

1. Effective (Isotropic) Radiated Power Output Data

1.1 Band5_ERP

1.1.1 Test Result

Band: 5									
ENV	Mode		Frequency (MHz)	Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict	
	Network	Subset				Result	Limit		
NTNV	RMC	12.2kbps RMC	826.4	22.33	0.30	20.18	<=38.45	Pass	
			836.6	22.37	0.30	20.22	<=38.45	Pass	
			846.6	22.33	0.30	20.18	<=38.45	Pass	
	HSDPA	Subtest 1	826.4	20.06	0.30	17.91	<=38.45	Pass	
		Subtest 2	826.4	20.07	0.30	17.92	<=38.45	Pass	
		Subtest 3	826.4	20.05	0.30	17.90	<=38.45	Pass	
		Subtest 4	826.4	20.05	0.30	17.90	<=38.45	Pass	
		Subtest 1	836.6	20.13	0.30	17.98	<=38.45	Pass	
		Subtest 2	836.6	20.13	0.30	17.98	<=38.45	Pass	
		Subtest 3	836.6	20.12	0.30	17.97	<=38.45	Pass	
		Subtest 4	836.6	20.14	0.30	17.99	<=38.45	Pass	
		Subtest 1	846.6	19.96	0.30	17.81	<=38.45	Pass	
		Subtest 2	846.6	19.99	0.30	17.84	<=38.45	Pass	
		Subtest 3	846.6	19.96	0.30	17.81	<=38.45	Pass	
		Subtest 4	846.6	19.98	0.30	17.83	<=38.45	Pass	
		HSUPA	Subtest 1	826.4	18.00	0.30	15.85	<=38.45	Pass
			Subtest 2	826.4	17.83	0.30	15.68	<=38.45	Pass
			Subtest 3	826.4	17.82	0.30	15.67	<=38.45	Pass
	Subtest 4		826.4	17.77	0.30	15.62	<=38.45	Pass	
	Subtest 5		826.4	17.81	0.30	15.66	<=38.45	Pass	
	Subtest 1		836.6	18.08	0.30	15.93	<=38.45	Pass	
	Subtest 2		836.6	17.58	0.30	15.43	<=38.45	Pass	
	Subtest 3		836.6	17.55	0.30	15.40	<=38.45	Pass	
	Subtest 4		836.6	18.12	0.30	15.97	<=38.45	Pass	
	Subtest 5		836.6	17.59	0.30	15.44	<=38.45	Pass	
	Subtest 1		846.6	18.03	0.30	15.88	<=38.45	Pass	
	Subtest 2		846.6	17.52	0.30	15.37	<=38.45	Pass	
	Subtest 3		846.6	17.54	0.30	15.39	<=38.45	Pass	
	Subtest 4		846.6	17.49	0.30	15.34	<=38.45	Pass	
	Subtest 5		846.6	17.53	0.30	15.38	<=38.45	Pass	

Note1: ERP=Conducted Power+Antenna Gain-2.15

2. Frequency Stability

2.1 Band5

2.1.1 Test Result

Band: 5							
Network	Frequency (MHz)	Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
					Result	Limit	
RMC	826.4	20	3.27	-11.473	-0.0139	-2.5 to 2.5	Pass
			3.85	-14.763	-0.0179	-2.5 to 2.5	Pass
			4.43	-14.513	-0.0176	-2.5 to 2.5	Pass
		-30	3.85	-14.820	-0.0179	-2.5 to 2.5	Pass
		-20	3.85	-13.103	-0.0159	-2.5 to 2.5	Pass

	836.6	-10	3.85	-13.096	-0.0158	-2.5 to 2.5	Pass
		0	3.85	-12.674	-0.0153	-2.5 to 2.5	Pass
		10	3.85	-11.394	-0.0138	-2.5 to 2.5	Pass
		30	3.85	-11.930	-0.0144	-2.5 to 2.5	Pass
		40	3.85	-12.646	-0.0153	-2.5 to 2.5	Pass
	50	3.85	-11.773	-0.0142	-2.5 to 2.5	Pass	
	836.6	20	3.27	-12.739	-0.0152	-2.5 to 2.5	Pass
			3.85	-13.289	-0.0159	-2.5 to 2.5	Pass
			4.43	-10.822	-0.0129	-2.5 to 2.5	Pass
		-30	3.85	-11.330	-0.0135	-2.5 to 2.5	Pass
		-20	3.85	-13.769	-0.0165	-2.5 to 2.5	Pass
		-10	3.85	-10.622	-0.0127	-2.5 to 2.5	Pass
		0	3.85	-10.750	-0.0128	-2.5 to 2.5	Pass
		10	3.85	-11.294	-0.0135	-2.5 to 2.5	Pass
		30	3.85	-10.085	-0.0121	-2.5 to 2.5	Pass
		40	3.85	-9.520	-0.0114	-2.5 to 2.5	Pass
		50	3.85	-10.264	-0.0123	-2.5 to 2.5	Pass
	846.6	20	3.27	-11.730	-0.0139	-2.5 to 2.5	Pass
			3.85	-11.659	-0.0138	-2.5 to 2.5	Pass
			4.43	-10.214	-0.0121	-2.5 to 2.5	Pass
		-30	3.85	-9.706	-0.0115	-2.5 to 2.5	Pass
-20		3.85	-10.471	-0.0124	-2.5 to 2.5	Pass	
-10		3.85	-11.437	-0.0135	-2.5 to 2.5	Pass	
0		3.85	-9.356	-0.0111	-2.5 to 2.5	Pass	
10		3.85	-10.300	-0.0122	-2.5 to 2.5	Pass	
30		3.85	-9.384	-0.0111	-2.5 to 2.5	Pass	
40		3.85	-10.629	-0.0126	-2.5 to 2.5	Pass	
50		3.85	-10.600	-0.0125	-2.5 to 2.5	Pass	
HSDPA	826.4	20	3.27	-8.433	-0.0102	-2.5 to 2.5	Pass
			3.85	-9.270	-0.0112	-2.5 to 2.5	Pass
			4.43	-8.254	-0.0100	-2.5 to 2.5	Pass
		-30	3.85	-7.911	-0.0096	-2.5 to 2.5	Pass
		-20	3.85	-9.542	-0.0115	-2.5 to 2.5	Pass
		-10	3.85	-12.045	-0.0146	-2.5 to 2.5	Pass
		0	3.85	-12.016	-0.0145	-2.5 to 2.5	Pass
		10	3.85	-5.171	-0.0063	-2.5 to 2.5	Pass
		30	3.85	-14.198	-0.0172	-2.5 to 2.5	Pass
		40	3.85	-12.324	-0.0149	-2.5 to 2.5	Pass
		50	3.85	-11.001	-0.0133	-2.5 to 2.5	Pass
	836.6	20	3.27	-14.813	-0.0177	-2.5 to 2.5	Pass
			3.85	-9.642	-0.0115	-2.5 to 2.5	Pass
			4.43	-8.647	-0.0103	-2.5 to 2.5	Pass
		-30	3.85	-11.587	-0.0139	-2.5 to 2.5	Pass
		-20	3.85	-1.752	-0.0021	-2.5 to 2.5	Pass
		-10	3.85	-6.909	-0.0083	-2.5 to 2.5	Pass
		0	3.85	-9.499	-0.0114	-2.5 to 2.5	Pass
		10	3.85	-12.960	-0.0155	-2.5 to 2.5	Pass
		30	3.85	-7.010	-0.0084	-2.5 to 2.5	Pass
		40	3.85	-8.383	-0.0100	-2.5 to 2.5	Pass
50	3.85	-11.108	-0.0133	-2.5 to 2.5	Pass		
846.6	20	3.27	-5.436	-0.0064	-2.5 to 2.5	Pass	
		3.85	-3.469	-0.0041	-2.5 to 2.5	Pass	
		4.43	-8.912	-0.0105	-2.5 to 2.5	Pass	
	-30	3.85	-5.236	-0.0062	-2.5 to 2.5	Pass	
	-20	3.85	-2.182	-0.0026	-2.5 to 2.5	Pass	
	-10	3.85	-9.649	-0.0114	-2.5 to 2.5	Pass	
	0	3.85	-6.537	-0.0077	-2.5 to 2.5	Pass	
	10	3.85	-2.089	-0.0025	-2.5 to 2.5	Pass	
30	3.85	-4.313	-0.0051	-2.5 to 2.5	Pass		

		40	3.85	-2.260	-0.0027	-2.5 to 2.5	Pass
		50	3.85	-2.317	-0.0027	-2.5 to 2.5	Pass
HSUPA	826.4	20	3.27	-8.368	-0.0101	-2.5 to 2.5	Pass
			3.85	-14.570	-0.0176	-2.5 to 2.5	Pass
			4.43	-14.684	-0.0178	-2.5 to 2.5	Pass
		-30	3.85	-16.801	-0.0203	-2.5 to 2.5	Pass
		-20	3.85	-14.577	-0.0176	-2.5 to 2.5	Pass
		-10	3.85	-17.745	-0.0215	-2.5 to 2.5	Pass
		0	3.85	-15.299	-0.0185	-2.5 to 2.5	Pass
		10	3.85	-15.049	-0.0182	-2.5 to 2.5	Pass
		30	3.85	-16.780	-0.0203	-2.5 to 2.5	Pass
		40	3.85	-13.397	-0.0162	-2.5 to 2.5	Pass
	50	3.85	-10.464	-0.0127	-2.5 to 2.5	Pass	
	836.6	20	3.27	-11.280	-0.0135	-2.5 to 2.5	Pass
			3.85	-13.633	-0.0163	-2.5 to 2.5	Pass
			4.43	-13.683	-0.0164	-2.5 to 2.5	Pass
		-30	3.85	-14.942	-0.0179	-2.5 to 2.5	Pass
		-20	3.85	-15.349	-0.0183	-2.5 to 2.5	Pass
		-10	3.85	-16.644	-0.0199	-2.5 to 2.5	Pass
		0	3.85	-14.405	-0.0172	-2.5 to 2.5	Pass
		10	3.85	-16.086	-0.0192	-2.5 to 2.5	Pass
		30	3.85	-12.059	-0.0144	-2.5 to 2.5	Pass
		40	3.85	-15.800	-0.0189	-2.5 to 2.5	Pass
	50	3.85	-13.697	-0.0164	-2.5 to 2.5	Pass	
	846.6	20	3.27	-15.757	-0.0186	-2.5 to 2.5	Pass
			3.85	-8.419	-0.0099	-2.5 to 2.5	Pass
			4.43	-14.126	-0.0167	-2.5 to 2.5	Pass
		-30	3.85	-9.606	-0.0113	-2.5 to 2.5	Pass
		-20	3.85	-11.544	-0.0136	-2.5 to 2.5	Pass
		-10	3.85	-13.297	-0.0157	-2.5 to 2.5	Pass
		0	3.85	-13.325	-0.0157	-2.5 to 2.5	Pass
		10	3.85	-10.014	-0.0118	-2.5 to 2.5	Pass
30		3.85	-14.634	-0.0173	-2.5 to 2.5	Pass	
40		3.85	-14.262	-0.0168	-2.5 to 2.5	Pass	
50	3.85	-13.983	-0.0165	-2.5 to 2.5	Pass		

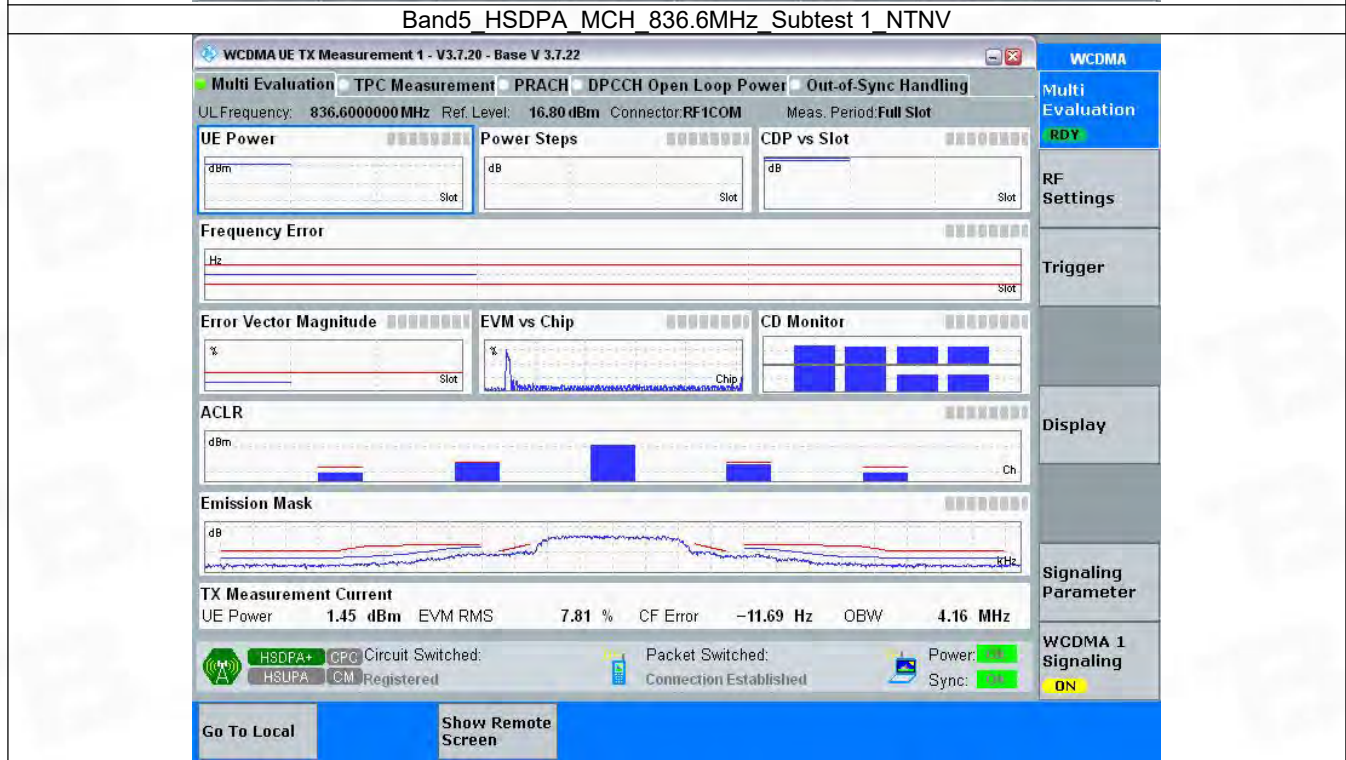
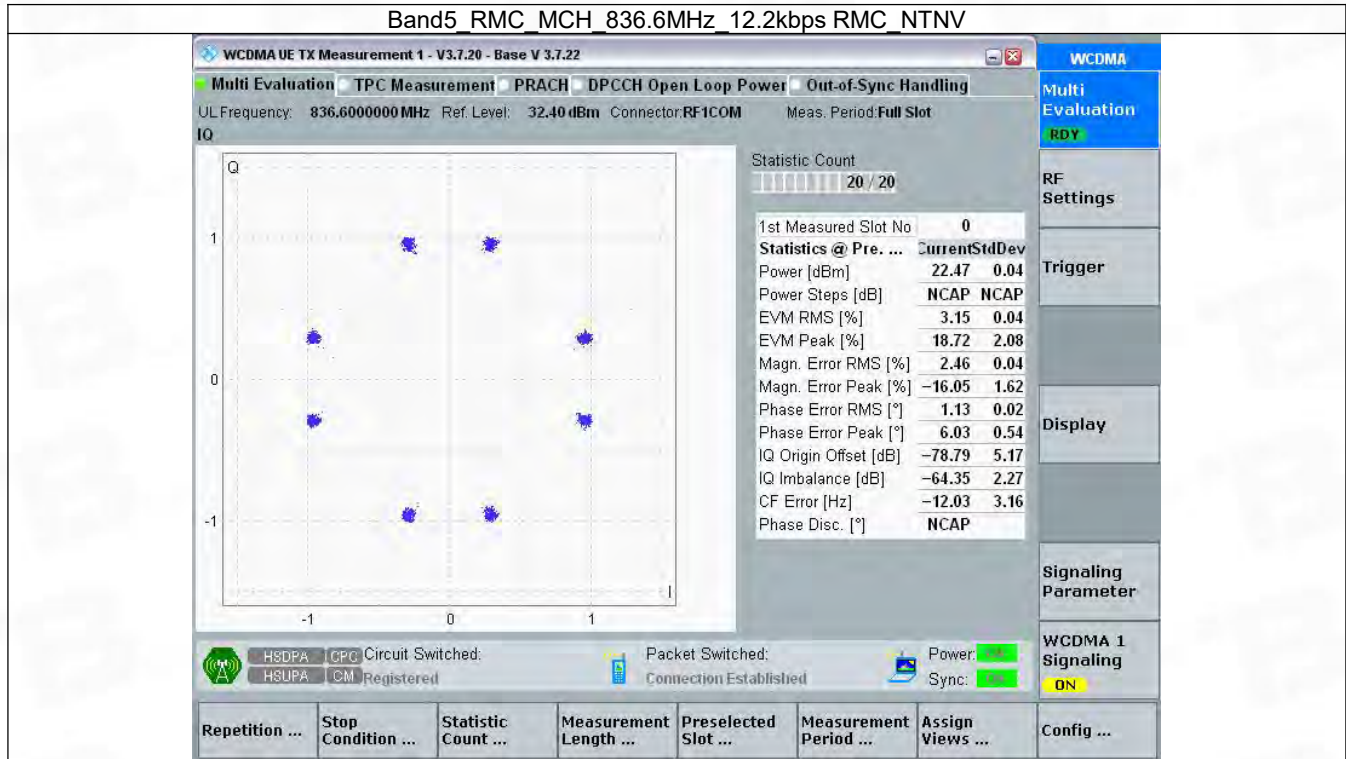
3. Modulation Characteristics

3.1 Band5

3.1.1 Test Result

Band: 5						
ENV	Mode		Frequency (MHz)	Modulation Characteristics		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	836.6	Refer To Test Graph		Pass
	HSDPA	Subtest 1	836.6	Refer To Test Graph		Pass
	HSUPA	Subtest 1	836.6	Refer To Test Graph		Pass

3.1.2 Test Graph



Band5 HSUPA MCH 836.6MHz Subtest 1 NTN

WCDMA UE TX Measurement 1 - V3.7.20 - Base V 3.7.22

Multi Evaluation TPC Measurement PRACH DPCCH Open Loop Power Out-of-Sync Handling

UL Frequency: 836.600000 MHz Ref. Level: 16.80 dBm Connector: RF1COM Meas. Period: Full Slot

WCDMA

Multi Evaluation

RDY

RF Settings

Trigger

Display

Signaling Parameter

WCDMA 1 Signaling

ON

Statistic Count
20 / 20

Statistics @ Pre. ...		Current	StdDev
Power [dBm]	-4.60	2.96	
Power Steps [dB]	NCAP	NCAP	
EVM RMS [%]	3.75	2.65	
EVM Peak [%]	8.14	34.29	
Magn. Error RMS [%]	2.97	2.88	
Magn. Error Peak [%]	7.67	34.44	
Phase Error RMS [°]	1.31	0.75	
Phase Error Peak [°]	4.20	4.04	
IQ Origin Offset [dB]	-79.39	8.20	
IQ Imbalance [dB]	-64.54	2.92	
CF Error [Hz]	-2.60	2.36	
Phase Disc. [°]	NCAP		

HSDPA+ CPC Circuit Switched:

HSUPA CM Registered

Packet Switched: Connection Established

Power: ON

Sync: ON

Go To Local

Show Remote Screen

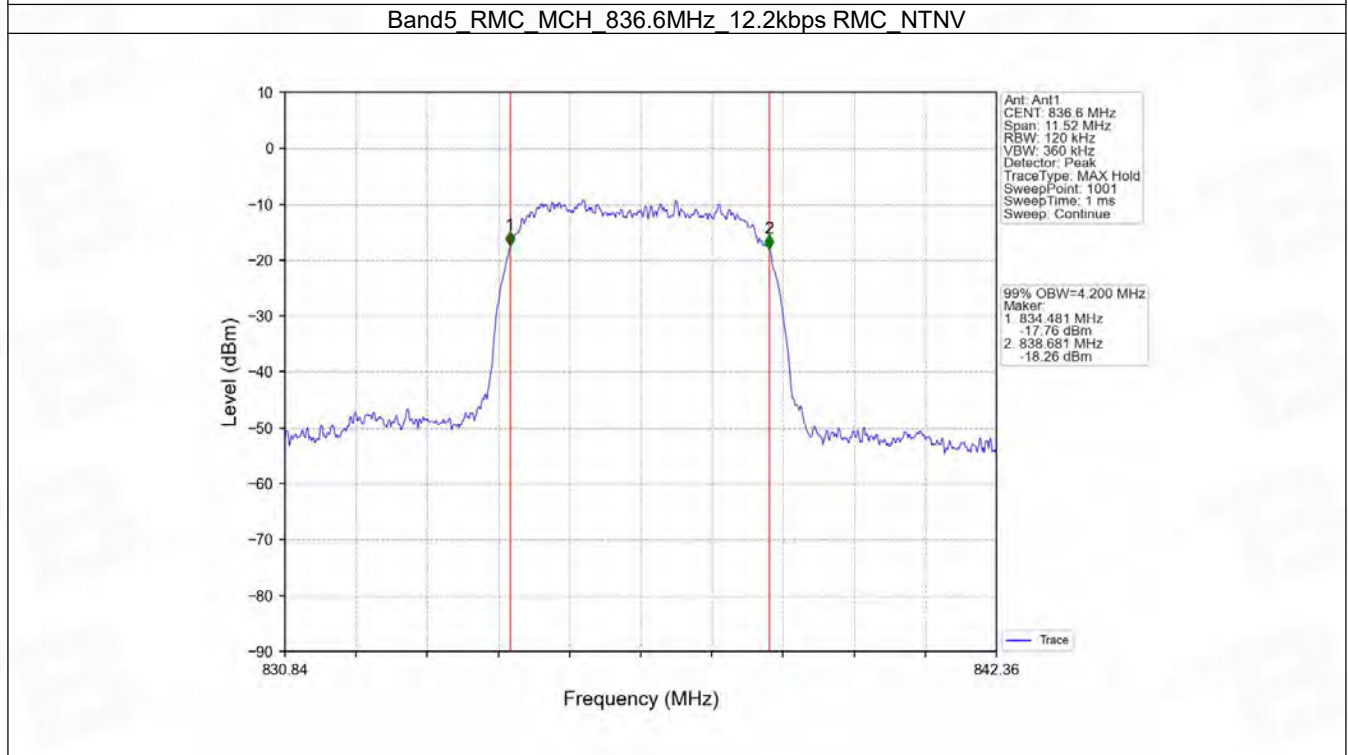
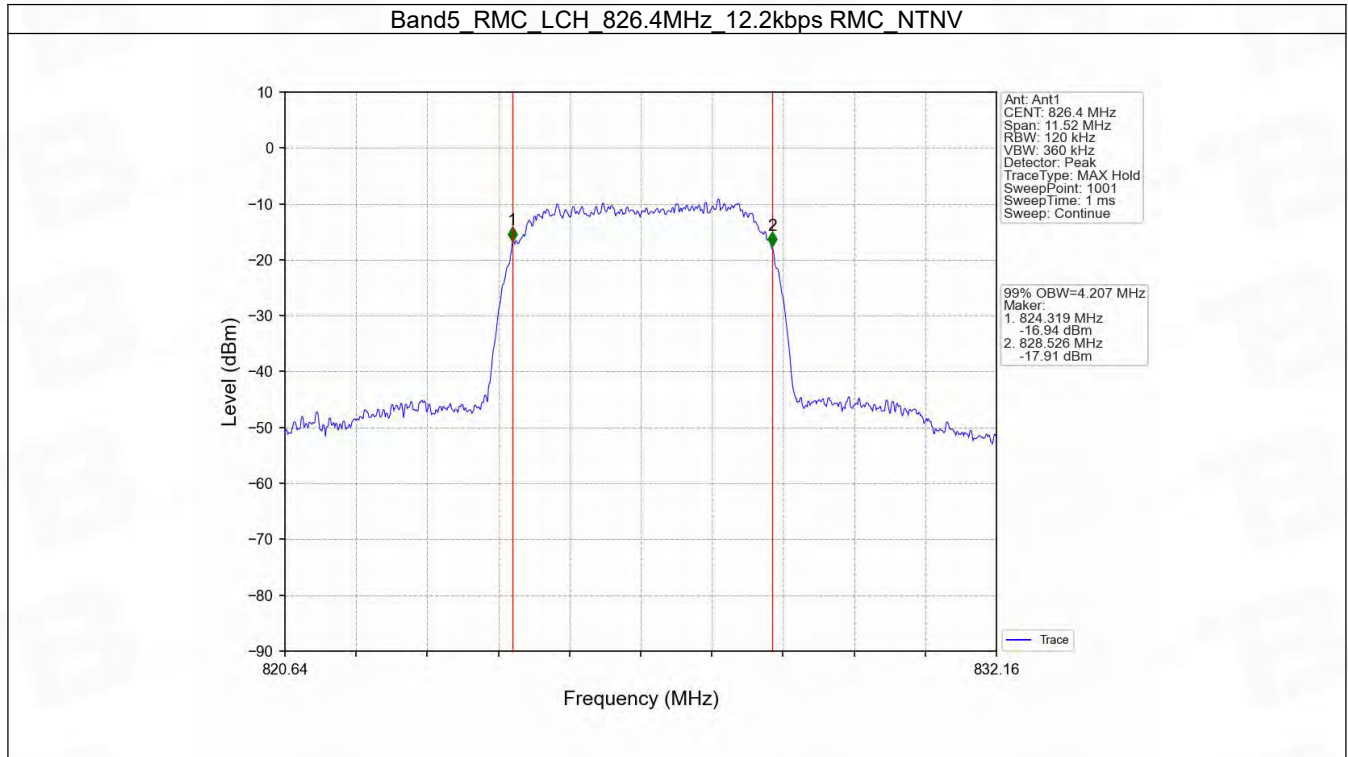
4. 99% & 26dB Bandwidth

4.1 Band5_OBW

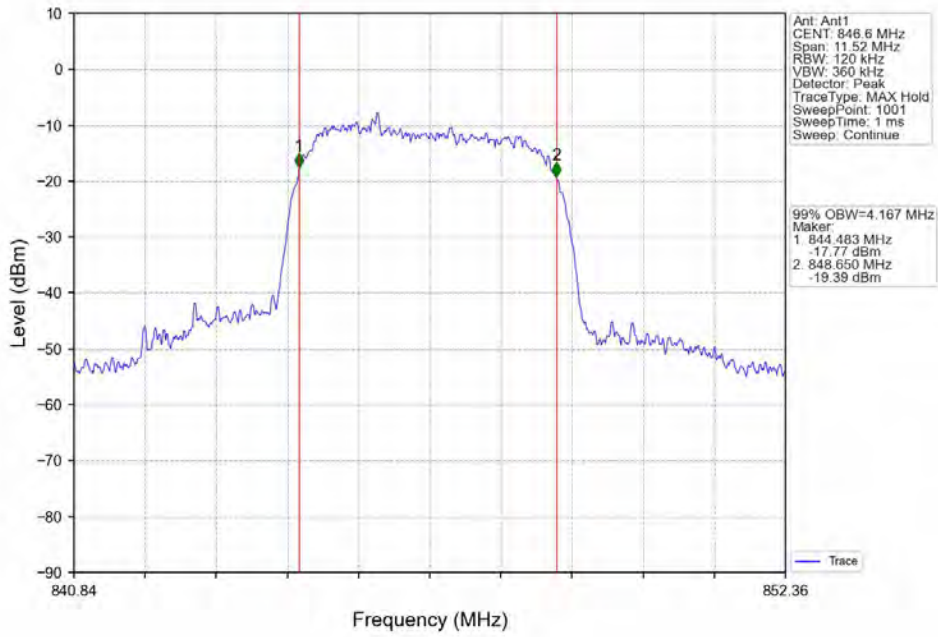
4.1.1 Test Result

Band: 5						
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	826.4	4.207	/	Pass
			836.6	4.200	/	Pass
			846.6	4.167	/	Pass
	HSDPA	Subtest 1	826.4	4.208	/	Pass
			836.6	4.199	/	Pass
			846.6	4.172	/	Pass
	HSUPA	Subtest 1	826.4	4.205	/	Pass
			836.6	4.221	/	Pass
			846.6	4.167	/	Pass

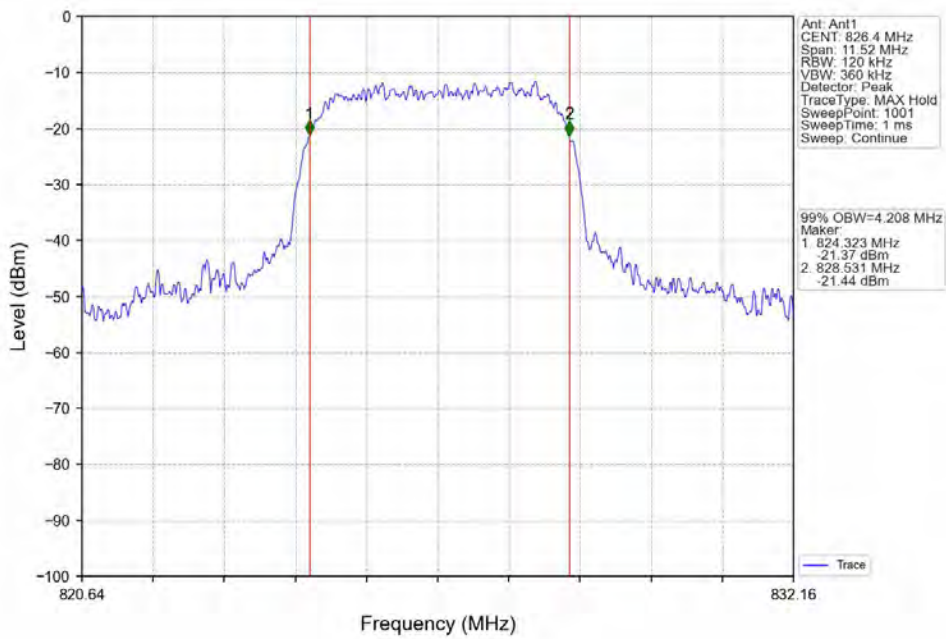
4.1.2 Test Graph



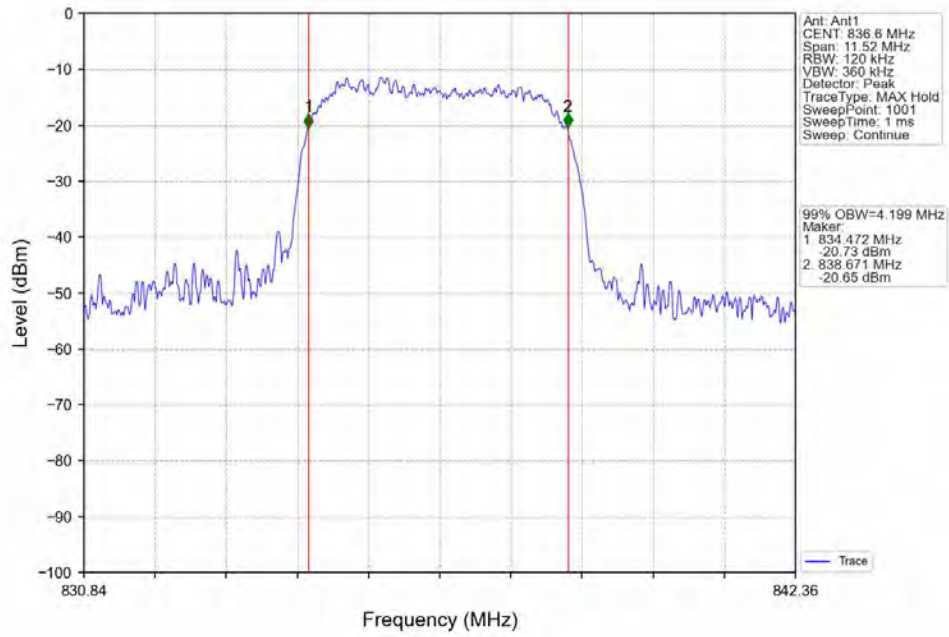
Band5_RMC_HCH_846.6MHz_12.2kbps_RMC_NTNV



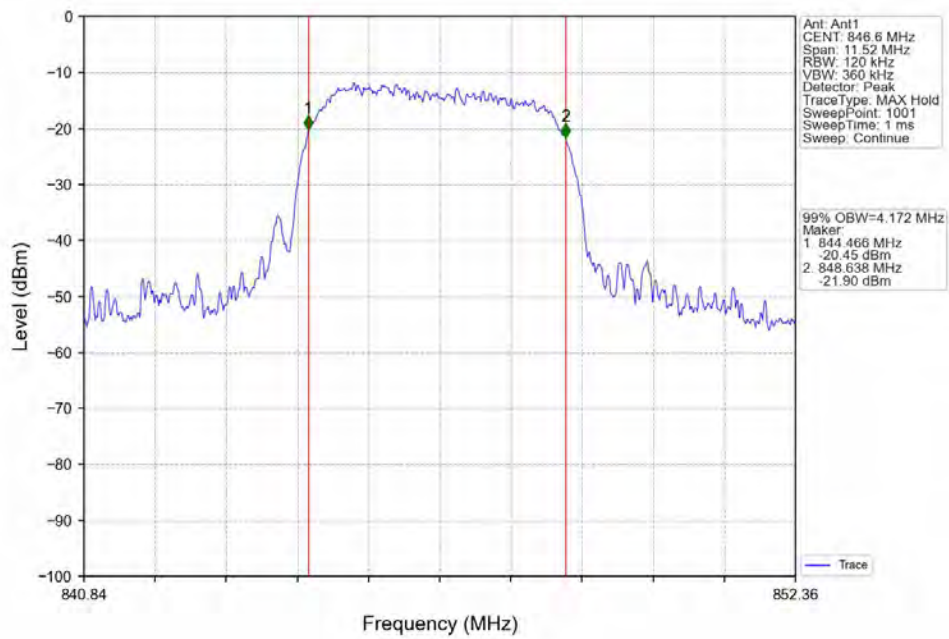
Band5_HSDPA_LCH_826.4MHz_Subtest 1_NTNV



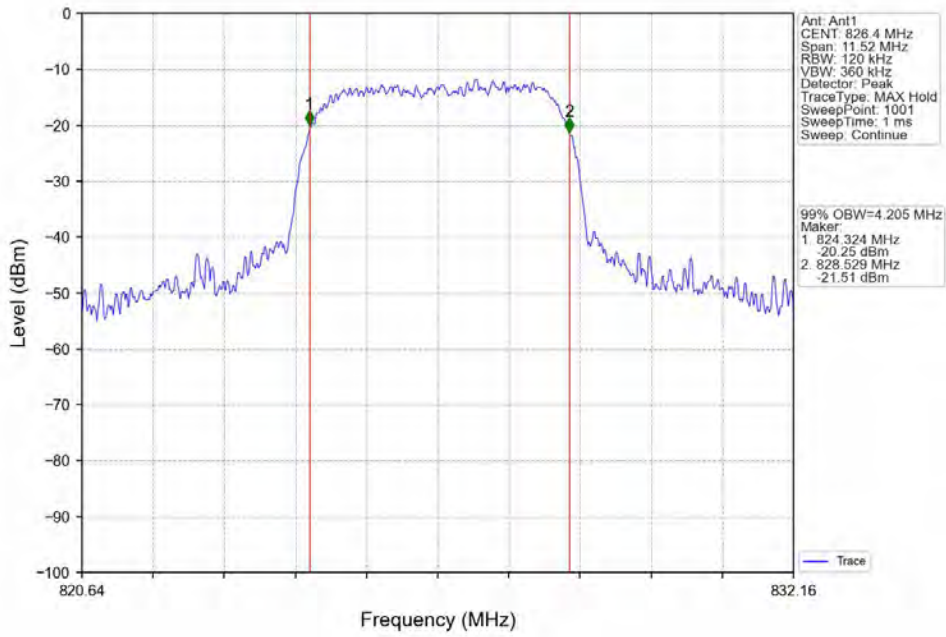
Band5 HSDPA MCH 836.6MHz Subtest 1_NTNV



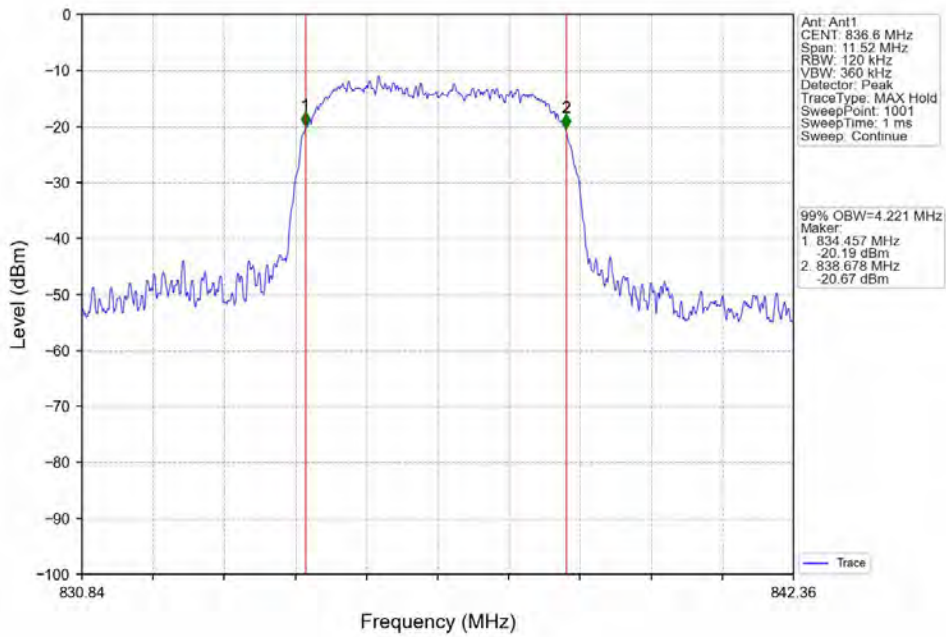
Band5 HSDPA HCH 846.6MHz Subtest 1_NTNV



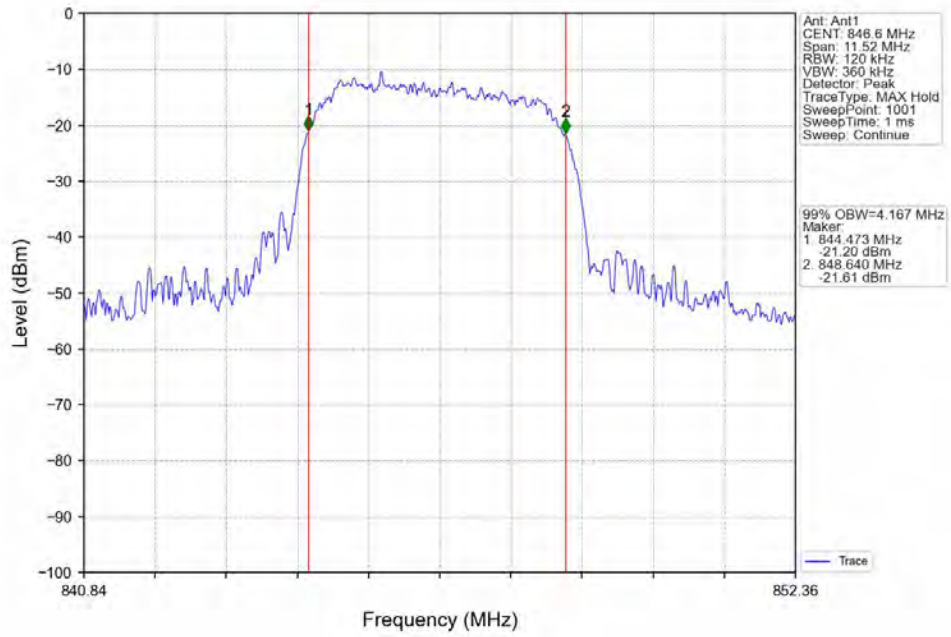
Band5_HSUPA_LCH_826.4MHz_Subtest 1_NTNV



Band5_HSUPA_MCH_836.6MHz_Subtest 1_NTNV



Band5_HSUPA_HCH_846.6MHz_Subtest 1_NTNV

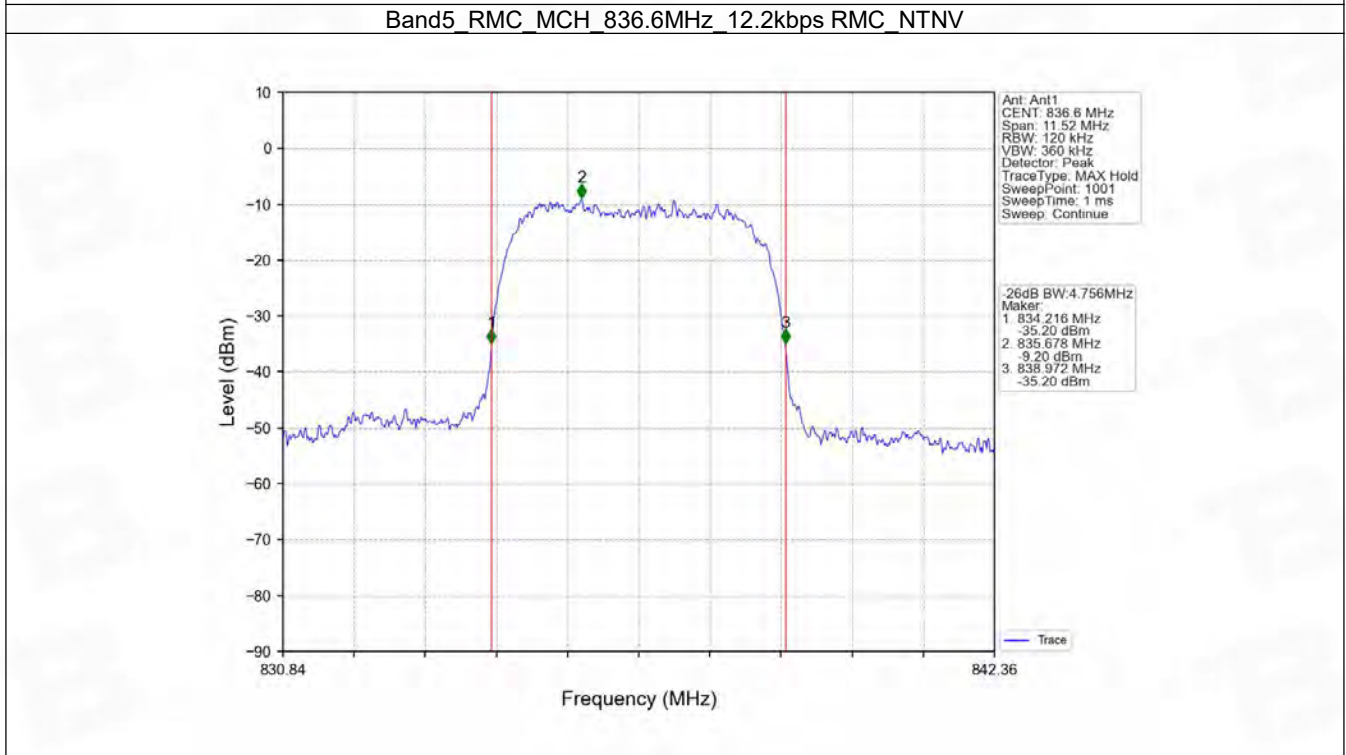
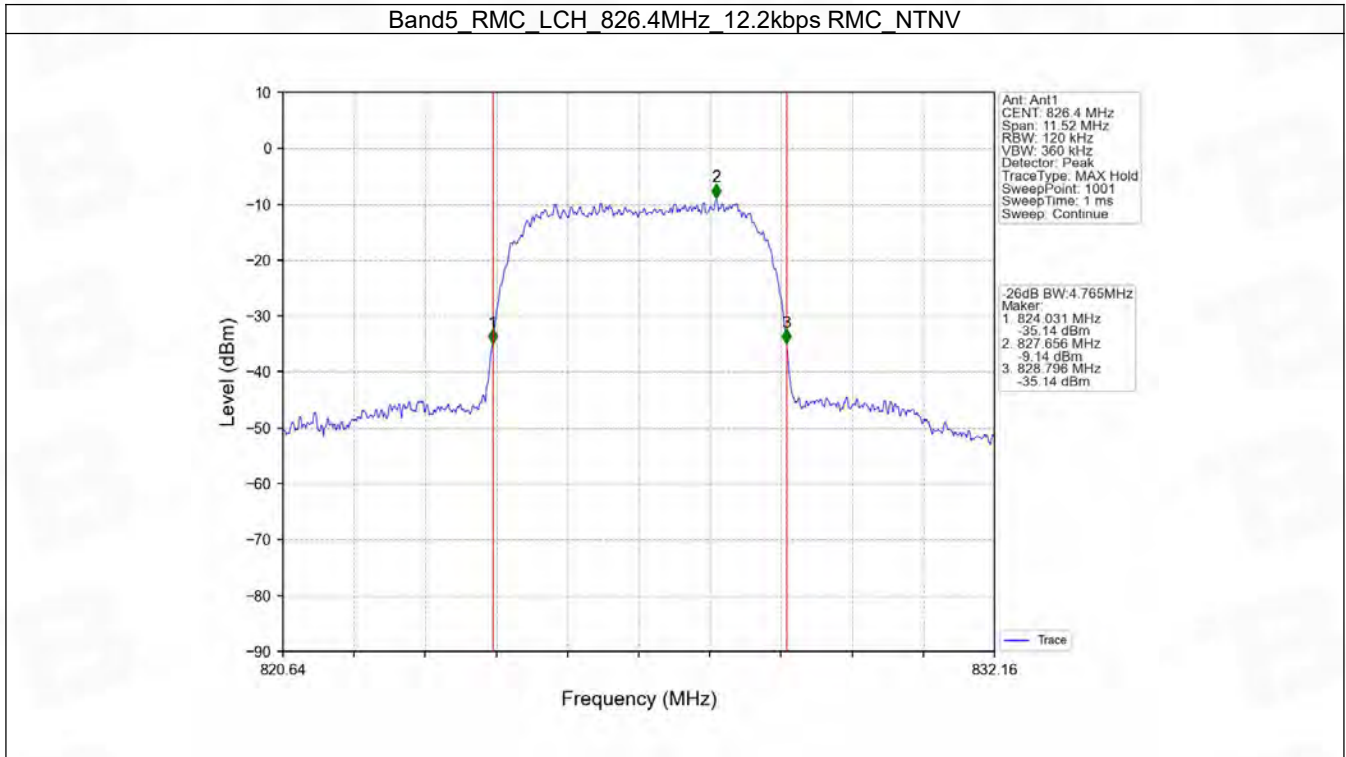


4.2 Band5_XDB

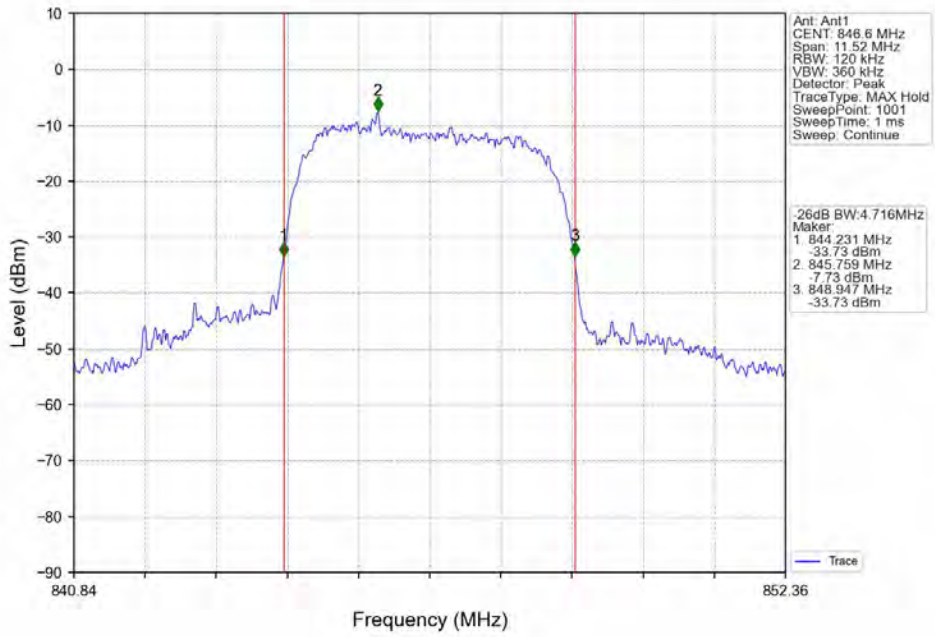
4.2.1 Test Result

Band: 5						
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	826.4	4.765	/	Pass
			836.6	4.756	/	Pass
			846.6	4.716	/	Pass
	HSDPA	Subtest 1	826.4	4.749	/	Pass
			836.6	4.739	/	Pass
			846.6	5.026	/	Pass
	HSUPA	Subtest 1	826.4	4.765	/	Pass
			836.6	4.752	/	Pass
			846.6	4.920	/	Pass

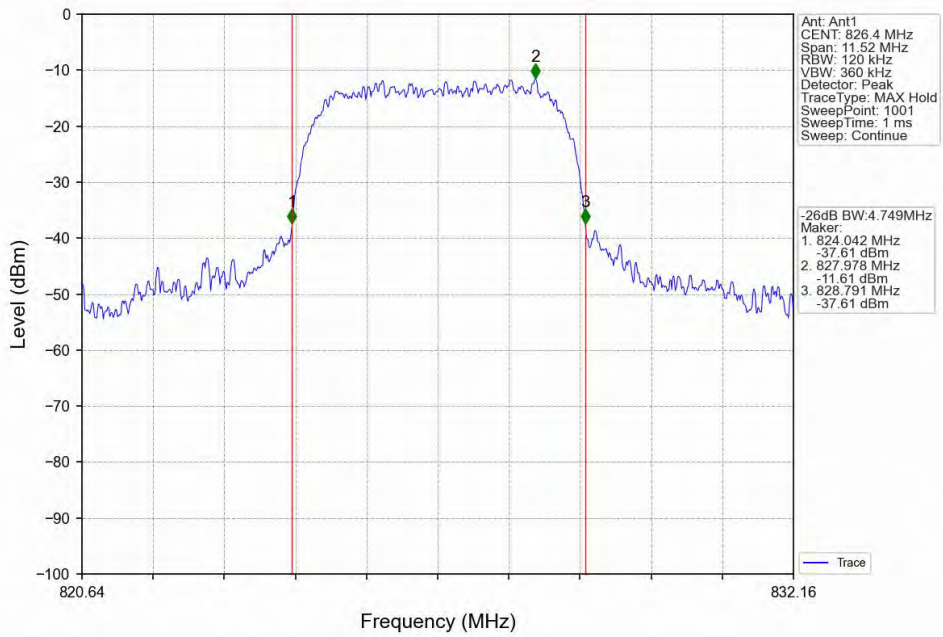
4.2.2 Test Graph



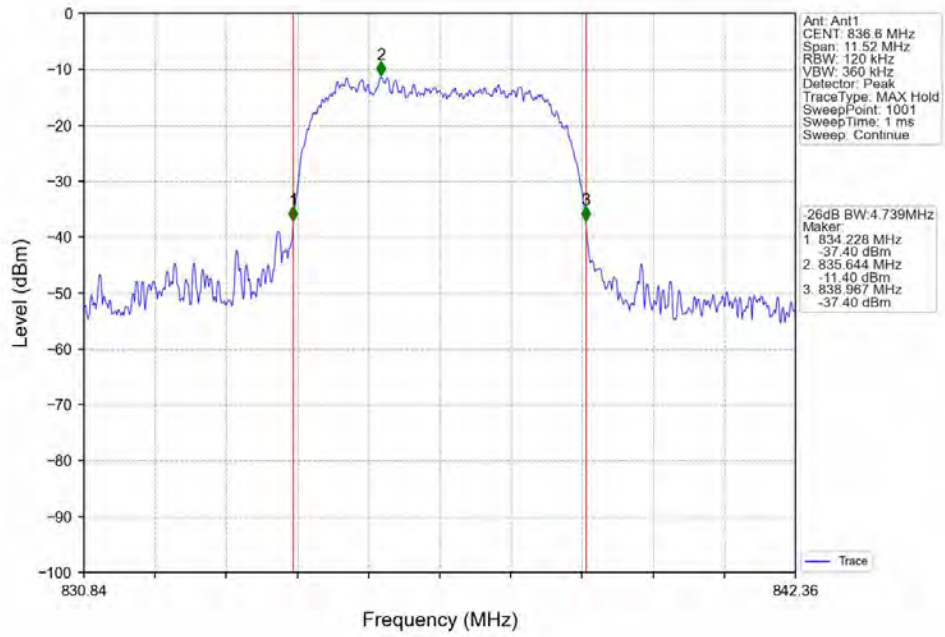
Band5_RMC_HCH_846.6MHz_12.2kbps_RMC_NTNV



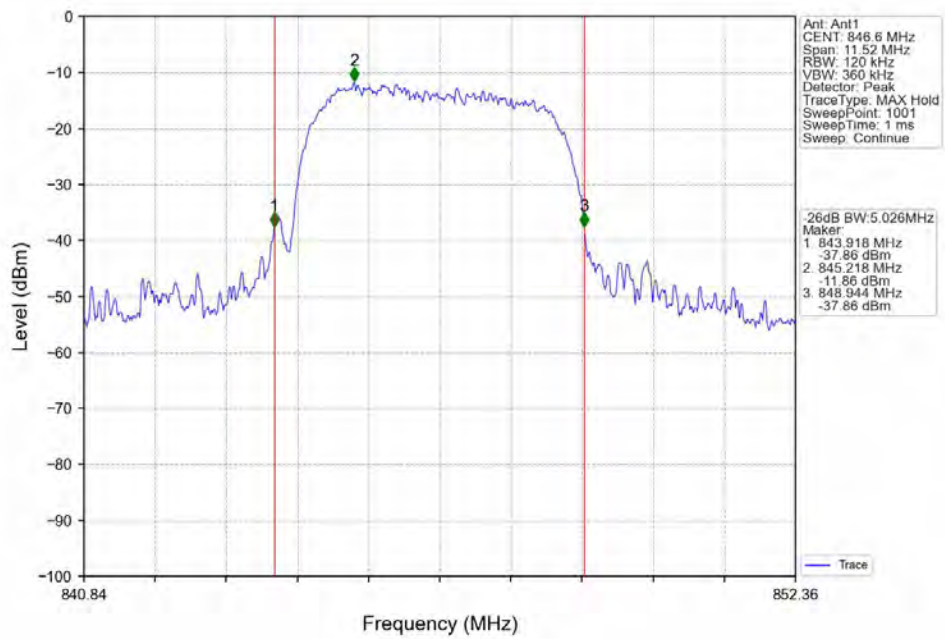
Band5_HSDPA_LCH_826.4MHz_Subtest 1_NTNV



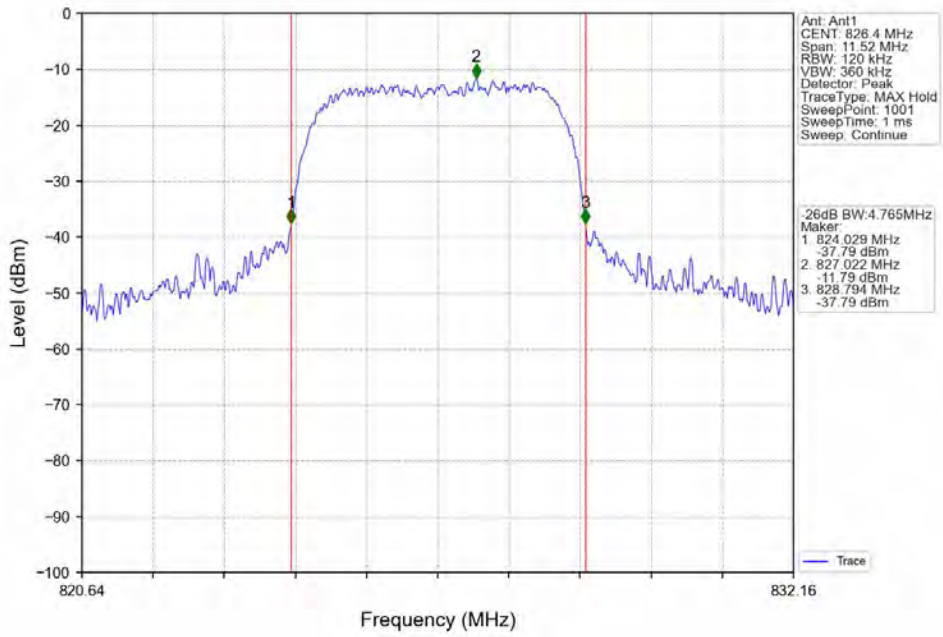
Band5 HSDPA MCH 836.6MHz Subtest 1_NTNV



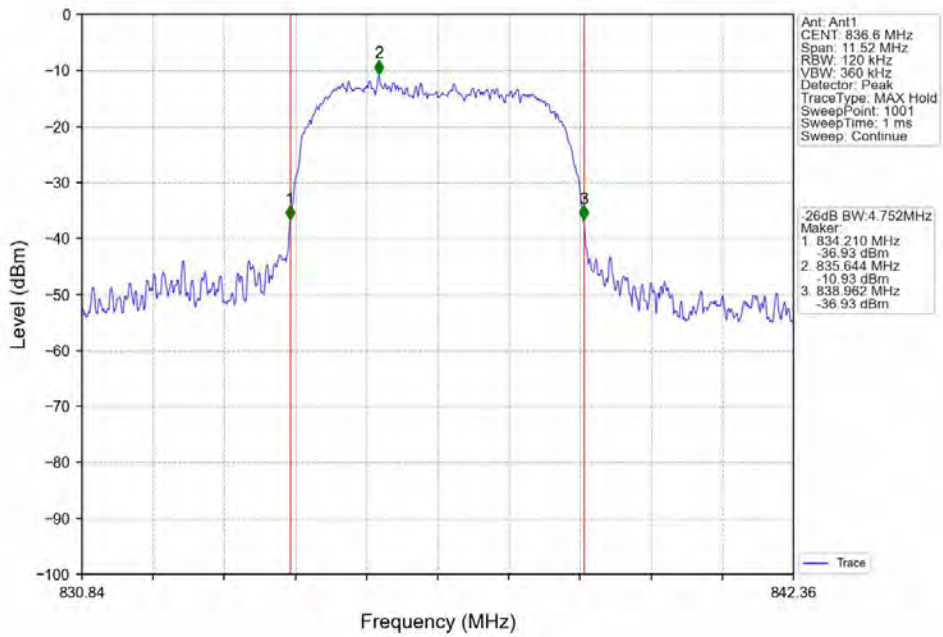
Band5 HSDPA HCH 846.6MHz Subtest 1_NTNV



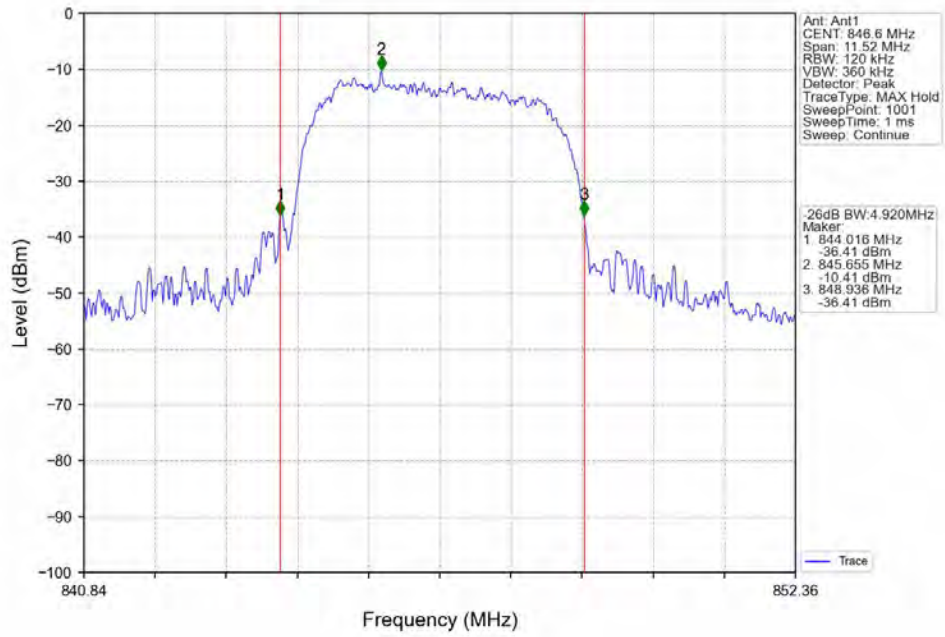
Band5_HSUPA_LCH_826.4MHz_Subtest_1_NTNV



Band5_HSUPA_MCH_836.6MHz_Subtest_1_NTNV



Band5_HSUPA_HCH_846.6MHz_Subtest_1_NTNV



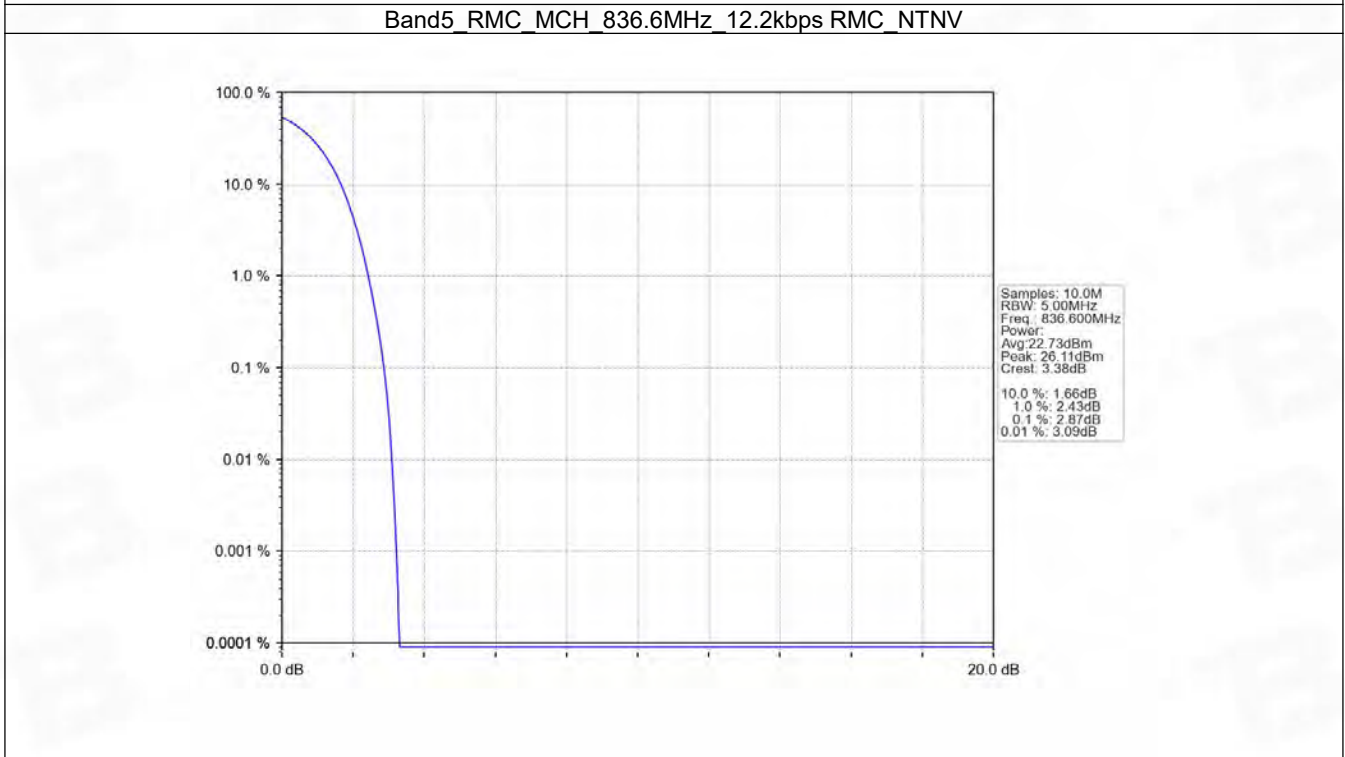
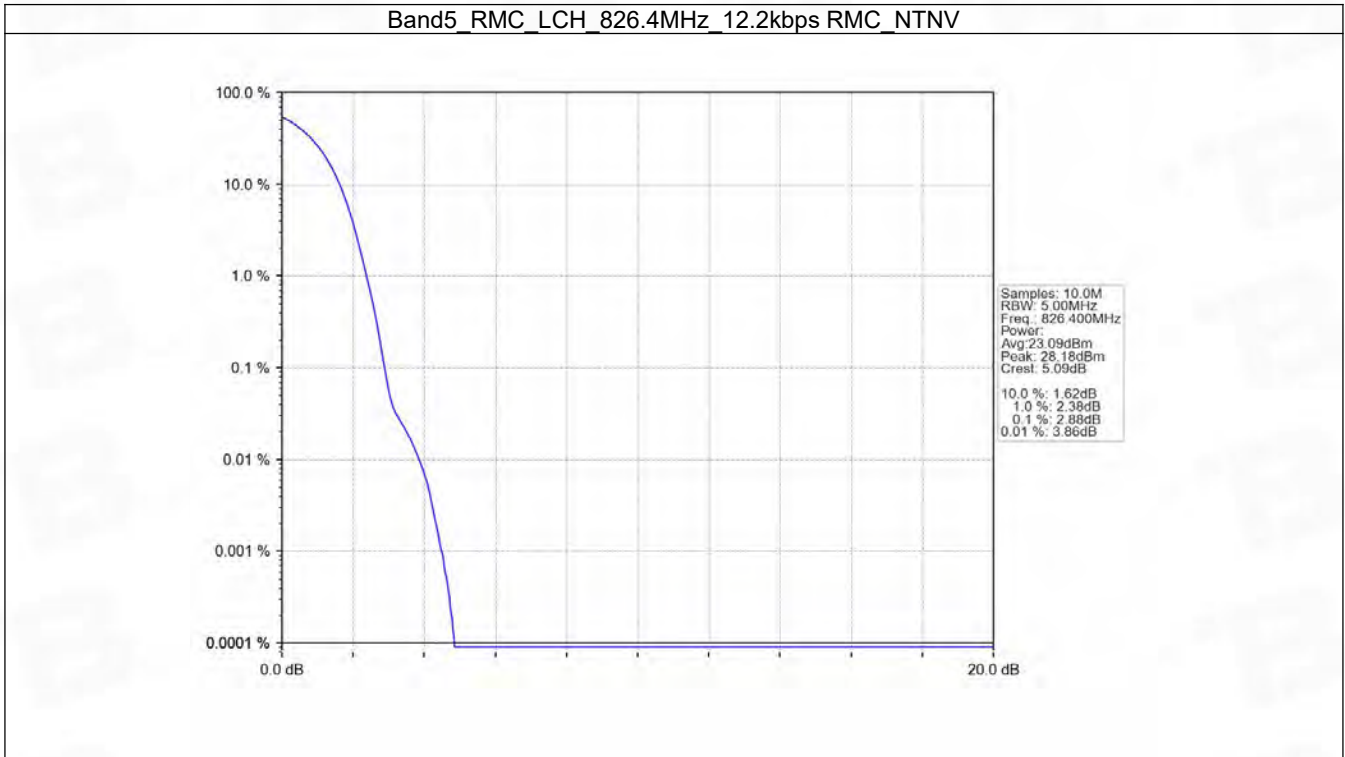
5. Peak-Average Ratio

5.1 Band5

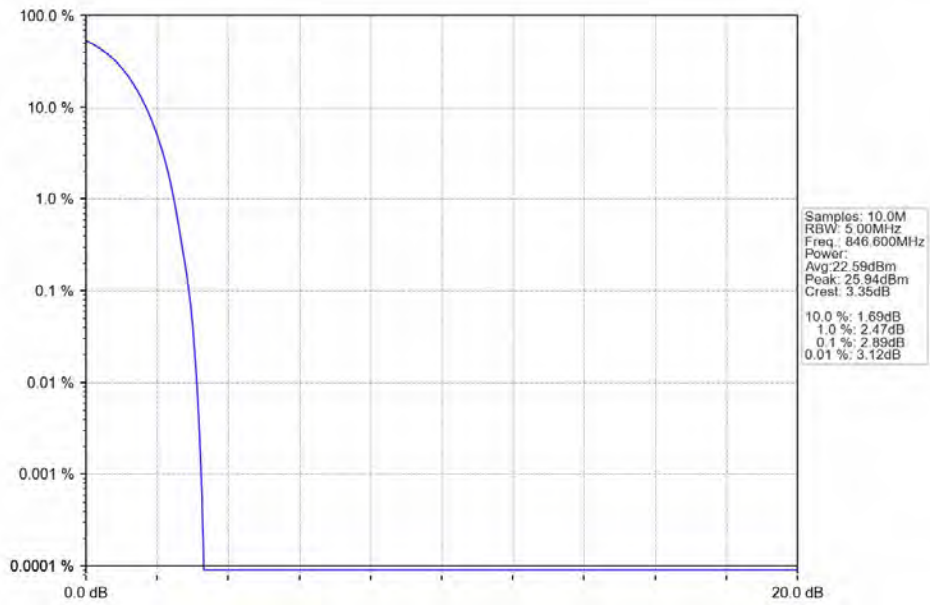
5.1.1 Test Result

Band: 5						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	826.4	2.88	<=13	Pass
			836.6	2.87	<=13	Pass
			846.6	2.89	<=13	Pass
	HSDPA	Subtest 1	826.4	5.74	<=13	Pass
			836.6	5.95	<=13	Pass
			846.6	5.94	<=13	Pass
	HSUPA	Subtest 1	826.4	5.75	<=13	Pass
			836.6	5.88	<=13	Pass
			846.6	6.00	<=13	Pass

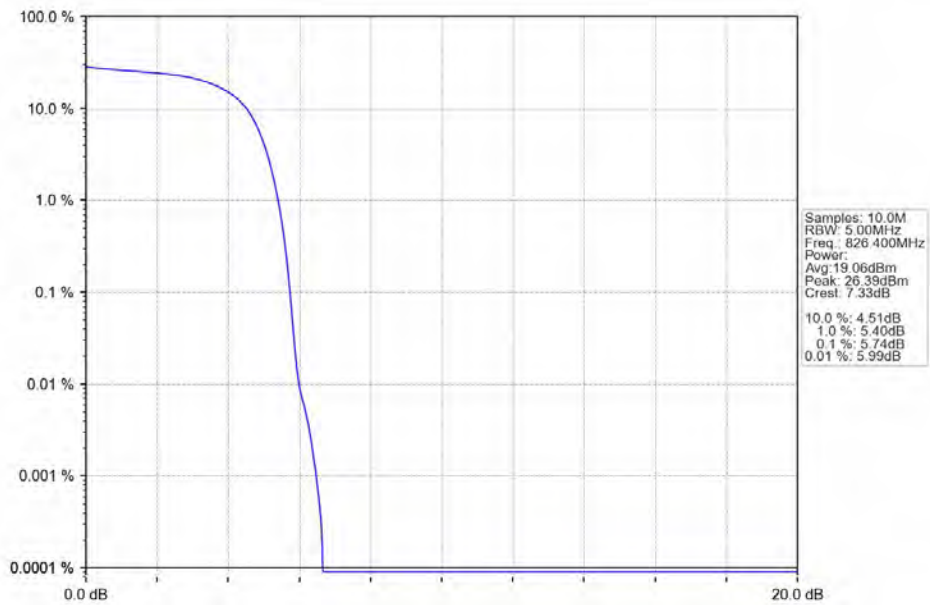
5.1.2 Test Graph



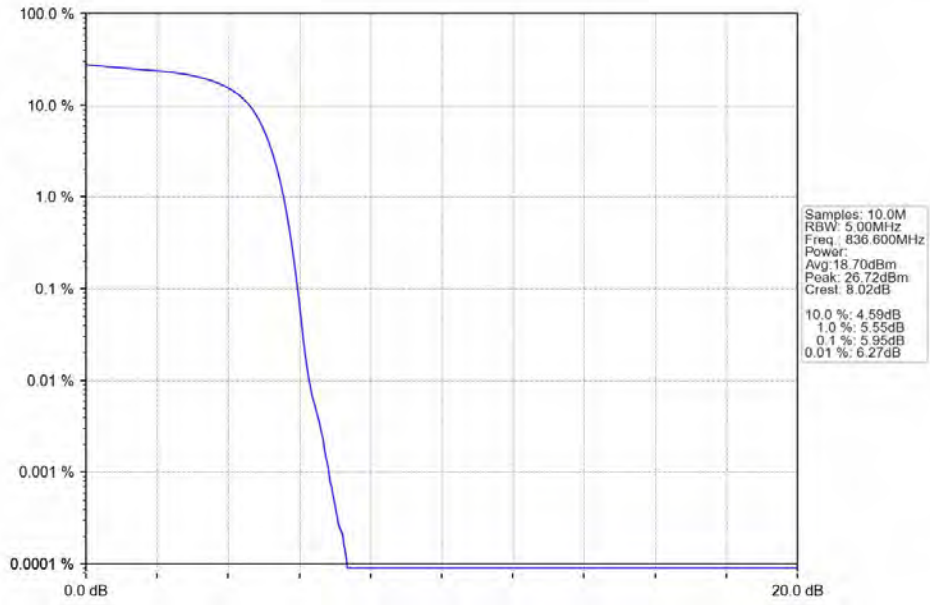
Band5_RMC_HCH_846.6MHz_12.2kbps_RMC_NTNV



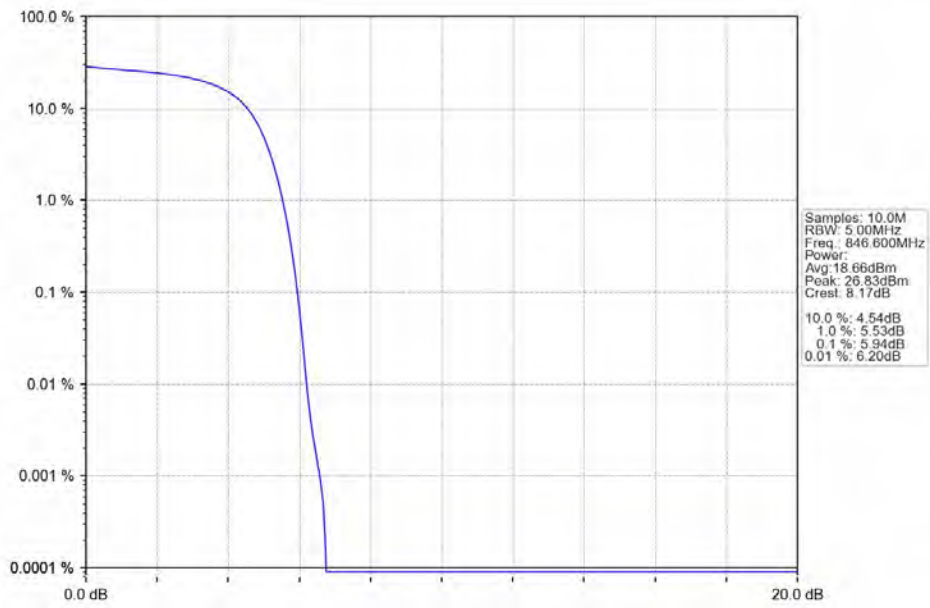
Band5_HSDPA_LCH_826.4MHz_Subtest 1_NTNV



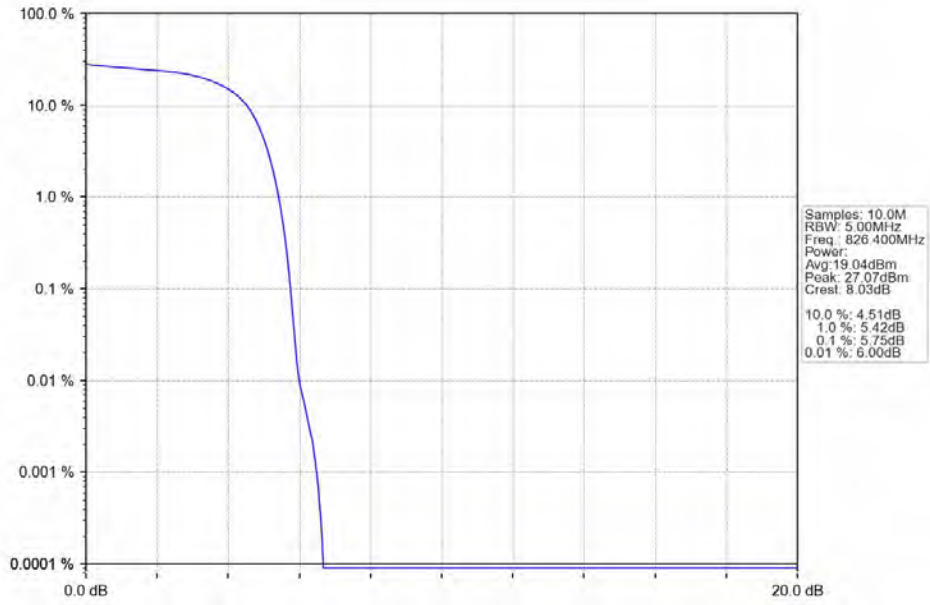
Band5_HSDPA_MCH_836.6MHz_Subtest_1_NTNV



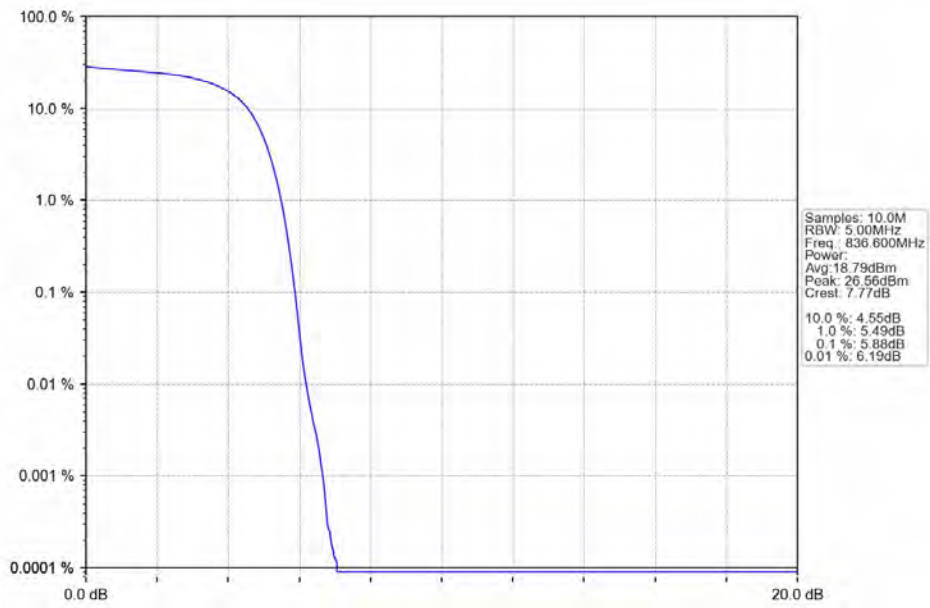
Band5_HSDPA_HCH_846.6MHz_Subtest_1_NTNV



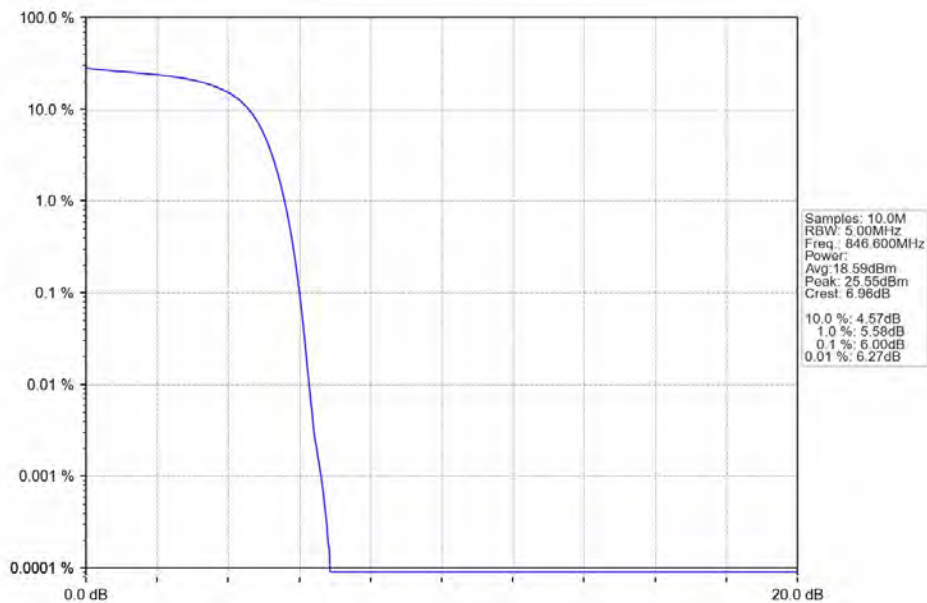
Band5_HSUPA_LCH_826.4MHz_Subtest 1_NTNV



Band5_HSUPA_MCH_836.6MHz_Subtest 1_NTNV



Band5_HSUPA_HCH_846.6MHz_Subtest 1_NTNV



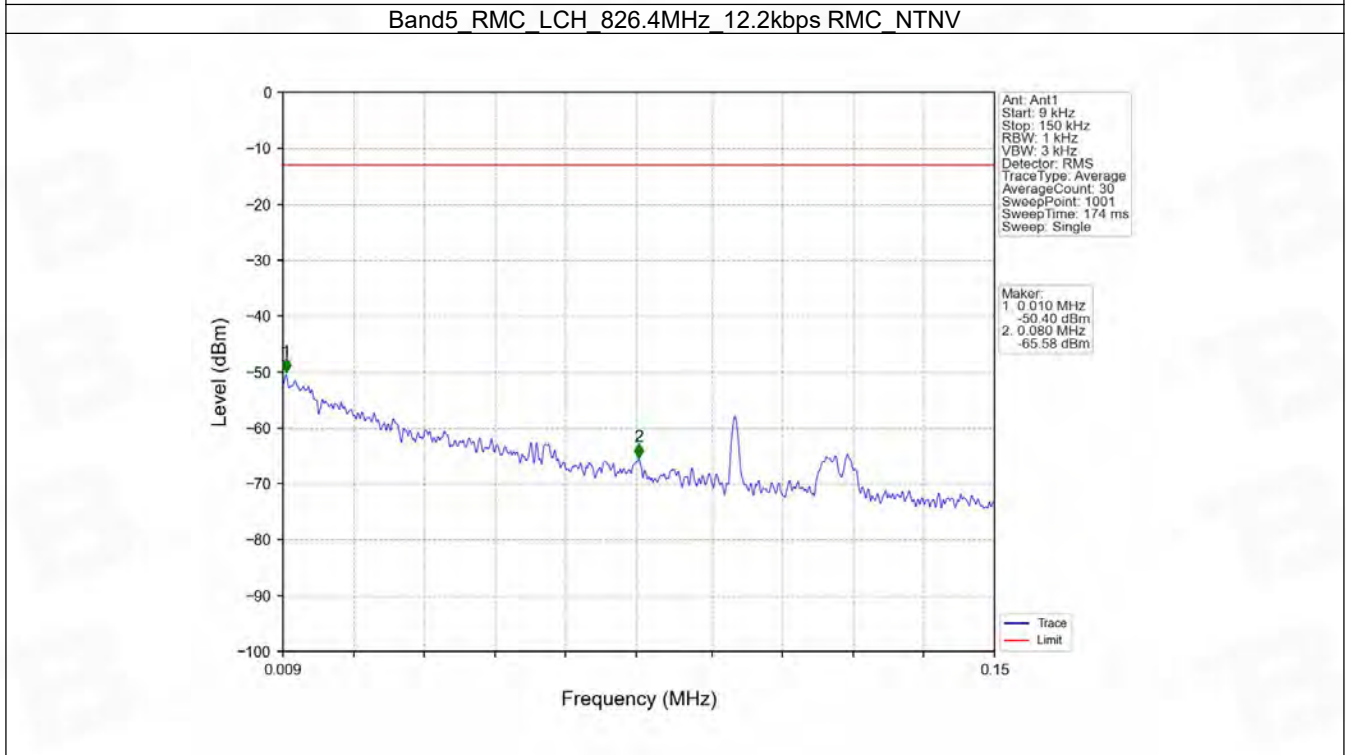
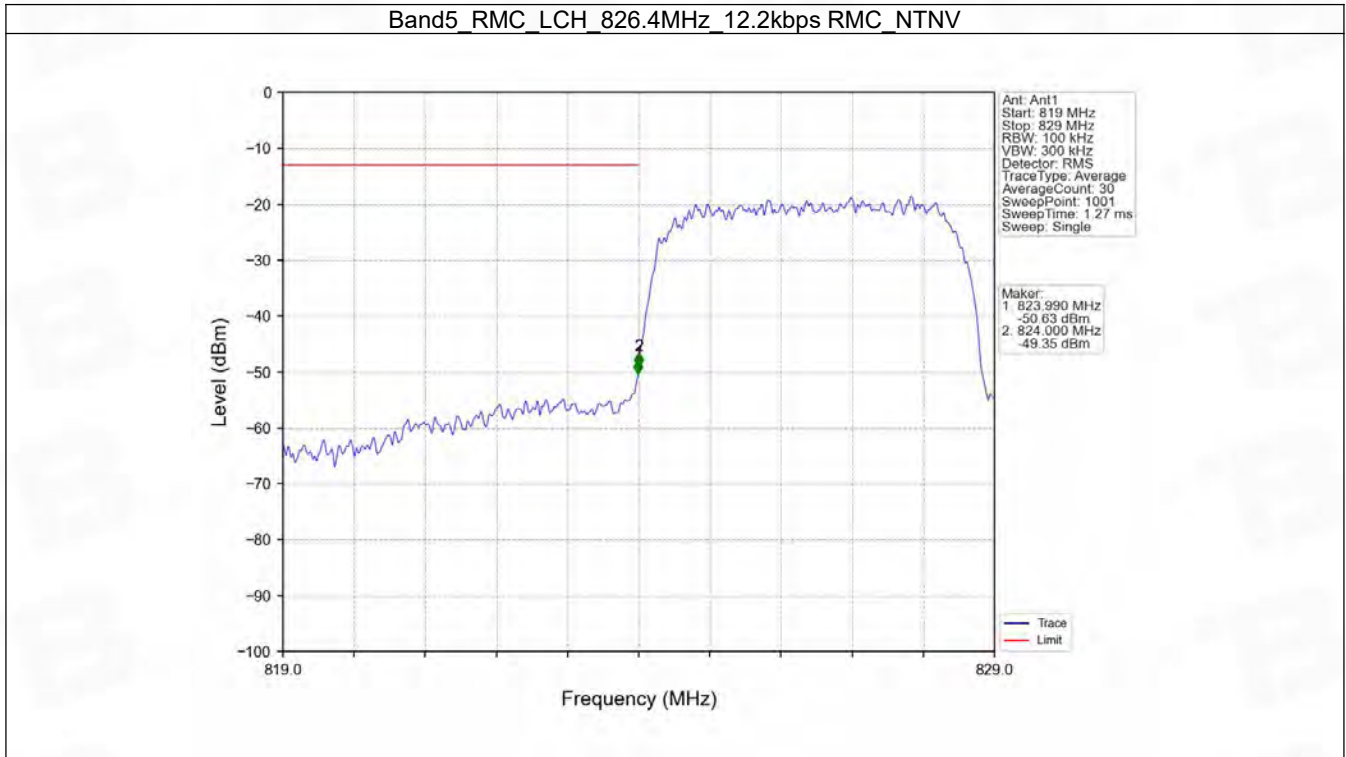
6. Spurious Emission

6.1 Band5

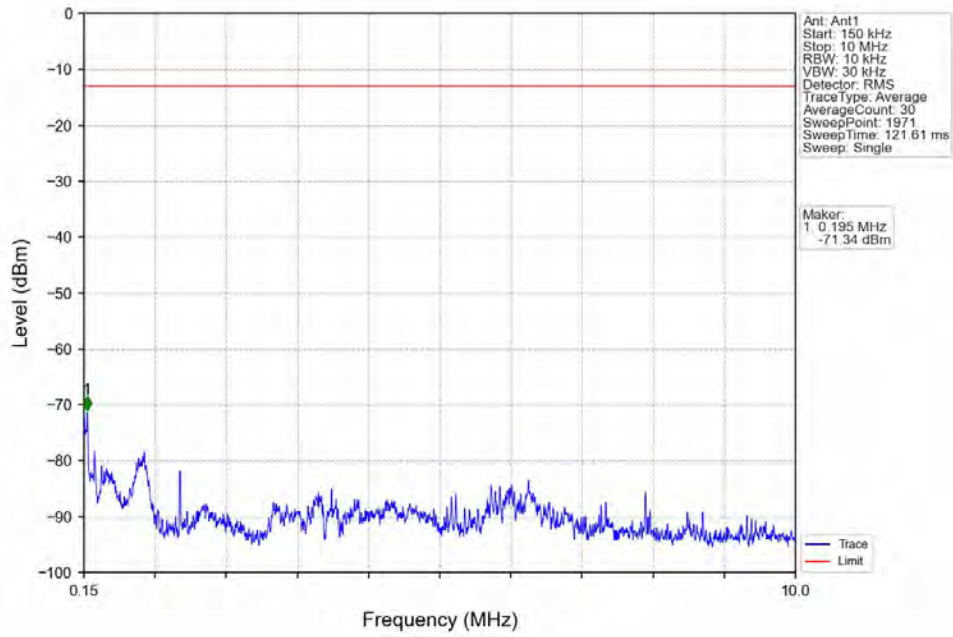
6.1.1 Test Result

Band: 5						
ENV	Mode		Frequency (MHz)	Spurious Emission		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	826.4	Refer To Test Graph		Pass
			836.6	Refer To Test Graph		Pass
			846.6	Refer To Test Graph		Pass
	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

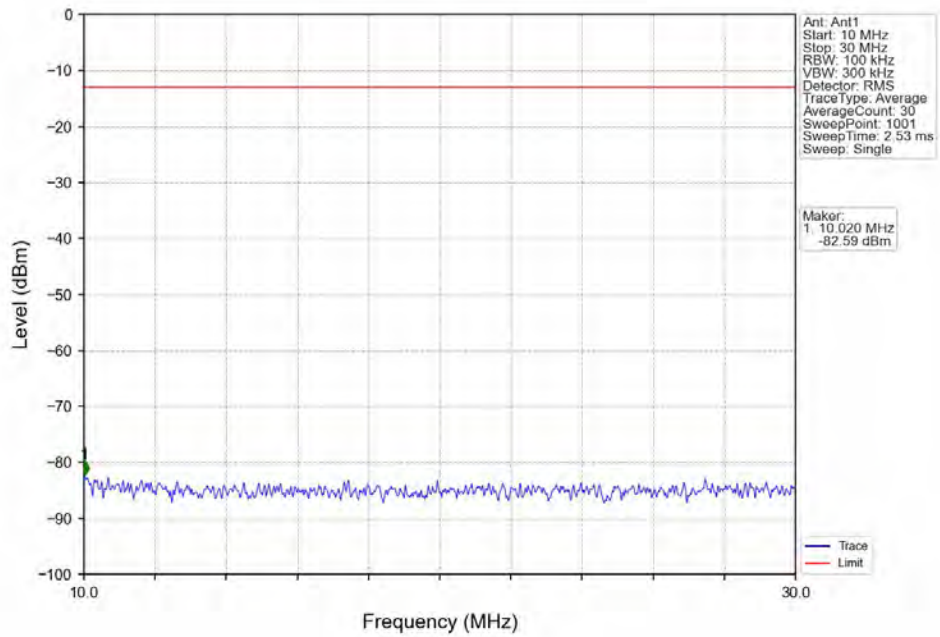
6.1.2 Test Graph



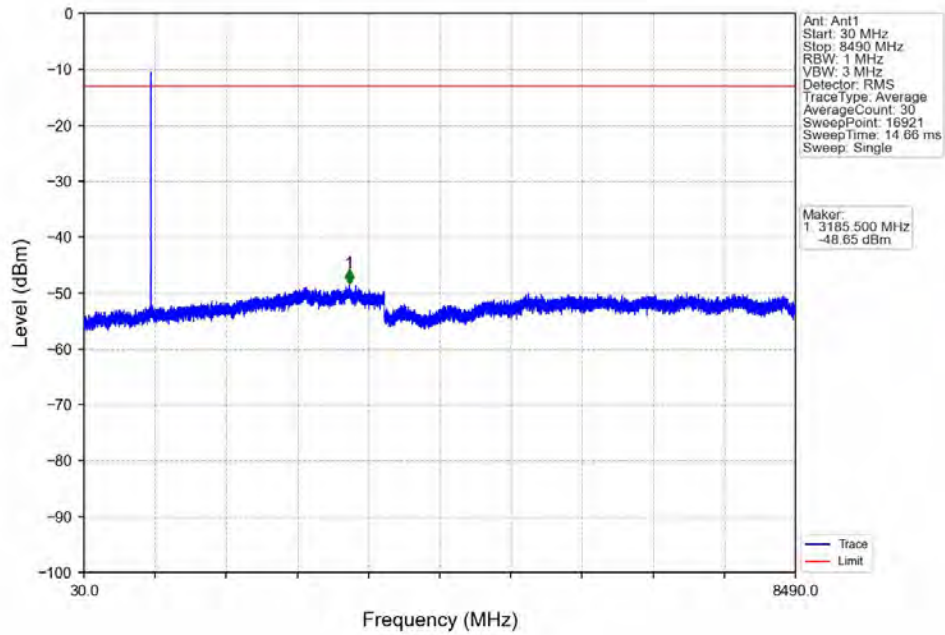
Band5_RMC_LCH_826.4MHz_12.2kbps_RMC_NTNV



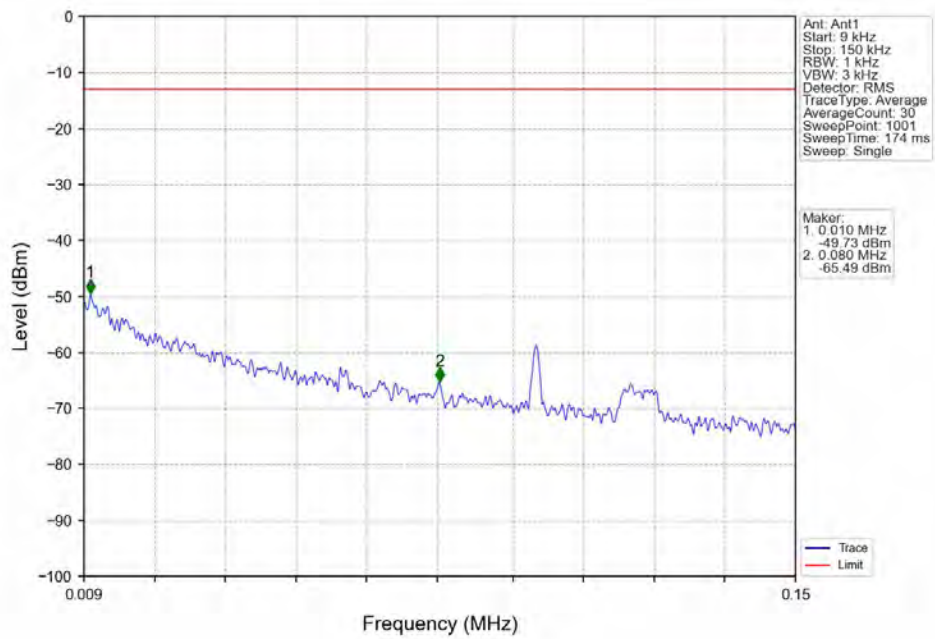
Band5_RMC_LCH_826.4MHz_12.2kbps_RMC_NTNV



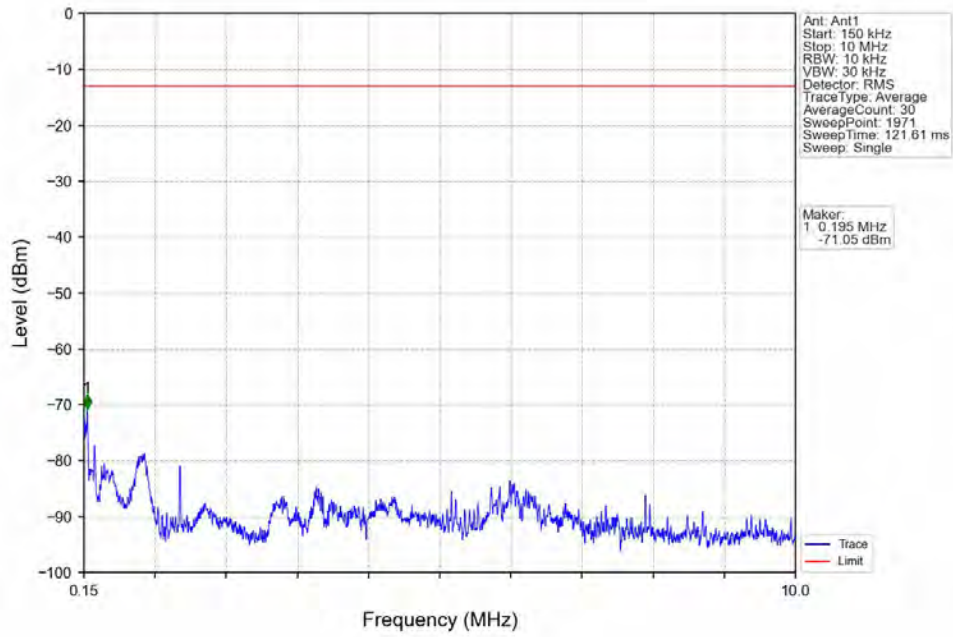
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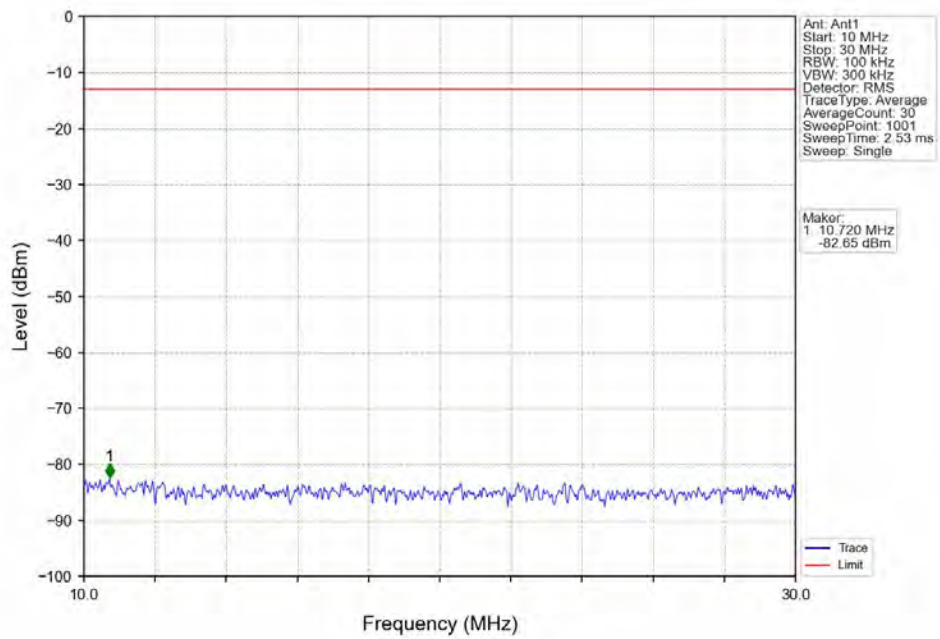
Band5_RMC_MCH_836.6MHz_12.2kbps_RMC_NTNV



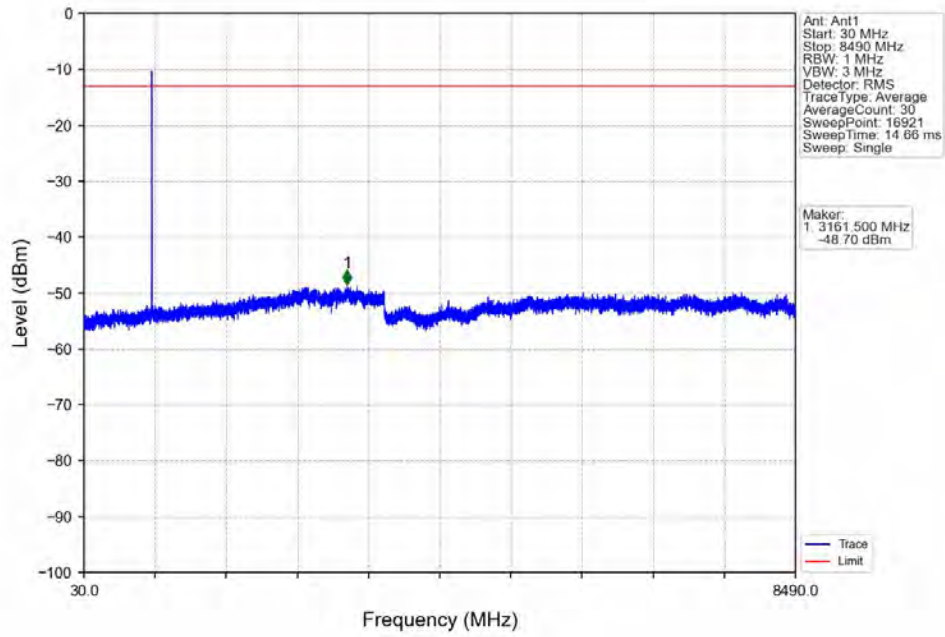
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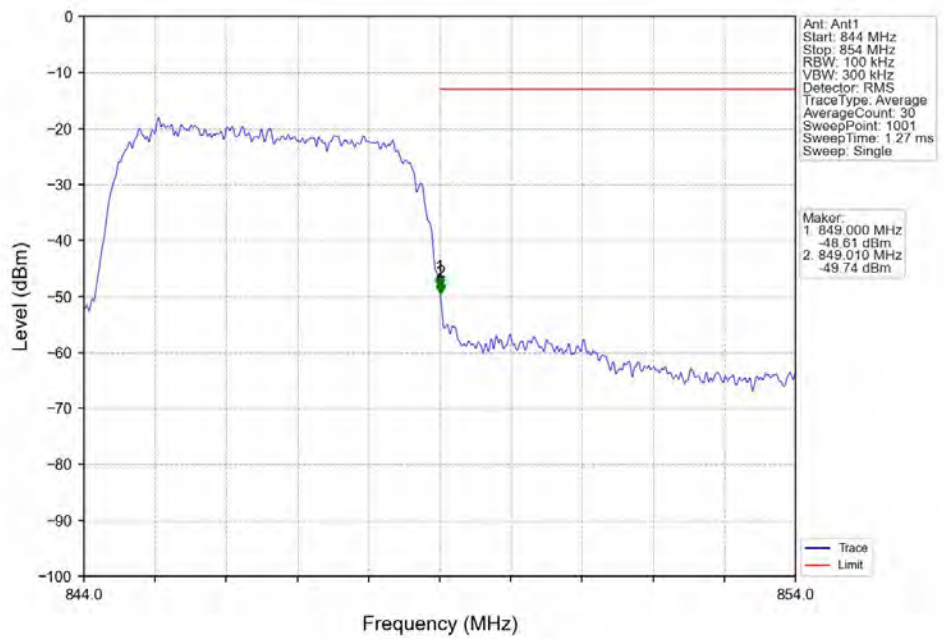
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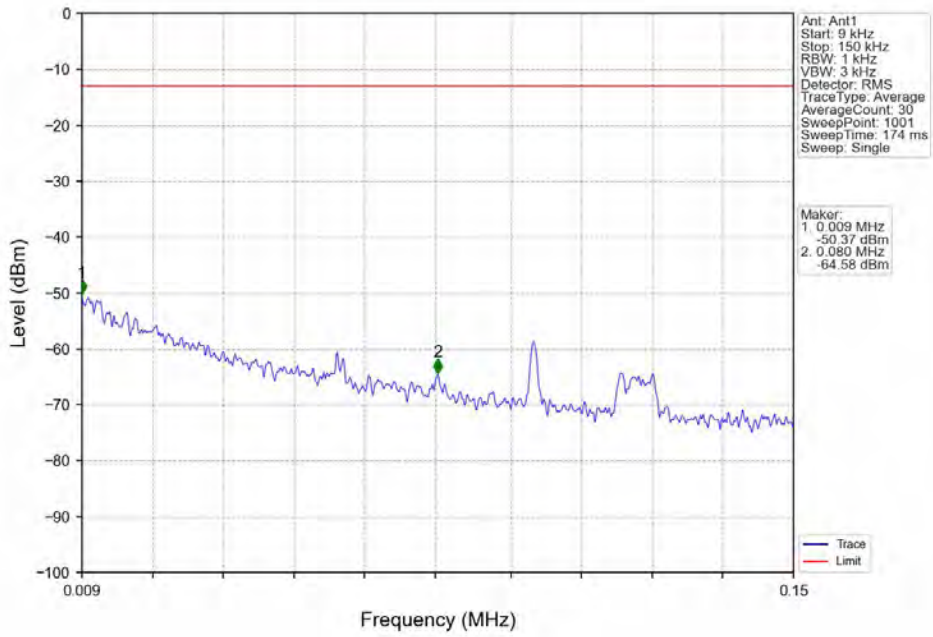
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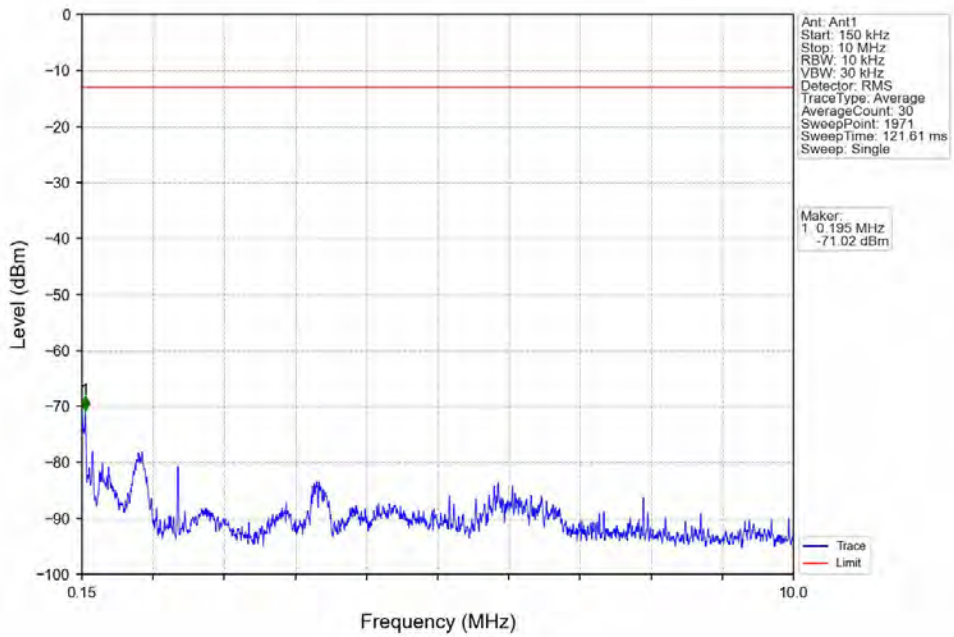
Band5_RMC_HCH_846.6MHz_12.2kbps_RMC_NTNV



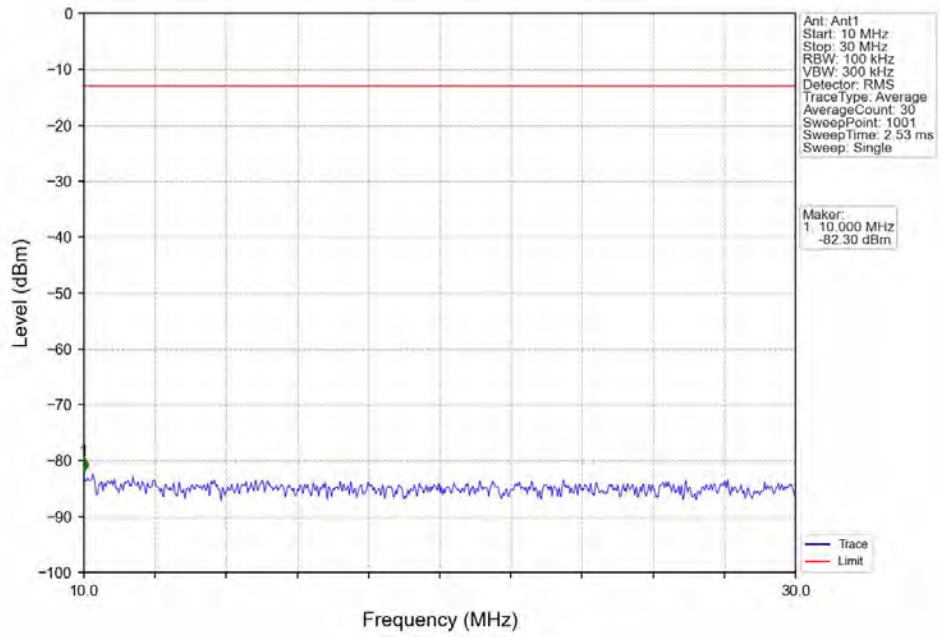
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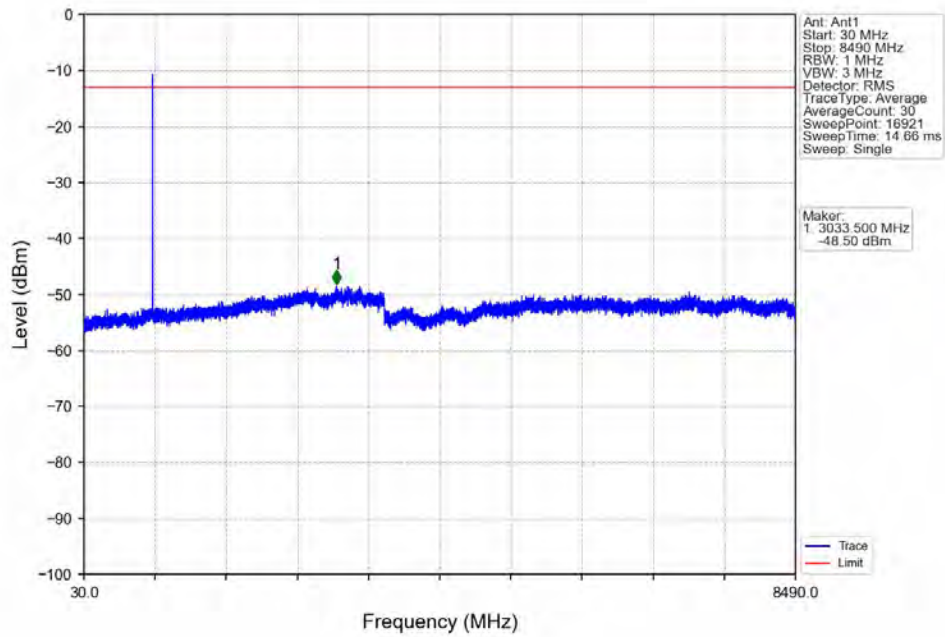
Band5_RMC_HCH_846.6MHz_12.2kbps_RMC_NTNV



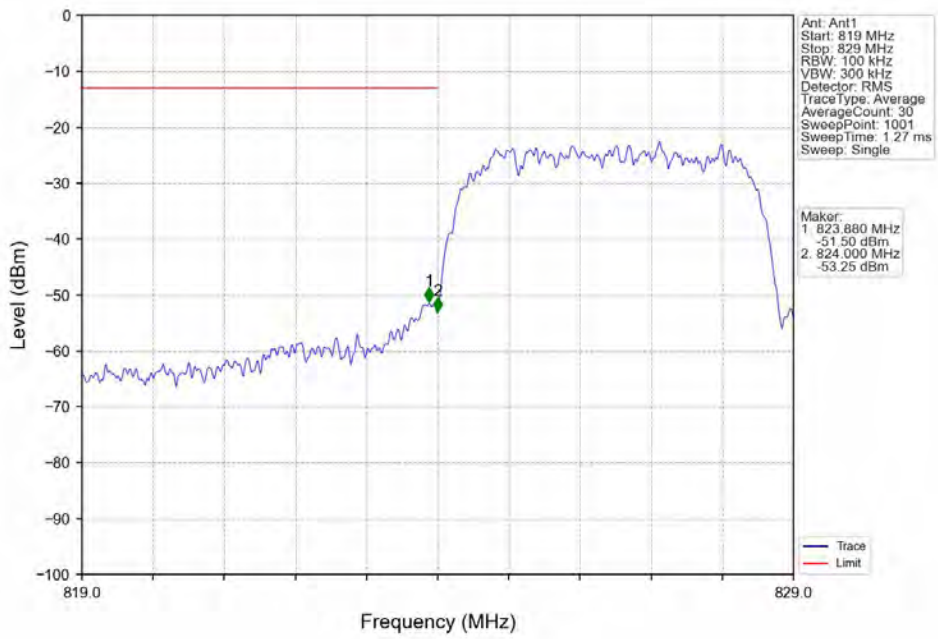
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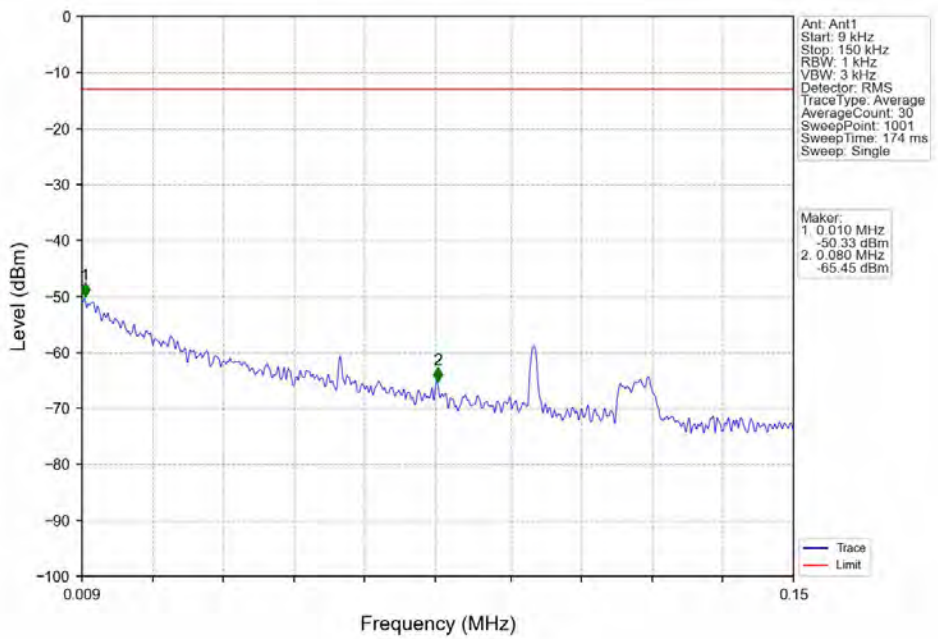
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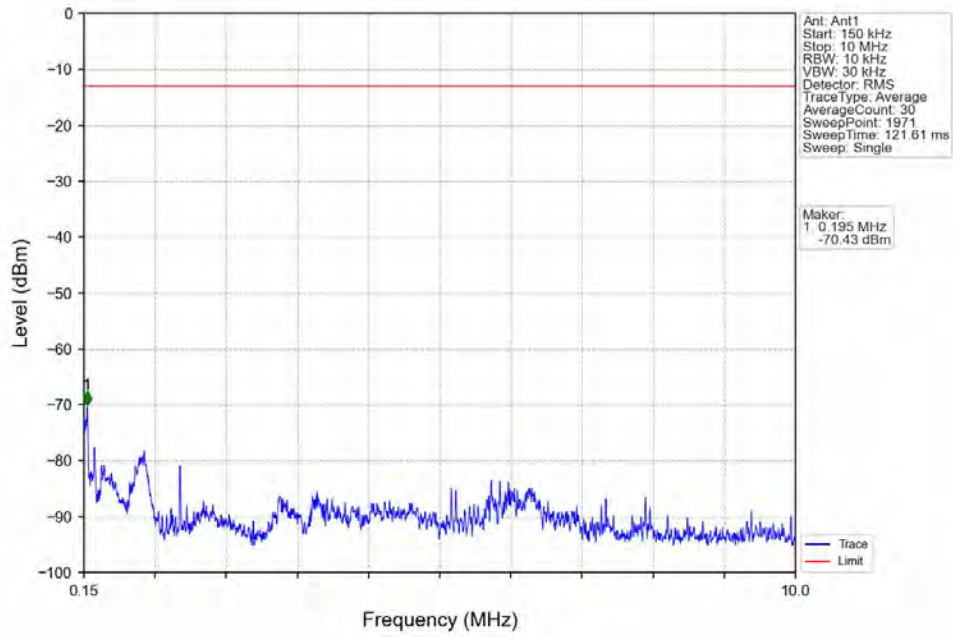
Band5_HSDPA_LCH_826.4MHz_Subtest 1_NTNV



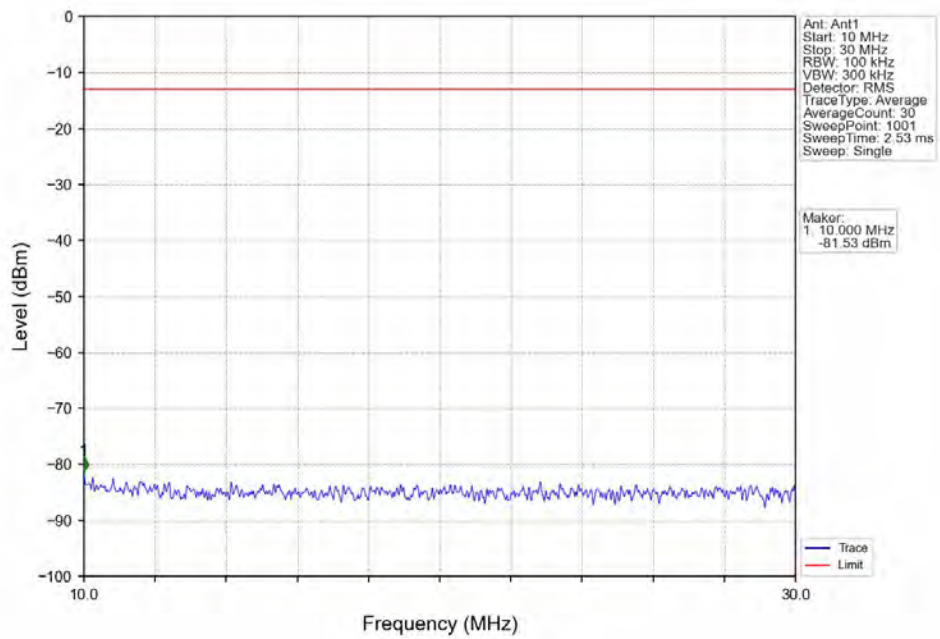
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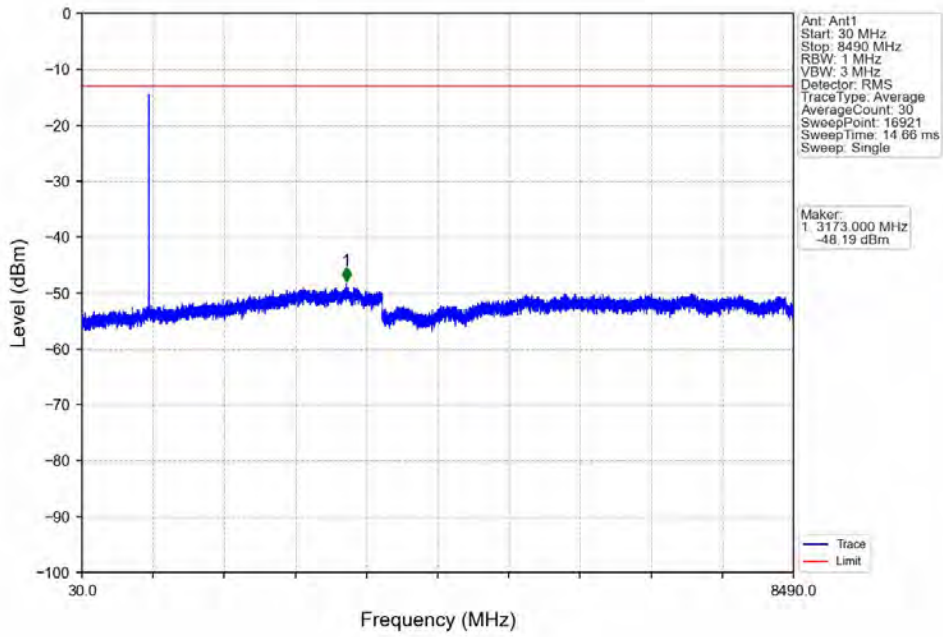
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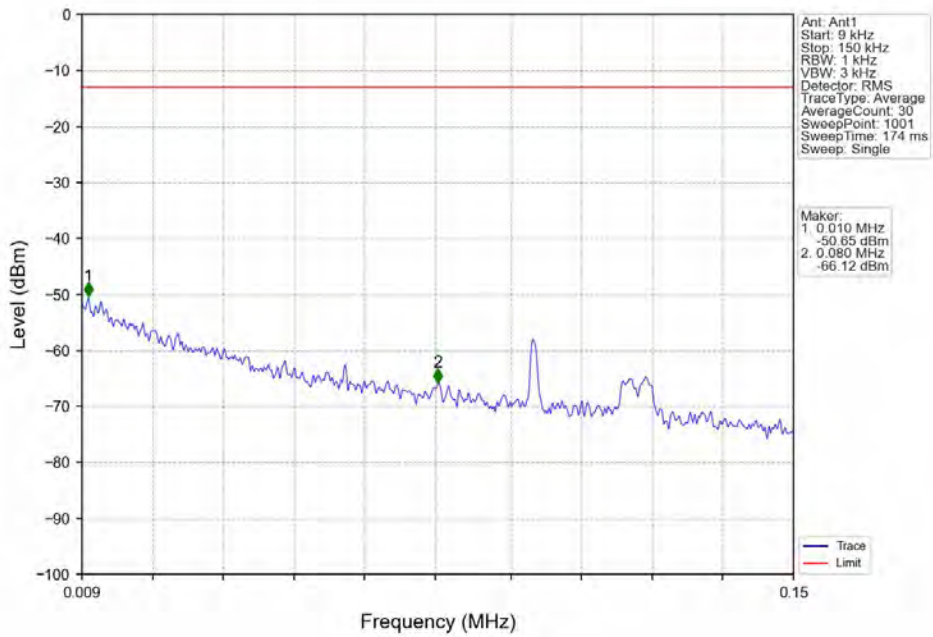
Band5_HSDPA_LCH_826.4MHz_Subtest 1_NTNV



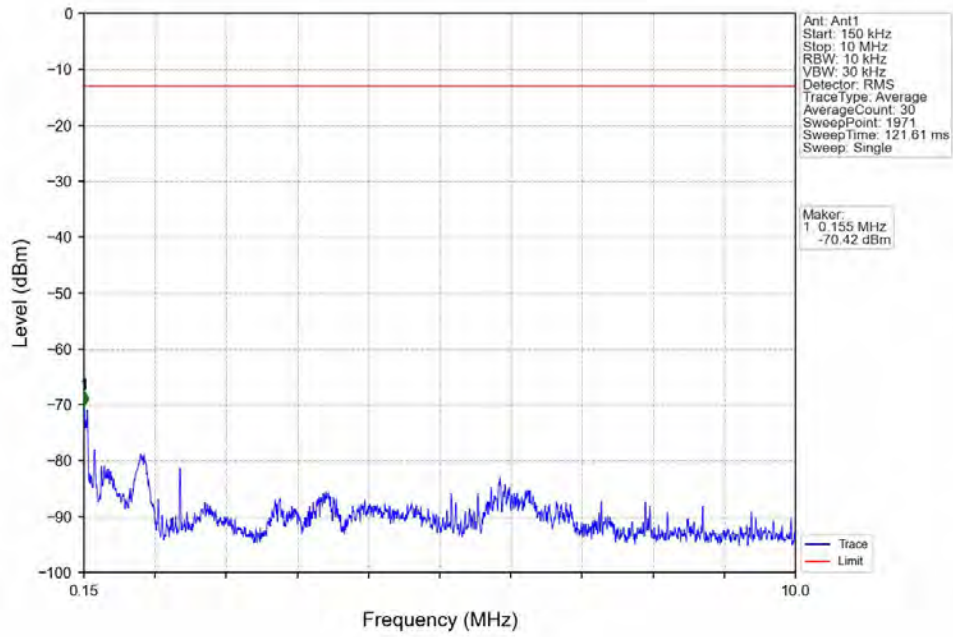
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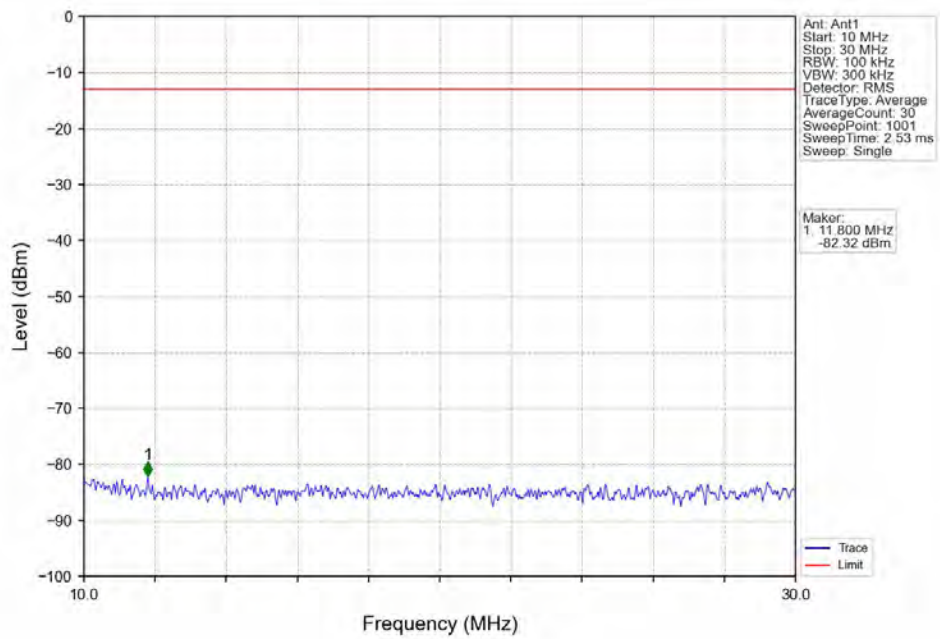
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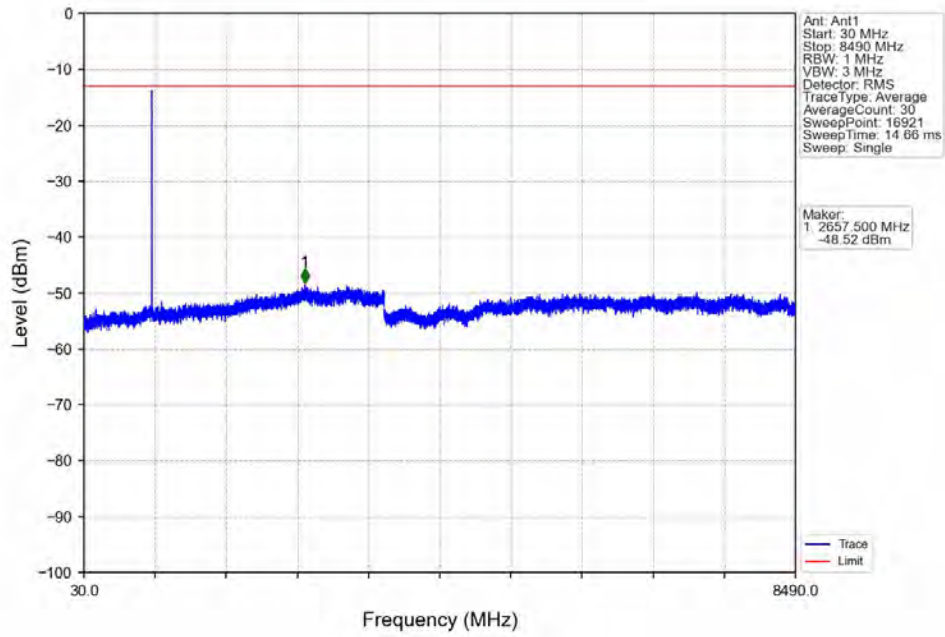
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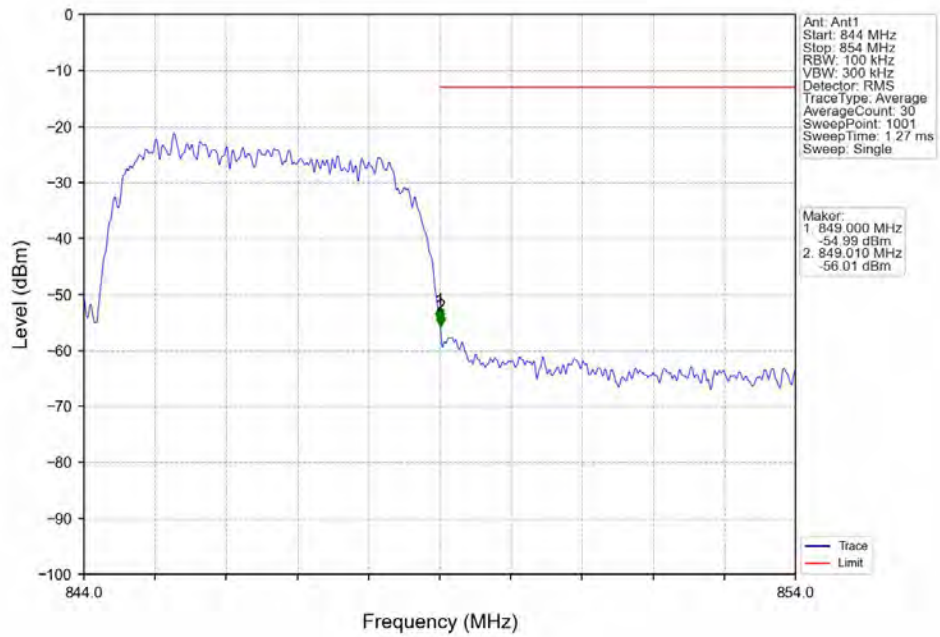
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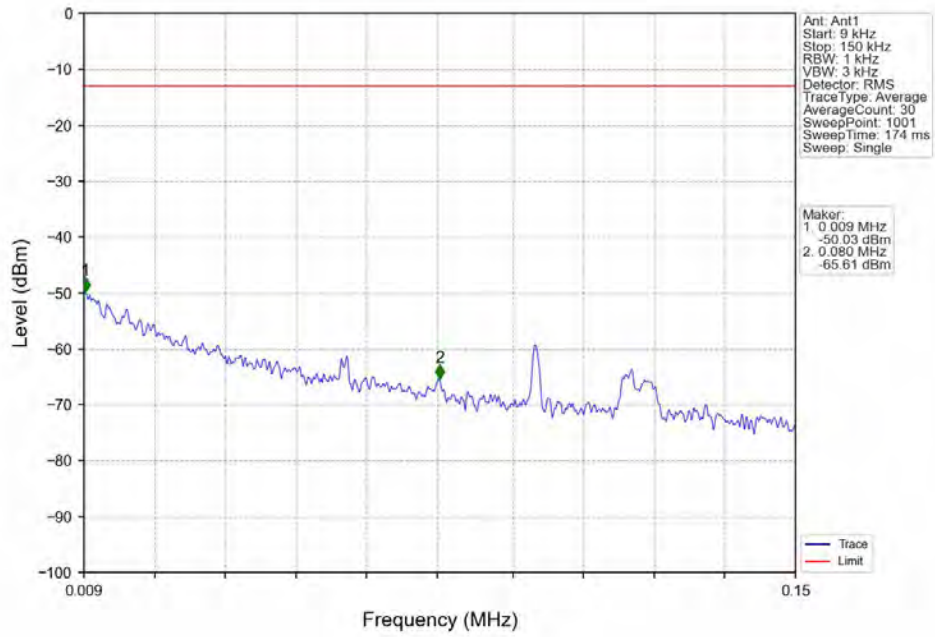
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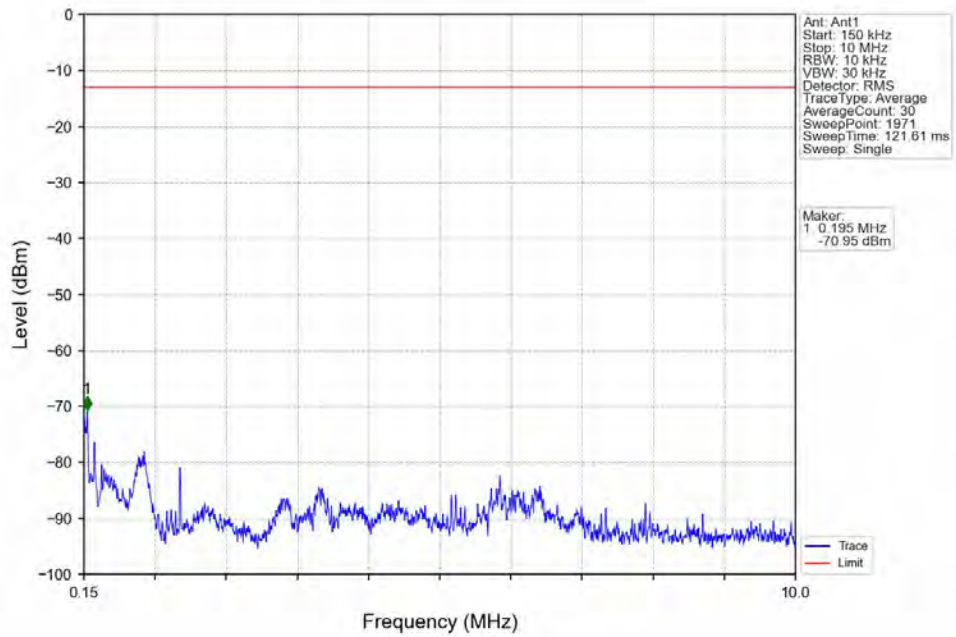
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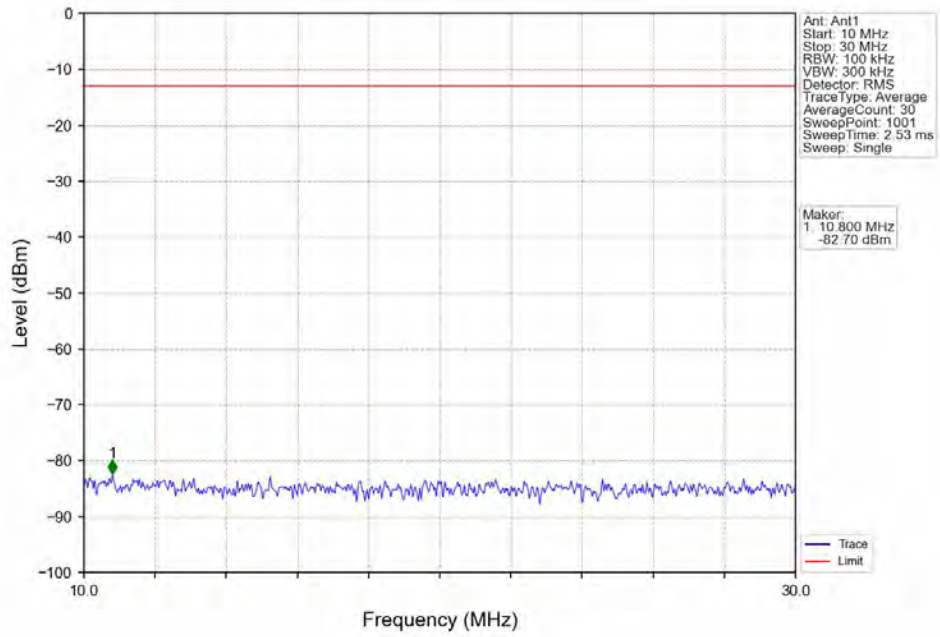
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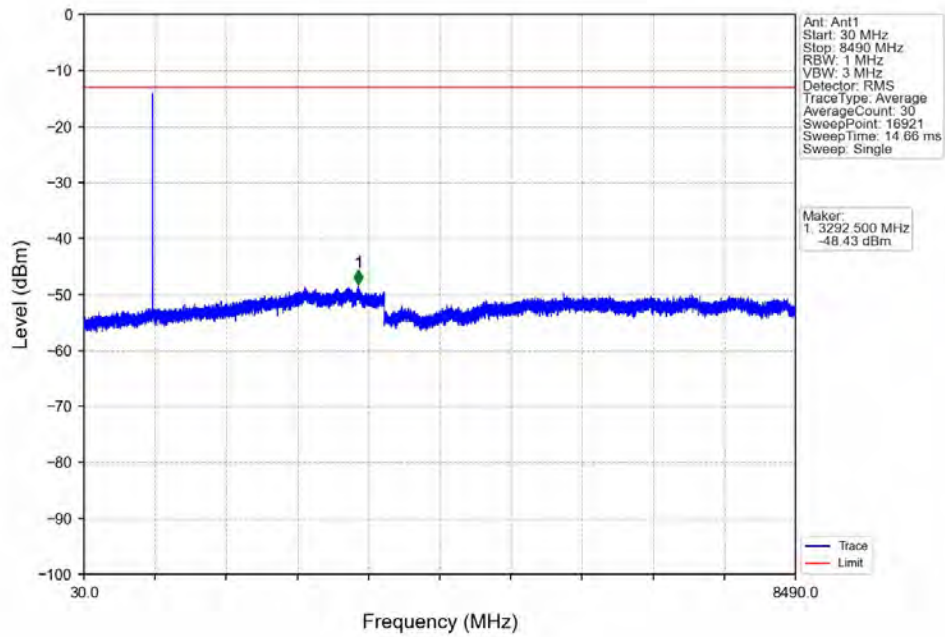
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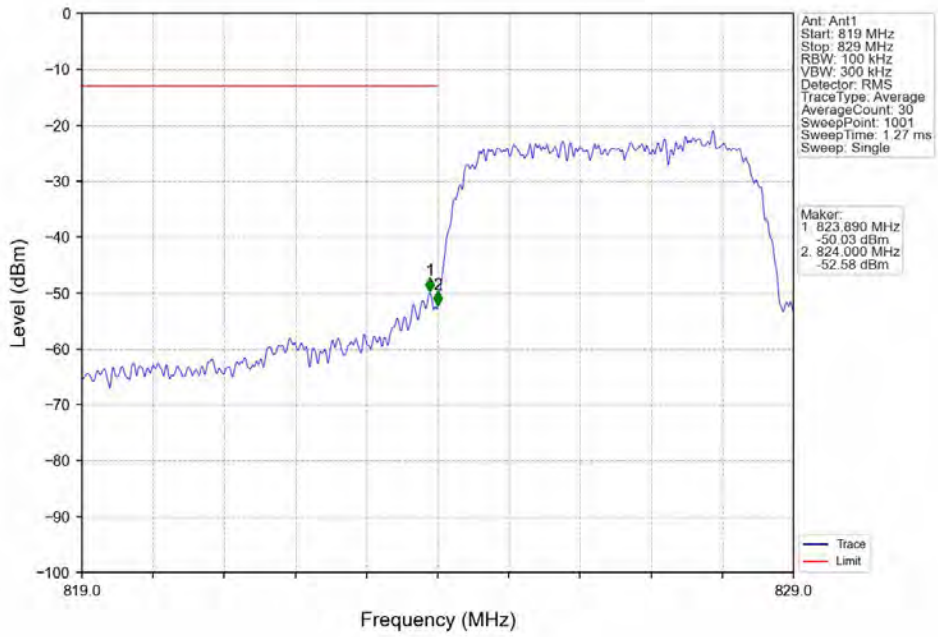
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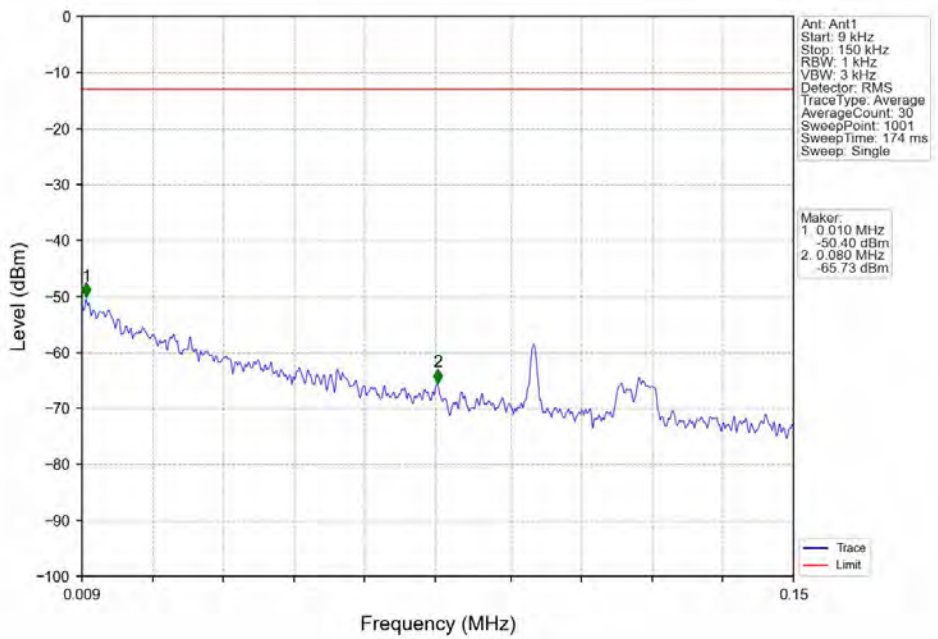
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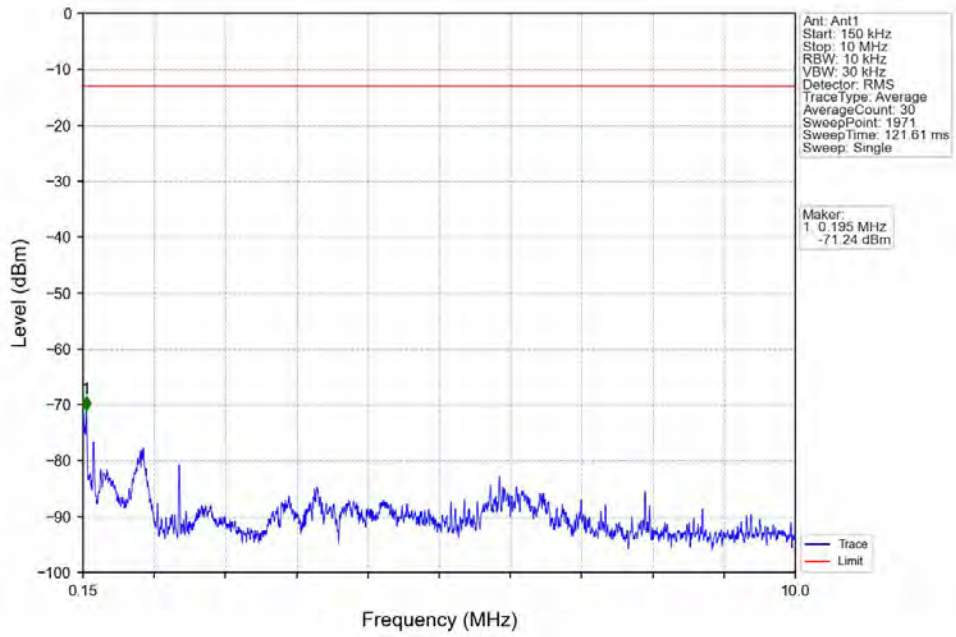
Band5_HSUPA_LCH_826.4MHz_Subtest 1_NTNV



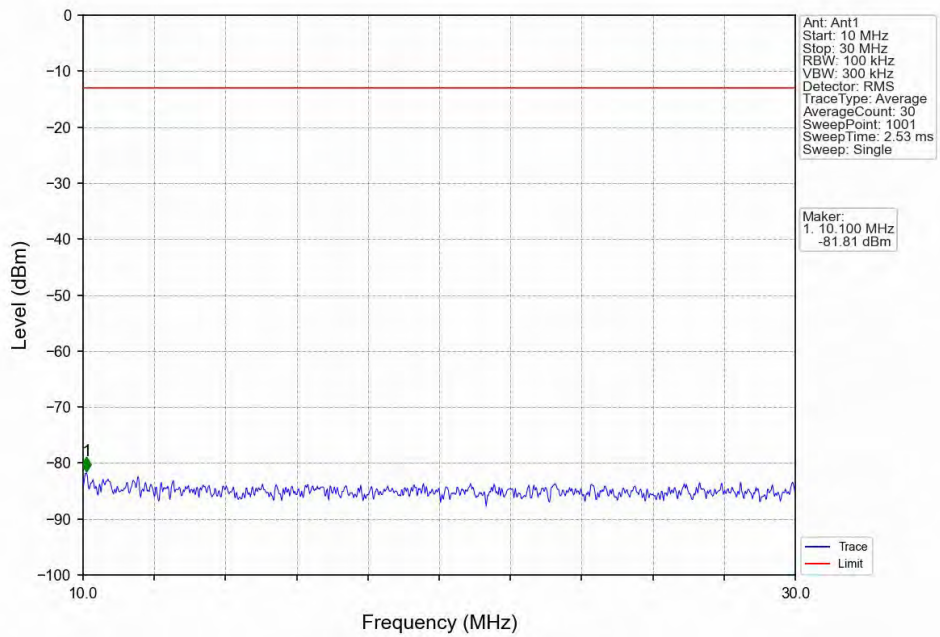
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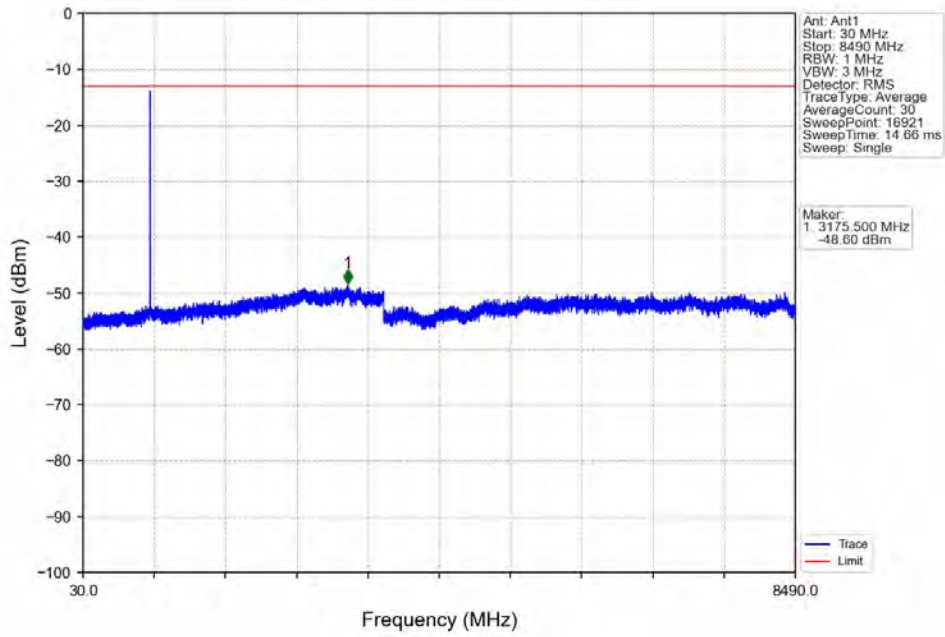
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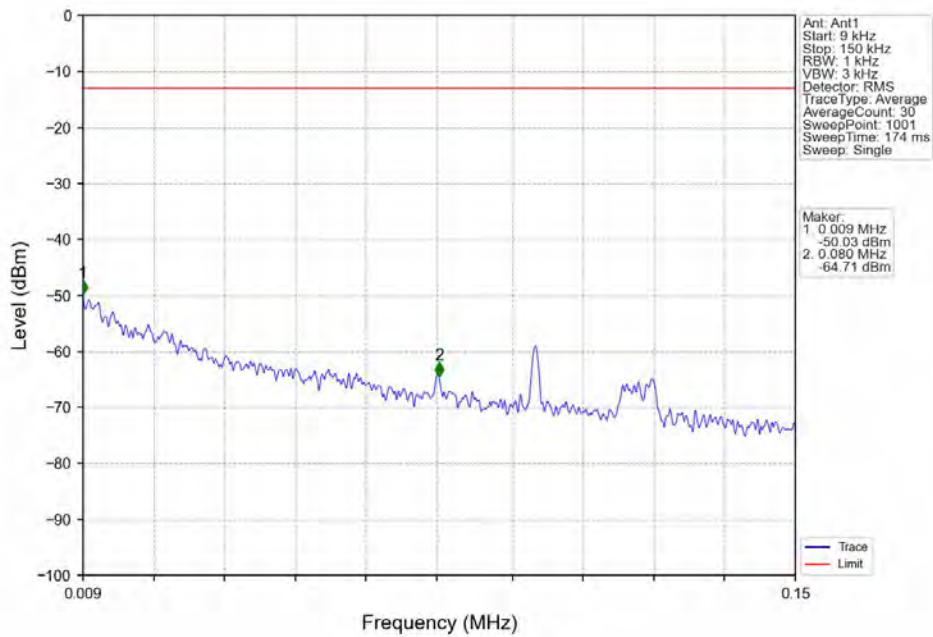
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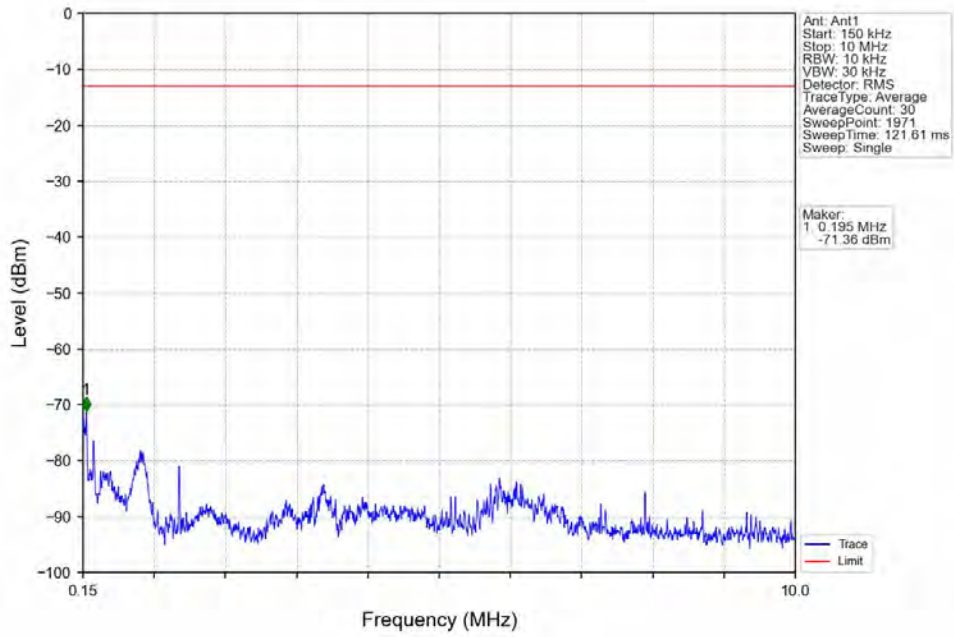
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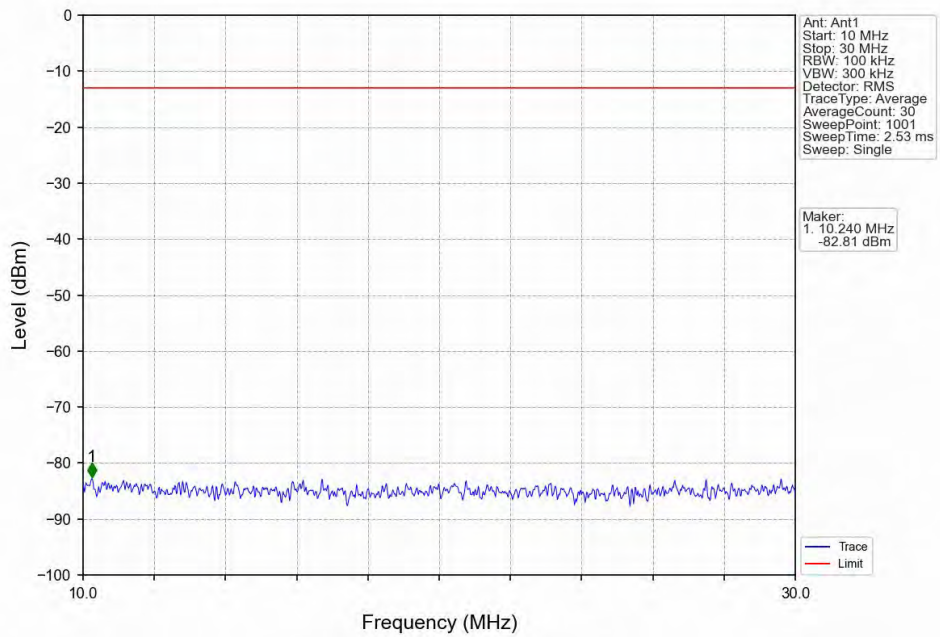
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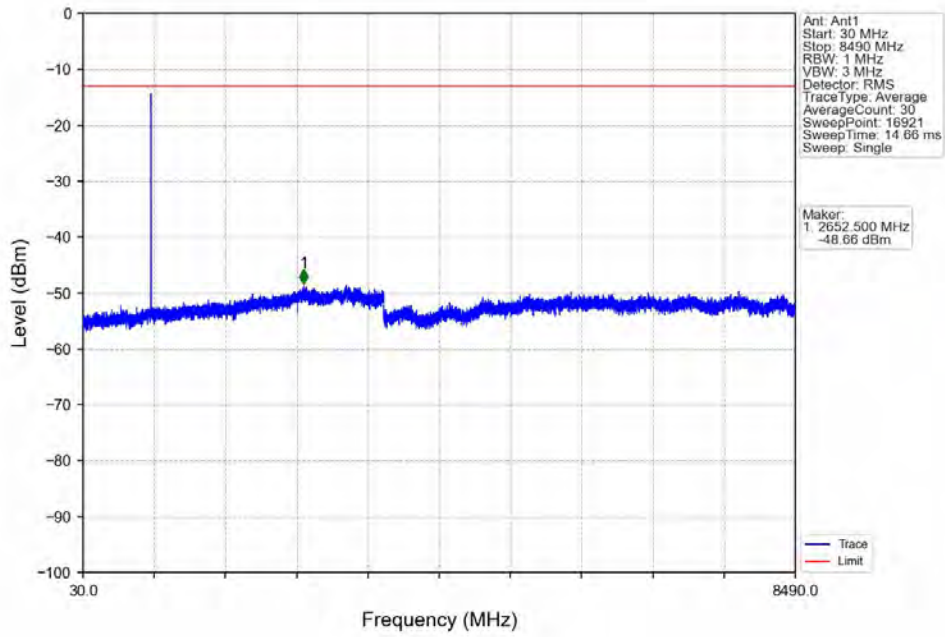
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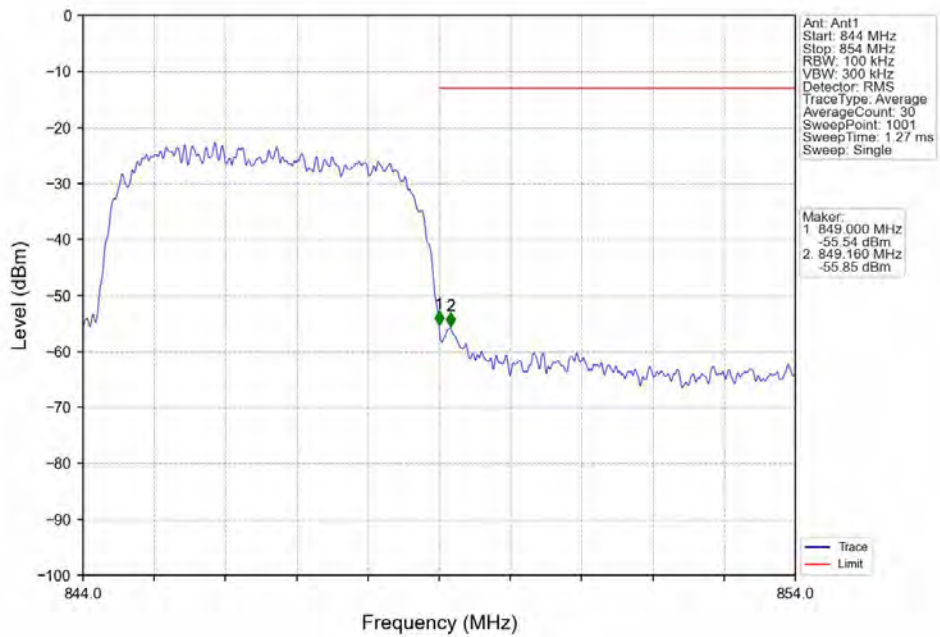
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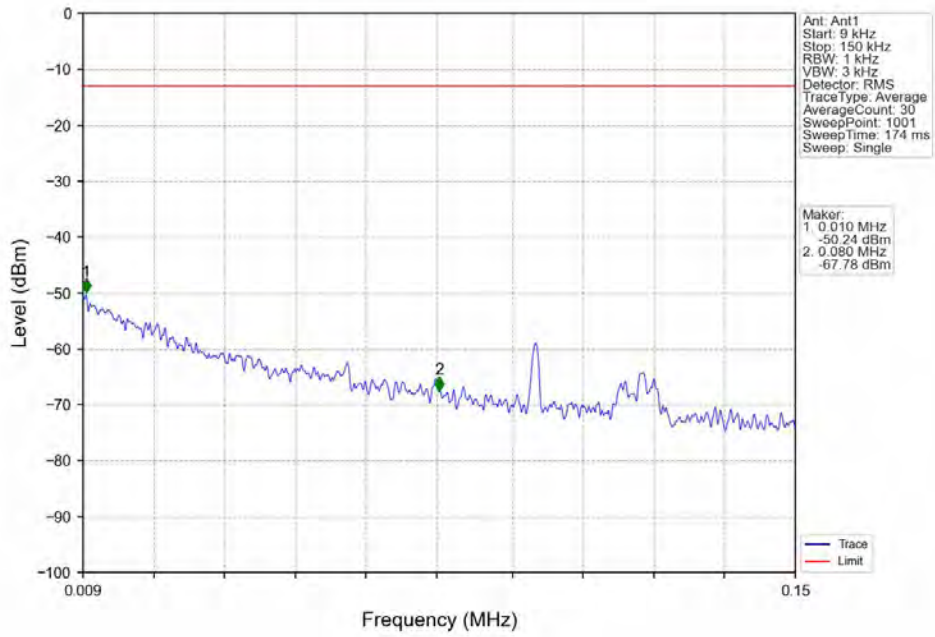
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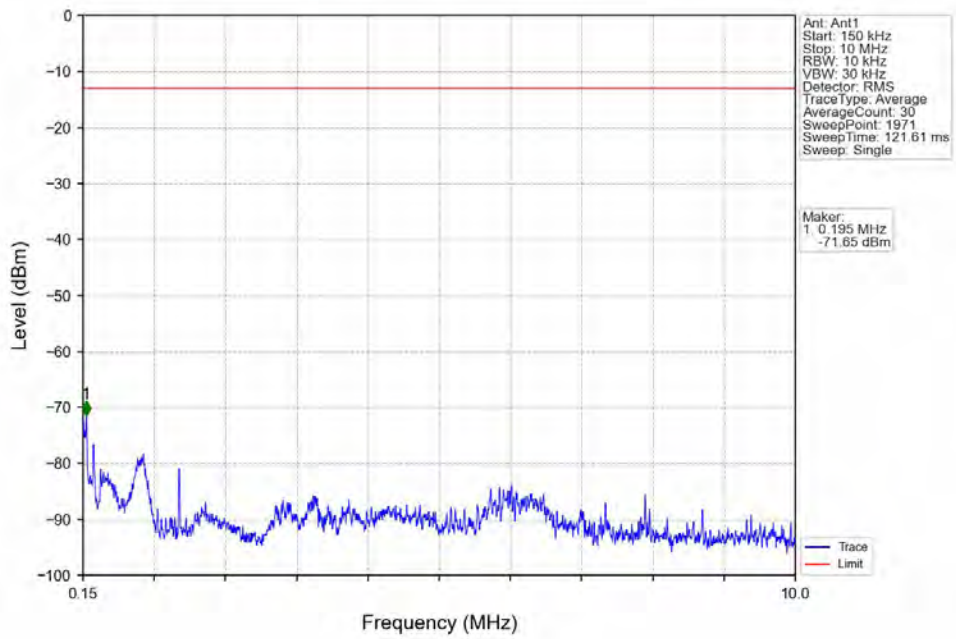
Band5_HSUPA_HCH_846.6MHz_Subtest 1_NTNV



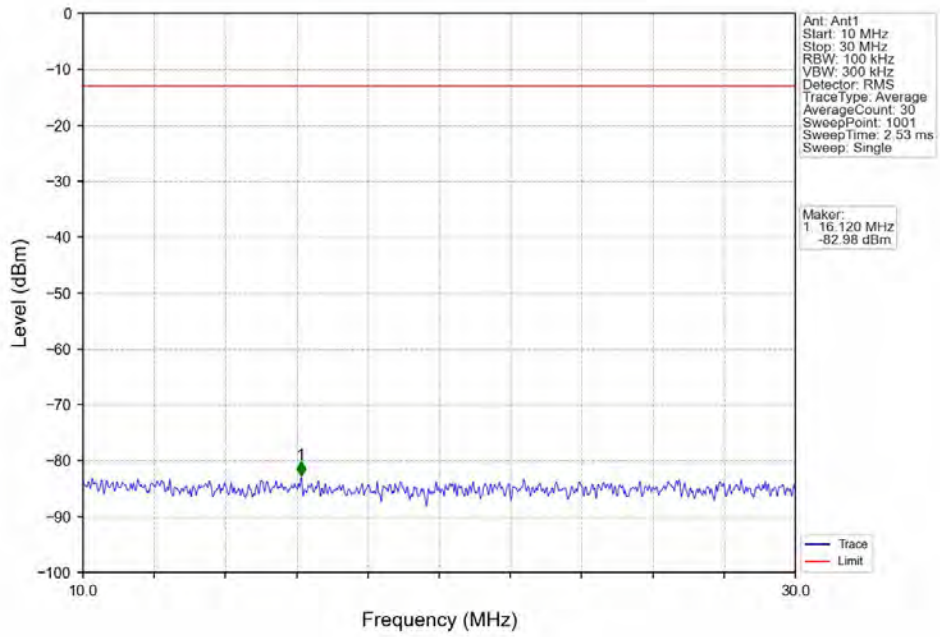
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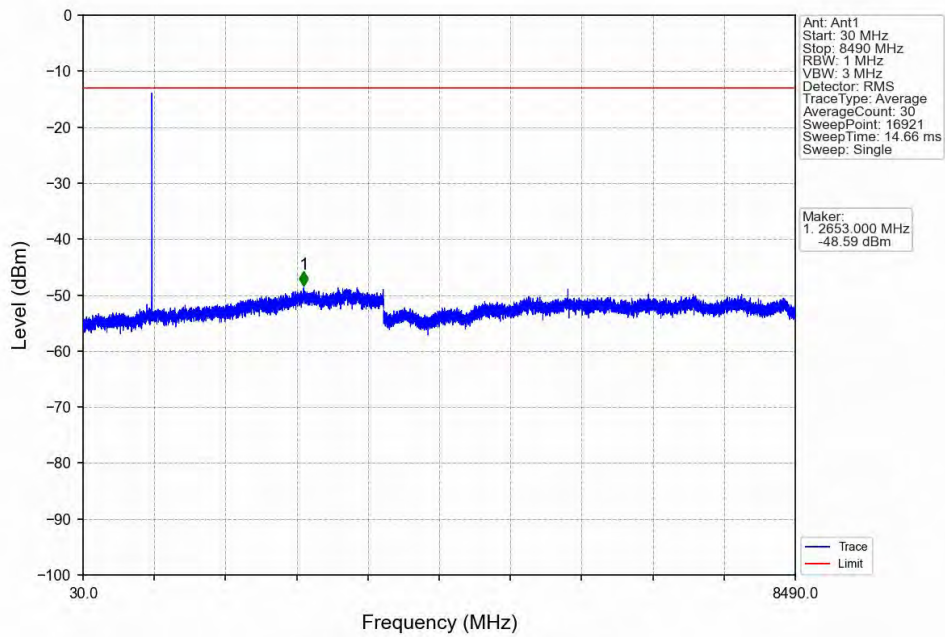
Band5_HSUPA_HCH_846.6MHz_Subtest 1_NTNV



Band5_HSUPA_HCH_846.6MHz_Subtest 1_NTNV



Band5_HSUPA_HCH_846.6MHz_Subtest 1_NTNV



7. Form731

7.1 Form731_Power

7.1.1 Test Result

Band	BW	Lower Freq	High Freq	MAX Power (W)	Value	Hz/ppm	Emission Designator	Rule Parts	MAX Power (dBm)
5	3.84	826.4	846.6	0.1726	0.0215	ppm	4M22F9W	22H	22.37

7.2 Form731_ERP

7.2.1 Test Result

Band	BW	Lower Freq	High Freq	MAX Power (W)	Value	Hz/ppm	Emission Designator	Rule Parts	MAX Power (dBm)
5	3.84	826.4	846.6	0.1052	0.0215	ppm	4M22F9W	22H	20.22