

# 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	HSDPA	Subtest 1	1712.4	20.50	0.48	20.98	<=30	Pass	
		Subtest 2	1712.4	20.52	0.48	21.00	<=30	Pass	
		Subtest 3	1712.4	20.53	0.48	21.01	<=30	Pass	
		Subtest 4	1712.4	20.52	0.48	21.00	<=30	Pass	
		Subtest 1	1732.6	20.28	0.48	20.76	<=30	Pass	
		Subtest 2	1732.6	20.29	0.48	20.77	<=30	Pass	
		Subtest 3	1732.6	20.26	0.48	20.74	<=30	Pass	
		Subtest 4	1732.6	20.29	0.48	20.77	<=30	Pass	
		Subtest 1	1752.6	20.15	0.48	20.63	<=30	Pass	
		Subtest 2	1752.6	20.17	0.48	20.65	<=30	Pass	
		Subtest 3	1752.6	20.15	0.48	20.63	<=30	Pass	
		Subtest 4	1752.6	20.15	0.48	20.63	<=30	Pass	
	HSUPA	Subtest 1	1712.4	18.44	0.48	18.92	<=30	Pass	
		Subtest 2	1712.4	17.88	0.48	18.36	<=30	Pass	
		Subtest 3	1712.4	17.90	0.48	18.38	<=30	Pass	
		Subtest 4	1712.4	17.95	0.48	18.43	<=30	Pass	
		Subtest 5	1712.4	18.20	0.48	18.68	<=30	Pass	
		Subtest 1	1732.6	18.00	0.48	18.48	<=30	Pass	
		Subtest 2	1732.6	17.70	0.48	18.18	<=30	Pass	
		Subtest 3	1732.6	17.74	0.48	18.22	<=30	Pass	
		Subtest 4	1732.6	18.22	0.48	18.70	<=30	Pass	
		Subtest 5	1732.6	18.04	0.48	18.52	<=30	Pass	
		Subtest 1	1752.6	18.07	0.48	18.55	<=30	Pass	
		Subtest 2	1752.6	18.08	0.48	18.56	<=30	Pass	
	RMC	12.2kbps RMC		1712.4	22.74	0.48	23.22	<=30	Pass
				1732.6	22.54	0.48	23.02	<=30	Pass
				1752.6	22.37	0.48	22.85	<=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	
HSDPA	1712.4	20	3.27	4.220	0.0025	-2.5 to 2.5	Pass
			3.85	3.591	0.0021	-2.5 to 2.5	Pass

			4.43	3.684	0.0022	-2.5 to 2.5	Pass		
		-30	3.85	3.726	0.0022	-2.5 to 2.5	Pass		
		-20	3.85	3.462	0.0020	-2.5 to 2.5	Pass		
		-10	3.85	3.247	0.0019	-2.5 to 2.5	Pass		
		0	3.85	3.104	0.0018	-2.5 to 2.5	Pass		
		10	3.85	3.183	0.0019	-2.5 to 2.5	Pass		
		30	3.85	3.347	0.0020	-2.5 to 2.5	Pass		
		40	3.85	3.490	0.0020	-2.5 to 2.5	Pass		
		50	3.85	2.768	0.0016	-2.5 to 2.5	Pass		
	1732.6	20		3.27	-0.143	-0.0001	-2.5 to 2.5	Pass	
				3.85	-0.565	-0.0003	-2.5 to 2.5	Pass	
				4.43	0.386	0.0002	-2.5 to 2.5	Pass	
			-30	3.85	0.458	0.0003	-2.5 to 2.5	Pass	
			-20	3.85	-0.250	-0.0001	-2.5 to 2.5	Pass	
			-10	3.85	-0.472	-0.0003	-2.5 to 2.5	Pass	
			0	3.85	-0.486	-0.0003	-2.5 to 2.5	Pass	
			10	3.85	0.007	0.0000	-2.5 to 2.5	Pass	
			30	3.85	-0.615	-0.0004	-2.5 to 2.5	Pass	
	1752.6	20		3.27	-1.903	-0.0011	-2.5 to 2.5	Pass	
				3.85	-1.853	-0.0011	-2.5 to 2.5	Pass	
				4.43	-2.367	-0.0014	-2.5 to 2.5	Pass	
			-30	3.85	-2.160	-0.0012	-2.5 to 2.5	Pass	
			-20	3.85	-1.459	-0.0008	-2.5 to 2.5	Pass	
			-10	3.85	-2.418	-0.0014	-2.5 to 2.5	Pass	
			0	3.85	-2.031	-0.0012	-2.5 to 2.5	Pass	
			10	3.85	-2.067	-0.0012	-2.5 to 2.5	Pass	
			30	3.85	-1.824	-0.0010	-2.5 to 2.5	Pass	
	HSUPA	1712.4	20		3.27	5.529	0.0032	-2.5 to 2.5	Pass
					3.85	5.586	0.0033	-2.5 to 2.5	Pass
					4.43	5.379	0.0031	-2.5 to 2.5	Pass
				-30	3.85	6.058	0.0035	-2.5 to 2.5	Pass
				-20	3.85	5.622	0.0033	-2.5 to 2.5	Pass
				-10	3.85	6.273	0.0037	-2.5 to 2.5	Pass
			0	3.85	4.992	0.0029	-2.5 to 2.5	Pass	
			10	3.85	5.908	0.0035	-2.5 to 2.5	Pass	
			30	3.85	5.937	0.0035	-2.5 to 2.5	Pass	
1732.6		20		3.27	4.005	0.0023	-2.5 to 2.5	Pass	
				3.85	3.569	0.0021	-2.5 to 2.5	Pass	
				4.43	4.041	0.0023	-2.5 to 2.5	Pass	
			-30	3.85	3.483	0.0020	-2.5 to 2.5	Pass	
			-20	3.85	1.988	0.0011	-2.5 to 2.5	Pass	
			-10	3.85	3.247	0.0019	-2.5 to 2.5	Pass	
			0	3.85	3.619	0.0021	-2.5 to 2.5	Pass	
			10	3.85	3.891	0.0022	-2.5 to 2.5	Pass	
			30	3.85	3.619	0.0021	-2.5 to 2.5	Pass	
1752.6		20		3.27	0.114	0.0001	-2.5 to 2.5	Pass	
				3.85	0.093	0.0001	-2.5 to 2.5	Pass	
				4.43	0.708	0.0004	-2.5 to 2.5	Pass	
			-30	3.85	0.622	0.0004	-2.5 to 2.5	Pass	

		-20	3.85	0.830	0.0005	-2.5 to 2.5	Pass
		-10	3.85	1.795	0.0010	-2.5 to 2.5	Pass
		0	3.85	0.851	0.0005	-2.5 to 2.5	Pass
		10	3.85	1.559	0.0009	-2.5 to 2.5	Pass
		30	3.85	-0.257	-0.0001	-2.5 to 2.5	Pass
		40	3.85	-0.229	-0.0001	-2.5 to 2.5	Pass
		50	3.85	0.165	0.0001	-2.5 to 2.5	Pass
RMC	1712.4	20	3.27	4.349	0.0025	-2.5 to 2.5	Pass
			3.85	3.719	0.0022	-2.5 to 2.5	Pass
			4.43	3.533	0.0021	-2.5 to 2.5	Pass
		-30	3.85	2.761	0.0016	-2.5 to 2.5	Pass
		-20	3.85	4.227	0.0025	-2.5 to 2.5	Pass
		-10	3.85	3.312	0.0019	-2.5 to 2.5	Pass
		0	3.85	3.448	0.0020	-2.5 to 2.5	Pass
		10	3.85	3.748	0.0022	-2.5 to 2.5	Pass
		30	3.85	3.555	0.0021	-2.5 to 2.5	Pass
		40	3.85	3.934	0.0023	-2.5 to 2.5	Pass
	50	3.85	2.782	0.0016	-2.5 to 2.5	Pass	
	1732.6	20	3.27	0.615	0.0004	-2.5 to 2.5	Pass
			3.85	0.923	0.0005	-2.5 to 2.5	Pass
			4.43	0.744	0.0004	-2.5 to 2.5	Pass
		-30	3.85	0.987	0.0006	-2.5 to 2.5	Pass
		-20	3.85	0.279	0.0002	-2.5 to 2.5	Pass
		-10	3.85	-0.358	-0.0002	-2.5 to 2.5	Pass
		0	3.85	0.043	0.0000	-2.5 to 2.5	Pass
		10	3.85	0.000	0.0000	-2.5 to 2.5	Pass
		30	3.85	0.808	0.0005	-2.5 to 2.5	Pass
		40	3.85	0.701	0.0004	-2.5 to 2.5	Pass
	50	3.85	0.458	0.0003	-2.5 to 2.5	Pass	
	1752.6	20	3.27	-1.867	-0.0011	-2.5 to 2.5	Pass
			3.85	-0.930	-0.0005	-2.5 to 2.5	Pass
			4.43	-1.981	-0.0011	-2.5 to 2.5	Pass
		-30	3.85	-1.810	-0.0010	-2.5 to 2.5	Pass
		-20	3.85	-1.516	-0.0009	-2.5 to 2.5	Pass
		-10	3.85	-1.345	-0.0008	-2.5 to 2.5	Pass
		0	3.85	-2.382	-0.0014	-2.5 to 2.5	Pass
		10	3.85	-2.332	-0.0013	-2.5 to 2.5	Pass
30		3.85	-2.403	-0.0014	-2.5 to 2.5	Pass	
40		3.85	-1.895	-0.0011	-2.5 to 2.5	Pass	
50	3.85	-1.731	-0.0010	-2.5 to 2.5	Pass		

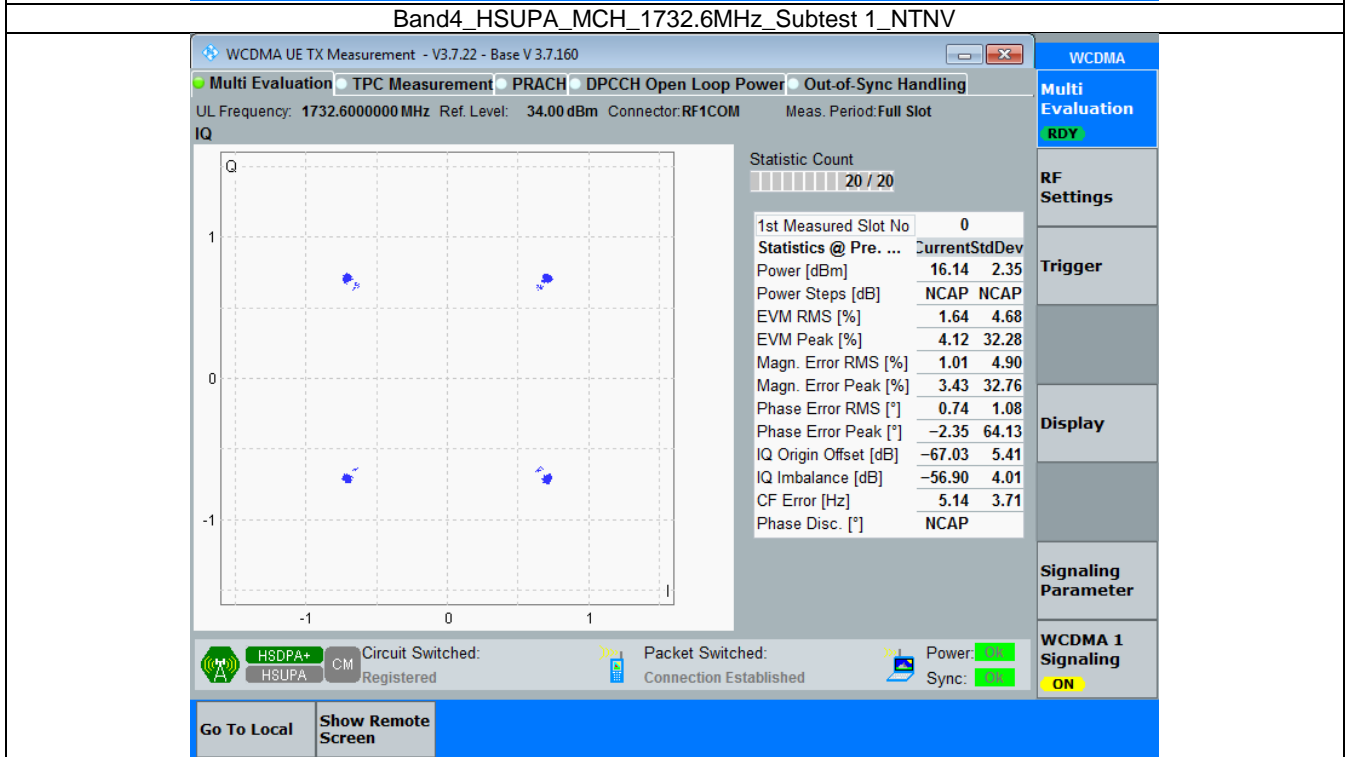
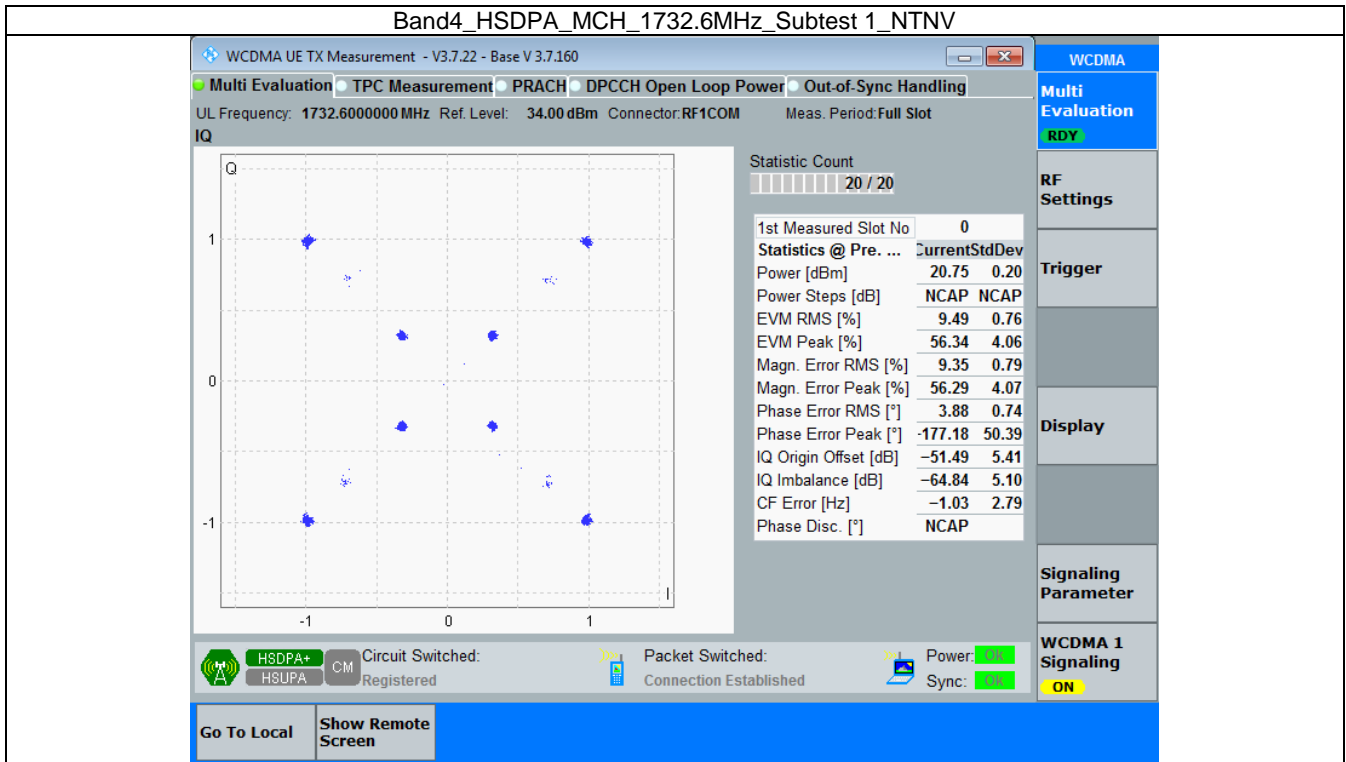
### 3. Modulation Characteristics

#### 3.1 Band4

##### 3.1.1 Test Result

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

### 3.1.2 Test Graph



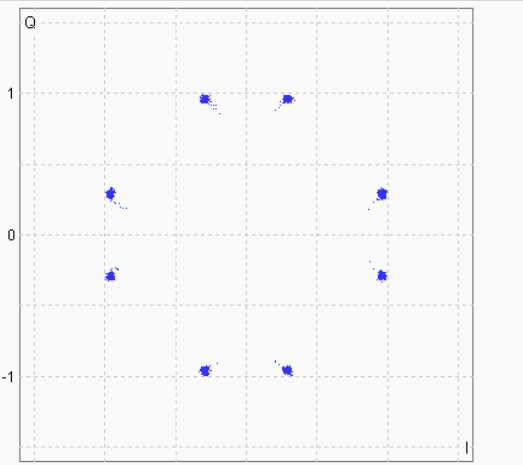
Band4\_RMC\_MCH\_1732.6MHz\_12.2kbps\_RMC\_NTNV

WCDMA UE TX Measurement - V3.7.22 - Base V 3.7.160

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

UL Frequency: 1732.600000 MHz Ref. Level: 32.40 dBm Connector:RF1COM Meas. Period:Full Slot

IQ



Statistic Count: 20 / 20

1st Measured Slot No	CurrentStdDev
0	

Statistics @ Pre. ...	CurrentStdDev
Power [dBm]	23.08 0.04
Power Steps [dB]	NCAP NCAP
EVM RMS [%]	2.19 0.08
EVM Peak [%]	14.93 2.07
Magn. Error RMS [%]	1.60 0.09
Magn. Error Peak [%]	-13.35 2.65
Phase Error RMS [°]	0.87 0.02
Phase Error Peak [°]	-5.00 0.44
IQ Origin Offset [dB]	-60.31 2.78
IQ Imbalance [dB]	-70.84 4.52
CF Error [Hz]	-1.12 1.67
Phase Disc. [°]	NCAP

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

Go To Local Show Remote Screen

WCDMA  
Multi Evaluation RDY  
RF Settings  
Trigger  
Display  
Signaling Parameter  
WCDMA 1 Signaling ON

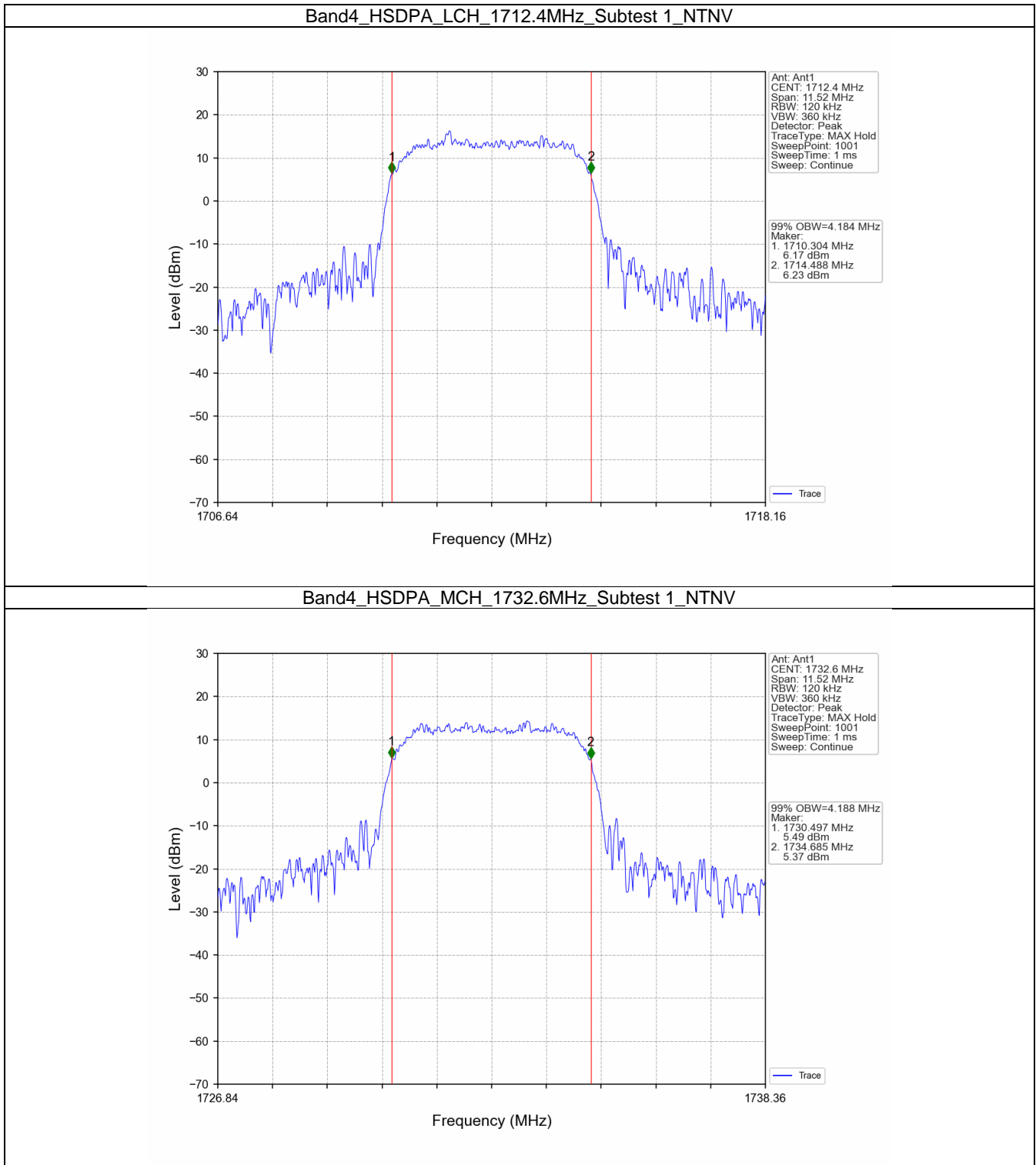
## 4. 99% & 26dB Bandwidth

### 4.1 Band4\_OBW

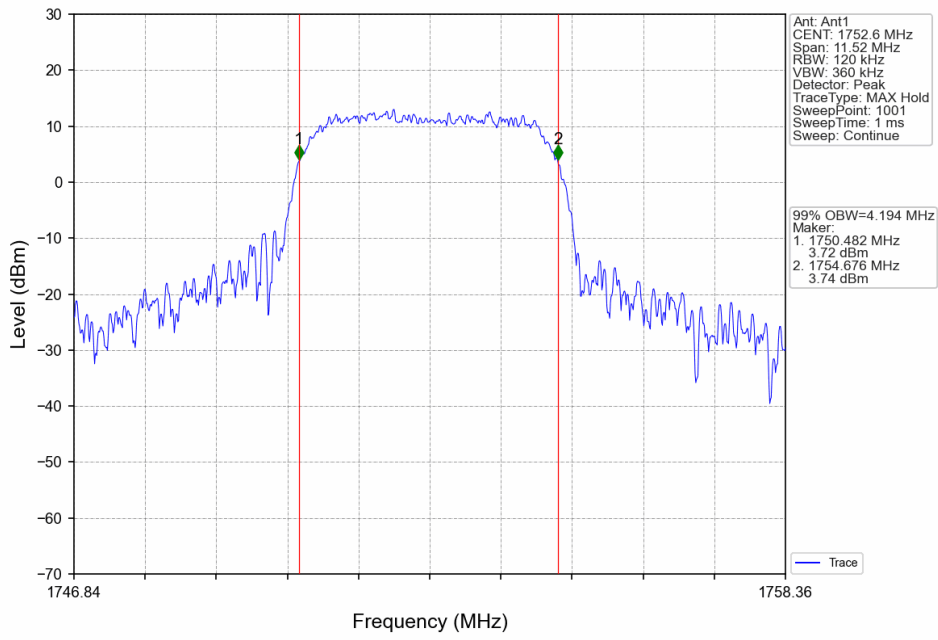
#### 4.1.1 Test Result

Band: 4						
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	HSDPA	Subtest 1	1712.4	4.184	/	Pass
			1732.6	4.188	/	Pass
			1752.6	4.194	/	Pass
	HSUPA	Subtest 1	1712.4	4.199	/	Pass
			1732.6	4.180	/	Pass
			1752.6	4.182	/	Pass
	RMC	12.2kbps RMC	1712.4	4.171	/	Pass
			1732.6	4.157	/	Pass
			1752.6	4.162	/	Pass

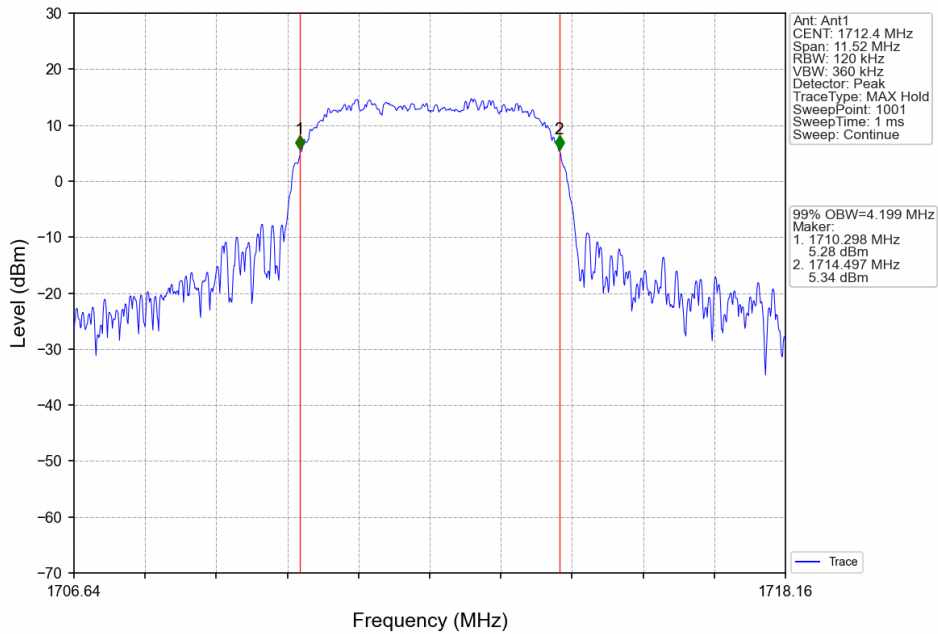
### 4.1.2 Test Graph



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

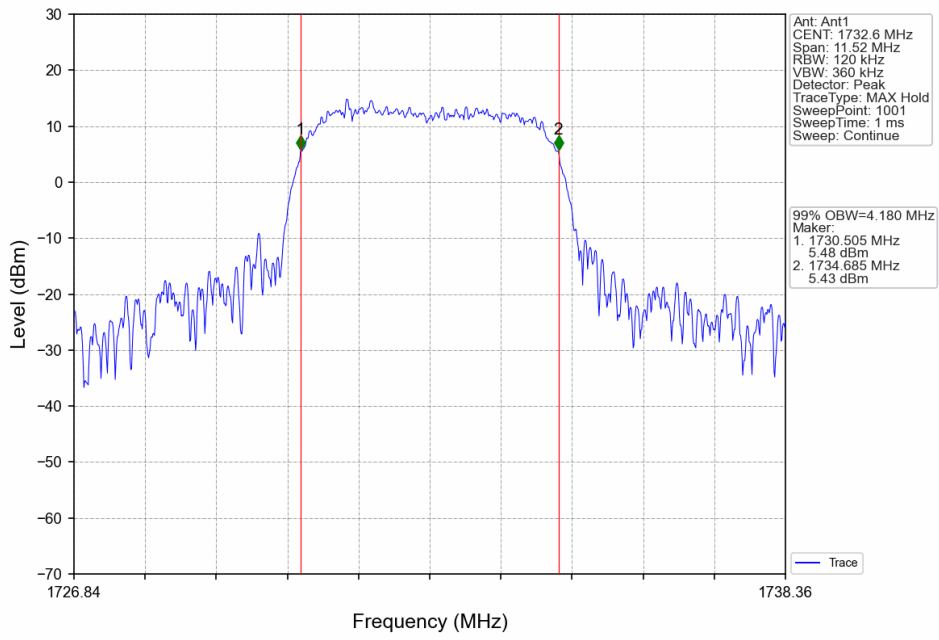


Band4\_HSUPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV

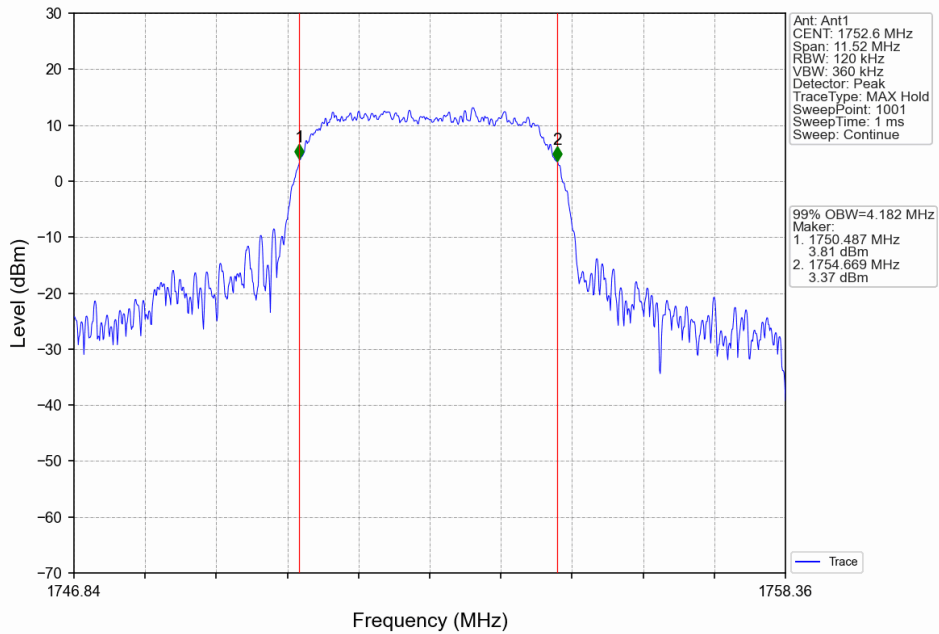




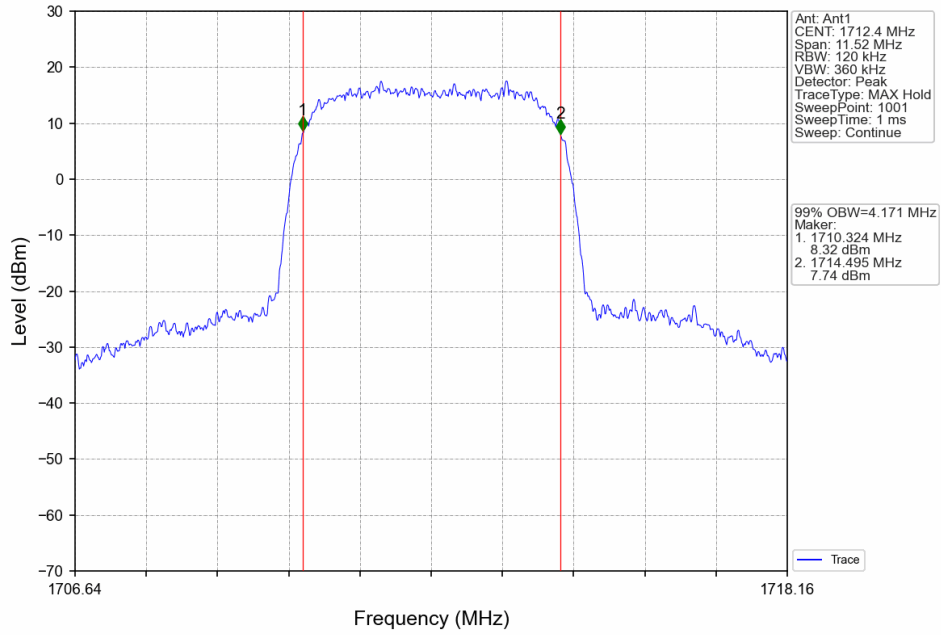
Band4\_HSUPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



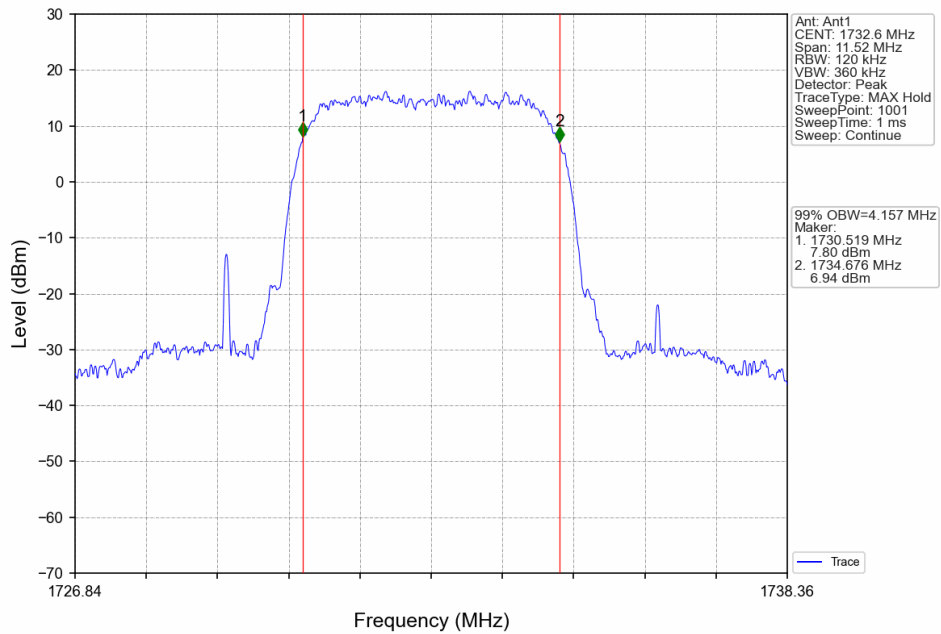
Band4\_HSUPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



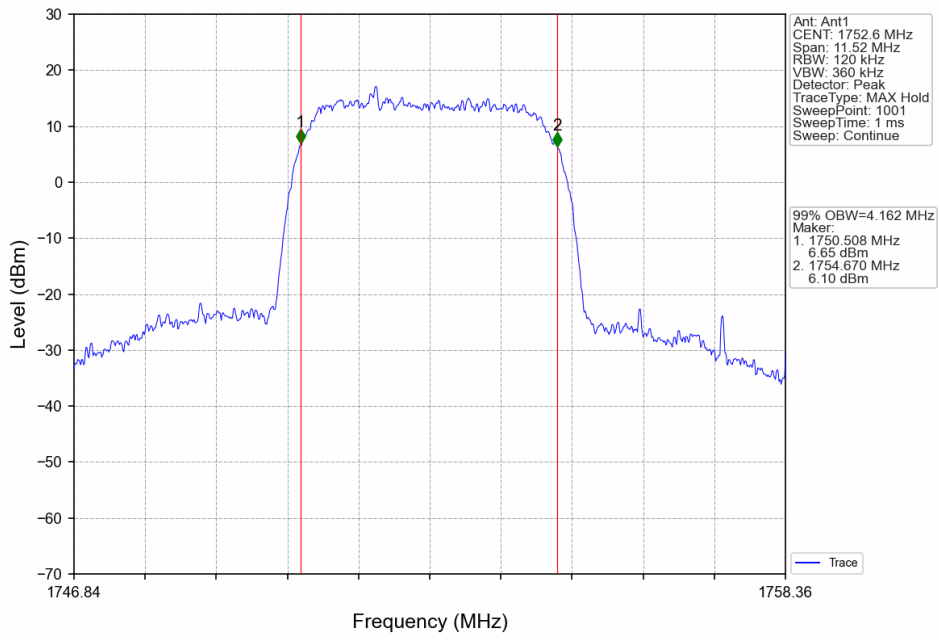
Band4\_RMC\_LCH\_1712.4MHz\_12.2kbps RMC\_NTNV



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



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

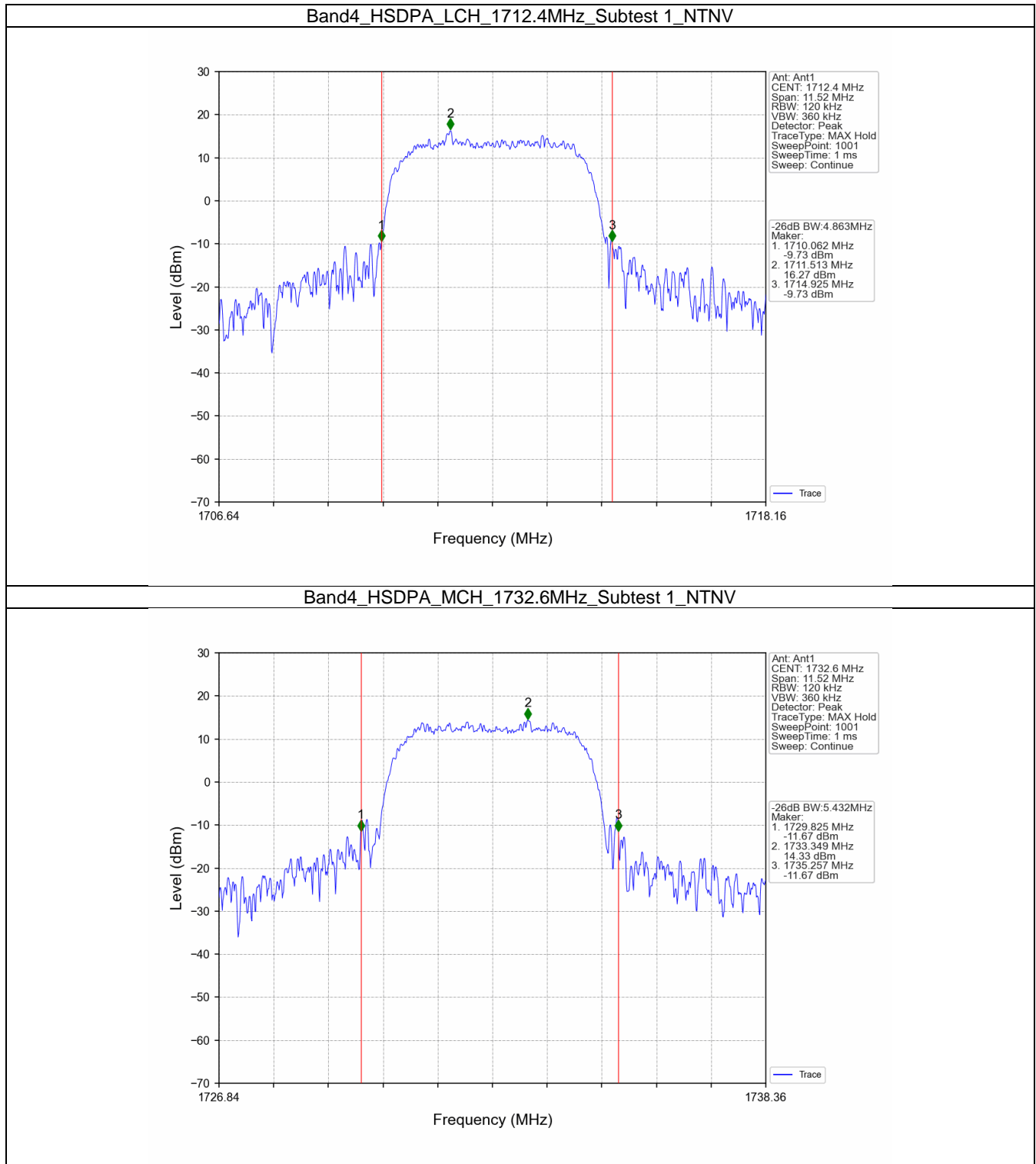


## 4.2 Band4\_XDB

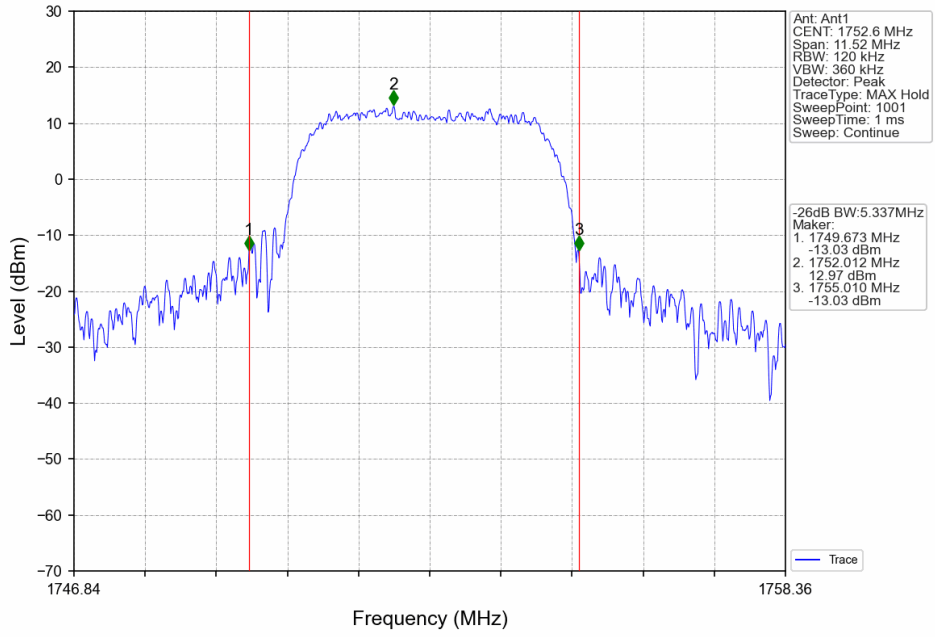
### 4.2.1 Test Result

Band: 4						
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	HSDPA	Subtest 1	1712.4	4.863	/	Pass
			1732.6	5.432	/	Pass
			1752.6	5.337	/	Pass
	HSUPA	Subtest 1	1712.4	6.044	/	Pass
			1732.6	5.328	/	Pass
			1752.6	5.351	/	Pass
	RMC	12.2kbps RMC	1712.4	4.751	/	Pass
			1732.6	4.724	/	Pass
			1752.6	4.715	/	Pass

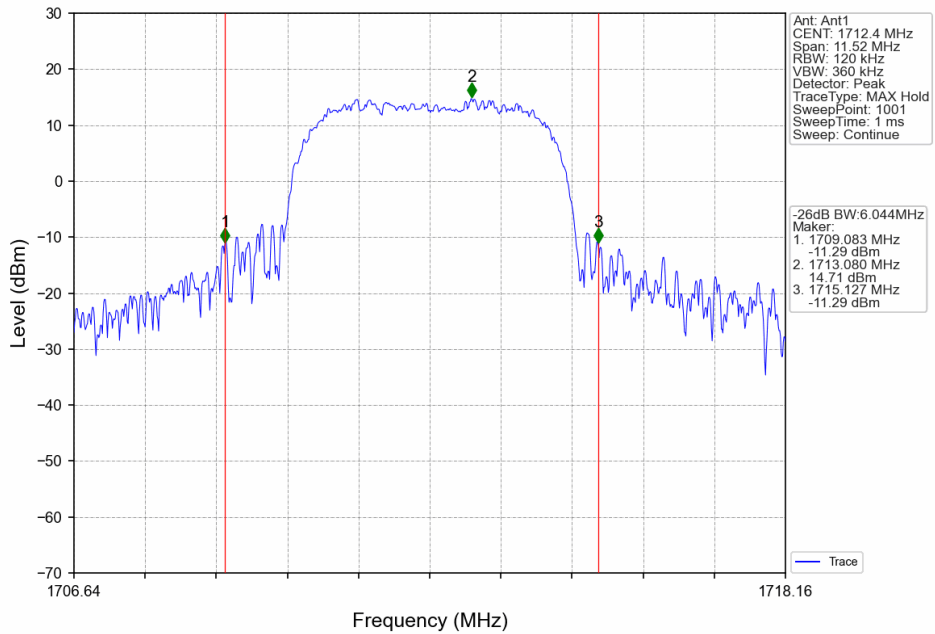
## 4.2.2 Test Graph



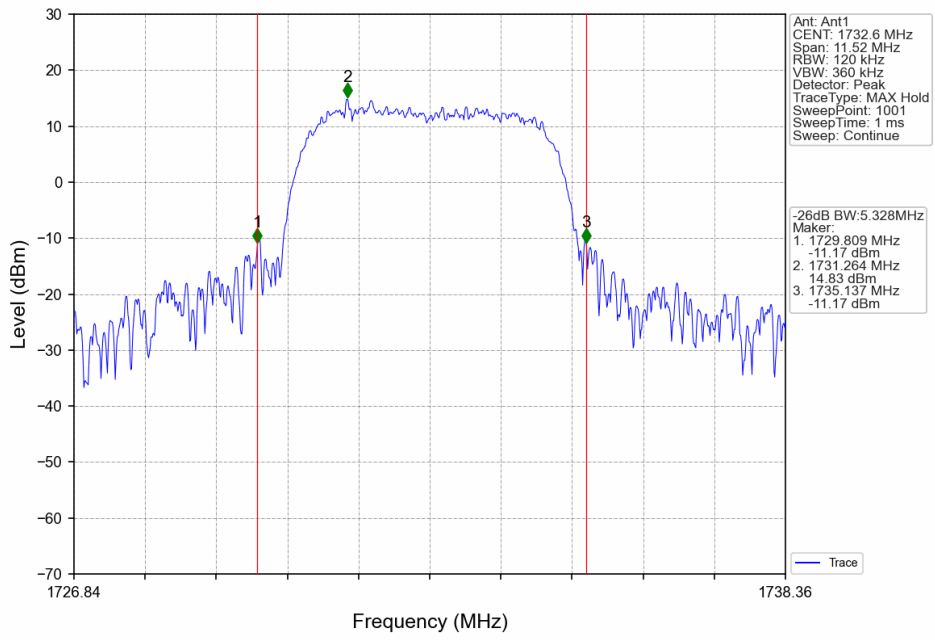
Band4\_HSDPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



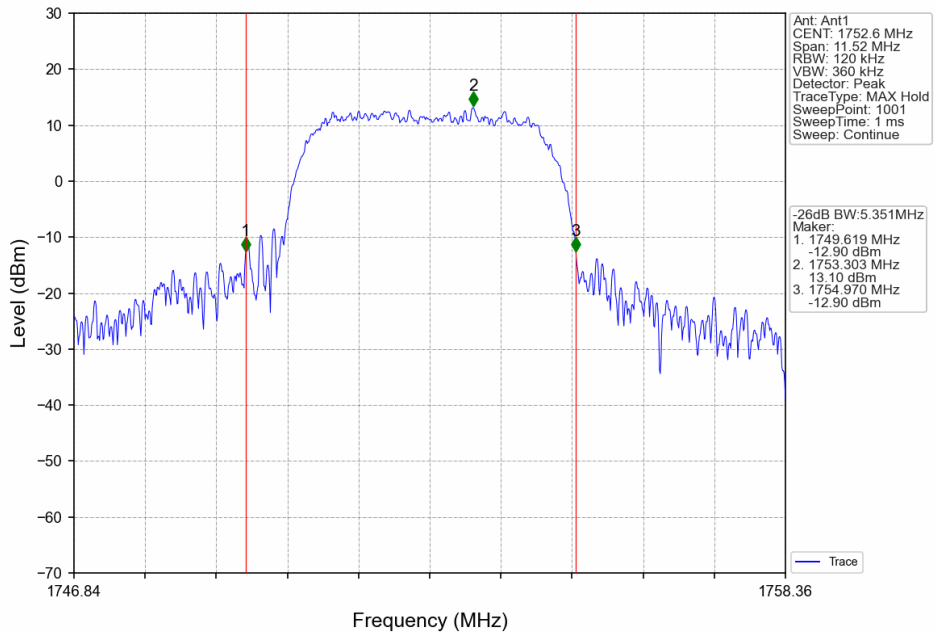
Band4\_HSUPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



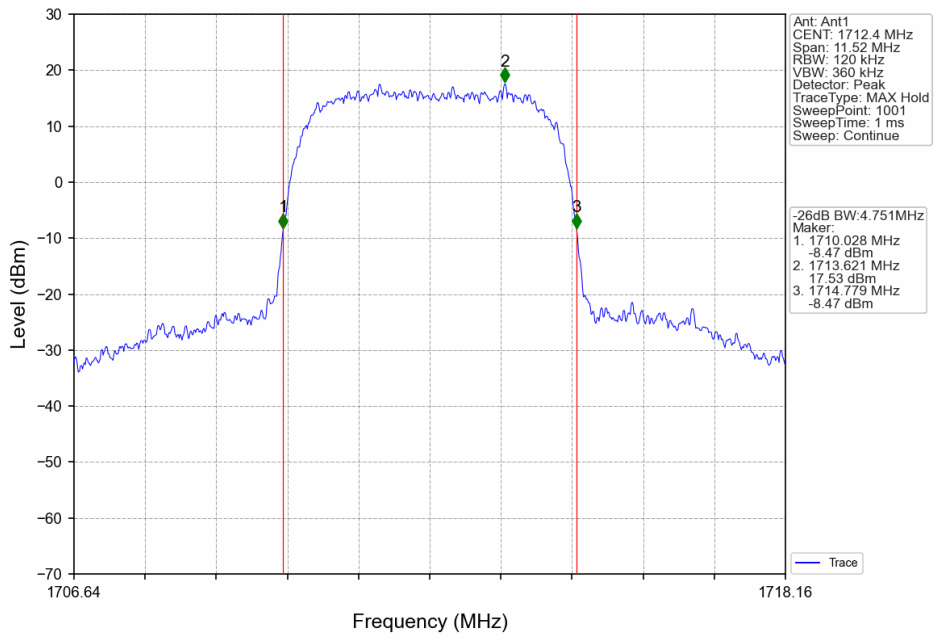
Band4\_HSUPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



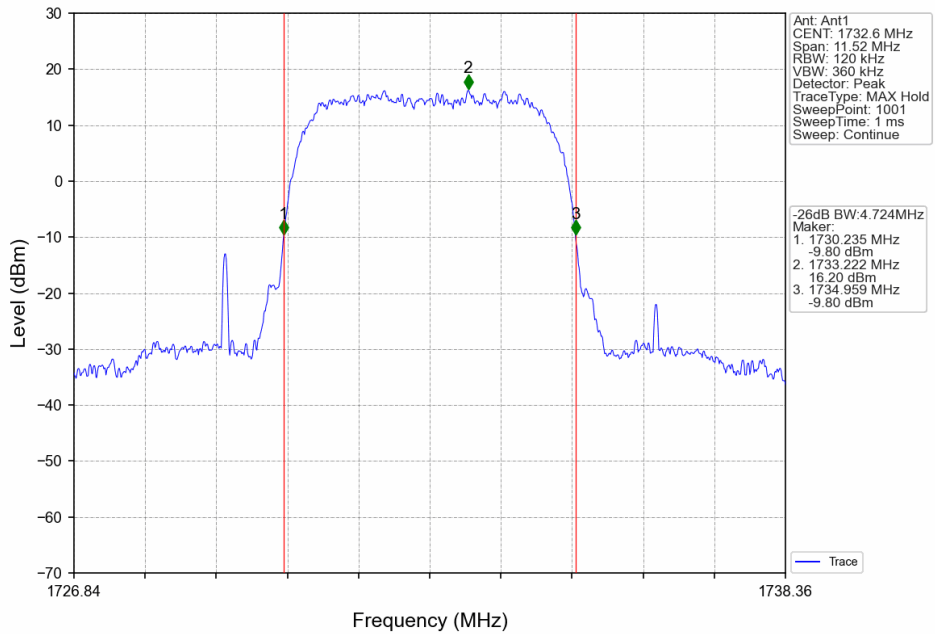
Band4\_HSUPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



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

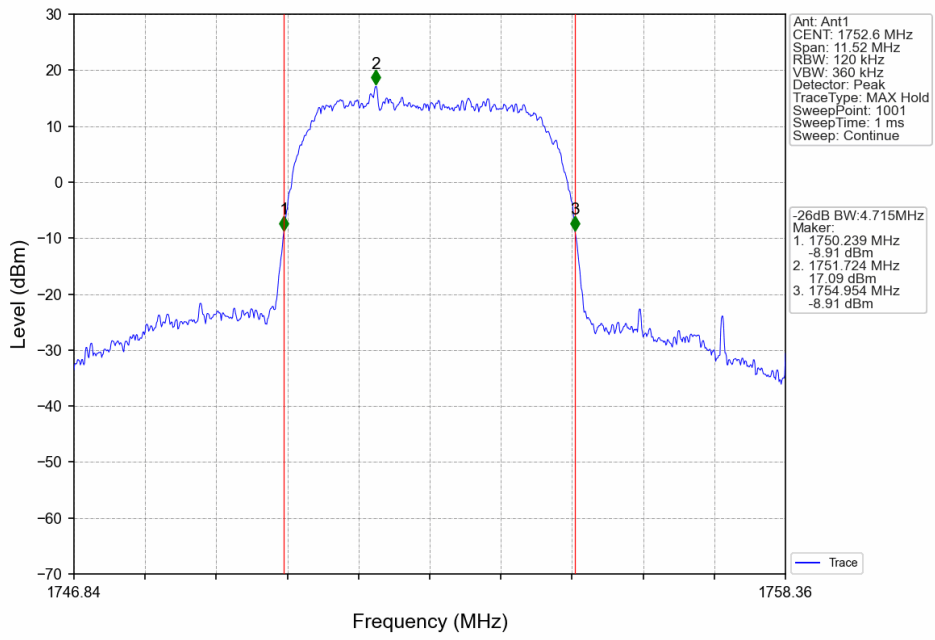


Band4\_RMC\_MCH\_1732.6MHz\_12.2kbps RMC\_NTNV





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



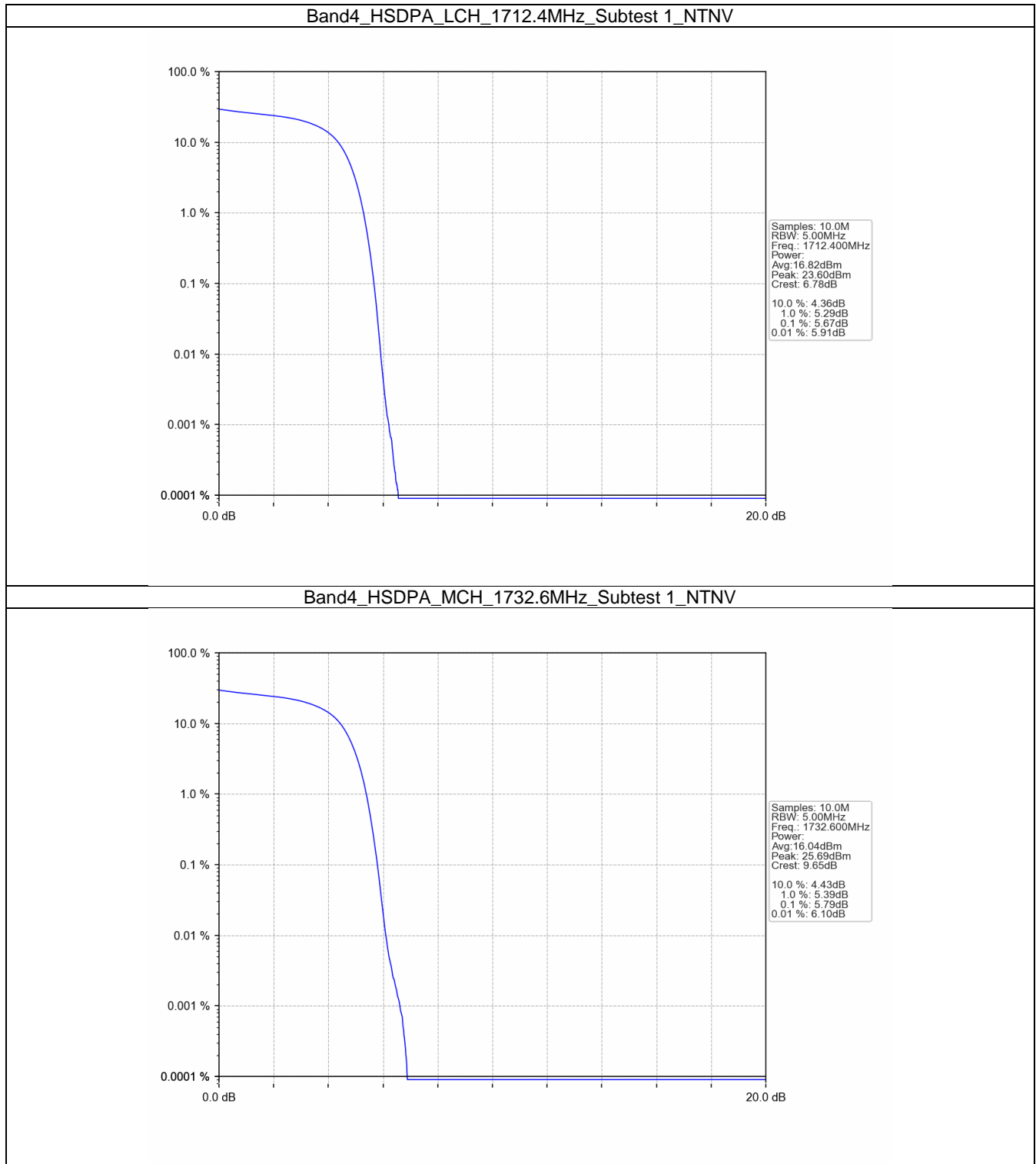
## 5. Peak-Average Ratio

### 5.1 Band4

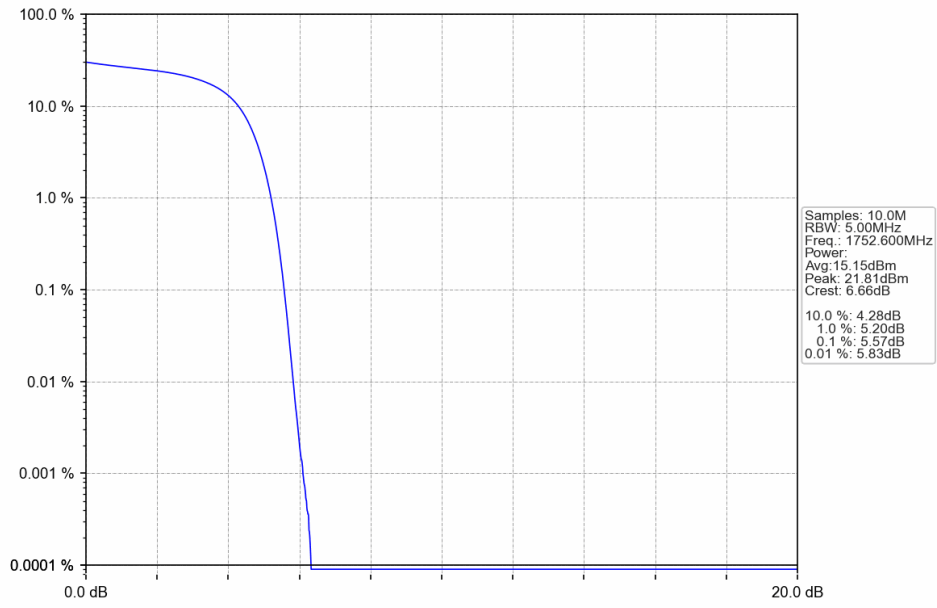
#### 5.1.1 Test Result

Band: 4						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	HSDPA	Subtest 1	1712.4	5.67	<=13	Pass
			1732.6	5.79	<=13	Pass
			1752.6	5.57	<=13	Pass
	HSUPA	Subtest 1	1712.4	5.63	<=13	Pass
			1732.6	5.86	<=13	Pass
			1752.6	5.58	<=13	Pass
	RMC	12.2kbps RMC	1712.4	2.59	<=13	Pass
			1732.6	3.01	<=13	Pass
			1752.6	2.53	<=13	Pass

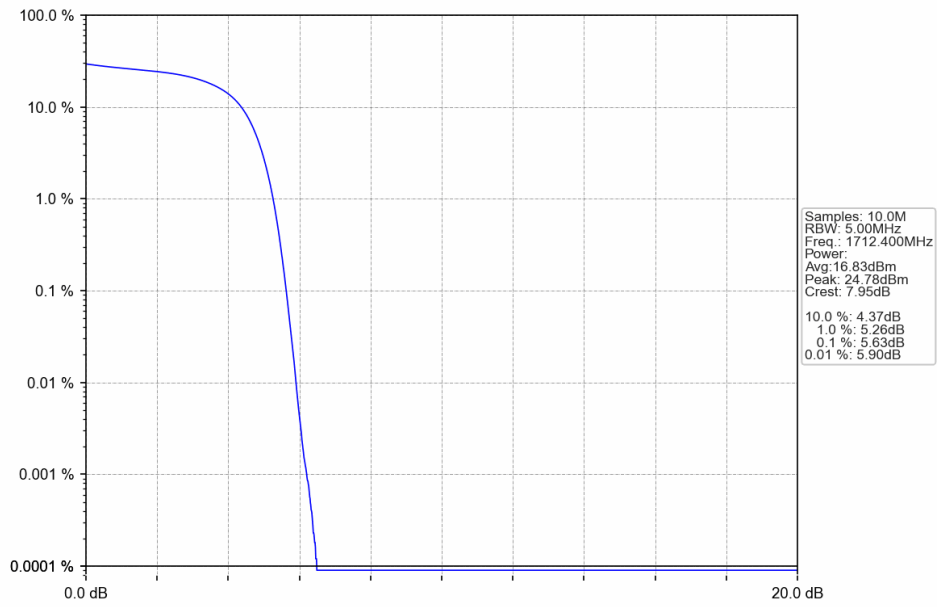
### 5.1.2 Test Graph



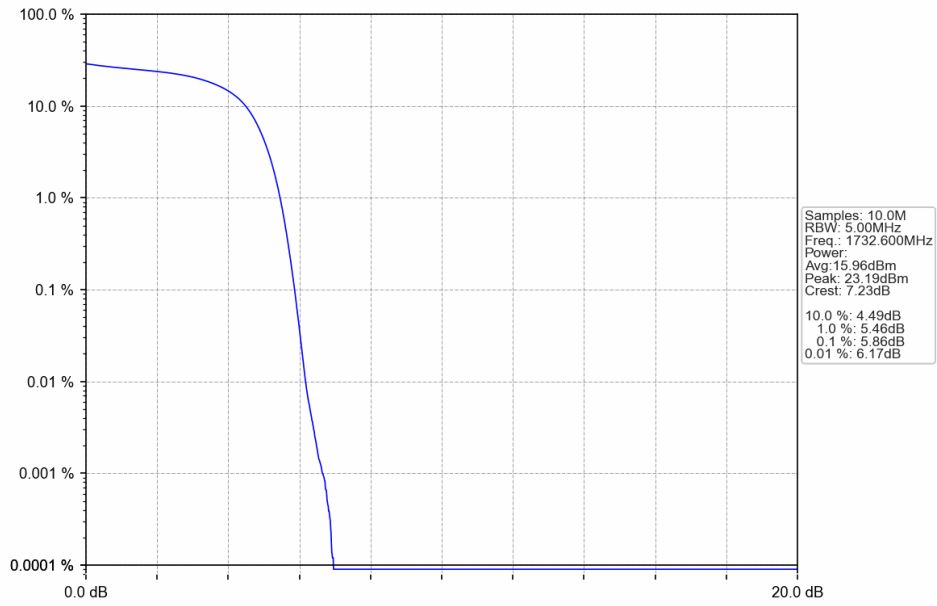
Band4\_HSDPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



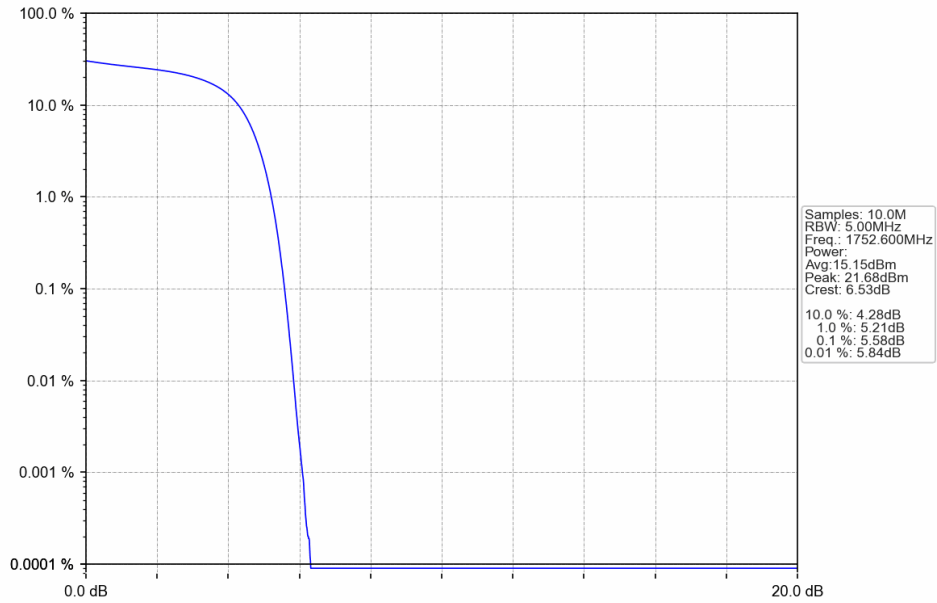
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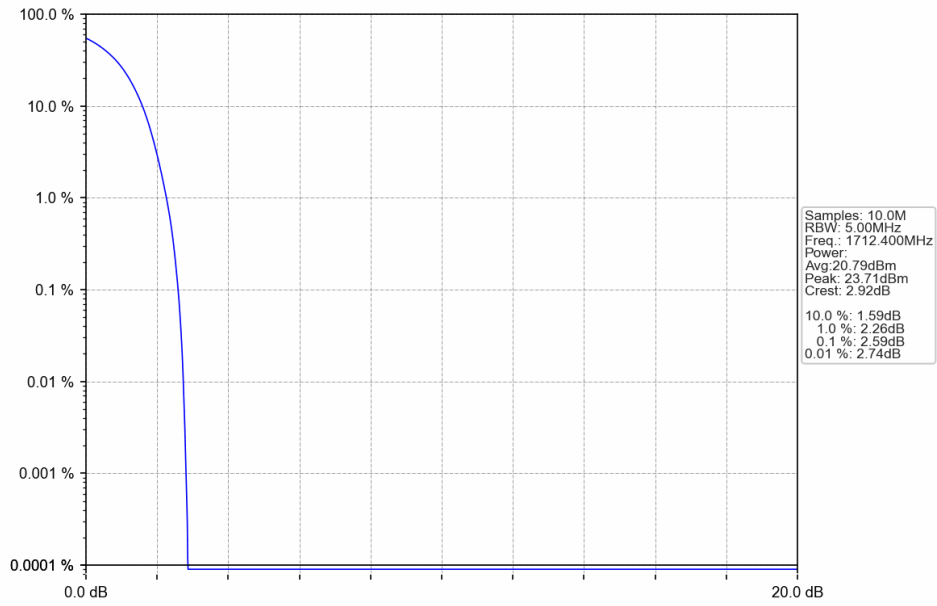
Band4\_HSUPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



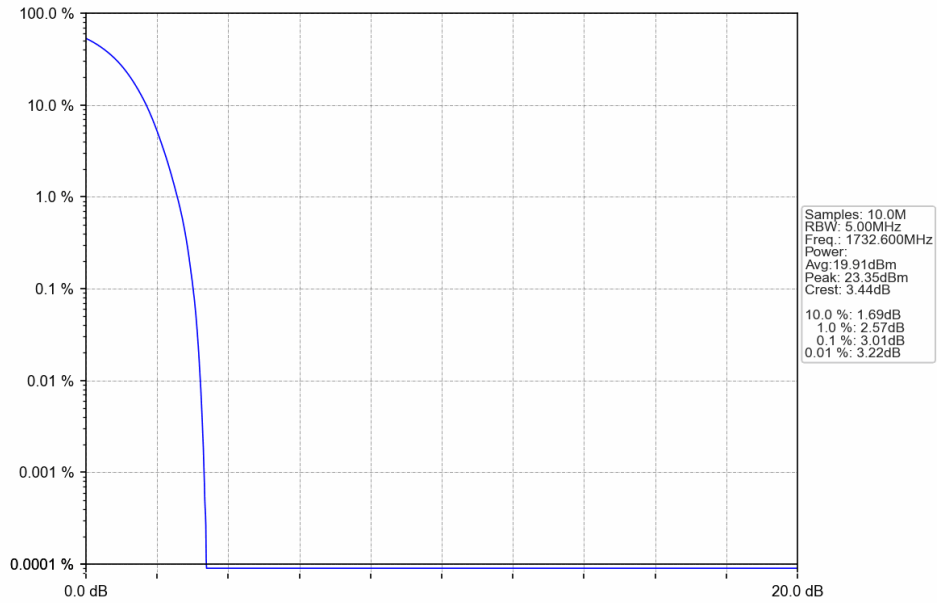
Band4\_HSUPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



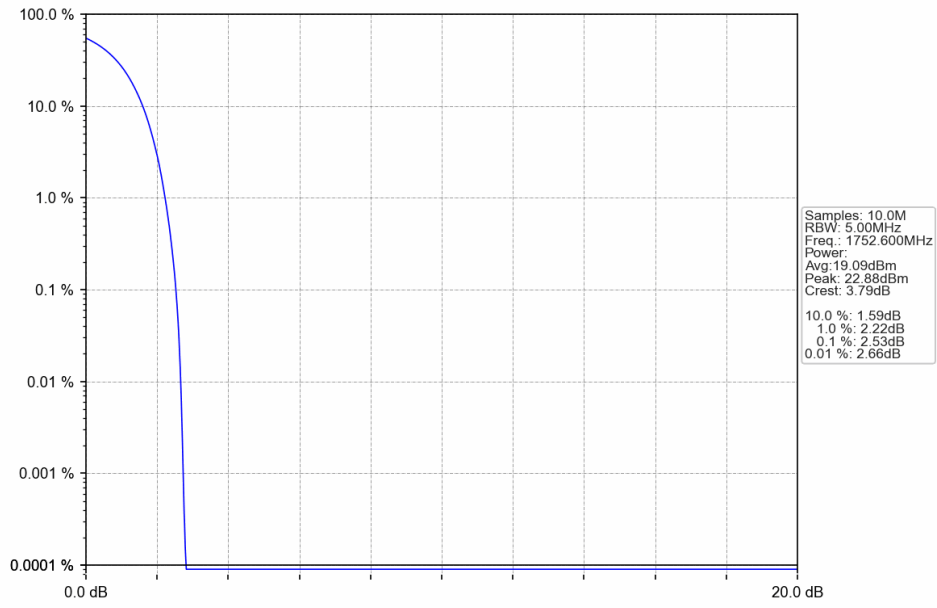
Band4\_RMC\_LCH\_1712.4MHz\_12.2kbps RMC\_NTNV



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



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



## 6. Spurious Emission

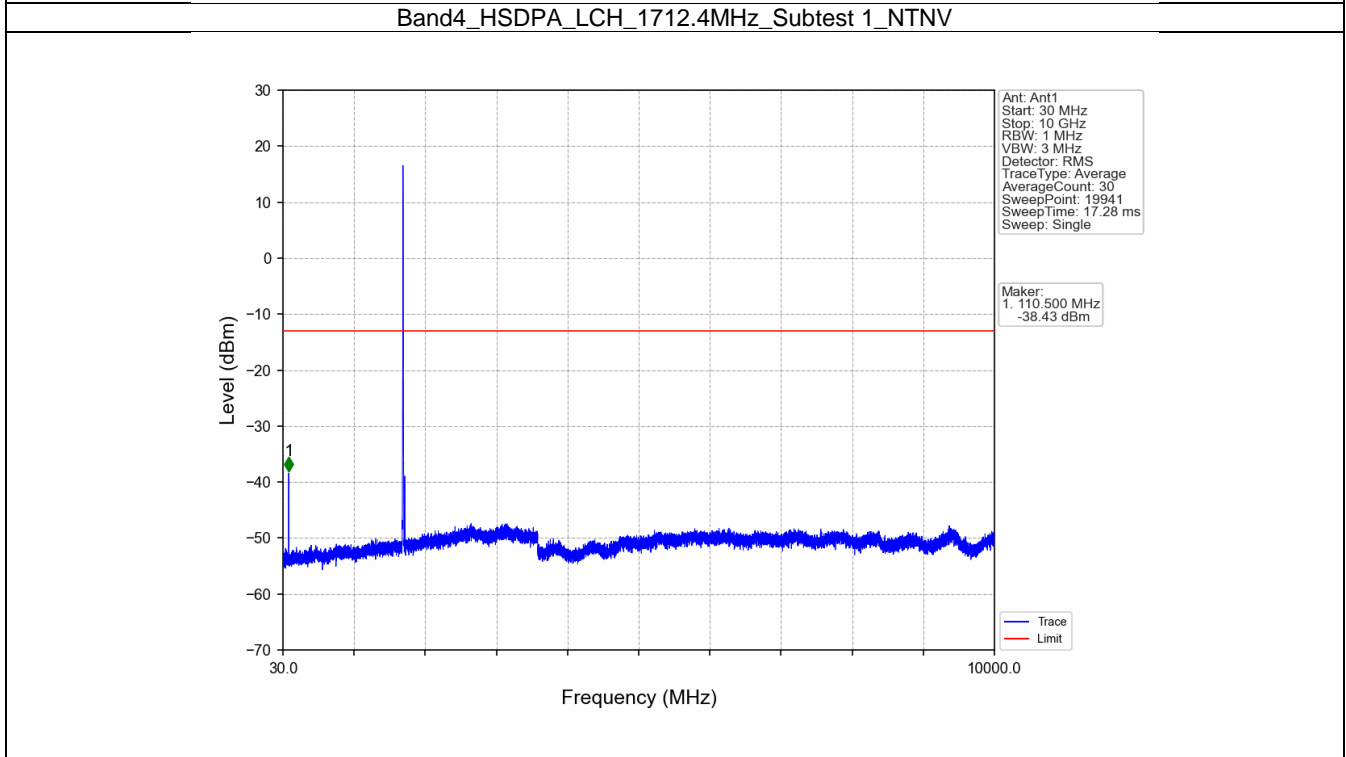
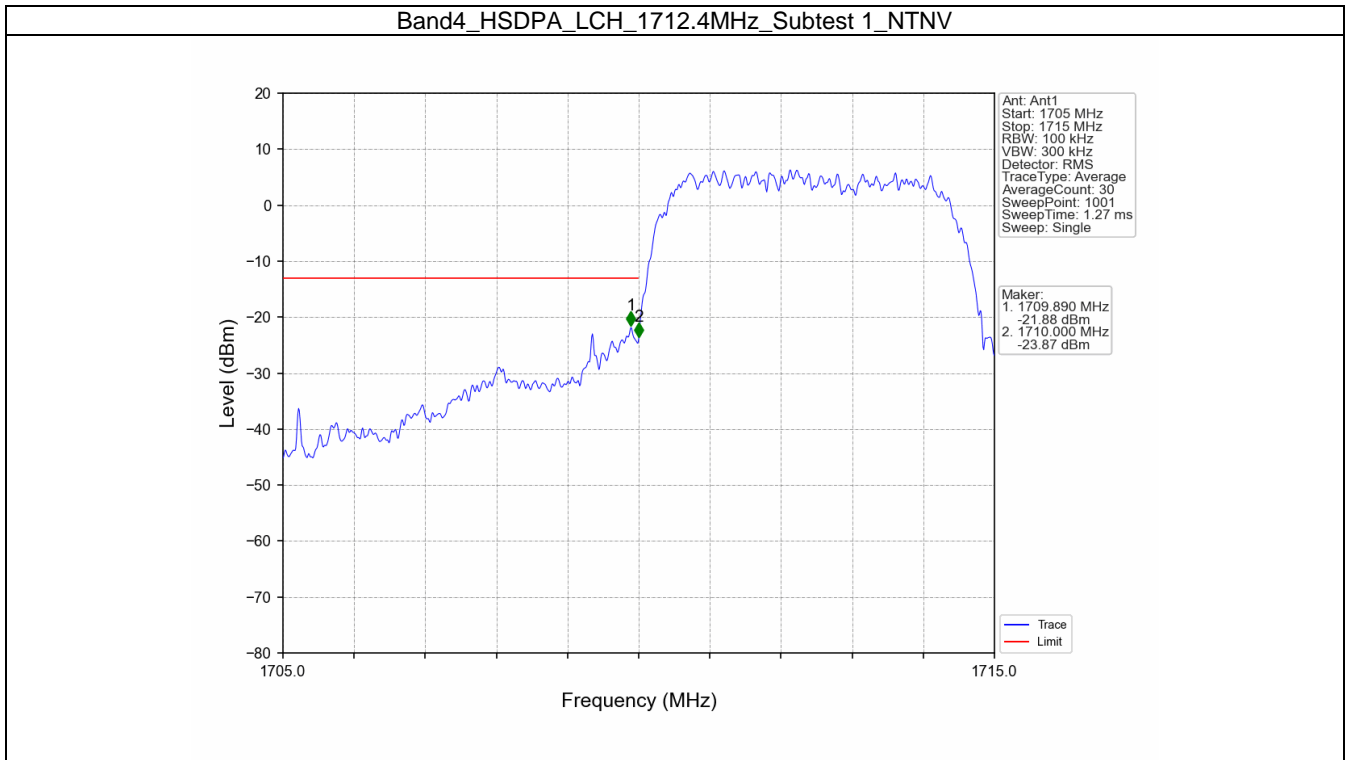
### 6.1 Band4

#### 6.1.1 Test Result

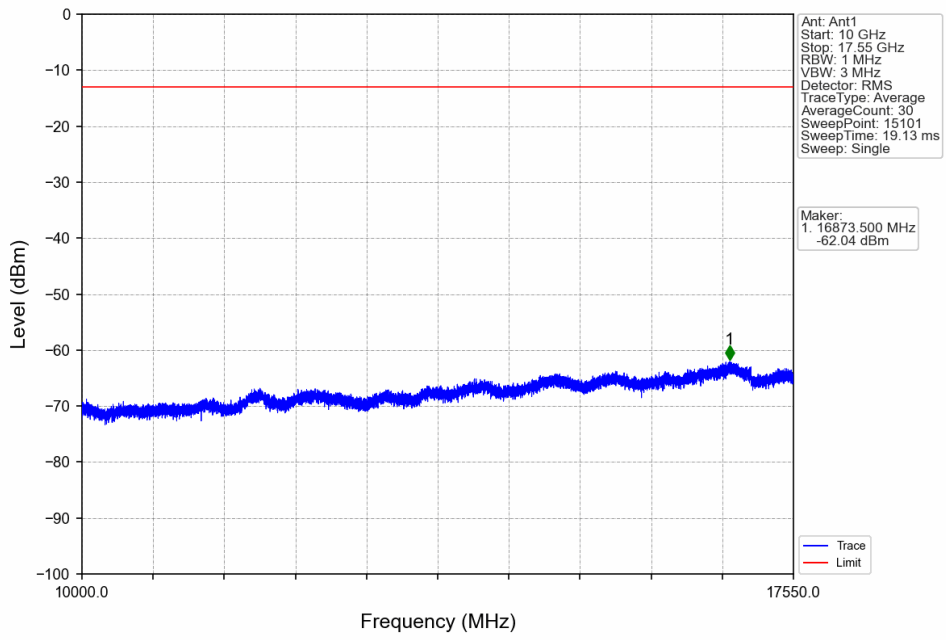
Band: 4						
ENV	Mode		Frequency (MHz)	Spurious Emission		Verdict
	Network	Subset		Result	Limit	
NTNV	HSDPA	Subtest 1	1712.4	Refer To Test Graph		Pass
			1732.6	Refer To Test Graph		Pass
			1752.6	Refer To Test Graph		Pass
	HSUPA	Subtest 1	1712.4	Refer To Test Graph		Pass
			1732.6	Refer To Test Graph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



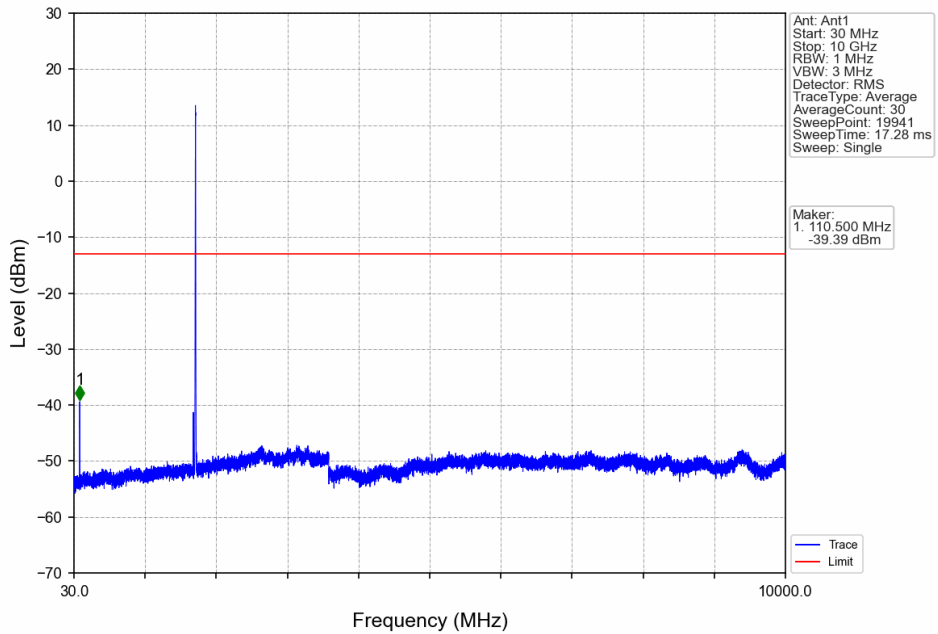
### 6.1.2 Test Graph



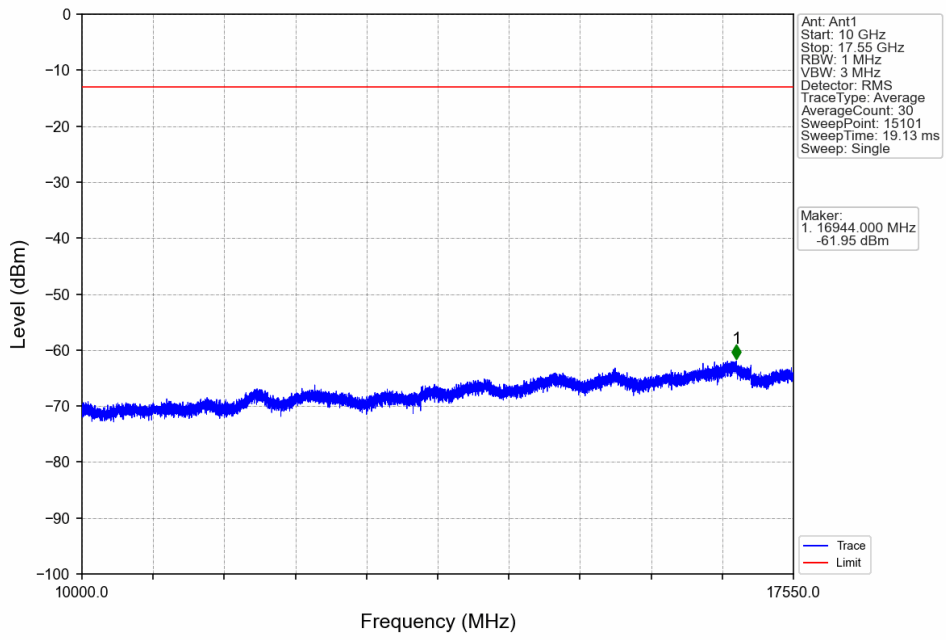
Band4\_HSDPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



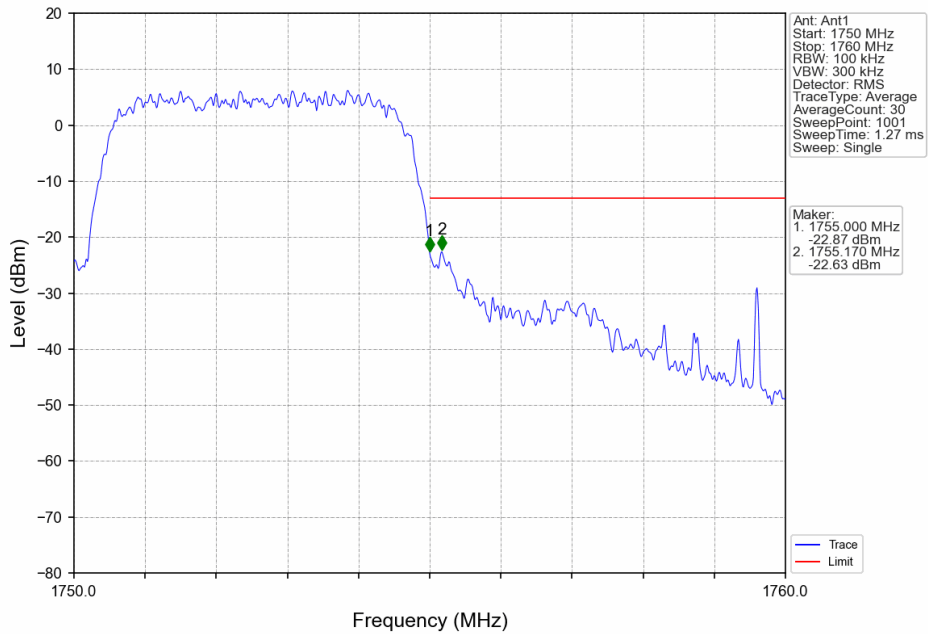
Band4\_HSDPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



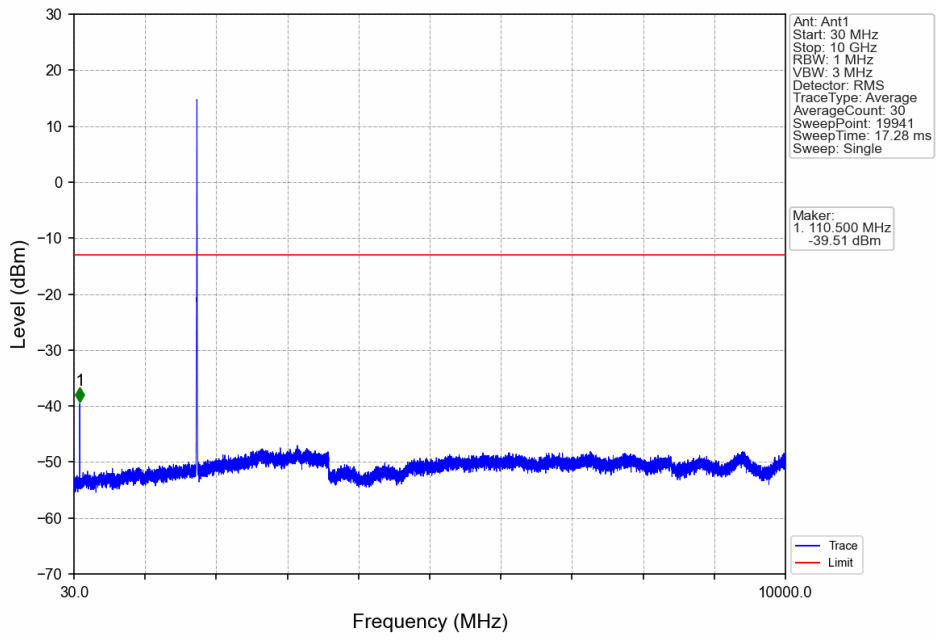
Band4\_HSDPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



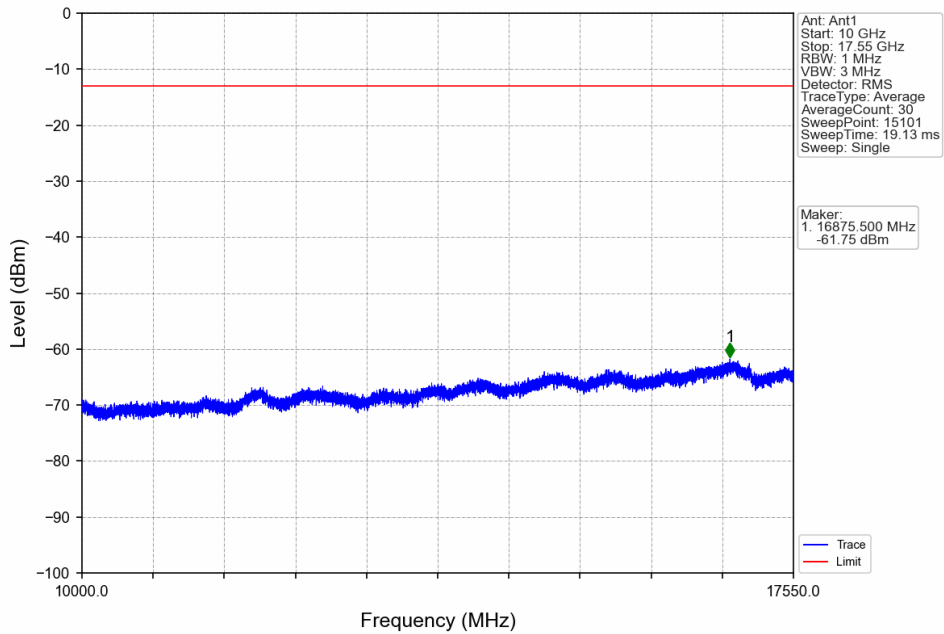
Band4\_HSDPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



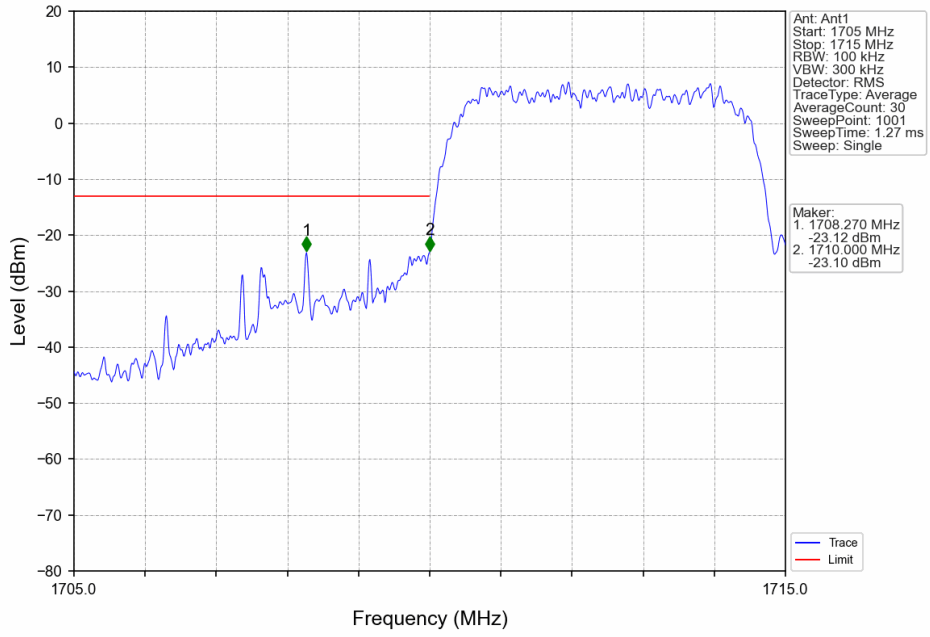
Band4\_HSDPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



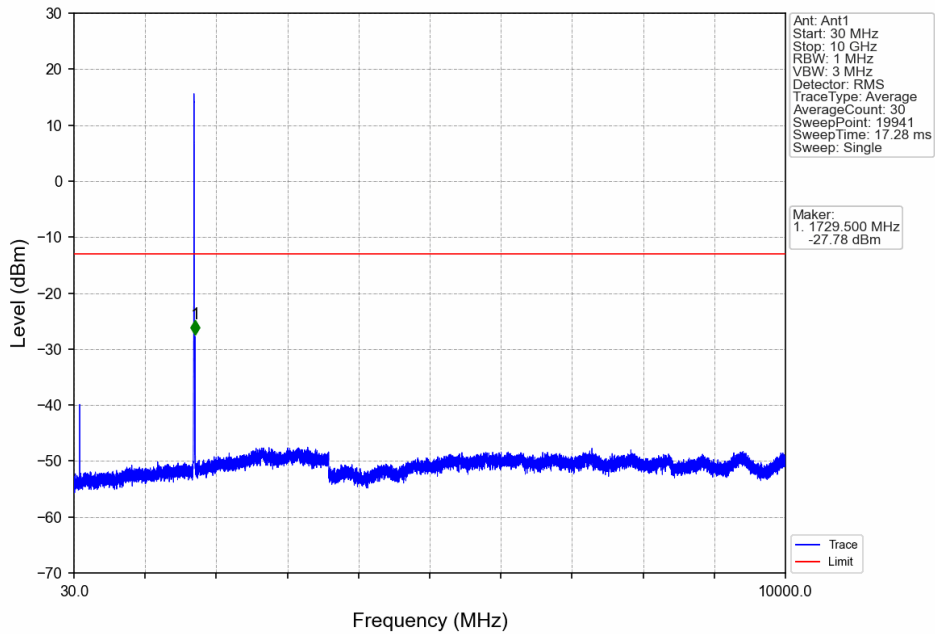
Band4\_HSDPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



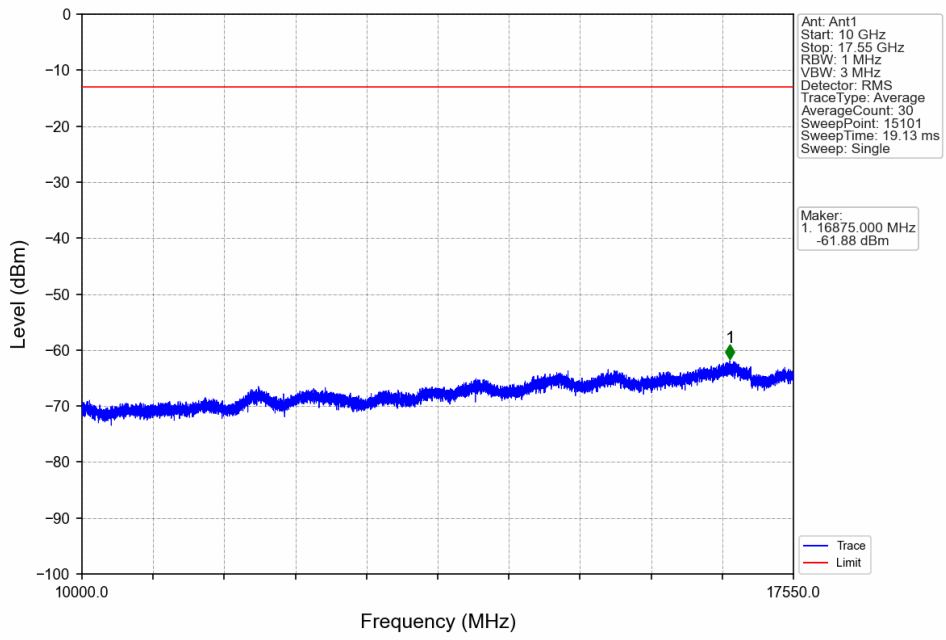
Band4\_HSUPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



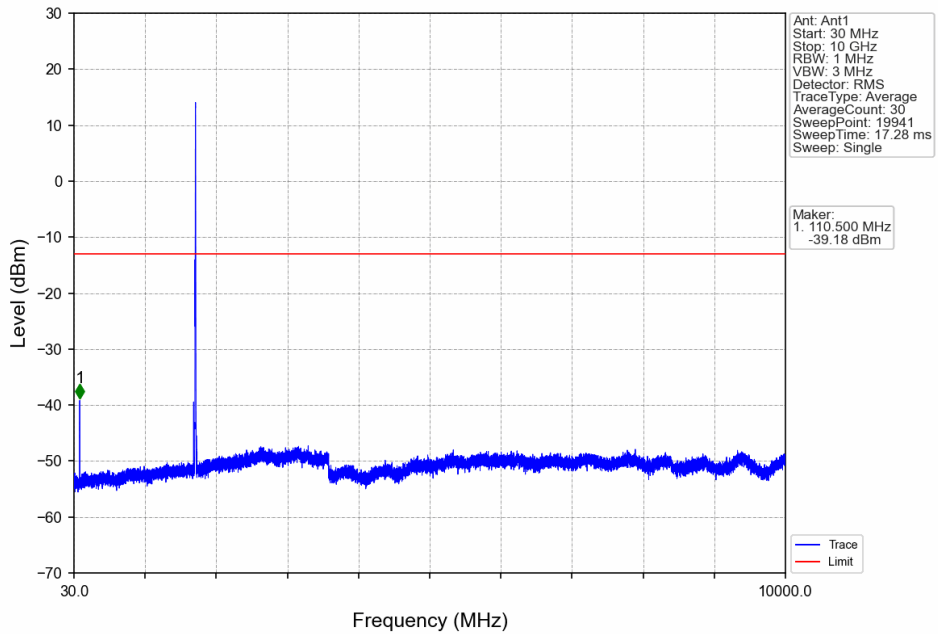
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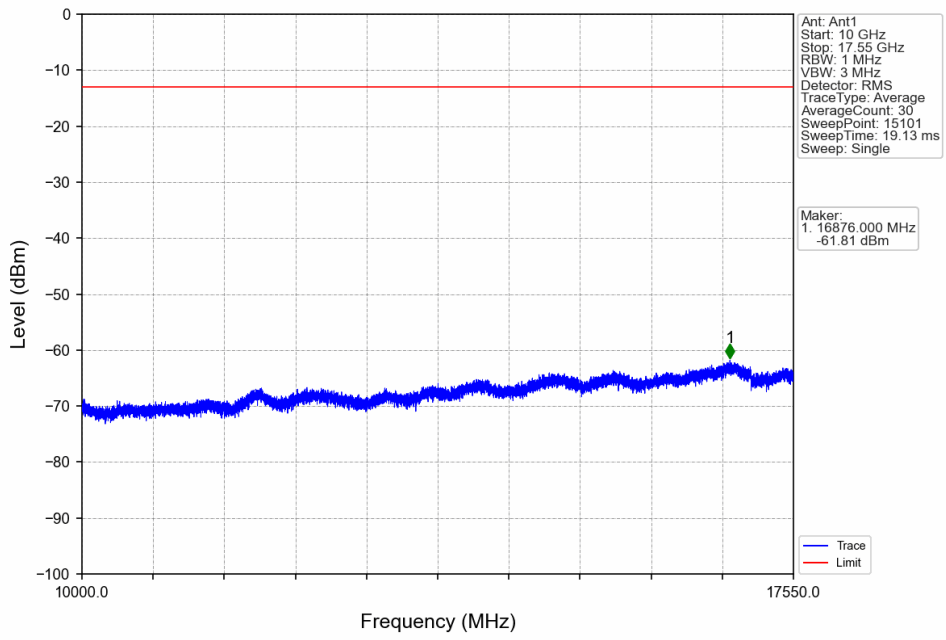
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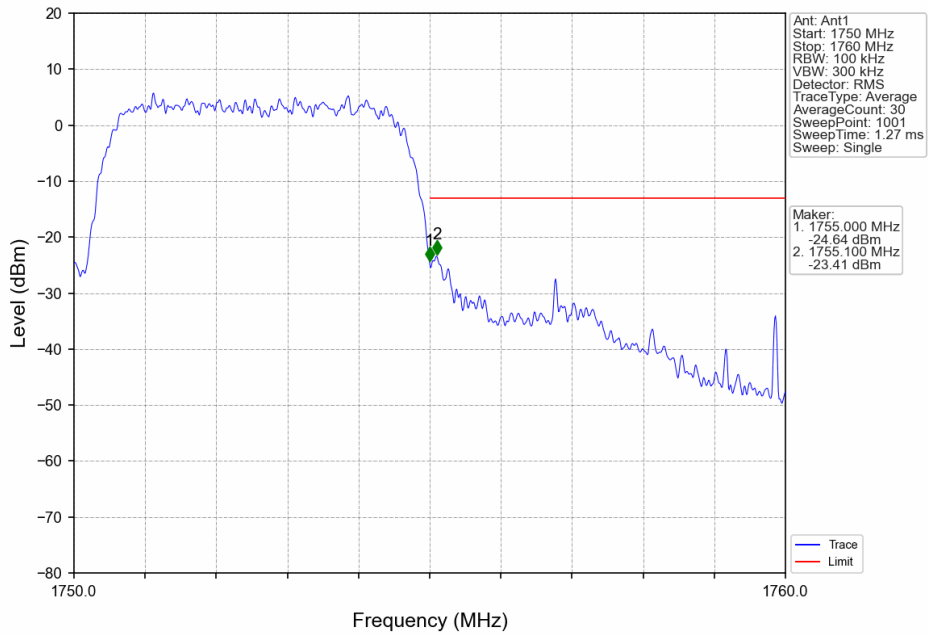
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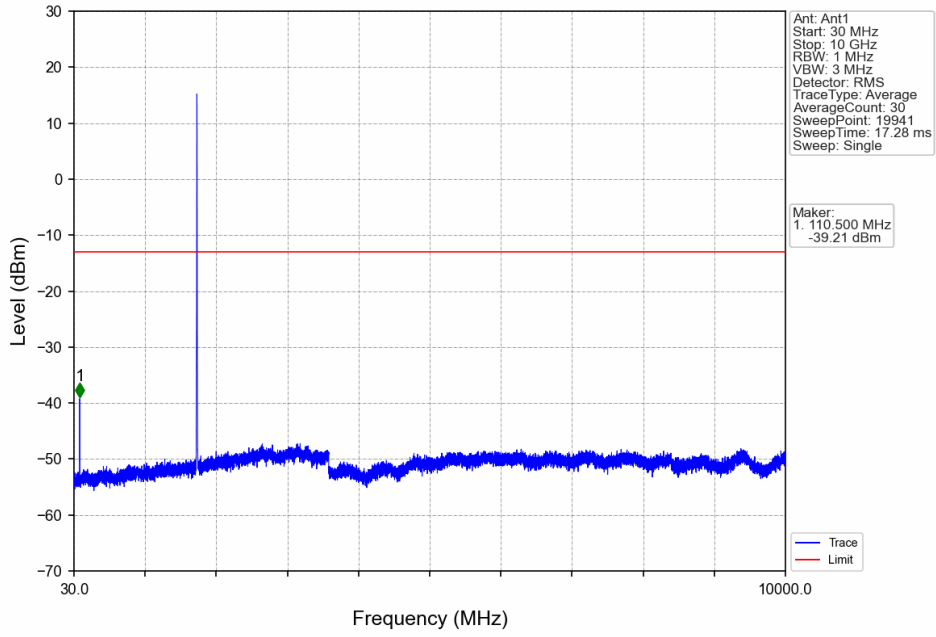
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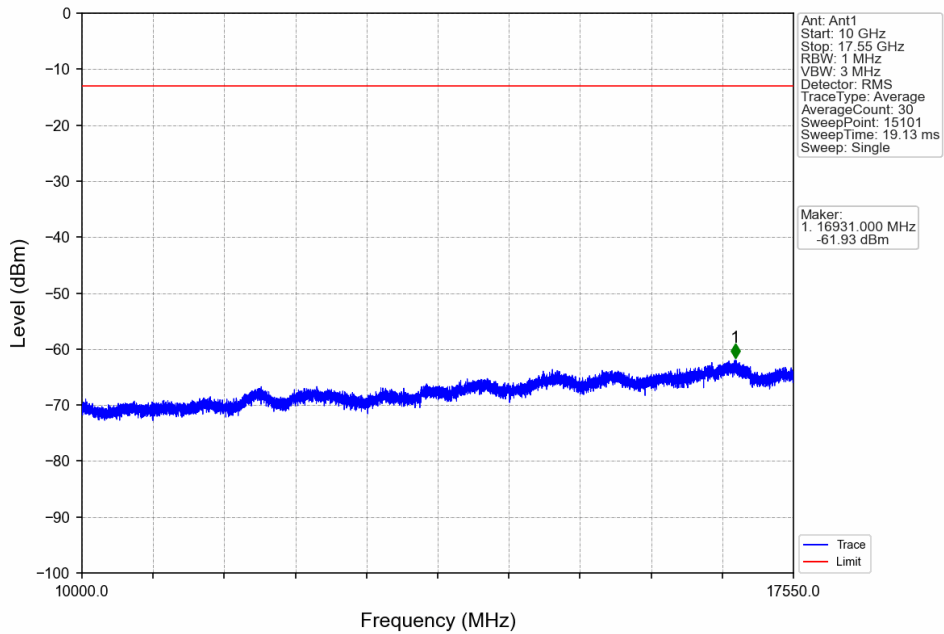
Band4\_HSUPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



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

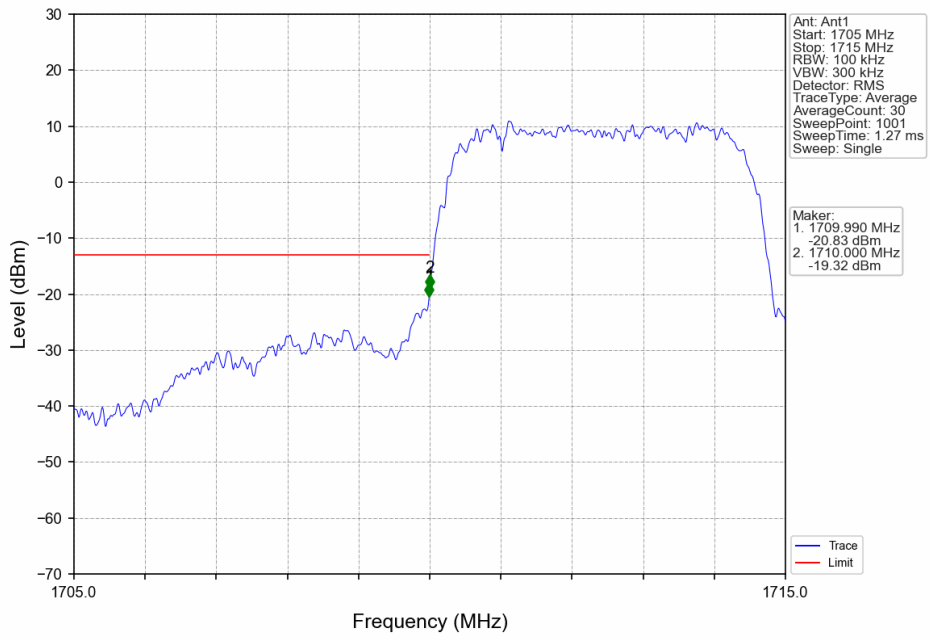


Band4\_HSUPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV

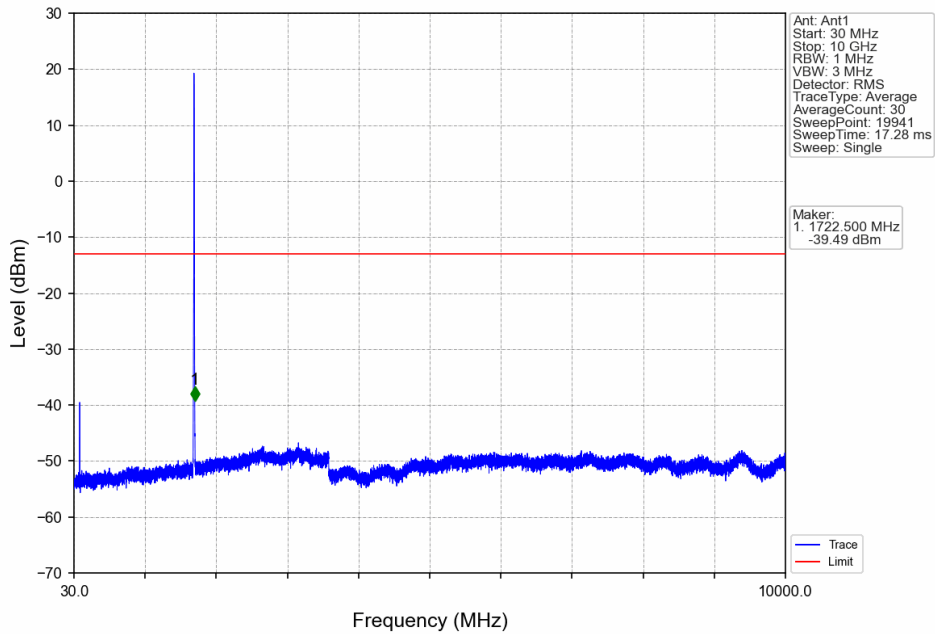




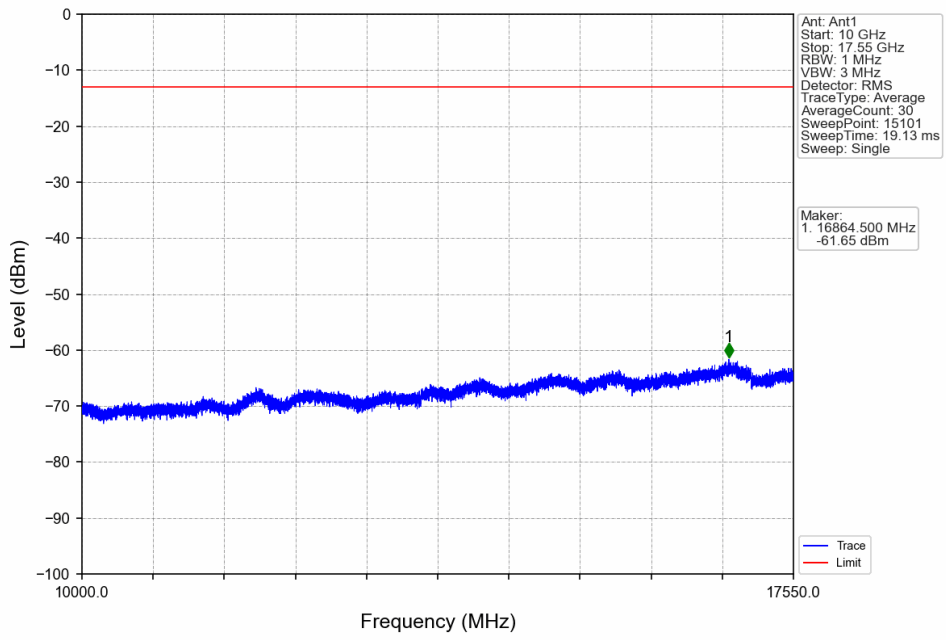
Band4\_RMC\_LCH\_1712.4MHz\_12.2kbps RMC\_NTNV



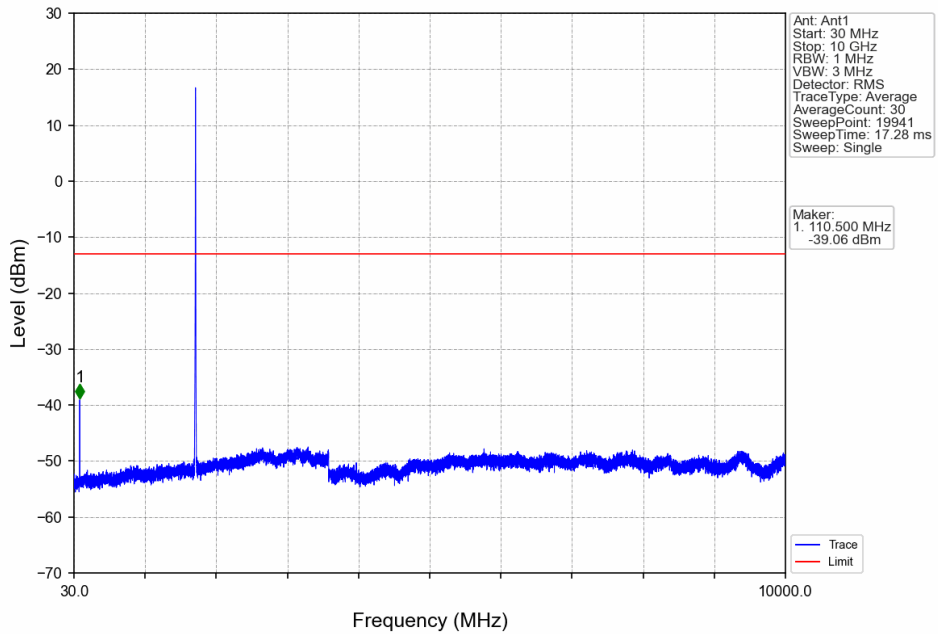
Band4\_RMC\_LCH\_1712.4MHz\_12.2kbps RMC\_NTNV



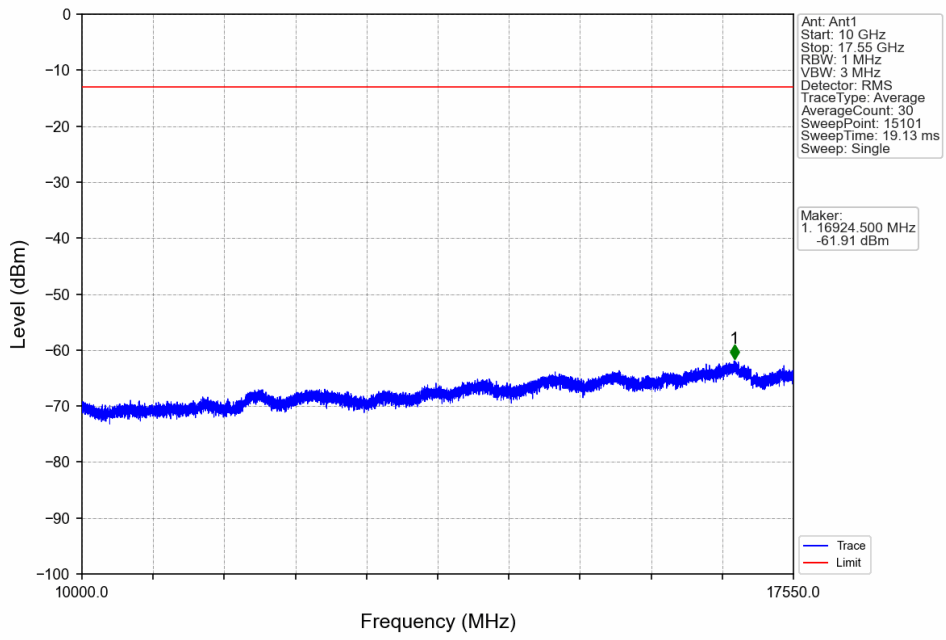
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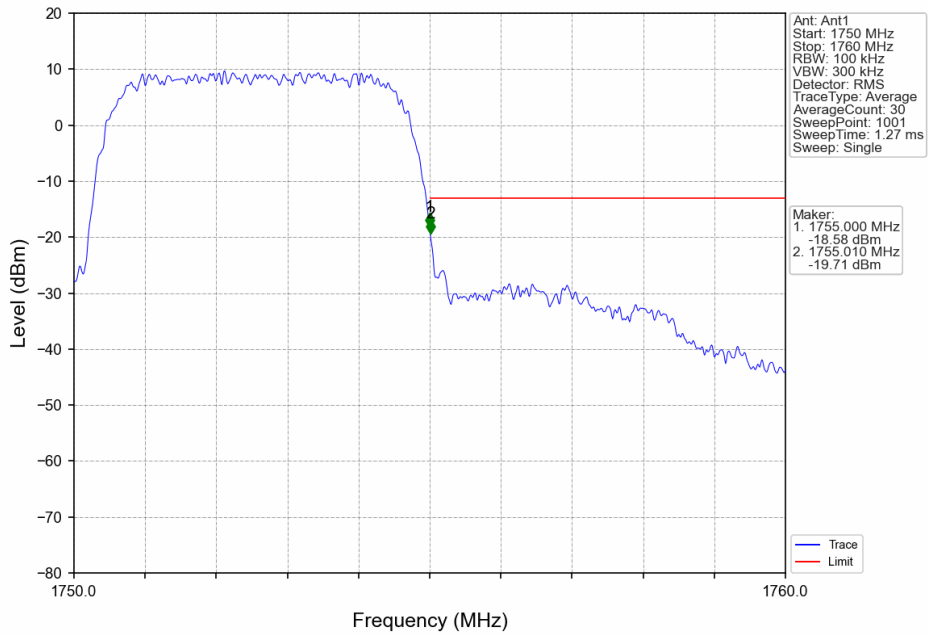
Band4\_RMC\_MCH\_1732.6MHz\_12.2kbps RMC\_NTNV



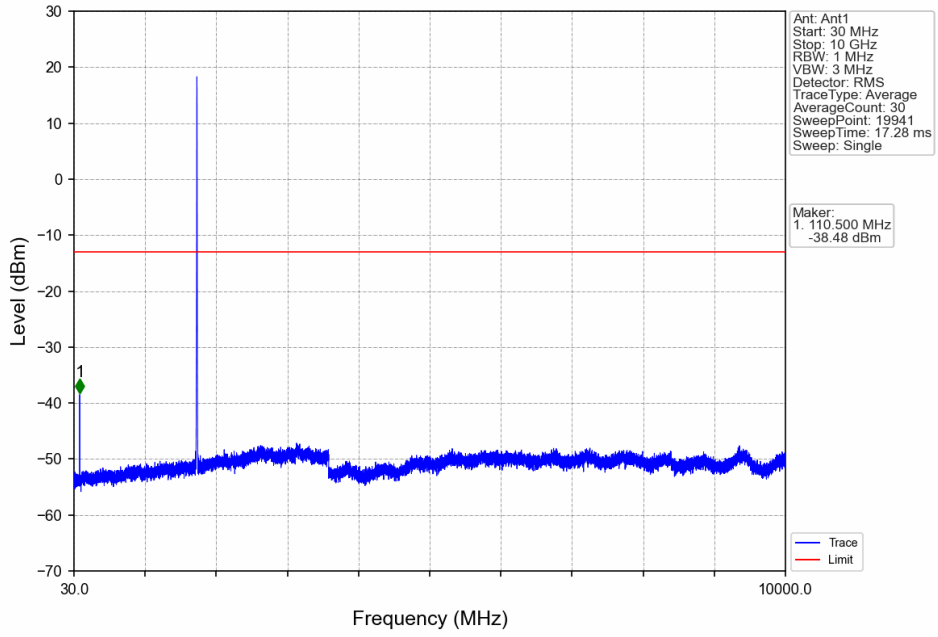
Band4\_RMC\_MCH\_1732.6MHz\_12.2kbps RMC\_NTNV



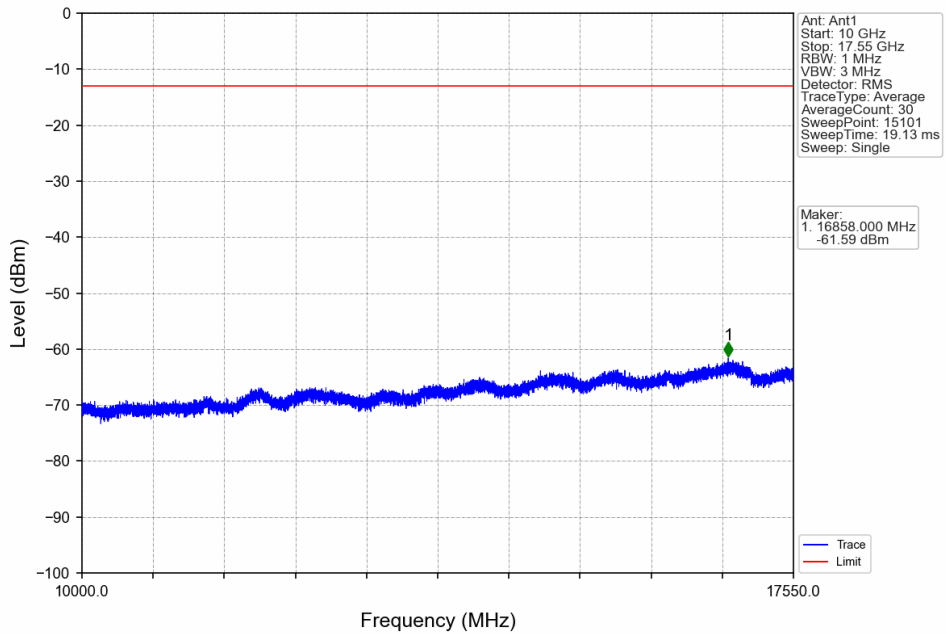
Band4\_RMC\_HCH\_1752.6MHz\_12.2kbps RMC\_NTNV



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



Band4\_RMC\_HCH\_1752.6MHz\_12.2kbps RMC\_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	0.1879	0.0037	ppm	4M20F9W	24E	22.74

### 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	0.2099	0.0037	ppm	4M20F9W	24E	23.22