

# 1. Effective (Isotropic) Radiated Power Output Data

## 1.1 Band4\_EIRP

### 1.1.1 Test Result

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	20.72	0.81	21.53	<=30	Pass		
			1732.6	20.57	0.81	21.38	<=30	Pass		
			1752.6	20.33	0.81	21.14	<=30	Pass		
	HSDPA	Subtest 1-4	1712.4	18.55	0.81	19.36	<=30	Pass		
			1712.4	18.45	0.81	19.26	<=30	Pass		
			1712.4	18.48	0.81	19.29	<=30	Pass		
			1712.4	18.50	0.81	19.31	<=30	Pass		
			1732.6	18.34	0.81	19.15	<=30	Pass		
			1732.6	18.32	0.81	19.13	<=30	Pass		
			1732.6	18.31	0.81	19.12	<=30	Pass		
			1732.6	18.33	0.81	19.14	<=30	Pass		
			1752.6	18.12	0.81	18.93	<=30	Pass		
			1752.6	18.10	0.81	18.91	<=30	Pass		
			1752.6	18.13	0.81	18.94	<=30	Pass		
			1752.6	18.15	0.81	18.96	<=30	Pass		
			HSUPA	Subtest 1-5	1712.4	15.97	0.81	16.78	<=30	Pass
					1712.4	16.48	0.81	17.29	<=30	Pass
					1712.4	16.48	0.81	17.29	<=30	Pass
					1712.4	15.98	0.81	16.79	<=30	Pass
					1712.4	15.98	0.81	16.79	<=30	Pass
	1732.6	15.85			0.81	16.66	<=30	Pass		
	1732.6	16.33			0.81	17.14	<=30	Pass		
	1732.6	16.09			0.81	16.90	<=30	Pass		
	1732.6	16.31			0.81	17.12	<=30	Pass		
	1732.6	15.82			0.81	16.63	<=30	Pass		
	1752.6	15.64			0.81	16.45	<=30	Pass		
	1752.6	15.86			0.81	16.67	<=30	Pass		
	1752.6	15.58			0.81	16.39	<=30	Pass		
	1752.6	15.59	0.81	16.40	<=30	Pass				
	1752.6	15.58	0.81	16.39	<=30	Pass				

Note1: EIRP=Conducted Power+Antenna Gain

## 2. Frequency Stability

### 2.1 Band4

#### 2.1.1 Test Result

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	-7.575	-0.0044	-2.5 to 2.5	Pass
			3.85	-4.213	-0.0025	-2.5 to 2.5	Pass

			4.43	-7.346	-0.0043	-2.5 to 2.5	Pass		
		-30	3.85	-8.619	-0.0050	-2.5 to 2.5	Pass		
		-20	3.85	-6.287	-0.0037	-2.5 to 2.5	Pass		
		-10	3.85	-0.186	-0.0001	-2.5 to 2.5	Pass		
		0	3.85	5.822	0.0034	-2.5 to 2.5	Pass		
		10	3.85	-1.638	-0.0010	-2.5 to 2.5	Pass		
		30	3.85	1.523	0.0009	-2.5 to 2.5	Pass		
		40	3.85	2.089	0.0012	-2.5 to 2.5	Pass		
		50	3.85	6.938	0.0041	-2.5 to 2.5	Pass		
	1732.6	20		3.27	8.454	0.0049	-2.5 to 2.5	Pass	
				3.85	5.958	0.0034	-2.5 to 2.5	Pass	
				4.43	5.021	0.0029	-2.5 to 2.5	Pass	
		-30	3.85	6.995	0.0040	-2.5 to 2.5	Pass		
		-20	3.85	7.074	0.0041	-2.5 to 2.5	Pass		
		-10	3.85	8.776	0.0051	-2.5 to 2.5	Pass		
		0	3.85	7.410	0.0043	-2.5 to 2.5	Pass		
		10	3.85	8.690	0.0050	-2.5 to 2.5	Pass		
		30	3.85	6.995	0.0040	-2.5 to 2.5	Pass		
	40	3.85	8.118	0.0047	-2.5 to 2.5	Pass			
	50	3.85	8.447	0.0049	-2.5 to 2.5	Pass			
	1752.6	20		3.27	-6.509	-0.0037	-2.5 to 2.5	Pass	
				3.85	-3.791	-0.0022	-2.5 to 2.5	Pass	
				4.43	-3.262	-0.0019	-2.5 to 2.5	Pass	
		-30	3.85	3.254	0.0019	-2.5 to 2.5	Pass		
		-20	3.85	2.089	0.0012	-2.5 to 2.5	Pass		
		-10	3.85	13.196	0.0075	-2.5 to 2.5	Pass		
		0	3.85	1.302	0.0007	-2.5 to 2.5	Pass		
		10	3.85	2.010	0.0011	-2.5 to 2.5	Pass		
		30	3.85	6.115	0.0035	-2.5 to 2.5	Pass		
	40	3.85	1.845	0.0011	-2.5 to 2.5	Pass			
	50	3.85	8.698	0.0050	-2.5 to 2.5	Pass			
	HSDPA	1712.4	20		3.27	16.408	0.0096	-2.5 to 2.5	Pass
					3.85	10.321	0.0060	-2.5 to 2.5	Pass
				4.43	11.601	0.0068	-2.5 to 2.5	Pass	
-30			3.85	11.272	0.0066	-2.5 to 2.5	Pass		
-20			3.85	12.159	0.0071	-2.5 to 2.5	Pass		
-10			3.85	11.430	0.0067	-2.5 to 2.5	Pass		
0			3.85	10.893	0.0064	-2.5 to 2.5	Pass		
10			3.85	16.186	0.0095	-2.5 to 2.5	Pass		
30			3.85	13.890	0.0081	-2.5 to 2.5	Pass		
40		3.85	12.889	0.0075	-2.5 to 2.5	Pass			
50		3.85	17.459	0.0102	-2.5 to 2.5	Pass			
1732.6		20		3.27	18.611	0.0107	-2.5 to 2.5	Pass	
				3.85	19.462	0.0112	-2.5 to 2.5	Pass	
				4.43	18.389	0.0106	-2.5 to 2.5	Pass	
		-30	3.85	16.701	0.0096	-2.5 to 2.5	Pass		
		-20	3.85	15.821	0.0091	-2.5 to 2.5	Pass		
		-10	3.85	8.640	0.0050	-2.5 to 2.5	Pass		
		0	3.85	14.734	0.0085	-2.5 to 2.5	Pass		
		10	3.85	7.646	0.0044	-2.5 to 2.5	Pass		
		30	3.85	12.896	0.0074	-2.5 to 2.5	Pass		
40		3.85	3.762	0.0022	-2.5 to 2.5	Pass			
50		3.85	1.681	0.0010	-2.5 to 2.5	Pass			
1752.6		20		3.27	12.116	0.0069	-2.5 to 2.5	Pass	
				3.85	14.055	0.0080	-2.5 to 2.5	Pass	
				4.43	13.204	0.0075	-2.5 to 2.5	Pass	
		-30	3.85	11.129	0.0063	-2.5 to 2.5	Pass		

		-20	3.85	12.910	0.0074	-2.5 to 2.5	Pass	
		-10	3.85	11.573	0.0066	-2.5 to 2.5	Pass	
		0	3.85	12.596	0.0072	-2.5 to 2.5	Pass	
		10	3.85	11.430	0.0065	-2.5 to 2.5	Pass	
		30	3.85	10.943	0.0062	-2.5 to 2.5	Pass	
		40	3.85	10.700	0.0061	-2.5 to 2.5	Pass	
		50	3.85	10.943	0.0062	-2.5 to 2.5	Pass	
HSUPA	1712.4	20	3.27	-2.797	-0.0016	-2.5 to 2.5	Pass	
			3.85	-12.002	-0.0070	-2.5 to 2.5	Pass	
			4.43	-7.174	-0.0042	-2.5 to 2.5	Pass	
		-30	3.85	-6.273	-0.0037	-2.5 to 2.5	Pass	
		-20	3.85	-6.573	-0.0038	-2.5 to 2.5	Pass	
		-10	3.85	-11.666	-0.0068	-2.5 to 2.5	Pass	
		0	3.85	-10.479	-0.0061	-2.5 to 2.5	Pass	
		10	3.85	-10.965	-0.0064	-2.5 to 2.5	Pass	
		30	3.85	-12.288	-0.0072	-2.5 to 2.5	Pass	
		40	3.85	-8.011	-0.0047	-2.5 to 2.5	Pass	
		50	3.85	-10.207	-0.0060	-2.5 to 2.5	Pass	
		1732.6	20	3.27	-14.763	-0.0085	-2.5 to 2.5	Pass
				3.85	-13.812	-0.0080	-2.5 to 2.5	Pass
				4.43	-11.315	-0.0065	-2.5 to 2.5	Pass
	-30		3.85	-11.108	-0.0064	-2.5 to 2.5	Pass	
	-20		3.85	-11.952	-0.0069	-2.5 to 2.5	Pass	
	-10		3.85	-12.138	-0.0070	-2.5 to 2.5	Pass	
	0		3.85	-12.918	-0.0075	-2.5 to 2.5	Pass	
	10		3.85	-16.694	-0.0096	-2.5 to 2.5	Pass	
	30		3.85	-18.039	-0.0104	-2.5 to 2.5	Pass	
	40		3.85	-14.977	-0.0086	-2.5 to 2.5	Pass	
	50		3.85	-19.054	-0.0110	-2.5 to 2.5	Pass	
	1752.6		20	3.27	-19.140	-0.0109	-2.5 to 2.5	Pass
				3.85	-15.922	-0.0091	-2.5 to 2.5	Pass
				4.43	-12.817	-0.0073	-2.5 to 2.5	Pass
		-30	3.85	-14.763	-0.0084	-2.5 to 2.5	Pass	
		-20	3.85	-18.024	-0.0103	-2.5 to 2.5	Pass	
		-10	3.85	-14.048	-0.0080	-2.5 to 2.5	Pass	
		0	3.85	-14.269	-0.0081	-2.5 to 2.5	Pass	
		10	3.85	-19.569	-0.0112	-2.5 to 2.5	Pass	
		30	3.85	-13.676	-0.0078	-2.5 to 2.5	Pass	
		40	3.85	-12.696	-0.0072	-2.5 to 2.5	Pass	
		50	3.85	-14.720	-0.0084	-2.5 to 2.5	Pass	

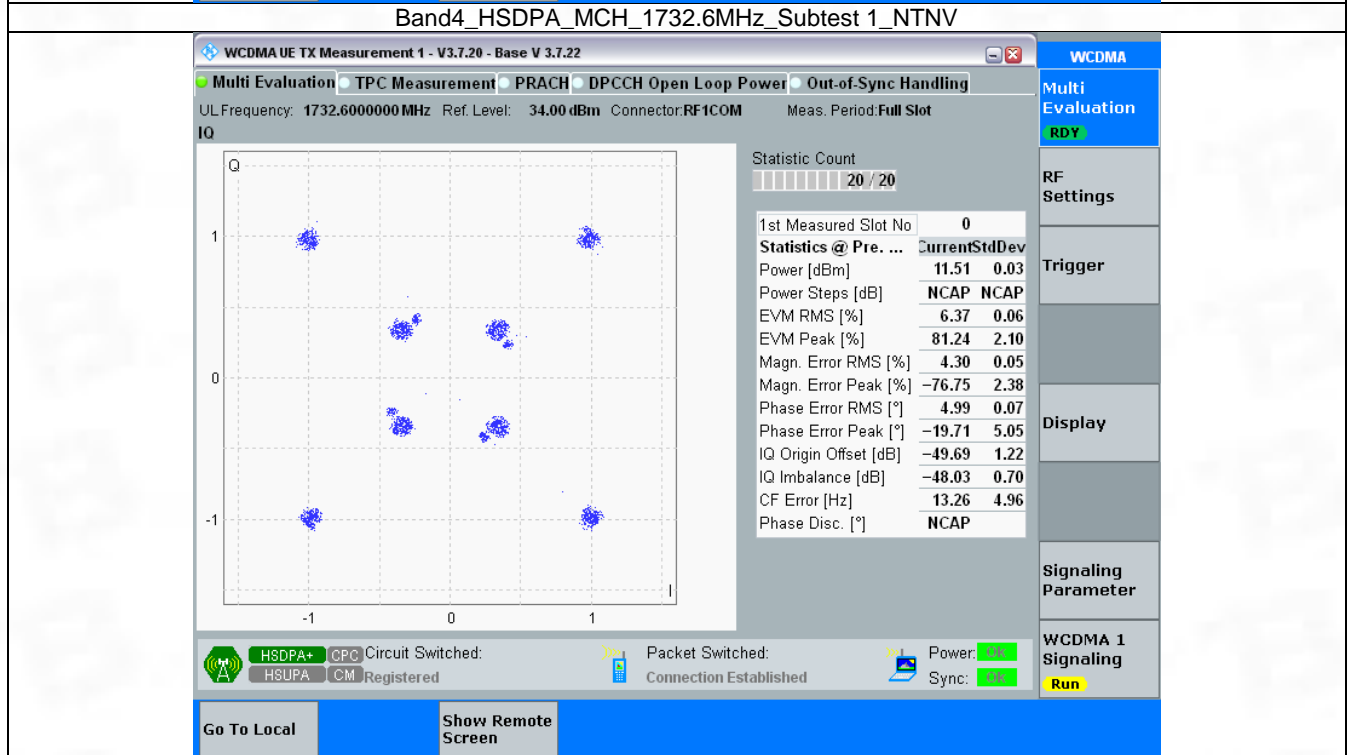
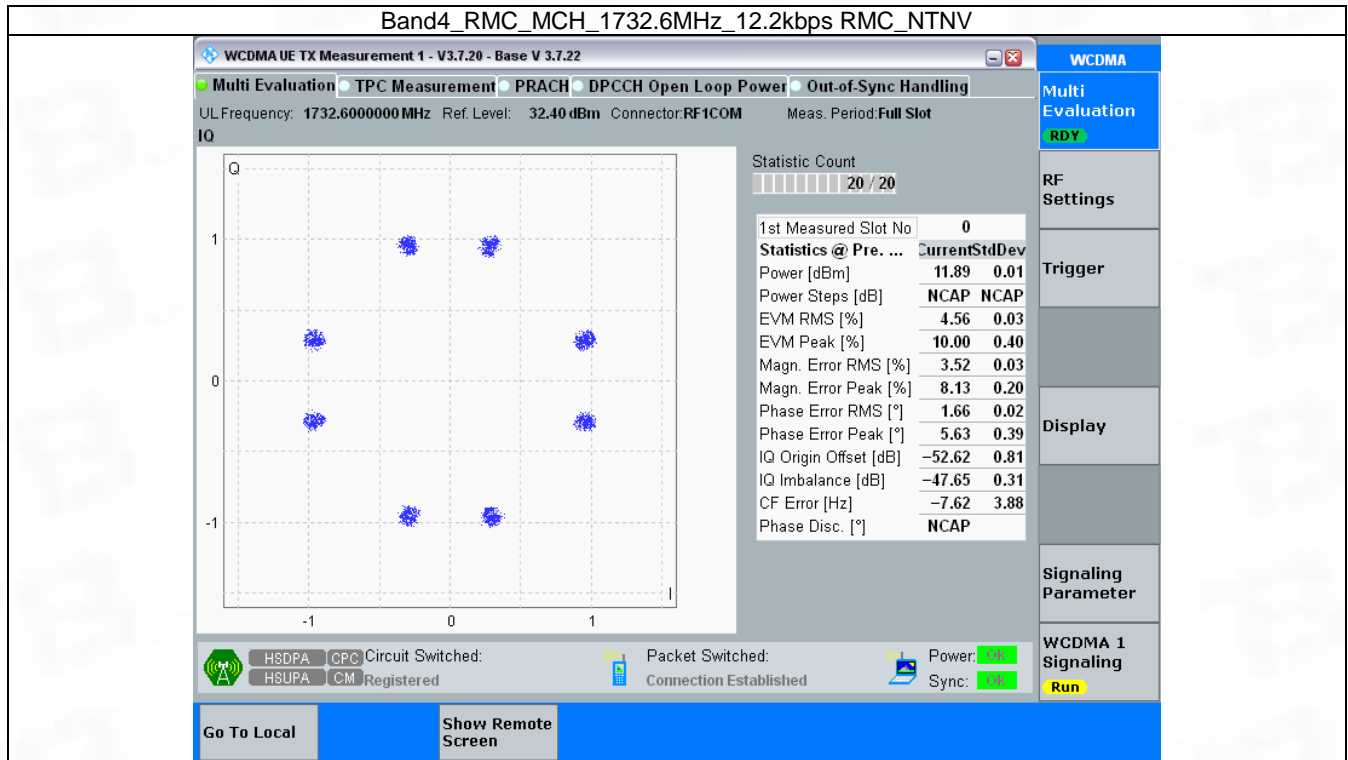
### 3. Modulation Characteristics

#### 3.1 Band4

##### 3.1.1 Test Result

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

### 3.1.2 Test Graph



Band4\_HSUPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV

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: 1732.600000MHz 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]	11.82 2.31
Power Steps [dB]	NCAP NCAP
EVM RMS [%]	4.59 2.31
EVM Peak [%]	9.43 36.70
Magn. Error RMS [%]	3.53 0.84
Magn. Error Peak [%]	8.30 36.14
Phase Error RMS [°]	3.08 1.49
Phase Error Peak [°]	-10.35 8.87
IQ Origin Offset [dB]	-49.89 1.84
IQ Imbalance [dB]	-47.80 1.18
CF Error [Hz]	-8.44 29.73
Phase Disc. [°]	NCAP

Go To Local Show Remote Screen

HSDPA+ CPO Circuit Switched
HSDPA CM Registered
Packet Switched: Connection Established
Power: ■
Sync: ■

WCDMA 1 Signaling Run

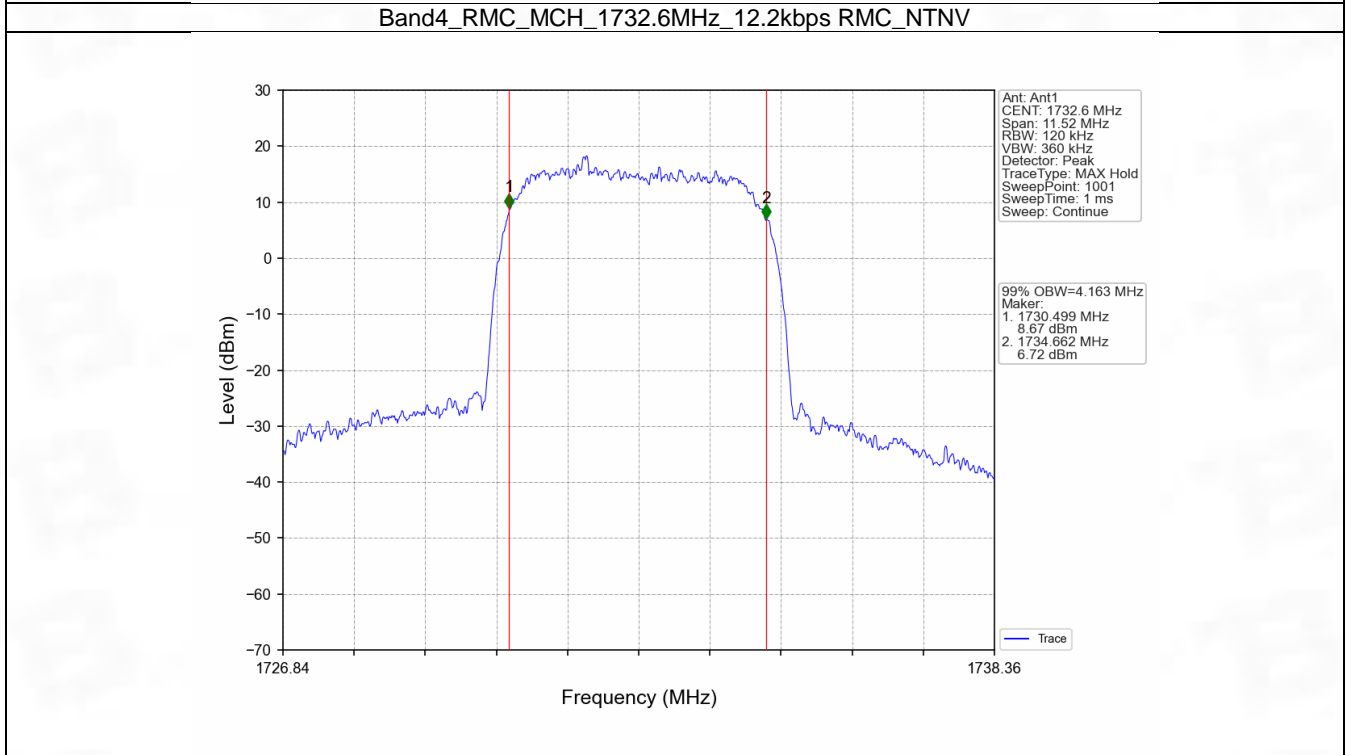
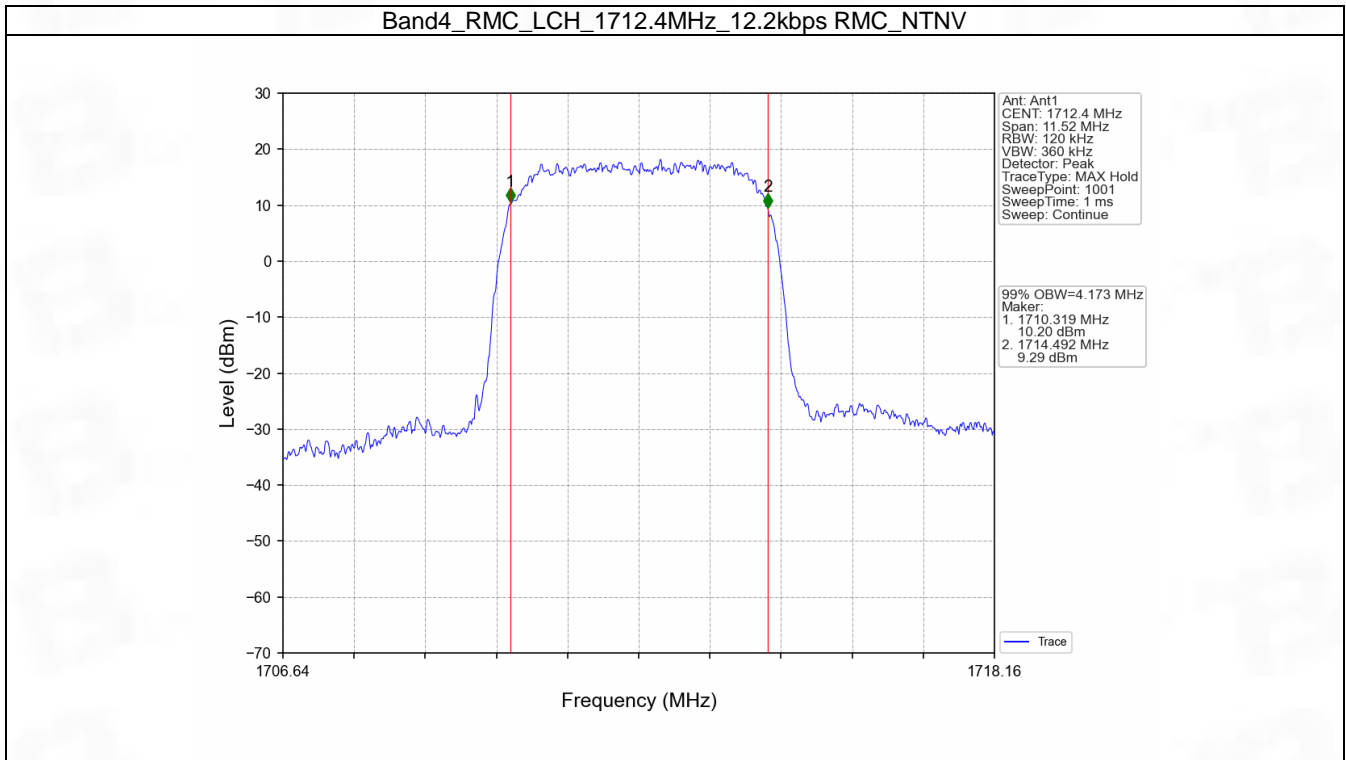
## 4. 99% & 26dB Bandwidth

### 4.1 Band4\_OBW

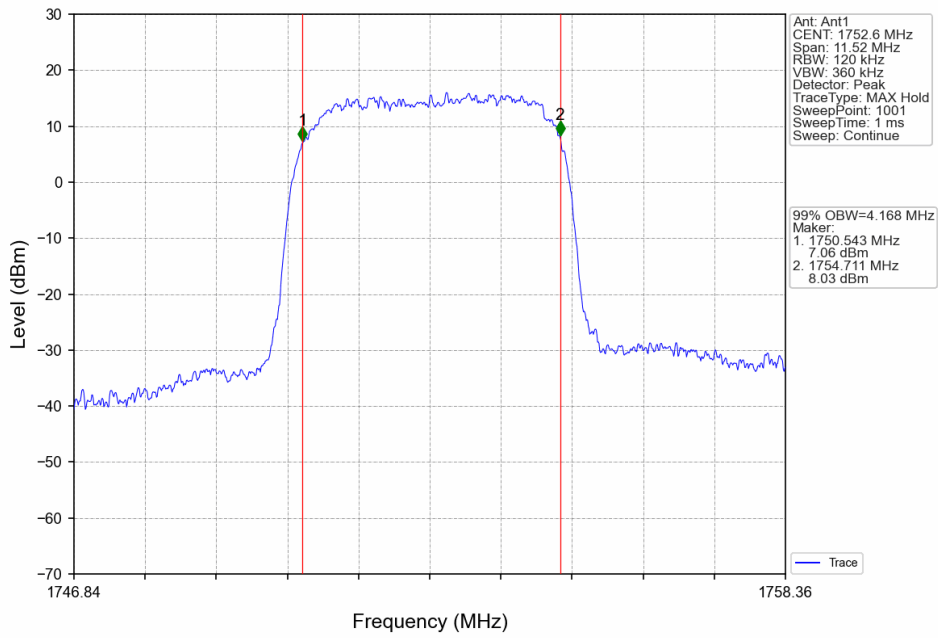
#### 4.1.1 Test Result

Band: 4						
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	1712.4	4.173	/	Pass
			1732.6	4.163	/	Pass
			1752.6	4.168	/	Pass
	HSDPA	Subtest 1	1712.4	4.154	/	Pass
			1732.6	4.184	/	Pass
			1752.6	4.170	/	Pass
	HSUPA	Subtest 1	1712.4	4.161	/	Pass
			1732.6	4.172	/	Pass
			1752.6	4.154	/	Pass

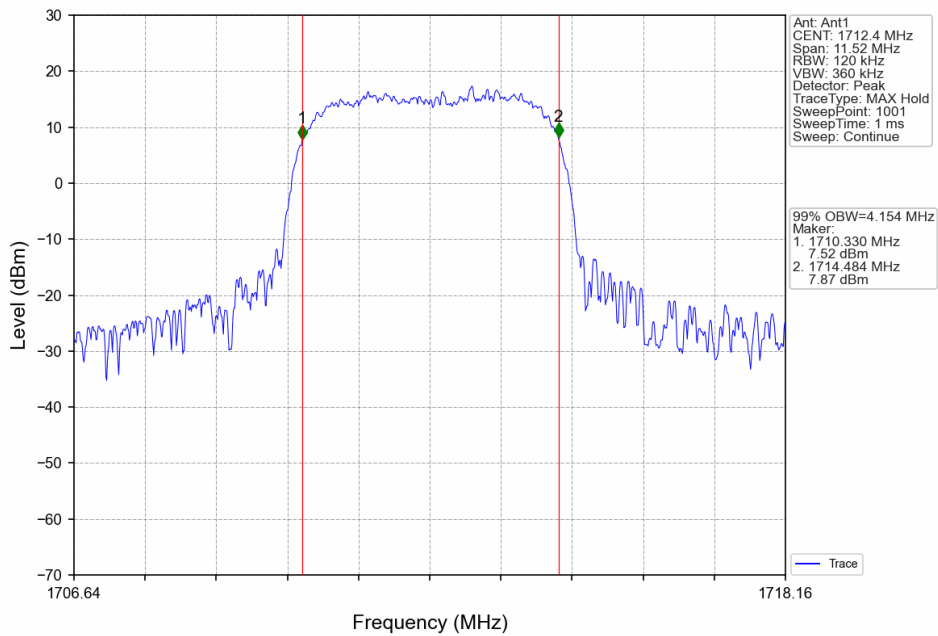
### 4.1.2 Test Graph



Band4\_RMC\_HCH\_1752.6MHz\_12.2kbps RMC\_NTNV

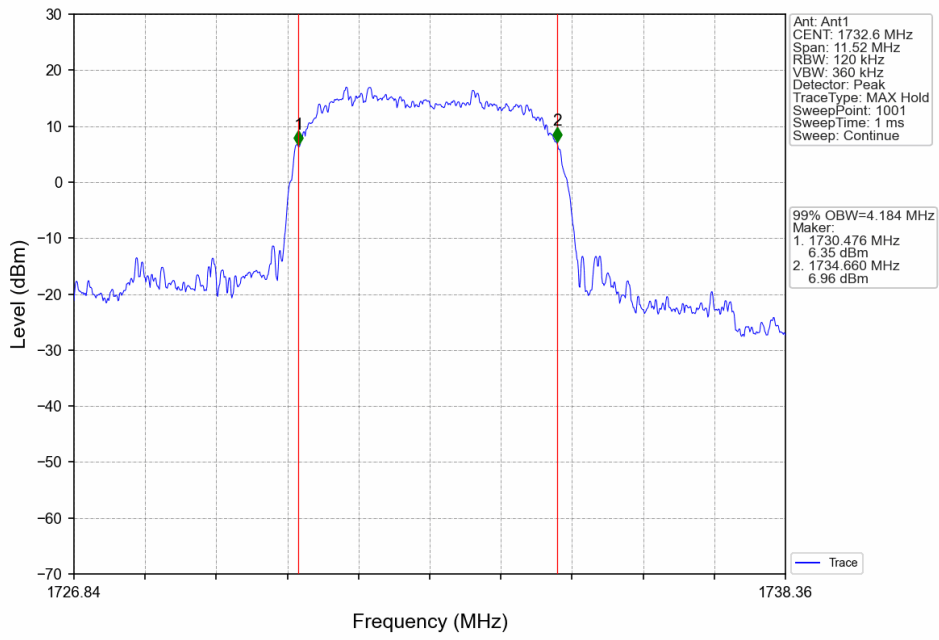


Band4\_HSDPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV

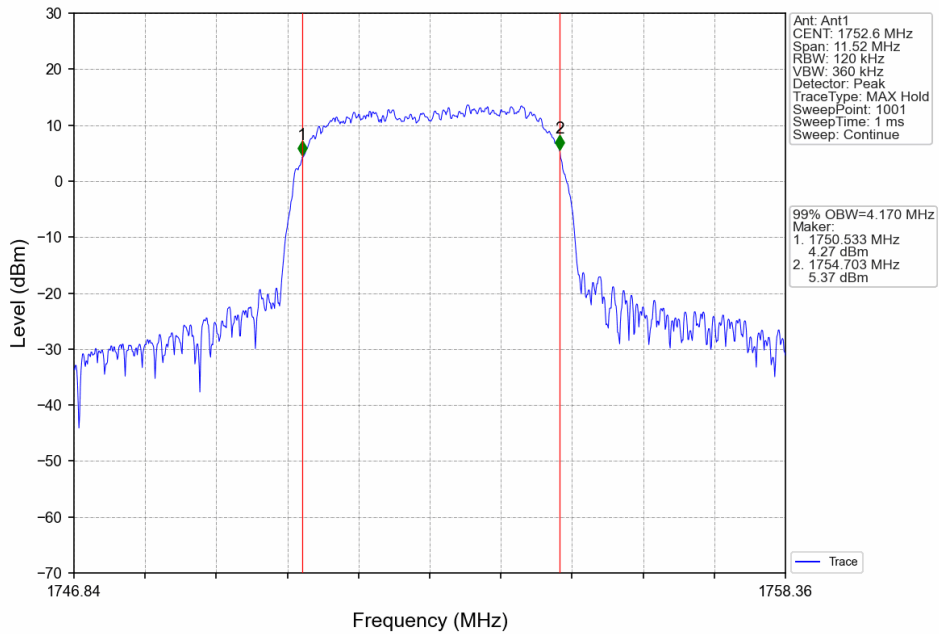




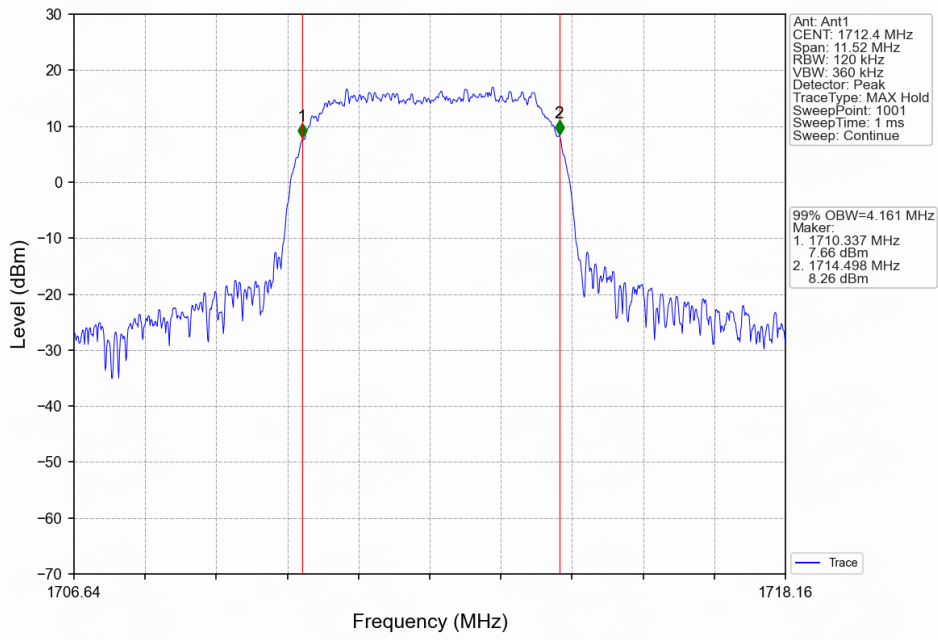
Band4\_HSDPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



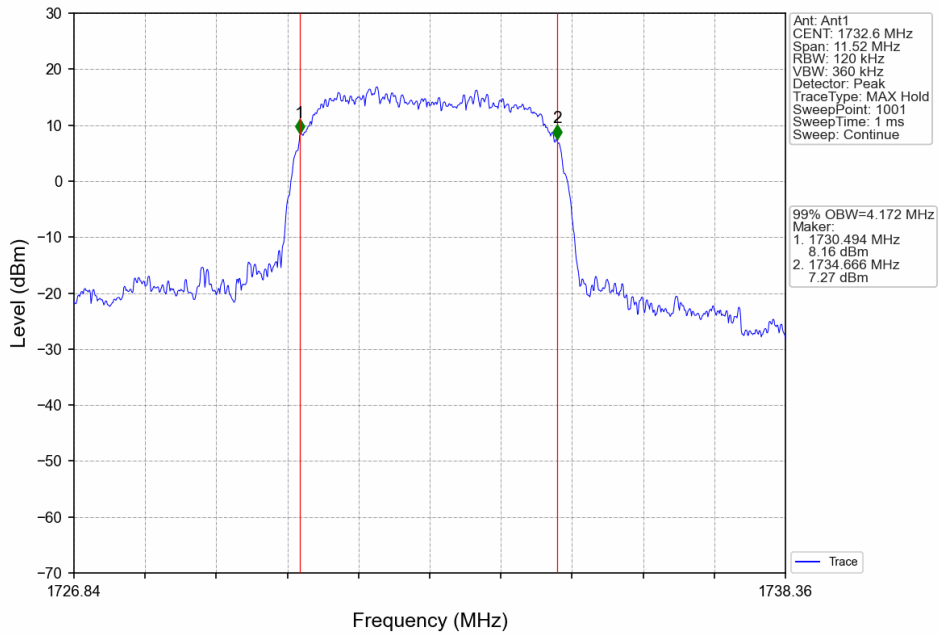
Band4\_HSDPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



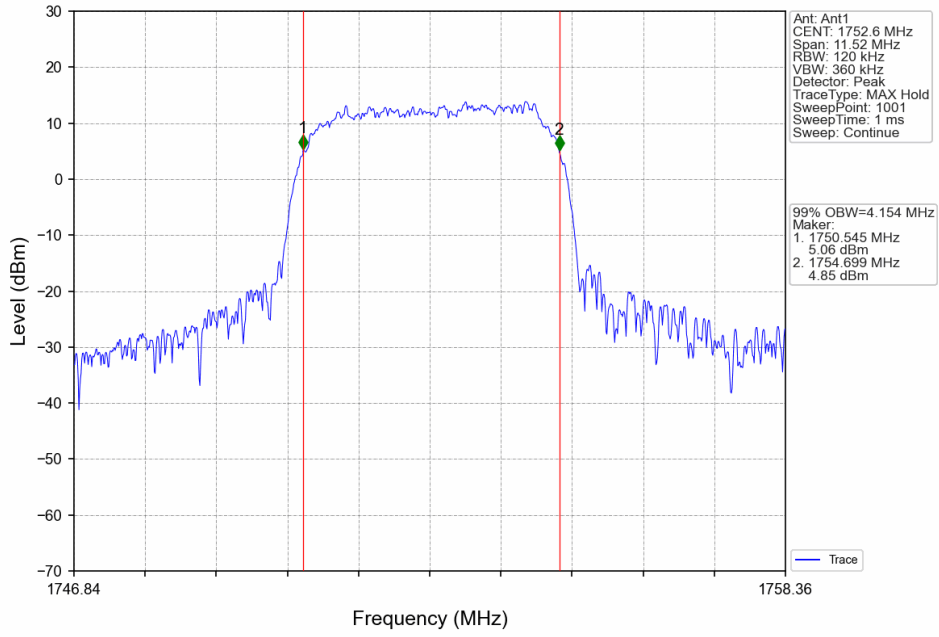
Band4\_HSUPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



Band4\_HSUPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



Band4\_HSUPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV

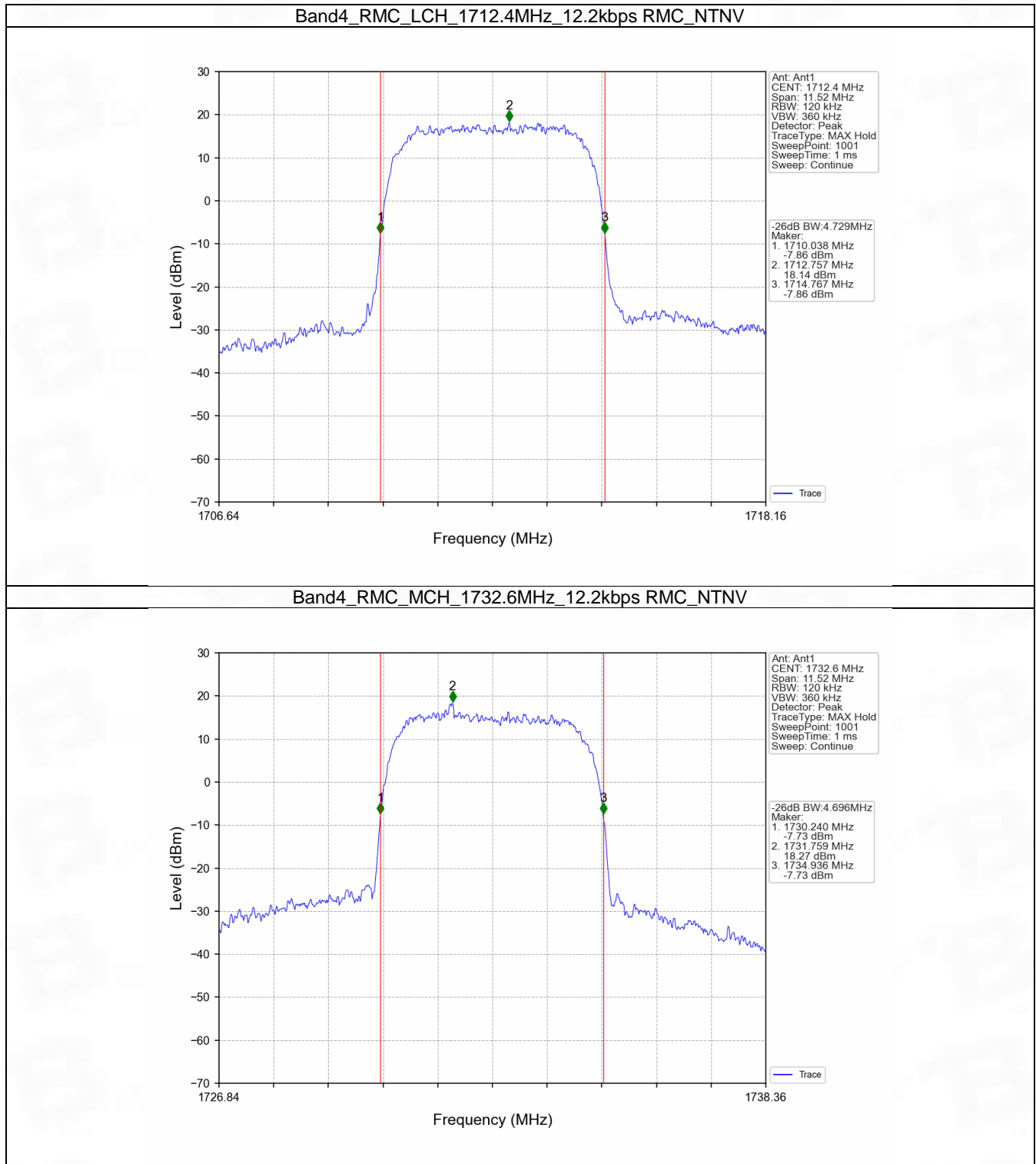


## 4.2 Band4\_XDB

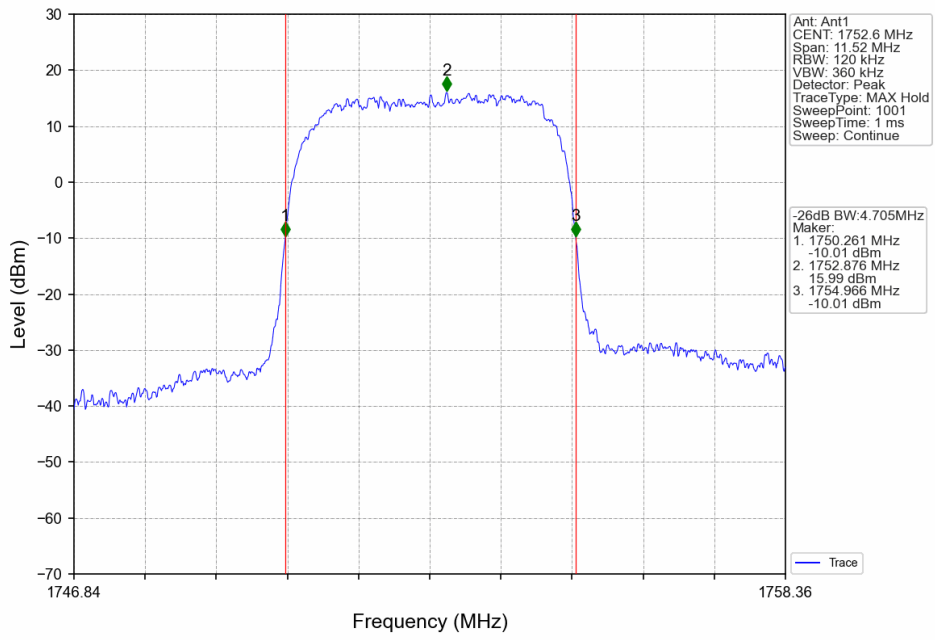
### 4.2.1 Test Result

Band: 4						
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	1712.4	4.729	/	Pass
			1732.6	4.696	/	Pass
			1752.6	4.705	/	Pass
	HSDPA	Subtest 1	1712.4	4.714	/	Pass
			1732.6	4.681	/	Pass
			1752.6	4.722	/	Pass
	HSUPA	Subtest 1	1712.4	4.704	/	Pass
			1732.6	4.683	/	Pass
			1752.6	4.724	/	Pass

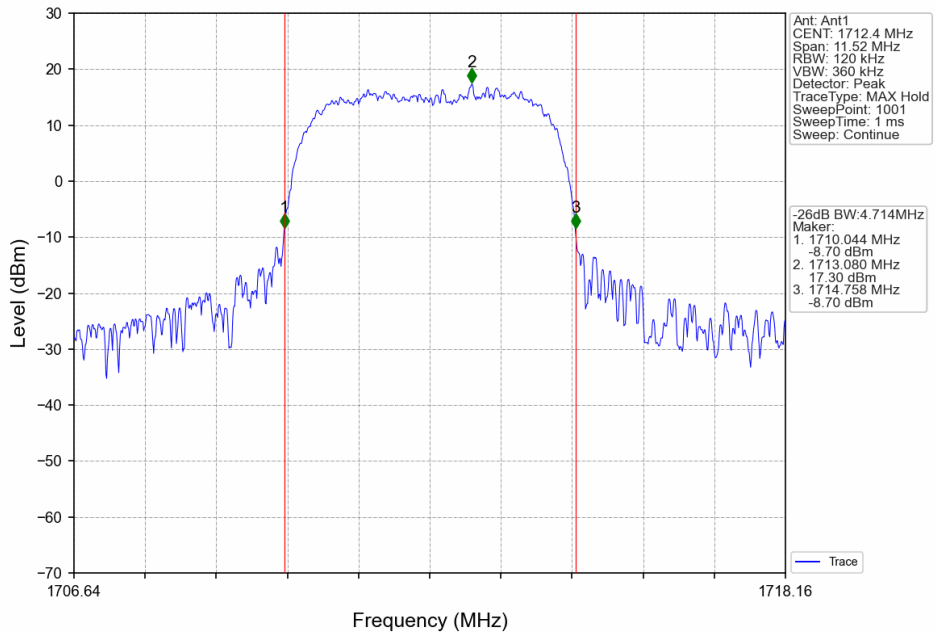
## 4.2.2 Test Graph



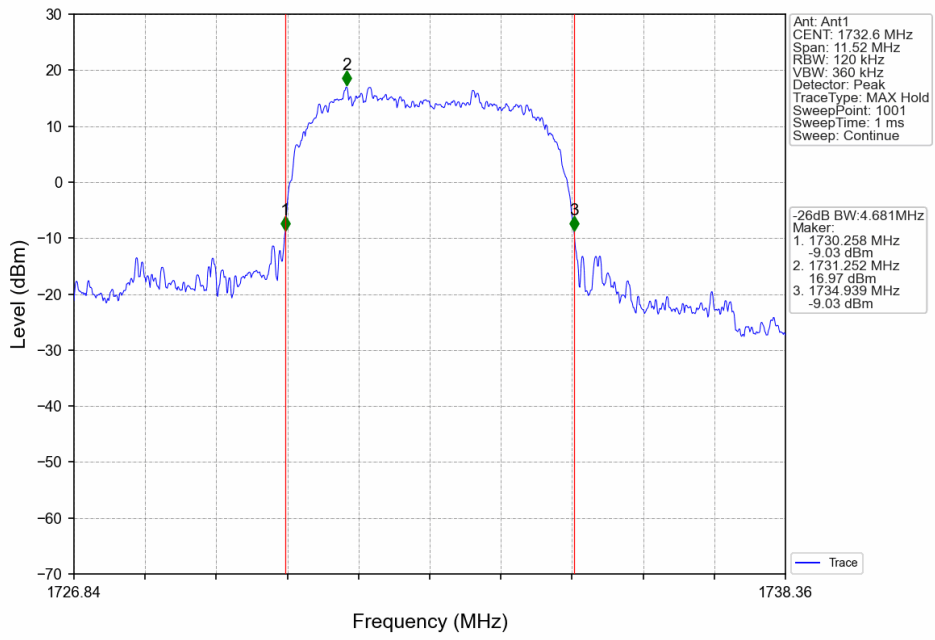
Band4\_RMC\_HCH\_1752.6MHz\_12.2kbps RMC\_NTNV



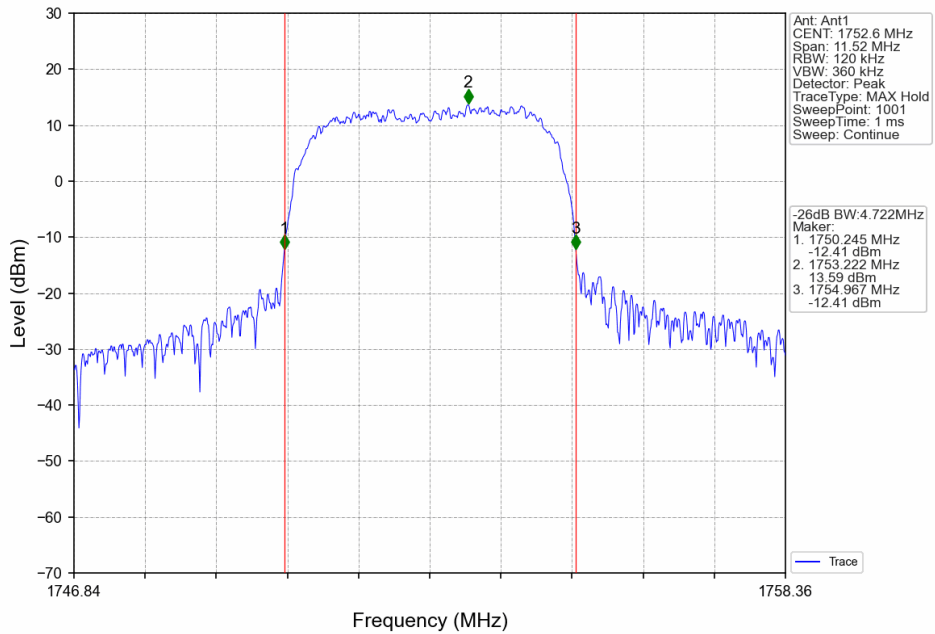
Band4\_HSDPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



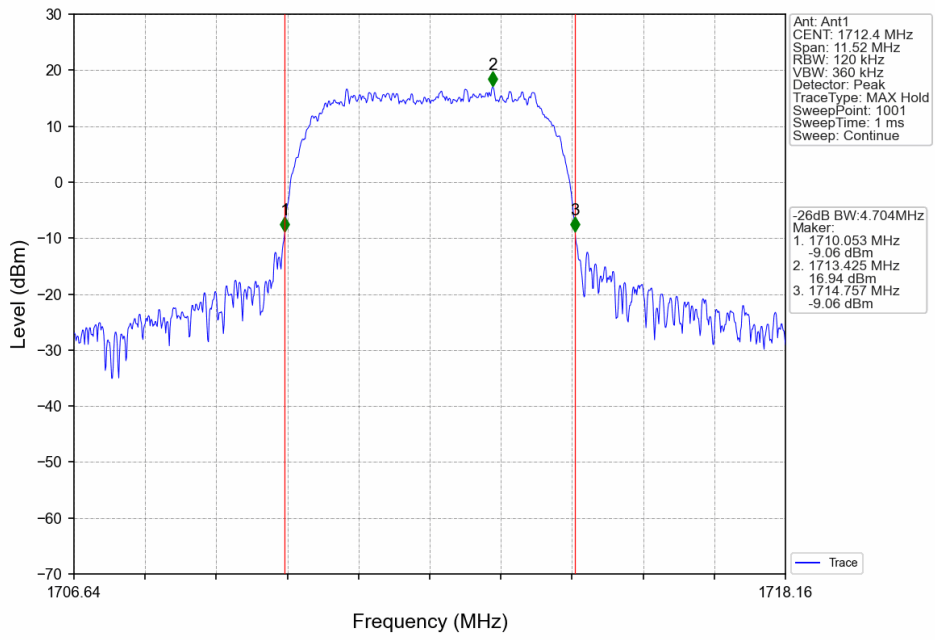
Band4\_HSDPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



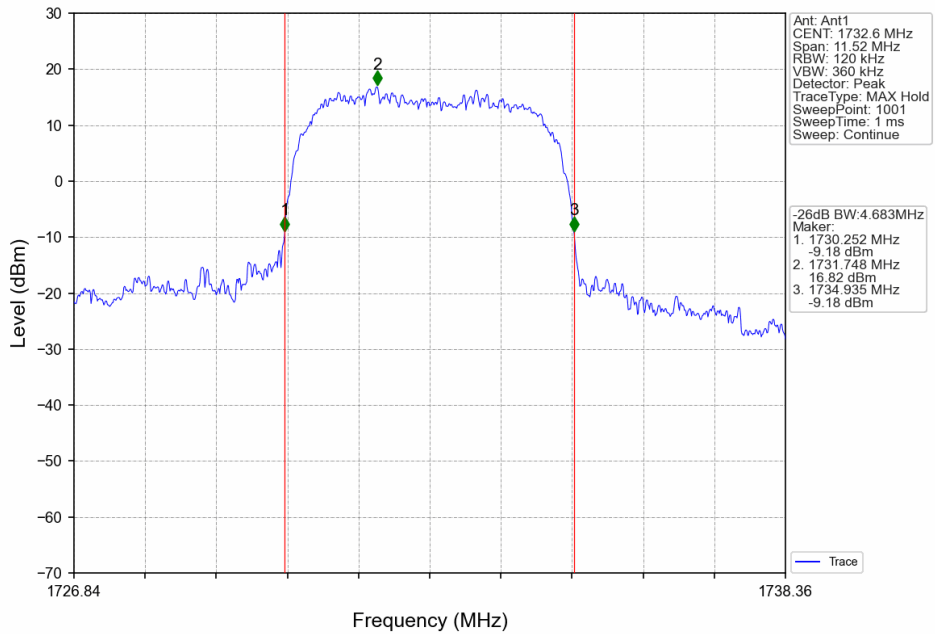
Band4\_HSDPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



Band4\_HSUPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV

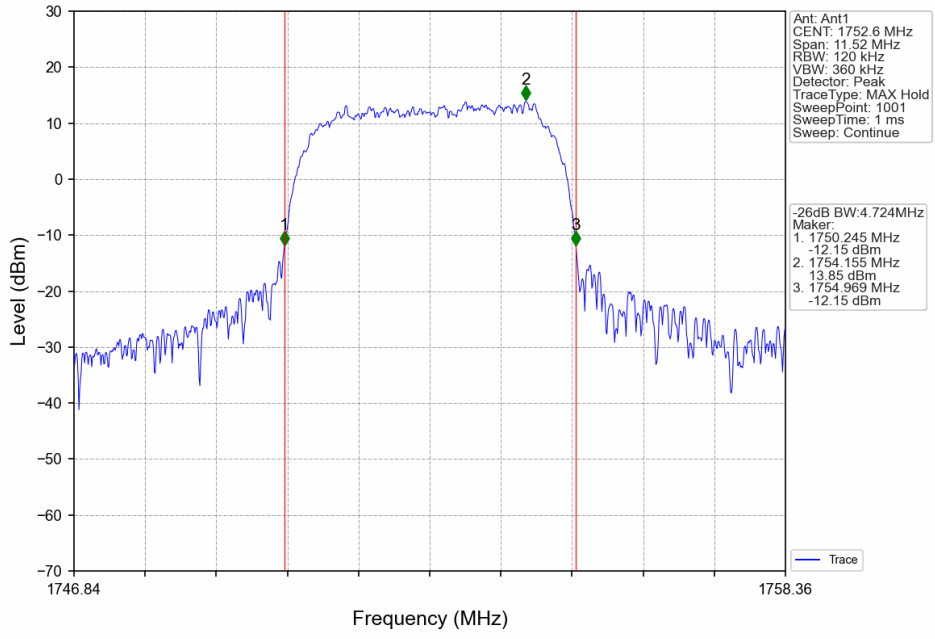


Band4\_HSUPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV





Band4\_HSUPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



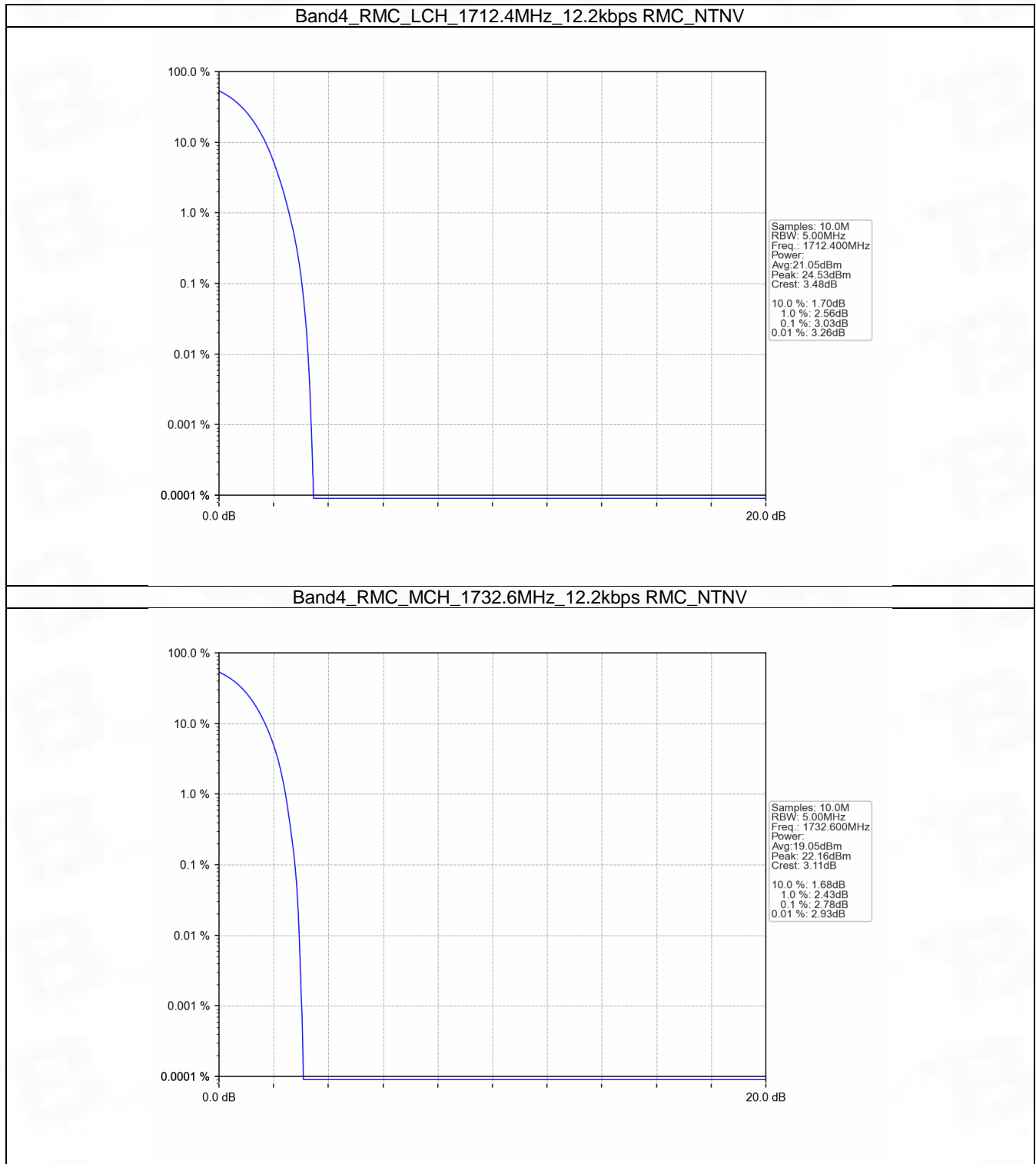
## 5. Peak-Average Ratio

### 5.1 Band4

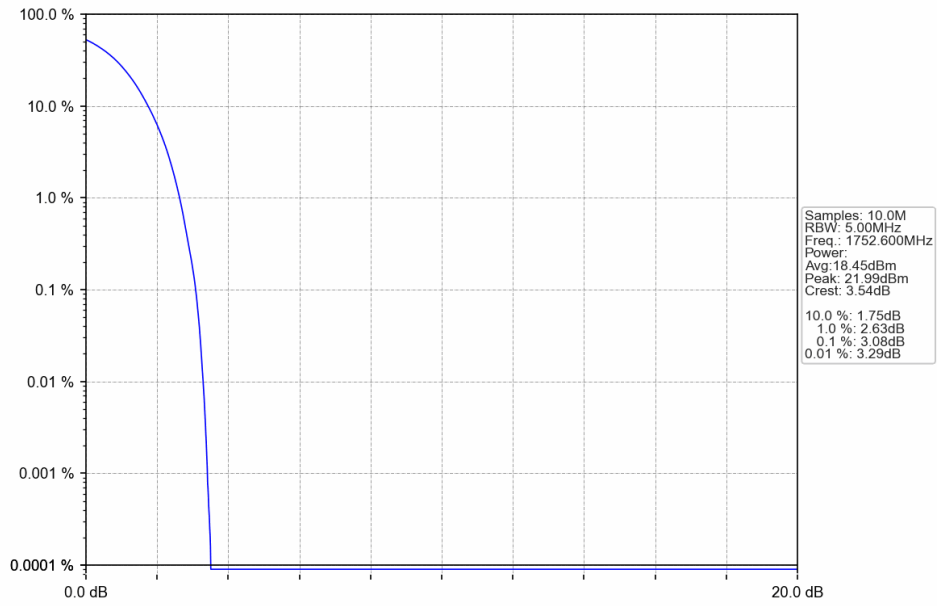
#### 5.1.1 Test Result

Band: 4						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	1712.4	3.03	<=13	Pass
			1732.6	2.78	<=13	Pass
			1752.6	3.08	<=13	Pass
	HSDPA	Subtest 1	1712.4	5.72	<=13	Pass
			1732.6	5.55	<=13	Pass
			1752.6	6.21	<=13	Pass
	HSUPA	Subtest 1	1712.4	5.98	<=13	Pass
			1732.6	5.52	<=13	Pass
			1752.6	5.82	<=13	Pass

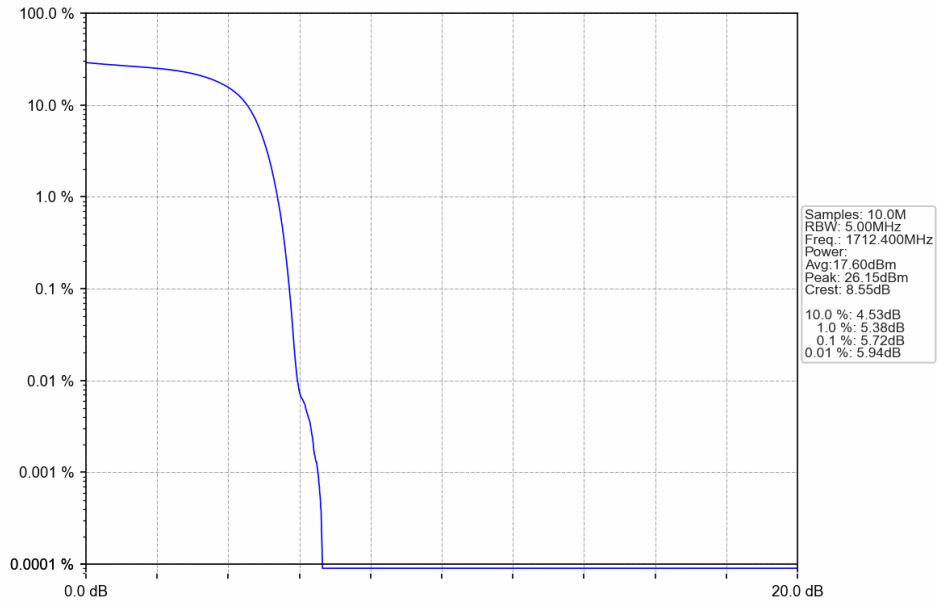
### 5.1.2 Test Graph



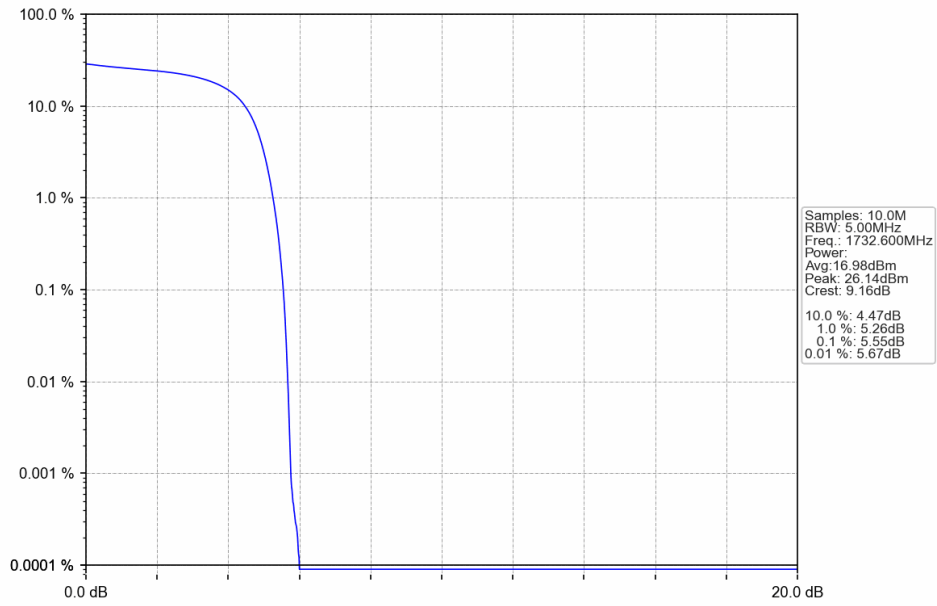
Band4\_RMC\_HCH\_1752.6MHz\_12.2kbps RMC\_NTNV



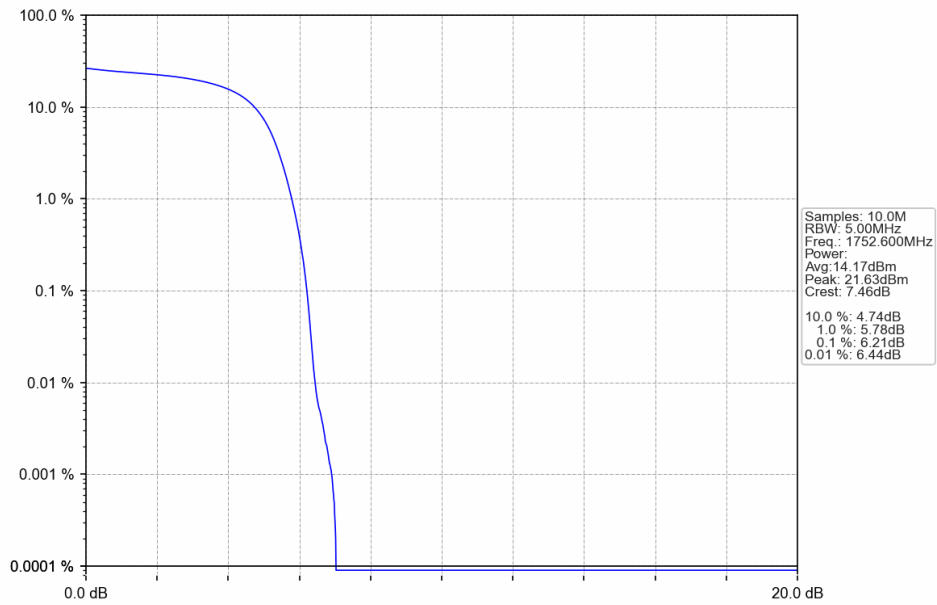
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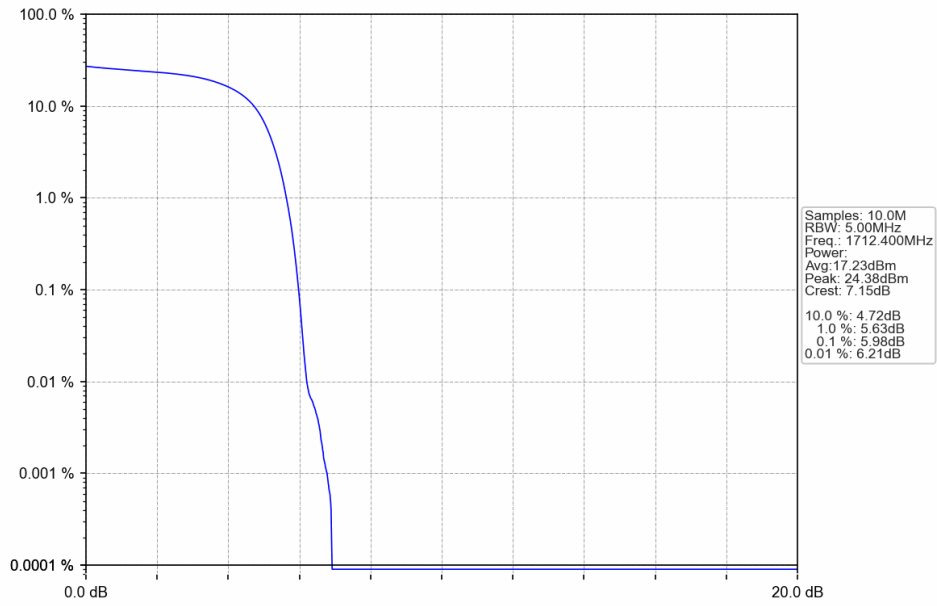
Band4\_HSDPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



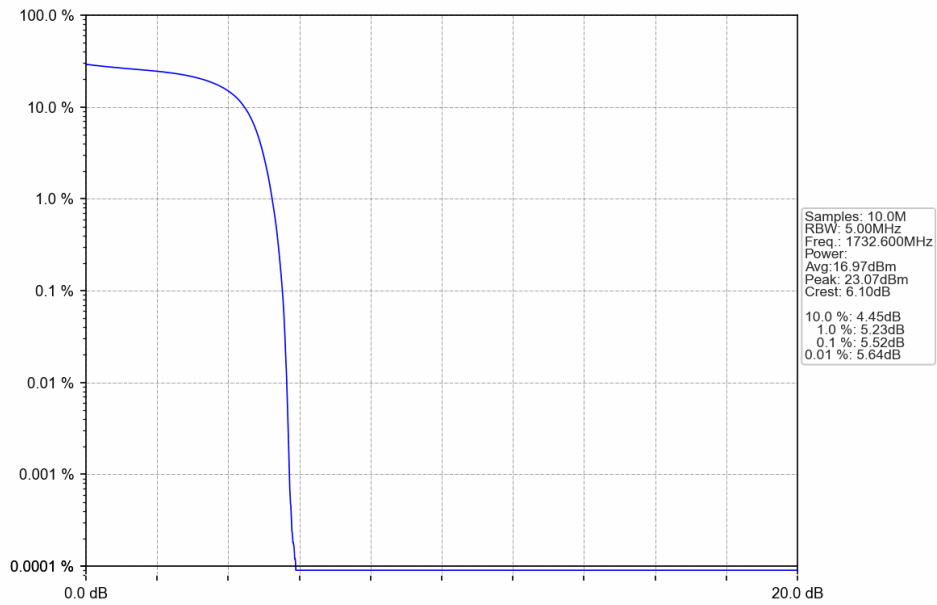
Band4\_HSDPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



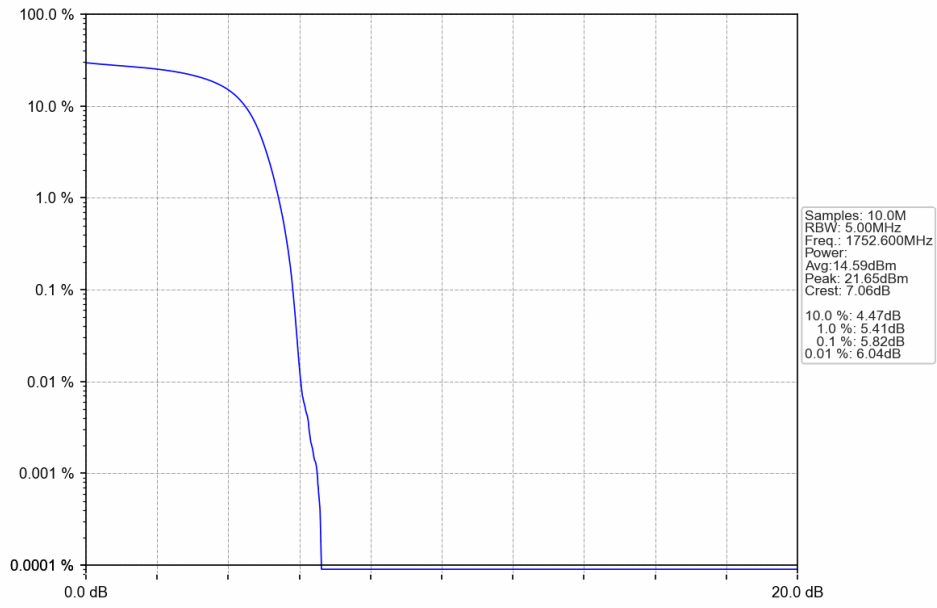
Band4\_HSUPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



Band4\_HSUPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



Band4\_HSUPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



## 6. Spurious Emission

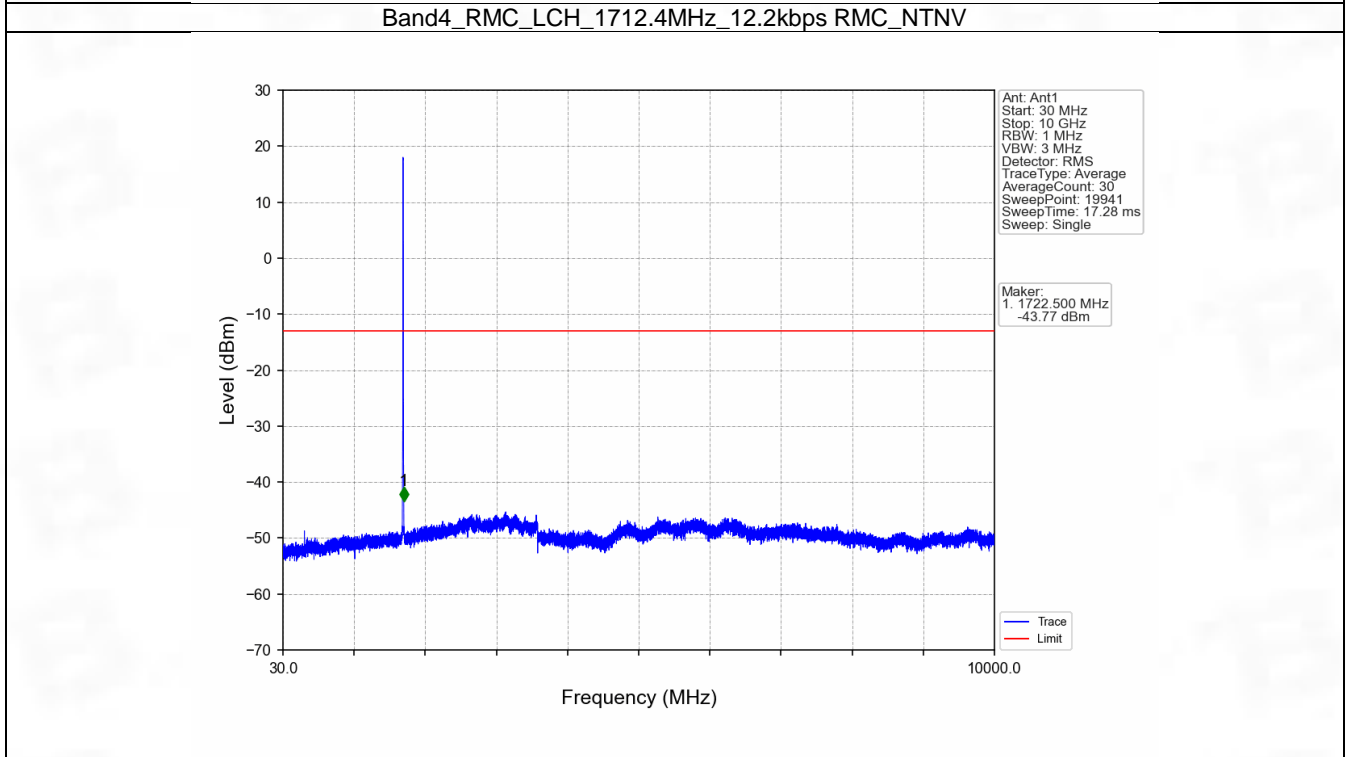
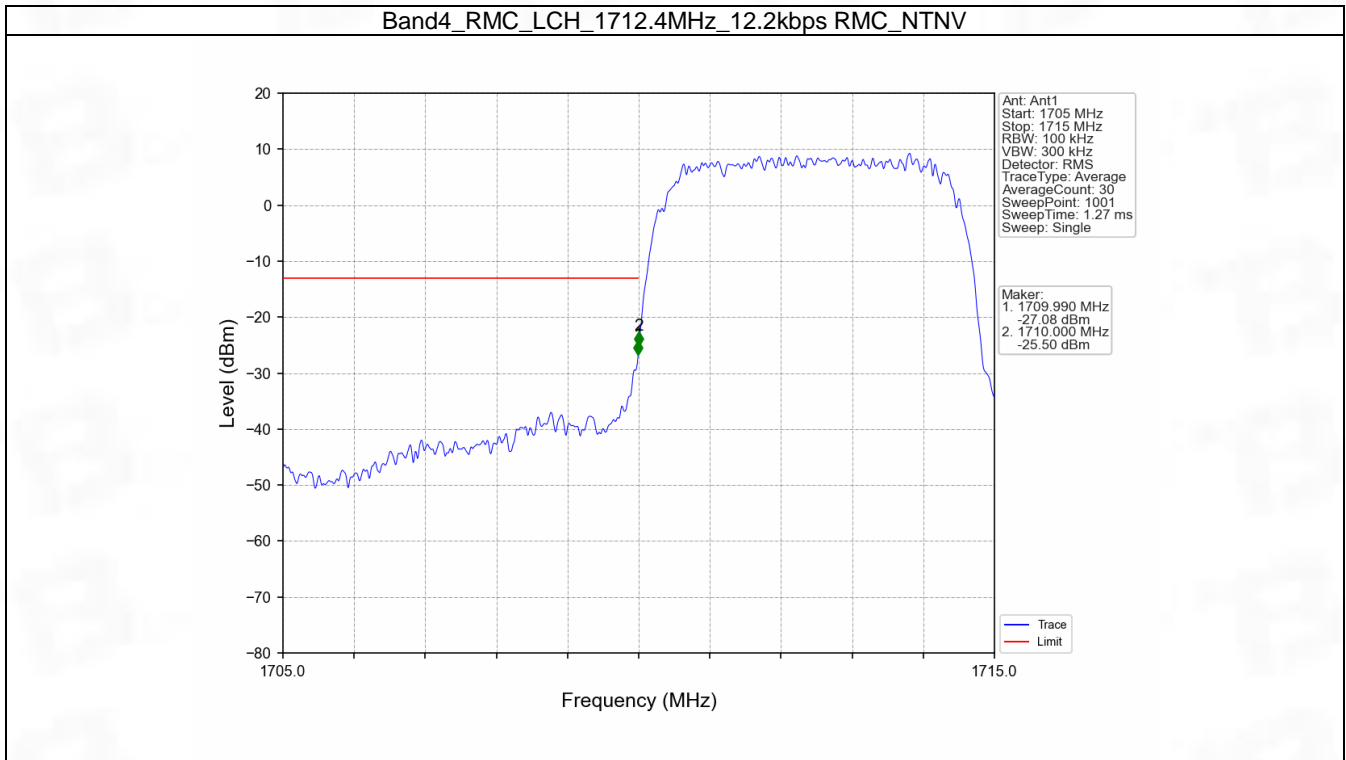
### 6.1 Band4

#### 6.1.1 Test Result

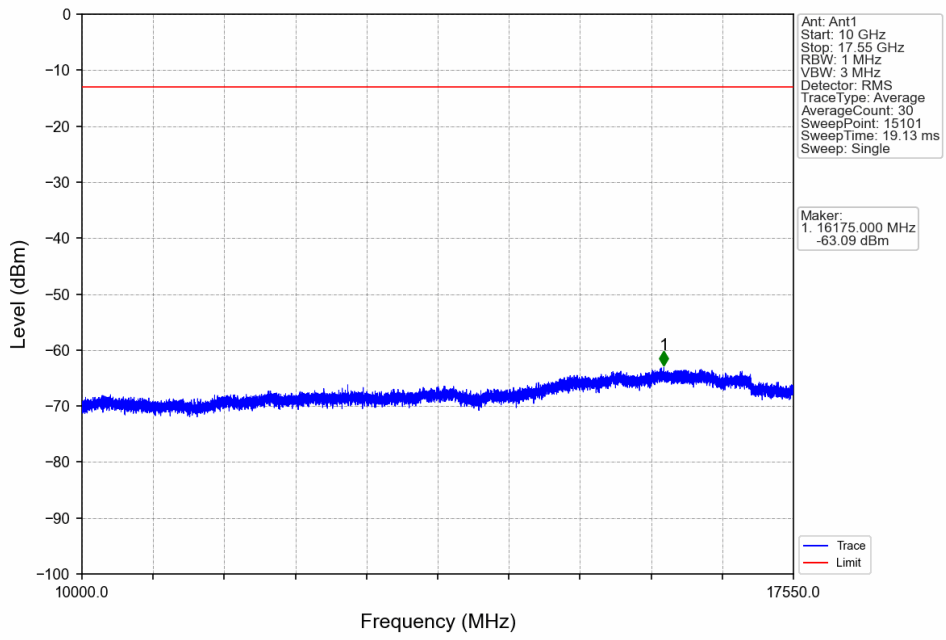
Band: 4						
ENV	Mode		Frequency (MHz)	Spurious Emission		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	1712.4	Refer To Test Graph		Pass
			1732.6	Refer To Test Graph		Pass
			1752.6	Refer To Test Graph		Pass
	HSDPA	Subtest 1	1712.4	Refer To Test Graph		Pass
			1732.6	Refer To Test Graph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



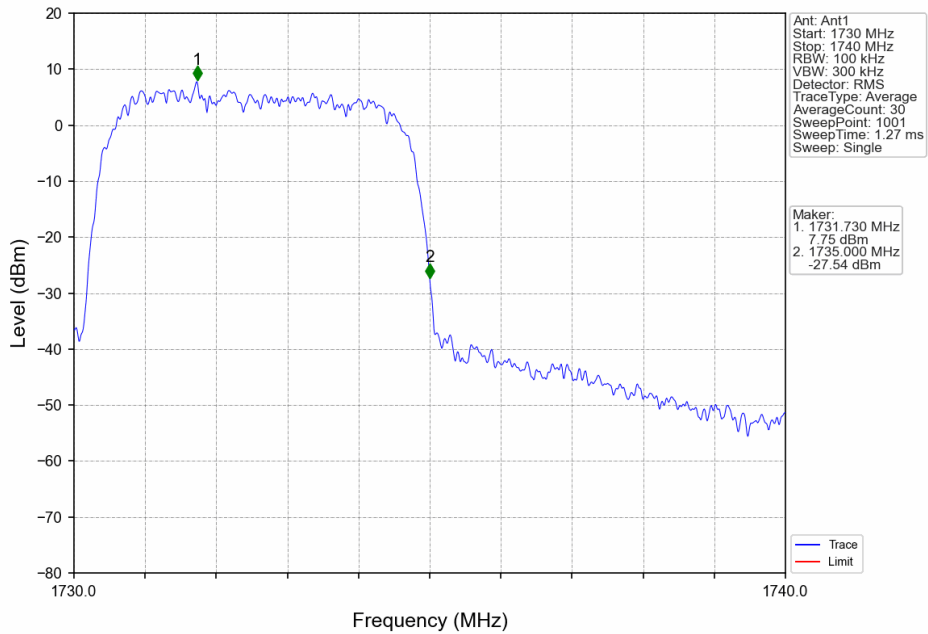
### 6.1.2 Test Graph



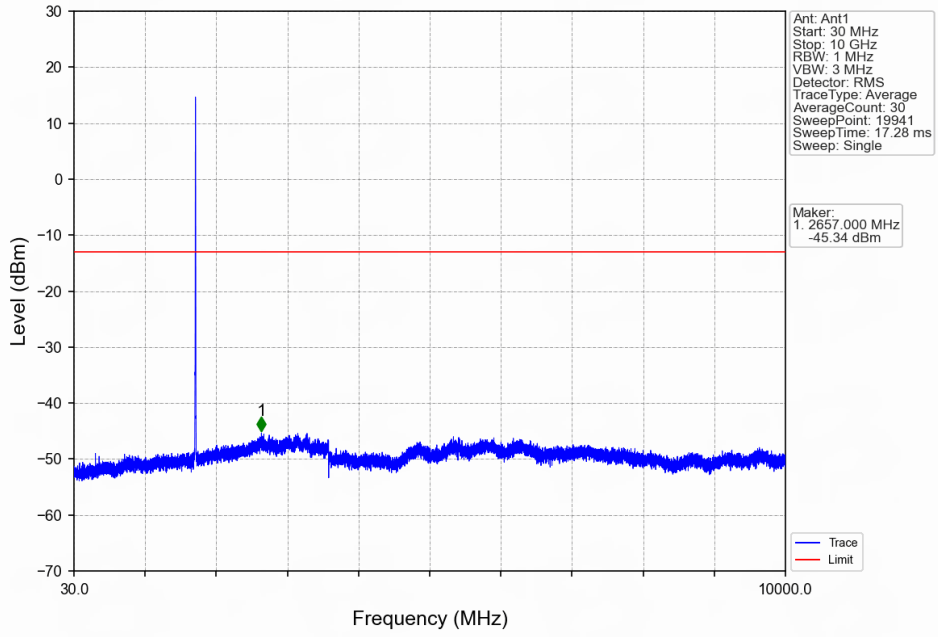
Band4\_RMC\_LCH\_1712.4MHz\_12.2kbps RMC\_NTNV



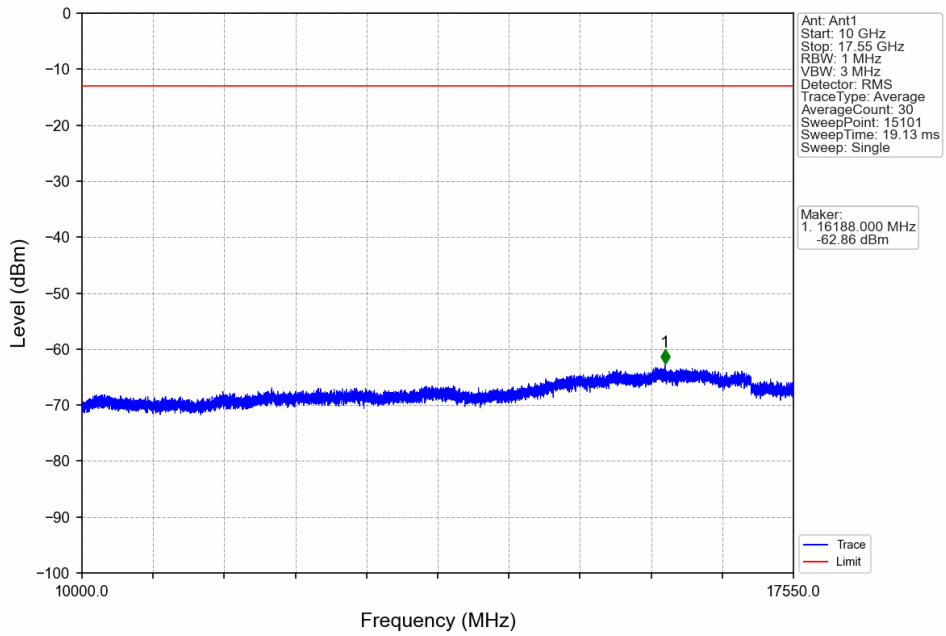
Band4\_RMC\_MCH\_1732.6MHz\_12.2kbps RMC\_NTNV



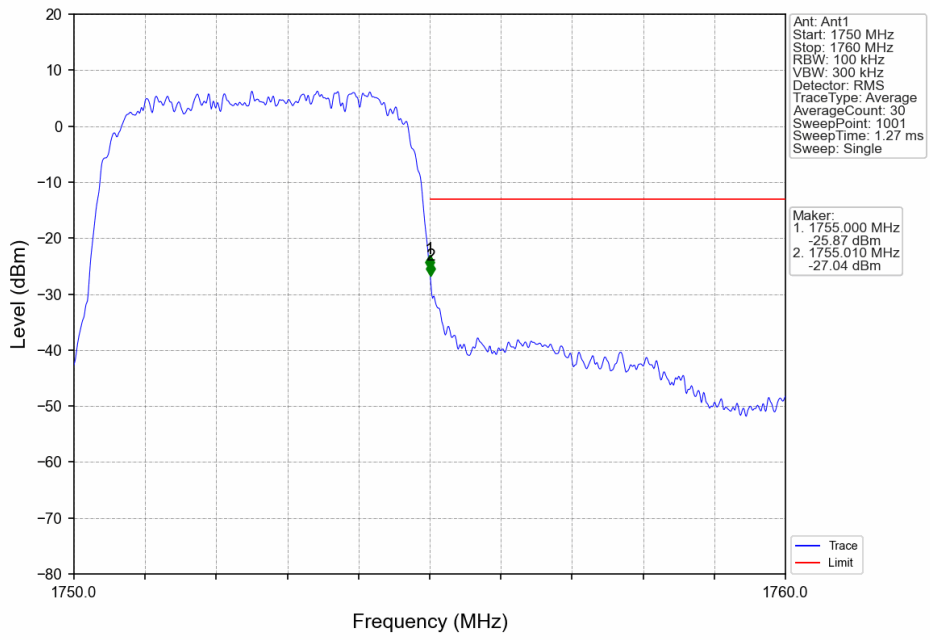
Band4\_RMC\_MCH\_1732.6MHz\_12.2kbps RMC\_NTNV



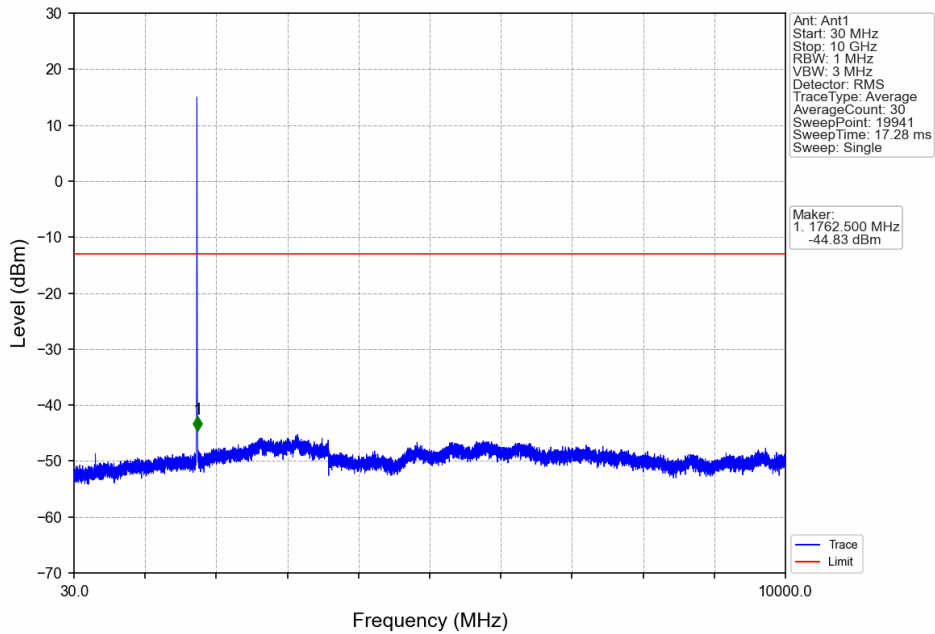
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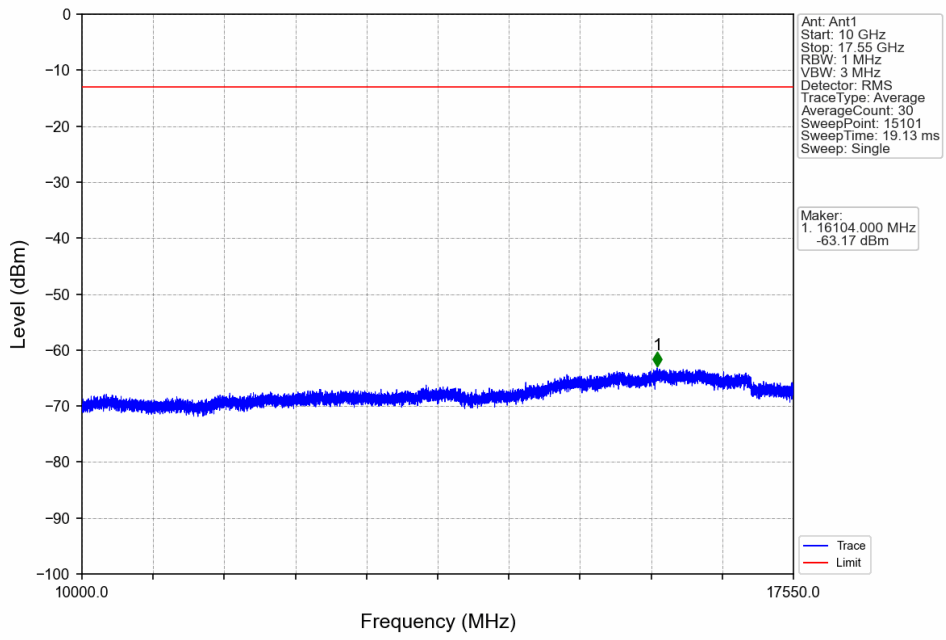
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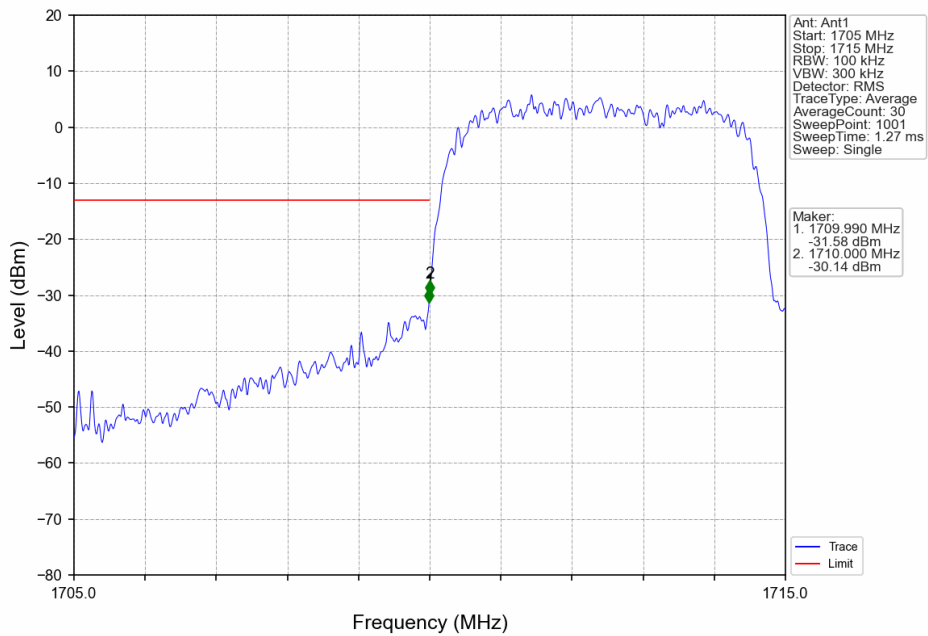
Band4\_RMC\_HCH\_1752.6MHz\_12.2kbps RMC\_NTNV



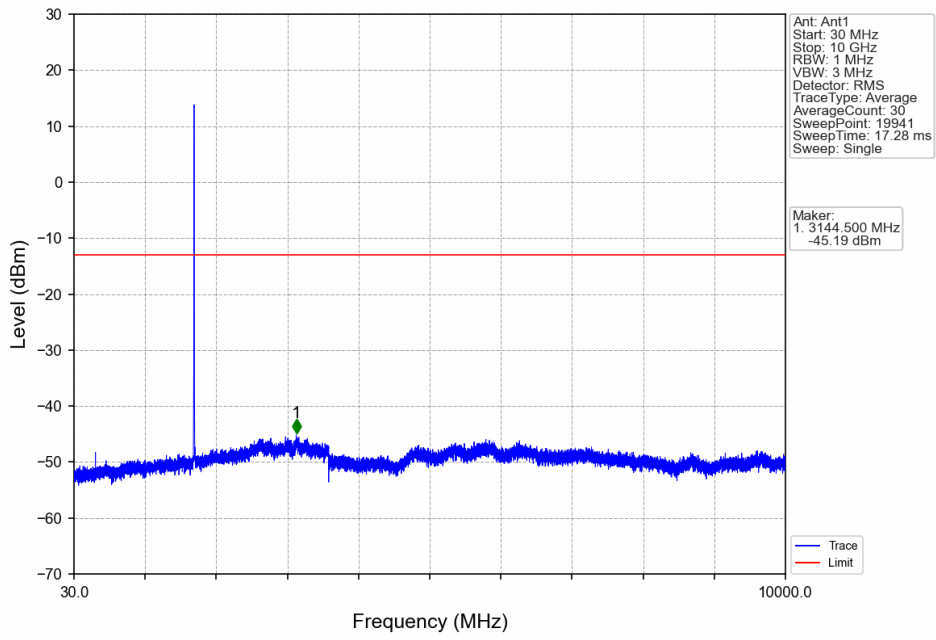
Band4\_RMC\_HCH\_1752.6MHz\_12.2kbps RMC\_NTNV



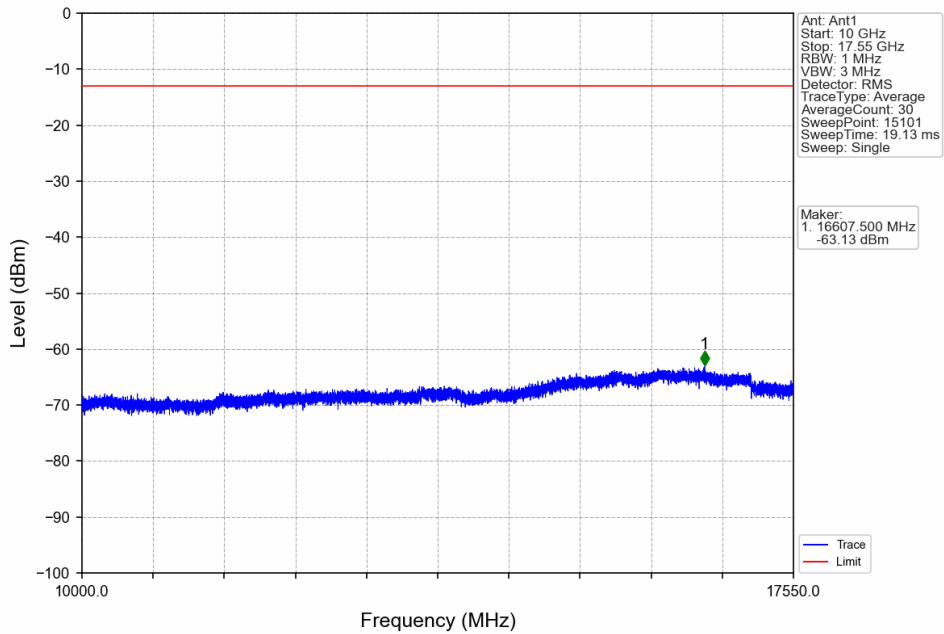
Band4\_HSDPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



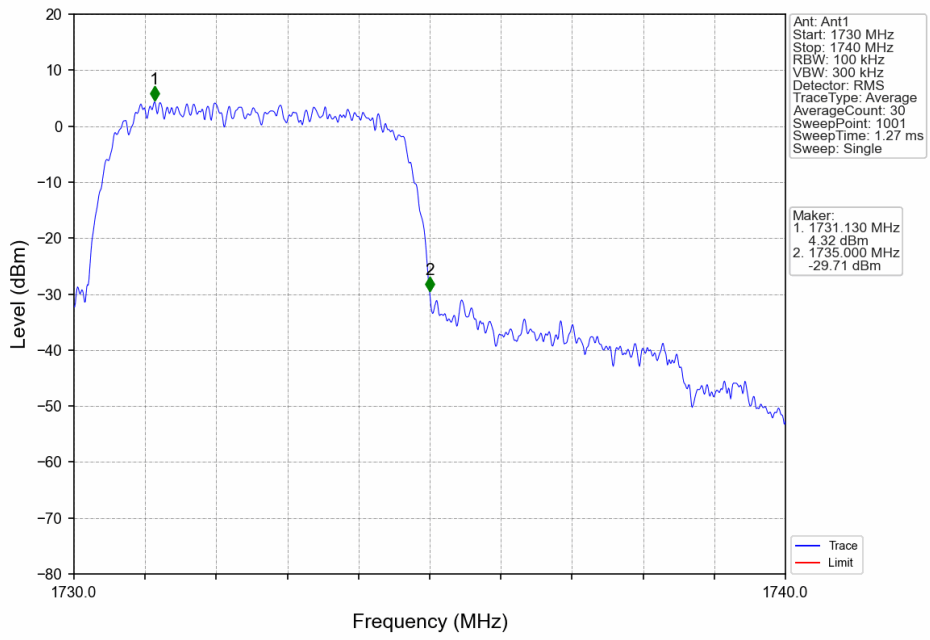
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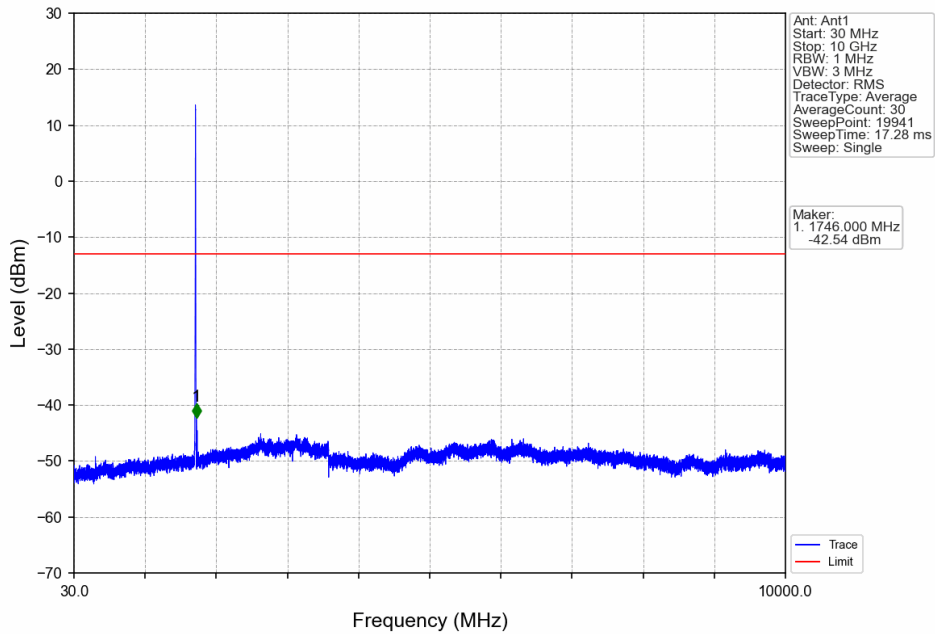
Band4\_HSDPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



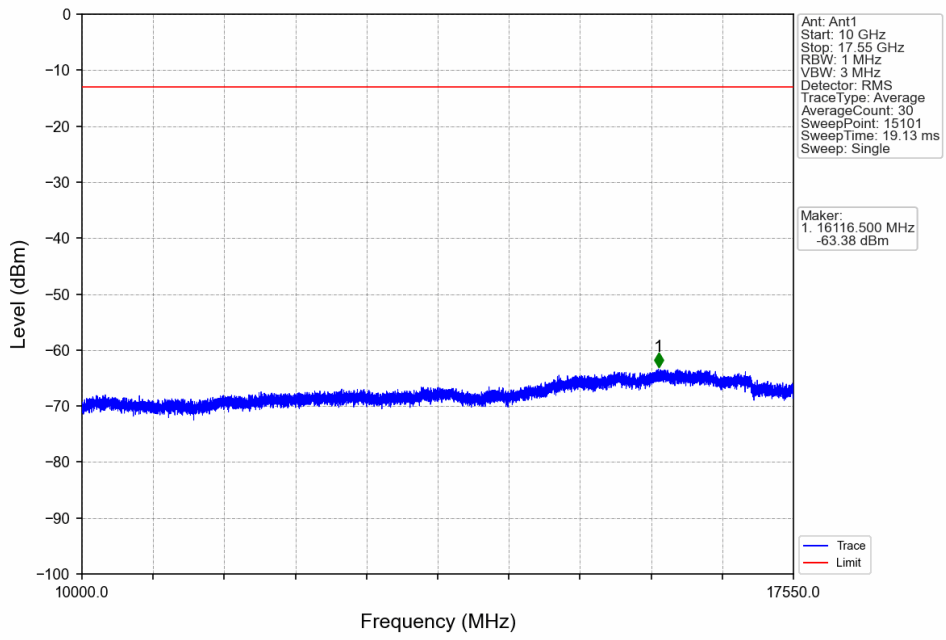
Band4\_HSDPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



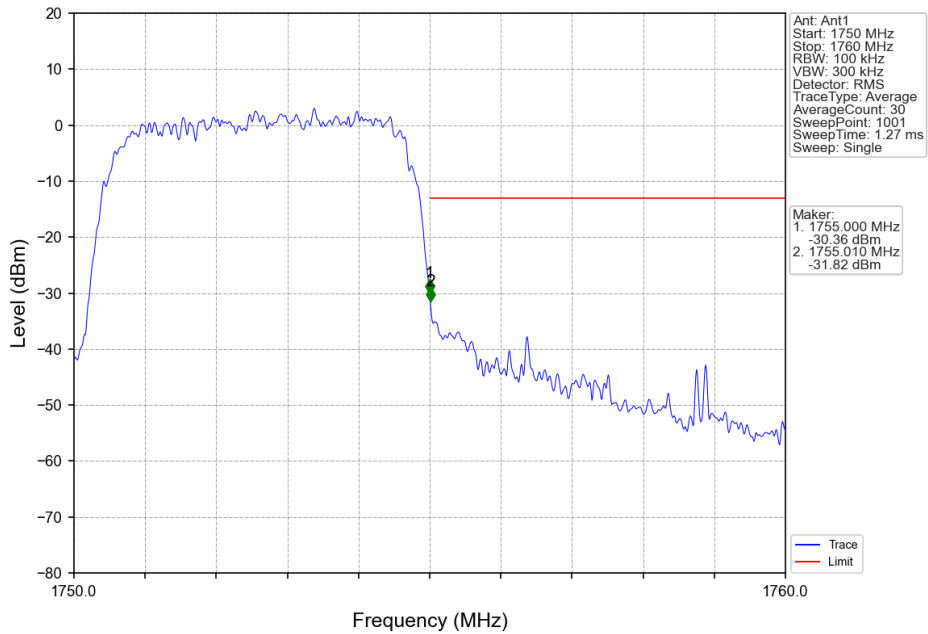
Band4\_HSDPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



Band4\_HSDPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV

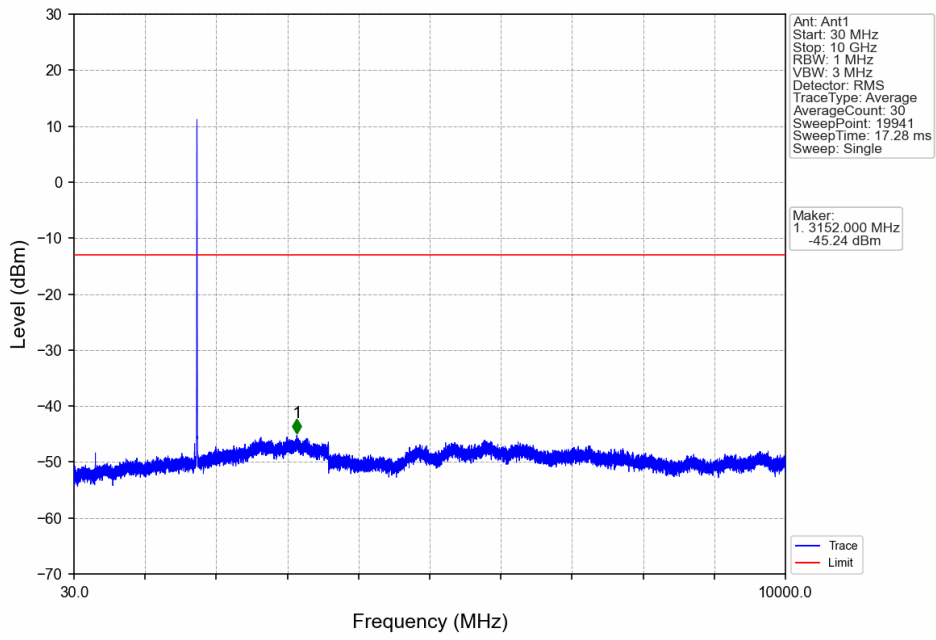


Band4\_HSDPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV

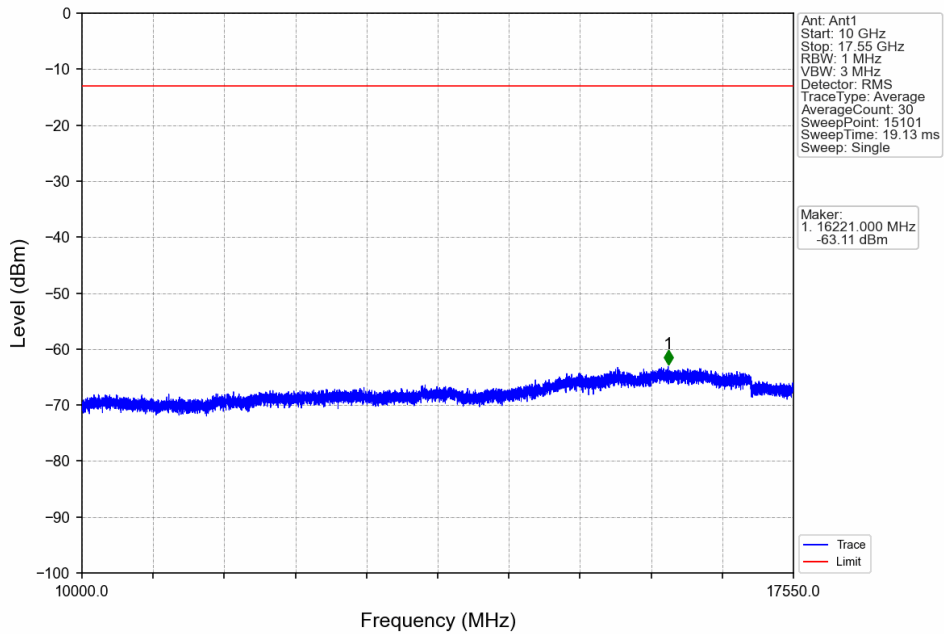




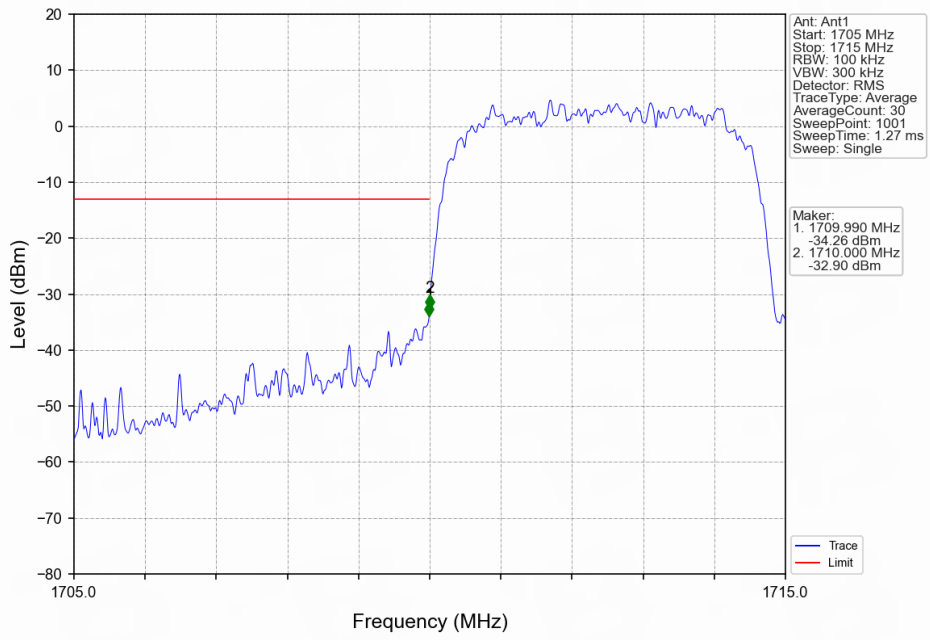
Band4\_HSDPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



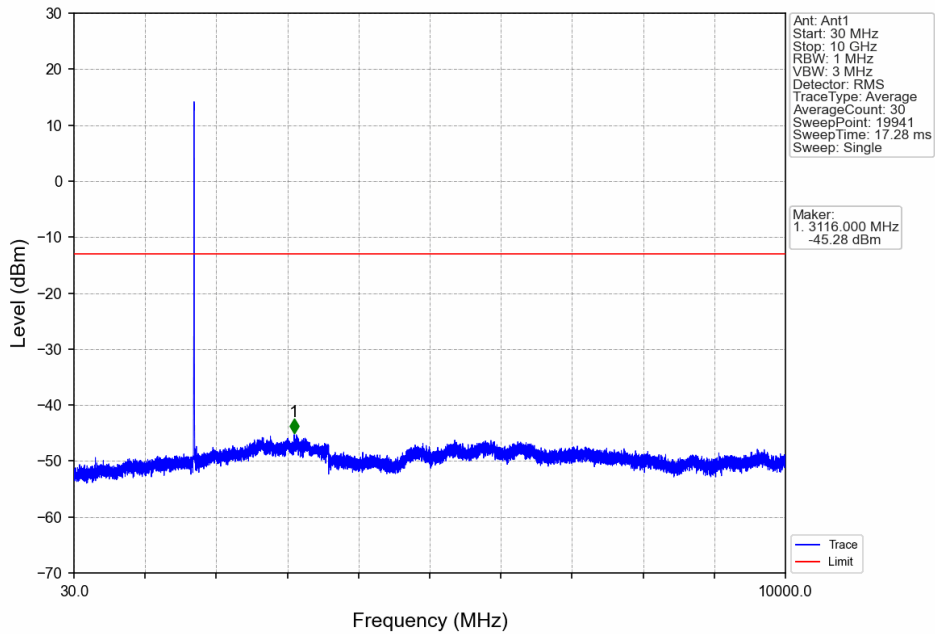
Band4\_HSDPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



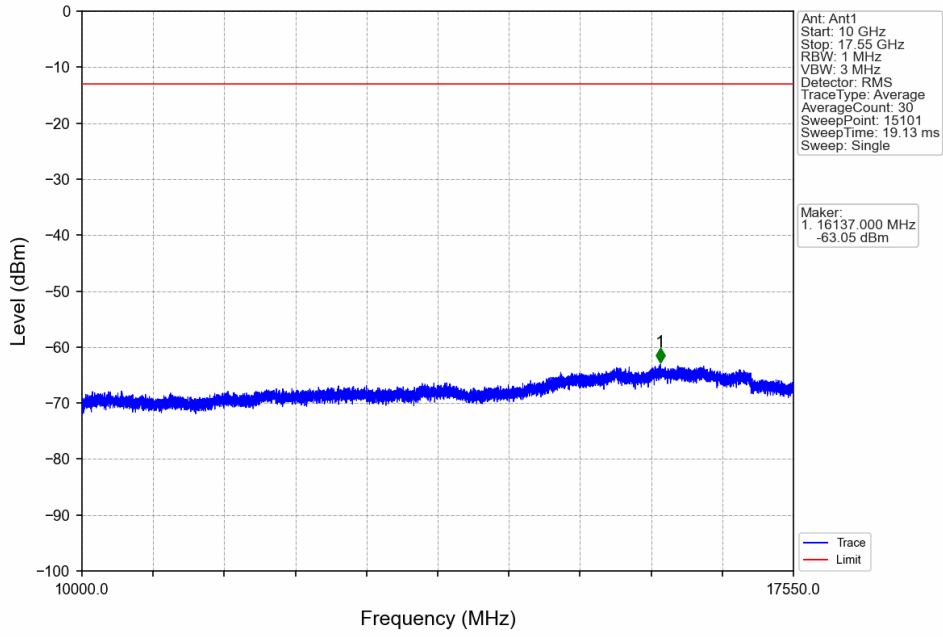
Band4\_HSUPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



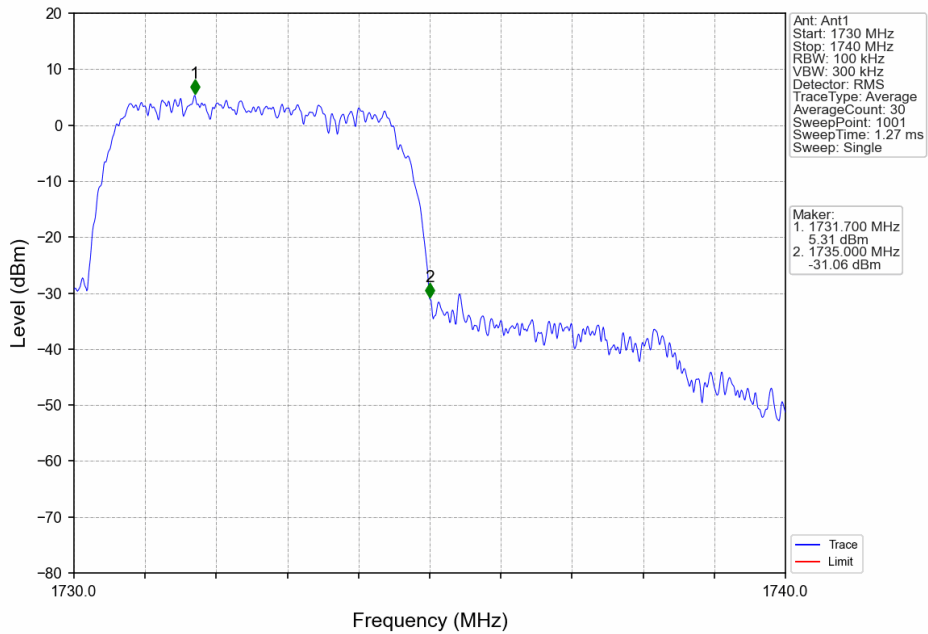
Band4\_HSUPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



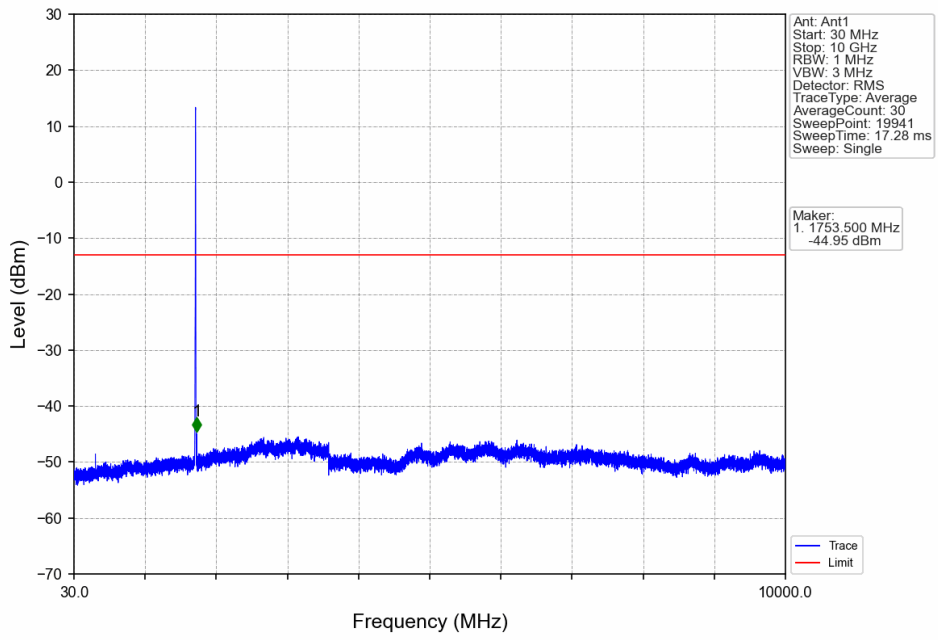
Band4\_HSUPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



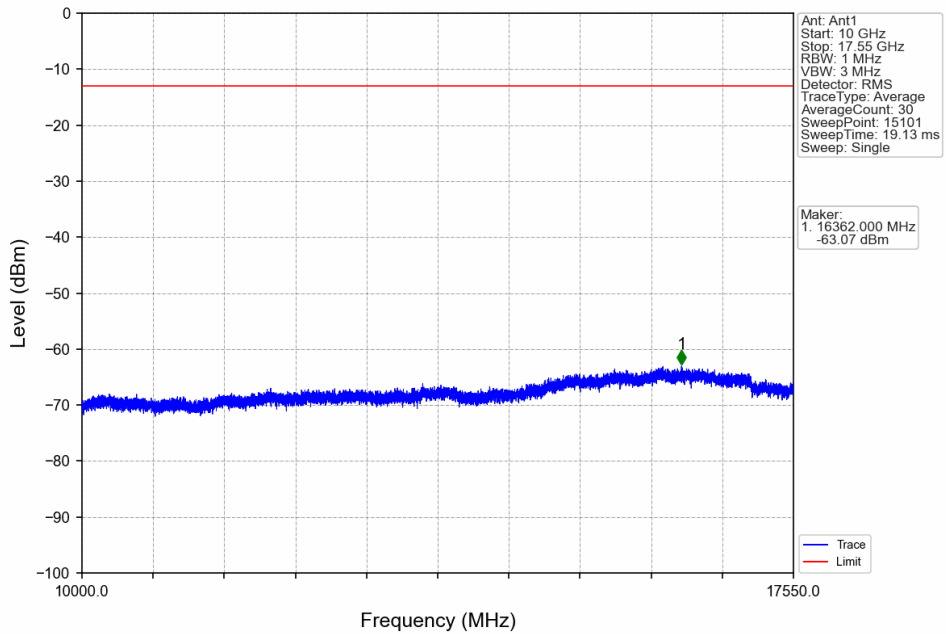
Band4\_HSUPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



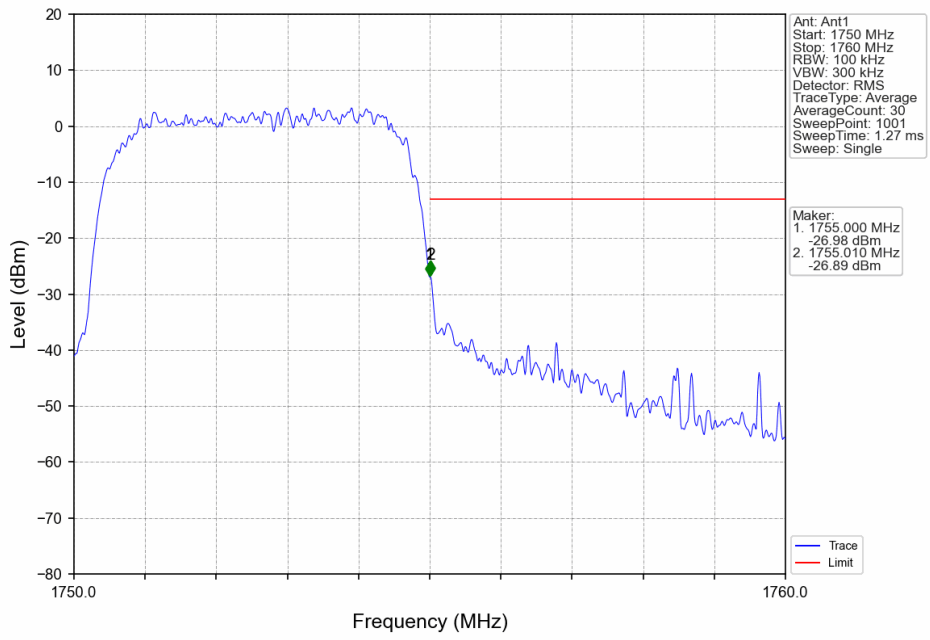
Band4\_HSUPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



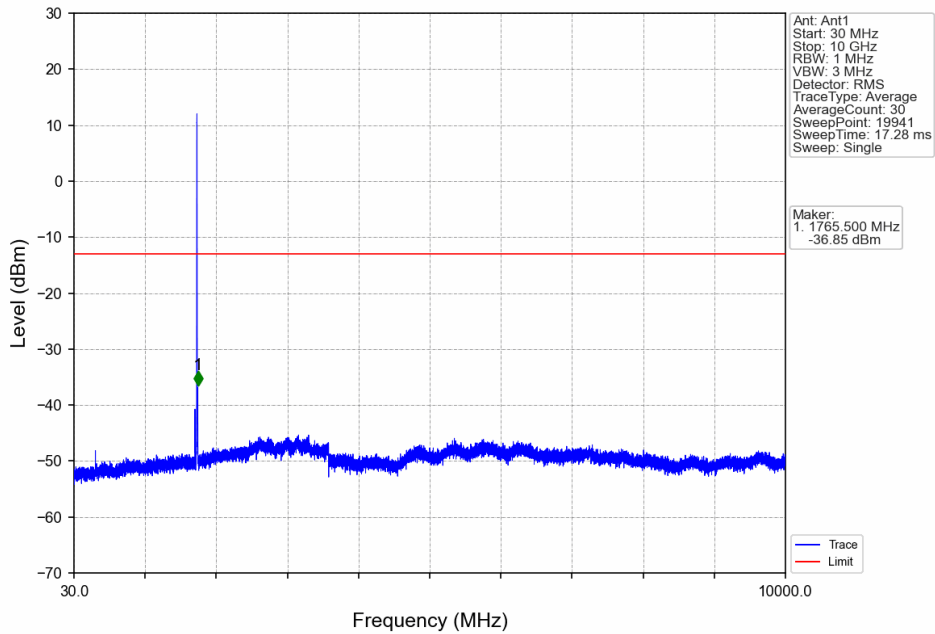
Band4\_HSUPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



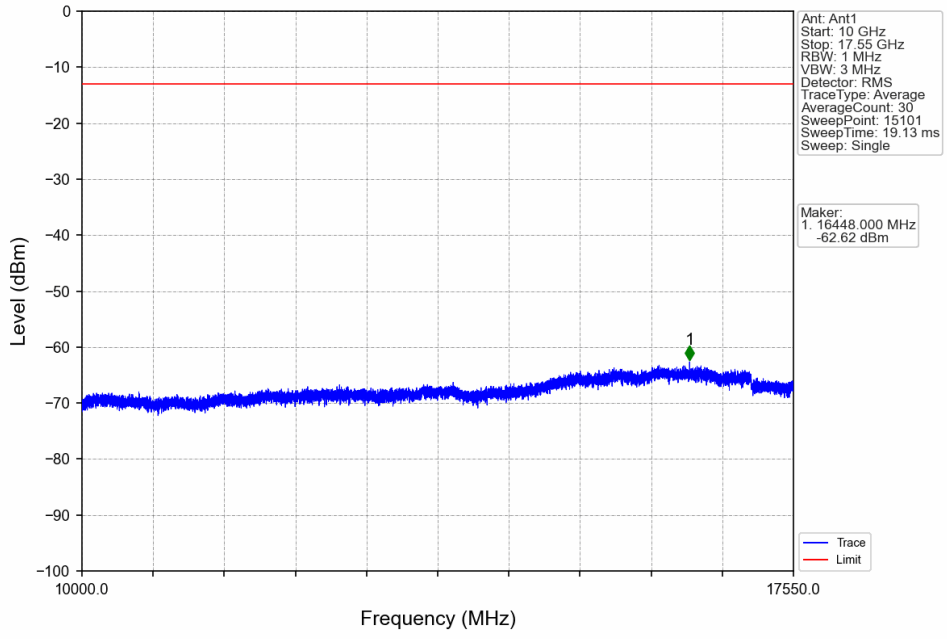
Band4\_HSUPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



Band4\_HSUPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



Band4\_HSUPA\_HCH\_1752.6MHz\_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)
4	3.84	1712.4	1752.6	0.1180	0.0112	ppm	4M18F9W	27L	20.72

### 7.2 Form731\_EIRP

#### 7.2.1 Test Result

Band	BW	Lower Freq	High Freq	MAX Power (W)	Value	Hz/ppm	Emission Designator	Rule Parts	MAX Power (dBm)
4	3.84	1712.4	1752.6	0.1422	0.0112	ppm	4M18F9W	27L	21.53