

# 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	20.93	0.64	21.57	<=30	Pass	
			1732.6	21.22	0.64	21.86	<=30	Pass	
			1752.6	21.13	0.64	21.77	<=30	Pass	
	HSDPA		Subtest 1	1712.4	18.67	0.64	19.31	<=30	Pass
			Subtest 2	1712.4	18.70	0.64	19.34	<=30	Pass
			Subtest 3	1712.4	18.67	0.64	19.31	<=30	Pass
			Subtest 4	1712.4	18.65	0.64	19.29	<=30	Pass
			Subtest 1	1732.6	18.94	0.64	19.58	<=30	Pass
			Subtest 2	1732.6	18.96	0.64	19.60	<=30	Pass
			Subtest 3	1732.6	18.95	0.64	19.59	<=30	Pass
			Subtest 4	1732.6	18.97	0.64	19.61	<=30	Pass
			Subtest 1	1752.6	18.84	0.64	19.48	<=30	Pass
			Subtest 2	1752.6	18.83	0.64	19.47	<=30	Pass
			Subtest 3	1752.6	18.85	0.64	19.49	<=30	Pass
			Subtest 4	1752.6	18.87	0.64	19.51	<=30	Pass
	HSUPA		Subtest 1	1712.4	16.64	0.64	17.28	<=30	Pass
			Subtest 2	1712.4	16.62	0.64	17.26	<=30	Pass
			Subtest 3	1712.4	16.64	0.64	17.28	<=30	Pass
			Subtest 4	1712.4	16.38	0.64	17.02	<=30	Pass
			Subtest 5	1712.4	16.60	0.64	17.24	<=30	Pass
			Subtest 1	1732.6	16.92	0.64	17.56	<=30	Pass
			Subtest 2	1732.6	16.68	0.64	17.32	<=30	Pass
			Subtest 3	1732.6	16.89	0.64	17.53	<=30	Pass
			Subtest 4	1732.6	16.35	0.64	16.99	<=30	Pass
			Subtest 5	1732.6	16.37	0.64	17.01	<=30	Pass
			Subtest 1	1752.6	16.79	0.64	17.43	<=30	Pass
			Subtest 2	1752.6	16.31	0.64	16.95	<=30	Pass
			Subtest 3	1752.6	16.80	0.64	17.44	<=30	Pass
			Subtest 4	1752.6	16.61	0.64	17.25	<=30	Pass
			Subtest 5	1752.6	16.61	0.64	17.25	<=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	-9.770	-0.0057	-2.5 to 2.5	Pass
			3.85	-15.085	-0.0088	-2.5 to 2.5	Pass
			4.43	-13.239	-0.0077	-2.5 to 2.5	Pass
		-30	3.85	-18.096	-0.0106	-2.5 to 2.5	Pass
		-20	3.85	-13.826	-0.0081	-2.5 to 2.5	Pass

	1732.6	-10	3.85	-14.062	-0.0082	-2.5 to 2.5	Pass		
		0	3.85	-14.555	-0.0085	-2.5 to 2.5	Pass		
		10	3.85	-15.213	-0.0089	-2.5 to 2.5	Pass		
		30	3.85	-13.998	-0.0082	-2.5 to 2.5	Pass		
		40	3.85	-10.521	-0.0061	-2.5 to 2.5	Pass		
	1732.6	20	50	3.85	-15.178	-0.0089	-2.5 to 2.5	Pass	
			3.27	-13.297	-0.0077	-2.5 to 2.5	Pass		
			3.85	-18.747	-0.0108	-2.5 to 2.5	Pass		
		4.43	-14.126	-0.0082	-2.5 to 2.5	Pass			
		-30	3.85	-13.976	-0.0081	-2.5 to 2.5	Pass		
		-20	3.85	-17.331	-0.0100	-2.5 to 2.5	Pass		
		-10	3.85	-11.759	-0.0068	-2.5 to 2.5	Pass		
		0	3.85	-13.289	-0.0077	-2.5 to 2.5	Pass		
		10	3.85	-13.068	-0.0075	-2.5 to 2.5	Pass		
		30	3.85	-11.930	-0.0069	-2.5 to 2.5	Pass		
	1752.6	20	40	3.85	-13.783	-0.0080	-2.5 to 2.5	Pass	
			50	3.85	-11.401	-0.0066	-2.5 to 2.5	Pass	
			3.27	-5.929	-0.0034	-2.5 to 2.5	Pass		
		3.85	-5.729	-0.0033	-2.5 to 2.5	Pass			
		4.43	-3.397	-0.0019	-2.5 to 2.5	Pass			
		-30	3.85	-3.111	-0.0018	-2.5 to 2.5	Pass		
		-20	3.85	-6.745	-0.0038	-2.5 to 2.5	Pass		
		-10	3.85	-6.022	-0.0034	-2.5 to 2.5	Pass		
		0	3.85	-7.153	-0.0041	-2.5 to 2.5	Pass		
		10	3.85	-3.769	-0.0022	-2.5 to 2.5	Pass		
	HSDPA	1712.4	20	30	3.85	-4.470	-0.0026	-2.5 to 2.5	Pass
				40	3.85	-7.174	-0.0041	-2.5 to 2.5	Pass
				50	3.85	-7.260	-0.0041	-2.5 to 2.5	Pass
			3.27	-9.577	-0.0056	-2.5 to 2.5	Pass		
			3.85	-73.671	-0.0430	-2.5 to 2.5	Pass		
4.43			-9.856	-0.0058	-2.5 to 2.5	Pass			
-30			3.85	-14.427	-0.0084	-2.5 to 2.5	Pass		
-20			3.85	-12.310	-0.0072	-2.5 to 2.5	Pass		
-10			3.85	-14.613	-0.0085	-2.5 to 2.5	Pass		
0			3.85	-11.809	-0.0069	-2.5 to 2.5	Pass		
1732.6		20	10	3.85	-9.627	-0.0056	-2.5 to 2.5	Pass	
			30	3.85	-13.204	-0.0077	-2.5 to 2.5	Pass	
			40	3.85	-15.507	-0.0091	-2.5 to 2.5	Pass	
		50	3.85	-10.293	-0.0060	-2.5 to 2.5	Pass		
		3.27	-13.983	-0.0081	-2.5 to 2.5	Pass			
		3.85	-15.235	-0.0088	-2.5 to 2.5	Pass			
		4.43	-15.399	-0.0089	-2.5 to 2.5	Pass			
		-30	3.85	-17.796	-0.0103	-2.5 to 2.5	Pass		
		-20	3.85	-19.083	-0.0110	-2.5 to 2.5	Pass		
		-10	3.85	-17.874	-0.0103	-2.5 to 2.5	Pass		
1752.6		20	0	3.85	-9.878	-0.0057	-2.5 to 2.5	Pass	
			10	3.85	-15.028	-0.0087	-2.5 to 2.5	Pass	
			30	3.85	-18.168	-0.0105	-2.5 to 2.5	Pass	
		40	3.85	-18.246	-0.0105	-2.5 to 2.5	Pass		
		50	3.85	-15.664	-0.0090	-2.5 to 2.5	Pass		
		3.27	-9.763	-0.0056	-2.5 to 2.5	Pass			
		3.85	-13.998	-0.0080	-2.5 to 2.5	Pass			
		4.43	-14.184	-0.0081	-2.5 to 2.5	Pass			
		-30	3.85	-9.356	-0.0053	-2.5 to 2.5	Pass		
		-20	3.85	-8.097	-0.0046	-2.5 to 2.5	Pass		
-10	3.85	-12.066	-0.0069	-2.5 to 2.5	Pass				
0	3.85	-13.890	-0.0079	-2.5 to 2.5	Pass				
10	3.85	-8.869	-0.0051	-2.5 to 2.5	Pass				
30	3.85	-6.373	-0.0036	-2.5 to 2.5	Pass				

		40	3.85	-13.604	-0.0078	-2.5 to 2.5	Pass
		50	3.85	-9.577	-0.0055	-2.5 to 2.5	Pass
HSUPA	1712.4	20	3.27	-11.823	-0.0069	-2.5 to 2.5	Pass
			3.85	-12.825	-0.0075	-2.5 to 2.5	Pass
			4.43	-10.257	-0.0060	-2.5 to 2.5	Pass
		-30	3.85	-14.877	-0.0087	-2.5 to 2.5	Pass
		-20	3.85	-11.666	-0.0068	-2.5 to 2.5	Pass
		-10	3.85	-14.069	-0.0082	-2.5 to 2.5	Pass
		0	3.85	-13.111	-0.0077	-2.5 to 2.5	Pass
		10	3.85	-10.872	-0.0063	-2.5 to 2.5	Pass
		30	3.85	-7.210	-0.0042	-2.5 to 2.5	Pass
		40	3.85	-15.006	-0.0088	-2.5 to 2.5	Pass
	50	3.85	-12.503	-0.0073	-2.5 to 2.5	Pass	
	1732.6	20	3.27	-13.189	-0.0076	-2.5 to 2.5	Pass
			3.85	-11.823	-0.0068	-2.5 to 2.5	Pass
			4.43	-7.546	-0.0044	-2.5 to 2.5	Pass
		-30	3.85	-14.892	-0.0086	-2.5 to 2.5	Pass
		-20	3.85	-12.946	-0.0075	-2.5 to 2.5	Pass
		-10	3.85	-14.076	-0.0081	-2.5 to 2.5	Pass
		0	3.85	-10.078	-0.0058	-2.5 to 2.5	Pass
		10	3.85	-14.684	-0.0085	-2.5 to 2.5	Pass
		30	3.85	-11.258	-0.0065	-2.5 to 2.5	Pass
		40	3.85	-11.623	-0.0067	-2.5 to 2.5	Pass
	50	3.85	-12.031	-0.0069	-2.5 to 2.5	Pass	
	1752.6	20	3.27	-11.580	-0.0066	-2.5 to 2.5	Pass
			3.85	-8.018	-0.0046	-2.5 to 2.5	Pass
			4.43	-5.679	-0.0032	-2.5 to 2.5	Pass
		-30	3.85	-6.530	-0.0037	-2.5 to 2.5	Pass
		-20	3.85	-7.811	-0.0045	-2.5 to 2.5	Pass
		-10	3.85	-7.281	-0.0042	-2.5 to 2.5	Pass
		0	3.85	-6.859	-0.0039	-2.5 to 2.5	Pass
		10	3.85	-6.967	-0.0040	-2.5 to 2.5	Pass
30		3.85	-9.184	-0.0052	-2.5 to 2.5	Pass	
40		3.85	-7.188	-0.0041	-2.5 to 2.5	Pass	
50	3.85	-9.320	-0.0053	-2.5 to 2.5	Pass		

### 3. Modulation Characteristics

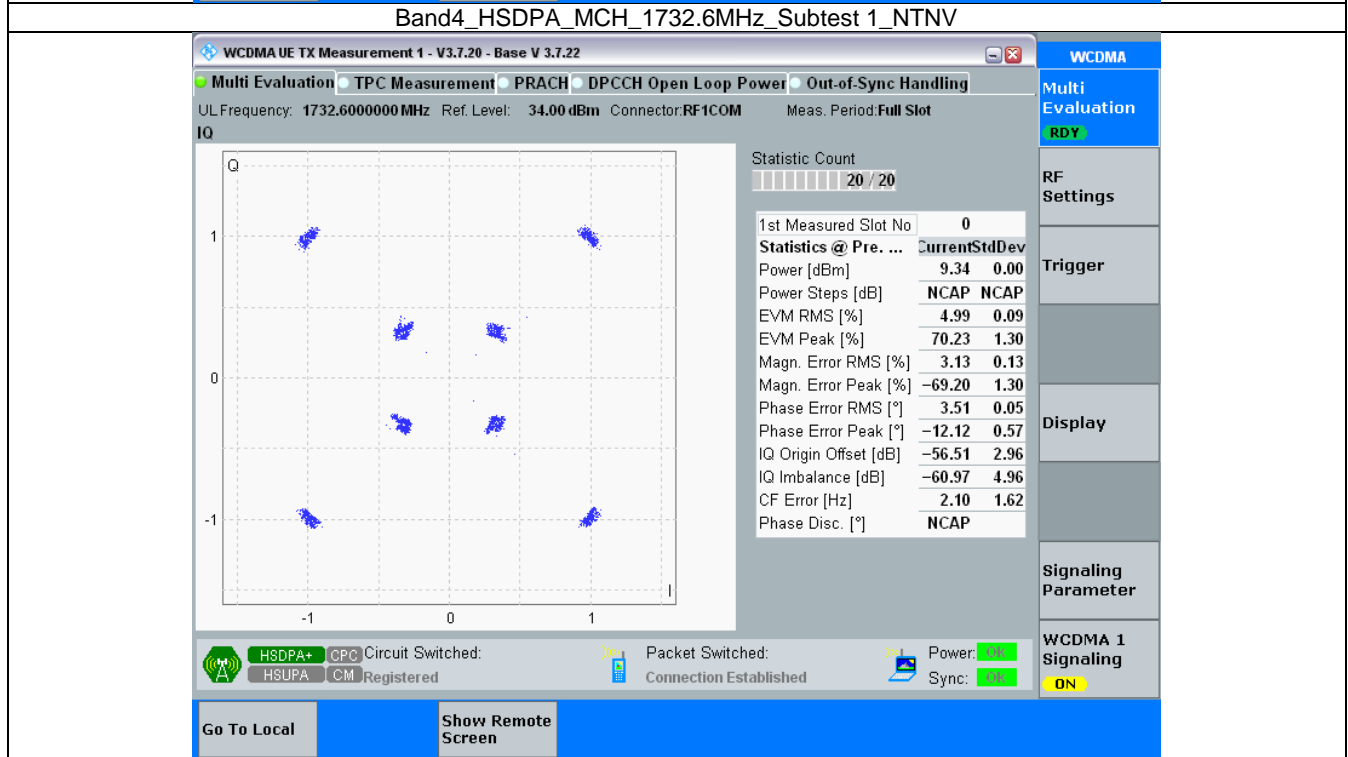
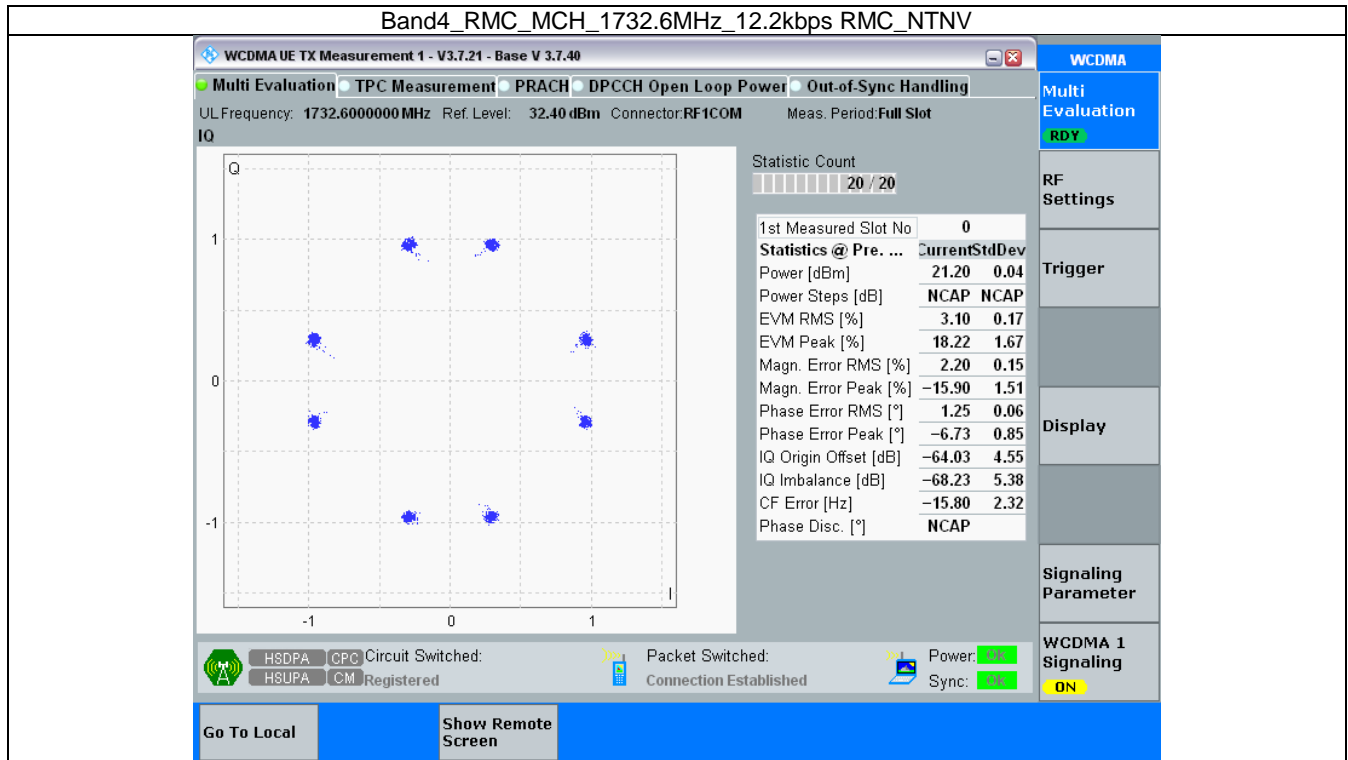
#### 3.1 Test Result

##### 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

## 3.2 Test Graph

### 3.2.1 Band4



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

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

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

UL Frequency: 1732.600000 MHz Ref. Level: 34.00 dBm Connector: RF1COM Meas. Period: Full Slot

**IQ**

Statistic Count  
20 / 20

Statistics @ Pre. ...		Current	StdDev
Power [dBm]	19.04	2.39	
Power Steps [dB]	NCAP	NCAP	
EVM RMS [%]	9.22	4.43	
EVM Peak [%]	80.25	38.89	
Magn. Error RMS [%]	8.83	4.72	
Magn. Error Peak [%]	80.26	39.79	
Phase Error RMS [°]	2.61	0.66	
Phase Error Peak [°]	51.74	19.21	
IQ Origin Offset [dB]	-61.09	10.37	
IQ Imbalance [dB]	-62.10	5.89	
CF Error [Hz]	-18.20	3.65	
Phase Disc. [°]	NCAP		

HSDPA+ CPC Circuit Switched:  
HSUPA CM Registered

Packet Switched:  
Connection Established

Power: 53%  
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 Band4\_OBW

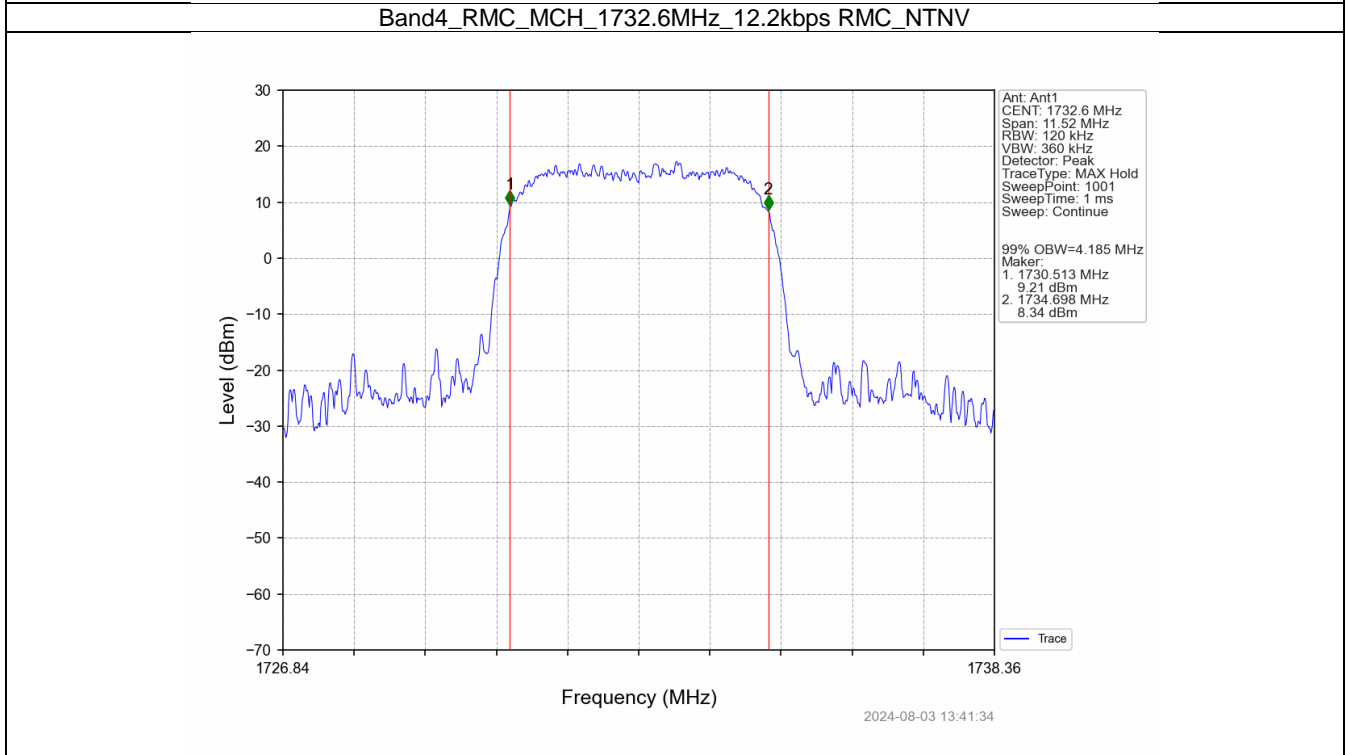
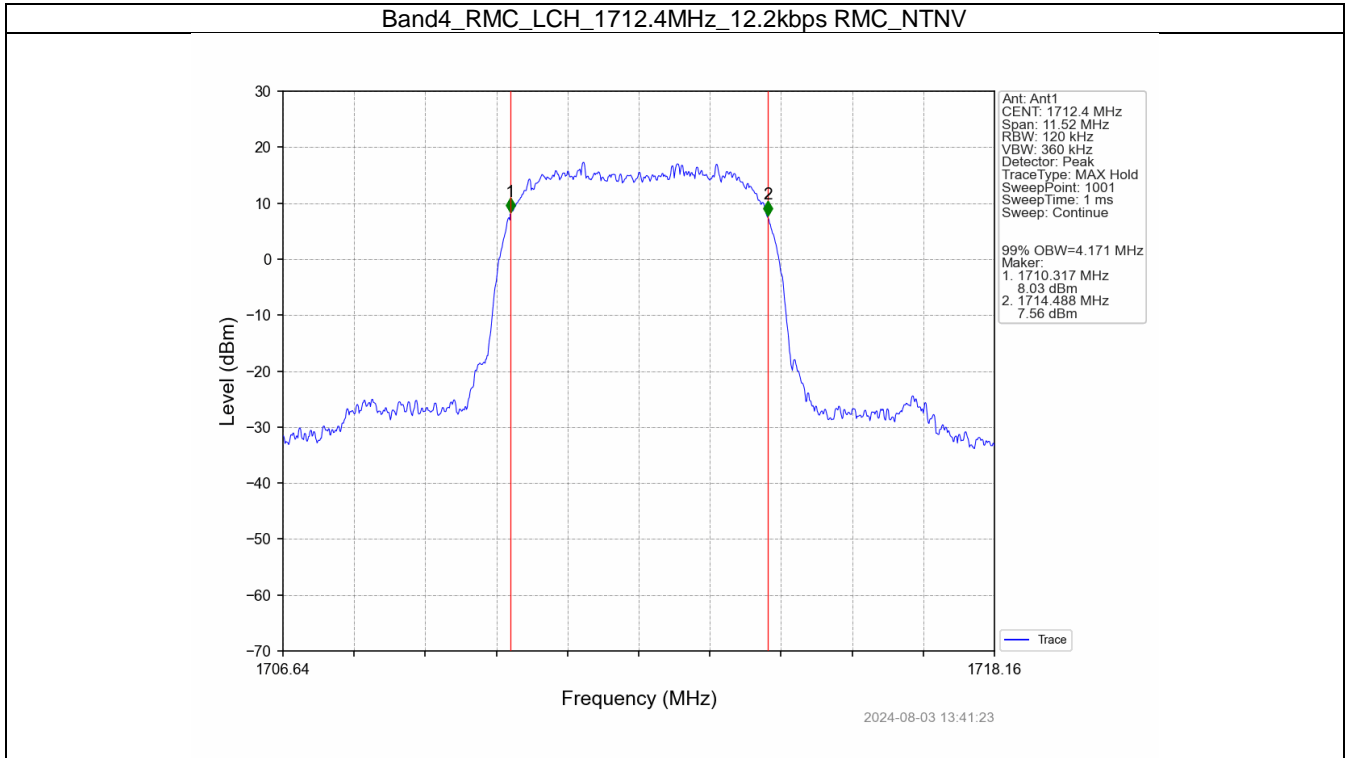
Band: 4						
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	1712.4	4.171	/	Pass
			1732.6	4.185	/	Pass
			1752.6	4.195	/	Pass
	HSDPA	Subtest 1	1712.4	4.249	/	Pass
			1732.6	4.256	/	Pass
			1752.6	4.241	/	Pass
	HSUPA	Subtest 1	1712.4	4.261	/	Pass
			1732.6	4.255	/	Pass
			1752.6	4.246	/	Pass

#### 4.1.2 Band4\_XDB

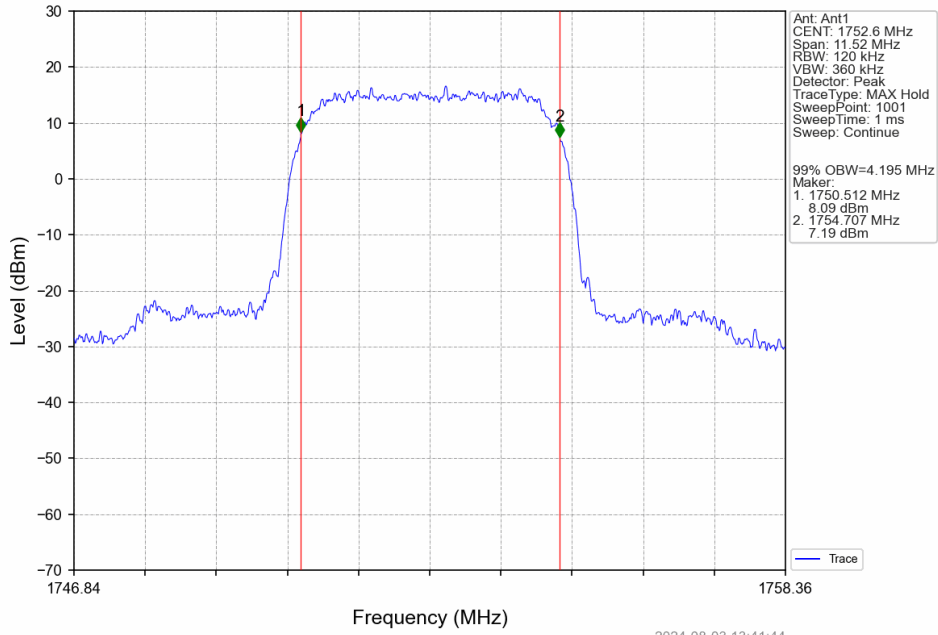
Band: 4						
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	1712.4	4.737	/	Pass
			1732.6	4.756	/	Pass
			1752.6	4.769	/	Pass
	HSDPA	Subtest 1	1712.4	7.311	/	Pass
			1732.6	9.104	/	Pass
			1752.6	5.061	/	Pass
	HSUPA	Subtest 1	1712.4	7.118	/	Pass
			1732.6	9.254	/	Pass
			1752.6	6.174	/	Pass

## 4.2 Test Graph

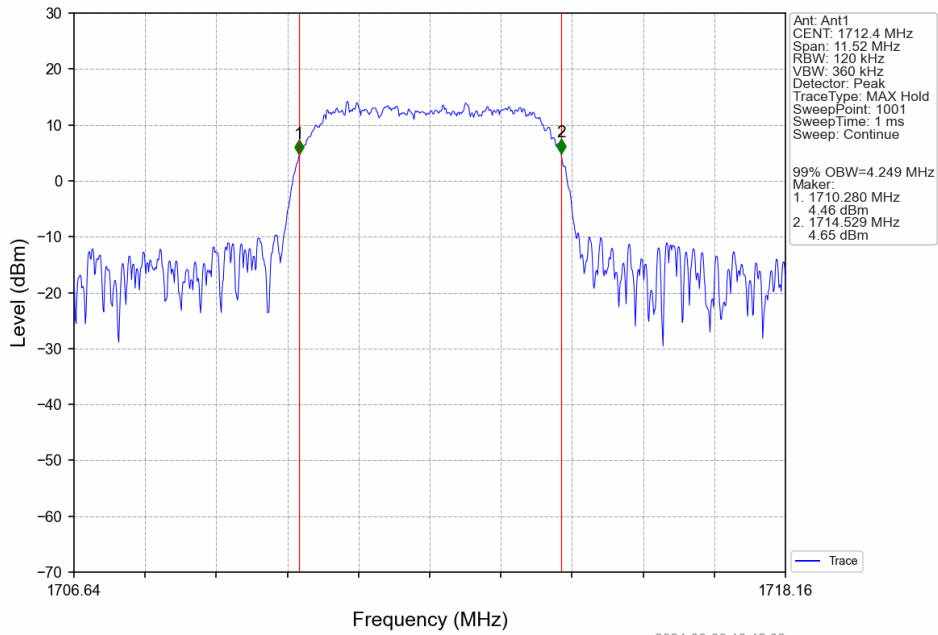
### 4.2.1 Band4\_OBW



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

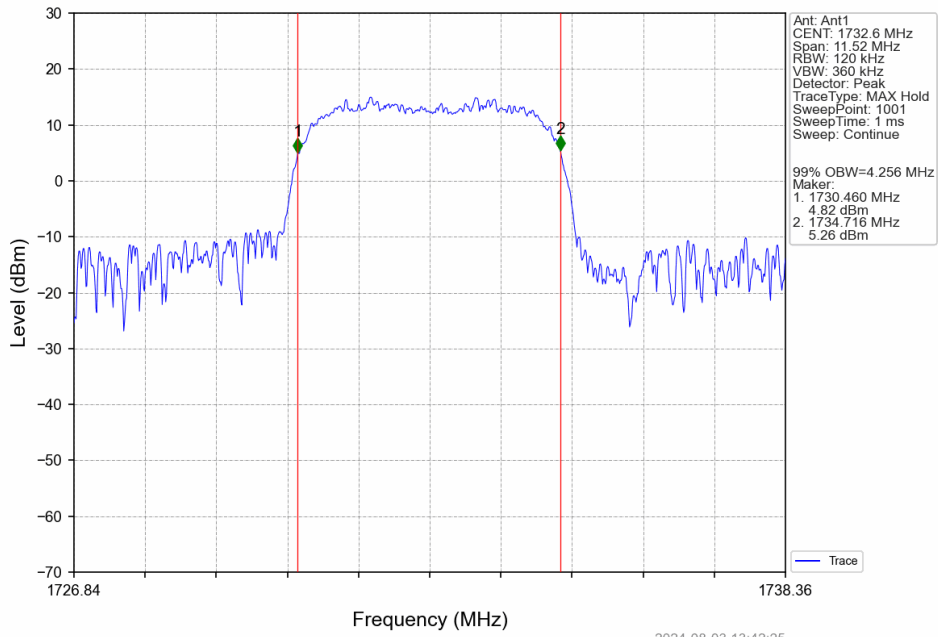


Band4\_HSDPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV

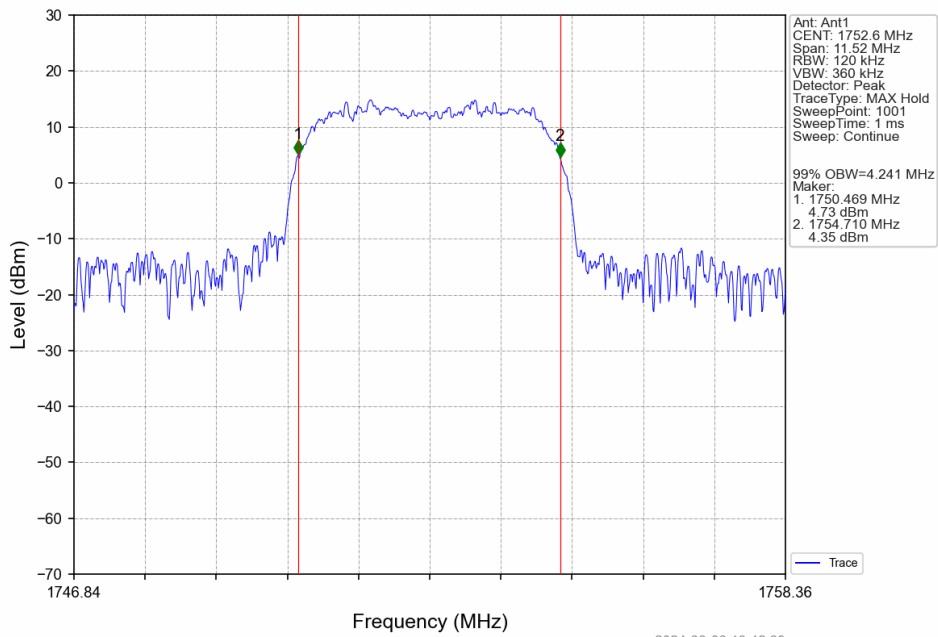




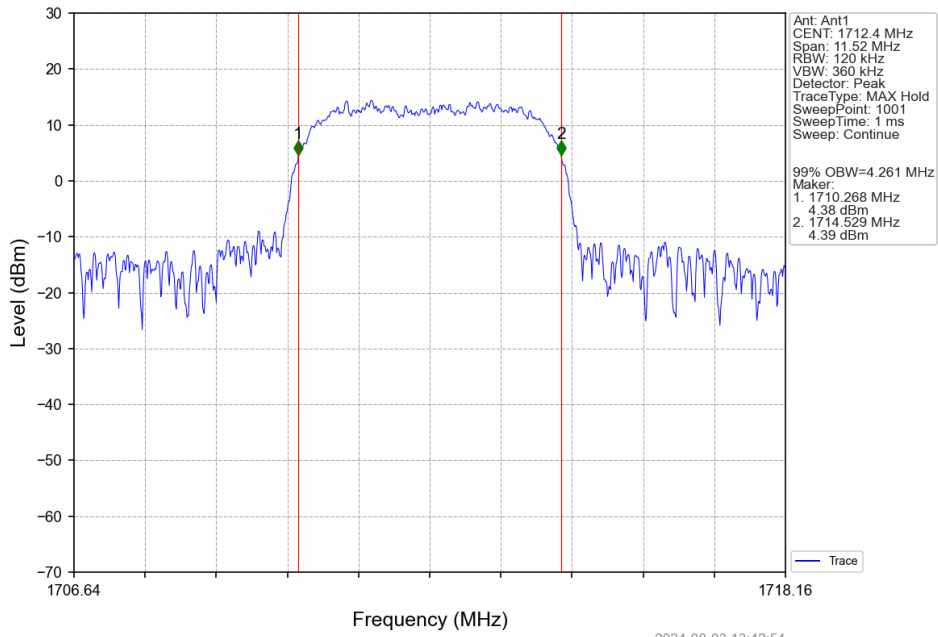
Band4\_HSDPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



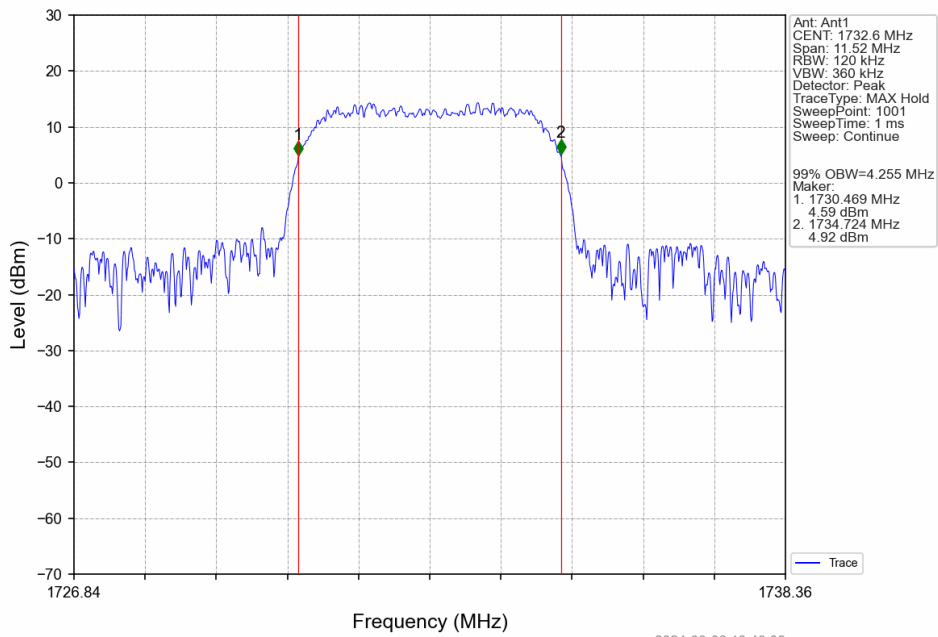
Band4\_HSDPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



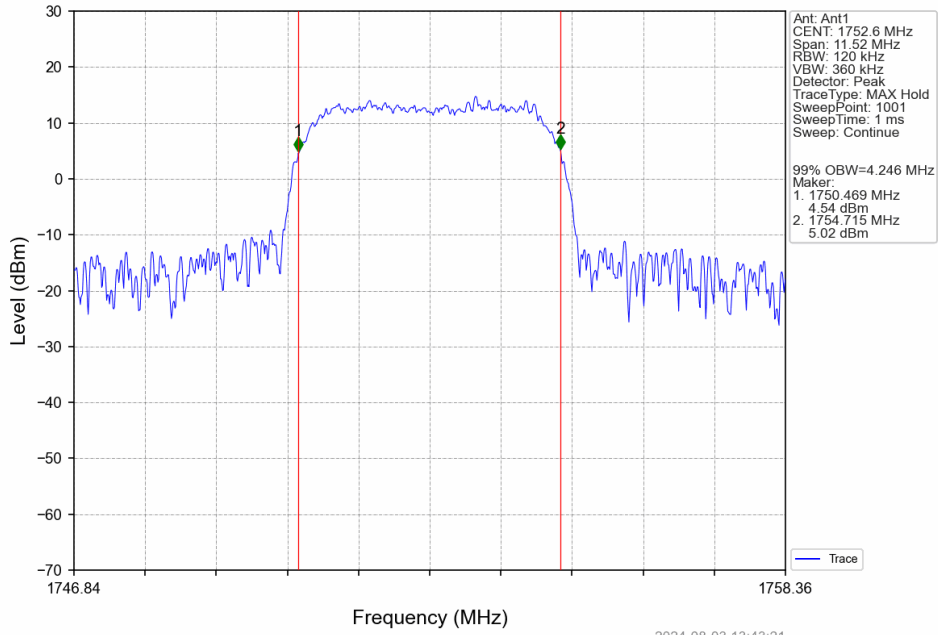
Band4\_HSUPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



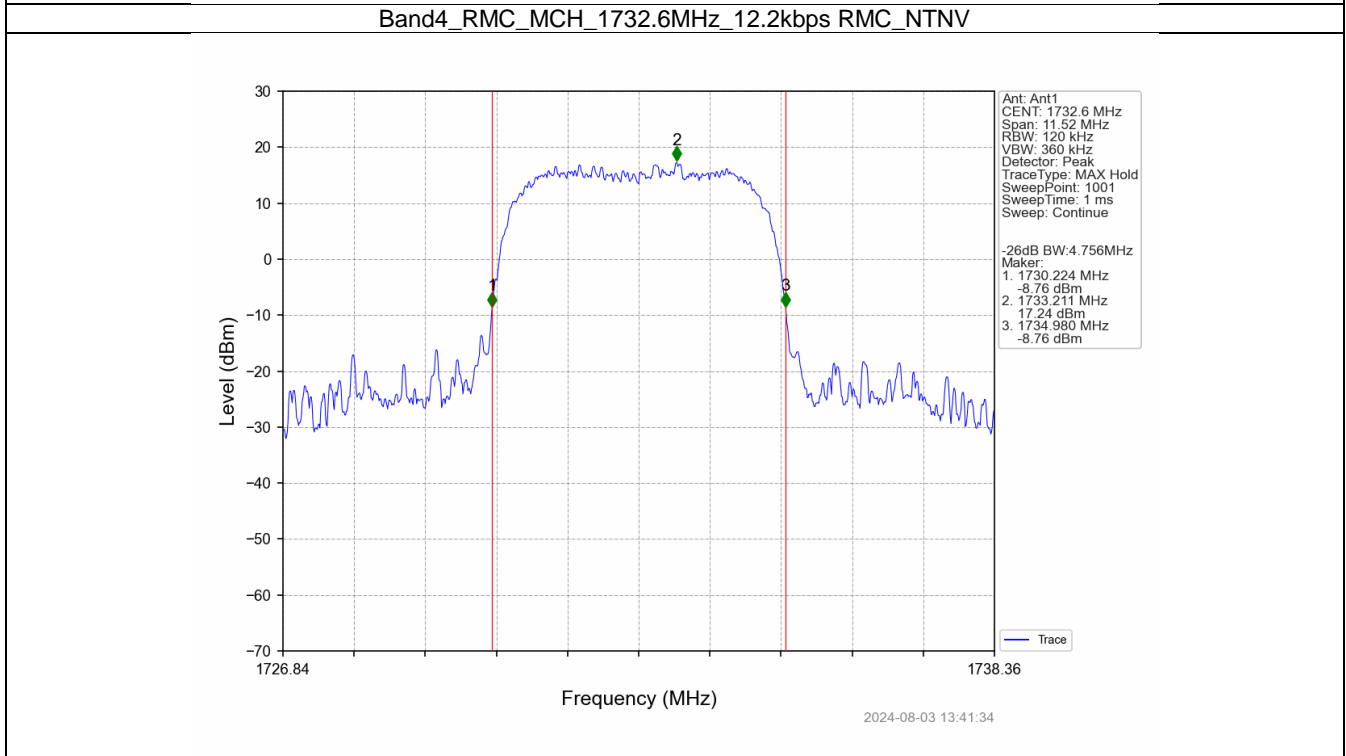
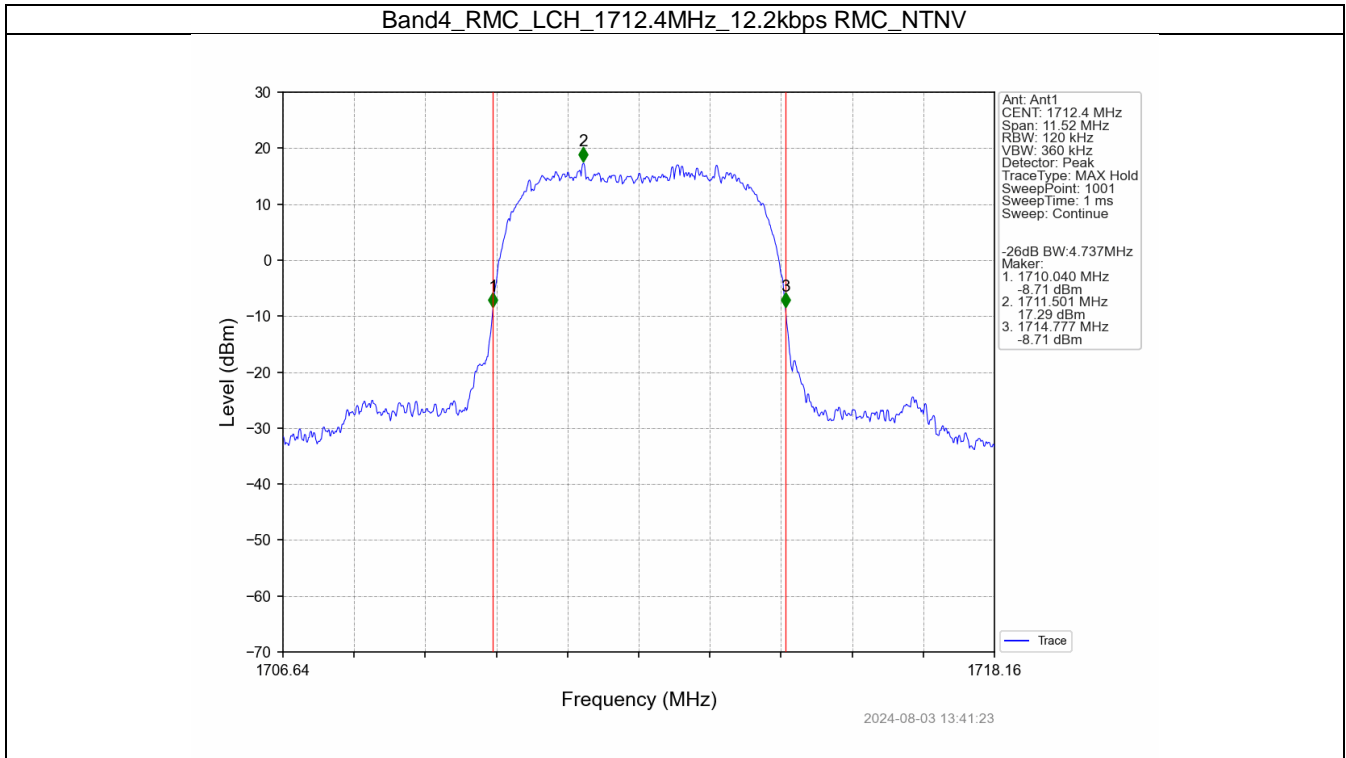
Band4\_HSUPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



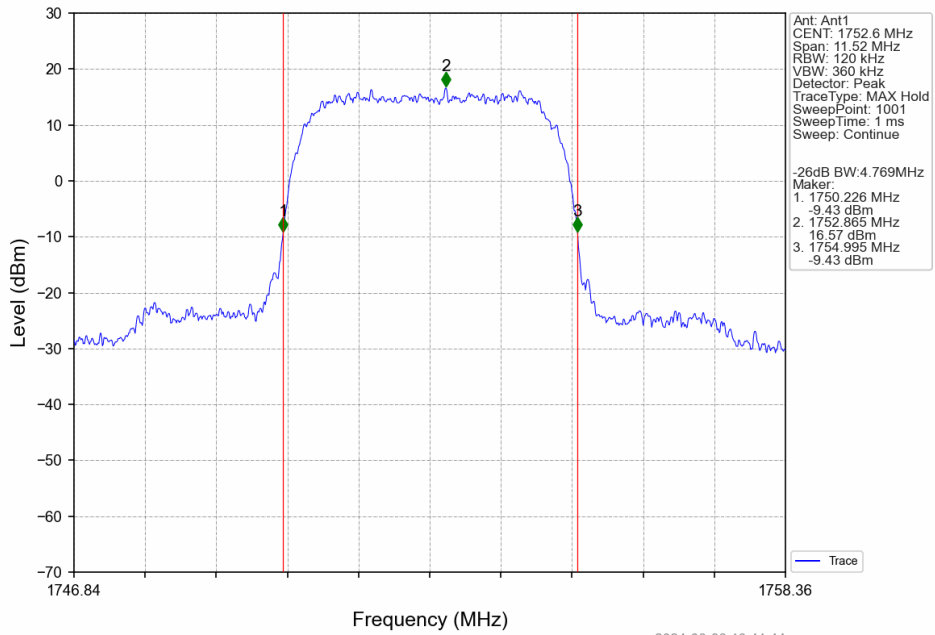
Band4\_HSUPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



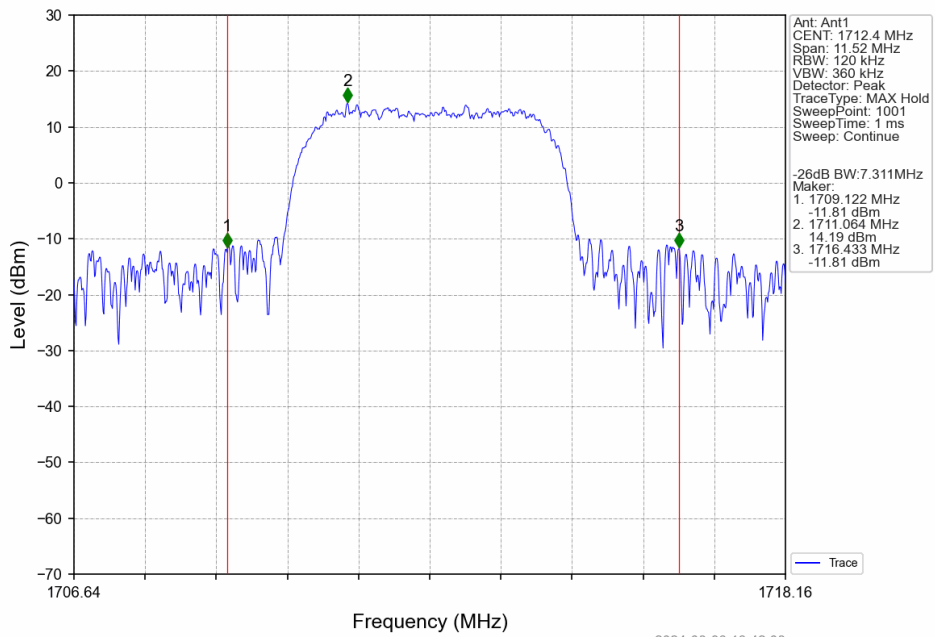
### 4.2.2 Band4\_XDB



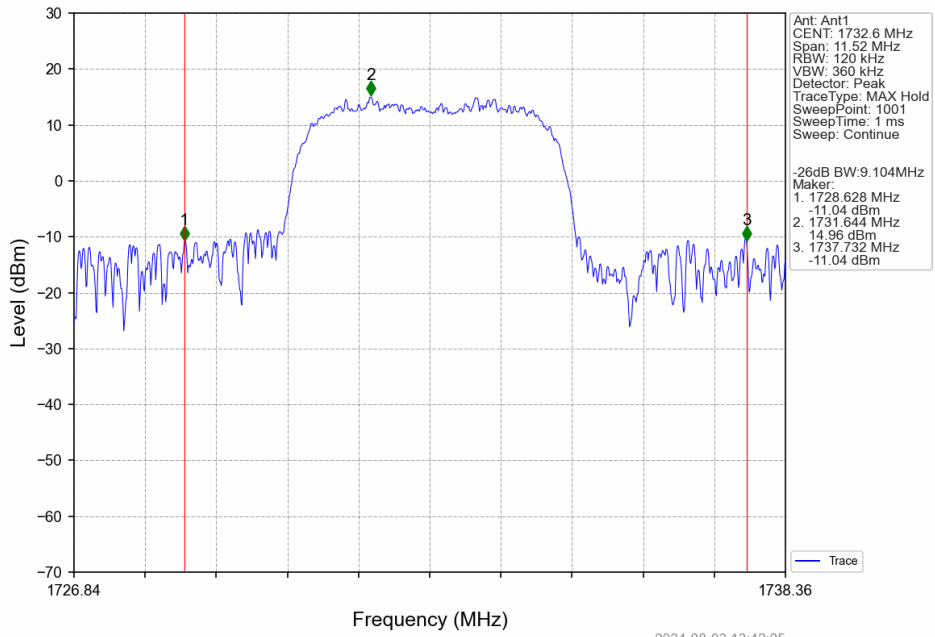
Band4\_RMC\_HCH\_1752.6MHz\_12.2kbps RMC\_NTNV



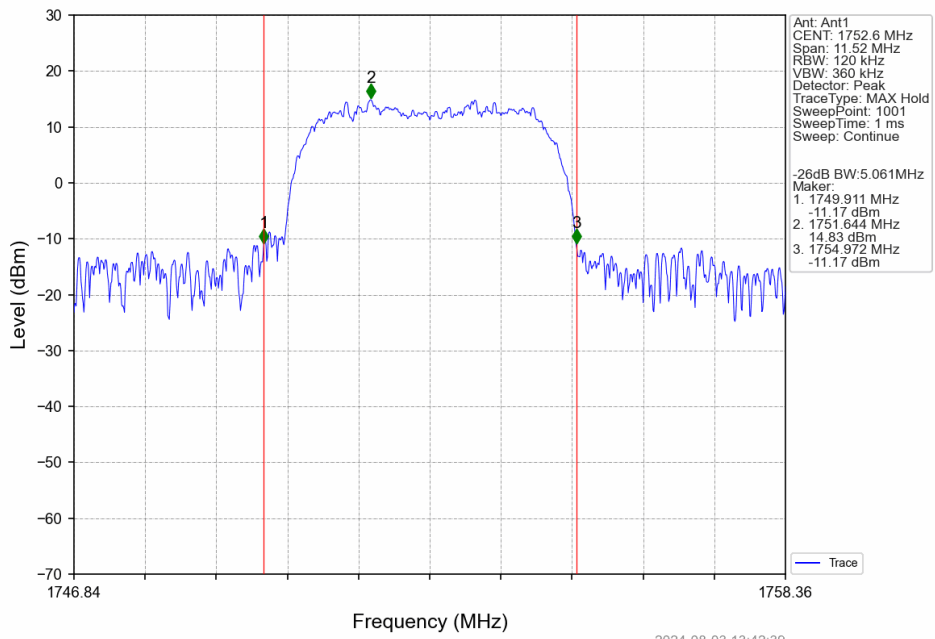
Band4\_HSDPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



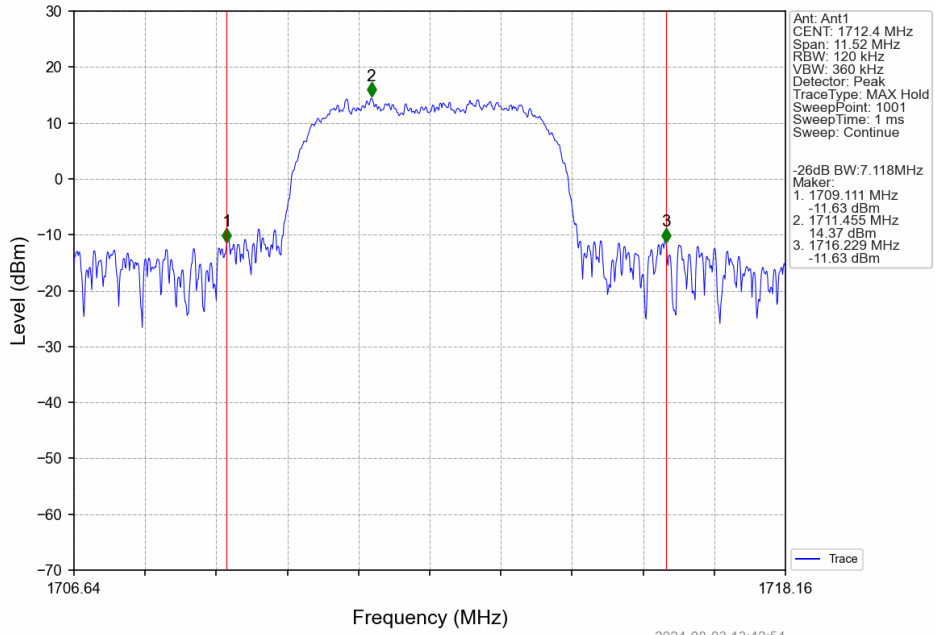
Band4\_HSDPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



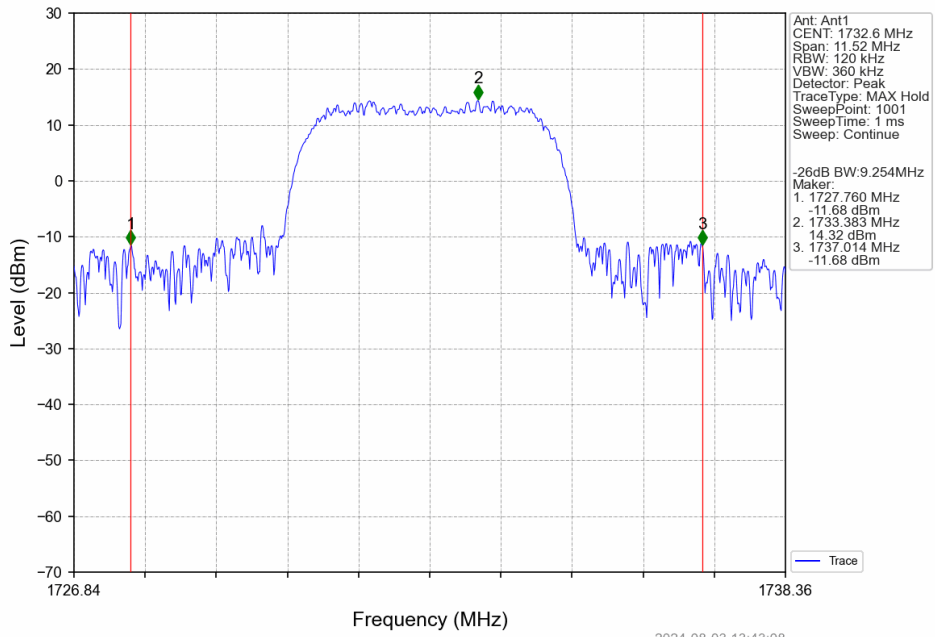
Band4\_HSDPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



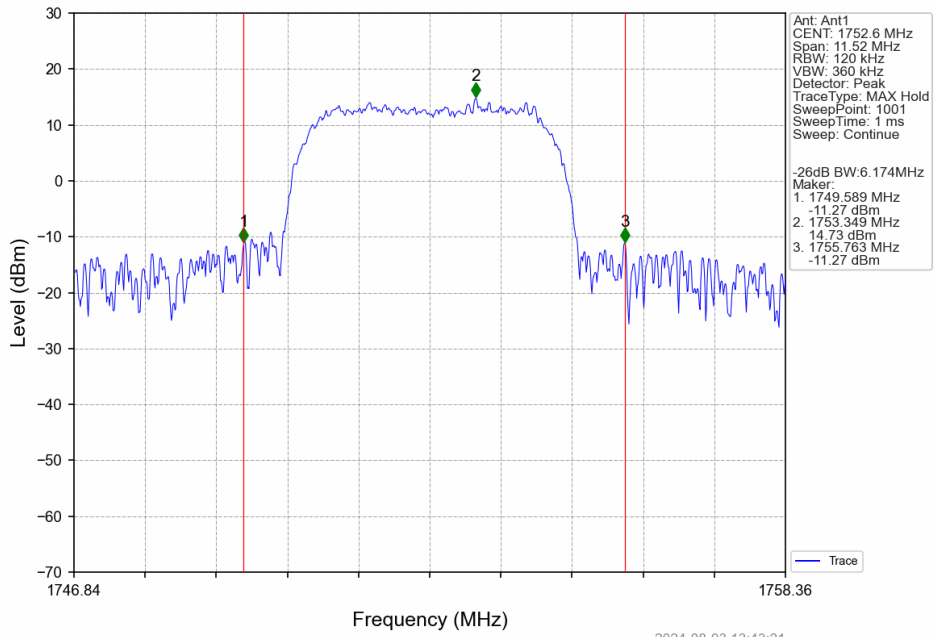
Band4\_HSUPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



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



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



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## 5. Peak-Average Ratio

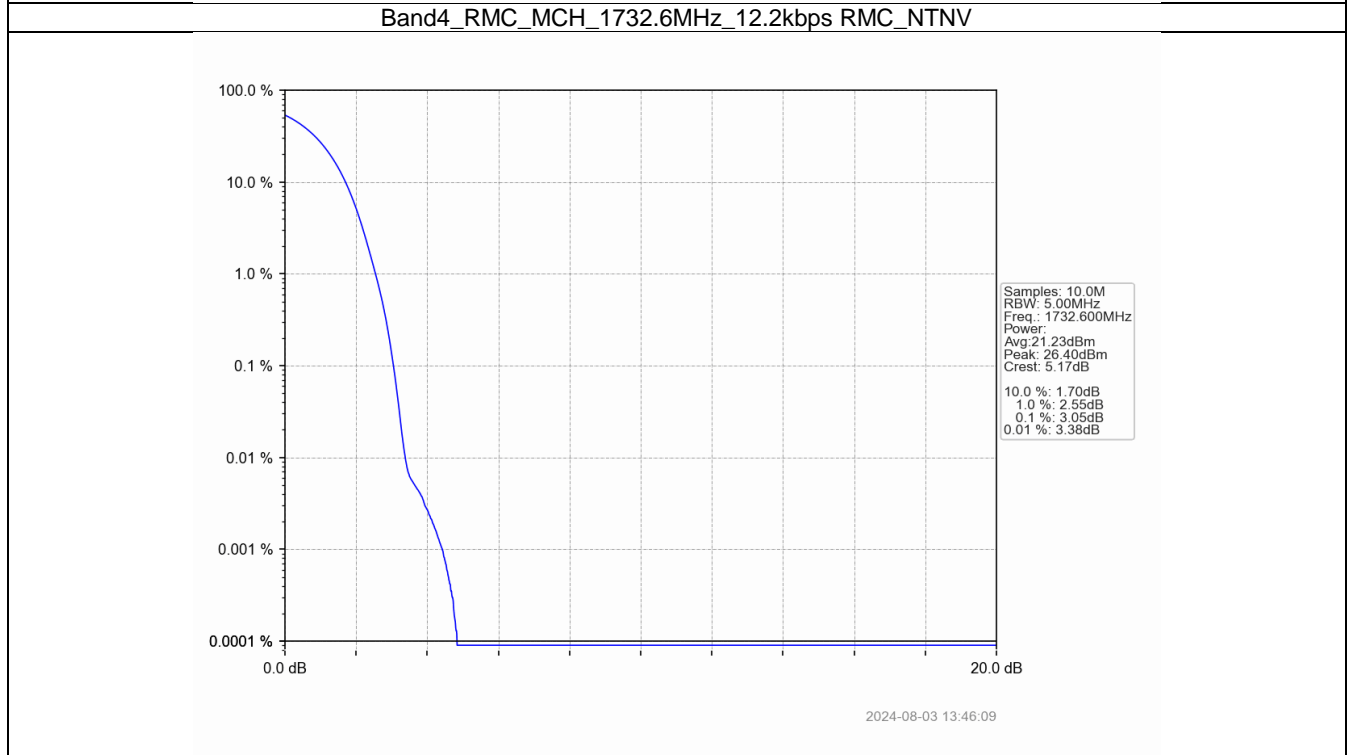
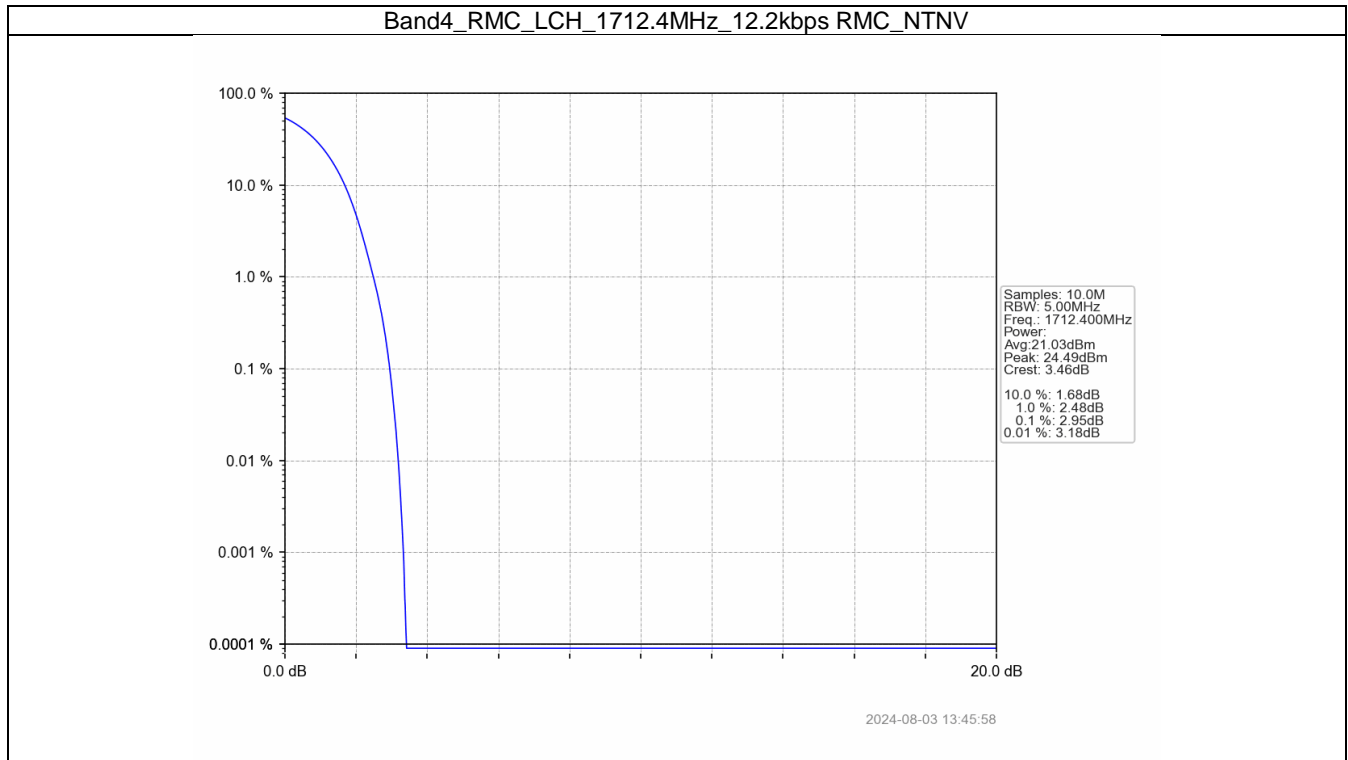
### 5.1 Test Result

#### 5.1.1 Band4

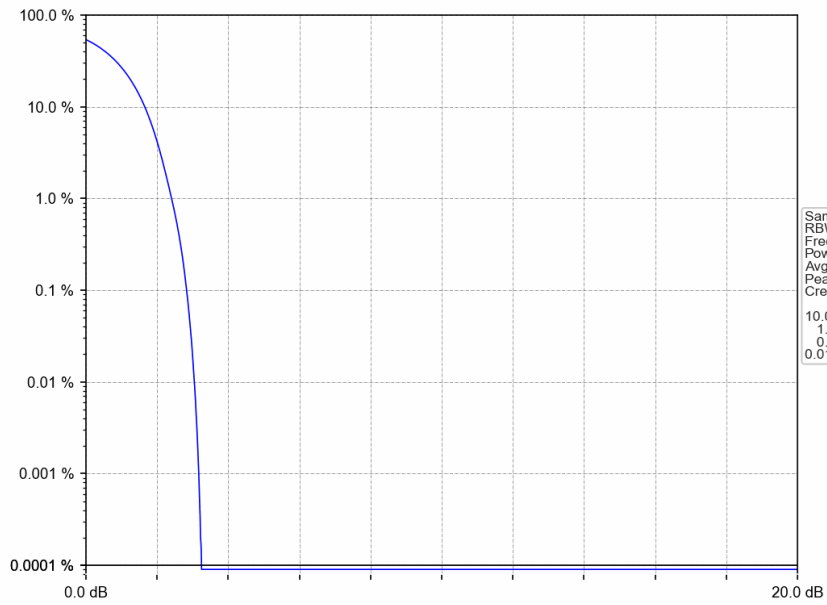
Band: 4						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	1712.4	2.95	<=13	Pass
			1732.6	3.05	<=13	Pass
			1752.6	2.83	<=13	Pass
	HSDPA	Subtest 1	1712.4	5.80	<=13	Pass
			1732.6	5.82	<=13	Pass
			1752.6	5.82	<=13	Pass
	HSUPA	Subtest 1	1712.4	5.78	<=13	Pass
			1732.6	5.95	<=13	Pass
			1752.6	5.68	<=13	Pass

## 5.2 Test Graph

### 5.2.1 Band4

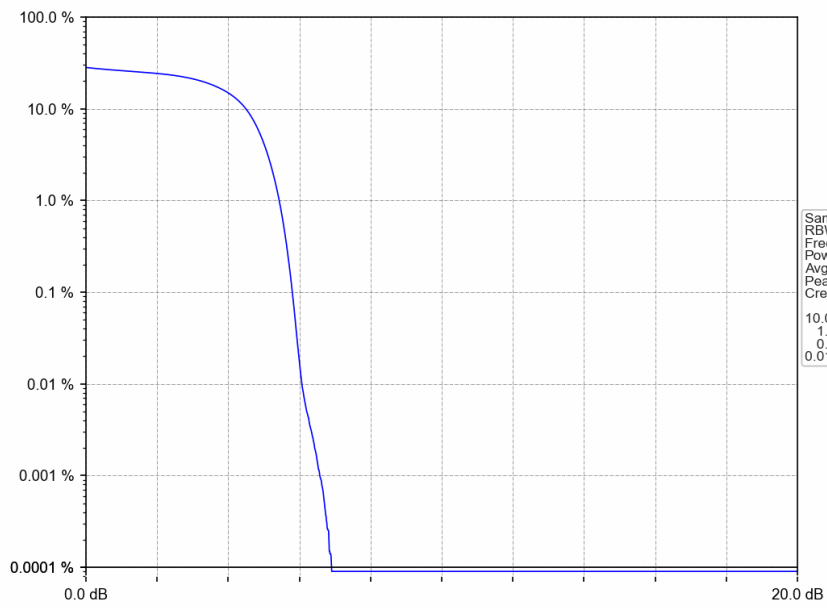


Band4\_RMC\_HCH\_1752.6MHz\_12.2kbps RMC\_NTNV



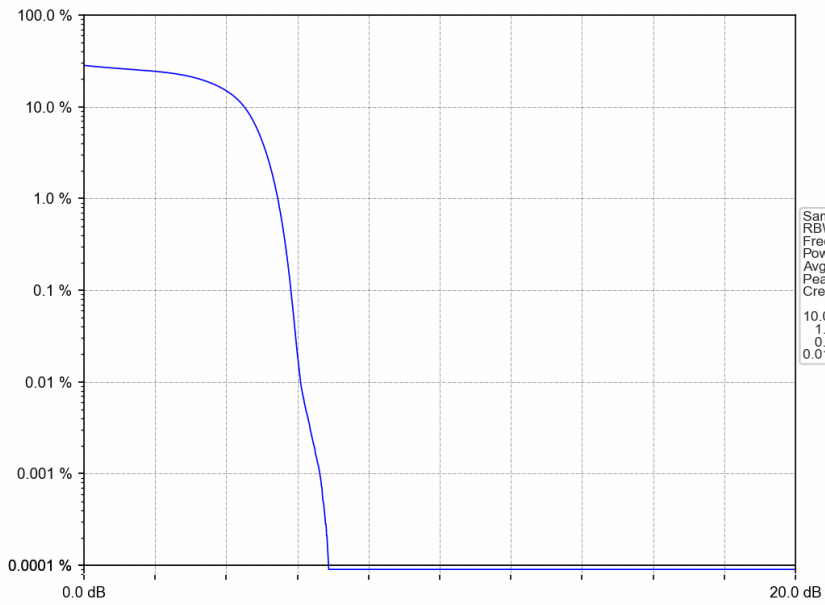
2024-08-03 13:46:19

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



2024-08-03 13:46:42

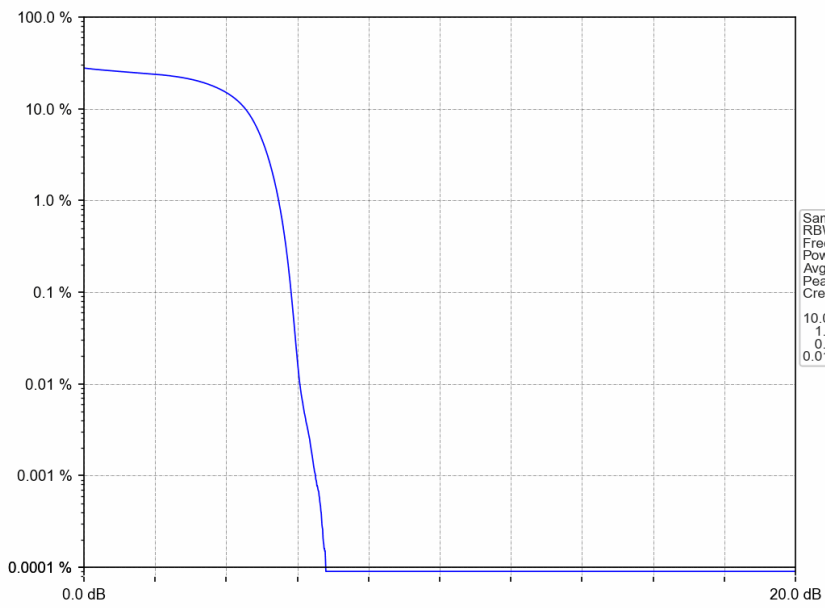
Band4\_HSDPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



Samples: 10.0M  
RBW: 5.00MHz  
Freq.: 1732.600MHz  
Power:  
Avg: 17.22dBm  
Peak: 24.68dBm  
Crest: 7.46dB  
10.0 %: 4.50dB  
1.0 %: 5.45dB  
0.1 %: 5.82dB  
0.01 %: 6.09dB

2024-08-03 13:46:54

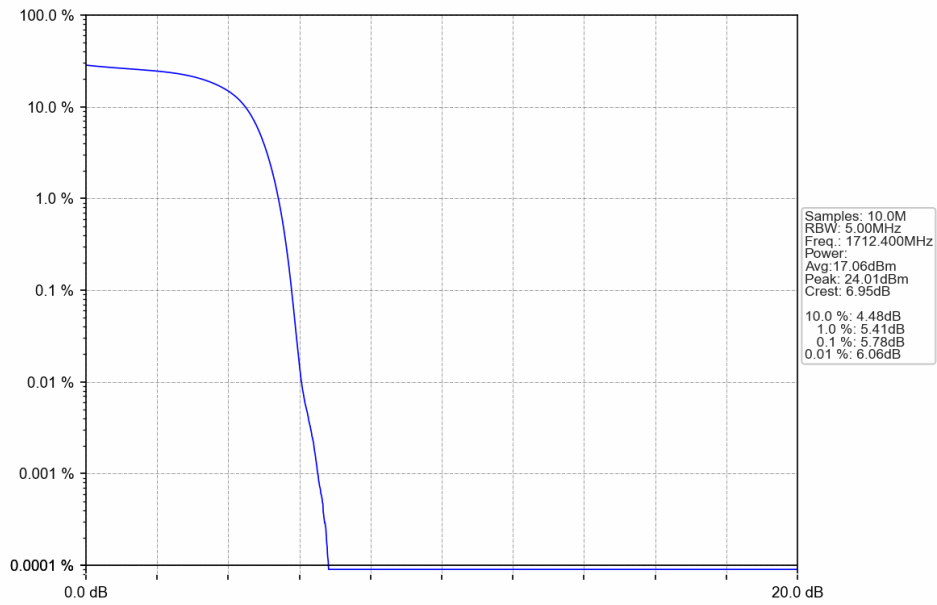
Band4\_HSDPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



Samples: 10.0M  
RBW: 5.00MHz  
Freq.: 1752.600MHz  
Power:  
Avg: 16.97dBm  
Peak: 24.01dBm  
Crest: 7.04dB  
10.0 %: 4.53dB  
1.0 %: 5.47dB  
0.1 %: 5.82dB  
0.01 %: 6.07dB

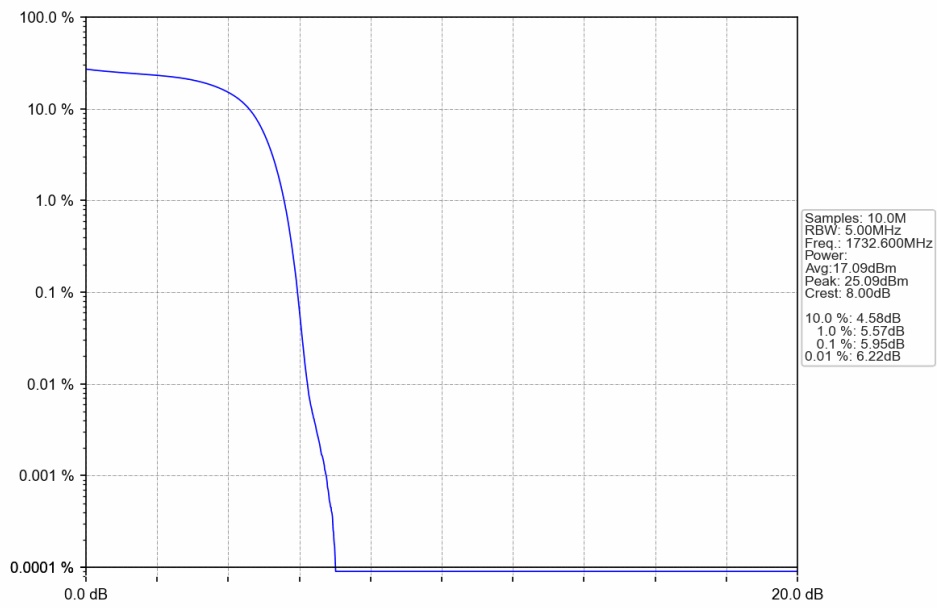
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Band4\_HSUPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



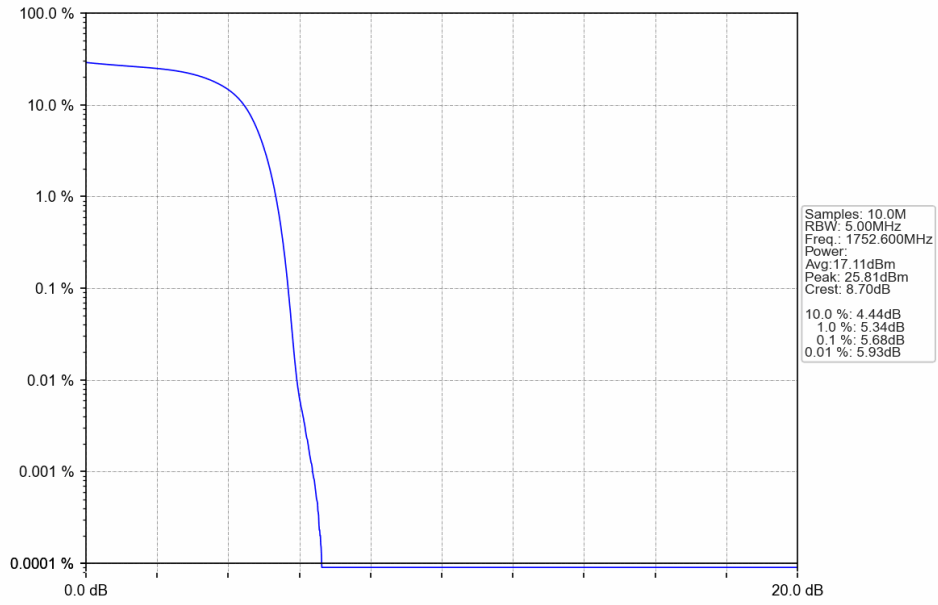
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Band4\_HSUPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



2024-08-03 13:47:32

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



2024-08-03 13:47:44

## 6. Spurious Emission

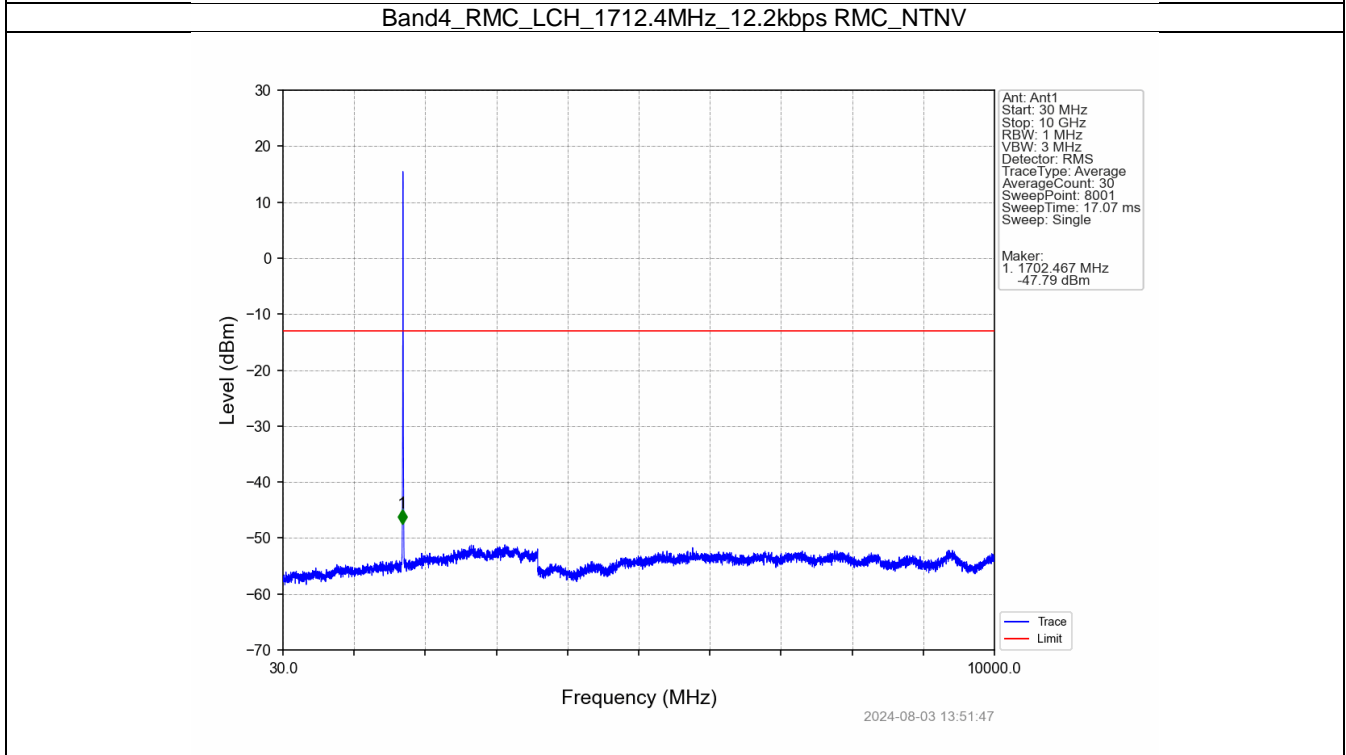
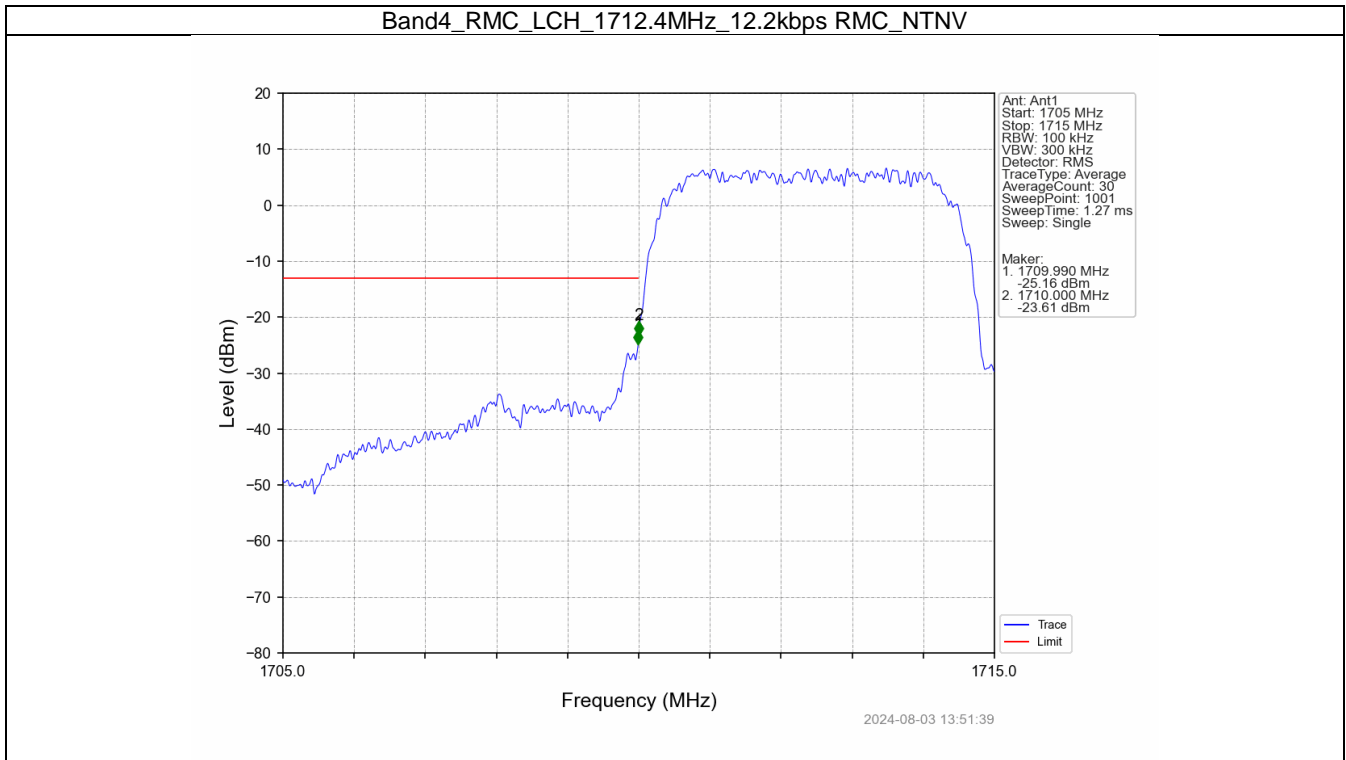
### 6.1 Test Result

#### 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	

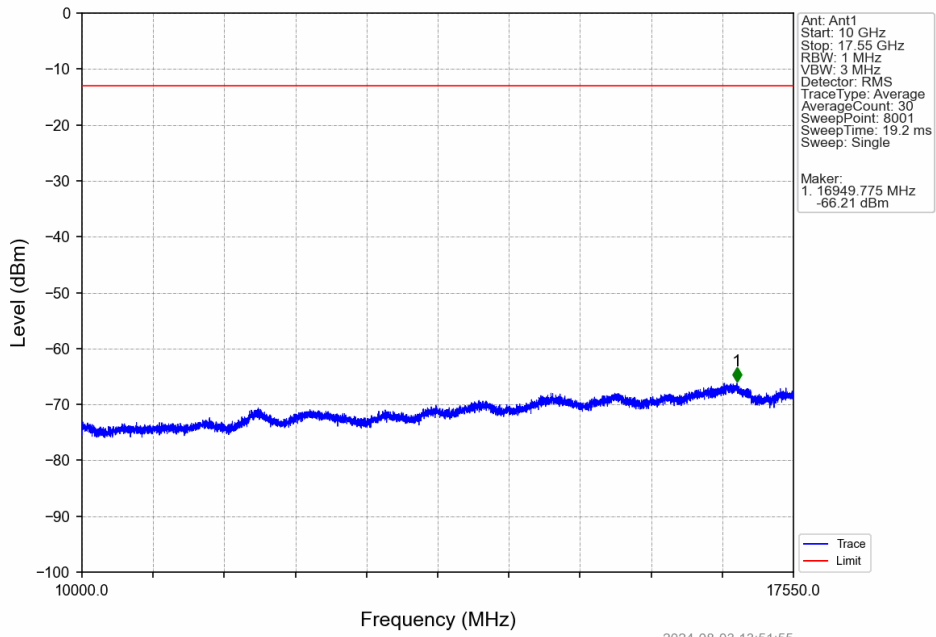
## 6.2 Test Graph

### 6.2.1 Band4

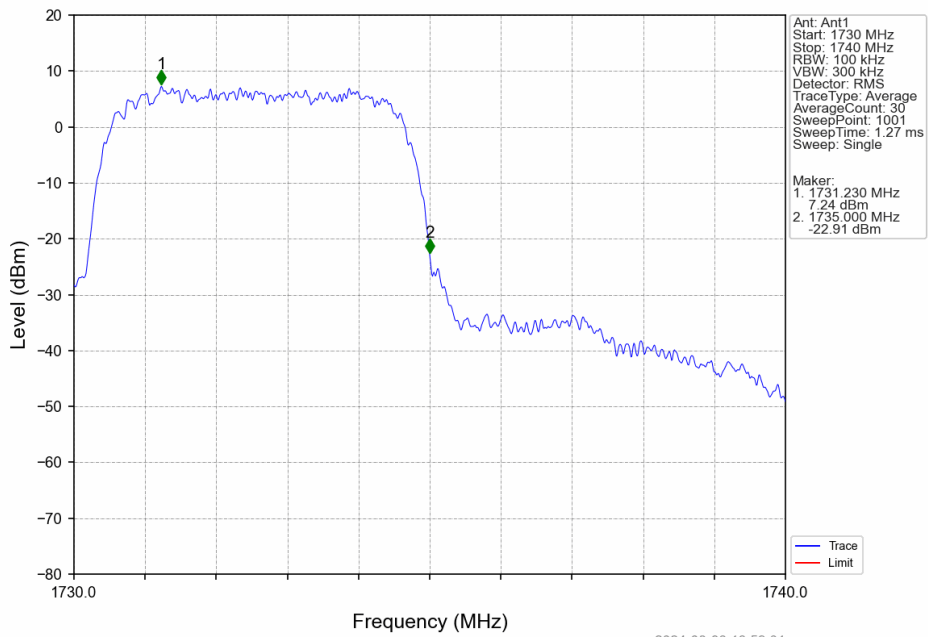




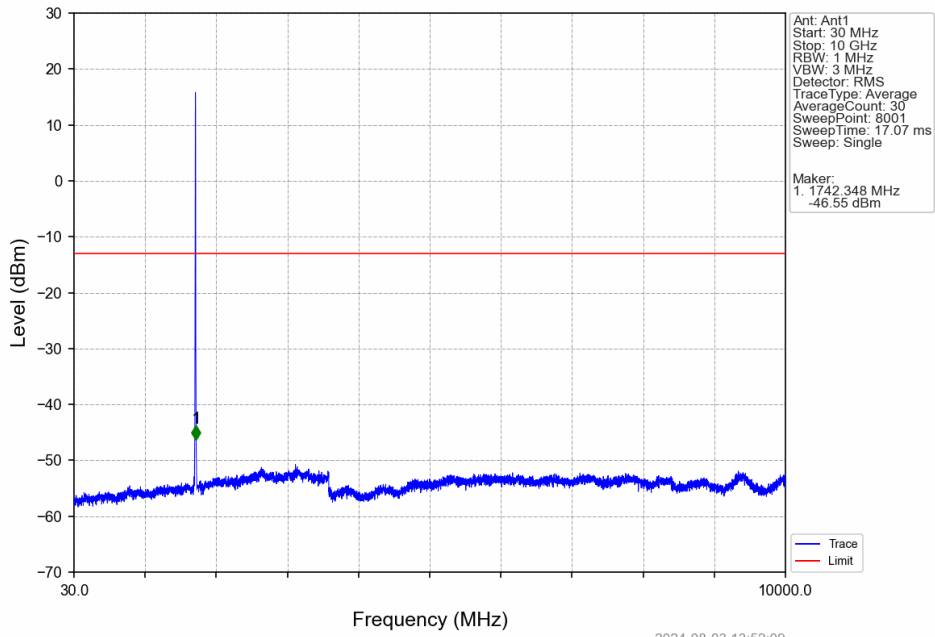
Band4\_RMC\_LCH\_1712.4MHz\_12.2kbps RMC\_NTNV



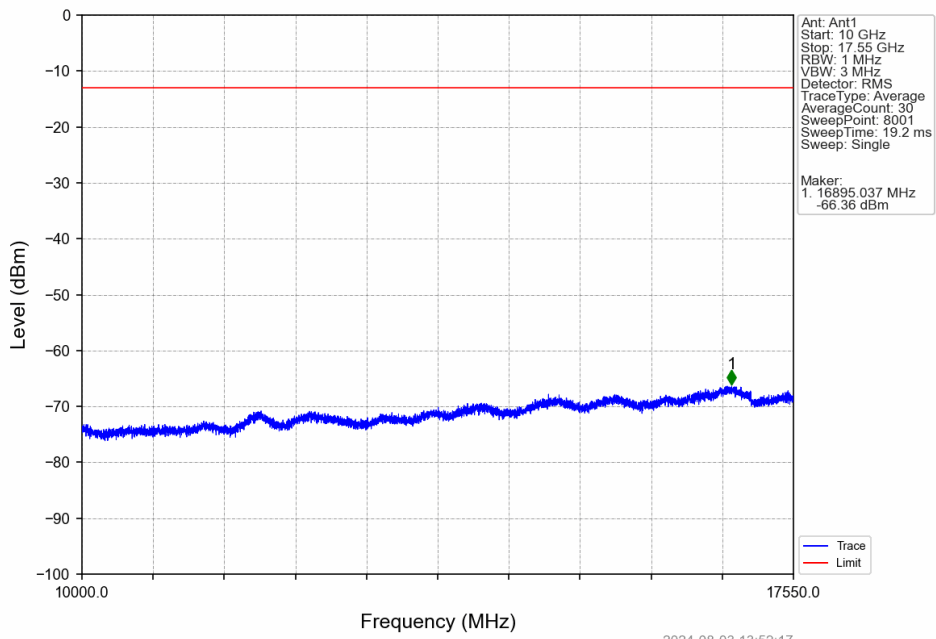
Band4\_RMC\_MCH\_1732.6MHz\_12.2kbps RMC\_NTNV



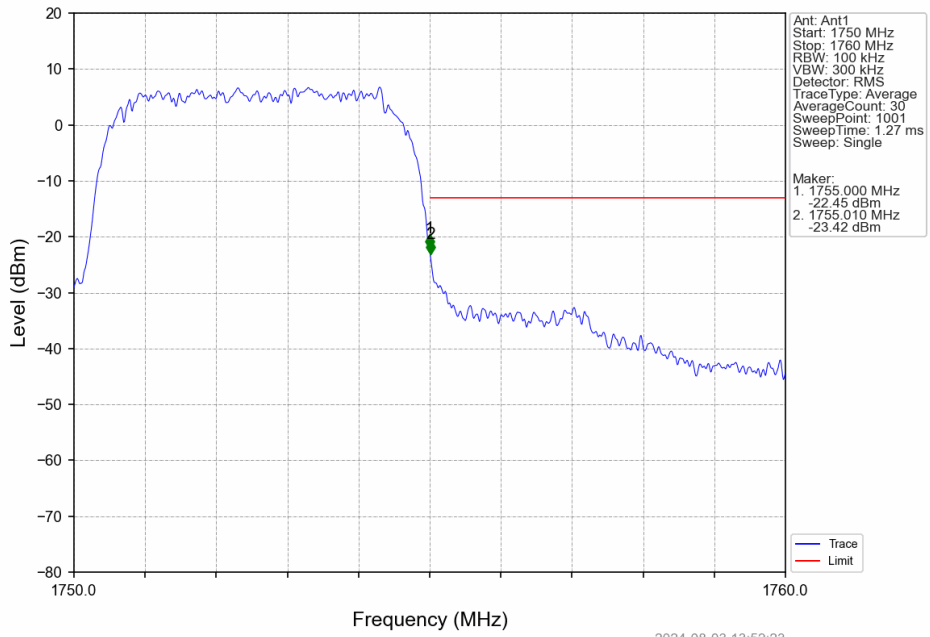
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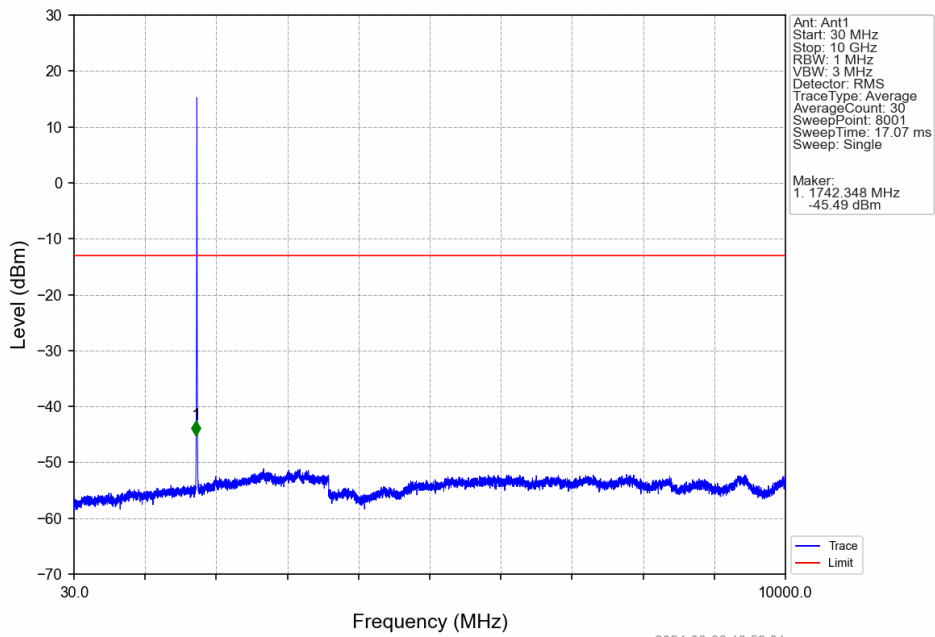
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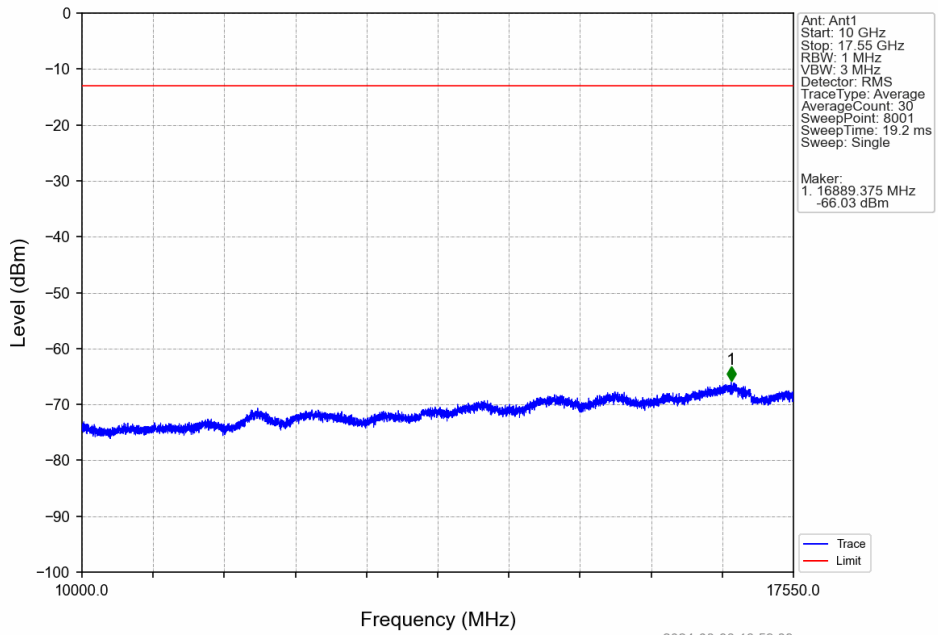
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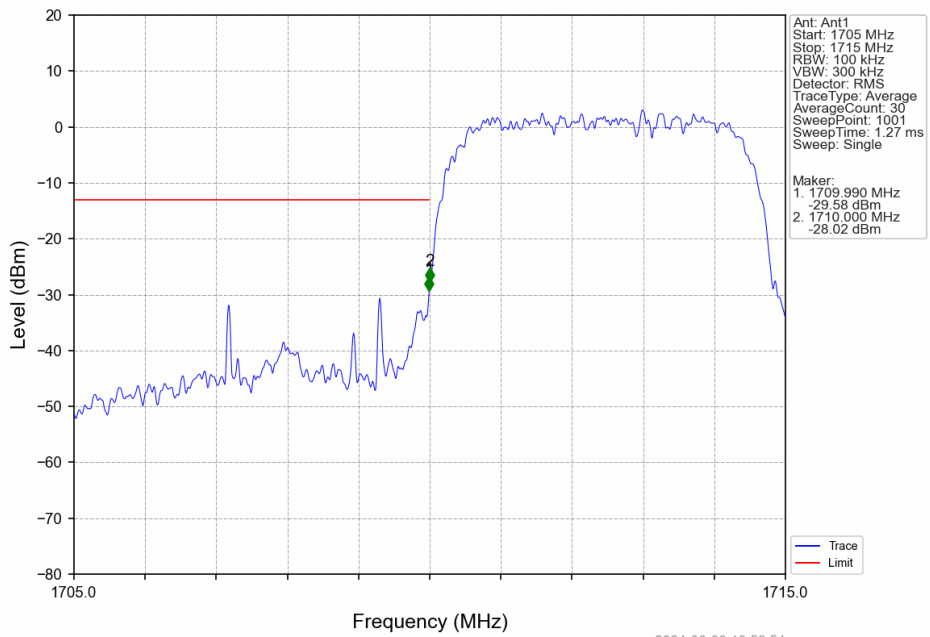
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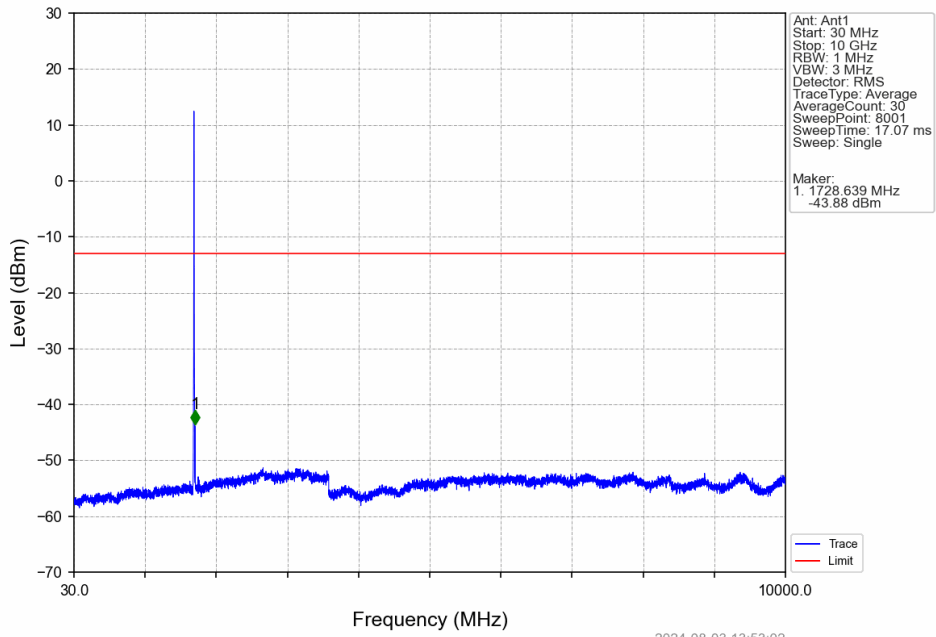
Band4\_RMC\_HCH\_1752.6MHz\_12.2kbps RMC\_NTNV



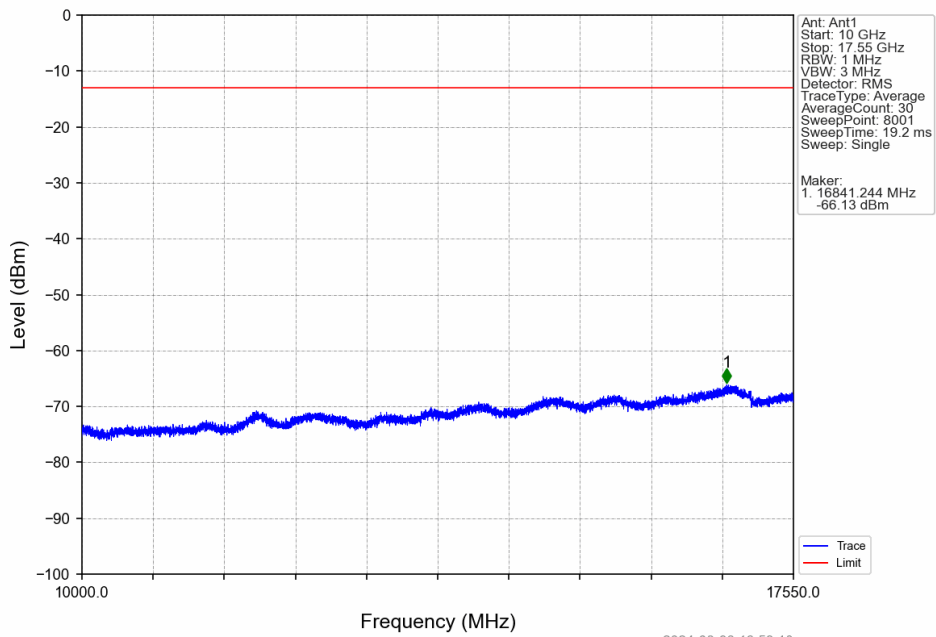
Band4\_HSDPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



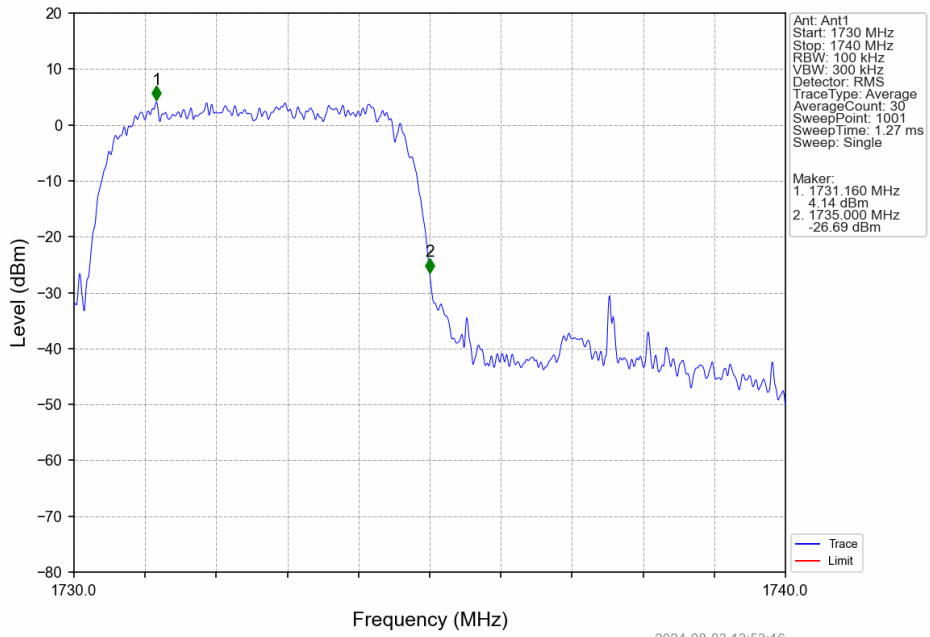
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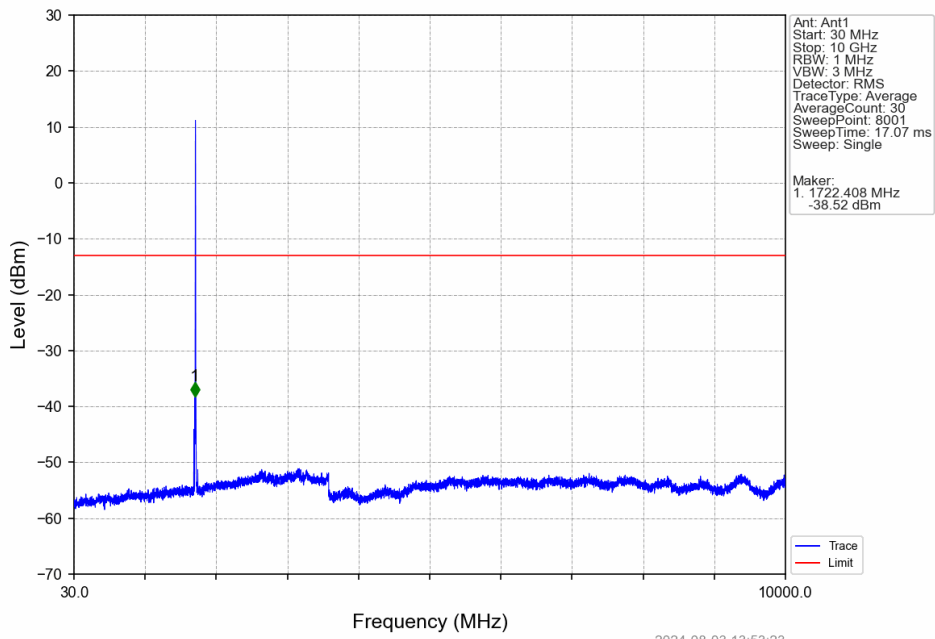
Band4\_HSDPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



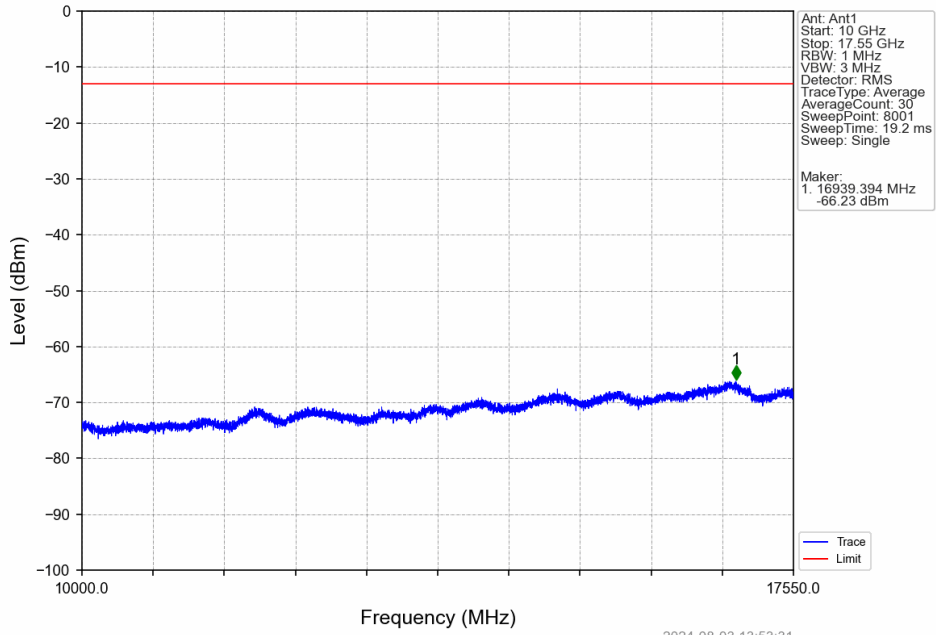
Band4\_HSDPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



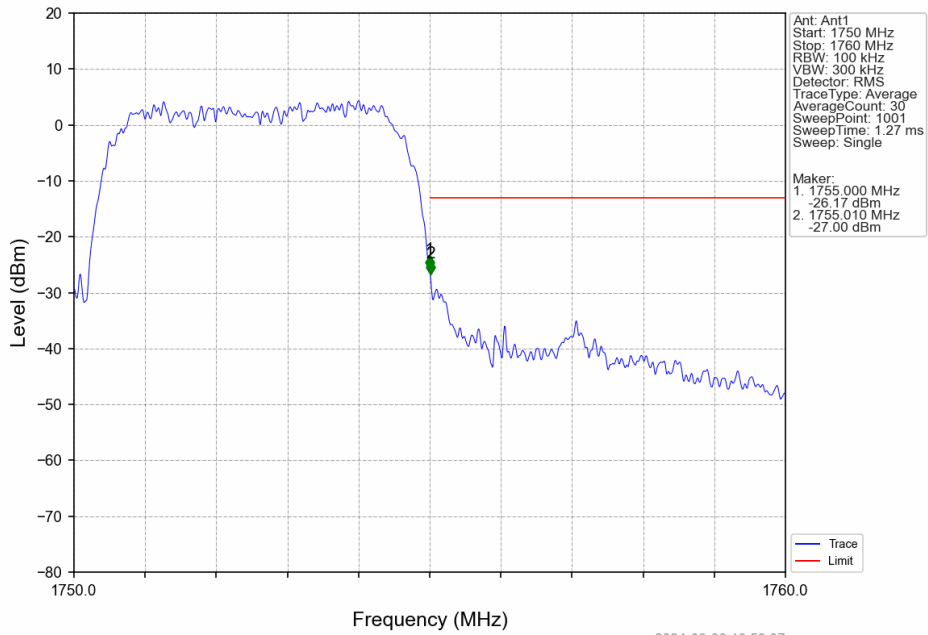
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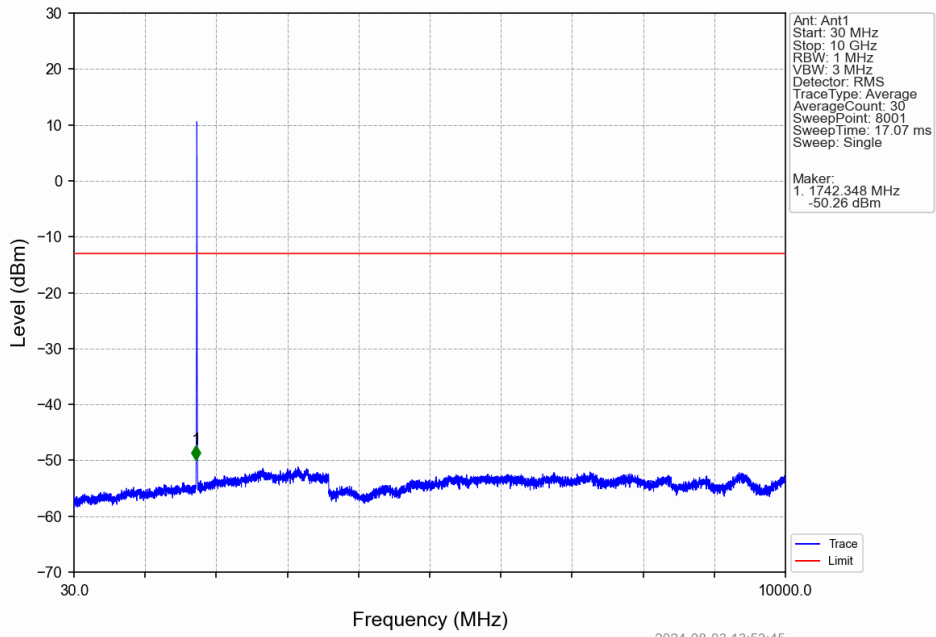
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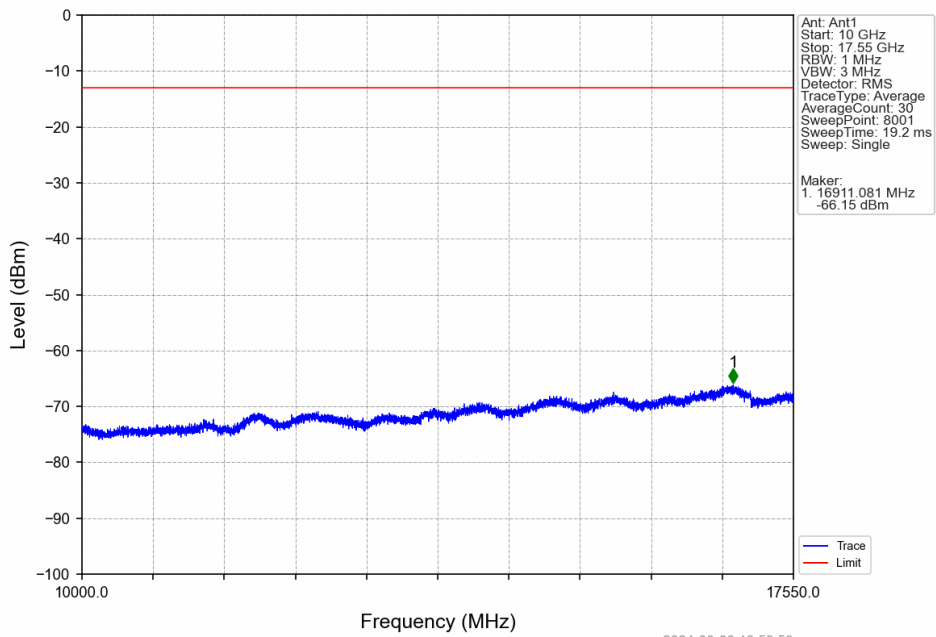
Band4\_HSDPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



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

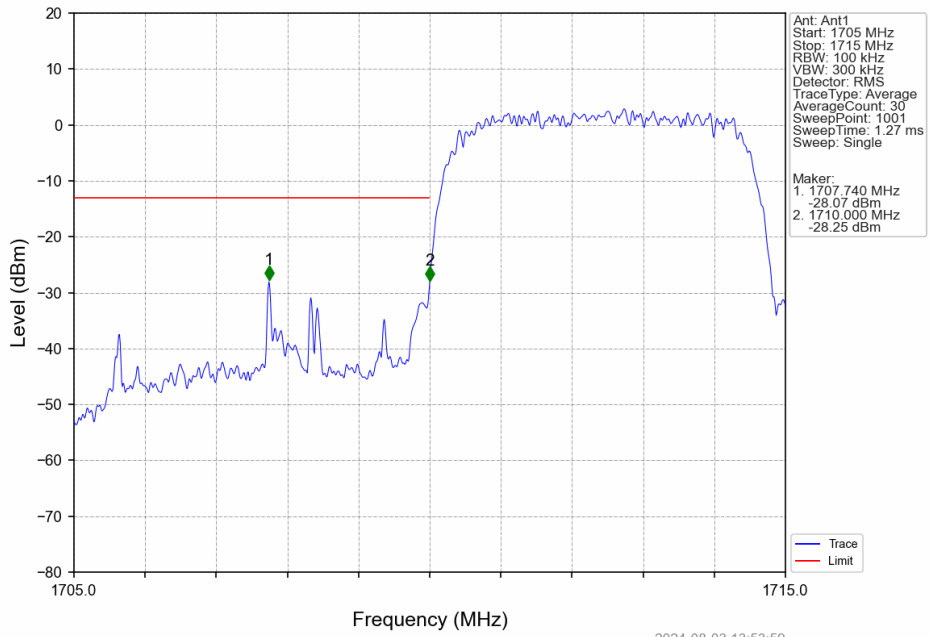


Band4\_HSDPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV

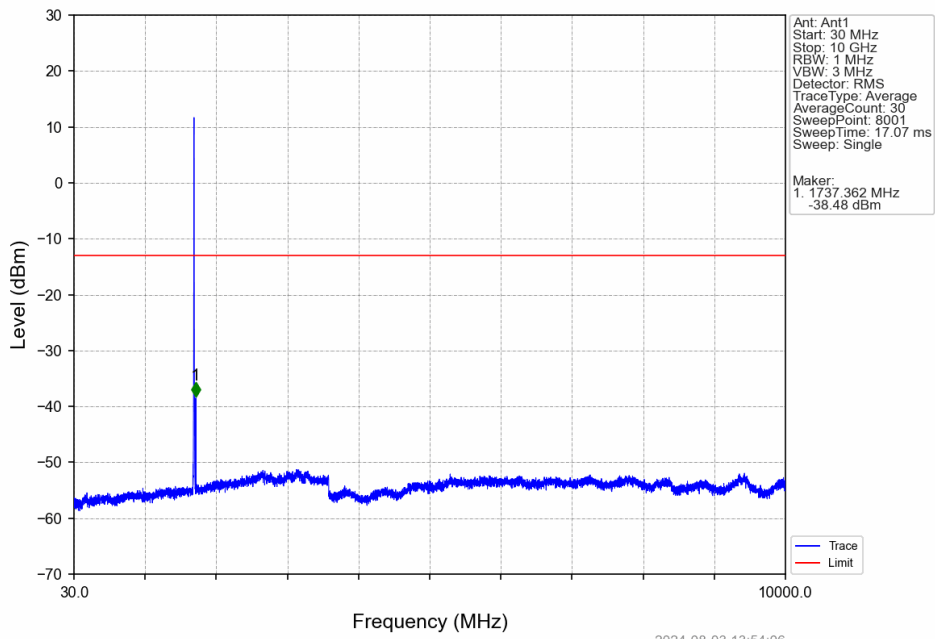




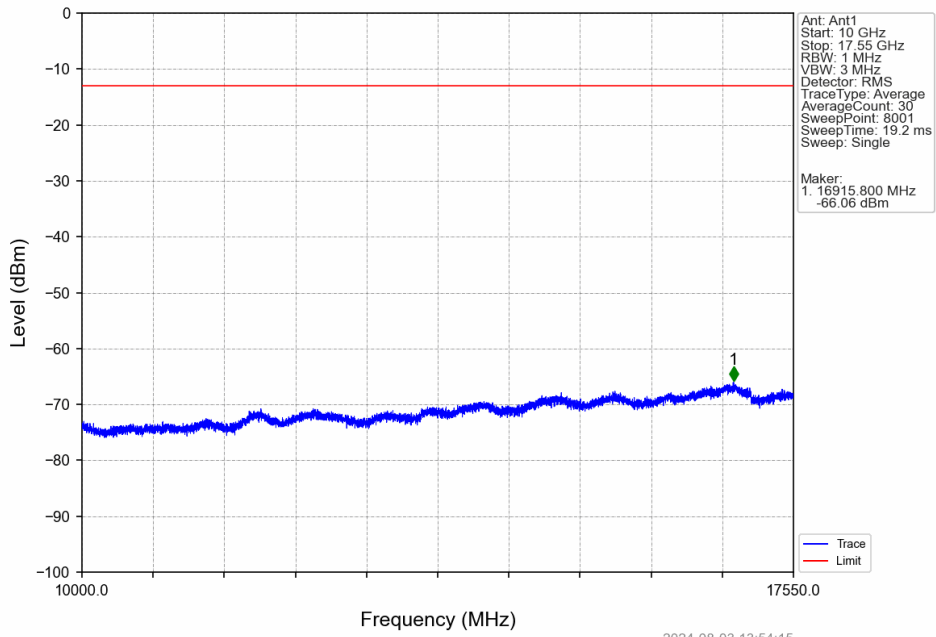
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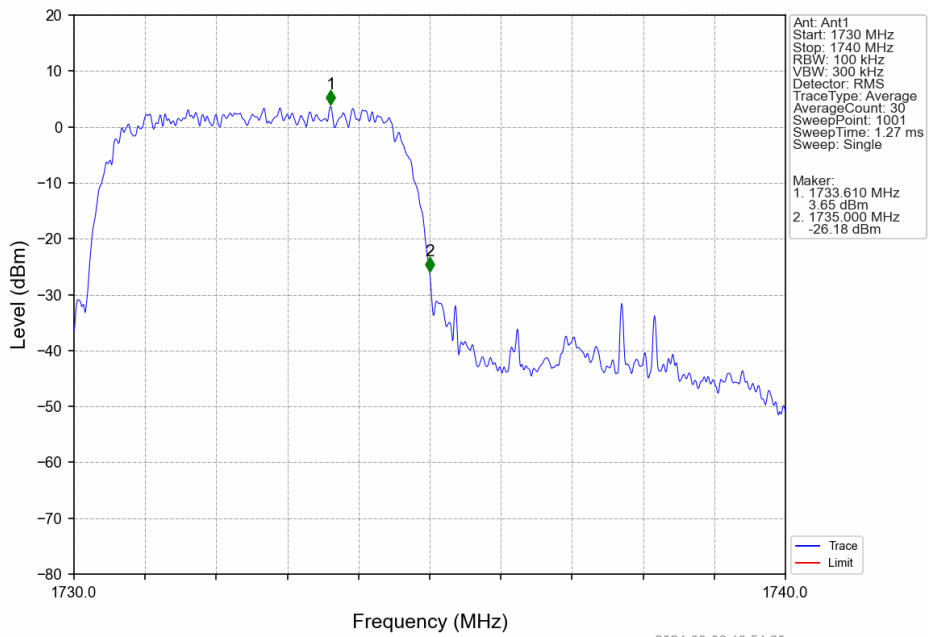
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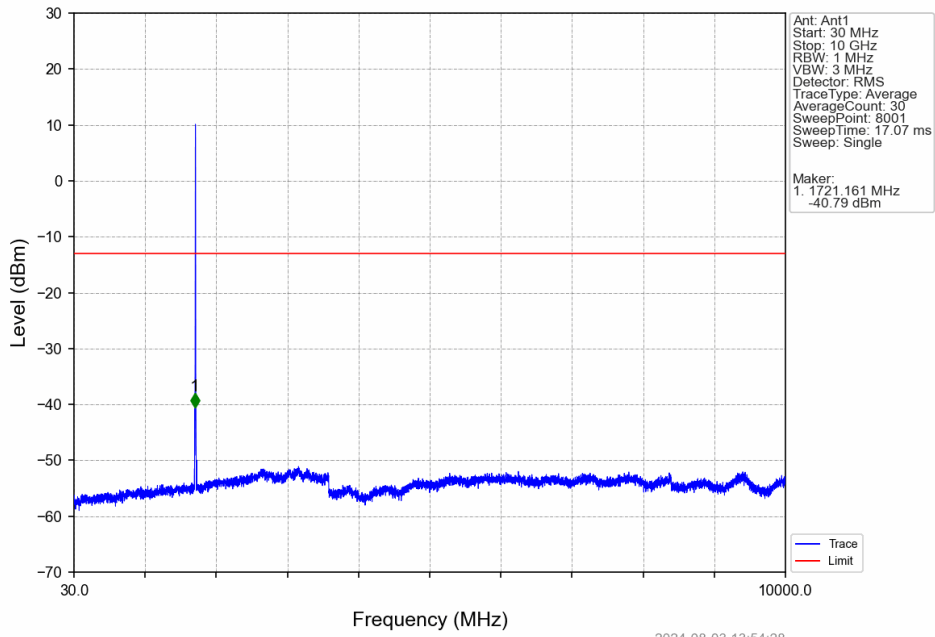
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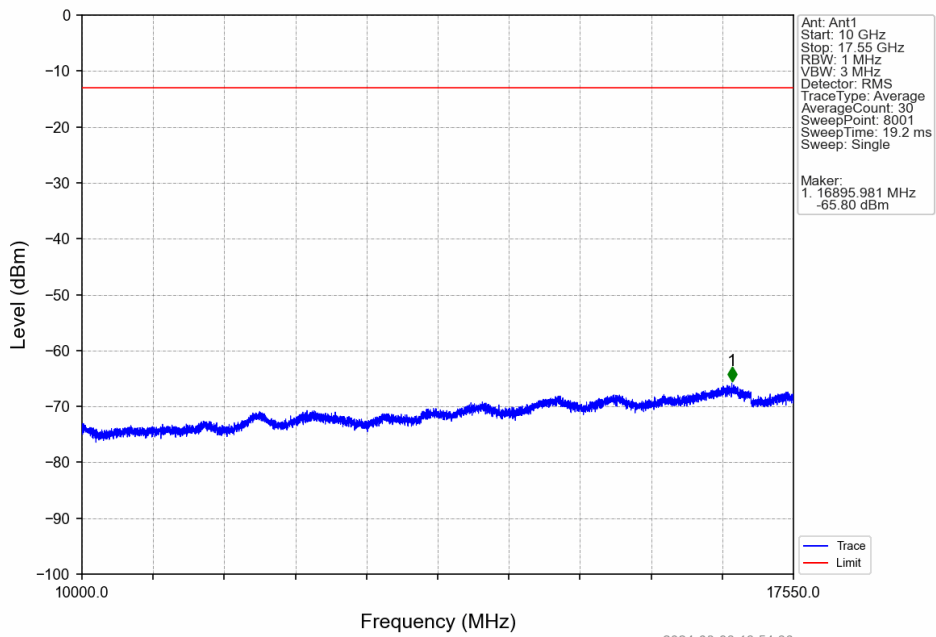
Band4\_HSUPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



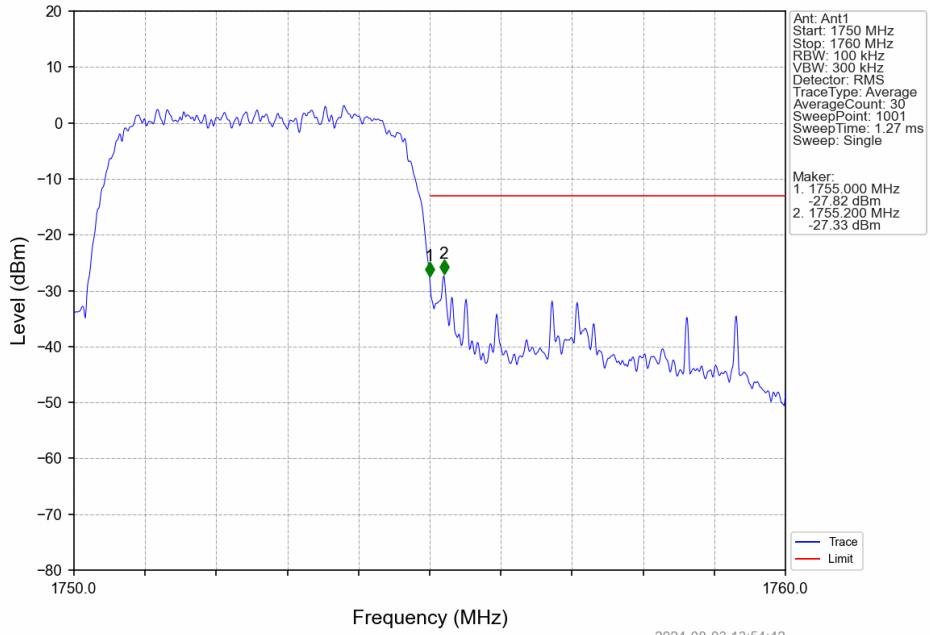
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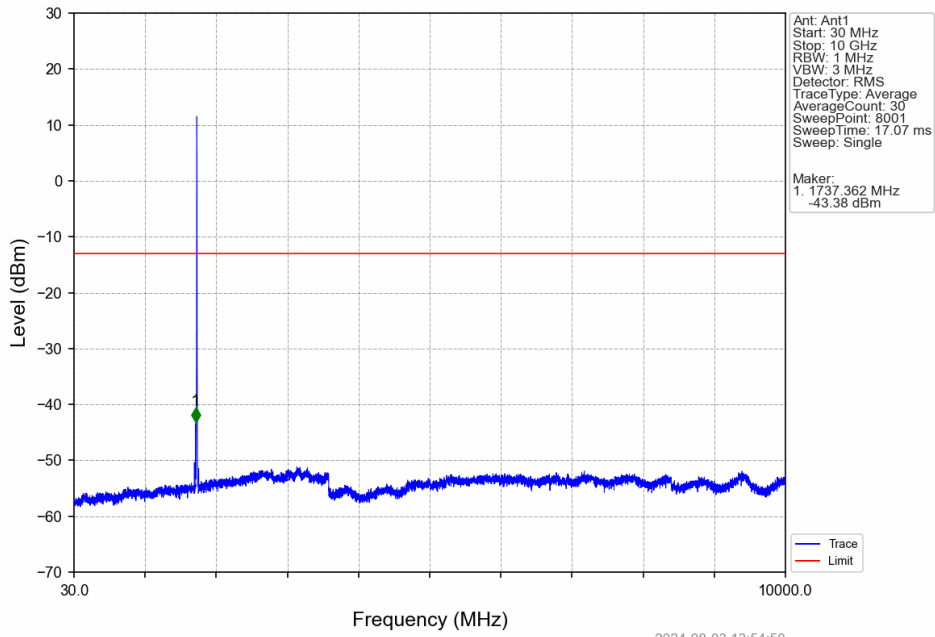
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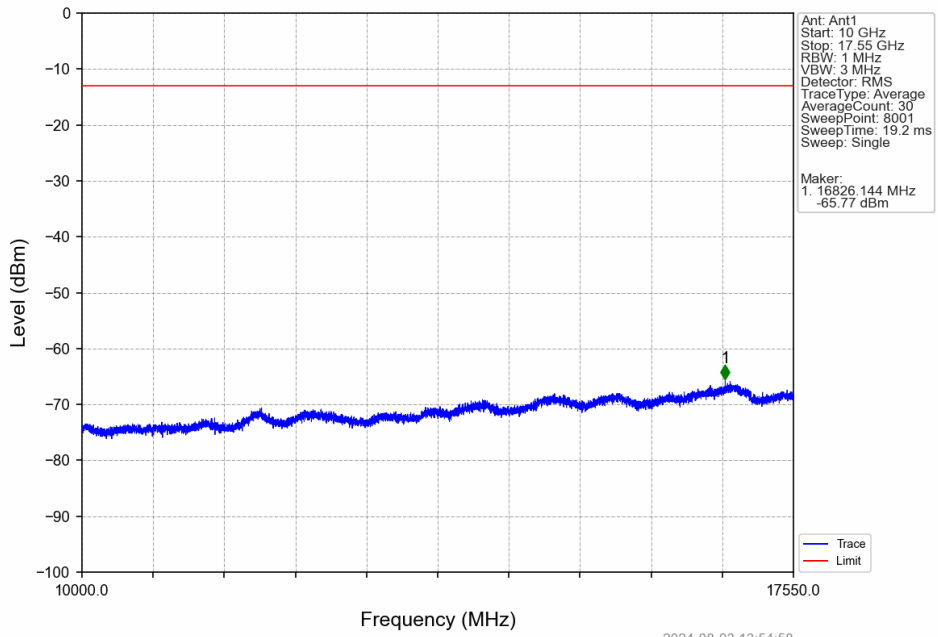
Band4\_HSUPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



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



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



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## 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)
4	3.84	1712.4	1752.6	0.1324	0.0430	ppm	4M26F9W	27L	21.22

#### 7.1.2 Form731\_EIRP

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	0.1535	0.0430	ppm	4M26F9W	27L	21.86