



Annex for WCDMA Band 4

Test Report No.: CTL2405163031-WF

TABLE OF CONTENTS

1. Effective (Isotropic) Radiated Power Output Data	3
1.1 Test Result	3
1.1.1 Band4_EIRP	3
2. Frequency Stability	3
2.1 Test Result	3
2.1.1 Band4	3
3. Modulation Characteristics.....	5
3.1 Test Result	5
3.1.1 Band4	5
3.2 Test Graph.....	7
3.2.1 Band4	7
4. 99% & 26dB Bandwidth	9
4.1 Test Result	9
4.1.1 Band4_OBW.....	9
4.1.2 Band4_XDB.....	9
4.2 Test Graph.....	10
4.2.1 Band4_OBW.....	10
4.2.2 Band4_XDB.....	15
5. Peak-Average Ratio.....	20
5.1 Test Result	20



5.1.1 Band4	20
5.2 Test Graph.....	21
5.2.1 Band4	21
6. Spurious Emission	26
6.1 Test Result	26
6.1.1 Band4	26
6.2 Test Graph.....	27
6.2.1 Band4	27

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1. Effective (Isotropic) Radiated Power Output Data

1.1 Test Result

1.1.1 Band4_EIRP

Band: 4								
ENV	Mode		Frequency (MHz)	Conducted Power (dBm)	Gain (dBi)	EIRP (dBm)		Verdict
	Network	Subset				Result	Limit	
NTNV	RMC	12.2kbps RMC	1712.4	23.24	1.96	25.20	<=30	Pass
			1732.6	22.77	1.96	24.73	<=30	Pass
			1752.6	22.99	1.96	24.95	<=30	Pass
	HSDPA	Subtest 1	1712.4	21.11	1.96	23.07	<=30	Pass
		Subtest 2	1712.4	21.03	1.96	22.99	<=30	Pass
		Subtest 3	1712.4	20.99	1.96	22.95	<=30	Pass
		Subtest 4	1712.4	21.28	1.96	23.24	<=30	Pass
		Subtest 1	1732.6	20.77	1.96	22.73	<=30	Pass
		Subtest 2	1732.6	20.79	1.96	22.75	<=30	Pass
		Subtest 3	1732.6	20.81	1.96	22.77	<=30	Pass
		Subtest 4	1732.6	20.85	1.96	22.81	<=30	Pass
		Subtest 1	1752.6	20.96	1.96	22.92	<=30	Pass
		Subtest 2	1752.6	20.98	1.96	22.94	<=30	Pass
		Subtest 3	1752.6	20.99	1.96	22.95	<=30	Pass
		Subtest 4	1752.6	21.03	1.96	22.99	<=30	Pass
	HSUPA	Subtest 1	1712.4	19.29	1.96	21.25	<=30	Pass
		Subtest 2	1712.4	19.44	1.96	21.40	<=30	Pass
		Subtest 3	1712.4	19.44	1.96	21.40	<=30	Pass
		Subtest 4	1712.4	19.07	1.96	21.03	<=30	Pass
		Subtest 5	1712.4	19.54	1.96	21.50	<=30	Pass
		Subtest 1	1732.6	18.59	1.96	20.55	<=30	Pass
		Subtest 2	1732.6	18.63	1.96	20.59	<=30	Pass
		Subtest 3	1732.6	18.63	1.96	20.59	<=30	Pass
		Subtest 4	1732.6	19.05	1.96	21.01	<=30	Pass
		Subtest 5	1732.6	18.62	1.96	20.58	<=30	Pass
		Subtest 1	1752.6	19.11	1.96	21.07	<=30	Pass
		Subtest 2	1752.6	19.30	1.96	21.26	<=30	Pass
		Subtest 3	1752.6	19.31	1.96	21.27	<=30	Pass
		Subtest 4	1752.6	18.83	1.96	20.79	<=30	Pass
		Subtest 5	1752.6	19.30	1.96	21.26	<=30	Pass

Note1: EIRP=Conducted Power+Antenna Gain

2. Frequency Stability

2.1 Test Result

2.1.1 Band4

Band: 4							
Network	Frequency (MHz)	Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
					Result	Limit	
RMC	1712.4	20	3.27	17.359	0.0101	-2.5 to 2.5	Pass

FCCID: 2BCUE-P8GLOBAL

			3.85	16.987	0.0099	-2.5 to 2.5	Pass
			4.43	18.239	0.0107	-2.5 to 2.5	Pass
		-30	3.85	17.624	0.0103	-2.5 to 2.5	Pass
		-20	3.85	18.039	0.0105	-2.5 to 2.5	Pass
		-10	3.85	17.402	0.0102	-2.5 to 2.5	Pass
		0	3.85	18.361	0.0107	-2.5 to 2.5	Pass
		10	3.85	17.817	0.0104	-2.5 to 2.5	Pass
		30	3.85	18.089	0.0106	-2.5 to 2.5	Pass
		40	3.85	17.867	0.0104	-2.5 to 2.5	Pass
		50	3.85	18.253	0.0107	-2.5 to 2.5	Pass
	1732.6	20	3.27	0.823	0.0005	-2.5 to 2.5	Pass
			3.85	0.522	0.0003	-2.5 to 2.5	Pass
			4.43	0.222	0.0001	-2.5 to 2.5	Pass
		-30	3.85	-0.229	-0.0001	-2.5 to 2.5	Pass
		-20	3.85	0.029	0.0000	-2.5 to 2.5	Pass
		-10	3.85	0.043	0.0000	-2.5 to 2.5	Pass
		0	3.85	0.064	0.0000	-2.5 to 2.5	Pass
		10	3.85	-0.300	-0.0002	-2.5 to 2.5	Pass
		30	3.85	0.093	0.0001	-2.5 to 2.5	Pass
		40	3.85	-0.207	-0.0001	-2.5 to 2.5	Pass
	50	3.85	0.265	0.0002	-2.5 to 2.5	Pass	
	1752.6	20	3.27	-16.265	-0.0093	-2.5 to 2.5	Pass
			3.85	-16.057	-0.0092	-2.5 to 2.5	Pass
			4.43	-16.830	-0.0096	-2.5 to 2.5	Pass
		-30	3.85	-16.251	-0.0093	-2.5 to 2.5	Pass
		-20	3.85	-16.465	-0.0094	-2.5 to 2.5	Pass
		-10	3.85	-16.158	-0.0092	-2.5 to 2.5	Pass
		0	3.85	-16.115	-0.0092	-2.5 to 2.5	Pass
		10	3.85	-16.658	-0.0095	-2.5 to 2.5	Pass
		30	3.85	-16.794	-0.0096	-2.5 to 2.5	Pass
		40	3.85	-16.294	-0.0093	-2.5 to 2.5	Pass
50	3.85	-16.394	-0.0094	-2.5 to 2.5	Pass		
HSDPA	1712.4	20	3.27	17.402	0.0102	-2.5 to 2.5	Pass
			3.85	17.123	0.0100	-2.5 to 2.5	Pass
			4.43	17.273	0.0101	-2.5 to 2.5	Pass
		-30	3.85	17.810	0.0104	-2.5 to 2.5	Pass
		-20	3.85	17.252	0.0101	-2.5 to 2.5	Pass
		-10	3.85	17.409	0.0102	-2.5 to 2.5	Pass
		0	3.85	18.117	0.0106	-2.5 to 2.5	Pass
		10	3.85	18.060	0.0105	-2.5 to 2.5	Pass
		30	3.85	17.002	0.0099	-2.5 to 2.5	Pass
		40	3.85	17.231	0.0101	-2.5 to 2.5	Pass
	50	3.85	17.753	0.0104	-2.5 to 2.5	Pass	
	1732.6	20	3.27	3.297	0.0019	-2.5 to 2.5	Pass
			3.85	2.797	0.0016	-2.5 to 2.5	Pass
			4.43	2.067	0.0012	-2.5 to 2.5	Pass
		-30	3.85	2.925	0.0017	-2.5 to 2.5	Pass
		-20	3.85	1.988	0.0011	-2.5 to 2.5	Pass
		-10	3.85	2.482	0.0014	-2.5 to 2.5	Pass
		0	3.85	2.661	0.0015	-2.5 to 2.5	Pass
		10	3.85	2.060	0.0012	-2.5 to 2.5	Pass
		30	3.85	2.983	0.0017	-2.5 to 2.5	Pass
		40	3.85	2.818	0.0016	-2.5 to 2.5	Pass
	50	3.85	2.575	0.0015	-2.5 to 2.5	Pass	
	1752.6	20	3.27	-12.839	-0.0073	-2.5 to 2.5	Pass
			3.85	-13.797	-0.0079	-2.5 to 2.5	Pass
			4.43	-13.669	-0.0078	-2.5 to 2.5	Pass

FCCID: 2BCUE-P8GLOBAL

		-30	3.85	-13.218	-0.0075	-2.5 to 2.5	Pass
		-20	3.85	-13.847	-0.0079	-2.5 to 2.5	Pass
		-10	3.85	-13.919	-0.0079	-2.5 to 2.5	Pass
		0	3.85	-13.039	-0.0074	-2.5 to 2.5	Pass
		10	3.85	-13.661	-0.0078	-2.5 to 2.5	Pass
		30	3.85	-14.319	-0.0082	-2.5 to 2.5	Pass
		40	3.85	-13.182	-0.0075	-2.5 to 2.5	Pass
		50	3.85	-14.019	-0.0080	-2.5 to 2.5	Pass
HSUPA	1712.4	20	3.27	16.336	0.0095	-2.5 to 2.5	Pass
			3.85	16.766	0.0098	-2.5 to 2.5	Pass
			4.43	17.517	0.0102	-2.5 to 2.5	Pass
		-30	3.85	16.072	0.0094	-2.5 to 2.5	Pass
			3.85	16.809	0.0098	-2.5 to 2.5	Pass
			3.85	16.572	0.0097	-2.5 to 2.5	Pass
		0	3.85	16.608	0.0097	-2.5 to 2.5	Pass
			3.85	16.665	0.0097	-2.5 to 2.5	Pass
			3.85	17.180	0.0100	-2.5 to 2.5	Pass
		40	3.85	16.952	0.0099	-2.5 to 2.5	Pass
			3.85	16.558	0.0097	-2.5 to 2.5	Pass
			3.85	16.558	0.0097	-2.5 to 2.5	Pass
	1732.6	20	3.27	-3.541	-0.0020	-2.5 to 2.5	Pass
			3.85	-4.041	-0.0023	-2.5 to 2.5	Pass
			4.43	-3.712	-0.0021	-2.5 to 2.5	Pass
		-30	3.85	-4.070	-0.0023	-2.5 to 2.5	Pass
			3.85	-4.284	-0.0025	-2.5 to 2.5	Pass
			3.85	-3.927	-0.0023	-2.5 to 2.5	Pass
		0	3.85	-3.562	-0.0021	-2.5 to 2.5	Pass
			3.85	-3.655	-0.0021	-2.5 to 2.5	Pass
			3.85	-3.633	-0.0021	-2.5 to 2.5	Pass
		40	3.85	-3.927	-0.0023	-2.5 to 2.5	Pass
			3.85	-5.336	-0.0031	-2.5 to 2.5	Pass
			3.85	-5.336	-0.0031	-2.5 to 2.5	Pass
	1752.6	20	3.27	-20.471	-0.0117	-2.5 to 2.5	Pass
			3.85	-20.628	-0.0118	-2.5 to 2.5	Pass
			4.43	-19.970	-0.0114	-2.5 to 2.5	Pass
		-30	3.85	-20.707	-0.0118	-2.5 to 2.5	Pass
			3.85	-19.963	-0.0114	-2.5 to 2.5	Pass
			3.85	-20.592	-0.0117	-2.5 to 2.5	Pass
		0	3.85	-21.257	-0.0121	-2.5 to 2.5	Pass
			3.85	-19.834	-0.0113	-2.5 to 2.5	Pass
			3.85	-21.522	-0.0123	-2.5 to 2.5	Pass
		40	3.85	-20.542	-0.0117	-2.5 to 2.5	Pass
			3.85	-19.755	-0.0113	-2.5 to 2.5	Pass
			3.85	-19.755	-0.0113	-2.5 to 2.5	Pass

3. Modulation Characteristics

3.1 Test Result

3.1.1 Band4

Band: 4						
ENV	Mode		Frequency (MHz)	Modulation Characteristics		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	1732.6	Refer To Test Graph		Pass
	HSDPA	Subtest 1	1732.6	Refer To Test Graph		Pass
	HSUPA	Subtest 1	1732.6	Refer To Test Graph		Pass

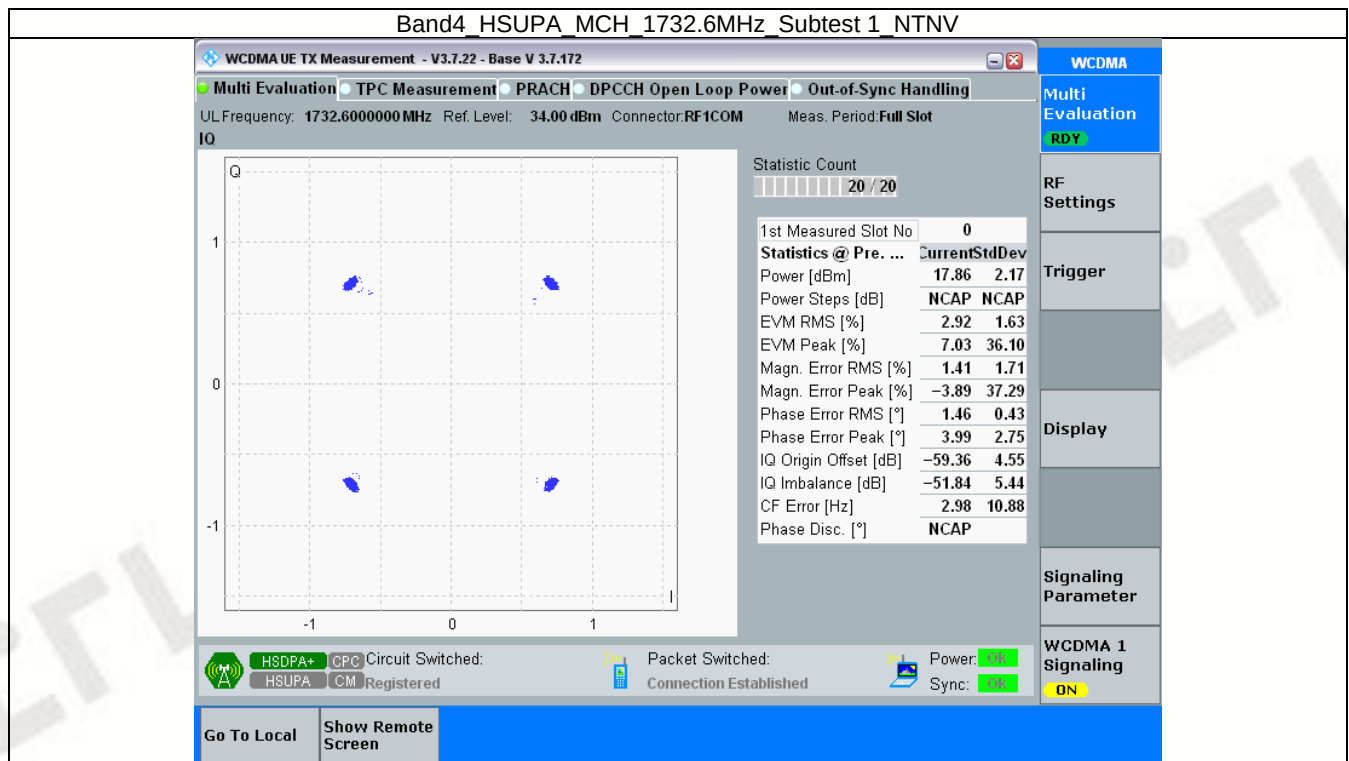
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3.2 Test Graph

3.2.1 Band4



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4. 99% & 26dB Bandwidth

4.1 Test Result

4.1.1 Band4_OBW

Band: 4						
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	1712.4	4.135	/	Pass
			1732.6	4.129	/	Pass
			1752.6	4.133	/	Pass
	HSDPA	Subtest 1	1712.4	4.139	/	Pass
			1732.6	4.143	/	Pass
			1752.6	4.140	/	Pass
	HSUPA	Subtest 1	1712.4	4.156	/	Pass
			1732.6	4.149	/	Pass
			1752.6	4.140	/	Pass

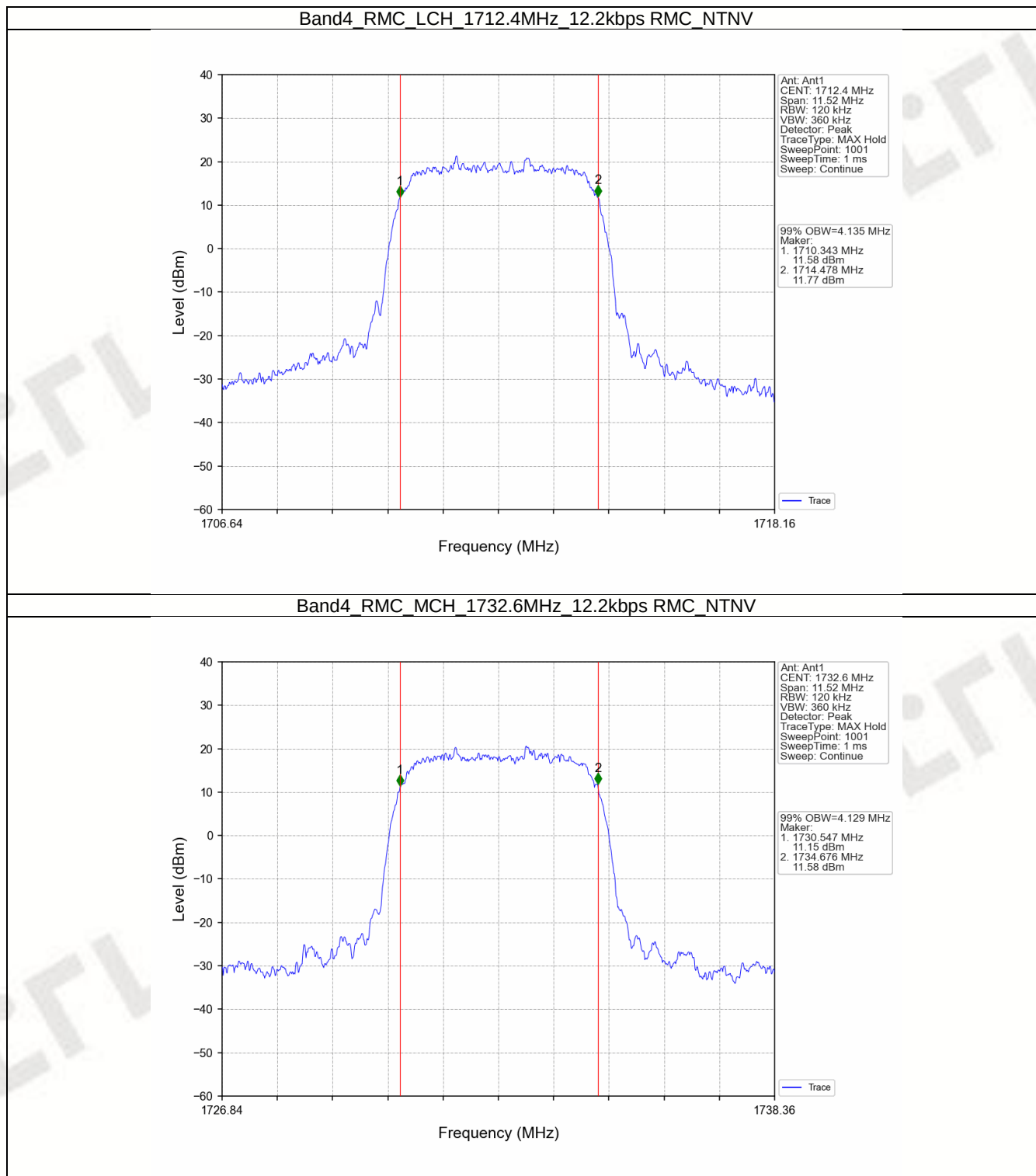
4.1.2 Band4_XDB

Band: 4						
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	1712.4	4.727	/	Pass
			1732.6	4.711	/	Pass
			1752.6	4.750	/	Pass
	HSDPA	Subtest 1	1712.4	4.749	/	Pass
			1732.6	4.722	/	Pass
			1752.6	4.738	/	Pass
	HSUPA	Subtest 1	1712.4	4.747	/	Pass
			1732.6	4.718	/	Pass
			1752.6	4.730	/	Pass

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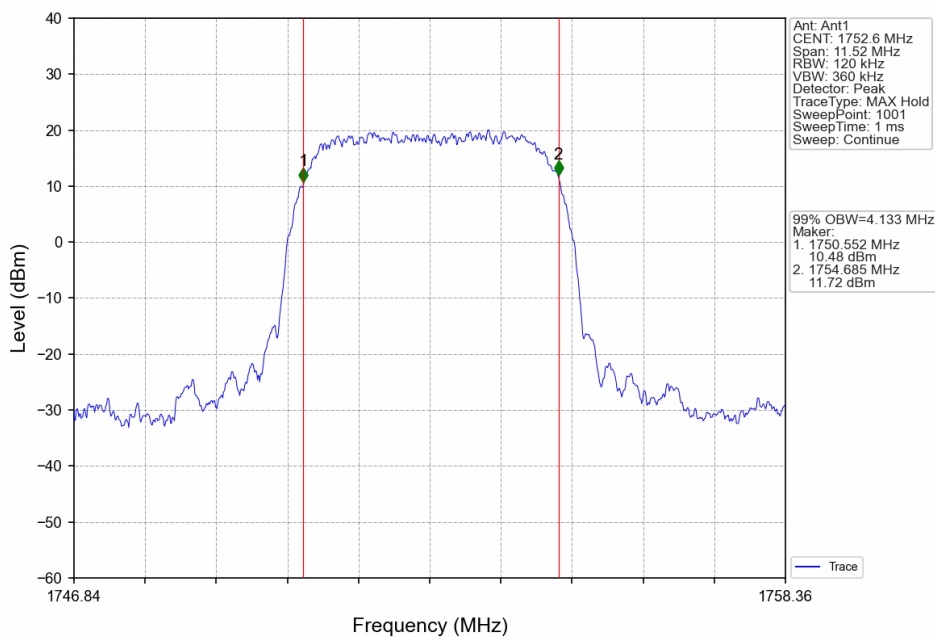
4.2 Test Graph

4.2.1 Band4_OBW

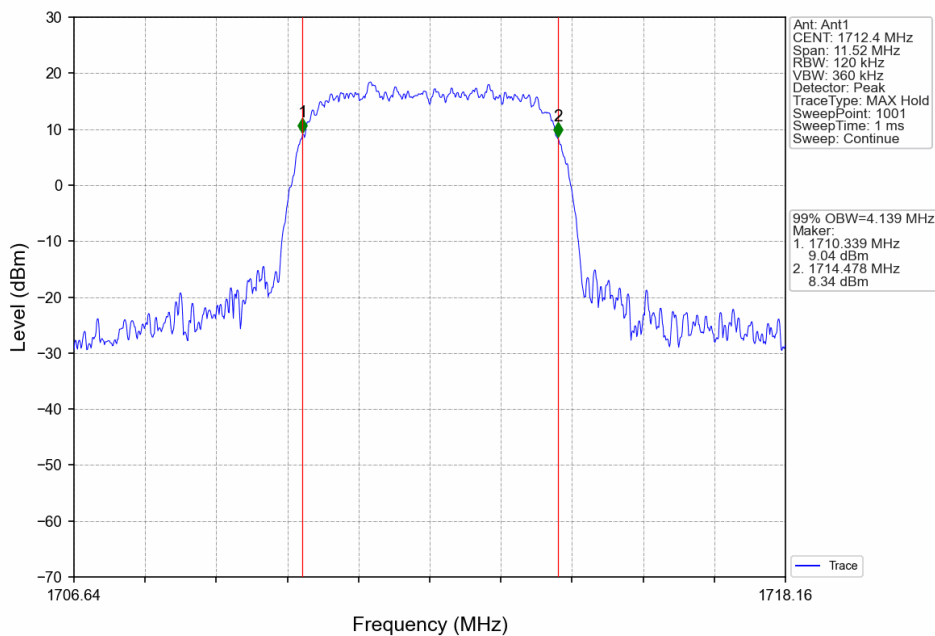


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Band4_RMC_HCH_1752.6MHz_12.2kbps_RMC_NTNV

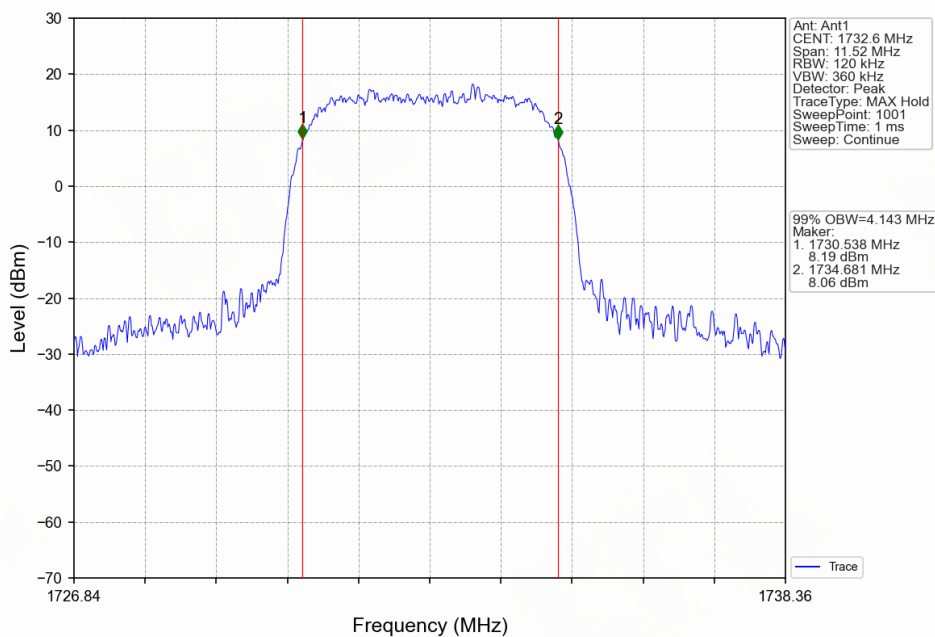


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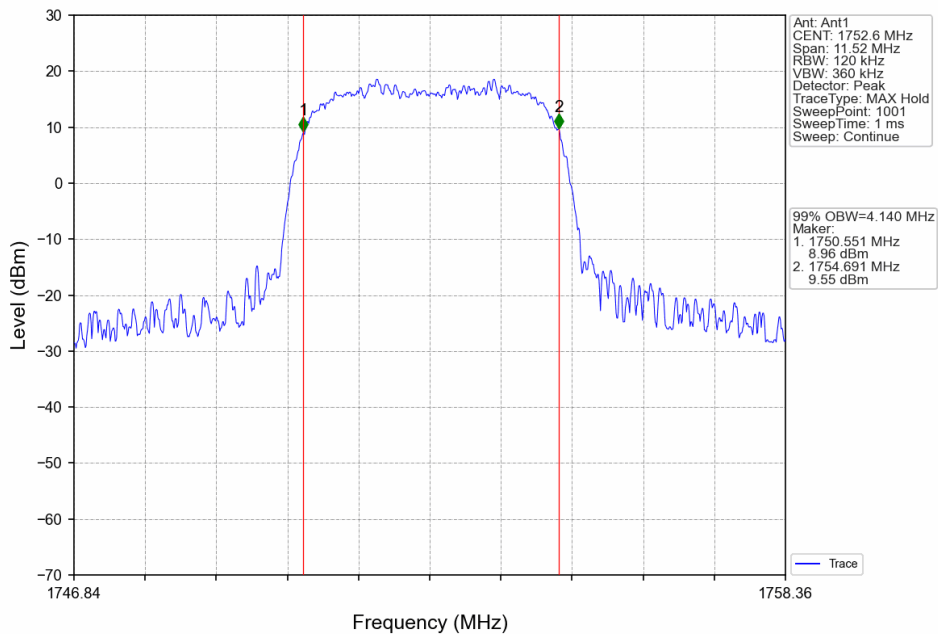


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Band4_HSDPA_MCH_1732.6MHz_Subtest 1_NTNV

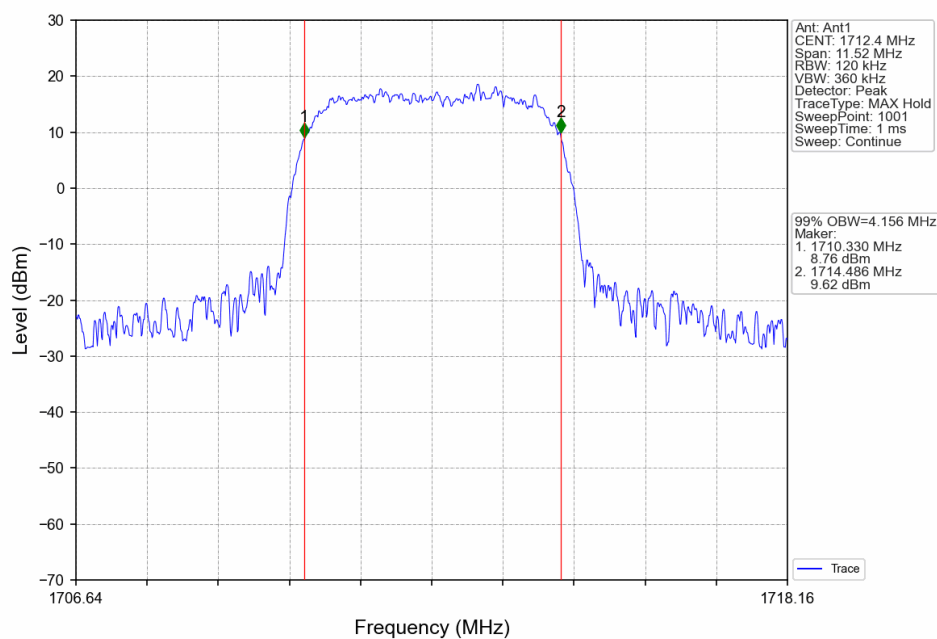


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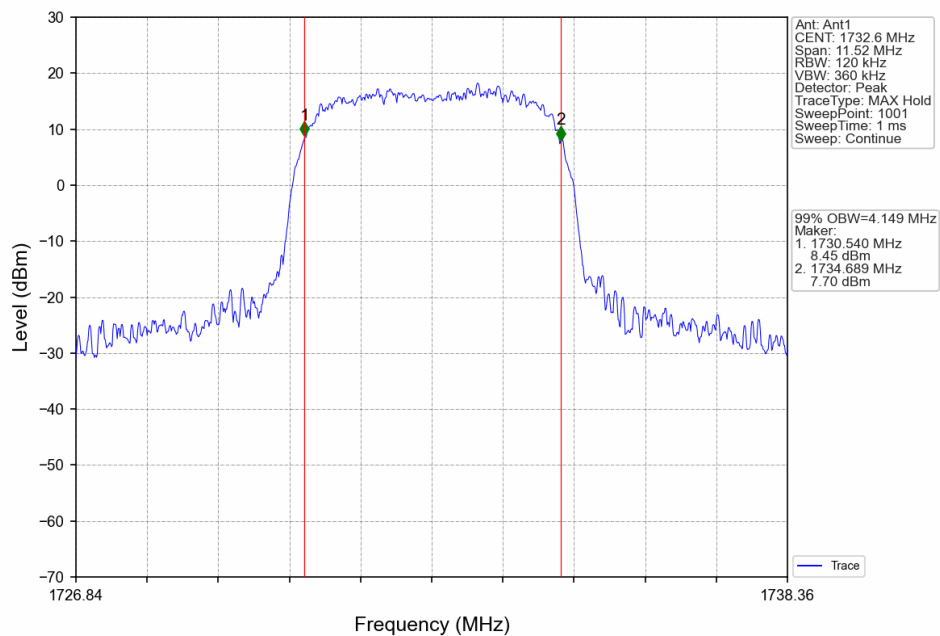


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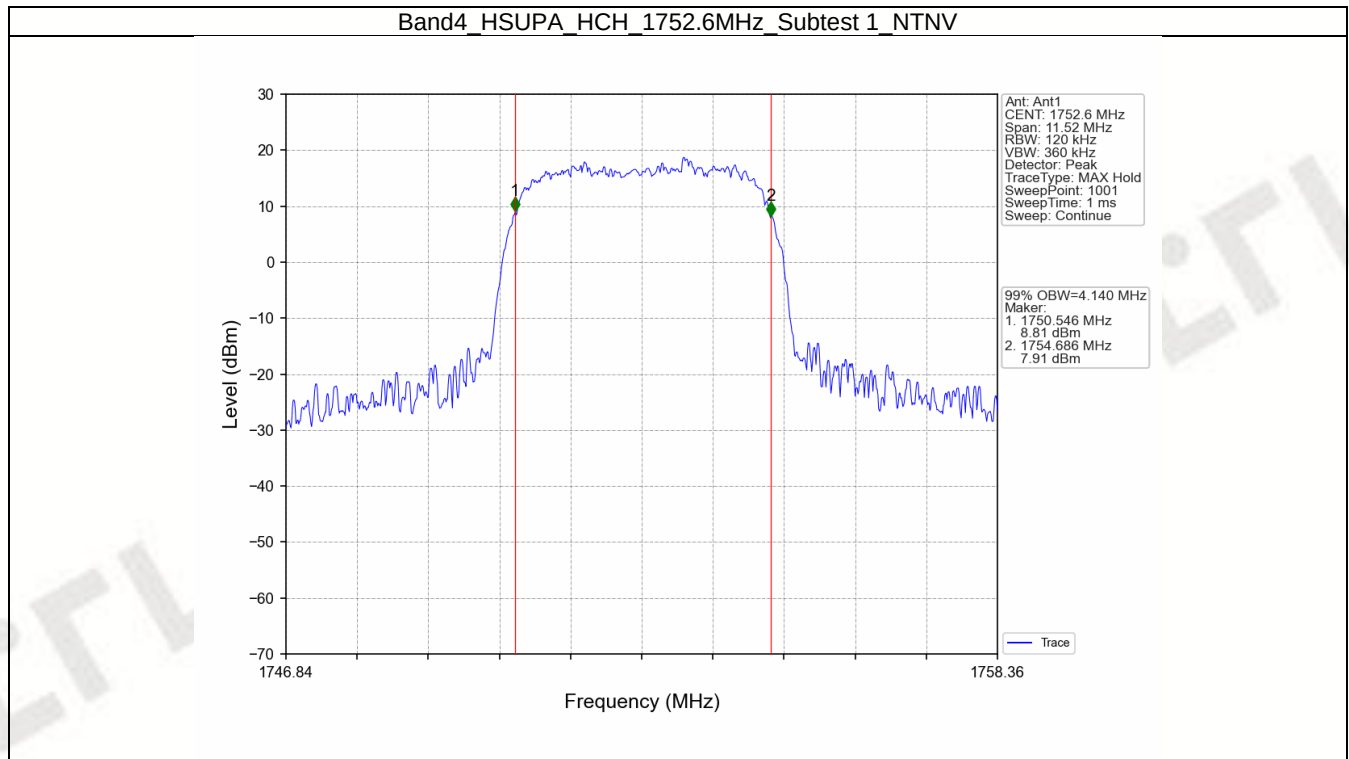
Band4_HSUPA_LCH_1712.4MHz_Subtest 1_NTNV



Band4_HSUPA_MCH_1732.6MHz_Subtest 1_NTNV

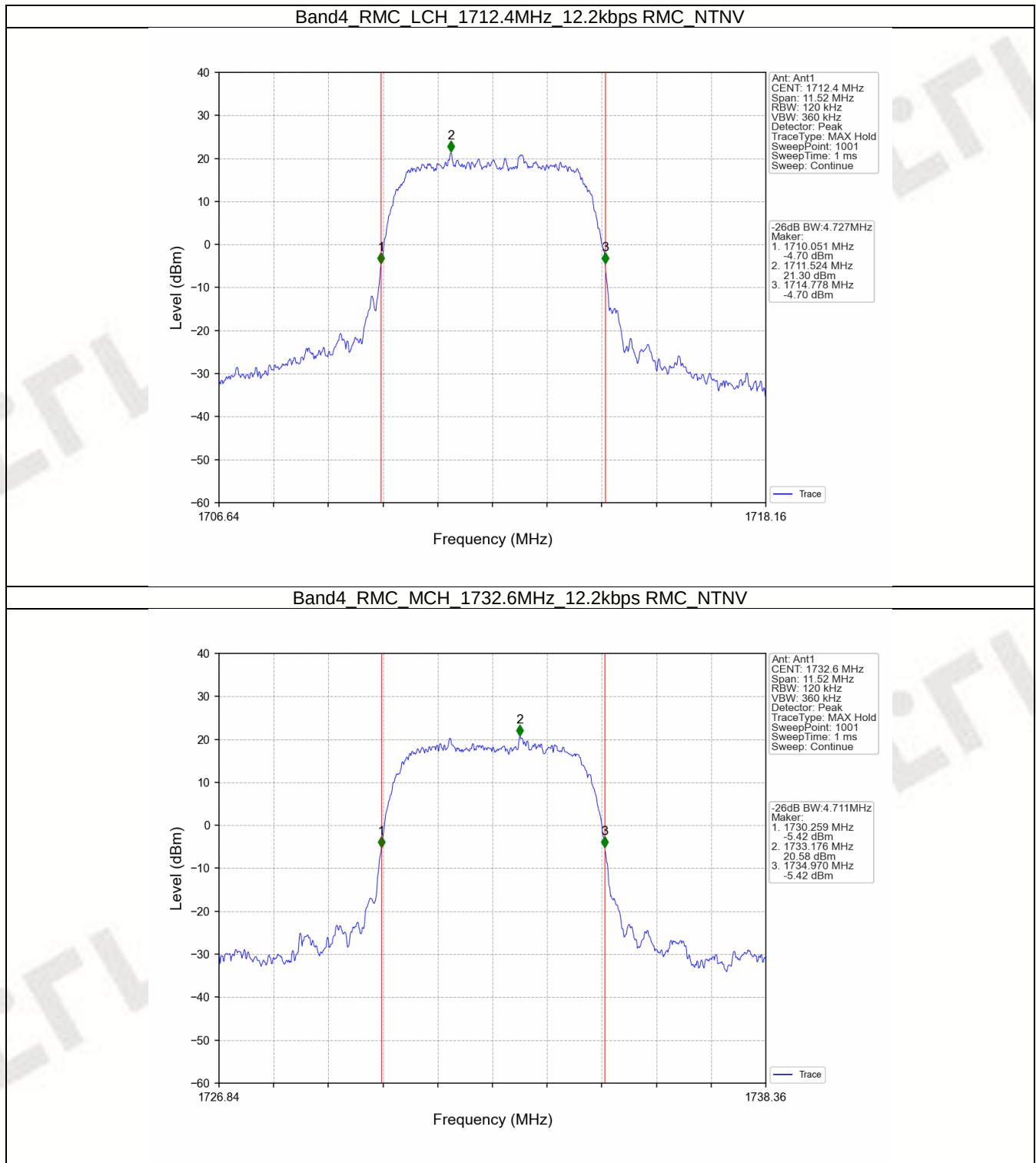


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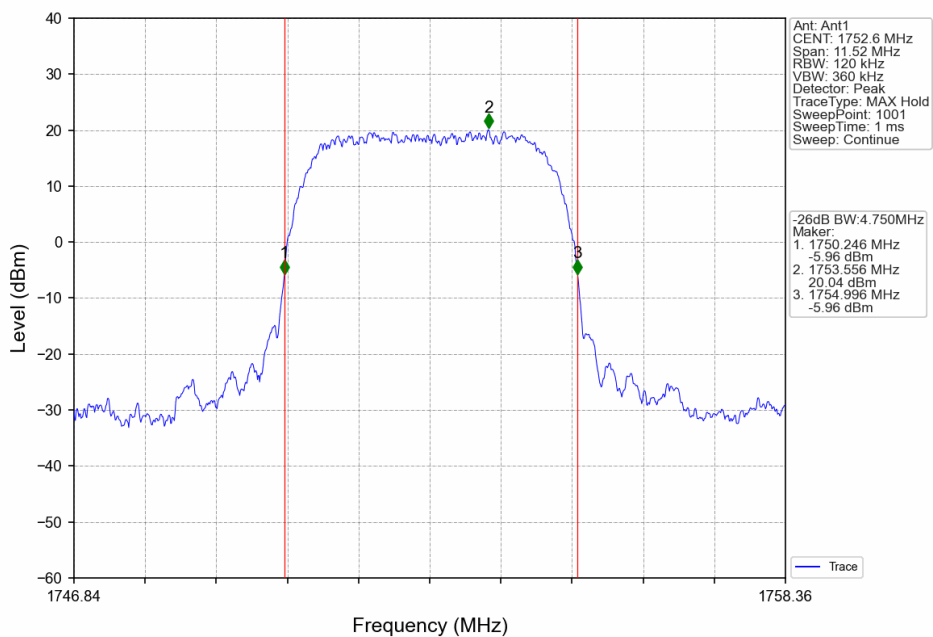
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4.2.2 Band4_XDB

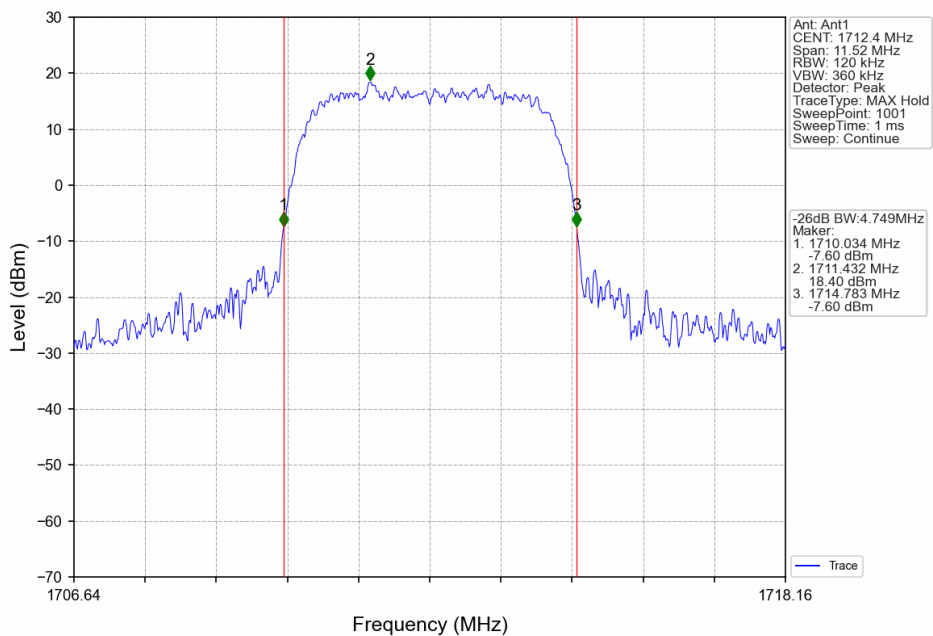


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Band4_RMC_HCH_1752.6MHz_12.2kbps_RMC_NTNV

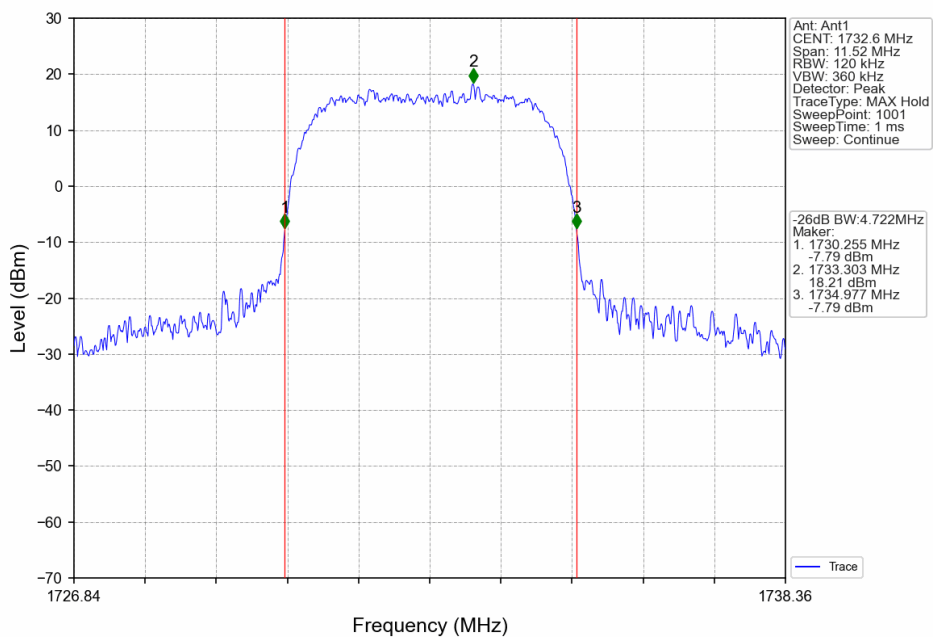


Band4_HSDPA_LCH_1712.4MHz_Subtest 1_NTNV

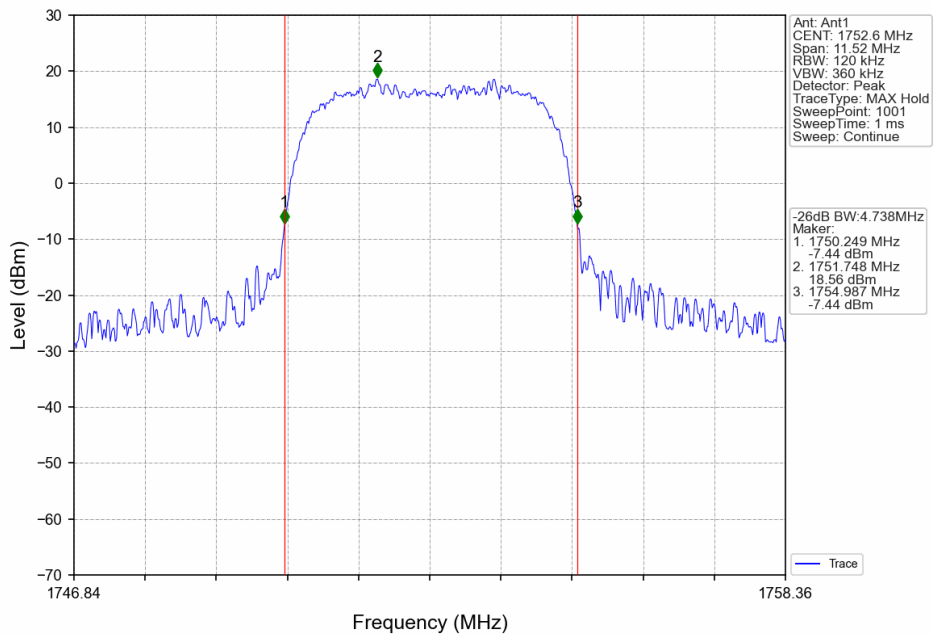


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Band4_HSDPA_MCH_1732.6MHz_Subtest 1_NTNV

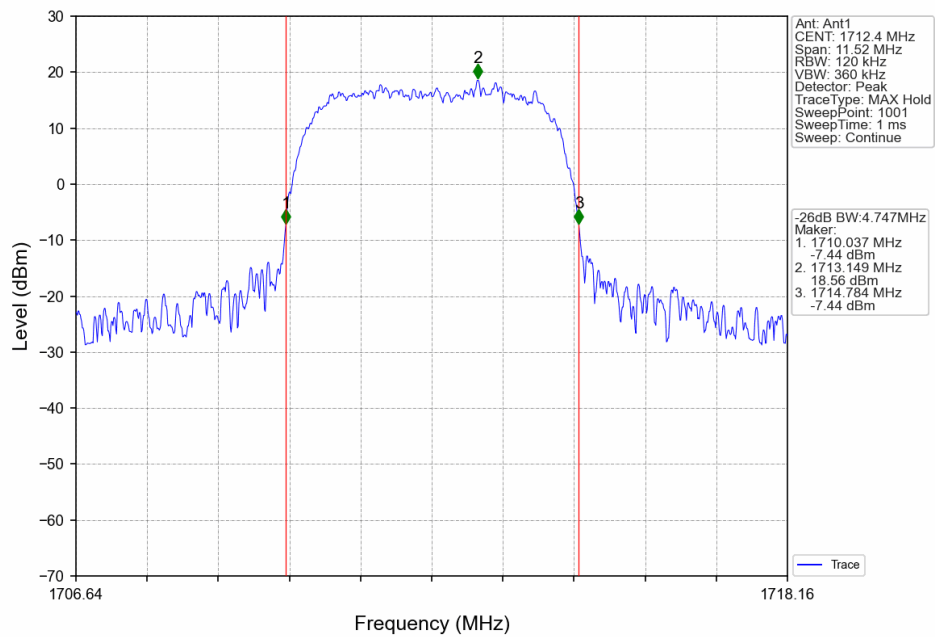


Band4_HSDPA_HCH_1752.6MHz_Subtest 1_NTNV

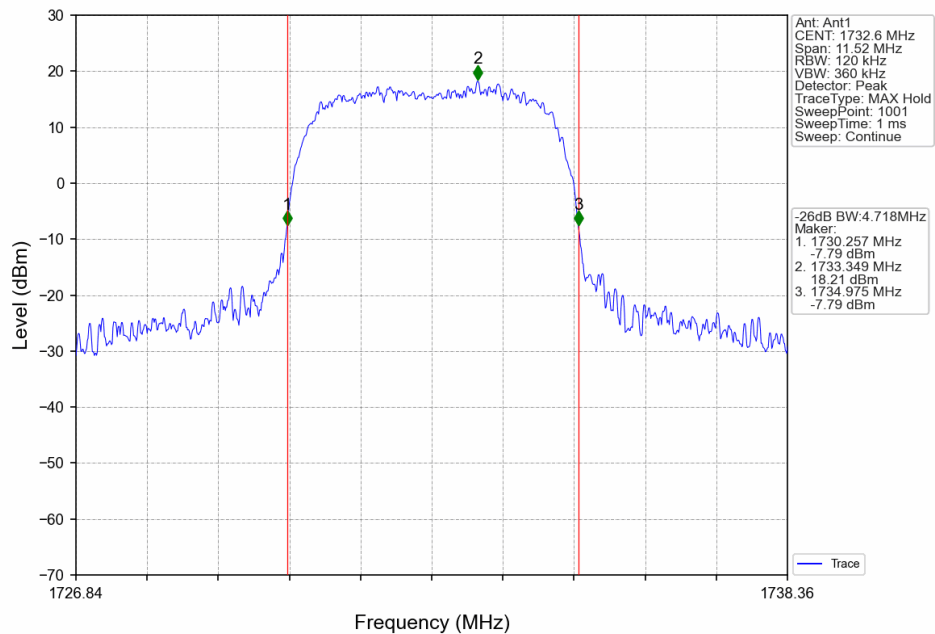


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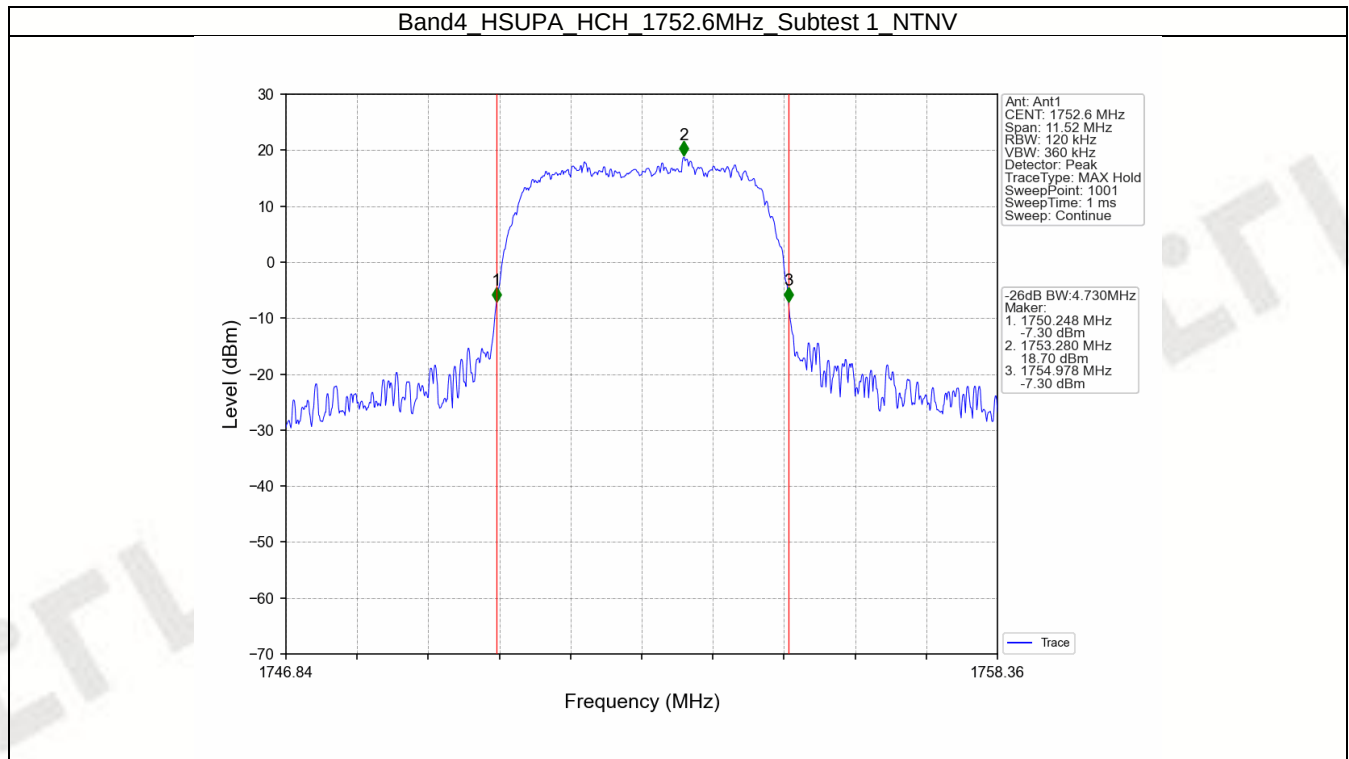
Band4_HSUPA_LCH_1712.4MHz_Subtest 1_NTNV



Band4_HSUPA_MCH_1732.6MHz_Subtest 1_NTNV



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5. Peak-Average Ratio

5.1 Test Result

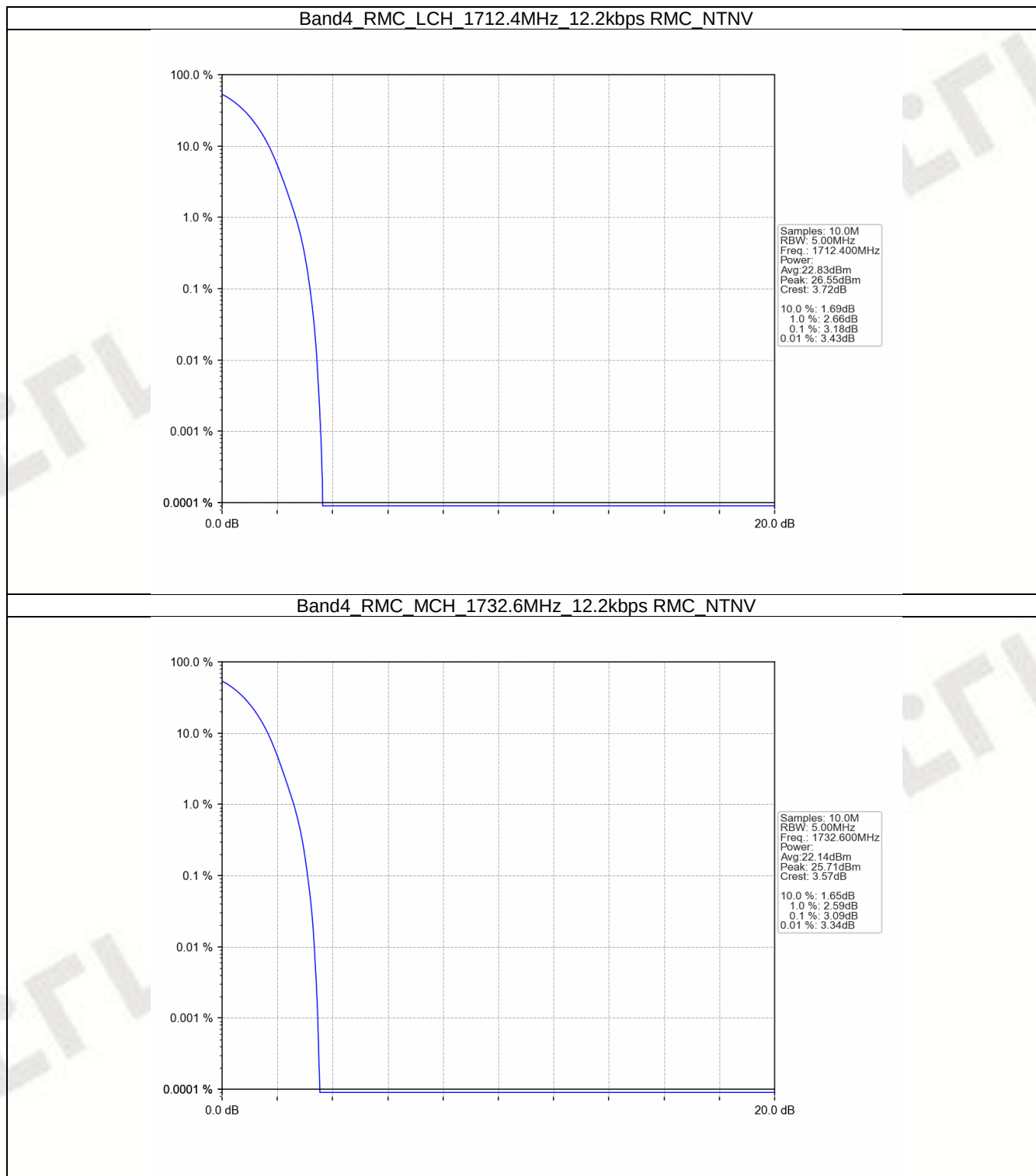
5.1.1 Band4

Band: 4						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	1712.4	3.18	<=13	Pass
			1732.6	3.09	<=13	Pass
			1752.6	3.10	<=13	Pass
	HSDPA	Subtest 1	1712.4	5.65	<=13	Pass
			1732.6	5.55	<=13	Pass
			1752.6	5.60	<=13	Pass
	HSUPA	Subtest 1	1712.4	5.65	<=13	Pass
			1732.6	5.60	<=13	Pass
			1752.6	5.56	<=13	Pass

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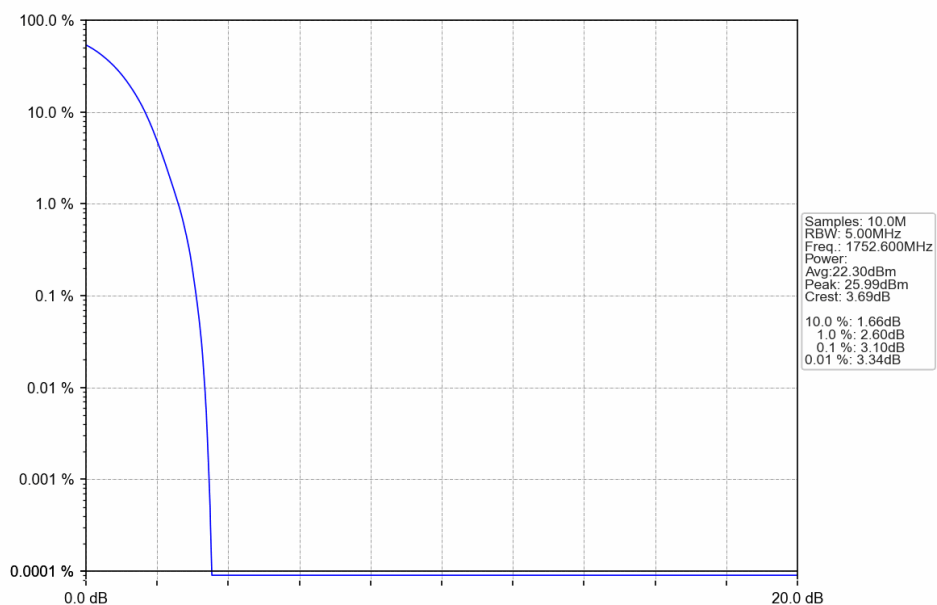
5.2 Test Graph

5.2.1 Band4

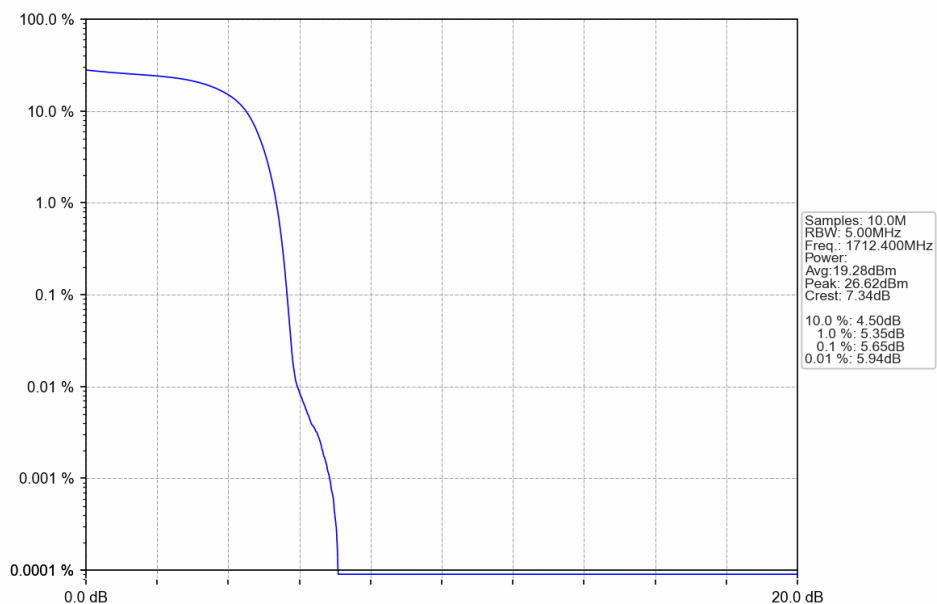


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Band4_RMC_HCH_1752.6MHz_12.2kbps RMC_NTNV

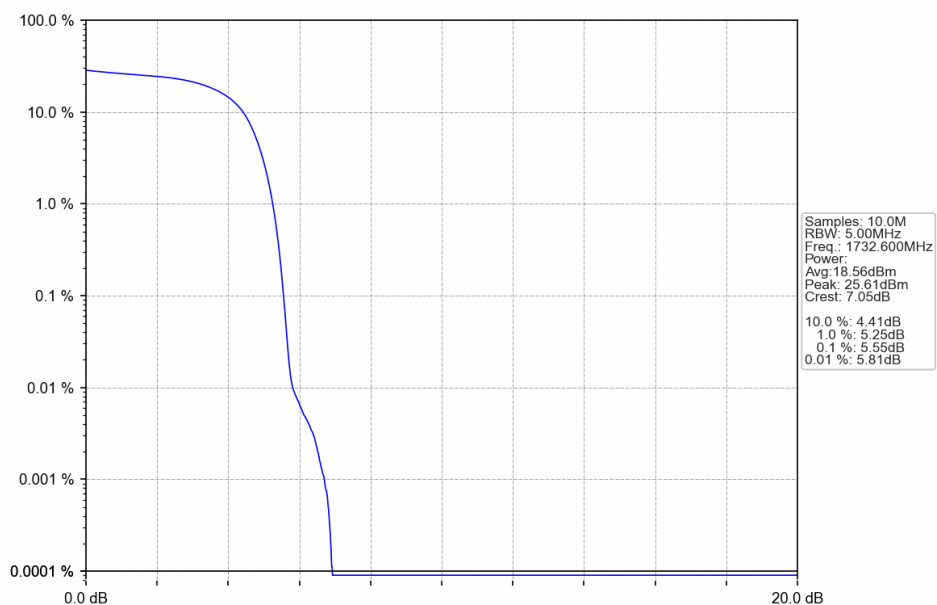


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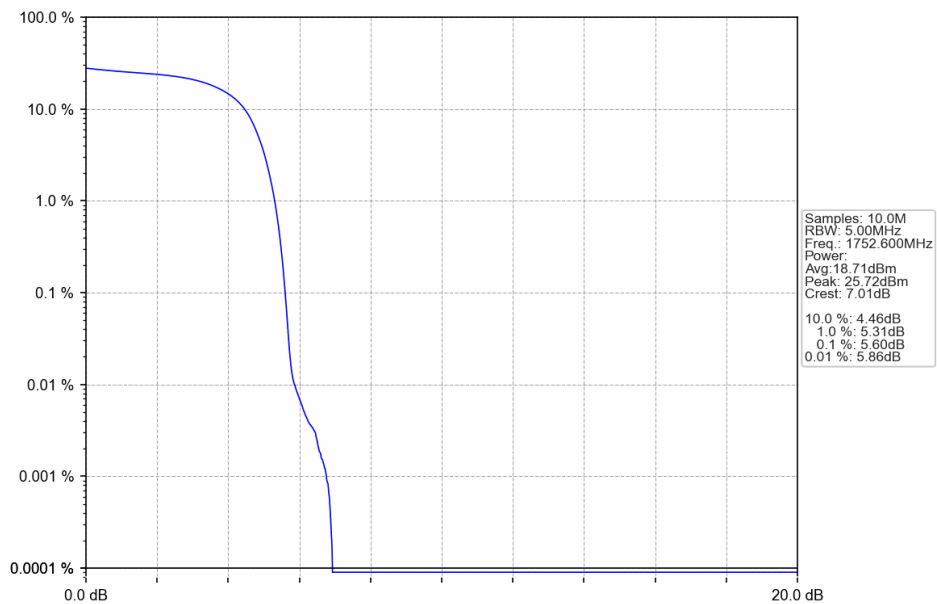


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Band4_HSDPA_MCH_1732.6MHz_Subtest 1_NTNV

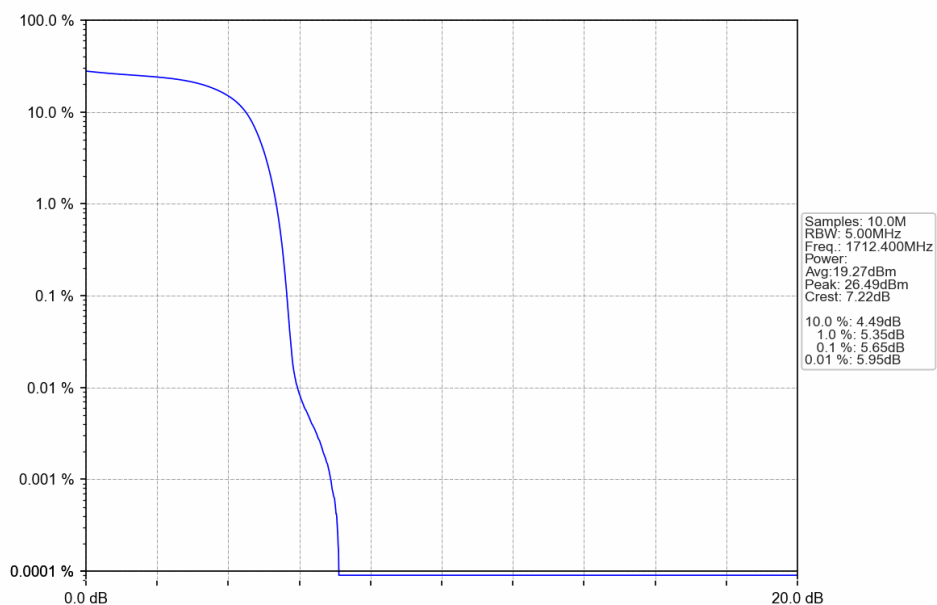


Band4_HSDPA_HCH_1752.6MHz_Subtest 1_NTNV

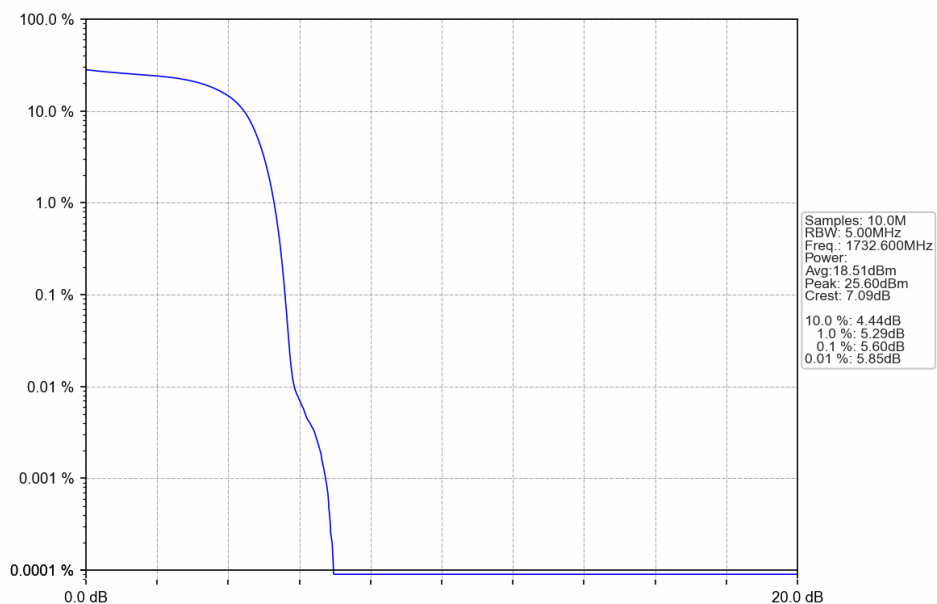


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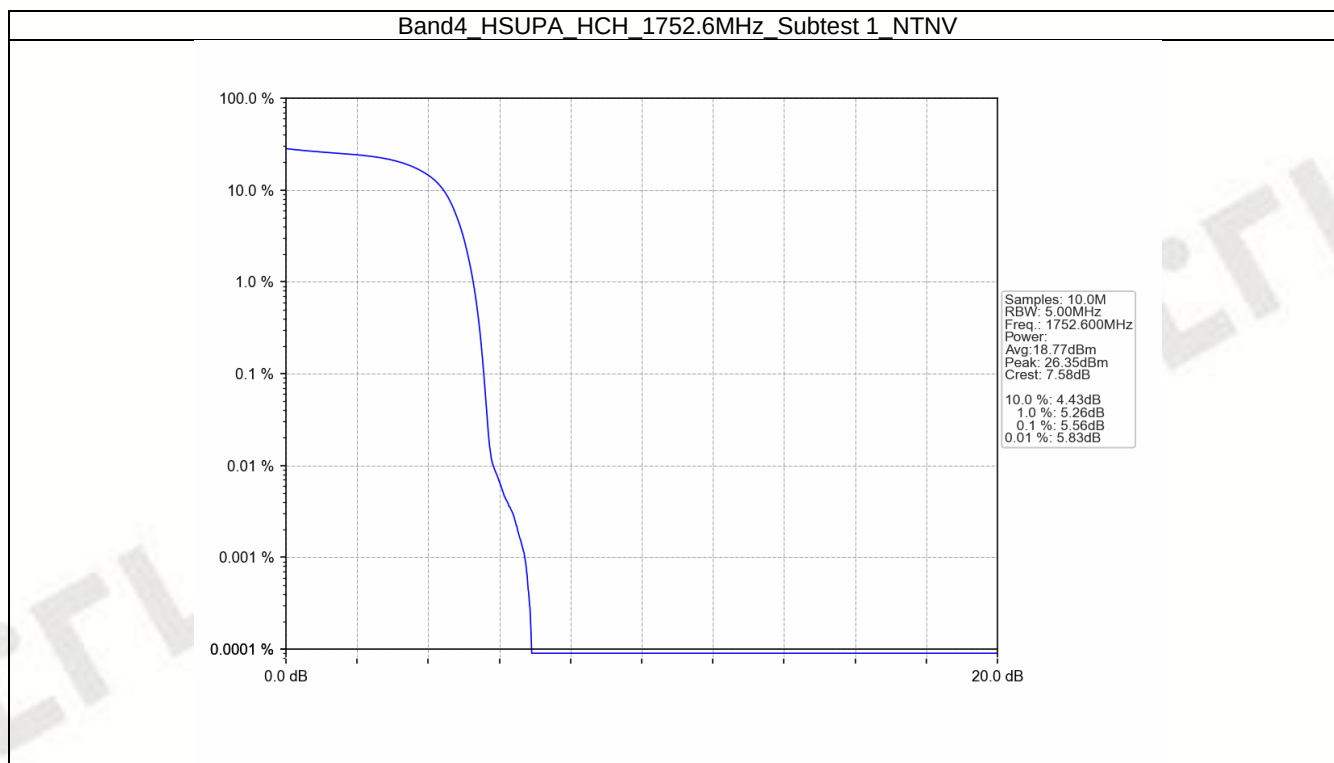
Band4_HSUPA_LCH_1712.4MHz_Subtest 1_NTNV



Band4_HSUPA_MCH_1732.6MHz_Subtest 1_NTNV



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6. Spurious Emission

6.1 Test Result

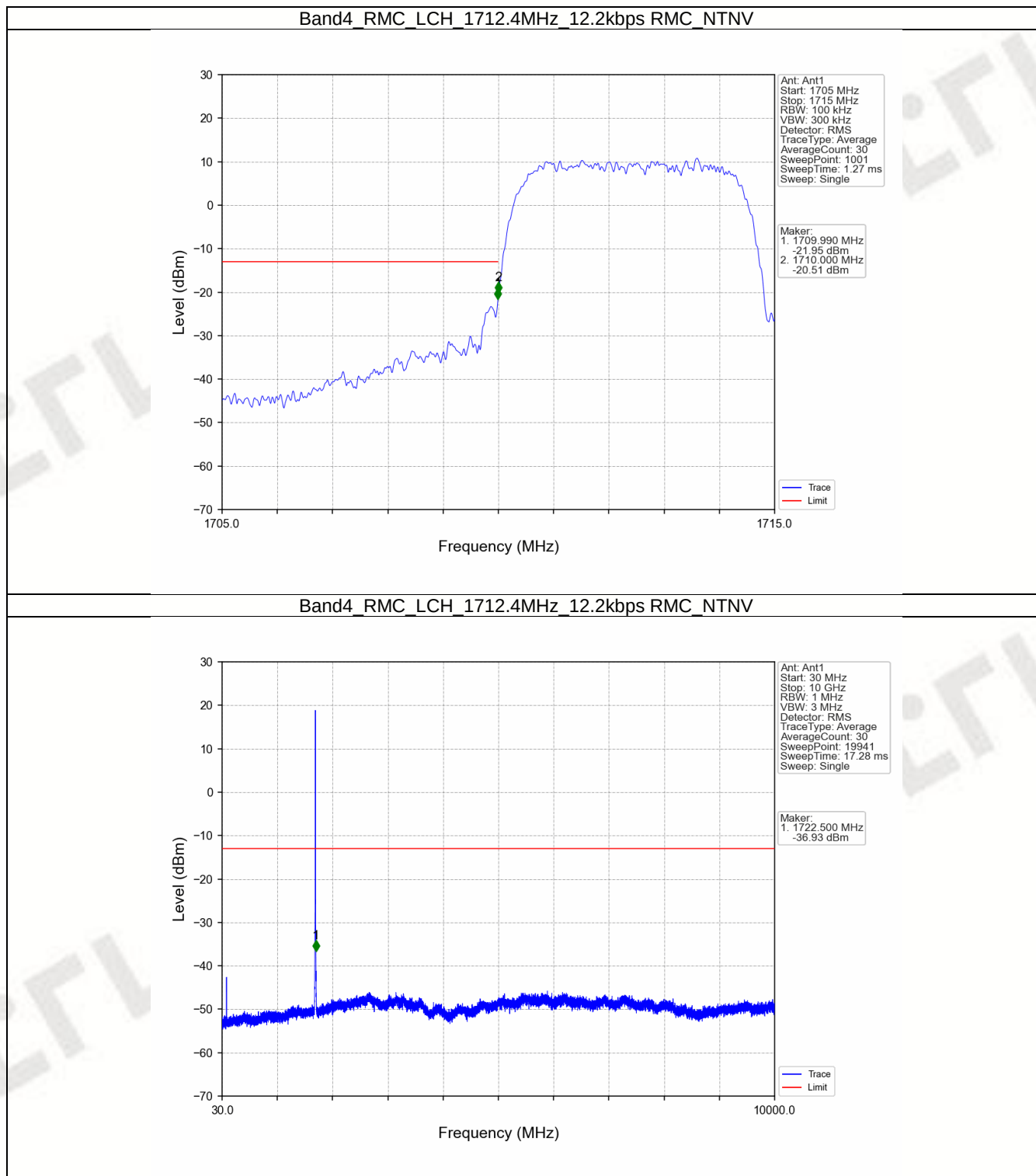
6.1.1 Band4

Band: 4						
ENV	Mode		Frequency (MHz)	Spurious Emission		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	1712.4	Refer To Test Graph	Pass	
			1732.6	Refer To Test Graph	Pass	
			1752.6	Refer To Test Graph	Pass	
	HSDPA	Subtest 1	1712.4	Refer To Test Graph	Pass	
			1732.6	Refer To Test Graph	Pass	
			1752.6	Refer To Test Graph	Pass	
	HSUPA	Subtest 1	1712.4	Refer To Test Graph	Pass	
			1732.6	Refer To Test Graph	Pass	
			1752.6	Refer To Test Graph	Pass	

FCCID: 2BCUE-P8GLOBAL

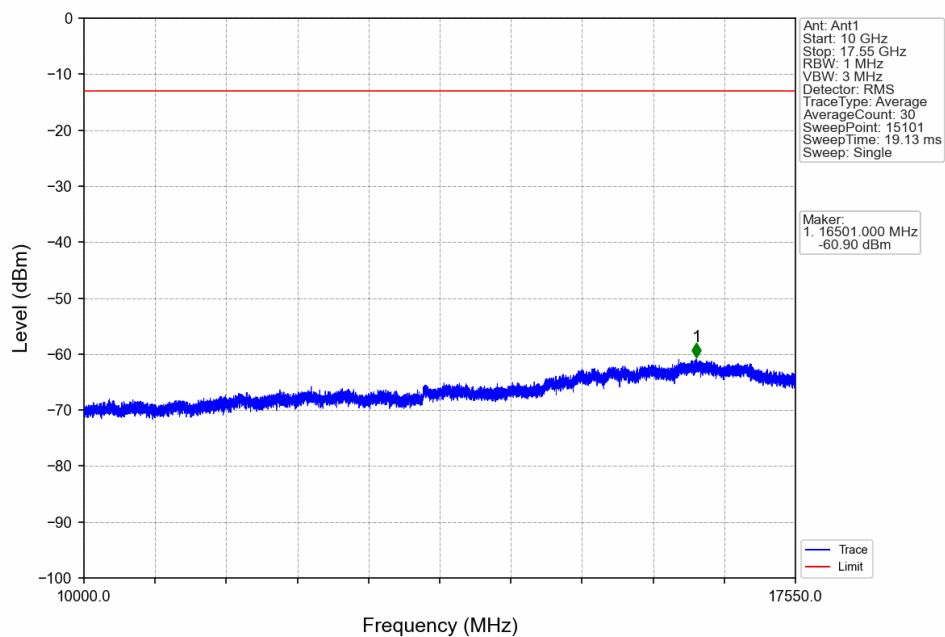
6.2 Test Graph

6.2.1 Band4

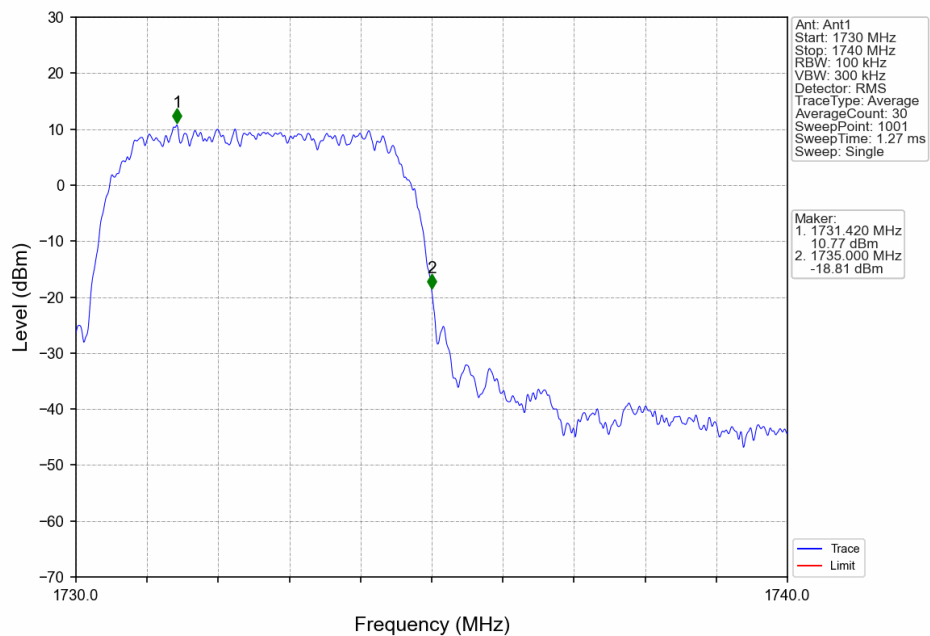


FCCID: 2BCUE-P8GLOBAL

Band4_RMC_LCH_1712.4MHz_12.2kbps RMC_NTNV

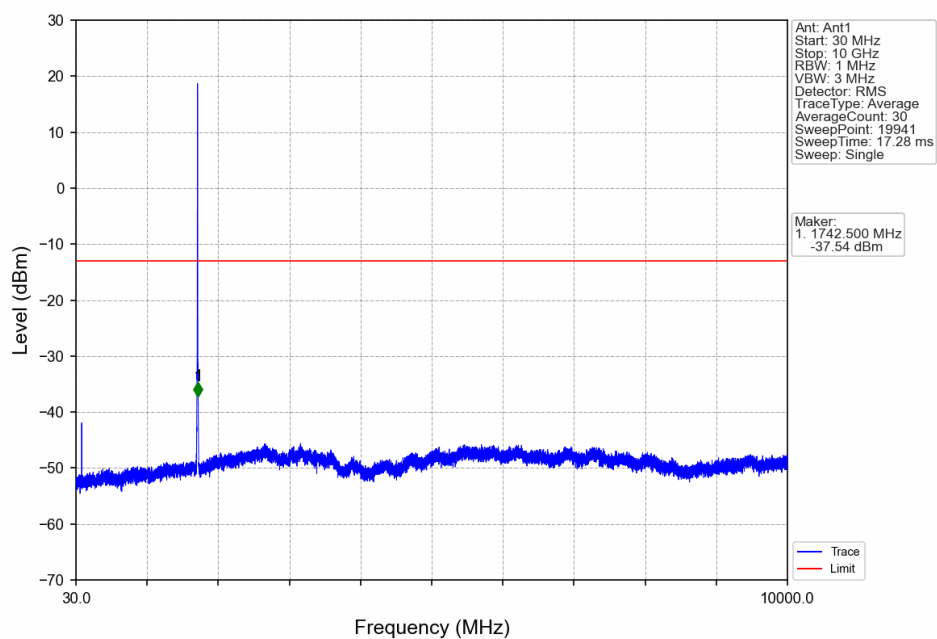


Band4_RMC_MCH_1732.6MHz_12.2kbps RMC_NTNV

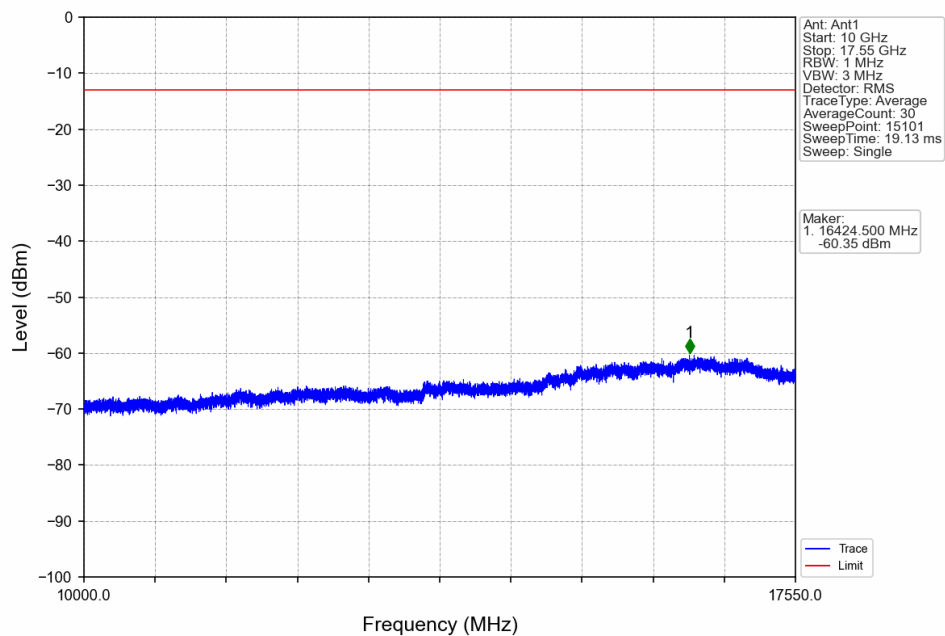


FCCID: 2BCUE-P8GLOBAL

Band4_RMC_MCH_1732.6MHz_12.2kbps RMC_NTNV

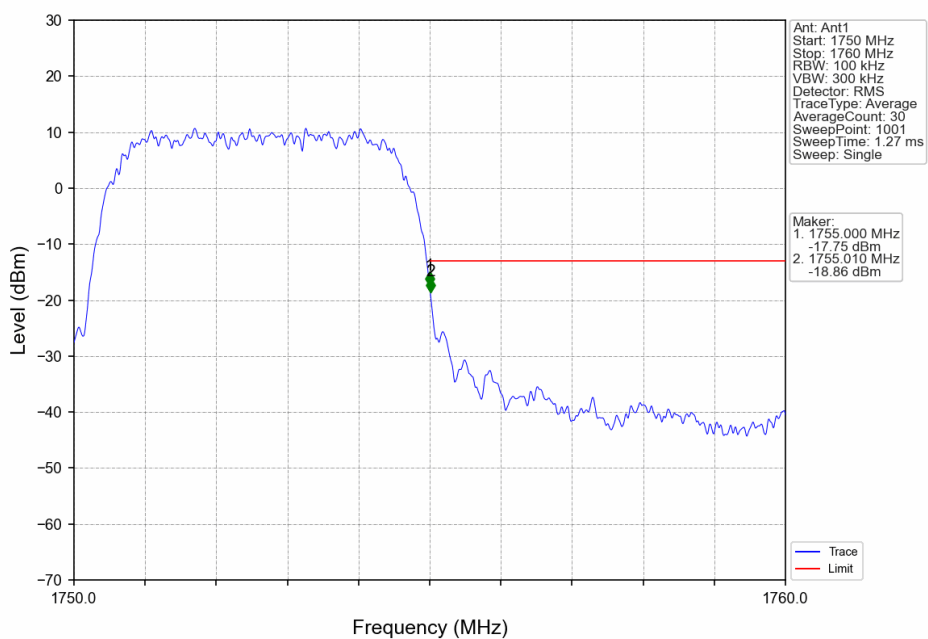


Band4_RMC_MCH_1732.6MHz_12.2kbps RMC_NTNV

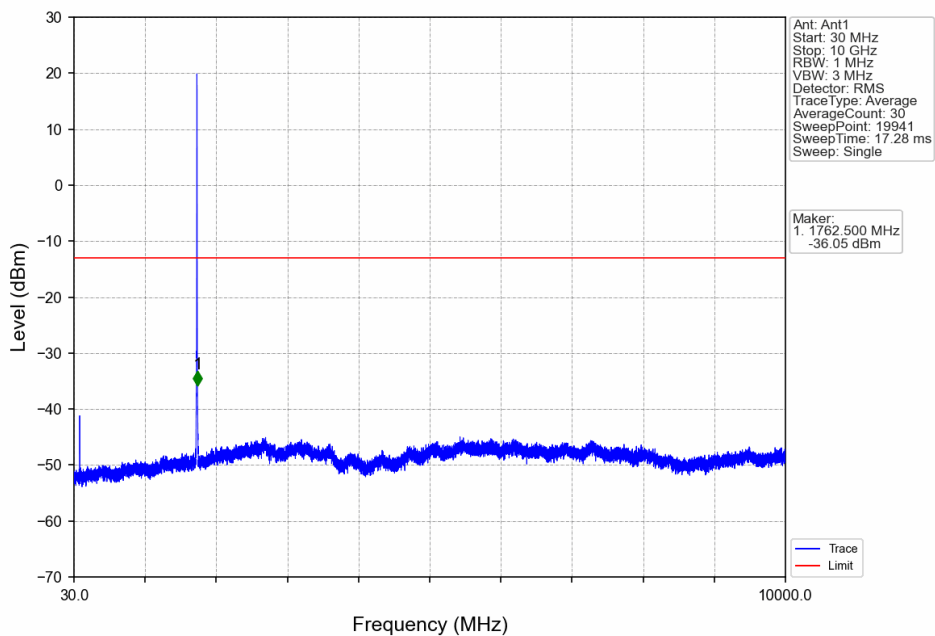


FCCID: 2BCUE-P8GLOBAL

Band4_RMC_HCH_1752.6MHz_12.2kbps RMC_NTNV

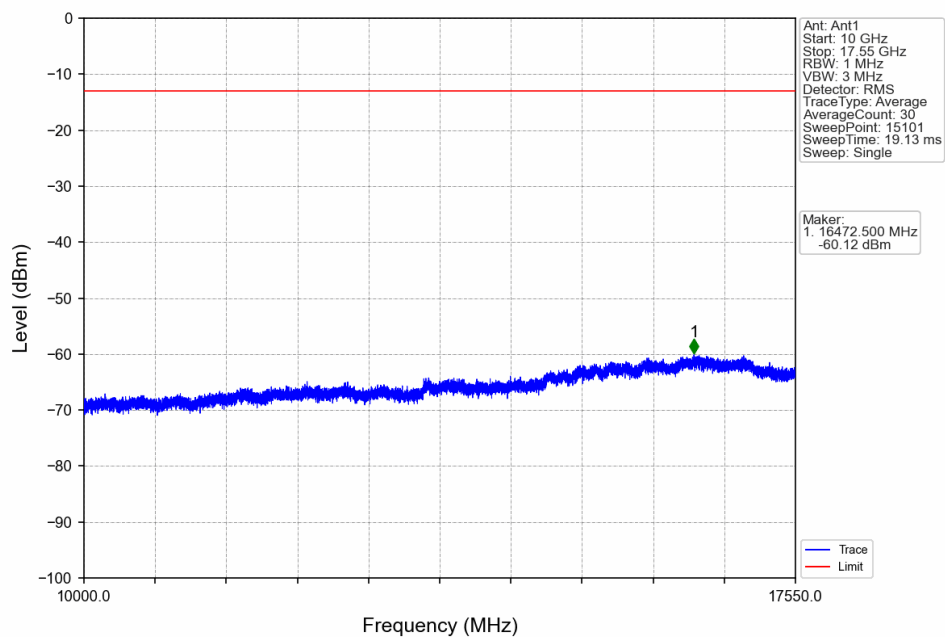


Band4_RMC_HCH_1752.6MHz_12.2kbps RMC_NTNV

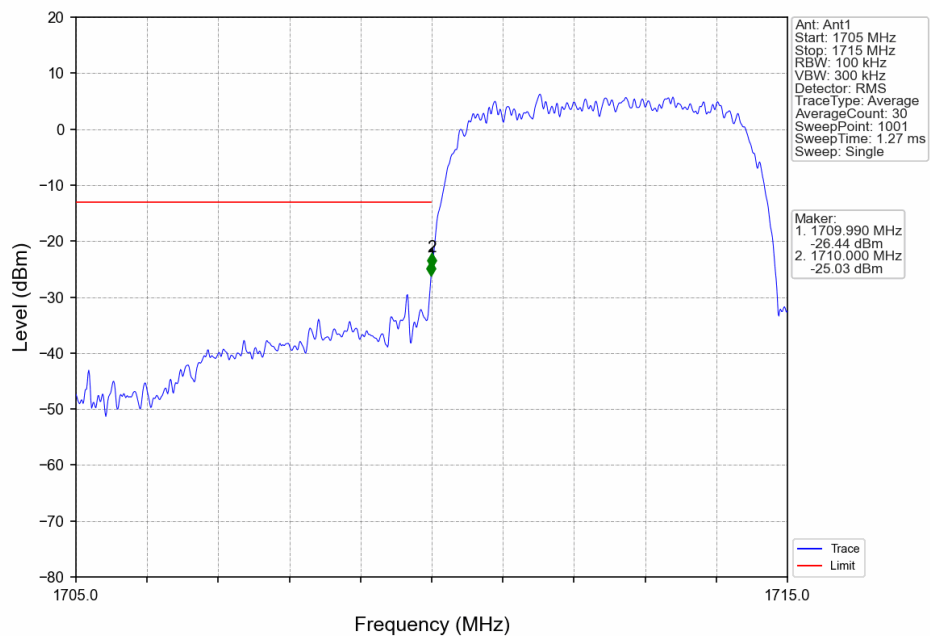


FCCID: 2BCUE-P8GLOBAL

Band4_RMC_HCH_1752.6MHz_12.2kbps RMC_NTNV

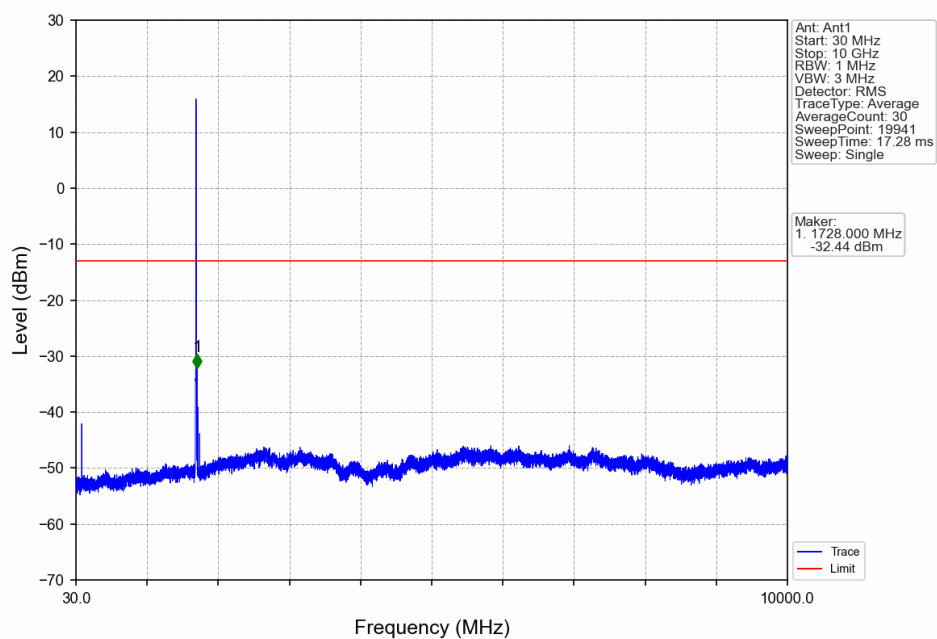


Band4_HSDPA_LCH_1712.4MHz_Subtest 1_NTNV

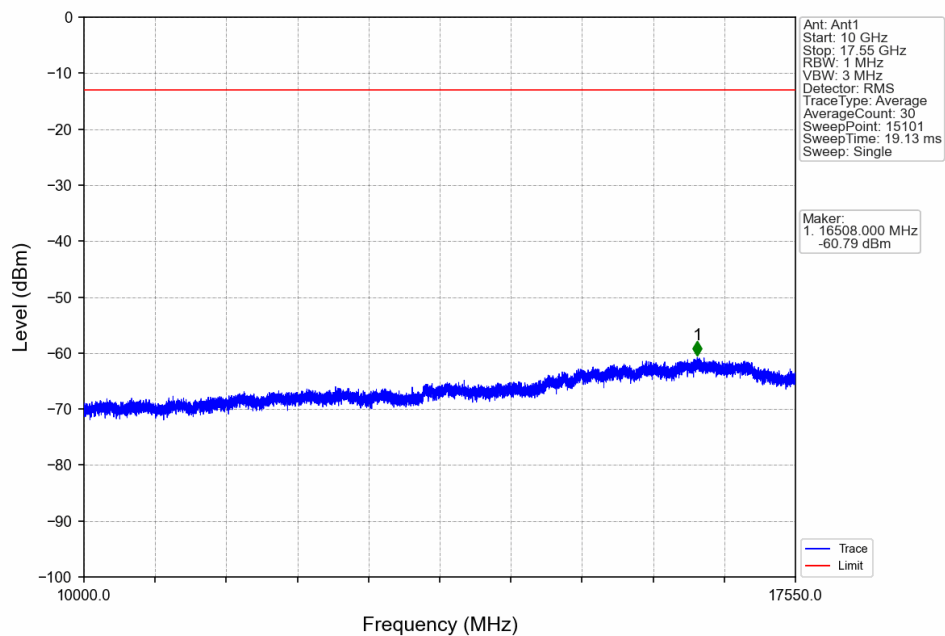


FCCID: 2BCUE-P8GLOBAL

Band4_HSDPA_LCH_1712.4MHz_Subtest 1_NTNV

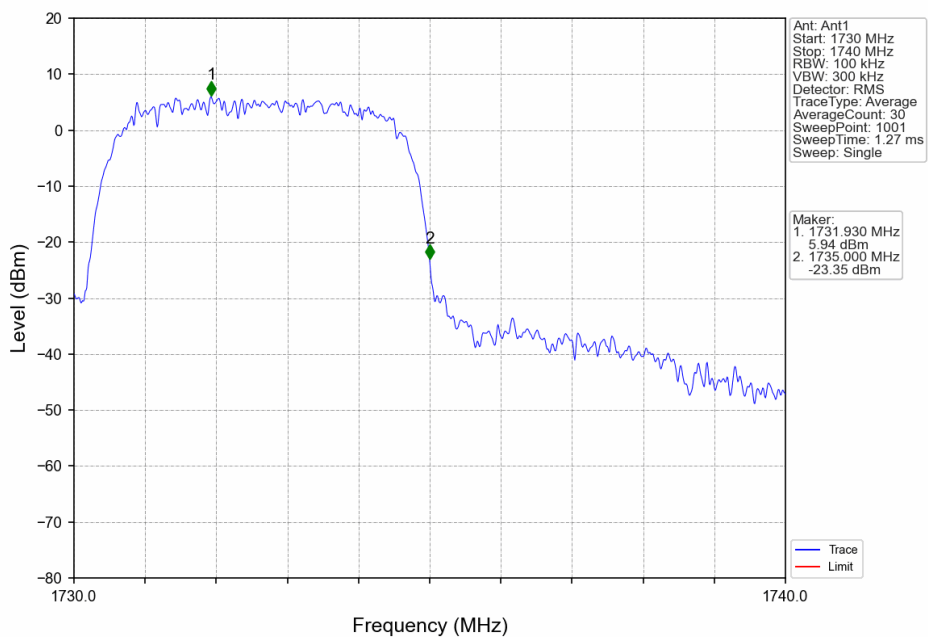


Band4_HSDPA_LCH_1712.4MHz_Subtest 1_NTNV

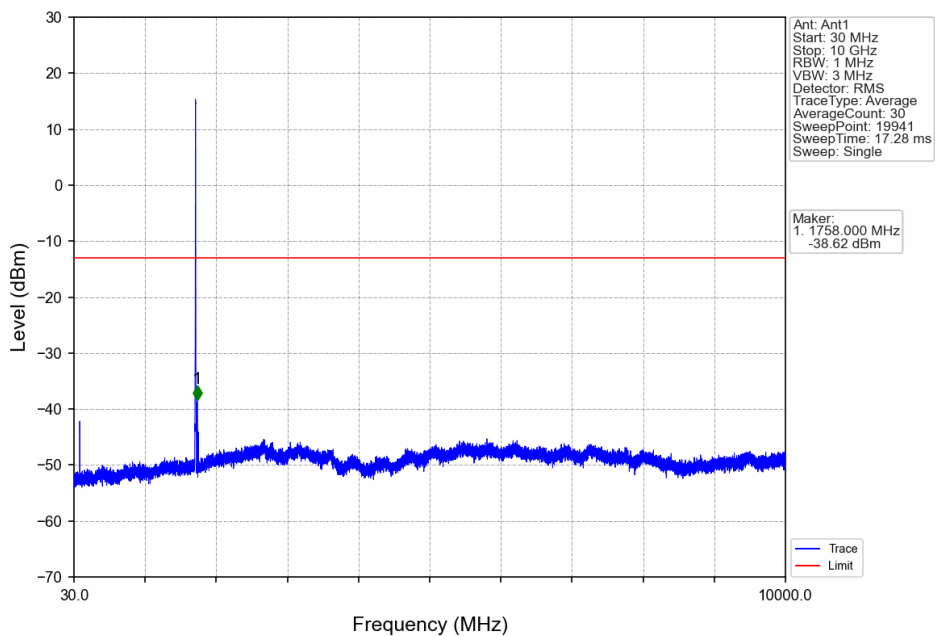


FCCID: 2BCUE-P8GLOBAL

Band4_HSDPA_MCH_1732.6MHz_Subtest 1_NTNV

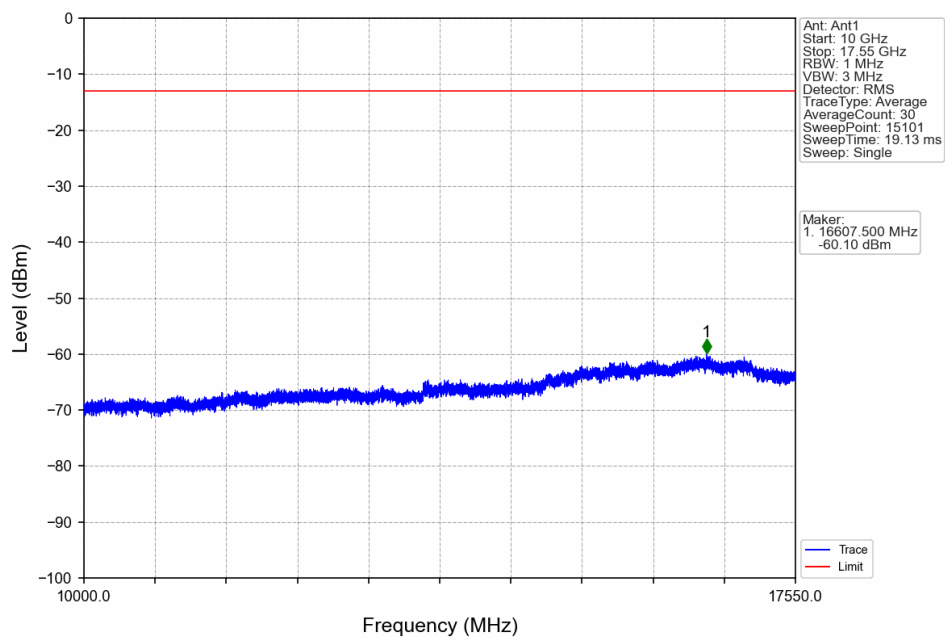


Band4_HSDPA_MCH_1732.6MHz_Subtest 1_NTNV

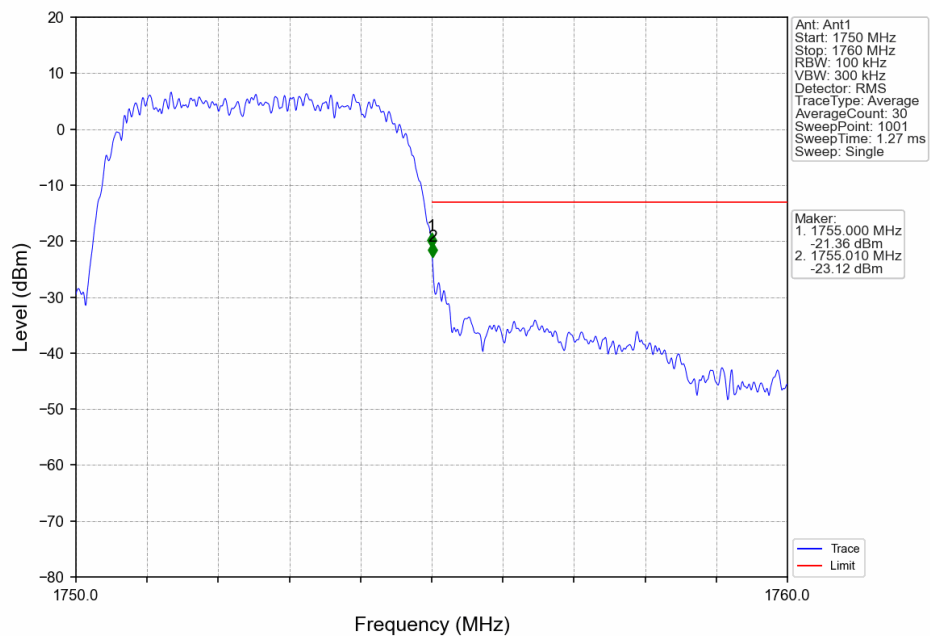


FCCID: 2BCUE-P8GLOBAL

Band4_HSDPA_MCH_1732.6MHz_Subtest 1_NTNV

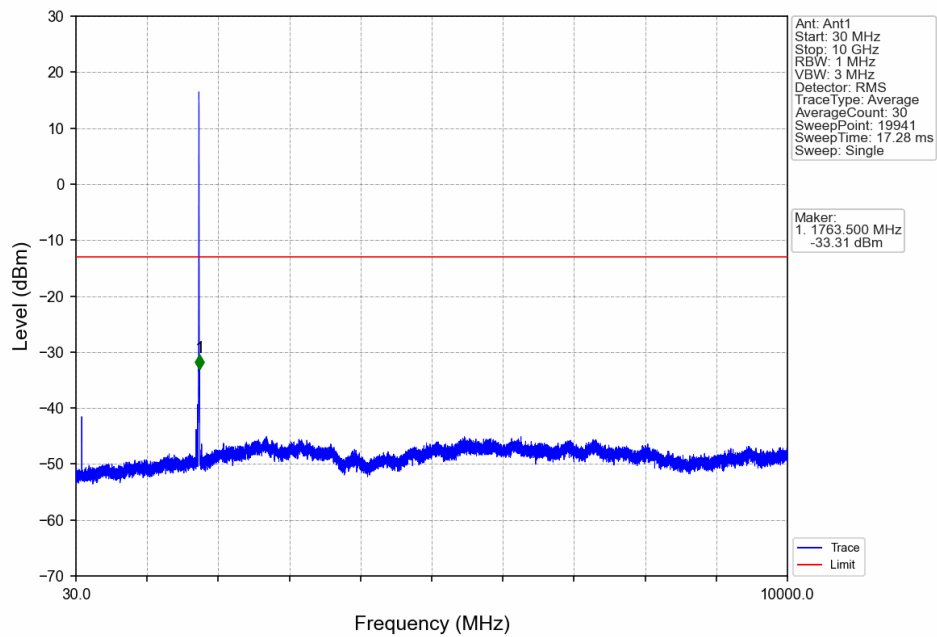


Band4_HSDPA_HCH_1752.6MHz_Subtest 1_NTNV

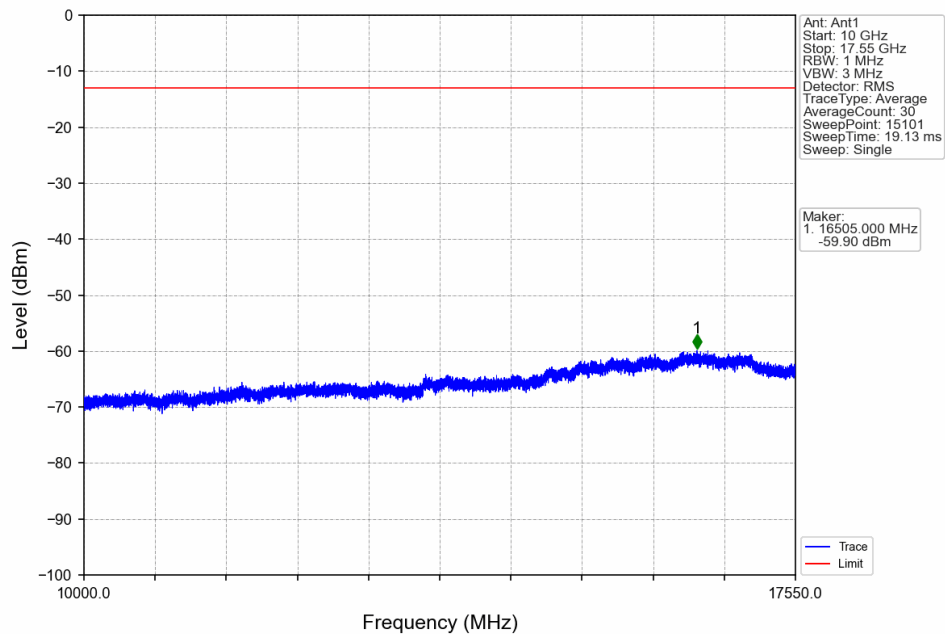


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Band4_HSDPA_HCH_1752.6MHz_Subtest 1_NTNV

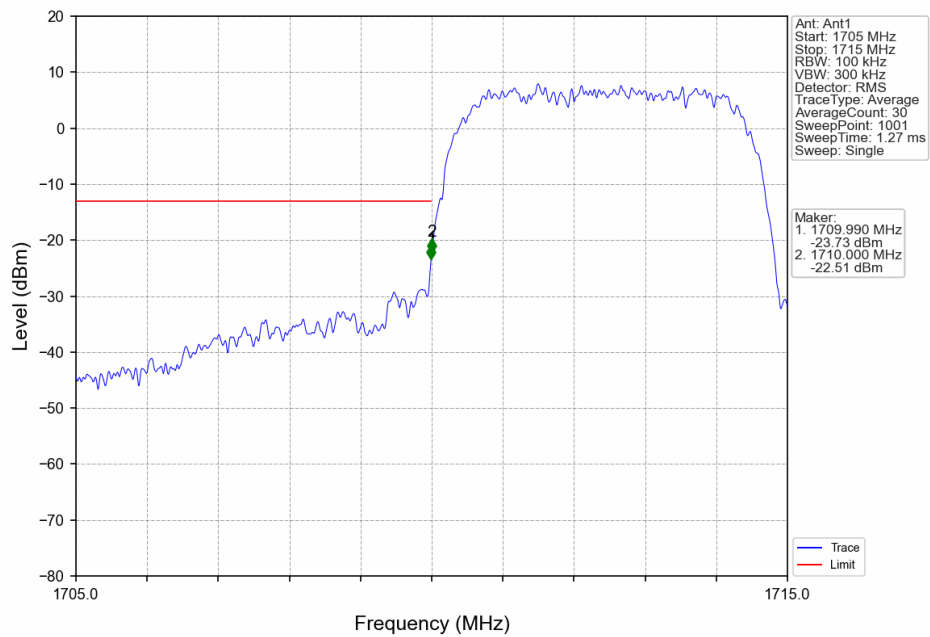


Band4_HSDPA_HCH_1752.6MHz_Subtest 1_NTNV

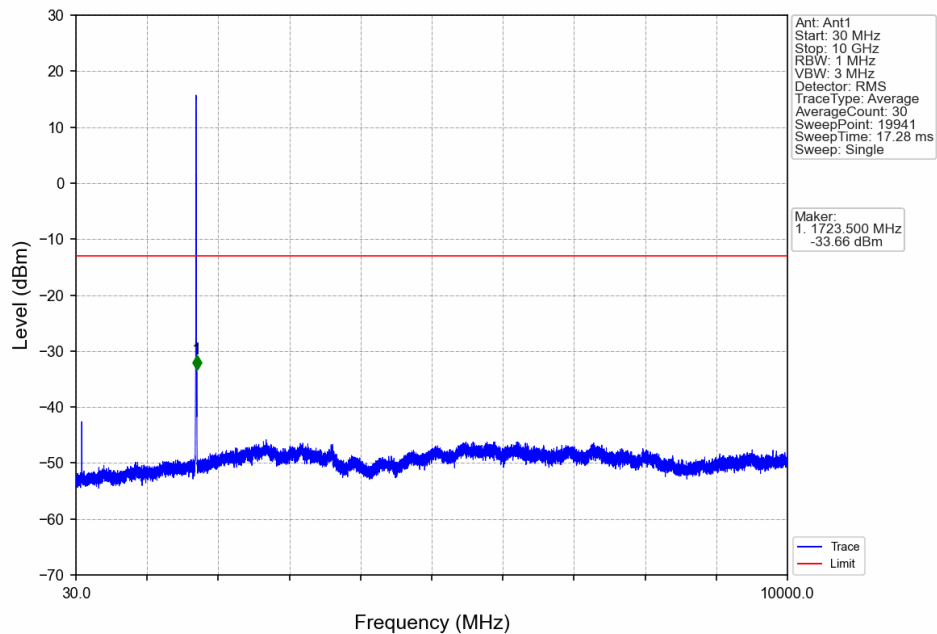


FCCID: 2BCUE-P8GLOBAL

Band4_HSUPA_LCH_1712.4MHz_Subtest 1_NTNV

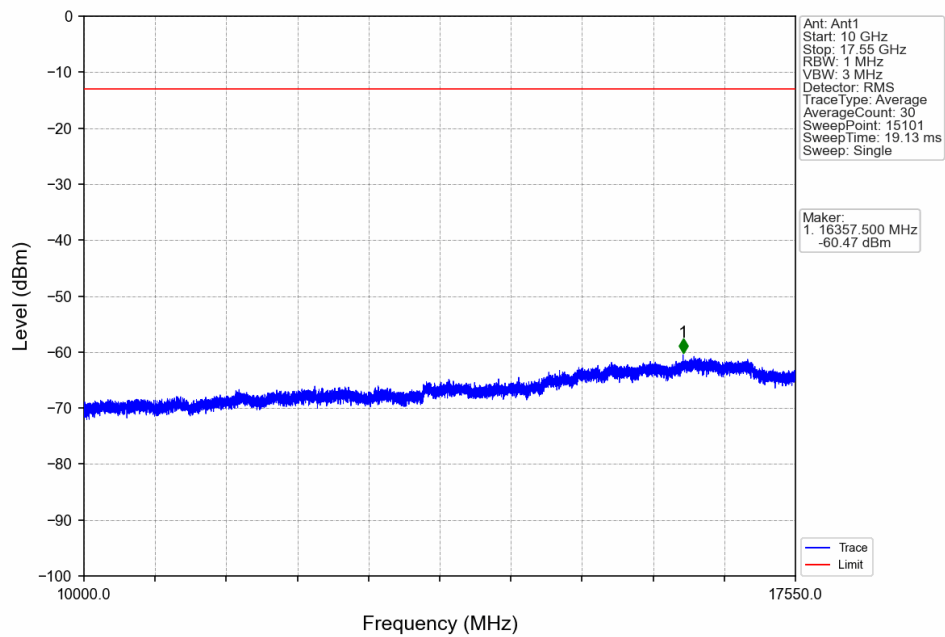


Band4_HSUPA_LCH_1712.4MHz_Subtest 1_NTNV

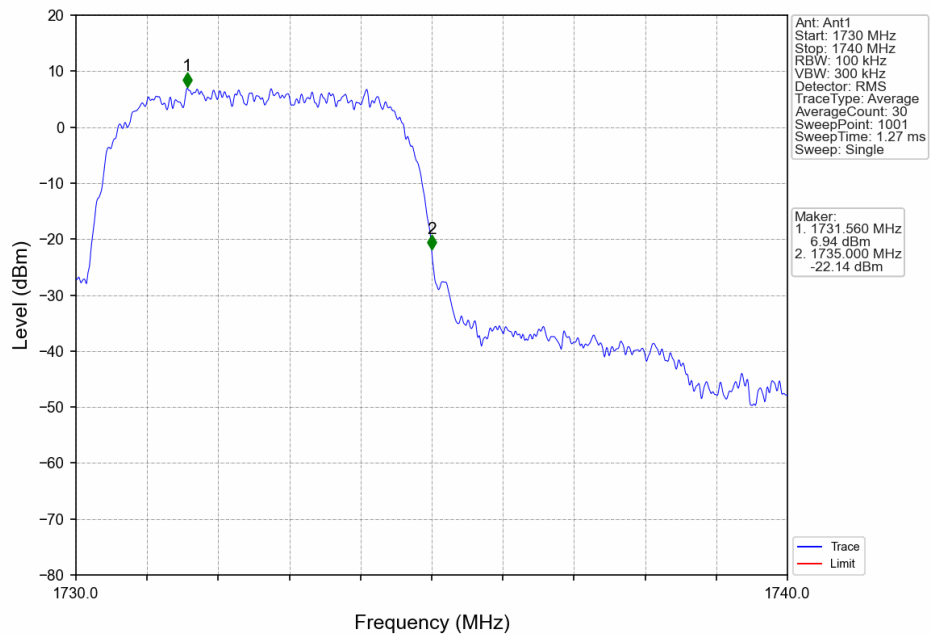


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Band4_HSUPA_LCH_1712.4MHz_Subtest 1_NTNV

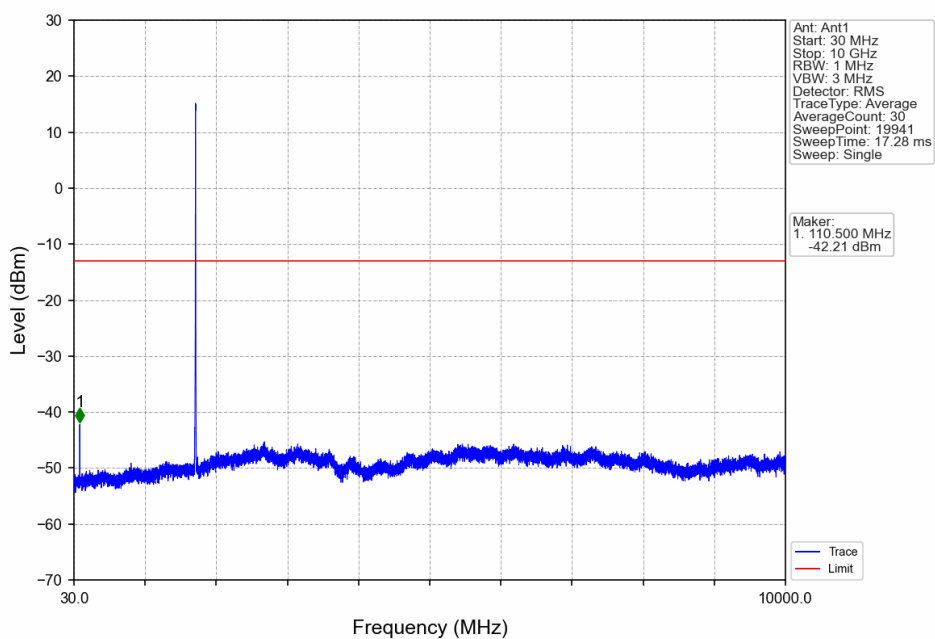


Band4_HSUPA_MCH_1732.6MHz_Subtest 1_NTNV

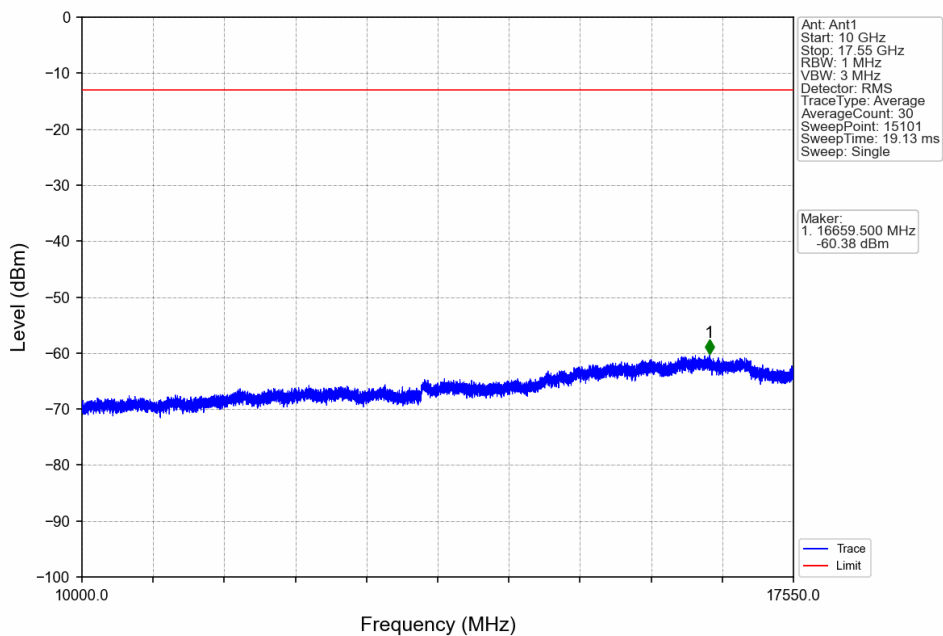


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Band4_HSUPA_MCH_1732.6MHz_Subtest 1_NTNV

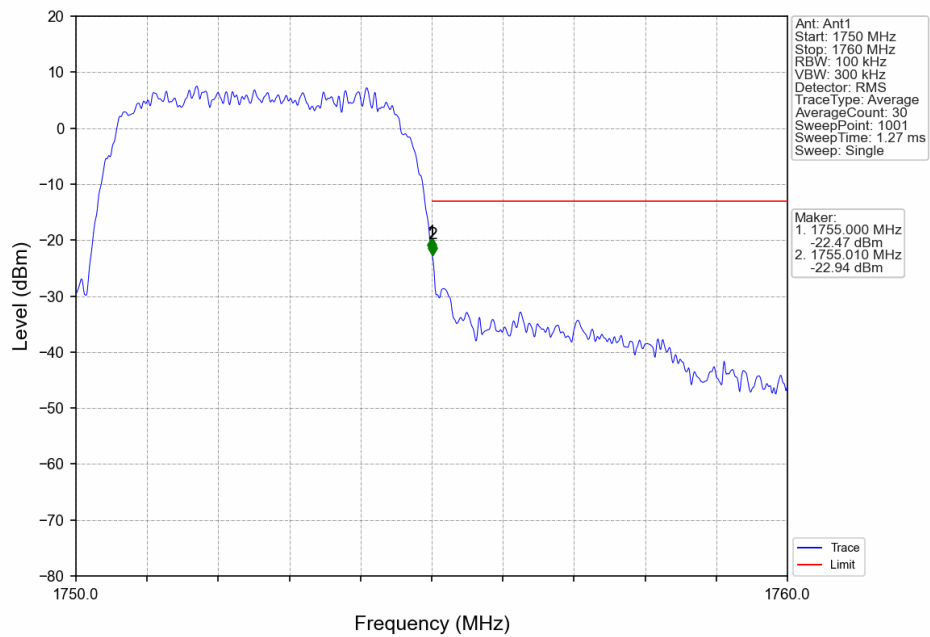


Band4_HSUPA_MCH_1732.6MHz_Subtest 1_NTNV

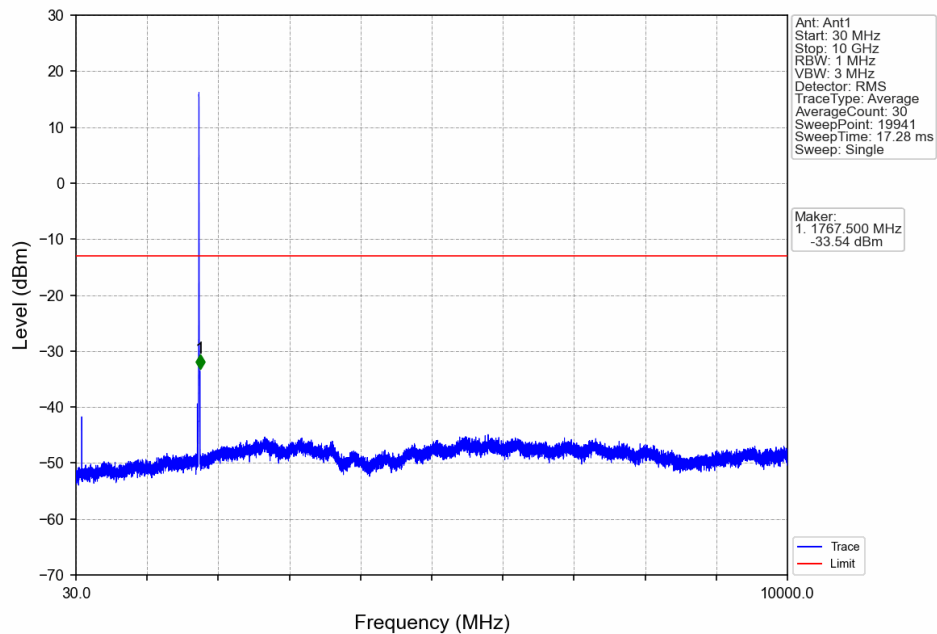


FCCID: 2BCUE-P8GLOBAL

Band4_HSUPA_HCH_1752.6MHz_Subtest 1_NTNV



Band4_HSUPA_HCH_1752.6MHz_Subtest 1_NTNV



FCCID: 2BCUE-P8GLOBAL

