

# 1. Effective (Isotropic) Radiated Power Output Data

## 1.1 Band5\_ERP

### 1.1.1 Test Result

Band: 5											
ENV	Mode		Frequency (MHz)	Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict			
	Network	Subset				Result	Limit				
NTNV	RMC	12.2kbps RMC	826.4	22.41	-3.31	16.95	<=38.45	Pass			
			836.6	22.44	-3.31	16.98	<=38.45	Pass			
			846.6	22.37	-3.31	16.91	<=38.45	Pass			
	HSDPA		Subtest 1	826.4	21.37	-3.31	15.91	<=38.45	Pass		
			Subtest 2	826.4	21.39	-3.31	15.93	<=38.45	Pass		
			Subtest 3	826.4	21.40	-3.31	15.94	<=38.45	Pass		
			Subtest 4	826.4	21.37	-3.31	15.91	<=38.45	Pass		
			Subtest 1	836.6	20.11	-3.31	14.65	<=38.45	Pass		
			Subtest 2	836.6	20.12	-3.31	14.66	<=38.45	Pass		
			Subtest 3	836.6	20.12	-3.31	14.66	<=38.45	Pass		
			Subtest 4	836.6	20.10	-3.31	14.64	<=38.45	Pass		
			Subtest 1	846.6	20.52	-3.31	15.06	<=38.45	Pass		
			Subtest 2	846.6	20.48	-3.31	15.02	<=38.45	Pass		
			Subtest 3	846.6	20.49	-3.31	15.03	<=38.45	Pass		
			Subtest 4	846.6	20.50	-3.31	15.04	<=38.45	Pass		
			HSUPA		Subtest 1	826.4	19.49	-3.31	14.03	<=38.45	Pass
					Subtest 2	826.4	19.48	-3.31	14.02	<=38.45	Pass
					Subtest 3	826.4	18.96	-3.31	13.50	<=38.45	Pass
	Subtest 4	826.4			19.47	-3.31	14.01	<=38.45	Pass		
	Subtest 5	826.4			19.46	-3.31	14.00	<=38.45	Pass		
	Subtest 1	836.6			18.18	-3.31	12.72	<=38.45	Pass		
	Subtest 2	836.6			18.17	-3.31	12.71	<=38.45	Pass		
	Subtest 3	836.6			17.65	-3.31	12.19	<=38.45	Pass		
	Subtest 4	836.6			17.98	-3.31	12.52	<=38.45	Pass		
	Subtest 5	836.6			18.16	-3.31	12.70	<=38.45	Pass		
	Subtest 1	846.6			18.51	-3.31	13.05	<=38.45	Pass		
	Subtest 2	846.6			18.49	-3.31	13.03	<=38.45	Pass		
	Subtest 3	846.6			18.23	-3.31	12.77	<=38.45	Pass		
	Subtest 4	846.6			18.48	-3.31	13.02	<=38.45	Pass		
	Subtest 5	846.6			17.94	-3.31	12.48	<=38.45	Pass		

Note1: ERP=Conducted Power+Antenna Gain-2.15

## 2. Frequency Stability

### 2.1 Band5

#### 2.1.1 Test Result

Band: 5							
Network	Frequency (MHz)	Temp. (°C)	Voltage (VDC)	Freq. Error (Hz)	Freq. vs. Rated (ppm)		Verdict
					Result	Limit	
RMC	826.4	20	3.27	-3.440	-0.0042	-2.5 to 2.5	Pass
			3.85	-4.964	-0.0060	-2.5 to 2.5	Pass
			4.43	-2.782	-0.0034	-2.5 to 2.5	Pass

		-30	3.85	-3.018	-0.0037	-2.5 to 2.5	Pass		
		-20	3.85	-3.612	-0.0044	-2.5 to 2.5	Pass		
		-10	3.85	-3.669	-0.0044	-2.5 to 2.5	Pass		
		0	3.85	-2.782	-0.0034	-2.5 to 2.5	Pass		
		10	3.85	-3.290	-0.0040	-2.5 to 2.5	Pass		
		30	3.85	-2.553	-0.0031	-2.5 to 2.5	Pass		
		40	3.85	-3.626	-0.0044	-2.5 to 2.5	Pass		
		50	3.85	-3.762	-0.0046	-2.5 to 2.5	Pass		
		836.6	20	3.27	1.266	0.0015	-2.5 to 2.5	Pass	
				3.85	-1.101	-0.0013	-2.5 to 2.5	Pass	
				4.43	-0.615	-0.0007	-2.5 to 2.5	Pass	
			-30	3.85	-1.774	-0.0021	-2.5 to 2.5	Pass	
			-20	3.85	0.494	0.0006	-2.5 to 2.5	Pass	
			-10	3.85	-1.230	-0.0015	-2.5 to 2.5	Pass	
	0		3.85	-2.360	-0.0028	-2.5 to 2.5	Pass		
	10		3.85	-1.774	-0.0021	-2.5 to 2.5	Pass		
	30		3.85	-2.768	-0.0033	-2.5 to 2.5	Pass		
	40		3.85	-0.472	-0.0006	-2.5 to 2.5	Pass		
	50		3.85	-1.202	-0.0014	-2.5 to 2.5	Pass		
	846.6		20	3.27	1.495	0.0018	-2.5 to 2.5	Pass	
				3.85	0.279	0.0003	-2.5 to 2.5	Pass	
				4.43	-0.873	-0.0010	-2.5 to 2.5	Pass	
		-30	3.85	0.215	0.0003	-2.5 to 2.5	Pass		
		-20	3.85	0.930	0.0011	-2.5 to 2.5	Pass		
		-10	3.85	-0.393	-0.0005	-2.5 to 2.5	Pass		
		0	3.85	0.157	0.0002	-2.5 to 2.5	Pass		
		10	3.85	-1.395	-0.0016	-2.5 to 2.5	Pass		
		30	3.85	-1.202	-0.0014	-2.5 to 2.5	Pass		
		40	3.85	-1.173	-0.0014	-2.5 to 2.5	Pass		
		50	3.85	-1.459	-0.0017	-2.5 to 2.5	Pass		
		HSDPA	826.4	20	3.27	0.114	0.0001	-2.5 to 2.5	Pass
					3.85	0.079	0.0001	-2.5 to 2.5	Pass
					4.43	-0.172	-0.0002	-2.5 to 2.5	Pass
-30	3.85			0.215	0.0003	-2.5 to 2.5	Pass		
-20	3.85			-1.516	-0.0018	-2.5 to 2.5	Pass		
-10	3.85			-0.494	-0.0006	-2.5 to 2.5	Pass		
0	3.85			0.336	0.0004	-2.5 to 2.5	Pass		
10	3.85			-0.944	-0.0011	-2.5 to 2.5	Pass		
30	3.85			0.014	0.0000	-2.5 to 2.5	Pass		
40	3.85			-2.031	-0.0025	-2.5 to 2.5	Pass		
50	3.85			-0.658	-0.0008	-2.5 to 2.5	Pass		
836.6	20			3.27	0.422	0.0005	-2.5 to 2.5	Pass	
				3.85	-0.079	-0.0001	-2.5 to 2.5	Pass	
				4.43	-1.080	-0.0013	-2.5 to 2.5	Pass	
	-30		3.85	0.043	0.0001	-2.5 to 2.5	Pass		
	-20		3.85	-0.794	-0.0009	-2.5 to 2.5	Pass		
	-10		3.85	0.644	0.0008	-2.5 to 2.5	Pass		
	0		3.85	-0.944	-0.0011	-2.5 to 2.5	Pass		
	10		3.85	0.107	0.0001	-2.5 to 2.5	Pass		
	30		3.85	0.951	0.0011	-2.5 to 2.5	Pass		
	40		3.85	-2.089	-0.0025	-2.5 to 2.5	Pass		
	50		3.85	-1.009	-0.0012	-2.5 to 2.5	Pass		
	846.6		20	3.27	2.024	0.0024	-2.5 to 2.5	Pass	
				3.85	0.751	0.0009	-2.5 to 2.5	Pass	
				4.43	0.129	0.0002	-2.5 to 2.5	Pass	
-30			3.85	0.279	0.0003	-2.5 to 2.5	Pass		
-20			3.85	0.179	0.0002	-2.5 to 2.5	Pass		

		-10	3.85	-1.438	-0.0017	-2.5 to 2.5	Pass
		0	3.85	1.352	0.0016	-2.5 to 2.5	Pass
		10	3.85	-0.429	-0.0005	-2.5 to 2.5	Pass
		30	3.85	-0.508	-0.0006	-2.5 to 2.5	Pass
		40	3.85	-0.408	-0.0005	-2.5 to 2.5	Pass
		50	3.85	-1.037	-0.0012	-2.5 to 2.5	Pass
HSUPA	826.4	20	3.27	0.615	0.0007	-2.5 to 2.5	Pass
			3.85	-2.246	-0.0027	-2.5 to 2.5	Pass
			4.43	-3.605	-0.0044	-2.5 to 2.5	Pass
		-30	3.85	-3.061	-0.0037	-2.5 to 2.5	Pass
		-20	3.85	-2.053	-0.0025	-2.5 to 2.5	Pass
		-10	3.85	-1.330	-0.0016	-2.5 to 2.5	Pass
		0	3.85	-0.958	-0.0012	-2.5 to 2.5	Pass
		10	3.85	-3.419	-0.0041	-2.5 to 2.5	Pass
		30	3.85	-2.246	-0.0027	-2.5 to 2.5	Pass
		40	3.85	-2.117	-0.0026	-2.5 to 2.5	Pass
	50	3.85	-2.081	-0.0025	-2.5 to 2.5	Pass	
	836.6	20	3.27	1.202	0.0014	-2.5 to 2.5	Pass
			3.85	-1.237	-0.0015	-2.5 to 2.5	Pass
			4.43	-0.036	0.0000	-2.5 to 2.5	Pass
		-30	3.85	-1.988	-0.0024	-2.5 to 2.5	Pass
		-20	3.85	-1.459	-0.0017	-2.5 to 2.5	Pass
		-10	3.85	-1.438	-0.0017	-2.5 to 2.5	Pass
		0	3.85	-0.415	-0.0005	-2.5 to 2.5	Pass
		10	3.85	-1.509	-0.0018	-2.5 to 2.5	Pass
		30	3.85	-0.901	-0.0011	-2.5 to 2.5	Pass
		40	3.85	-1.452	-0.0017	-2.5 to 2.5	Pass
	50	3.85	-3.247	-0.0039	-2.5 to 2.5	Pass	
	846.6	20	3.27	2.418	0.0029	-2.5 to 2.5	Pass
			3.85	-1.338	-0.0016	-2.5 to 2.5	Pass
			4.43	0.014	0.0000	-2.5 to 2.5	Pass
		-30	3.85	-0.615	-0.0007	-2.5 to 2.5	Pass
		-20	3.85	-0.372	-0.0004	-2.5 to 2.5	Pass
		-10	3.85	0.672	0.0008	-2.5 to 2.5	Pass
		0	3.85	-0.679	-0.0008	-2.5 to 2.5	Pass
		10	3.85	0.200	0.0002	-2.5 to 2.5	Pass
		30	3.85	-0.207	-0.0002	-2.5 to 2.5	Pass
		40	3.85	-0.100	-0.0001	-2.5 to 2.5	Pass
	50	3.85	-0.043	-0.0001	-2.5 to 2.5	Pass	

### 3. Modulation Characteristics

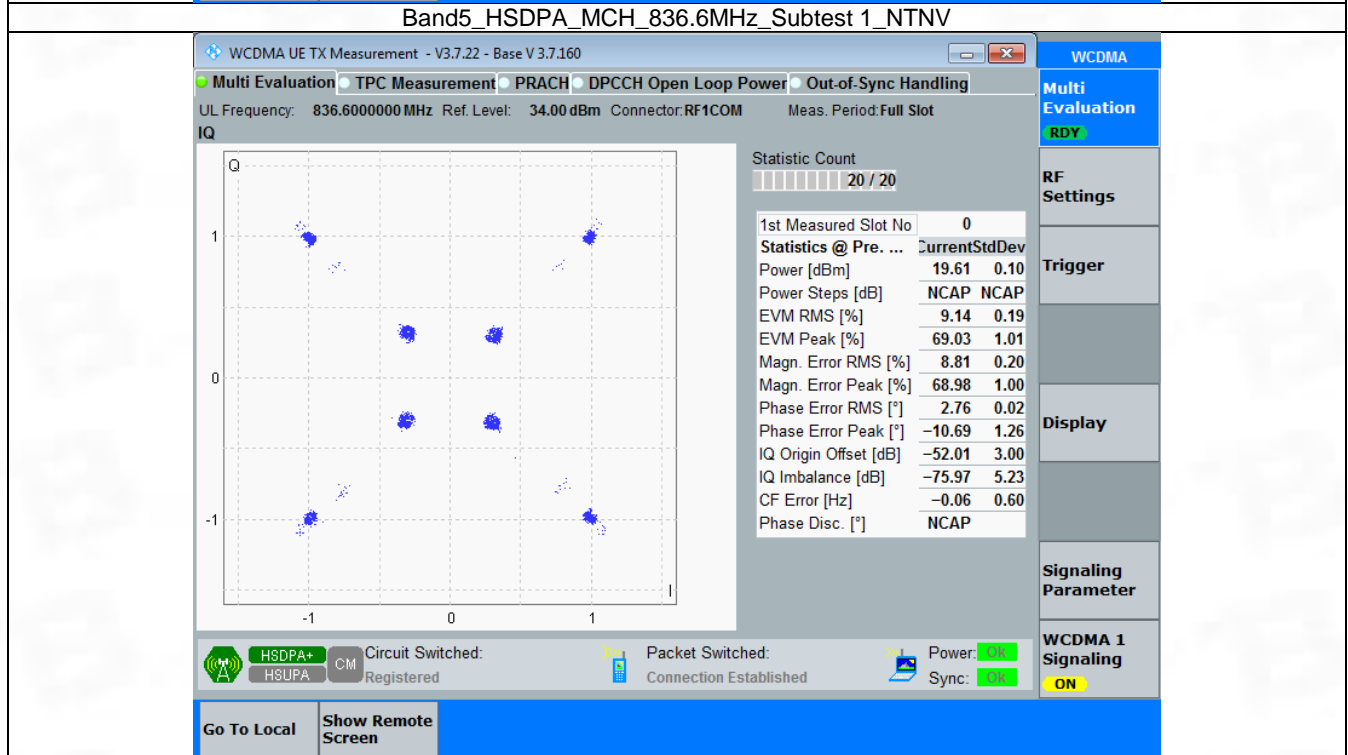
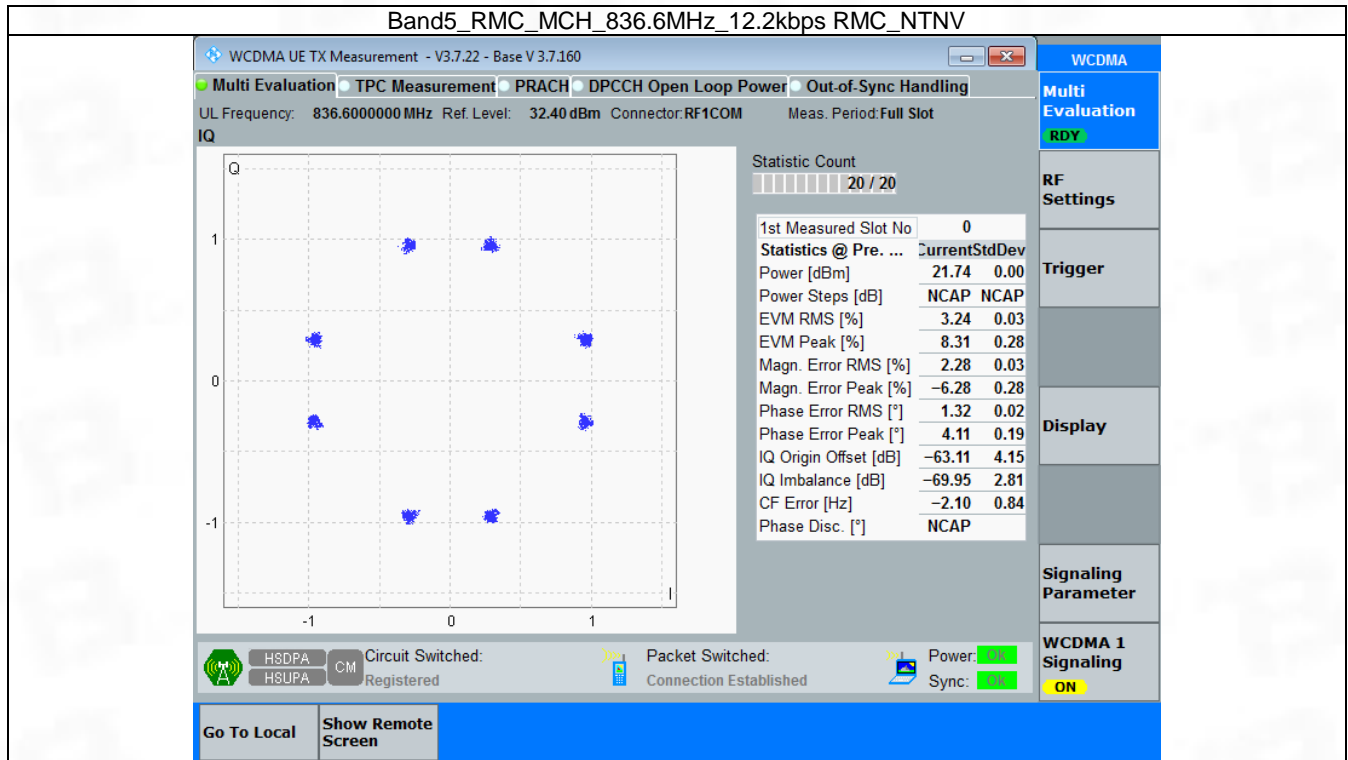
#### 3.1 Band5

##### 3.1.1 Test Result

Band: 5						
ENV	Mode		Frequency (MHz)	Modulation Characteristics		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	836.6	Refer To Test Graph		Pass
	HSDPA	Subtest 1	836.6	Refer To Test Graph		Pass

	HSUPA	Subtest 1	836.6	Refer To Test Graph	Pass
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### 3.1.2 Test Graph



Band5 HSUPA MCH\_836.6MHz Subtest 1\_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: 836.600000 MHz Ref. Level: 34.00 dBm Connector:RF1COM Meas. Period:Full Slot

IQ

Statistic Count: 20 / 20

1st Measured Slot No	0
Statistics @ Pre. ...	CurrentStdDev
Power [dBm]	19.62 2.35
Power Steps [dB]	NCAP NCAP
EVM RMS [%]	3.58 3.57
EVM Peak [%]	7.49 35.58
Magn. Error RMS [%]	2.69 3.86
Magn. Error Peak [%]	-7.46 35.68
Phase Error RMS [°]	2.81 0.62
Phase Error Peak [°]	-10.05 5.47
IQ Origin Offset [dB]	-77.19 8.29
IQ Imbalance [dB]	-64.55 5.97
CF Error [Hz]	-1.30 1.43
Phase Disc. [°]	NCAP

HSDPA+  HSDPA  CM  Circuit Switched: Registered

Packet Switched: Connection Established

Power: ■ Sync: ■

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

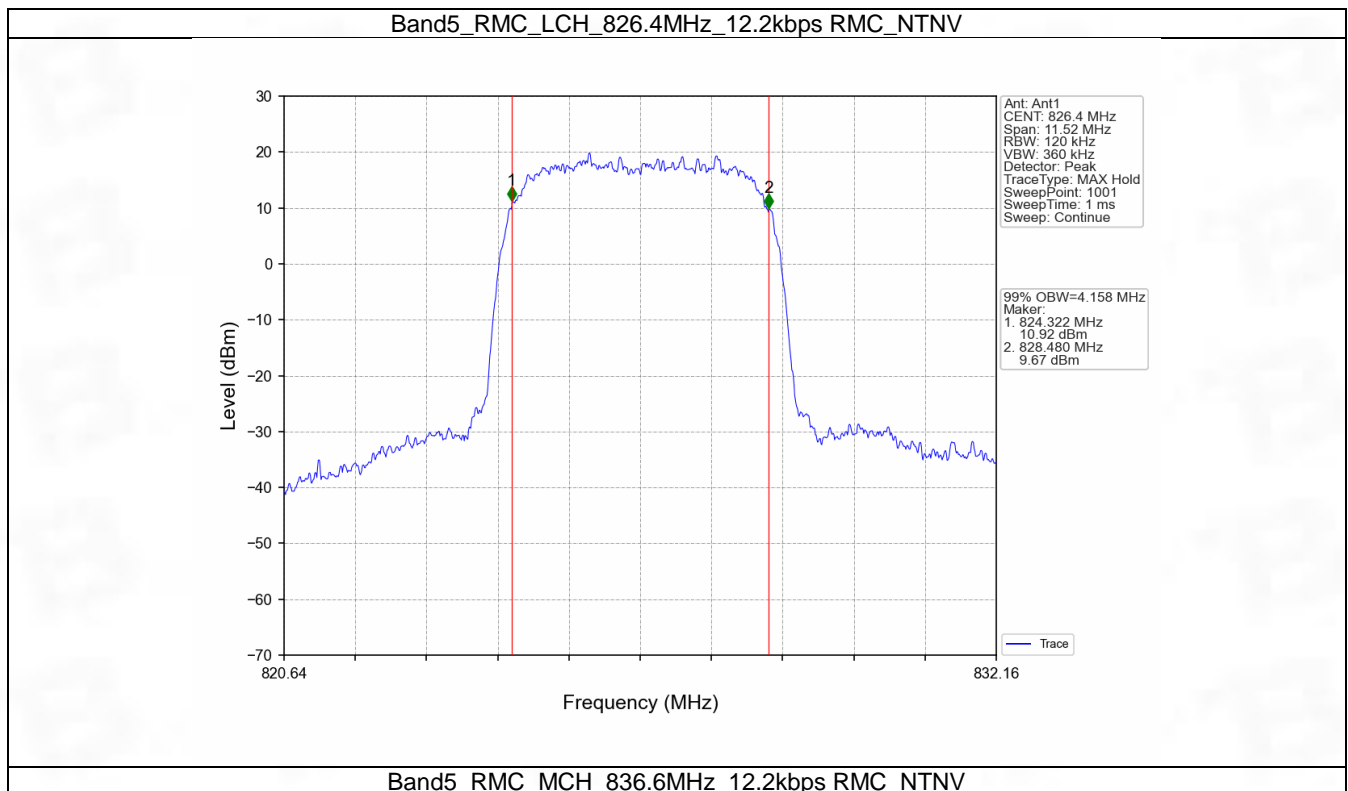
## 4. 99% & 26dB Bandwidth

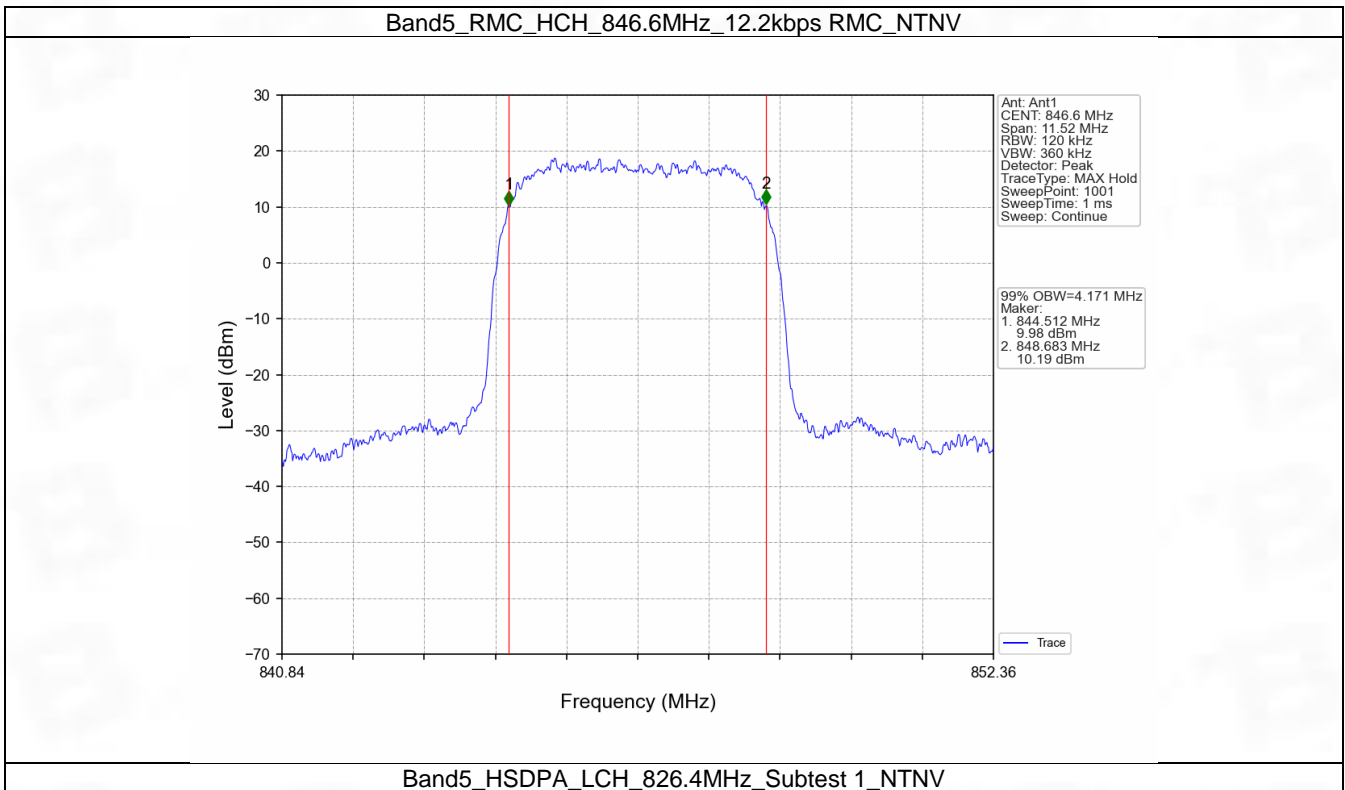
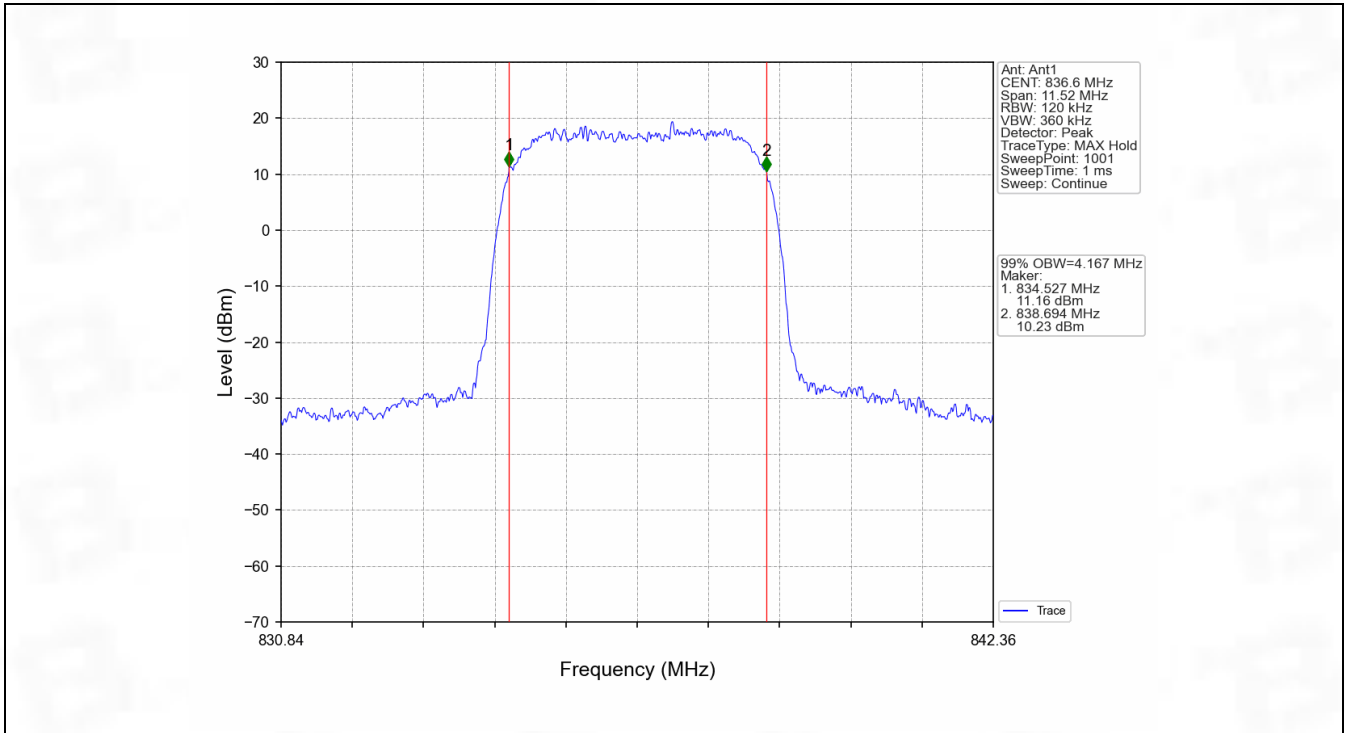
### 4.1 Band5\_OBW

#### 4.1.1 Test Result

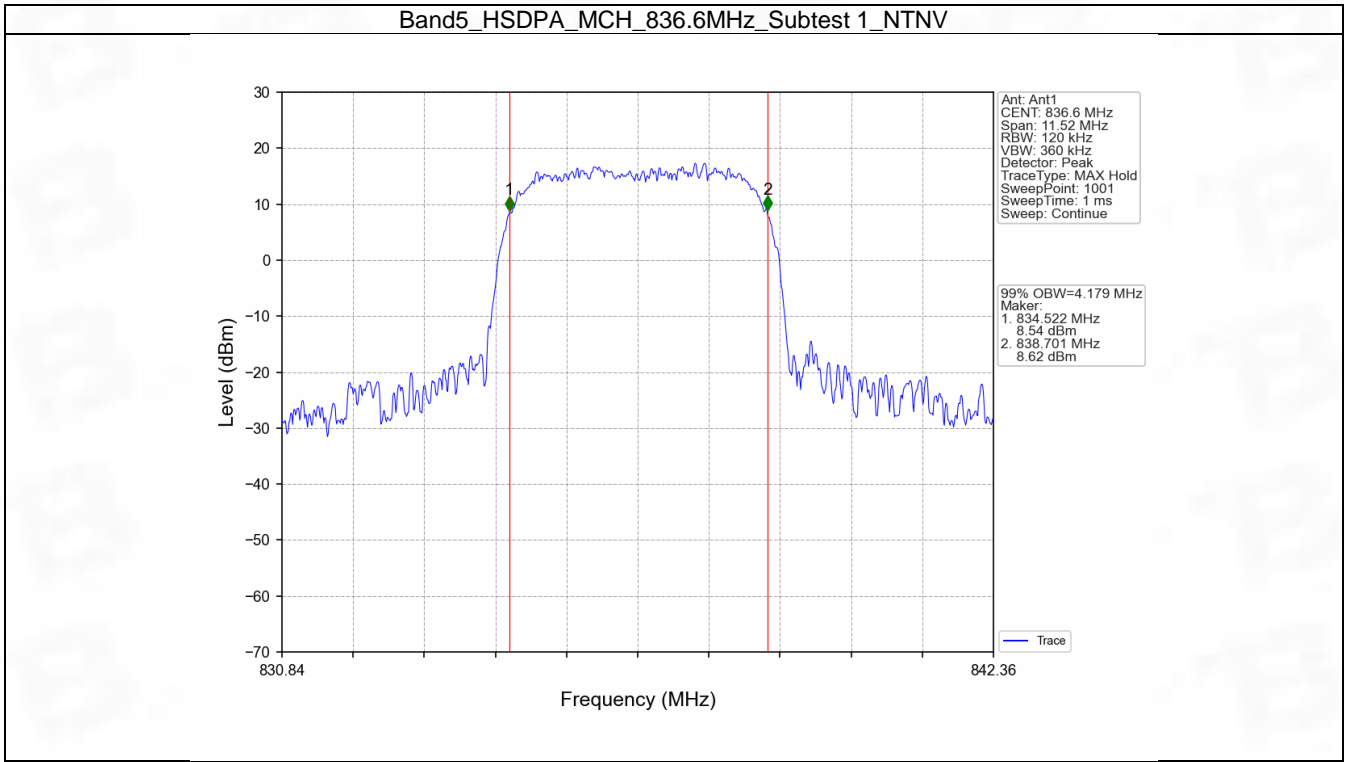
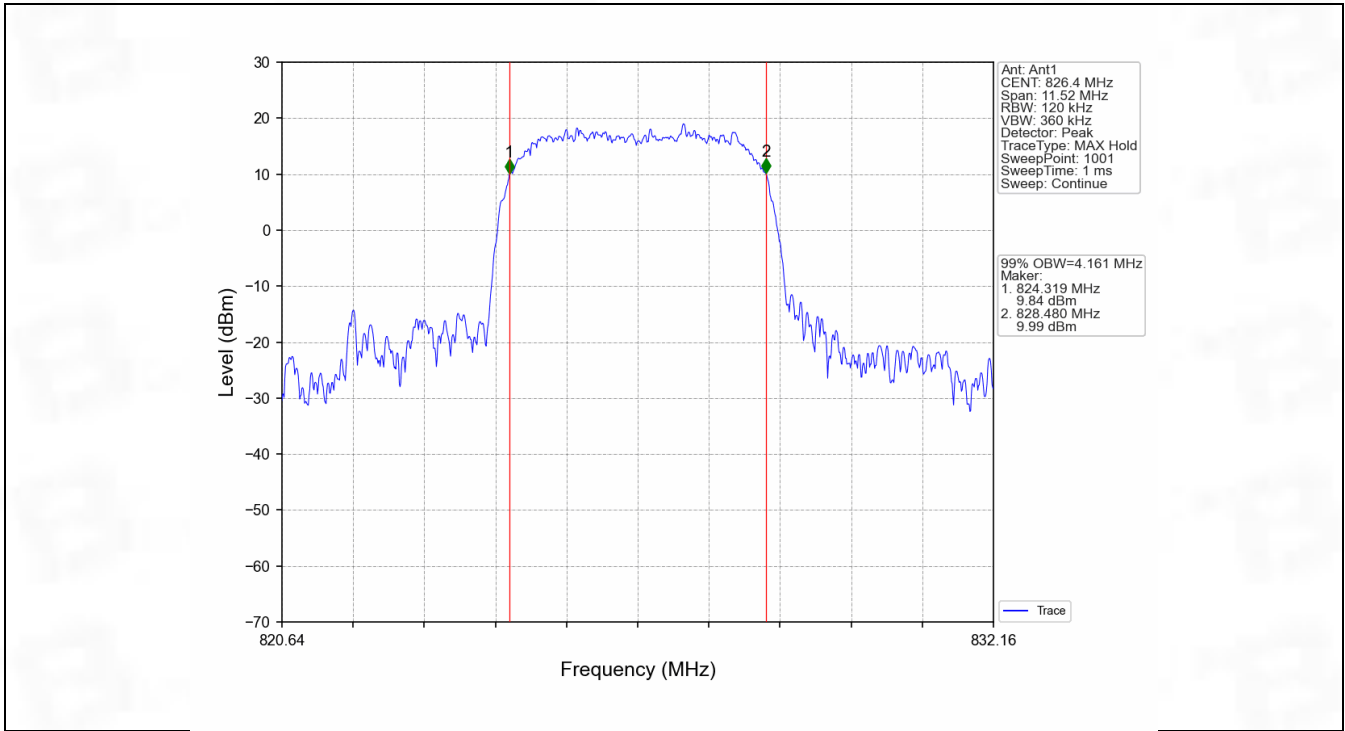
Band: 5					
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)	Verdict
	Network	Subset		Result	
NTNV	RMC	12.2kbps RMC	826.4	4.158	Pass
			836.6	4.167	Pass
			846.6	4.171	Pass
	HSDPA	Subtest 1	826.4	4.161	Pass
			836.6	4.179	Pass
			846.6	4.145	Pass
	HSUPA	Subtest 1	826.4	4.170	Pass
			836.6	4.177	Pass
			846.6	4.159	Pass

#### 4.1.2 Test Graph

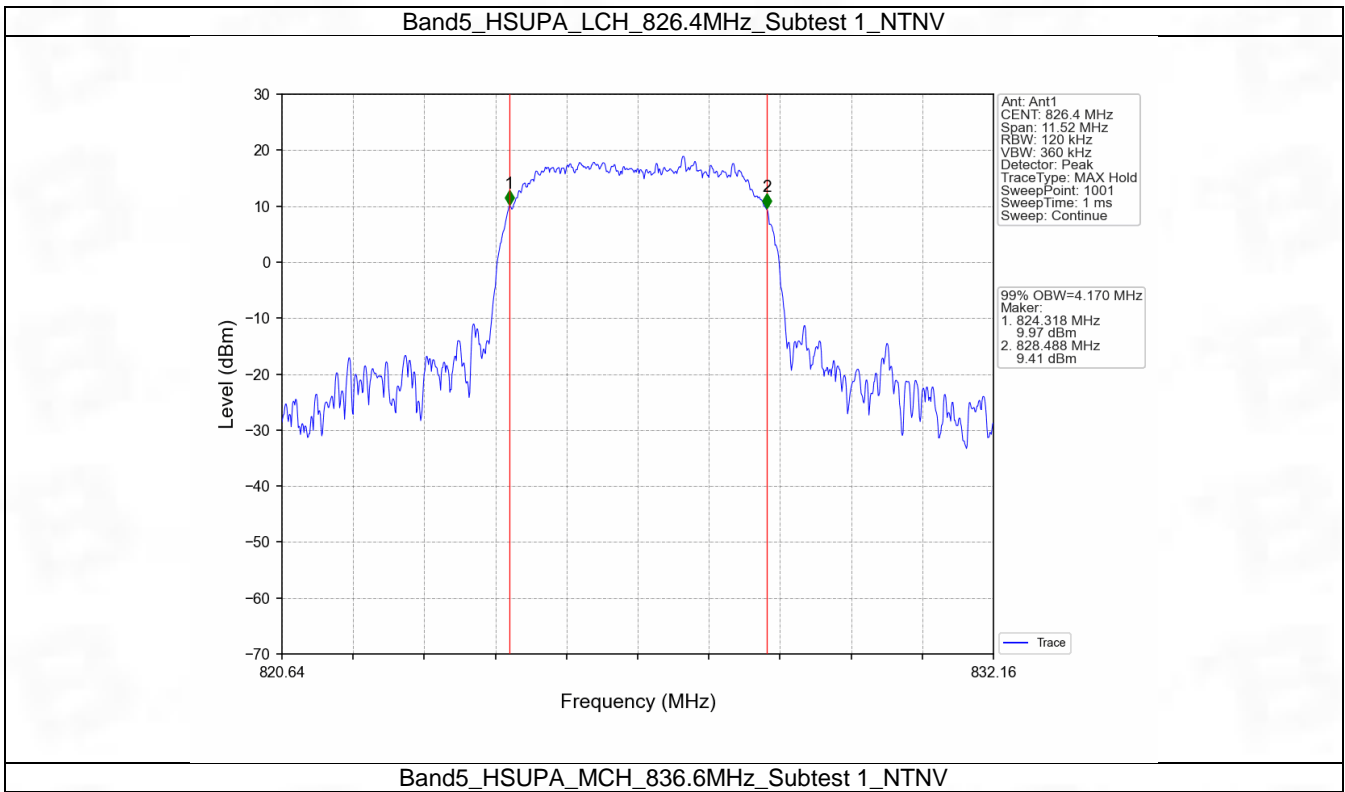
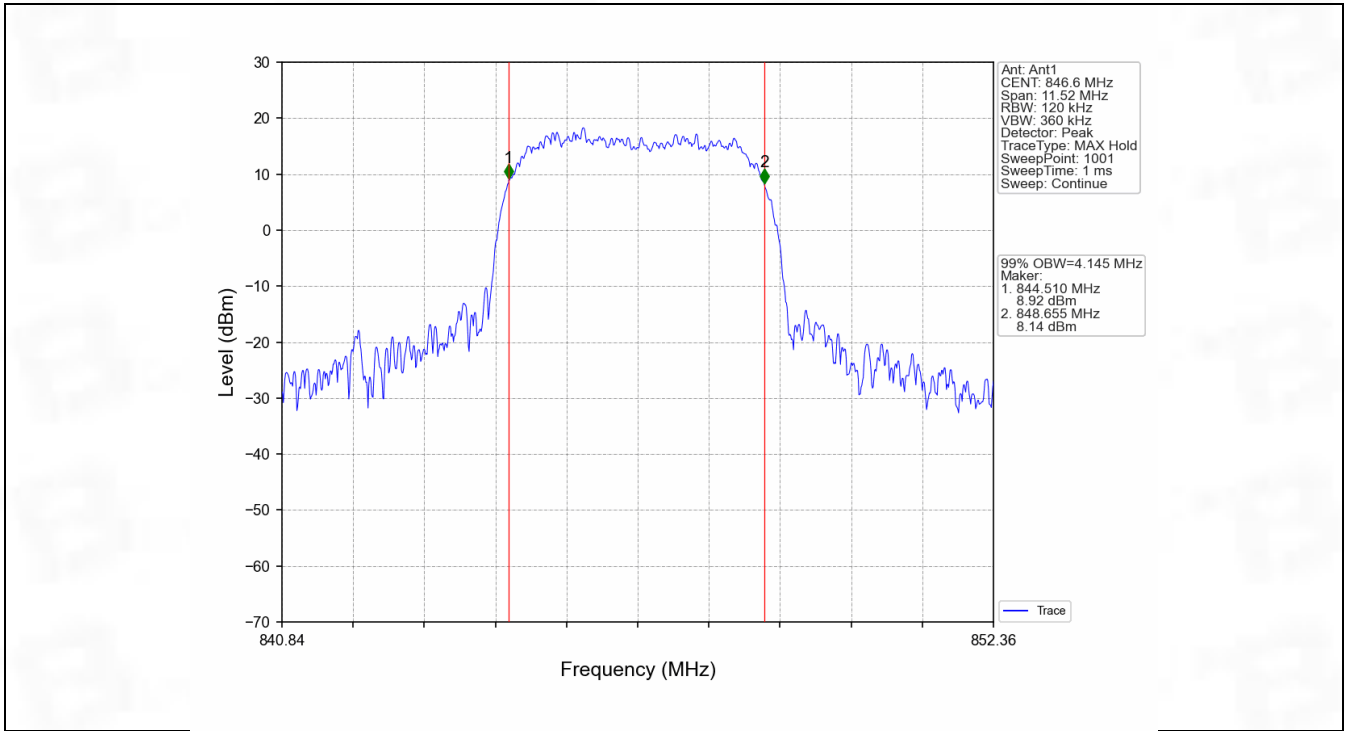


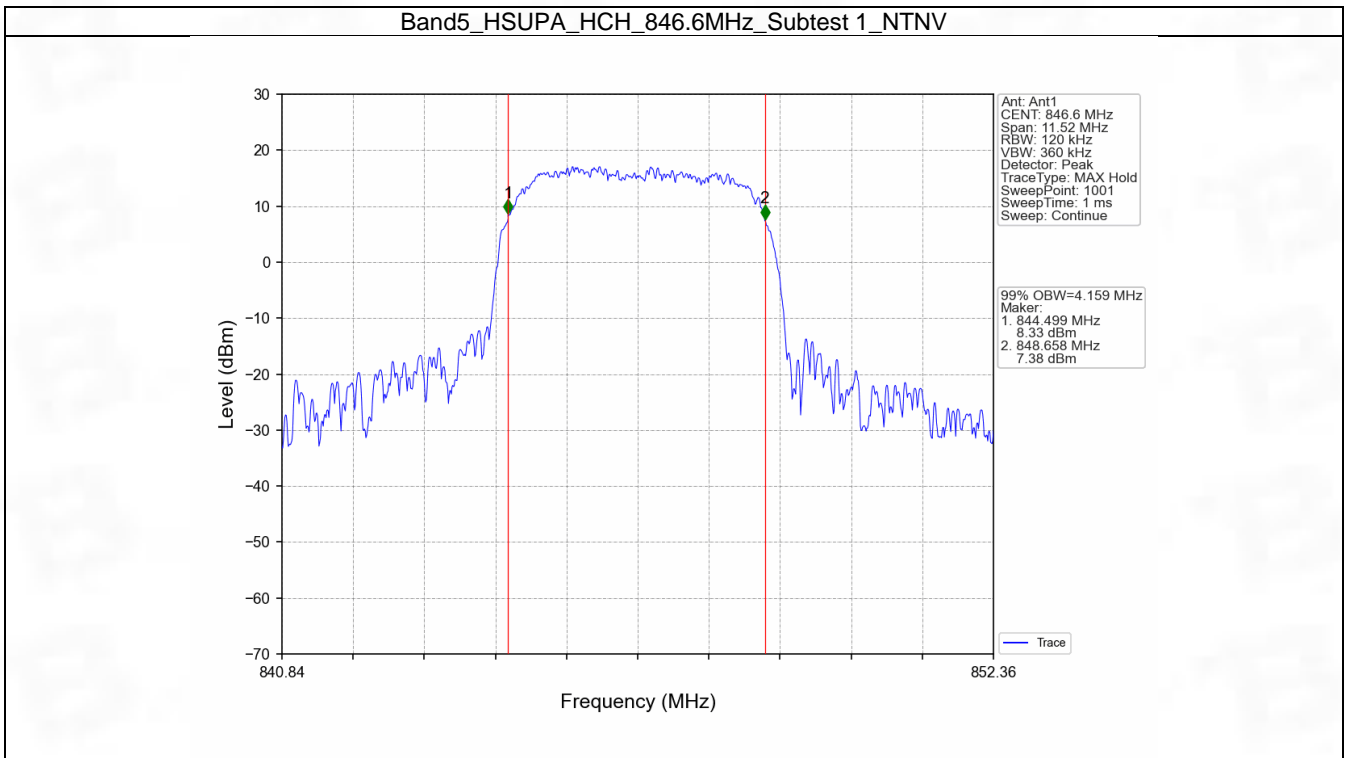
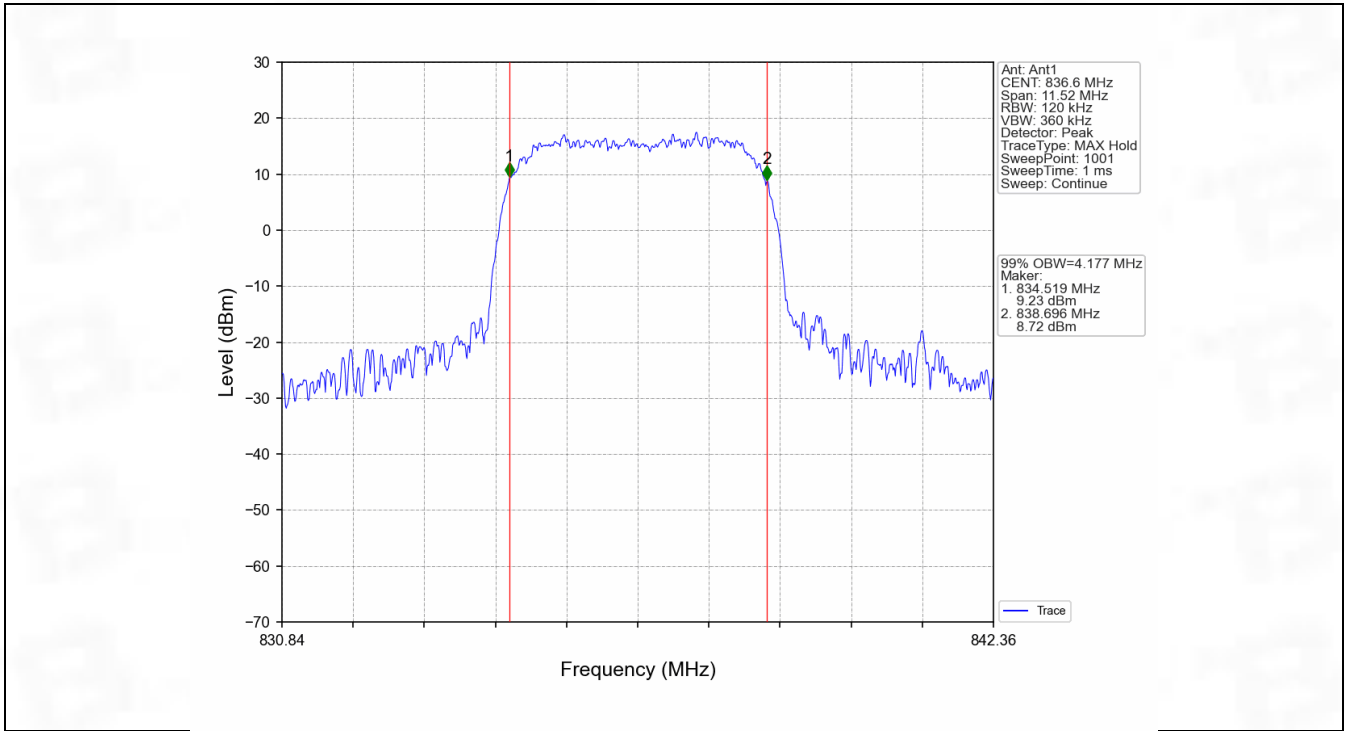






Band5\_HSDPA\_HCH\_846.6MHz\_Subtest 1\_NTNV



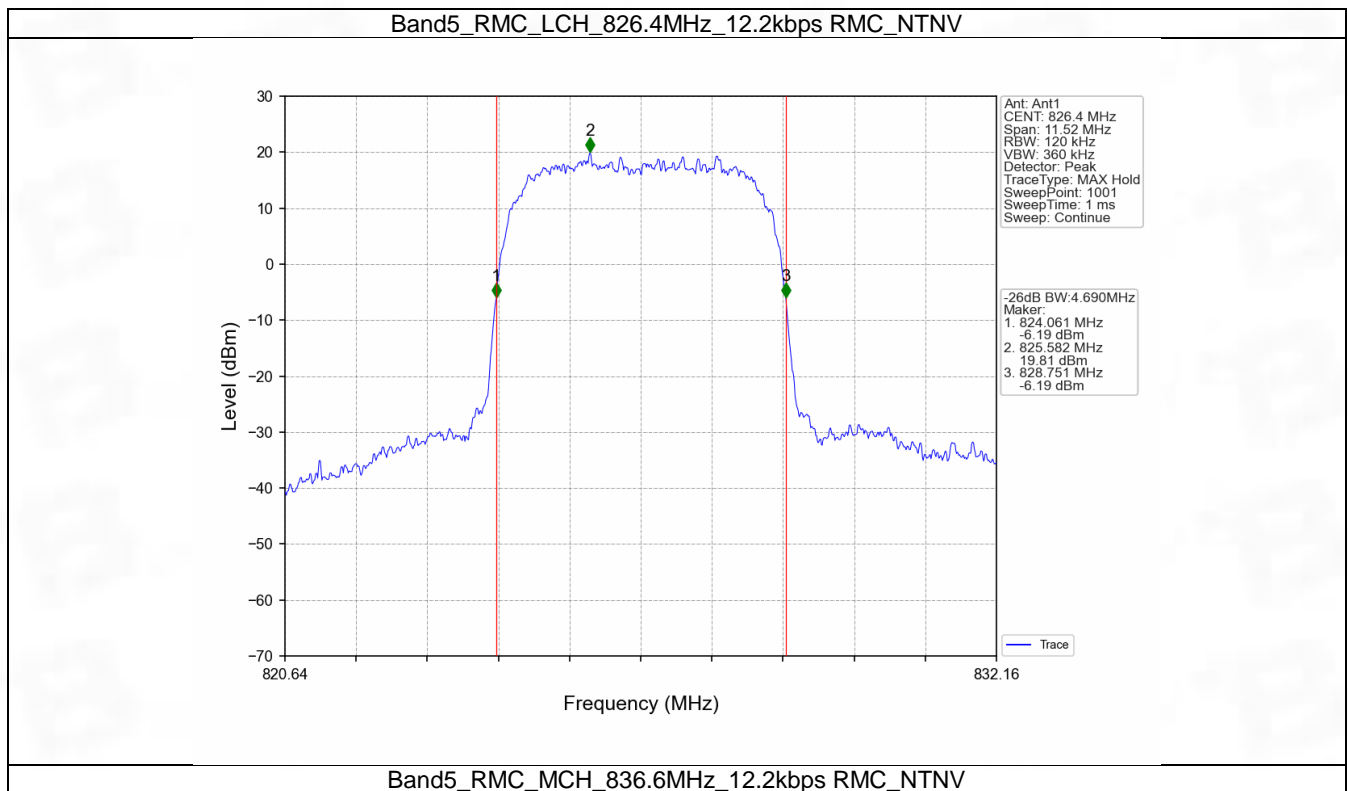


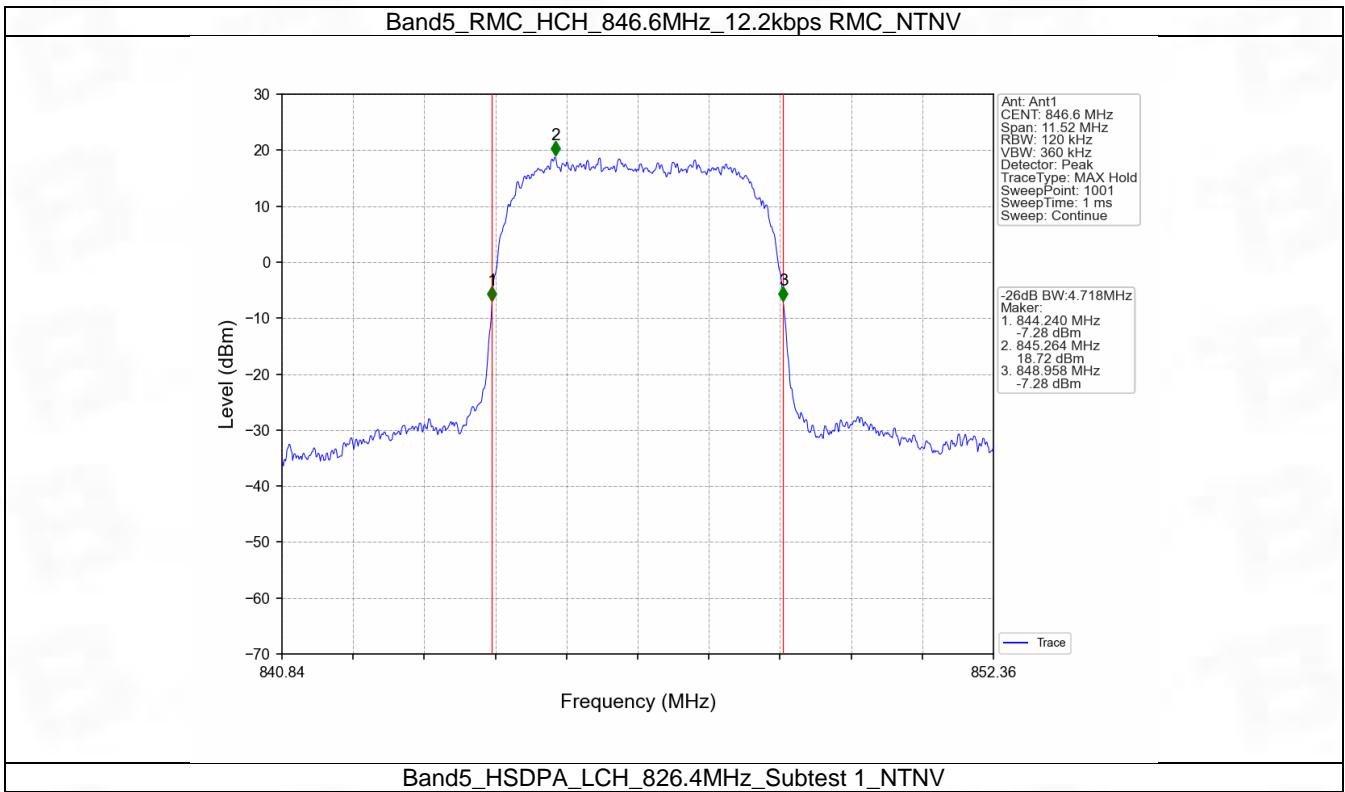
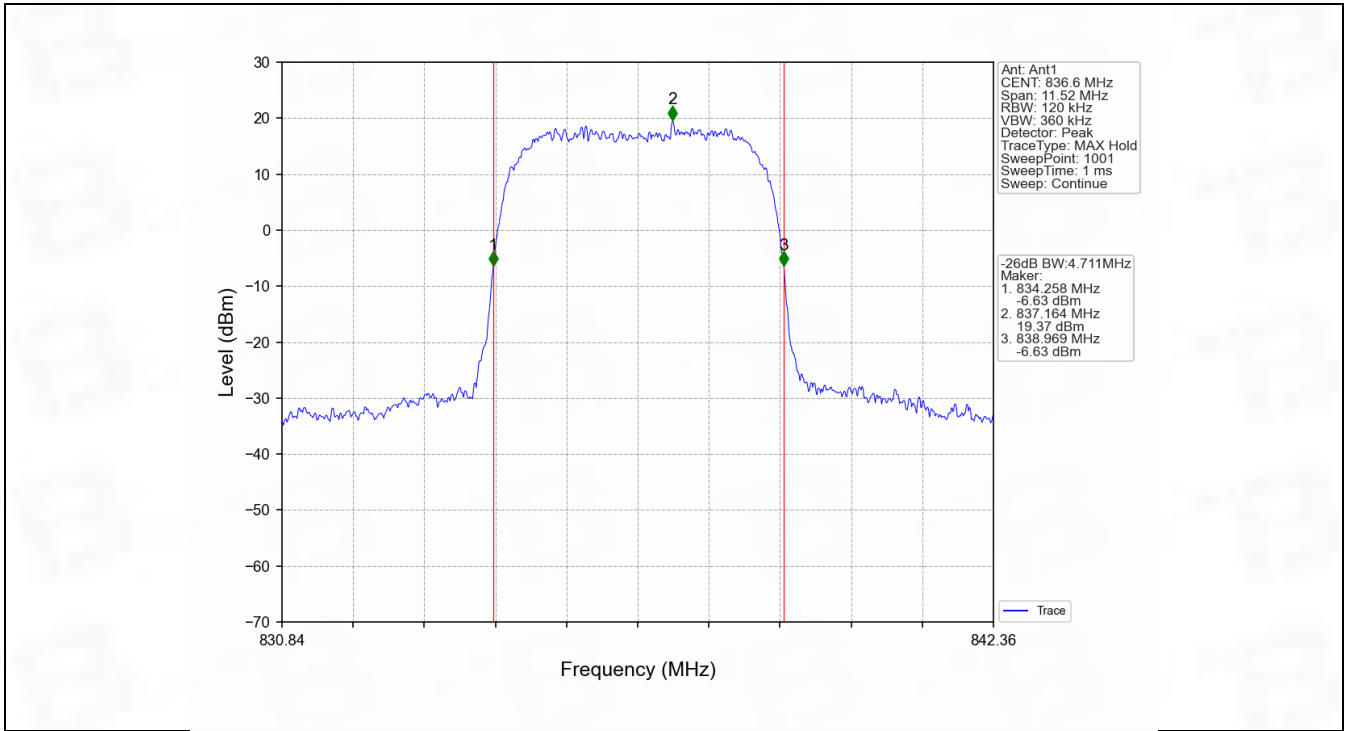
## 4.2 Band5\_XDB

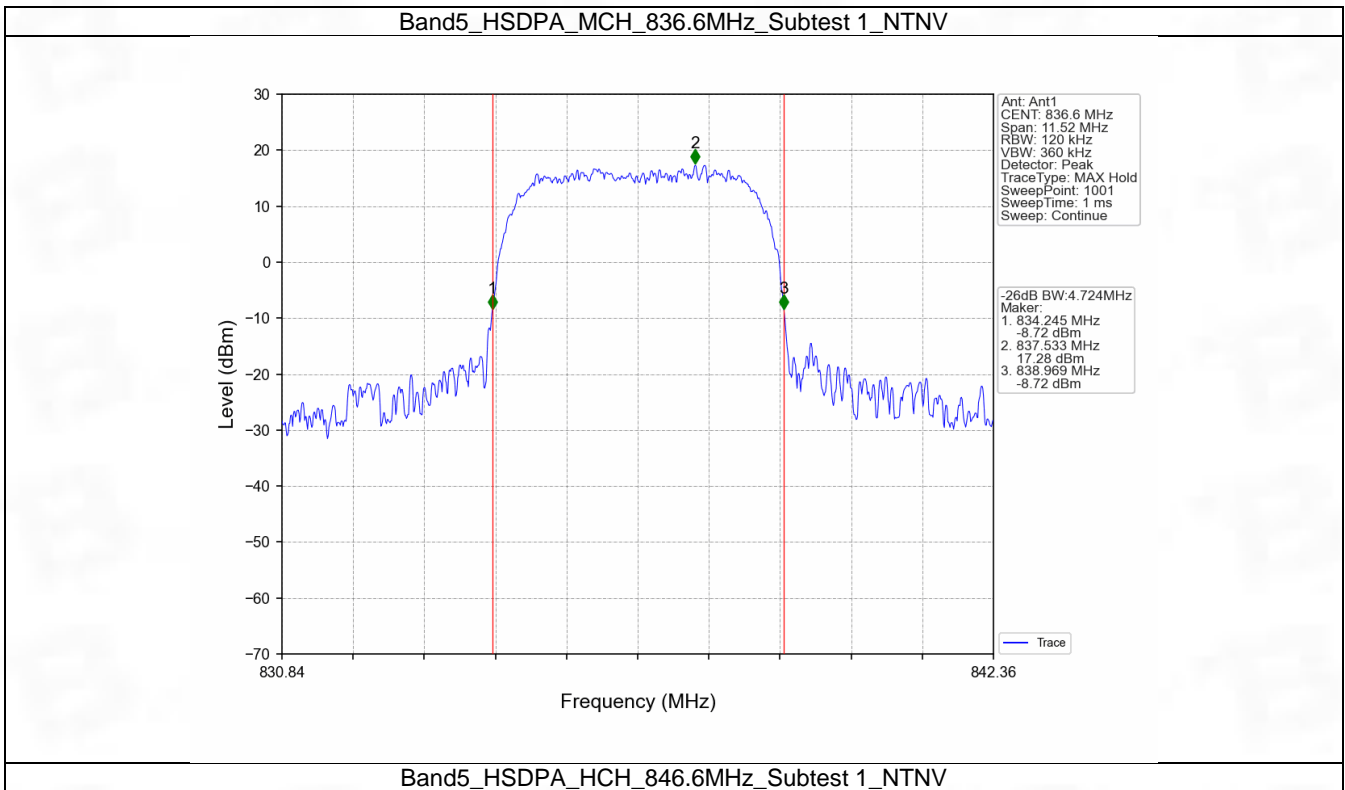
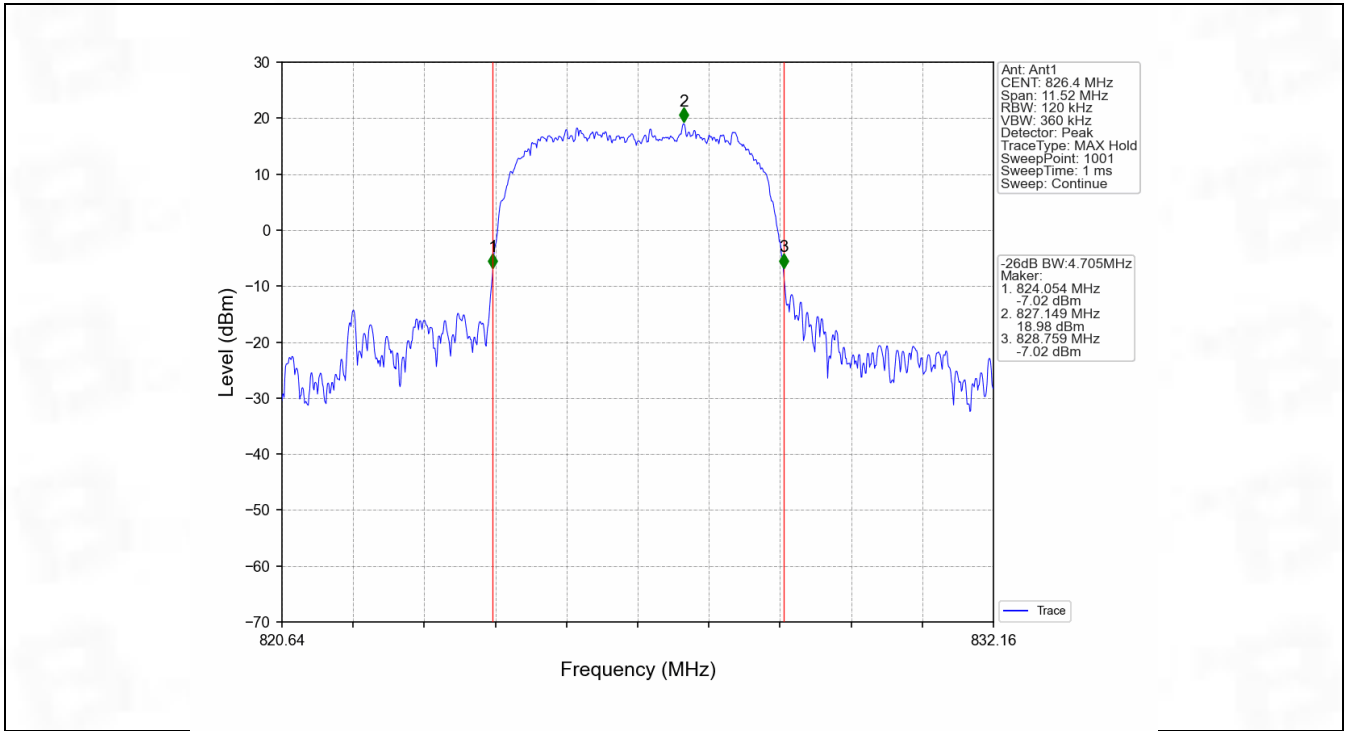
### 4.2.1 Test Result

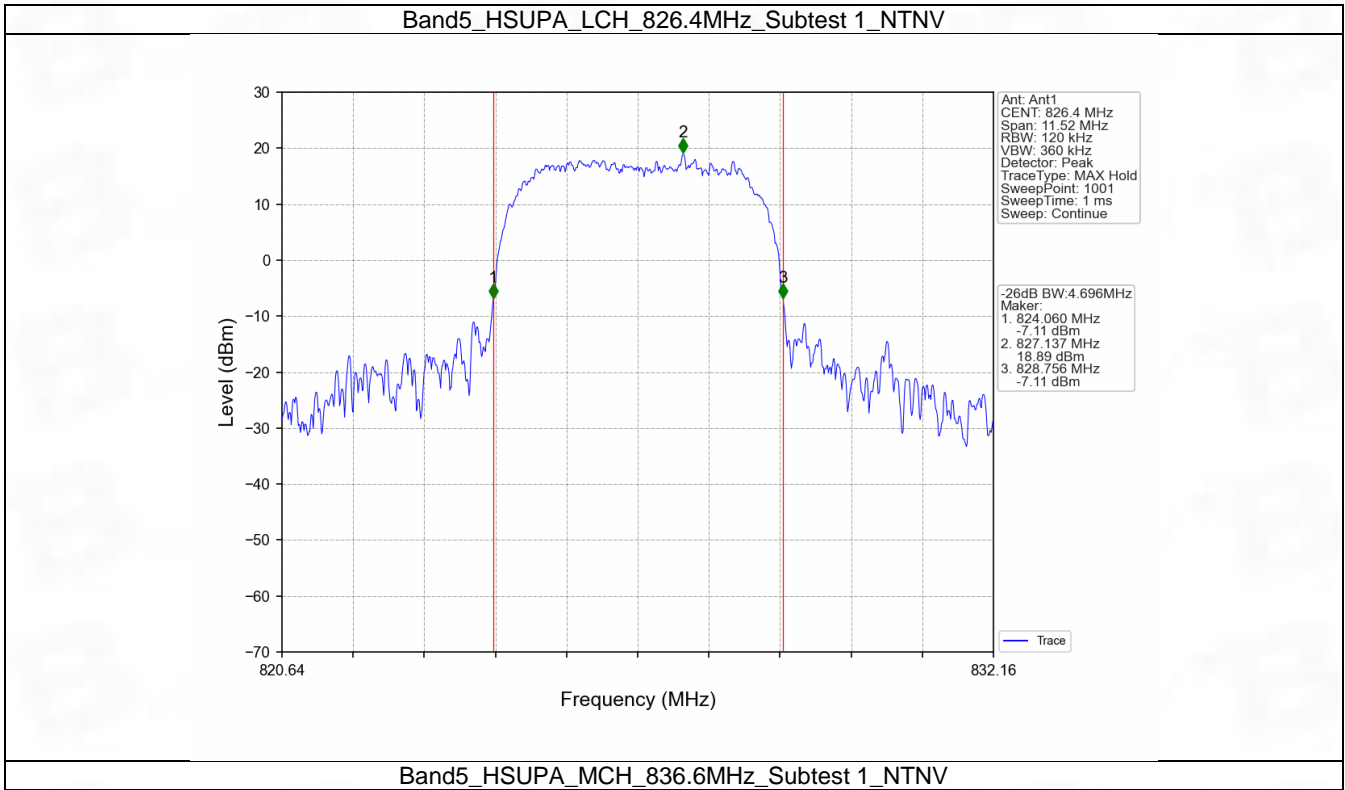
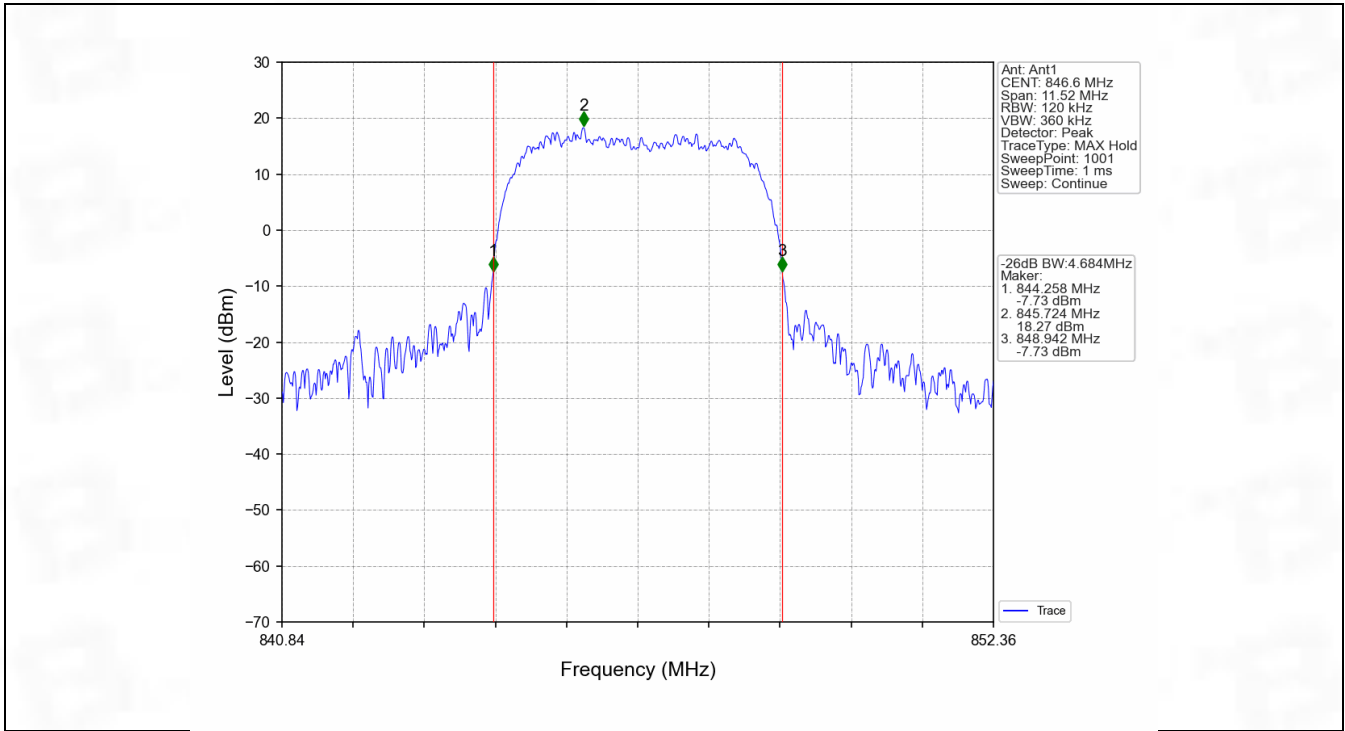
Band: 5					
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)	Verdict
	Network	Subset		Result	
NTNV	RMC	12.2kbps RMC	826.4	4.690	Pass
			836.6	4.711	Pass
			846.6	4.718	Pass
	HSDPA	Subtest 1	826.4	4.705	Pass
			836.6	4.724	Pass
			846.6	4.684	Pass
	HSUPA	Subtest 1	826.4	4.696	Pass
			836.6	4.731	Pass
			846.6	4.724	Pass

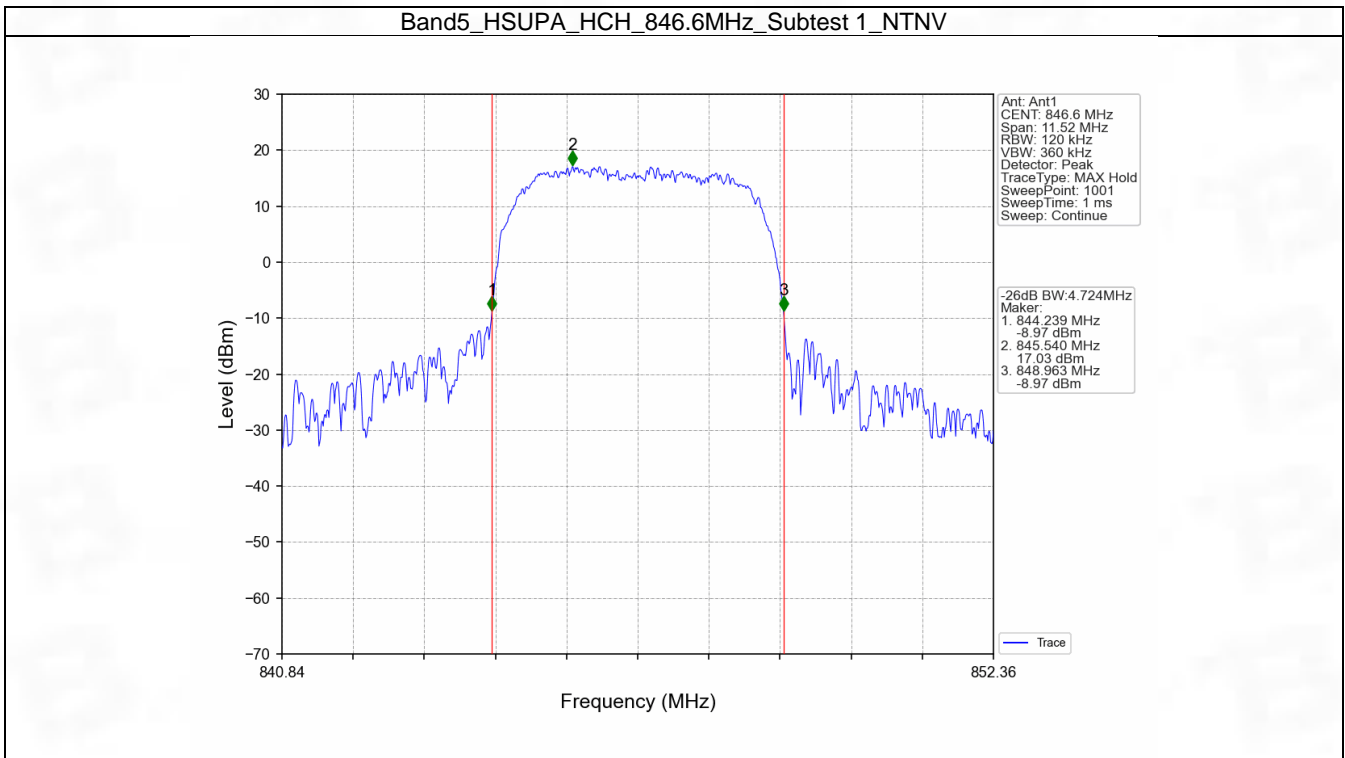
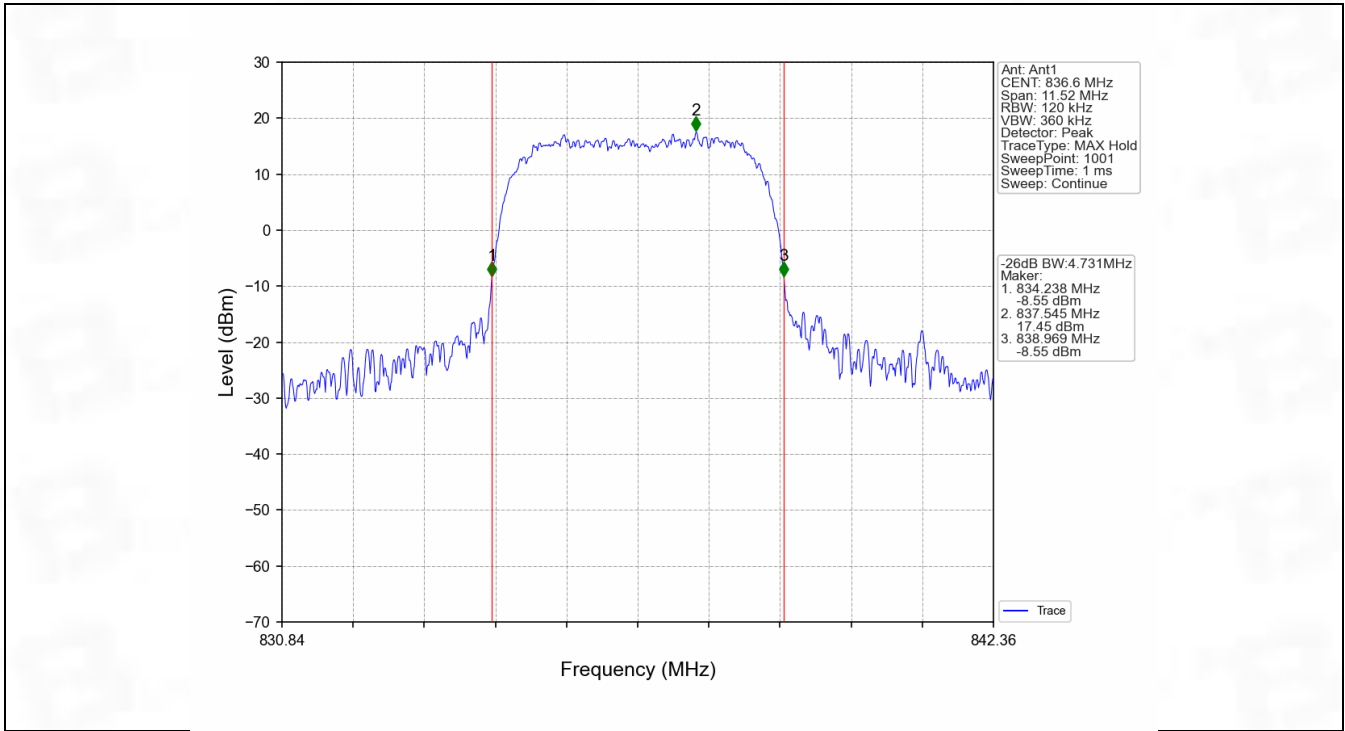
### 4.2.2 Test Graph













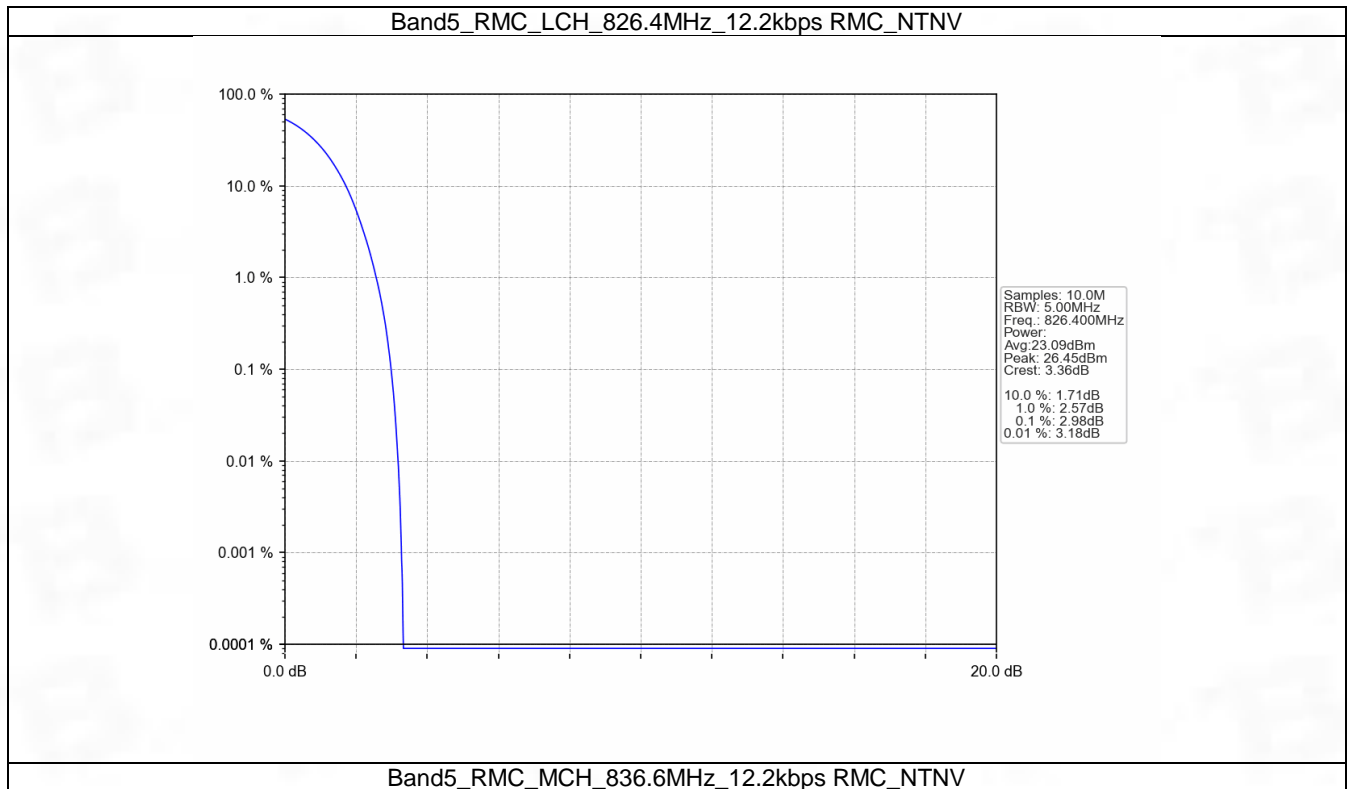
## 5. Peak-Average Ratio

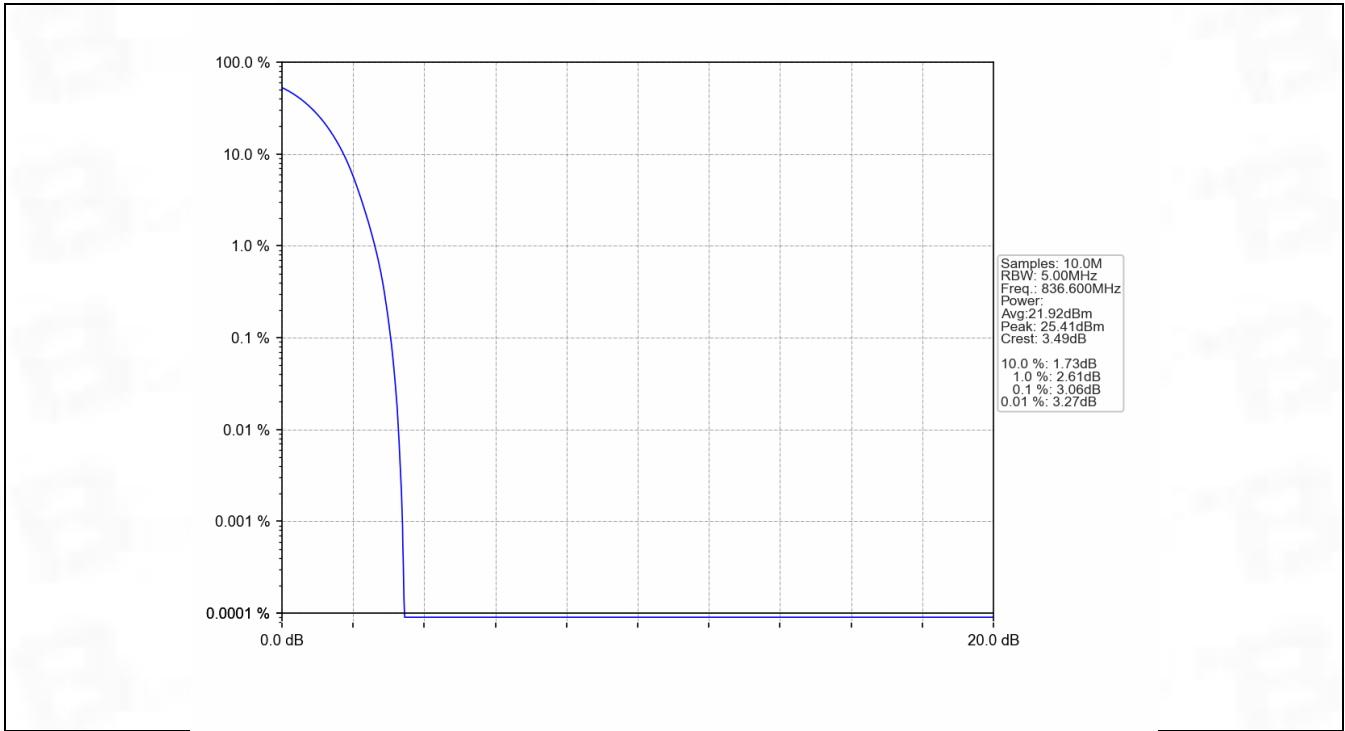
### 5.1 Band5

#### 5.1.1 Test Result

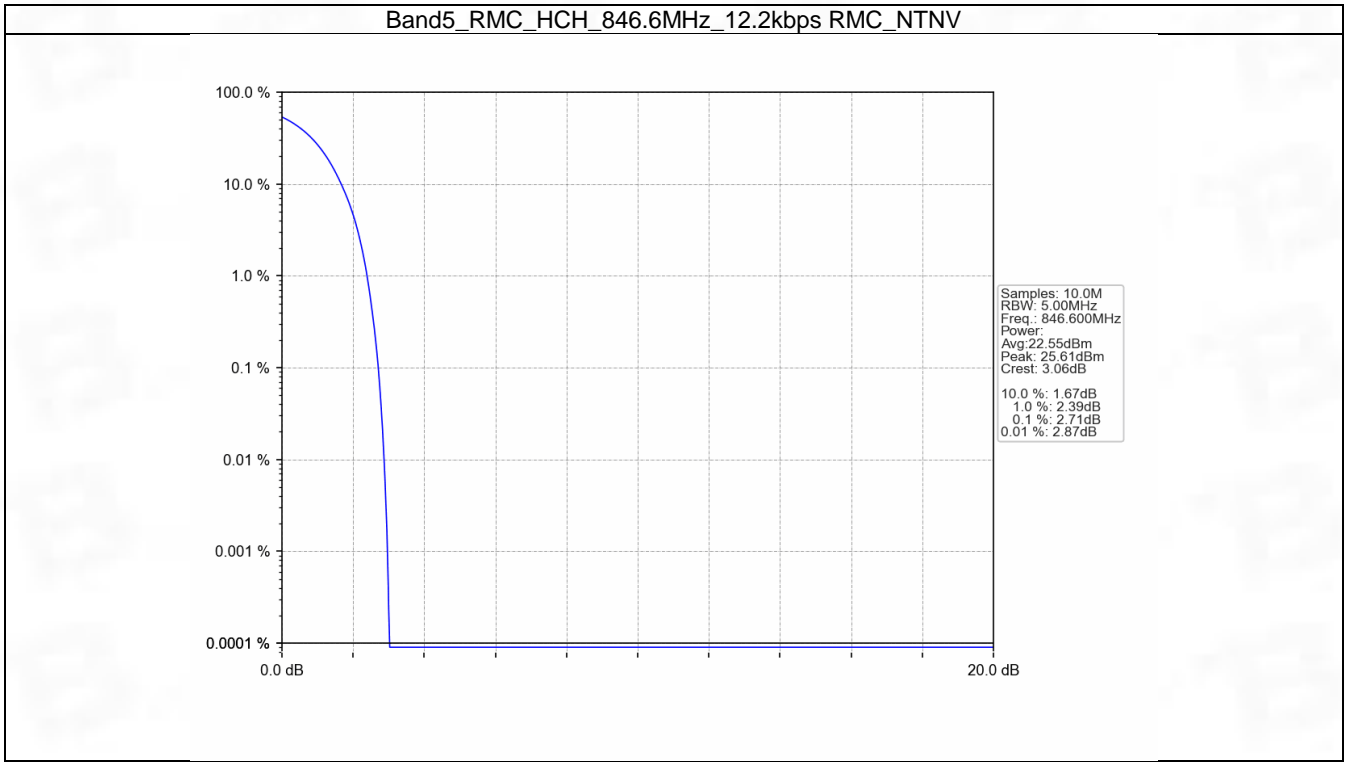
Band: 5						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	826.4	2.98	<=13	Pass
			836.6	3.06	<=13	Pass
			846.6	2.71	<=13	Pass
	HSDPA	Subtest 1	826.4	5.55	<=13	Pass
			836.6	5.76	<=13	Pass
			846.6	5.58	<=13	Pass
	HSUPA	Subtest 1	826.4	5.65	<=13	Pass
			836.6	5.78	<=13	Pass
			846.6	5.62	<=13	Pass

#### 5.1.2 Test Graph

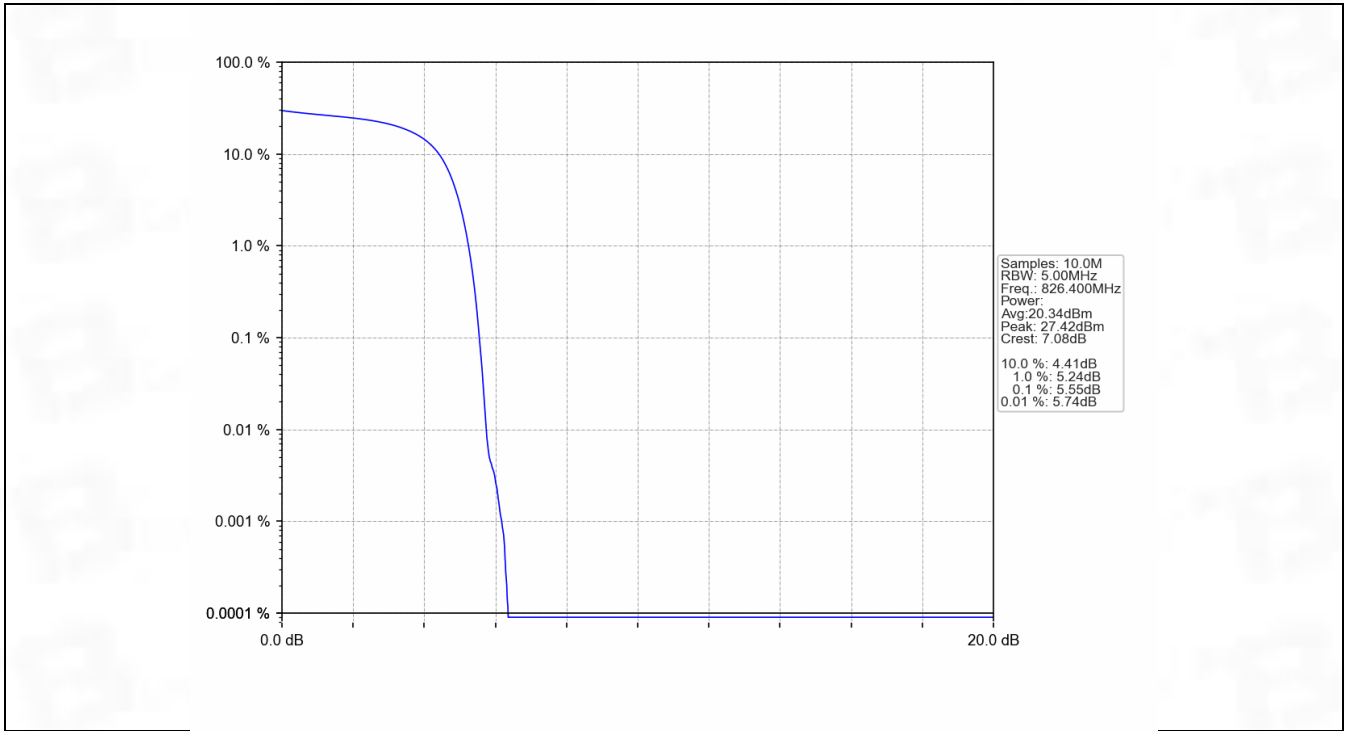




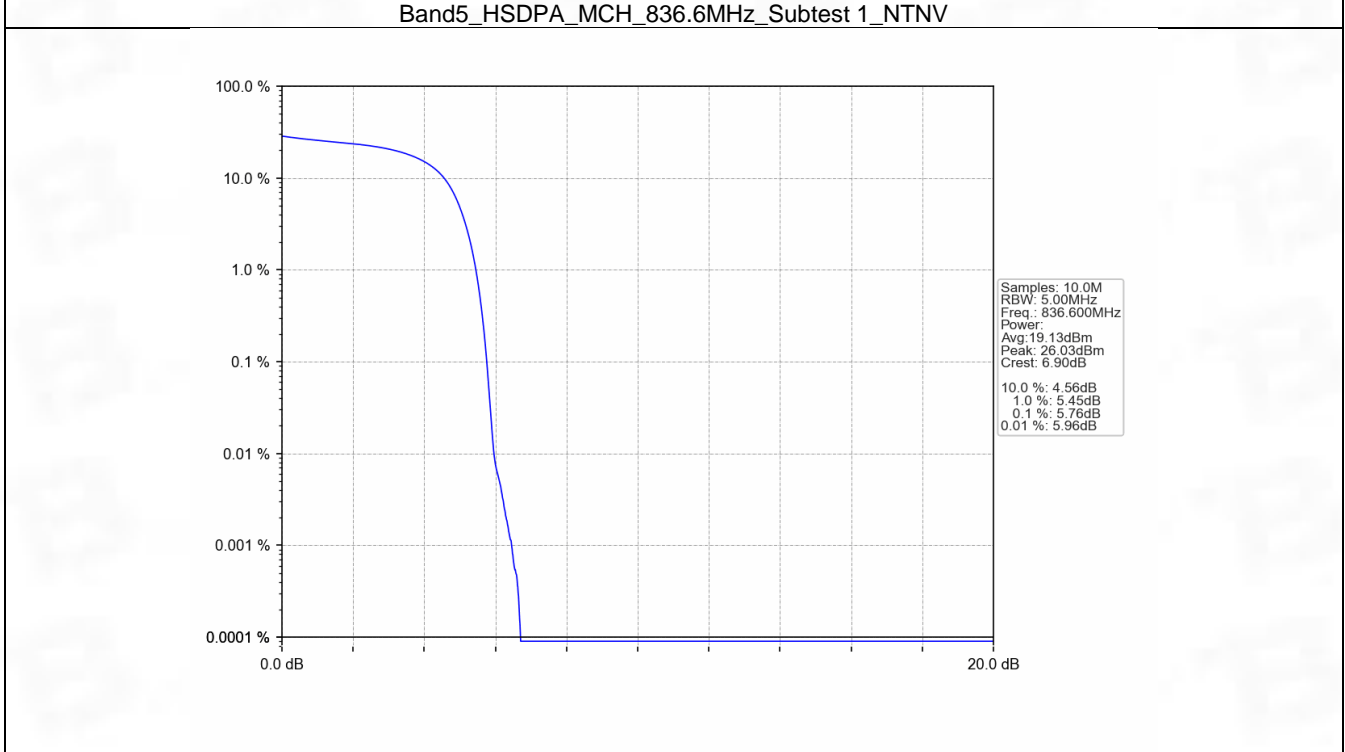
Band5\_RMC\_HCH\_846.6MHz\_12.2kbps RMC\_NTNV



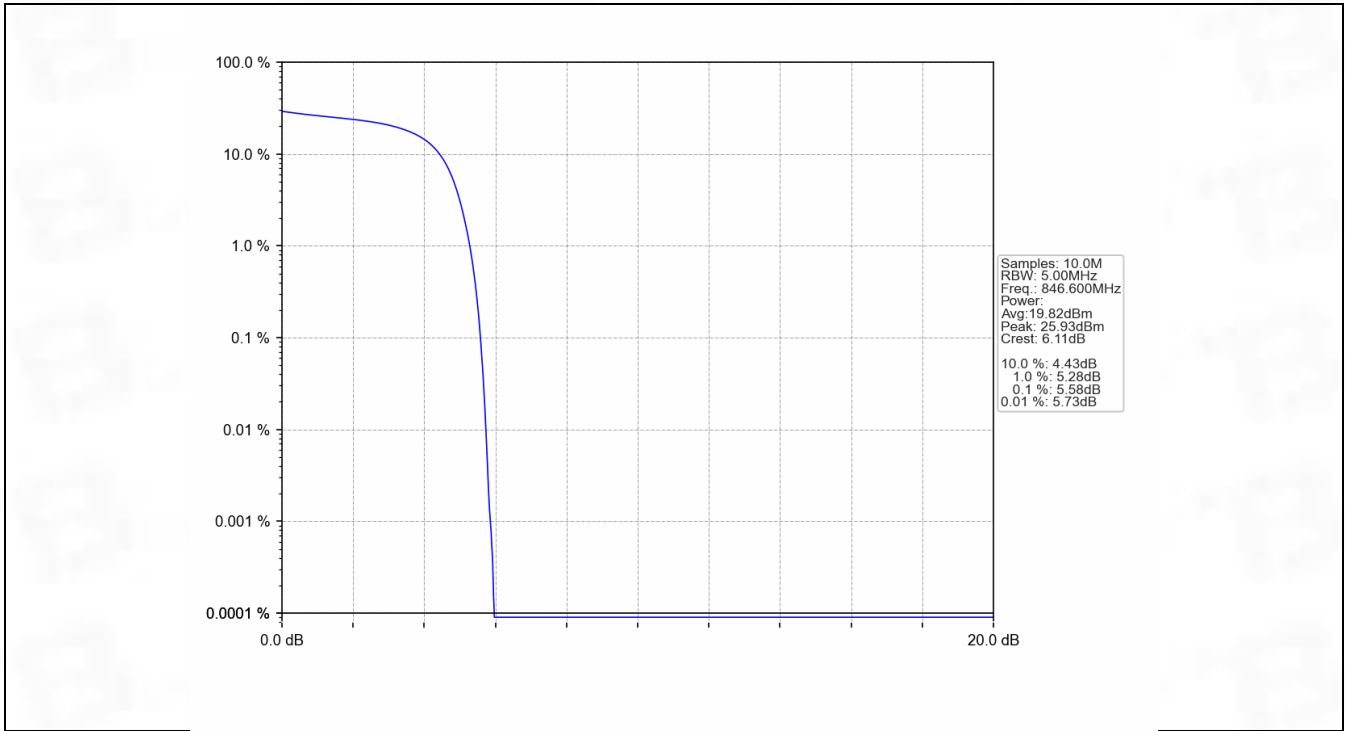
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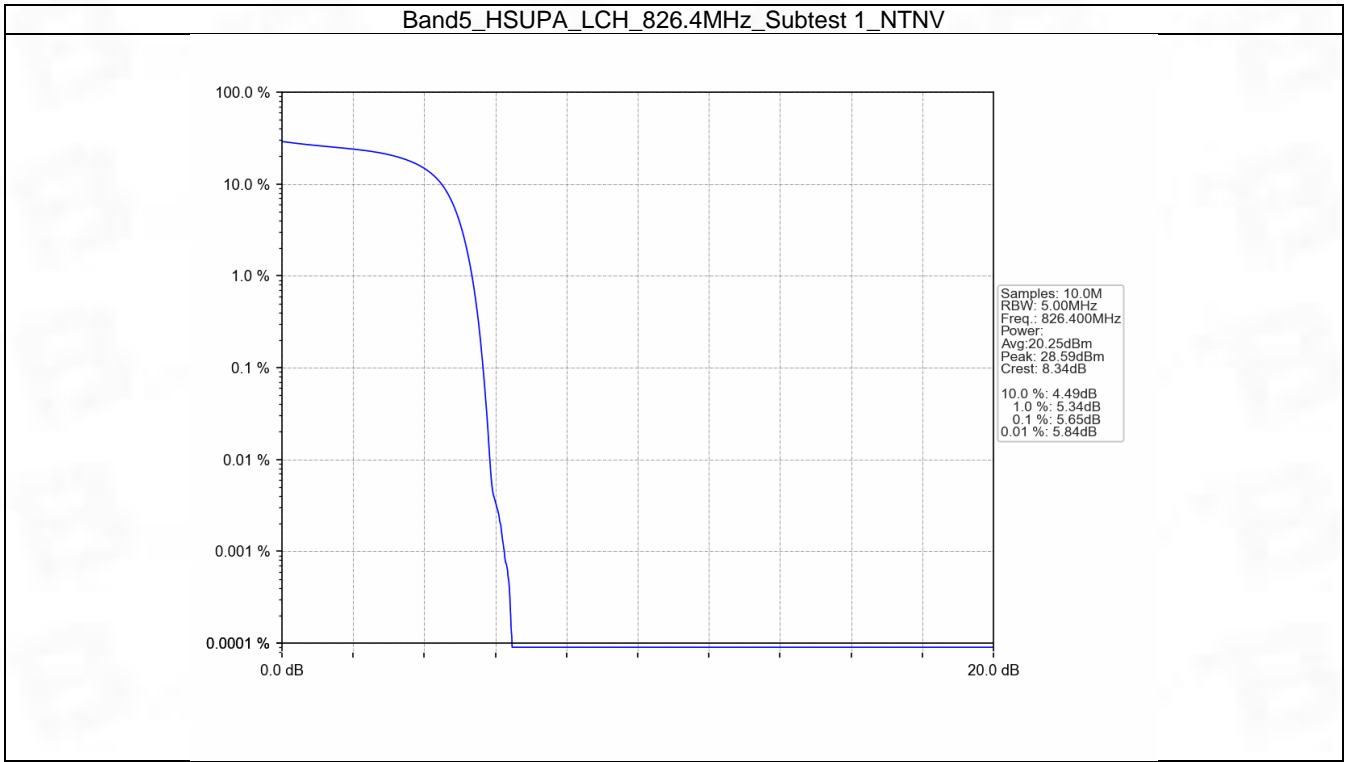
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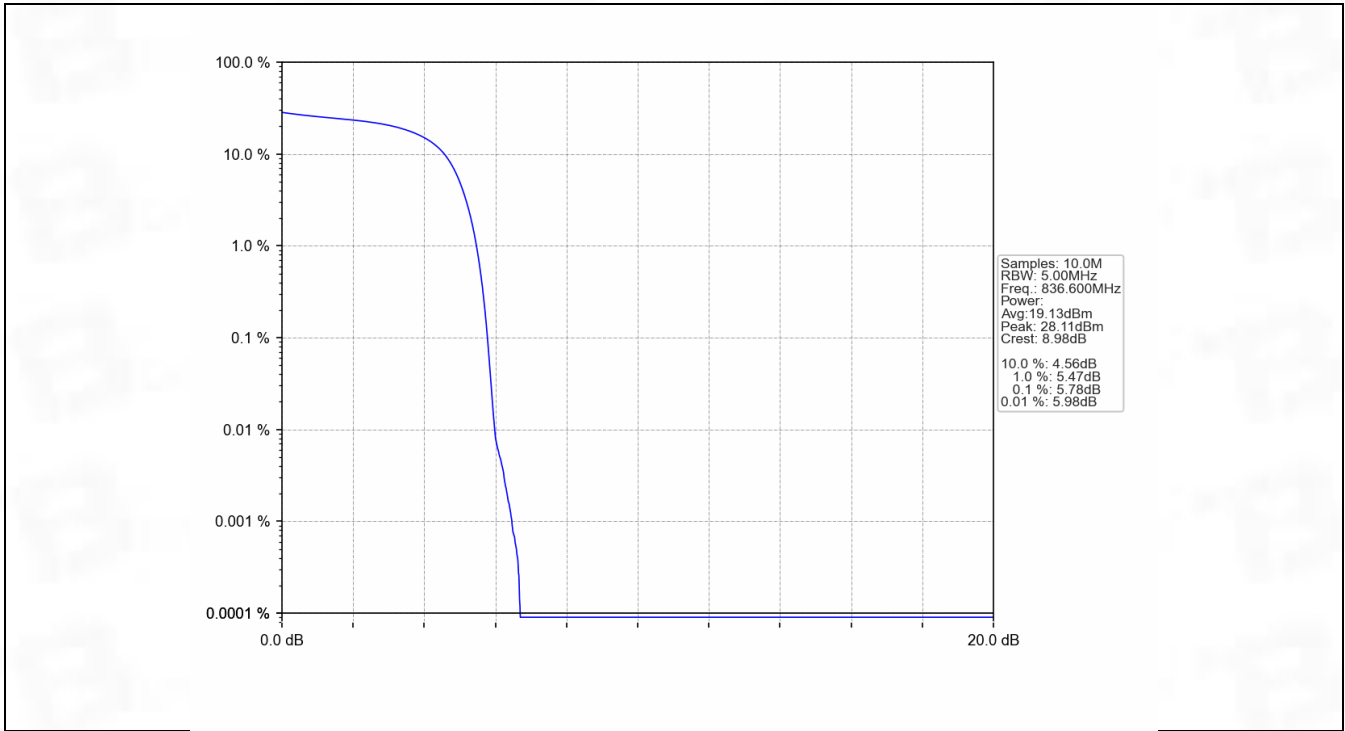
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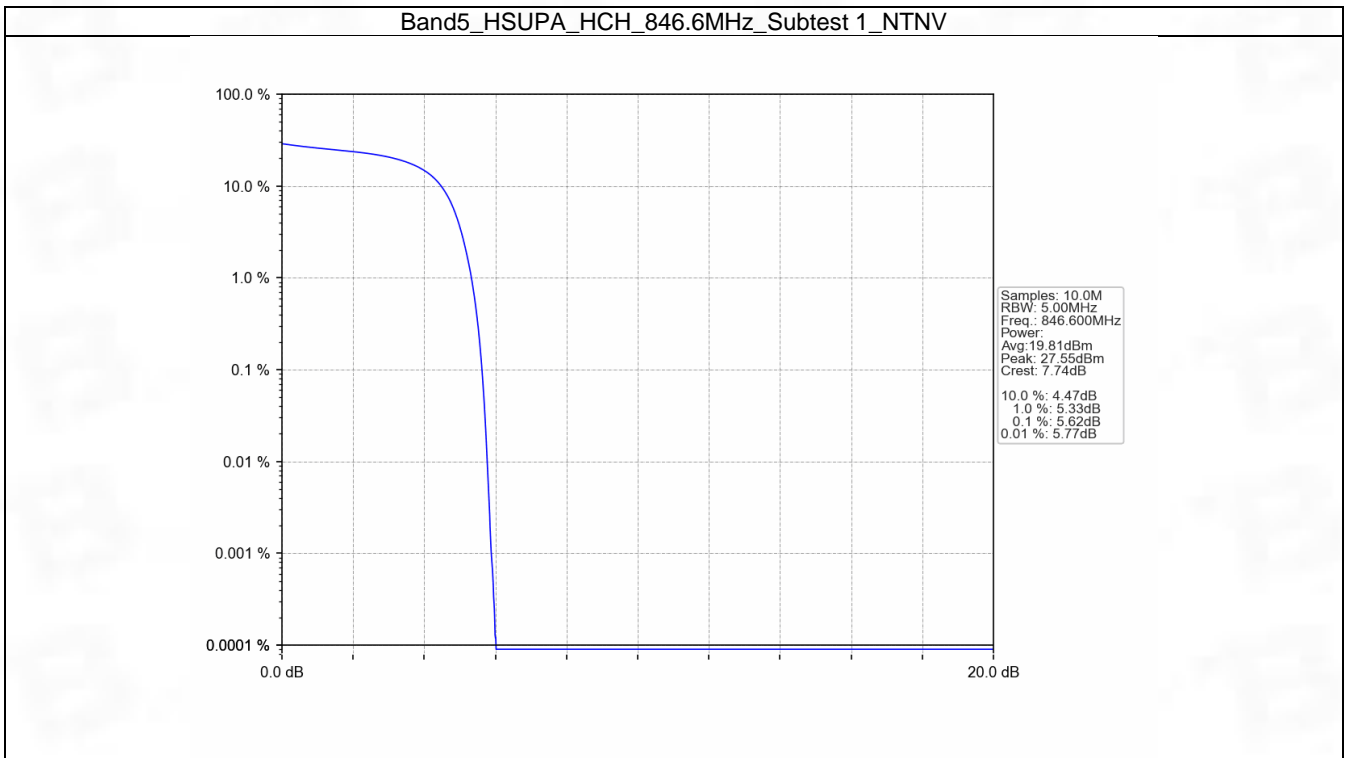
Band5\_HSUPA\_LCH\_826.4MHz\_Subtest 1\_NTNV



Band5\_HSUPA\_MCH\_836.6MHz\_Subtest 1\_NTNV



Band5\_HSUPA\_HCH\_846.6MHz\_Subtest 1\_NTNV



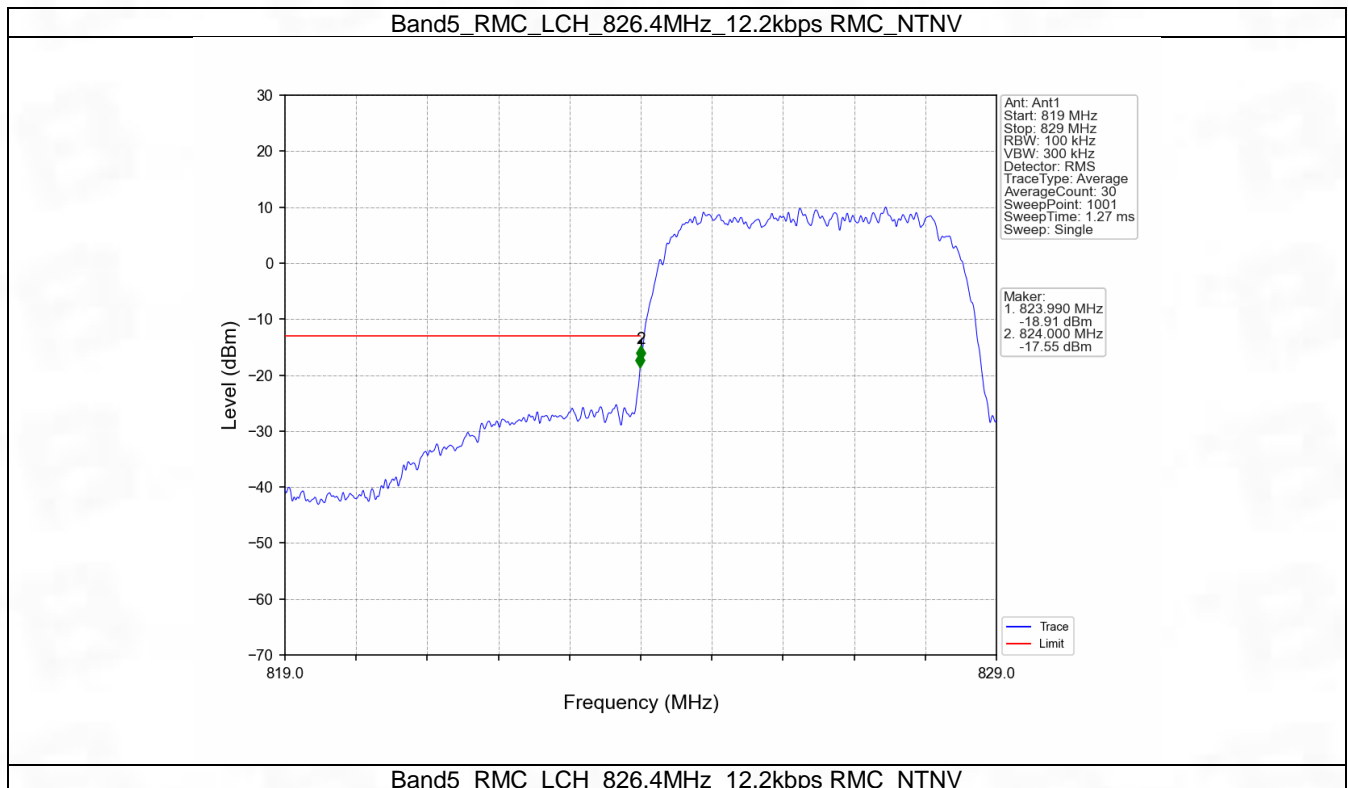
## 6. Spurious Emission

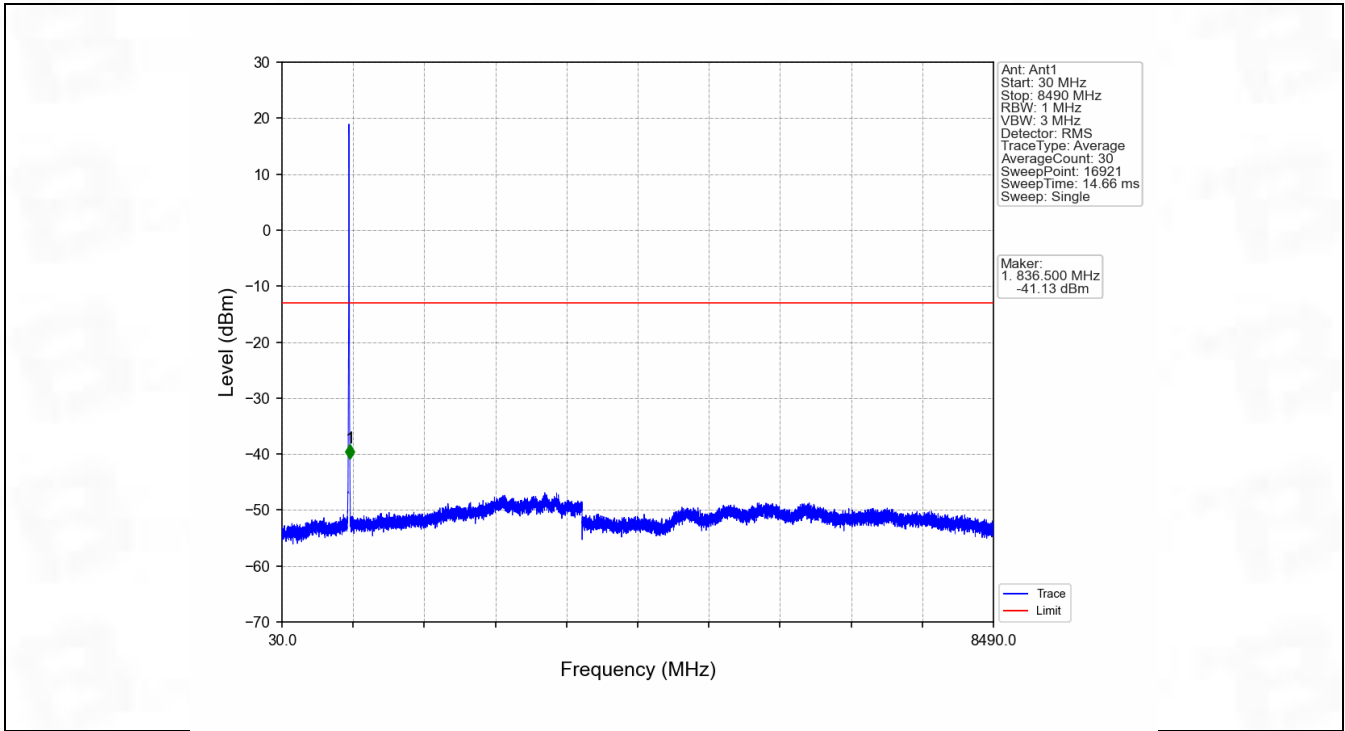
### 6.1 Band5

#### 6.1.1 Test Result

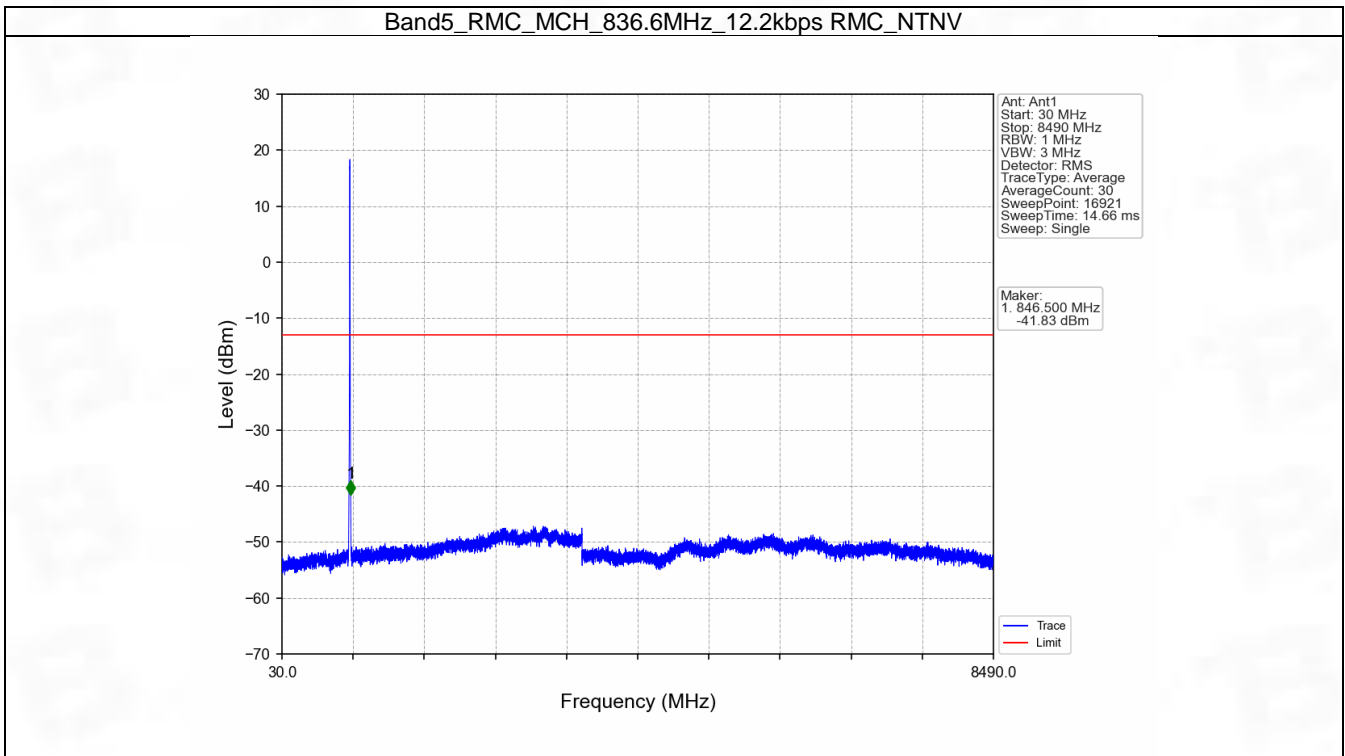
Band: 5						
ENV	Mode		Frequency (MHz)	Spurious Emission		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	826.4	Refer To Test Graph		Pass
			836.6	Refer To Test Graph		Pass
			846.6	Refer To Test Graph		Pass
	HSDPA	Subtest 1	826.4	Refer To Test Graph		Pass
			836.6	Refer To Test Graph		Pass
			846.6	Refer To Test Graph		Pass
	HSUPA	Subtest 1	826.4	Refer To Test Graph		Pass
			836.6	Refer To Test Graph		Pass
			846.6	Refer To Test Graph		Pass

#### 6.1.2 Test Graph

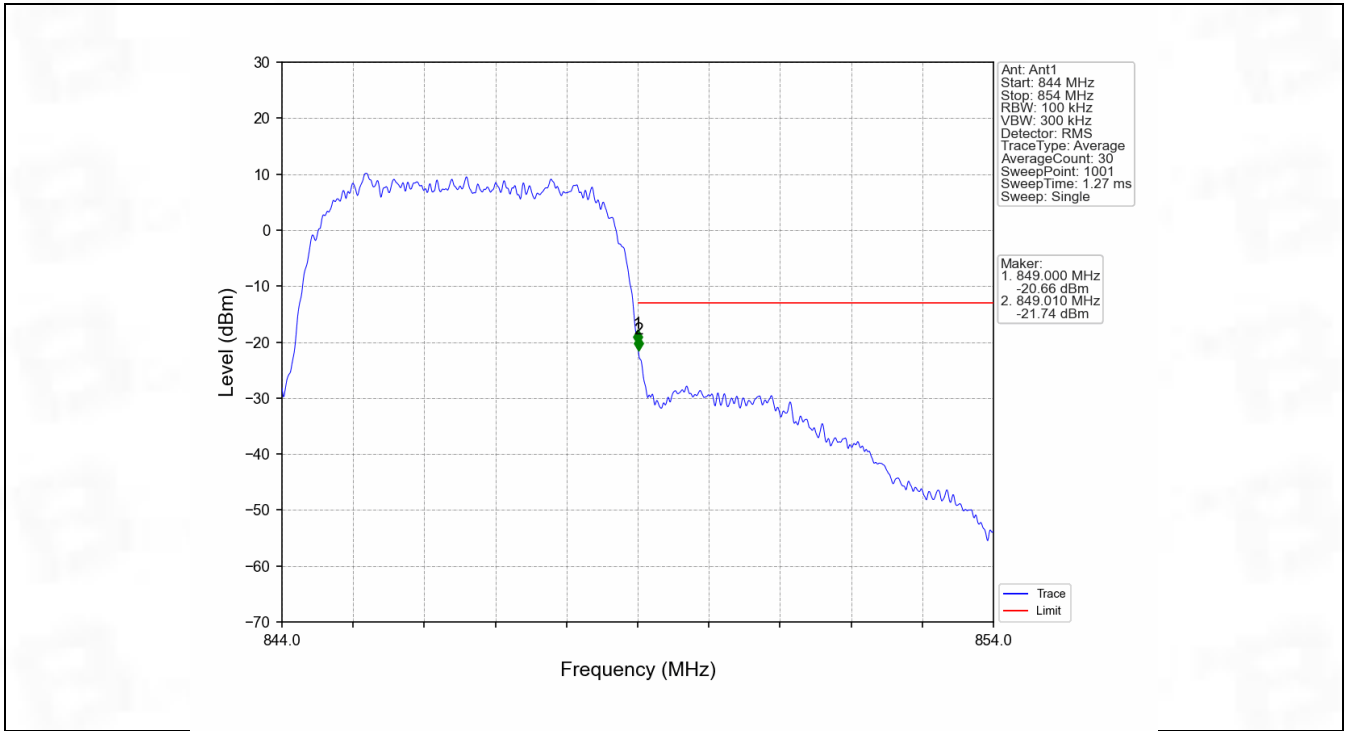




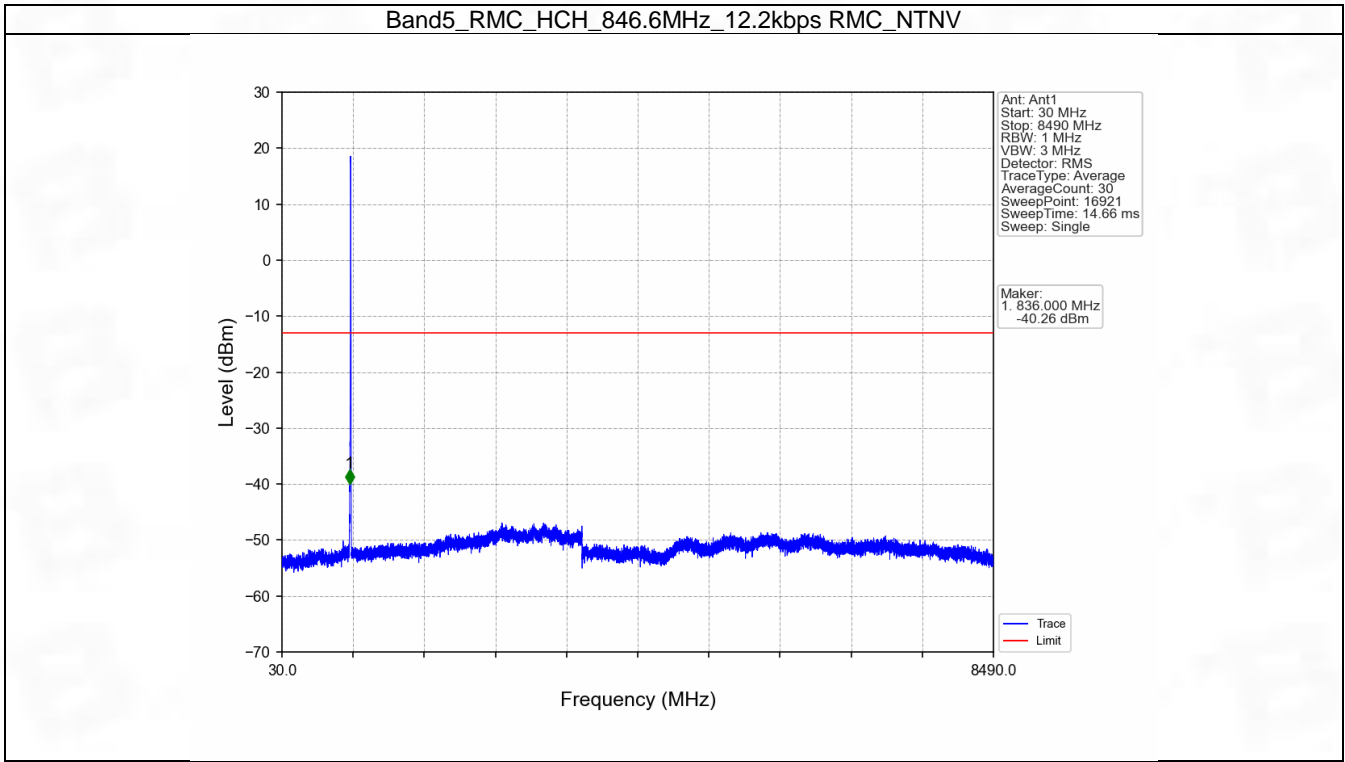
Band5\_RMC\_MCH\_836.6MHz\_12.2kbps RMC\_NTNV



Band5\_RMC\_HCH\_846.6MHz\_12.2kbps RMC\_NTNV

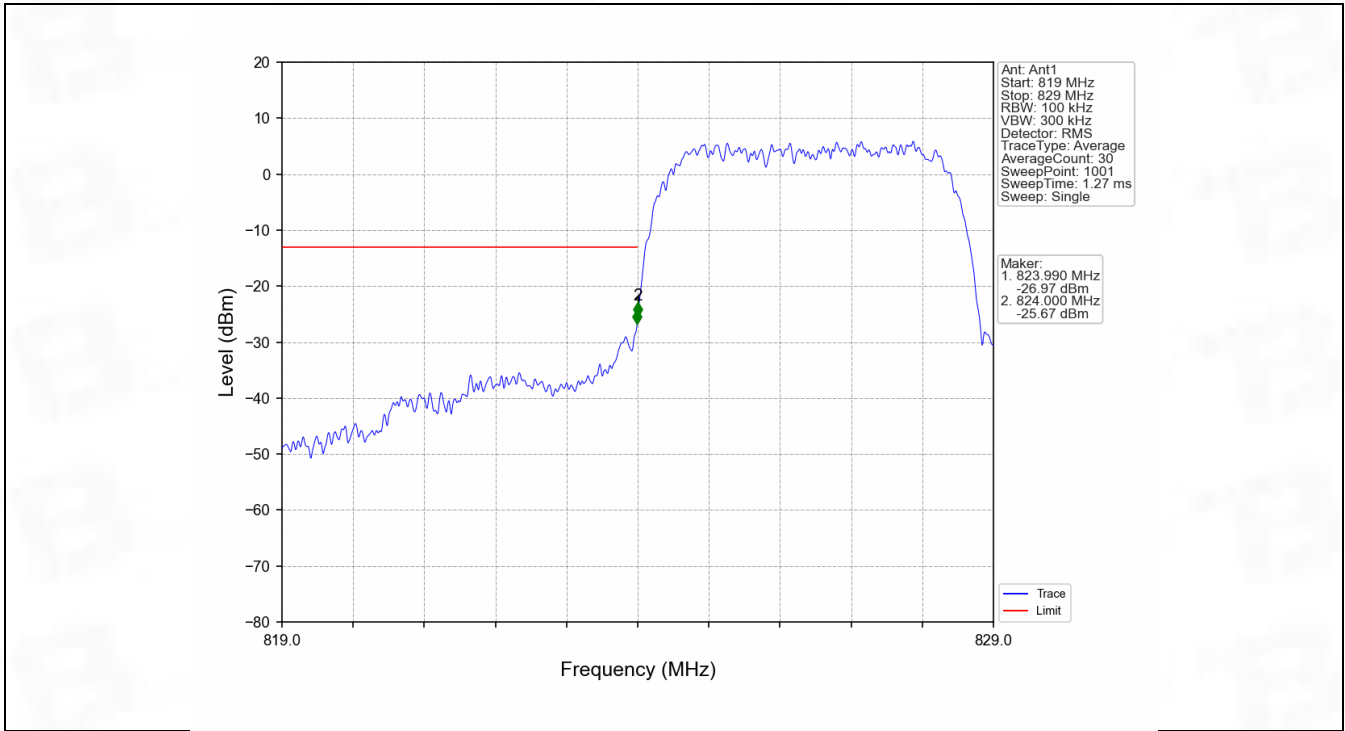


Band5\_RMC\_HCH\_846.6MHz\_12.2kbps RMC\_NTNV

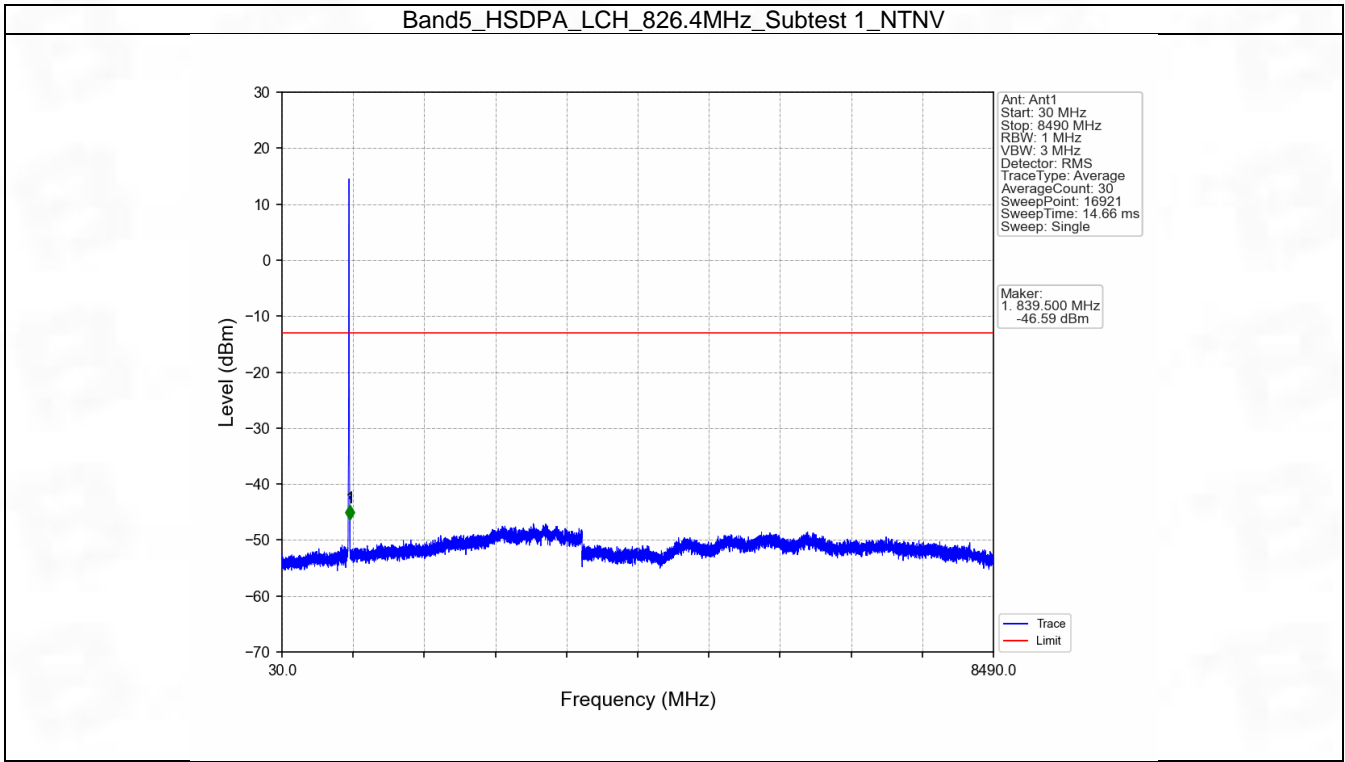


Band5\_HSDPA\_LCH\_826.4MHz\_Subtest 1\_NTNV

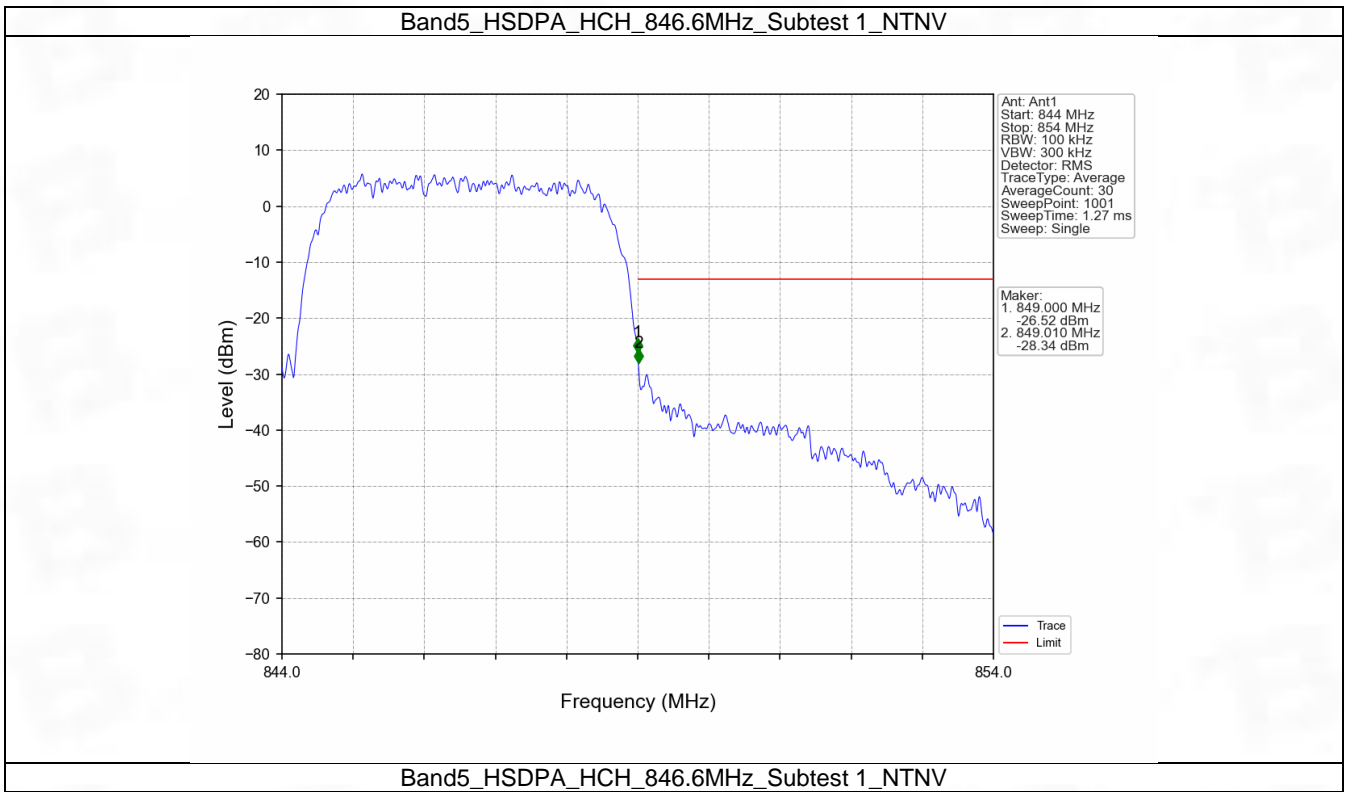
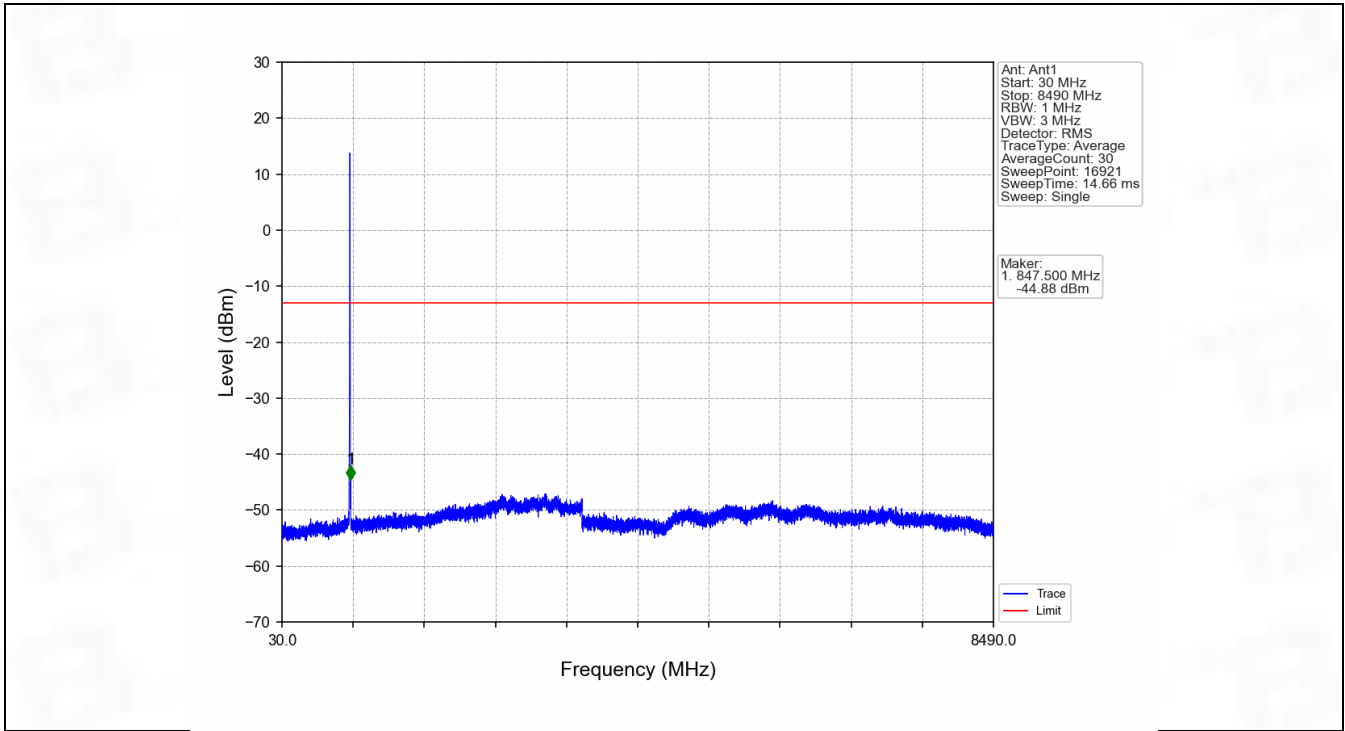


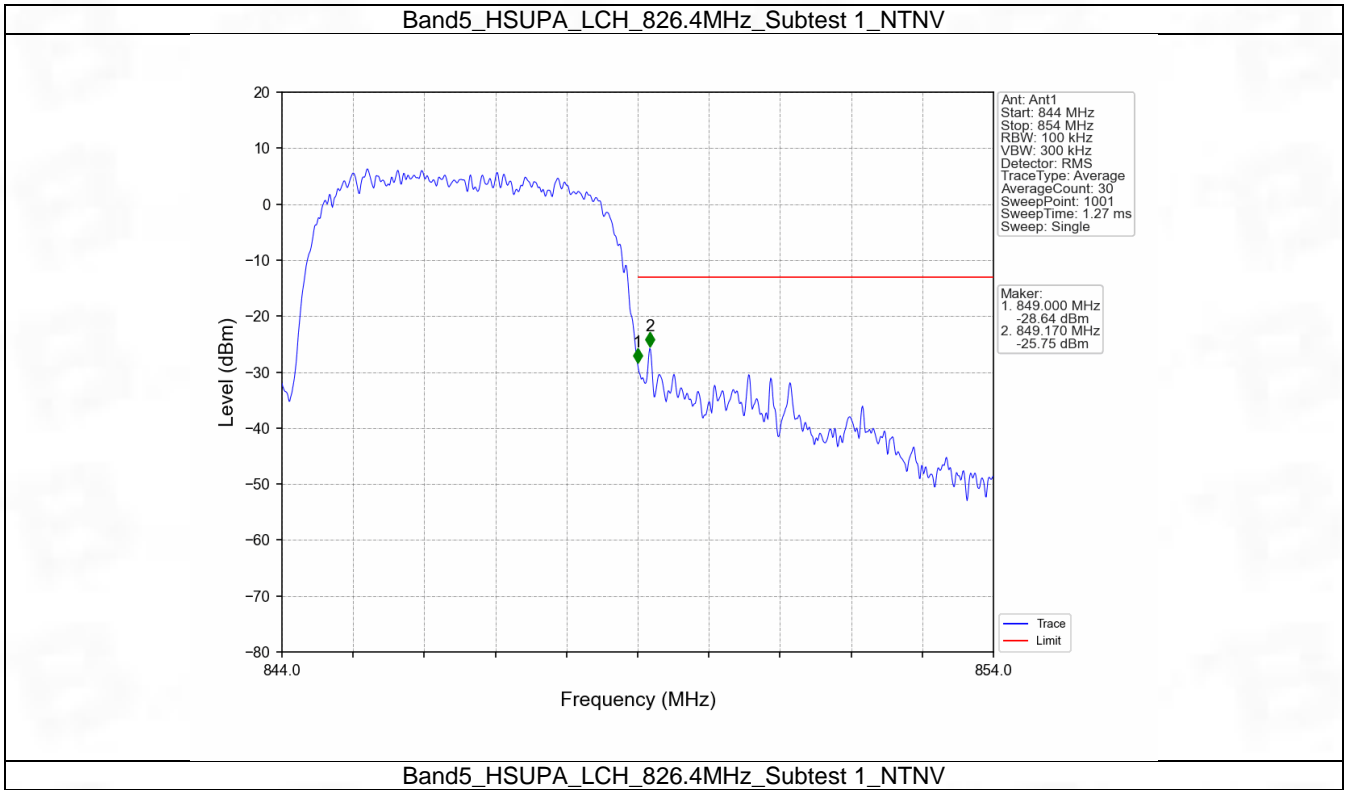
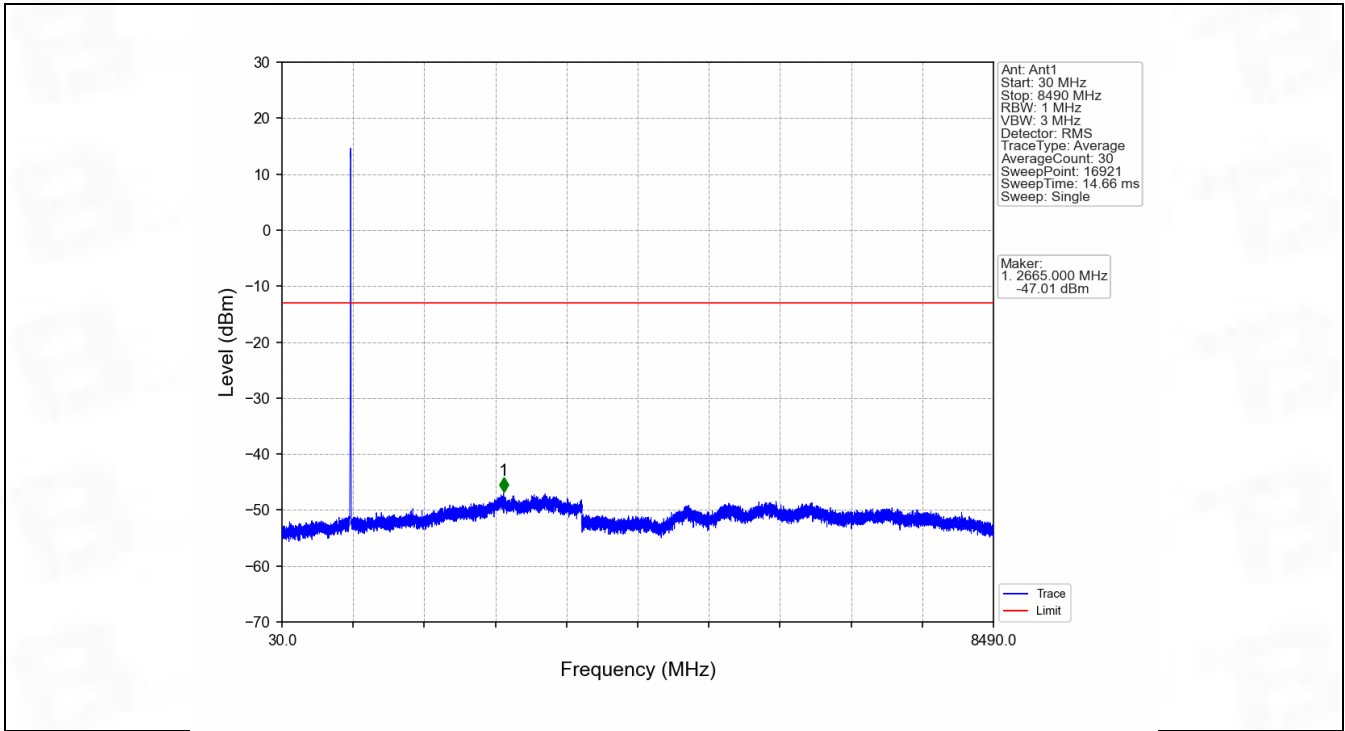


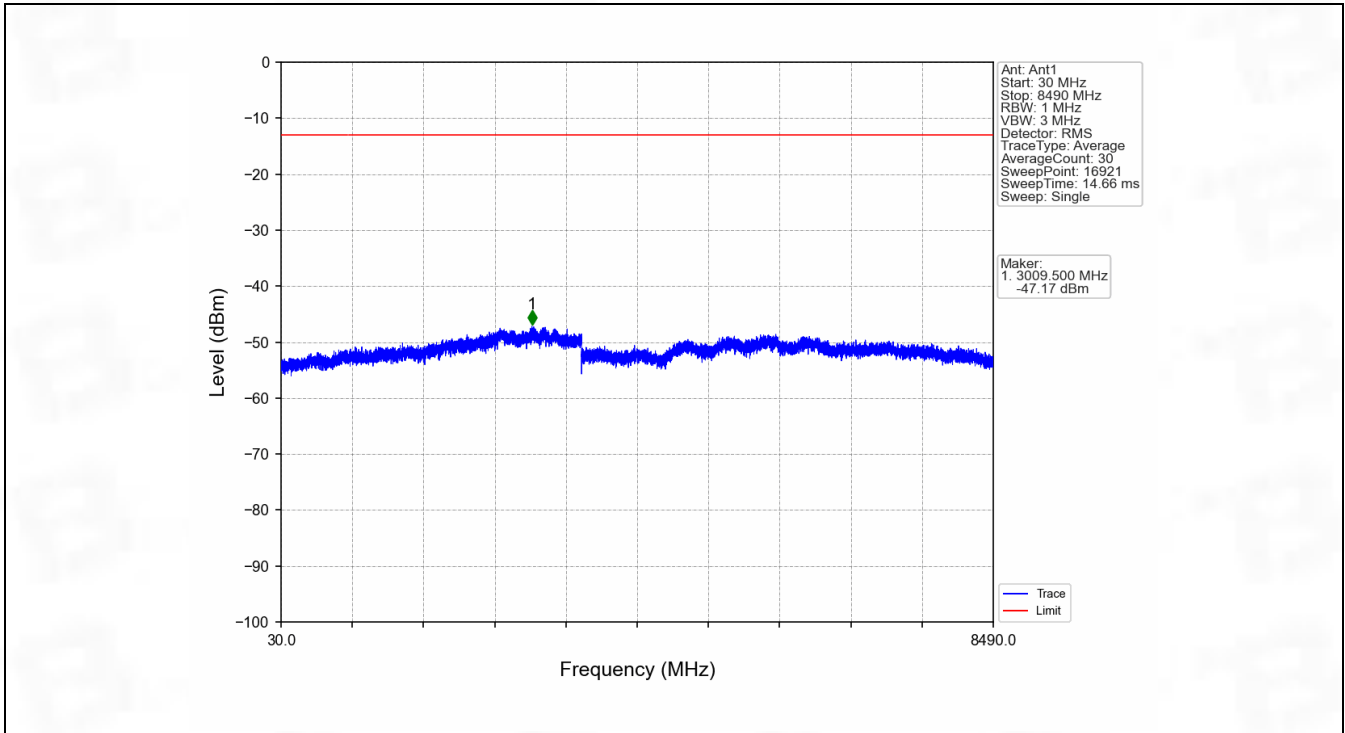
Band5\_HSDPA\_LCH\_826.4MHz\_Subtest 1\_NTNV



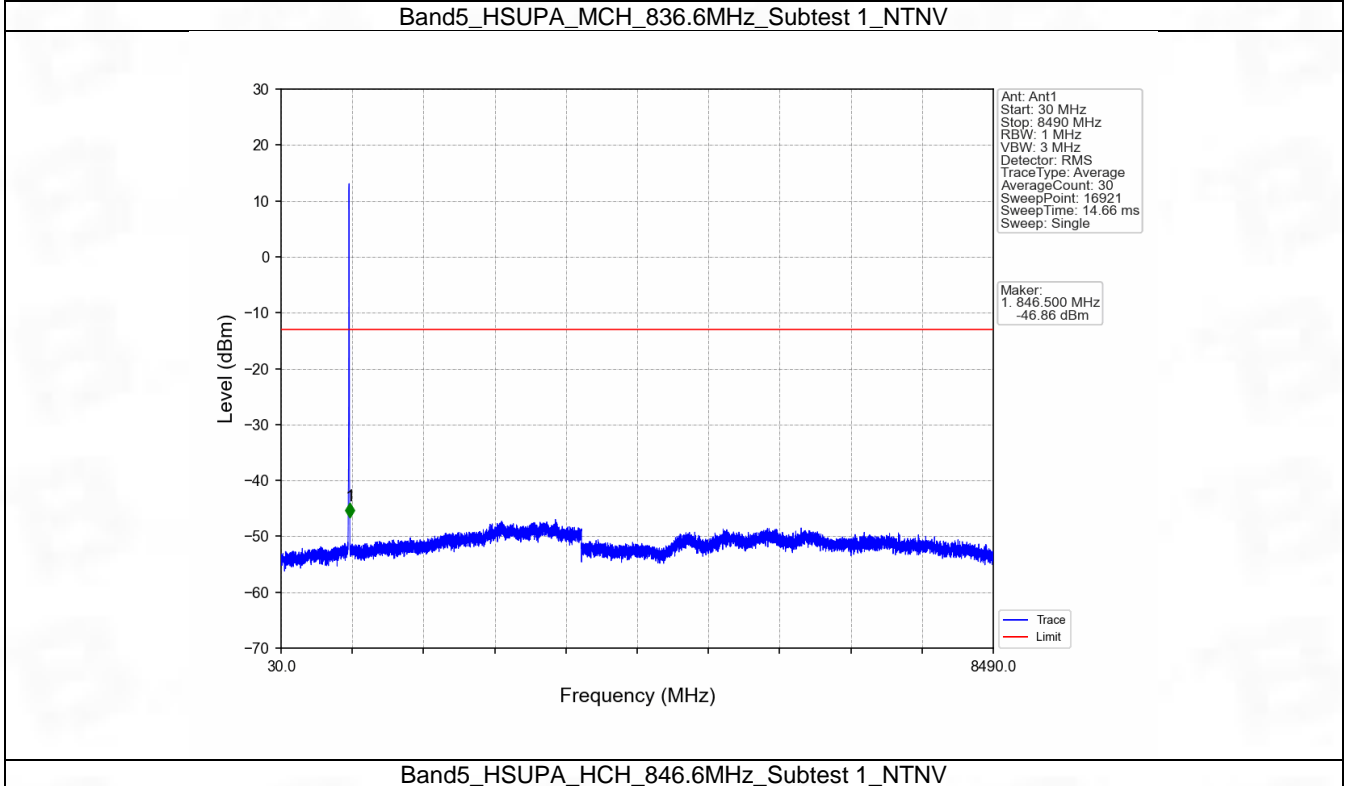
Band5\_HSDPA\_MCH\_836.6MHz\_Subtest 1\_NTNV



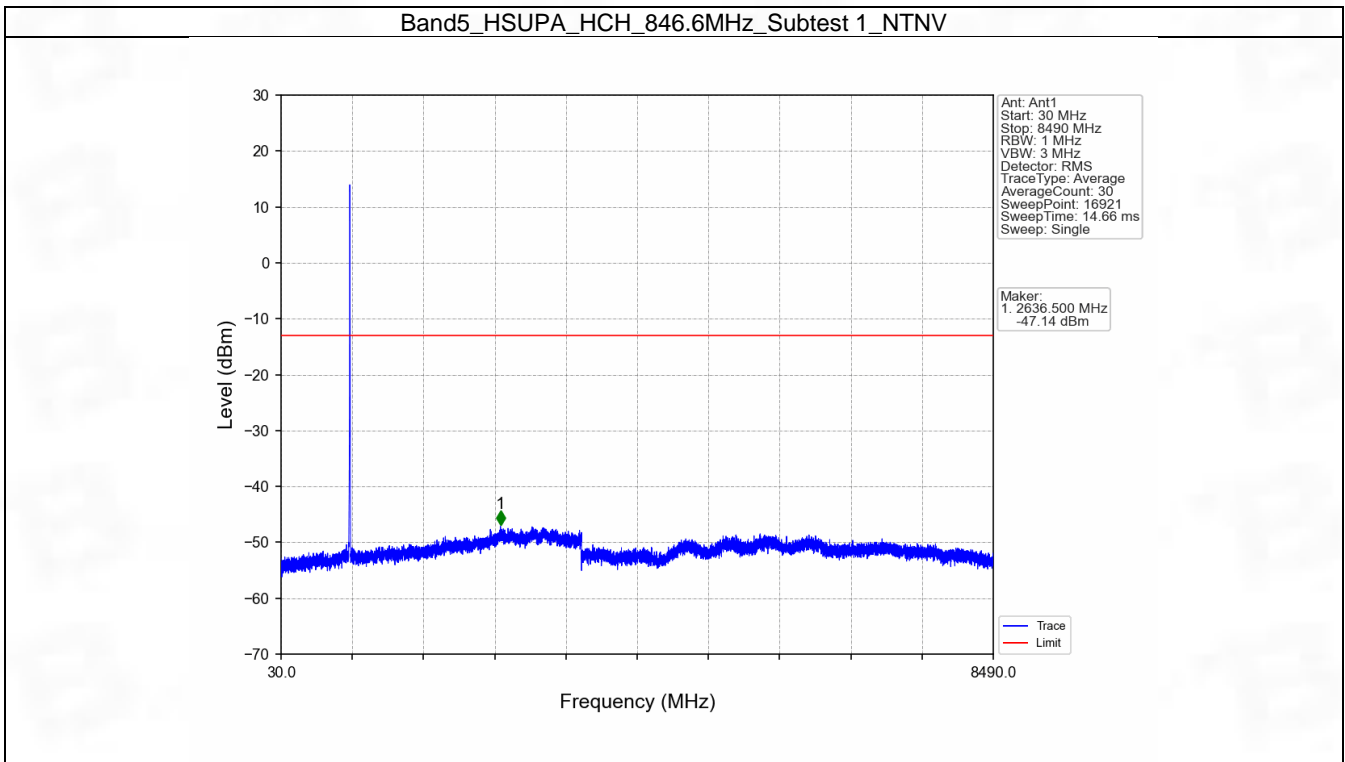
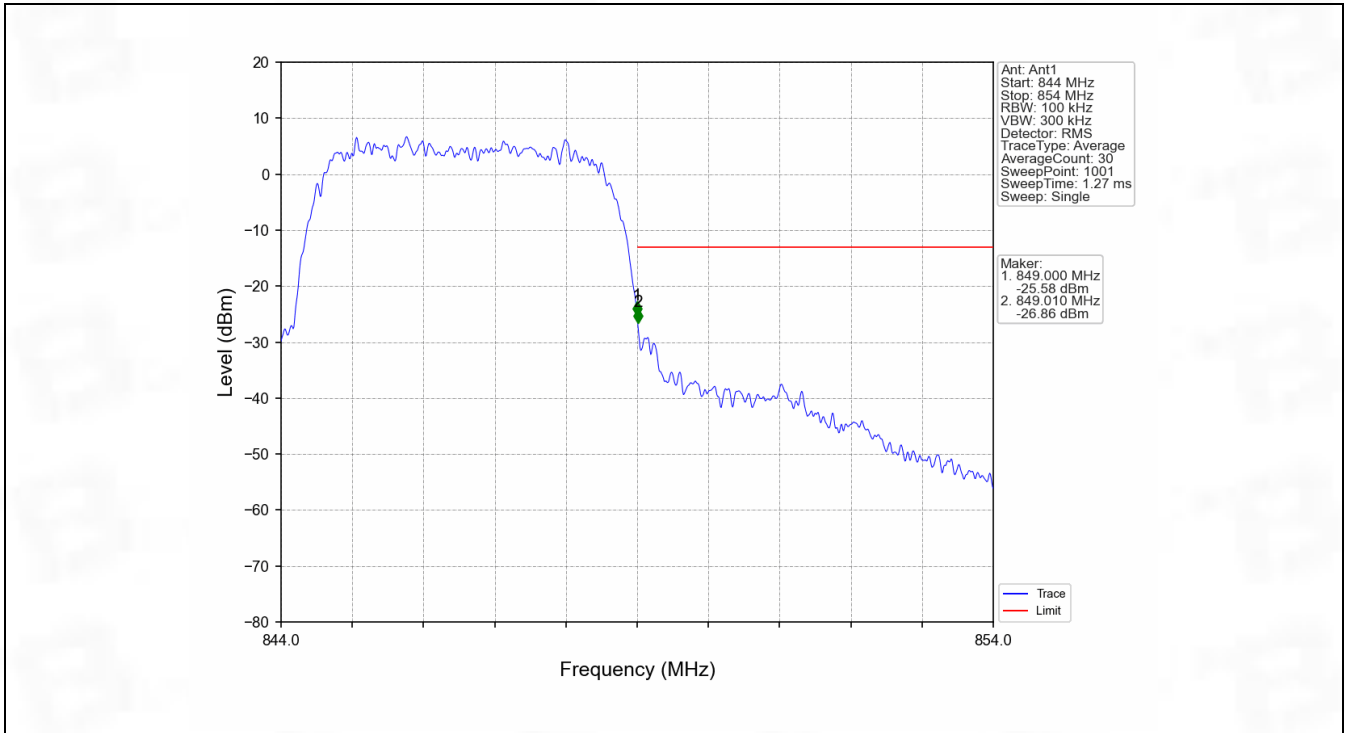




Band5\_HSUPA\_MCH\_836.6MHz\_Subtest 1\_NTNV



Band5\_HSUPA\_HCH\_846.6MHz\_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)
5	3.84	826.4	846.6	0.1754	0.0029	ppm	M18F9W	24E	22.44

### 7.2 Form731\_ERP

#### 7.2.1 Test Result

Band	BW	Lower Freq	High Freq	MAX Power (W)	Value	Hz/ppm	Emission Designator	Rule Parts	MAX Power (dBm)
5	3.84	826.4	846.6	0.0499	0.0029	ppm	M18F9W	24E	16.98