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Annex for 3G_WCDMA_band_5

Test Report No.: CTL2506093036-WF05

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1. Effective (Isotropic) Radiated Power Output Data**1.1 Test Result****1.1.1 Band5_ERP**

Band: 5								
ENV	Mode		Frequency (MHz)	Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
	Network	Subset				Result	Limit	
NTNV	HSDPA	Subtest 1	826.4	20.54	-5.84	12.55	<=38.45	Pass
		Subtest 2	826.4	20.55	-5.84	12.56	<=38.45	Pass
		Subtest 3	826.4	20.53	-5.84	12.54	<=38.45	Pass
		Subtest 4	826.4	20.59	-5.84	12.60	<=38.45	Pass
		Subtest 1	836.6	20.66	-5.84	12.67	<=38.45	Pass
		Subtest 2	836.6	20.47	-5.84	12.48	<=38.45	Pass
		Subtest 3	836.6	20.47	-5.84	12.48	<=38.45	Pass
		Subtest 4	836.6	20.53	-5.84	12.54	<=38.45	Pass
		Subtest 1	846.6	20.59	-5.84	12.60	<=38.45	Pass
		Subtest 2	846.6	20.59	-5.84	12.60	<=38.45	Pass
		Subtest 3	846.6	20.59	-5.84	12.60	<=38.45	Pass
		Subtest 4	846.6	20.67	-5.84	12.68	<=38.45	Pass
	HSUPA	Subtest 1	826.4	18.60	-5.84	10.61	<=38.45	Pass
		Subtest 2	826.4	18.69	-5.84	10.70	<=38.45	Pass
		Subtest 3	826.4	18.85	-5.84	10.86	<=38.45	Pass
		Subtest 4	826.4	17.91	-5.84	9.92	<=38.45	Pass
		Subtest 5	826.4	17.94	-5.84	9.95	<=38.45	Pass
		Subtest 1	836.6	18.26	-5.84	10.27	<=38.45	Pass
		Subtest 2	836.6	19.13	-5.84	11.14	<=38.45	Pass
		Subtest 3	836.6	18.66	-5.84	10.67	<=38.45	Pass
		Subtest 4	836.6	18.02	-5.84	10.03	<=38.45	Pass
		Subtest 5	836.6	17.82	-5.84	9.83	<=38.45	Pass
		Subtest 1	846.6	18.15	-5.84	10.16	<=38.45	Pass
		Subtest 2	846.6	18.79	-5.84	10.80	<=38.45	Pass
		Subtest 3	846.6	18.90	-5.84	10.91	<=38.45	Pass
		Subtest 4	846.6	17.74	-5.84	9.75	<=38.45	Pass
		Subtest 5	846.6	17.83	-5.84	9.84	<=38.45	Pass

Note1: ERP=Conducted Power+Antenna Gain-2.15

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2. Frequency Stability**2.1 Test Result****2.1.1 Band5**

Band: 5							
Network	Frequency (MHz)	Temp. (°C)	Voltage (VAC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
					Result	Limit	
HSDPA	826.4	20	102	-0.722	-0.0009	-2.5 to 2.5	Pass
			120	-1.044	-0.0013	-2.5 to 2.5	Pass
			138	-0.966	-0.0012	-2.5 to 2.5	Pass
		-30	120	-0.436	-0.0005	-2.5 to 2.5	Pass
		-20	120	-0.136	-0.0002	-2.5 to 2.5	Pass
		-10	120	-0.179	-0.0002	-2.5 to 2.5	Pass
		0	120	0.308	0.0004	-2.5 to 2.5	Pass
		10	120	0.451	0.0005	-2.5 to 2.5	Pass
		30	120	0.086	0.0001	-2.5 to 2.5	Pass
		40	120	0.207	0.0003	-2.5 to 2.5	Pass
		50	120	0.243	0.0003	-2.5 to 2.5	Pass
	836.6	20	102	1.216	0.0015	-2.5 to 2.5	Pass
			120	1.860	0.0022	-2.5 to 2.5	Pass
			138	1.502	0.0018	-2.5 to 2.5	Pass
		-30	120	1.616	0.0019	-2.5 to 2.5	Pass
		-20	120	1.380	0.0016	-2.5 to 2.5	Pass
		-10	120	1.466	0.0018	-2.5 to 2.5	Pass
		0	120	1.423	0.0017	-2.5 to 2.5	Pass
		10	120	1.659	0.0020	-2.5 to 2.5	Pass
		30	120	1.702	0.0020	-2.5 to 2.5	Pass
		40	120	1.538	0.0018	-2.5 to 2.5	Pass
		50	120	1.788	0.0021	-2.5 to 2.5	Pass
	846.6	20	102	1.523	0.0018	-2.5 to 2.5	Pass
			120	1.695	0.0020	-2.5 to 2.5	Pass
			138	1.466	0.0017	-2.5 to 2.5	Pass
		-30	120	1.659	0.0020	-2.5 to 2.5	Pass
		-20	120	1.302	0.0015	-2.5 to 2.5	Pass
		-10	120	1.380	0.0016	-2.5 to 2.5	Pass
		0	120	1.273	0.0015	-2.5 to 2.5	Pass
		10	120	1.881	0.0022	-2.5 to 2.5	Pass
		30	120	1.688	0.0020	-2.5 to 2.5	Pass
		40	120	1.545	0.0018	-2.5 to 2.5	Pass
HSUPA	826.4	20	102	-0.114	-0.0001	-2.5 to 2.5	Pass
			120	0.215	0.0003	-2.5 to 2.5	Pass
			138	-0.179	-0.0002	-2.5 to 2.5	Pass
		-30	120	0.200	0.0002	-2.5 to 2.5	Pass
		-20	120	0.529	0.0006	-2.5 to 2.5	Pass
		-10	120	0.451	0.0005	-2.5 to 2.5	Pass
		0	120	0.615	0.0007	-2.5 to 2.5	Pass
		10	120	0.186	0.0002	-2.5 to 2.5	Pass
		30	120	0.823	0.0010	-2.5 to 2.5	Pass
		40	120	0.558	0.0007	-2.5 to 2.5	Pass
		50	120	0.336	0.0004	-2.5 to 2.5	Pass
	836.6	20	102	-3.626	-0.0043	-2.5 to 2.5	Pass
			120	-4.184	-0.0050	-2.5 to 2.5	Pass
			138	-3.676	-0.0044	-2.5 to 2.5	Pass
		-30	120	-4.270	-0.0051	-2.5 to 2.5	Pass
		-20	120	-4.385	-0.0052	-2.5 to 2.5	Pass

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		-10	120	-4.299	-0.0051	-2.5 to 2.5	Pass
		0	120	-4.370	-0.0052	-2.5 to 2.5	Pass
		10	120	-4.141	-0.0049	-2.5 to 2.5	Pass
		30	120	-3.390	-0.0041	-2.5 to 2.5	Pass
		40	120	-4.442	-0.0053	-2.5 to 2.5	Pass
		50	120	-4.177	-0.0050	-2.5 to 2.5	Pass
	846.6	20	102	-5.579	-0.0066	-2.5 to 2.5	Pass
			120	-5.751	-0.0068	-2.5 to 2.5	Pass
			138	-6.859	-0.0081	-2.5 to 2.5	Pass
		-30	120	-6.137	-0.0072	-2.5 to 2.5	Pass
		-20	120	-7.303	-0.0086	-2.5 to 2.5	Pass
		-10	120	-7.253	-0.0086	-2.5 to 2.5	Pass
		0	120	-5.808	-0.0069	-2.5 to 2.5	Pass
		10	120	-6.659	-0.0079	-2.5 to 2.5	Pass
		30	120	-6.831	-0.0081	-2.5 to 2.5	Pass
		40	120	-6.702	-0.0079	-2.5 to 2.5	Pass
		50	120	-7.074	-0.0084	-2.5 to 2.5	Pass

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3. Modulation Characteristics

3.1 Test Result

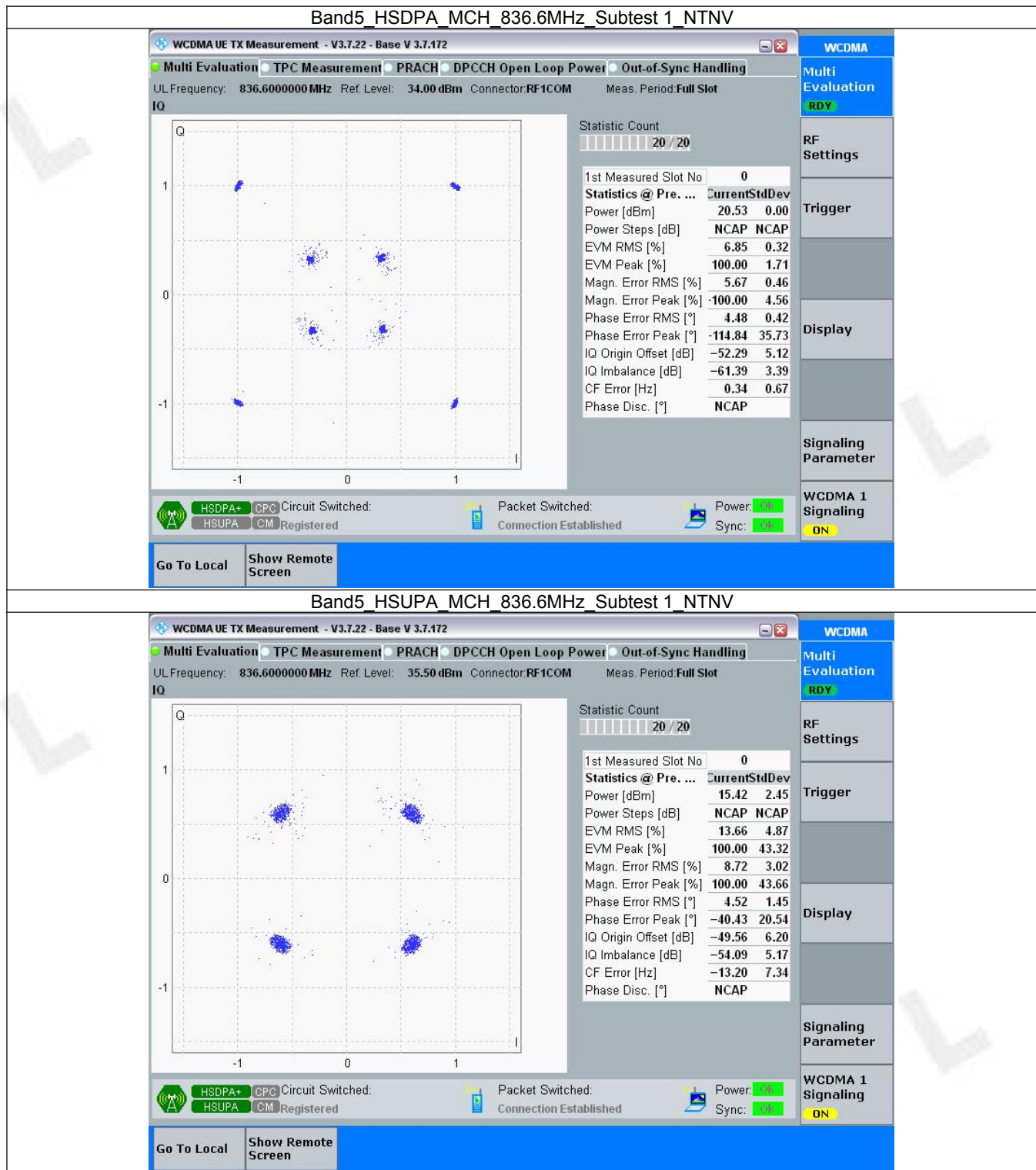
3.1.1 Band5

Band: 5						
ENV	Mode		Frequency (MHz)	Modulation Characteristics		Verdict
	Network	Subset		Result	Limit	
NTNV	HSDPA	Subtest 1	836.6	Refer To Test Graph		Pass
	HSUPA	Subtest 1	836.6	Refer To Test Graph		Pass

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3.2 Test Graph

3.2.1 Band5



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4. 99% & 26dB Bandwidth**4.1 Test Result****4.1.1 Band5_OBW**

Band: 5						
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	HSDPA	Subtest 1	826.4	4.334	/	Pass
			836.6	4.316	/	Pass
			846.6	4.229	/	Pass
	HSUPA	Subtest 1	826.4	4.354	/	Pass
			836.6	4.318	/	Pass
			846.6	4.275	/	Pass

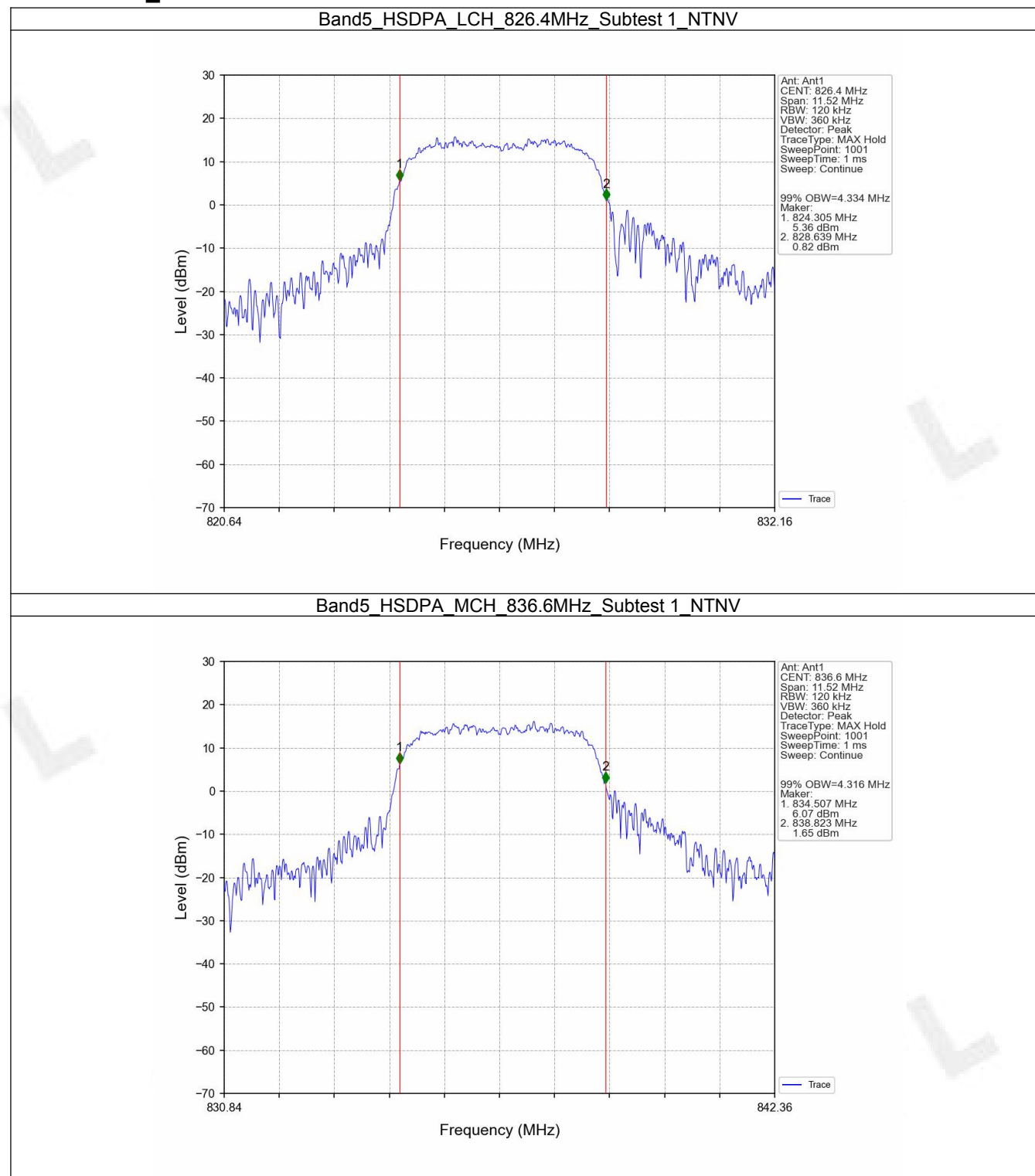
4.1.2 Band5_XDB

Band: 5						
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	HSDPA	Subtest 1	826.4	6.812	/	Pass
			836.6	7.056	/	Pass
			846.6	6.777	/	Pass
	HSUPA	Subtest 1	826.4	6.605	/	Pass
			836.6	6.459	/	Pass
			846.6	6.360	/	Pass

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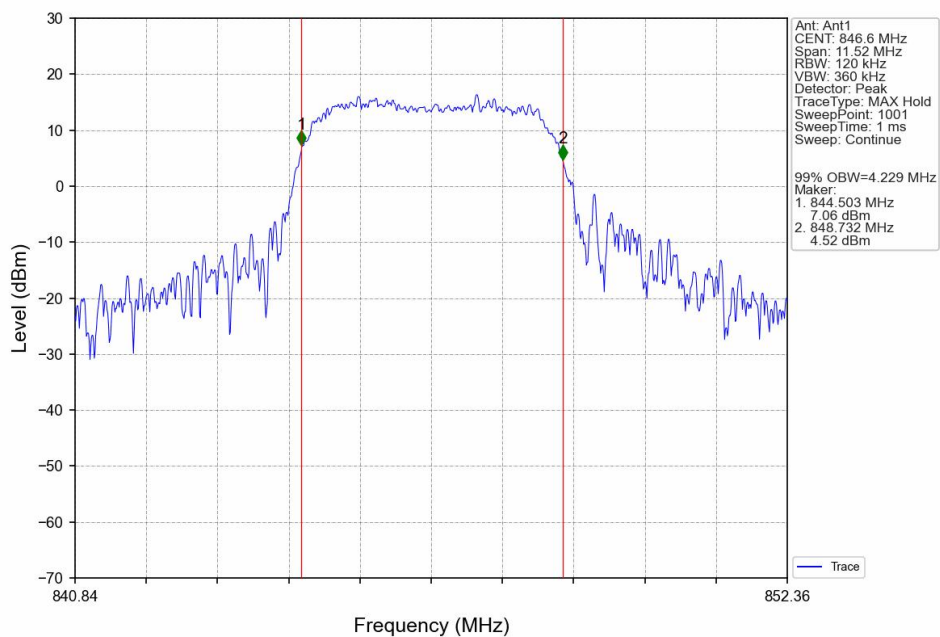
4.2 Test Graph

4.2.1 Band5_OBW

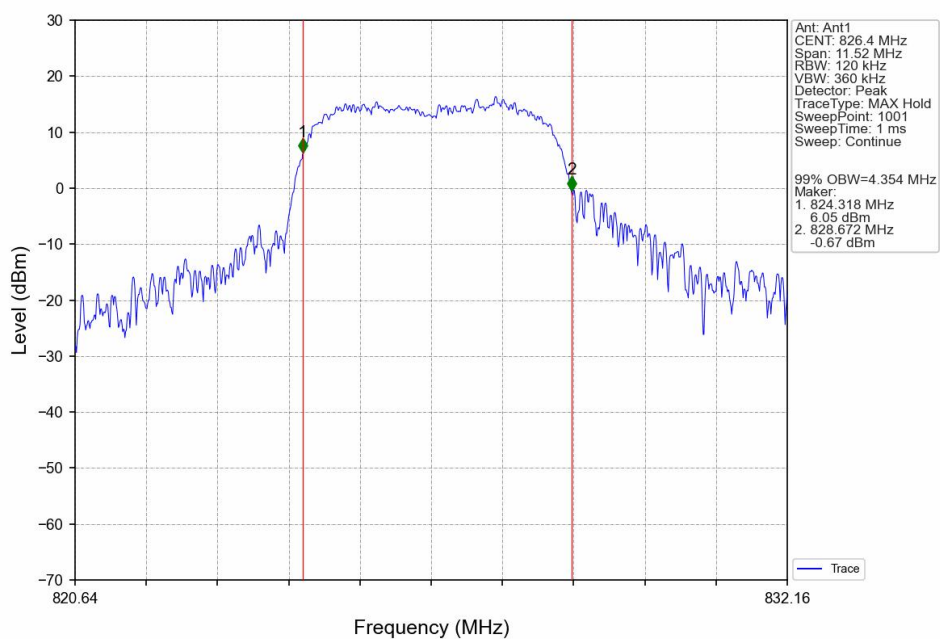


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Band5_HSDPA_HCH_846.6MHz_Subtest 1_NTNV

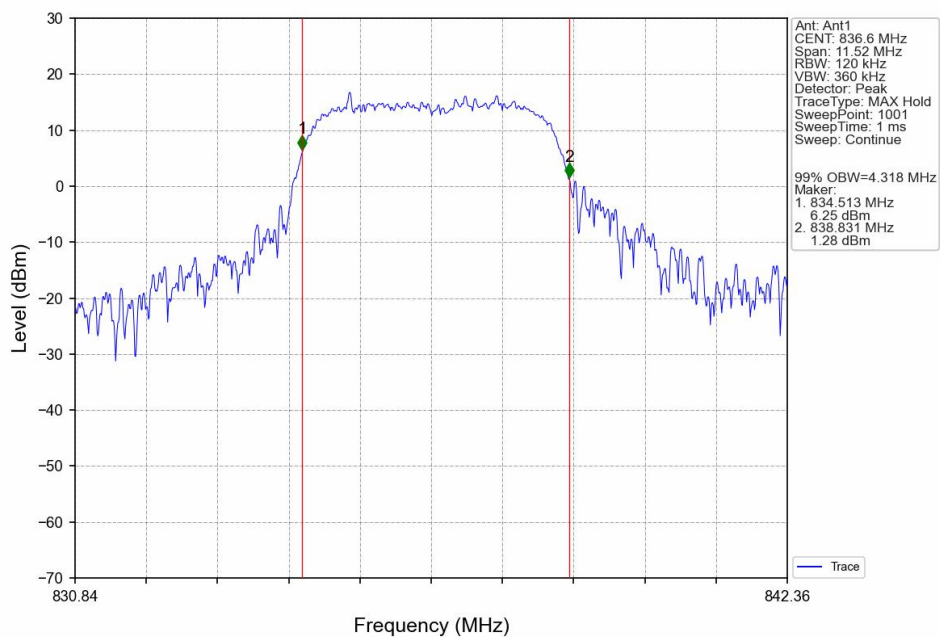


Band5_HSUPA_LCH_826.4MHz_Subtest 1_NTNV

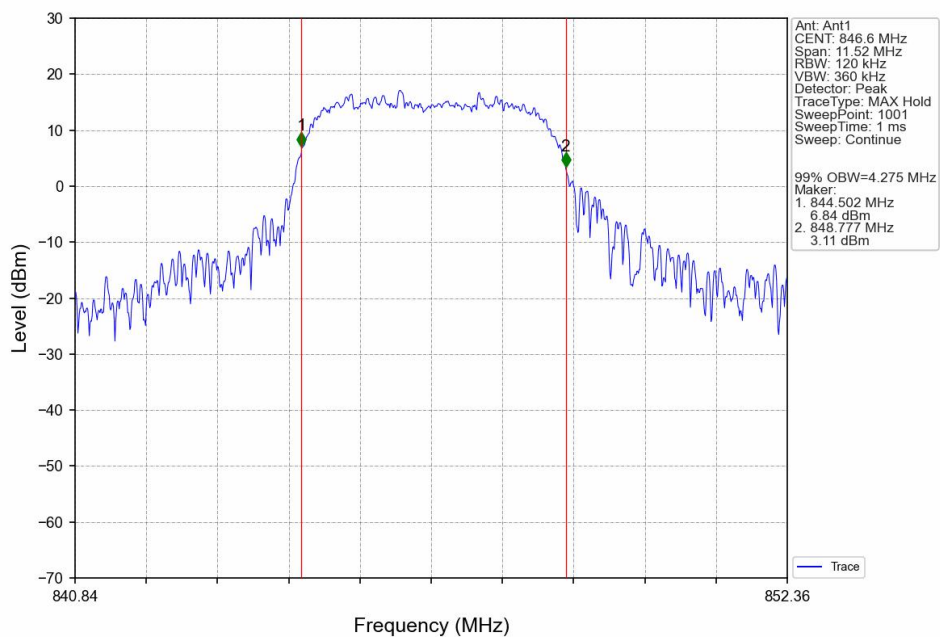


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Band5_HSUPA_MCH_836.6MHz_Subtest 1_NTNV

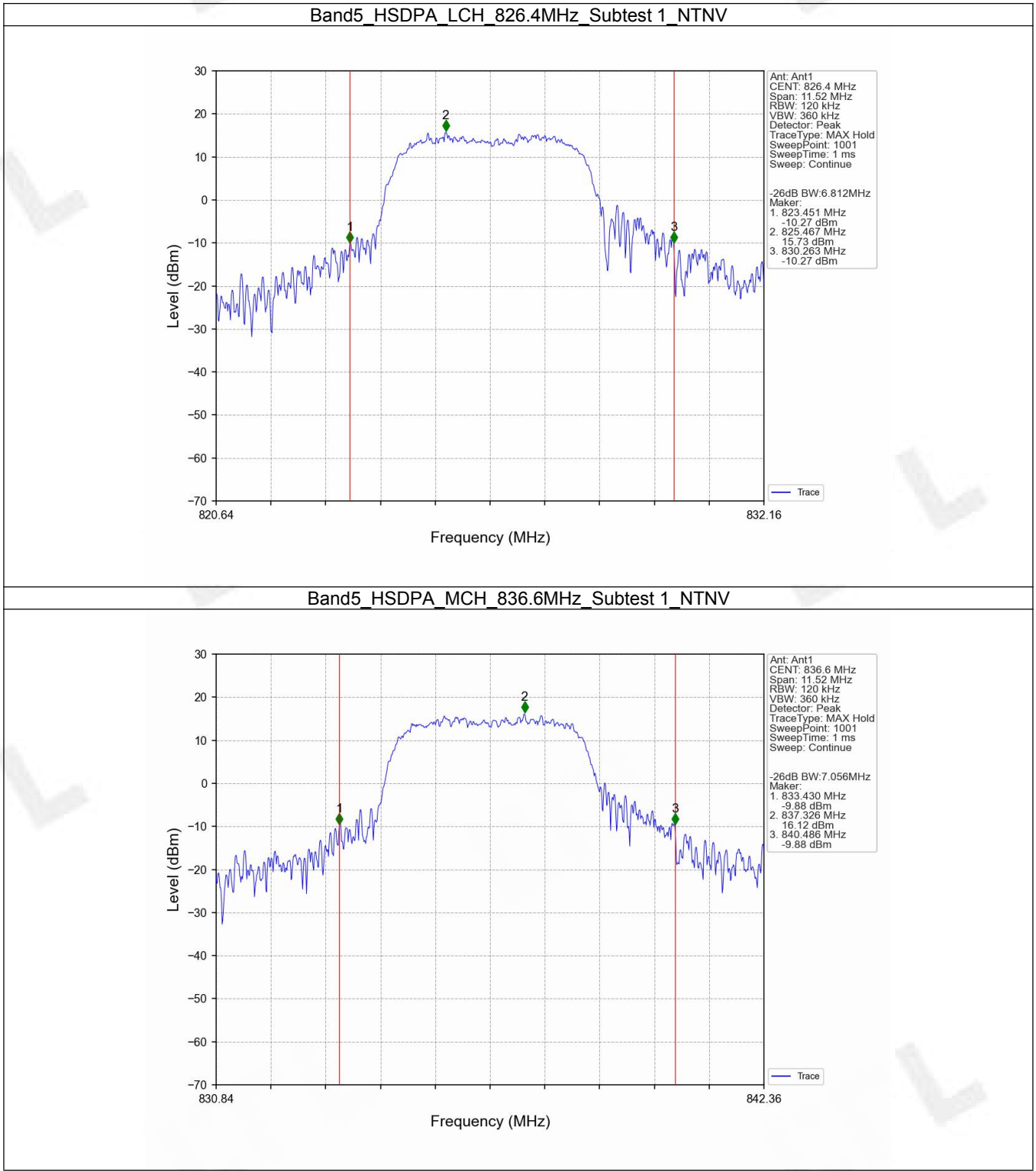


Band5_HSUPA_HCH_846.6MHz_Subtest 1_NTNV



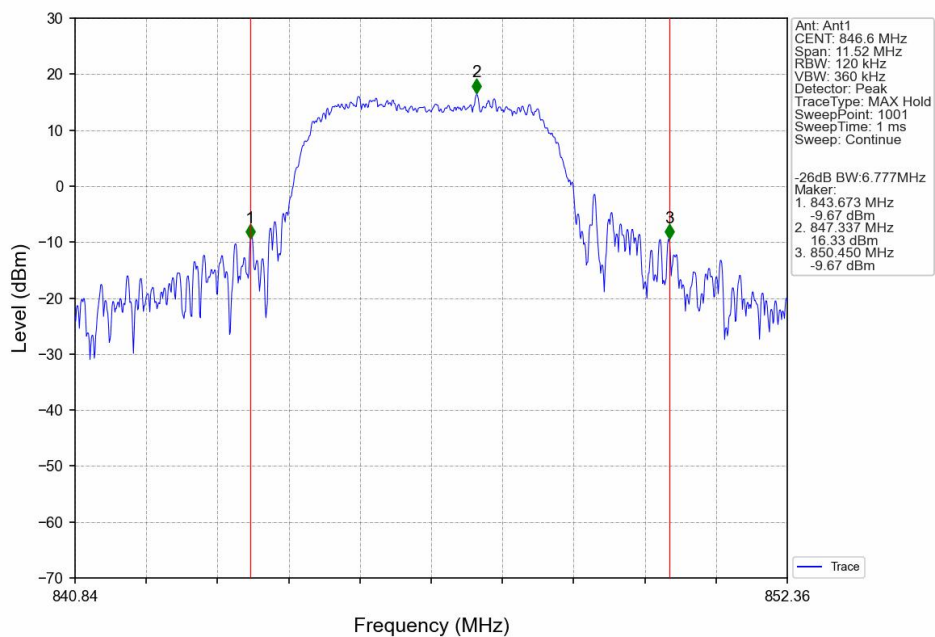
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4.2.2 Band5_XDB

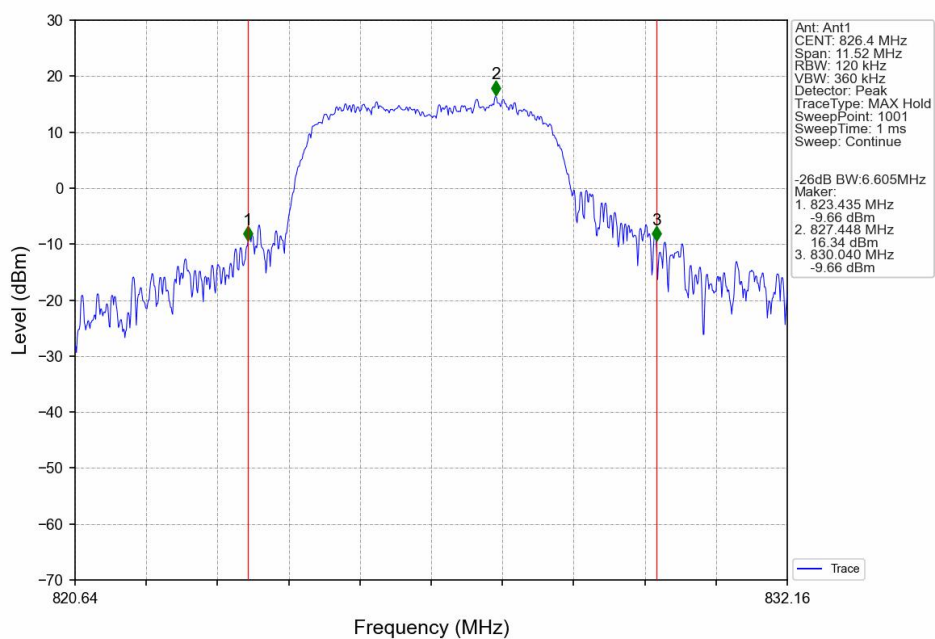


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Band5_HSDPA_HCH_846.6MHz_Subtest 1_NTNV

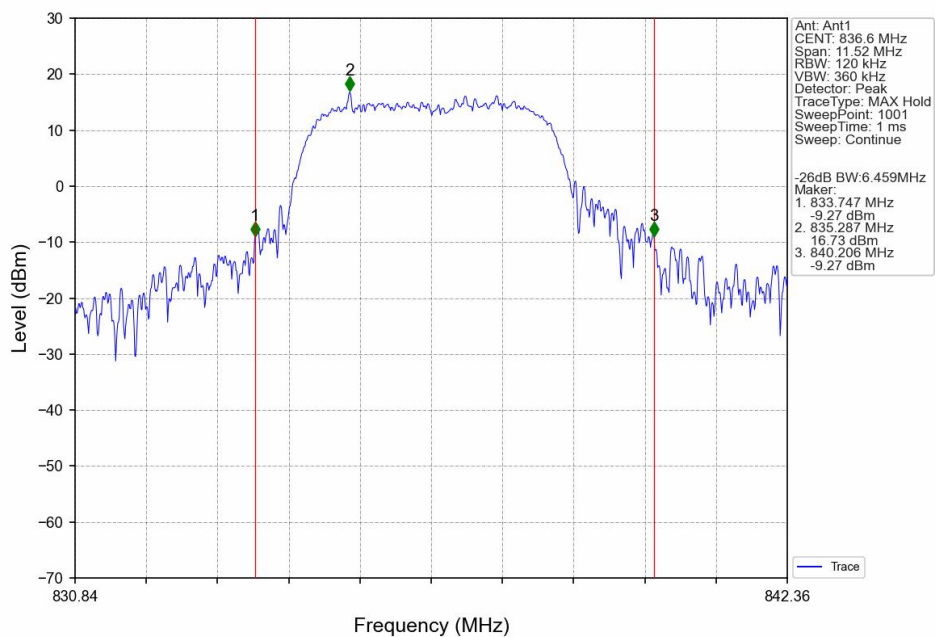


Band5_HSUPA_LCH_826.4MHz_Subtest 1_NTNV

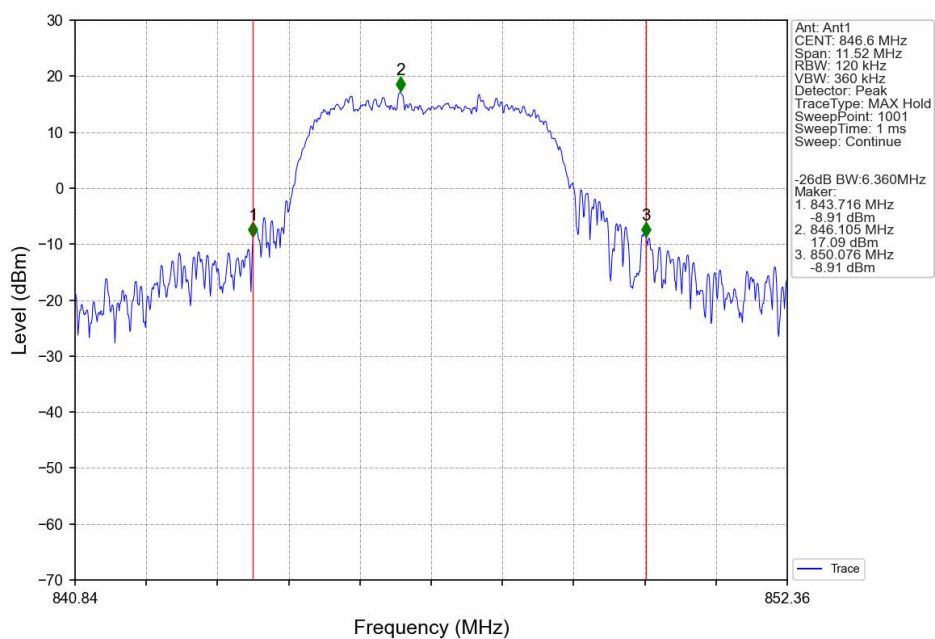


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Band5_HSUPA_MCH_836.6MHz_Subtest 1_NTNV



Band5_HSUPA_HCH_846.6MHz_Subtest 1_NTNV



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5. Peak-Average Ratio**5.1 Test Result****5.1.1 Band5**

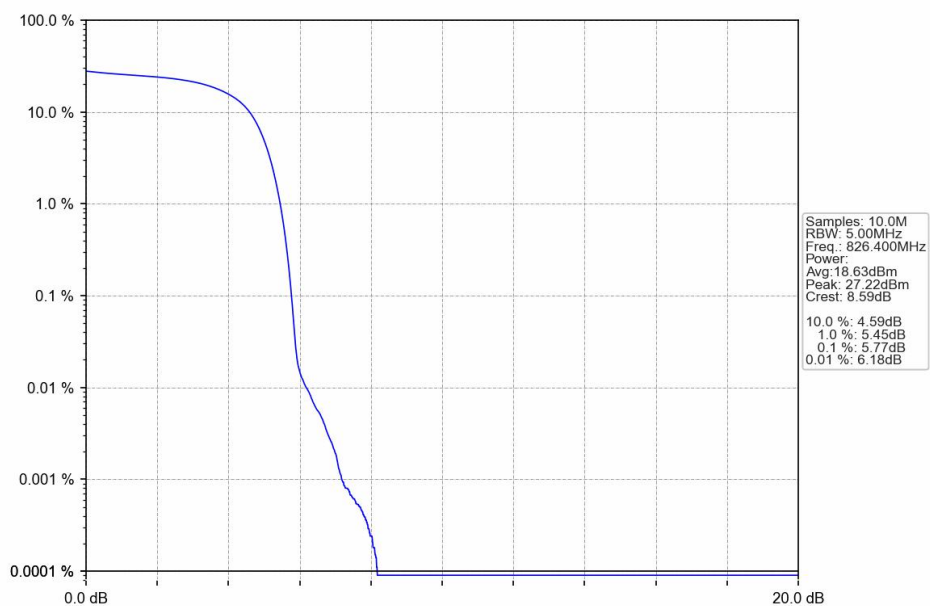
Band: 5						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	HSDPA	Subtest 1	826.4	5.77	<=13	Pass
			836.6	5.75	<=13	Pass
			846.6	5.80	<=13	Pass
	HSUPA	Subtest 1	826.4	7.13	<=13	Pass
			836.6	7.13	<=13	Pass
			846.6	7.06	<=13	Pass

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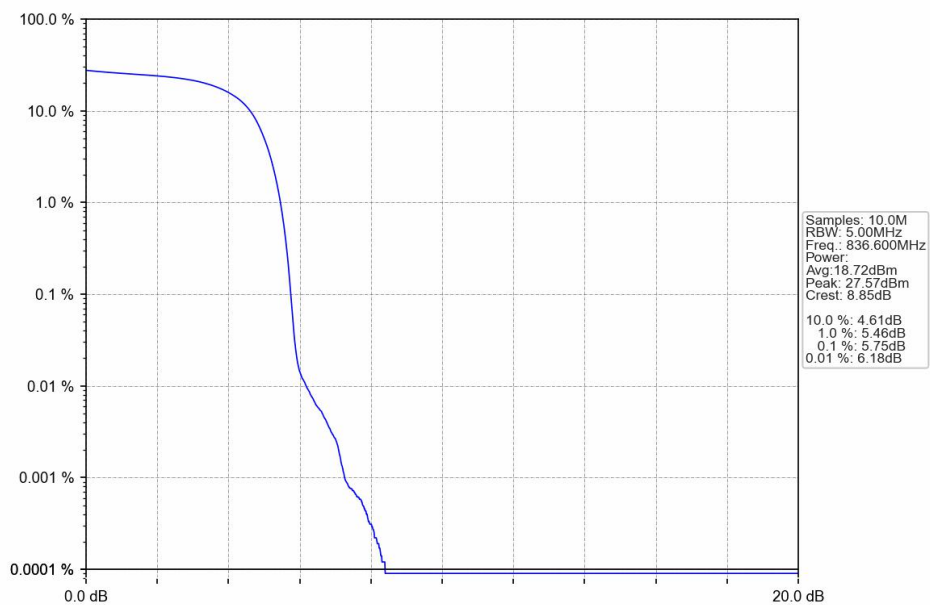
5.2 Test Graph

5.2.1 Band5

Band5_HSDPA_LCH_826.4MHz_Subtest 1_NTNV

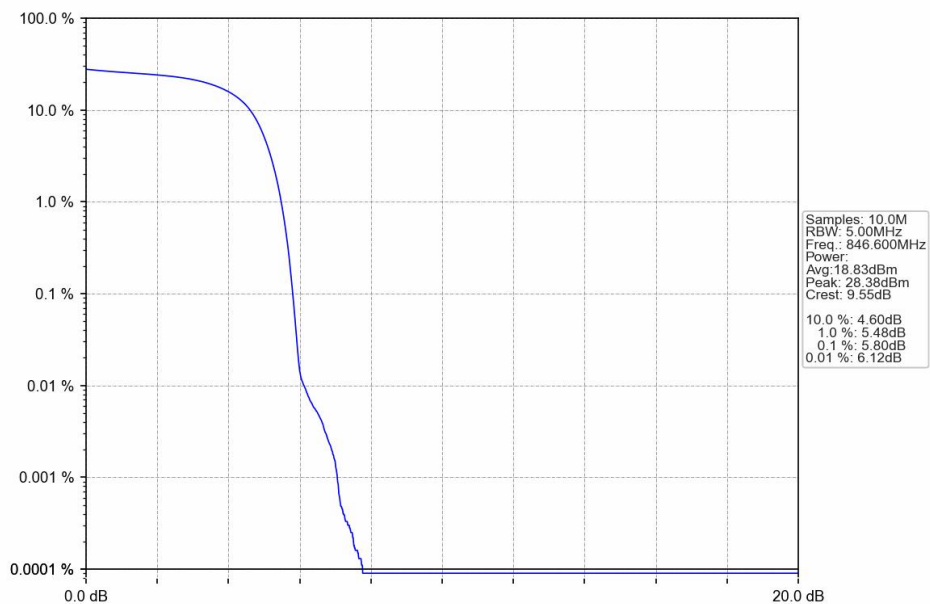


Band5_HSDPA_MCH_836.6MHz_Subtest 1_NTNV

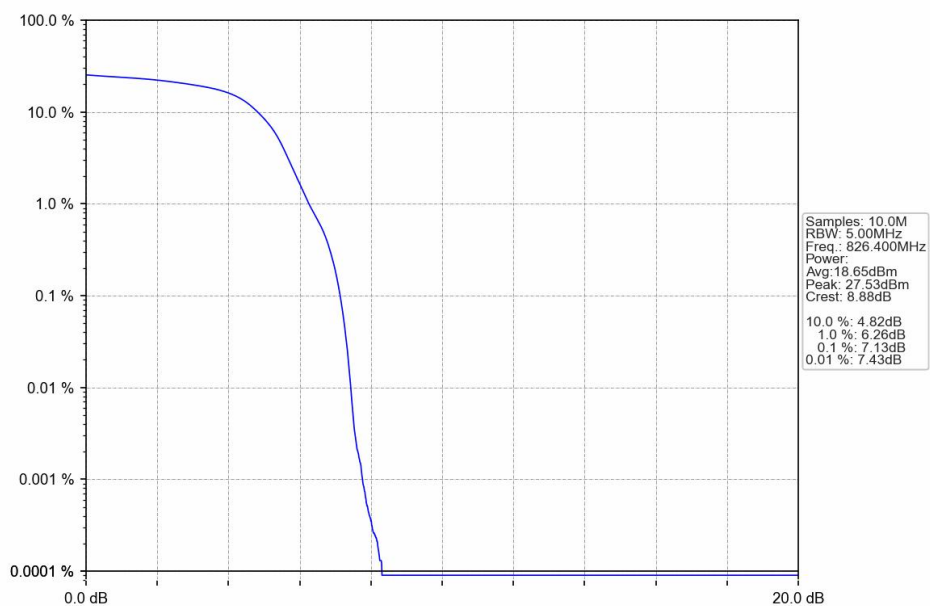


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Band5_HSDPA_HCH_846.6MHz_Subtest 1_NTNV

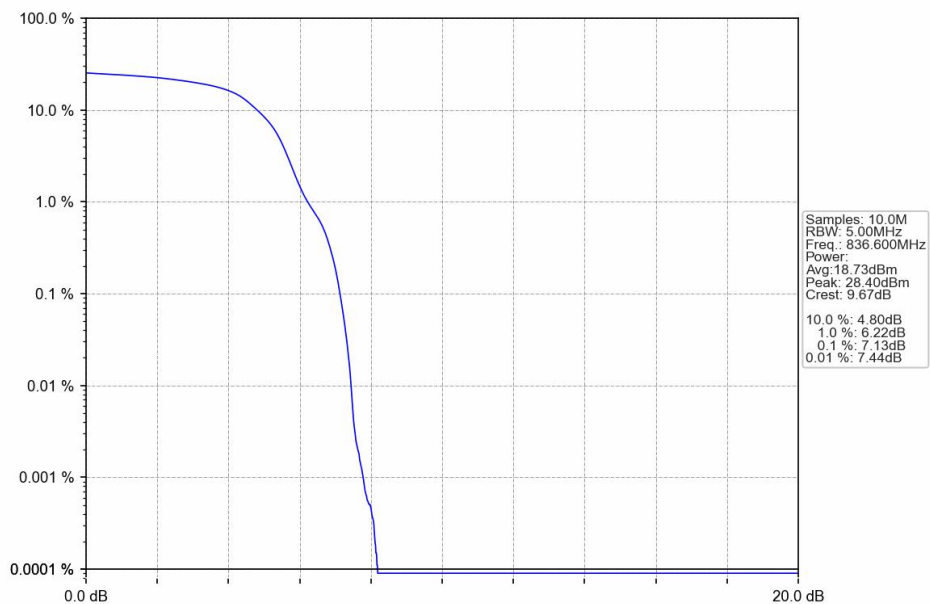


Band5_HSUPA_LCH_826.4MHz_Subtest 1_NTNV

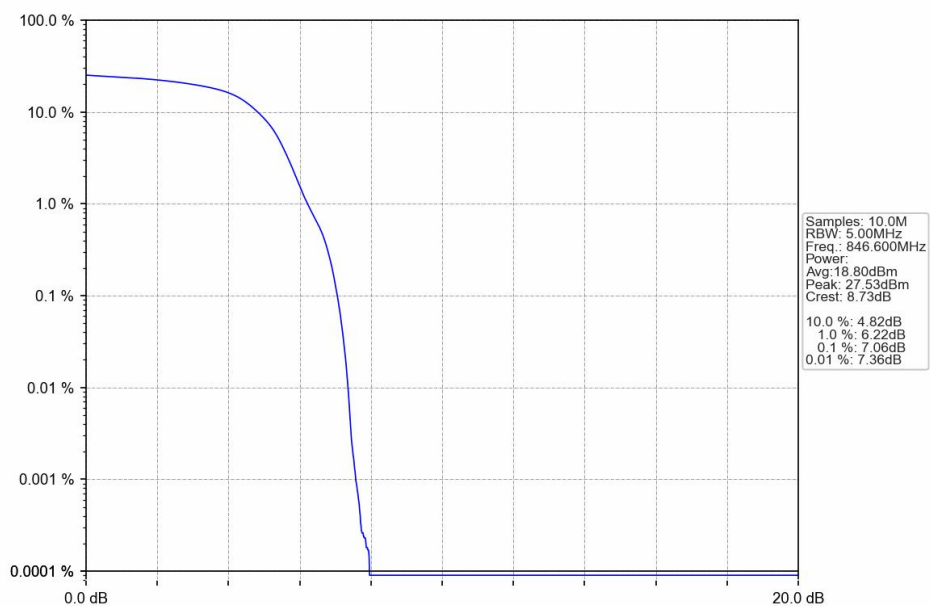


FCC ID: 2BQV3-AL16

Band5_HSUPA_MCH_836.6MHz_Subtest 1_NTNV



Band5_HSUPA_HCH_846.6MHz_Subtest 1_NTNV



FCC ID: 2BQV3-AL16

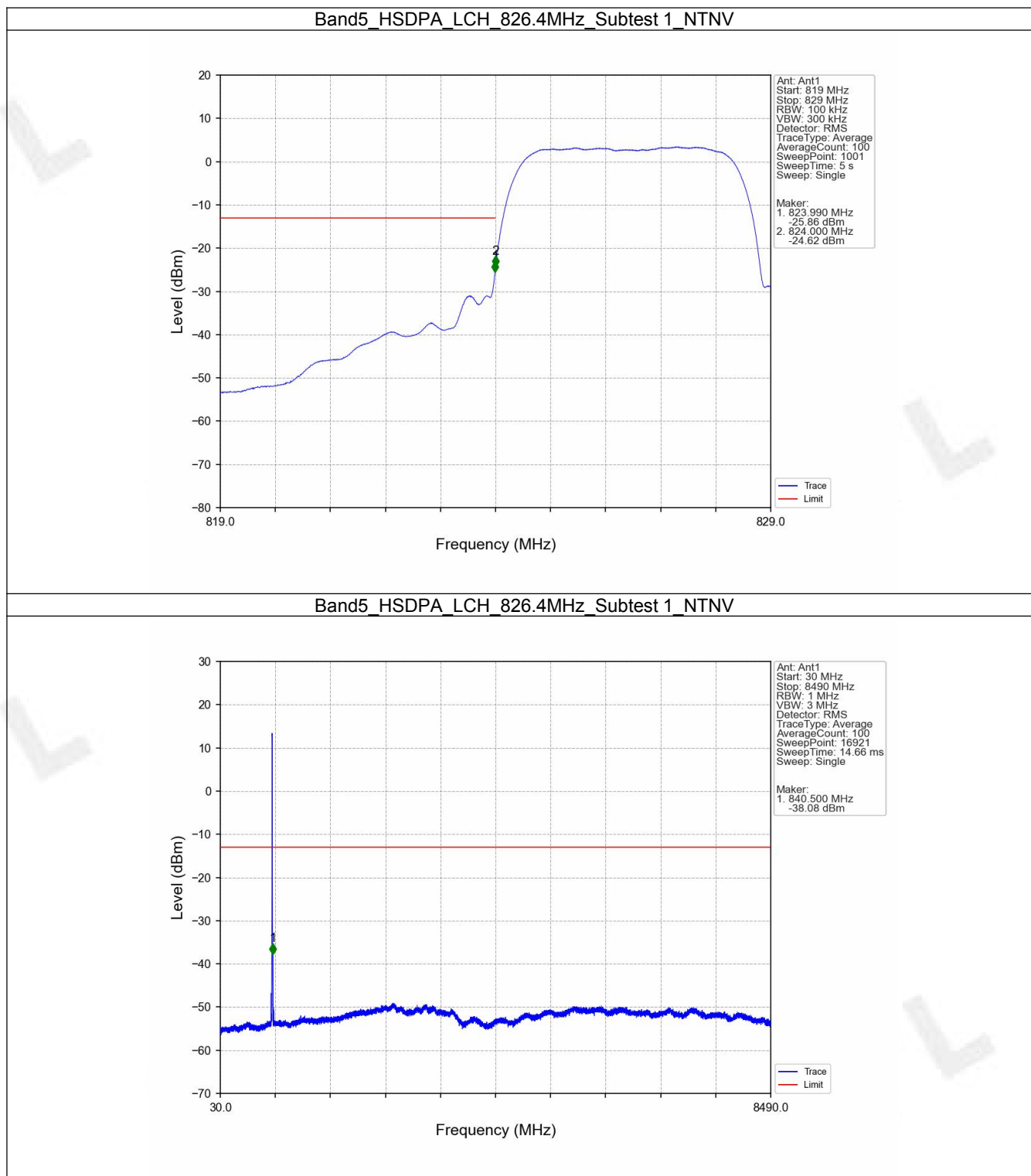
6. Spurious Emission**6.1 Test Result****6.1.1 Band5**

Band: 5					
ENV	Mode		Frequency (MHz)	Spurious Emission	
	Network	Subset		Result	Limit
NTNV	HSDPA	Subtest 1	826.4	Refer To Test Graph	Pass
			836.6	Refer To Test Graph	Pass
			846.6	Refer To Test Graph	Pass
	HSUPA	Subtest 1	826.4	Refer To Test Graph	Pass
			836.6	Refer To Test Graph	Pass
			846.6	Refer To Test Graph	Pass

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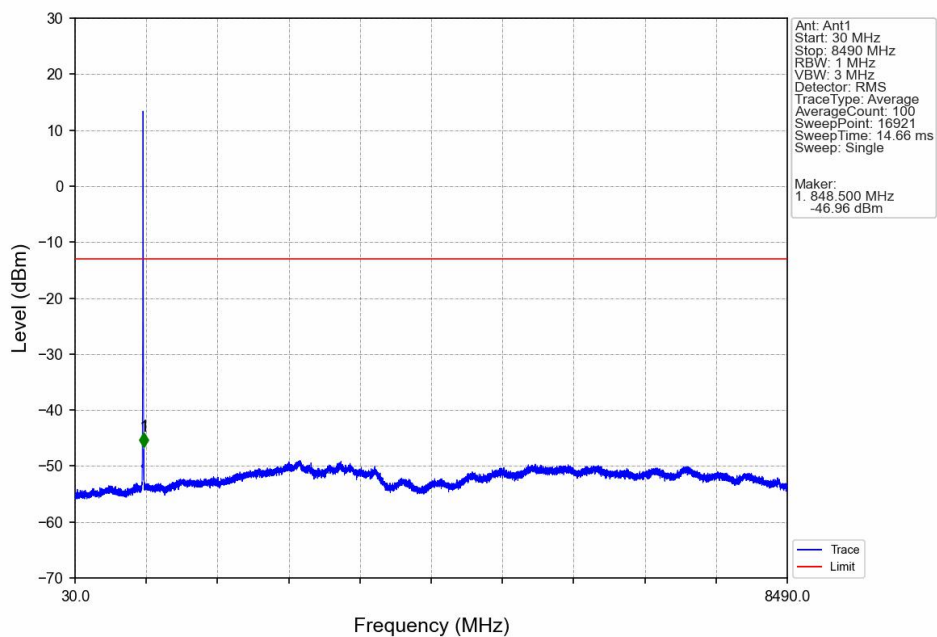
6.2 Test Graph

6.2.1 Band5

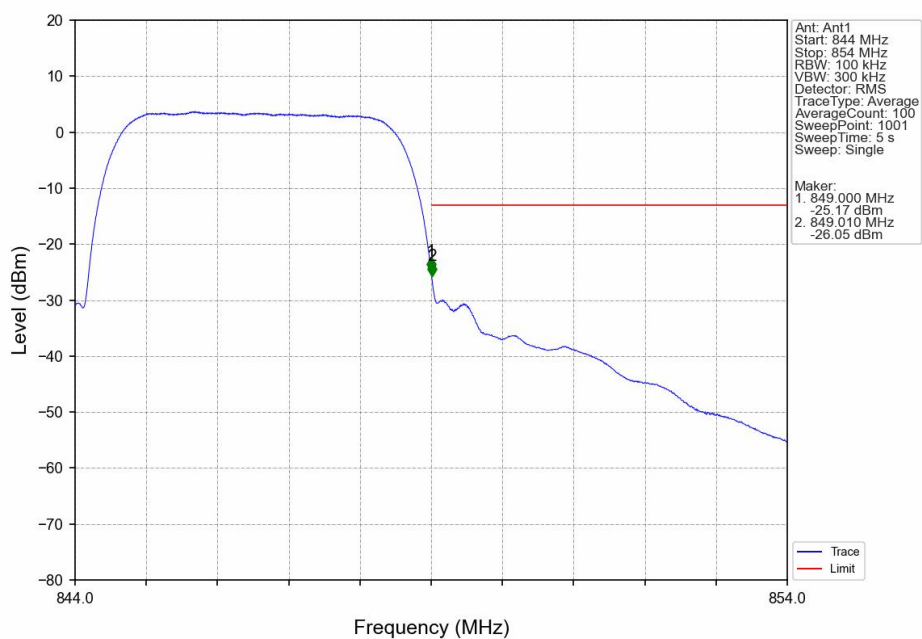


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Band5_HSDPA_MCH_836.6MHz_Subtest 1_NTNV

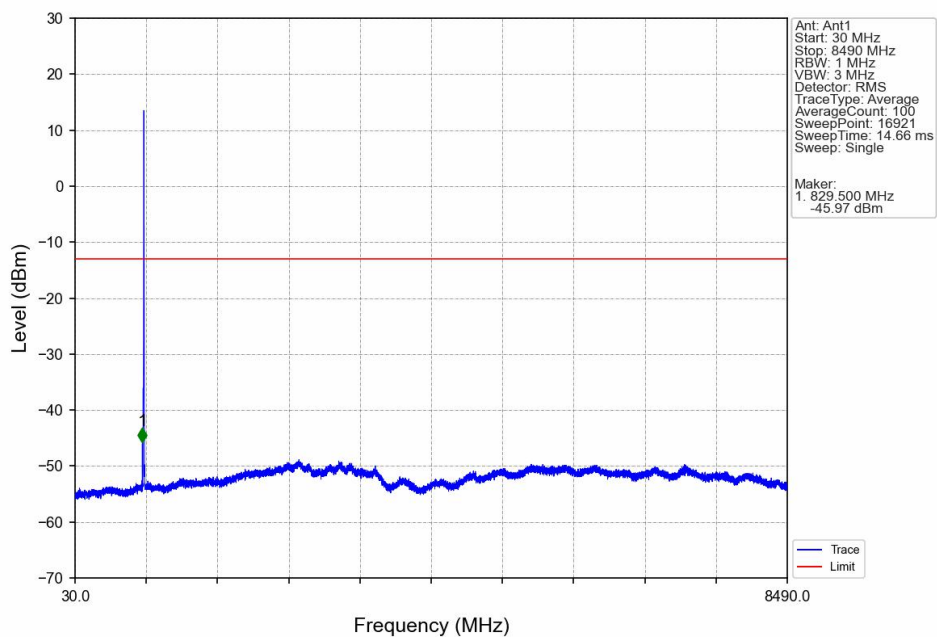


Band5_HSDPA_HCH_846.6MHz_Subtest 1_NTNV

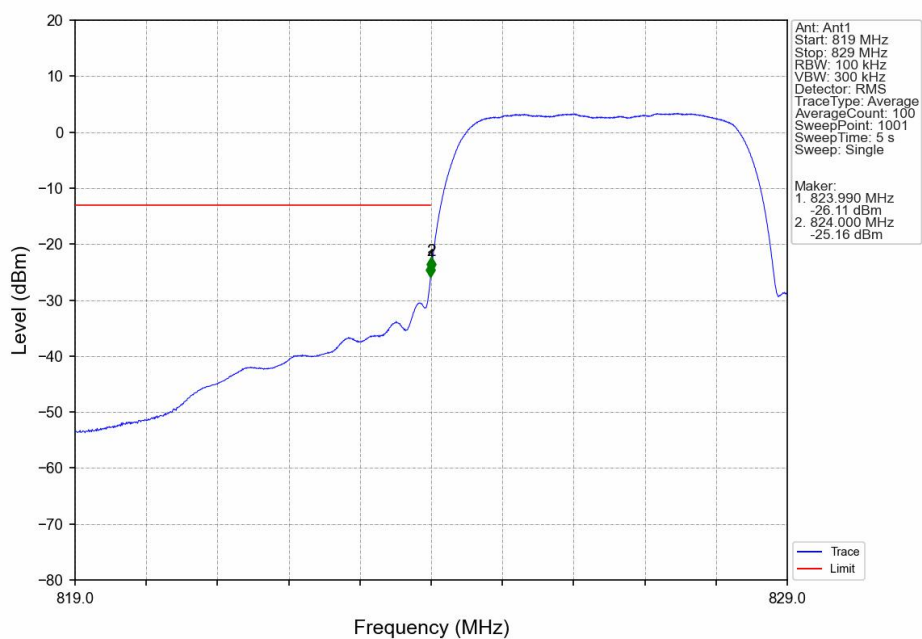


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Band5_HSDPA_HCH_846.6MHz_Subtest 1_NTNV

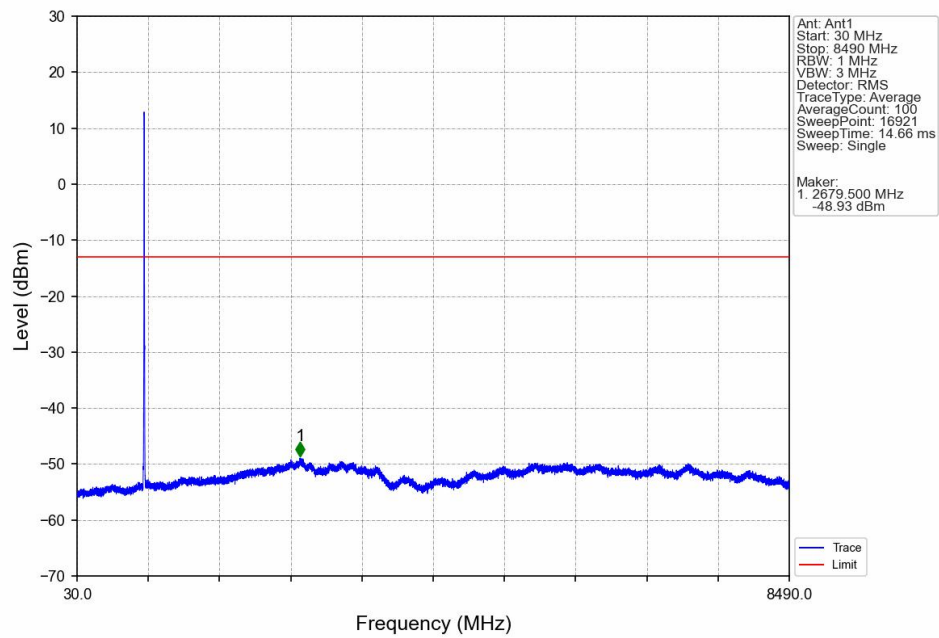


Band5_HSUPA_LCH_826.4MHz_Subtest 1_NTNV

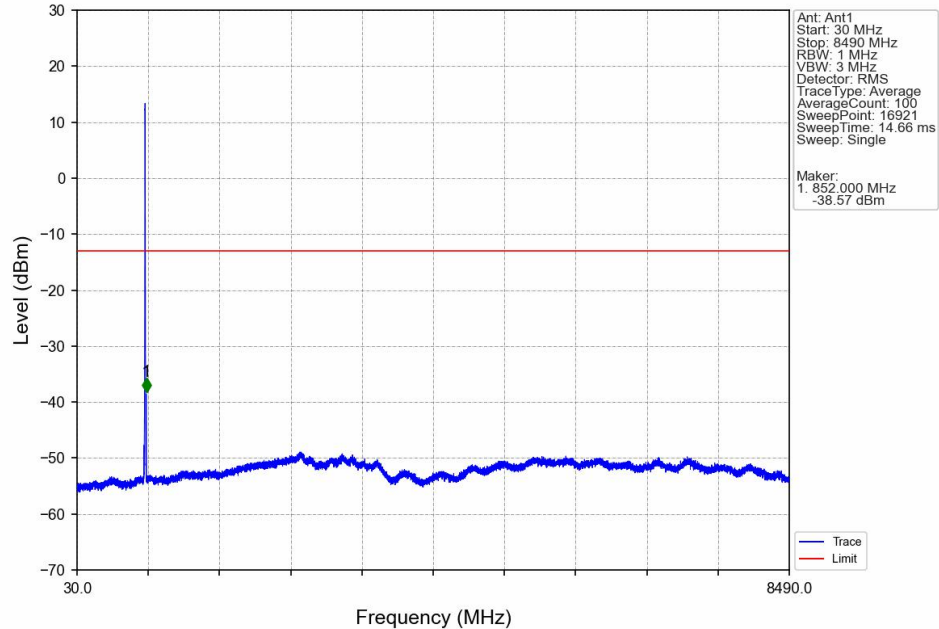


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Band5_HSUPA_LCH_826.4MHz_Subtest 1_NTNV

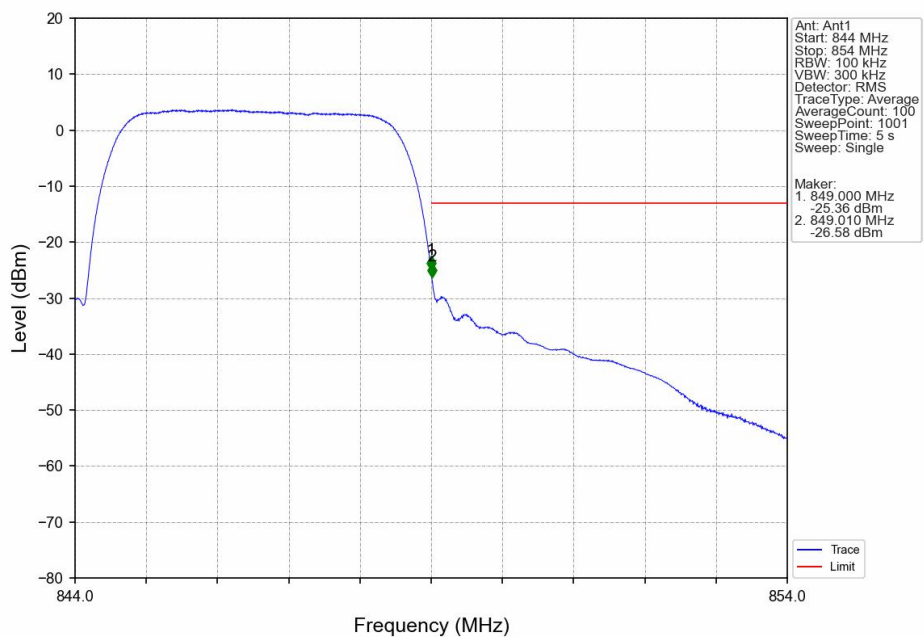


Band5_HSUPA_MCH_836.6MHz_Subtest 1_NTNV



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Band5_HSUPA_HCH_846.6MHz_Subtest 1_NTNV



Band5_HSUPA_HCH_846.6MHz_Subtest 1_NTNV

