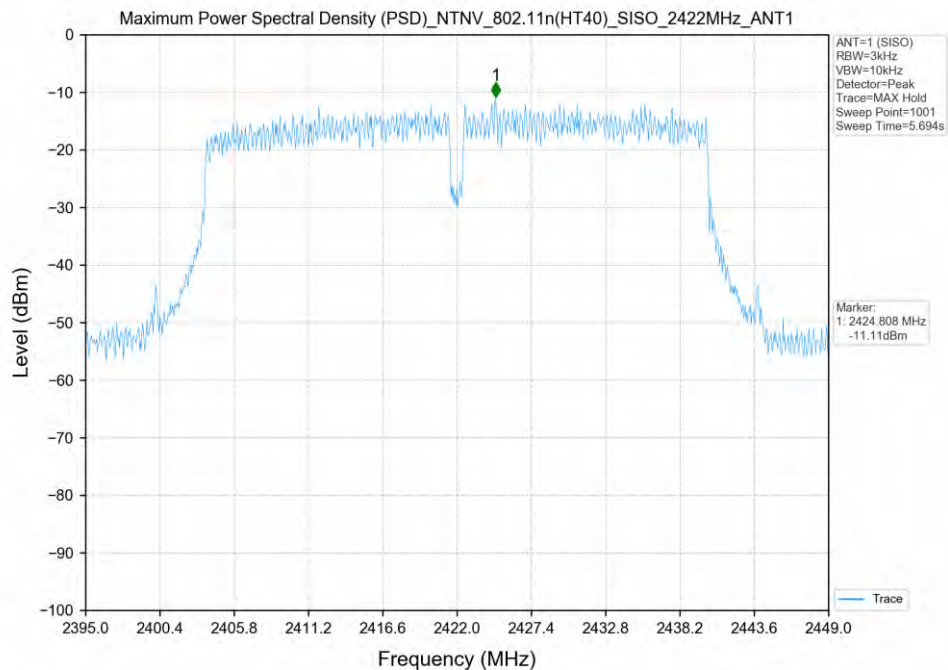
802.11n(HT20)_2462MHz_SISO_ANT1



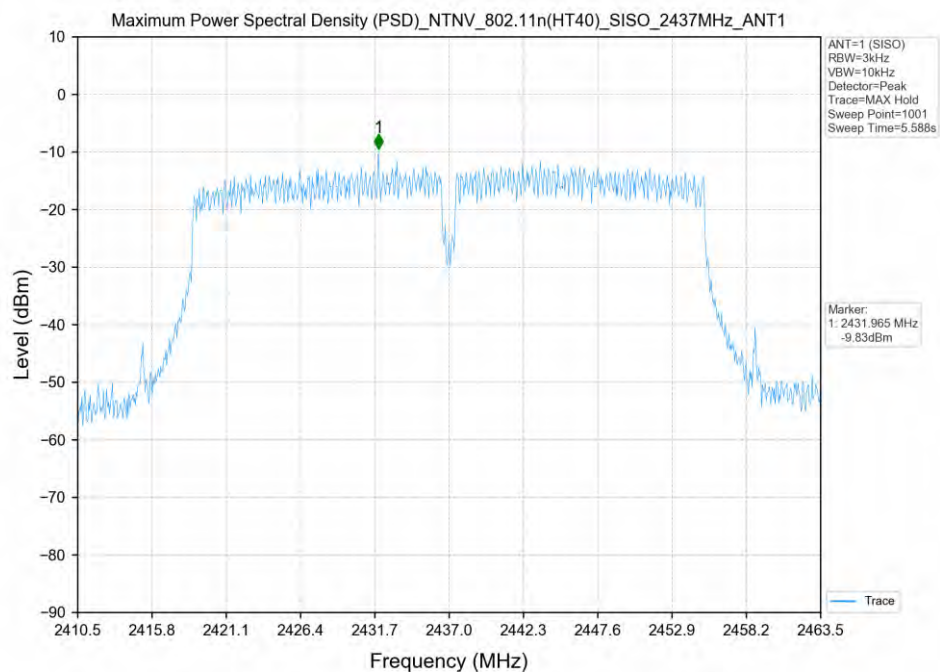
802.11n(HT40)_2422MHz_SISO_ANT1



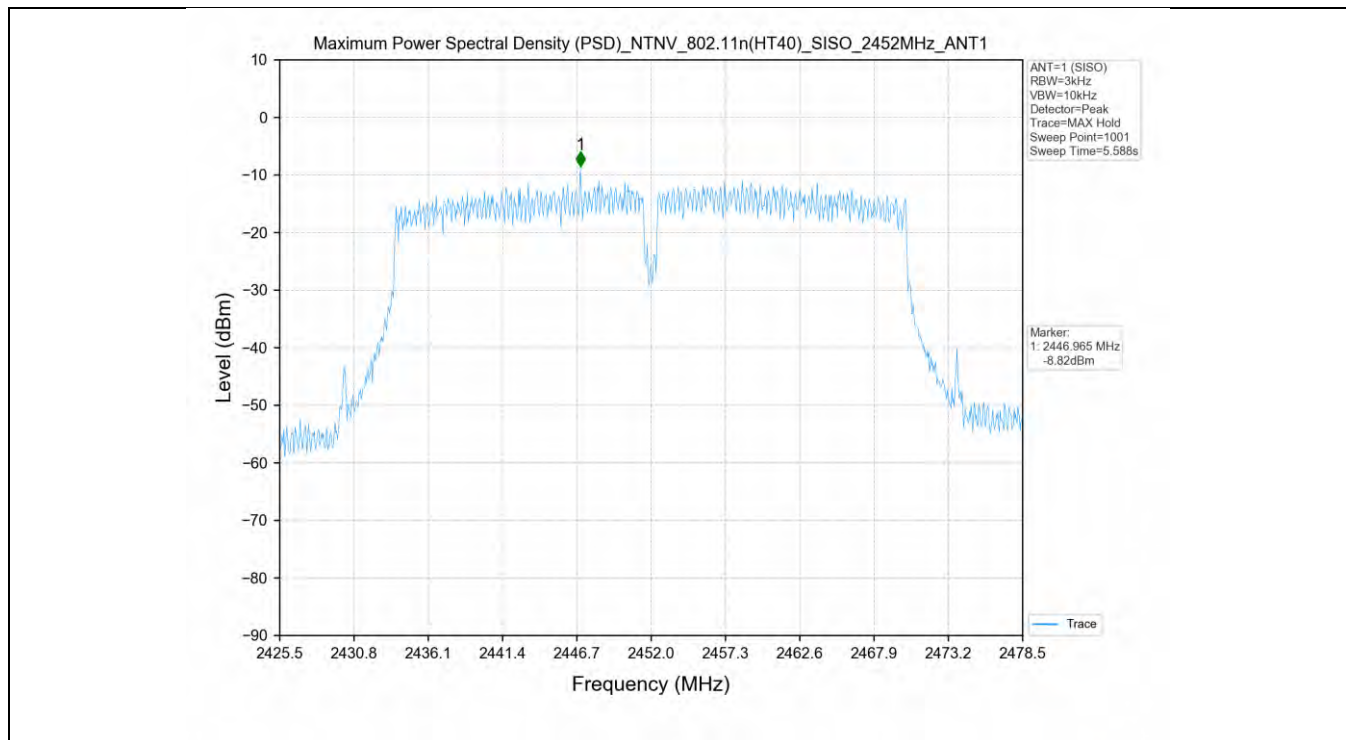
SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch



802.11n(HT40)_2437MHz_SISO_ANT1



802.11n(HT40)_2452MHz_SISO_ANT1



5. Unwanted Emissions in Non-restricted Frequency Bands

Test Result

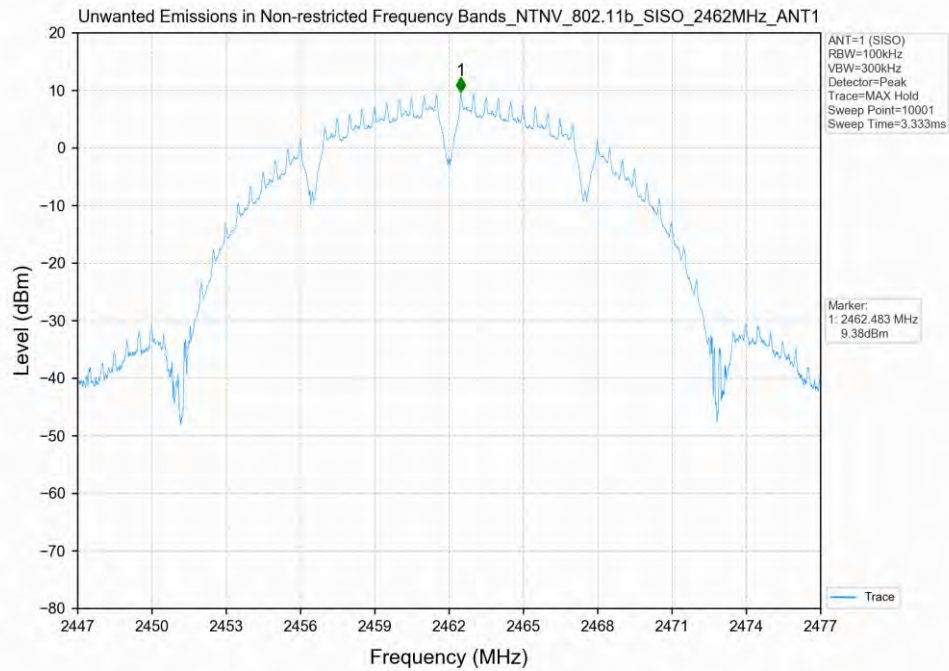
Test Mode	Frequency (MHz)	TX Type	ANT No.	Spurious Conducted Emission (dBm)	Limits (dBm)	Verdict
802.11b	2412	SISO	1	Refer to test graph	-20.62	PASS
	2437	SISO	1	Refer to test graph	-20.62	PASS
	2462	SISO	1	Refer to test graph	-20.62	PASS
802.11g	2412	SISO	1	Refer to test graph	-23.16	PASS
	2437	SISO	1	Refer to test graph	-23.16	PASS
	2462	SISO	1	Refer to test graph	-23.16	PASS
802.11n(HT20)	2412	SISO	1	Refer to test graph	-23.11	PASS
	2437	SISO	1	Refer to test graph	-23.11	PASS
	2462	SISO	1	Refer to test graph	-23.11	PASS
802.11n(HT40)	2422	SISO	1	Refer to test graph	-26.18	PASS
	2437	SISO	1	Refer to test graph	-26.18	PASS
	2452	SISO	1	Refer to test graph	-26.18	PASS

2.2 Test Graph

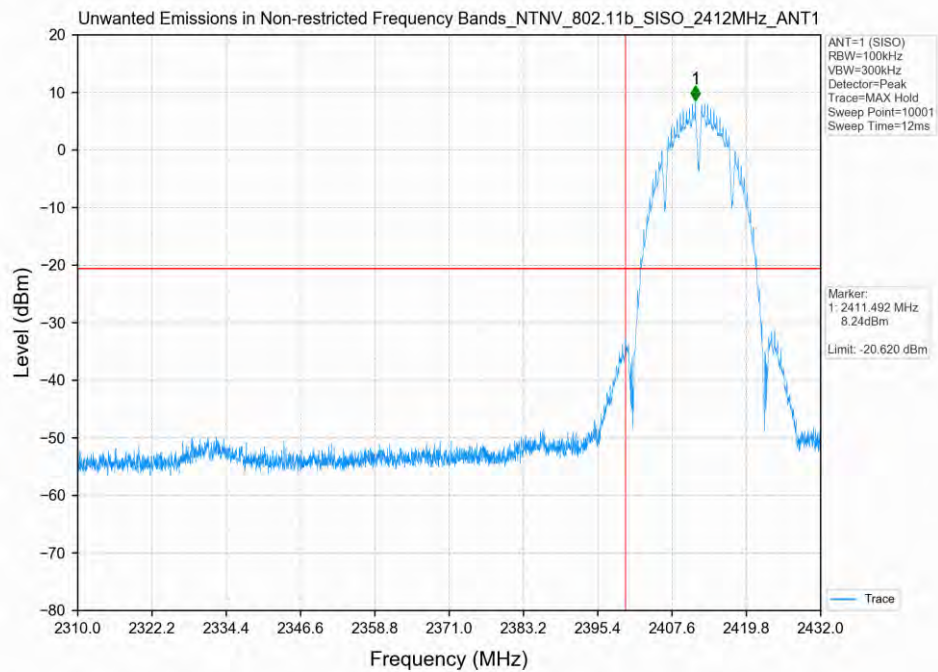
802.11b_SISO_ANT1_REF



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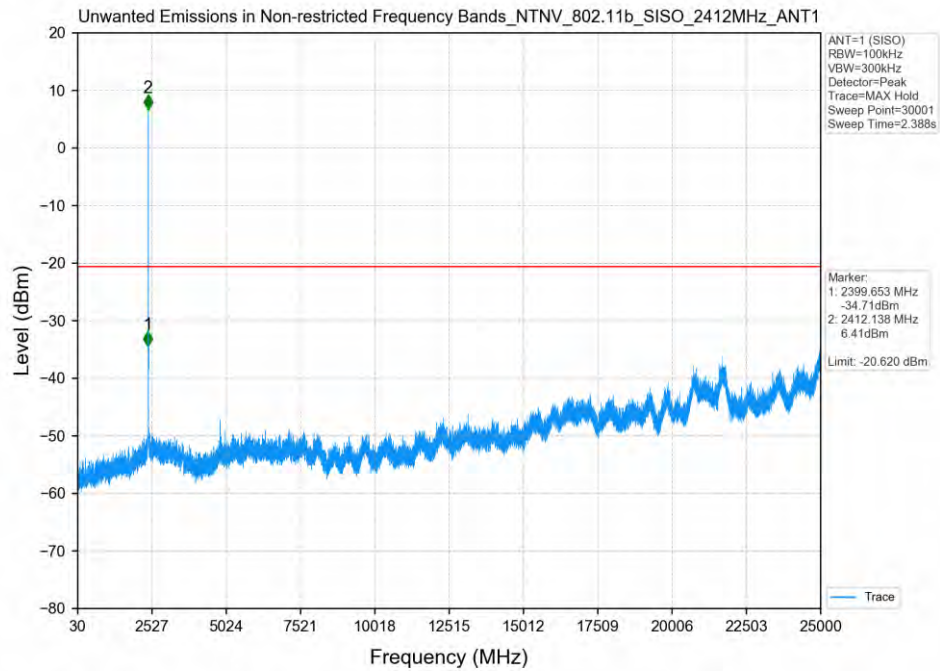
802.11b_2412MHz_SISO_ANT1



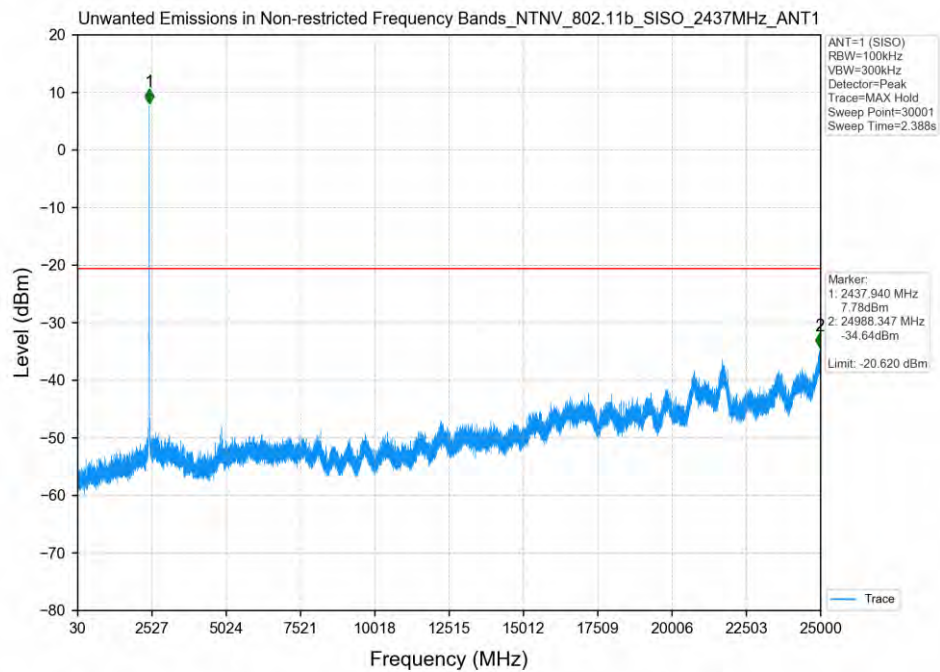
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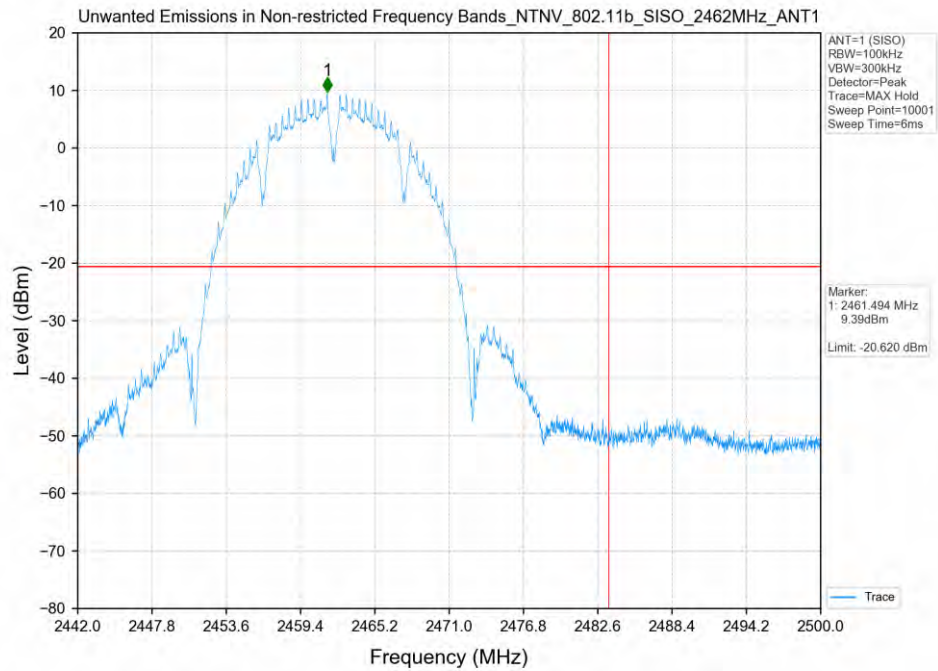
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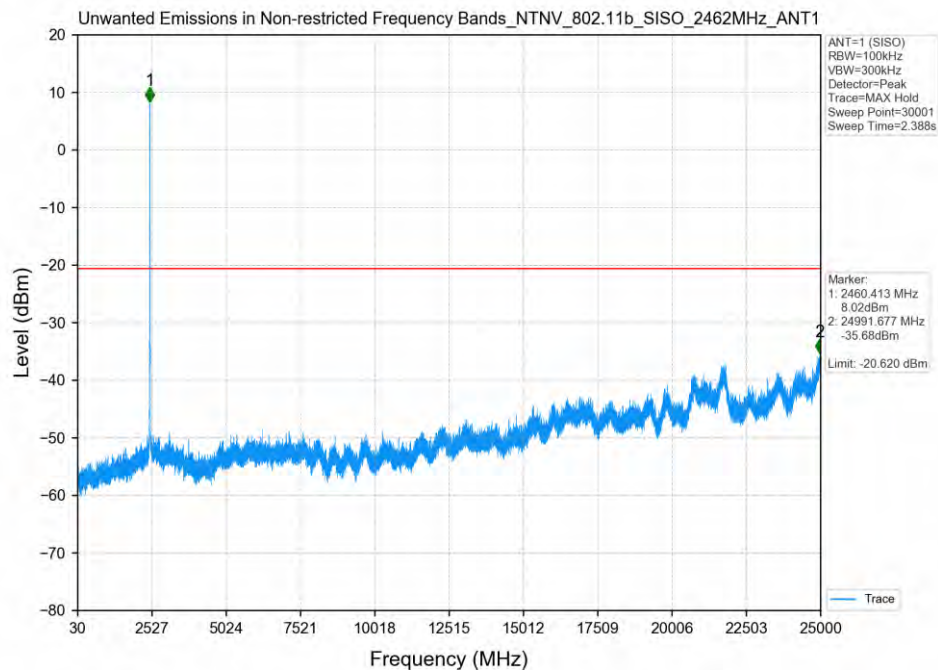
802.11b_2462MHz_SISO_ANT1



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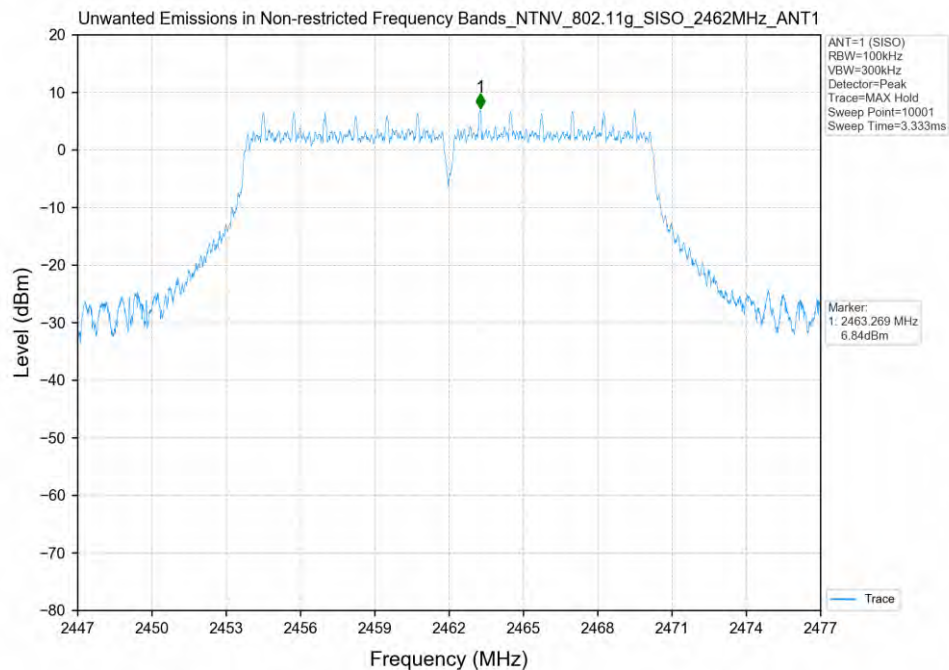
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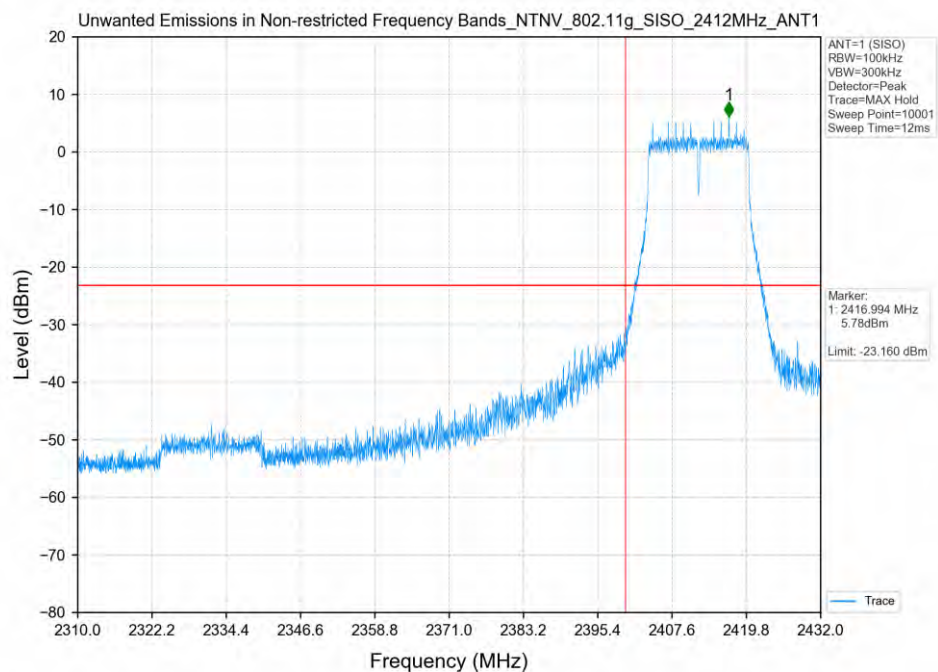
802.11g_SISO_ANT1_REF



SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch



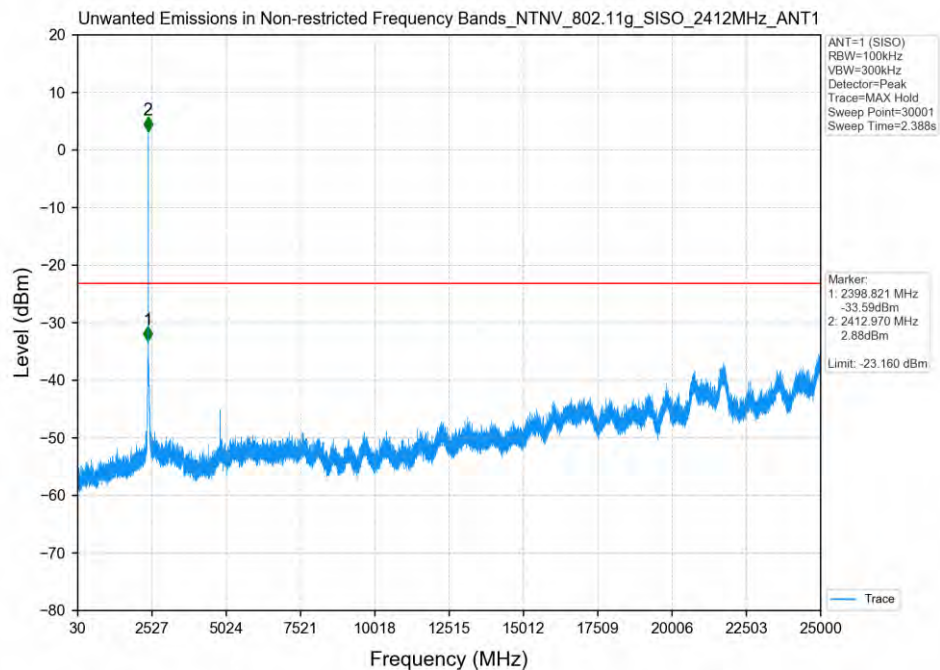
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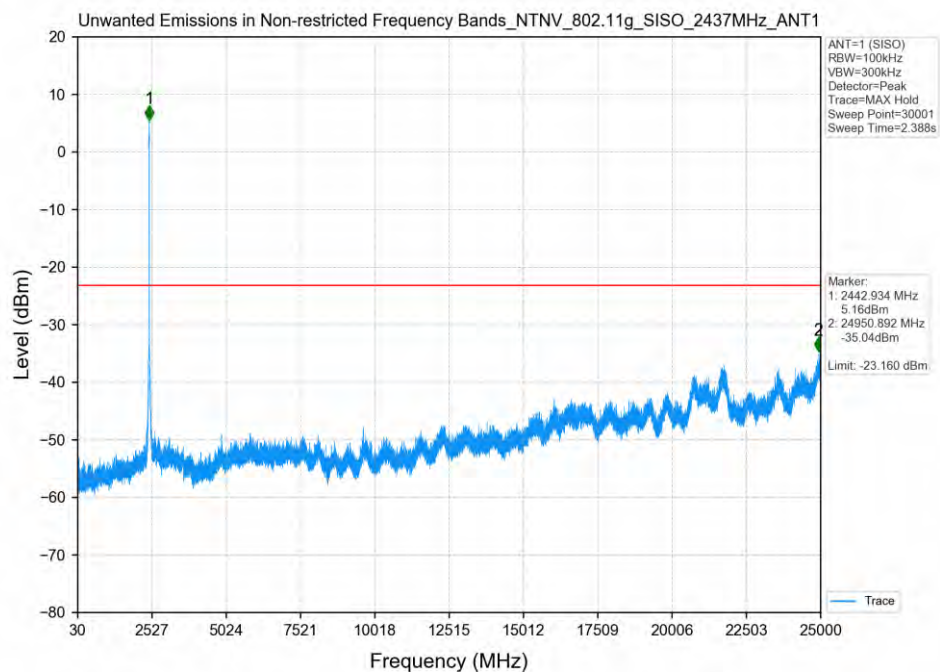
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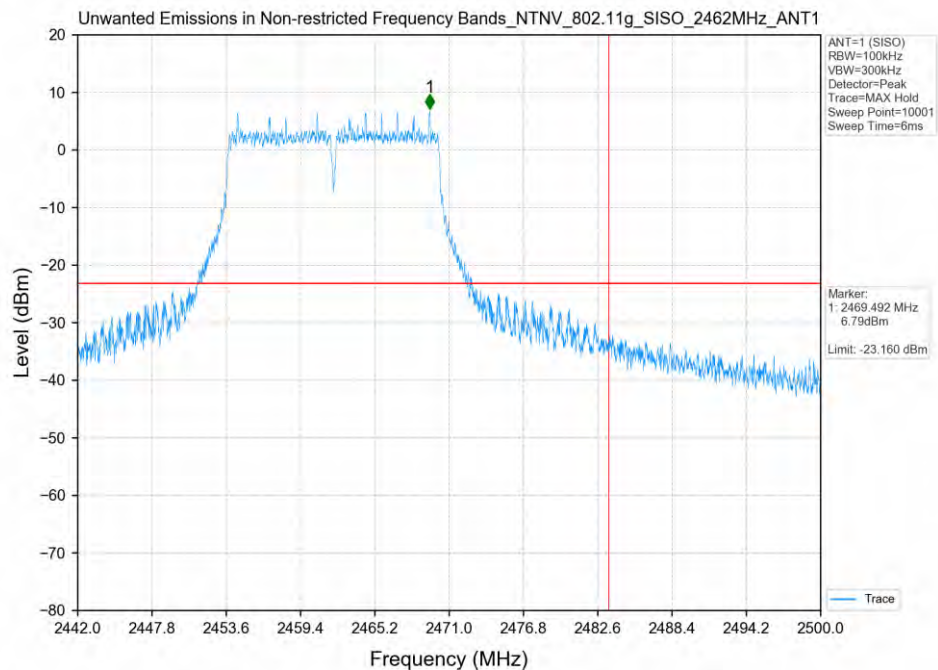
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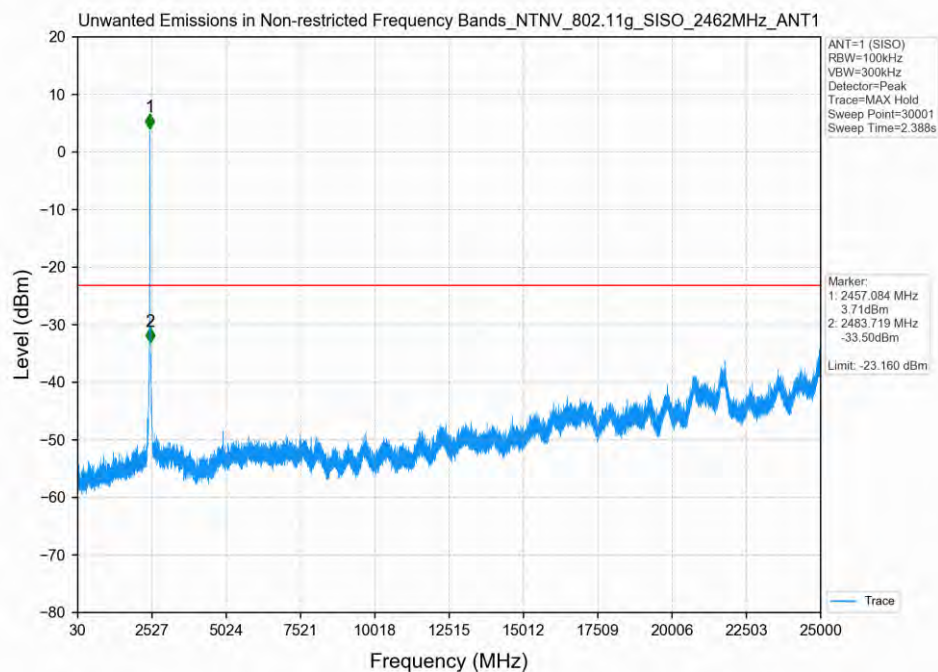
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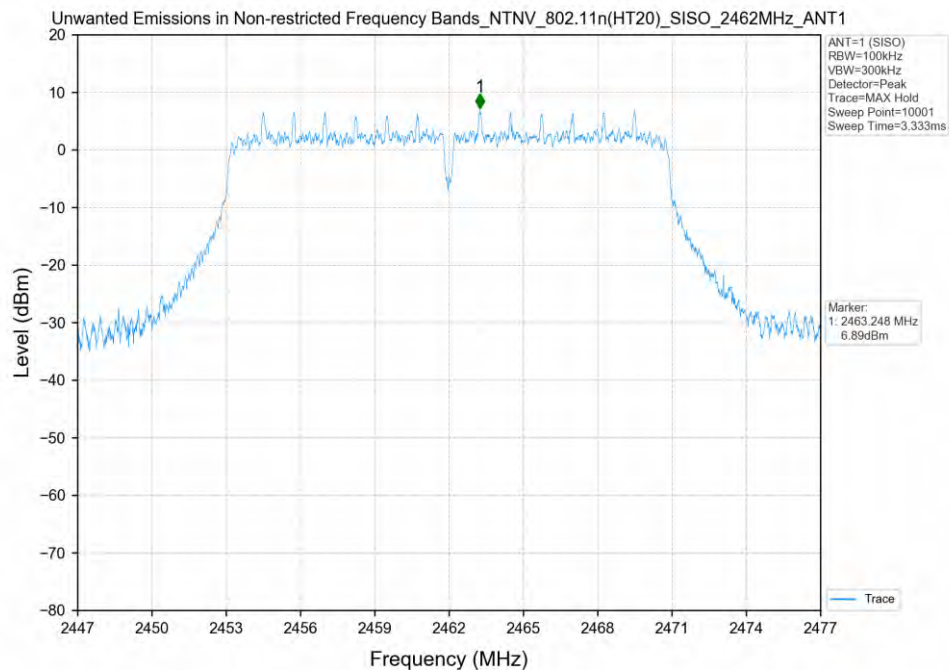
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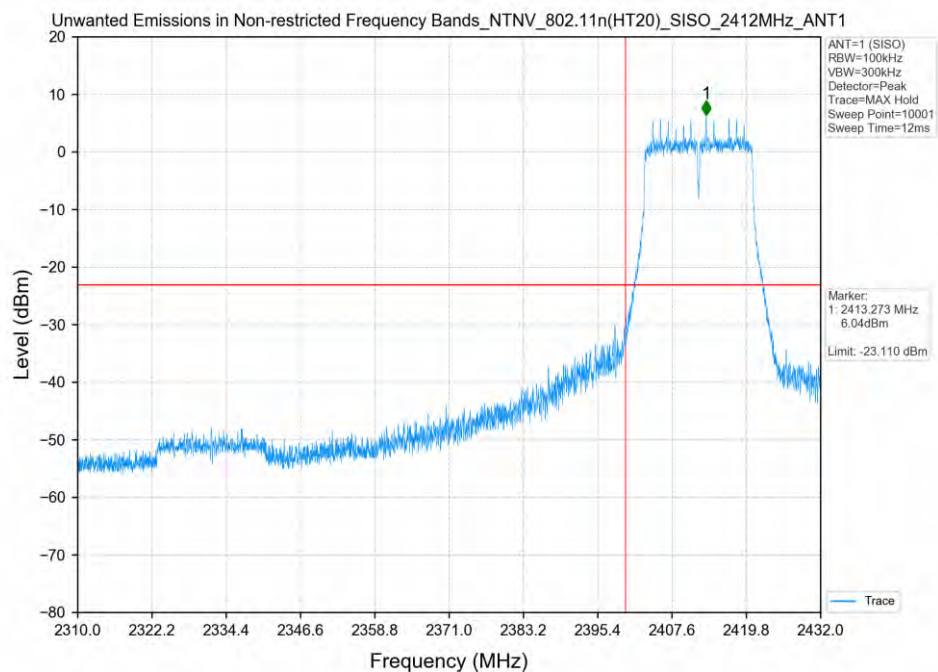
802.11n(HT20)_SISO_ANT1_REF



SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch



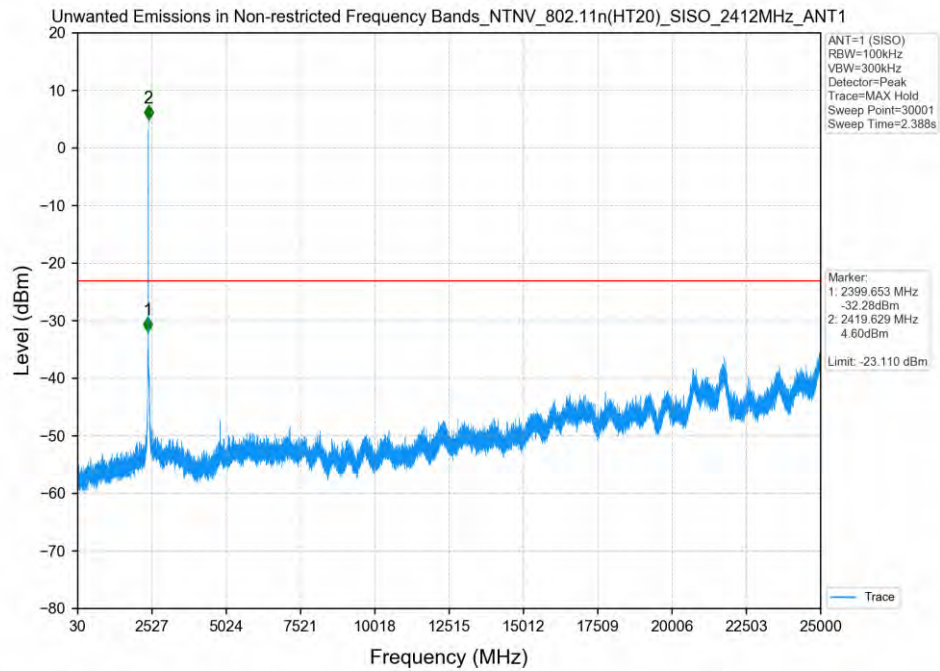
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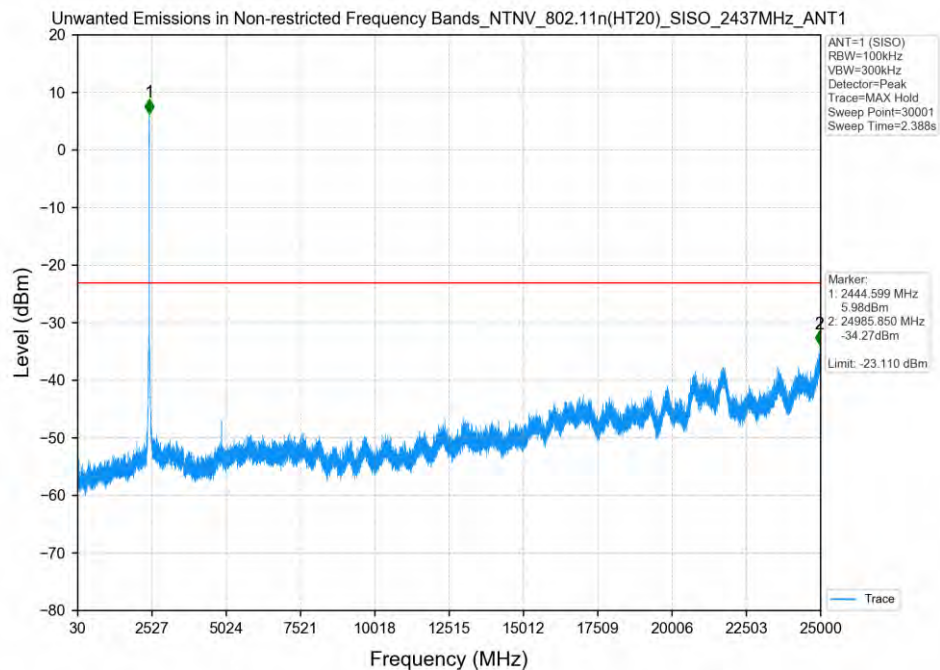
802.11n(HT20)_2412MHz_SISO_ANT1



SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch



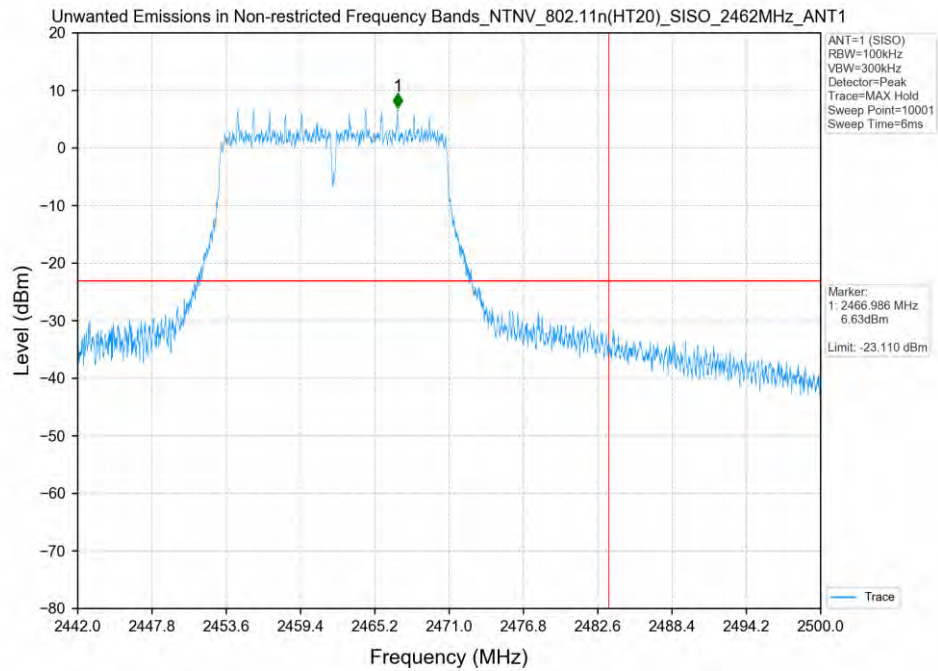
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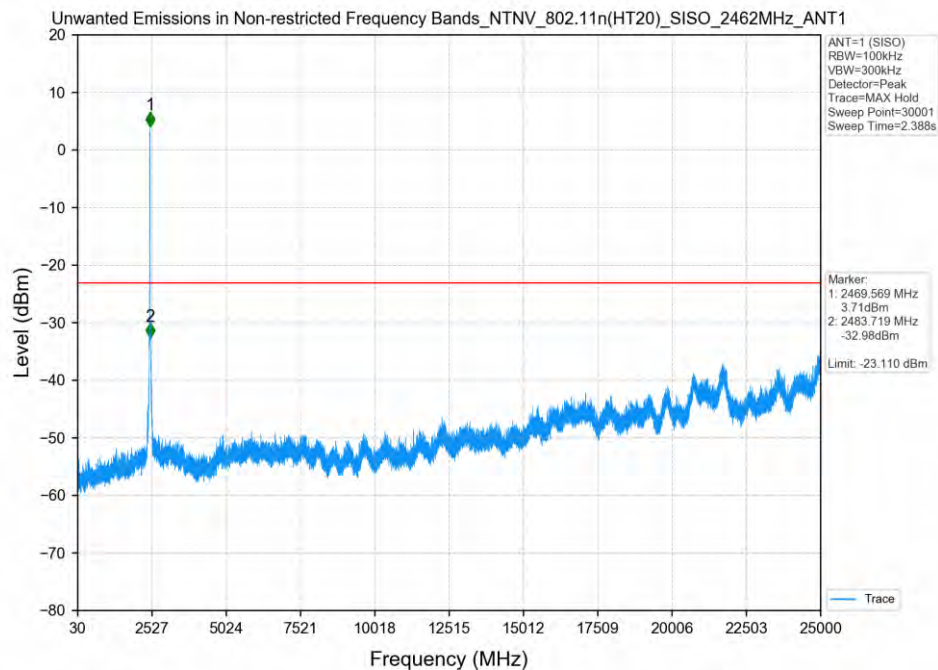
802.11n(HT20)_2462MHz_SISO_ANT1



SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch



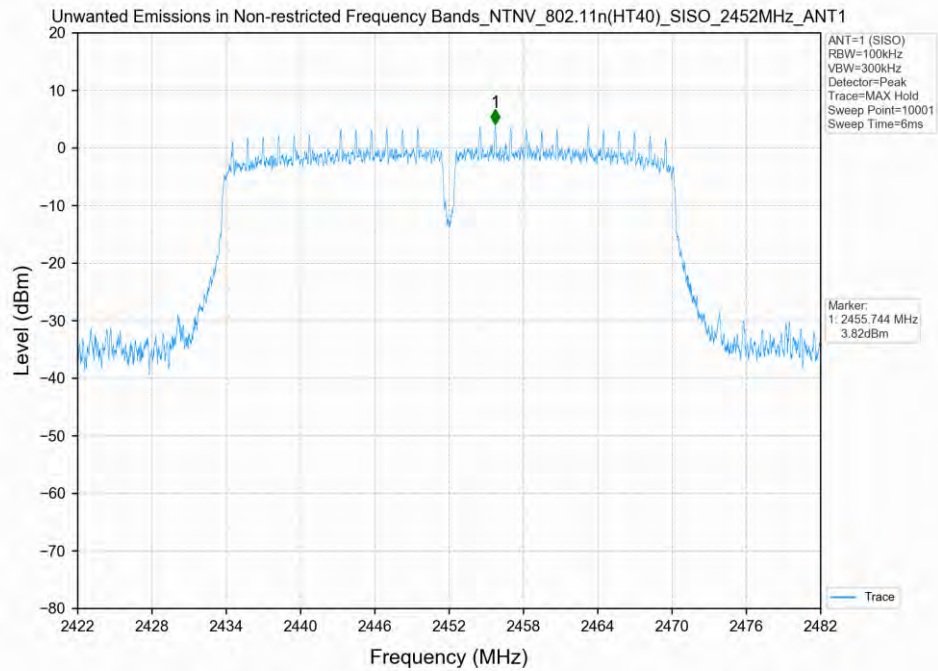
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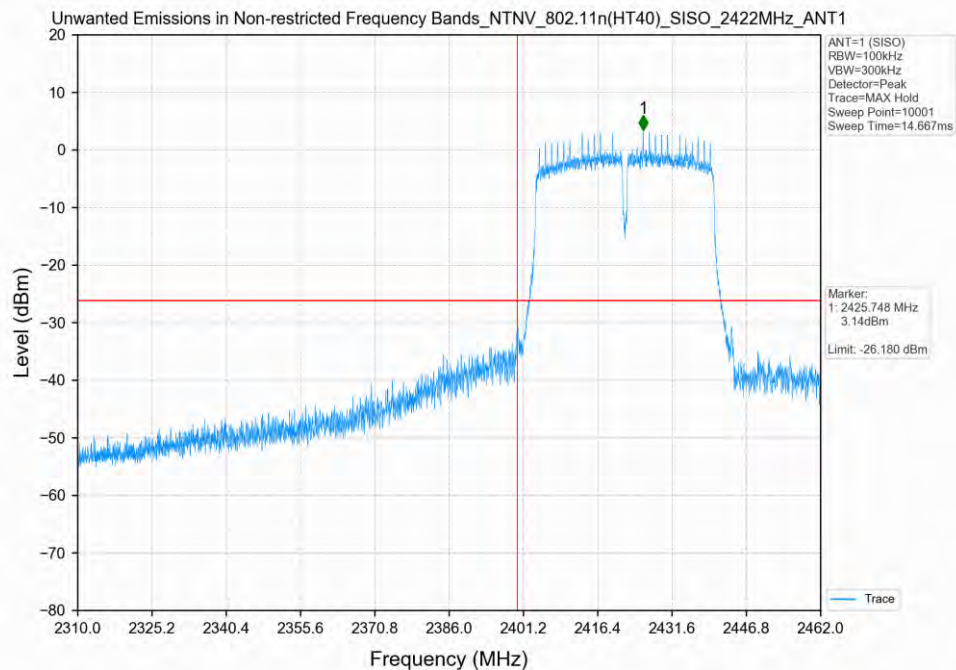
802.11n(HT40)_SISO_ANT1_REF



SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch



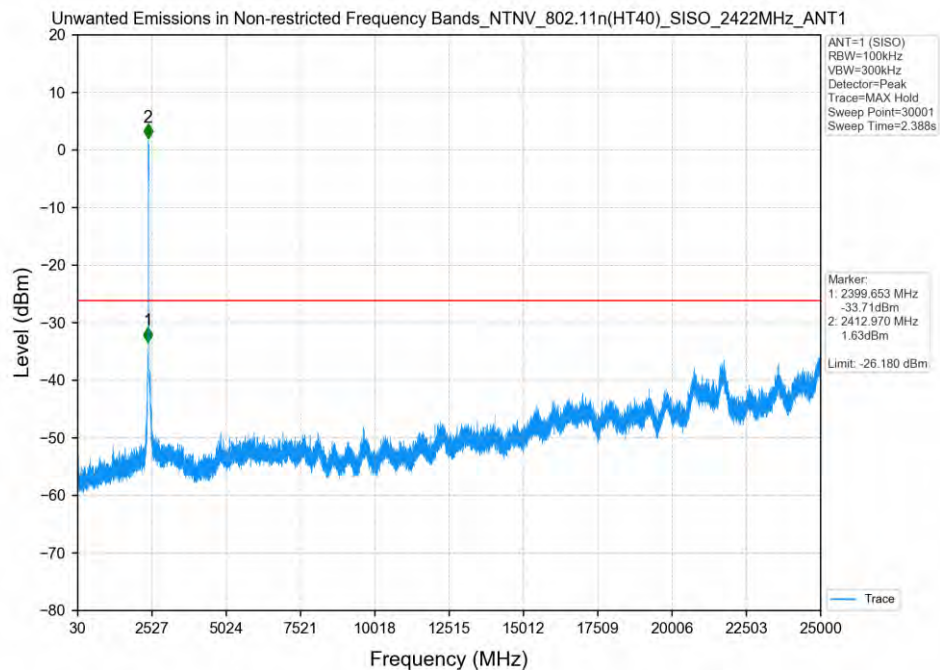
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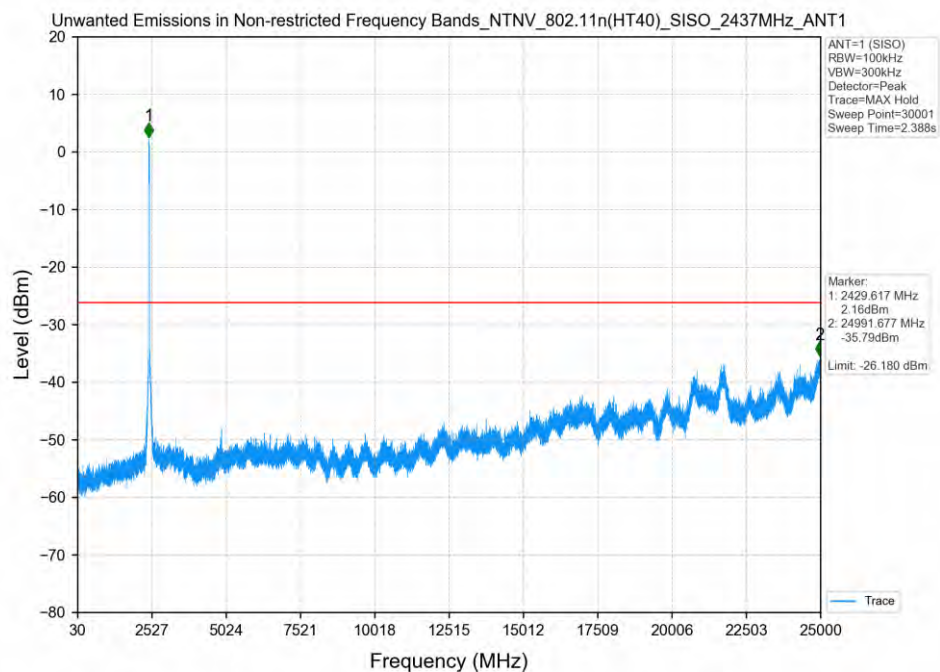
802.11n(HT40)_2422MHz_SISO_ANT1



SGS-CSTC Standards Technical Services Co., Ltd. Shanghai Branch



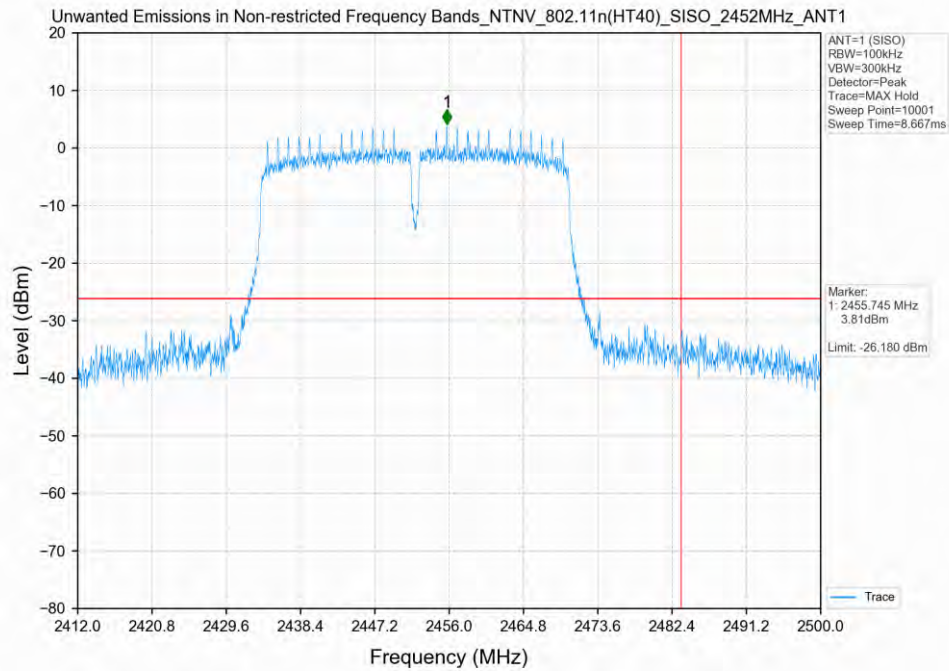
802.11n(HT40)_2437MHz_SISO_ANT1



802.11n(HT40)_2452MHz_SISO_ANT1



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802.11n(HT40)_2452MHz_SISO_ANT1

