

# 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	21.47	0.68	22.15	<=30	Pass			
			1732.6	21.26	0.68	21.94	<=30	Pass			
			1752.6	21.13	0.68	21.81	<=30	Pass			
	HSDPA		Subtest 1	1712.4	19.11	0.68	19.79	<=30	Pass		
			Subtest 2	1712.4	19.08	0.68	19.76	<=30	Pass		
			Subtest 3	1712.4	19.11	0.68	19.79	<=30	Pass		
			Subtest 4	1712.4	19.10	0.68	19.78	<=30	Pass		
			Subtest 1	1732.6	18.97	0.68	19.65	<=30	Pass		
			Subtest 2	1732.6	18.96	0.68	19.64	<=30	Pass		
			Subtest 3	1732.6	18.96	0.68	19.64	<=30	Pass		
			Subtest 4	1732.6	18.96	0.68	19.64	<=30	Pass		
			Subtest 1	1752.6	18.77	0.68	19.45	<=30	Pass		
			Subtest 2	1752.6	18.77	0.68	19.45	<=30	Pass		
			Subtest 3	1752.6	18.79	0.68	19.47	<=30	Pass		
			Subtest 4	1752.6	18.78	0.68	19.46	<=30	Pass		
			HSUPA		Subtest 1	1712.4	17.00	0.68	17.68	<=30	Pass
					Subtest 2	1712.4	17.18	0.68	17.86	<=30	Pass
					Subtest 3	1712.4	16.95	0.68	17.63	<=30	Pass
					Subtest 4	1712.4	17.18	0.68	17.86	<=30	Pass
					Subtest 5	1712.4	17.20	0.68	17.88	<=30	Pass
	Subtest 1	1732.6			16.97	0.68	17.65	<=30	Pass		
	Subtest 2	1732.6			16.98	0.68	17.66	<=30	Pass		
	Subtest 3	1732.6			16.78	0.68	17.46	<=30	Pass		
	Subtest 4	1732.6			16.81	0.68	17.49	<=30	Pass		
	Subtest 5	1732.6			16.76	0.68	17.44	<=30	Pass		
	Subtest 1	1752.6			16.85	0.68	17.53	<=30	Pass		
	Subtest 2	1752.6			16.61	0.68	17.29	<=30	Pass		
	Subtest 3	1752.6			16.33	0.68	17.01	<=30	Pass		
	Subtest 4	1752.6	16.62	0.68	17.30	<=30	Pass				
	Subtest 5	1752.6	16.66	0.68	17.34	<=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	-11.802	-0.0069	-2.5 to 2.5	Pass
			3.85	-17.352	-0.0101	-2.5 to 2.5	Pass
			4.43	-16.093	-0.0094	-2.5 to 2.5	Pass
		-30	3.85	-14.691	-0.0086	-2.5 to 2.5	Pass
		-20	3.85	-10.750	-0.0063	-2.5 to 2.5	Pass
		-10	3.85	-12.932	-0.0076	-2.5 to 2.5	Pass
		0	3.85	-13.175	-0.0077	-2.5 to 2.5	Pass
		10	3.85	-12.209	-0.0071	-2.5 to 2.5	Pass
		30	3.85	-10.664	-0.0062	-2.5 to 2.5	Pass
		40	3.85	-9.356	-0.0055	-2.5 to 2.5	Pass
	50	3.85	-10.235	-0.0060	-2.5 to 2.5	Pass	
	1732.6	20	3.27	-7.360	-0.0042	-2.5 to 2.5	Pass
			3.85	-10.808	-0.0062	-2.5 to 2.5	Pass
			4.43	-11.144	-0.0064	-2.5 to 2.5	Pass
		-30	3.85	-7.403	-0.0043	-2.5 to 2.5	Pass
		-20	3.85	-12.839	-0.0074	-2.5 to 2.5	Pass
		-10	3.85	-10.149	-0.0059	-2.5 to 2.5	Pass
		0	3.85	-11.873	-0.0069	-2.5 to 2.5	Pass
		10	3.85	-12.488	-0.0072	-2.5 to 2.5	Pass
		30	3.85	-9.921	-0.0057	-2.5 to 2.5	Pass
		40	3.85	-11.759	-0.0068	-2.5 to 2.5	Pass
	50	3.85	-10.815	-0.0062	-2.5 to 2.5	Pass	
	1752.6	20	3.27	-9.456	-0.0054	-2.5 to 2.5	Pass
			3.85	-8.898	-0.0051	-2.5 to 2.5	Pass
			4.43	-9.212	-0.0053	-2.5 to 2.5	Pass
		-30	3.85	-6.115	-0.0035	-2.5 to 2.5	Pass
		-20	3.85	-5.443	-0.0031	-2.5 to 2.5	Pass
		-10	3.85	-10.350	-0.0059	-2.5 to 2.5	Pass
		0	3.85	-8.376	-0.0048	-2.5 to 2.5	Pass
		10	3.85	-8.912	-0.0051	-2.5 to 2.5	Pass
30		3.85	-9.913	-0.0057	-2.5 to 2.5	Pass	
40		3.85	-10.664	-0.0061	-2.5 to 2.5	Pass	
50	3.85	-6.230	-0.0036	-2.5 to 2.5	Pass		
HSDPA	1712.4	20	3.27	-16.487	-0.0096	-2.5 to 2.5	Pass
			3.85	-18.754	-0.0110	-2.5 to 2.5	Pass
			4.43	-23.932	-0.0140	-2.5 to 2.5	Pass
		-30	3.85	-18.017	-0.0105	-2.5 to 2.5	Pass
		-20	3.85	-19.720	-0.0115	-2.5 to 2.5	Pass
		-10	3.85	-17.588	-0.0103	-2.5 to 2.5	Pass
		0	3.85	-15.221	-0.0089	-2.5 to 2.5	Pass
		10	3.85	-15.221	-0.0089	-2.5 to 2.5	Pass
		30	3.85	-18.375	-0.0107	-2.5 to 2.5	Pass
		40	3.85	-19.140	-0.0112	-2.5 to 2.5	Pass
	50	3.85	-19.305	-0.0113	-2.5 to 2.5	Pass	
	1732.6	20	3.27	-14.820	-0.0086	-2.5 to 2.5	Pass
			3.85	-17.338	-0.0100	-2.5 to 2.5	Pass
			4.43	-22.173	-0.0128	-2.5 to 2.5	Pass
		-30	3.85	-16.501	-0.0095	-2.5 to 2.5	Pass
		-20	3.85	-14.012	-0.0081	-2.5 to 2.5	Pass
		-10	3.85	-18.346	-0.0106	-2.5 to 2.5	Pass
		0	3.85	-18.497	-0.0107	-2.5 to 2.5	Pass
		10	3.85	-17.917	-0.0103	-2.5 to 2.5	Pass
		30	3.85	-13.490	-0.0078	-2.5 to 2.5	Pass
40		3.85	-17.316	-0.0100	-2.5 to 2.5	Pass	
50	3.85	-16.000	-0.0092	-2.5 to 2.5	Pass		

	1752.6	20	3.27	-11.444	-0.0065	-2.5 to 2.5	Pass
			3.85	-14.641	-0.0084	-2.5 to 2.5	Pass
			4.43	-17.216	-0.0098	-2.5 to 2.5	Pass
		-30	3.85	-14.420	-0.0082	-2.5 to 2.5	Pass
		-20	3.85	-14.148	-0.0081	-2.5 to 2.5	Pass
		-10	3.85	-9.162	-0.0052	-2.5 to 2.5	Pass
		0	3.85	-22.774	-0.0130	-2.5 to 2.5	Pass
		10	3.85	-17.238	-0.0098	-2.5 to 2.5	Pass
		30	3.85	-15.793	-0.0090	-2.5 to 2.5	Pass
		40	3.85	-14.527	-0.0083	-2.5 to 2.5	Pass
50	3.85	-17.660	-0.0101	-2.5 to 2.5	Pass		
HSUPA	1712.4	20	3.27	-19.326	-0.0113	-2.5 to 2.5	Pass
			3.85	-17.037	-0.0099	-2.5 to 2.5	Pass
			4.43	-15.714	-0.0092	-2.5 to 2.5	Pass
		-30	3.85	-14.498	-0.0085	-2.5 to 2.5	Pass
		-20	3.85	-13.211	-0.0077	-2.5 to 2.5	Pass
		-10	3.85	-17.409	-0.0102	-2.5 to 2.5	Pass
		0	3.85	-14.112	-0.0082	-2.5 to 2.5	Pass
		10	3.85	-15.743	-0.0092	-2.5 to 2.5	Pass
		30	3.85	-12.023	-0.0070	-2.5 to 2.5	Pass
		40	3.85	-15.049	-0.0088	-2.5 to 2.5	Pass
	50	3.85	-11.094	-0.0065	-2.5 to 2.5	Pass	
	1732.6	20	3.27	-6.673	-0.0039	-2.5 to 2.5	Pass
			3.85	-14.434	-0.0083	-2.5 to 2.5	Pass
			4.43	-19.720	-0.0114	-2.5 to 2.5	Pass
		-30	3.85	-12.352	-0.0071	-2.5 to 2.5	Pass
		-20	3.85	-12.760	-0.0074	-2.5 to 2.5	Pass
		-10	3.85	-14.391	-0.0083	-2.5 to 2.5	Pass
		0	3.85	-16.487	-0.0095	-2.5 to 2.5	Pass
		10	3.85	-15.771	-0.0091	-2.5 to 2.5	Pass
		30	3.85	-13.125	-0.0076	-2.5 to 2.5	Pass
		40	3.85	-13.146	-0.0076	-2.5 to 2.5	Pass
	50	3.85	-8.168	-0.0047	-2.5 to 2.5	Pass	
	1752.6	20	3.27	-8.948	-0.0051	-2.5 to 2.5	Pass
			3.85	-11.637	-0.0066	-2.5 to 2.5	Pass
			4.43	-13.483	-0.0077	-2.5 to 2.5	Pass
		-30	3.85	-9.806	-0.0056	-2.5 to 2.5	Pass
		-20	3.85	-11.830	-0.0067	-2.5 to 2.5	Pass
		-10	3.85	-9.298	-0.0053	-2.5 to 2.5	Pass
		0	3.85	-8.976	-0.0051	-2.5 to 2.5	Pass
		10	3.85	-13.497	-0.0077	-2.5 to 2.5	Pass
30		3.85	-7.625	-0.0044	-2.5 to 2.5	Pass	
40		3.85	-10.099	-0.0058	-2.5 to 2.5	Pass	
50	3.85	-8.812	-0.0050	-2.5 to 2.5	Pass		

### 3. Modulation Characteristics

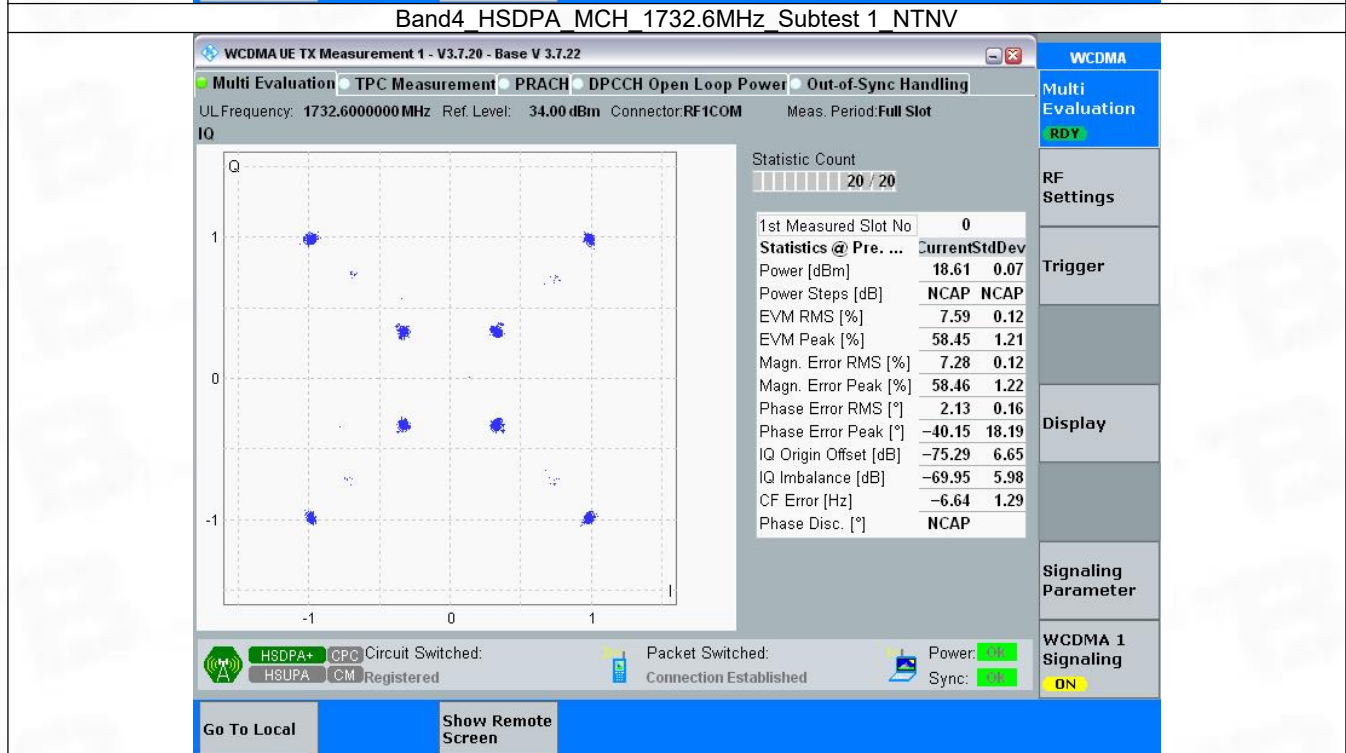
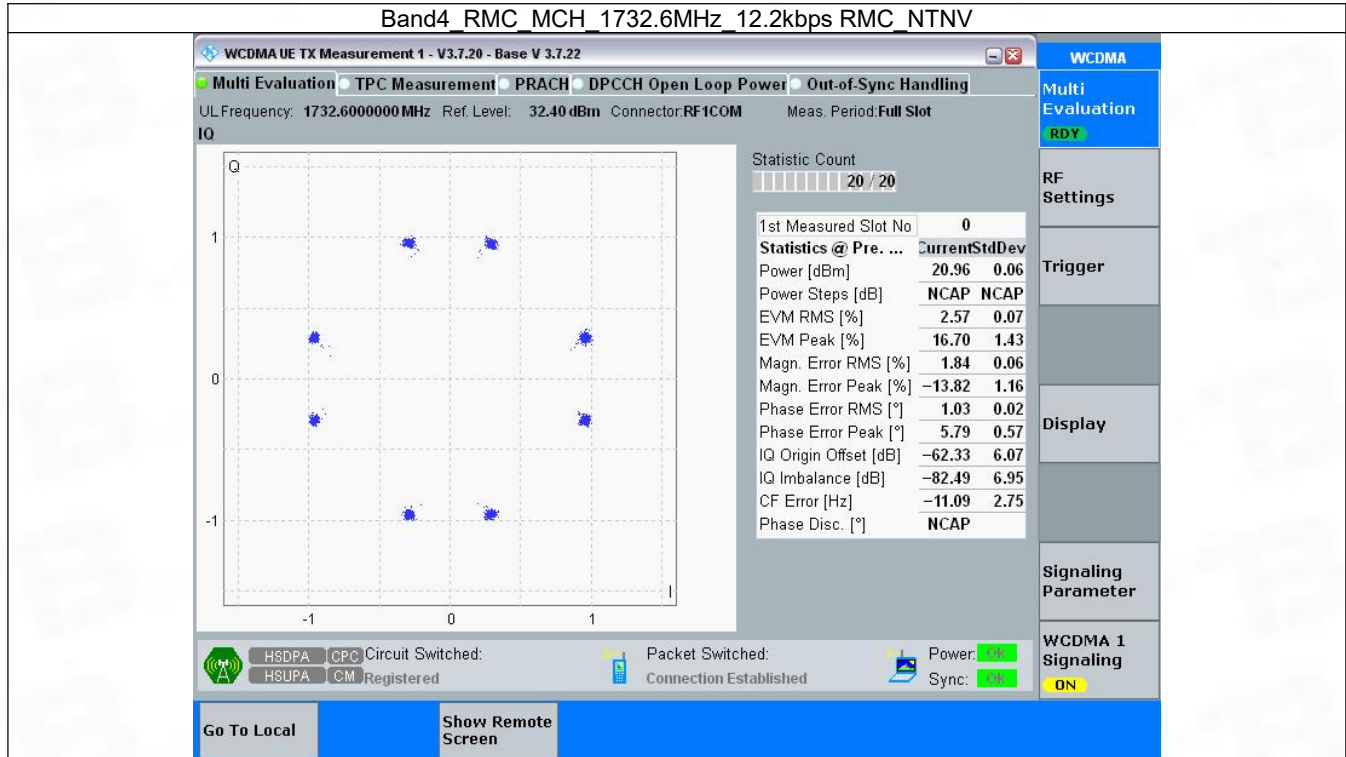
#### 3.1 Band4

##### 3.1.1 Test Result

Band: 4
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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: 34.20 dBm Connector: RF1COM Meas. Period: Full Slot

WCDMA

Multi Evaluation

RDY

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

IQ

Statistic Count

20 / 20

1st Measured Slot No	0
Statistics @ Pre. ...	CurrentStdDev
Power [dBm]	18.04 0.75
Power Steps [dB]	NCAP NCAP
EVM RMS [%]	3.30 0.47
EVM Peak [%]	32.73 10.94
Magn. Error RMS [%]	2.83 0.63
Magn. Error Peak [%]	32.71 11.41
Phase Error RMS [°]	71.40 34.84
Phase Error Peak [°]	-179.93 87.09
IQ Origin Offset [dB]	-67.07 4.15
IQ Imbalance [dB]	-69.82 3.71
CF Error [Hz]	-8.51 4.21
Phase Disc. [°]	NCAP

HSDPA+ CPC Circuit Switched: ON

HSUPA CM Registered ON

Packet Switched: ON

Connection Established ON

Power: ON

Sync: ON

Go To Local

Show Remote Screen

WCDMA 1 Signaling

ON

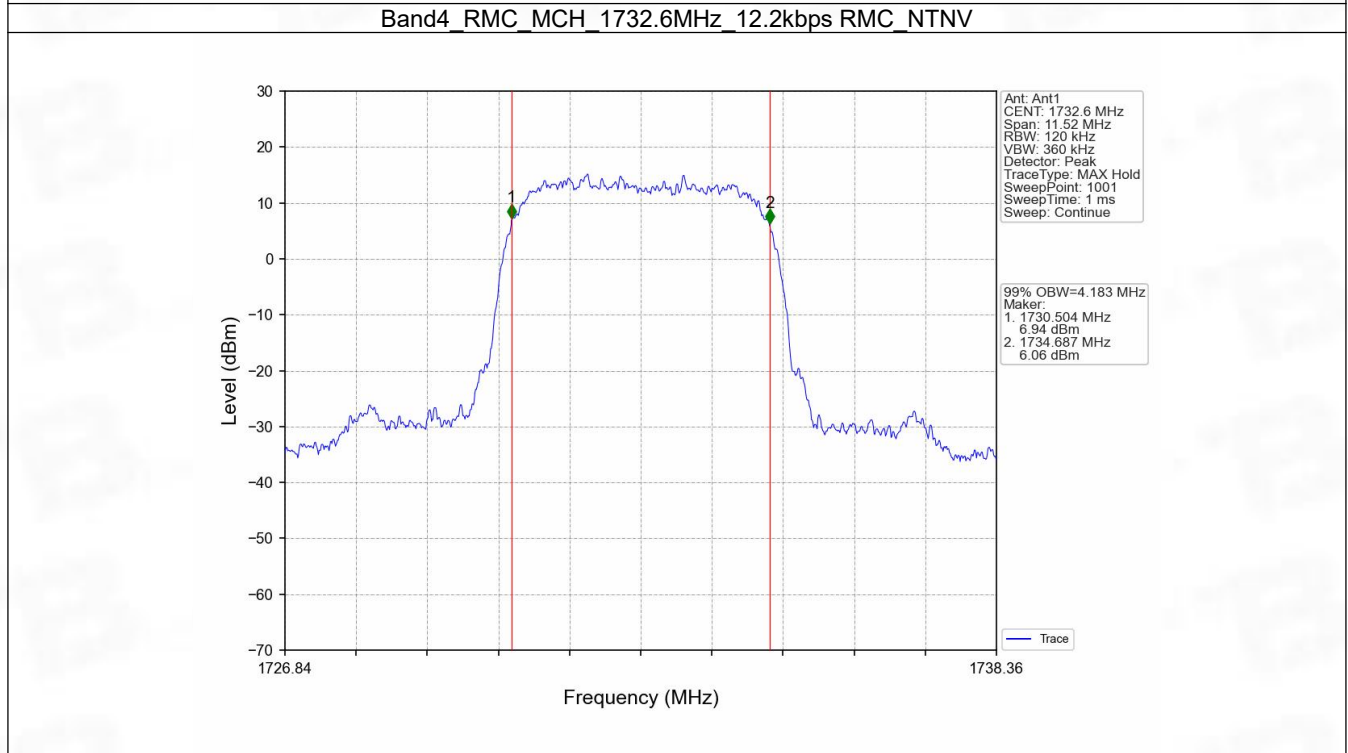
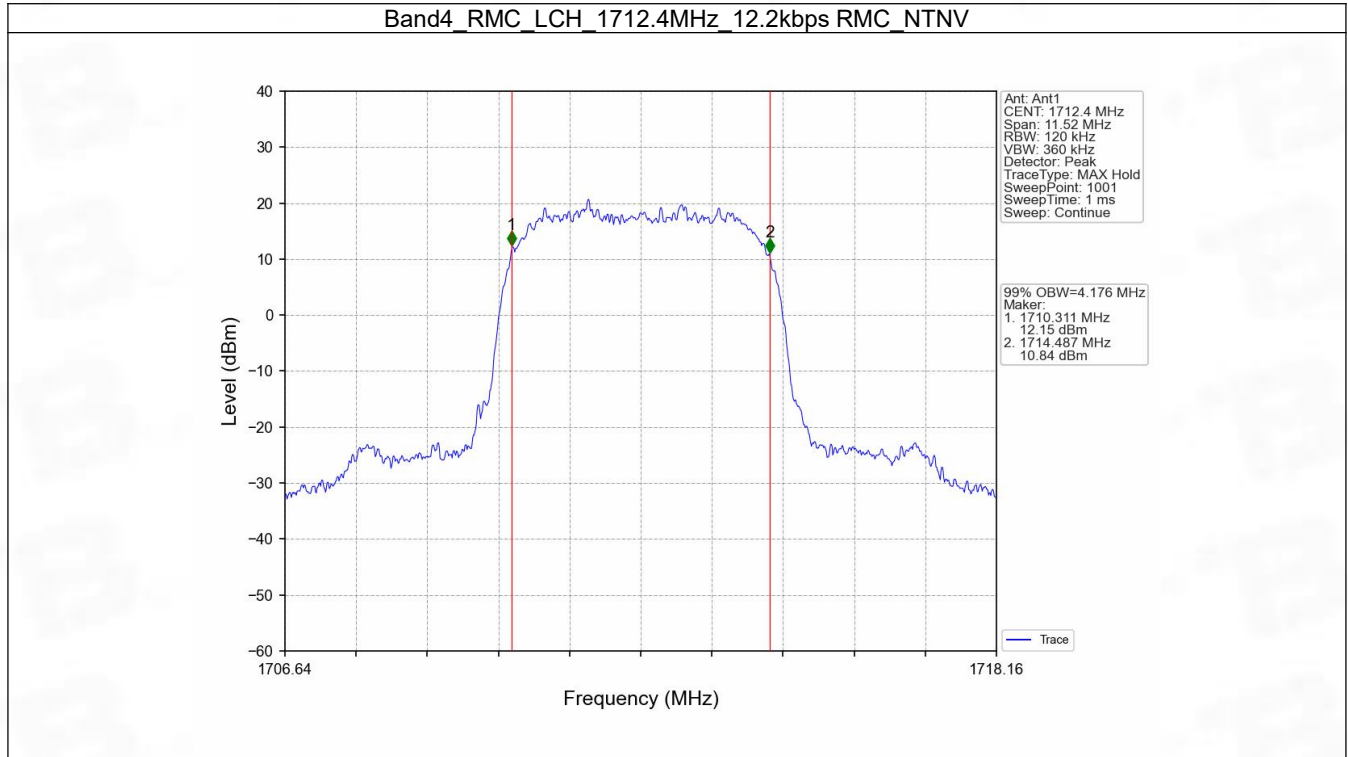
## 4. 99% & 26dB Bandwidth

### 4.1 Band4\_OBW

#### 4.1.1 Test Result

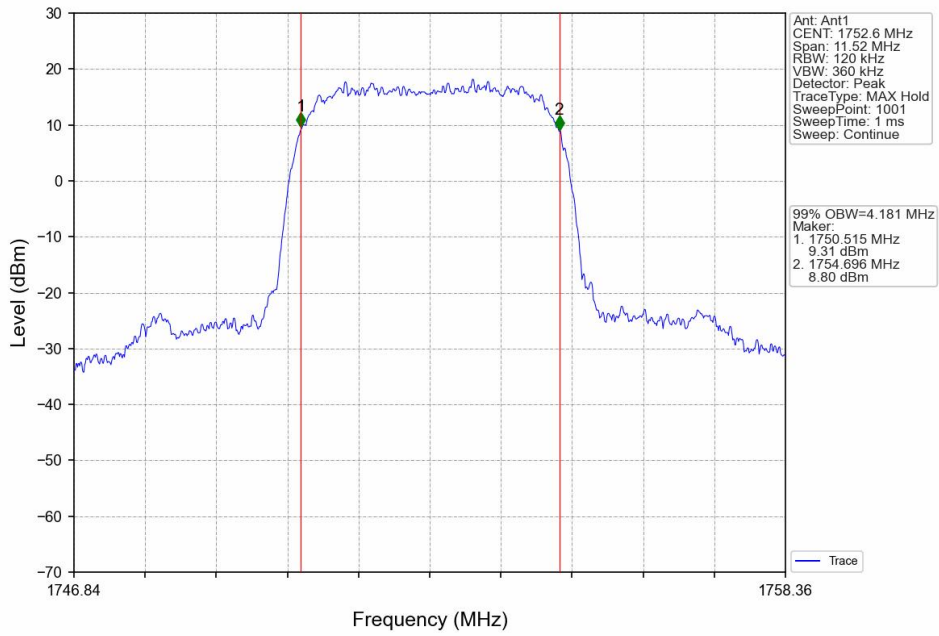
Band: 4					
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)	Verdict
	Network	Subset		Result	
NTNV	RMC	12.2kbps RMC	1712.4	4.176	Pass
			1732.6	4.183	Pass
			1752.6	4.181	Pass
	HSDPA	Subtest 1	1712.4	4.206	Pass
			1732.6	4.202	Pass
			1752.6	4.188	Pass
	HSUPA	Subtest 1	1712.4	4.205	Pass
			1732.6	4.219	Pass
			1752.6	4.182	Pass

### 4.1.2 Test Graph

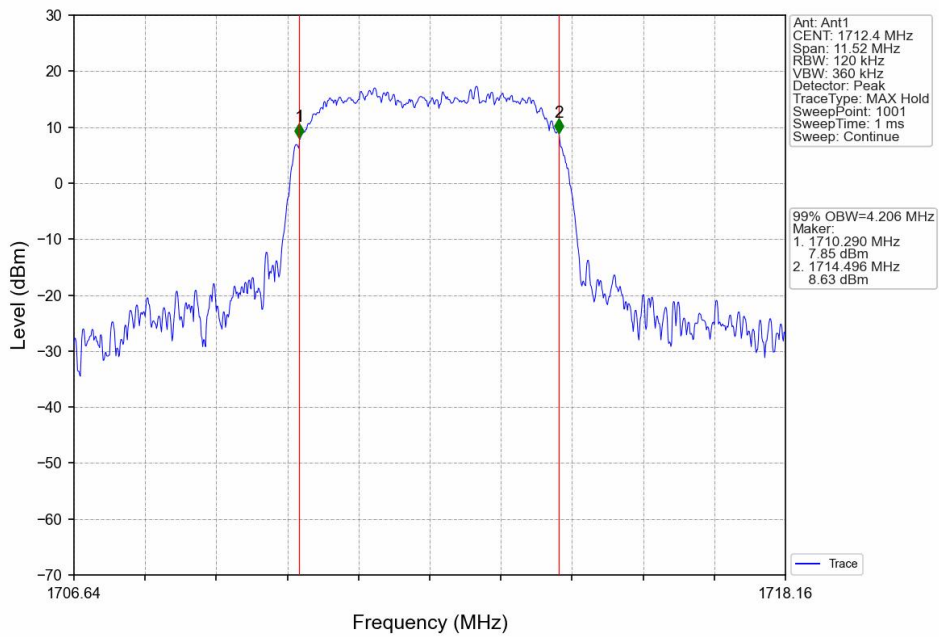




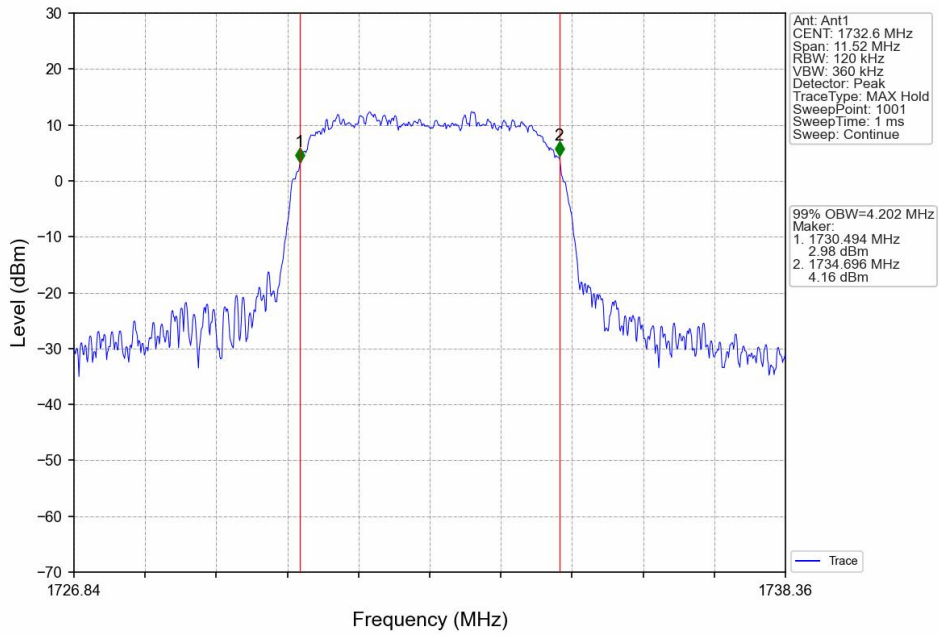
Band4\_RMC\_HCH\_1752.6MHz\_12.2kbps\_RMC\_NTNV



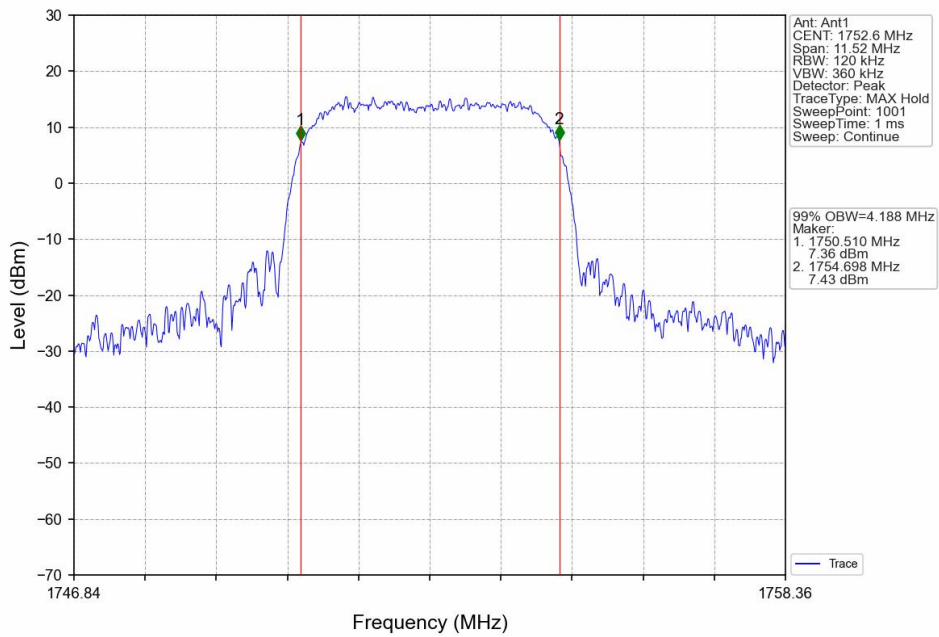
Band4\_HSDPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



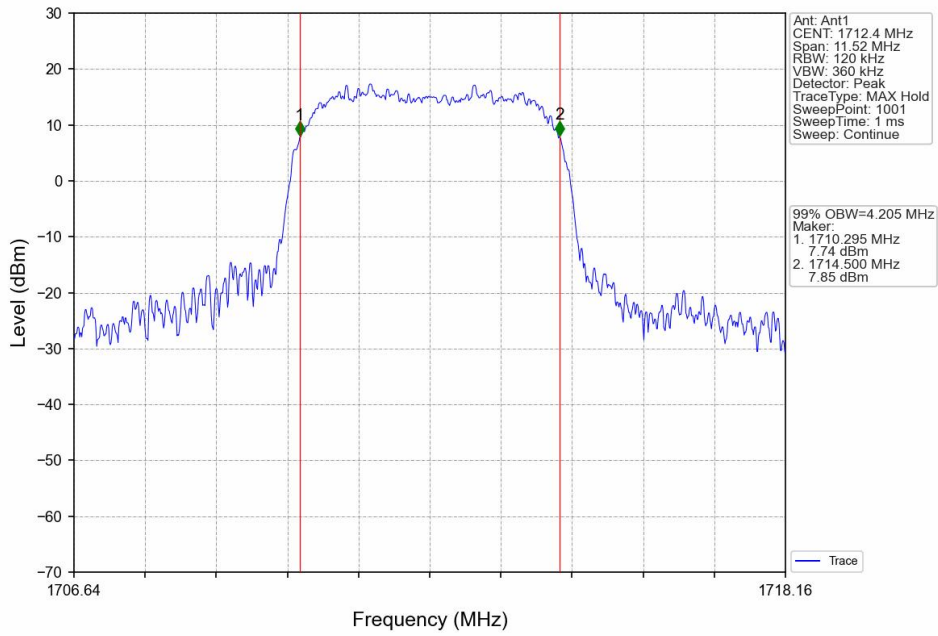
Band4\_HSDPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



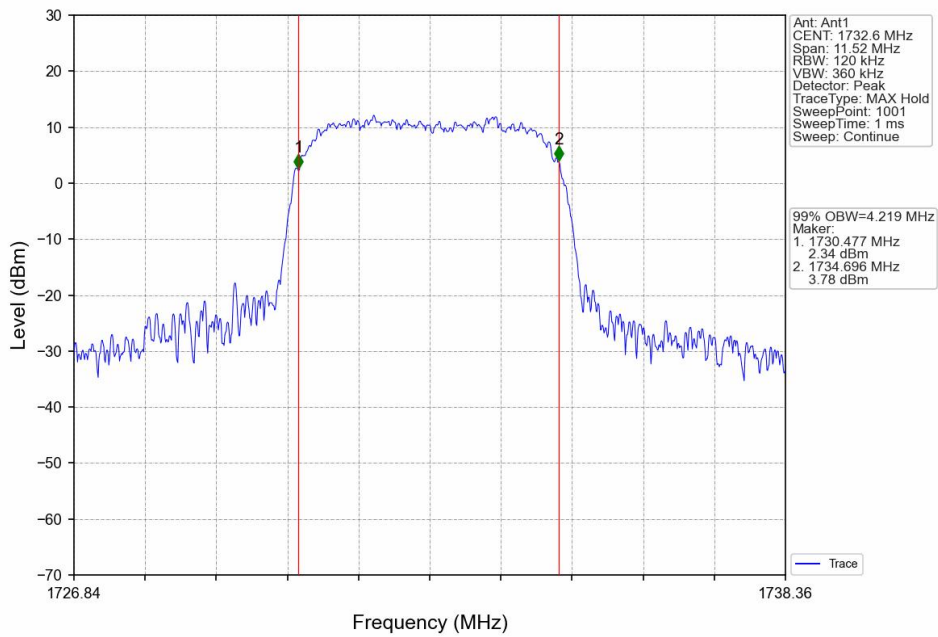
Band4\_HSDPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



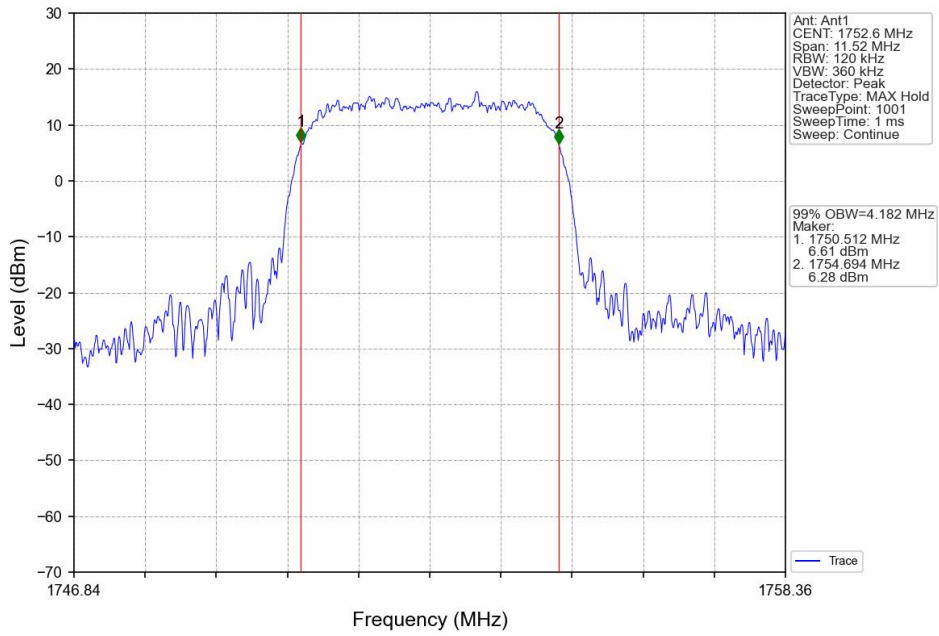
Band4\_HSUPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



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



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

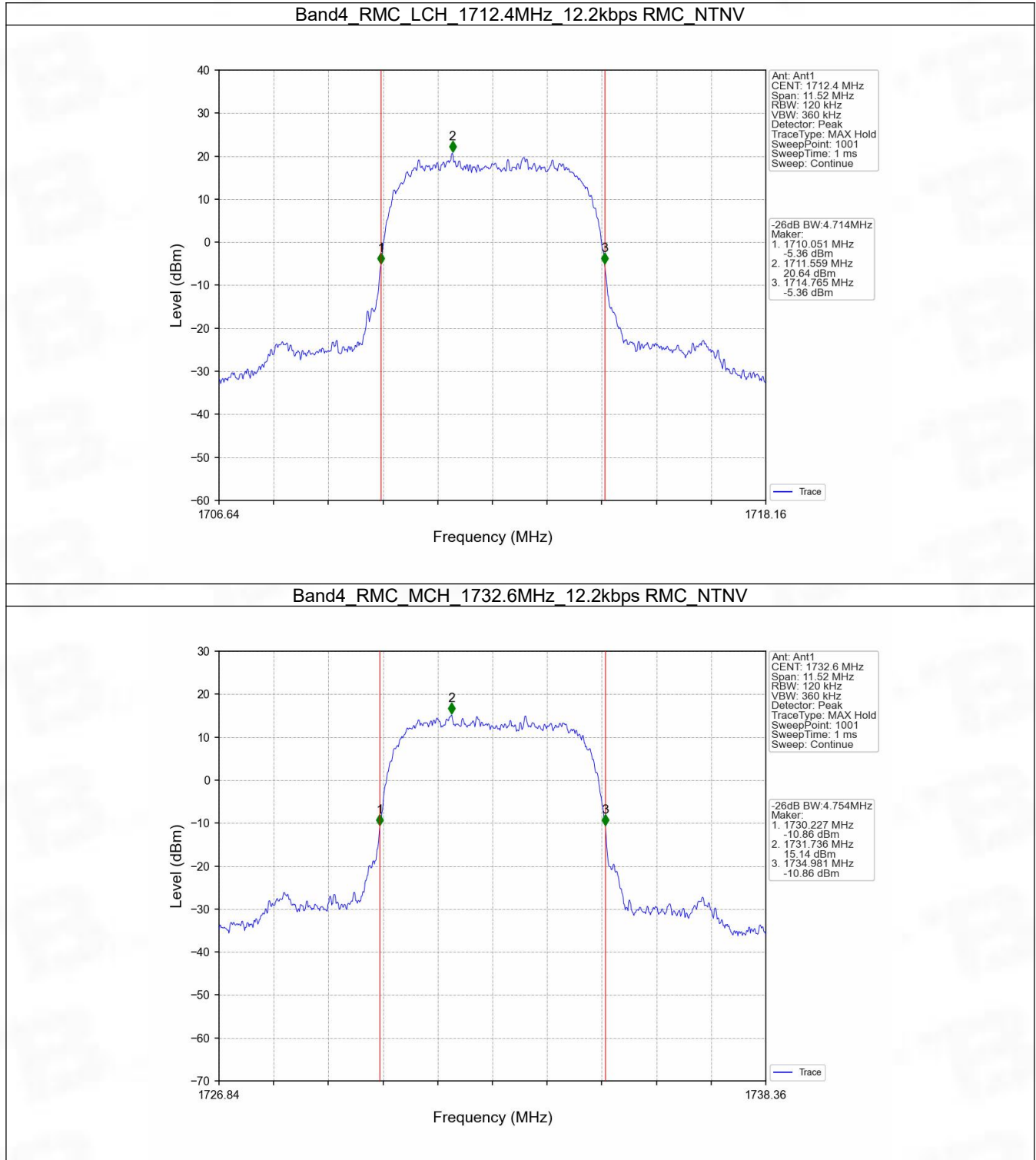


## 4.2 Band4\_XDB

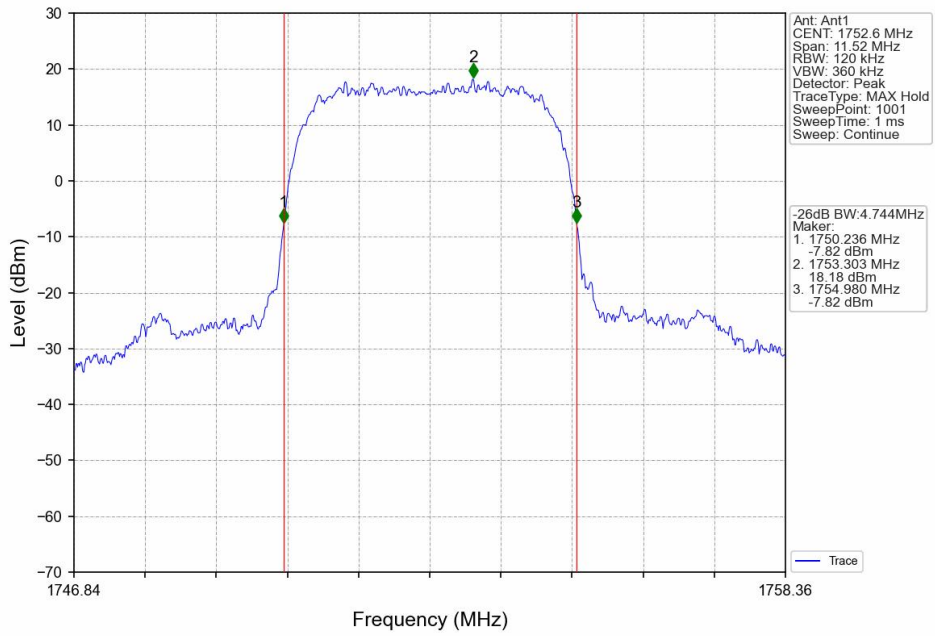
### 4.2.1 Test Result

Band: 4					
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)	Verdict
	Network	Subset		Result	
NTNV	RMC	12.2kbps RMC	1712.4	4.714	Pass
			1732.6	4.754	Pass
			1752.6	4.744	Pass
	HSDPA	Subtest 1	1712.4	4.733	Pass
			1732.6	4.752	Pass
			1752.6	4.747	Pass
	HSUPA	Subtest 1	1712.4	4.740	Pass
			1732.6	4.770	Pass
			1752.6	4.734	Pass

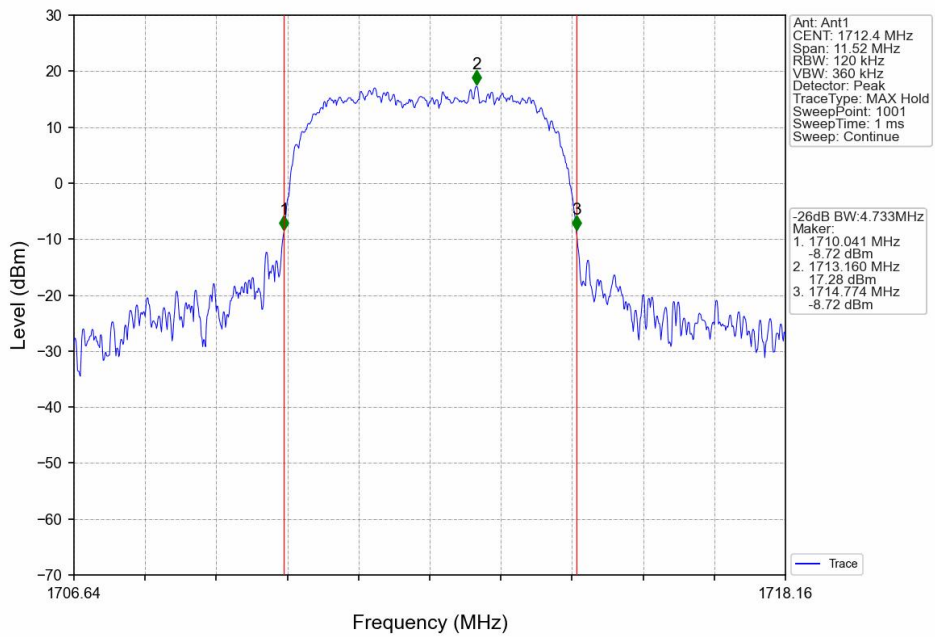
## 4.2.2 Test Graph



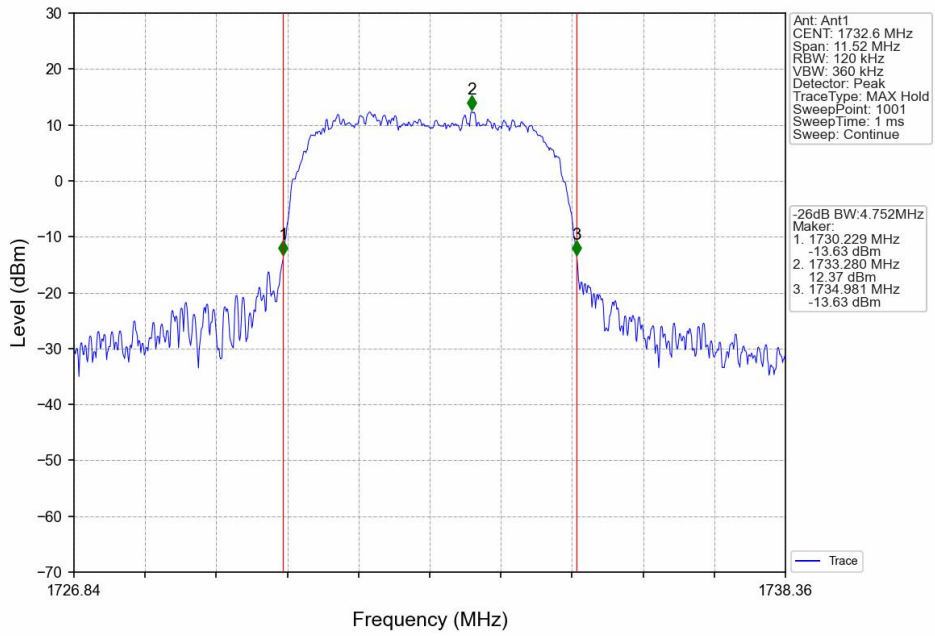
Band4\_RMC\_HCH\_1752.6MHz\_12.2kbps\_RMC\_NTNV



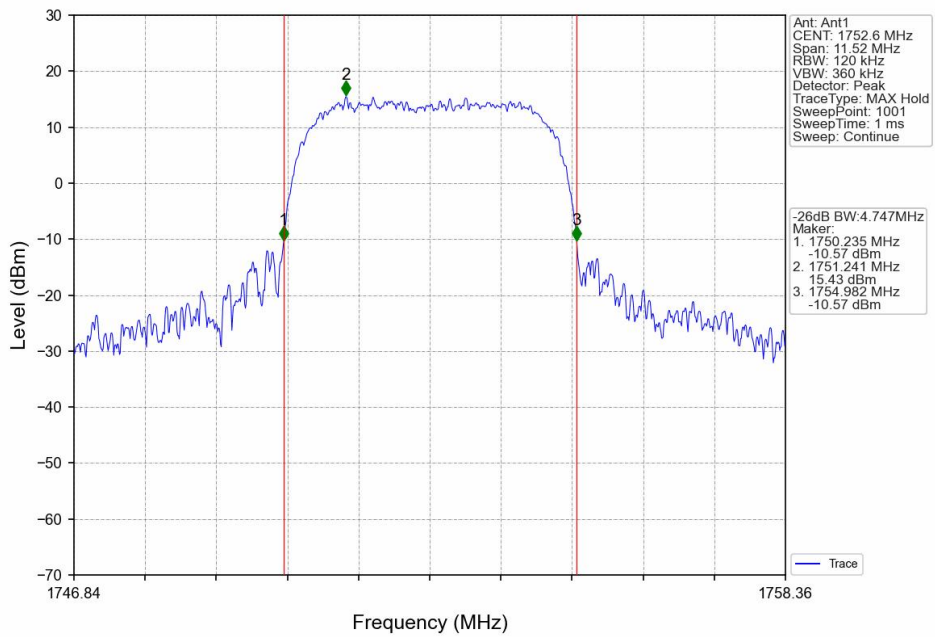
Band4\_HSDPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



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

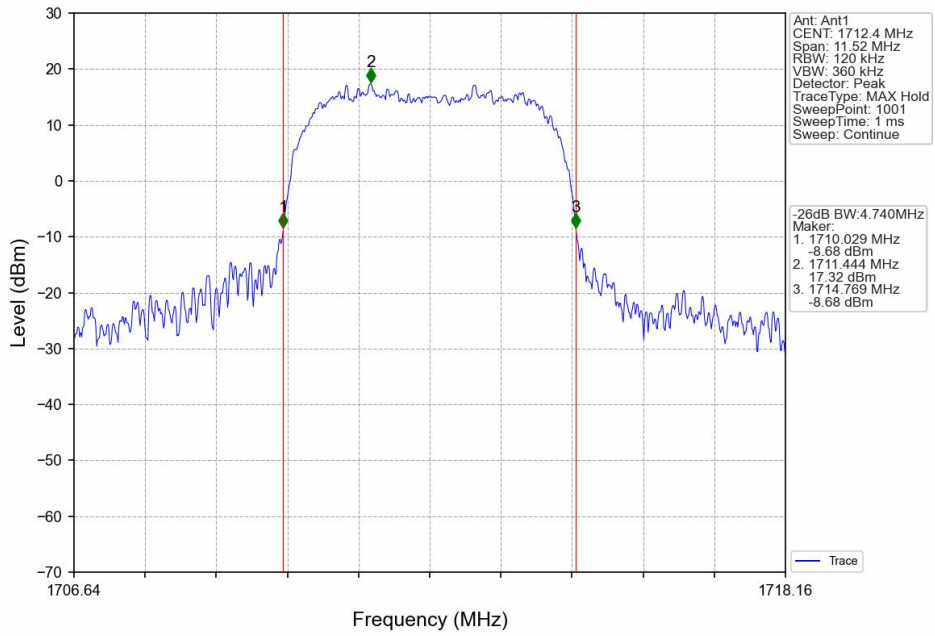


Band4\_HSDPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV

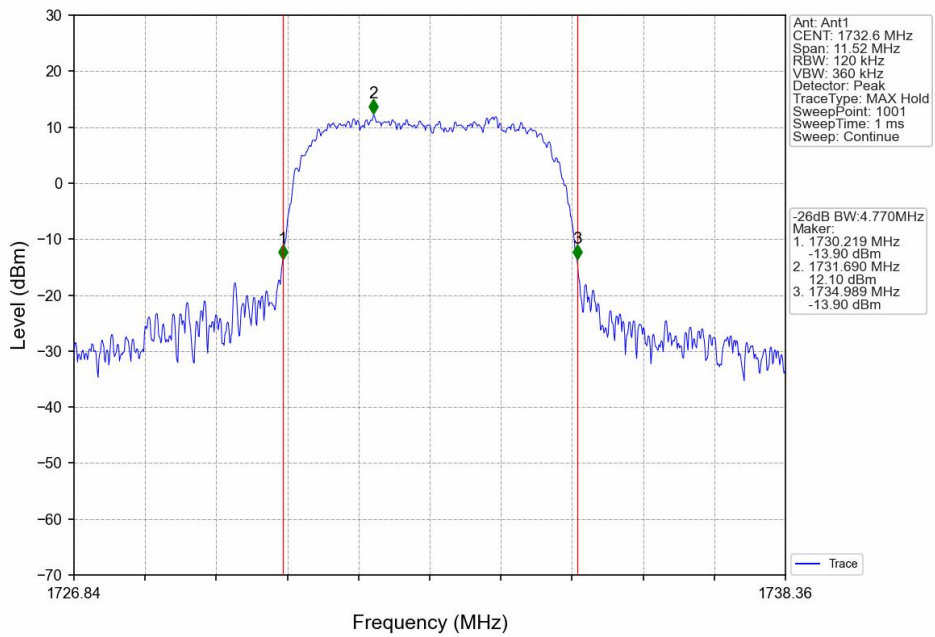




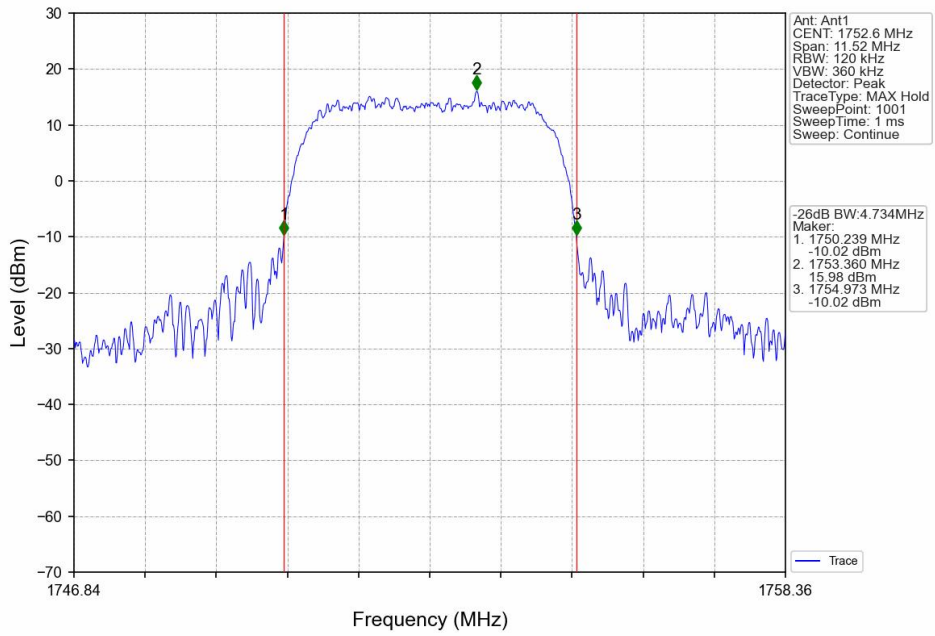
Band4\_HSUPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



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



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



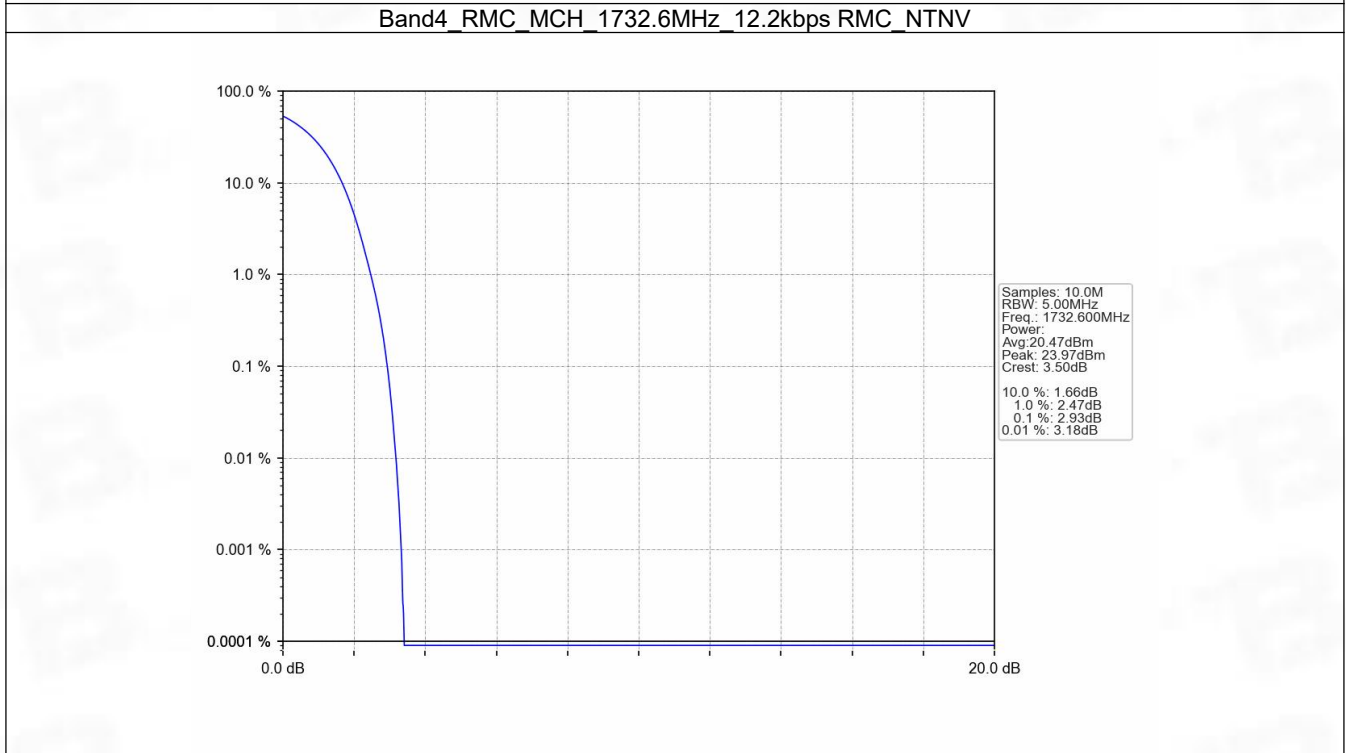
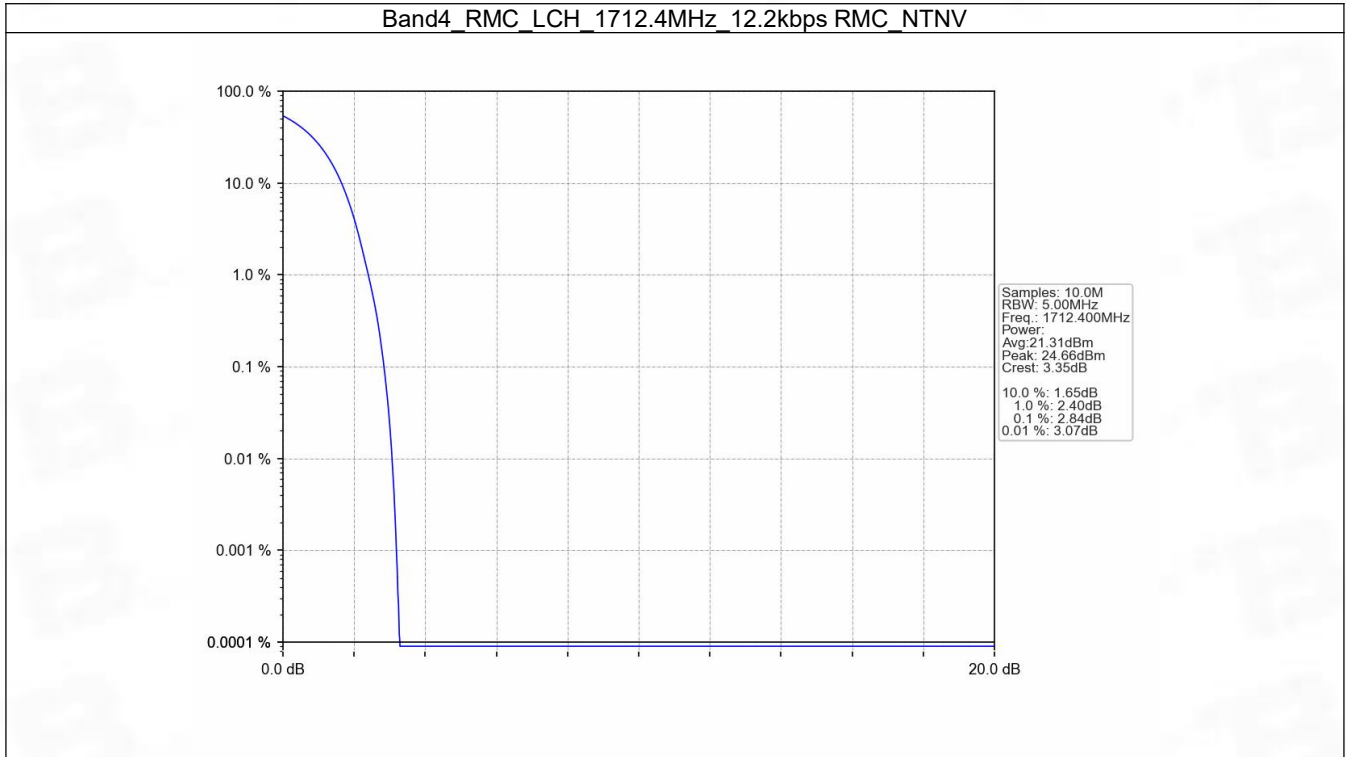
## 5. Peak-Average Ratio

### 5.1 Band4

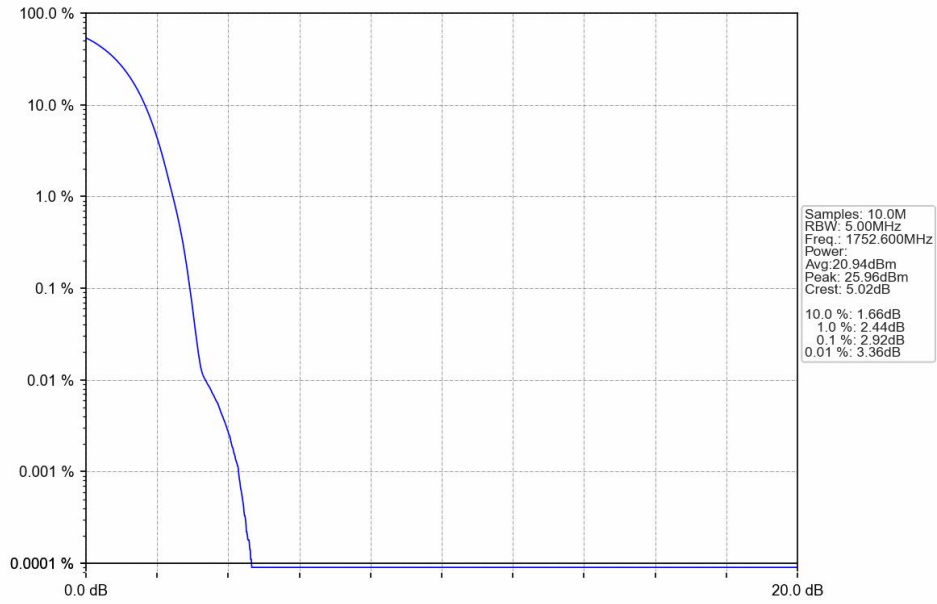
#### 5.1.1 Test Result

Band: 4						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	1712.4	2.84	<=13	Pass
			1732.6	2.93	<=13	Pass
			1752.6	2.92	<=13	Pass
	HSDPA	Subtest 1	1712.4	6.06	<=13	Pass
			1732.6	6.01	<=13	Pass
			1752.6	6.02	<=13	Pass
	HSUPA	Subtest 1	1712.4	4.70	<=13	Pass
			1732.6	4.74	<=13	Pass
			1752.6	4.69	<=13	Pass

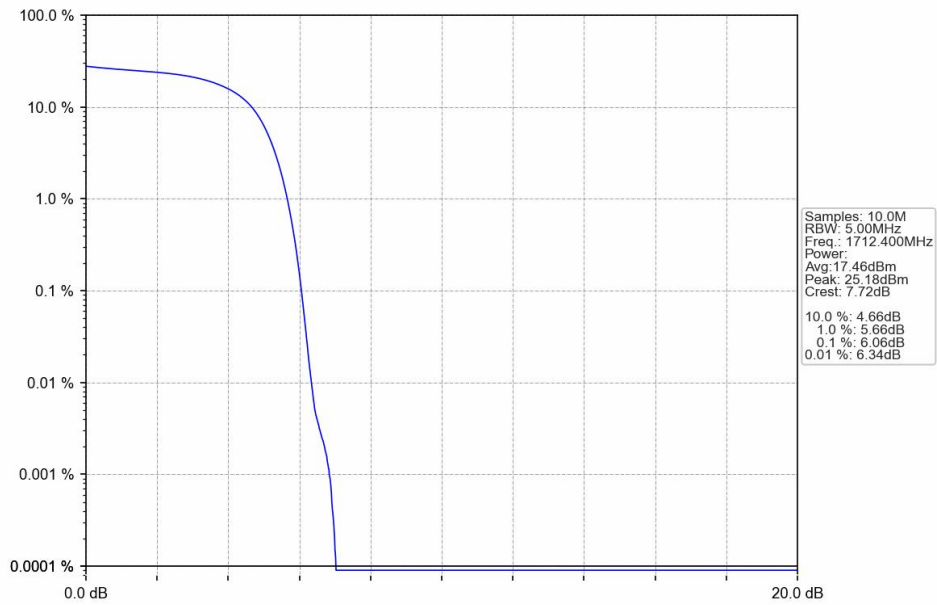
### 5.1.2 Test Graph



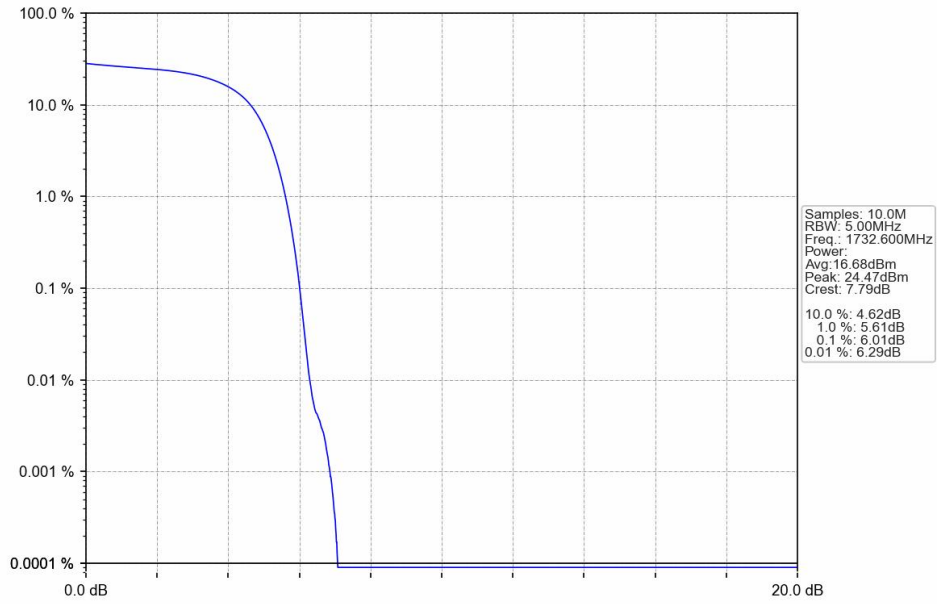
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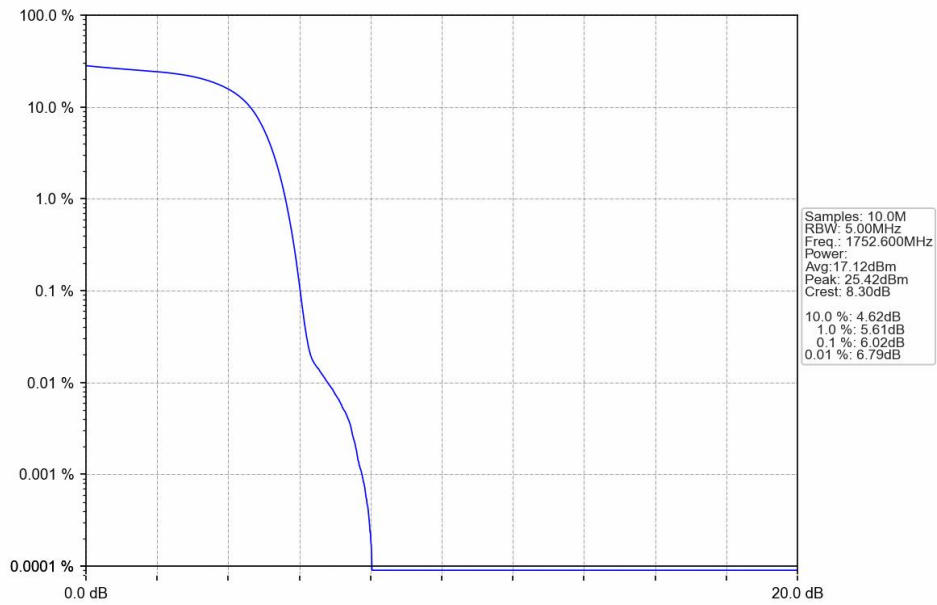
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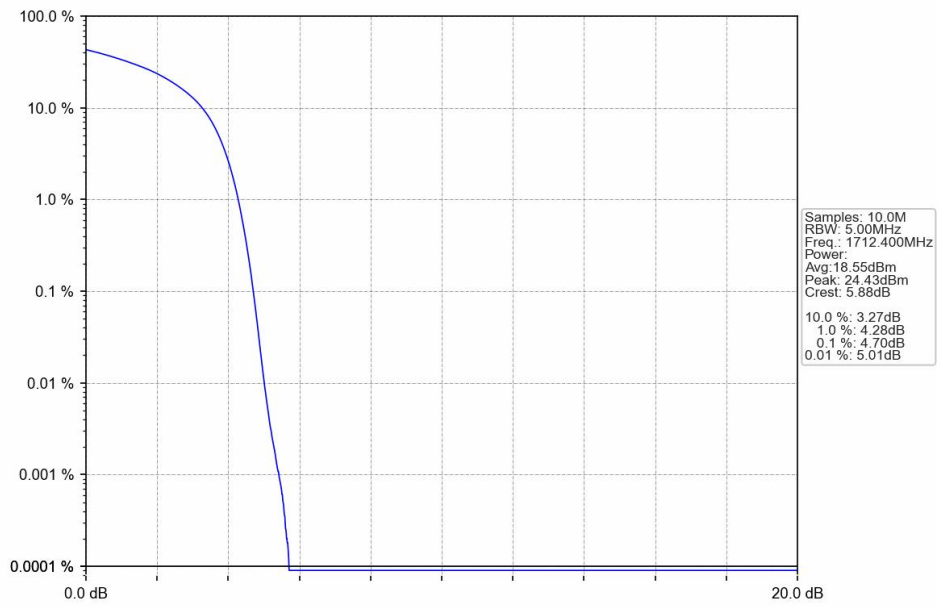
Band4\_HSDPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



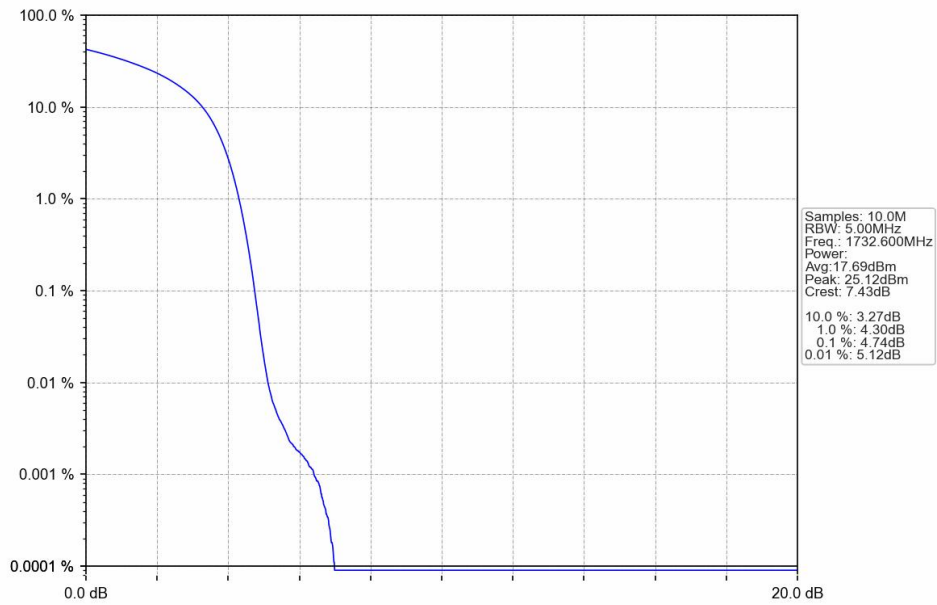
Band4\_HSDPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



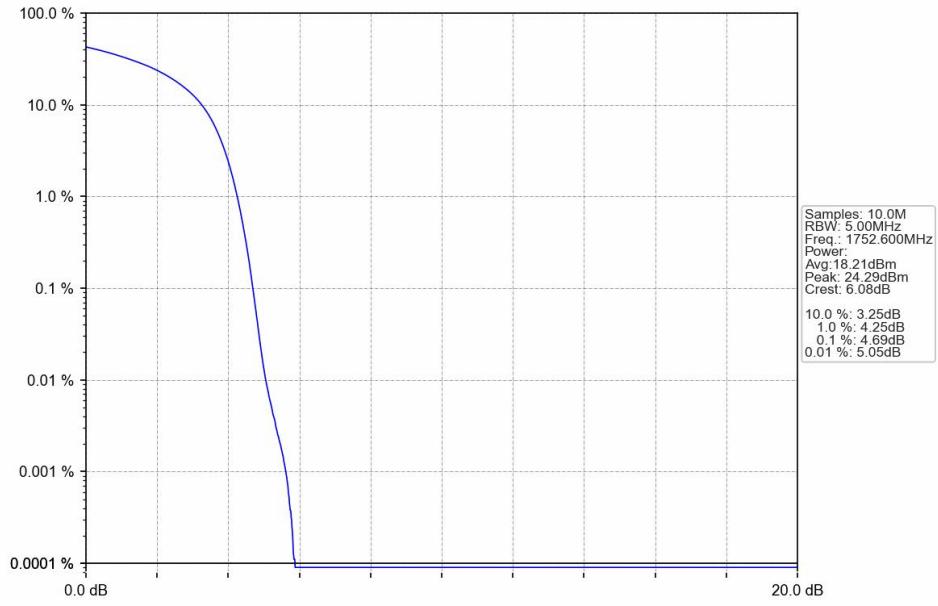
Band4\_HSUPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



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



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





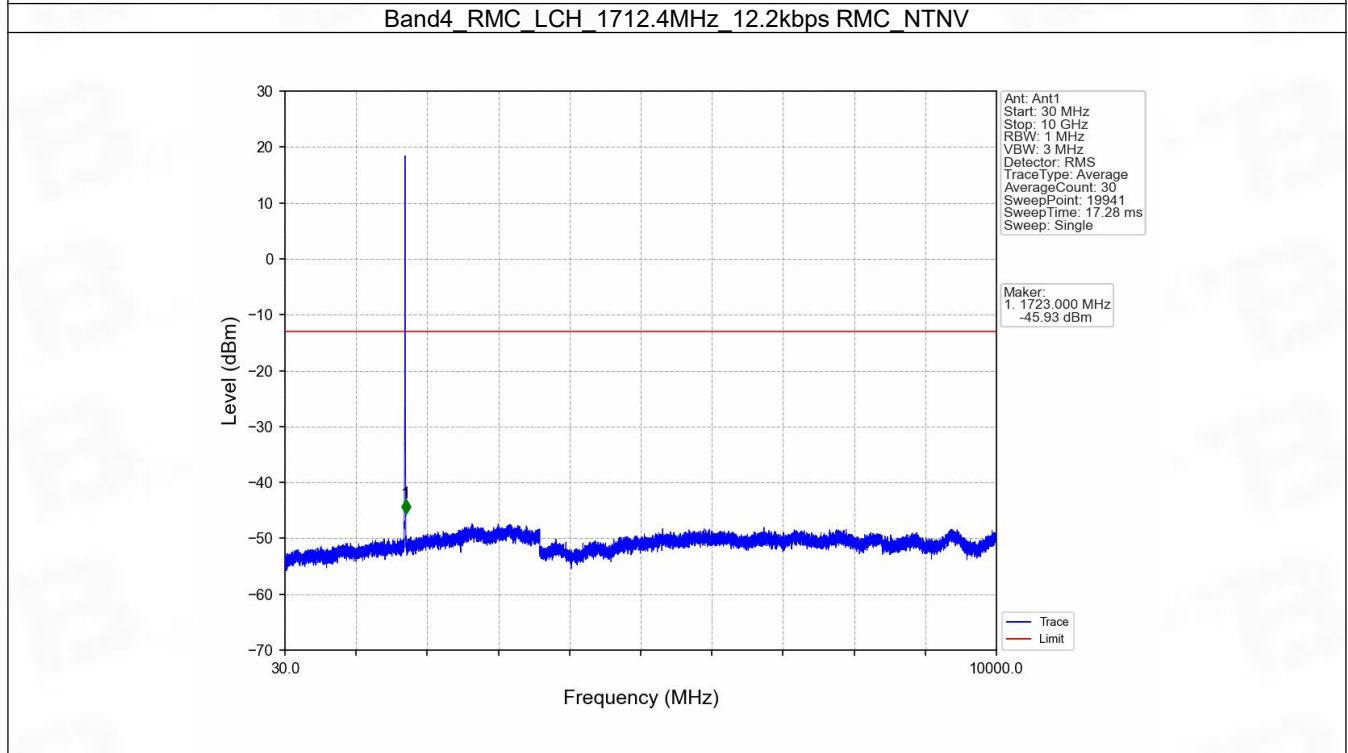
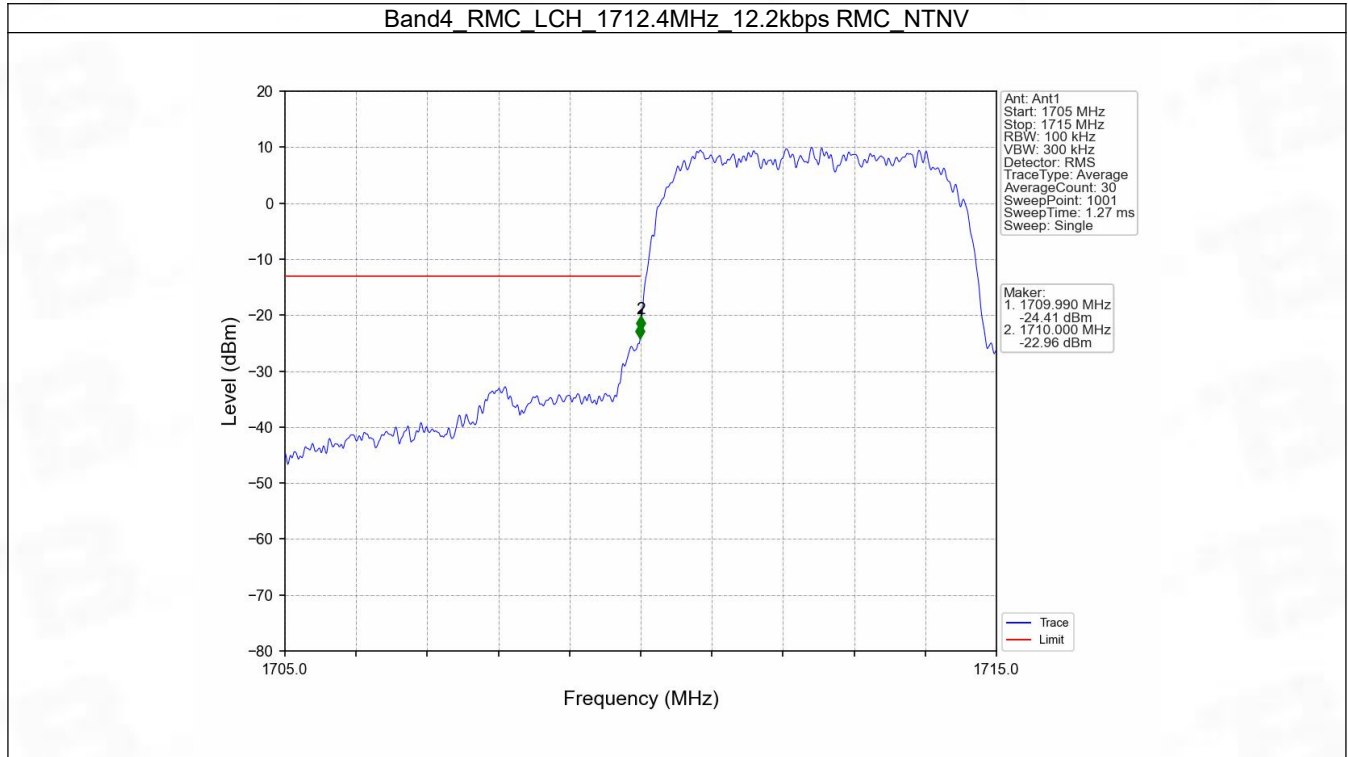
## 6. Spurious Emission

### 6.1 Band4

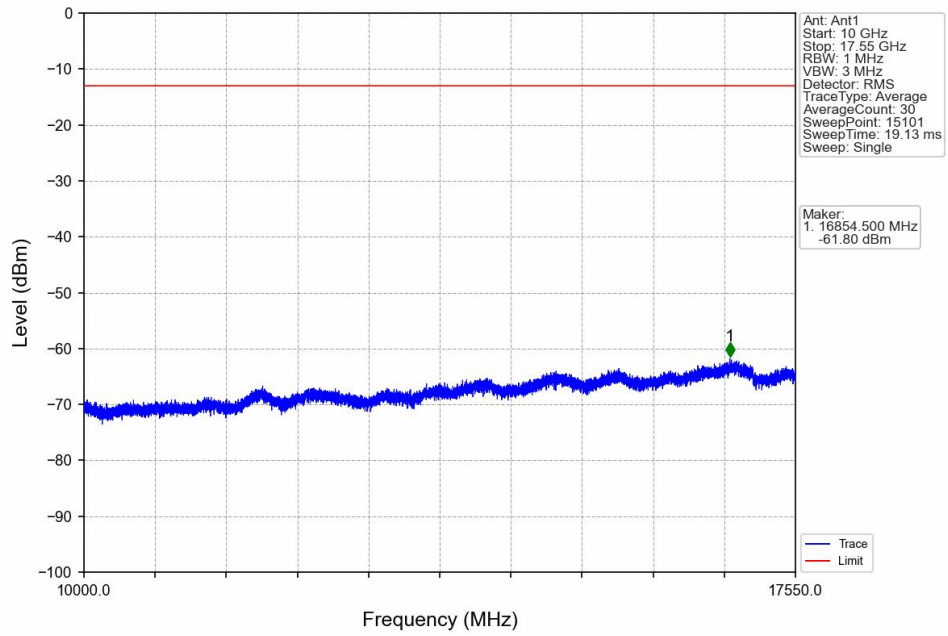
#### 6.1.1 Test Result

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

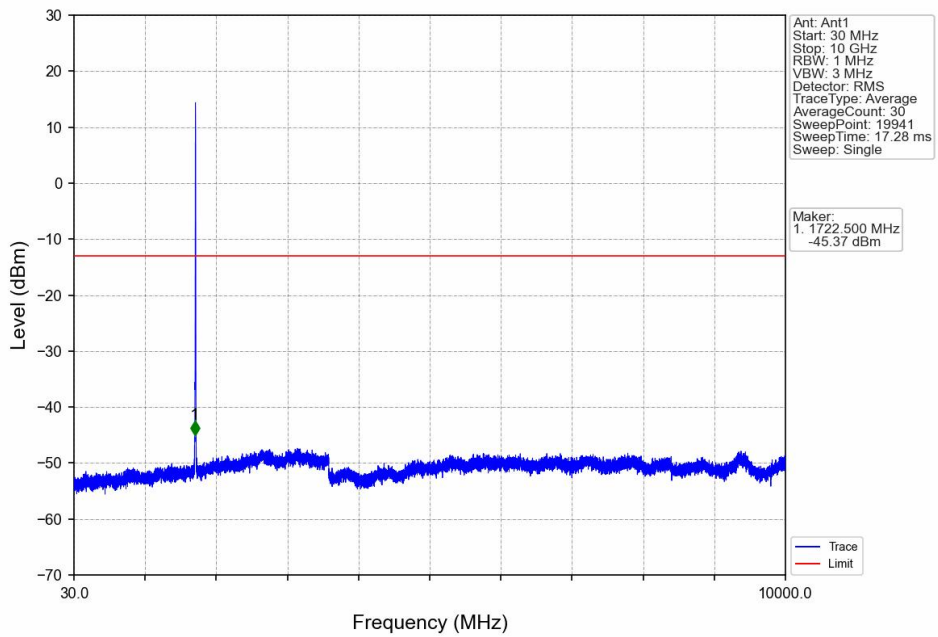
### 6.1.2 Test Graph



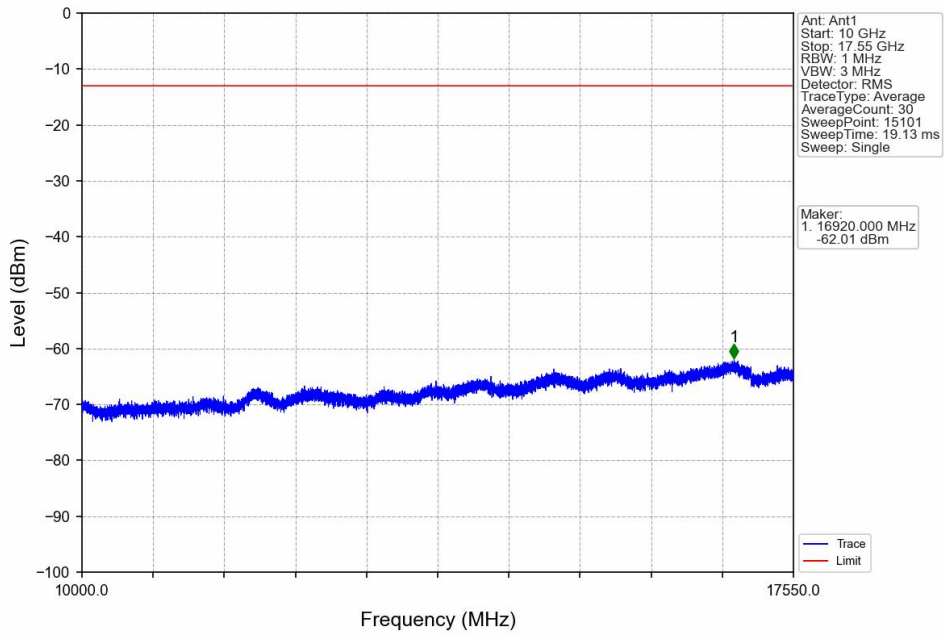
Band4\_RMC\_LCH\_1712.4MHz\_12.2kbps RMC\_NTNV



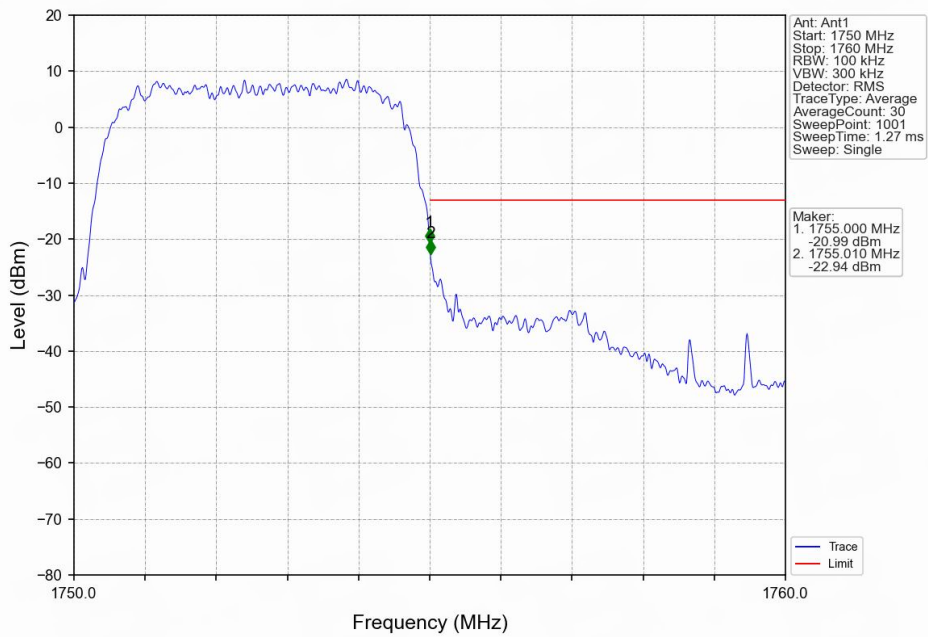
Band4\_RMC\_MCH\_1732.6MHz\_12.2kbps RMC\_NTNV



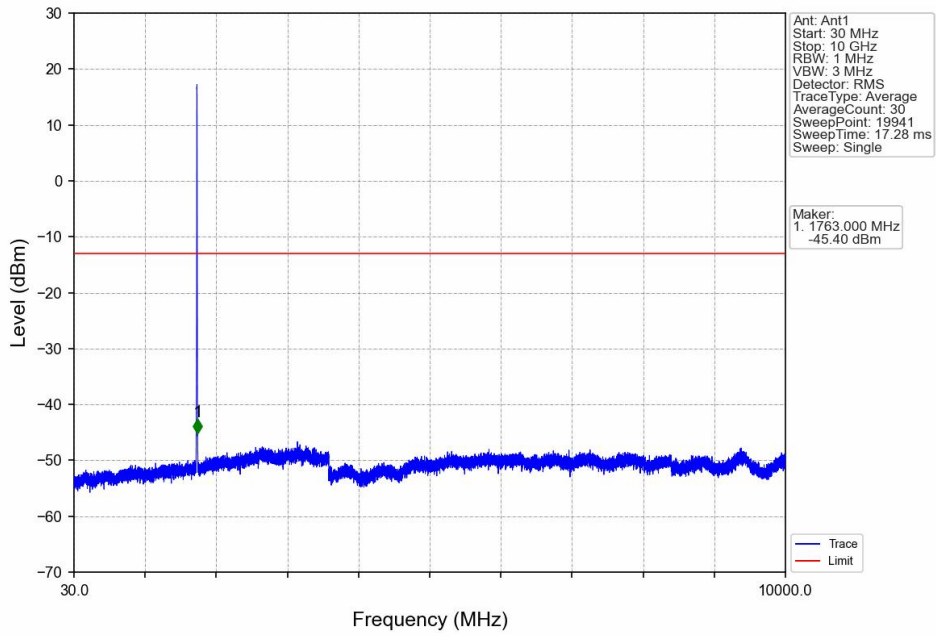
Band4\_RMC\_MCH\_1732.6MHz\_12.2kbps\_RMC\_NTNV



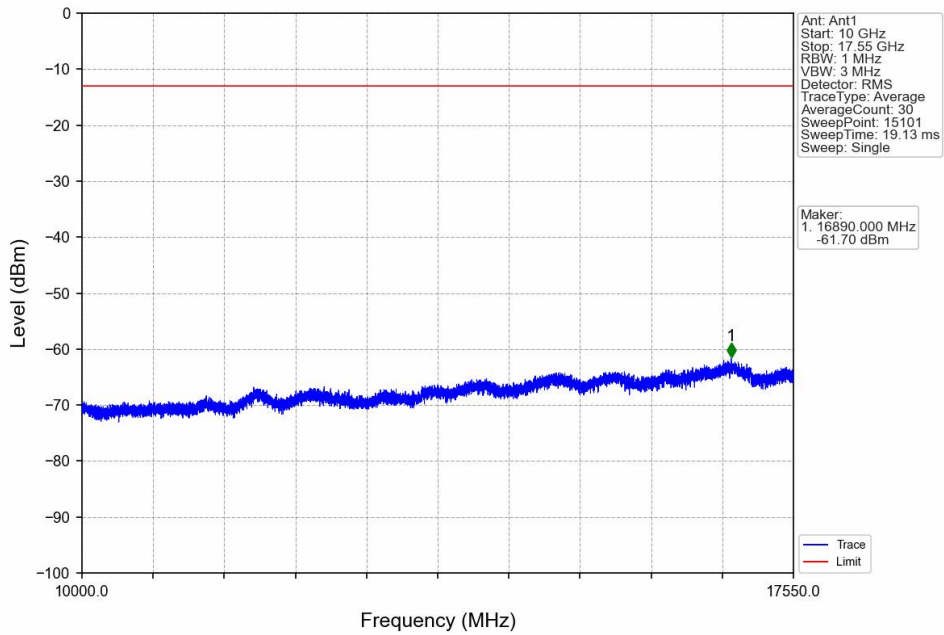
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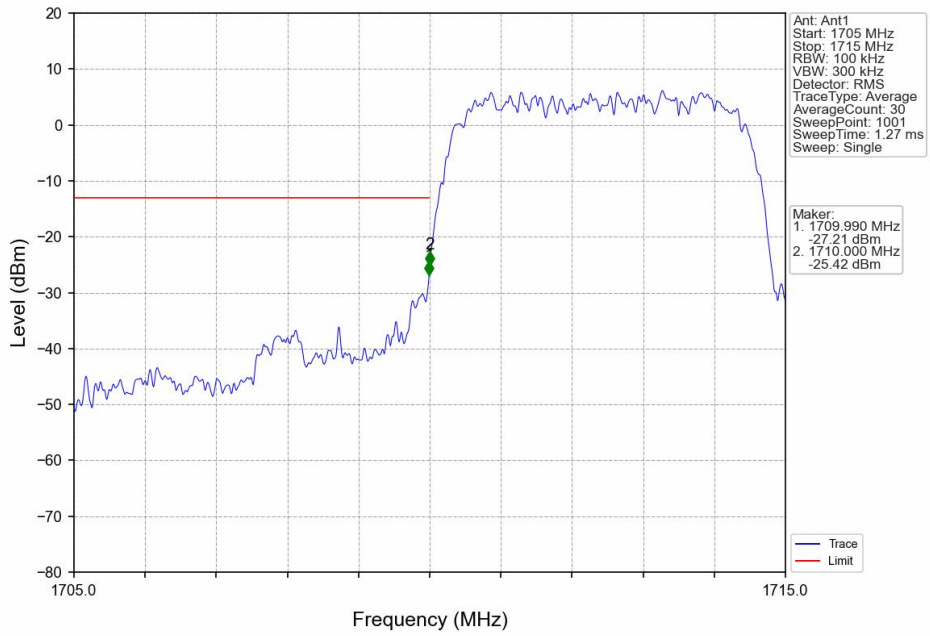
Band4\_RMC\_HCH\_1752.6MHz\_12.2kbps\_RMC\_NTNV



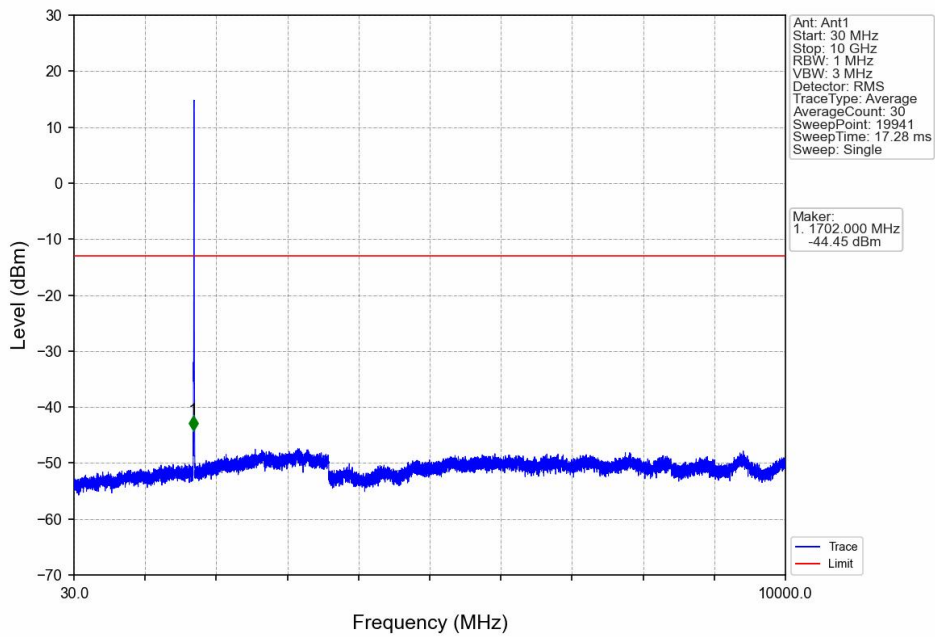
Band4\_RMC\_HCH\_1752.6MHz\_12.2kbps\_RMC\_NTNV



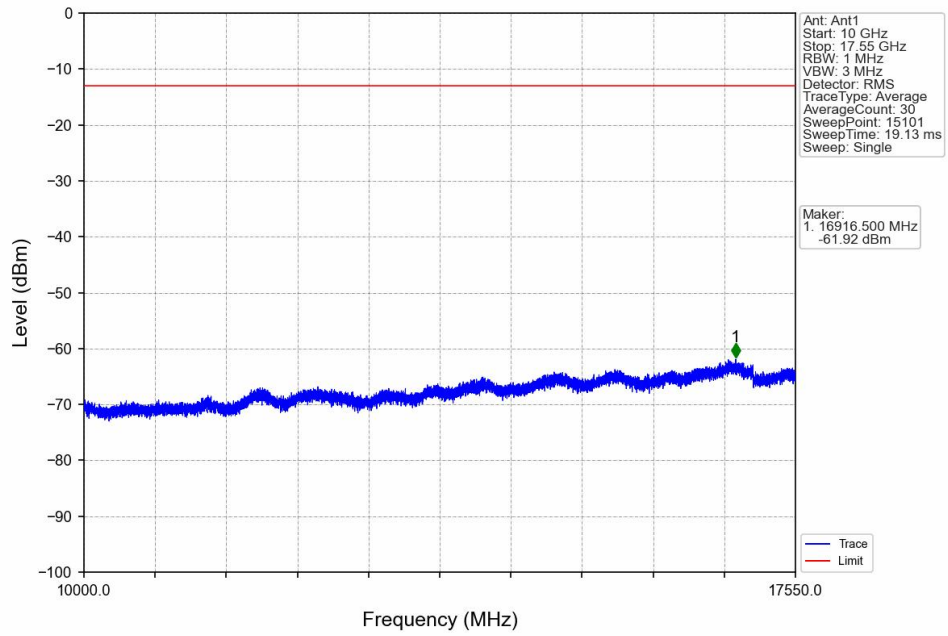
Band4\_HSDPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



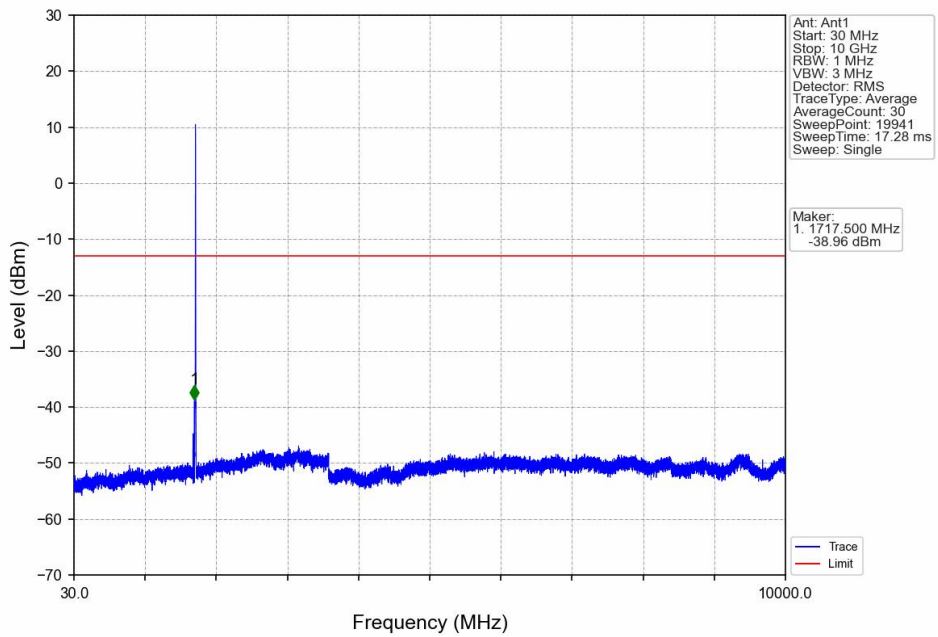
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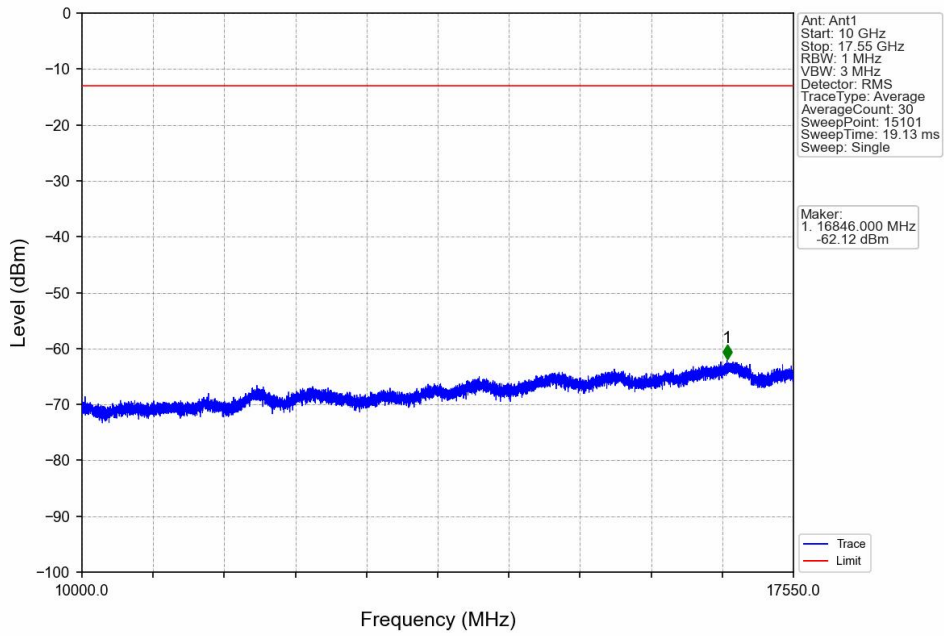
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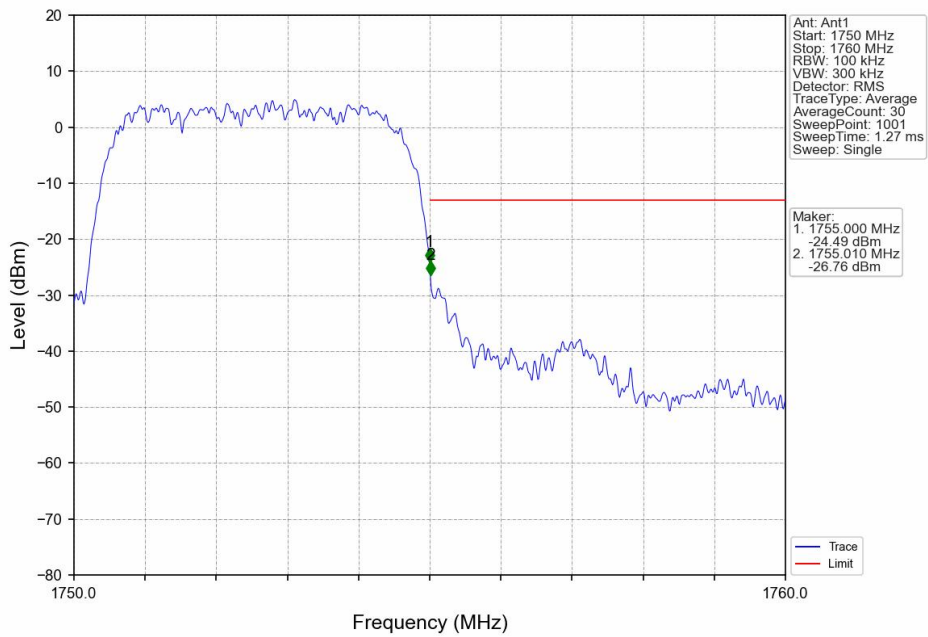
Band4\_HSDPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



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

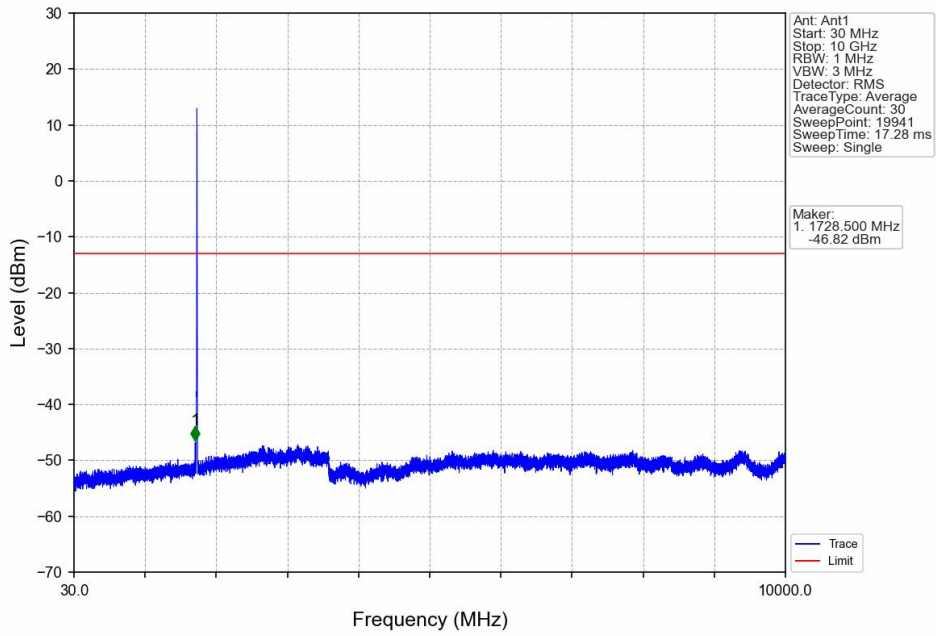


Band4\_HSDPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV

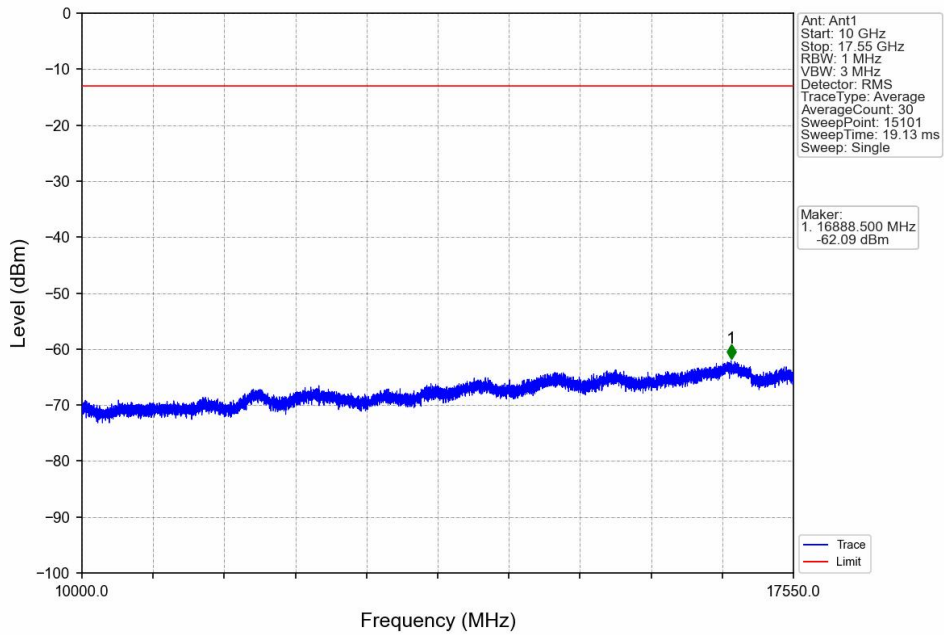




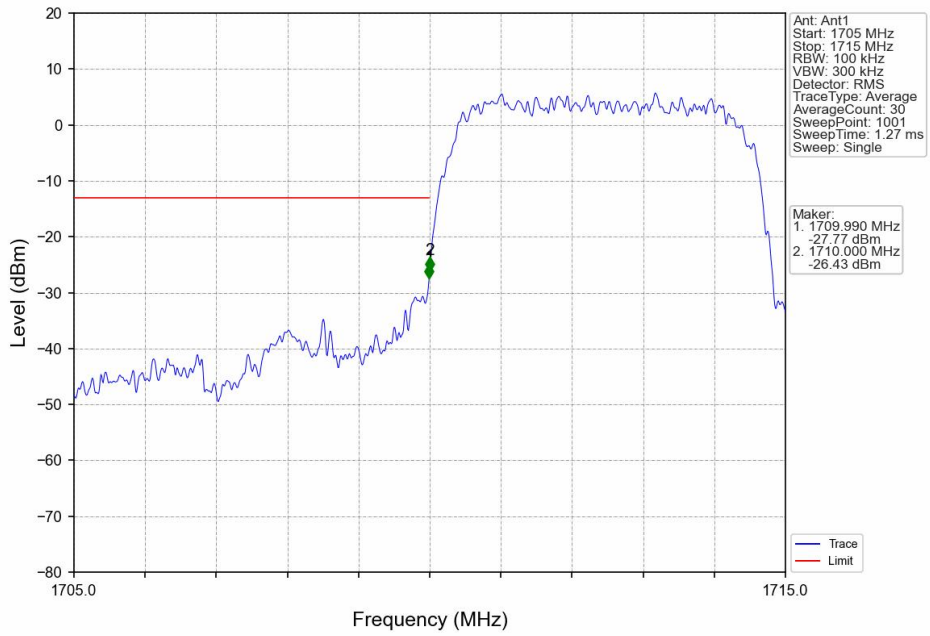
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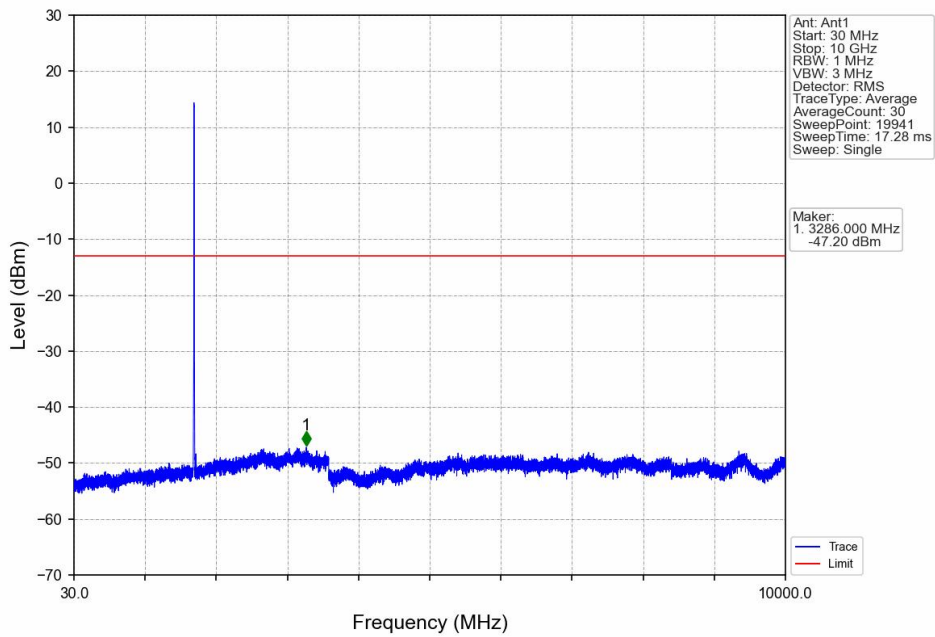
Band4\_HSDPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



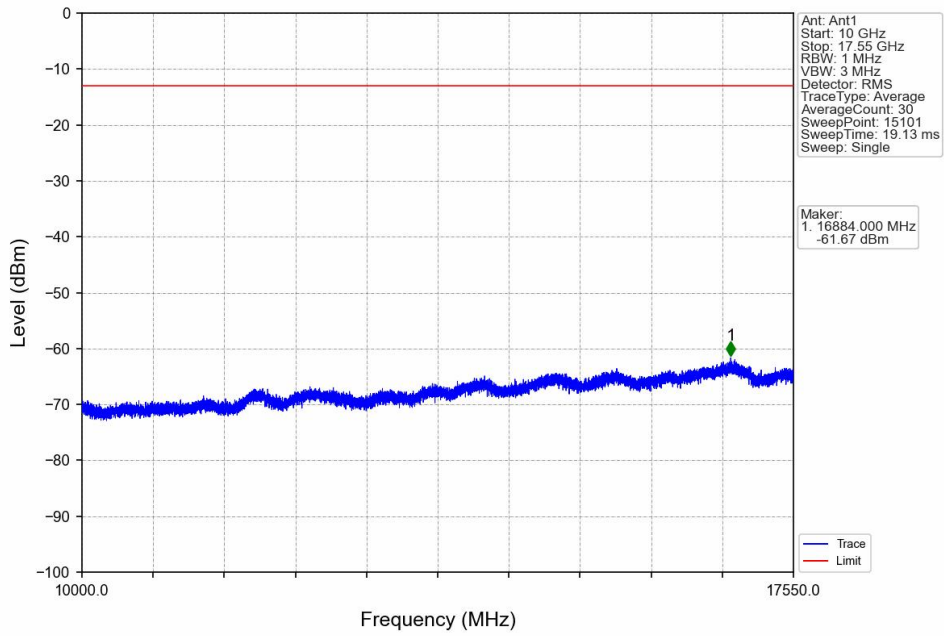
Band4\_HSUPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



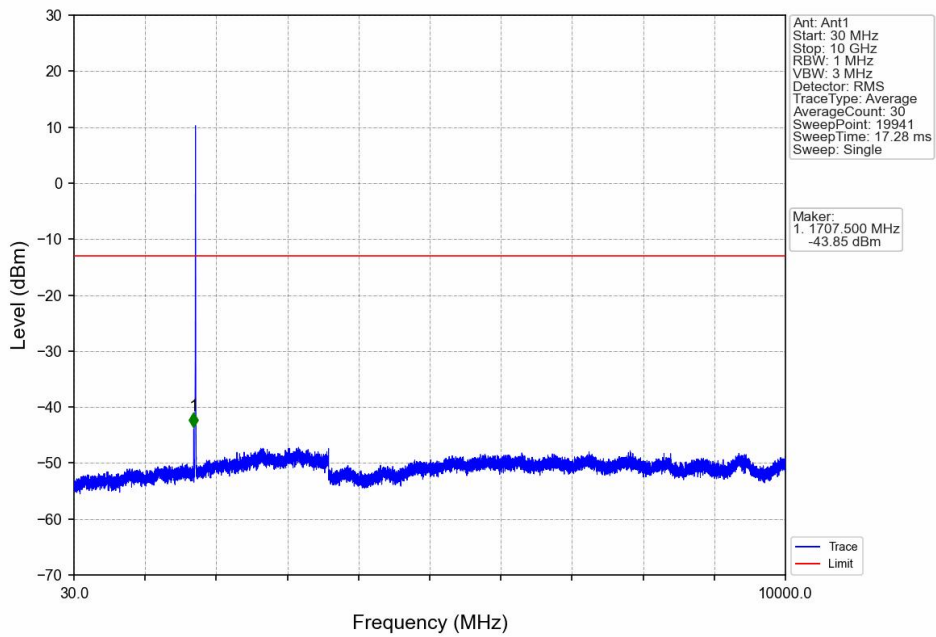
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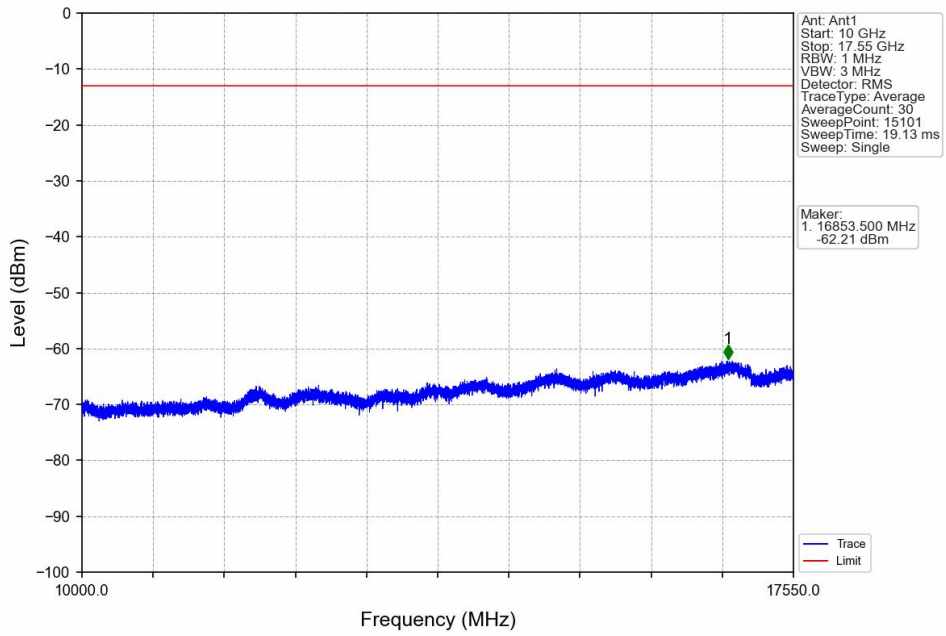
Band4\_HSUPA\_LCH\_1712.4MHz\_Subtest 1\_NTNV



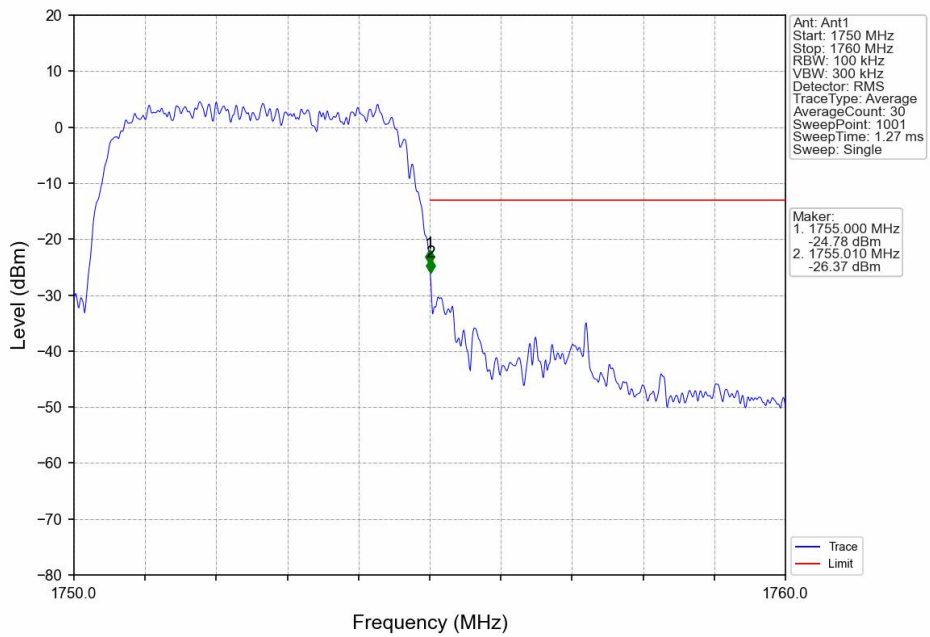
Band4\_HSUPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



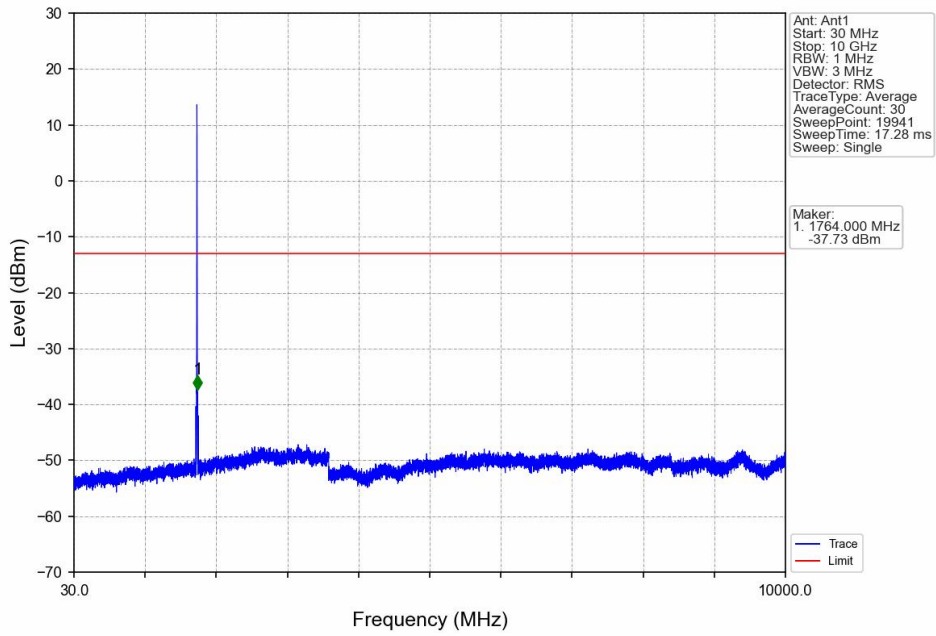
Band4\_HSUPA\_MCH\_1732.6MHz\_Subtest 1\_NTNV



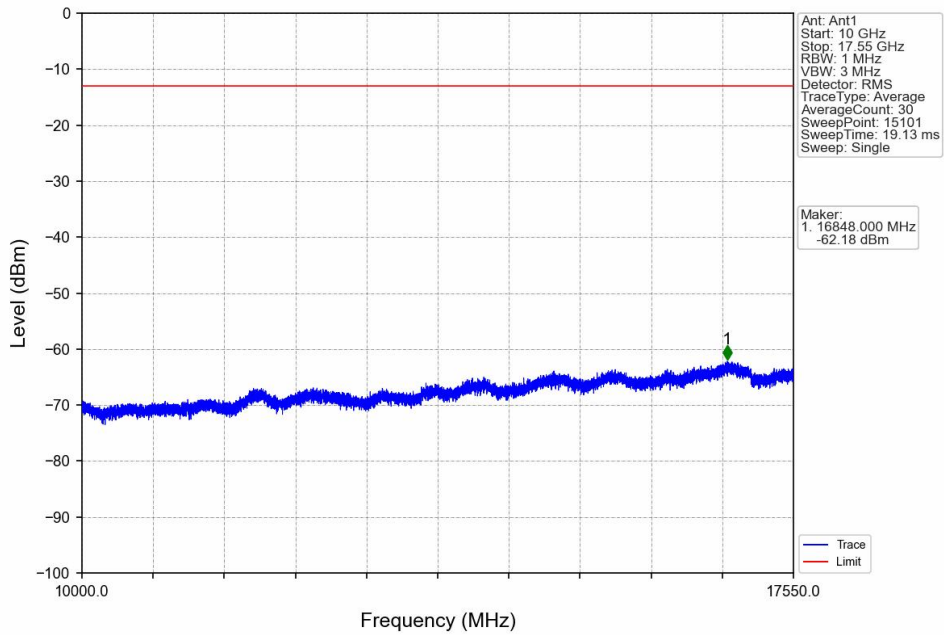
Band4\_HSUPA\_HCH\_1752.6MHz\_Subtest 1\_NTNV



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	0.1403	0.0140	ppm	4M22F9W	24E	21.47

### 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	0.1641	0.0140	ppm	4M22F9W	24E	22.15