

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	RMC	12.2kbps RMC	826.4	23.03	3.50	24.38	<=38.45	Pass	
			836.6	22.96	3.50	24.31	<=38.45	Pass	
			846.6	22.91	3.50	24.26	<=38.45	Pass	
	HSDPA	Subtest 1	826.4	21.33	3.50	22.68	<=38.45	Pass	
		Subtest 2	826.4	21.23	3.50	22.58	<=38.45	Pass	
		Subtest 3	826.4	21.24	3.50	22.59	<=38.45	Pass	
		Subtest 4	826.4	21.23	3.50	22.58	<=38.45	Pass	
		Subtest 1	836.6	21.11	3.50	22.46	<=38.45	Pass	
		Subtest 2	836.6	21.11	3.50	22.46	<=38.45	Pass	
		Subtest 3	836.6	21.10	3.50	22.45	<=38.45	Pass	
		Subtest 4	836.6	21.12	3.50	22.47	<=38.45	Pass	
		Subtest 1	846.6	21.14	3.50	22.49	<=38.45	Pass	
		Subtest 2	846.6	21.14	3.50	22.49	<=38.45	Pass	
		Subtest 3	846.6	21.14	3.50	22.49	<=38.45	Pass	
		Subtest 4	846.6	21.13	3.50	22.48	<=38.45	Pass	
		HSUPA	Subtest 1	826.4	18.78	3.50	20.13	<=38.45	Pass
			Subtest 2	826.4	18.78	3.50	20.13	<=38.45	Pass
			Subtest 3	826.4	19.03	3.50	20.38	<=38.45	Pass
			Subtest 4	826.4	18.83	3.50	20.18	<=38.45	Pass
			Subtest 5	826.4	19.13	3.50	20.48	<=38.45	Pass
			Subtest 1	836.6	18.64	3.50	19.99	<=38.45	Pass
			Subtest 2	836.6	18.92	3.50	20.27	<=38.45	Pass
			Subtest 3	836.6	18.92	3.50	20.27	<=38.45	Pass
	Subtest 4		836.6	18.65	3.50	20.00	<=38.45	Pass	
	Subtest 5		836.6	18.70	3.50	20.05	<=38.45	Pass	
	Subtest 1		846.6	18.75	3.50	20.10	<=38.45	Pass	
	Subtest 2		846.6	18.69	3.50	20.04	<=38.45	Pass	
	Subtest 3		846.6	18.70	3.50	20.05	<=38.45	Pass	
	Subtest 4		846.6	18.70	3.50	20.05	<=38.45	Pass	
	Subtest 5		846.6	18.98	3.50	20.33	<=38.45	Pass	
Note1: ERP=Conducted Power+Antenna Gain-2.15									

2. Frequency Stability

2.1 Test Result

2.1.1 Band5

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	-2.189	-0.0026	-2.5 to 2.5	Pass
			3.85	-4.141	-0.0050	-2.5 to 2.5	Pass
			4.43	-3.119	-0.0038	-2.5 to 2.5	Pass
		-30	3.85	-3.648	-0.0044	-2.5 to 2.5	Pass
		-20	3.85	-3.033	-0.0037	-2.5 to 2.5	Pass
		-10	3.85	-3.555	-0.0043	-2.5 to 2.5	Pass
		0	3.85	-2.911	-0.0035	-2.5 to 2.5	Pass
		10	3.85	-3.004	-0.0036	-2.5 to 2.5	Pass
		30	3.85	-3.097	-0.0037	-2.5 to 2.5	Pass
		40	3.85	-3.290	-0.0040	-2.5 to 2.5	Pass
		50	3.85	-2.511	-0.0030	-2.5 to 2.5	Pass
	836.6	20	3.27	-2.632	-0.0031	-2.5 to 2.5	Pass
			3.85	-3.011	-0.0036	-2.5 to 2.5	Pass
			4.43	-3.748	-0.0045	-2.5 to 2.5	Pass
		-30	3.85	-2.360	-0.0028	-2.5 to 2.5	Pass
		-20	3.85	-2.596	-0.0031	-2.5 to 2.5	Pass
		-10	3.85	-2.761	-0.0033	-2.5 to 2.5	Pass
		0	3.85	-2.089	-0.0025	-2.5 to 2.5	Pass
		10	3.85	-3.383	-0.0040	-2.5 to 2.5	Pass
		30	3.85	-2.689	-0.0032	-2.5 to 2.5	Pass
		40	3.85	-2.575	-0.0031	-2.5 to 2.5	Pass
		50	3.85	-3.140	-0.0038	-2.5 to 2.5	Pass
	846.6	20	3.27	-2.947	-0.0035	-2.5 to 2.5	Pass
			3.85	-2.639	-0.0031	-2.5 to 2.5	Pass
			4.43	-2.367	-0.0028	-2.5 to 2.5	Pass
		-30	3.85	-2.096	-0.0025	-2.5 to 2.5	Pass
		-20	3.85	-2.453	-0.0029	-2.5 to 2.5	Pass
		-10	3.85	-2.246	-0.0027	-2.5 to 2.5	Pass
		0	3.85	-2.789	-0.0033	-2.5 to 2.5	Pass
		10	3.85	-2.253	-0.0027	-2.5 to 2.5	Pass
		30	3.85	-3.068	-0.0036	-2.5 to 2.5	Pass
		40	3.85	-2.353	-0.0028	-2.5 to 2.5	Pass
		50	3.85	-2.897	-0.0034	-2.5 to 2.5	Pass
HSDPA	826.4	20	3.27	-2.067	-0.0025	-2.5 to 2.5	Pass
			3.85	-2.146	-0.0026	-2.5 to 2.5	Pass
			4.43	-1.788	-0.0022	-2.5 to 2.5	Pass
		-30	3.85	-2.253	-0.0027	-2.5 to 2.5	Pass
		-20	3.85	-2.568	-0.0031	-2.5 to 2.5	Pass
		-10	3.85	-1.717	-0.0021	-2.5 to 2.5	Pass
		0	3.85	-2.596	-0.0031	-2.5 to 2.5	Pass
		10	3.85	-1.953	-0.0024	-2.5 to 2.5	Pass
		30	3.85	-2.131	-0.0026	-2.5 to 2.5	Pass
		40	3.85	-1.996	-0.0024	-2.5 to 2.5	Pass
		50	3.85	-2.325	-0.0028	-2.5 to 2.5	Pass
	836.6	20	3.27	-1.760	-0.0021	-2.5 to 2.5	Pass
			3.85	-2.031	-0.0024	-2.5 to 2.5	Pass
			4.43	-1.688	-0.0020	-2.5 to 2.5	Pass
		-30	3.85	-2.761	-0.0033	-2.5 to 2.5	Pass
		-20	3.85	-1.967	-0.0024	-2.5 to 2.5	Pass
		-10	3.85	-1.438	-0.0017	-2.5 to 2.5	Pass

		0	3.85	-2.189	-0.0026	-2.5 to 2.5	Pass
		10	3.85	-1.745	-0.0021	-2.5 to 2.5	Pass
		30	3.85	-1.924	-0.0023	-2.5 to 2.5	Pass
		40	3.85	-2.203	-0.0026	-2.5 to 2.5	Pass
		50	3.85	-2.067	-0.0025	-2.5 to 2.5	Pass
	846.6	20	3.27	-3.219	-0.0038	-2.5 to 2.5	Pass
			3.85	-2.811	-0.0033	-2.5 to 2.5	Pass
			4.43	-3.791	-0.0045	-2.5 to 2.5	Pass
		-30	3.85	-3.741	-0.0044	-2.5 to 2.5	Pass
		-20	3.85	-3.176	-0.0038	-2.5 to 2.5	Pass
		-10	3.85	-2.968	-0.0035	-2.5 to 2.5	Pass
		0	3.85	-2.990	-0.0035	-2.5 to 2.5	Pass
		10	3.85	-2.661	-0.0031	-2.5 to 2.5	Pass
		30	3.85	-2.918	-0.0034	-2.5 to 2.5	Pass
		40	3.85	-2.518	-0.0030	-2.5 to 2.5	Pass
		50	3.85	-3.276	-0.0039	-2.5 to 2.5	Pass
HSUPA	826.4	20	3.27	-2.861	-0.0035	-2.5 to 2.5	Pass
			3.85	-3.633	-0.0044	-2.5 to 2.5	Pass
			4.43	-3.519	-0.0043	-2.5 to 2.5	Pass
		-30	3.85	-2.661	-0.0032	-2.5 to 2.5	Pass
		-20	3.85	-2.031	-0.0025	-2.5 to 2.5	Pass
		-10	3.85	-2.625	-0.0032	-2.5 to 2.5	Pass
		0	3.85	-2.882	-0.0035	-2.5 to 2.5	Pass
		10	3.85	-2.811	-0.0034	-2.5 to 2.5	Pass
		30	3.85	-2.875	-0.0035	-2.5 to 2.5	Pass
		40	3.85	-2.754	-0.0033	-2.5 to 2.5	Pass
		50	3.85	-2.360	-0.0029	-2.5 to 2.5	Pass
	836.6	20	3.27	-2.711	-0.0032	-2.5 to 2.5	Pass
			3.85	-2.153	-0.0026	-2.5 to 2.5	Pass
			4.43	-2.432	-0.0029	-2.5 to 2.5	Pass
		-30	3.85	-2.789	-0.0033	-2.5 to 2.5	Pass
		-20	3.85	-2.418	-0.0029	-2.5 to 2.5	Pass
		-10	3.85	-2.382	-0.0028	-2.5 to 2.5	Pass
		0	3.85	-2.539	-0.0030	-2.5 to 2.5	Pass
		10	3.85	-2.718	-0.0032	-2.5 to 2.5	Pass
		30	3.85	-2.396	-0.0029	-2.5 to 2.5	Pass
		40	3.85	-3.369	-0.0040	-2.5 to 2.5	Pass
		50	3.85	-3.061	-0.0037	-2.5 to 2.5	Pass
	846.6	20	3.27	-2.682	-0.0032	-2.5 to 2.5	Pass
			3.85	-1.945	-0.0023	-2.5 to 2.5	Pass
			4.43	-2.453	-0.0029	-2.5 to 2.5	Pass
		-30	3.85	-2.339	-0.0028	-2.5 to 2.5	Pass
		-20	3.85	-2.346	-0.0028	-2.5 to 2.5	Pass
		-10	3.85	-2.267	-0.0027	-2.5 to 2.5	Pass
		0	3.85	-2.682	-0.0032	-2.5 to 2.5	Pass
		10	3.85	-2.854	-0.0034	-2.5 to 2.5	Pass
		30	3.85	-1.867	-0.0022	-2.5 to 2.5	Pass
		40	3.85	-2.732	-0.0032	-2.5 to 2.5	Pass
		50	3.85	-1.874	-0.0022	-2.5 to 2.5	Pass

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	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

3.2 Test Graph

3.2.1 Band5

Band5_RMC_MCH_836.6MHz_12.2kbps_RMC_NTNV

WCDMA UE TX Measurement - V3.7.22 - Base V 3.7.172

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

TX Measurement

1st Measured Slot No 0

Statistic Count 20 / 20

Statistics @ Pre. Slot 0	Current	Average	Maximum	StdDev.
Power [dBm]	22.87	22.88	22.89	0.01
Power Steps [dB]	NCAP	NCAP	NCAP	NCAP
EVM RMS [%]	NCAP	NCAP	NCAP	NCAP
EVM Peak [%]	NCAP	NCAP	NCAP	NCAP
Magnitude Error RMS [%]	NCAP	NCAP	NCAP	NCAP
Magnitude Error Peak [%]	NCAP	NCAP	NCAP	NCAP
Phase Error RMS [°]	NCAP	NCAP	NCAP	NCAP
Phase Error Peak [°]	NCAP	NCAP	NCAP	NCAP
IQ Origin Offset [dB]	NCAP	NCAP	NCAP	NCAP
IQ Imbalance [dB]	NCAP	NCAP	NCAP	NCAP
CF Error [Hz]	NCAP	NCAP	NCAP	NCAP
Trans. Time Error [Chip]	NCAP	NCAP	NCAP	NCAP
Phase Disc. [°]	NCAP	NCAP	NCAP	NCAP
OBW [MHz]	NCAP	NCAP	NCAP	NCAP

HSDPA

CPC

Circuit Switched:

HSUPA

CM

ON

Packet Switched:

ON

Power: ---

Sync: ---

Go To Local

Show Remote Screen

WCDMA

Multi Evaluation

RDY

RF Settings

Trigger

Display

Signaling Parameter

WCDMA 1 Signaling

ON

Band5_HSDPA_MCH_836.6MHz_Subtest 1_NTNV

WCDMA UE TX Measurement - V3.7.22 - Base V 3.7.172

Multi Evaluation

TPC Measurement

PRACH

DPCCH Open Loop Power

Out-of-Sync Handling

UL Frequency: 836.600000 MHz Ref. Level: 34.00 dBm Connector: RF1COM Meas. Period: Full Slot

TX Measurement

1st Measured Slot No 0

Statistic Count 20 / 20

Statistics @ Pre. Slot 0	Current	Average	Maximum	StdDev.
Power [dBm]	21.01	21.04	21.07	0.02
Power Steps [dB]	NCAP	NCAP	NCAP	NCAP
EVM RMS [%]	NCAP	NCAP	NCAP	NCAP
EVM Peak [%]	NCAP	NCAP	NCAP	NCAP
Magnitude Error RMS [%]	NCAP	NCAP	NCAP	NCAP
Magnitude Error Peak [%]	NCAP	NCAP	NCAP	NCAP
Phase Error RMS [°]	NCAP	NCAP	NCAP	NCAP
Phase Error Peak [°]	NCAP	NCAP	NCAP	NCAP
IQ Origin Offset [dB]	NCAP	NCAP	NCAP	NCAP
IQ Imbalance [dB]	NCAP	NCAP	NCAP	NCAP
CF Error [Hz]	NCAP	NCAP	NCAP	NCAP
Trans. Time Error [Chip]	NCAP	NCAP	NCAP	NCAP
Phase Disc. [°]	NCAP	NCAP	NCAP	NCAP
OBW [MHz]	NCAP	NCAP	NCAP	NCAP

HSDPA+

CPC

Circuit Switched:

HSUPA

CM

Registered

Packet Switched:

Connection Established

Power: 24.4

Sync: 24.4

Go To Local

Show Remote Screen

WCDMA

Multi Evaluation

RDY

RF Settings

Trigger

Display

Signaling Parameter

WCDMA 1 Signaling

ON

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Band5 HSUPA MCH 836.6MHz Subtest 1 NTV

WCDMA UE TX Measurement - V3.7.22 - Base V 3.7.172
WCDMA

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

Multi Evaluation

UL Frequency: 836.6000000 MHz Ref. Level: 34.00 dBm Connector: RF1COM Meas. Period: Full Slot

TX Measurement

1st Measured Slot No 0
Statistic Count 20 / 20

Statistics @ Pre. Slot 0	Current	Average	Maximum	StdDev.
Power [dBm]	21.35	18.84	21.37	2.45
Power Steps [dB]	NCAP	NCAP	NCAP	NCAP
EVM RMS [%]	NCAP	NCAP	NCAP	NCAP
EVM Peak [%]	NCAP	NCAP	NCAP	NCAP
Magnitude Error RMS [%]	NCAP	NCAP	NCAP	NCAP
Magnitude Error Peak [%]	NCAP	NCAP	NCAP	NCAP
Phase Error RMS [°]	NCAP	NCAP	NCAP	NCAP
Phase Error Peak [°]	NCAP	NCAP	NCAP	NCAP
IQ Origin Offset [dB]	NCAP	NCAP	NCAP	NCAP
IQ Imbalance [dB]	NCAP	NCAP	NCAP	NCAP
CF Error [Hz]	NCAP	NCAP	NCAP	NCAP
Trans. Time Error [Chip]	NCAP	NCAP	NCAP	NCAP
Phase Disc. [°]	NCAP			
OBW [MHz]	NCAP	NCAP	NCAP	

HSDPA+ ☒ Circuit Switched:
HSUPA ☐ CM Registered

Packet Switched:
 Connection Established

Power: ☒
 Sync: ☒

WCDMA 1 Signaling
ON

Go To Local
Show Remote Screen

4. 99% & 26dB Bandwidth

4.1 Test Result

4.1.1 Band5_OBW

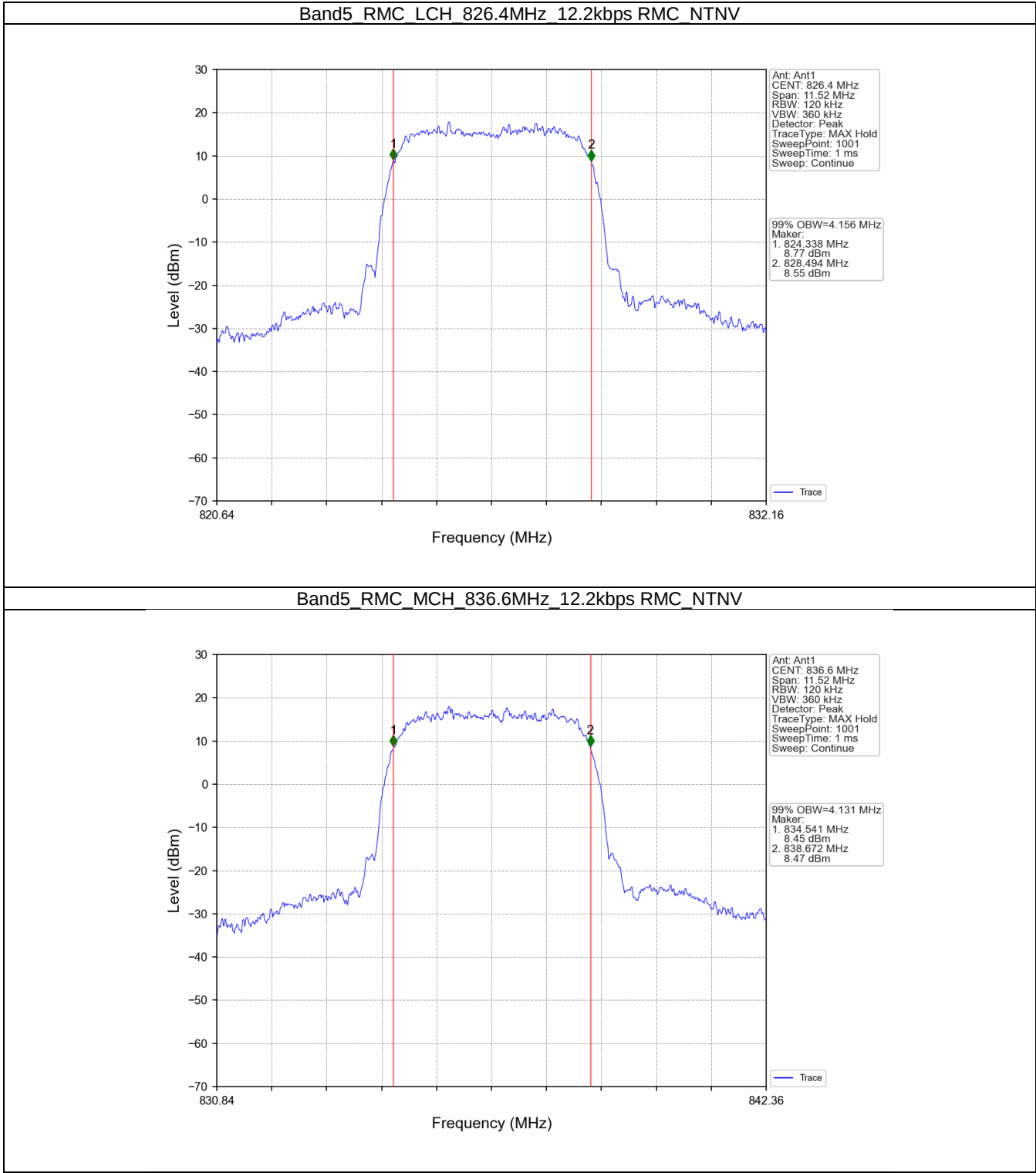
Band: 5						
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	826.4	4.156	/	Pass
			836.6	4.131	/	Pass
			846.6	4.136	/	Pass
	HSDPA	Subtest 1	826.4	4.273	/	Pass
			836.6	4.294	/	Pass
			846.6	4.219	/	Pass
	HSUPA	Subtest 1	826.4	4.291	/	Pass
			836.6	4.231	/	Pass
			846.6	4.204	/	Pass

4.1.2 Band5_XDB

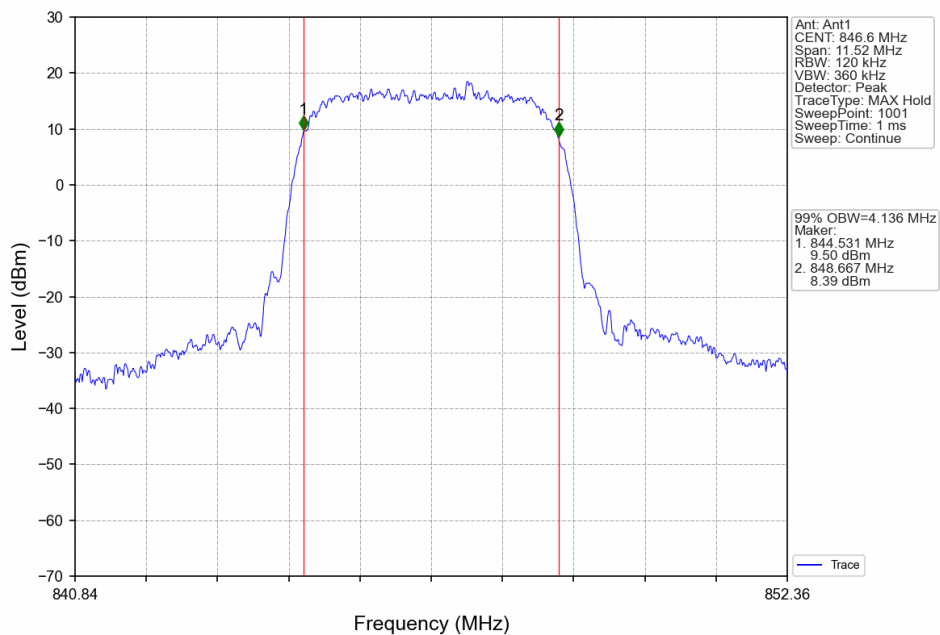
Band: 5						
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	826.4	4.731	/	Pass
			836.6	4.727	/	Pass
			846.6	4.699	/	Pass
	HSDPA	Subtest 1	826.4	6.441	/	Pass
			836.6	6.740	/	Pass
			846.6	6.747	/	Pass
	HSUPA	Subtest 1	826.4	6.262	/	Pass
			836.6	6.600	/	Pass
			846.6	6.117	/	Pass

4.2 Test Graph

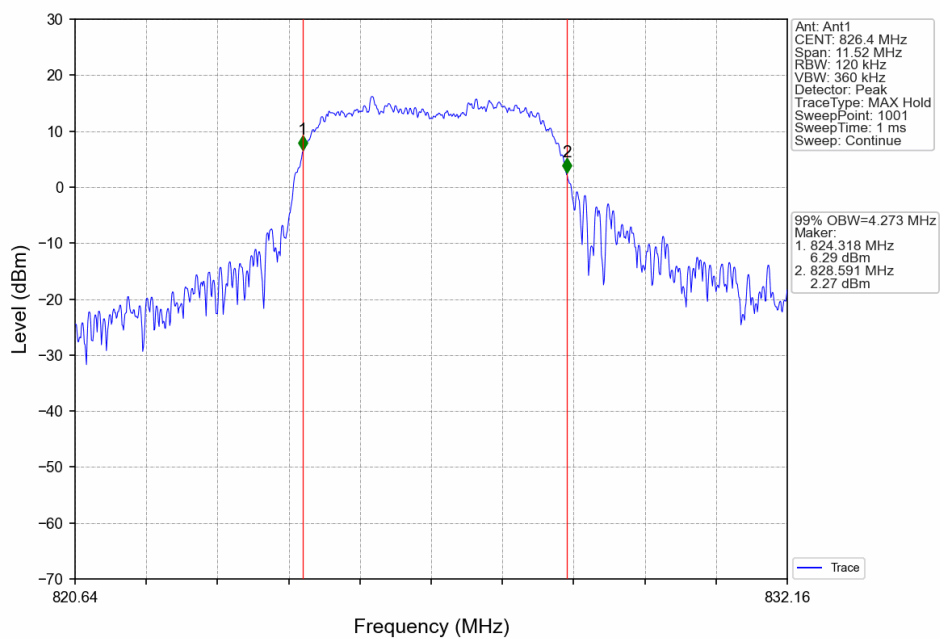
4.2.1 Band5_OBW



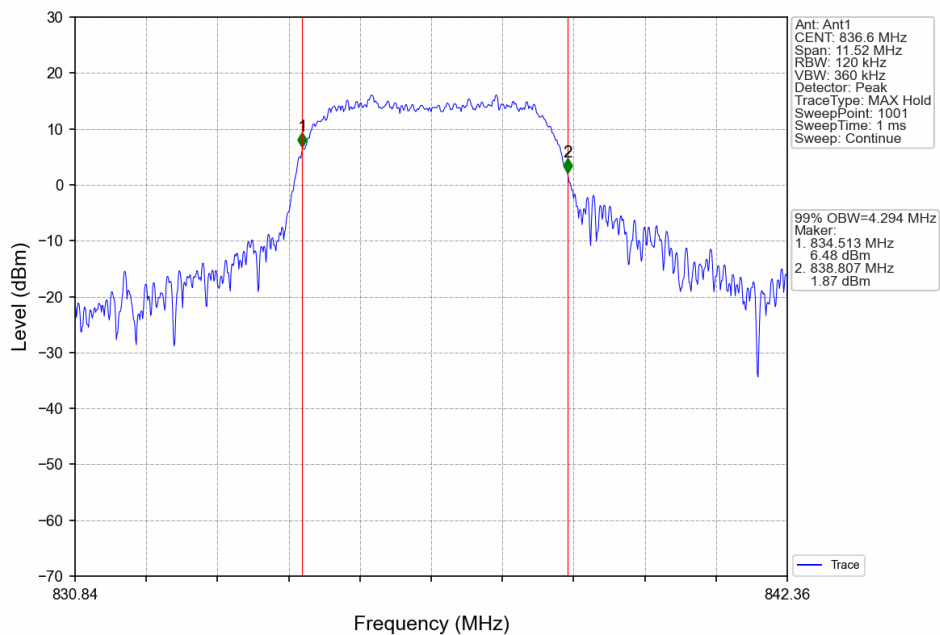
Band5_RMC_HCH_846.6MHz_12.2kbps_RMC_NTNV



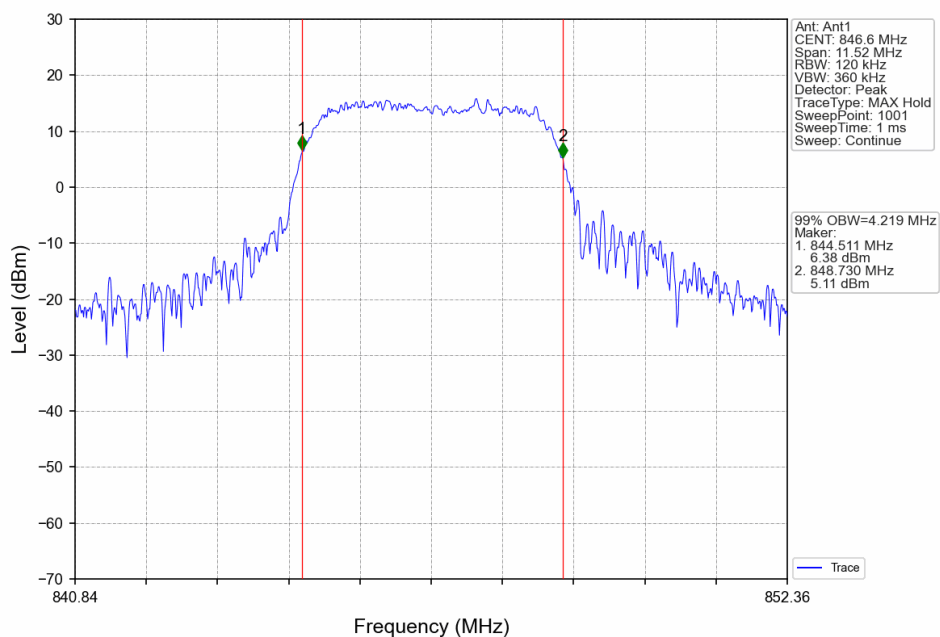
Band5_HSDPA_LCH_826.4MHz_Subtest 1_NTNV



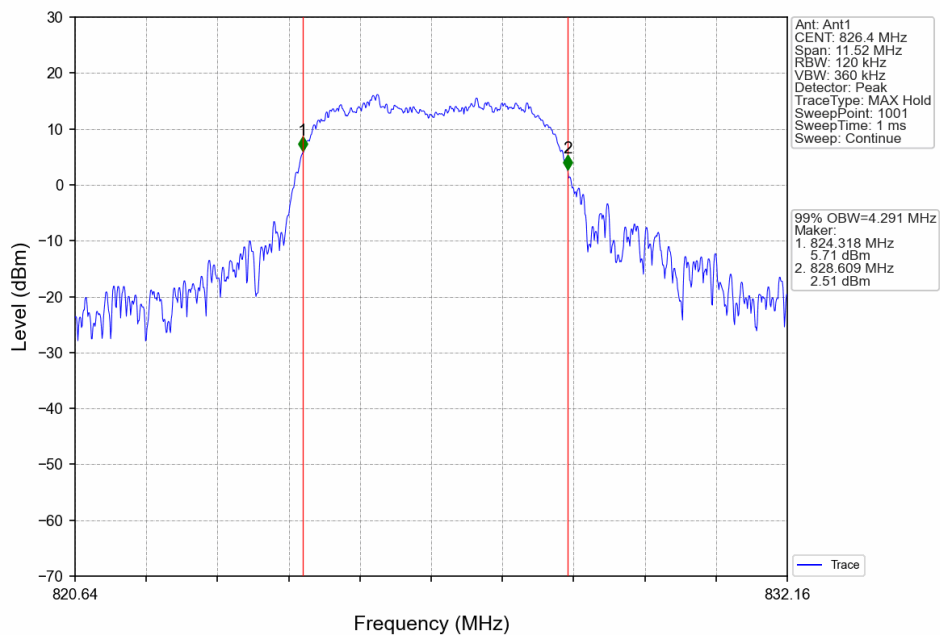
Band5 HSDPA MCH 836.6MHz Subtest 1 NTN



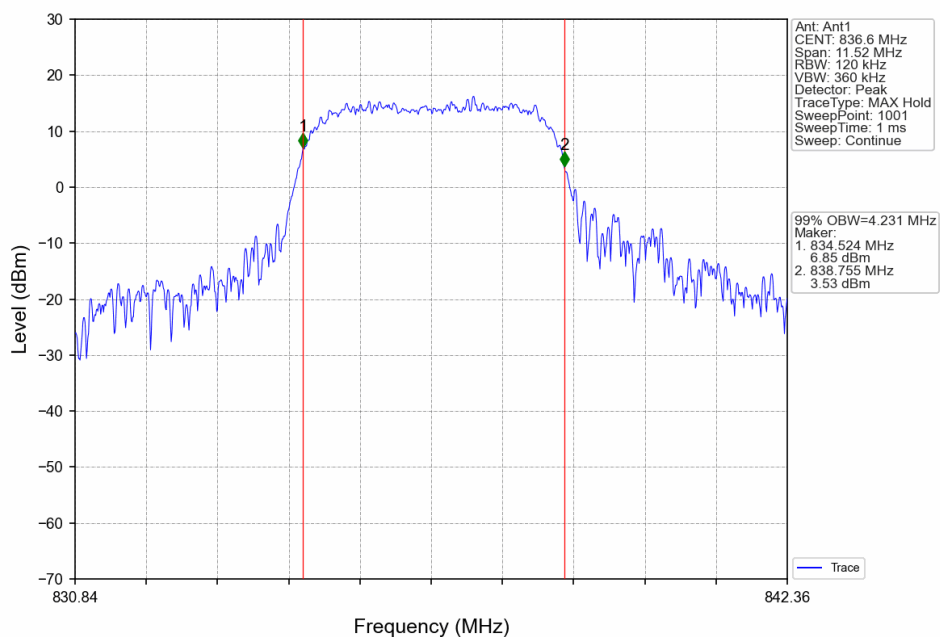
Band5 HSDPA HCH 846.6MHz Subtest 1 NTN

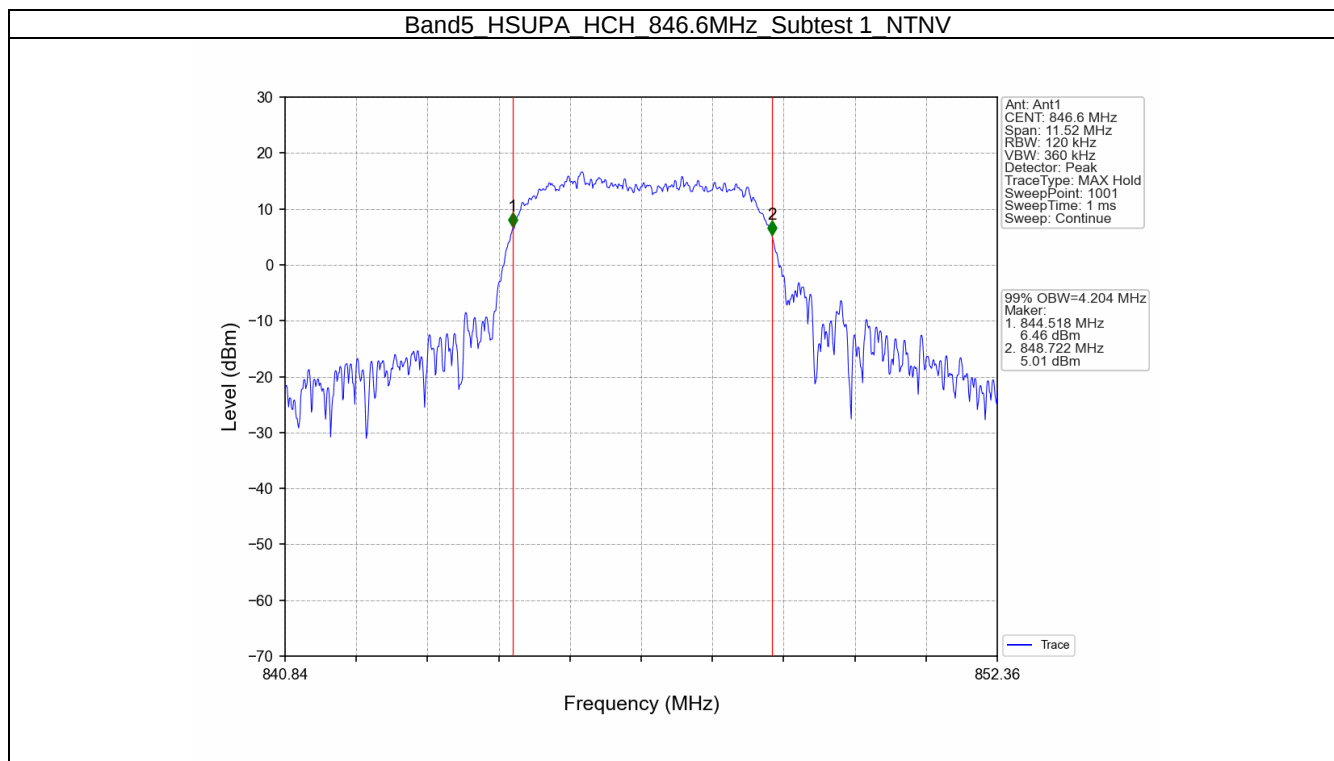


Band5 HSUPA LCH 826.4MHz Subtest 1 NTN

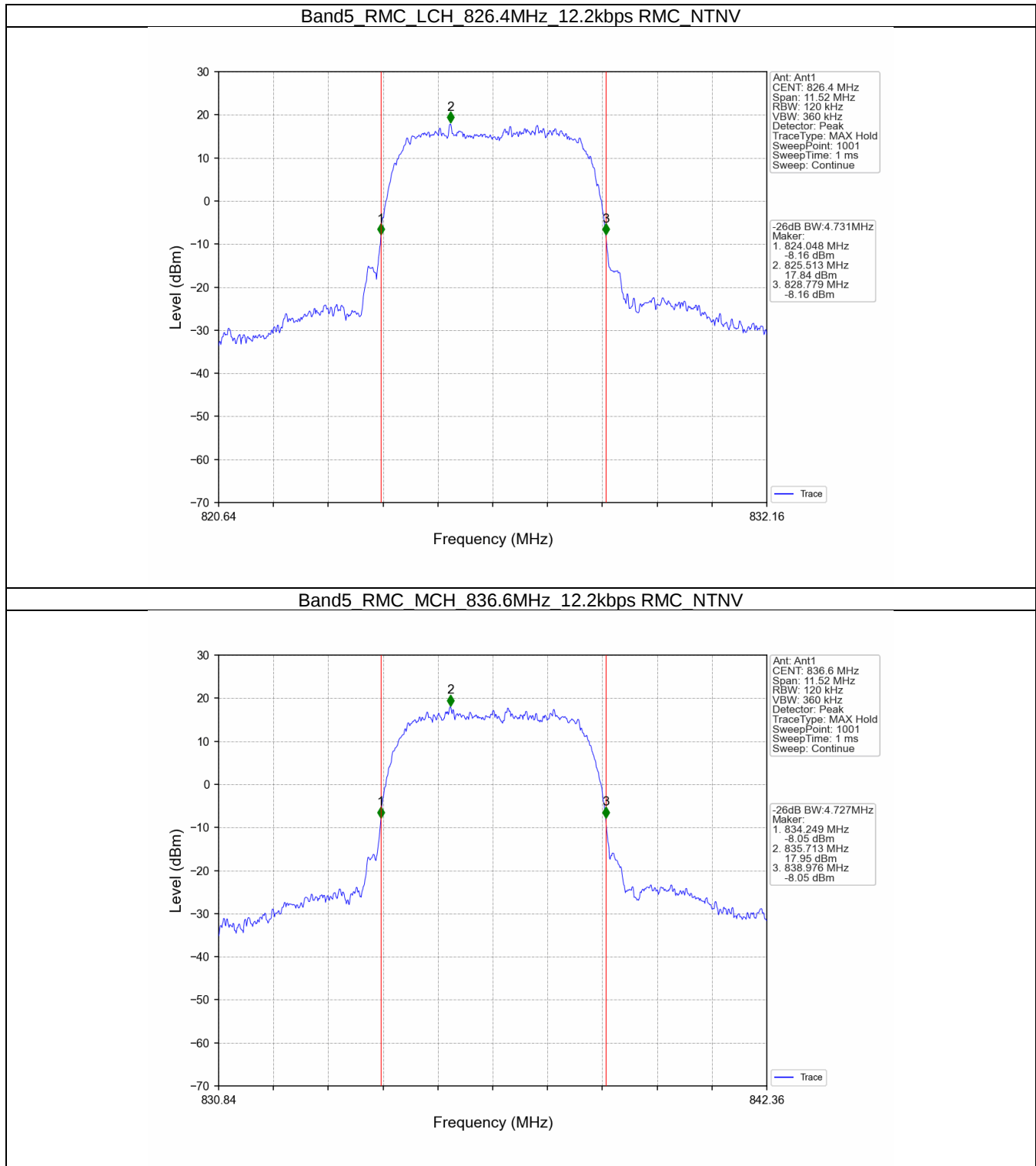


Band5 HSUPA MCH 836.6MHz Subtest 1 NTN

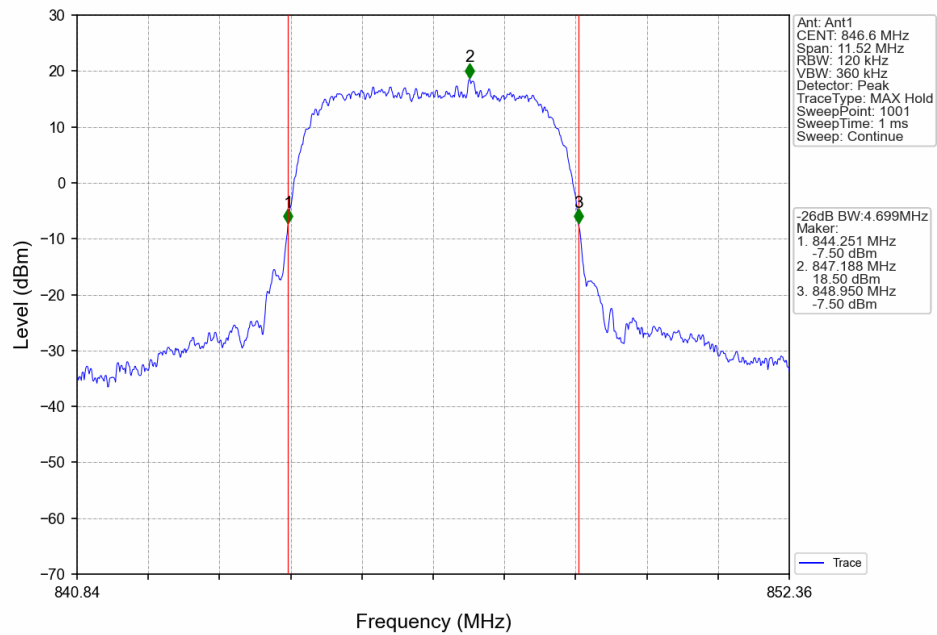




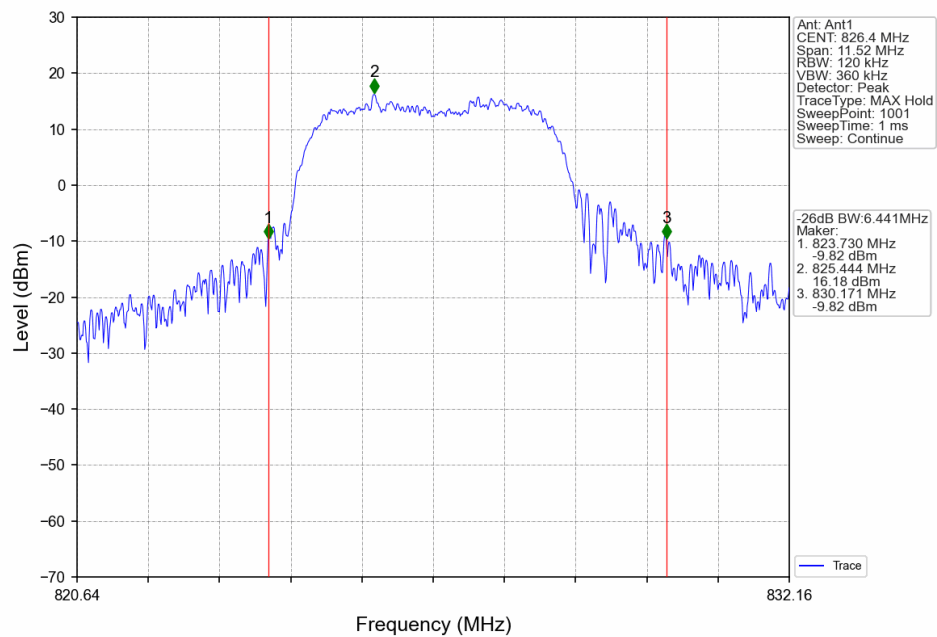
4.2.2 Band5_XDB



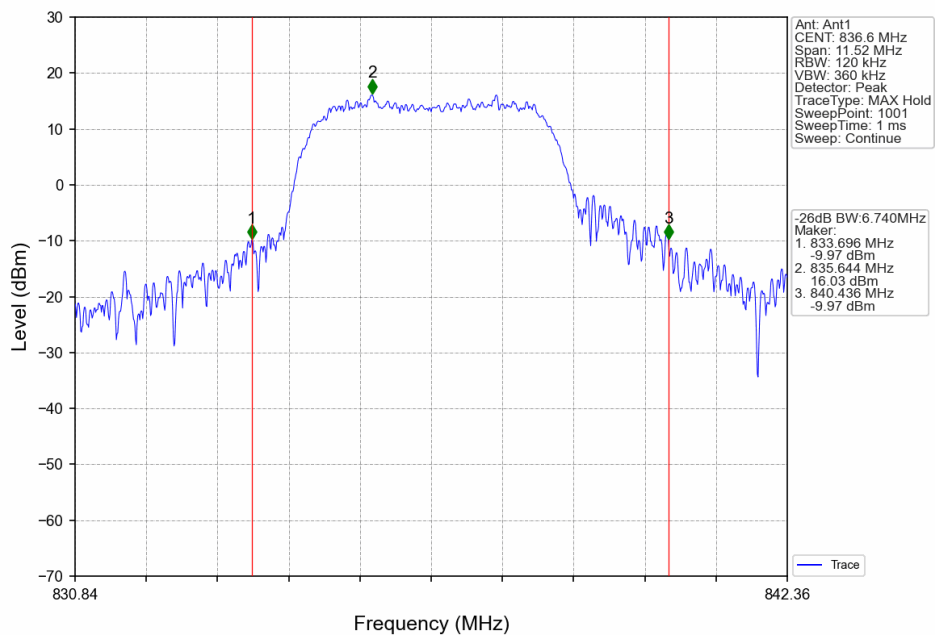
Band5_RMC_HCH_846.6MHz_12.2kbps_RMC_NTNV



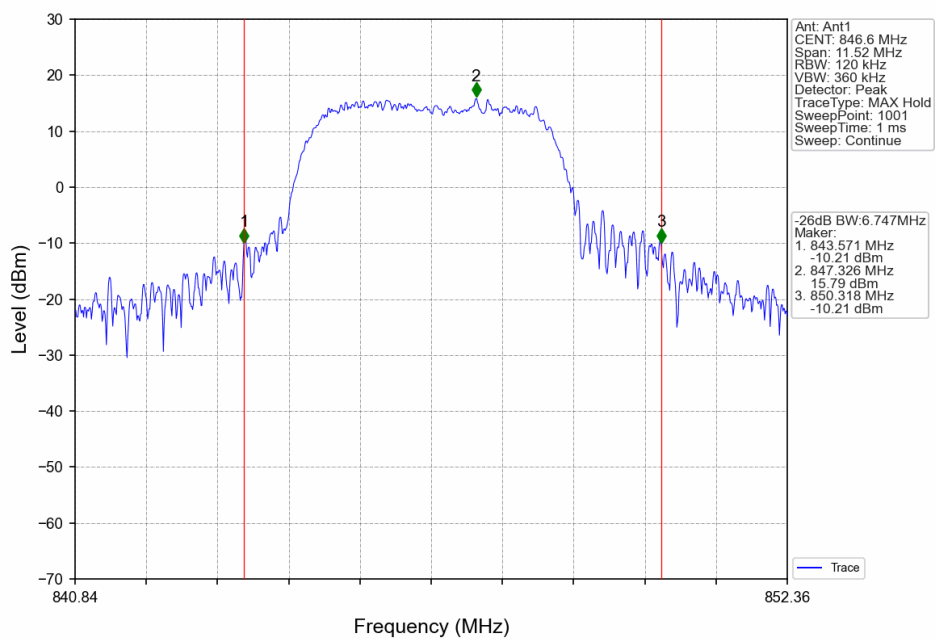
Band5_HSDPA_LCH_826.4MHz_Subtest 1_NTNV



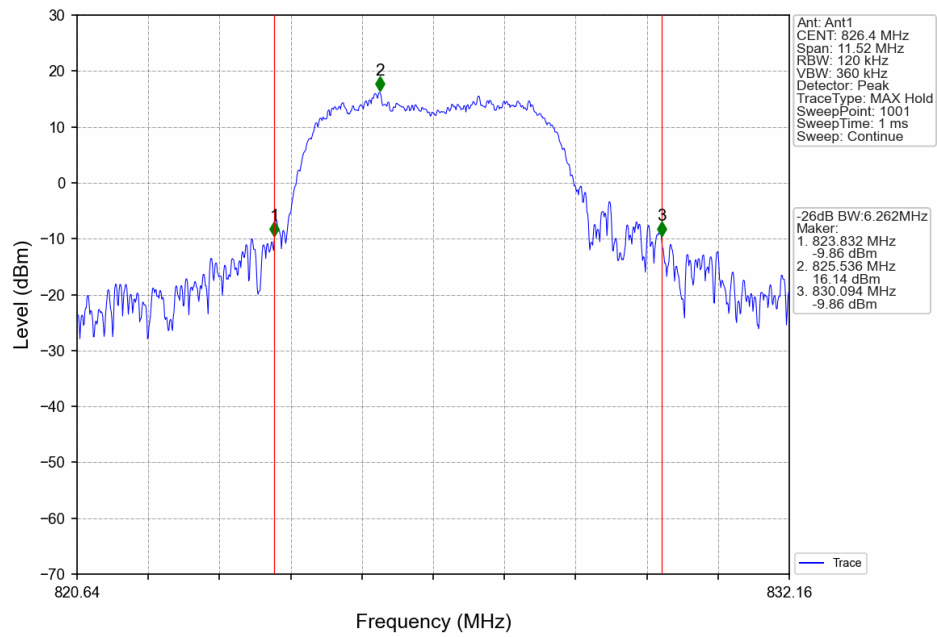
Band5 HSDPA MCH 836.6MHz Subtest 1 NTNV



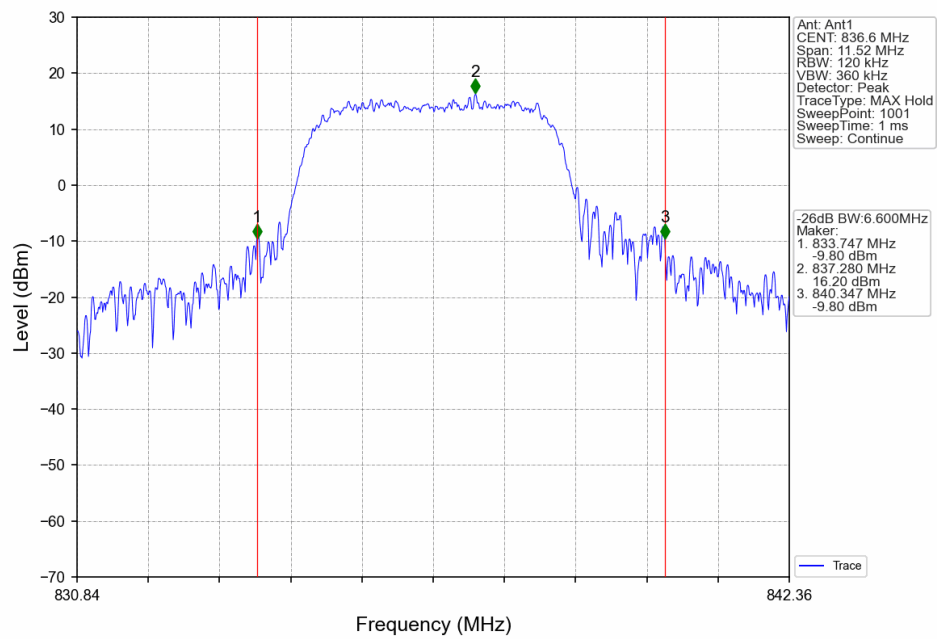
Band5 HSDPA HCH 846.6MHz Subtest 1 NTNV

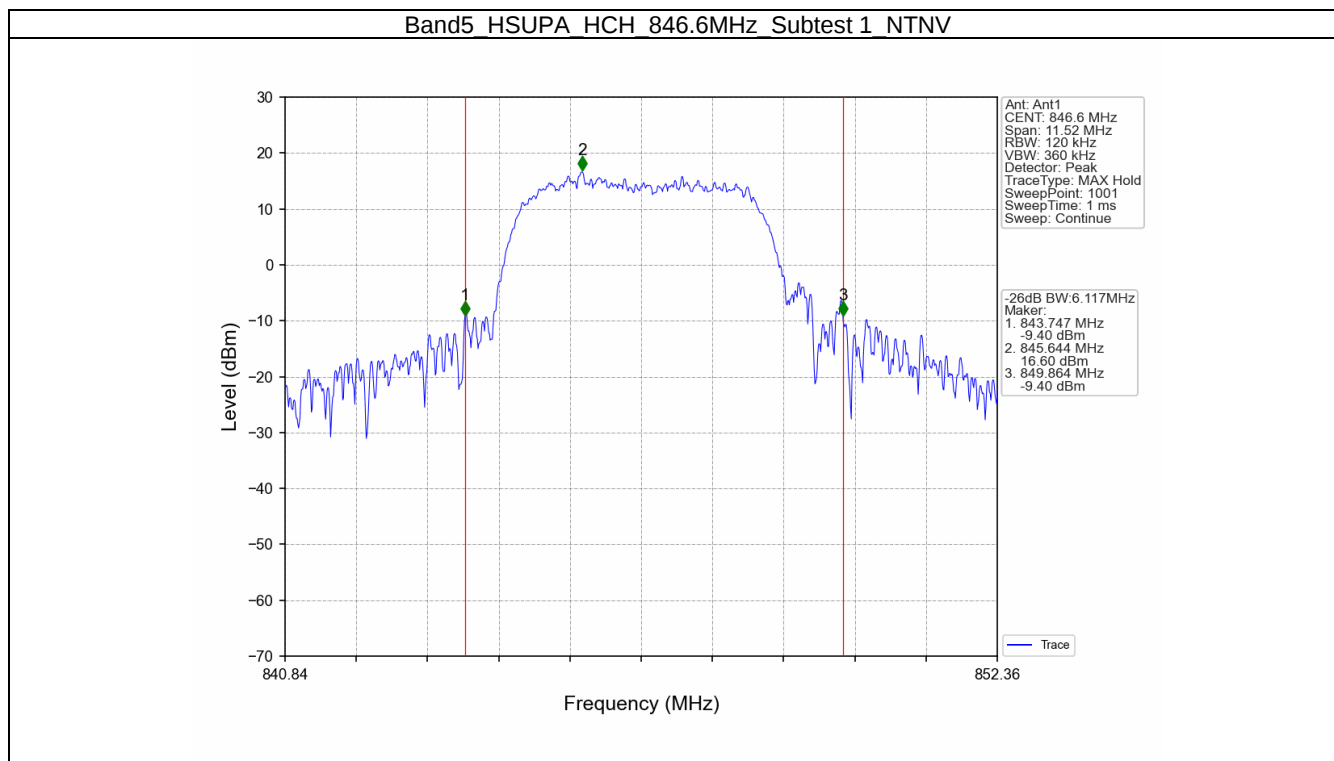


Band5_HSUPA_LCH_826.4MHz_Subtest 1_NTNV



Band5_HSUPA_MCH_836.6MHz_Subtest 1_NTNV





5. Peak-Average Ratio

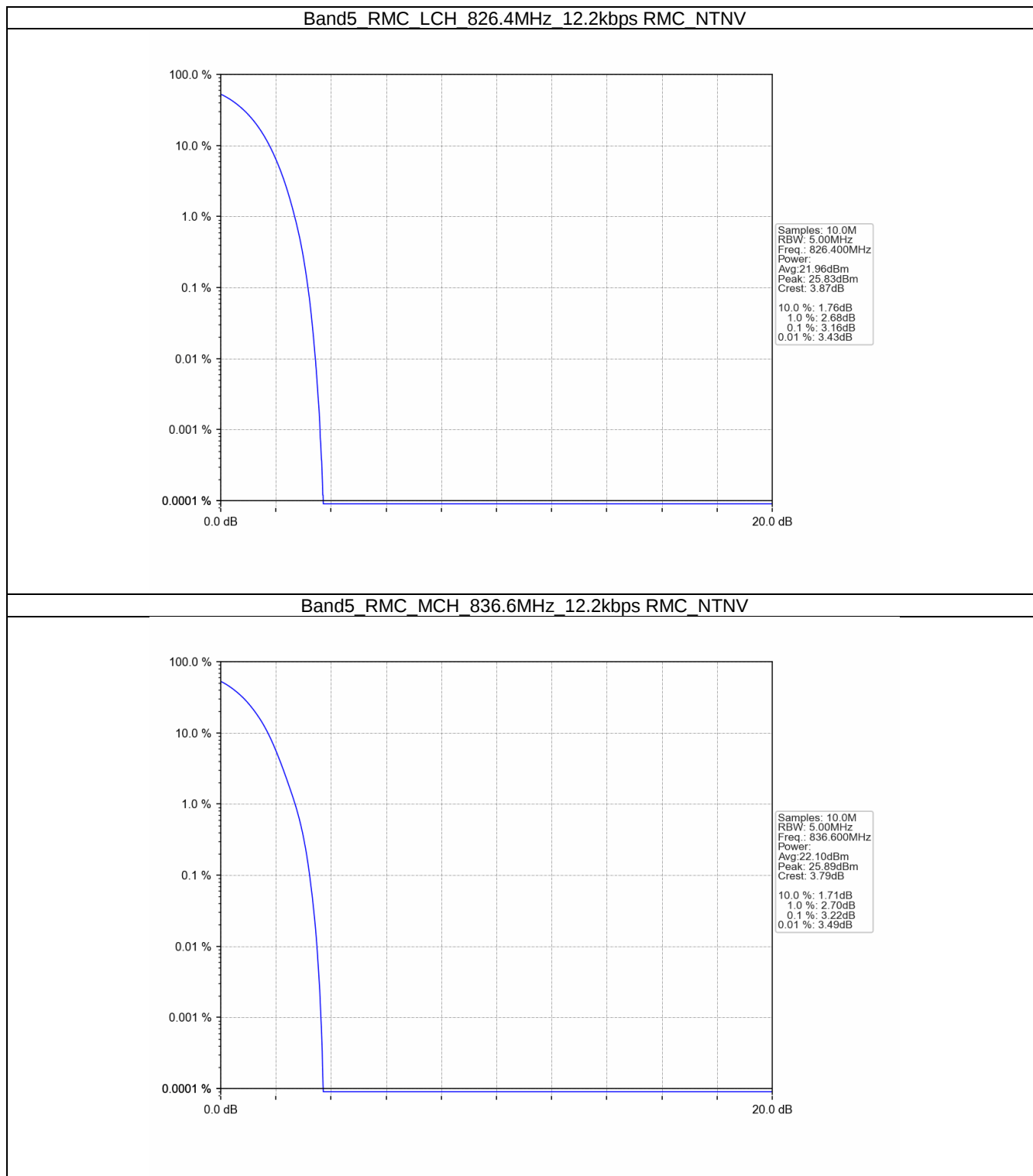
5.1 Test Result

5.1.1 Band5

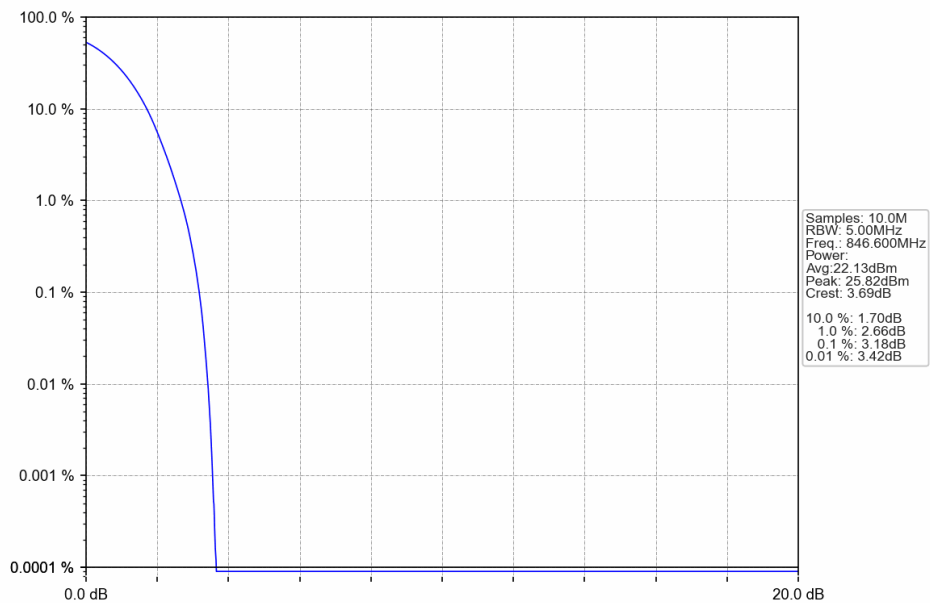
Band: 5						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	826.4	3.16	<=13	Pass
			836.6	3.22	<=13	Pass
			846.6	3.18	<=13	Pass
	HSDPA	Subtest 1	826.4	5.84	<=13	Pass
			836.6	5.89	<=13	Pass
			846.6	5.80	<=13	Pass
	HSUPA	Subtest 1	826.4	5.79	<=13	Pass
			836.6	5.81	<=13	Pass
			846.6	5.91	<=13	Pass

5.2 Test Graph

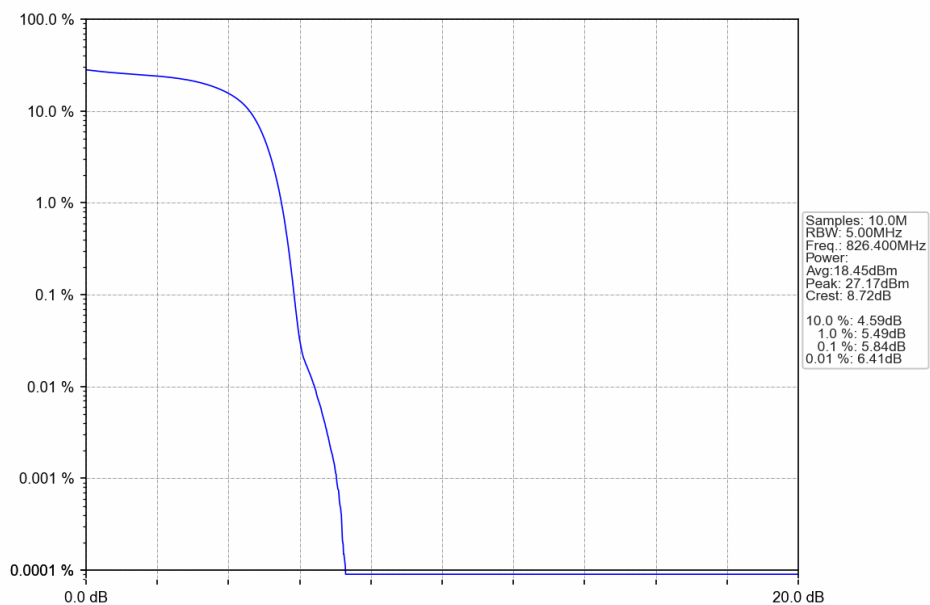
5.2.1 Band5



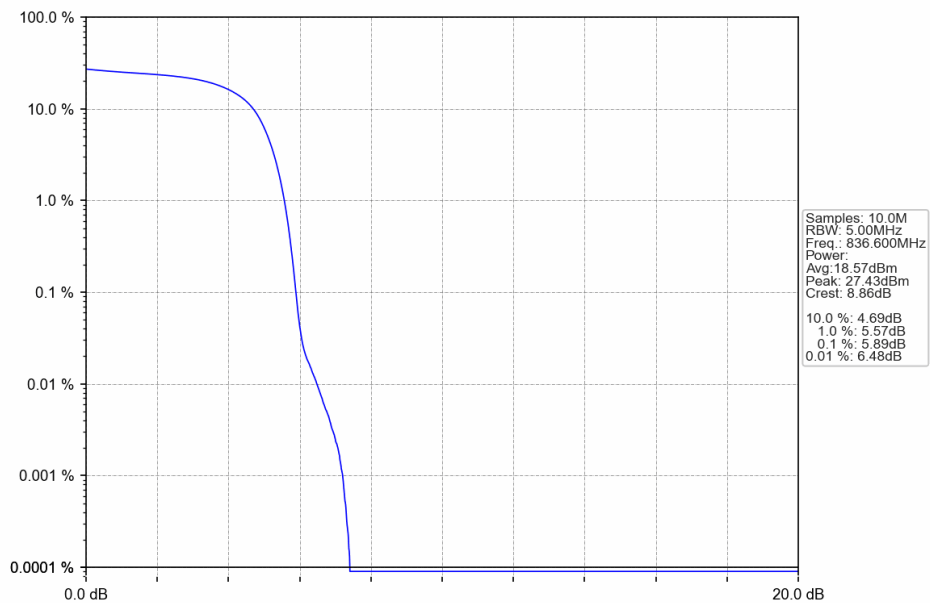
Band5_RMC_HCH_846.6MHz_12.2kbps_RMC_NTNV



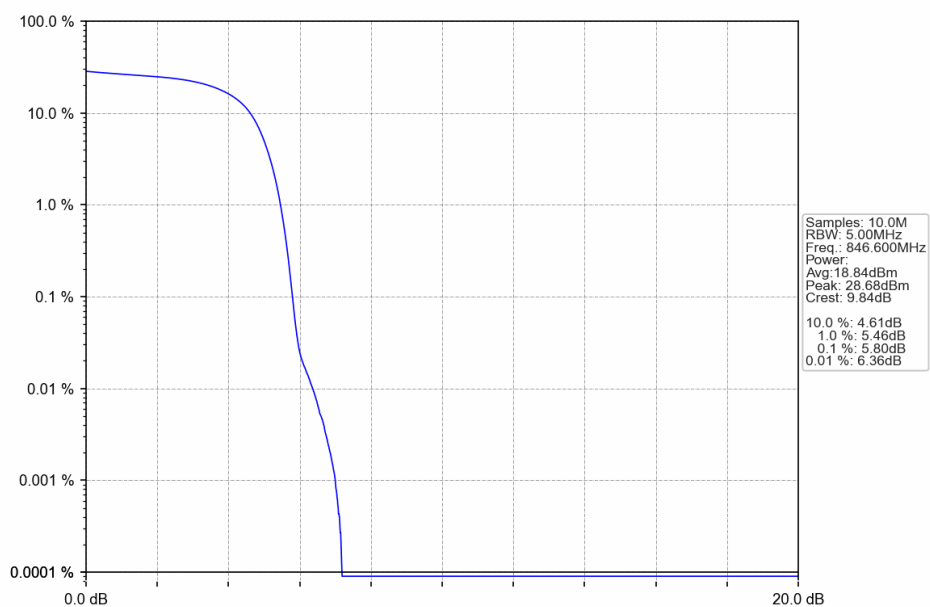
Band5_HSDPA_LCH_826.4MHz_Subtest 1_NTNV



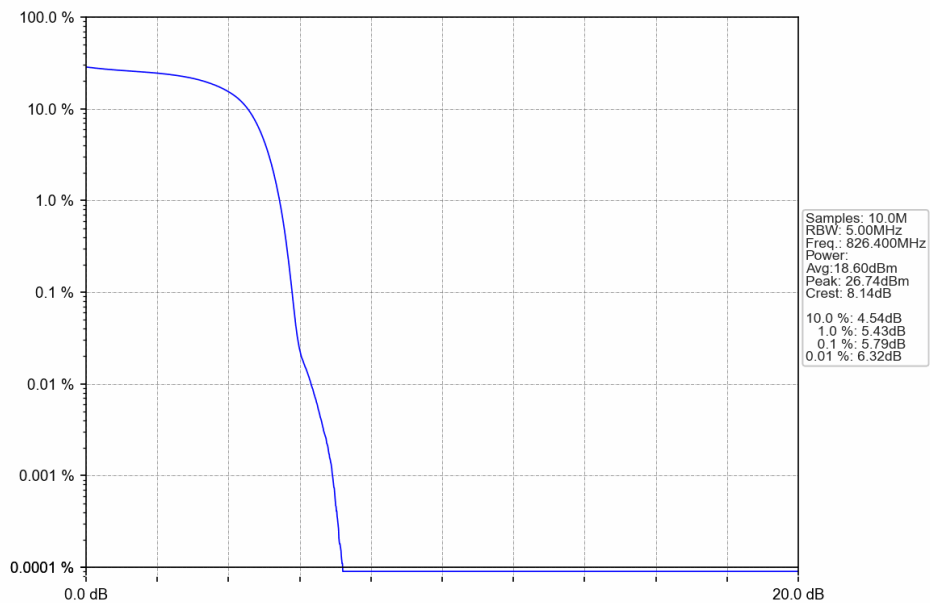
Band5 HSDPA MCH 836.6MHz Subtest 1 NTN



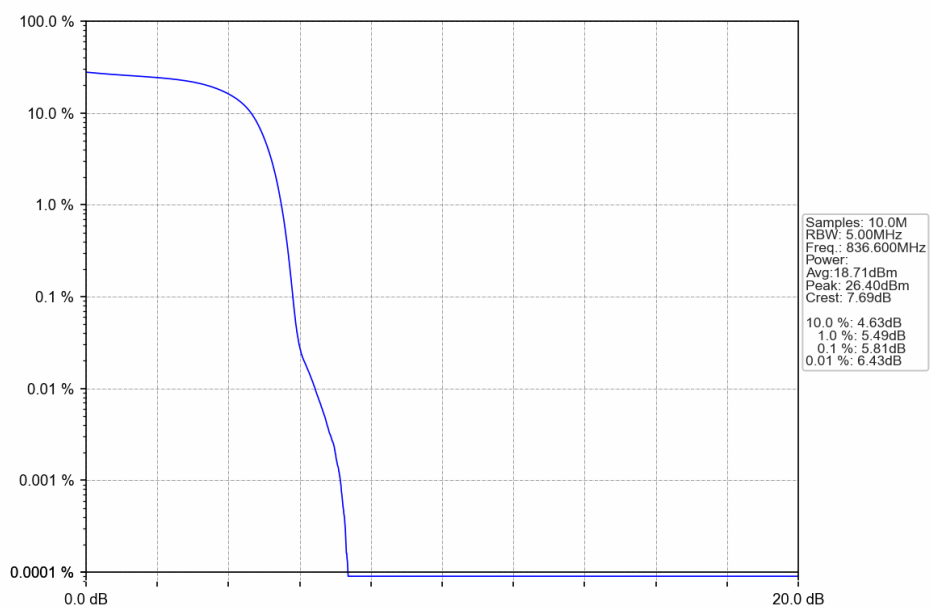
Band5 HSDPA HCH 846.6MHz Subtest 1 NTN

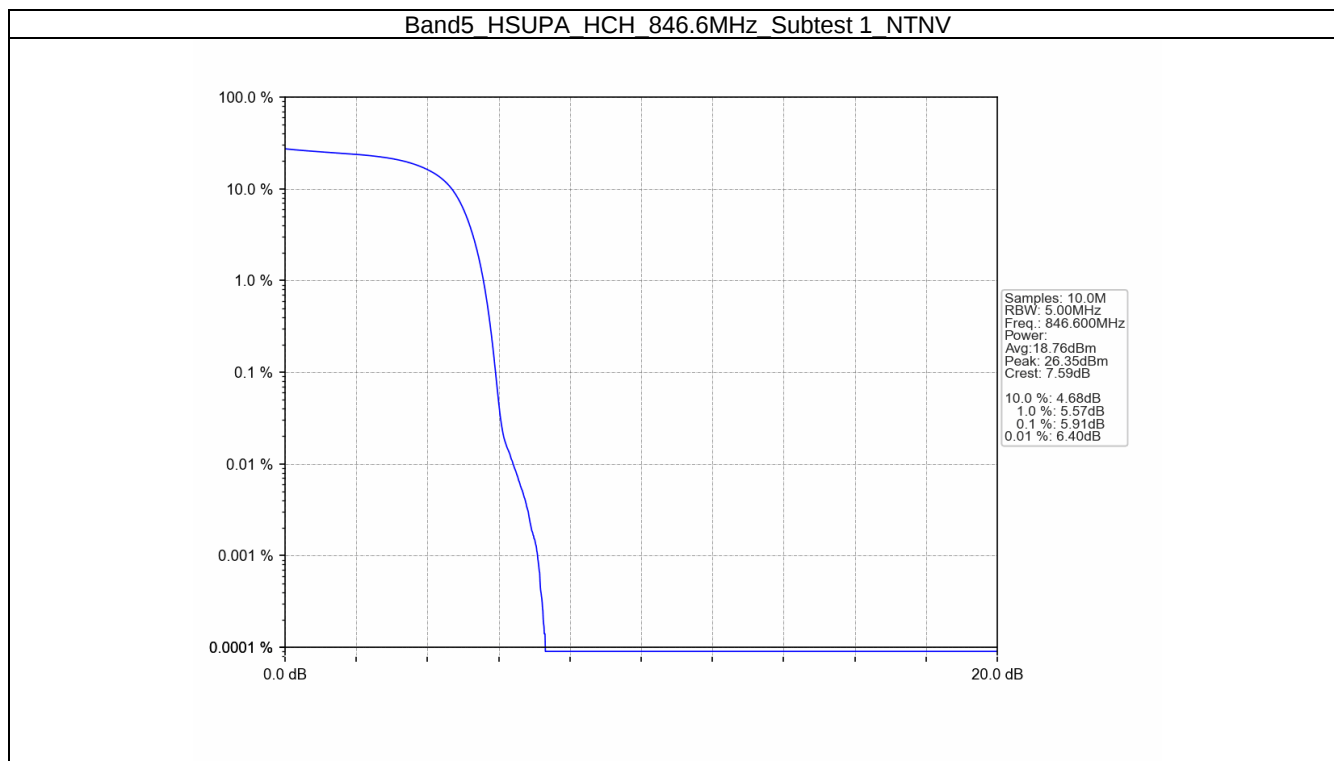


Band5 HSUPA LCH 826.4MHz Subtest 1 NTN



Band5 HSUPA MCH 836.6MHz Subtest 1 NTN





6. Spurious Emission

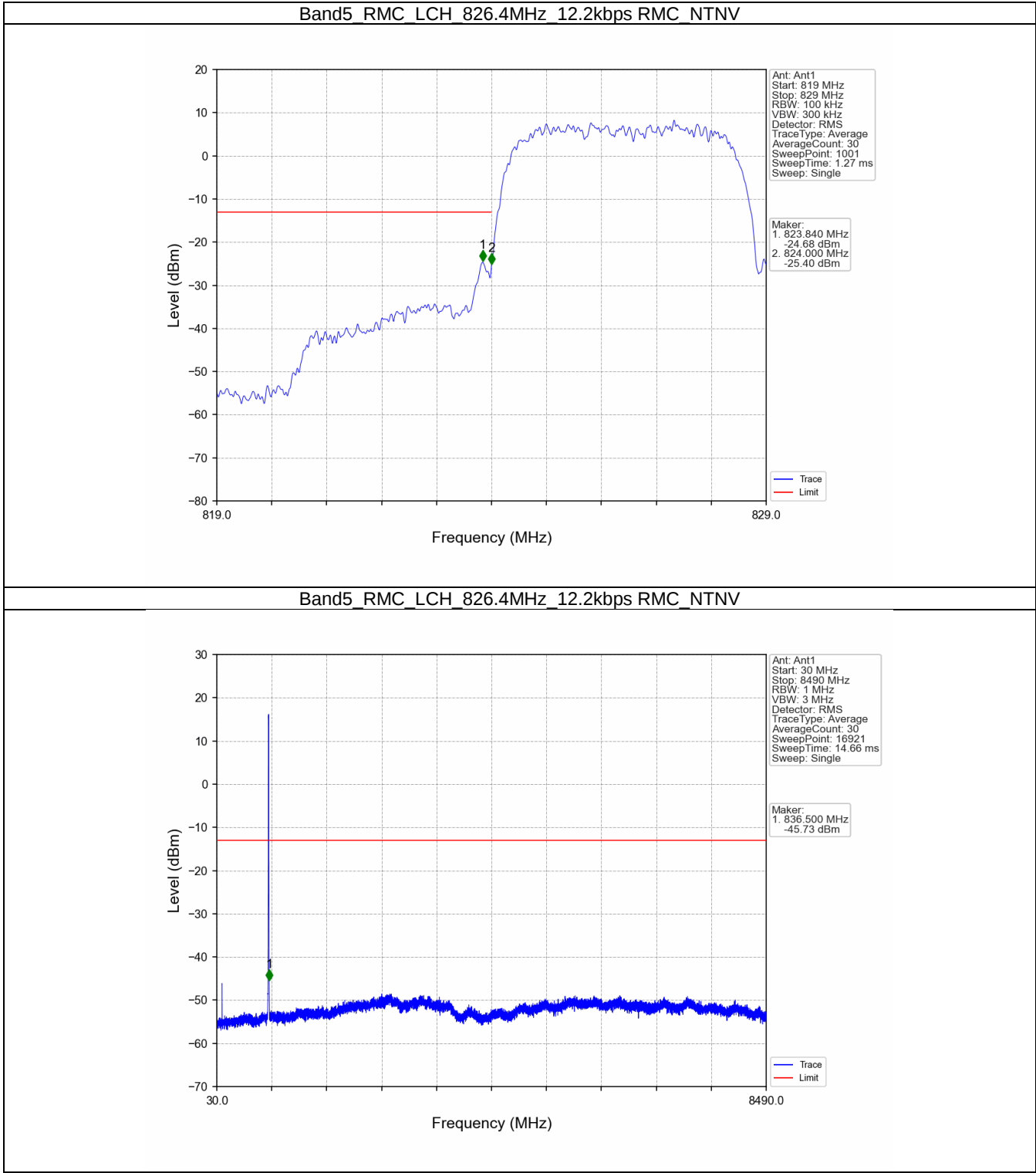
6.1 Test Result

6.1.1 Band5

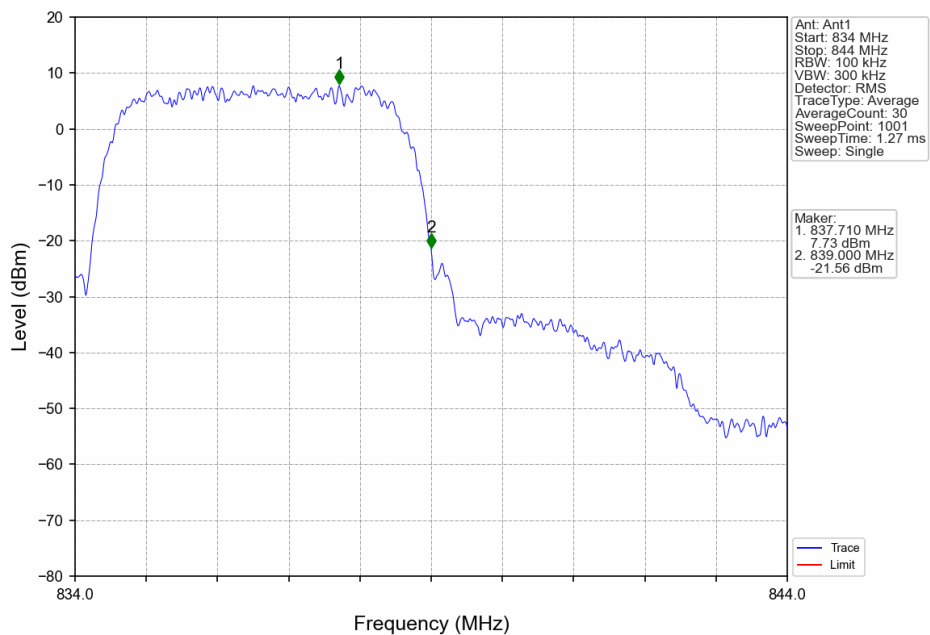
Band: 5						
ENV	Mode		Frequency (MHz)	Spurious Emission		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	826.4	Refer To Test Graph		Pass
			836.6	Refer To Test Graph		Pass
			846.6	Refer To Test Graph		Pass
	HSDPA	Subtest 1	826.4	Refer To Test Graph		Pass
			836.6	Refer To Test Graph		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

6.2 Test Graph

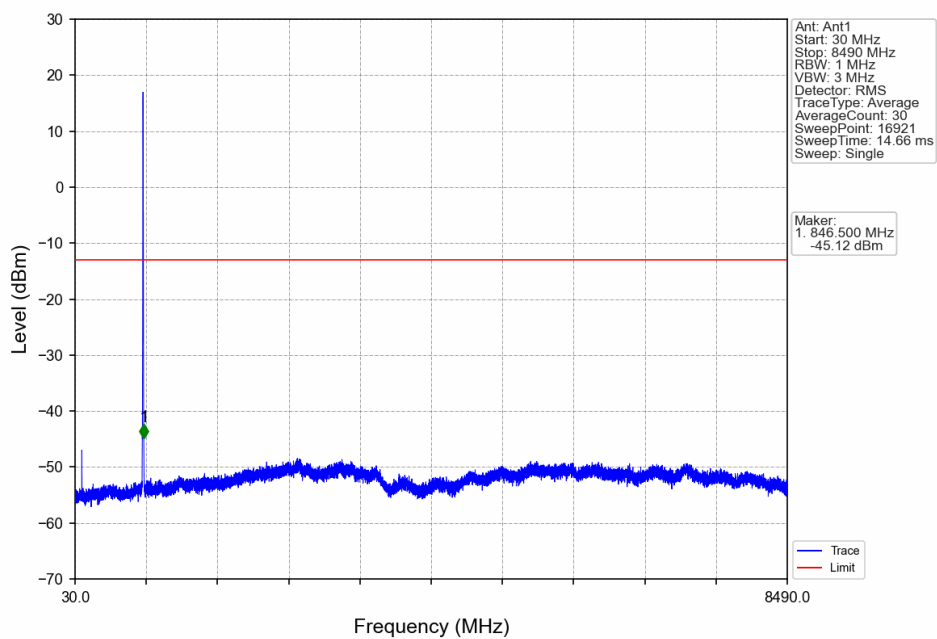
6.2.1 Band5



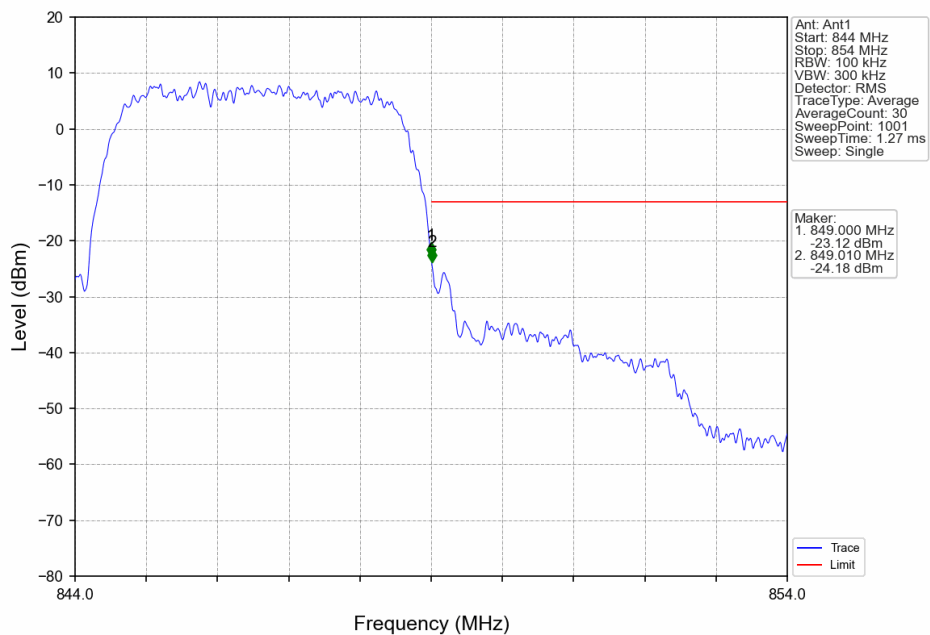
Band5_RMC_MCH_836.6MHz_12.2kbps_RMC_NTNV



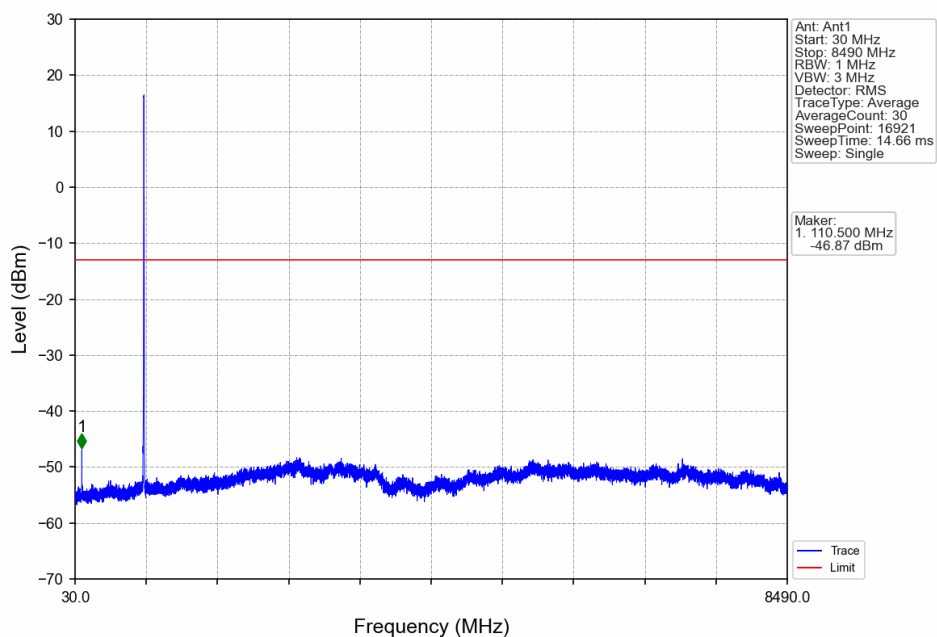
Band5_RMC_MCH_836.6MHz_12.2kbps_RMC_NTNV



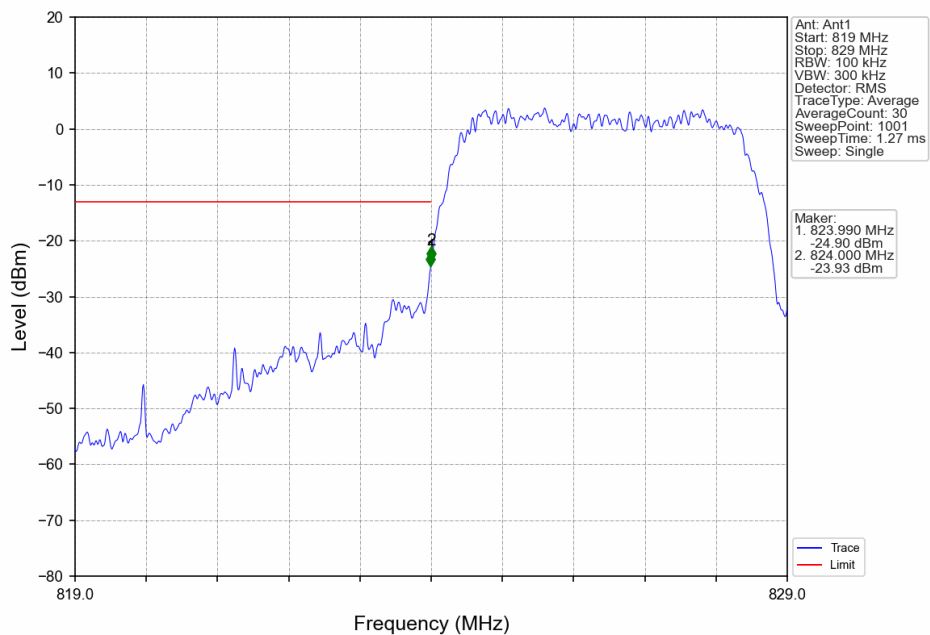
Band5_RMC_HCH_846.6MHz_12.2kbps_RMC_NTNV



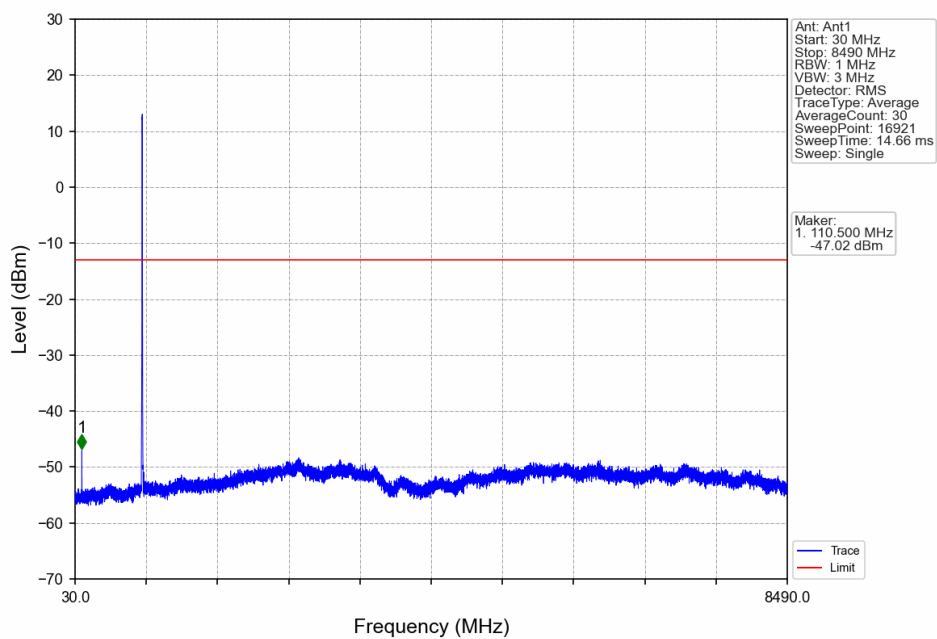
Band5_RMC_HCH_846.6MHz_12.2kbps_RMC_NTNV



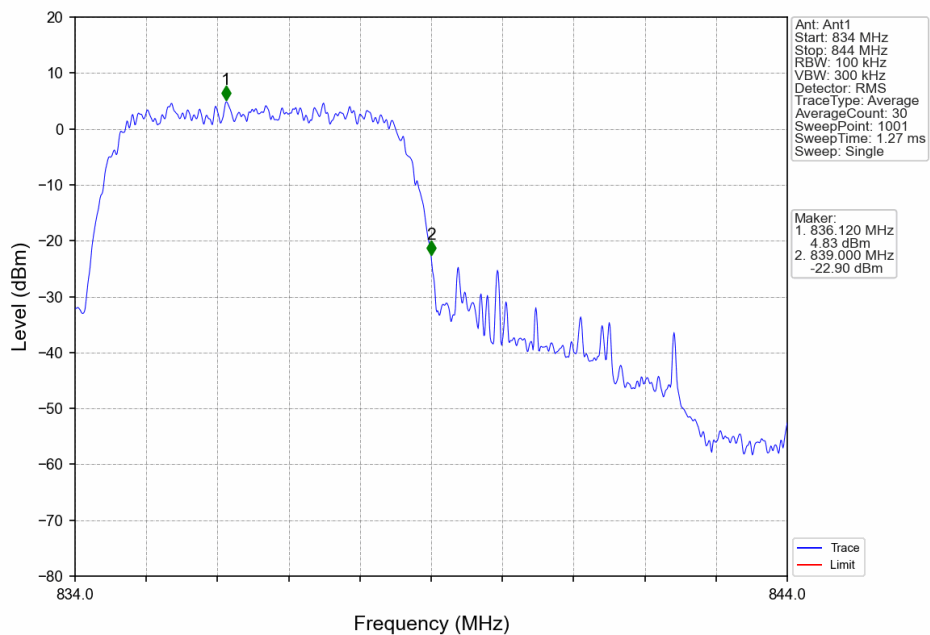
Band5_HSDPA_LCH_826.4MHz_Subtest 1_NTNV



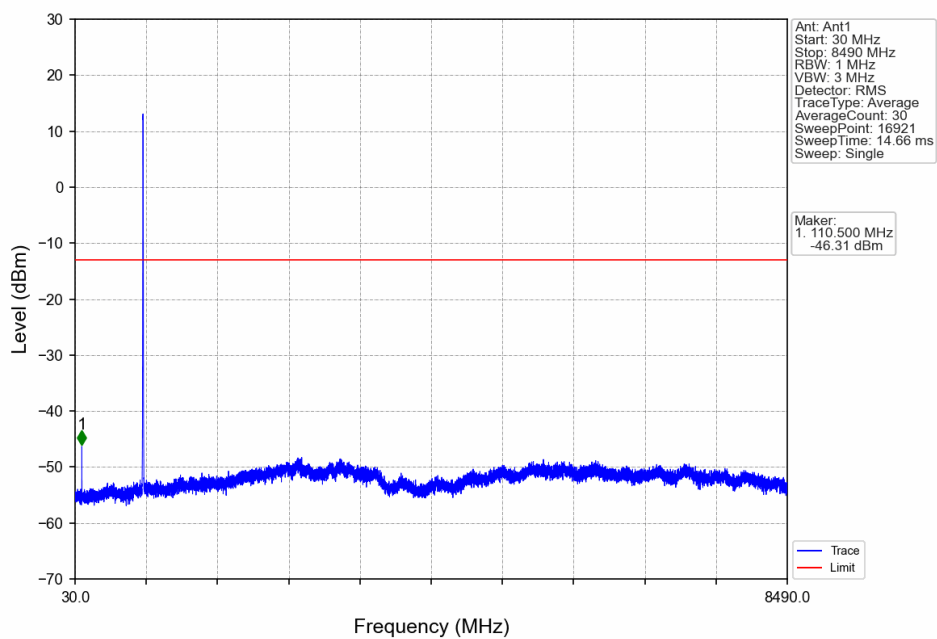
Band5_HSDPA_LCH_826.4MHz_Subtest 1_NTNV



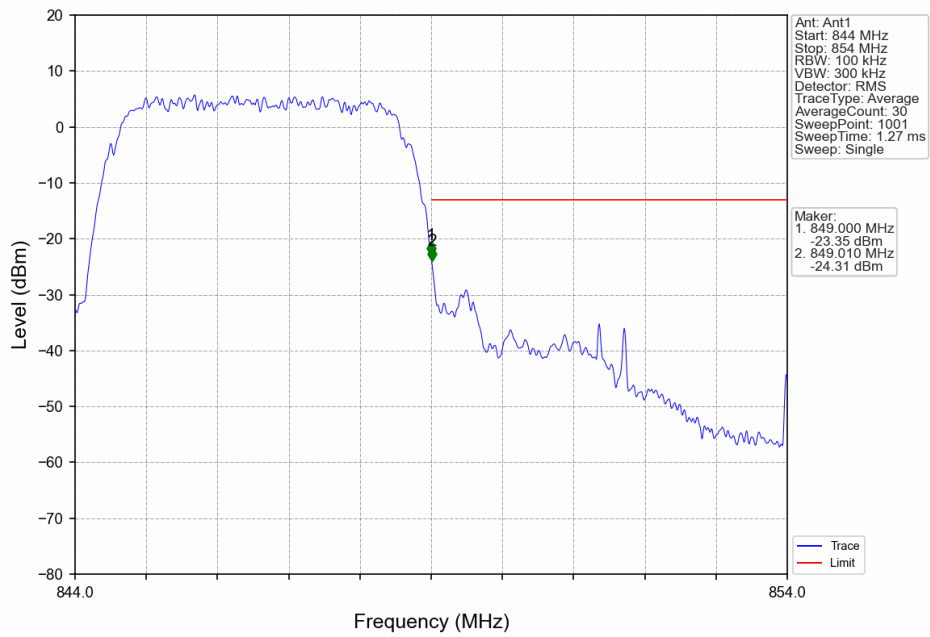
Band5 HSDPA MCH 836.6MHz Subtest 1 NTNV



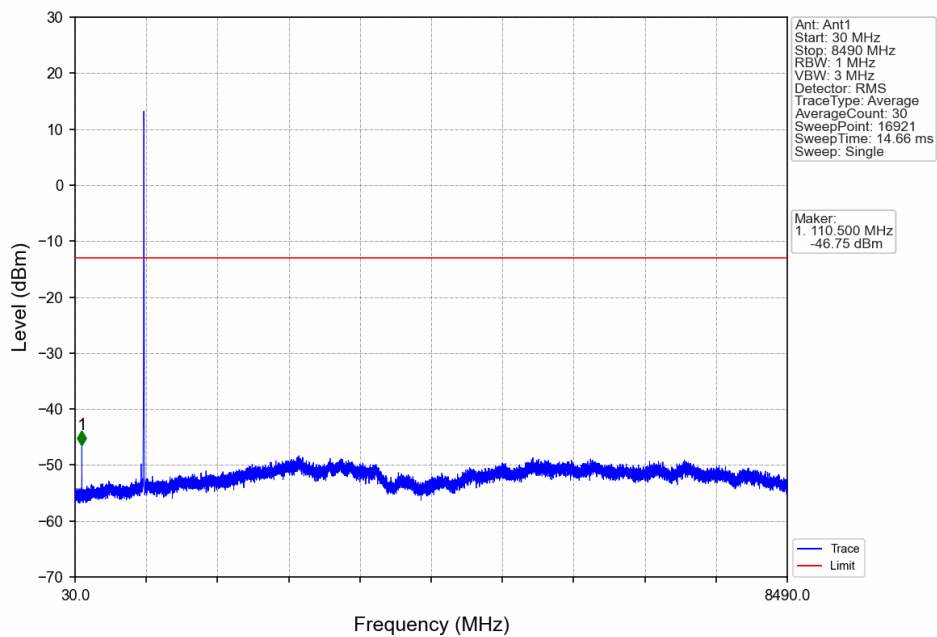
Band5 HSDPA MCH 836.6MHz Subtest 1 NTNV



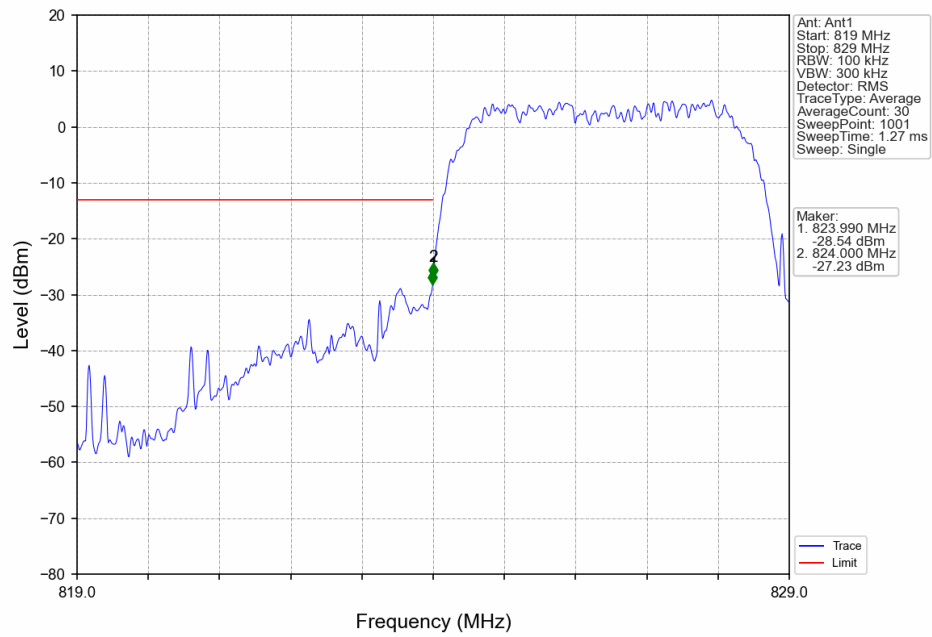
Band5 HSDPA HCH 846.6MHz Subtest 1 NTN



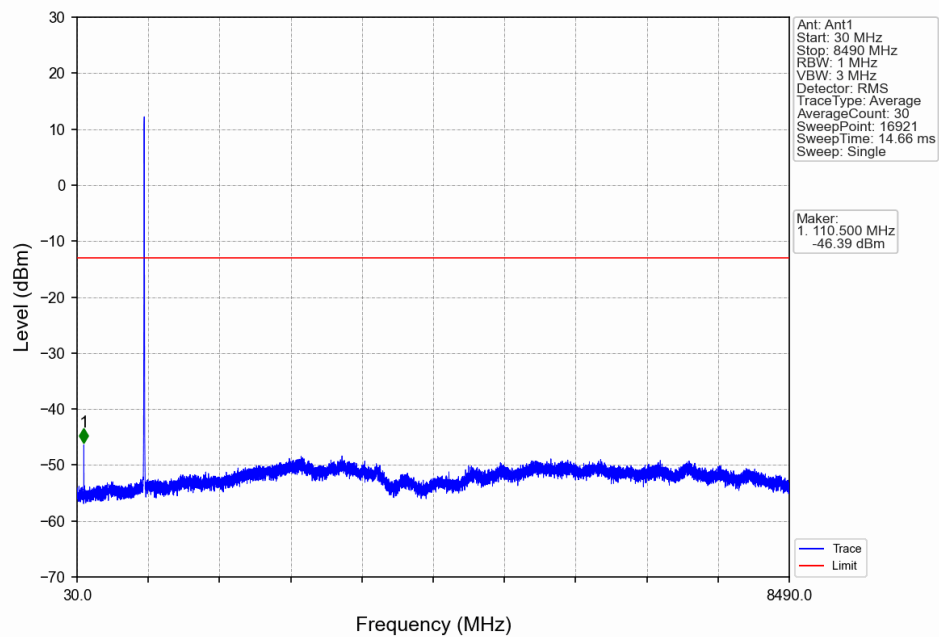
Band5 HSDPA HCH 846.6MHz Subtest 1 NTN



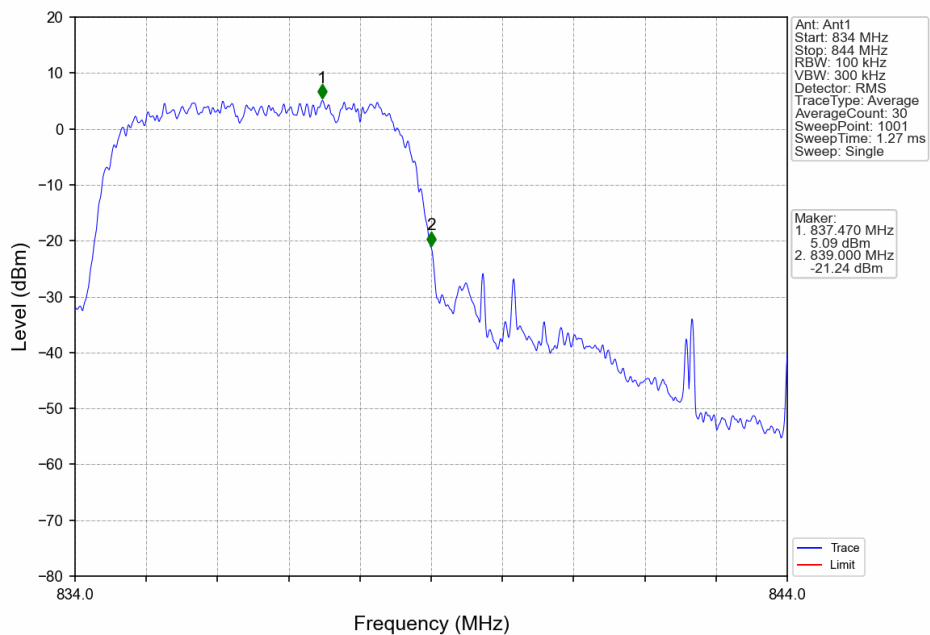
Band5_HSUPA_LCH_826.4MHz_Subtest 1_NTNV



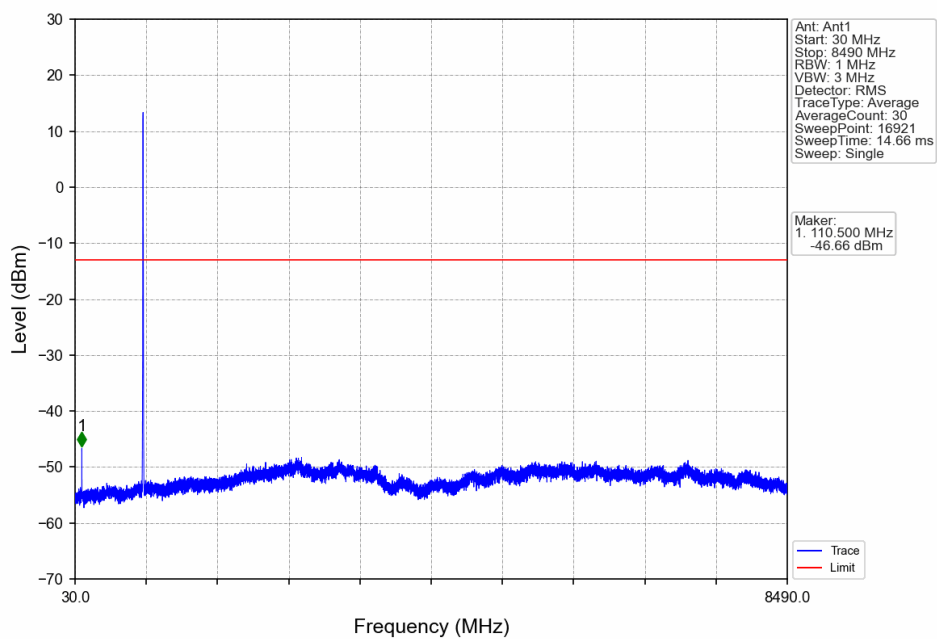
Band5_HSUPA_LCH_826.4MHz_Subtest 1_NTNV



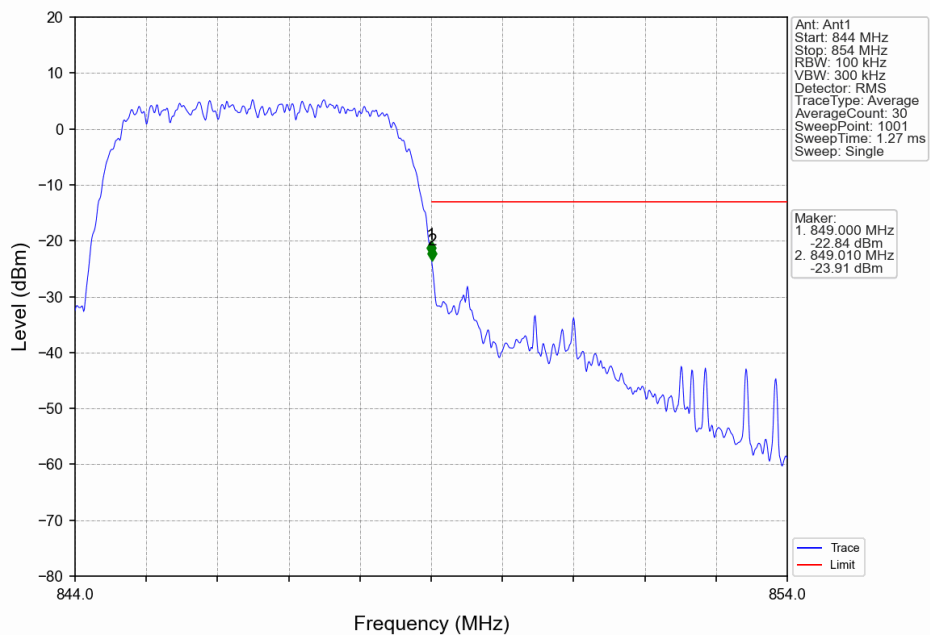
Band5 HSUPA MCH 836.6MHz Subtest 1 NTNV



Band5 HSUPA MCH 836.6MHz Subtest 1 NTNV



Band5 HSUPA HCH 846.6MHz Subtest 1 NTN



Band5 HSUPA HCH 846.6MHz Subtest 1 NTN

