

1. Effective (Isotropic) Radiated Power Output Data

1.1 Test Result

1.1.1 Band2_EIRP

Band: 2									
ENV	Mode		Frequency (MHz)	Conducted Power (dBm)	Gain (dBi)	EIRP (dBm)		Verdict	
	Network	Subset				Result	Limit		
NTNV	RMC	12.2kbps RMC	1852.4	21.50	0.91	22.41	<=33.01	Pass	
			1880	21.53	0.91	22.44	<=33.01	Pass	
			1907.6	21.38	0.91	22.29	<=33.01	Pass	
	HSDPA	Subtest 1	1852.4	19.24	0.91	20.15	<=33.01	Pass	
		Subtest 2	1852.4	19.24	0.91	20.15	<=33.01	Pass	
		Subtest 3	1852.4	19.25	0.91	20.16	<=33.01	Pass	
		Subtest 4	1852.4	19.26	0.91	20.17	<=33.01	Pass	
		Subtest 1	1880	19.25	0.91	20.16	<=33.01	Pass	
		Subtest 2	1880	19.29	0.91	20.20	<=33.01	Pass	
		Subtest 3	1880	19.25	0.91	20.16	<=33.01	Pass	
		Subtest 4	1880	19.26	0.91	20.17	<=33.01	Pass	
		Subtest 1	1907.6	19.05	0.91	19.96	<=33.01	Pass	
		Subtest 2	1907.6	19.07	0.91	19.98	<=33.01	Pass	
		Subtest 3	1907.6	19.08	0.91	19.99	<=33.01	Pass	
		Subtest 4	1907.6	19.05	0.91	19.96	<=33.01	Pass	
		HSUPA	Subtest 1	1852.4	17.31	0.91	18.22	<=33.01	Pass
			Subtest 2	1852.4	17.28	0.91	18.19	<=33.01	Pass
			Subtest 3	1852.4	17.27	0.91	18.18	<=33.01	Pass
			Subtest 4	1852.4	16.78	0.91	17.69	<=33.01	Pass
			Subtest 5	1852.4	17.26	0.91	18.17	<=33.01	Pass
			Subtest 1	1880	17.35	0.91	18.26	<=33.01	Pass
			Subtest 2	1880	17.31	0.91	18.22	<=33.01	Pass
			Subtest 3	1880	17.14	0.91	18.05	<=33.01	Pass
	Subtest 4		1880	17.15	0.91	18.06	<=33.01	Pass	
	Subtest 5		1880	17.15	0.91	18.06	<=33.01	Pass	
	Subtest 1		1907.6	17.15	0.91	18.06	<=33.01	Pass	
	Subtest 2		1907.6	17.14	0.91	18.05	<=33.01	Pass	
	Subtest 3		1907.6	16.96	0.91	17.87	<=33.01	Pass	
	Subtest 4		1907.6	17.14	0.91	18.05	<=33.01	Pass	
	Subtest 5		1907.6	16.96	0.91	17.87	<=33.01	Pass	
Note1: EIRP=Conducted Power+Antenna Gain									

2. Frequency Stability

2.1 Test Result

2.1.1 Band2

Band: 2							
Network	Frequency (MHz)	Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
					Result	Limit	
RMC	1852.4	20	3.27	-6.838	-0.0037	-2.5 to 2.5	Pass
			3.85	-12.145	-0.0066	-2.5 to 2.5	Pass
			4.43	-4.971	-0.0027	-2.5 to 2.5	Pass
		-30	3.85	-5.908	-0.0032	-2.5 to 2.5	Pass
		-20	3.85	-8.698	-0.0047	-2.5 to 2.5	Pass

	1880	-10	3.85	-5.643	-0.0030	-2.5 to 2.5	Pass	
		0	3.85	-8.748	-0.0047	-2.5 to 2.5	Pass	
		10	3.85	-6.738	-0.0036	-2.5 to 2.5	Pass	
		30	3.85	-5.629	-0.0030	-2.5 to 2.5	Pass	
		40	3.85	-2.575	-0.0014	-2.5 to 2.5	Pass	
		50	3.85	-9.098	-0.0049	-2.5 to 2.5	Pass	
		1907.6	20	3.27	-14.563	-0.0077	-2.5 to 2.5	Pass
				3.85	-20.156	-0.0107	-2.5 to 2.5	Pass
				4.43	-19.813	-0.0105	-2.5 to 2.5	Pass
			-30	3.85	-16.923	-0.0090	-2.5 to 2.5	Pass
			-20	3.85	-18.396	-0.0098	-2.5 to 2.5	Pass
			-10	3.85	-20.599	-0.0110	-2.5 to 2.5	Pass
	0		3.85	-15.171	-0.0081	-2.5 to 2.5	Pass	
	10		3.85	-19.569	-0.0104	-2.5 to 2.5	Pass	
	30		3.85	-17.030	-0.0091	-2.5 to 2.5	Pass	
	40		3.85	-15.085	-0.0080	-2.5 to 2.5	Pass	
	50		3.85	-11.423	-0.0061	-2.5 to 2.5	Pass	
	1907.6		20	3.27	-3.347	-0.0018	-2.5 to 2.5	Pass
		3.85		-16.458	-0.0086	-2.5 to 2.5	Pass	
		4.43		-17.195	-0.0090	-2.5 to 2.5	Pass	
		-30	3.85	-16.801	-0.0088	-2.5 to 2.5	Pass	
		-20	3.85	-15.399	-0.0081	-2.5 to 2.5	Pass	
		-10	3.85	-12.267	-0.0064	-2.5 to 2.5	Pass	
		0	3.85	-13.640	-0.0072	-2.5 to 2.5	Pass	
		10	3.85	-18.003	-0.0094	-2.5 to 2.5	Pass	
		30	3.85	-16.909	-0.0089	-2.5 to 2.5	Pass	
		40	3.85	-10.700	-0.0056	-2.5 to 2.5	Pass	
		50	3.85	-17.638	-0.0092	-2.5 to 2.5	Pass	
		HSDPA	1852.4	20	3.27	-4.499	-0.0024	-2.5 to 2.5
	3.85				-9.527	-0.0051	-2.5 to 2.5	Pass
	4.43				-8.068	-0.0044	-2.5 to 2.5	Pass
	-30			3.85	-8.690	-0.0047	-2.5 to 2.5	Pass
	-20			3.85	-6.523	-0.0035	-2.5 to 2.5	Pass
-10	3.85			-4.020	-0.0022	-2.5 to 2.5	Pass	
0	3.85			-6.652	-0.0036	-2.5 to 2.5	Pass	
10	3.85			-9.592	-0.0052	-2.5 to 2.5	Pass	
30	3.85			-9.184	-0.0050	-2.5 to 2.5	Pass	
40	3.85			-10.564	-0.0057	-2.5 to 2.5	Pass	
50	3.85			-4.456	-0.0024	-2.5 to 2.5	Pass	
1880	20			3.27	-10.164	-0.0054	-2.5 to 2.5	Pass
			3.85	-10.185	-0.0054	-2.5 to 2.5	Pass	
			4.43	-10.042	-0.0053	-2.5 to 2.5	Pass	
	-30		3.85	-8.640	-0.0046	-2.5 to 2.5	Pass	
	-20		3.85	-11.587	-0.0062	-2.5 to 2.5	Pass	
	-10		3.85	-7.010	-0.0037	-2.5 to 2.5	Pass	
	0		3.85	-9.520	-0.0051	-2.5 to 2.5	Pass	
	10		3.85	-10.929	-0.0058	-2.5 to 2.5	Pass	
	30		3.85	-6.981	-0.0037	-2.5 to 2.5	Pass	
	40		3.85	-6.874	-0.0037	-2.5 to 2.5	Pass	
	50		3.85	-4.892	-0.0026	-2.5 to 2.5	Pass	
	1907.6		20	3.27	-11.480	-0.0060	-2.5 to 2.5	Pass
3.85				-7.067	-0.0037	-2.5 to 2.5	Pass	
4.43				-11.008	-0.0058	-2.5 to 2.5	Pass	
-30			3.85	-13.969	-0.0073	-2.5 to 2.5	Pass	
-20			3.85	-9.735	-0.0051	-2.5 to 2.5	Pass	
-10			3.85	-11.244	-0.0059	-2.5 to 2.5	Pass	
0			3.85	-11.430	-0.0060	-2.5 to 2.5	Pass	
10			3.85	-13.769	-0.0072	-2.5 to 2.5	Pass	
30			3.85	-6.630	-0.0035	-2.5 to 2.5	Pass	

HSUPA		40	3.85	-6.373	-0.0033	-2.5 to 2.5	Pass
		50	3.85	-10.393	-0.0054	-2.5 to 2.5	Pass
	1852.4	20	3.27	-6.709	-0.0036	-2.5 to 2.5	Pass
			3.85	-10.293	-0.0056	-2.5 to 2.5	Pass
			4.43	-9.506	-0.0051	-2.5 to 2.5	Pass
		-30	3.85	-8.554	-0.0046	-2.5 to 2.5	Pass
		-20	3.85	-11.458	-0.0062	-2.5 to 2.5	Pass
		-10	3.85	-16.115	-0.0087	-2.5 to 2.5	Pass
		0	3.85	-9.520	-0.0051	-2.5 to 2.5	Pass
		10	3.85	-13.146	-0.0071	-2.5 to 2.5	Pass
		30	3.85	-10.200	-0.0055	-2.5 to 2.5	Pass
		40	3.85	-9.449	-0.0051	-2.5 to 2.5	Pass
		50	3.85	-11.337	-0.0061	-2.5 to 2.5	Pass
	1880	20	3.27	-14.505	-0.0077	-2.5 to 2.5	Pass
			3.85	-7.939	-0.0042	-2.5 to 2.5	Pass
			4.43	-10.350	-0.0055	-2.5 to 2.5	Pass
		-30	3.85	-10.107	-0.0054	-2.5 to 2.5	Pass
		-20	3.85	-13.869	-0.0074	-2.5 to 2.5	Pass
		-10	3.85	-15.707	-0.0084	-2.5 to 2.5	Pass
		0	3.85	-4.821	-0.0026	-2.5 to 2.5	Pass
		10	3.85	-3.791	-0.0020	-2.5 to 2.5	Pass
		30	3.85	-5.157	-0.0027	-2.5 to 2.5	Pass
		40	3.85	-10.085	-0.0054	-2.5 to 2.5	Pass
		50	3.85	-7.925	-0.0042	-2.5 to 2.5	Pass
	1907.6	20	3.27	-9.391	-0.0049	-2.5 to 2.5	Pass
			3.85	-8.855	-0.0046	-2.5 to 2.5	Pass
			4.43	-12.968	-0.0068	-2.5 to 2.5	Pass
		-30	3.85	-8.776	-0.0046	-2.5 to 2.5	Pass
		-20	3.85	-7.889	-0.0041	-2.5 to 2.5	Pass
		-10	3.85	-11.580	-0.0061	-2.5 to 2.5	Pass
		0	3.85	-11.423	-0.0060	-2.5 to 2.5	Pass
		10	3.85	-9.820	-0.0051	-2.5 to 2.5	Pass
		30	3.85	-9.077	-0.0048	-2.5 to 2.5	Pass
		40	3.85	-11.966	-0.0063	-2.5 to 2.5	Pass
		50	3.85	-10.085	-0.0053	-2.5 to 2.5	Pass

3. Modulation Characteristics

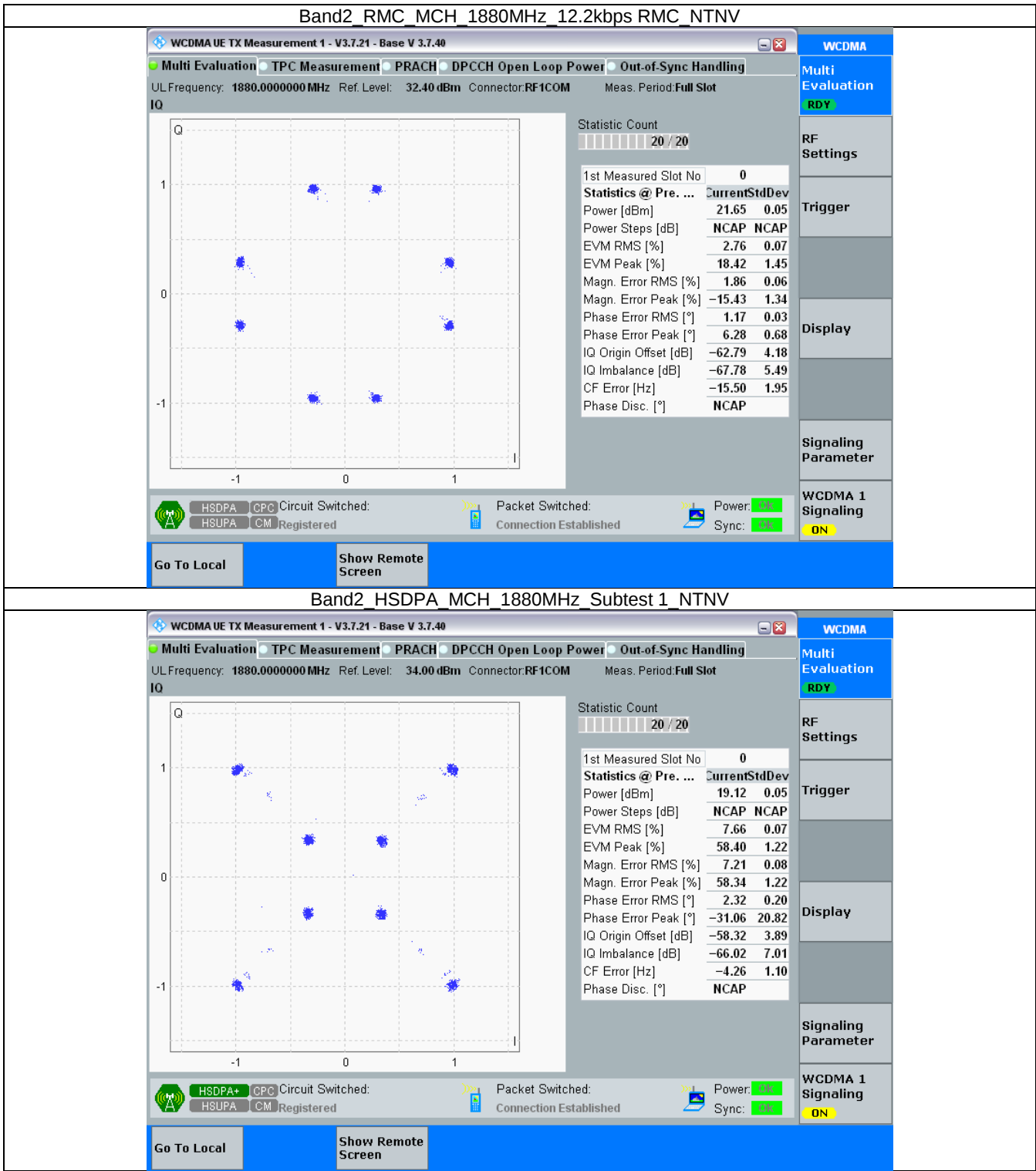
3.1 Test Result

3.1.1 Band2

Band: 2						
ENV	Mode		Frequency (MHz)	Modulation Characteristics		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	1880	Refer To Test Graph		Pass
	HSDPA	Subtest 1	1880	Refer To Test Graph		Pass
	HSUPA	Subtest 1	1880	Refer To Test Graph		Pass

3.2 Test Graph

3.2.1 Band2



Band2 HSUPA MCH 1880MHz Subtest 1 NTN

WCDMA UE TX Measurement 1 - V3.7.21 - Base V 3.7.40

Multi Evaluation

TPC Measurement

PRACH

DPCCH Open Loop Power

Out-of-Sync Handling

UL Frequency: 1880.000000 MHz Ref. Level: 34.00 dBm Connector: RF1COM Meas. Period: Full Slot

IQ

Statistic Count

20 / 20

1st Measured Slot No

0

Statistics @ Pre. ...

CurrentStdDev

Power [dBm]

13.67 2.58

Power Steps [dB]

NCAP NCAP

EVM RMS [%]

13.21 4.55

EVM Peak [%]

100.00 39.70

Magn. Error RMS [%]

12.92 4.86

Magn. Error Peak [%]

-100.00 40.86

Phase Error RMS [°]

1.90 0.53

Phase Error Peak [°]

67.90 25.53

IQ Origin Offset [dB]

-45.30 9.72

IQ Imbalance [dB]

-61.40 4.86

CF Error [Hz]

-3.55 3.54

Phase Disc. [°]

NCAP

HSDPA+

HSUPA

CPC

CM

Circuit Switched:

Registered

Packet Switched:

Connection Established

Power:

5%

Sync:

100%

Go To Local

Show Remote Screen

WCDMA

Multi Evaluation

RDY

RF Settings

Trigger

Display

Signaling Parameter

WCDMA 1 Signaling

ON

4. 99% & 26dB Bandwidth

4.1 Test Result

4.1.1 Band2_OBW

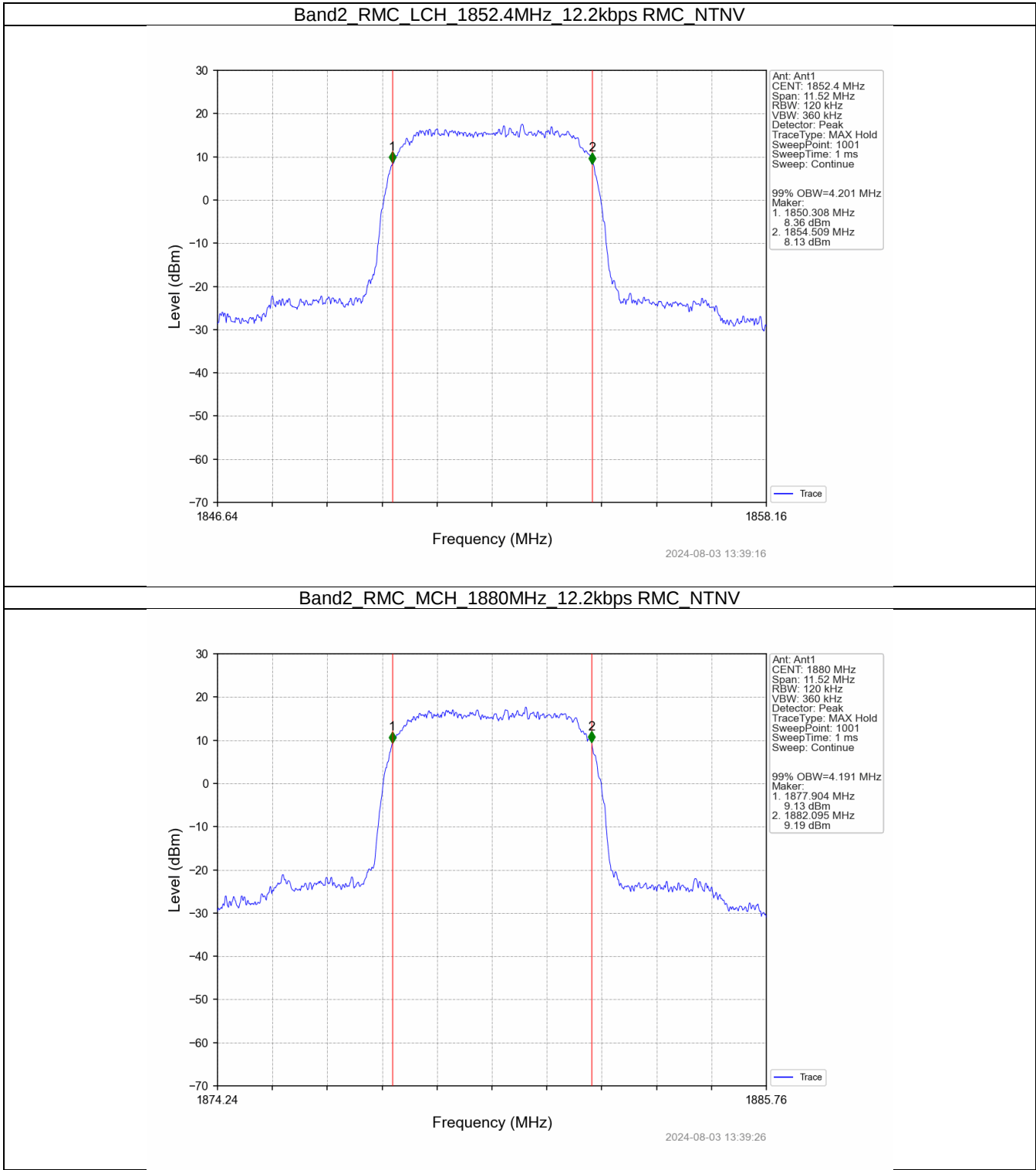
Band: 2						
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	1852.4	4.201	/	Pass
			1880	4.191	/	Pass
			1907.6	4.197	/	Pass
	HSDPA	Subtest 1	1852.4	4.221	/	Pass
			1880	4.221	/	Pass
			1907.6	4.206	/	Pass
	HSUPA	Subtest 1	1852.4	4.242	/	Pass
			1880	4.226	/	Pass
			1907.6	4.208	/	Pass

4.1.2 Band2_XDB

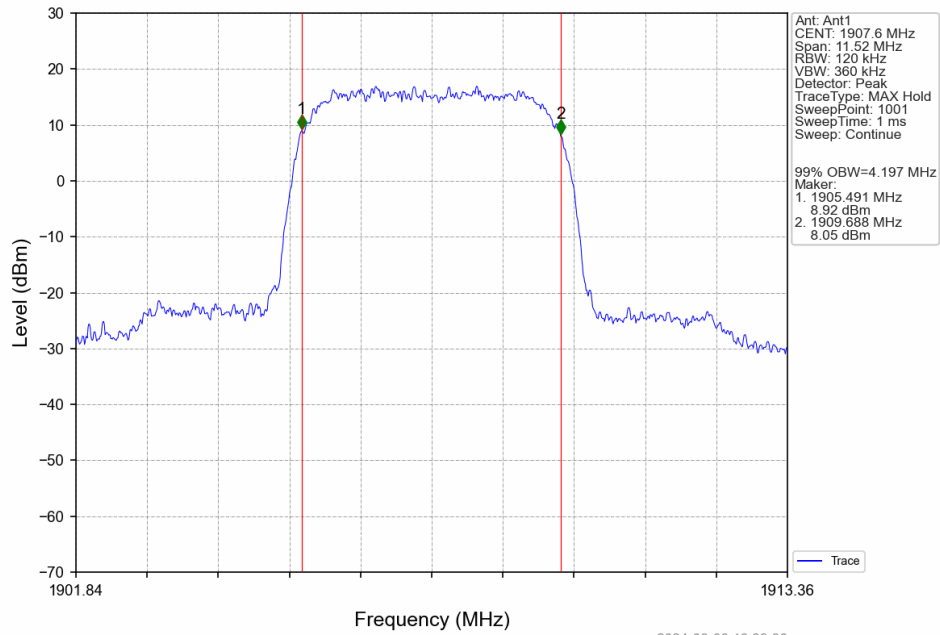
Band: 2						
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	1852.4	4.760	/	Pass
			1880	4.764	/	Pass
			1907.6	4.779	/	Pass
	HSDPA	Subtest 1	1852.4	5.375	/	Pass
			1880	5.308	/	Pass
			1907.6	5.084	/	Pass
	HSUPA	Subtest 1	1852.4	5.489	/	Pass
			1880	5.130	/	Pass
			1907.6	5.210	/	Pass

4.2 Test Graph

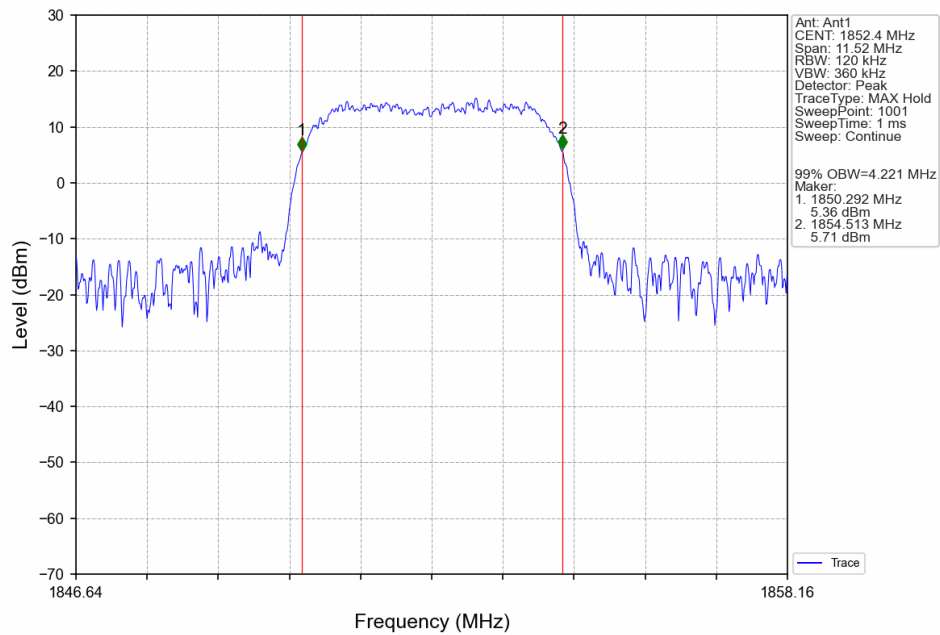
4.2.1 Band2_OBW



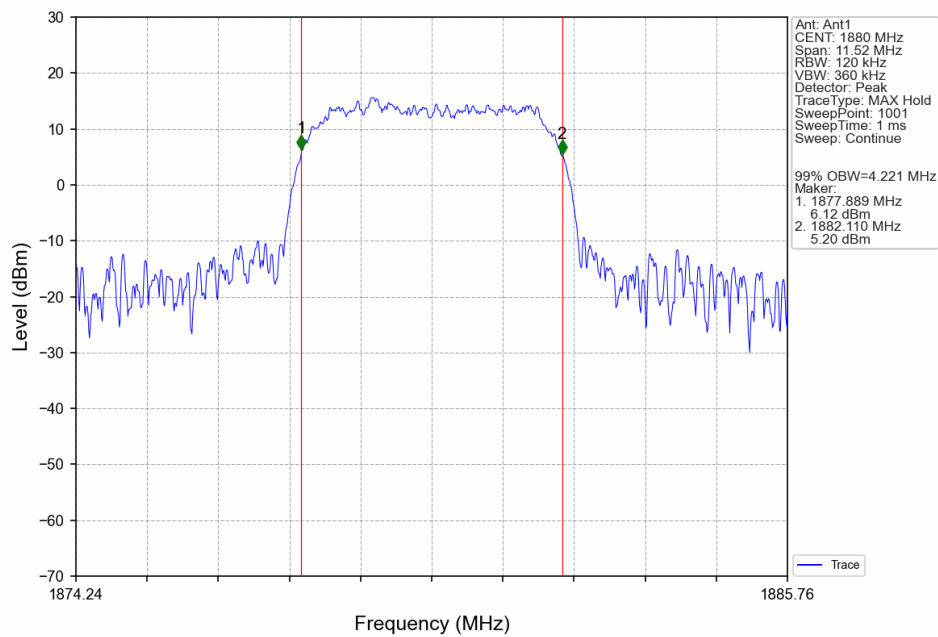
Band2 RMC HCH 1907.6MHz 12.2kbps RMC NTN



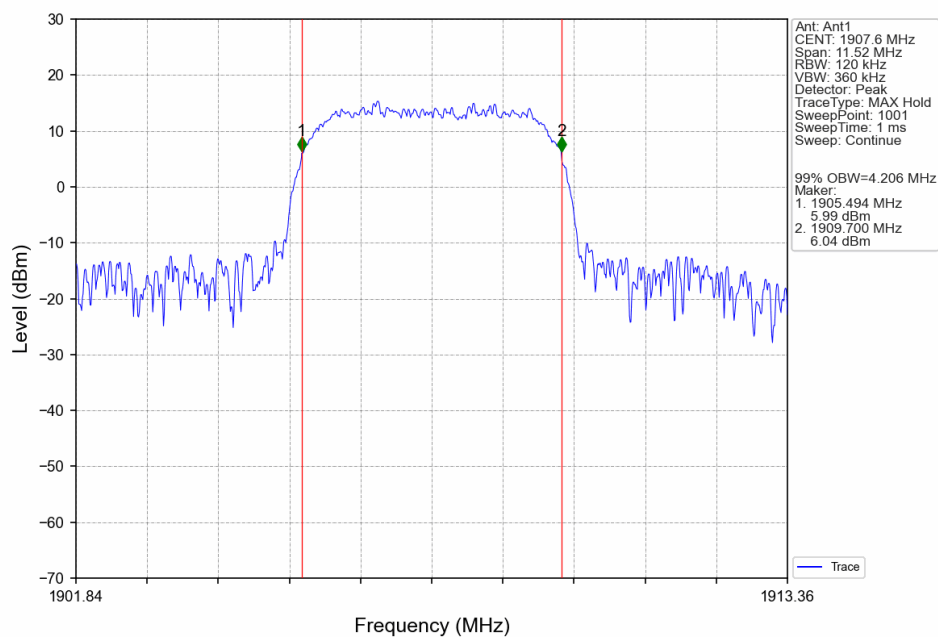
Band2 HSDPA LCH 1852.4MHz Subtest 1 NTN



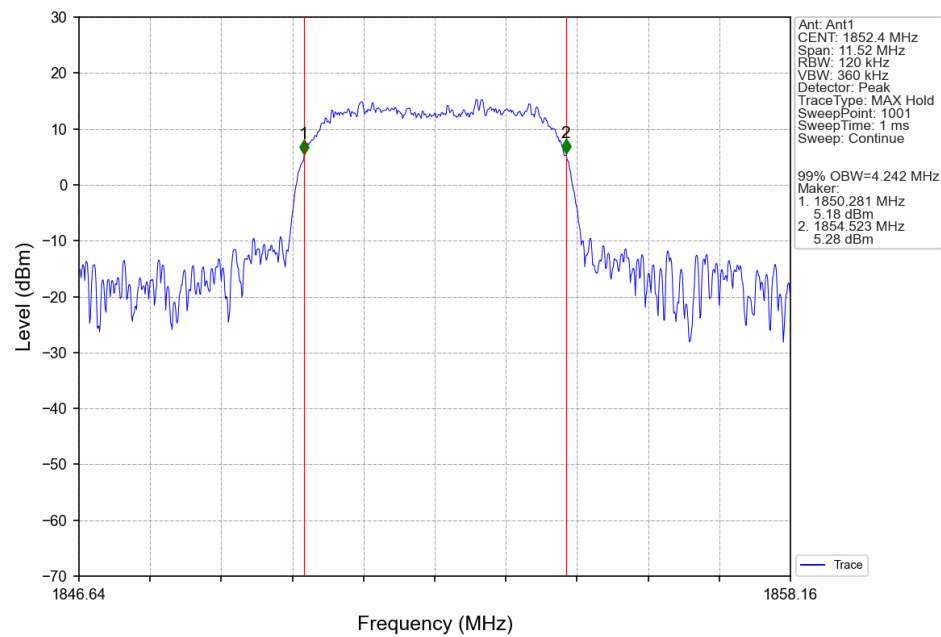
Band2 HSDPA MCH 1880MHz Subtest 1 NTN



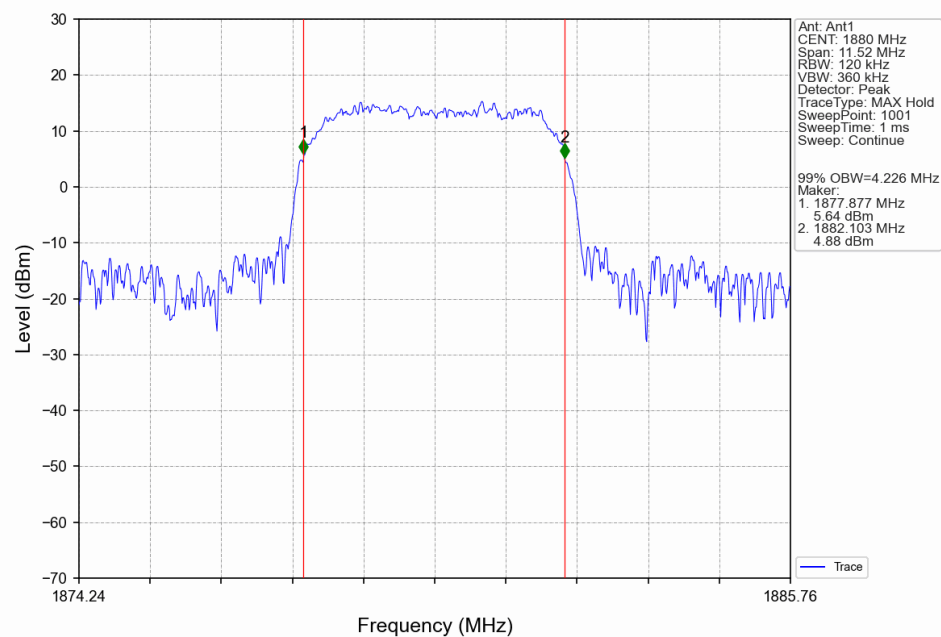
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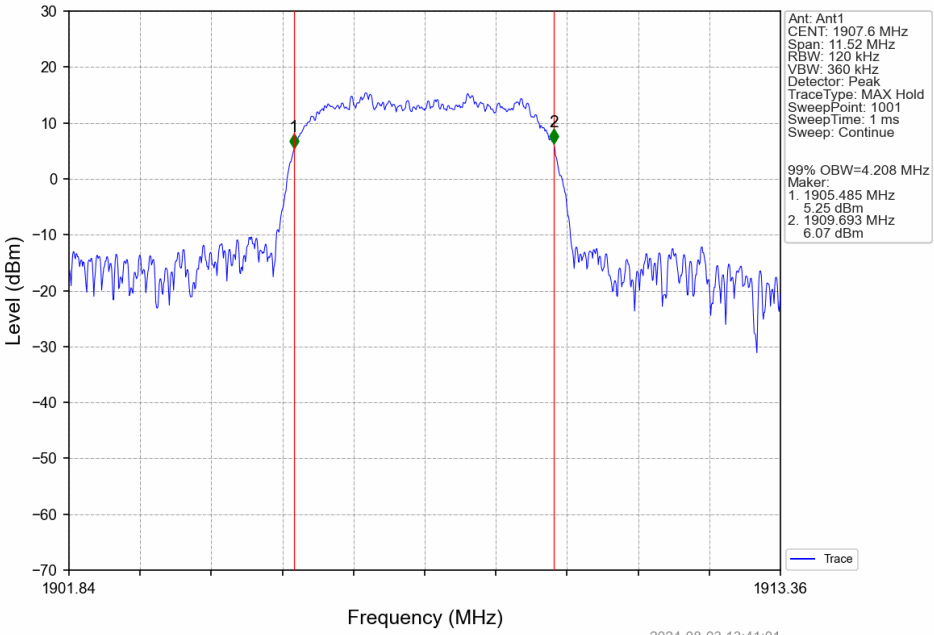
Band2 HSUPA LCH 1852.4MHz Subtest 1 NTN



Band2 HSUPA MCH 1880MHz Subtest 1 NTN

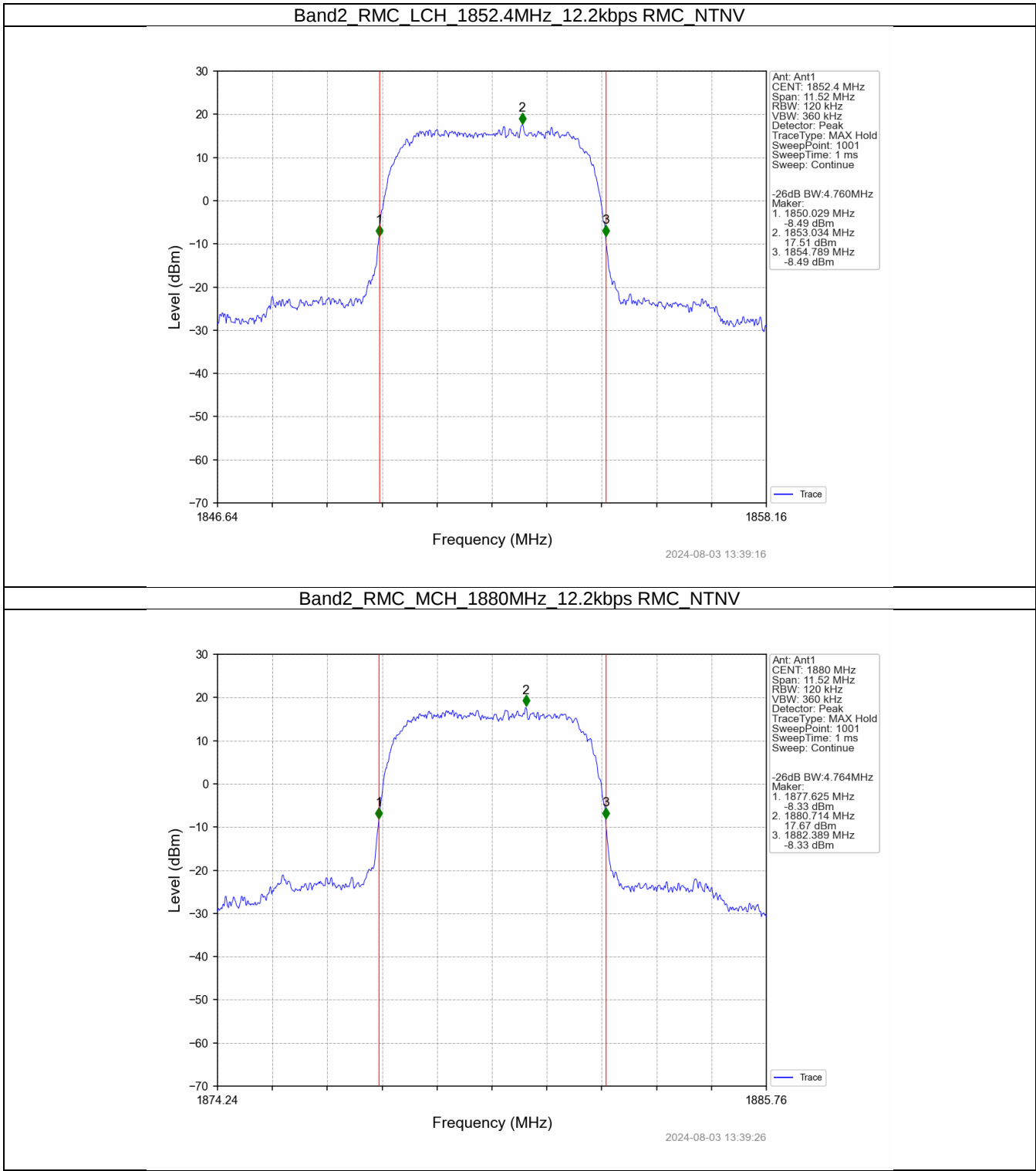


Band2 HSUPA HCH 1907.6MHz Subtest 1 NTV

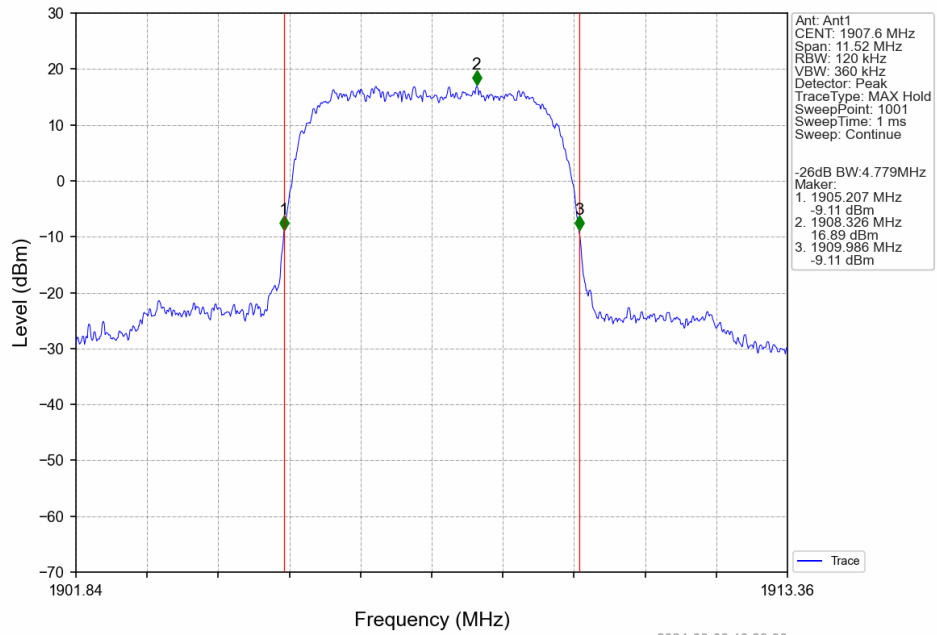


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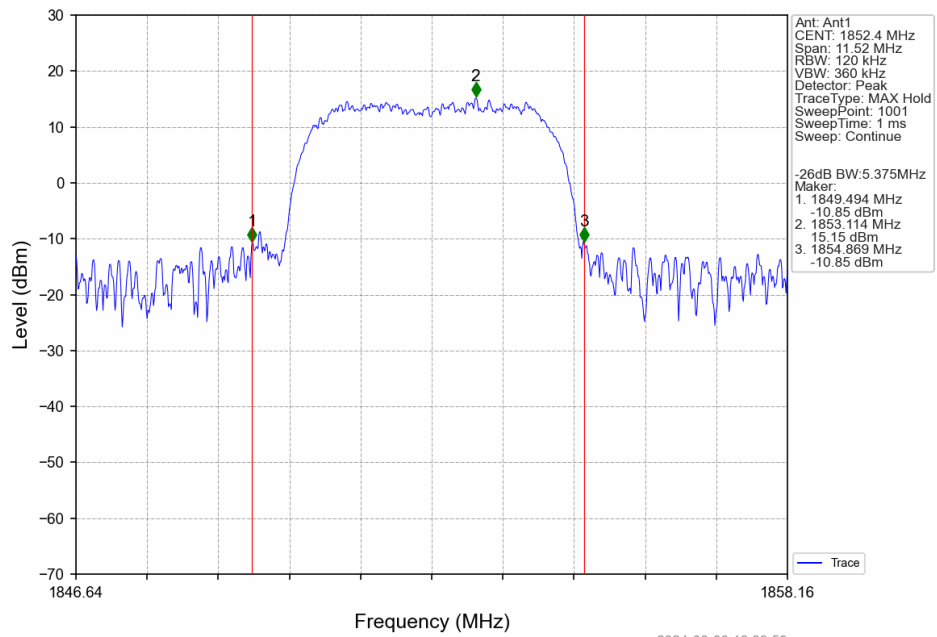
4.2.2 Band2_XDB



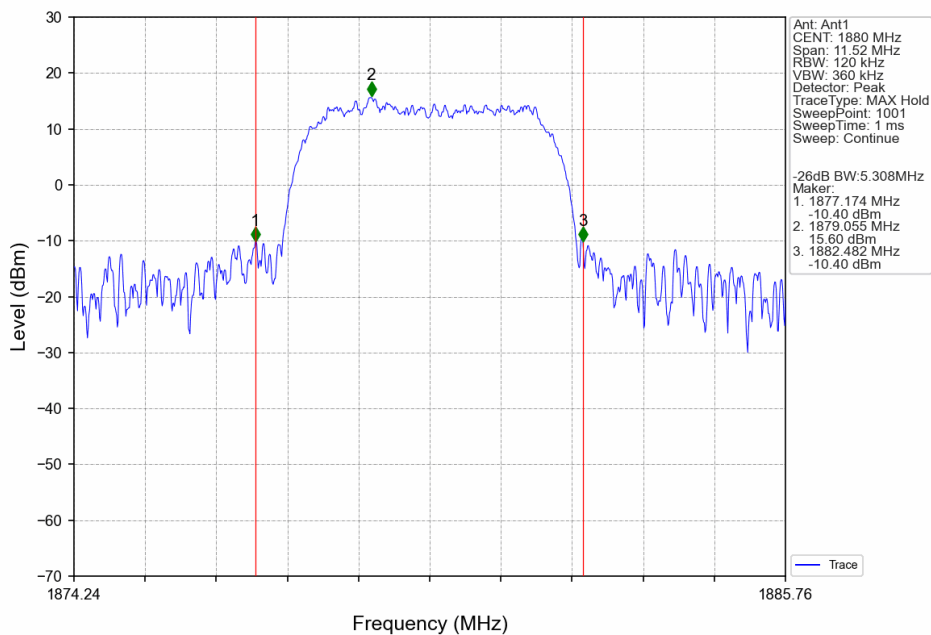
Band2 RMC HCH 1907.6MHz 12.2kbps RMC NTN



Band2 HSDPA LCH 1852.4MHz Subtest 1 NTN

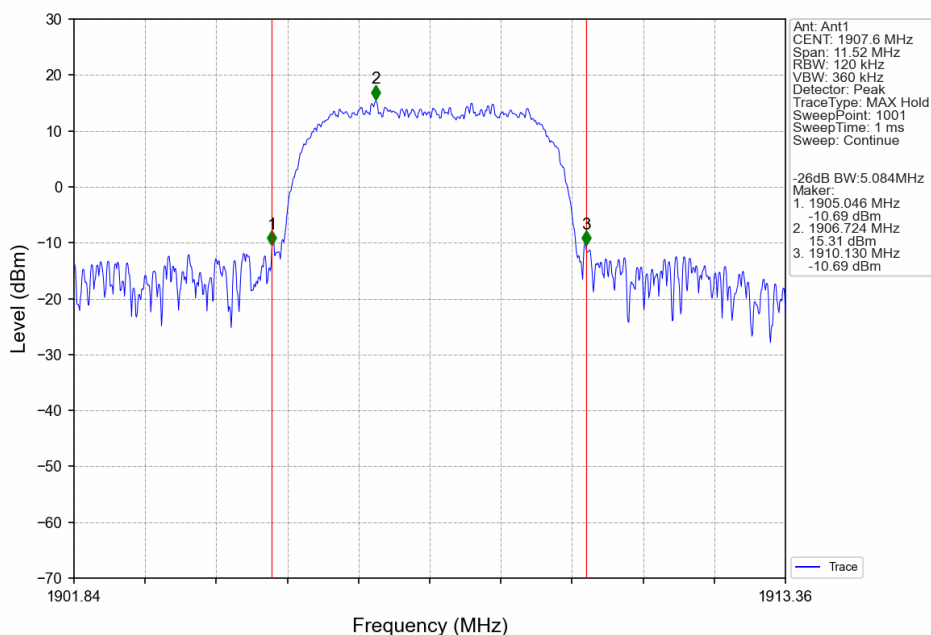


Band2 HSDPA MCH 1880MHz Subtest 1 NTN



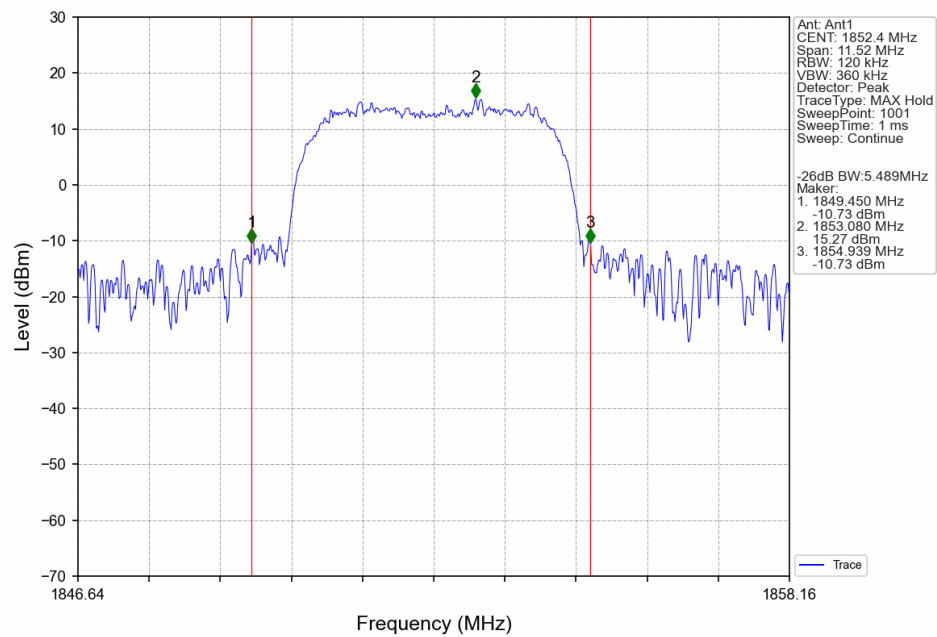
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Band2 HSDPA HCH 1907.6MHz Subtest 1 NTN

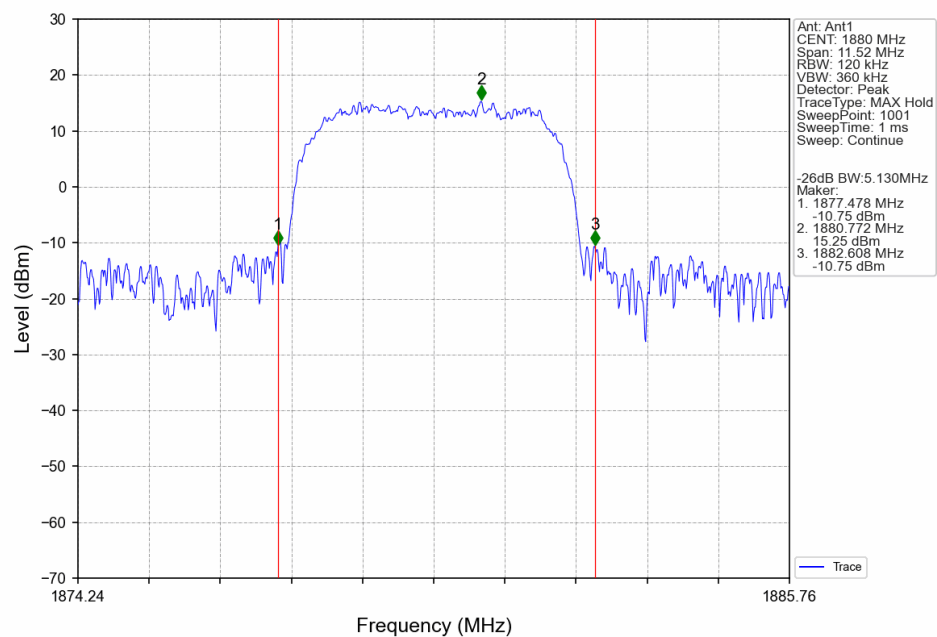


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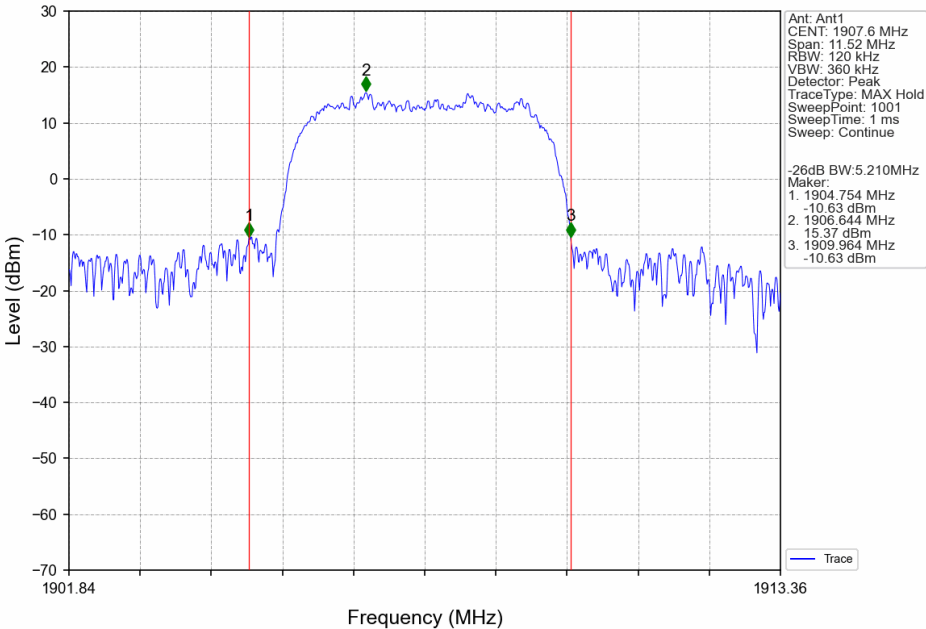
Band2 HSUPA LCH 1852.4MHz Subtest 1 NTN



Band2 HSUPA MCH 1880MHz Subtest 1 NTN



Band2 HSUPA HCH 1907.6MHz Subtest 1 NTNV



5. Peak-Average Ratio

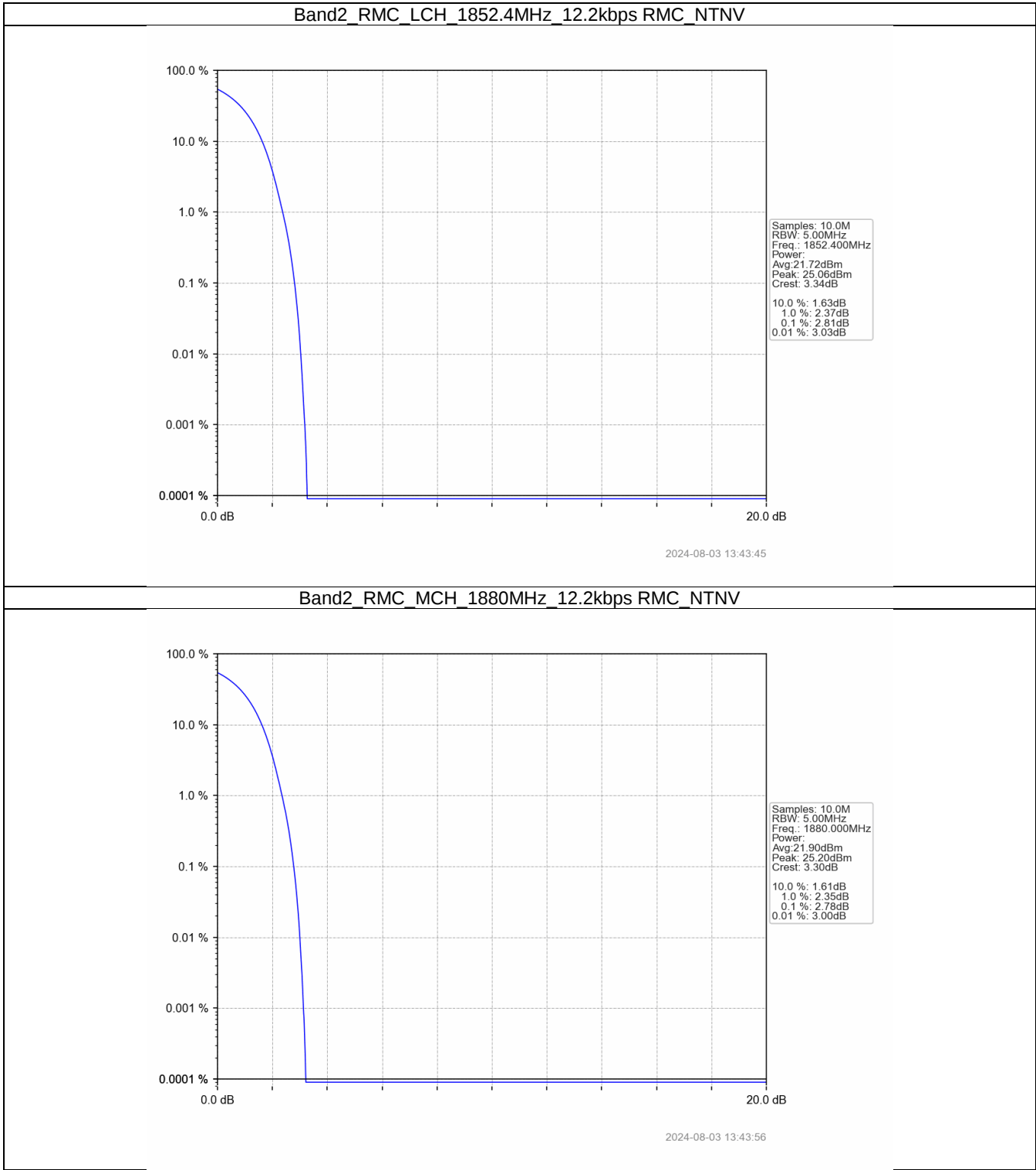
5.1 Test Result

5.1.1 Band2

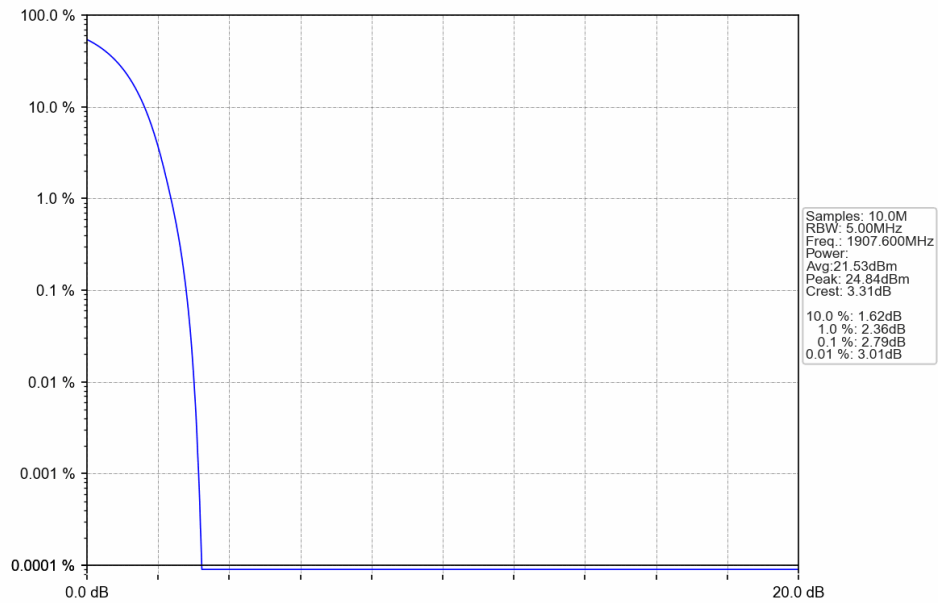
Band: 2						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	1852.4	2.81	<=13	Pass
			1880	2.78	<=13	Pass
			1907.6	2.79	<=13	Pass
	HSDPA	Subtest 1	1852.4	5.62	<=13	Pass
			1880	5.76	<=13	Pass
			1907.6	5.65	<=13	Pass
	HSUPA	Subtest 1	1852.4	5.76	<=13	Pass
			1880	5.77	<=13	Pass
			1907.6	5.81	<=13	Pass

5.2 Test Graph

5.2.1 Band2

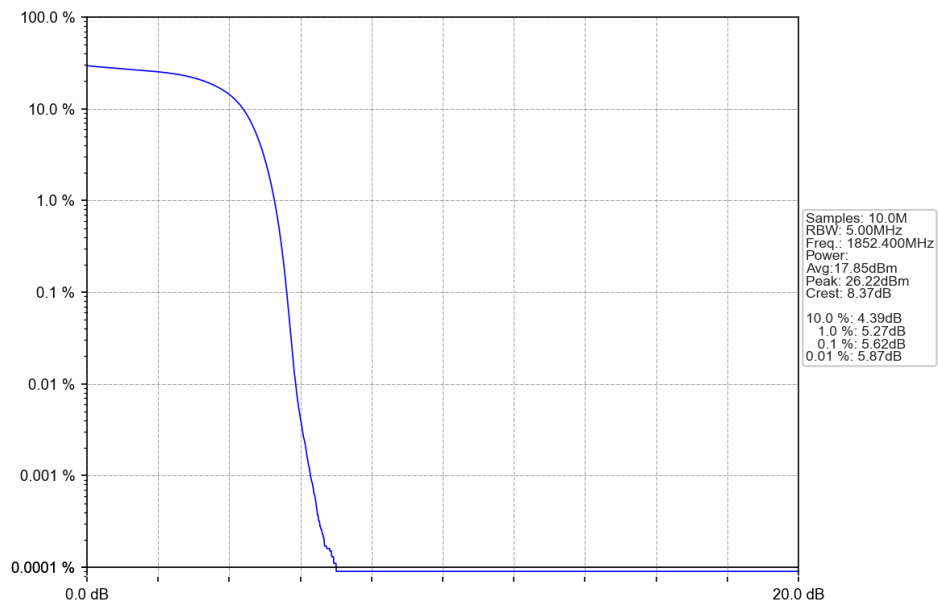


Band2 RMC HCH 1907.6MHz 12.2kbps RMC NTN



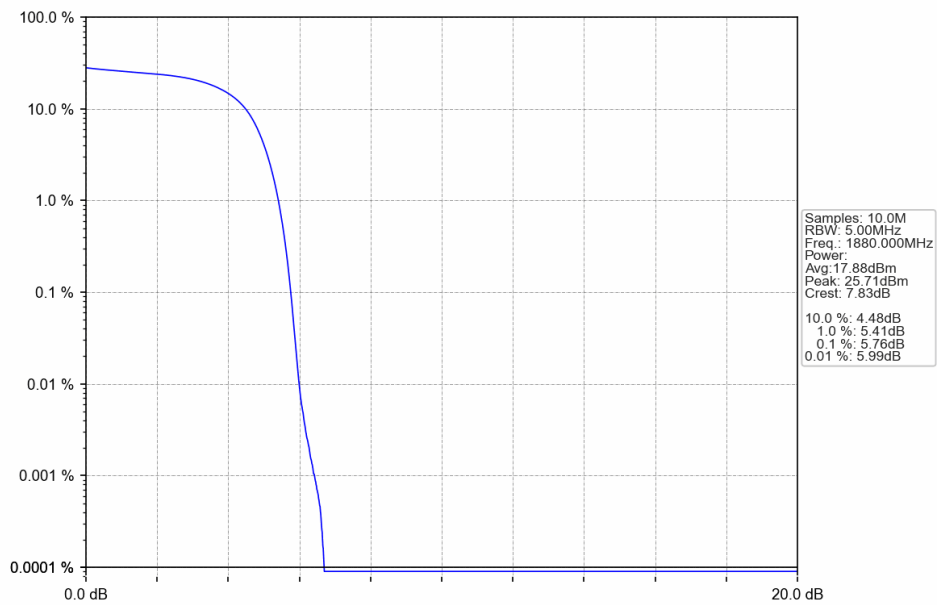
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Band2 HSDPA LCH 1852.4MHz Subtest 1 NTN



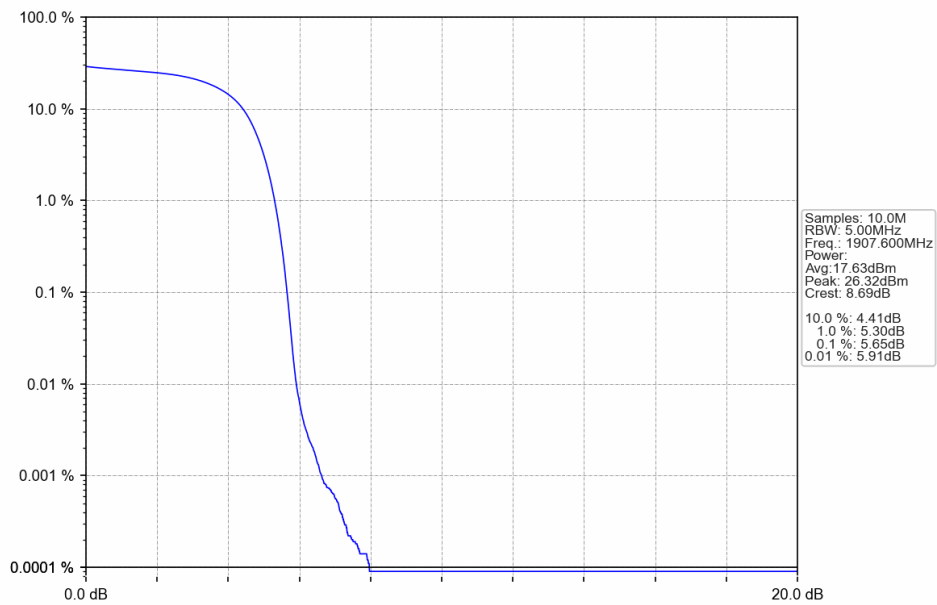
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Band2 HSDPA MCH 1880MHz Subtest 1 NTN



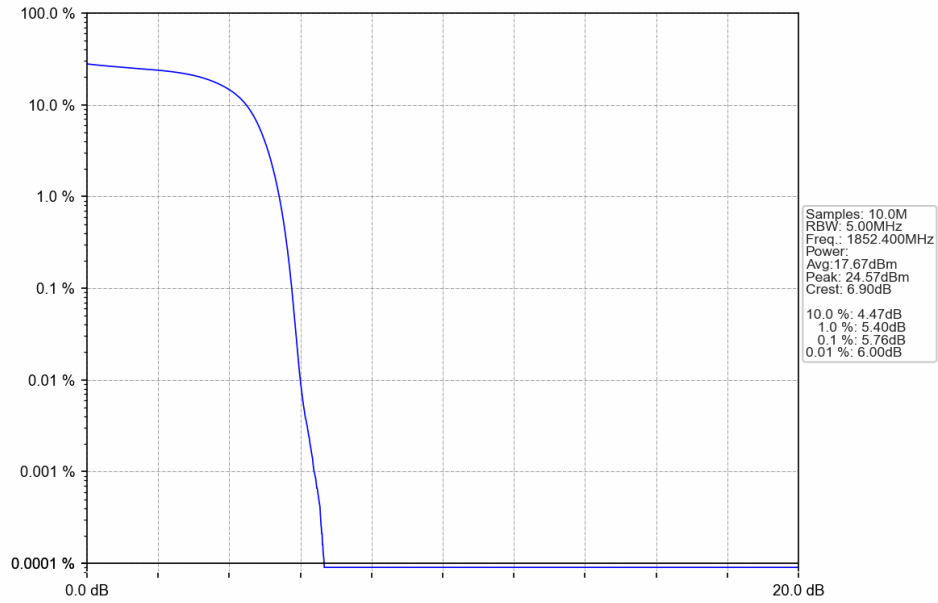
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Band2 HSDPA HCH 1907.6MHz Subtest 1 NTN



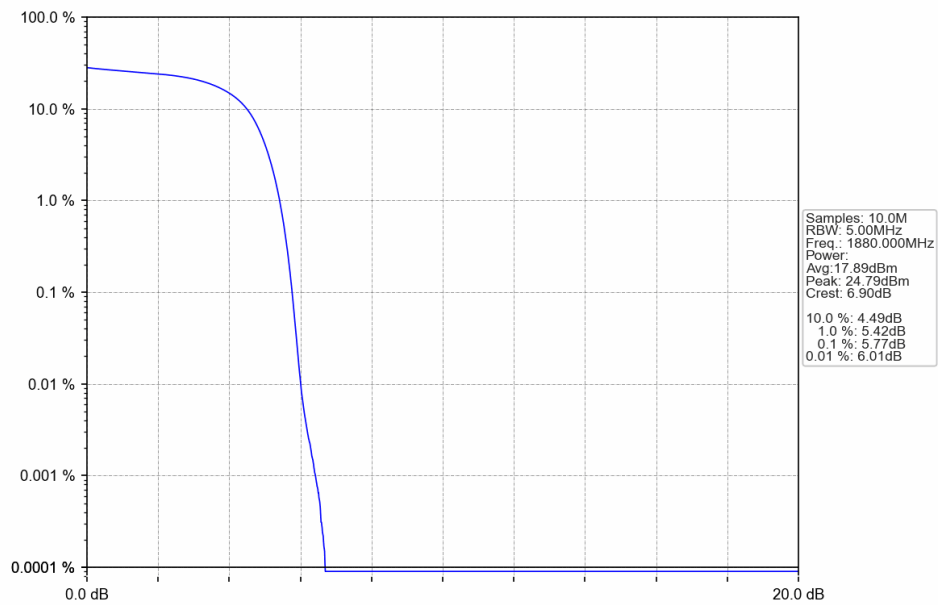
2024-08-03 13:44:58

Band2 HSUPA LCH 1852.4MHz Subtest 1 NTN



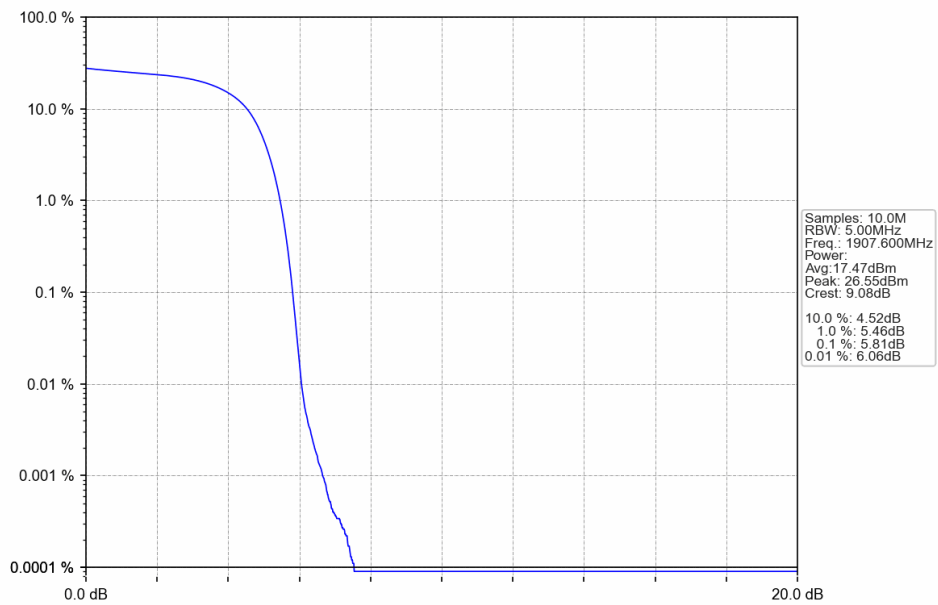
2024-08-03 13:45:10

Band2 HSUPA MCH 1880MHz Subtest 1 NTN



2024-08-03 13:45:22

Band2 HSUPA HCH 1907.6MHz Subtest 1 NTV



2024-08-03 13:45:36

6. Spurious Emission

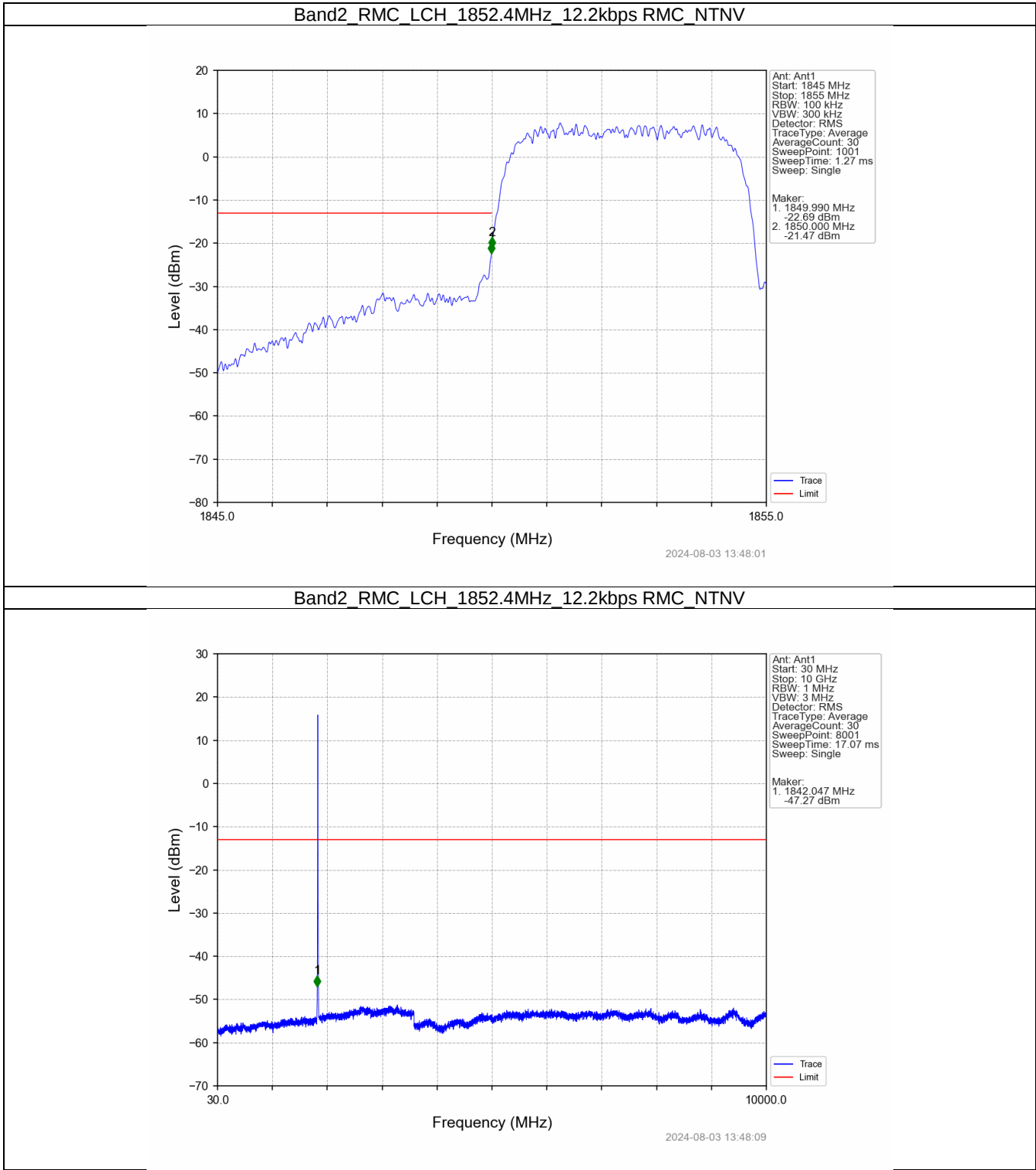
6.1 Test Result

6.1.1 Band2

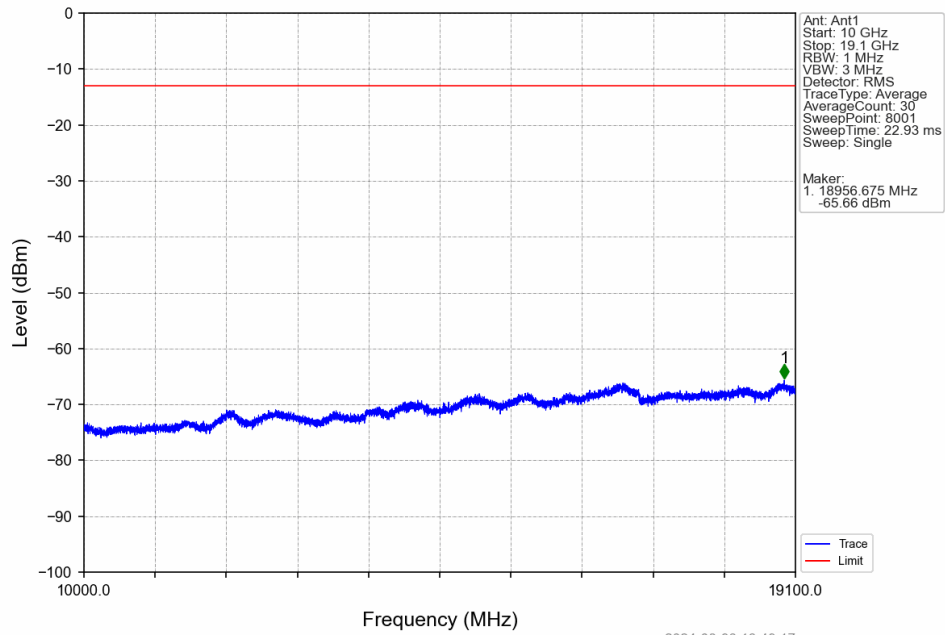
Band: 2					
ENV	Mode		Frequency (MHz)	Spurious Emission	
	Network	Subset		Result	Limit
NTNV	RMC	12.2kbps RMC	1852.4	Refer To Test Graph	Pass
			1880	Refer To Test Graph	Pass
			1907.6	Refer To Test Graph	Pass
	HSDPA	Subtest 1	1852.4	Refer To Test Graph	Pass
			1880	Refer To Test Graph	Pass
			1907.6	Refer To Test Graph	Pass
	HSUPA	Subtest 1	1852.4	Refer To Test Graph	Pass
			1880	Refer To Test Graph	Pass
			1907.6	Refer To Test Graph	Pass

6.2 Test Graph

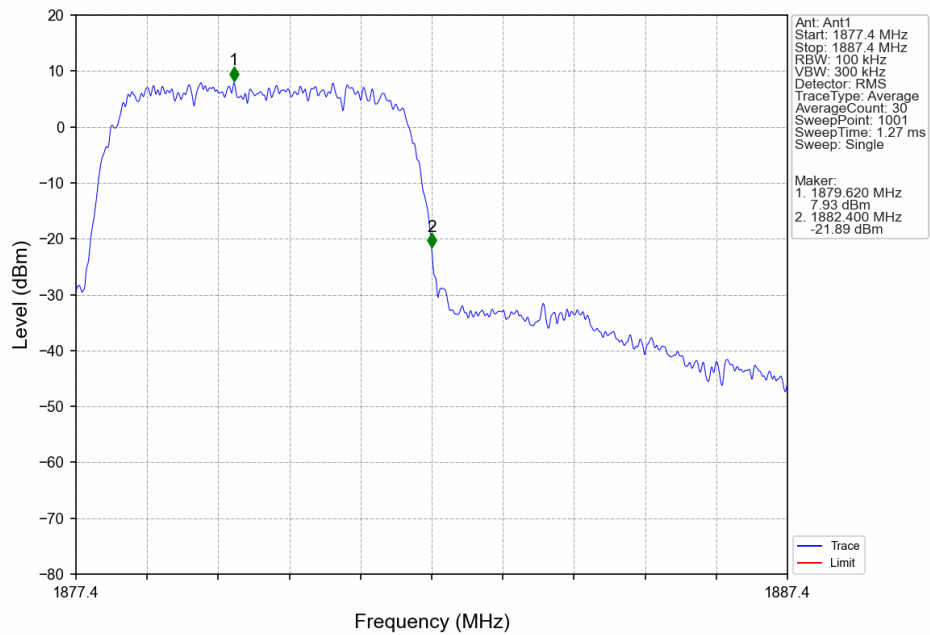
6.2.1 Band2



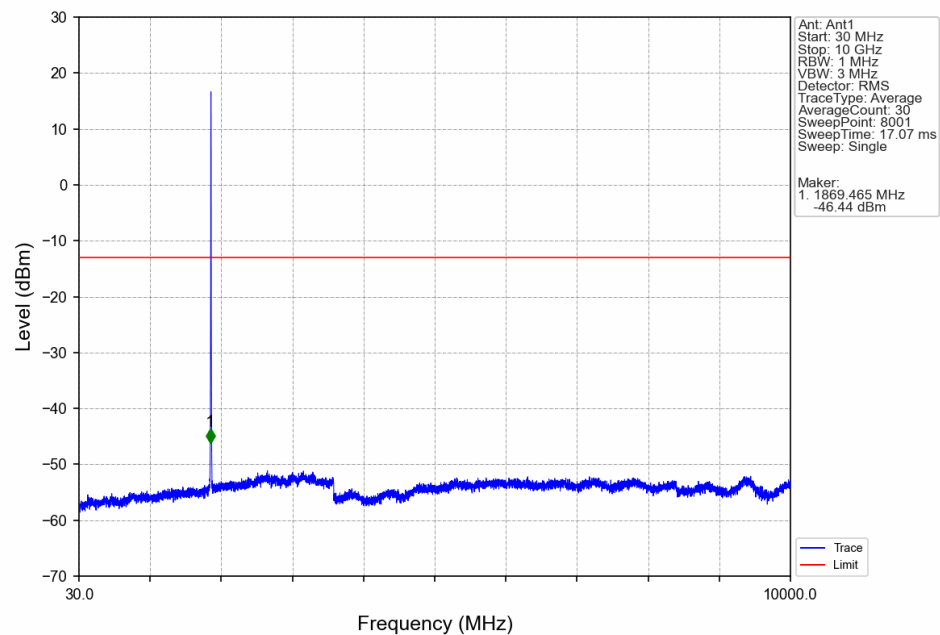
Band2_RMC_LCH_1852.4MHz_12.2kbps_RMC_NTNV



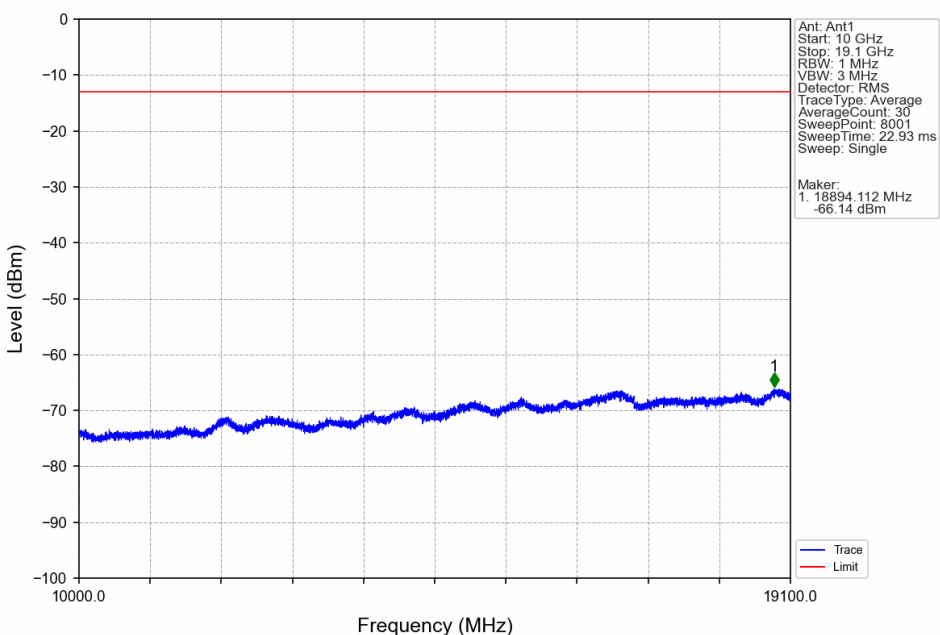
Band2_RMC_MCH_1880MHz_12.2kbps_RMC_NTNV



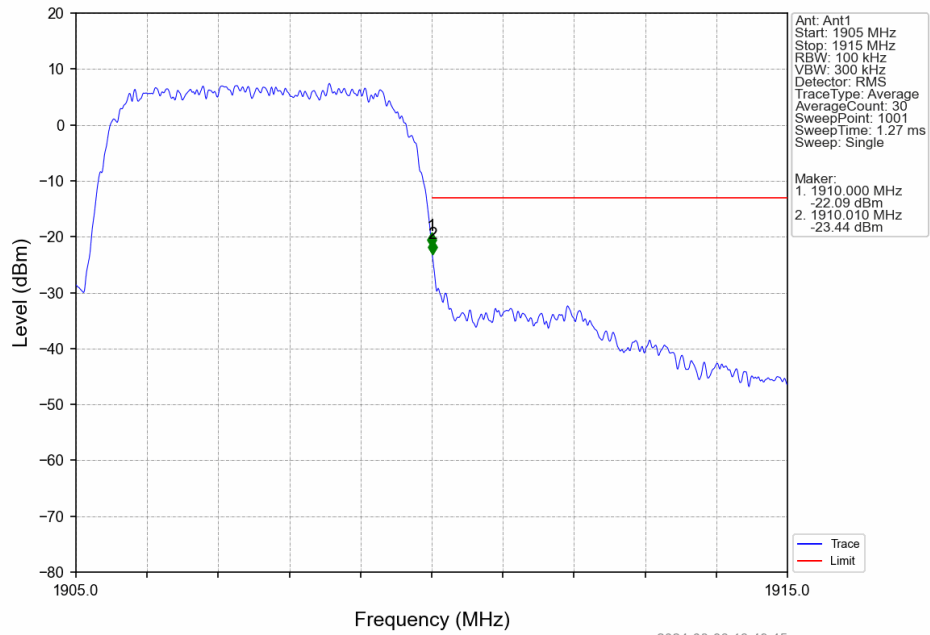
Band2 RMC MCH 1880MHz 12.2kbps RMC NTN



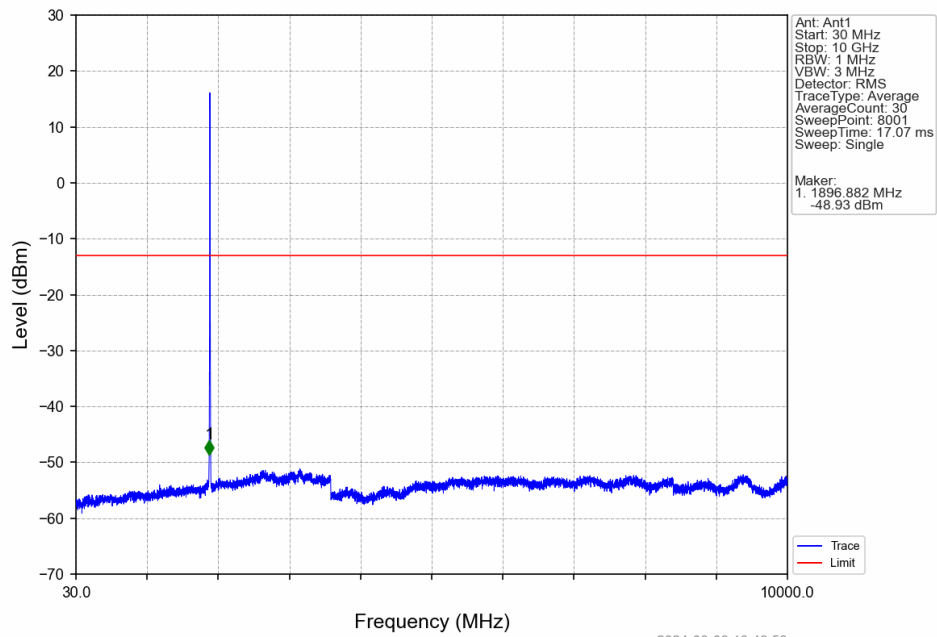
Band2 RMC MCH 1880MHz 12.2kbps RMC NTN



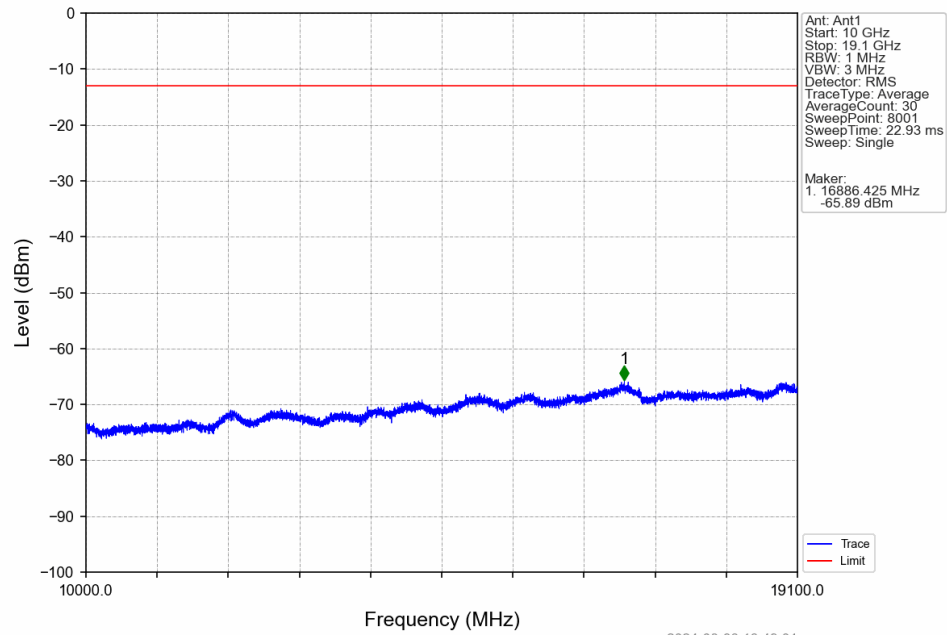
Band2 RMC HCH 1907.6MHz 12.2kbps RMC NTN



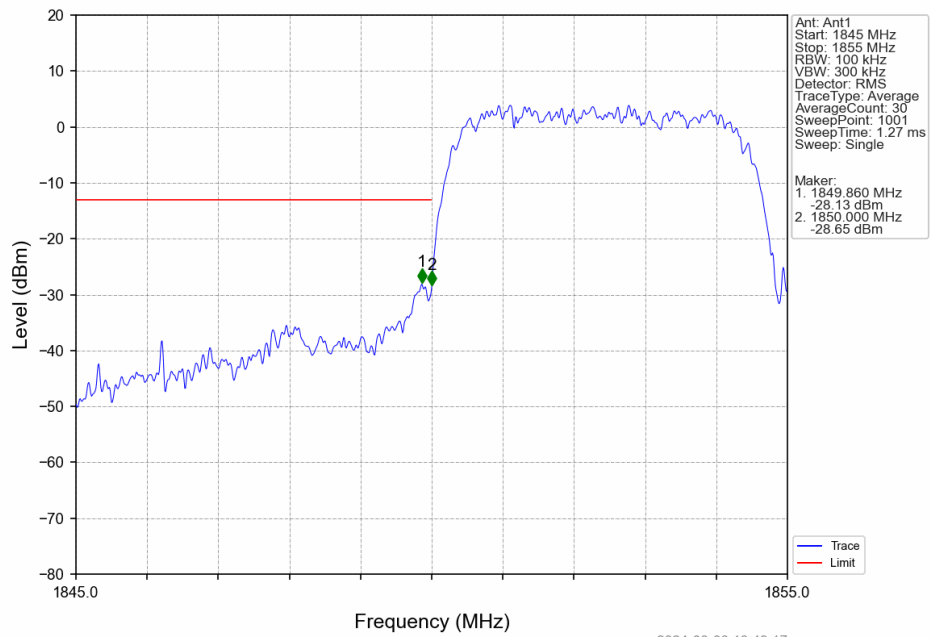
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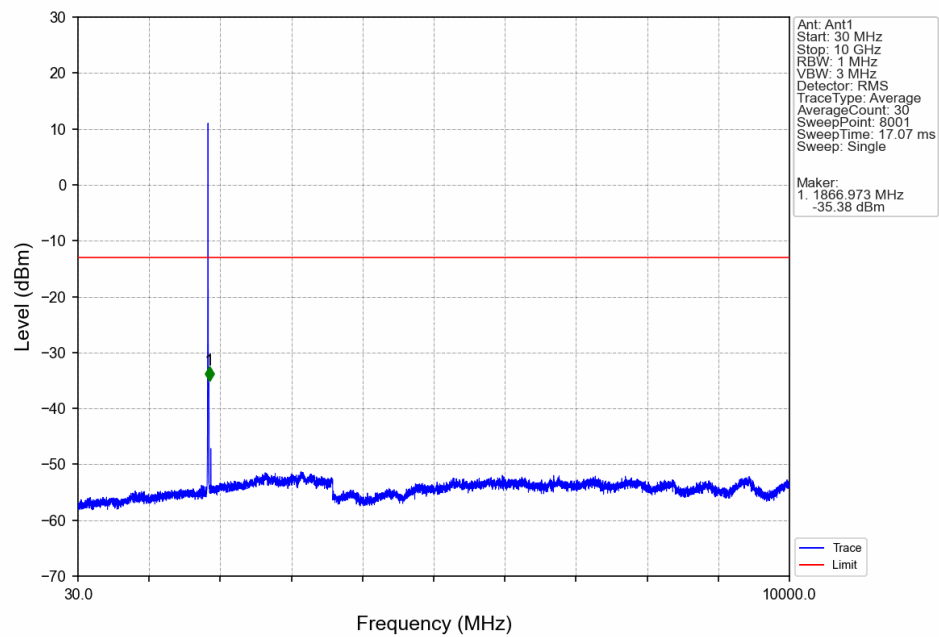
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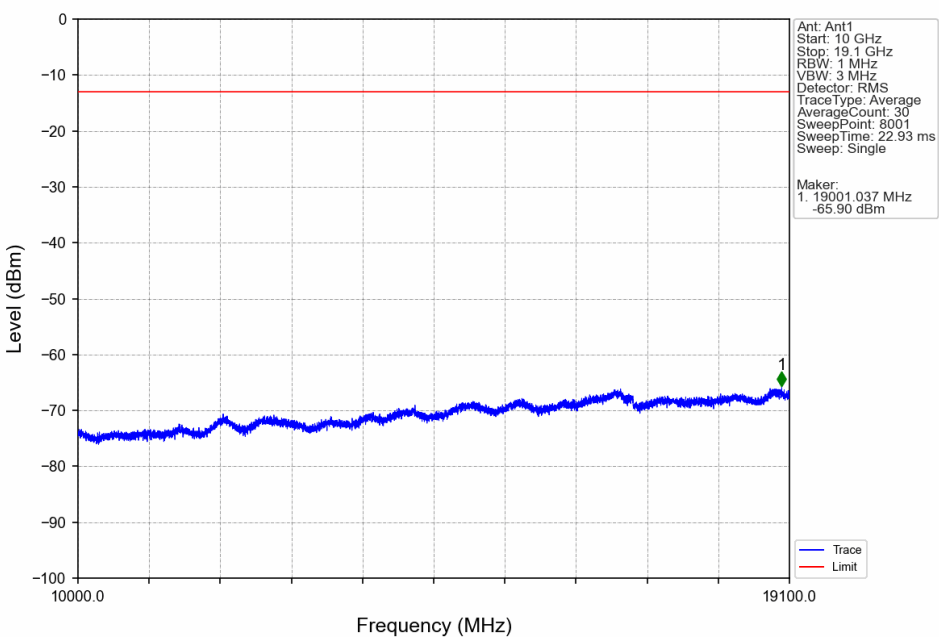
Band2 HSDPA LCH 1852.4MHz Subtest 1 NTN



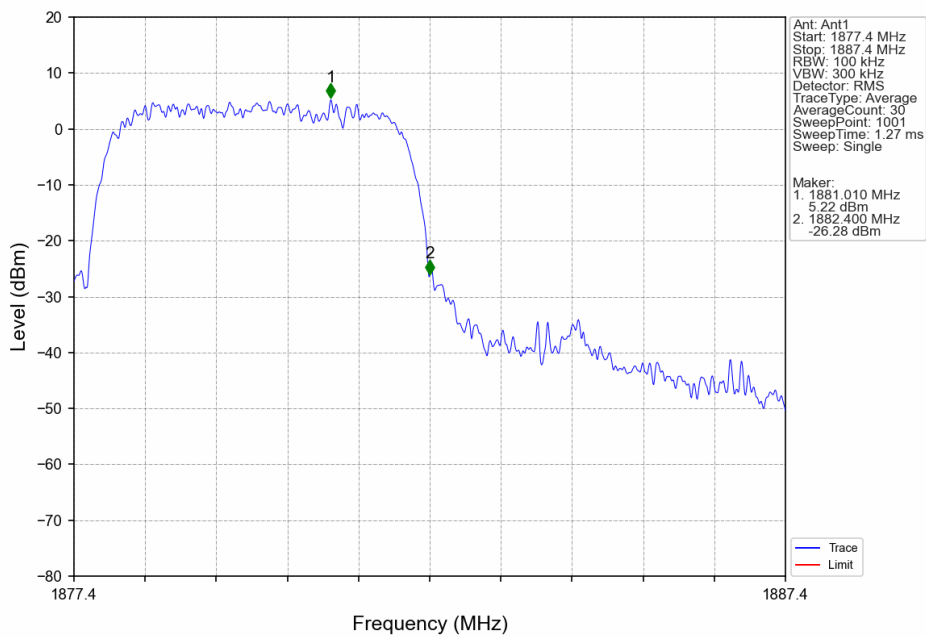
Band2 HSDPA LCH 1852.4MHz Subtest 1 NTN



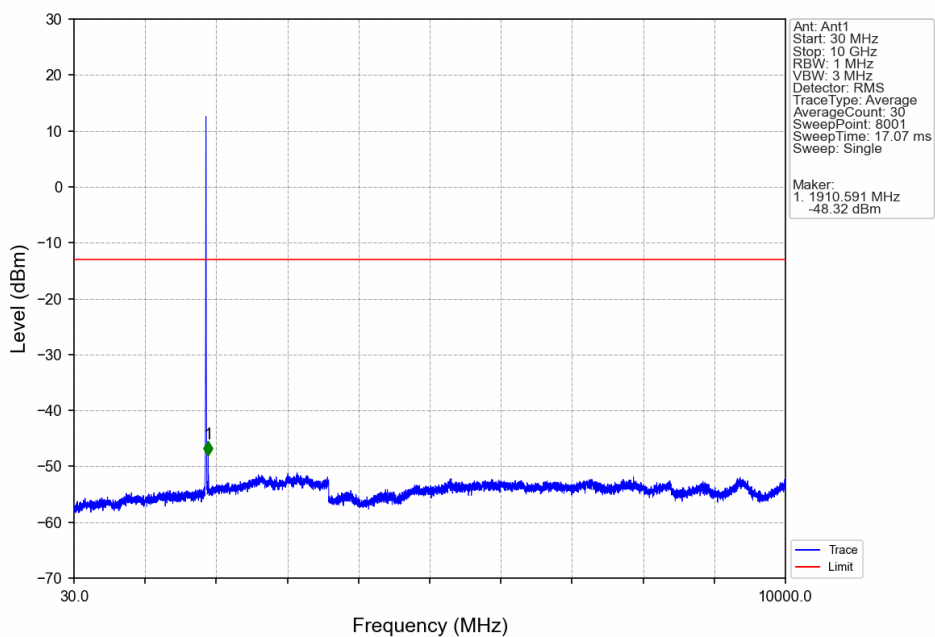
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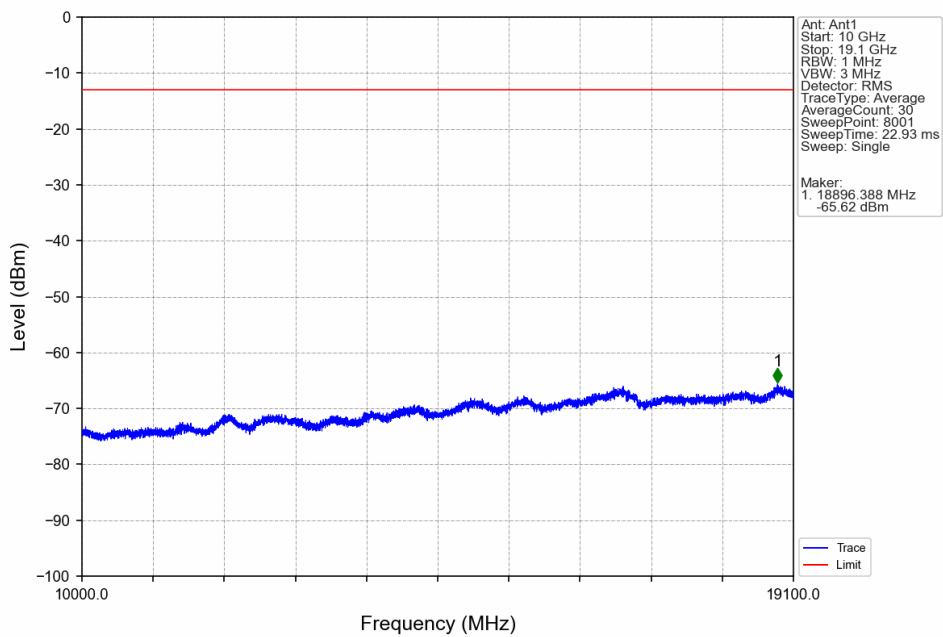
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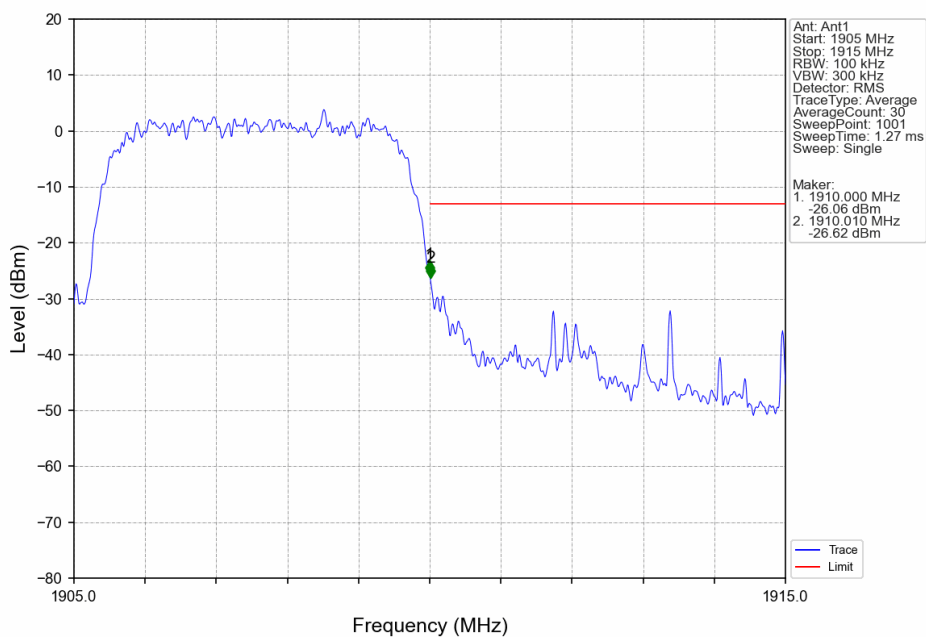
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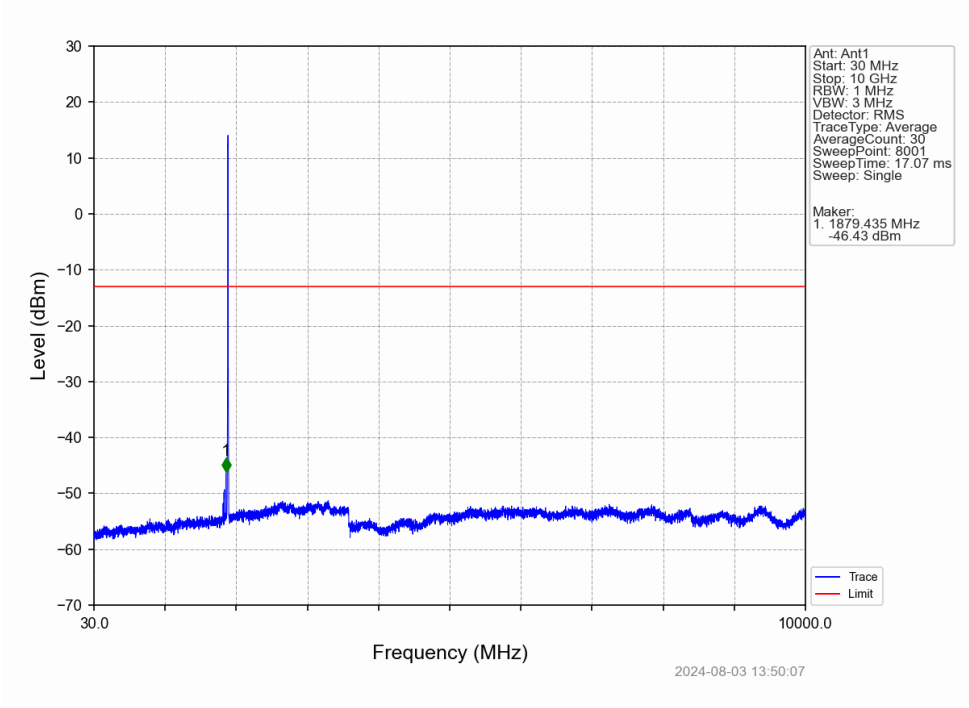
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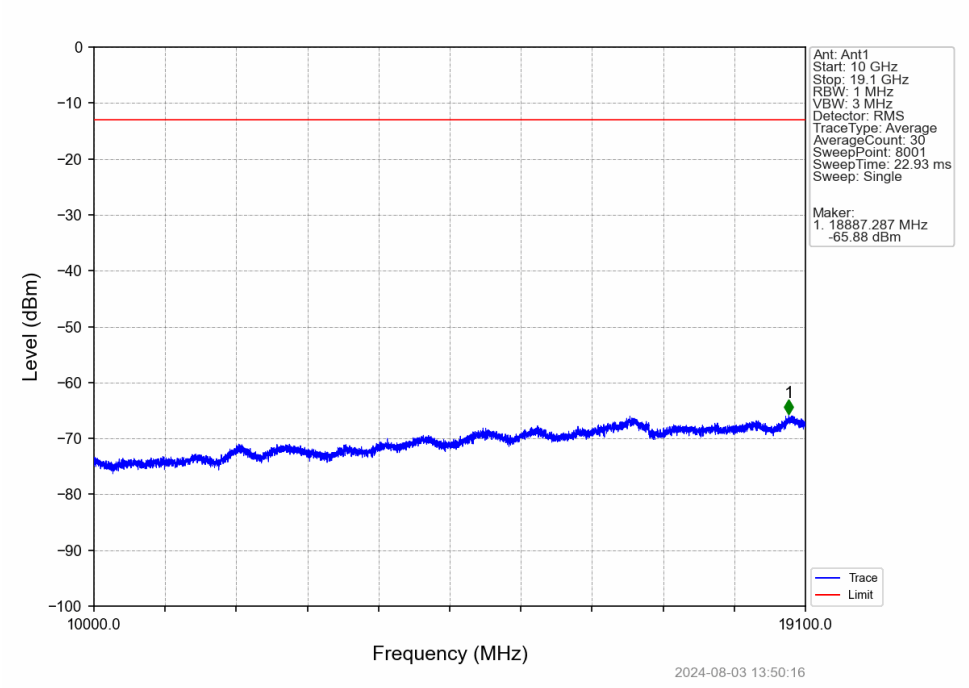
Band2 HSDPA HCH 1907.6MHz Subtest 1 NTN



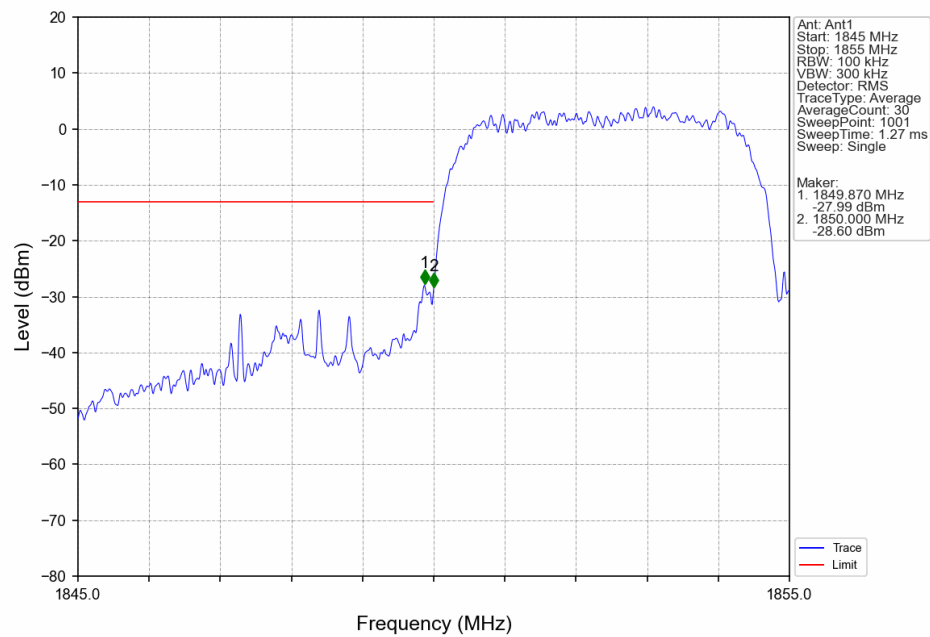
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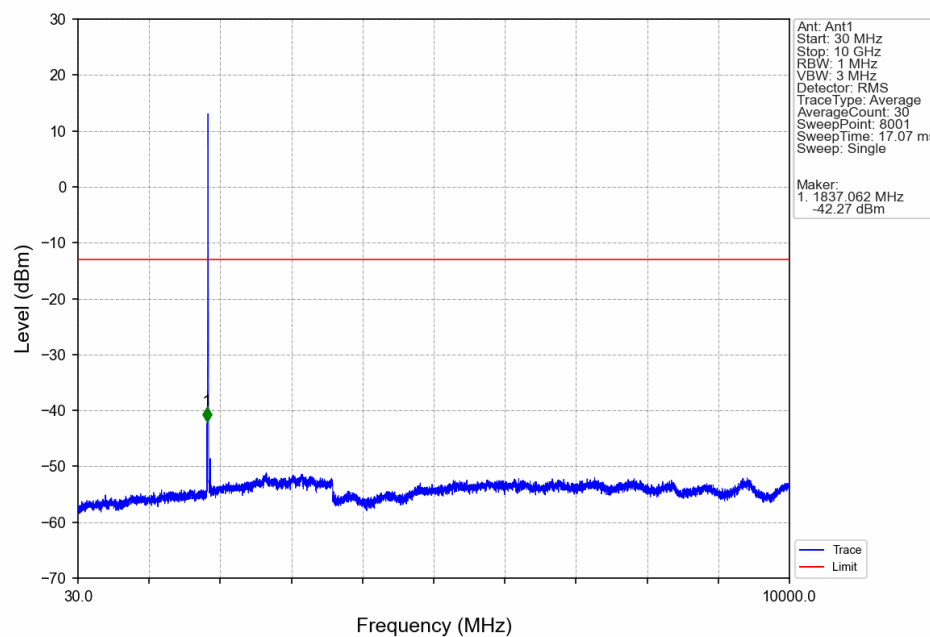
Band2 HSDPA HCH 1907.6MHz Subtest 1 NTN



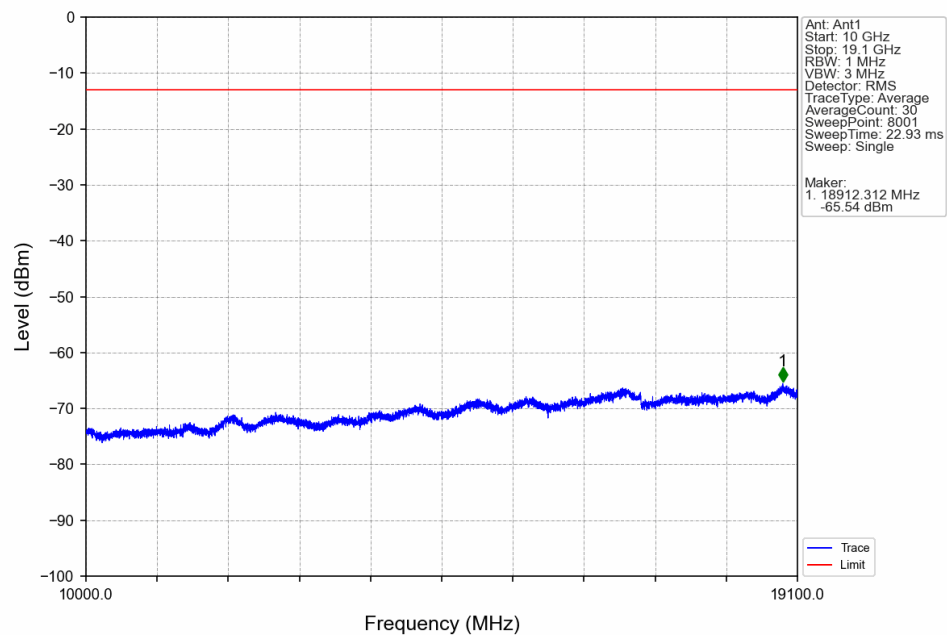
Band2 HSUPA LCH 1852.4MHz Subtest 1 NTN



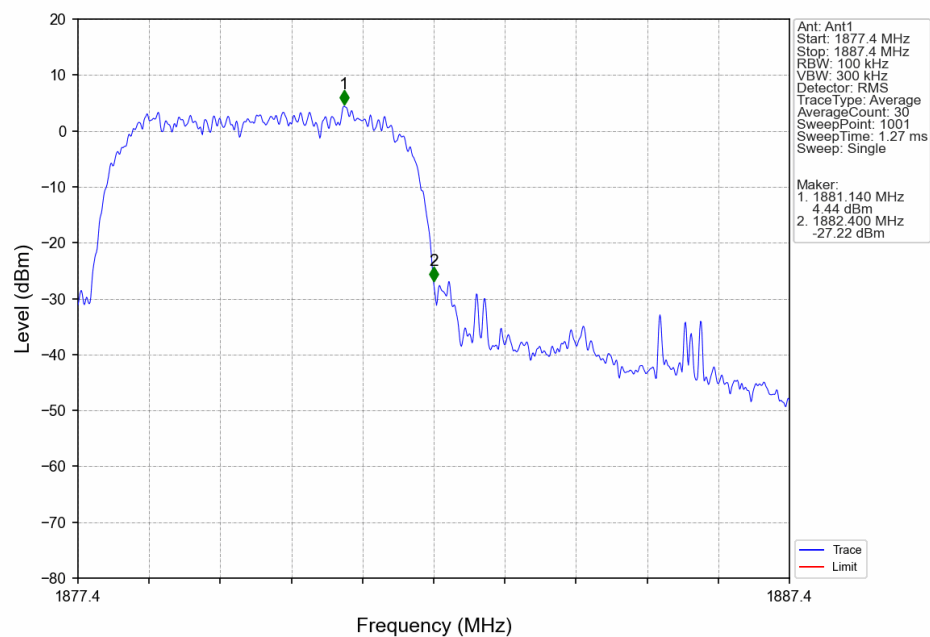
Band2 HSUPA LCH 1852.4MHz Subtest 1 NTN



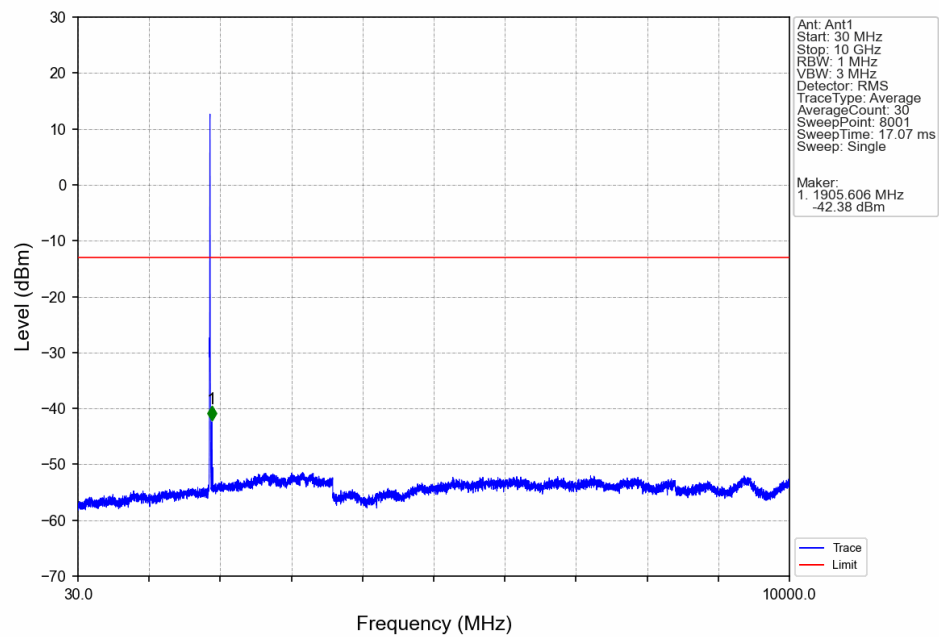
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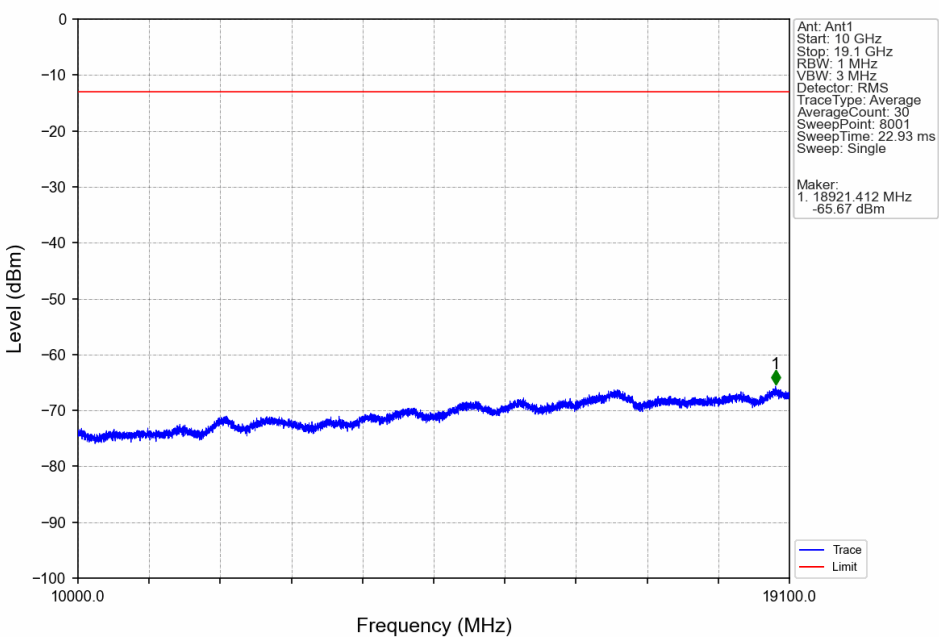
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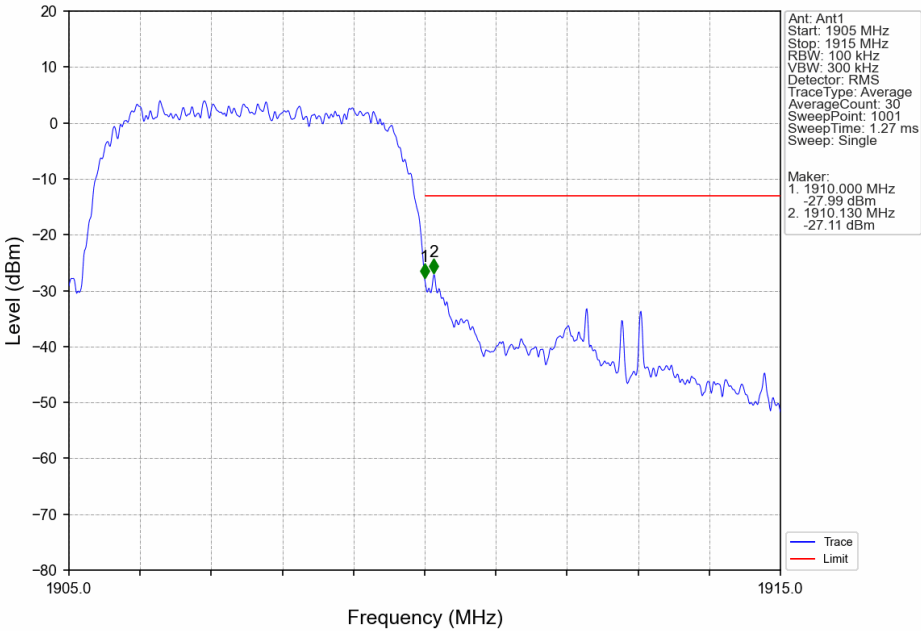
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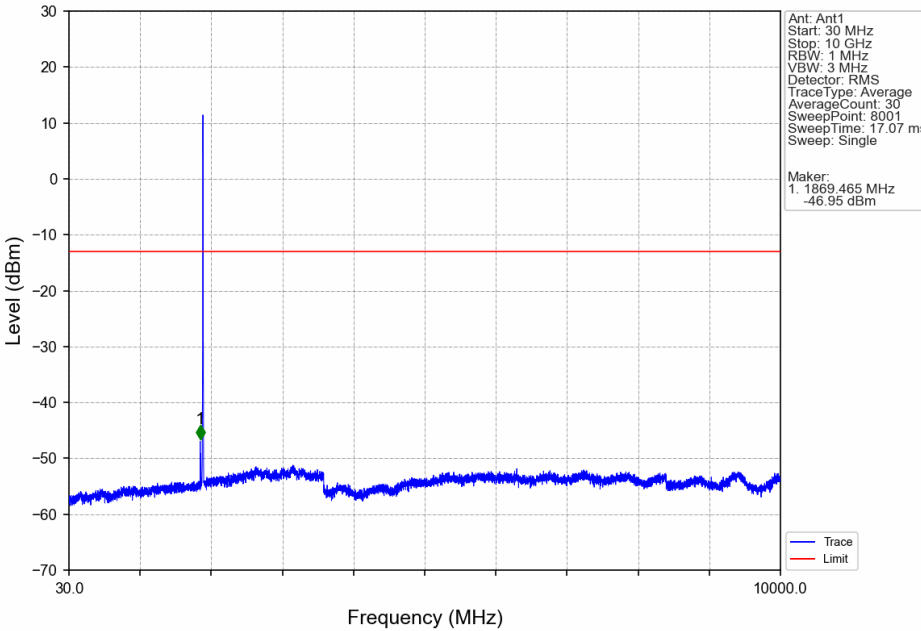
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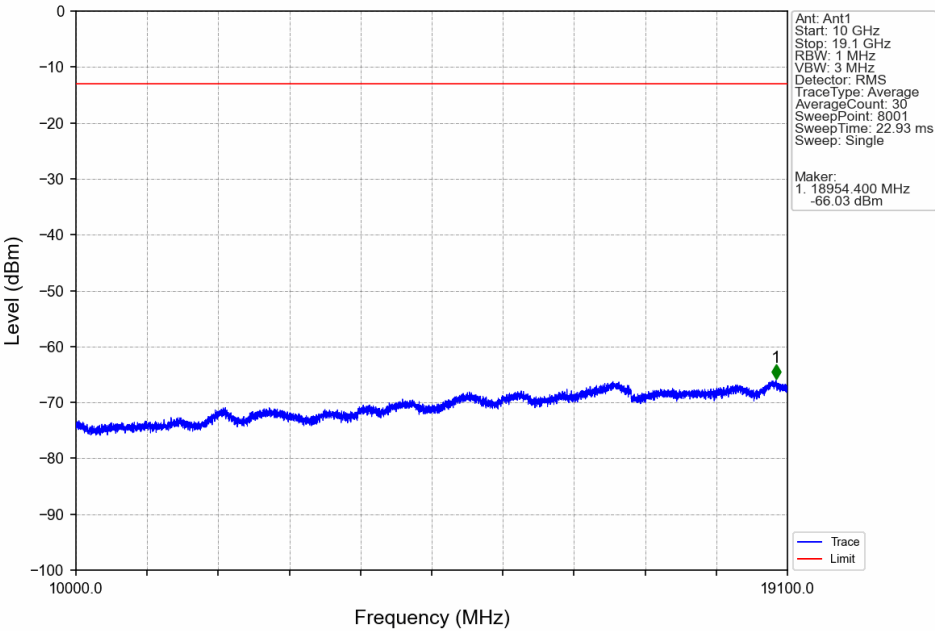
Band2 HSUPA HCH 1907.6MHz Subtest 1 NTN



Band2 HSUPA HCH 1907.6MHz Subtest 1 NTN



Band2 HSUPA HCH 1907.6MHz Subtest 1 NTN



7. Form731

7.1 Test Result

7.1.1 Form731_Power

Band	BW	Lower Freq	High Freq	MAX Power (W)	Value	Hz/ppm	Emission Designator	Rule Parts	MAX Power (dBm)
2	3.84	1852.4	1907.6	0.1422	0.0110	ppm	4M24F9W	24E	21.53

7.1.2 Form731_EIRP

Band	BW	Lower Freq	High Freq	MAX Power (W)	Value	Hz/ppm	Emission Designator	Rule Parts	MAX Power (dBm)
2	3.84	1852.4	1907.6	0.1754	0.0110	ppm	4M24F9W	24E	22.44