

# 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	22.10	0.17	22.27	<=30	Pass	
			1732.6	22.09	0.17	22.26	<=30	Pass	
			1752.6	21.95	0.17	22.12	<=30	Pass	
	HSDPA	Subtest 1	1712.4	20.79	0.17	20.96	<=30	Pass	
		Subtest 2	1712.4	20.81	0.17	20.98	<=30	Pass	
		Subtest 3	1712.4	20.81	0.17	20.98	<=30	Pass	
		Subtest 4	1712.4	20.77	0.17	20.94	<=30	Pass	
		Subtest 1	1732.6	20.44	0.17	20.61	<=30	Pass	
		Subtest 2	1732.6	20.45	0.17	20.62	<=30	Pass	
		Subtest 3	1732.6	20.45	0.17	20.62	<=30	Pass	
		Subtest 4	1732.6	20.40	0.17	20.57	<=30	Pass	
		Subtest 1	1752.6	20.18	0.17	20.35	<=30	Pass	
		Subtest 2	1752.6	20.19	0.17	20.36	<=30	Pass	
		Subtest 3	1752.6	20.20	0.17	20.37	<=30	Pass	
		Subtest 4	1752.6	20.15	0.17	20.32	<=30	Pass	
		HSUPA	Subtest 1	1712.4	18.63	0.17	18.80	<=30	Pass
			Subtest 2	1712.4	18.84	0.17	19.01	<=30	Pass
	Subtest 3		1712.4	18.36	0.17	18.53	<=30	Pass	
	Subtest 4		1712.4	18.71	0.17	18.88	<=30	Pass	
	Subtest 5		1712.4	18.44	0.17	18.61	<=30	Pass	
	Subtest 1		1732.6	18.13	0.17	18.30	<=30	Pass	
	Subtest 2		1732.6	18.24	0.17	18.41	<=30	Pass	
	Subtest 3		1732.6	18.23	0.17	18.40	<=30	Pass	
	Subtest 4		1732.6	18.17	0.17	18.34	<=30	Pass	
	Subtest 5		1732.6	18.41	0.17	18.58	<=30	Pass	
	Subtest 1		1752.6	18.18	0.17	18.35	<=30	Pass	
	Subtest 2		1752.6	17.65	0.17	17.82	<=30	Pass	
	Subtest 3		1752.6	17.92	0.17	18.09	<=30	Pass	
	Subtest 4	1752.6	17.97	0.17	18.14	<=30	Pass		
	Subtest 5	1752.6	18.16	0.17	18.33	<=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	3.583	0.0021	-2.5 to 2.5	Pass
			3.85	5.250	0.0031	-2.5 to 2.5	Pass
			4.43	9.198	0.0054	-2.5 to 2.5	Pass
		-30	3.85	1.917	0.0011	-2.5 to 2.5	Pass
		-20	3.85	5.980	0.0035	-2.5 to 2.5	Pass

	1732.6	-10	3.85	-2.568	-0.0015	-2.5 to 2.5	Pass	
		0	3.85	5.465	0.0032	-2.5 to 2.5	Pass	
		10	3.85	-3.691	-0.0022	-2.5 to 2.5	Pass	
		30	3.85	2.124	0.0012	-2.5 to 2.5	Pass	
		40	3.85	-2.997	-0.0018	-2.5 to 2.5	Pass	
		50	3.85	-2.131	-0.0012	-2.5 to 2.5	Pass	
		20	3.27	-10.607	-0.0061	-2.5 to 2.5	Pass	
			3.85	5.450	0.0031	-2.5 to 2.5	Pass	
			4.43	12.667	0.0073	-2.5 to 2.5	Pass	
			-30	3.85	2.532	0.0015	-2.5 to 2.5	Pass
			-20	3.85	6.258	0.0036	-2.5 to 2.5	Pass
			-10	3.85	-2.511	-0.0014	-2.5 to 2.5	Pass
			0	3.85	2.117	0.0012	-2.5 to 2.5	Pass
			10	3.85	-2.182	-0.0013	-2.5 to 2.5	Pass
			30	3.85	-0.987	-0.0006	-2.5 to 2.5	Pass
	40		3.85	2.618	0.0015	-2.5 to 2.5	Pass	
	50	3.85	-0.265	-0.0002	-2.5 to 2.5	Pass		
	1752.6	20	3.27	5.851	0.0033	-2.5 to 2.5	Pass	
			3.85	-3.362	-0.0019	-2.5 to 2.5	Pass	
			4.43	-0.157	-0.0001	-2.5 to 2.5	Pass	
		-30	3.85	1.137	0.0006	-2.5 to 2.5	Pass	
		-20	3.85	3.161	0.0018	-2.5 to 2.5	Pass	
		-10	3.85	2.074	0.0012	-2.5 to 2.5	Pass	
		0	3.85	-2.668	-0.0015	-2.5 to 2.5	Pass	
		10	3.85	-1.709	-0.0010	-2.5 to 2.5	Pass	
		30	3.85	2.747	0.0016	-2.5 to 2.5	Pass	
		40	3.85	-5.915	-0.0034	-2.5 to 2.5	Pass	
	50	3.85	-3.455	-0.0020	-2.5 to 2.5	Pass		
	HSDPA	1712.4	20	3.27	15.056	0.0088	-2.5 to 2.5	Pass
				3.85	18.404	0.0107	-2.5 to 2.5	Pass
4.43				18.883	0.0110	-2.5 to 2.5	Pass	
-30			3.85	18.389	0.0107	-2.5 to 2.5	Pass	
-20			3.85	16.265	0.0095	-2.5 to 2.5	Pass	
-10			3.85	14.441	0.0084	-2.5 to 2.5	Pass	
0			3.85	18.296	0.0107	-2.5 to 2.5	Pass	
10			3.85	15.757	0.0092	-2.5 to 2.5	Pass	
30			3.85	13.618	0.0080	-2.5 to 2.5	Pass	
40			3.85	14.033	0.0082	-2.5 to 2.5	Pass	
50		3.85	15.907	0.0093	-2.5 to 2.5	Pass		
1732.6		20	3.27	7.217	0.0042	-2.5 to 2.5	Pass	
			3.85	8.733	0.0050	-2.5 to 2.5	Pass	
			4.43	5.636	0.0033	-2.5 to 2.5	Pass	
		-30	3.85	5.701	0.0033	-2.5 to 2.5	Pass	
		-20	3.85	5.901	0.0034	-2.5 to 2.5	Pass	
		-10	3.85	4.506	0.0026	-2.5 to 2.5	Pass	
		0	3.85	6.144	0.0035	-2.5 to 2.5	Pass	
		10	3.85	3.068	0.0018	-2.5 to 2.5	Pass	
		30	3.85	6.731	0.0039	-2.5 to 2.5	Pass	
		40	3.85	10.028	0.0058	-2.5 to 2.5	Pass	
50		3.85	8.261	0.0048	-2.5 to 2.5	Pass		
1752.6		20	3.27	15.564	0.0089	-2.5 to 2.5	Pass	
			3.85	13.182	0.0075	-2.5 to 2.5	Pass	
			4.43	11.165	0.0064	-2.5 to 2.5	Pass	
		-30	3.85	10.164	0.0058	-2.5 to 2.5	Pass	
		-20	3.85	11.809	0.0067	-2.5 to 2.5	Pass	
		-10	3.85	10.493	0.0060	-2.5 to 2.5	Pass	
		0	3.85	8.748	0.0050	-2.5 to 2.5	Pass	
		10	3.85	8.805	0.0050	-2.5 to 2.5	Pass	
	30	3.85	11.759	0.0067	-2.5 to 2.5	Pass		

		40	3.85	10.021	0.0057	-2.5 to 2.5	Pass
		50	3.85	12.546	0.0072	-2.5 to 2.5	Pass
HSUPA	1712.4	20	3.27	-4.041	-0.0024	-2.5 to 2.5	Pass
			3.85	-10.943	-0.0064	-2.5 to 2.5	Pass
			4.43	-13.475	-0.0079	-2.5 to 2.5	Pass
		-30	3.85	-13.168	-0.0077	-2.5 to 2.5	Pass
		-20	3.85	-9.634	-0.0056	-2.5 to 2.5	Pass
		-10	3.85	-4.978	-0.0029	-2.5 to 2.5	Pass
		0	3.85	-1.874	-0.0011	-2.5 to 2.5	Pass
		10	3.85	-1.023	-0.0006	-2.5 to 2.5	Pass
		30	3.85	-8.605	-0.0050	-2.5 to 2.5	Pass
		40	3.85	-7.882	-0.0046	-2.5 to 2.5	Pass
	50	3.85	-12.231	-0.0071	-2.5 to 2.5	Pass	
	1732.6	20	3.27	-18.497	-0.0107	-2.5 to 2.5	Pass
			3.85	-19.534	-0.0113	-2.5 to 2.5	Pass
			4.43	-19.734	-0.0114	-2.5 to 2.5	Pass
		-30	3.85	-20.049	-0.0116	-2.5 to 2.5	Pass
		-20	3.85	-20.249	-0.0117	-2.5 to 2.5	Pass
		-10	3.85	-4.263	-0.0025	-2.5 to 2.5	Pass
		0	3.85	-4.513	-0.0026	-2.5 to 2.5	Pass
		10	3.85	-3.254	-0.0019	-2.5 to 2.5	Pass
		30	3.85	-1.495	-0.0009	-2.5 to 2.5	Pass
		40	3.85	-2.639	-0.0015	-2.5 to 2.5	Pass
	50	3.85	-1.037	-0.0006	-2.5 to 2.5	Pass	
	1752.6	20	3.27	-15.821	-0.0090	-2.5 to 2.5	Pass
			3.85	-20.270	-0.0116	-2.5 to 2.5	Pass
			4.43	-9.148	-0.0052	-2.5 to 2.5	Pass
		-30	3.85	-9.584	-0.0055	-2.5 to 2.5	Pass
		-20	3.85	-7.567	-0.0043	-2.5 to 2.5	Pass
		-10	3.85	-9.105	-0.0052	-2.5 to 2.5	Pass
		0	3.85	-11.287	-0.0064	-2.5 to 2.5	Pass
		10	3.85	-10.886	-0.0062	-2.5 to 2.5	Pass
30		3.85	-9.527	-0.0054	-2.5 to 2.5	Pass	
40		3.85	-14.906	-0.0085	-2.5 to 2.5	Pass	
50	3.85	-16.844	-0.0096	-2.5 to 2.5	Pass		

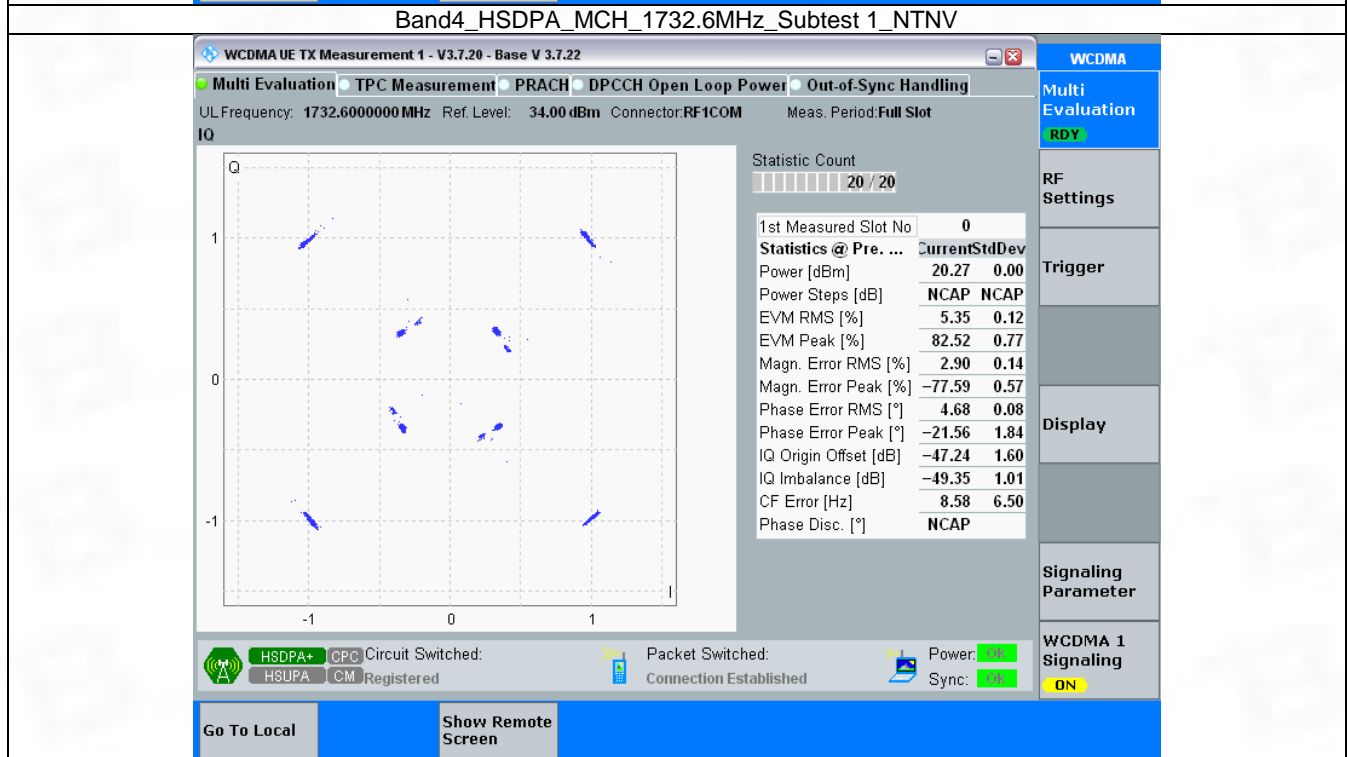
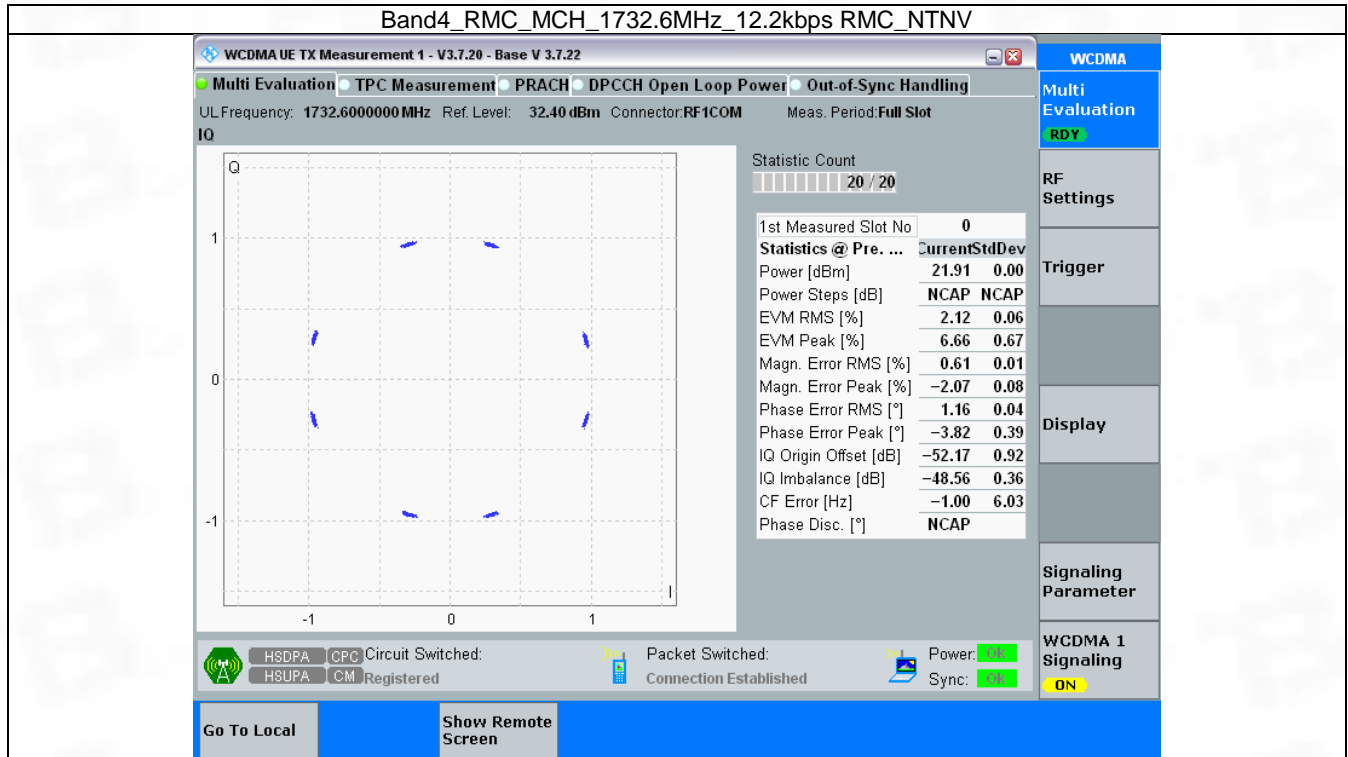
### 3. Modulation Characteristics

#### 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

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

WCDMA

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

Multi Evaluation

RDY

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RF Settings

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Trigger

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Display

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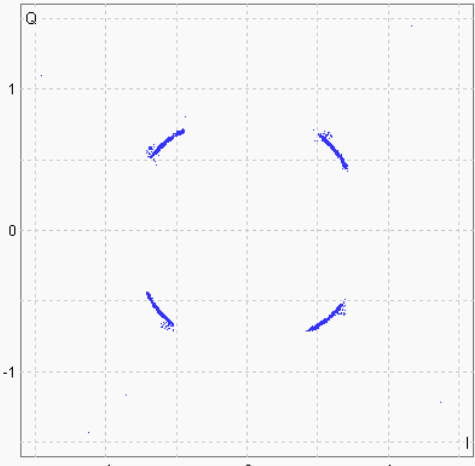
Signaling Parameter

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WCDMA 1 Signaling

ON

IQ



Statistic Count

20 / 20

1st Measured Slot No	0
<b>Statistics @ Pre. ...</b>	<b>CurrentStdDev</b>
Power [dBm]	14.80 2.58
Power Steps [dB]	NCAP NCAP
EVM RMS [%]	11.09 3.68
EVM Peak [%]	100.00 41.74
Magn. Error RMS [%]	4.67 1.68
Magn. Error Peak [%]	100.00 44.19
Phase Error RMS [°]	6.22 2.15
Phase Error Peak [°]	-16.49 6.67
IQ Origin Offset [dB]	-47.65 3.14
IQ Imbalance [dB]	-50.67 0.87
CF Error [Hz]	-83.73 39.30
Phase Disc. [°]	NCAP

HSDPA+
CPC
 Circuit Switched:

HSUPA
CM
 Registered

»» Packet Switched:

»» Connection Established

Power: ON

Sync: ON

Go To Local

Show Remote Screen

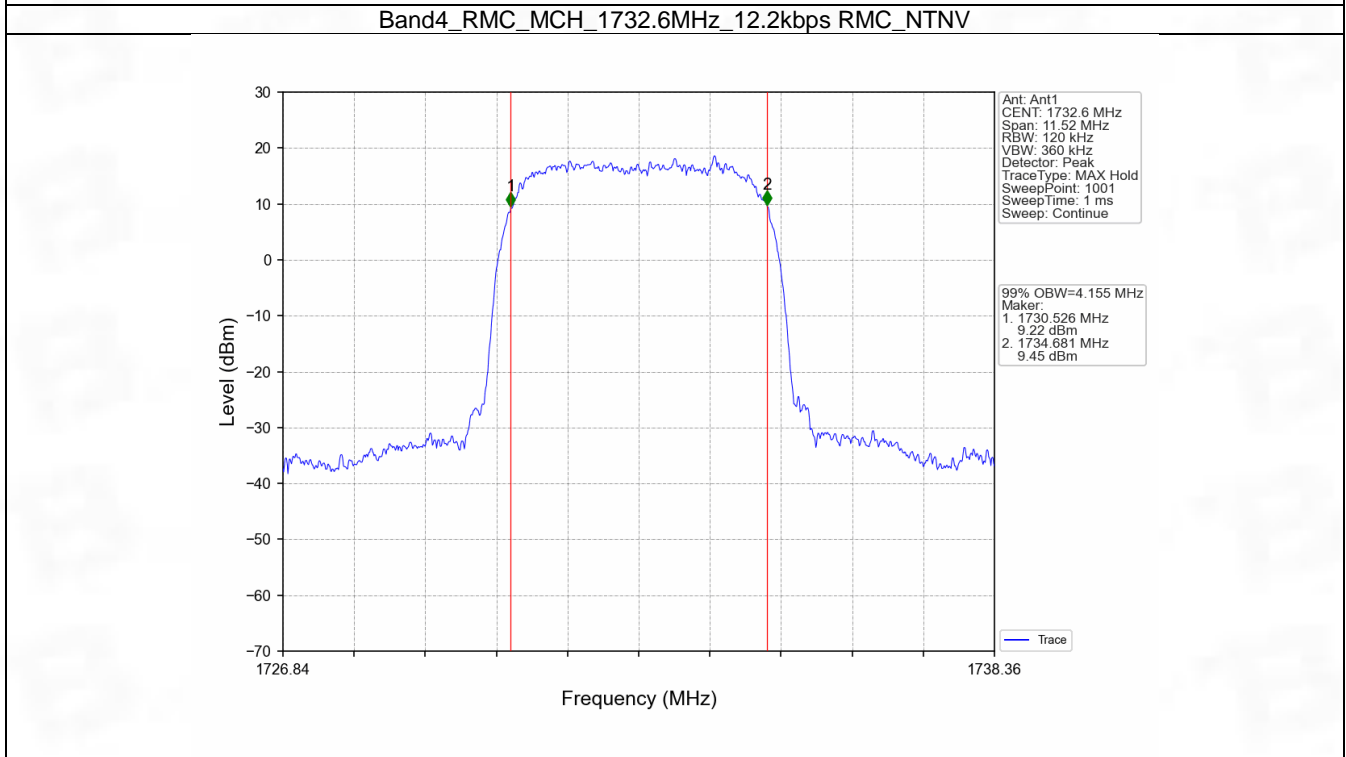
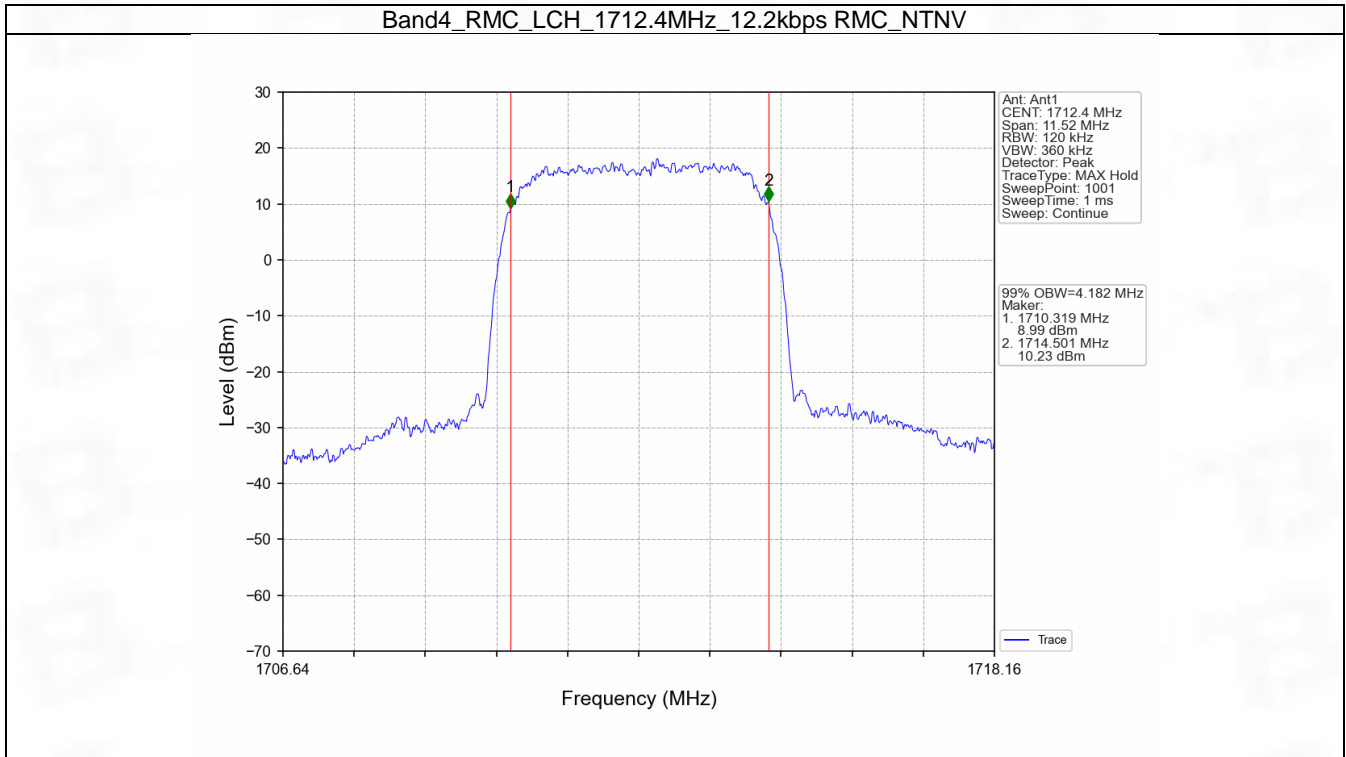
## 4. 99% & 26dB Bandwidth

### 4.1 Band4\_OBW

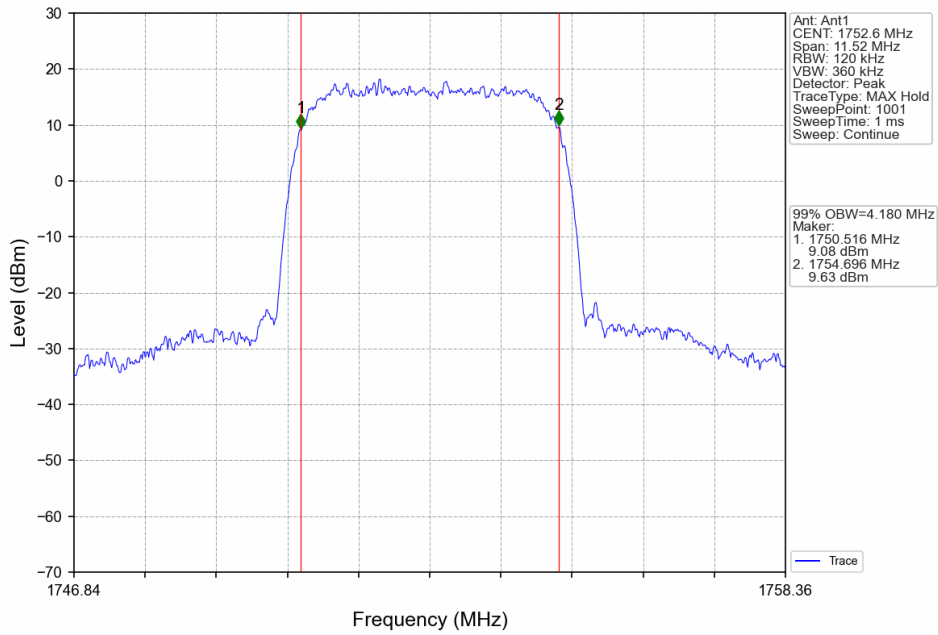
#### 4.1.1 Test Result

Band: 4					
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)	Verdict
	Network	Subset		Result	
NTNV	RMC	12.2kbps RMC	1712.4	4.182	Pass
			1732.6	4.155	Pass
			1752.6	4.180	Pass
	HSDPA	Subtest 1	1712.4	4.182	Pass
			1732.6	4.166	Pass
			1752.6	4.180	Pass
	HSUPA	Subtest 1	1712.4	4.162	Pass
			1732.6	4.181	Pass
			1752.6	4.176	Pass

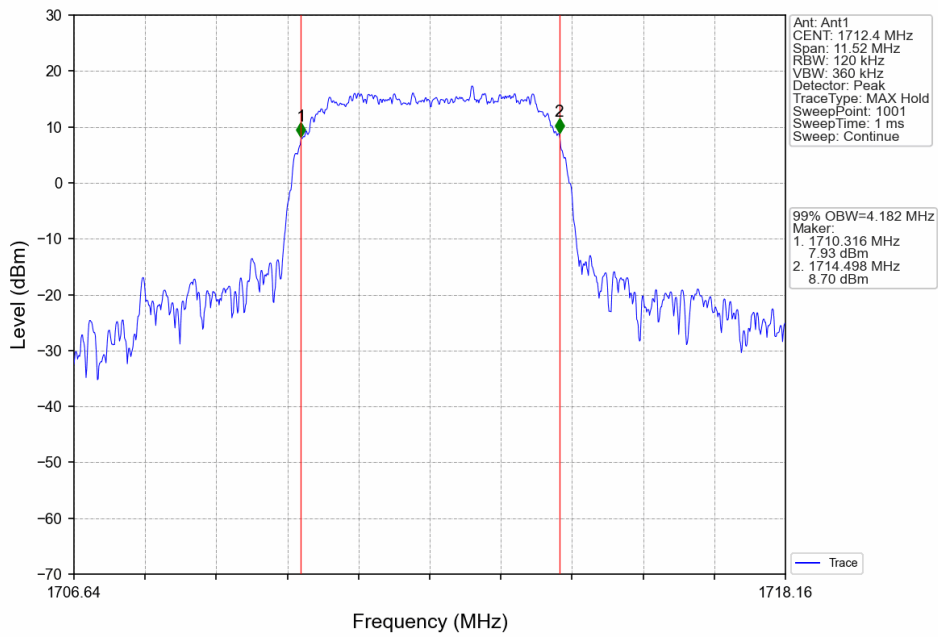
### 4.1.2 Test Graph



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

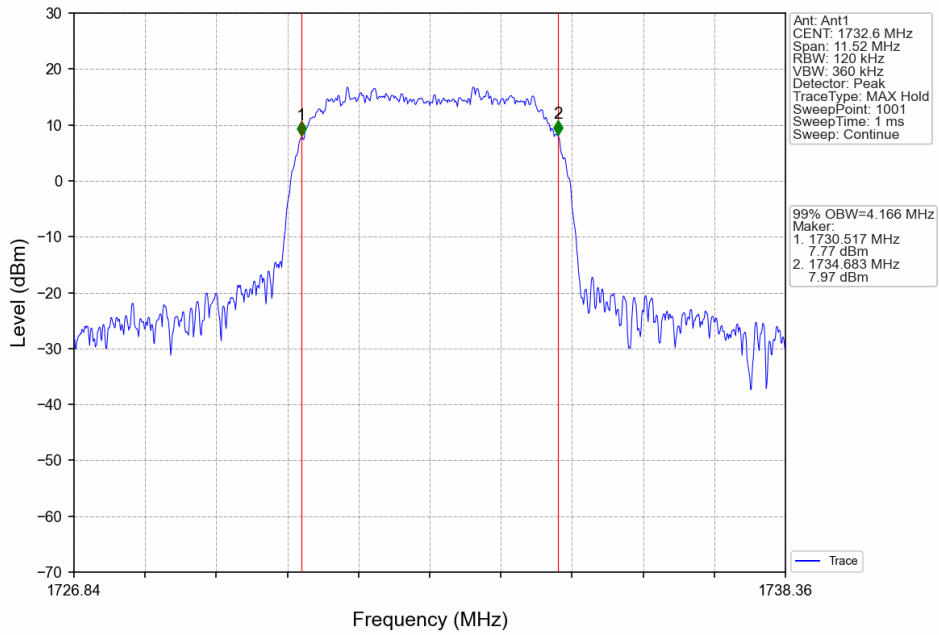


Band4\_HSDPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV

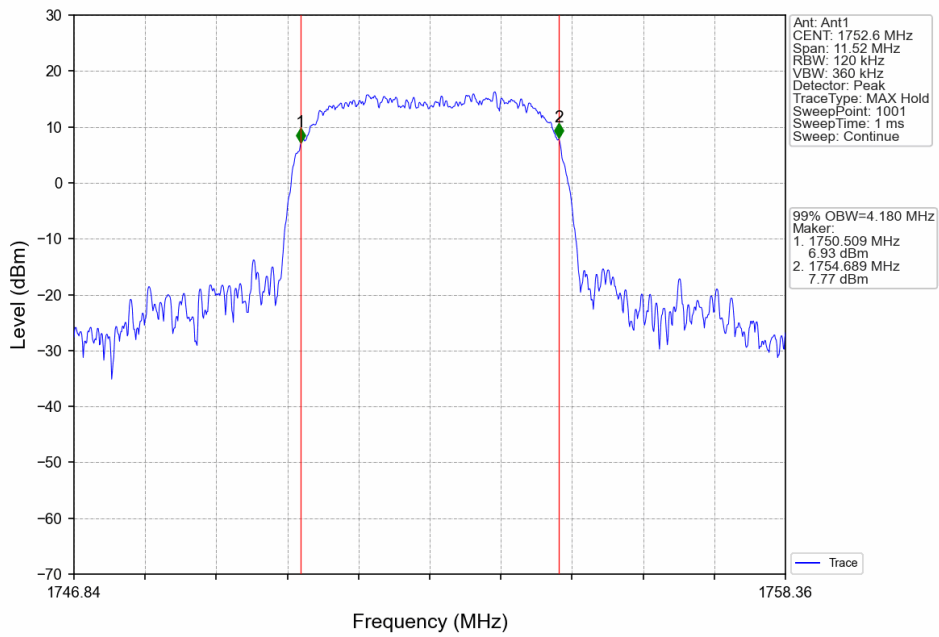




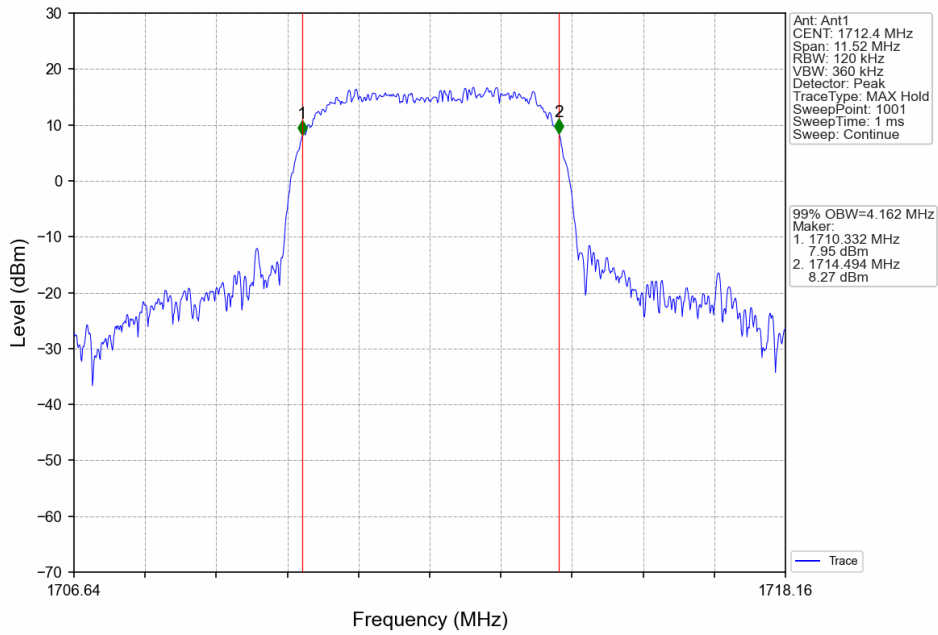
Band4\_HSDPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



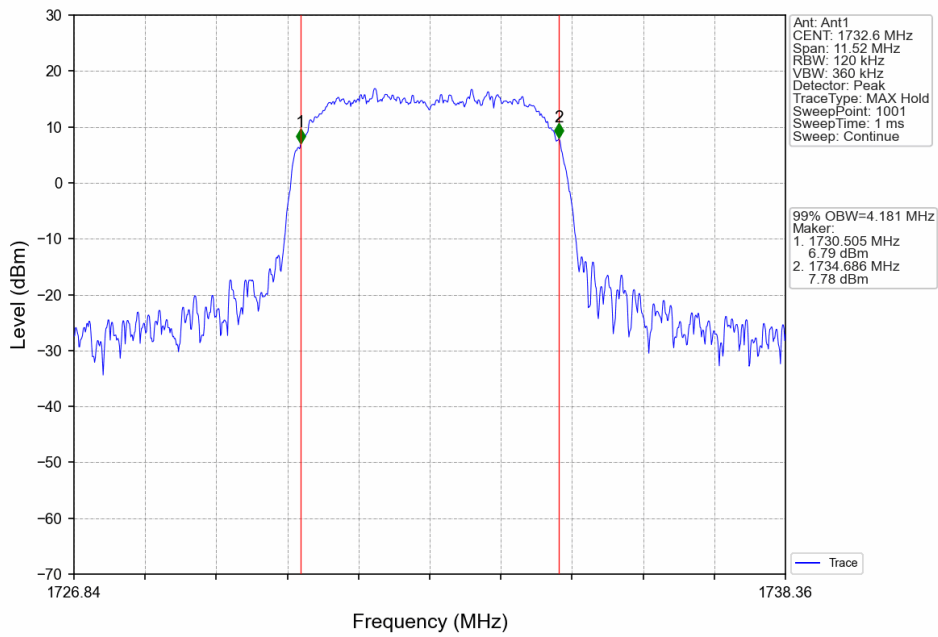
Band4\_HSDPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



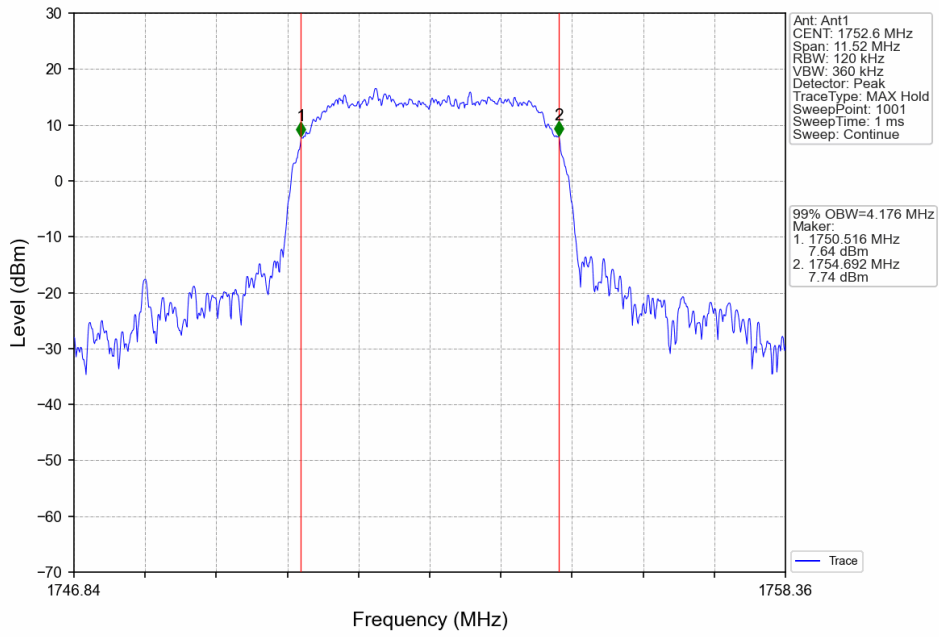
Band4\_HSUPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



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



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

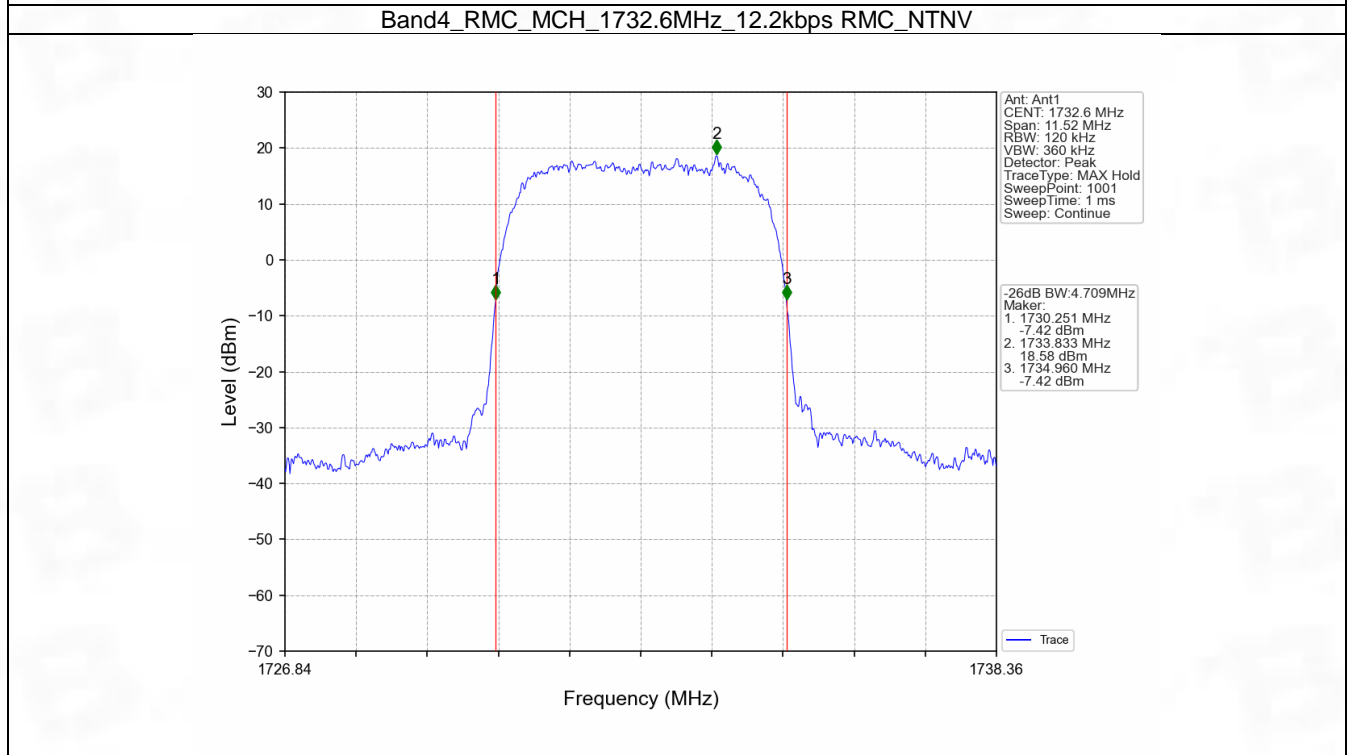
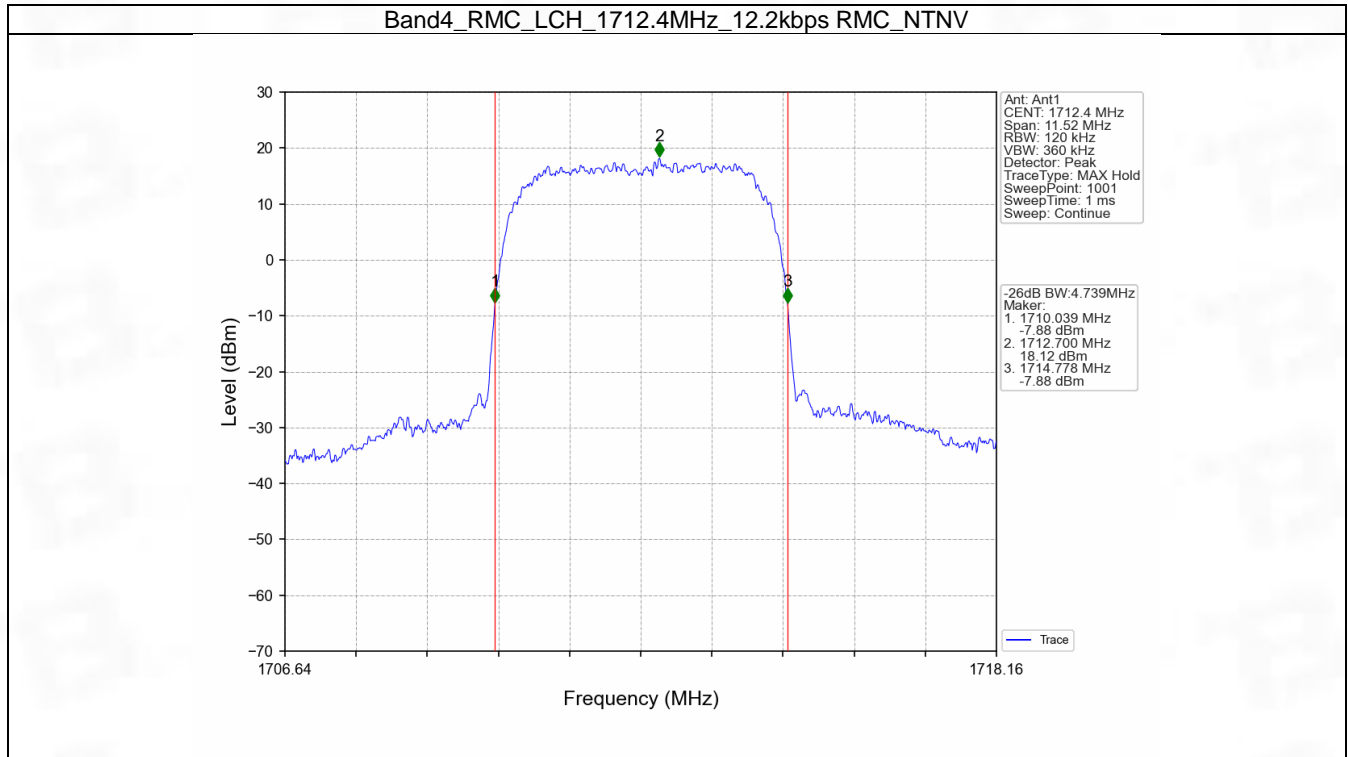


## 4.2 Band4\_XDB

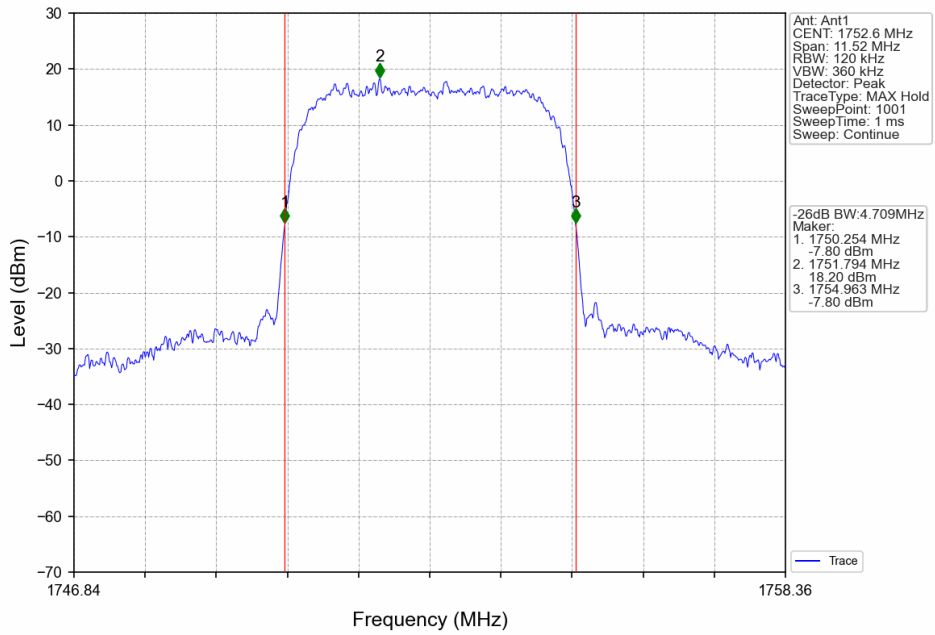
### 4.2.1 Test Result

Band: 4					
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)	Verdict
	Network	Subset		Result	
NTNV	RMC	12.2kbps RMC	1712.4	4.739	Pass
			1732.6	4.709	Pass
			1752.6	4.709	Pass
	HSDPA	Subtest 1	1712.4	4.699	Pass
			1732.6	4.706	Pass
			1752.6	4.719	Pass
	HSUPA	Subtest 1	1712.4	4.715	Pass
			1732.6	4.695	Pass
			1752.6	4.688	Pass

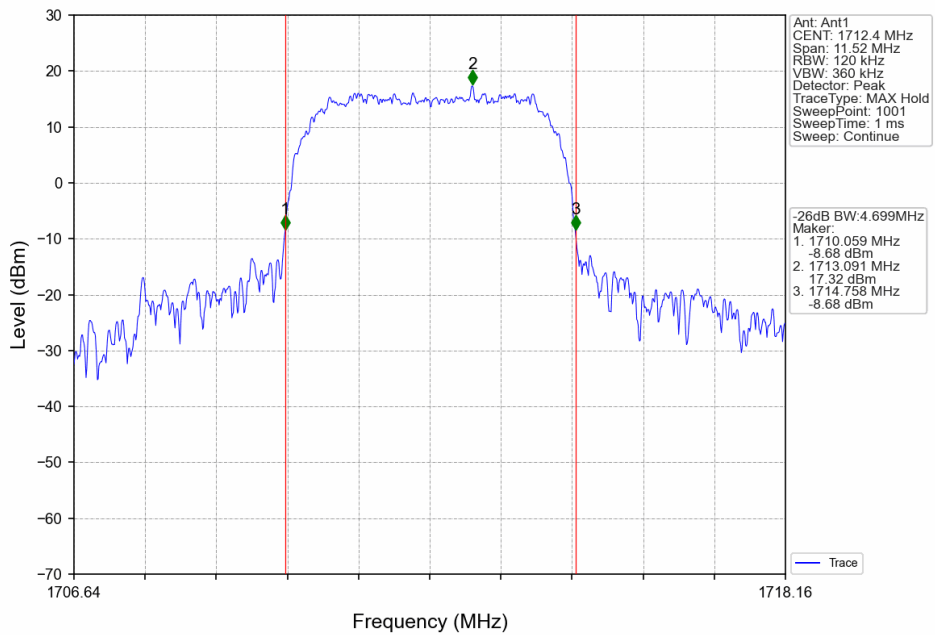
## 4.2.2 Test Graph



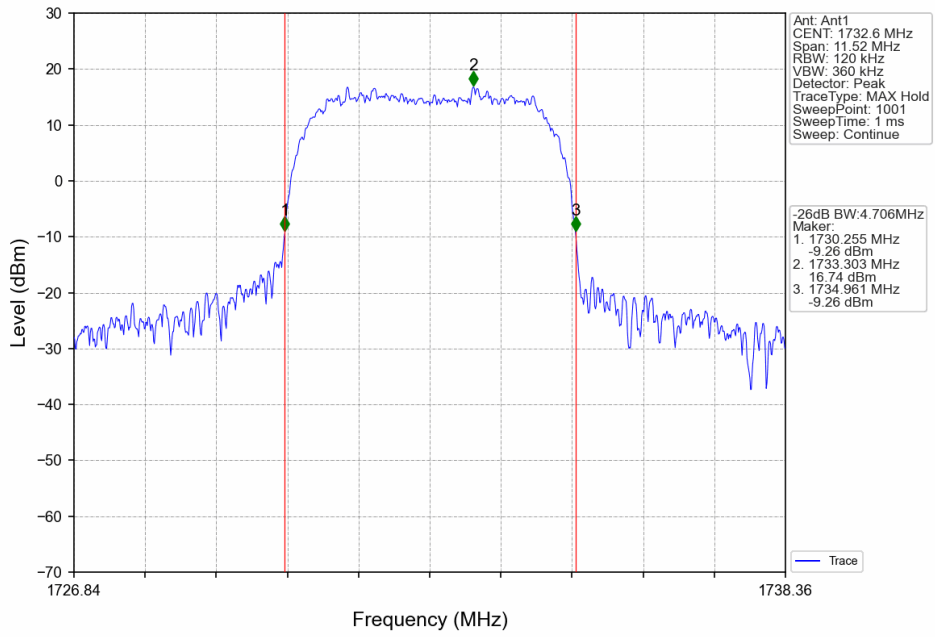
Band4\_RMC\_HCH\_1752.6MHz\_12.2kbps RMC\_NTNV



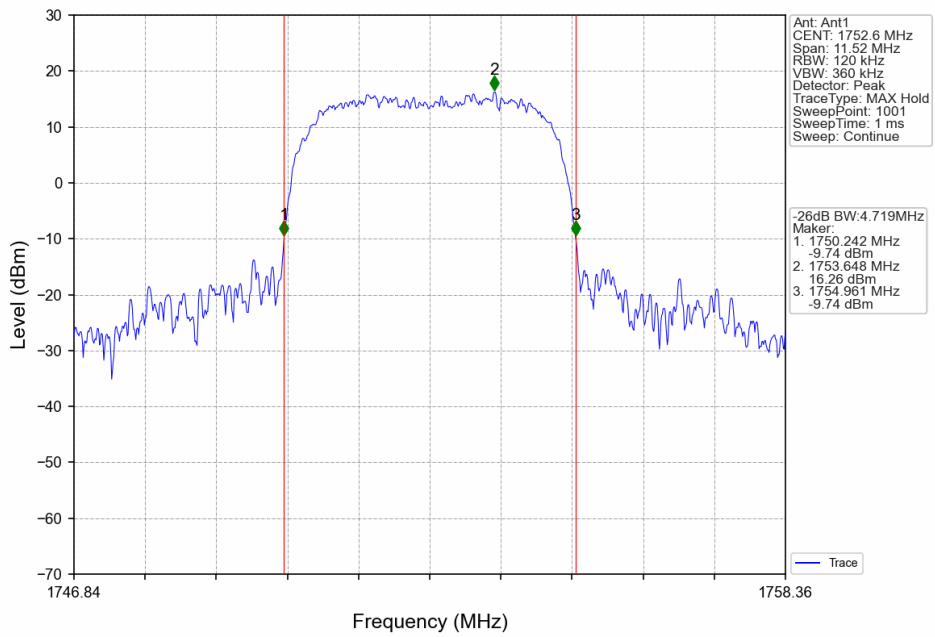
Band4\_HSDPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



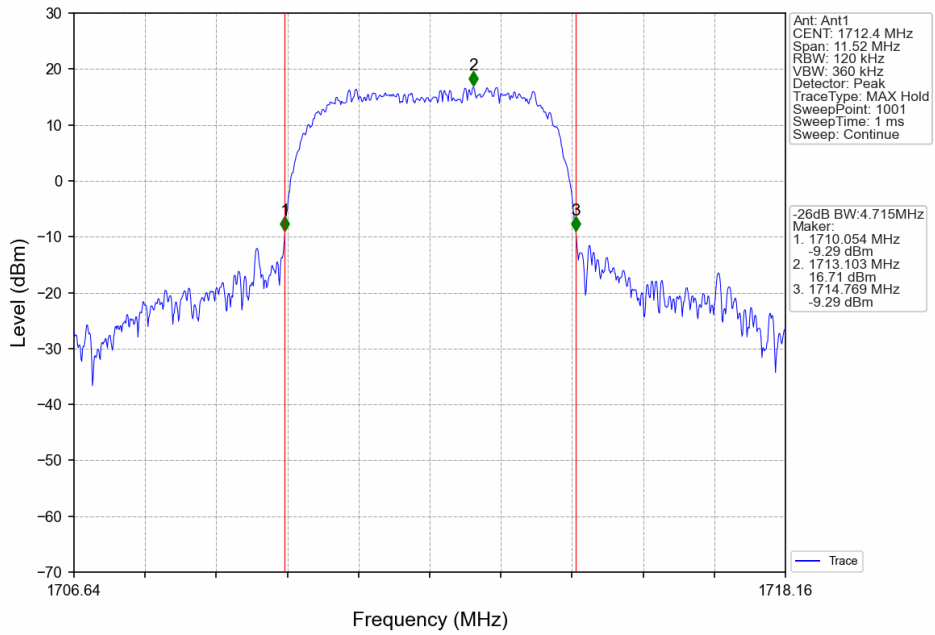
Band4\_HSDPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



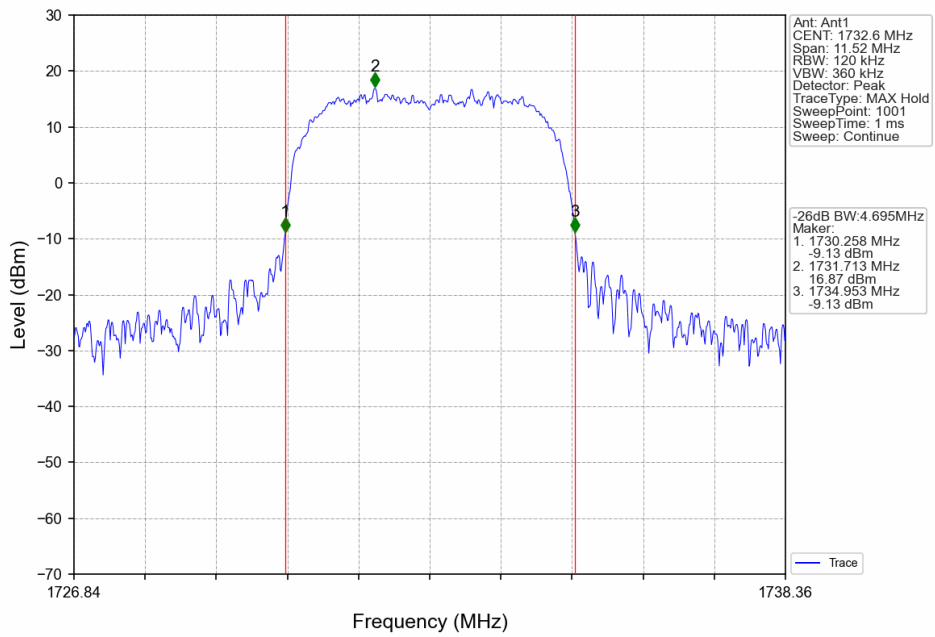
Band4\_HSDPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



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

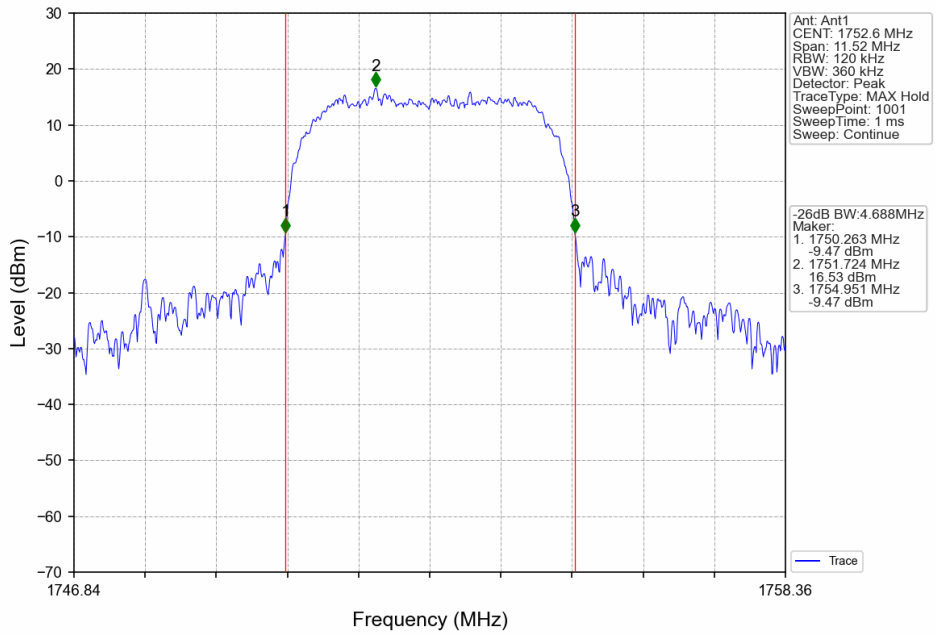


Band4\_HSUPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV





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



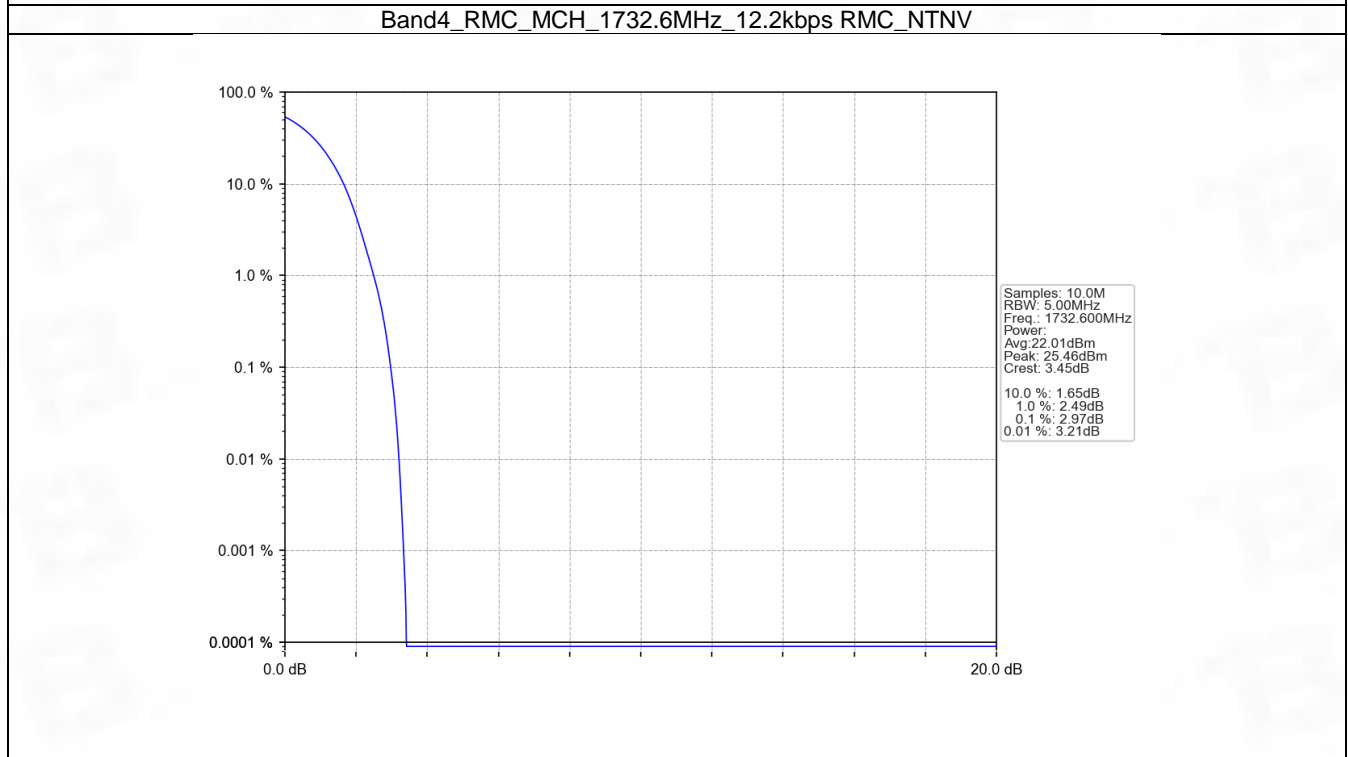
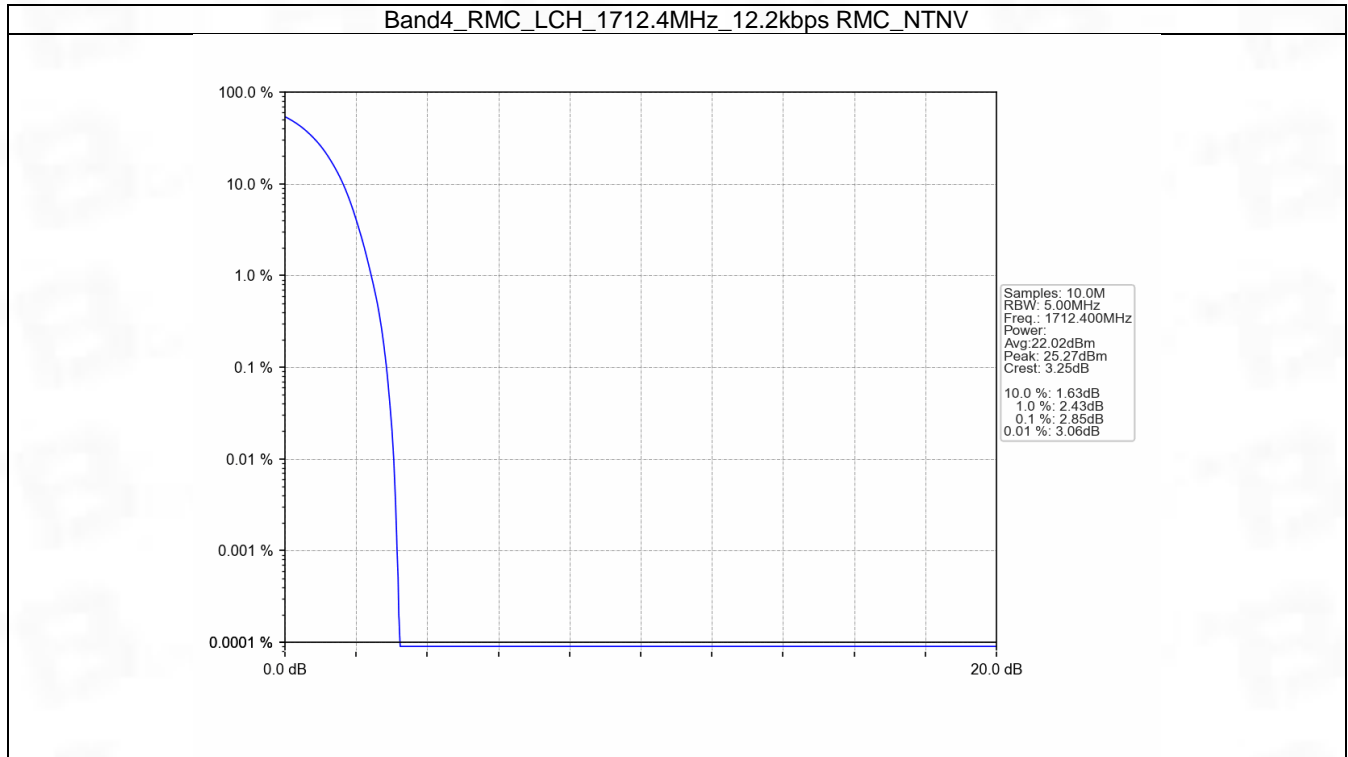
## 5. Peak-Average Ratio

### 5.1 Band4

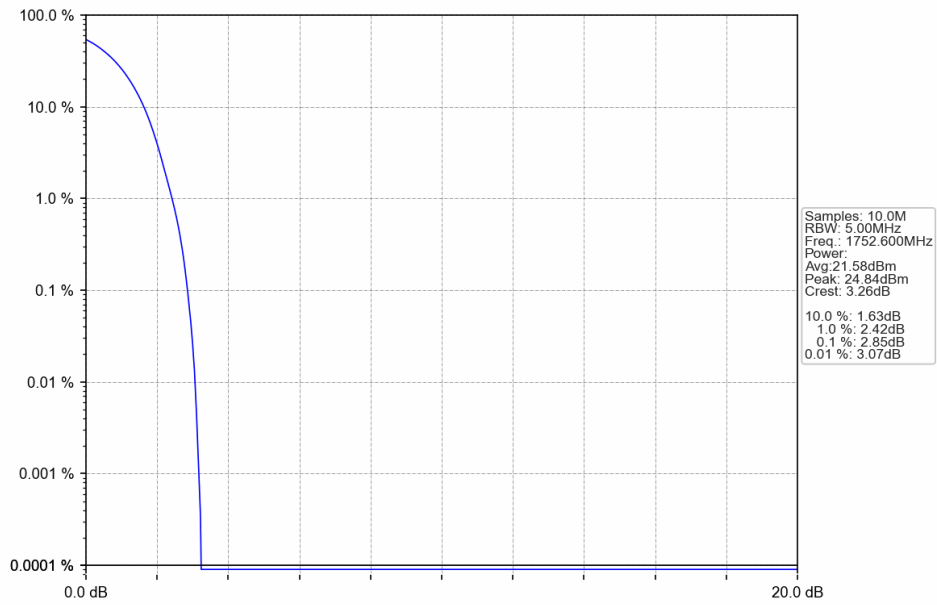
#### 5.1.1 Test Result

Band: 4						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	1712.4	2.85	<=13	Pass
			1732.6	2.97	<=13	Pass
			1752.6	2.85	<=13	Pass
	HSDPA	Subtest 1	1712.4	5.81	<=13	Pass
			1732.6	5.71	<=13	Pass
			1752.6	5.61	<=13	Pass
	HSUPA	Subtest 1	1712.4	5.68	<=13	Pass
			1732.6	5.82	<=13	Pass
			1752.6	5.64	<=13	Pass

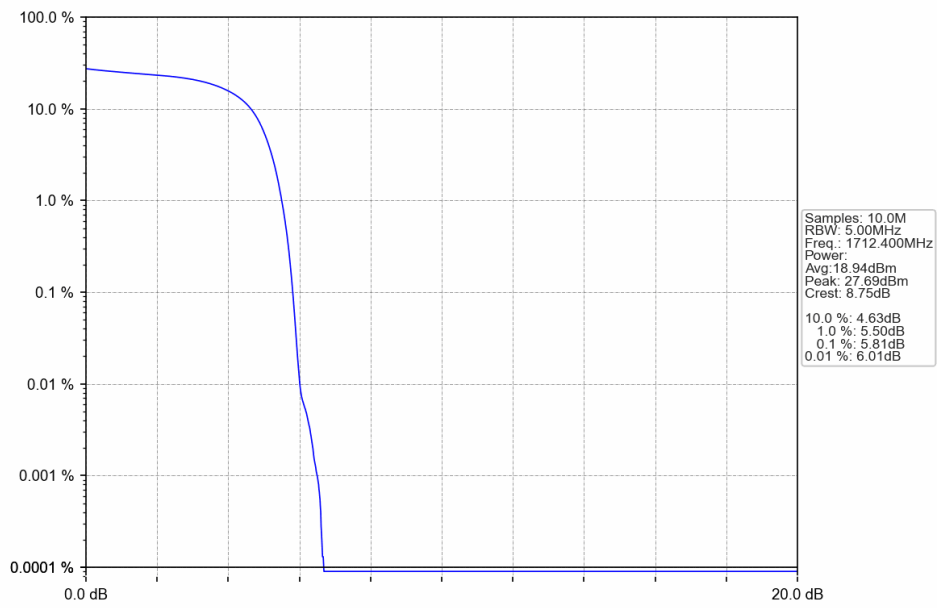
## 5.1.2 Test Graph



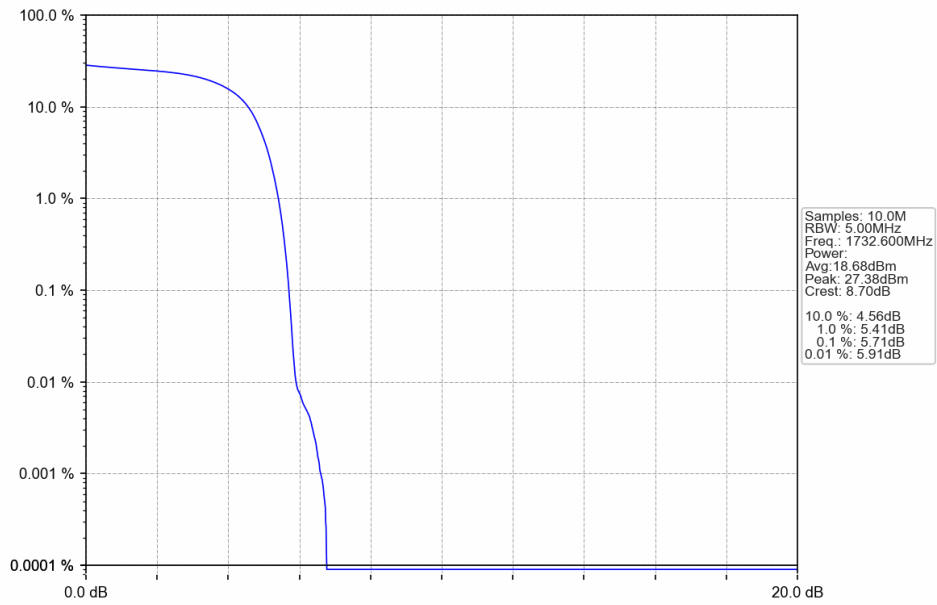
Band4\_RMC\_HCH\_1752.6MHz\_12.2kbps RMC\_NTNV



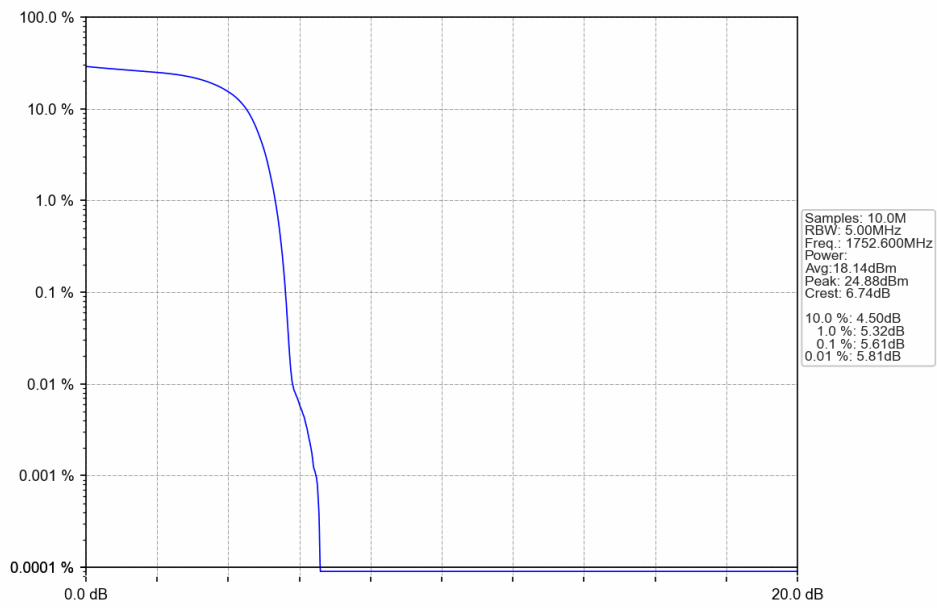
Band4\_HSDPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



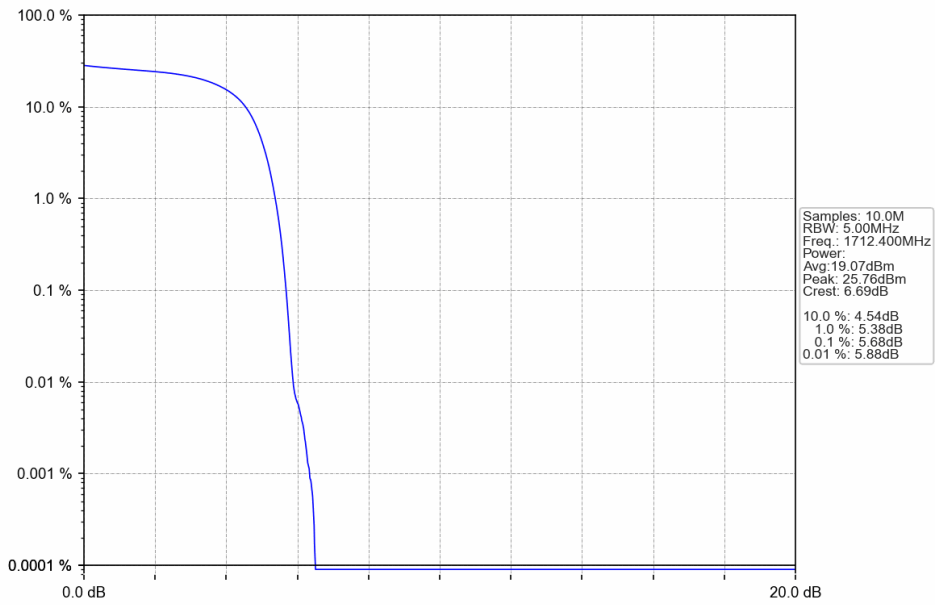
Band4\_HSDPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



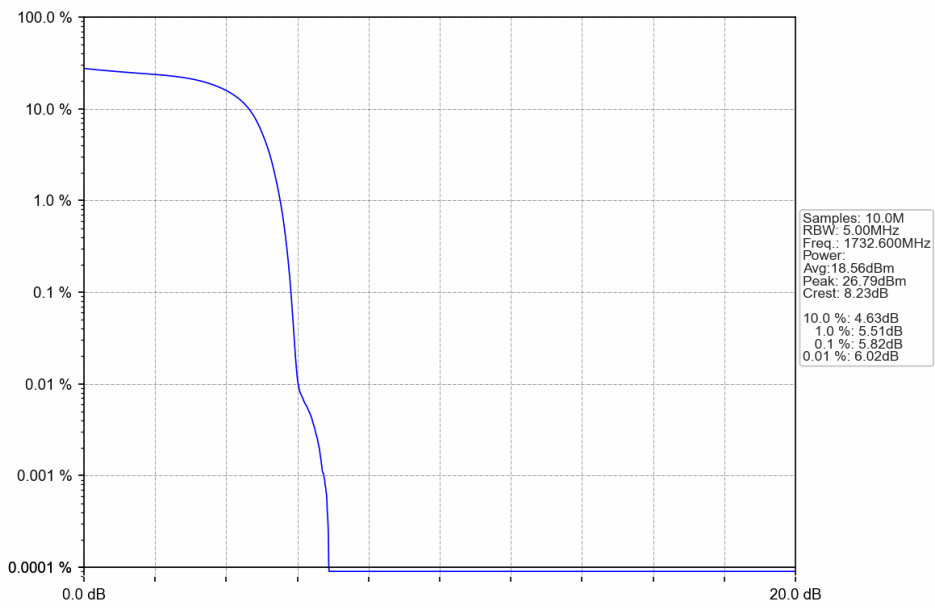
Band4\_HSDPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



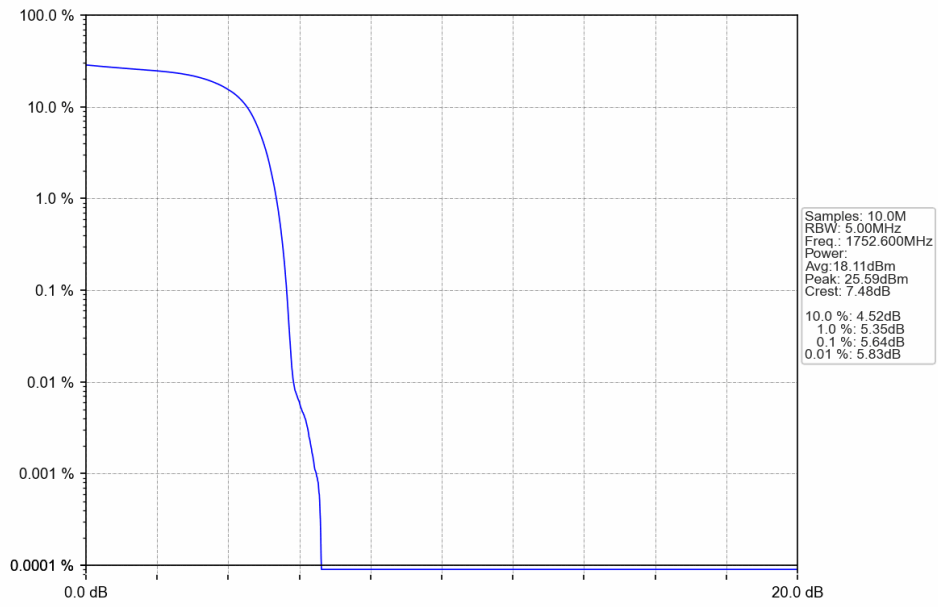
Band4\_HSUPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



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



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



## 6. Spurious Emission

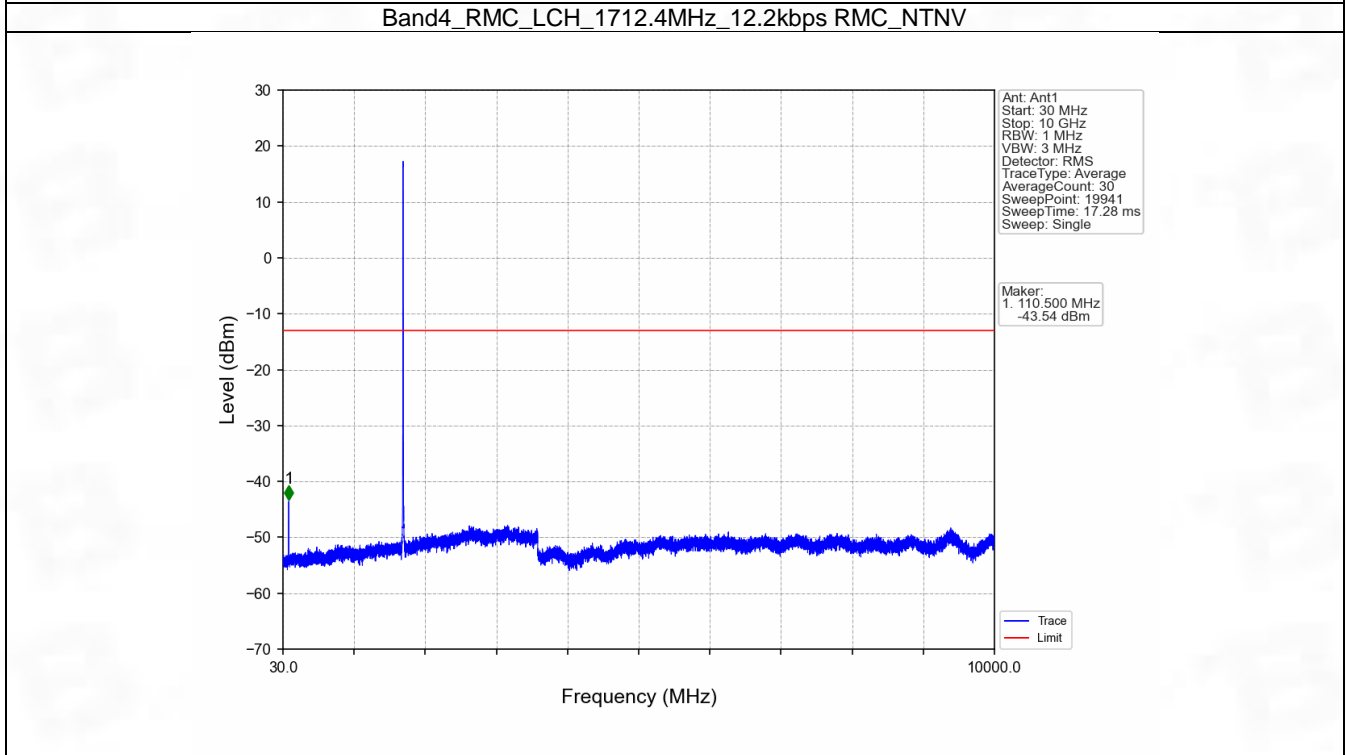
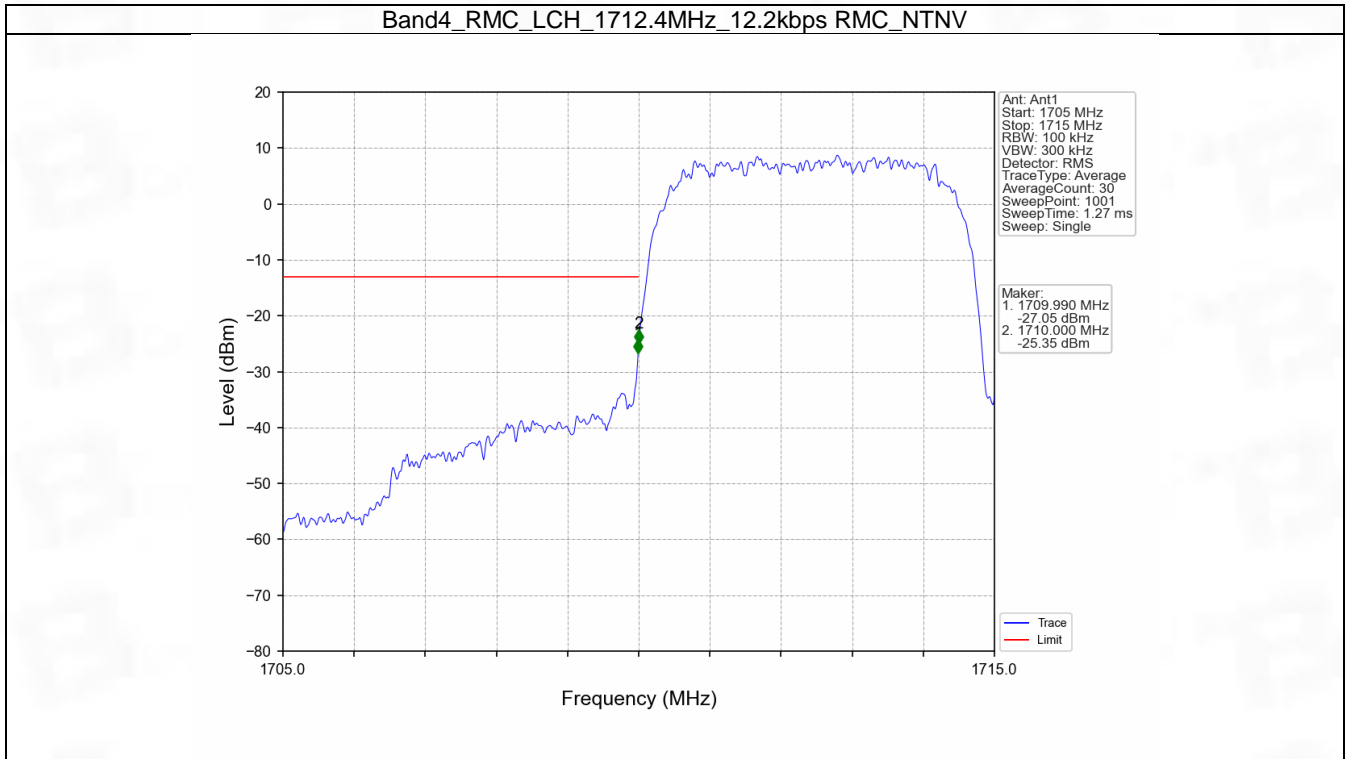
### 6.1 Band4

#### 6.1.1 Test Result

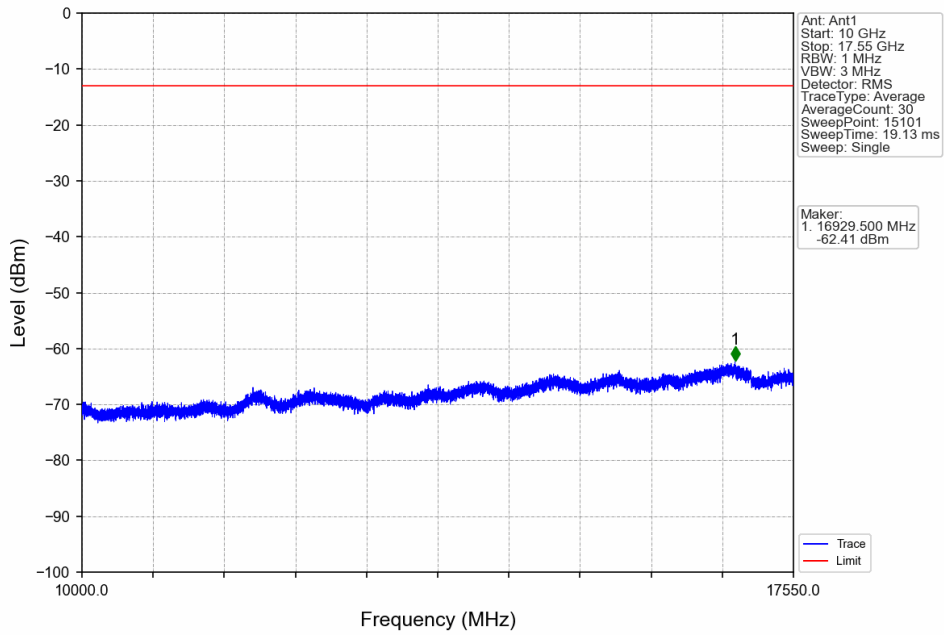
Band: 4						
ENV	Mode		Frequency (MHz)	Spurious Emission		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	1712.4	Refer To Test Graph	Pass	
			1732.6	Refer To Test Graph	Pass	
			1752.6	Refer To Test Graph	Pass	
	HSDPA	Subtest 1	1712.4	Refer To Test Graph	Pass	
			1732.6	Refer To Test Graph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



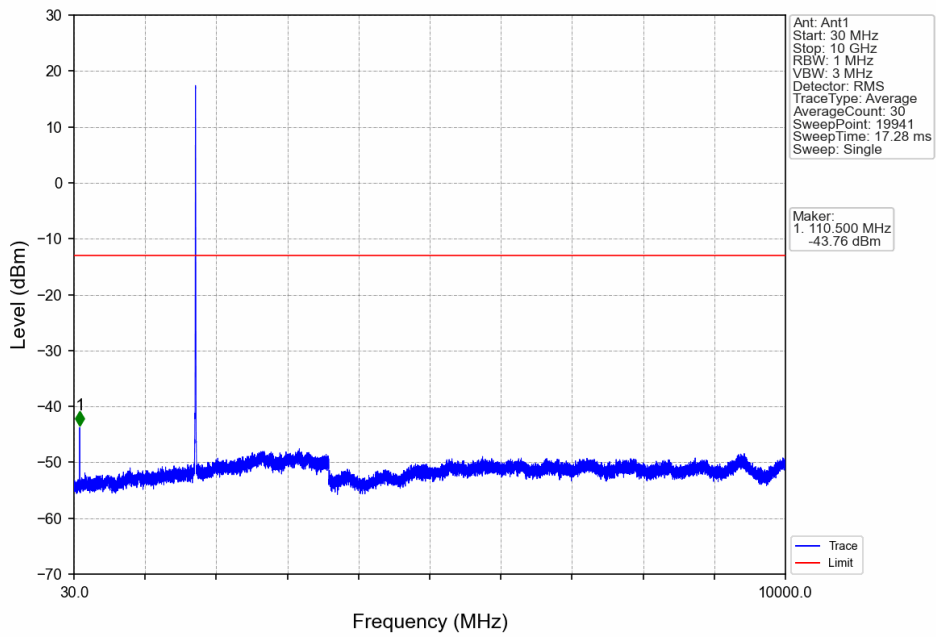
### 6.1.2 Test Graph



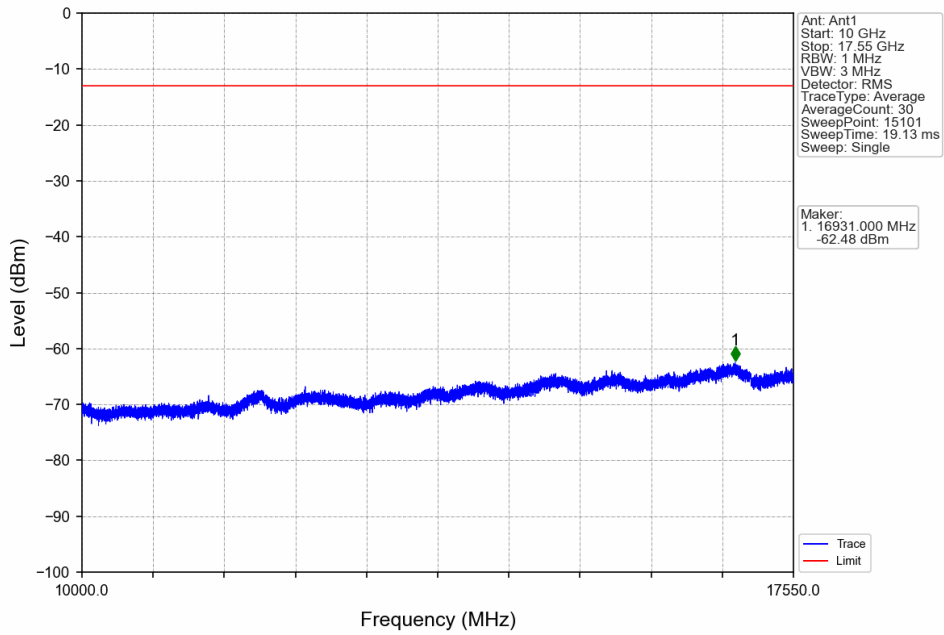
Band4\_RMC\_LCH\_1712.4MHz\_12.2kbps RMC\_NTNV



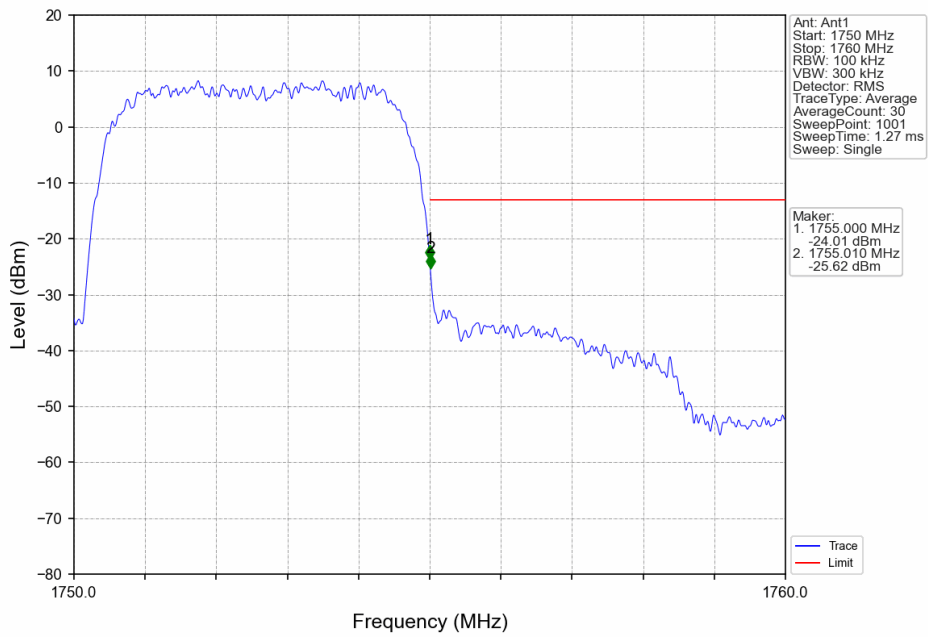
Band4\_RMC\_MCH\_1732.6MHz\_12.2kbps RMC\_NTNV



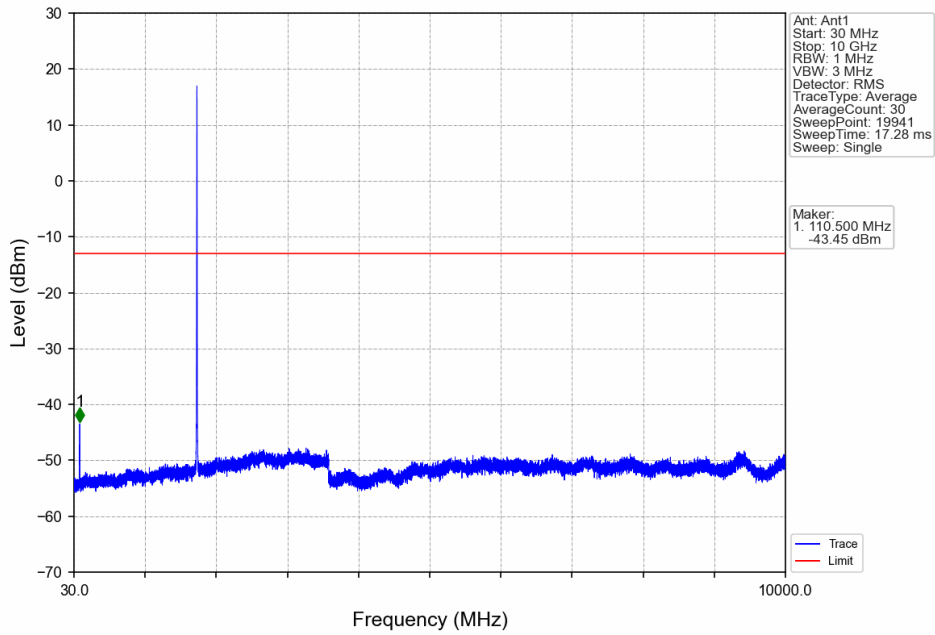
Band4\_RMC\_MCH\_1732.6MHz\_12.2kbps RMC\_NTNV



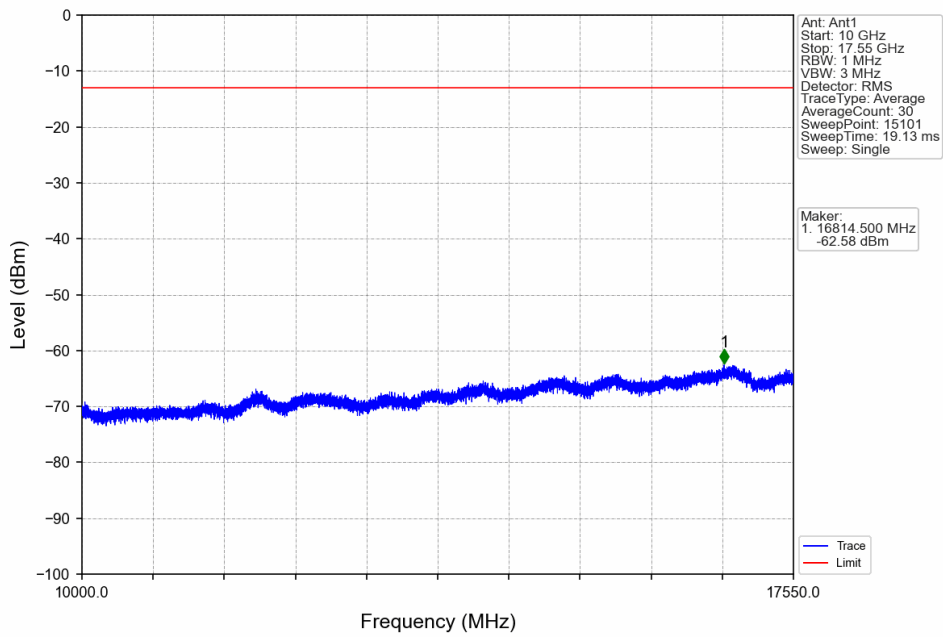
Band4\_RMC\_HCH\_1752.6MHz\_12.2kbps RMC\_NTNV



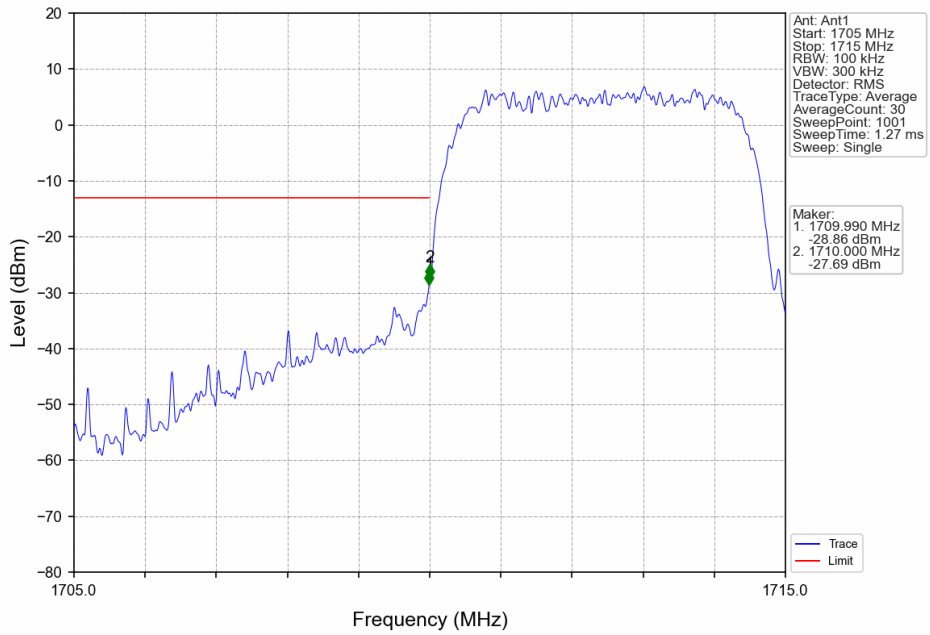
Band4\_RMC\_HCH\_1752.6MHz\_12.2kbps RMC\_NTNV



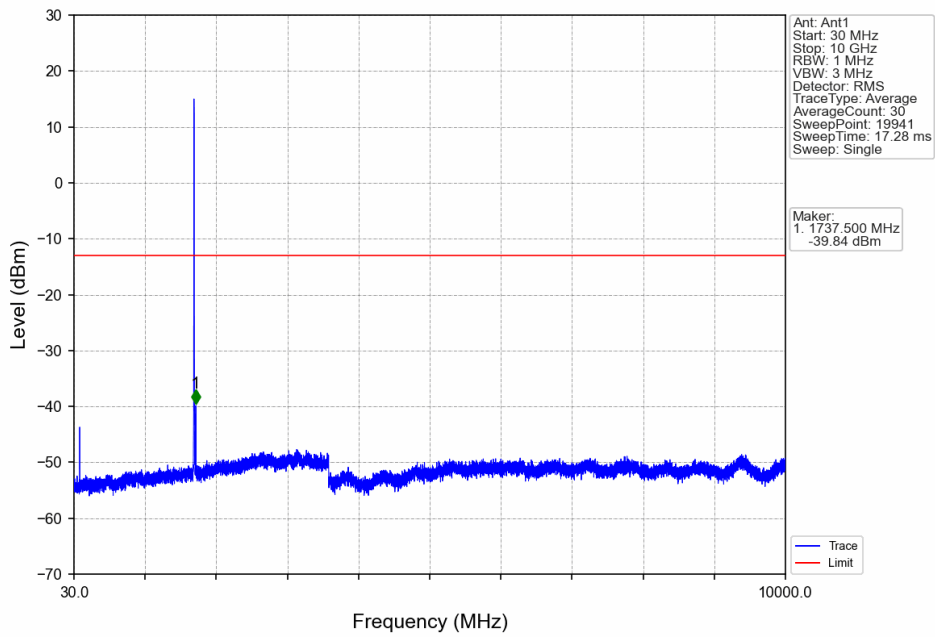
Band4\_RMC\_HCH\_1752.6MHz\_12.2kbps RMC\_NTNV



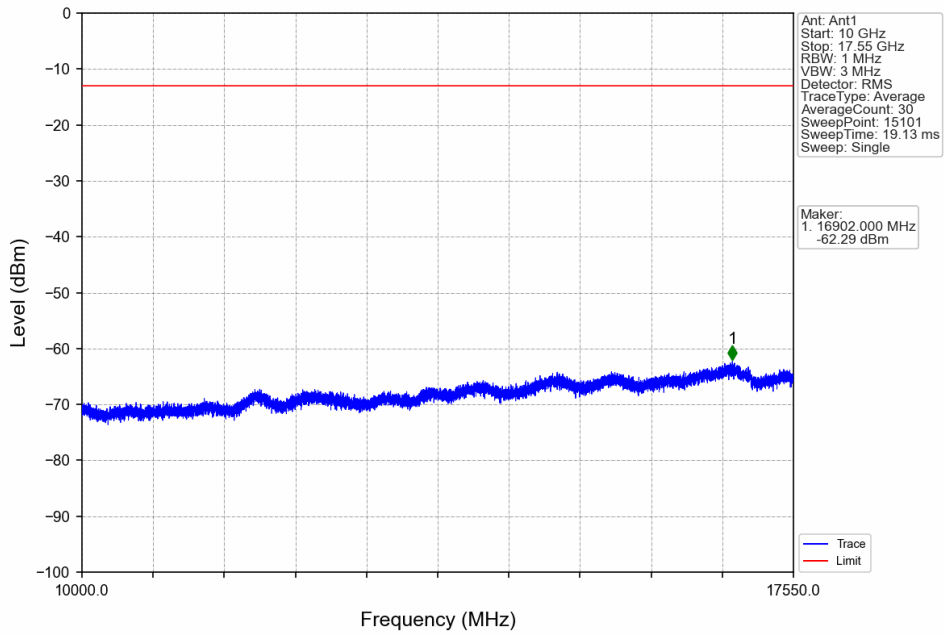
Band4\_HSDPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



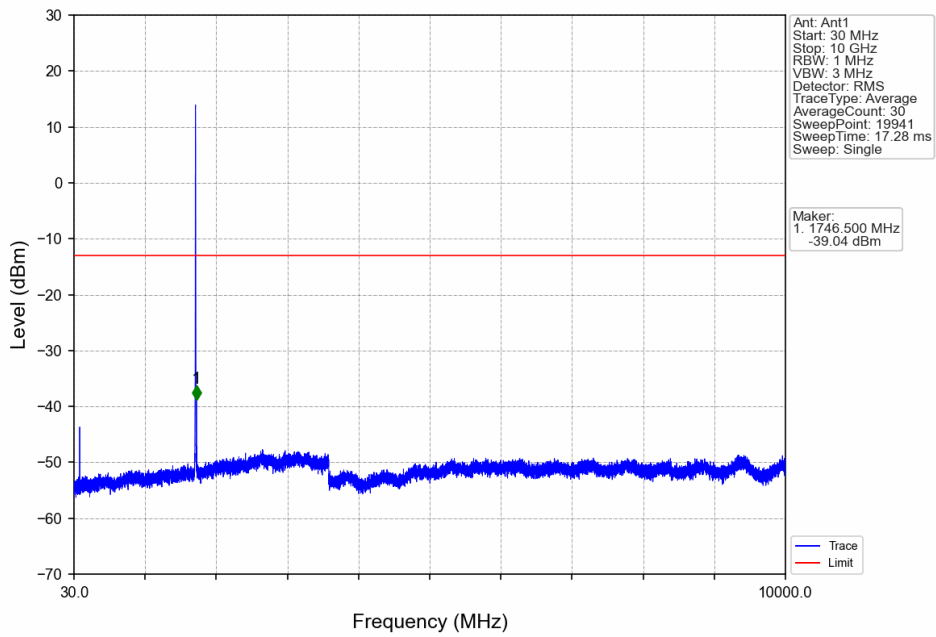
Band4\_HSDPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



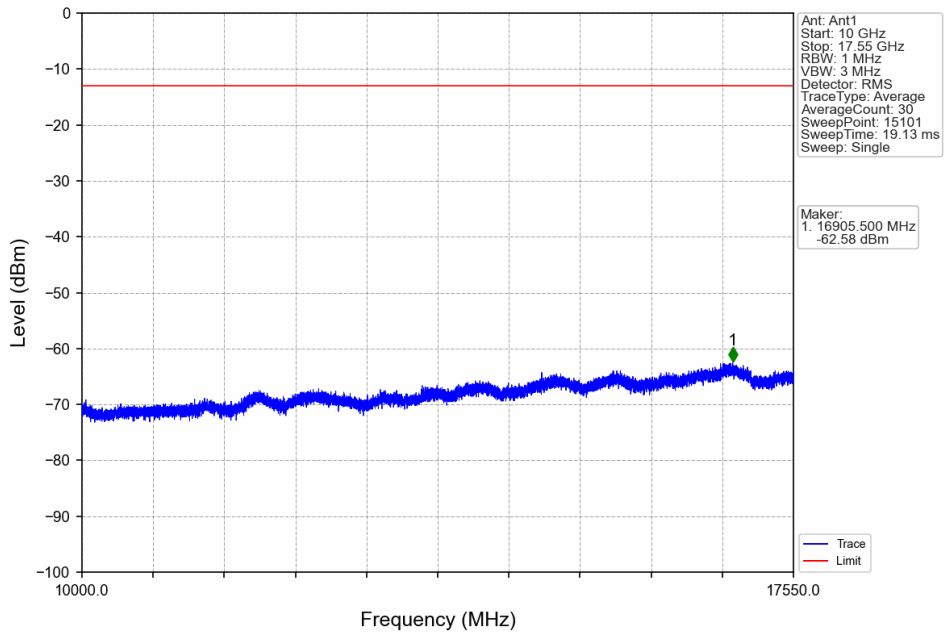
Band4\_HSDPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



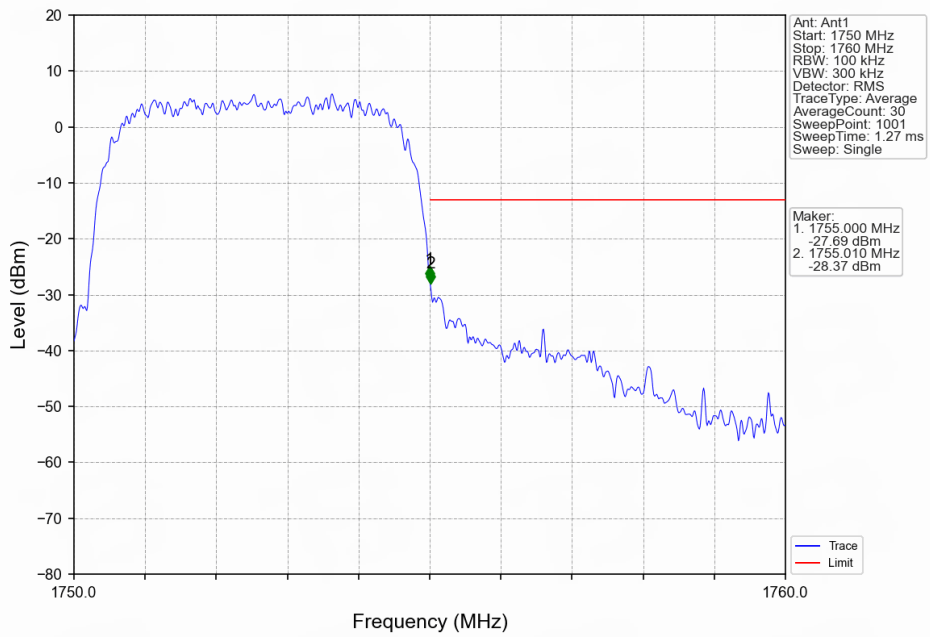
Band4\_HSDPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



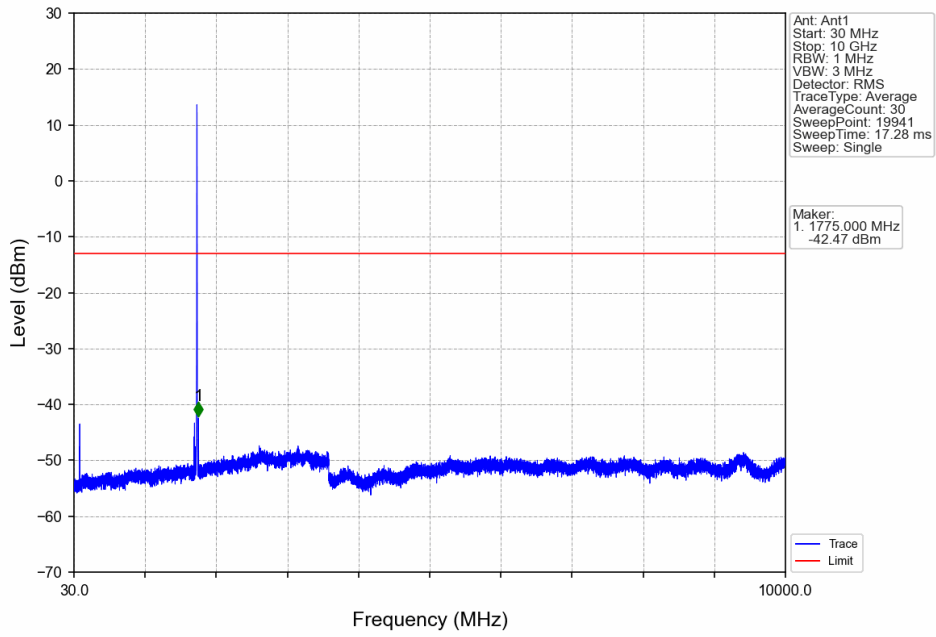
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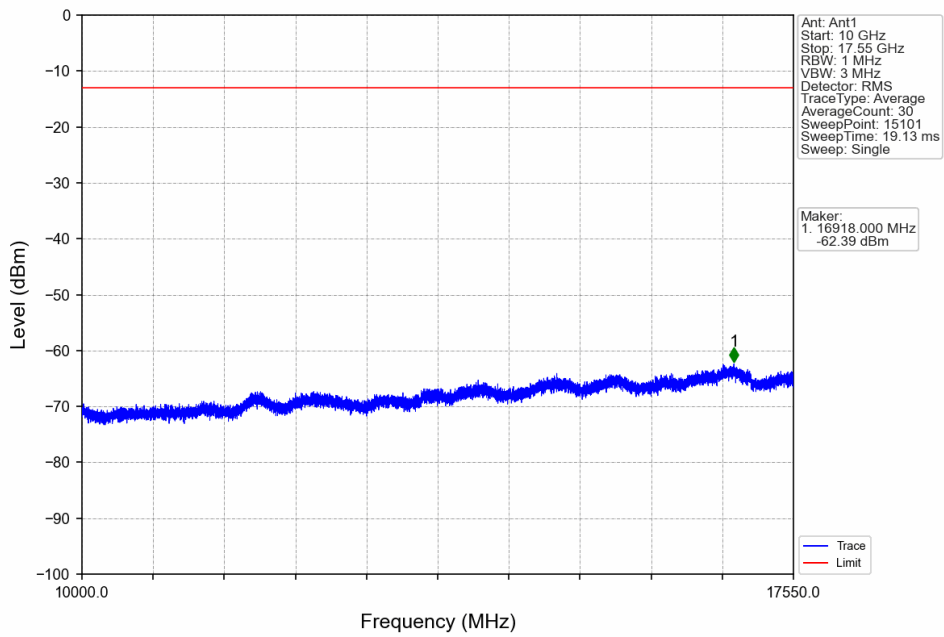
Band4\_HSDPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



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

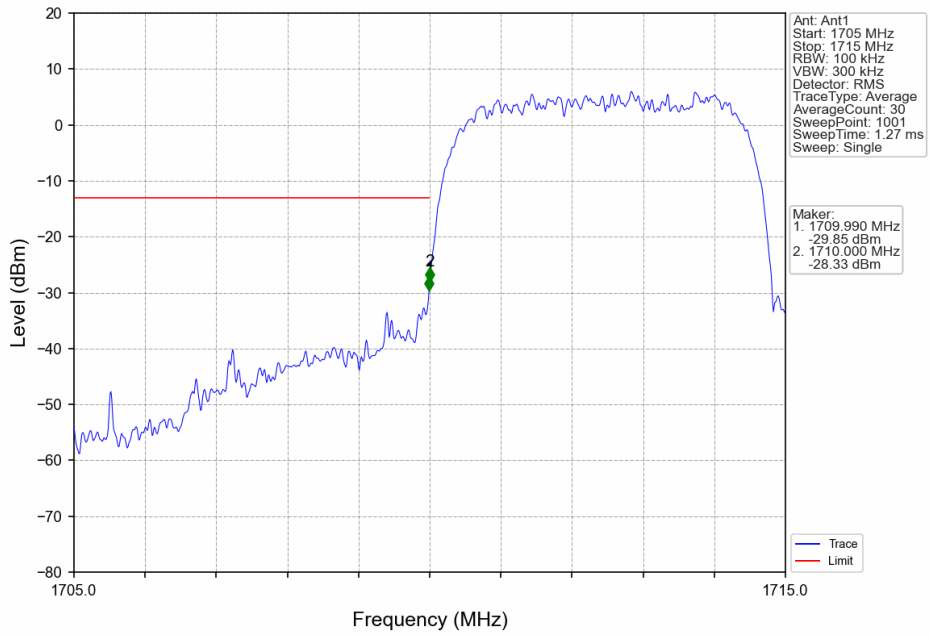


Band4\_HSDPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV

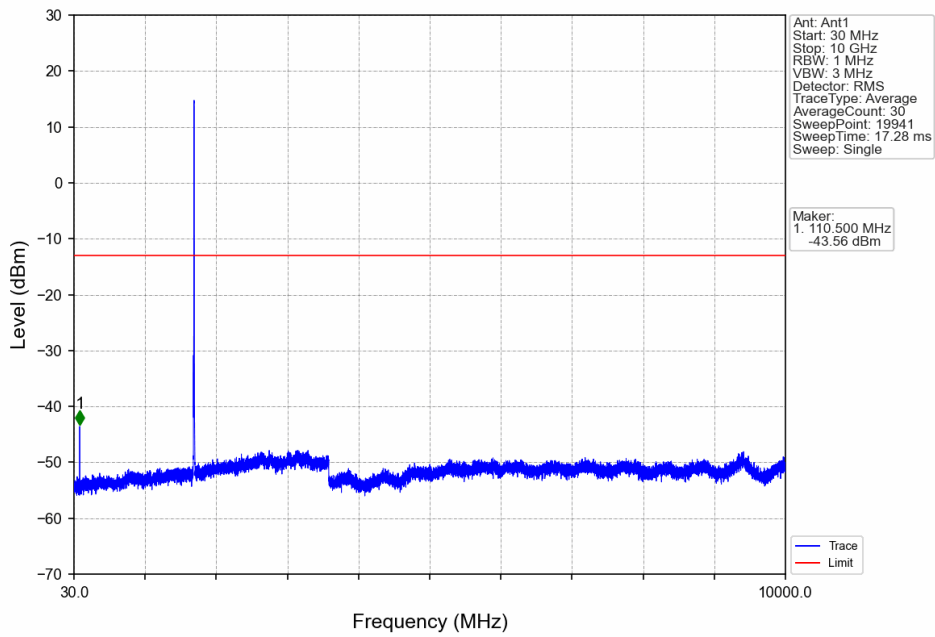




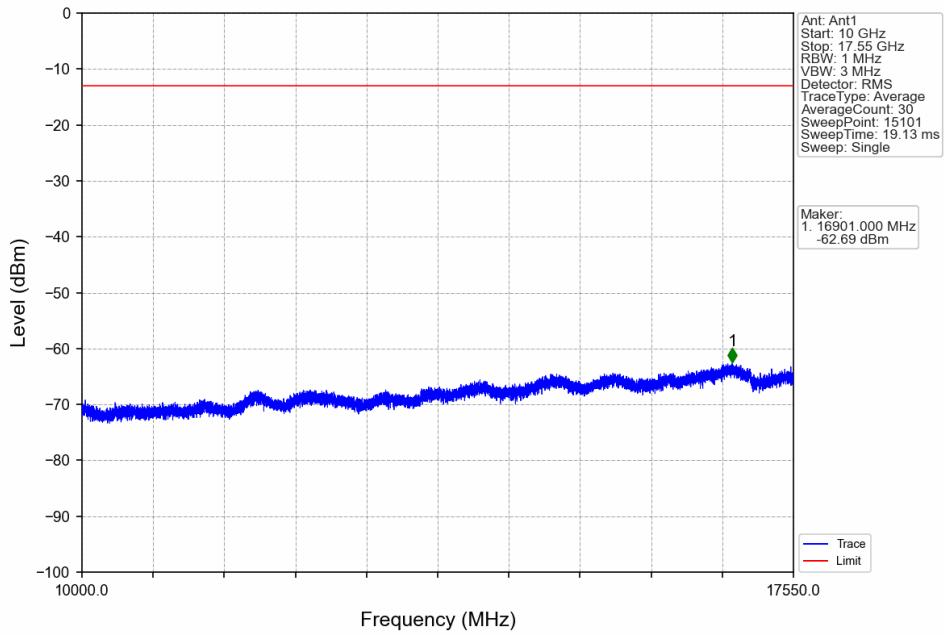
Band4\_HSUPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



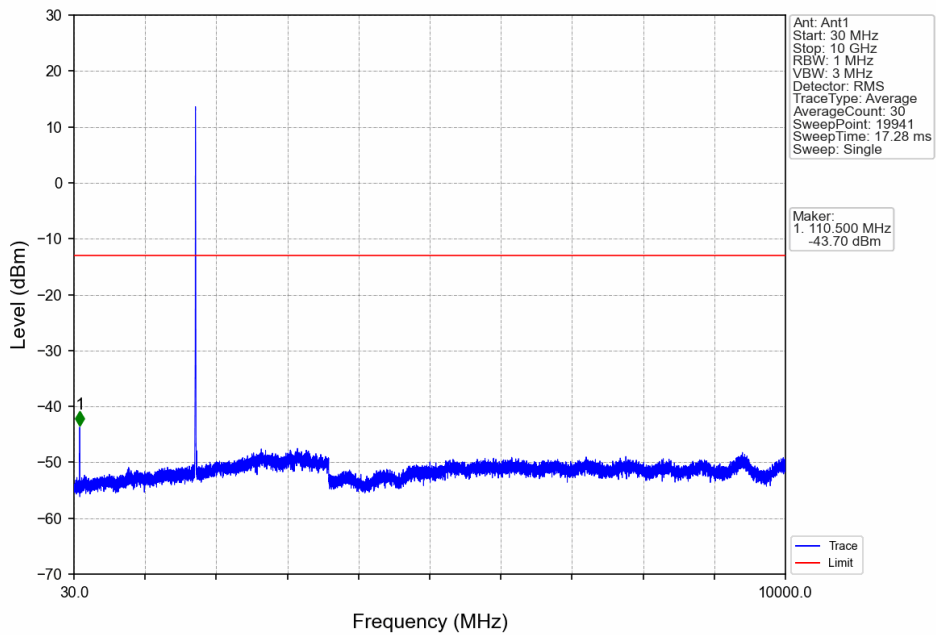
Band4\_HSUPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



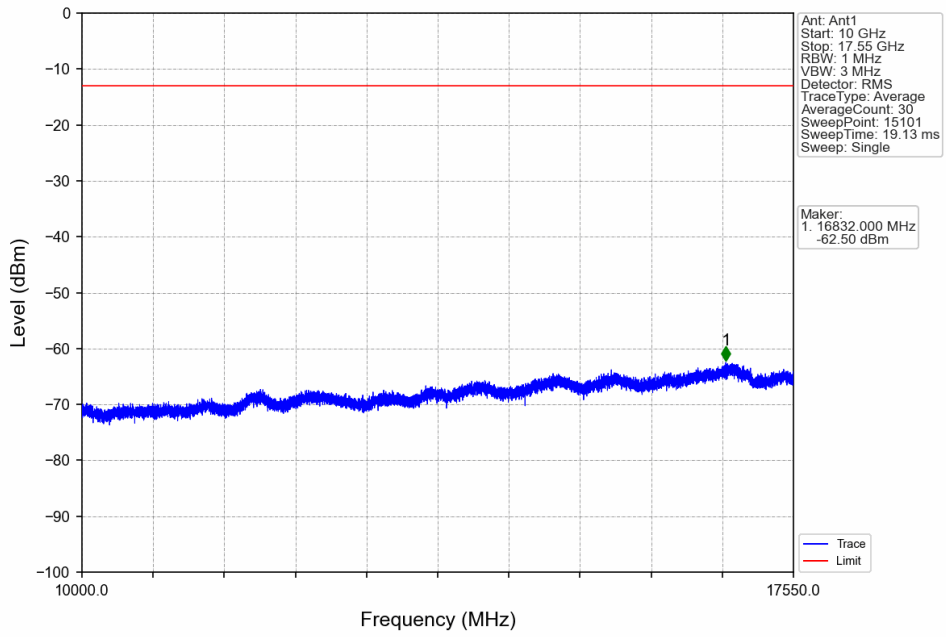
Band4\_HSUPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



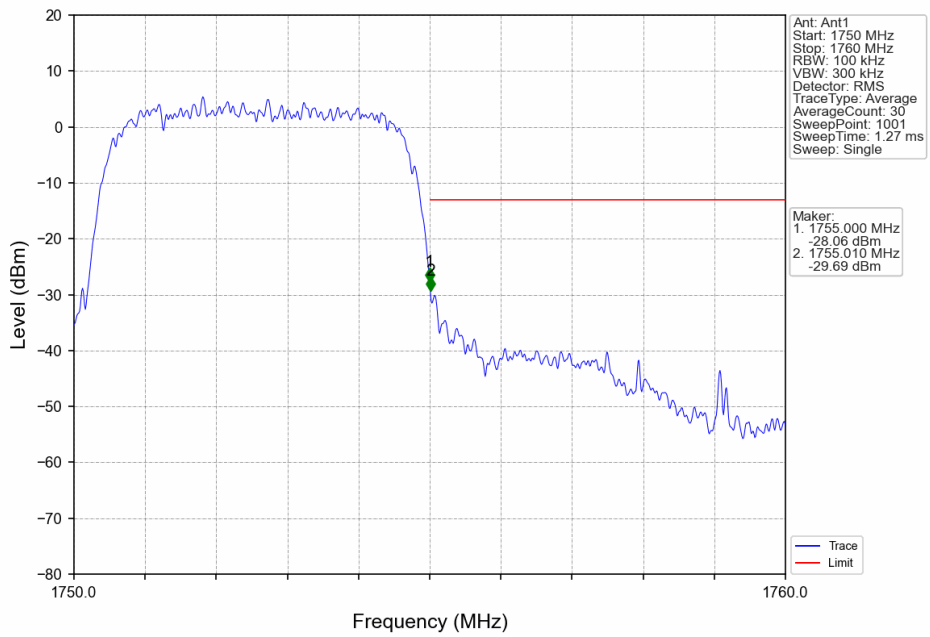
Band4\_HSUPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



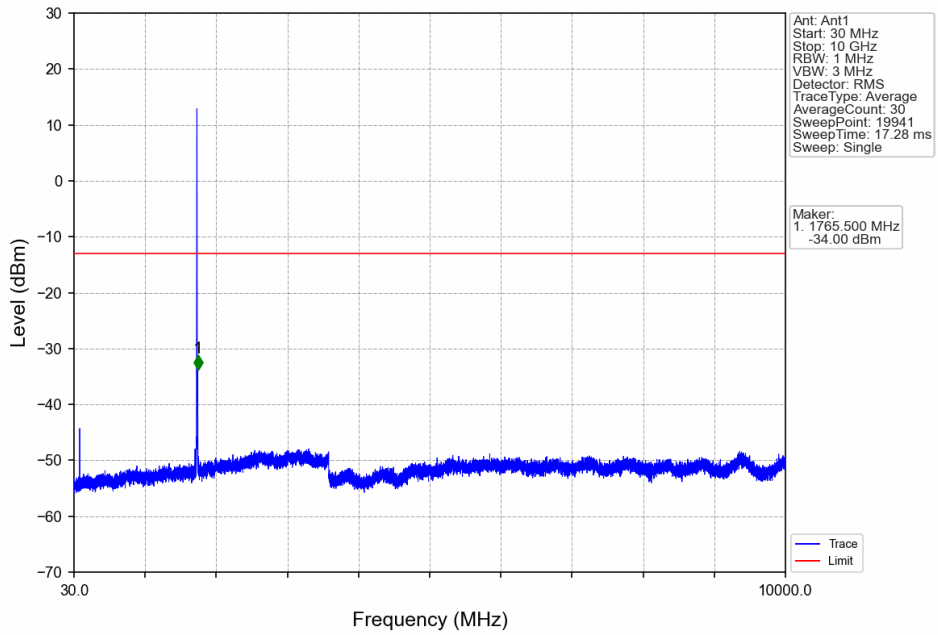
Band4\_HSUPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



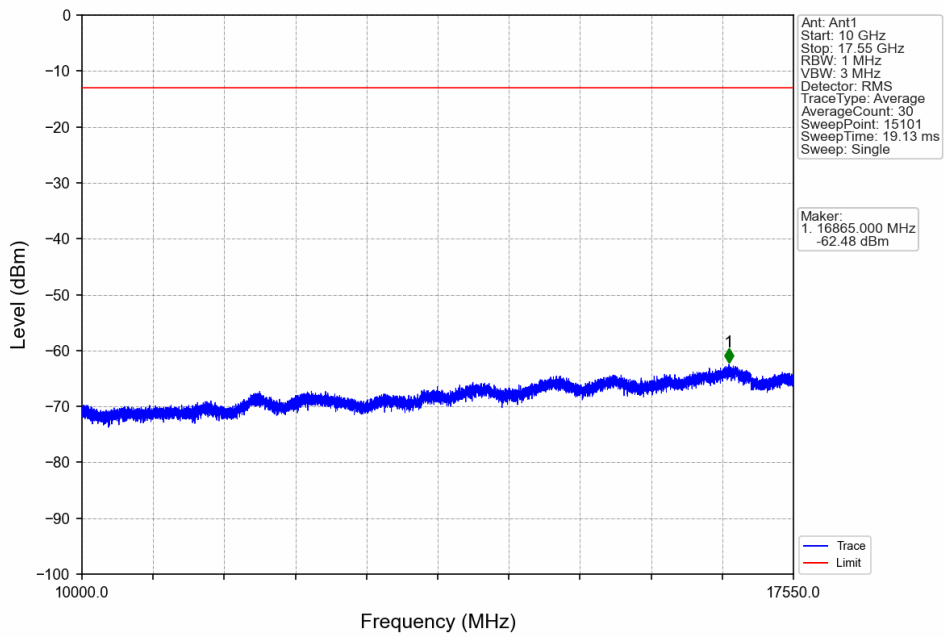
Band4\_HSUPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



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	0.1622	0.0117	ppm	4M18F9W	24E	22.10

### 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	0.1687	0.0117	ppm	4M18F9W	24E	22.27