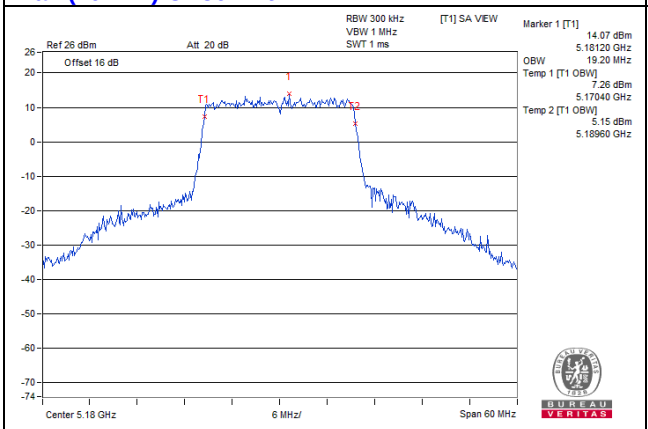
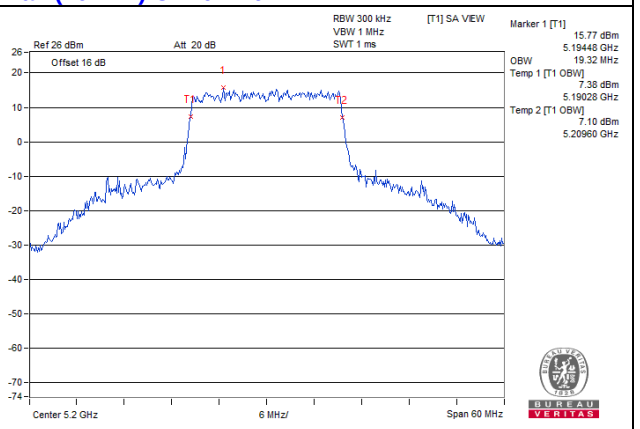
1S4T TxBF

99% OCCUPIED BANDWIDTH SPECTRUM PLOT

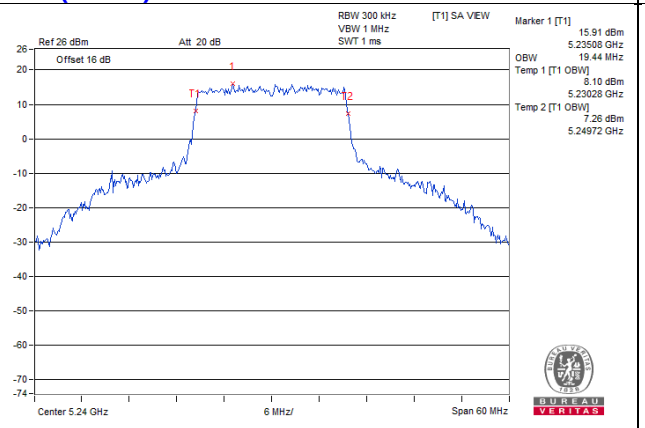
11ax (20MHz) CH36 Ant1



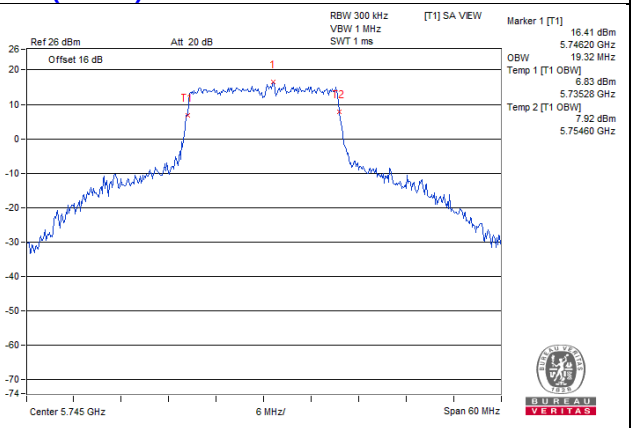
11ax (20MHz) CH40 Ant1



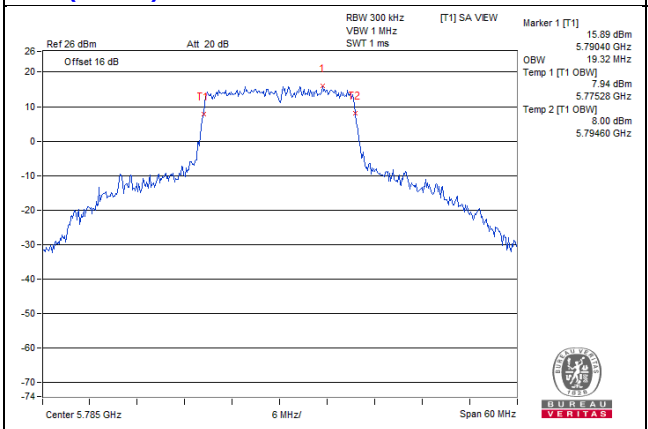
11ax (20MHz) CH48 Ant1



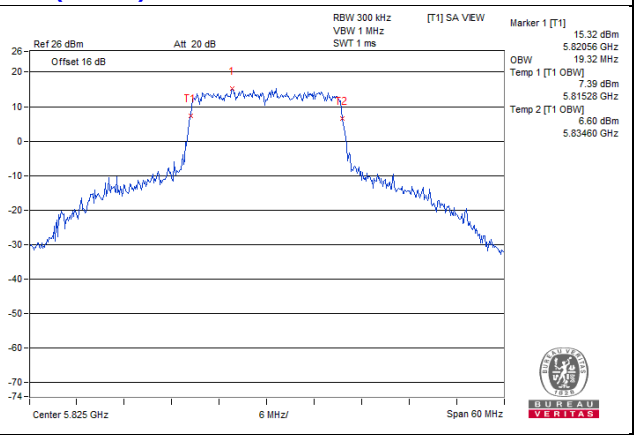
11ax (20MHz) CH149 Ant1



11ax (20MHz) CH157 Ant1

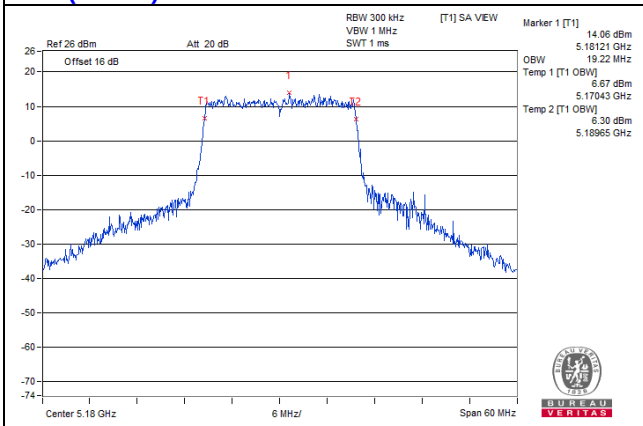


11ax (20MHz) CH165 Ant1

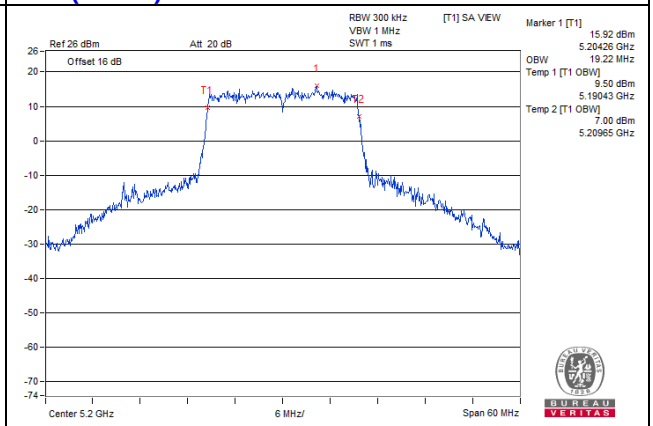


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

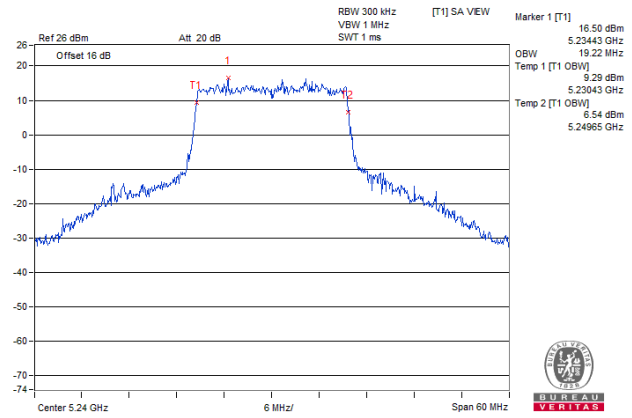
11ax (20MHz) CH36 Ant2



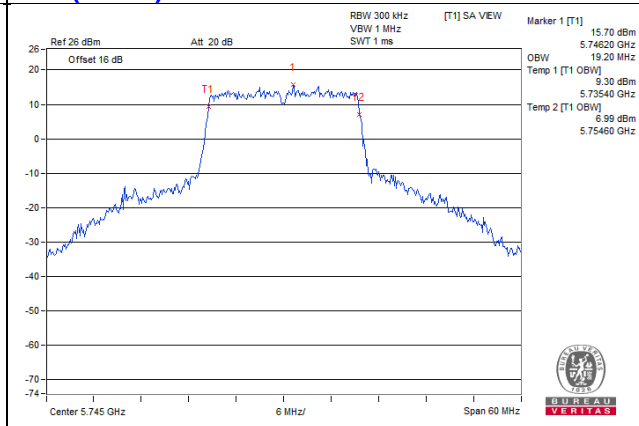
11ax (20MHz) CH40 Ant2



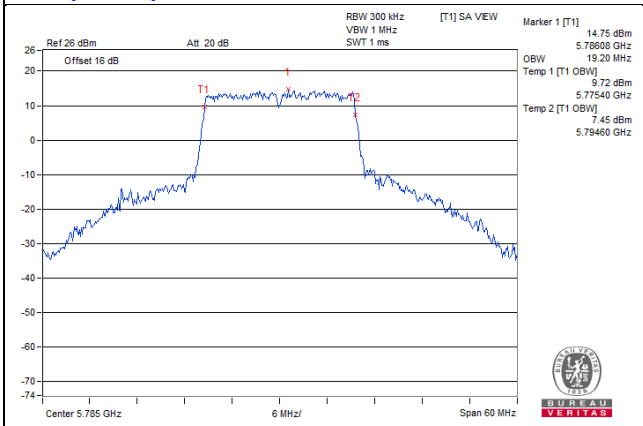
11ax (20MHz) CH48 Ant2



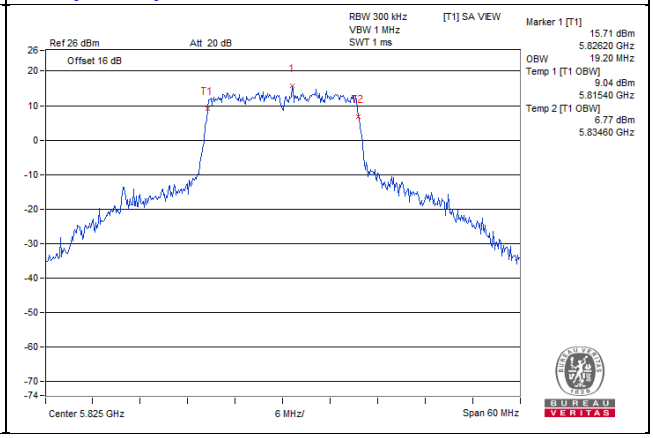
11ax (20MHz) CH149 Ant2



11ax (20MHz) CH157 Ant2

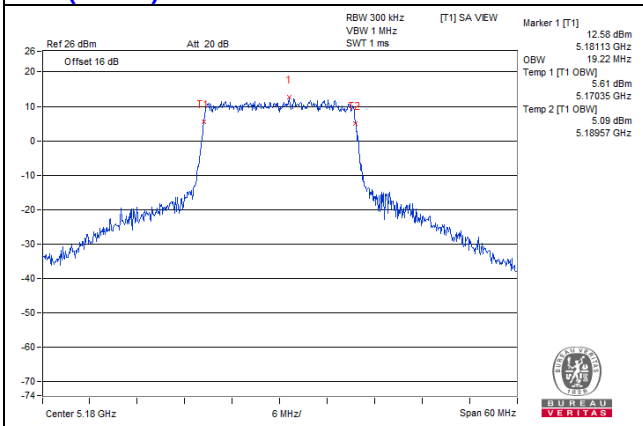


11ax (20MHz) CH165 Ant2

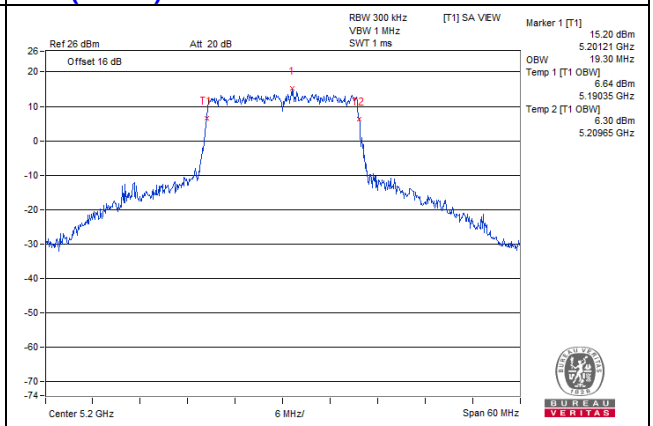


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

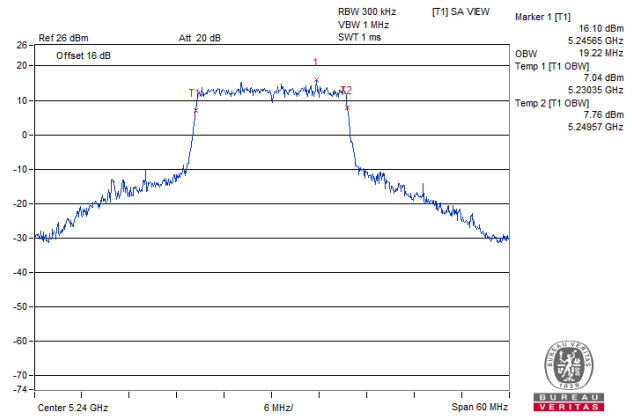
11ax (20MHz) CH36 Ant3



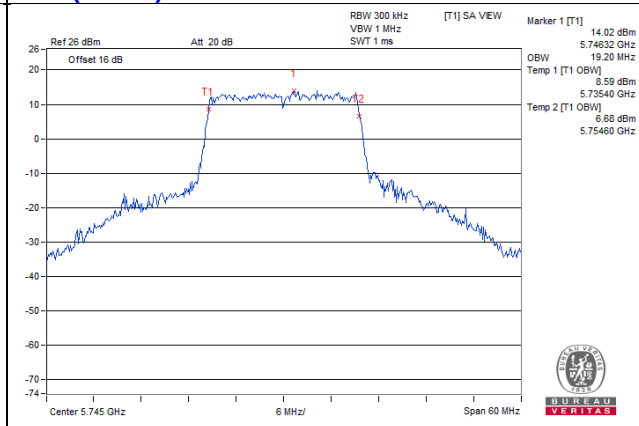
11ax (20MHz) CH40 Ant3



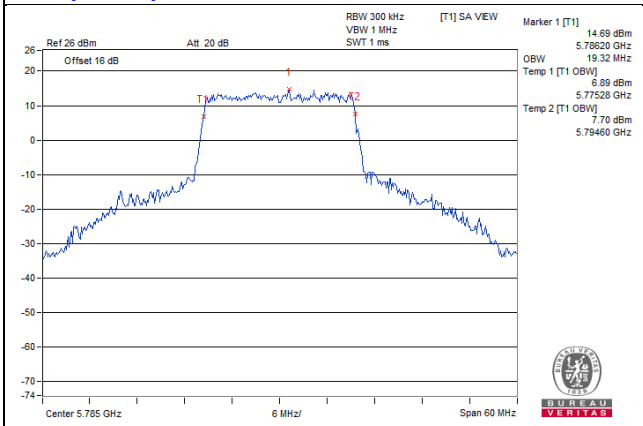
11ax (20MHz) CH48 Ant3



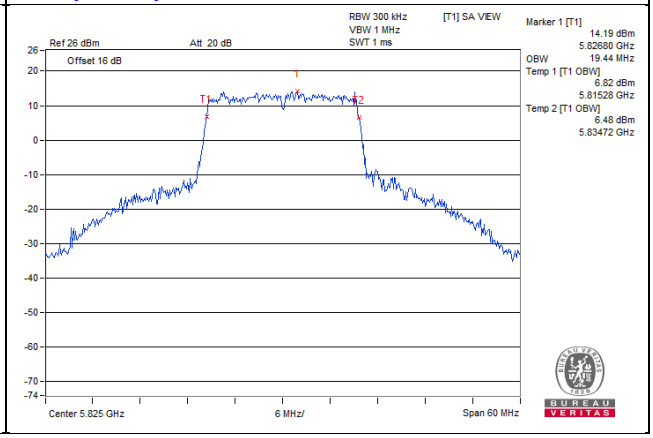
11ax (20MHz) CH149 Ant3



11ax (20MHz) CH157 Ant3

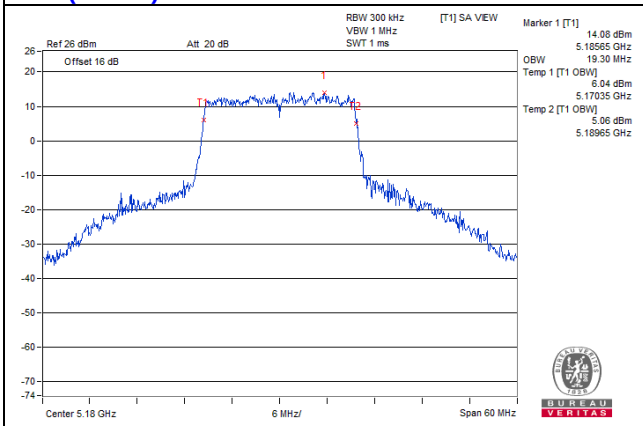


11ax (20MHz) CH165 Ant3

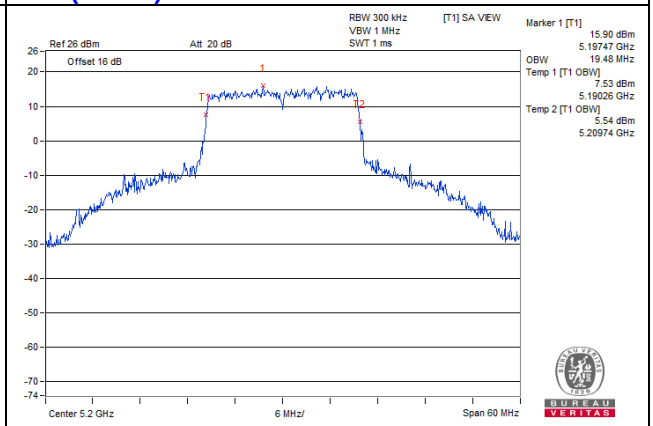


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

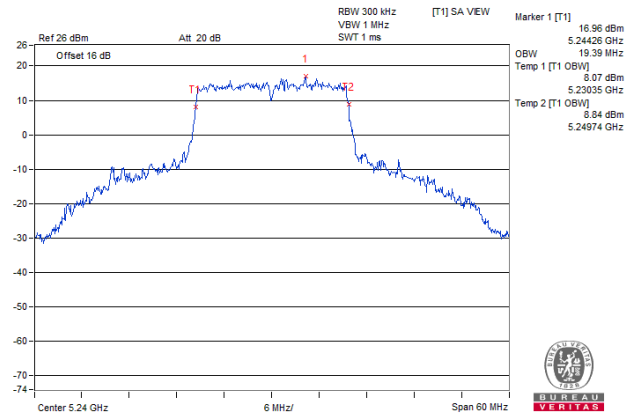
11ax (20MHz) CH36 Ant4



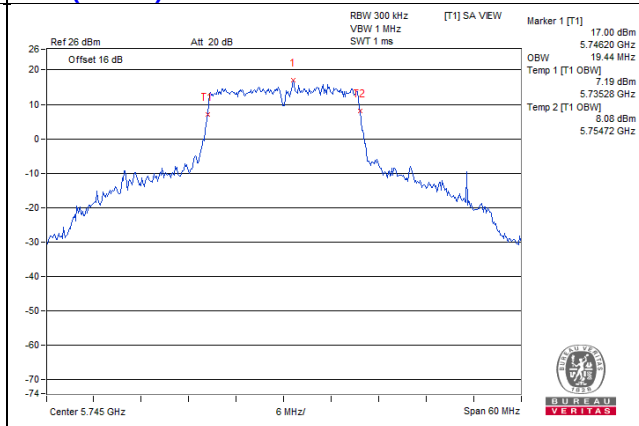
11ax (20MHz) CH40 Ant4



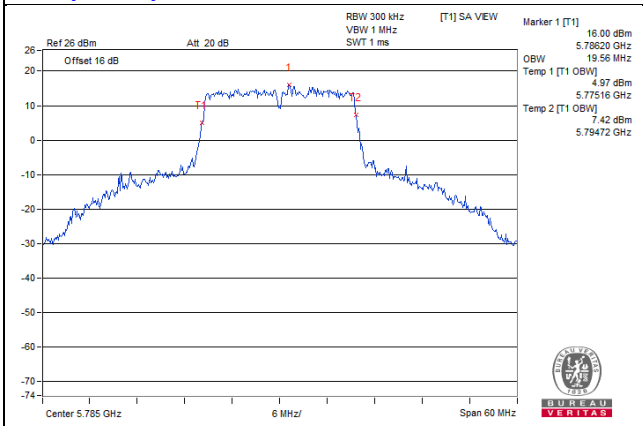
11ax (20MHz) CH48 Ant4



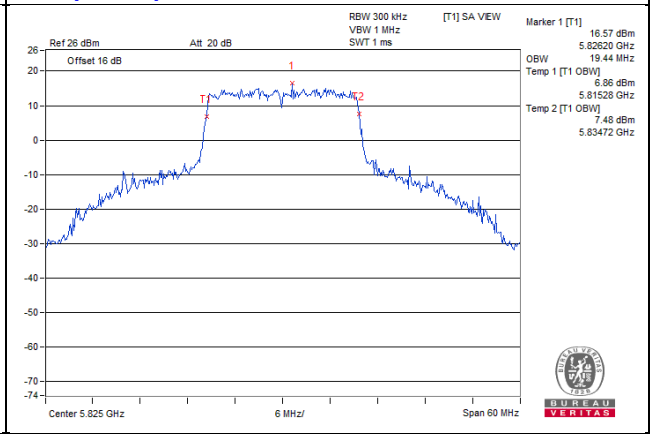
11ax (20MHz) CH149 Ant4



11ax (20MHz) CH157 Ant4

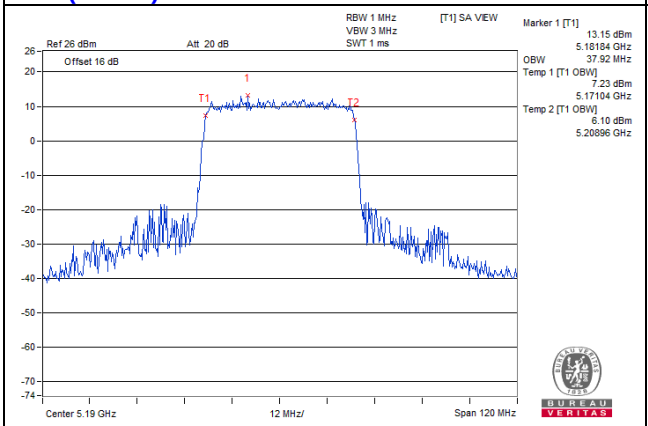


11ax (20MHz) CH165 Ant4

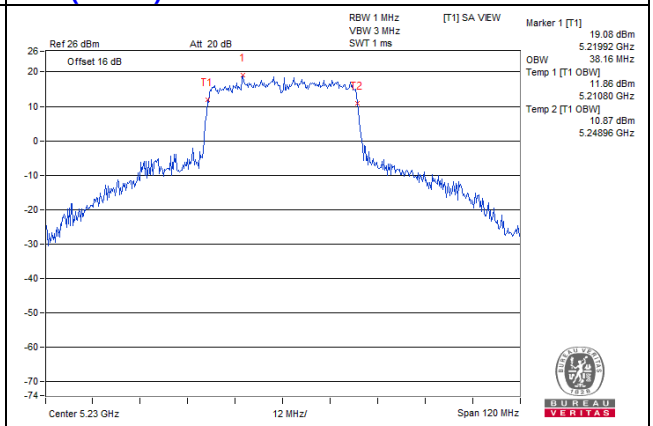


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

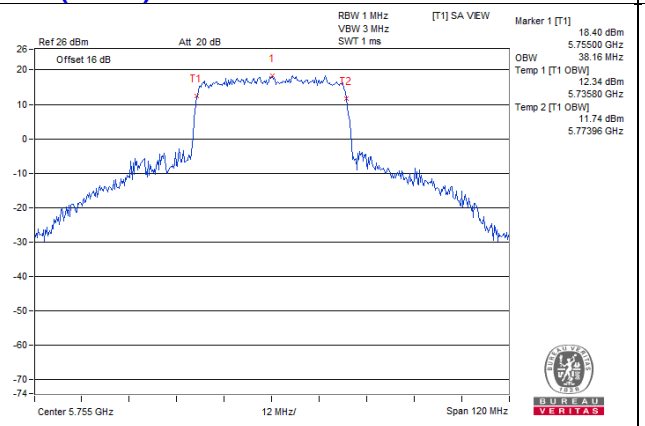
11ax (40MHz) CH38 Ant1



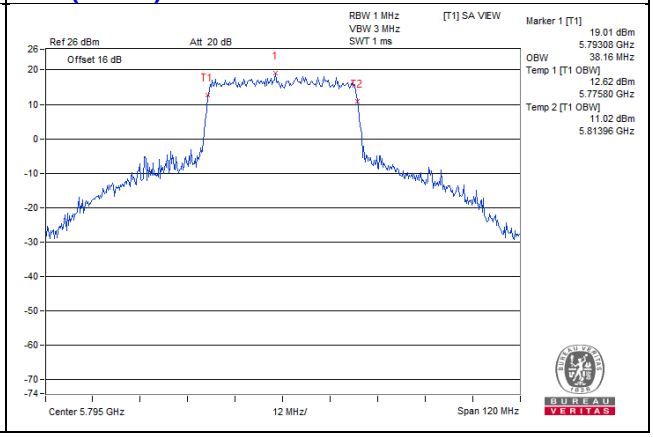
11ax (40MHz) CH46 Ant1



11ax (40MHz) CH151 Ant1

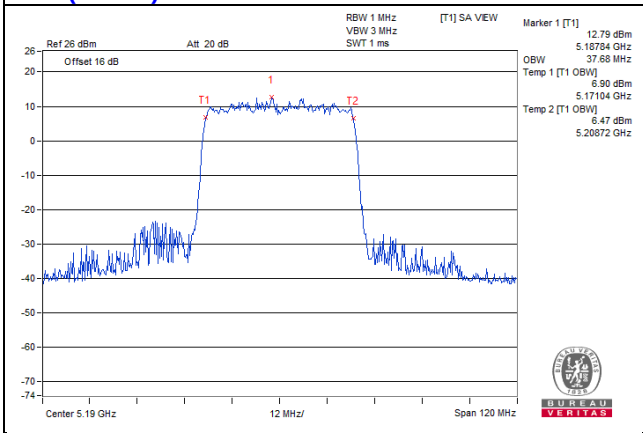


11ax (40MHz) CH159 Ant1

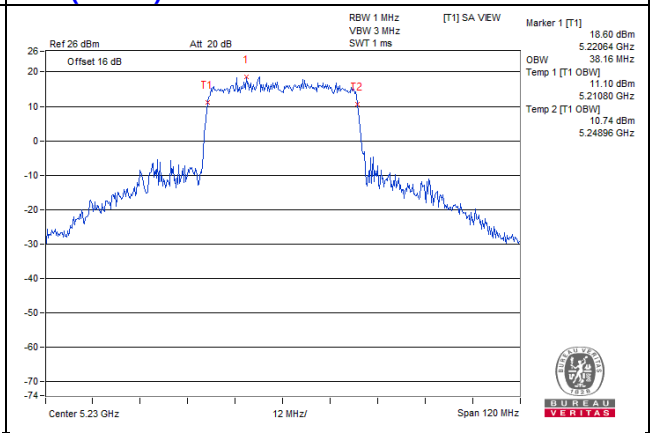


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

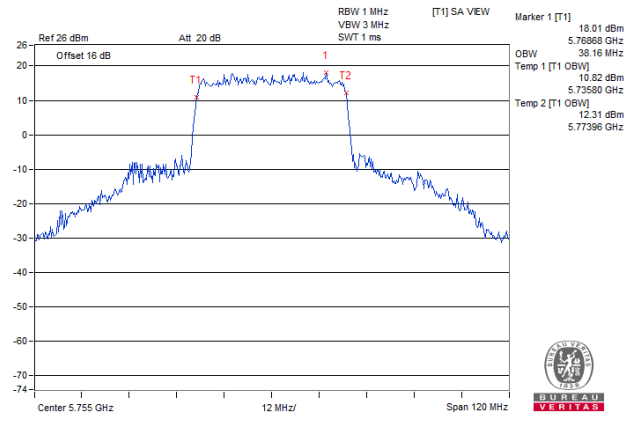
11ax (40MHz) CH38 Ant2



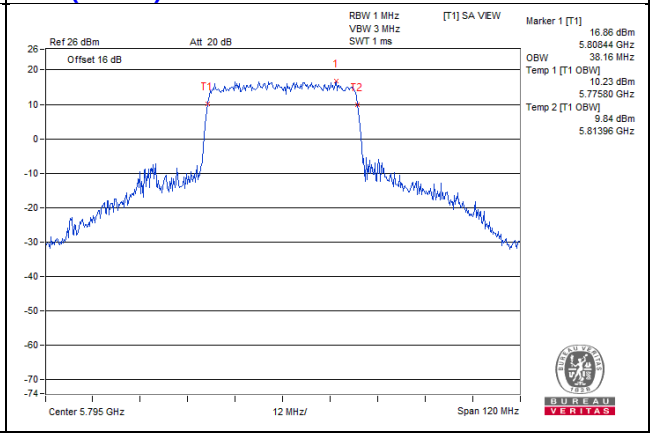
11ax (40MHz) CH46 Ant2



11ax (40MHz) CH151 Ant2

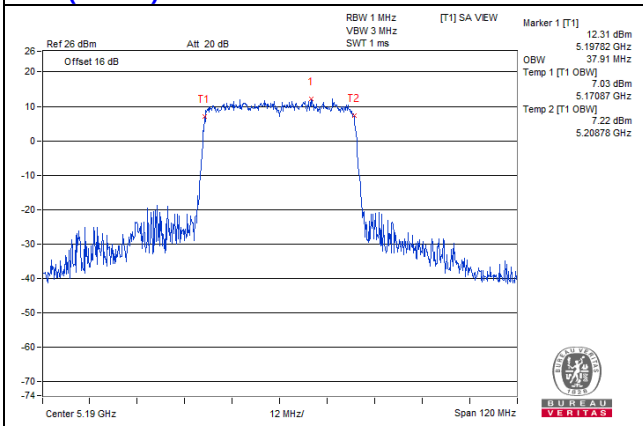


11ax (40MHz) CH159 Ant2

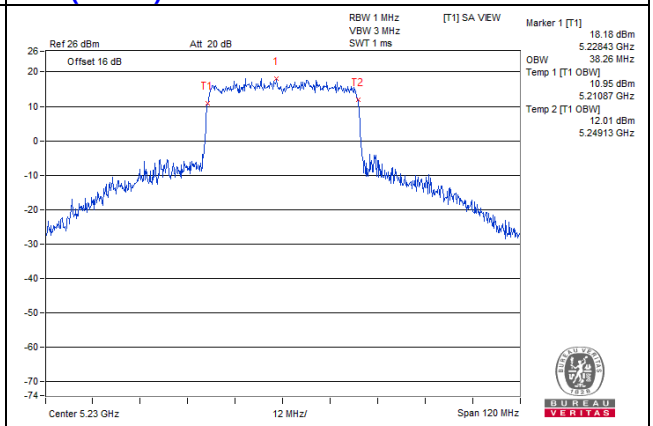


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

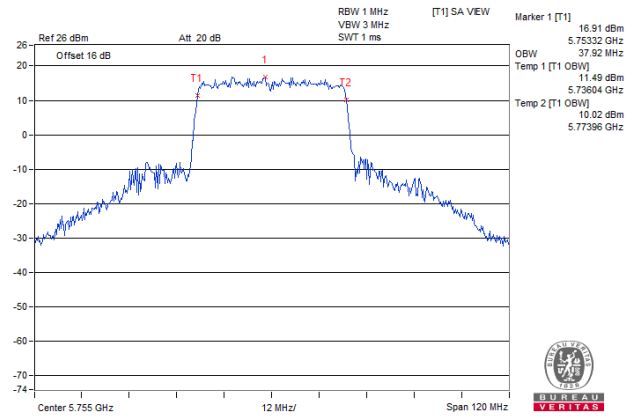
11ax (40MHz) CH38 Ant3



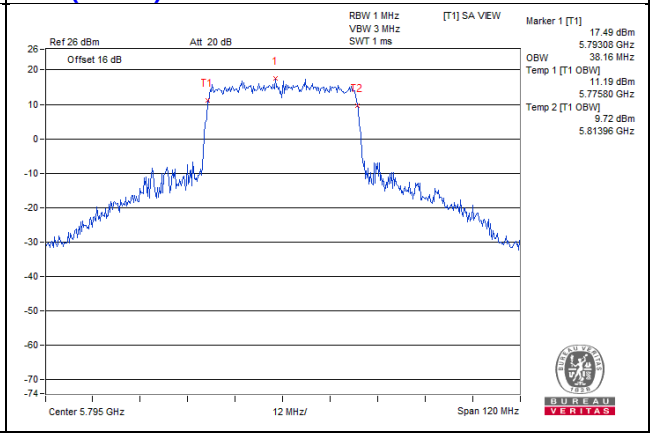
11ax (40MHz) CH46 Ant3



11ax (40MHz) CH151 Ant3

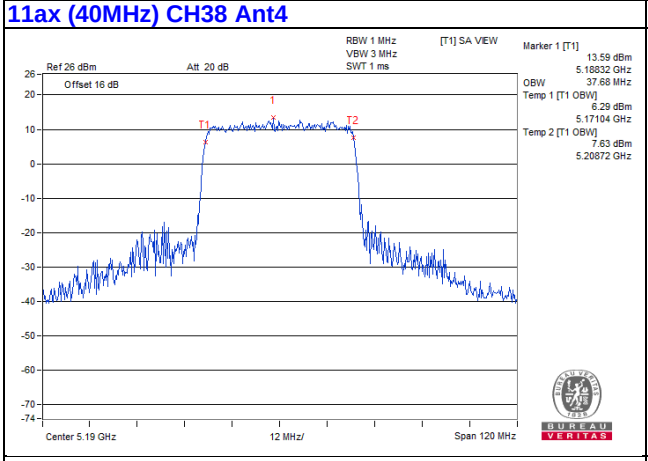


11ax (40MHz) CH159 Ant3

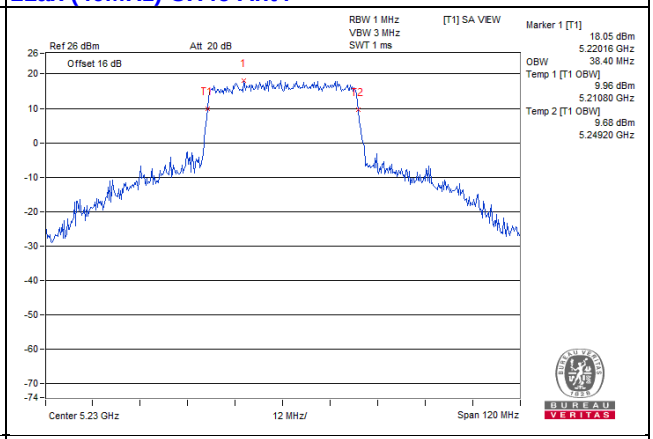


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

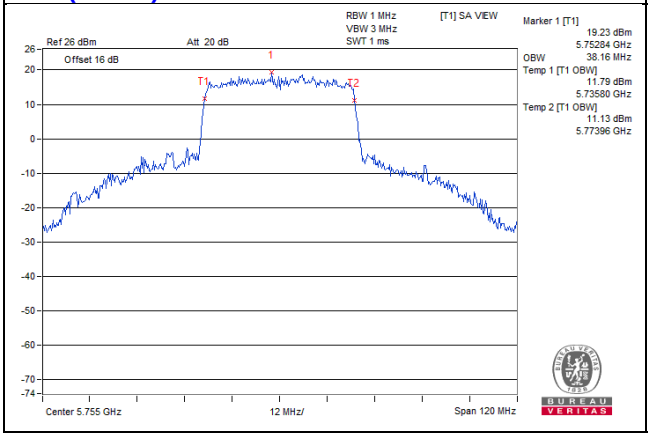
11ax (40MHz) CH38 Ant4



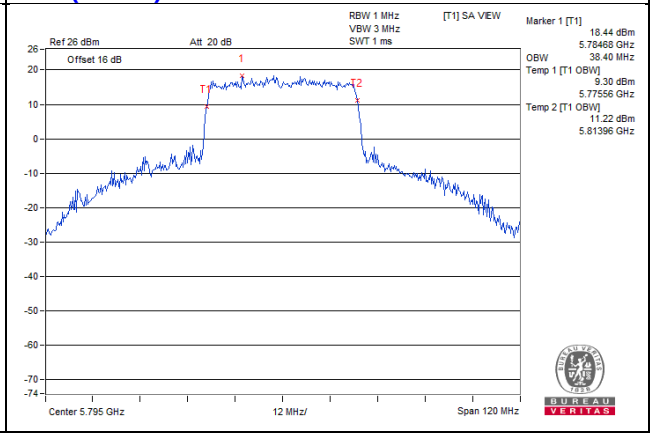
11ax (40MHz) CH46 Ant4



11ax (40MHz) CH151 Ant4

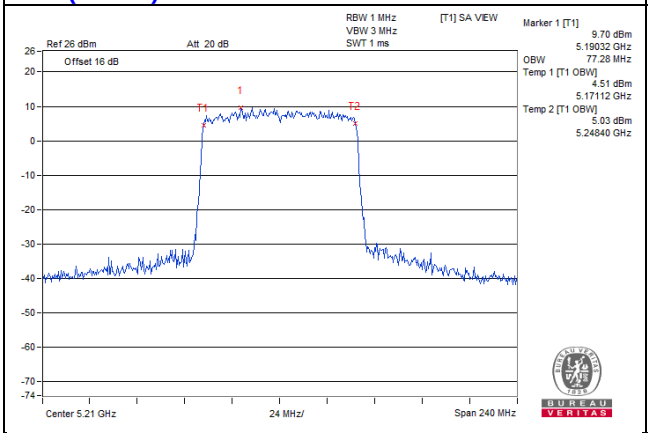


11ax (40MHz) CH159 Ant4

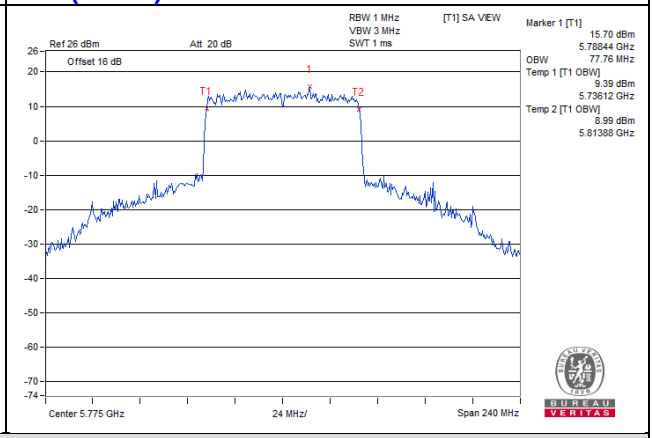


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

11ax (80MHz) CH42 Ant1

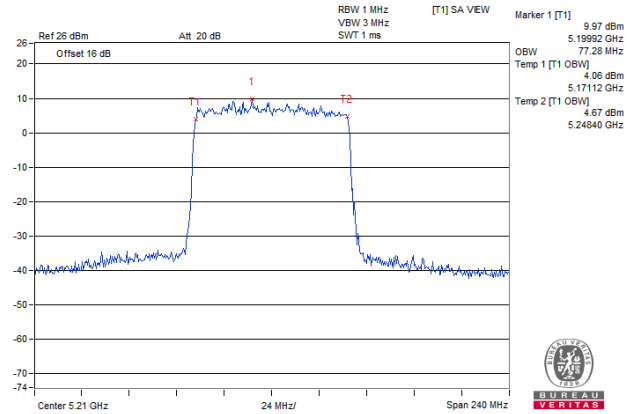


11ax (80MHz) CH155 Ant1

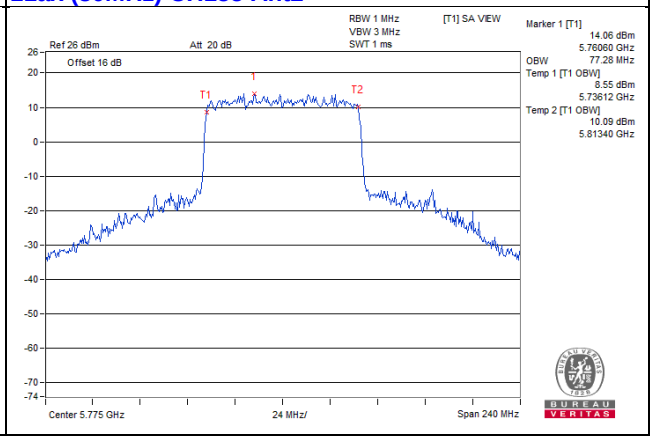


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

11ax (80MHz) CH42 Ant2

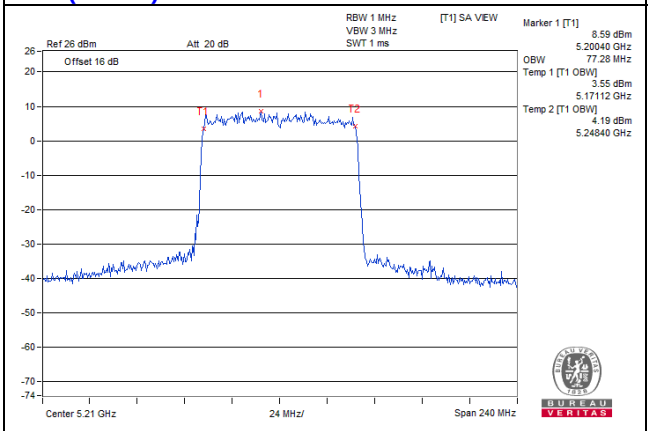


11ax (80MHz) CH155 Ant2

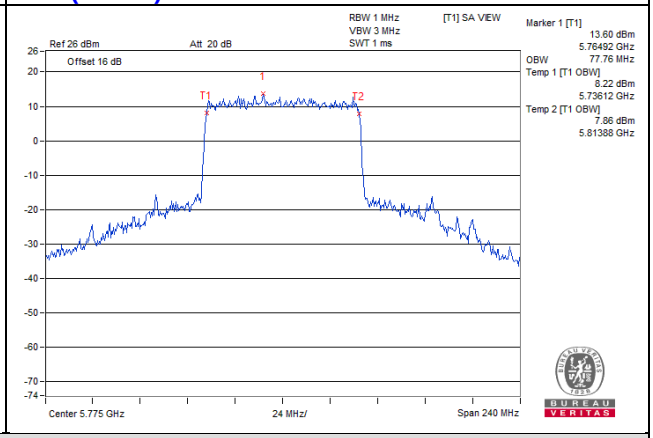


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

11ax (80MHz) CH42 Ant3

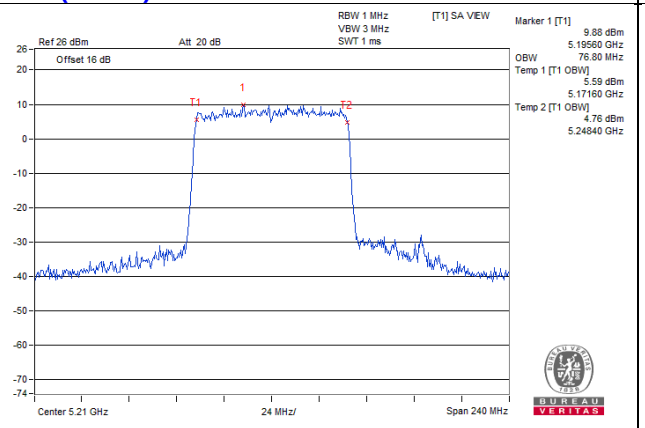


11ax (80MHz) CH155 Ant3

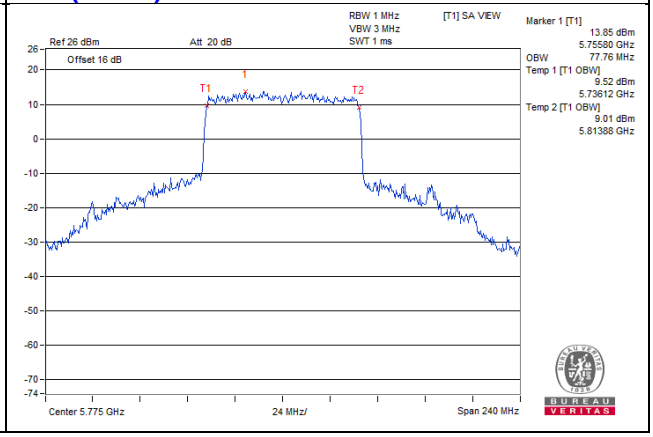


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

11ax (80MHz) CH42 Ant4



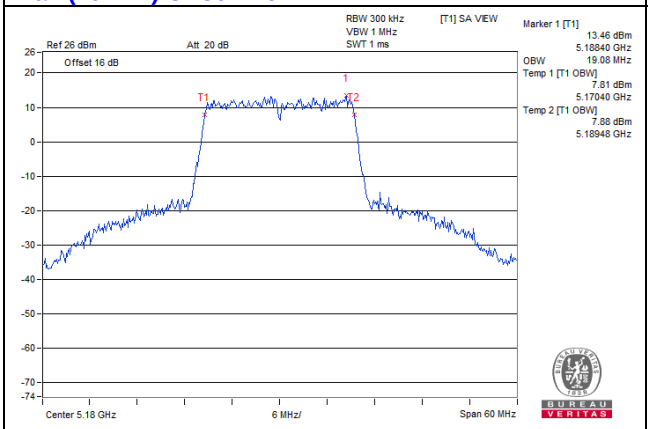
11ax (80MHz) CH155 Ant4



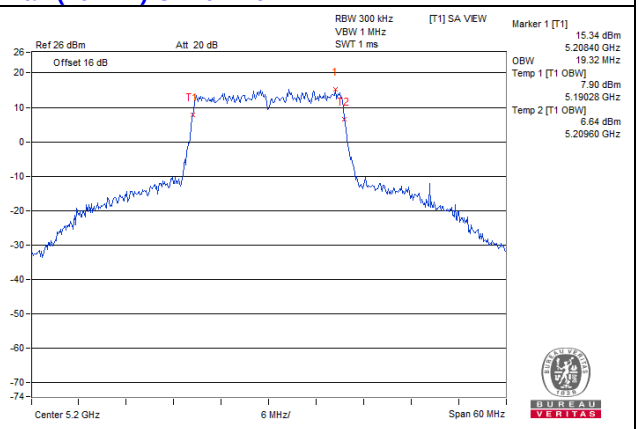
2S4T TxBF

99% OCCUPIED BANDWIDTH SPECTRUM PLOT

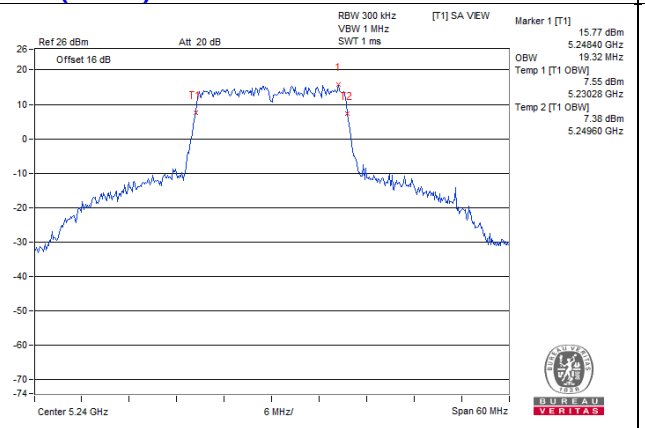
11ax (20MHz) CH36 Ant1



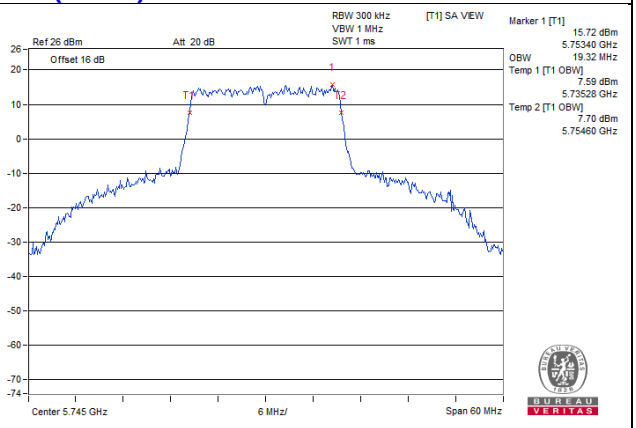
11ax (20MHz) CH40 Ant1



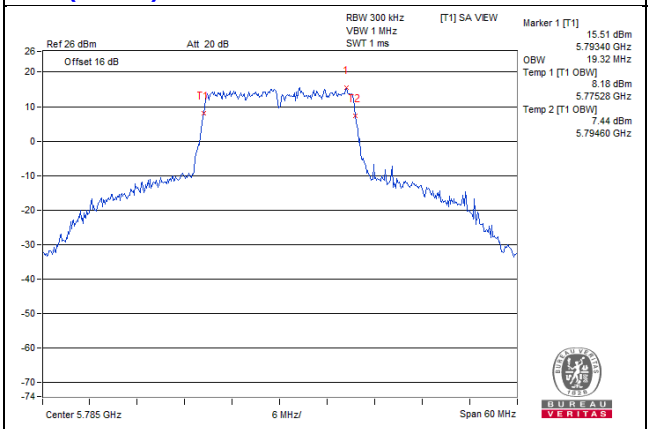
11ax (20MHz) CH48 Ant1



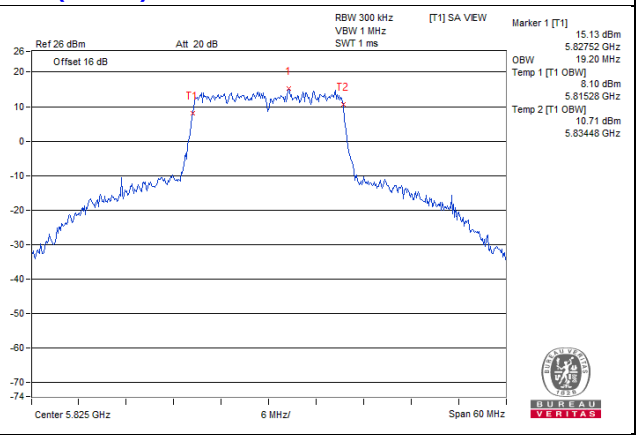
11ax (20MHz) CH149 Ant1



11ax (20MHz) CH157 Ant1

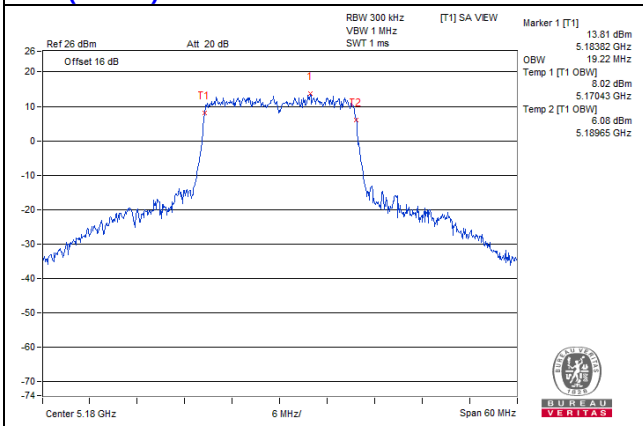


11ax (20MHz) CH165 Ant1

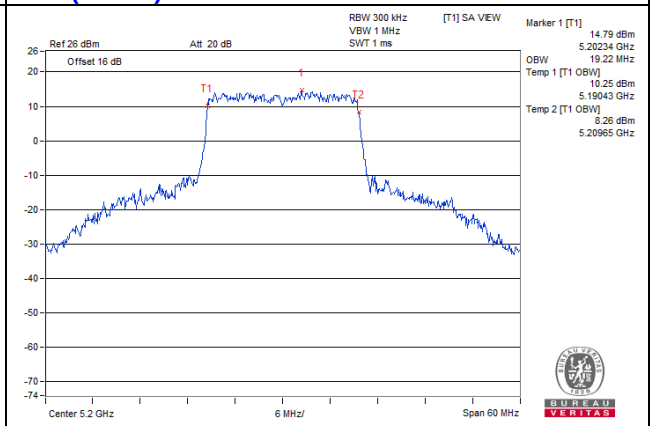


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

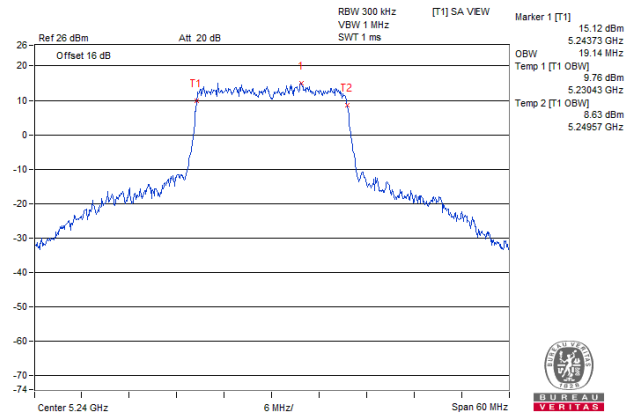
11ax (20MHz) CH36 Ant2



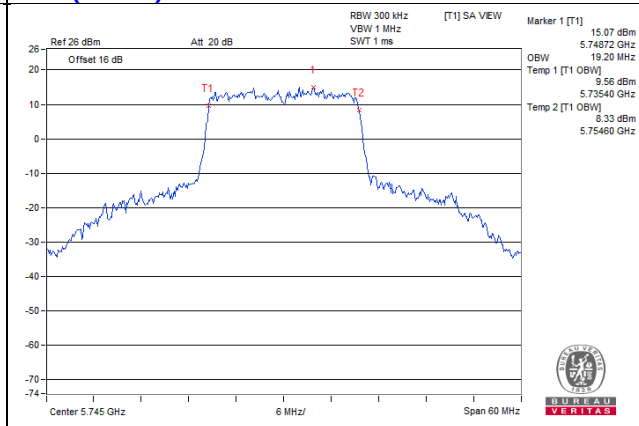
11ax (20MHz) CH40 Ant2



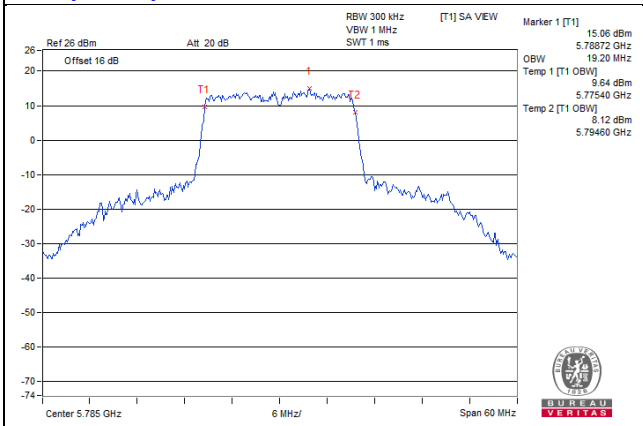
11ax (20MHz) CH48 Ant2



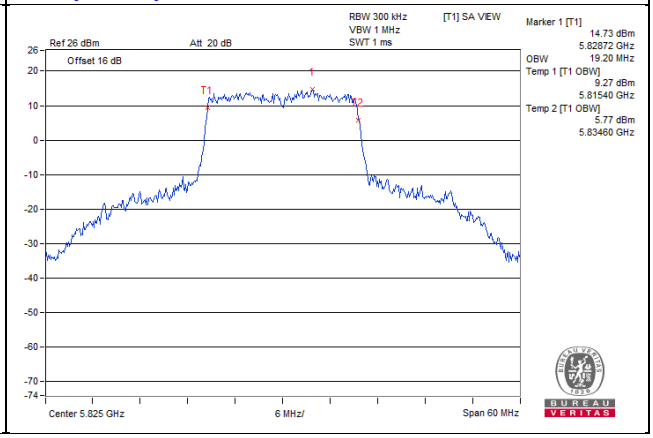
11ax (20MHz) CH149 Ant2



11ax (20MHz) CH157 Ant2

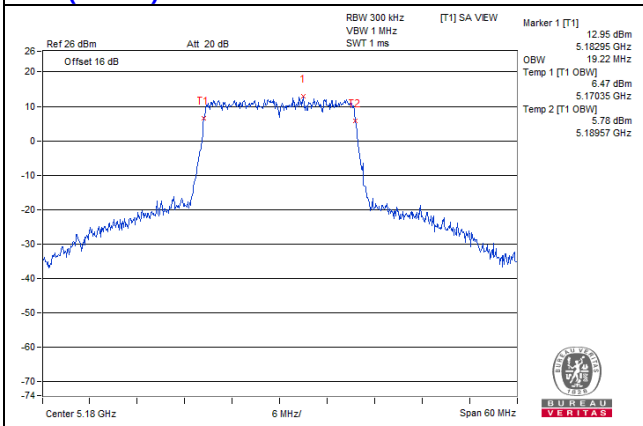


11ax (20MHz) CH165 Ant2

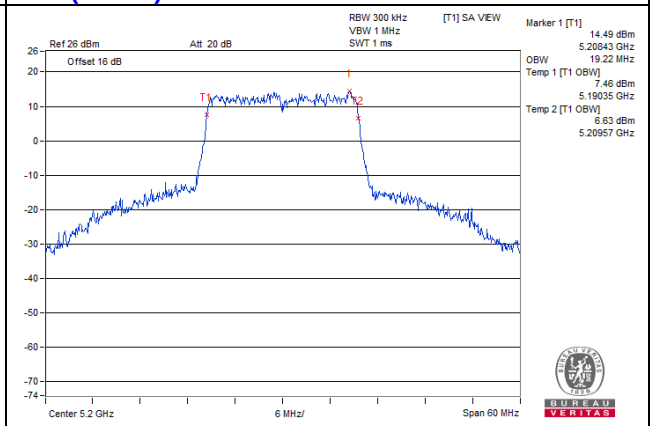


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

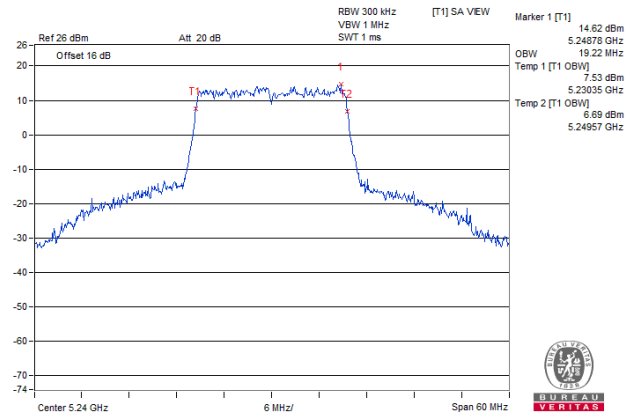
11ax (20MHz) CH36 Ant3



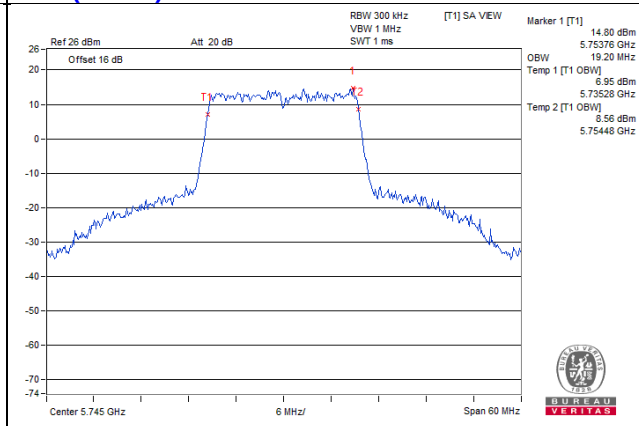
11ax (20MHz) CH40 Ant3



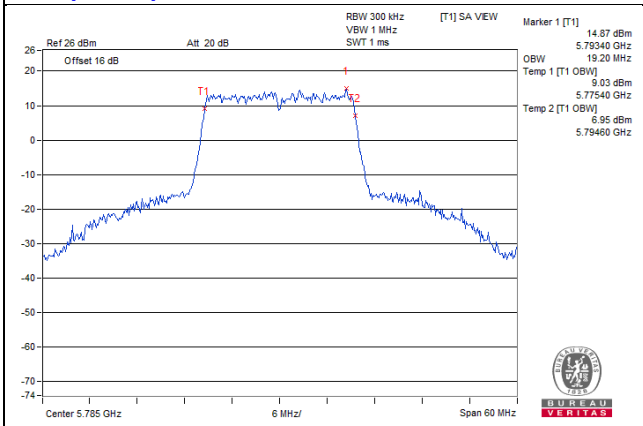
11ax (20MHz) CH48 Ant3



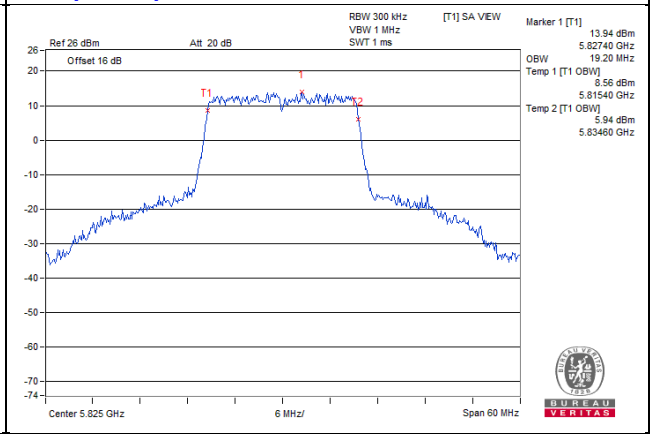
11ax (20MHz) CH149 Ant3



11ax (20MHz) CH157 Ant3

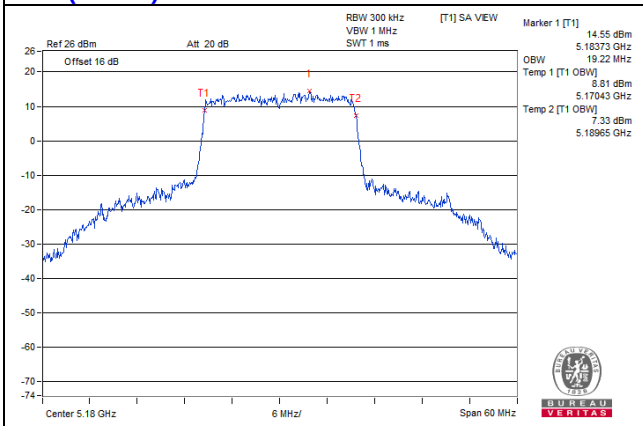


11ax (20MHz) CH165 Ant3

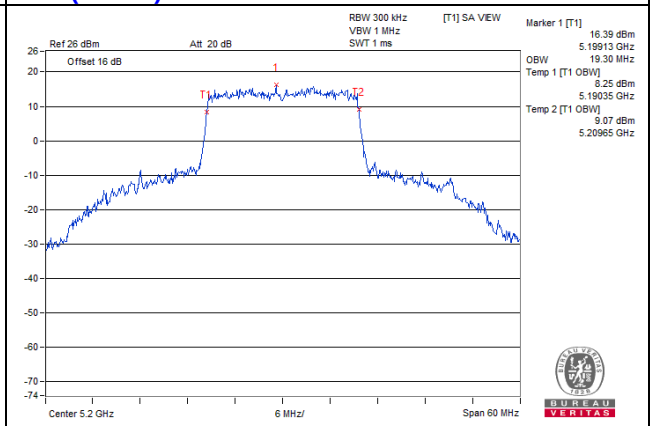


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

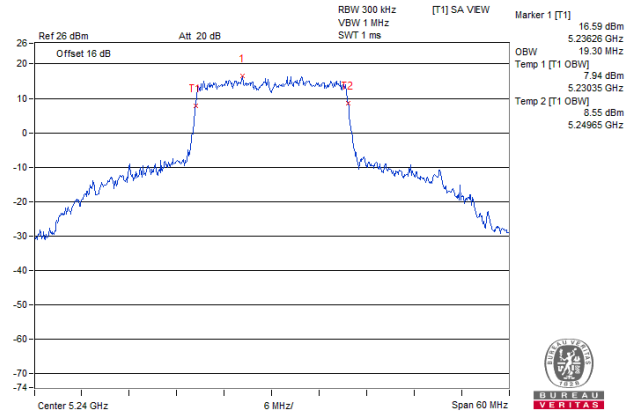
11ax (20MHz) CH36 Ant4



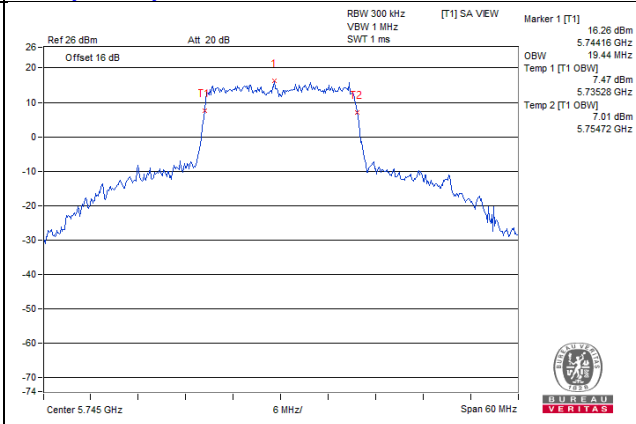
11ax (20MHz) CH40 Ant4



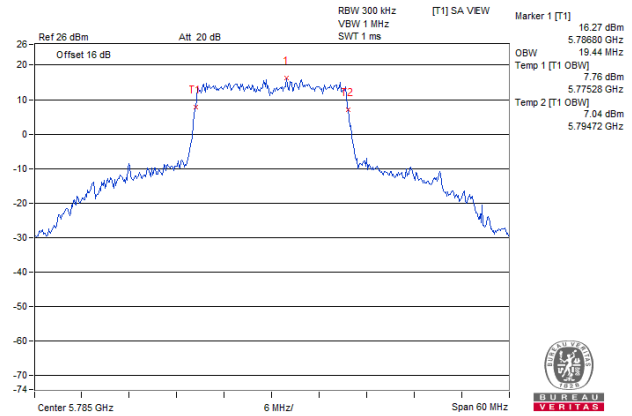
11ax (20MHz) CH48 Ant4



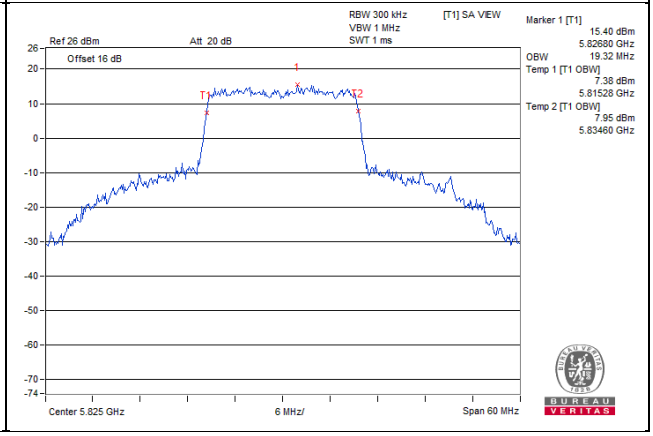
11ax (20MHz) CH149 Ant4



11ax (20MHz) CH157 Ant4

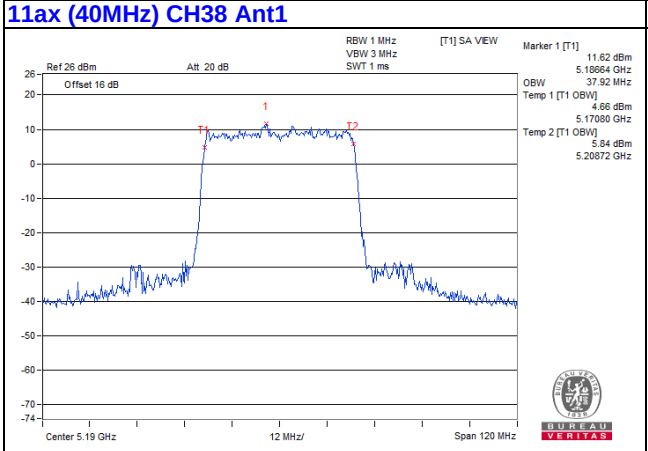


11ax (20MHz) CH165 Ant4

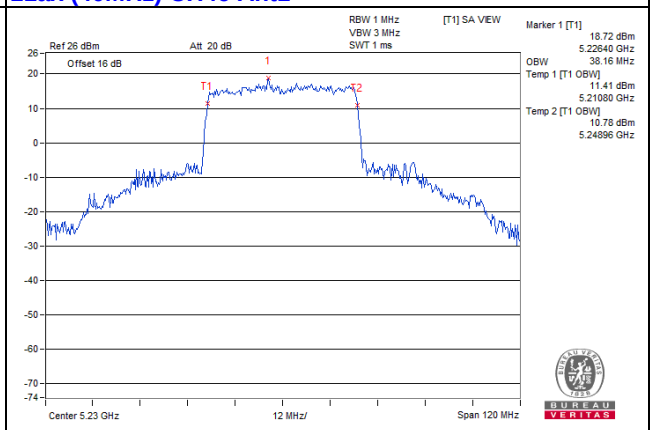


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

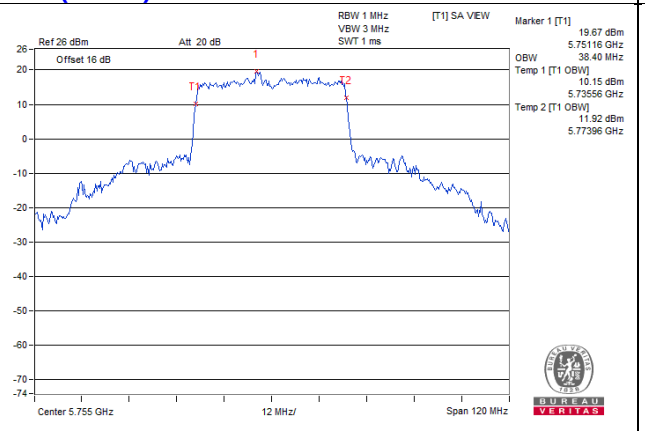
11ax (40MHz) CH38 Ant1



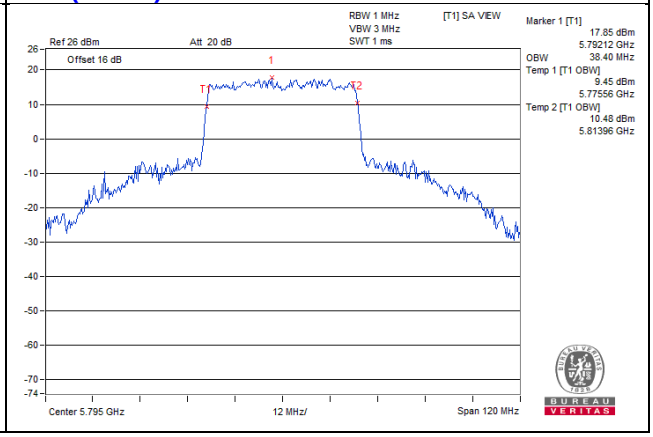
11ax (40MHz) CH46 Ant1



11ax (40MHz) CH151 Ant1

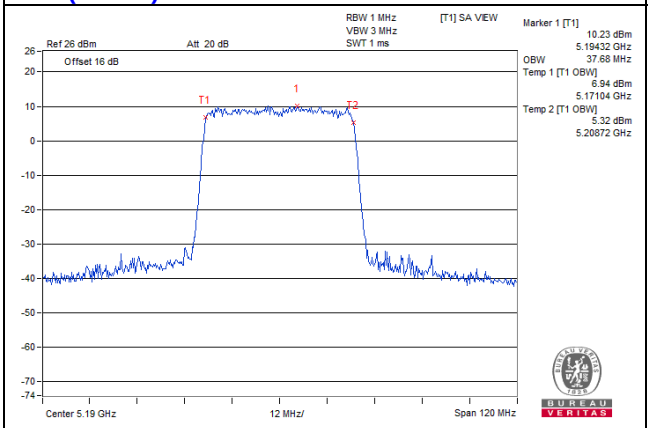


11ax (40MHz) CH159 Ant1

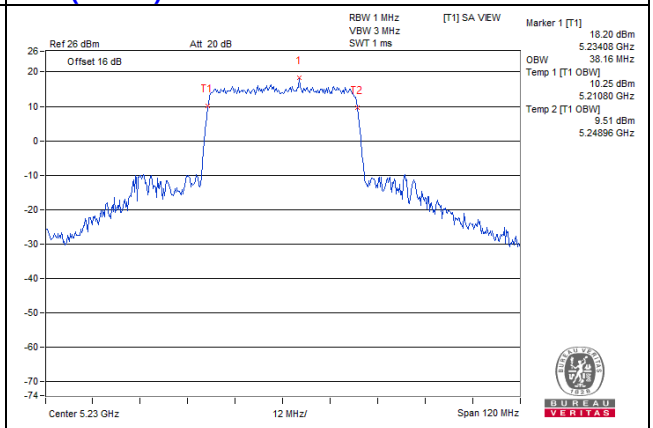


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

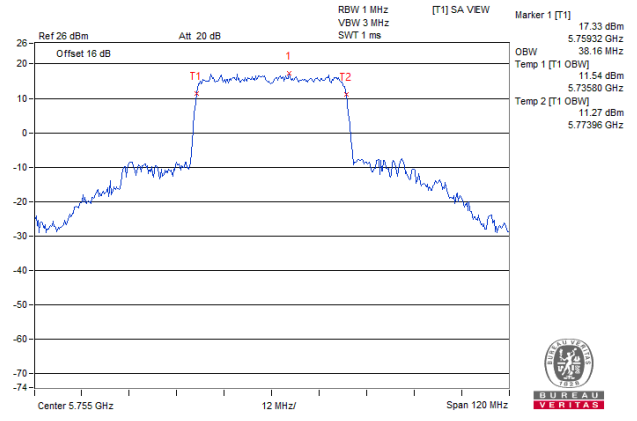
11ax (40MHz) CH38 Ant2



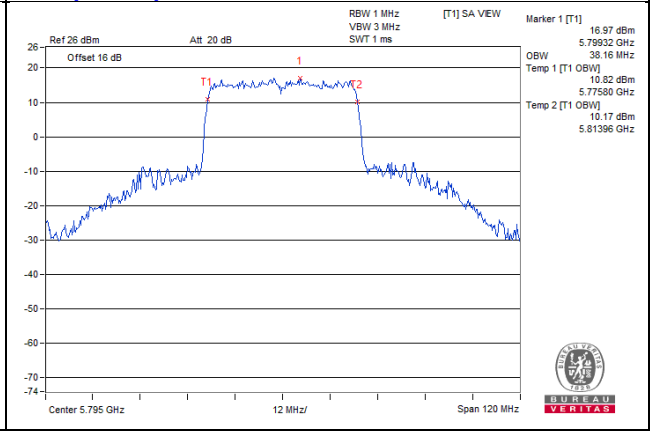
11ax (40MHz) CH46 Ant2



11ax (40MHz) CH151 Ant2

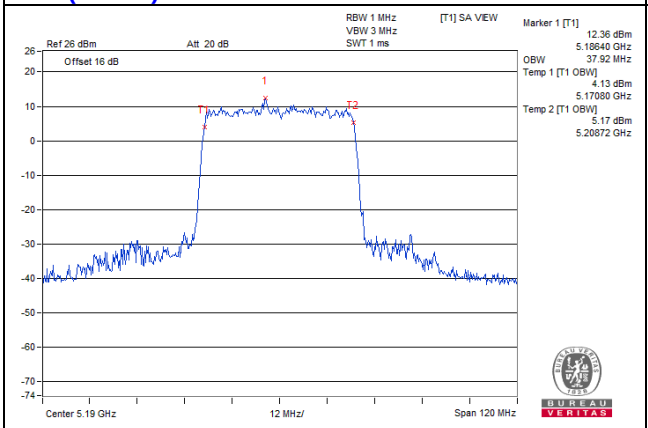


11ax (40MHz) CH159 Ant2

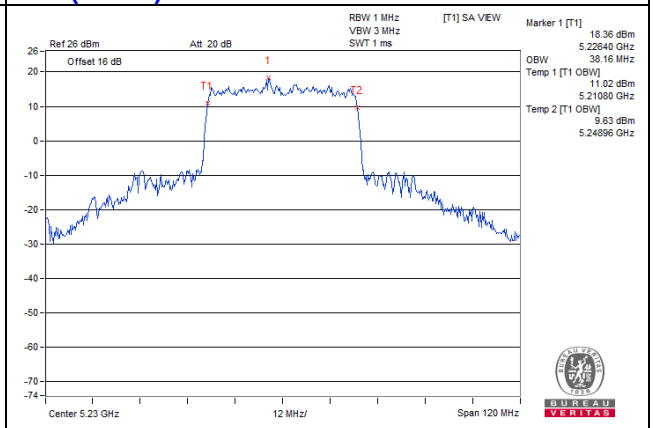


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

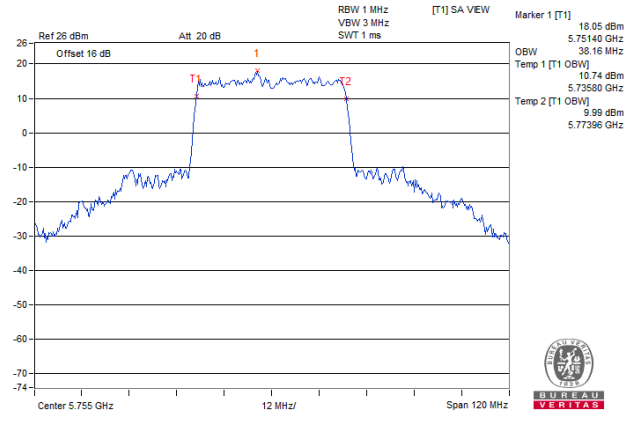
11ax (40MHz) CH38 Ant3



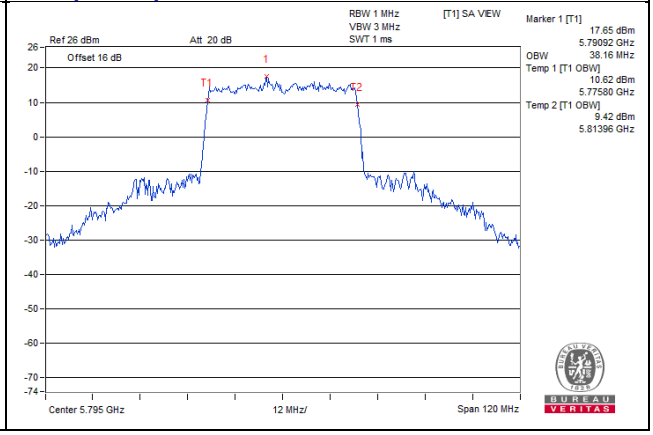
11ax (40MHz) CH46 Ant3



11ax (40MHz) CH151 Ant3

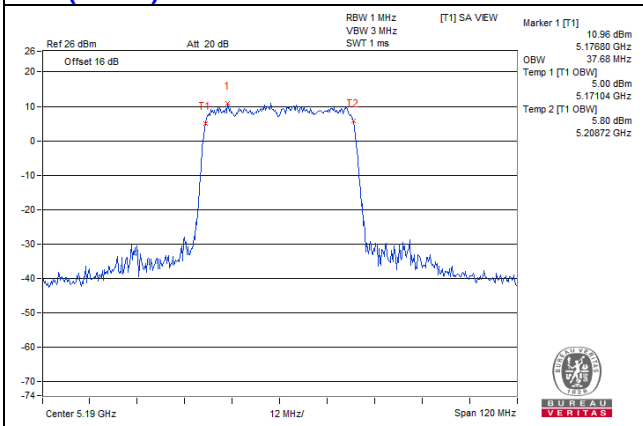


11ax (40MHz) CH159 Ant3

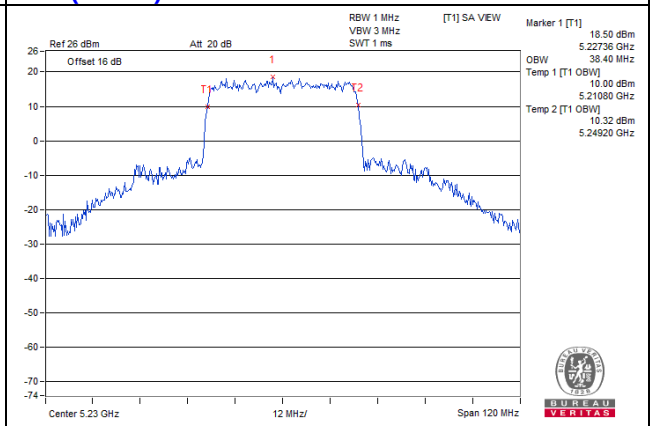


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

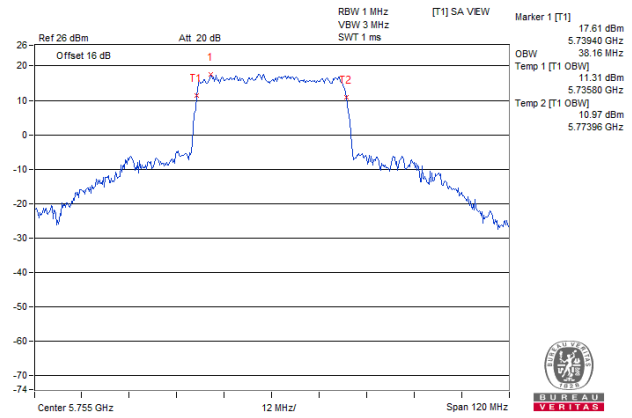
11ax (40MHz) CH38 Ant4



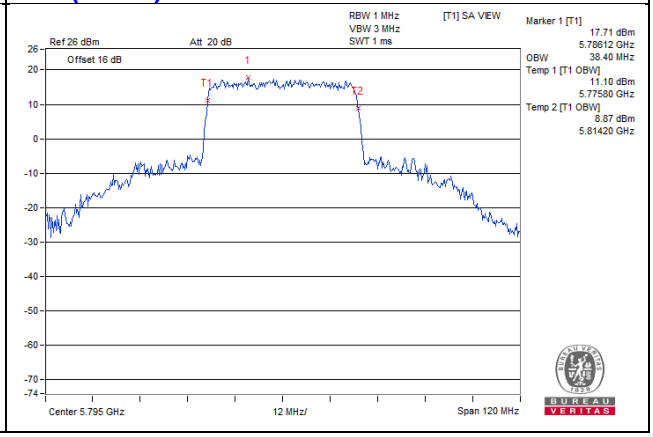
11ax (40MHz) CH46 Ant4



11ax (40MHz) CH151 Ant4

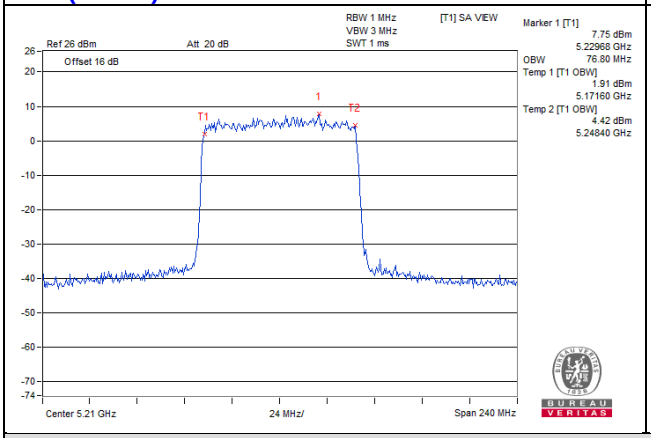


11ax (40MHz) CH159 Ant4

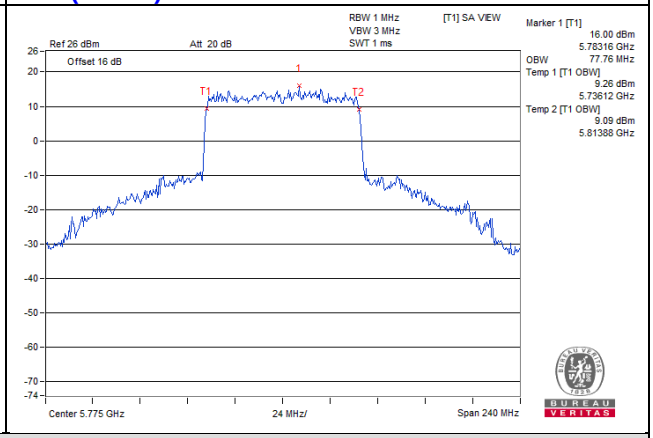


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

11ax (80MHz) CH42 Ant1

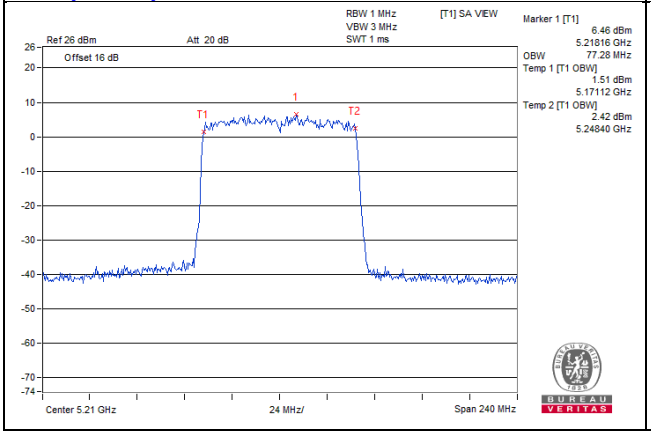


11ax (80MHz) CH155 Ant1

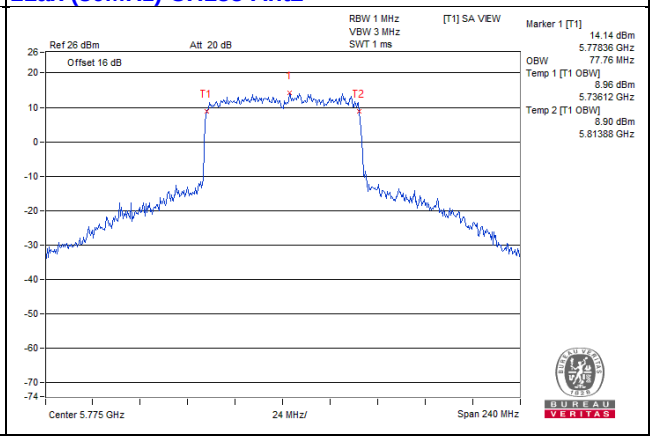


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

11ax (80MHz) CH42 Ant2

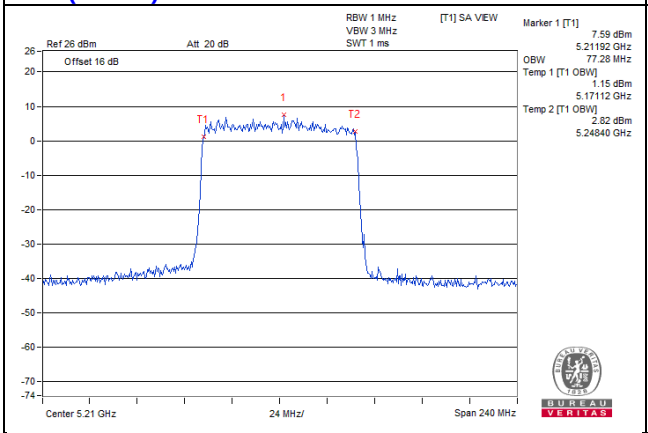


11ax (80MHz) CH155 Ant2

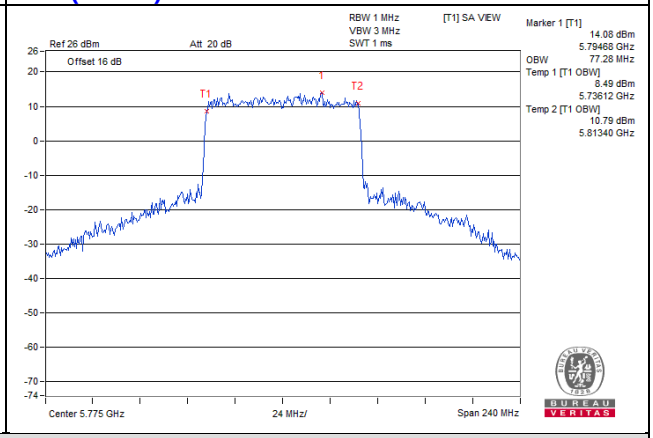


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

11ax (80MHz) CH42 Ant3

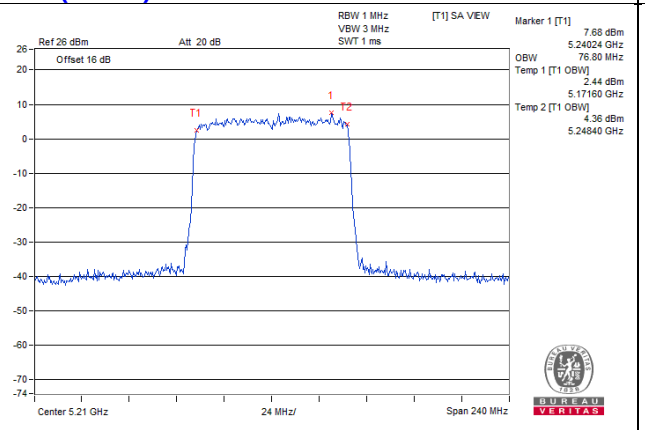


11ax (80MHz) CH155 Ant3

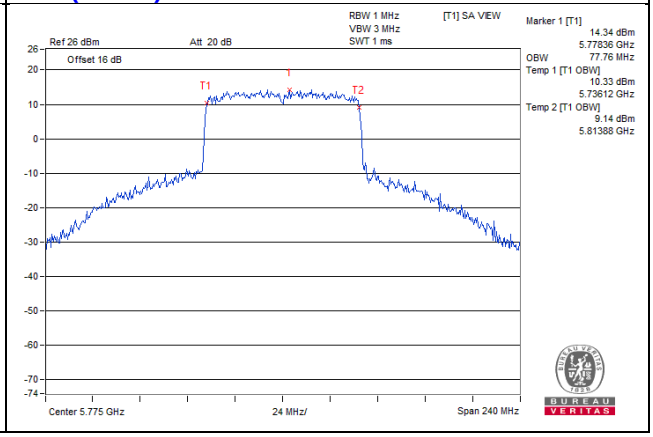


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

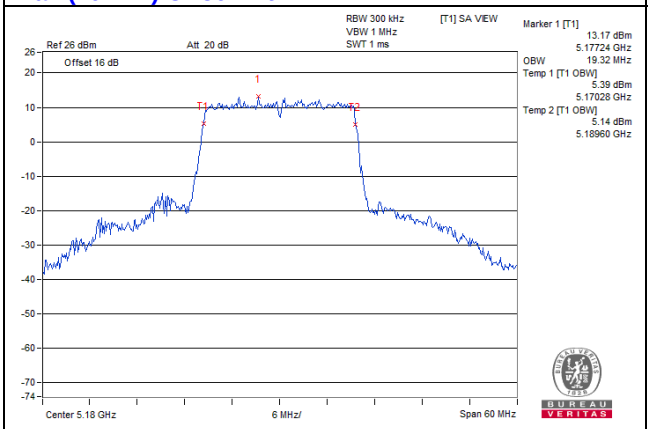
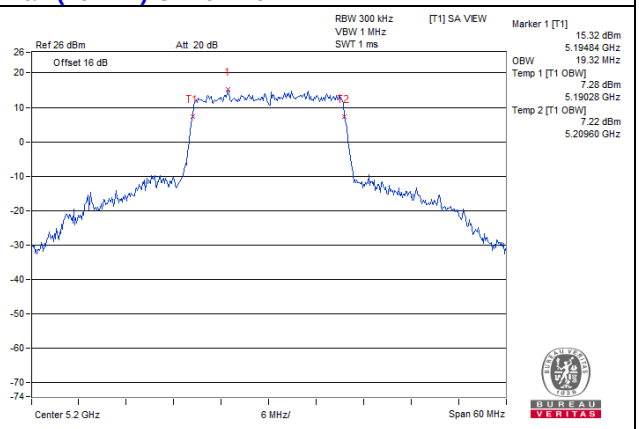
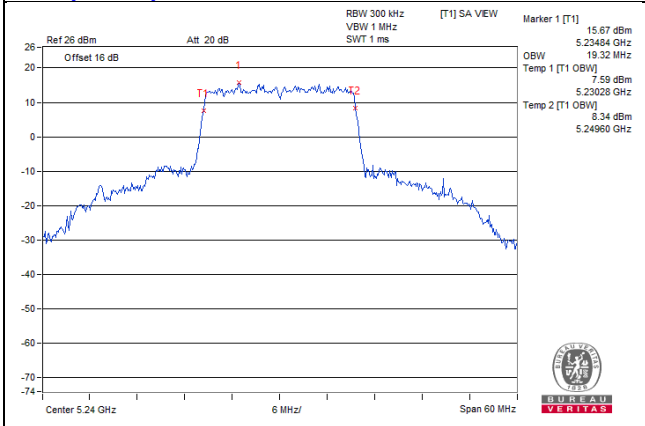
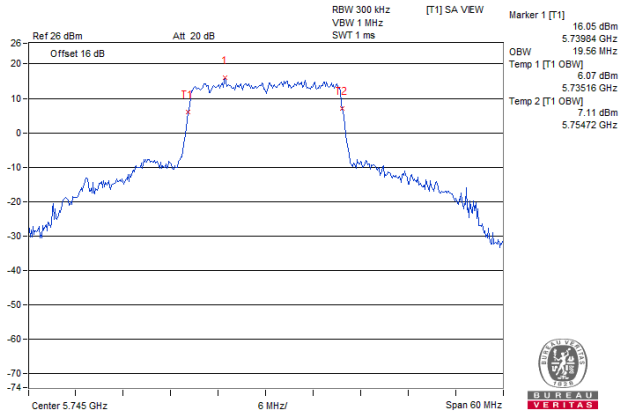
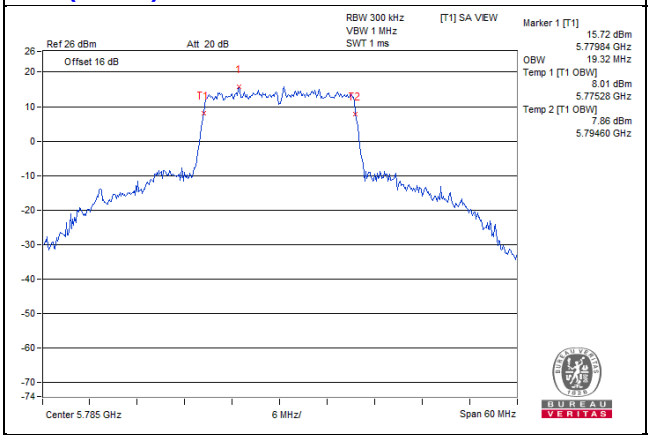
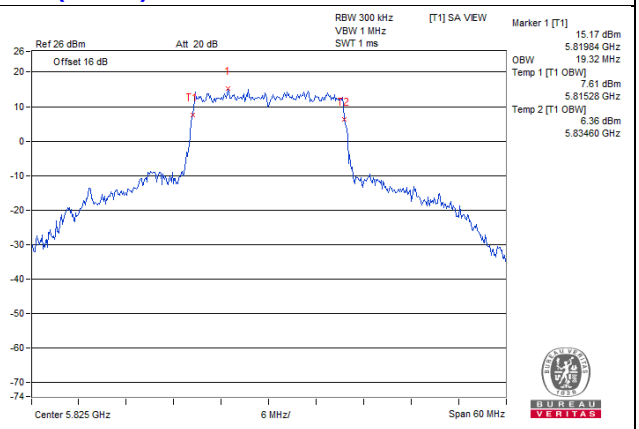
11ax (80MHz) CH42 Ant4



11ax (80MHz) CH155 Ant4

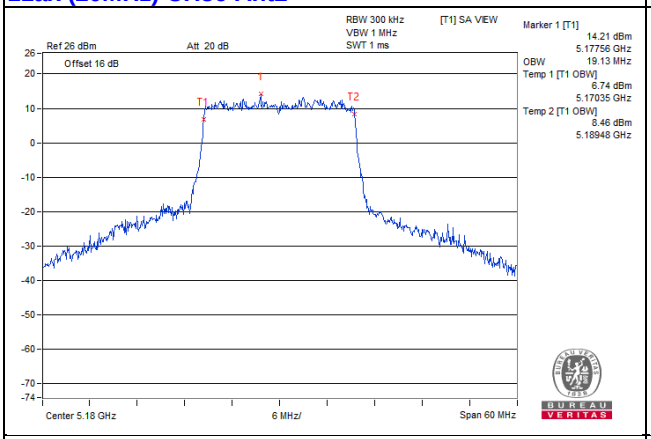


3S4T TxBF

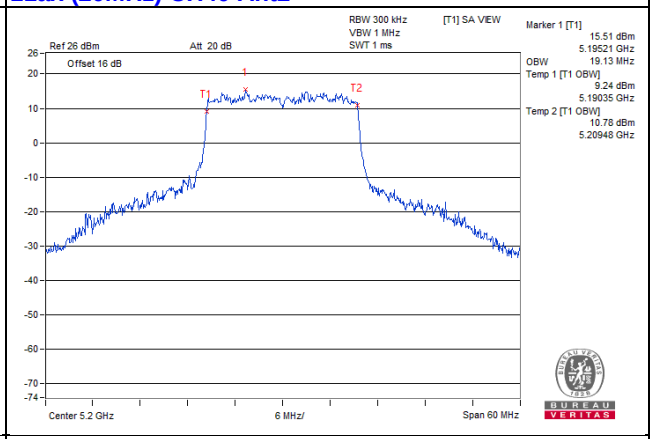
99% OCCUPIED BANDWIDTH SPECTRUM PLOT	
11ax (20MHz) CH36 Ant1	**11ax (20MHz) CH40 Ant1**
	
11ax (20MHz) CH48 Ant1	**11ax (20MHz) CH149 Ant1**
	
11ax (20MHz) CH157 Ant1	**11ax (20MHz) CH165 Ant1**
	

99% OCCUPIED BANDWIDTH SPECTRUM PLOT

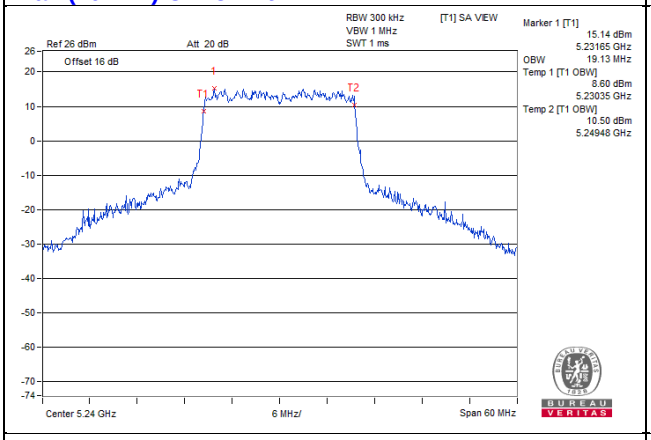
11ax (20MHz) CH36 Ant2



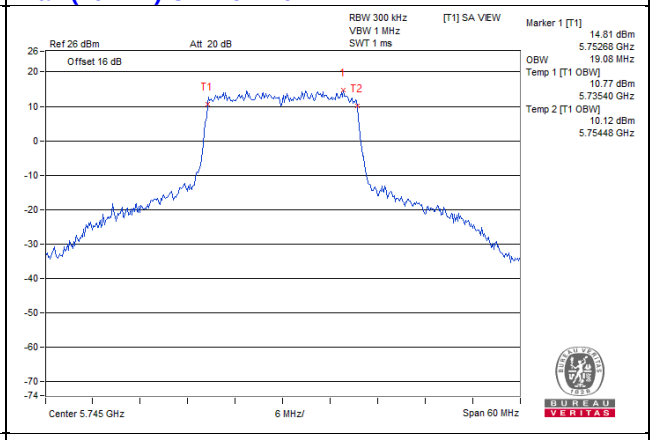
11ax (20MHz) CH40 Ant2



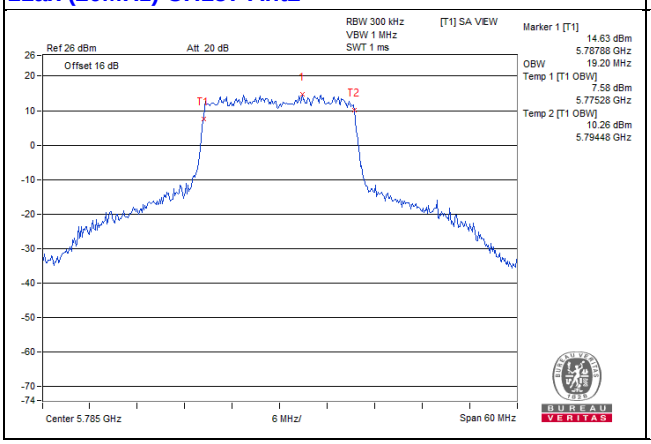
11ax (20MHz) CH48 Ant2



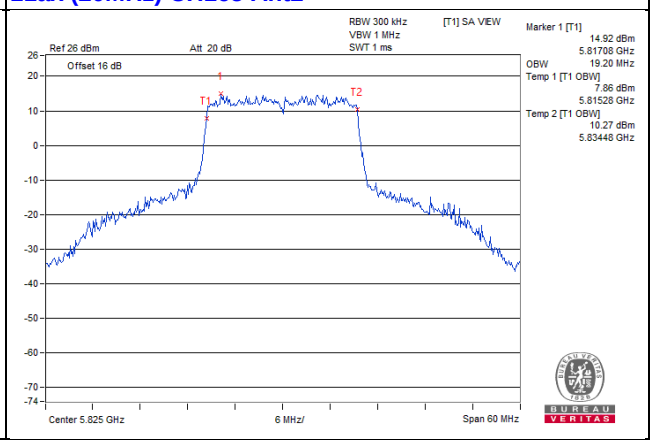
11ax (20MHz) CH149 Ant2



11ax (20MHz) CH157 Ant2

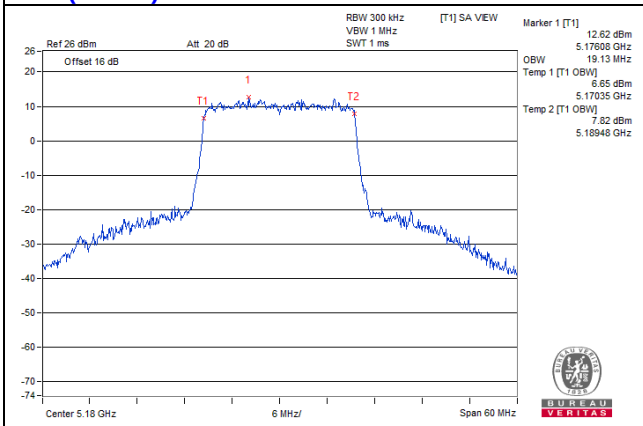


11ax (20MHz) CH165 Ant2

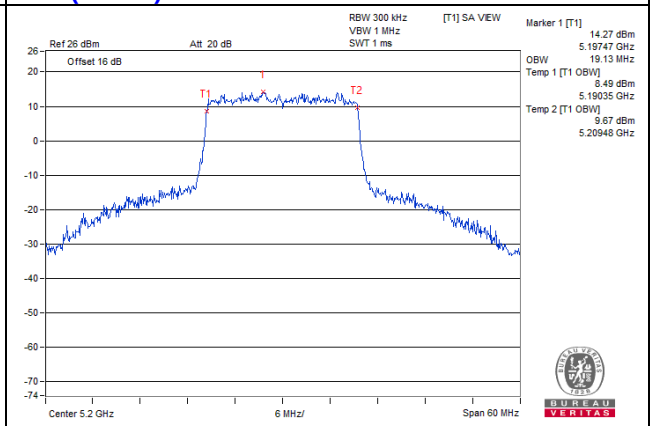


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

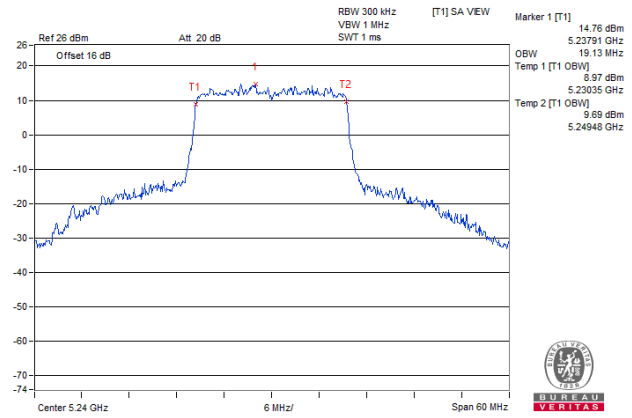
11ax (20MHz) CH36 Ant3



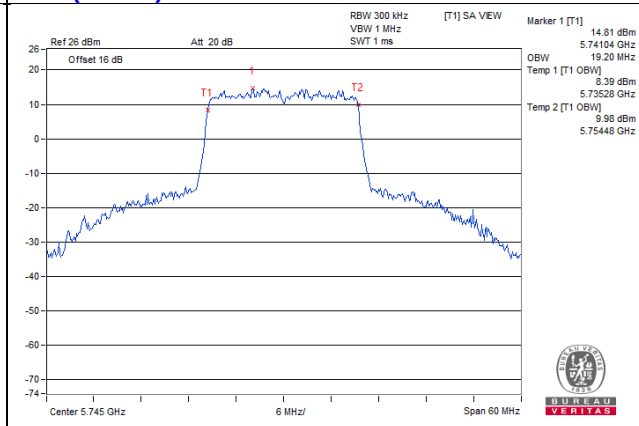
11ax (20MHz) CH40 Ant3



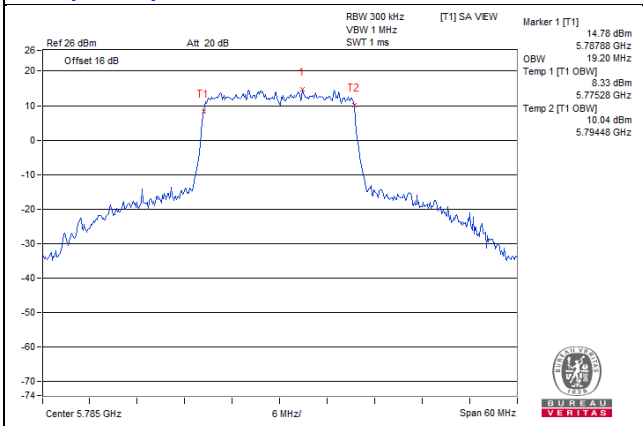
11ax (20MHz) CH48 Ant3



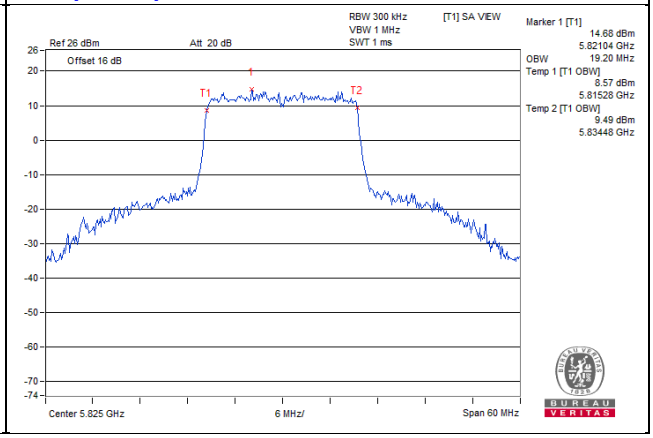
11ax (20MHz) CH149 Ant3



11ax (20MHz) CH157 Ant3

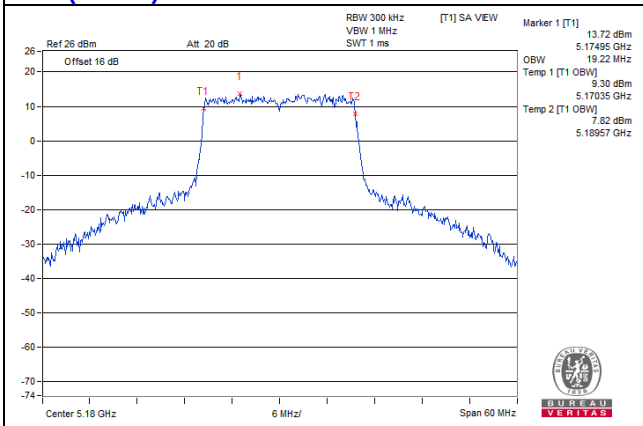


11ax (20MHz) CH165 Ant3

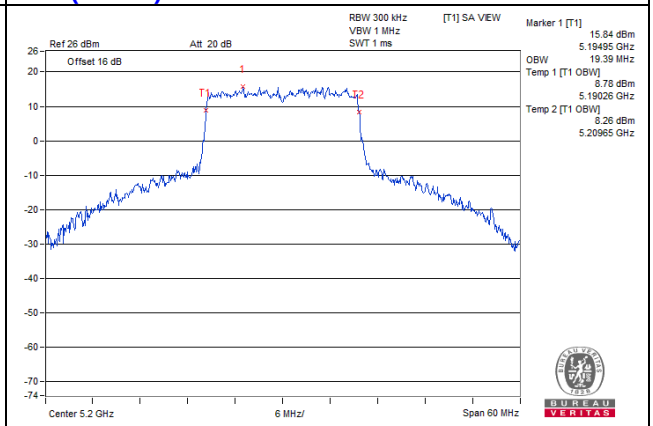


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

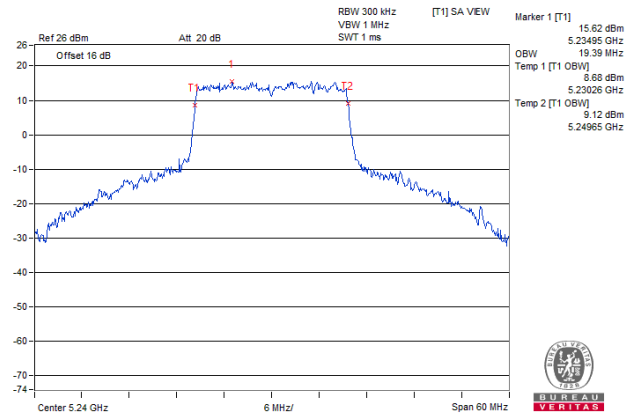
11ax (20MHz) CH36 Ant4



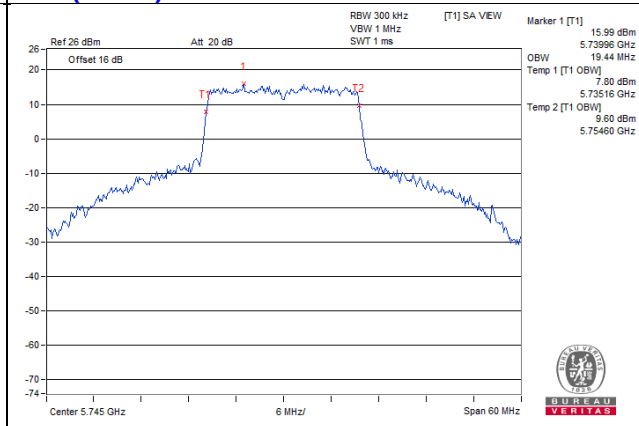
11ax (20MHz) CH40 Ant4



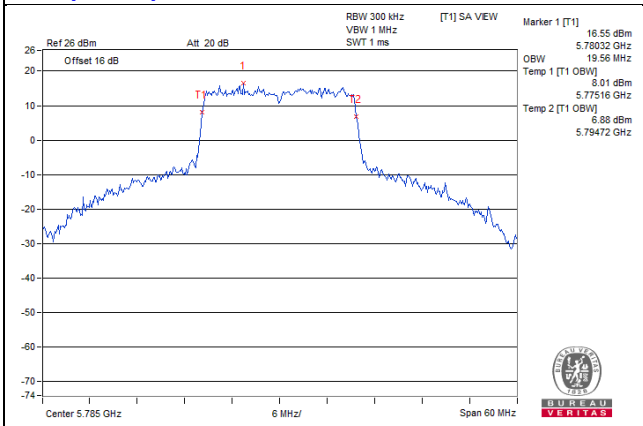
11ax (20MHz) CH48 Ant4



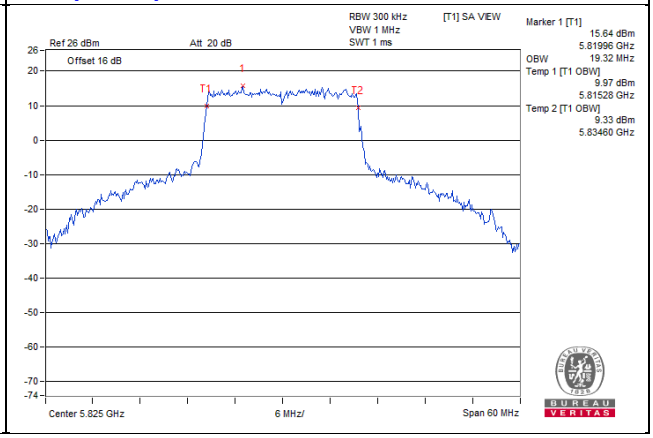
11ax (20MHz) CH149 Ant4



11ax (20MHz) CH157 Ant4

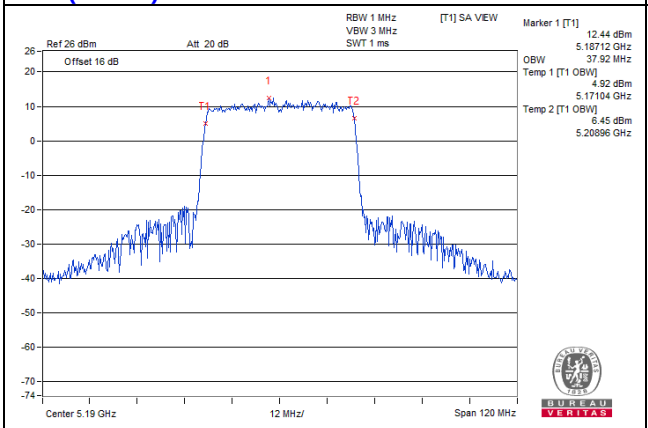


11ax (20MHz) CH165 Ant4

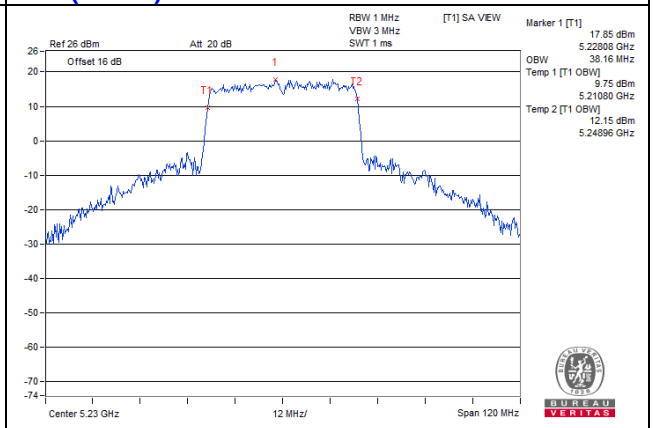


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

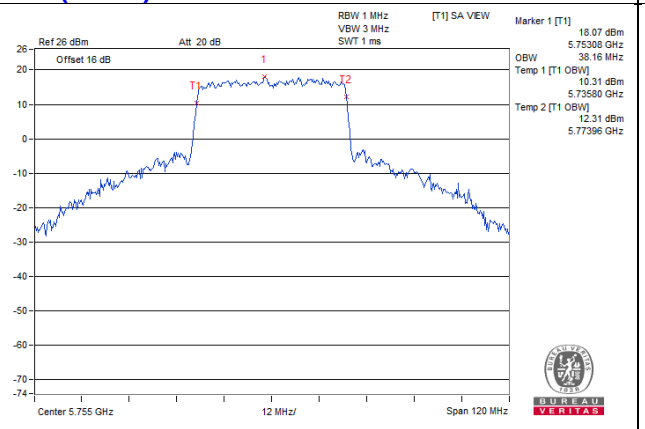
11ax (40MHz) CH38 Ant1



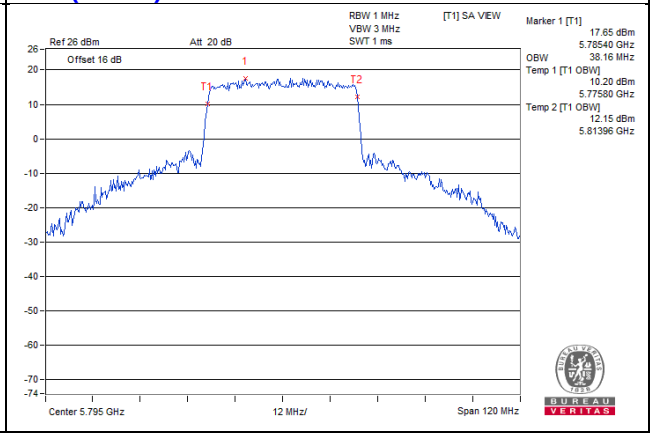
11ax (40MHz) CH46 Ant1



11ax (40MHz) CH151 Ant1

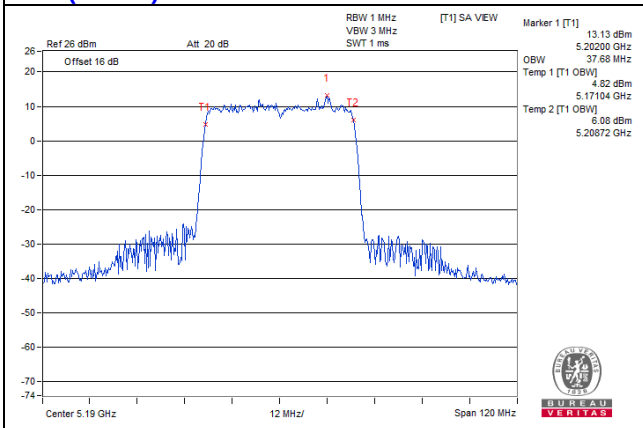


11ax (40MHz) CH159 Ant1

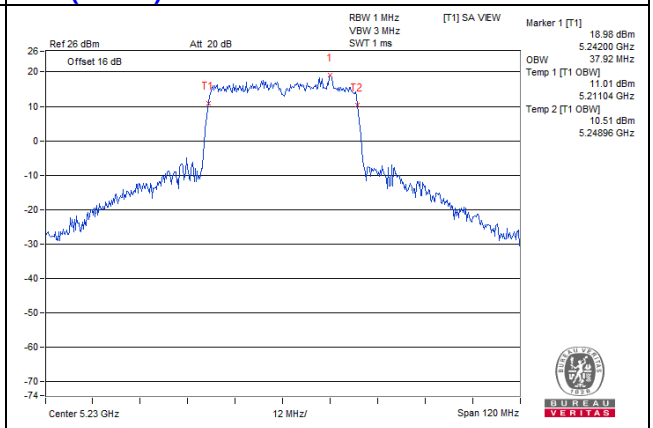


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

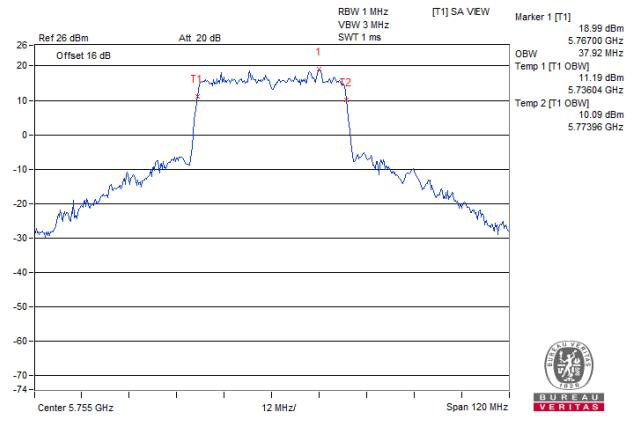
11ax (40MHz) CH38 Ant2



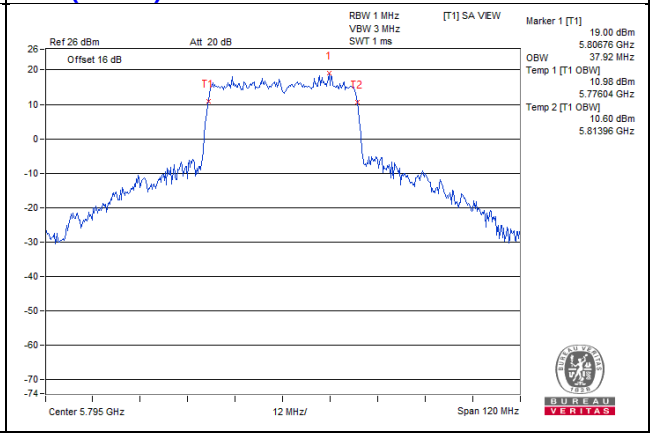
11ax (40MHz) CH46 Ant2



11ax (40MHz) CH151 Ant2

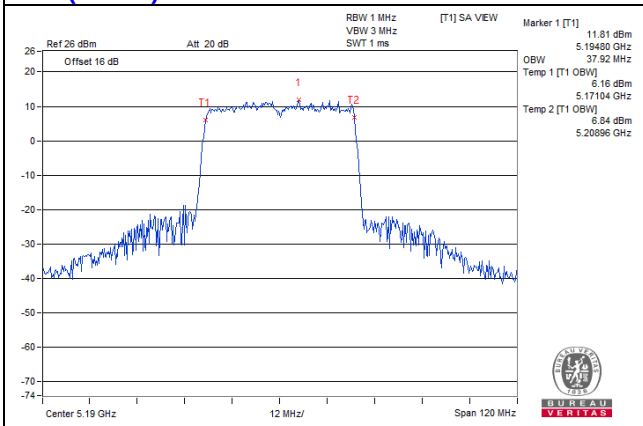


11ax (40MHz) CH159 Ant2

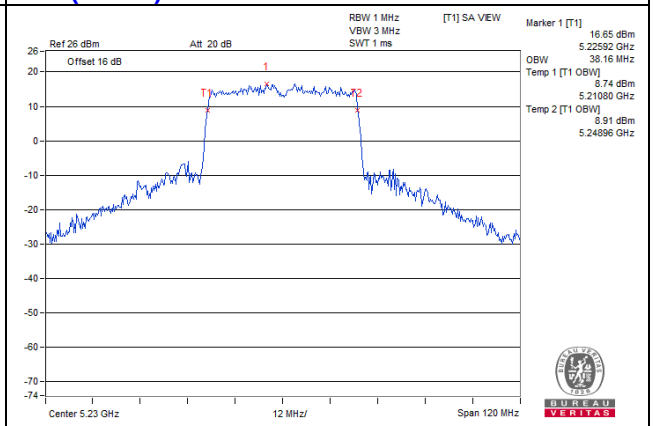


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

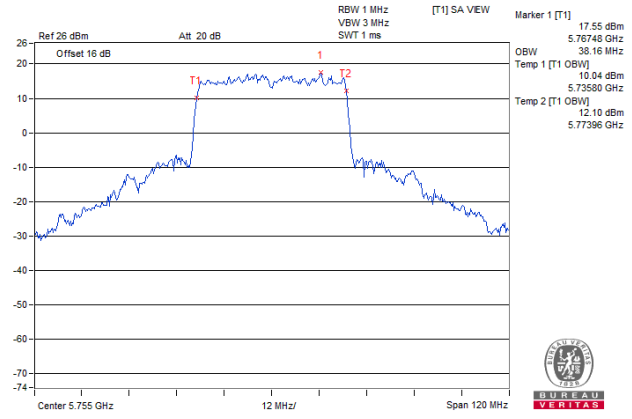
11ax (40MHz) CH38 Ant3



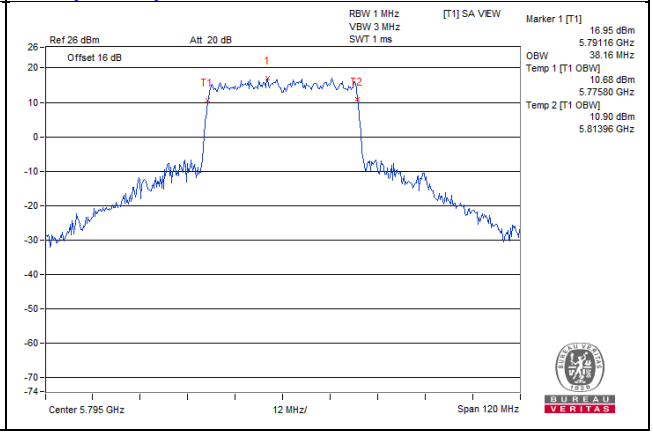
11ax (40MHz) CH46 Ant3



11ax (40MHz) CH151 Ant3

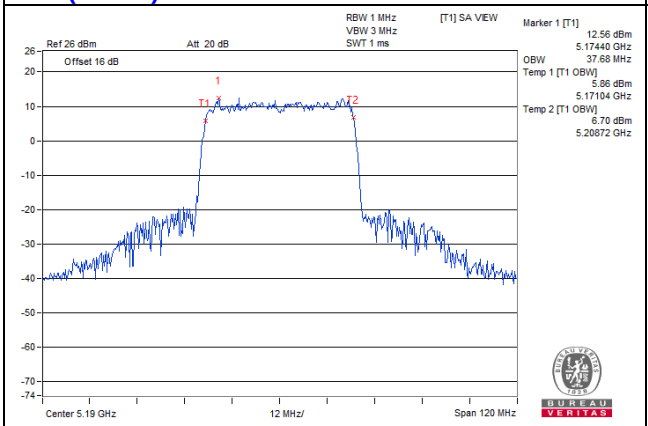


11ax (40MHz) CH159 Ant3

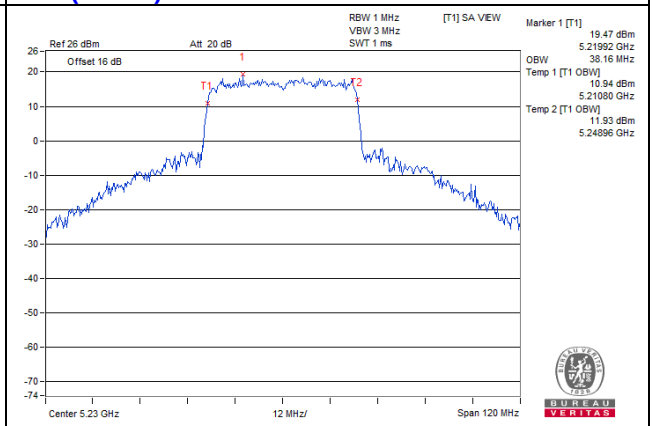


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

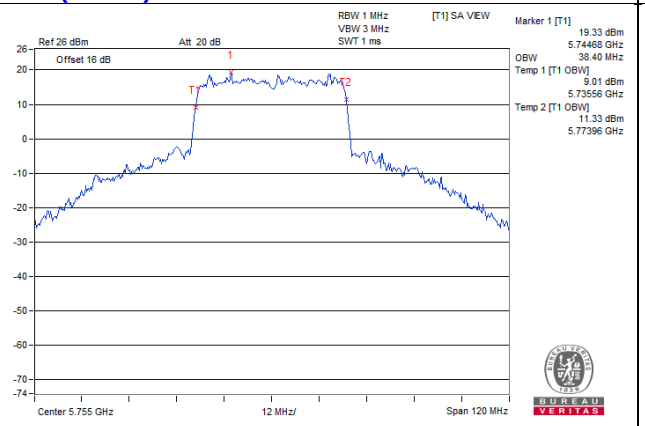
11ax (40MHz) CH38 Ant4



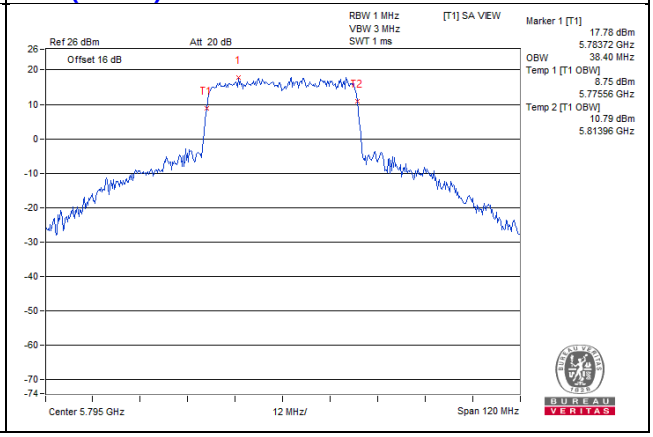
11ax (40MHz) CH46 Ant4



11ax (40MHz) CH151 Ant4

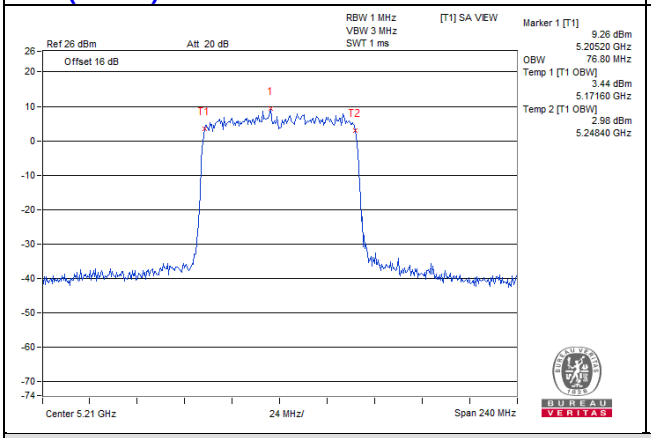


11ax (40MHz) CH159 Ant4

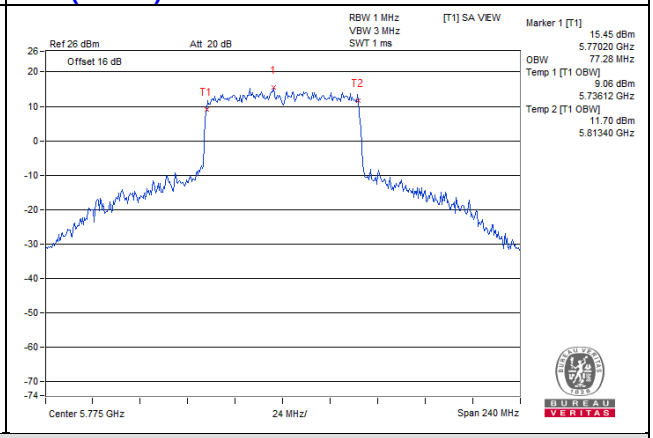


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

11ax (80MHz) CH42 Ant1

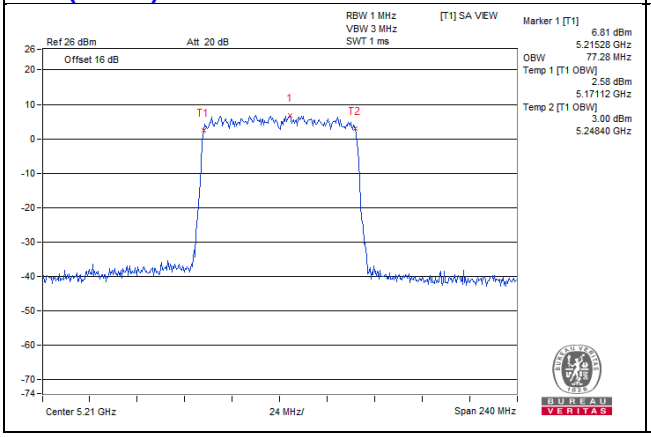


11ax (80MHz) CH155 Ant1

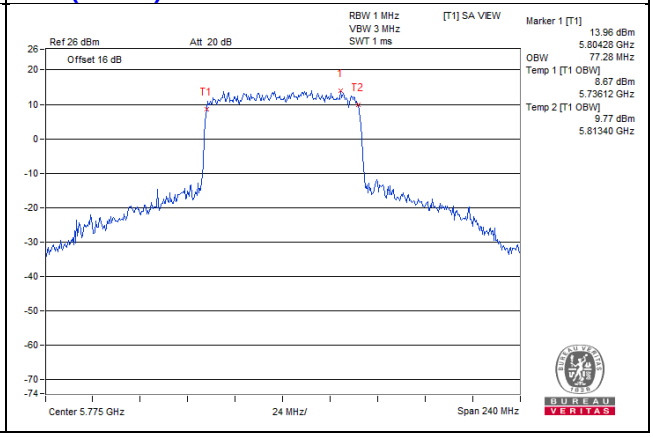


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

11ax (80MHz) CH42 Ant2

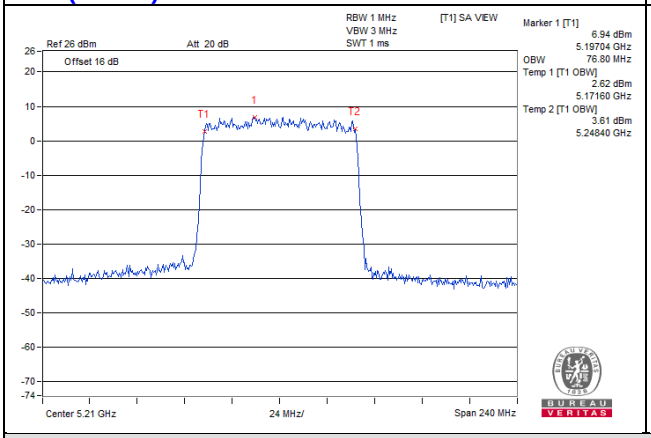


11ax (80MHz) CH155 Ant2

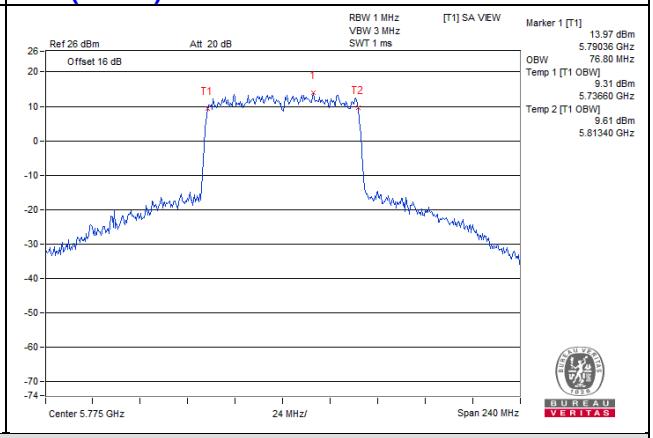


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

11ax (80MHz) CH42 Ant3

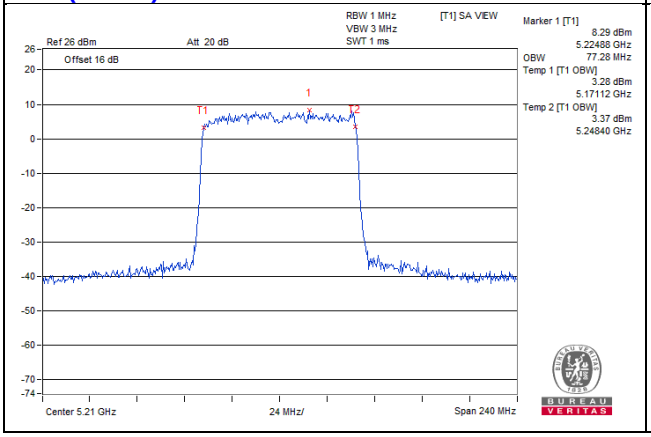


11ax (80MHz) CH155 Ant3

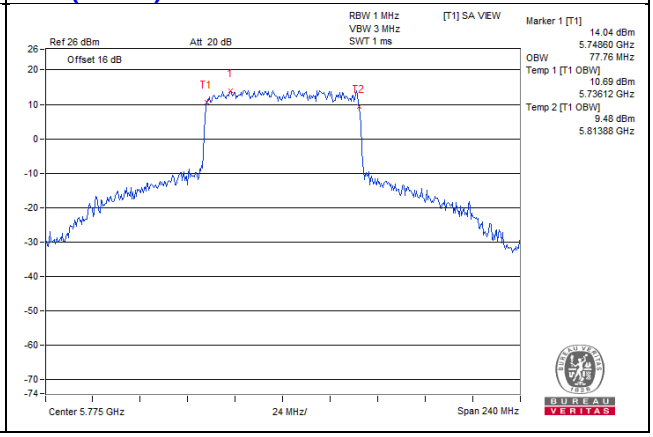


99% OCCUPIED BANDWIDTH SPECTRUM PLOT

11ax (80MHz) CH42 Ant4



11ax (80MHz) CH155 Ant4



4.3 6dB Bandwidth Measurement

4.3.1 Limit

For digital modulation systems, the minimum 6dB bandwidth shall be at least 500 kHz

4.3.2 Measuring Instruments and Setting

The following table is the setting of the Spectrum Analyzer.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	> 6dB Bandwidth
RBW	100KHz
VBW	≥ 3 x RBW
Detector	Peak
Trace	Max Hold
Sweep Time	Auto couple

4.3.3 Test Procedures

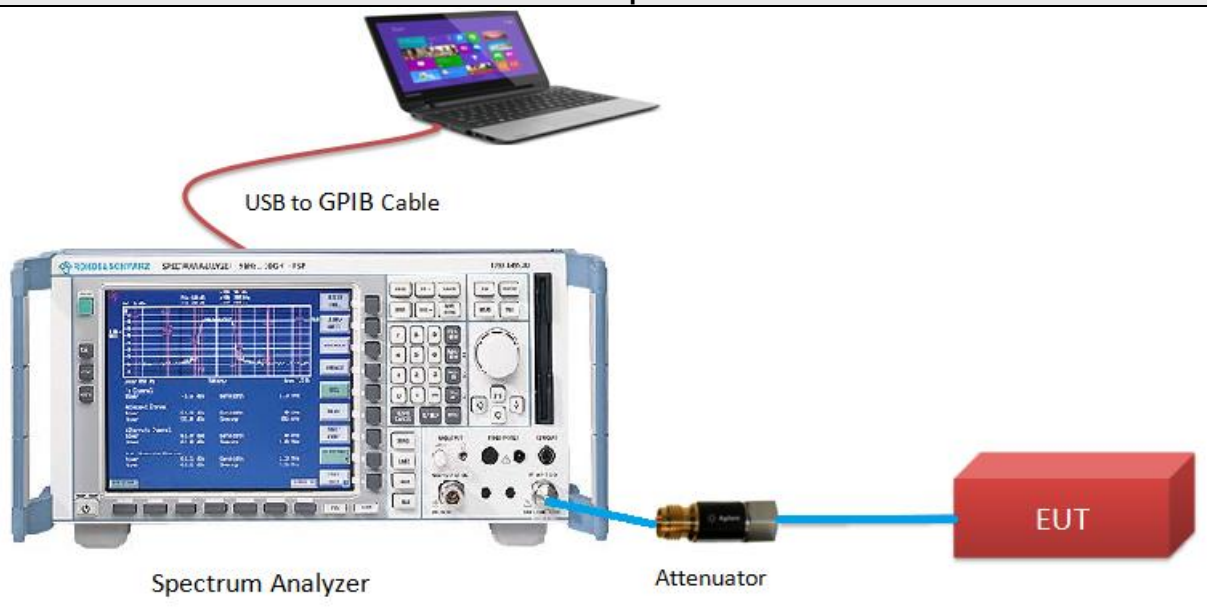
1 The transmitter output (antenna port) was connected to the spectrum analyzer in peak hold mode.

2 Test was performed in accordance with Measurement of Digital Transmission Systems Operating under 789033 D02 General U-NII Test Procedures New Rules v02r01, in section “Emission bandwidth (C)(2)” , 12/14/2017

3 Measured the spectrum width with power higher than 6dB account by this measurement.

4.3.4 Test Setup Layout

Setup



4.3.5 Test Deviation

There are no deviations with the original standard.

4.3.6 EUT Operating Conditions

The EUT was programmed to be in continuously transmitting mode.

4.3.7 Test Results of 6dB Bandwidth

Temperature	25°C	Humidity	60%
Test Engineer	Jyunchun Lin		

1S4T CDD

11ax (20MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)				MINIMUM LIMIT (MHz)	PASS / FAIL
		ANT 1	ANT 2	ANT 3	ANT 4		
149	5745	18.99	19.01	18.8	18.96	0.5	PASS
157	5785	18.99	19.04	18.84	18.98	0.5	PASS
165	5825	19.01	19.03	18.94	18.97	0.5	PASS

11ax (40MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)				MINIMUM LIMIT (MHz)	PASS / FAIL
		ANT 1	ANT 2	ANT 3	ANT 4		
151	5755	37.75	37.78	37.79	37.7	0.5	PASS
159	5795	37.75	37.67	37.79	37.7	0.5	PASS

11ax (80MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)				MINIMUM LIMIT (MHz)	PASS / FAIL
		ANT 1	ANT 2	ANT 3	ANT 4		
155	5775	76.88	76.83	76.26	75.56	0.5	PASS

1S4T TxBF

11ax (20MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)				MINIMUM LIMIT (MHz)	PASS / FAIL
		ANT 1	ANT 2	ANT 3	ANT 4		
149	5745	19.02	19.01	18.83	18.98	0.5	PASS
157	5785	19.02	19.01	18.95	18.98	0.5	PASS
165	5825	19.03	19.02	18.83	18.99	0.5	PASS

11ax (40MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)				MINIMUM LIMIT (MHz)	PASS / FAIL
		ANT 1	ANT 2	ANT 3	ANT 4		
151	5755	37.82	37.19	37.71	37.36	0.5	PASS
159	5795	37.77	37.71	37.77	37.51	0.5	PASS

11ax (80MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)				MINIMUM LIMIT (MHz)	PASS / FAIL
		ANT 1	ANT 2	ANT 3	ANT 4		
155	5775	77.28	76.84	76.25	76.85	0.5	PASS

2S4T TxBF

11ax (20MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)				MINIMUM LIMIT (MHz)	PASS / FAIL
		ANT 1	ANT 2	ANT 3	ANT 4		
149	5745	19.02	18.98	19.01	18.96	0.5	PASS
157	5785	19.03	19.02	18.99	18.8	0.5	PASS
165	5825	19.05	18.85	18.98	18.84	0.5	PASS

11ax (40MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)				MINIMUM LIMIT (MHz)	PASS / FAIL
		ANT 1	ANT 2	ANT 3	ANT 4		
151	5755	37.73	37.71	37.51	37.74	0.5	PASS
159	5795	37.69	37.7	37.5	37.73	0.5	PASS

11ax (80MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)				MINIMUM LIMIT (MHz)	PASS / FAIL
		ANT 1	ANT 2	ANT 3	ANT 4		
155	5775	76.3	76.19	75.61	75.66	0.5	PASS

3S4T TxBF

11ax (20MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)				MINIMUM LIMIT (MHz)	PASS / FAIL
		ANT 1	ANT 2	ANT 3	ANT 4		
149	5745	19.08	19.08	19.1	19.13	0.5	PASS
157	5785	19.1	19.04	19.1	19.13	0.5	PASS
165	5825	19.1	19.05	19.1	19.14	0.5	PASS

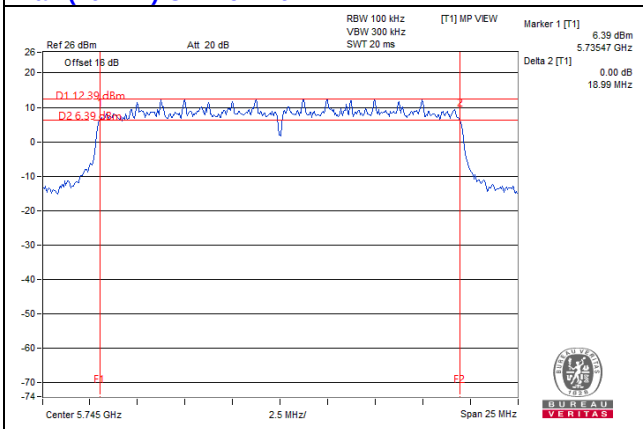
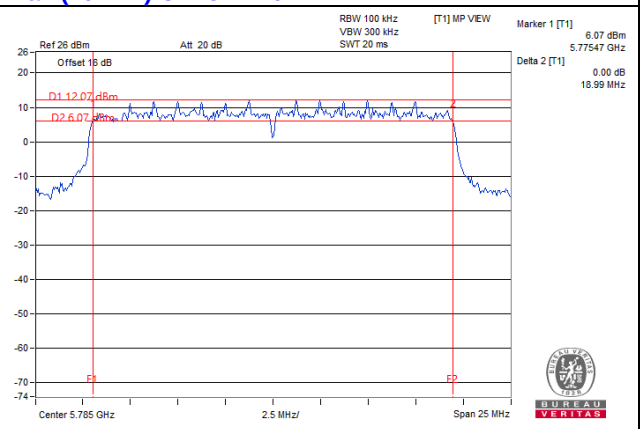
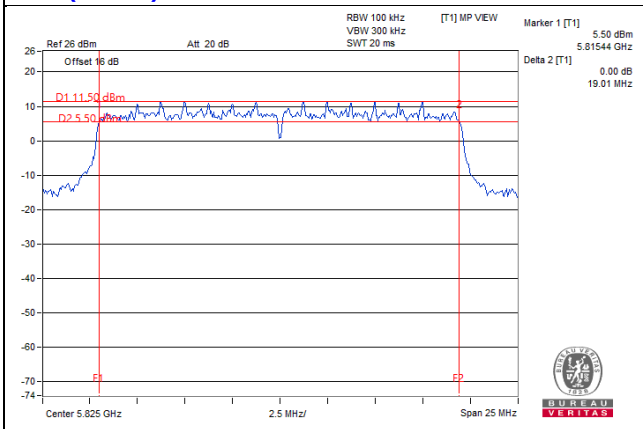
11ax (40MHz)

CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)				MINIMUM LIMIT (MHz)	PASS / FAIL
		ANT 1	ANT 2	ANT 3	ANT 4		
151	5755	37.77	37.49	37.73	37.4	0.5	PASS
159	5795	37.75	37.48	37.72	37.4	0.5	PASS

11ax (80MHz)

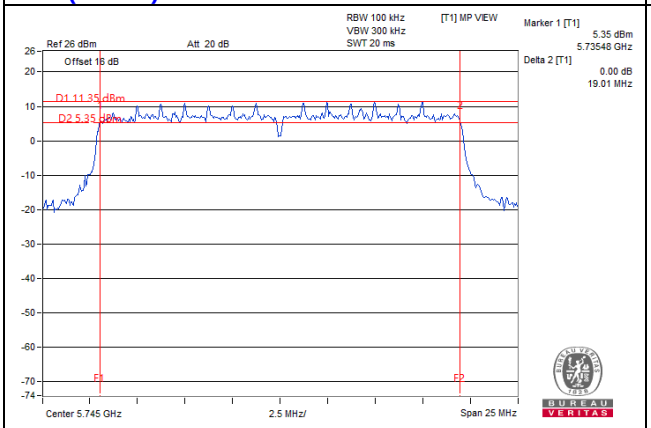
CHANNEL	FREQUENCY (MHz)	6dB BANDWIDTH (MHz)				MINIMUM LIMIT (MHz)	PASS / FAIL
		ANT 1	ANT 2	ANT 3	ANT 4		
155	5775	76.27	77.25	76.35	77.42	0.5	PASS

1S4T CDD

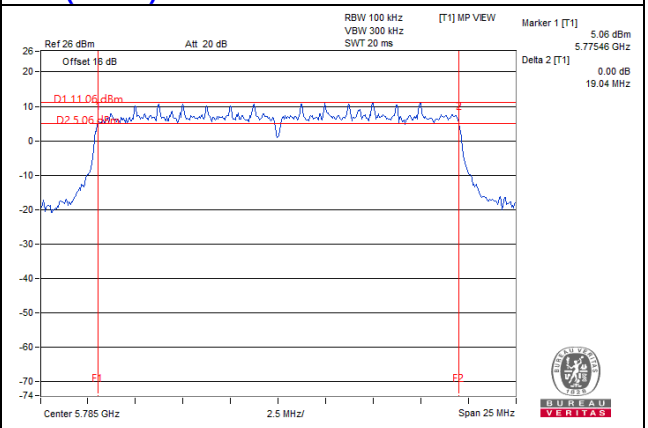
6dB BANDWIDTH SPECTRUM PLOT	
11ax (20MHz) CH149 Ant1	**11ax (20MHz) CH157 Ant1**
	
11ax (20MHz) CH165 Ant1	
	

6dB BANDWIDTH SPECTRUM PLOT

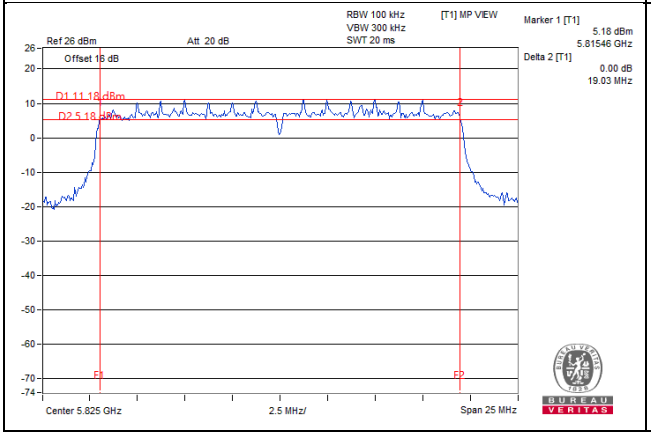
11ax (20MHz) CH149 Ant2



11ax (20MHz) CH157 Ant2

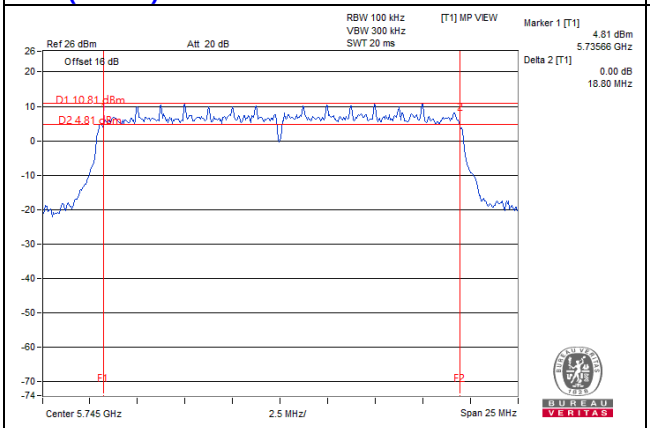


11ax (20MHz) CH165 Ant2

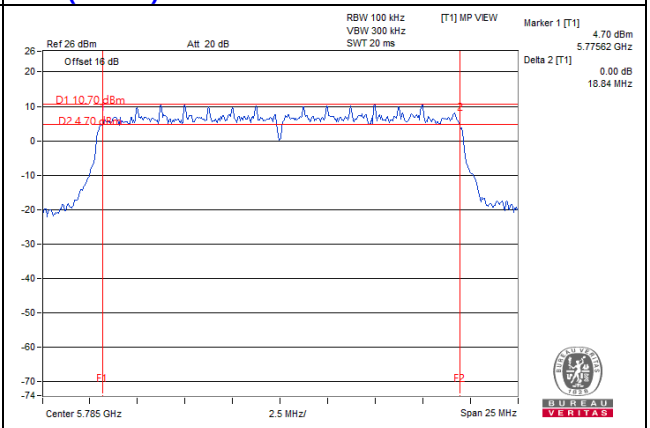


6dB BANDWIDTH SPECTRUM PLOT

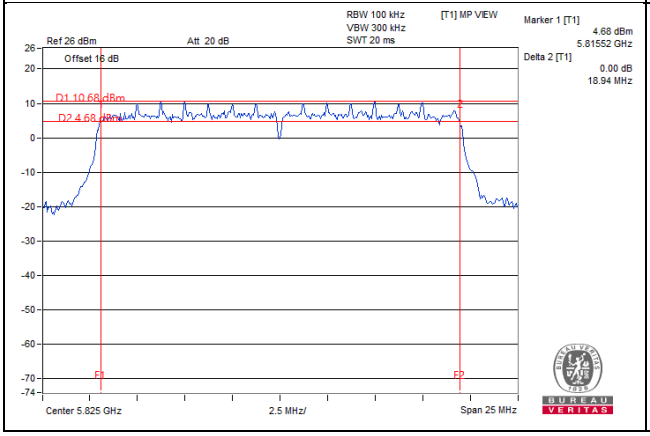
11ax (20MHz) CH149 Ant3



11ax (20MHz) CH157 Ant3

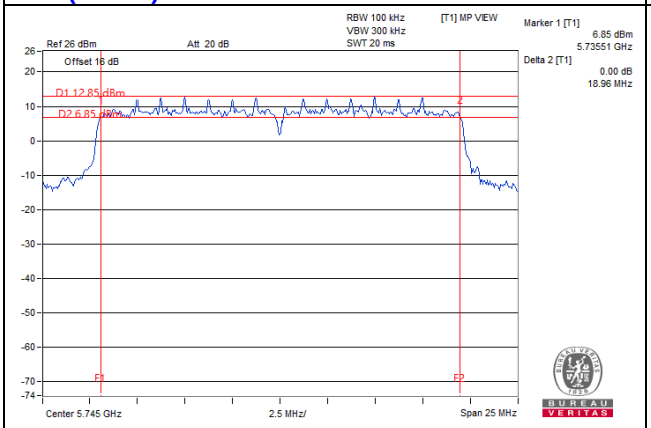


11ax (20MHz) CH165 Ant3

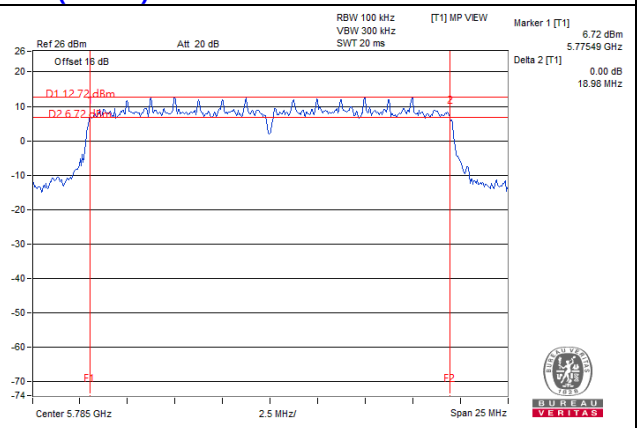


6dB BANDWIDTH SPECTRUM PLOT

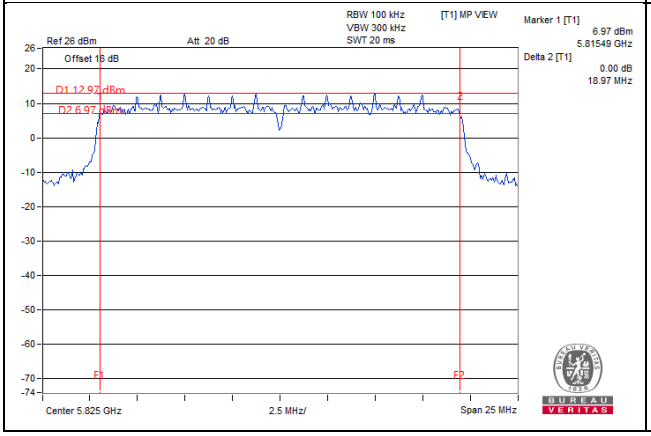
11ax (20MHz) CH149 Ant4



11ax (20MHz) CH157 Ant4

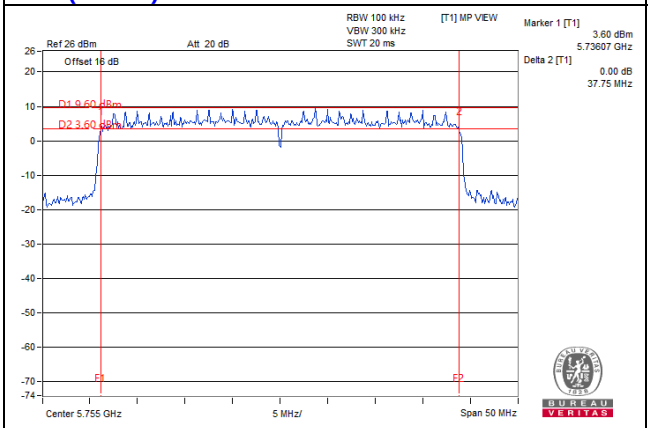


11ax (20MHz) CH165 Ant4

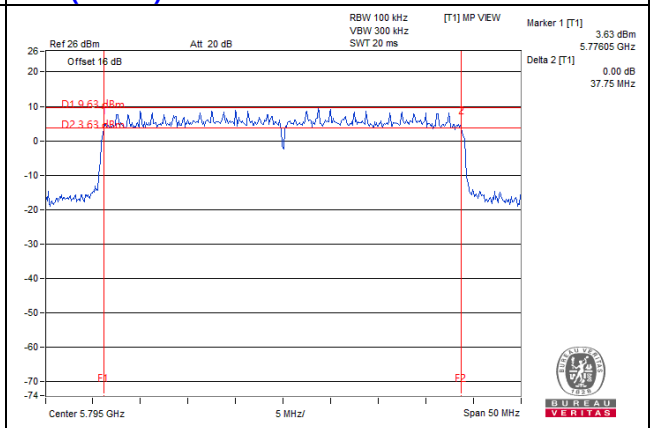


6dB BANDWIDTH SPECTRUM PLOT

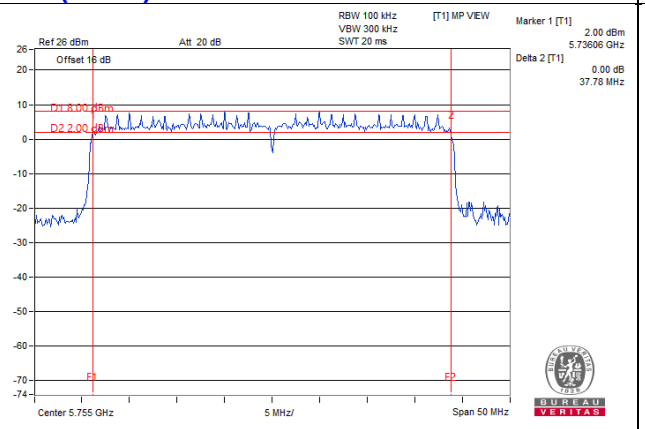
11ax (40MHz) CH151 Ant1



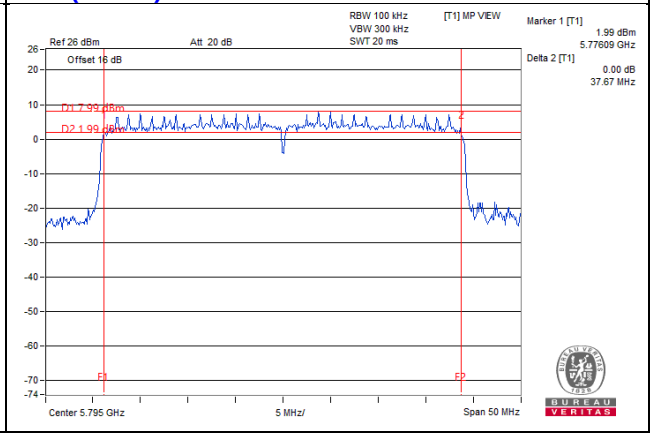
11ax (40MHz) CH159 Ant1



11ax (40MHz) CH151 Ant2

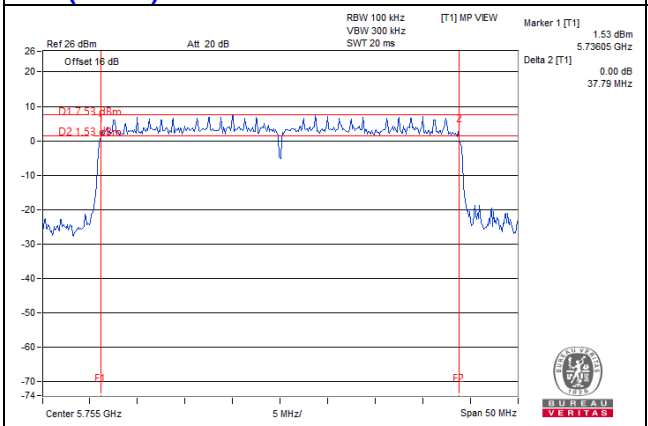


11ax (40MHz) CH159 Ant2

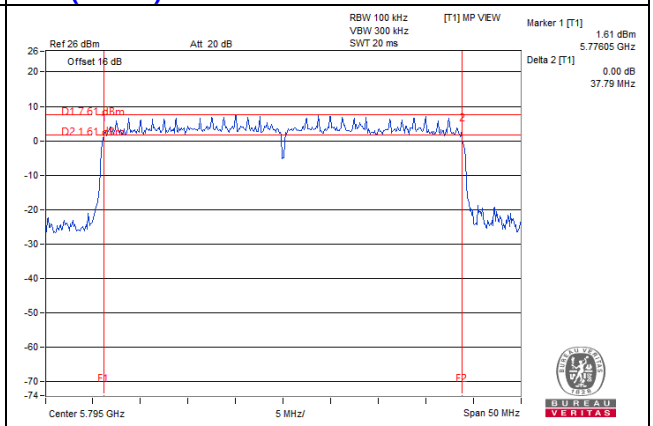


6dB BANDWIDTH SPECTRUM PLOT

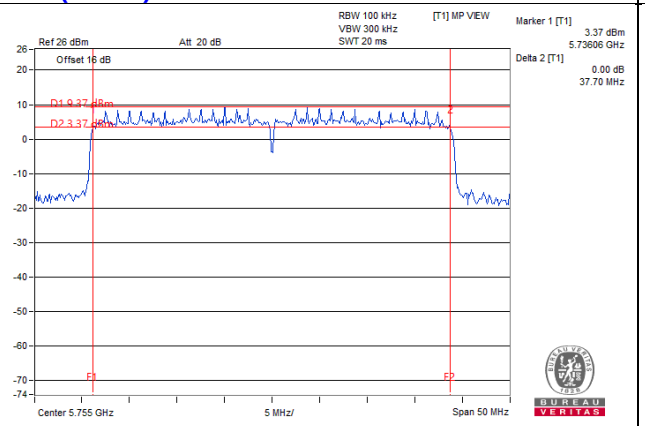
11ax (40MHz) CH151 Ant3



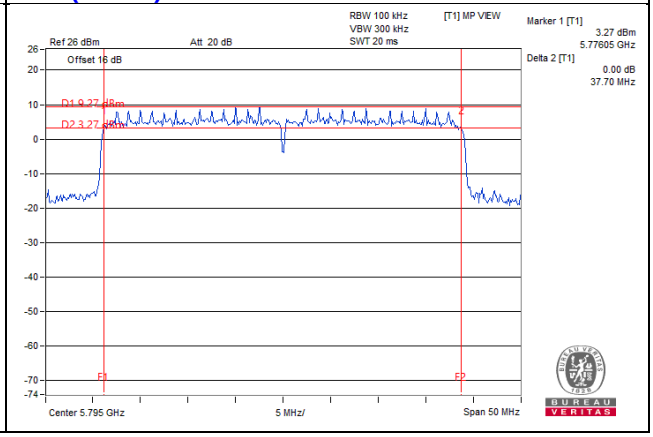
11ax (40MHz) CH159 Ant3



11ax (40MHz) CH151 Ant4

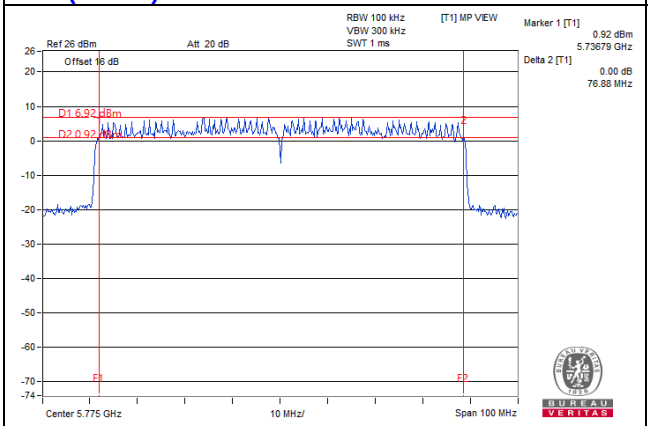


11ax (40MHz) CH159 Ant4

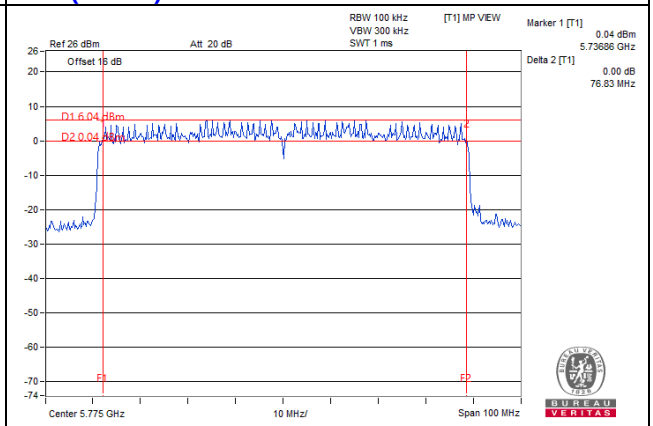


6dB BANDWIDTH SPECTRUM PLOT

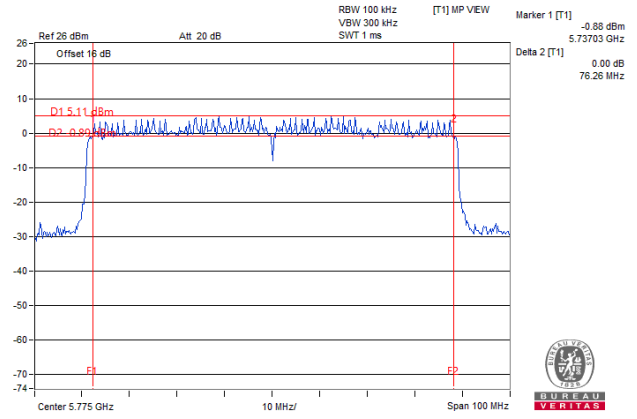
11ax (80MHz) CH155 Ant1



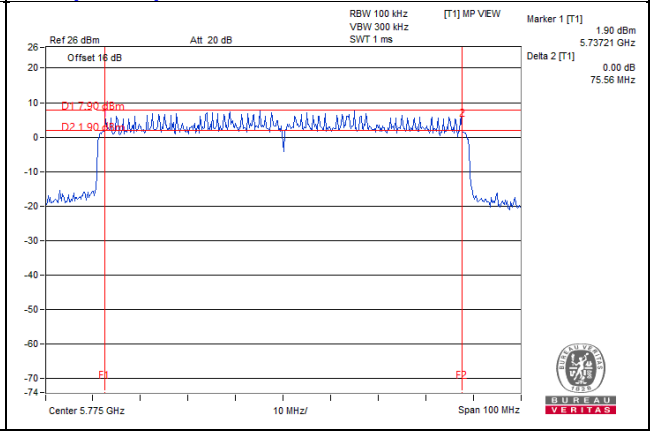
11ax (80MHz) CH155 Ant2



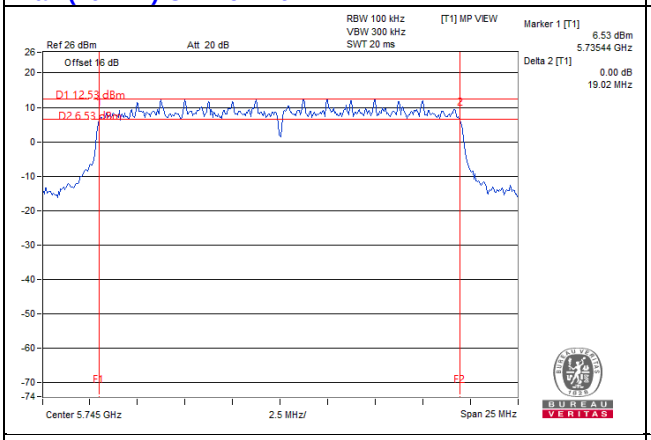
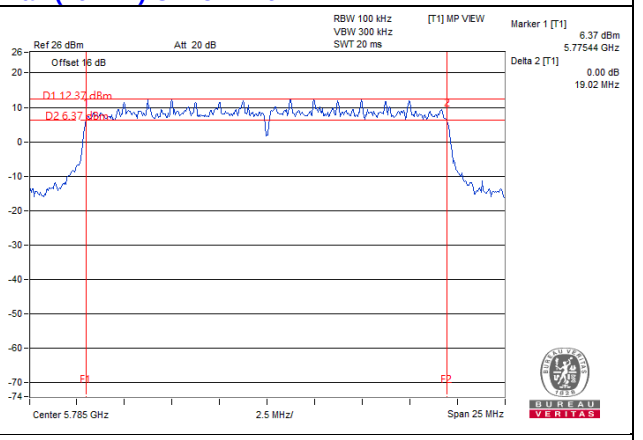
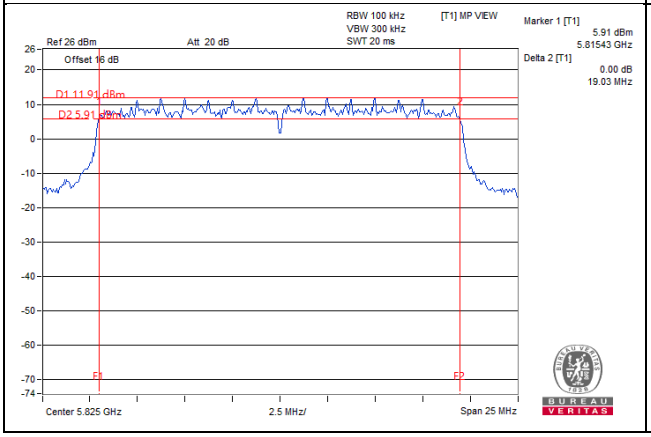
11ax (80MHz) CH155 Ant3



11ax (80MHz) CH155 Ant4

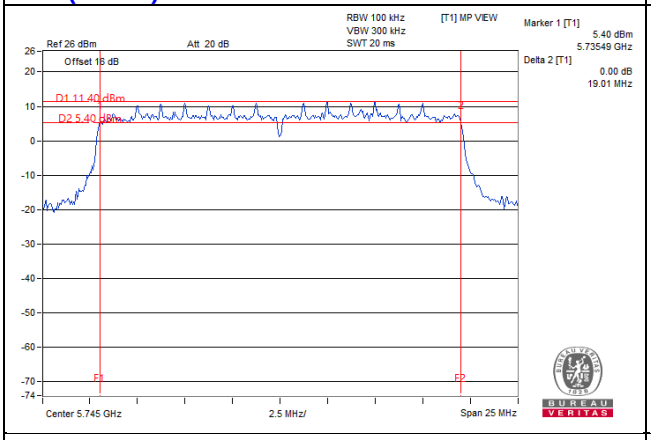


1S4T TxBF

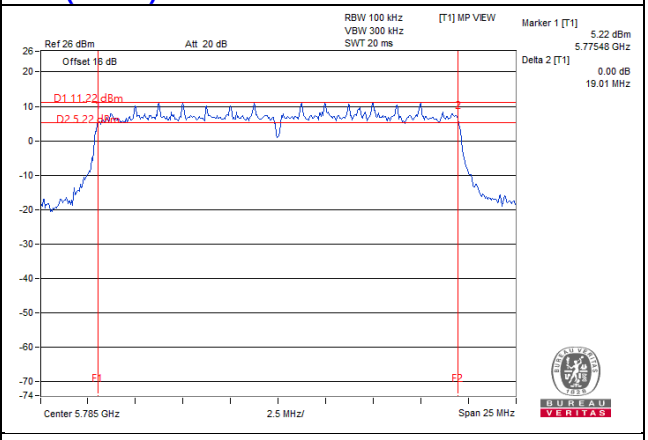
6dB BANDWIDTH SPECTRUM PLOT	
11ax (20MHz) CH149 Ant1	**11ax (20MHz) CH157 Ant1**
	
11ax (20MHz) CH165 Ant1	
	

6dB BANDWIDTH SPECTRUM PLOT

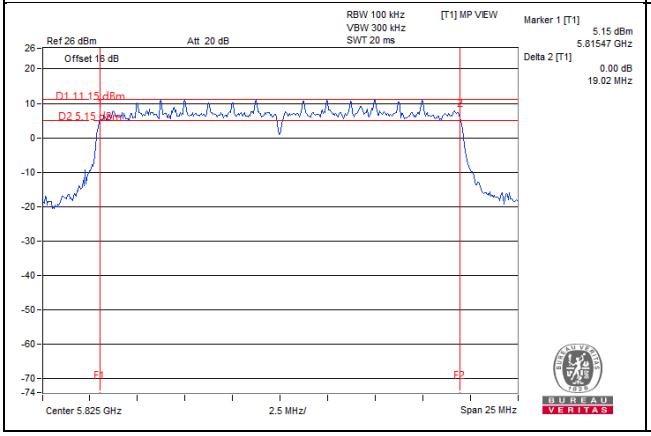
11ax (20MHz) CH149 Ant2



11ax (20MHz) CH157 Ant2

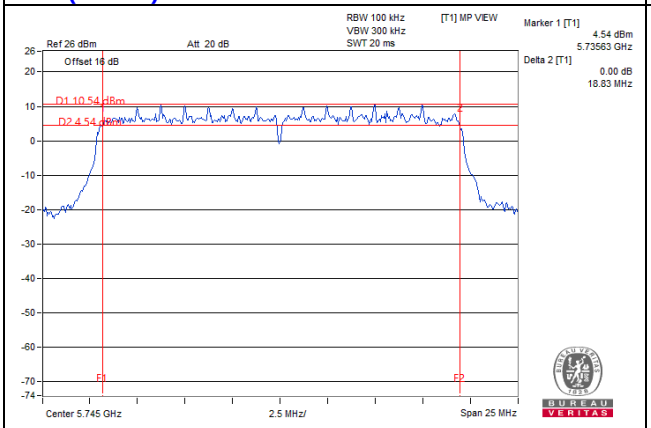


11ax (20MHz) CH165 Ant2

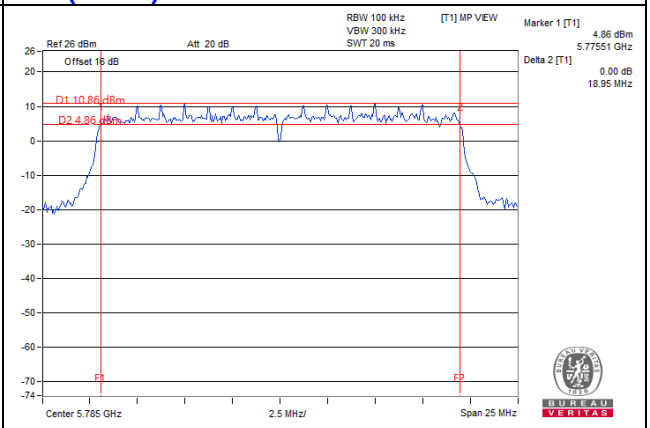


6dB BANDWIDTH SPECTRUM PLOT

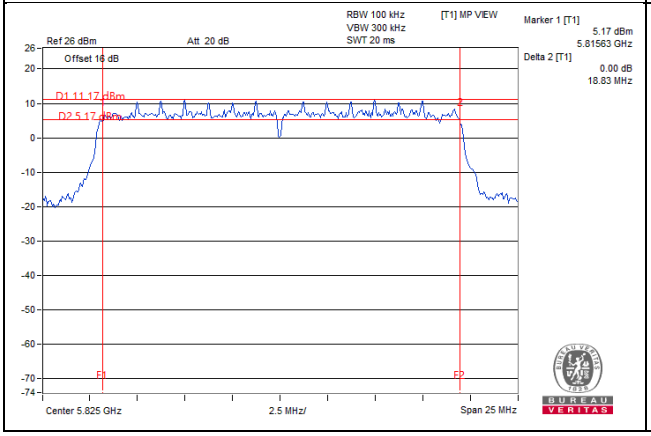
11ax (20MHz) CH149 Ant3



11ax (20MHz) CH157 Ant3

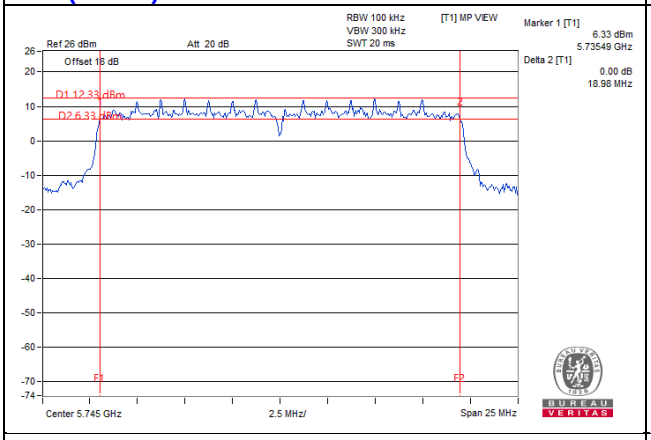


11ax (20MHz) CH165 Ant3

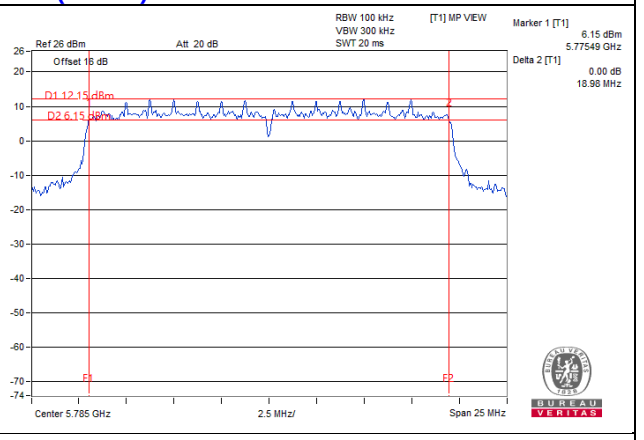


6dB BANDWIDTH SPECTRUM PLOT

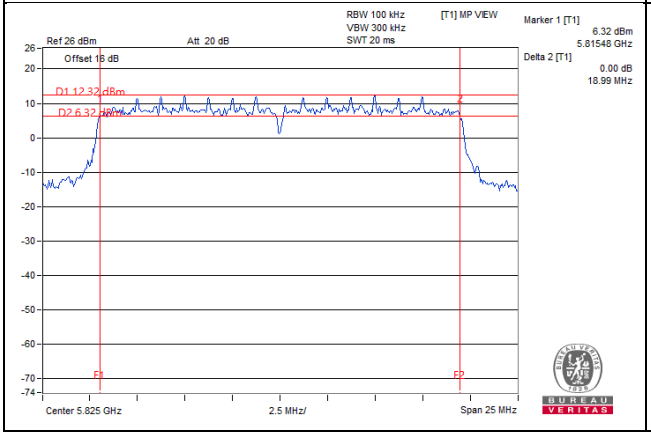
11ax (20MHz) CH149 Ant4



11ax (20MHz) CH157 Ant4

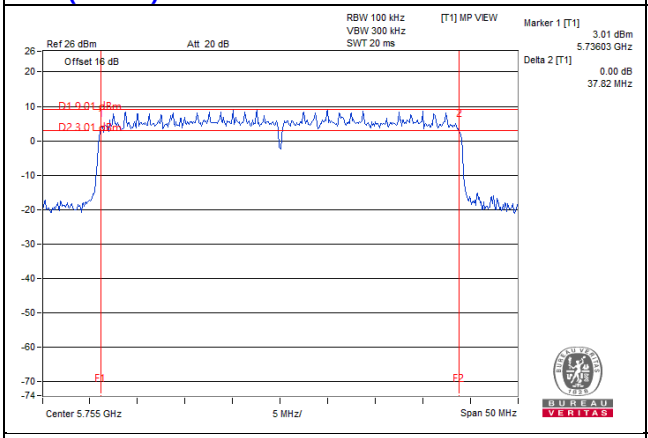


11ax (20MHz) CH165 Ant4

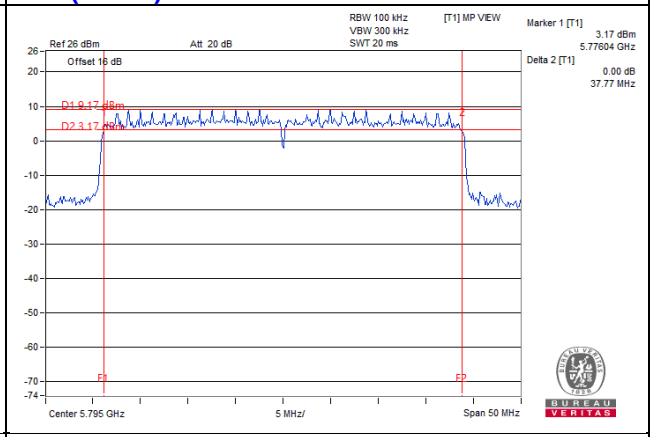


6dB BANDWIDTH SPECTRUM PLOT

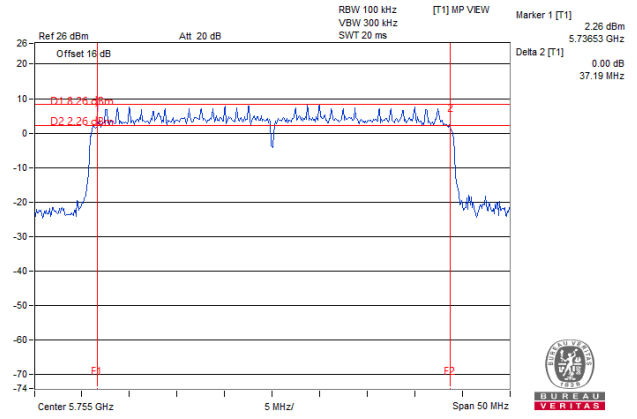
11ax (40MHz) CH151 Ant1



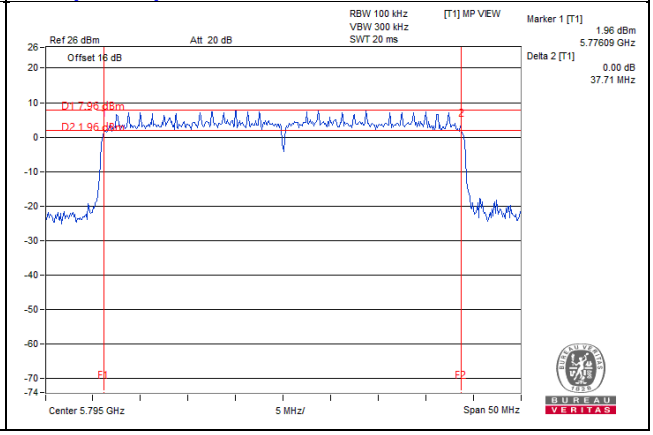
11ax (40MHz) CH159 Ant1



11ax (40MHz) CH151 Ant2

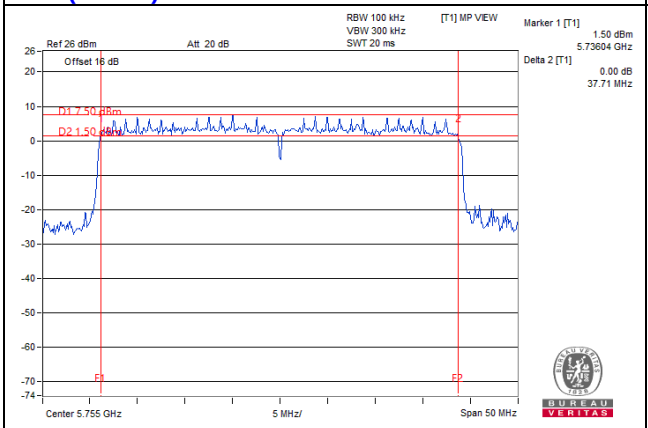


11ax (40MHz) CH159 Ant2

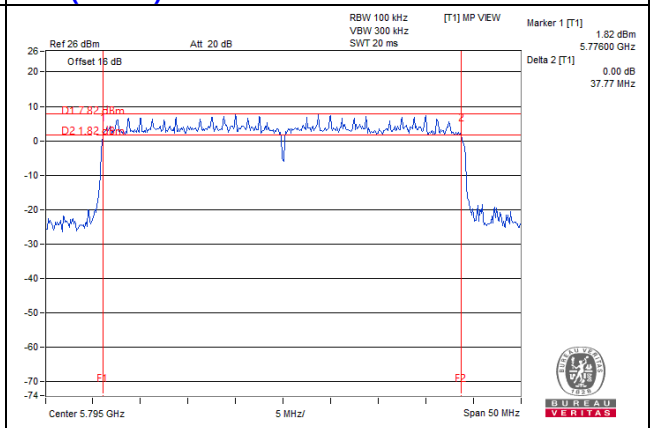


6dB BANDWIDTH SPECTRUM PLOT

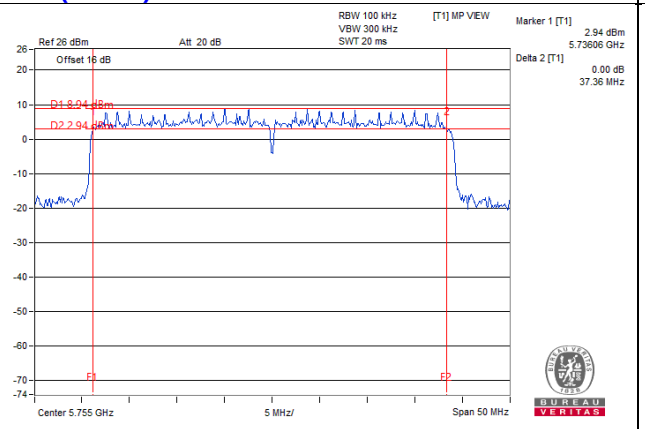
11ax (40MHz) CH151 Ant3



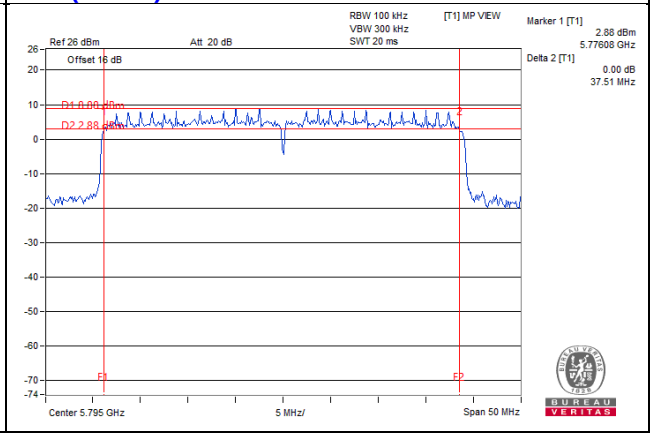
11ax (40MHz) CH159 Ant3



11ax (40MHz) CH151 Ant4

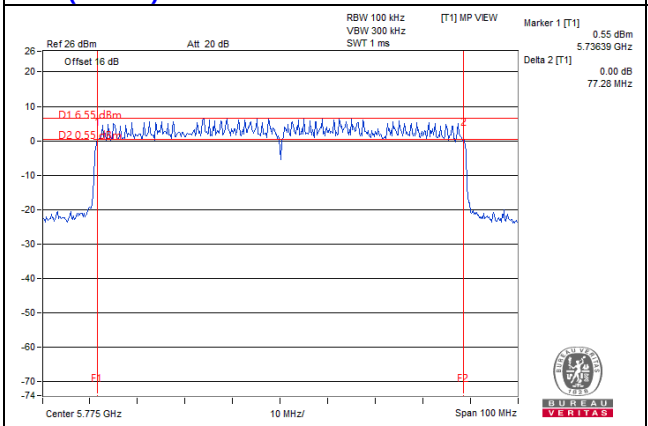


11ax (40MHz) CH159 Ant4

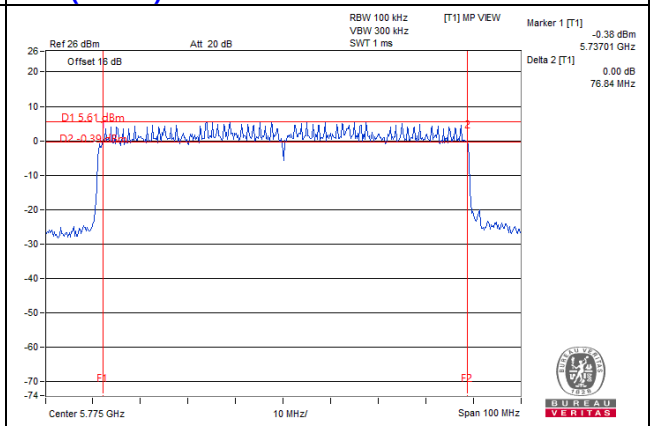


6dB BANDWIDTH SPECTRUM PLOT

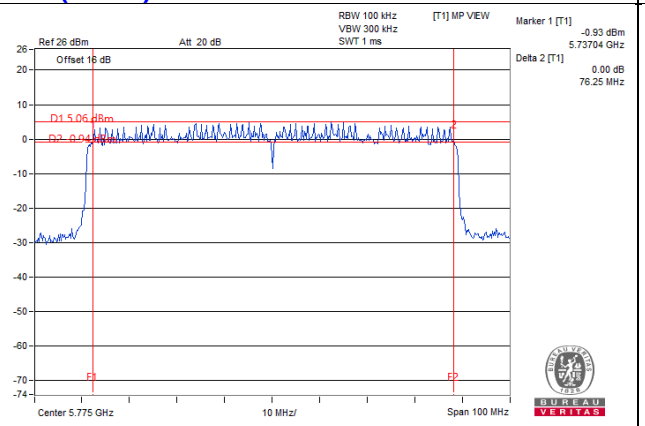
11ax (80MHz) CH155 Ant1



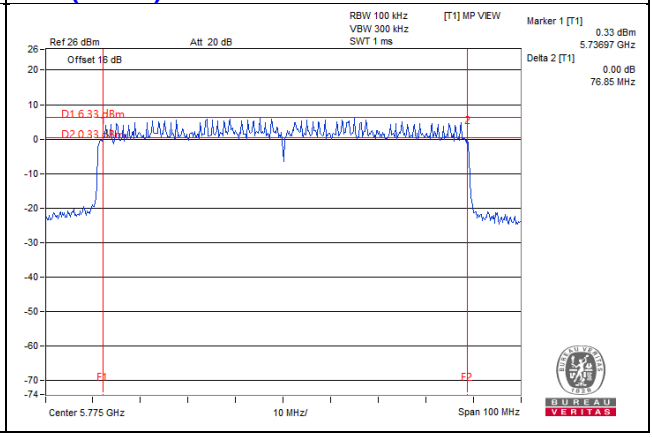
11ax (80MHz) CH155 Ant2



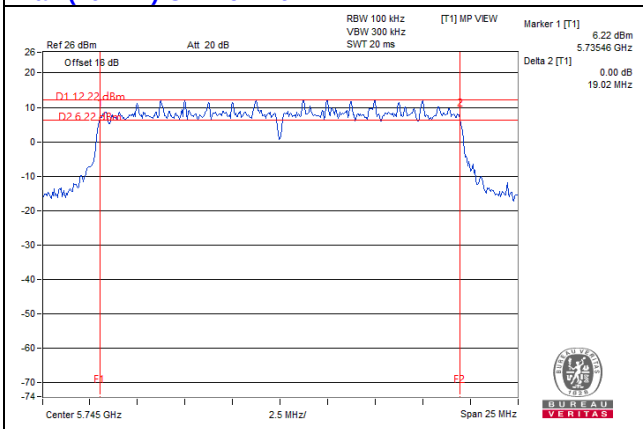
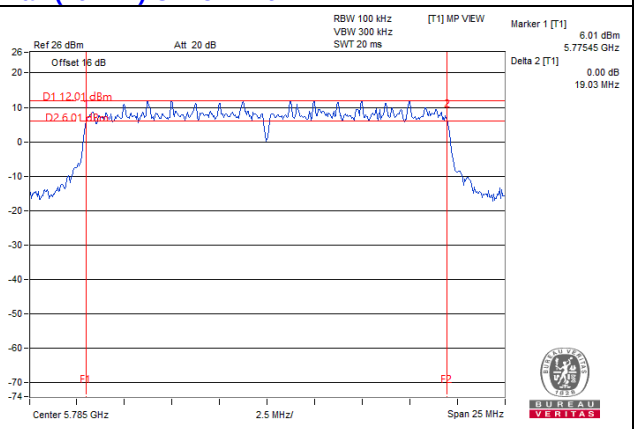
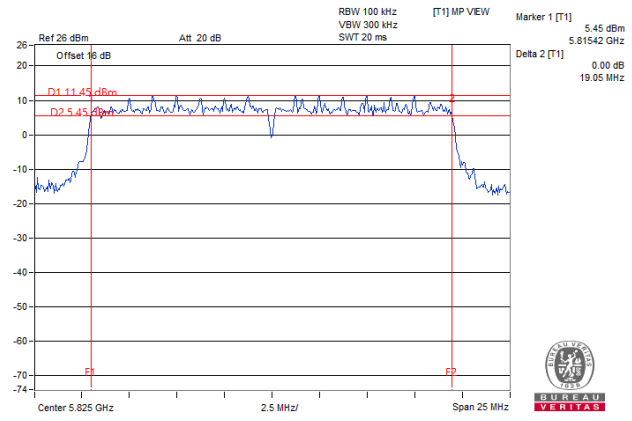
11ax (80MHz) CH155 Ant3



11ax (80MHz) CH155 Ant4

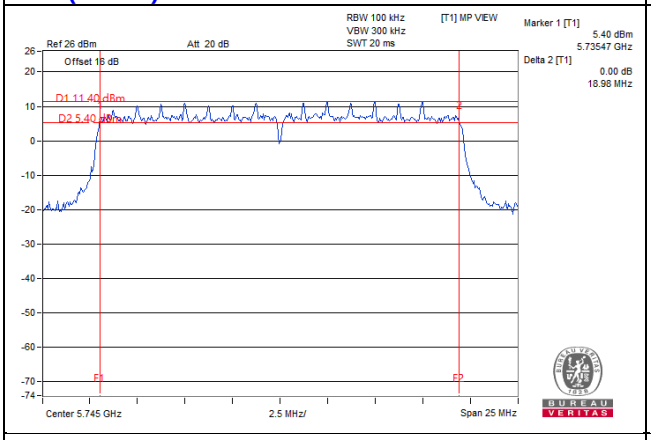


2S4T TxBF

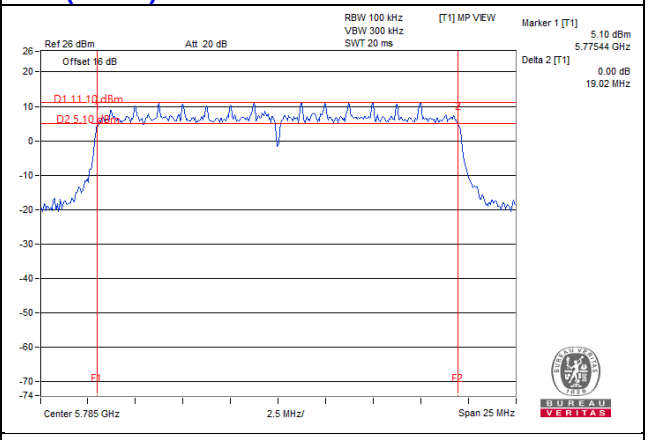
6dB BANDWIDTH SPECTRUM PLOT	
11ax (20MHz) CH149 Ant1	**11ax (20MHz) CH157 Ant1**
	
11ax (20MHz) CH165 Ant1	
	

6dB BANDWIDTH SPECTRUM PLOT

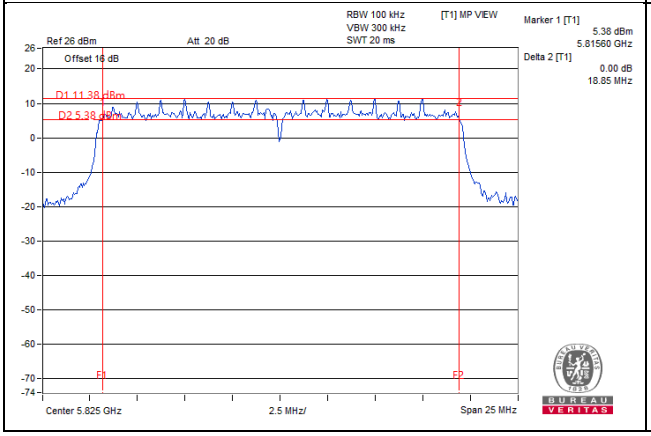
11ax (20MHz) CH149 Ant2



11ax (20MHz) CH157 Ant2

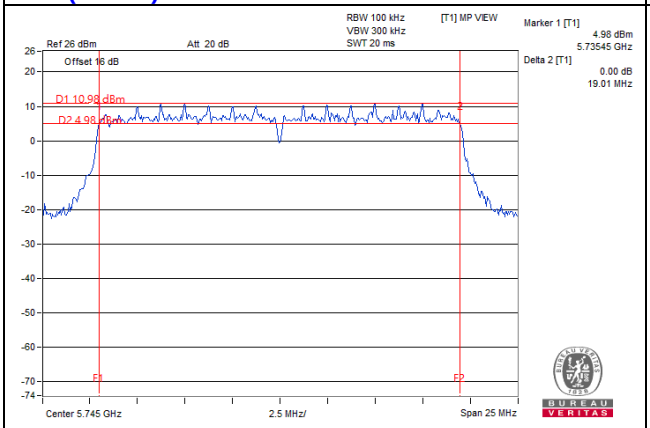


11ax (20MHz) CH165 Ant2

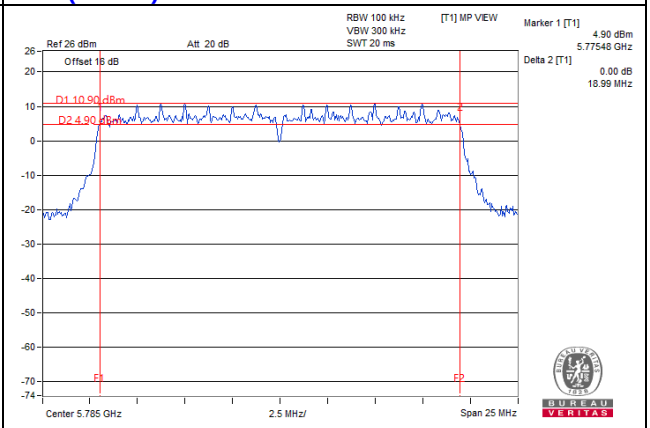


6dB BANDWIDTH SPECTRUM PLOT

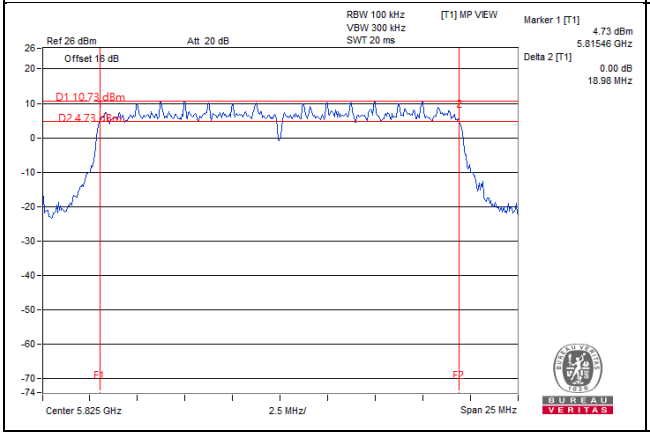
11ax (20MHz) CH149 Ant3



11ax (20MHz) CH157 Ant3

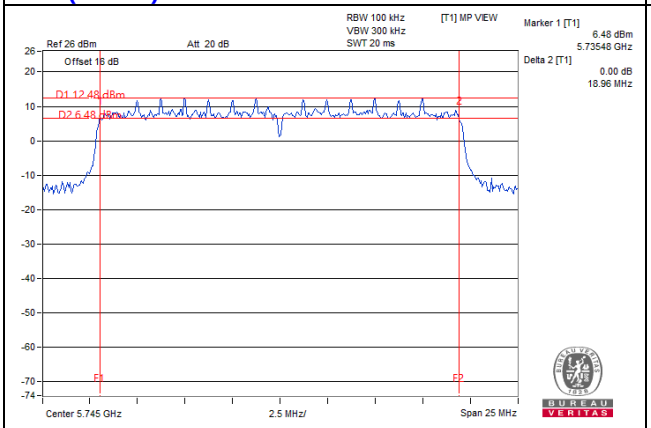


11ax (20MHz) CH165 Ant3

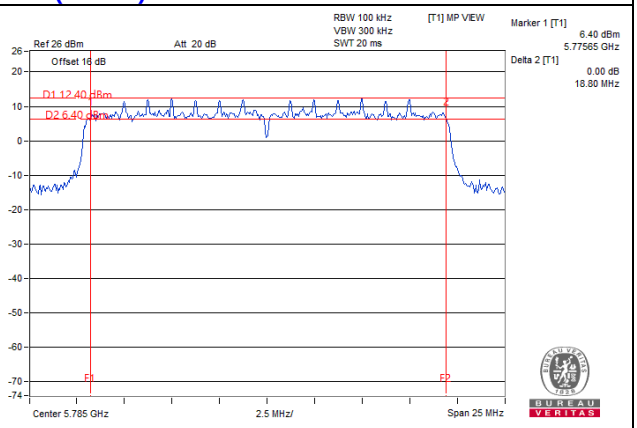


6dB BANDWIDTH SPECTRUM PLOT

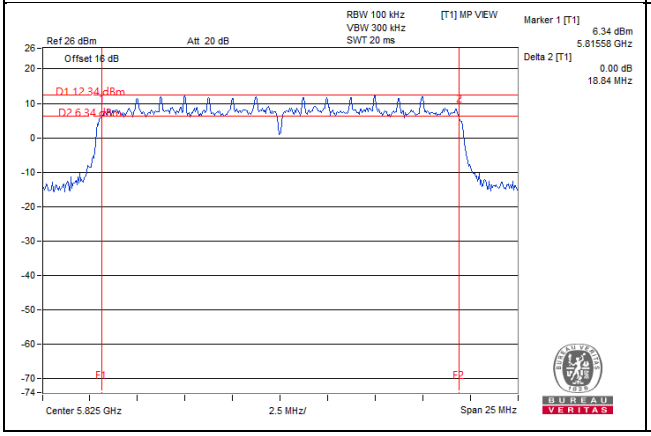
11ax (20MHz) CH149 Ant4



11ax (20MHz) CH157 Ant4

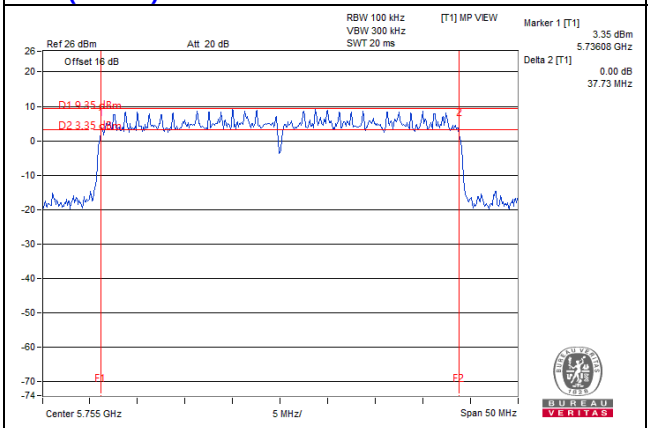


11ax (20MHz) CH165 Ant4

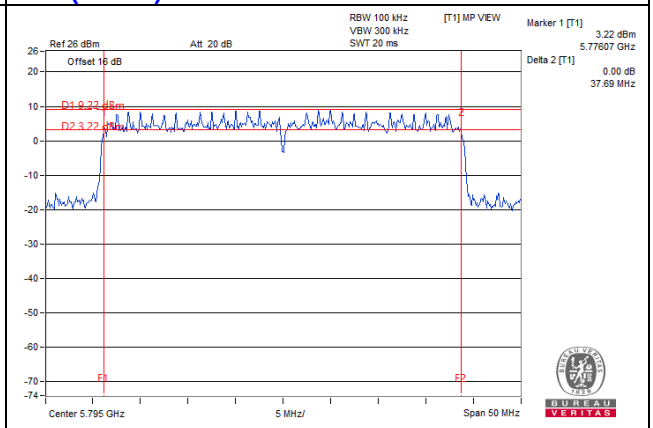


6dB BANDWIDTH SPECTRUM PLOT

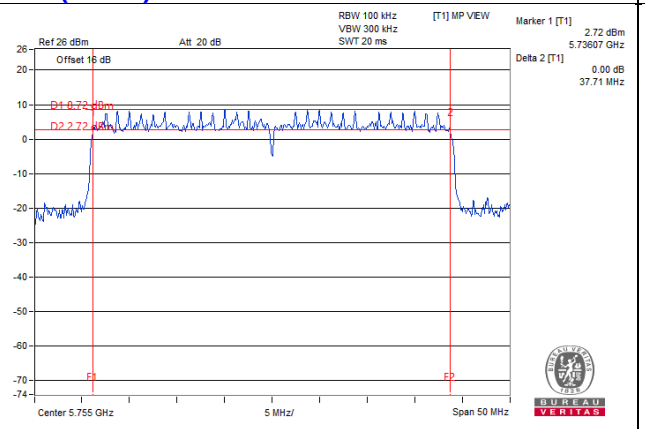
11ax (40MHz) CH151 Ant1



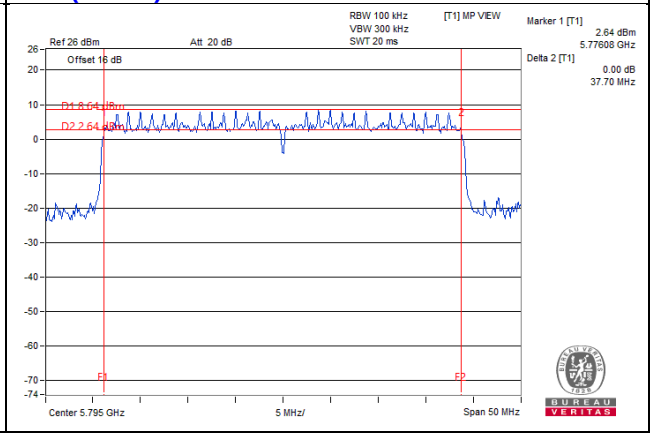
11ax (40MHz) CH159 Ant1



11ax (40MHz) CH151 Ant2

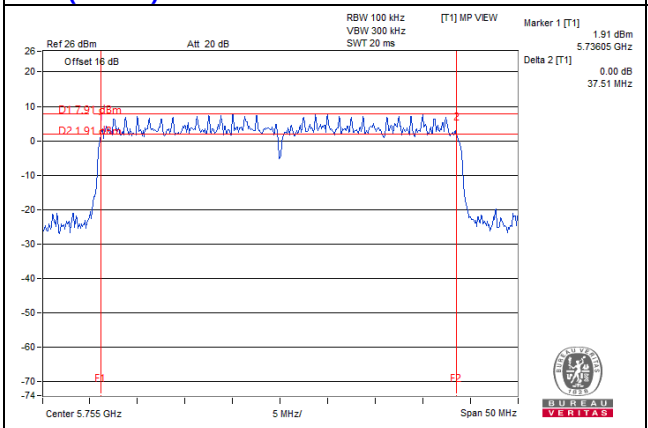


11ax (40MHz) CH159 Ant2

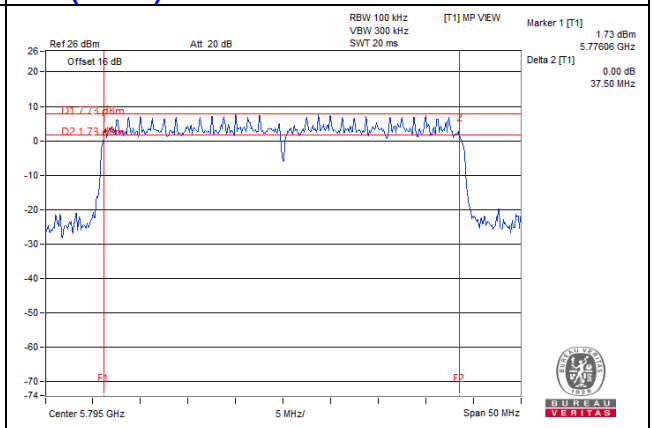


6dB BANDWIDTH SPECTRUM PLOT

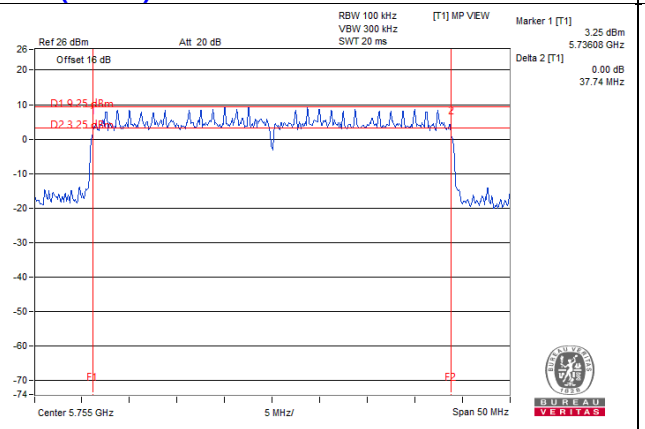
11ax (40MHz) CH151 Ant3



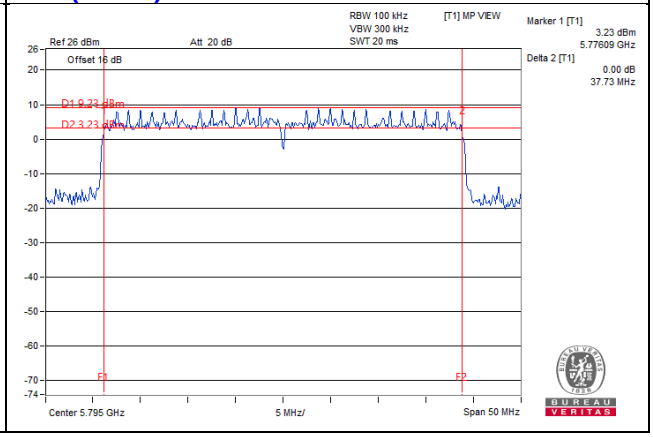
11ax (40MHz) CH159 Ant3



11ax (40MHz) CH151 Ant4

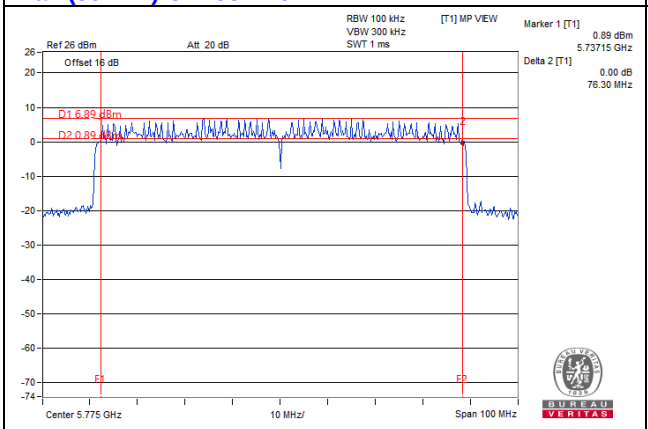


11ax (40MHz) CH159 Ant4

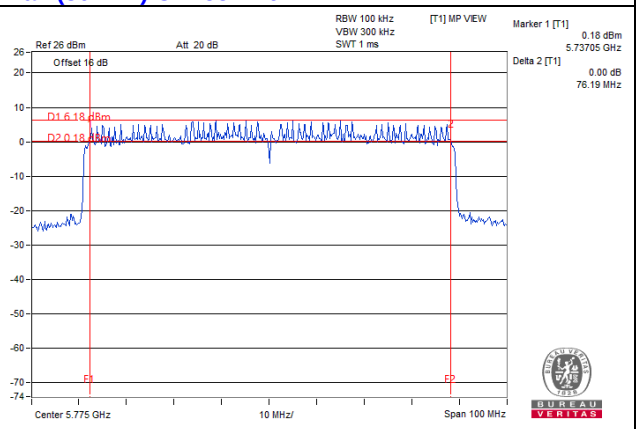


6dB BANDWIDTH SPECTRUM PLOT

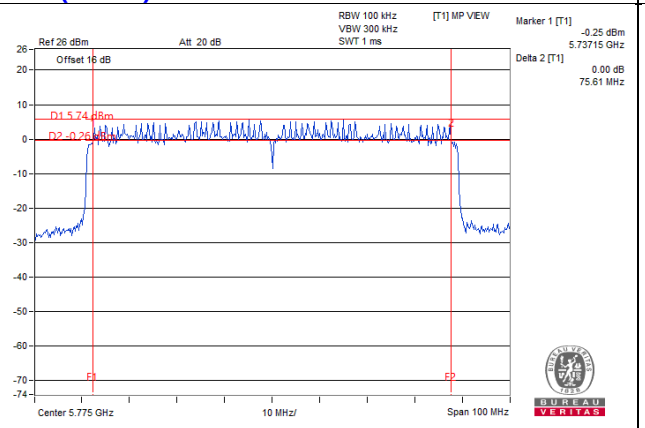
11ax (80MHz) CH155 Ant1



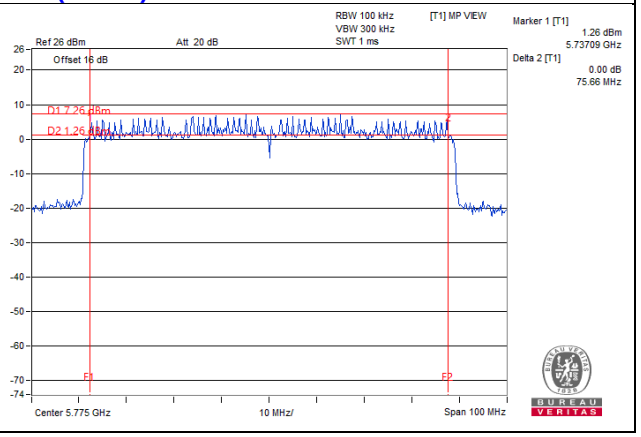
11ax (80MHz) CH155 Ant2



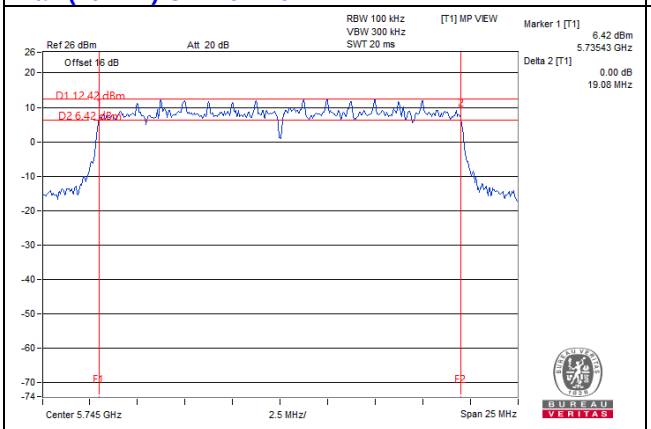
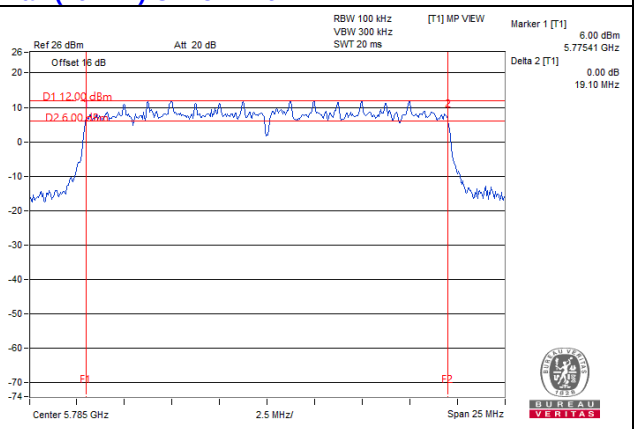
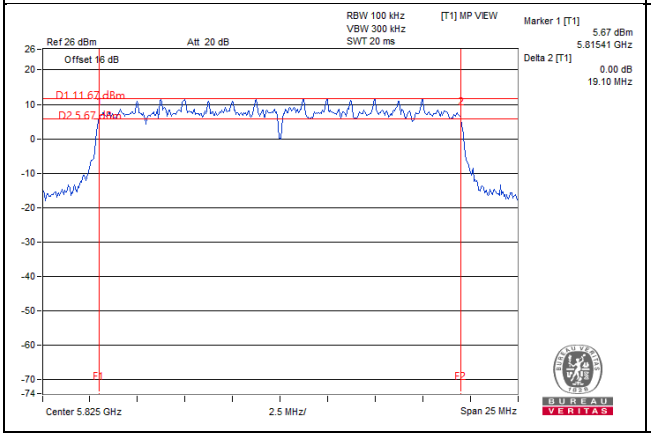
11ax (80MHz) CH155 Ant3



11ax (80MHz) CH155 Ant4

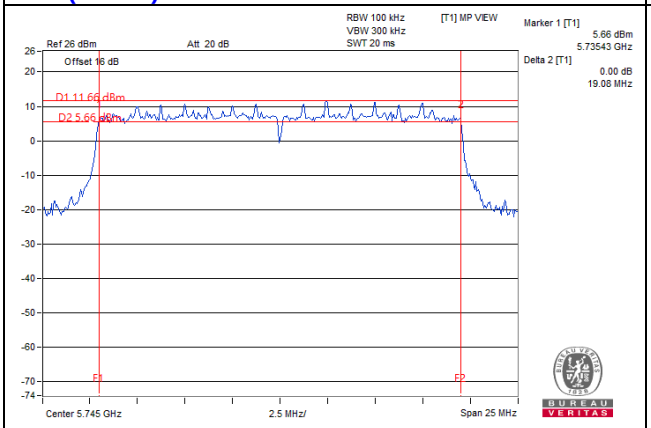


3S4T TxBF

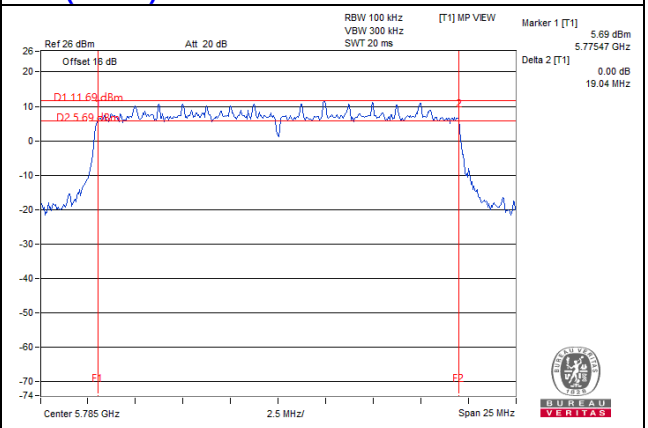
6dB BANDWIDTH SPECTRUM PLOT	
11ax (20MHz) CH149 Ant1	**11ax (20MHz) CH157 Ant1**
	
11ax (20MHz) CH165 Ant1	
	

6dB BANDWIDTH SPECTRUM PLOT

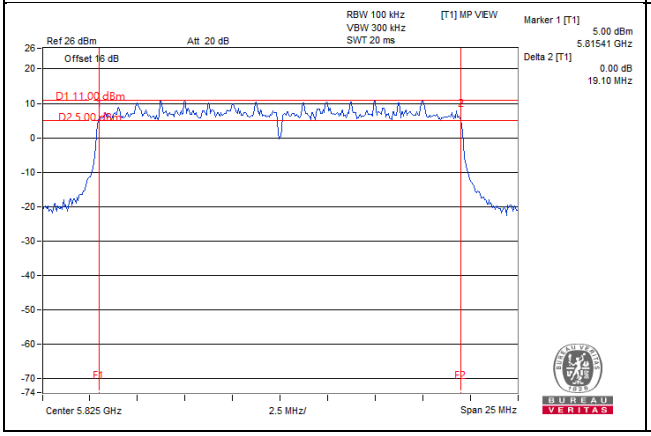
11ax (20MHz) CH149 Ant2



11ax (20MHz) CH157 Ant2

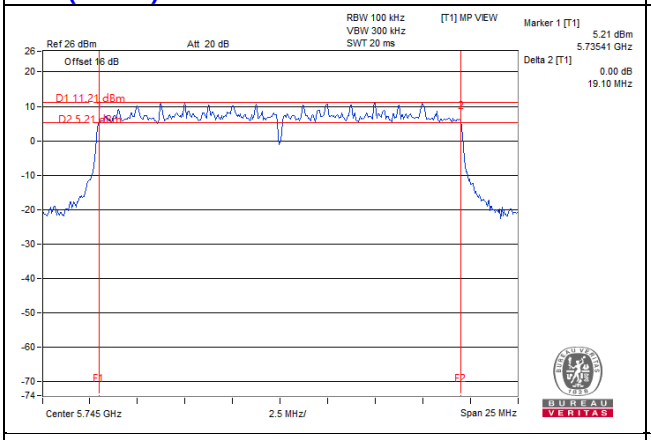


11ax (20MHz) CH165 Ant2

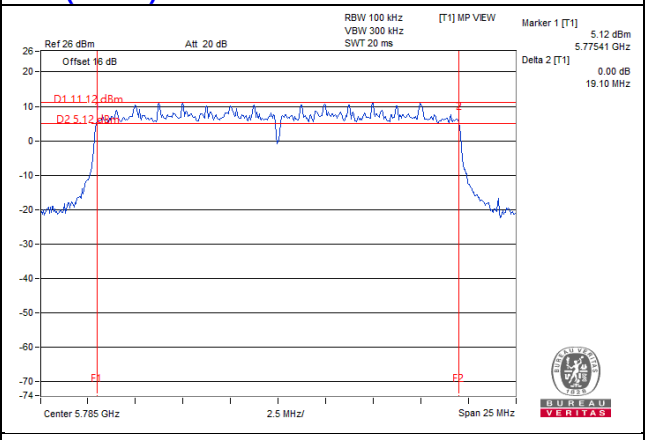


6dB BANDWIDTH SPECTRUM PLOT

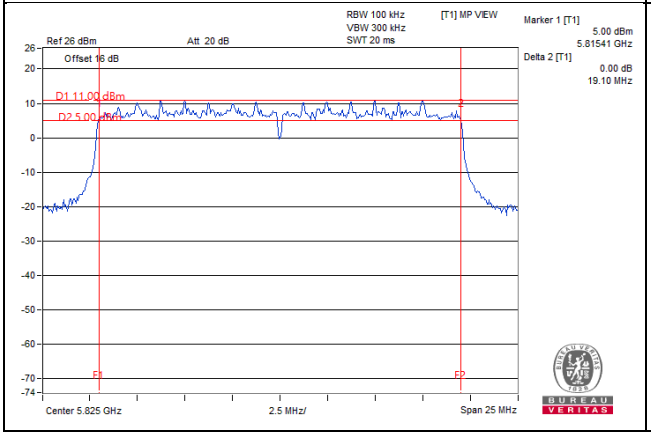
11ax (20MHz) CH149 Ant3



11ax (20MHz) CH157 Ant3

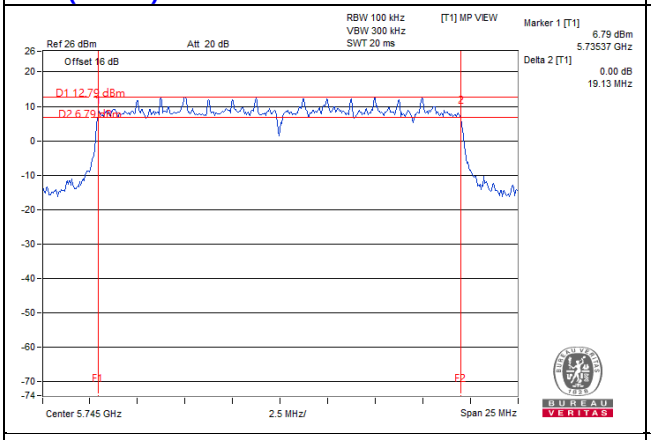


11ax (20MHz) CH165 Ant3

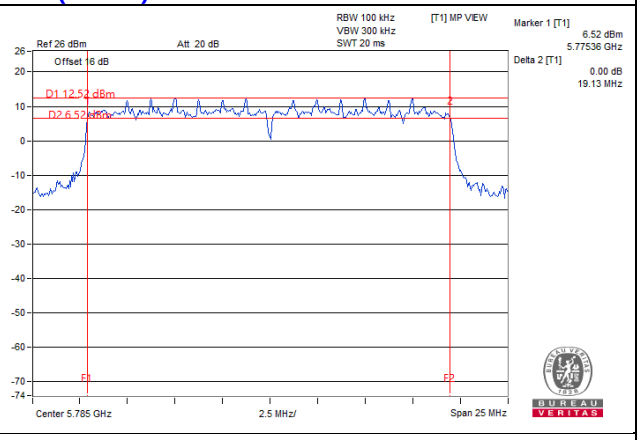


6dB BANDWIDTH SPECTRUM PLOT

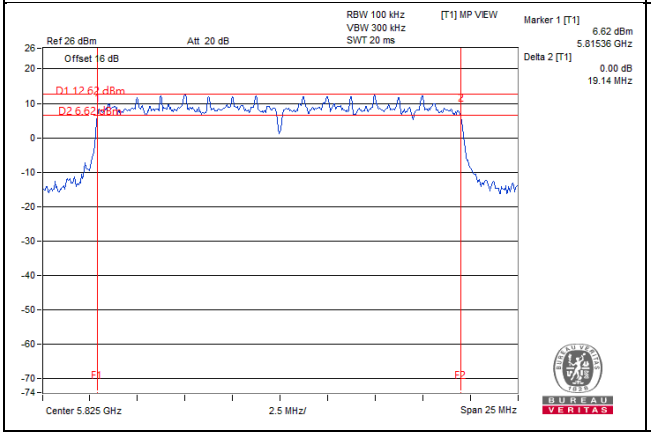
11ax (20MHz) CH149 Ant4



11ax (20MHz) CH157 Ant4

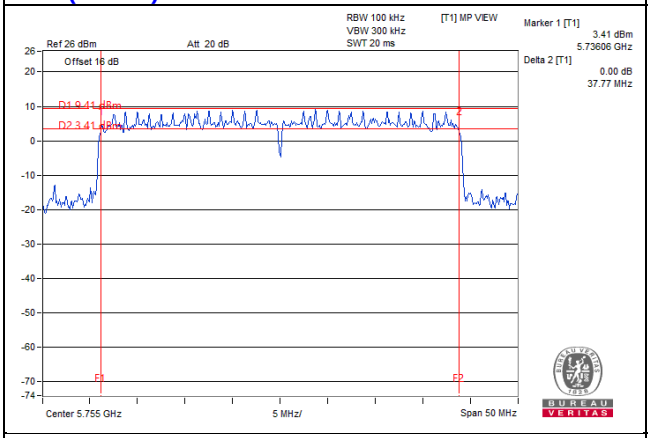


11ax (20MHz) CH165 Ant4

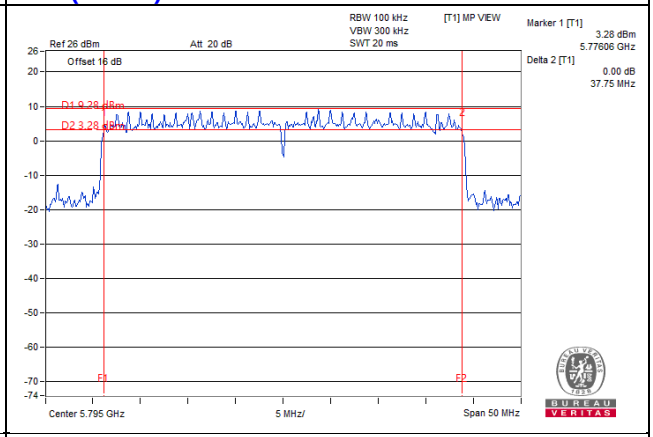


6dB BANDWIDTH SPECTRUM PLOT

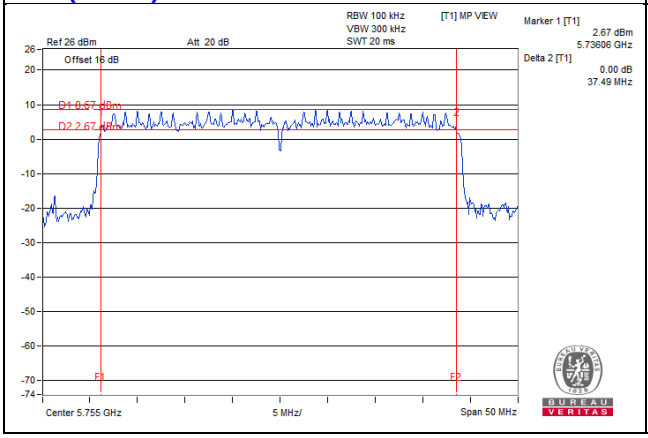
11ax (40MHz) CH151 Ant1



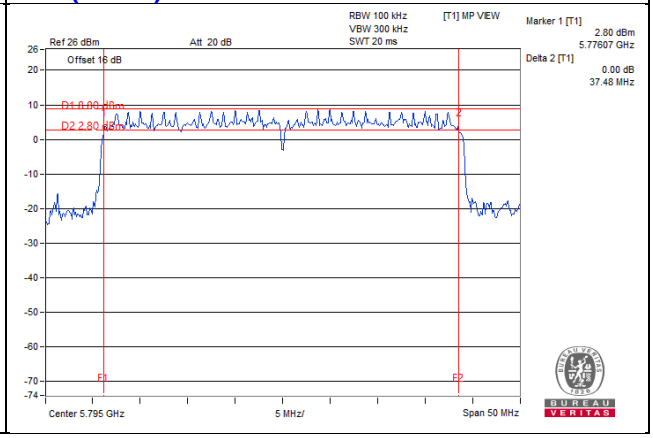
11ax (40MHz) CH159 Ant1



11ax (40MHz) CH151 Ant2

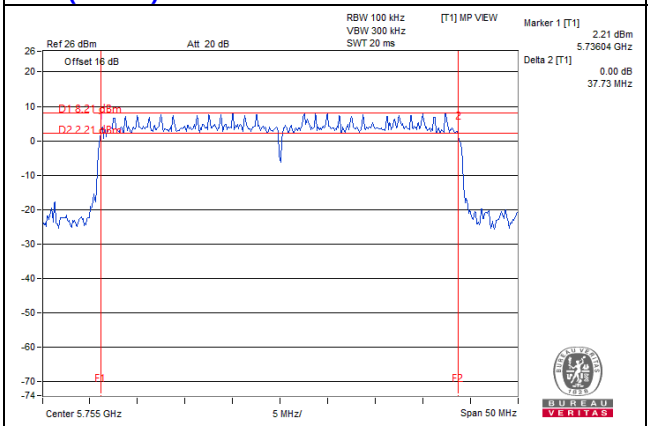


11ax (40MHz) CH159 Ant2

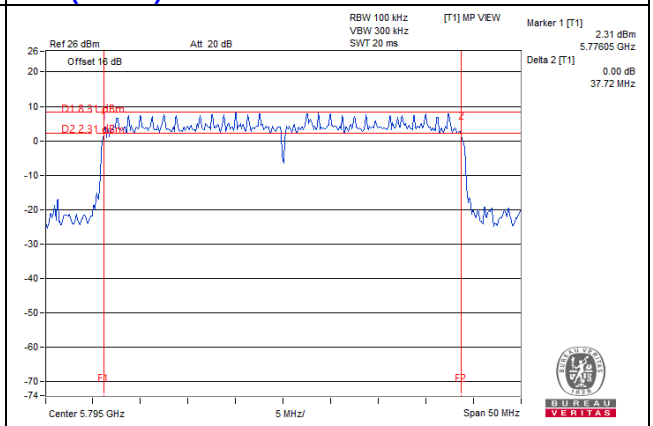


6dB BANDWIDTH SPECTRUM PLOT

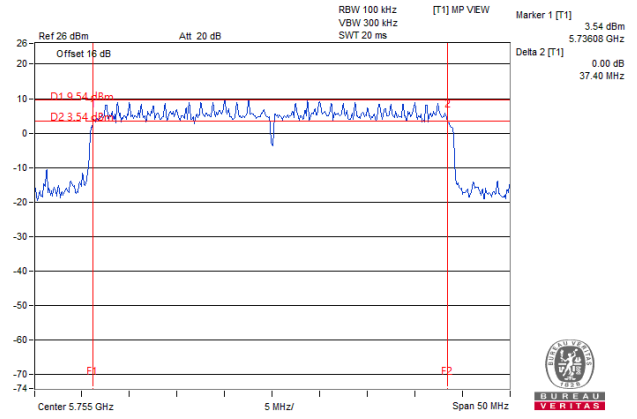
11ax (40MHz) CH151 Ant3



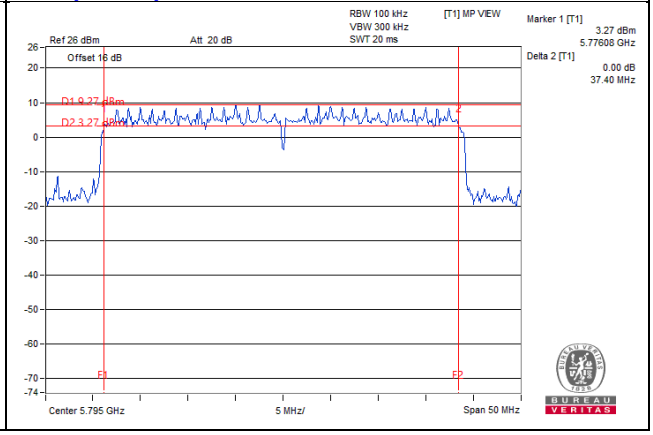
11ax (40MHz) CH159 Ant3



11ax (40MHz) CH151 Ant4

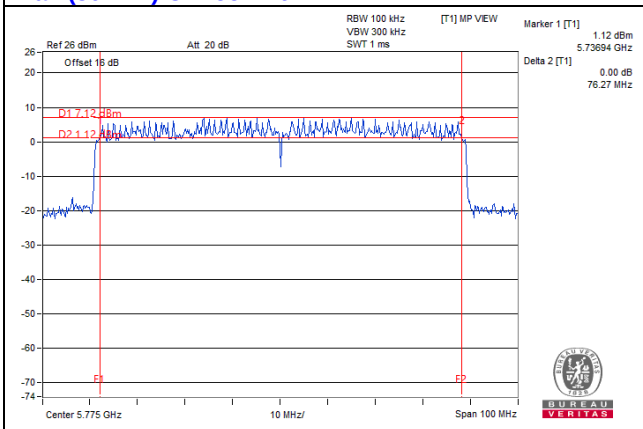


11ax (40MHz) CH159 Ant4

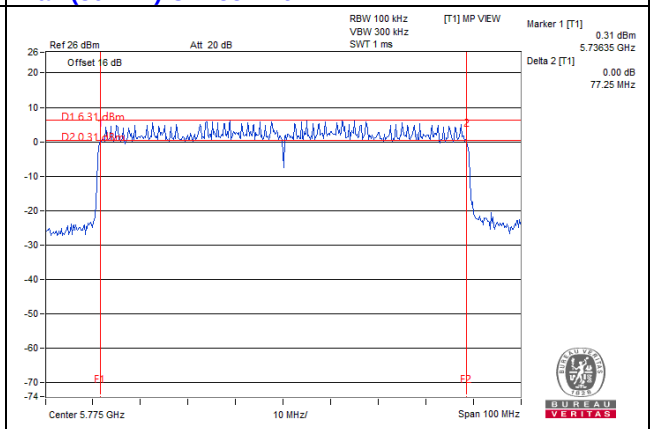


6dB BANDWIDTH SPECTRUM PLOT

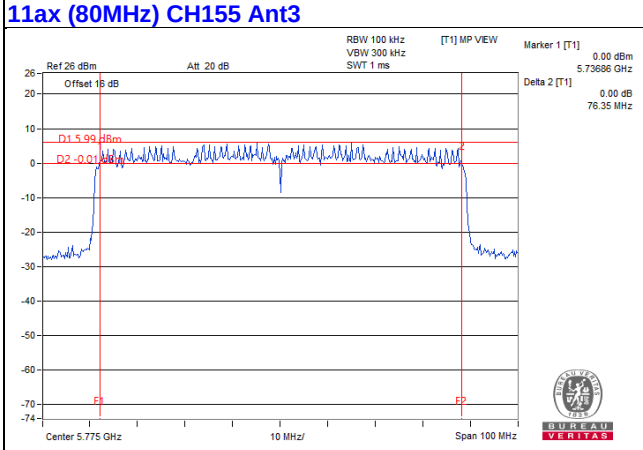
11ax (80MHz) CH155 Ant1



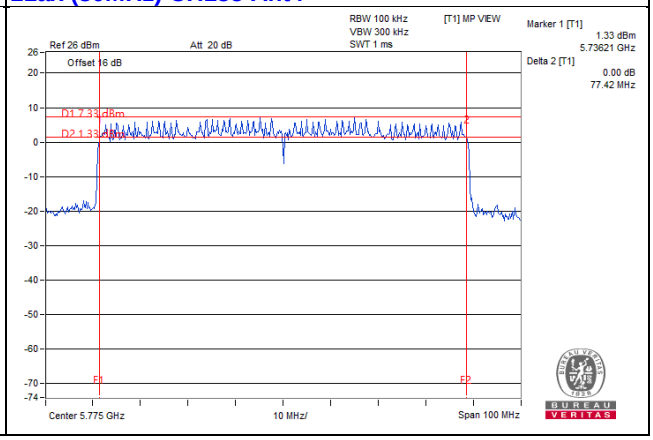
11ax (80MHz) CH155 Ant2



11ax (80MHz) CH155 Ant3



11ax (80MHz) CH155 Ant4



4.4 Maximum Conducted Output Power Measurement

4.4.1 Limit

Operation Band	EUT Category		Limit
U-NII-1		Outdoor Access Point	1 Watt (30 dBm) (Max. e.i.r.p ≦ 125mW(21 dBm) at any elevation angle above 30 degrees as measured from the horizon)
		Fixed point-to-point Access Point	1 Watt (30 dBm)
	√	Indoor Access Point	1 Watt (30 dBm)
		Mobile and Portable client device	250mW (24 dBm)
U-NII-2A			250mW (24 dBm) or 11 dBm+10 log B*
U-NII-2C			250mW (24 dBm) or 11 dBm+10 log B*
U-NII-3	√		1 Watt (30 dBm)

*B is the 26 dB emission bandwidth in megahertz

Per KDB 662911 Method of conducted output power measurement on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT};
Array Gain = 5 log(N_{ANT}/N_{SS}) dB or 3 dB, whichever is less for 20-MHz channel widths with $N_{ANT} \geq 5$.

For power measurements on all other devices: Array Gain = 10 log(N_{ANT}/N_{SS}) dB.

4.4.2 Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of the power meter.

Power Meter Parameter	**Setting**
Filter No.	Auto
Measurement time	8ns
Power Sensor	MA2411B

4.4.3 Test Procedures

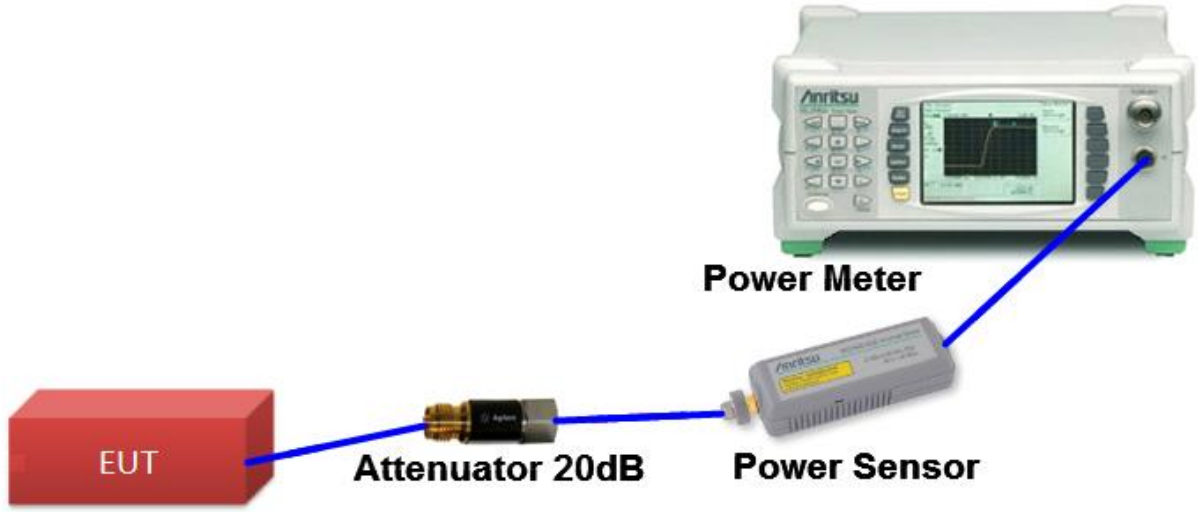
1 Test was performed in accordance with Measurement of Digital Transmission Systems Operating under 789033 D02 General U-NII Test Procedures New Rules v02r01, in section “Maximum conducted output power Method (3)” , 12/14/2017

2 The average power sensor was used on the output port of the EUT. A power meter was used to read the response of the average power sensor and enable the trigger function to get the all on time transmission. Record the average power level.

3 When measuring maximum conducted output power with multiple antenna systems, add every result of the values by mathematic formula.

4.4.4 Test Setup Layout

Setup



4.4.5 Test Deviation

There are no deviations with the original standard.

4.4.6 EUT Operating Conditions

The EUT was programmed to be in continuously transmitting mode.

4.4.7 Test Results of Maximum Conducted Output Power

Temperature	25°C	Humidity	60%
Test Engineer	Jyunchun Lin		

1S4T CDD

11ax (20MHz)

Channel	Frequency (MHz)	Conducted Power (dBm)				Total Conducted Power (dBm)	Directional Gain(dBi)	MAX. Limit (dBm)	Result
		Ant1	Ant2	Ant3	Ant4				
36	5180	21.68	21.74	21.17	21.77	27.62	2.85	30.00	PASS
40	5200	23.86	23.87	23.12	23.89	29.72	2.53	30.00	PASS
48	5240	23.85	23.76	23.14	23.92	29.70	2.64	30.00	PASS
149	5745	23.97	23.48	23.06	24.23	29.73	3.2	30.00	PASS
157	5785	23.83	23.51	23.13	24.26	29.72	4.05	30.00	PASS
165	5825	23.59	23.62	23.22	24.28	29.72	3.78	30.00	PASS

11ax (40MHz)

Channel	Frequency (MHz)	Conducted Power (dBm)				Total Conducted Power (dBm)	Directional Gain(dBi)	MAX. Limit (dBm)	Result
		Ant1	Ant2	Ant3	Ant4				
38	5190	19.52	18.81	18.61	19.50	25.15	2.83	30.00	PASS
46	5230	24.03	23.15	23.10	24.03	29.62	2.5	30.00	PASS
151	5755	23.88	23.57	22.83	24.09	29.64	4.18	30.00	PASS
159	5795	24.00	23.34	22.94	23.94	29.60	2.94	30.00	PASS

11ax (80MHz)

Channel	Frequency (MHz)	Conducted Power (dBm)				Total Conducted Power (dBm)	Directional Gain(dBi)	MAX. Limit (dBm)	Result
		Ant1	Ant2	Ant3	Ant4				
42	5210	18.39	17.77	17.79	18.43	24.13	2.64	30.00	PASS
155	5775	23.98	23.62	22.69	24.07	29.64	3.62	30.00	PASS

1S4T TxBF

11ax (20MHz)

Channel	Frequency (MHz)	Conducted Power (dBm)				Total Conducted Power (dBm)	Directional Gain(dBi)	MAX. Limit (dBm)	Result
		Ant1	Ant2	Ant3	Ant4				
36	5180	21.62	21.71	21.11	21.87	27.61	6.07	29.93	PASS
40	5200	23.81	23.78	23.03	23.83	29.65	6.12	29.88	PASS
48	5240	23.90	23.68	23.02	23.87	29.65	5.83	30.00	PASS
149	5745	23.92	23.38	23.06	24.16	29.67	5.91	30.00	PASS
157	5785	23.81	23.49	23.08	24.22	29.69	5.96	30.00	PASS
165	5825	23.52	23.53	23.15	24.32	29.67	5.83	30.00	PASS

Note:
1. For 5180MHz: Directional gain = 6.07dBi > 6dBi, so the power limit shall be reduced to 30-(6.07-6) = 29.93dBm.
2. For 5200MHz: Directional gain = 6.12dBi > 6dBi, so the power limit shall be reduced to 30-(6.12-6) = 29.88dBm.
3. For 5240MHz: Directional gain = 5.83dBi < 6dBi, so the power limit shall not be reduced.
4. For 5745MHz: Directional gain = 5.91dBi < 6dBi, so the power limit shall not be reduced.
5. For 5785MHz: Directional gain = 5.96dBi < 6dBi, so the power limit shall not be reduced.
6. For 5825MHz: Directional gain = 5.83dBi < 6dBi, so the power limit shall not be reduced.

11ax (40MHz)

Channel	Frequency (MHz)	Conducted Power (dBm)				Total Conducted Power (dBm)	Directional Gain(dBi)	MAX. Limit (dBm)	Result
		Ant1	Ant2	Ant3	Ant4				
38	5190	18.46	17.58	18.35	18.21	24.18	6.03	29.97	PASS
46	5230	24.25	23.14	23.08	23.86	29.63	6.08	29.92	PASS
151	5755	22.90	22.56	21.87	23.08	28.65	7.26	28.74	PASS
159	5795	23.98	23.31	22.99	24.05	29.63	6	30.00	PASS

Note:
1. For 5190MHz: Directional gain = 6.03dBi > 6dBi, so the power limit shall be reduced to 30-(6.03-6) = 29.97dBm.
2. For 5230MHz: Directional gain = 6.08dBi > 6dBi, so the power limit shall be reduced to 30-(6.08-6) = 29.92dBm.
3. For 5755MHz: Directional gain = 7.26dBi > 6dBi, so the power limit shall be reduced to 30-(7.26-6) = 28.74dBm.
4. For 5795MHz: Directional gain = 6dBi, so the power limit shall not be reduced.

11ax (80MHz)

Channel	Frequency (MHz)	Conducted Power (dBm)				Total Conducted Power (dBm)	Directional Gain(dBi)	MAX. Limit (dBm)	Result
		Ant1	Ant2	Ant3	Ant4				
42	5210	18.41	17.72	17.75	18.27	24.07	5.83	30.00	PASS
155	5775	23.45	23.14	22.22	23.42	29.11	6.39	29.61	PASS

Note:
1. For 5210MHz: Directional gain = 5.83dBi < 6dBi, so the power limit shall not be reduced.
2. For 5775MHz: Directional gain = 6.39dBi > 6dBi, so the power limit shall be reduced to 30-(6.39-6) = 29.61dBm.

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11ax (20MHz)

Channel	Frequency (MHz)	Conducted Power (dBm)				Total Conducted Power (dBm)	Directional Gain(dBi)	MAX. Limit (dBm)	Result
		Ant1	Ant2	Ant3	Ant4				
36	5180	22.08	22.18	21.59	22.35	28.08	4.44	30.00	PASS
40	5200	23.78	23.69	23.06	23.81	29.62	4.66	30.00	PASS
48	5240	23.92	23.59	22.99	23.87	29.63	4.36	30.00	PASS
149	5745	23.80	23.47	23.11	24.20	29.68	4.27	30.00	PASS
157	5785	23.85	23.52	23.09	24.23	29.71	4.4	30.00	PASS
165	5825	23.48	23.55	23.13	24.21	29.63	4.58	30.00	PASS

Note:
1. For 5180MHz: Directional gain = 4.44dBi < 6dBi, so the power limit shall not be reduced.
2. For 5200MHz: Directional gain = 4.66dBi < 6dBi, so the power limit shall not be reduced.
3. For 5240MHz: Directional gain = 4.36dBi < 6dBi, so the power limit shall not be reduced.
4. For 5745MHz: Directional gain = 4.27dBi < 6dBi, so the power limit shall not be reduced.
5. For 5785MHz: Directional gain = 4.4dBi < 6dBi, so the power limit shall not be reduced.
6. For 5825MHz: Directional gain = 4.58dBi < 6dBi, so the power limit shall not be reduced.

11ax (40MHz)

Channel	Frequency (MHz)	Conducted Power (dBm)				Total Conducted Power (dBm)	Directional Gain(dBi)	MAX. Limit (dBm)	Result
		Ant1	Ant2	Ant3	Ant4				
38	5190	16.87	16.11	16.81	16.75	22.67	4.6	30.00	PASS
46	5230	23.95	22.96	22.85	23.67	29.40	4.63	30.00	PASS
151	5755	23.85	23.55	22.85	23.86	29.57	5.7	30.00	PASS
159	5795	23.85	23.31	22.98	23.88	29.54	4.11	30.00	PASS

Note:
1. For 5190MHz: Directional gain = 4.6dBi < 6dBi, so the power limit shall not be reduced.
2. For 5230MHz: Directional gain = 4.63dBi < 6dBi, so the power limit shall not be reduced.
3. For 5755MHz: Directional gain = 5.7dBi < 6dBi, so the power limit shall not be reduced.
4. For 5795MHz: Directional gain = 4.11dBi < 6dBi, so the power limit shall not be reduced.

11ax (80MHz)

Channel	Frequency (MHz)	Conducted Power (dBm)				Total Conducted Power (dBm)	Directional Gain(dBi)	MAX. Limit (dBm)	Result
		Ant1	Ant2	Ant3	Ant4				
42	5210	16.15	15.44	15.52	15.99	21.81	4.36	30.00	PASS
155	5775	24.07	23.52	22.71	23.78	29.57	4.87	30.00	PASS

Note:
1. For 5210MHz: Directional gain = 4.36dBi < 6dBi, so the power limit shall not be reduced.
2. For 5775MHz: Directional gain = 4.87dBi < 6dBi, so the power limit shall not be reduced.

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11ax (20MHz)

Channel	Frequency (MHz)	Conducted Power (dBm)				Total Conducted Power (dBm)	Directional Gain(dBi)	MAX. Limit (dBm)	Result
		Ant1	Ant2	Ant3	Ant4				
36	5180	21.58	21.75	21.08	21.77	27.57	2.51	30.00	PASS
40	5200	23.82	23.78	23.07	23.83	29.66	2.39	30.00	PASS
48	5240	23.98	23.62	23.08	23.81	29.66	2.25	30.00	PASS
149	5745	23.86	23.40	23.20	24.27	29.72	2.51	30.00	PASS
157	5785	23.91	23.50	23.16	24.22	29.74	2.5	30.00	PASS
165	5825	23.52	23.58	23.18	24.29	29.68	2.38	30.00	PASS

Note:
1. For 5180MHz: Directional gain = 2.51dBi < 6dBi, so the power limit shall not be reduced.
2. For 5200MHz: Directional gain = 2.39dBi < 6dBi, so the power limit shall not be reduced.
3. For 5240MHz: Directional gain = 2.25dBi < 6dBi, so the power limit shall not be reduced.
4. For 5745MHz: Directional gain = 2.51dBi < 6dBi, so the power limit shall not be reduced.
5. For 5785MHz: Directional gain = 2.5dBi < 6dBi, so the power limit shall not be reduced.
6. For 5825MHz: Directional gain = 2.38dBi < 6dBi, so the power limit shall not be reduced.

11ax (40MHz)

Channel	Frequency (MHz)	Conducted Power (dBm)				Total Conducted Power (dBm)	Directional Gain(dBi)	MAX. Limit (dBm)	Result
		Ant1	Ant2	Ant3	Ant4				
38	5190	17.63	16.81	17.58	17.37	23.38	2.83	30.00	PASS
46	5230	24.00	23.02	22.88	23.74	29.46	2.5	30.00	PASS
151	5755	23.84	23.48	22.92	23.97	29.59	4.18	30.00	PASS
159	5795	23.96	23.25	23.01	23.95	29.58	2.94	30.00	PASS

Note:
1. For 5190MHz: Directional gain = 2.83dBi < 6dBi, so the power limit shall not be reduced.
2. For 5230MHz: Directional gain = 2.5dBi < 6dBi, so the power limit shall not be reduced.
3. For 5755MHz: Directional gain = 4.18dBi < 6dBi, so the power limit shall not be reduced.
4. For 5795MHz: Directional gain = 2.94dBi < 6dBi, so the power limit shall not be reduced.

11ax (80MHz)

Channel	Frequency (MHz)	Conducted Power (dBm)				Total Conducted Power (dBm)	Directional Gain(dBi)	MAX. Limit (dBm)	Result
		Ant1	Ant2	Ant3	Ant4				
42	5210	16.94	16.21	16.28	16.83	22.60	2.25	30.00	PASS
155	5775	24.06	23.52	22.83	23.94	29.63	2.65	30.00	PASS

Note:
1. For 5210MHz: Directional gain = 2.25dBi < 6dBi, so the power limit shall not be reduced.
2. For 5775MHz: Directional gain = 2.65dBi < 6dBi, so the power limit shall not be reduced.

4.5 Power Spectral Density Measurement

4.5.1 Limit

Operation Band	EUT Category		Limit
U-NII-1		Outdoor Access Point	17dBm/ MHz
		Fixed point-to-point Access Point	
	√	Indoor Access Point	
		Mobile and Portable client device	11dBm/ MHz
U-NII-2A			11dBm/ MHz
U-NII-2C			11dBm/ MHz
U-NII-3	√		30dBm/ 500kHz (27.78 dBm/300kHz)

Note: 27.78dBm/300kHz= 30dBm/500kHz-10log $\left(\frac{500\,kHz}{300\,kHz}\right)$

4.5.2 Measuring Instruments and Setting

Please refer to section 5 of equipments list in this report. The following table is the setting of the spectrum analyzer.

Spectrum Parameter Setting	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RBW	1 MHz
VBW	≥ 3 MHz
Detector	RMS
Trace	Average
Sweep Time	Auto, trigger set to “free run”
Trace average	100 times

For U-NII-3 band:

Spectrum Parameter Setting	Setting
Attenuation	Auto
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal
RBW	300kHz
VBW	≥ 3 RBW
Detector	RMS
Trace	Average
Sweep Time	Auto, trigger set to “free run”
Trace average	100 times

4.5.3 Test Procedure

1 The transmitter output (antenna port) was connected RF switch to the spectrum analyzer.

2 For U-NII-1, U-NII-2A & U-NII-2C Bands, PSD Measure was performed in accordance with 789033 D02 General U-NII Test Procedures New Rules v02r01, in section “Maximum conducted output power (E)(2)(d) Method SA-2”, 12/14/2017.

3 For U-NII-3 Band, PSD Measure was performed in accordance with 789033 D02 General U-NII Test Procedures New Rules v02r01, in section “Maximum Power Spectral Density (F)(5)” , 12/14/2017

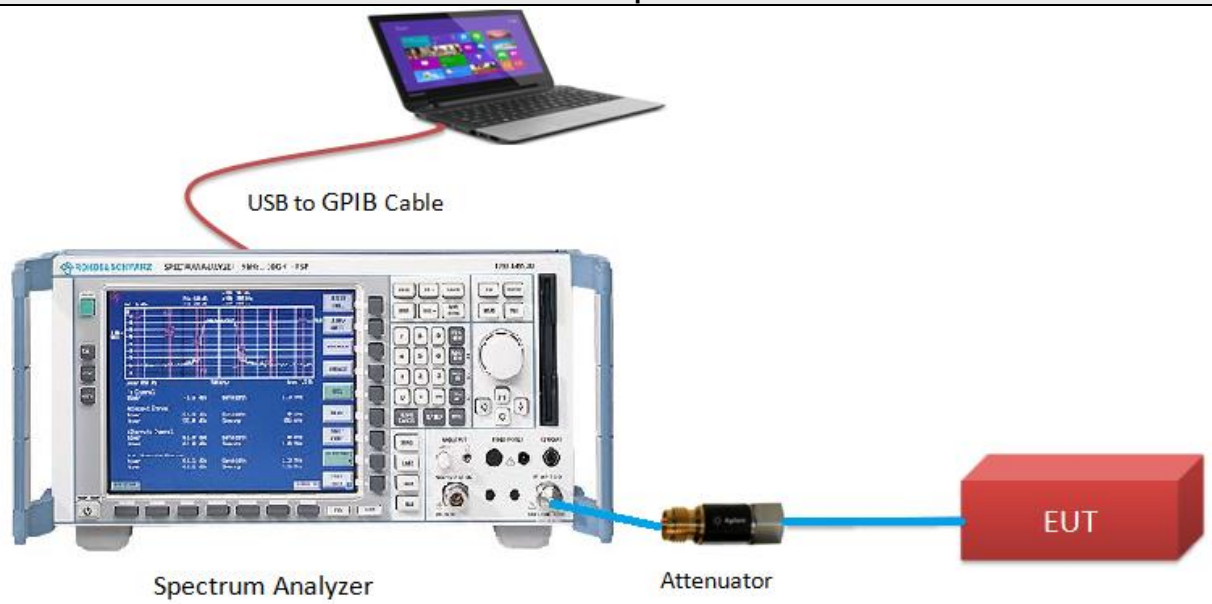
4 Multiple antenna systems was performed in accordance 662911 D01 Multiple Transmitter Output v02r01 in-Band Power Spectral Density (PSD) Measurements (a) Measure and sum the spectra across the outputs (bin-by-bin summing).

5 When measuring first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3 and so on up to the Nth output to obtain the value for the first frequency bin of the summed spectrum.

6 The summed spectrum value for each of the other frequency bins is computed in the same way.

4.5.4 Test Setup Layout

Setup



4.5.5 Test Deviation

There are no deviations with the original standard.

4.5.6 EUT Operating Conditions

The EUT was programmed to be in continuously transmitting mode.

4.5.7 Test Results

Temperature	25°C	Humidity	60%
Test Engineer	Jyunchun Lin		

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11ax (20MHz)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)	Duty Factor (dB)	Total PSD with duty factor (dBm/MHz)	Directional Gain(dBi)	MAX. Limit (dBm/MHz)	Result
36	5180	13.21	0.1	13.31	6.07	16.93	Pass
40	5200	15.33	0.1	15.43	6.12	16.88	Pass
48	5240	15.48	0.1	15.58	5.83	17.00	Pass

Note:
1. Total PSD (dBm/MHz) = PSD(dBm/MHz) + Duty Factor (dB)
2. For 5180MHz: Directional gain = 6.07dBi > 6dBi, therefore the limit shall be reduced to 17-(6.07-6) = 16.93dBm.
3. For 5200MHz: Directional gain = 6.12dBi > 6dBi, therefore the limit shall be reduced to 17-(6.12-6) = 16.88dBm.
4. For 5240MHz: Directional gain = 5.83dBi < 6dBi, so the power density limit shall not be reduced.

Chan.	Chan. Freq. (MHz)	Total PSD (dBm/ 300kHz)	Duty Factor (dB)	Total PSD with Duty Factor (dBm/300kHz)	Total PSD with Duty Factor (dBm/500kHz)	Directional Gain(dBi)	MAX. Limit (dBm/500kHz)	Result
149	5745	6.19	0.1	6.29	8.51	6.39	29.61	Pass
157	5785	6.14	0.1	6.24	8.46	5.96	30.00	Pass
165	5825	6.02	0.1	6.12	8.34	5.83	30.00	Pass

Note:
1. Total PSD (dBm/500kHz) = PSD(dBm/300kHz) + 2.22dB+ Duty Factor (dB)
2. For 5745MHz: Directional gain = 6.39dBi > 6dBi, therefore the limit shall be reduced to 30-(6.39-6) = 29.61dBm.
3. For 5785MHz: Directional gain = 5.96dBi < 6dBi, so the power density limit shall not be reduced.
4. For 5825MHz: Directional gain = 5.83dBi < 6dBi, so the power density limit shall not be reduced.

11ax (40MHz)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)	Duty Factor (dB)	Total PSD with duty factor (dBm/MHz)	Directional Gain(dBi)	MAX. Limit (dBm/MHz)	Result
38	5190	8.86	0	8.86	6.03	16.97	Pass
46	5230	12.83	0	12.83	6.08	16.92	Pass

Note:
1. Total PSD (dBm/MHz) = PSD(dBm/MHz) + Duty Factor (dB)
2. For 5190MHz: Directional gain = 6.03dBi > 6dBi, therefore the limit shall be reduced to 17-(6.03-6) = 16.97dBm.
3. For 5230MHz: Directional gain = 6.08dBi > 6dBi, therefore the limit shall be reduced to 17-(6.08-6) = 16.92dBm.

Chan.	Chan. Freq. (MHz)	Total PSD (dBm/ 300kHz)	Duty Factor (dB)	Total PSD with Duty Factor (dBm/300kHz)	Total PSD with Duty Factor (dBm/500kHz)	Directional Gain(dBi)	MAX. Limit (dBm/500kHz)	Result
151	5755	3.08	0	3.08	5.30	7.26	28.74	Pass
159	5795	3.29	0	3.29	5.51	6.00	30.00	Pass

Note:
1. Total PSD (dBm/500kHz) = PSD(dBm/300kHz) + 2.22dB+ Duty Factor (dB)
2. For 5755MHz: Directional gain = 7.26dBi > 6dBi, therefore the limit shall be reduced to 30-(7.26-6) = 28.74dBm.
3. For 5795MHz: Directional gain = 5.96dBi < 6dBi, so the power density limit shall not be reduced.

11ax (80MHz)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)	Duty Factor (dB)	Total PSD with duty factor (dBm/MHz)	Directional Gain(dBi)	MAX. Limit (dBm/MHz)	Result
42	5210	4.8	0.24	5.04	5.83	17.00	Pass

Note: 1. Total PSD (dBm/MHz) = PSD(dBm/MHz) + Duty Factor (dB)

2. Directional gain = 5.83dBi < 6dBi, so the power density limit shall not be reduced.

Chan.	Chan. Freq. (MHz)	Total PSD (dBm/ 300kHz)	Duty Factor (dB)	Total PSD with Duty Factor (dBm/300kHz)	Total PSD with Duty Factor (dBm/500kHz)	Directional Gain(dBi)	MAX. Limit (dBm/500kHz)	Result
155	5775	0.13	0.24	0.37	2.59	6.39	29.61	Pass

Note: 1. Total PSD (dBm/500kHz) = PSD(dBm/300kHz) + 2.22dB+ Duty Factor (dB)

2. Directional gain = 6.39dBi > 6dBi, therefore the limit shall be reduced to 30-(6.39-6) = 29.61dBm.

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11ax (20MHz)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)	Duty Factor (dB)	Total PSD with duty factor (dBm/MHz)	Directional Gain(dBi)	MAX. Limit (dBm/MHz)	Result
36	5180	13.70	0	13.70	6.07	16.93	Pass
40	5200	15.84	0	15.84	6.12	16.88	Pass
48	5240	15.86	0	15.86	5.83	17.00	Pass

Note:
1. Total PSD (dBm/MHz) = PSD(dBm/MHz) + Duty Factor (dB)
2. For 5180MHz: Directional gain = 6.07dBi > 6dBi, therefore the limit shall be reduced to 17-(6.07-6) = 16.93dBm.
3. For 5200MHz: Directional gain = 6.12dBi > 6dBi, therefore the limit shall be reduced to 17-(6.12-6) = 16.88dBm.
4. For 5240MHz: Directional gain = 5.83dBi < 6dBi, so the power density limit shall not be reduced.

Chan.	Chan. Freq. (MHz)	Total PSD (dBm/ 300kHz)	Duty Factor (dB)	Total PSD with Duty Factor (dBm/300kHz)	Total PSD with Duty Factor (dBm/500kHz)	Directional Gain(dBi)	MAX. Limit (dBm/500kHz)	Result
149	5745	6.40	0	6.40	8.62	5.91	30.00	Pass
157	5785	6.31	0	6.31	8.53	5.96	30.00	Pass
165	5825	6.22	0	6.22	8.44	5.83	30.00	Pass

Note:
1. Total PSD (dBm/500kHz) = PSD(dBm/300kHz) + 2.22dB+ Duty Factor (dB)
2. For 5745MHz: Directional gain = 5.91dBi < 6dBi, so the power density limit shall not be reduced.
3. For 5785MHz: Directional gain = 5.96dBi < 6dBi, so the power density limit shall not be reduced.
4. For 5825MHz: Directional gain = 5.83dBi < 6dBi, so the power density limit shall not be reduced.

11ax (40MHz)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)	Duty Factor (dB)	Total PSD with duty factor (dBm/MHz)	Directional Gain(dBi)	MAX. Limit (dBm/MHz)	Result
38	5190	7.18	0	7.18	6.03	16.97	Pass
46	5230	13.34	0	13.34	6.08	16.92	Pass

Note:
1. Total PSD (dBm/MHz) = PSD(dBm/MHz) + Duty Factor (dB)
2. For 5190MHz: Directional gain = 6.03dBi > 6dBi, therefore the limit shall be reduced to 17-(6.03-6) = 16.97dBm.
3. For 5230MHz: Directional gain = 6.08dBi > 6dBi, therefore the limit shall be reduced to 17-(6.08-6) = 16.92dBm.

Chan.	Chan. Freq. (MHz)	Total PSD (dBm/ 300kHz)	Duty Factor (dB)	Total PSD with Duty Factor (dBm/300kHz)	Total PSD with Duty Factor (dBm/500kHz)	Directional Gain(dBi)	MAX. Limit (dBm/500kHz)	Result
151	5755	2.96	0	2.96	5.18	7.26	28.74	Pass
159	5795	3.47	0	3.47	5.69	6.00	30.00	Pass

Note:
1. Total PSD (dBm/500kHz) = PSD(dBm/300kHz) + 2.22dB+ Duty Factor (dB)
2. For 5755MHz: Directional gain = 7.26dBi > 6dBi, therefore the limit shall be reduced to 30-(7.26-6) = 28.74dBm.
3. For 5795MHz: Directional gain = 6dBi, so the power density limit shall not be reduced.

11ax (80MHz)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)	Duty Factor (dB)	Total PSD with duty factor (dBm/MHz)	Directional Gain(dBi)	MAX. Limit (dBm/MHz)	Result
42	5210	4.65	0.25	4.90	5.83	17.00	Pass

Note: 1. Total PSD (dBm/MHz) = PSD(dBm/MHz) + Duty Factor (dB)

2. Directional gain = 5.83dBi < 6dBi, so the power density limit shall not be reduced.

Chan.	Chan. Freq. (MHz)	Total PSD (dBm/ 300kHz)	Duty Factor (dB)	Total PSD with Duty Factor (dBm/300kHz)	Total PSD with Duty Factor (dBm/500kHz)	Directional Gain(dBi)	MAX. Limit (dBm/500kHz)	Result
155	5775	-0.12	0.25	0.13	2.35	6.39	29.61	Pass

Note: 1. Total PSD (dBm/500kHz) = PSD(dBm/300kHz) + 2.22dB+ Duty Factor (dB)

2. Directional gain = 6.39dBi > 6dBi, therefore the limit shall be reduced to 30-(6.39-6) = 29.61dBm.

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11ax (20MHz)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)	Duty Factor (dB)	Total PSD with duty factor (dBm/MHz)	Directional Gain(dBi)	MAX. Limit (dBm/MHz)	Result
36	5180	13.68	0.19	13.87	4.44	17.00	Pass
40	5200	15.34	0.19	15.53	4.66	17.00	Pass
48	5240	15.40	0.19	15.59	4.36	17.00	Pass

Note: 1. Total PSD (dBm/MHz) = PSD(dBm/MHz) + Duty Factor (dB)

2. For 5180MHz: Directional gain = 4.44dBi < 6dBi, so the power density limit shall not be reduced.

3. For 5200MHz: Directional gain = 4.66dBi < 6dBi, so the power density limit shall not be reduced.

4. For 5240MHz: Directional gain = 4.36dBi < 6dBi, so the power density limit shall not be reduced.

Chan.	Chan. Freq. (MHz)	Total PSD (dBm/ 300kHz)	Duty Factor (dB)	Total PSD with Duty Factor (dBm/300kHz)	Total PSD with Duty Factor (dBm/500kHz)	Directional Gain(dBi)	MAX. Limit (dBm/500kHz)	Result
149	5745	6.21	0.19	6.40	8.62	4.27	30.00	Pass
157	5785	6.10	0.19	6.29	8.51	4.40	30.00	Pass
165	5825	6.04	0.19	6.23	8.45	4.58	30.00	Pass

Note: 1. Total PSD (dBm/500kHz) = PSD(dBm/300kHz) + 2.22dB+ Duty Factor (dB)

2. For 5745MHz: Directional gain = 4.27dBi < 6dBi, so the power density limit shall not be reduced.

3. For 5785MHz: Directional gain = 4.40dBi < 6dBi, so the power density limit shall not be reduced.

4. For 5825MHz: Directional gain = 4.58dBi < 6dBi, so the power density limit shall not be reduced.

11ax (40MHz)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)	Duty Factor (dB)	Total PSD with duty factor (dBm/MHz)	Directional Gain(dBi)	MAX. Limit (dBm/MHz)	Result
38	5190	5.88	0.23	6.11	4.60	17.00	Pass
46	5230	12.58	0.23	12.82	4.63	17.00	Pass

Note: 1. Total PSD (dBm/MHz) = PSD(dBm/MHz) + Duty Factor (dB)

2. For 5190MHz: Directional gain = 4.60dBi < 6dBi, so the power density limit shall not be reduced.

3. For 5230MHz: Directional gain = 4.63dBi < 6dBi, so the power density limit shall not be reduced.

Chan.	Chan. Freq. (MHz)	Total PSD (dBm/ 300kHz)	Duty Factor (dB)	Total PSD with Duty Factor (dBm/300kHz)	Total PSD with Duty Factor (dBm/500kHz)	Directional Gain(dBi)	MAX. Limit (dBm/500kHz)	Result
151	5755	3.19	0.23	3.42	5.64	5.70	30.00	Pass
159	5795	3.08	0.23	3.31	5.53	5.11	30.00	Pass

Note: 1. Total PSD (dBm/500kHz) = PSD(dBm/300kHz) + 2.22dB+ Duty Factor (dB)

2. For 5755MHz: Directional gain = 5.70dBi < 6dBi, so the power density limit shall not be reduced.

3. For 5795MHz: Directional gain = 5.11dBi < 6dBi, so the power density limit shall not be reduced.

11ax (80MHz)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)	Duty Factor (dB)	Total PSD with duty factor (dBm/MHz)	Directional Gain(dBi)	MAX. Limit (dBm/MHz)	Result
42	5210	2.14	0.38	2.52	4.36	17.00	Pass

Note: 1. Total PSD (dBm/MHz) = PSD(dBm/MHz) + Duty Factor (dB)

2. Directional gain = 4.36dBi < 6dBi, so the power density limit shall not be reduced.

Chan.	Chan. Freq. (MHz)	Total PSD (dBm/ 300kHz)	Duty Factor (dB)	Total PSD with Duty Factor (dBm/300kHz)	Total PSD with Duty Factor (dBm/500kHz)	Directional Gain(dBi)	MAX. Limit (dBm/500kHz)	Result
155	5775	-0.08	0.38	0.30	2.52	4.87	30.00	Pass

Note: 1. Total PSD (dBm/500kHz) = PSD(dBm/300kHz) + 2.22dB+ Duty Factor (dB)

2. Directional gain = 4.87dBi < 6dBi, so the power density limit shall not be reduced.

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11ax (20MHz)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)	Duty Factor (dB)	Total PSD with duty factor (dBm/MHz)	Directional Gain(dBi)	MAX. Limit (dBm/MHz)	Result
36	5180	13.18	0.24	13.42	2.51	17.00	Pass
40	5200	15.37	0.24	15.61	2.39	17.00	Pass
48	5240	15.42	0.24	15.66	2.25	17.00	Pass

Note: 1. Total PSD (dBm/MHz) = PSD(dBm/MHz) + Duty Factor (dB)

2. For 5180MHz: Directional gain = 2.51dBi < 6dBi, so the power density limit shall not be reduced.

3. For 5200MHz: Directional gain = 2.39dBi < 6dBi, so the power density limit shall not be reduced.

4. For 5240MHz: Directional gain = 2.25dBi < 6dBi, so the power density limit shall not be reduced.

Chan.	Chan. Freq. (MHz)	Total PSD (dBm/ 300kHz)	Duty Factor (dB)	Total PSD with Duty Factor (dBm/300kHz)	Total PSD with Duty Factor (dBm/500kHz)	Directional Gain(dBi)	MAX. Limit (dBm/500kHz)	Result
149	5745	6.41	0.24	6.65	8.87	2.51	30.00	Pass
157	5785	6.36	0.24	6.60	8.82	2.50	30.00	Pass
165	5825	6.30	0.24	6.54	8.76	2.38	30.00	Pass

Note: 1. Total PSD (dBm/500kHz) = PSD(dBm/300kHz) + 2.22dB+ Duty Factor (dB)

2. For 5745MHz: Directional gain = 2.51dBi < 6dBi, so the power density limit shall not be reduced.

3. For 5785MHz: Directional gain = 2.50dBi < 6dBi, so the power density limit shall not be reduced.

4. For 5825MHz: Directional gain = 2.38dBi < 6dBi, so the power density limit shall not be reduced.

11ax (40MHz)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)	Duty Factor (dB)	Total PSD with duty factor (dBm/MHz)	Directional Gain(dBi)	MAX. Limit (dBm/MHz)	Result
38	5190	6.58	0.33	6.91	2.33	17.00	Pass
46	5230	12.48	0.33	12.81	2.51	17.00	Pass

Note: 1. Total PSD (dBm/MHz) = PSD(dBm/MHz) + Duty Factor (dB)

2. For 5190MHz: Directional gain = 2.33dBi < 6dBi, so the power density limit shall not be reduced.

3. For 5230MHz: Directional gain = 2.51dBi < 6dBi, so the power density limit shall not be reduced.

Chan.	Chan. Freq. (MHz)	Total PSD (dBm/ 300kHz)	Duty Factor (dB)	Total PSD with Duty Factor (dBm/300kHz)	Total PSD with Duty Factor (dBm/500kHz)	Directional Gain(dBi)	MAX. Limit (dBm/500kHz)	Result
151	5755	3.28	0.33	3.61	5.83	3.42	30.00	Pass
159	5795	3.24	0.33	3.57	5.79	1.92	30.00	Pass

Note: 1. Total PSD (dBm/500kHz) = PSD(dBm/300kHz) + 2.22dB+ Duty Factor (dB)

2. For 5755MHz: Directional gain = 3.42dBi < 6dBi, so the power density limit shall not be reduced.

3. For 5795MHz: Directional gain = 1.92dBi < 6dBi, so the power density limit shall not be reduced.

11ax (80MHz)

Chan.	Chan. Freq. (MHz)	PSD (dBm/MHz)	Duty Factor (dB)	Total PSD with duty factor (dBm/MHz)	Directional Gain(dBi)	MAX. Limit (dBm/MHz)	Result
42	5210	3.22	0.42	3.64	2.25	17.00	Pass

Note: 1. Total PSD (dBm/MHz) = PSD(dBm/MHz) + Duty Factor (dB)

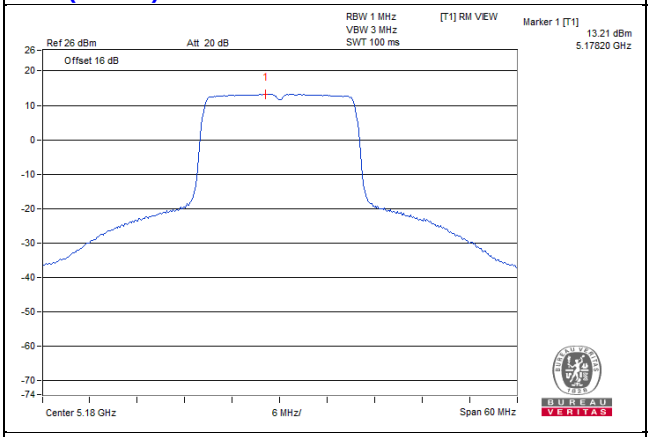
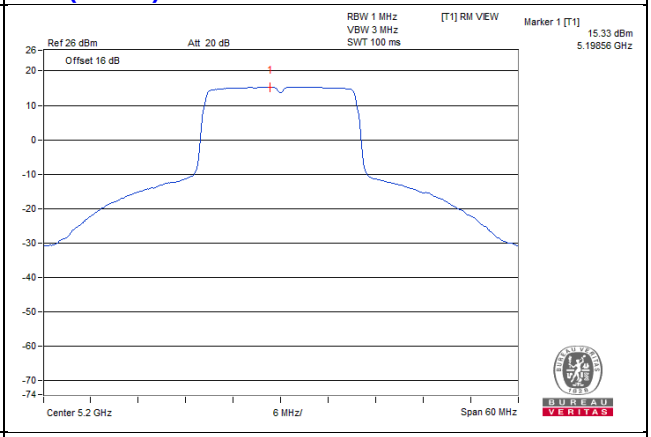
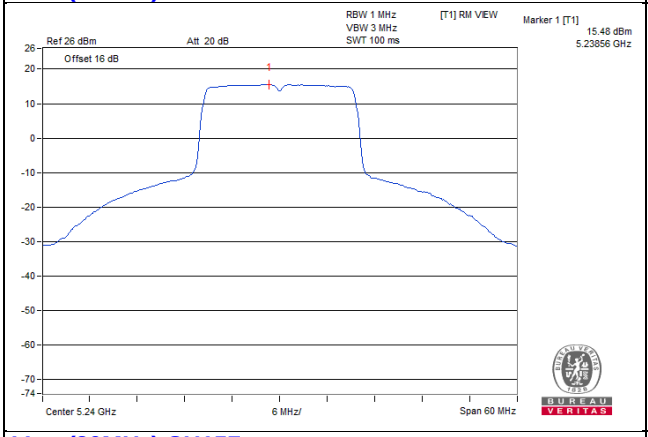
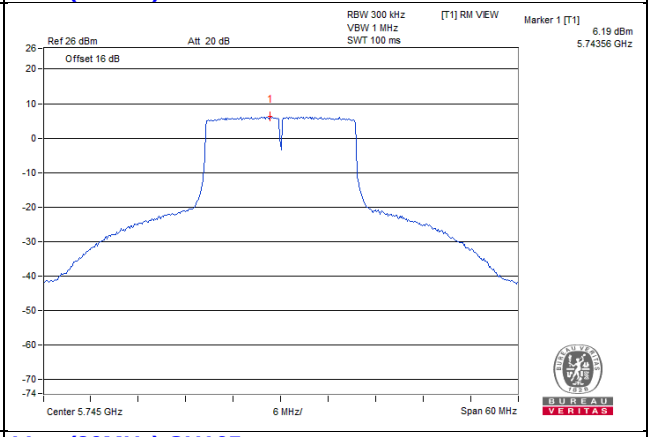
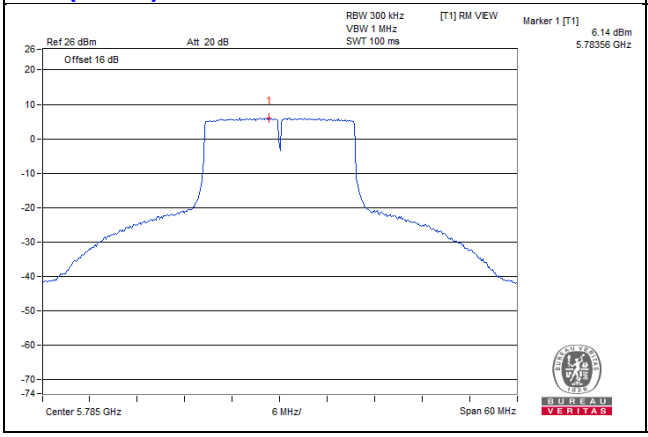
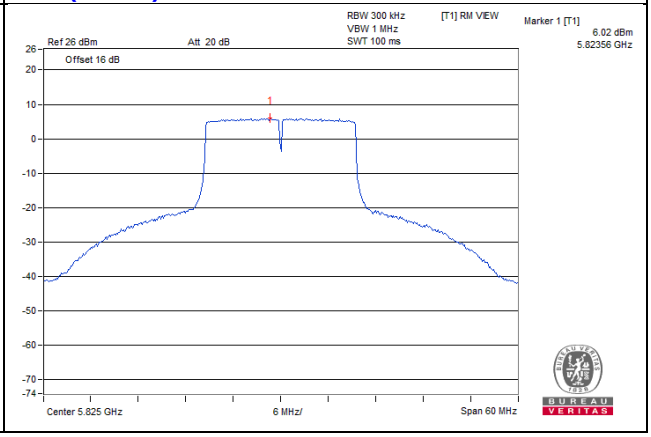
2. Directional gain = 2.25dBi < 6dBi, so the power density limit shall not be reduced.

Chan.	Chan. Freq. (MHz)	Total PSD (dBm/ 300kHz)	Duty Factor (dB)	Total PSD with Duty Factor (dBm/300kHz)	Total PSD with Duty Factor (dBm/500kHz)	Directional Gain(dBi)	MAX. Limit (dBm/500kHz)	Result
155	5775	0.16	0.42	0.58	2.80	2.65	30.00	Pass

Note: 1. Total PSD (dBm/500kHz) = PSD(dBm/300kHz) + 2.22dB+ Duty Factor (dB)

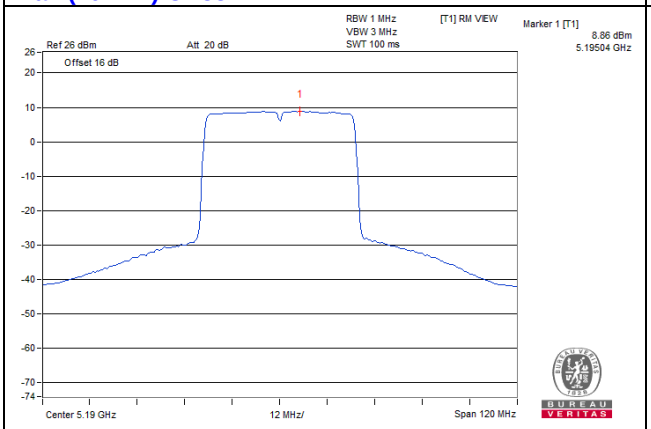
2. Directional gain = 2.65dBi < 6dBi, so the power density limit shall not be reduced.

1S4T CDD

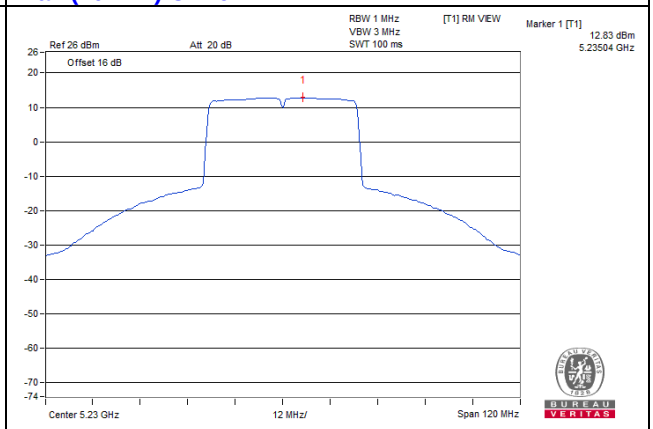
PSD SPECTRUM PLOT	
11ax (20MHz) CH36	**11ax (20MHz) CH40**
	
11ax (20MHz) CH48	**11ax (20MHz) CH149**
	
11ax (20MHz) CH157	**11ax (20MHz) CH165**
	

PSD SPECTRUM PLOT

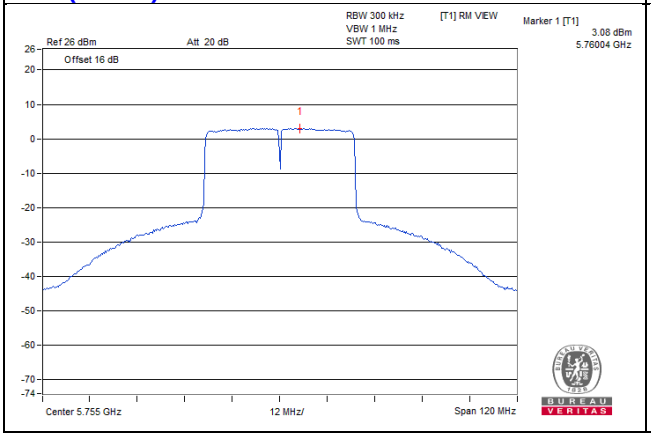
11ax (40MHz) CH38



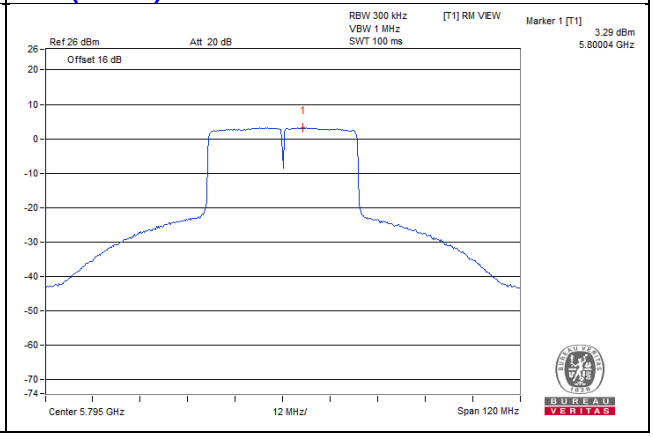
11ax (40MHz) CH46



11ax (40MHz) CH151

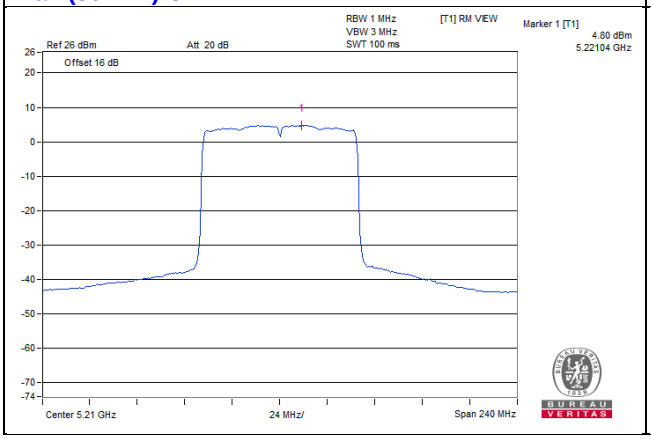


11ax (40MHz) CH159

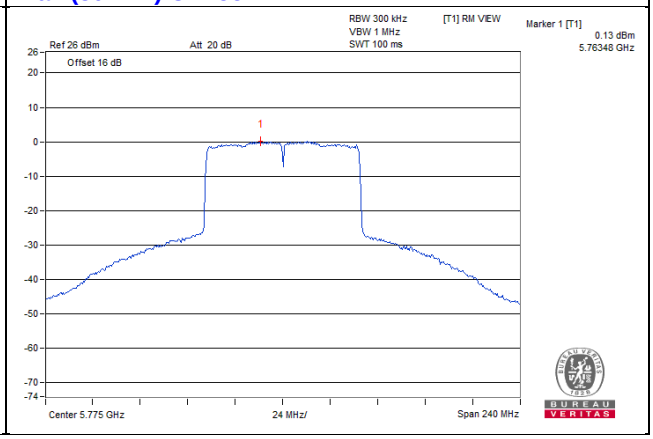


PSD SPECTRUM PLOT

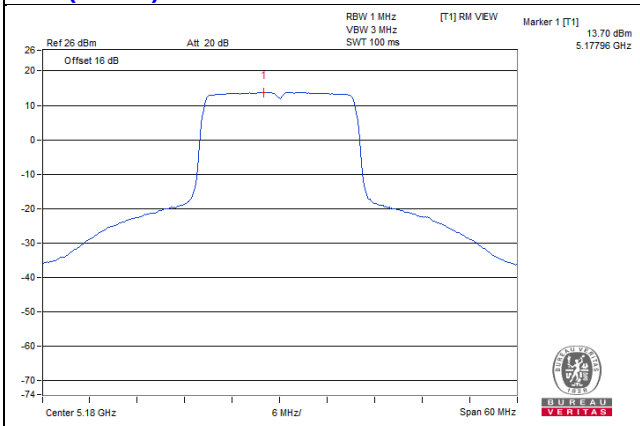
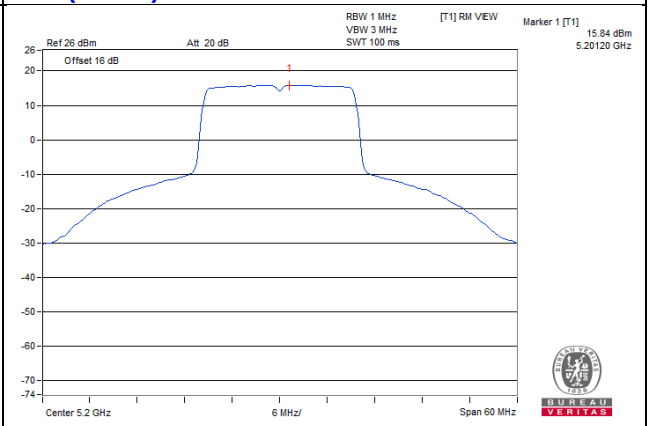
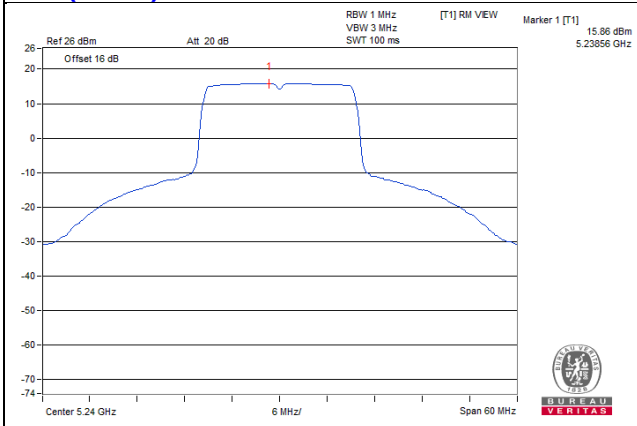
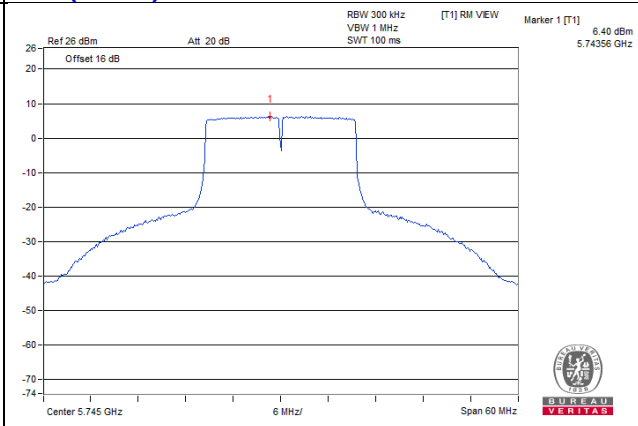
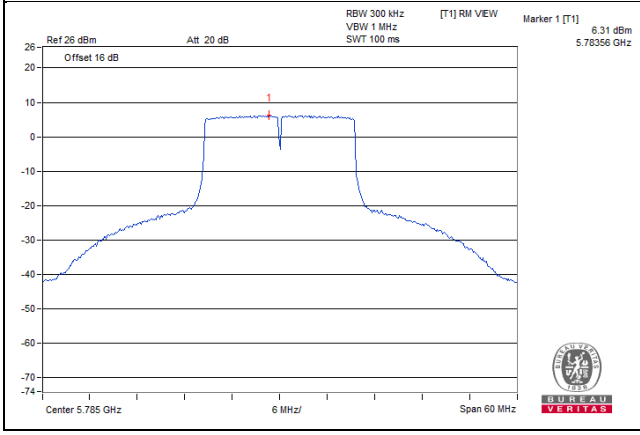
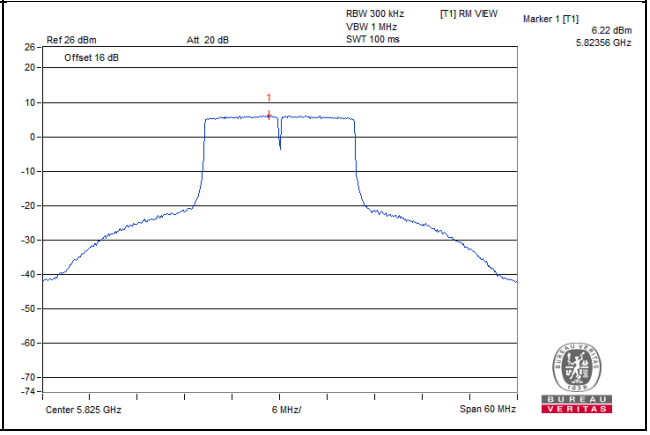
11ax (80MHz) CH42



11ax (80MHz) CH155

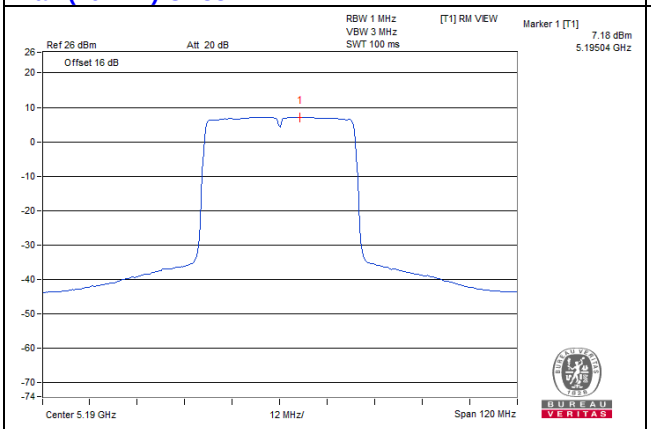


1S4T TxBF

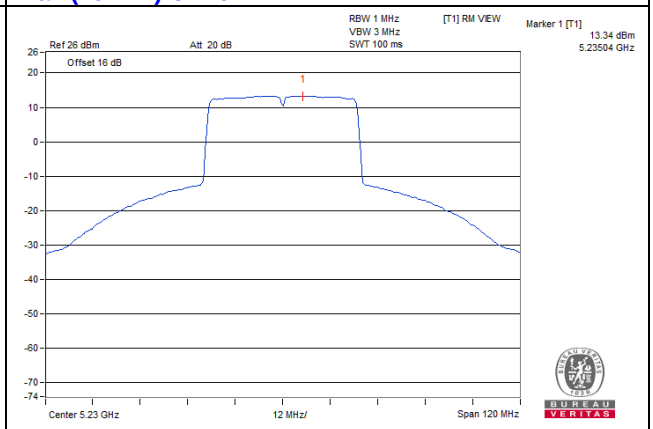
PSD SPECTRUM PLOT	
11ax (20MHz) CH36	**11ax (20MHz) CH40**
	
11ax (20MHz) CH48	**11ax (20MHz) CH149**
	
11ax (20MHz) CH157	**11ax (20MHz) CH165**
	

PSD SPECTRUM PLOT

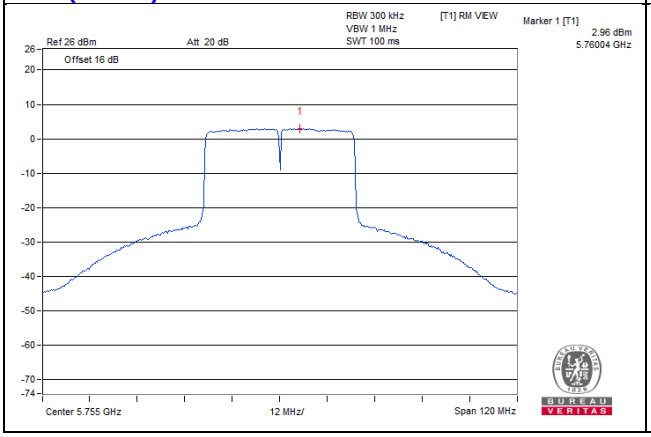
11ax (40MHz) CH38



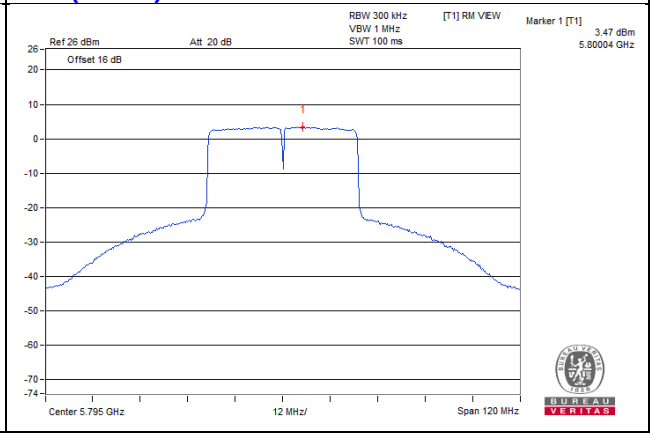
11ax (40MHz) CH46



11ax (40MHz) CH151

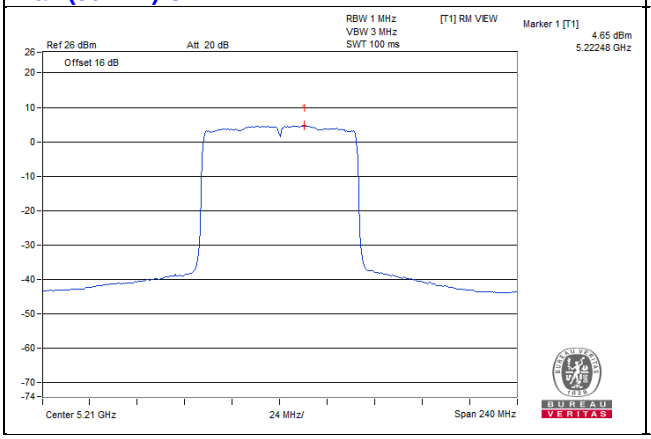


11ax (40MHz) CH159

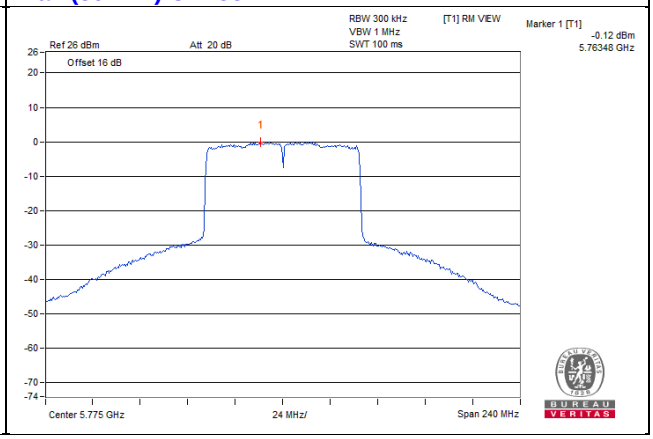


PSD SPECTRUM PLOT

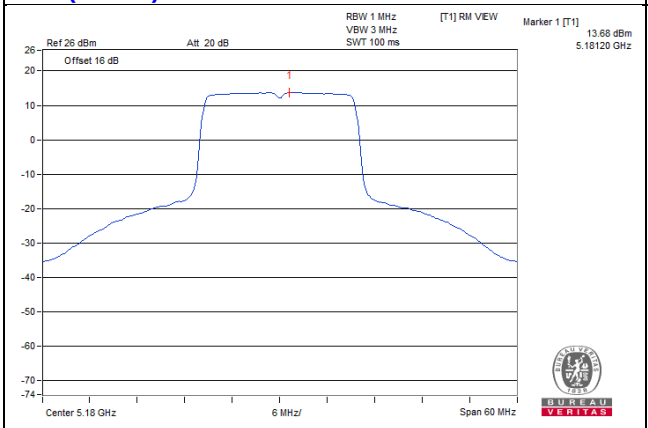
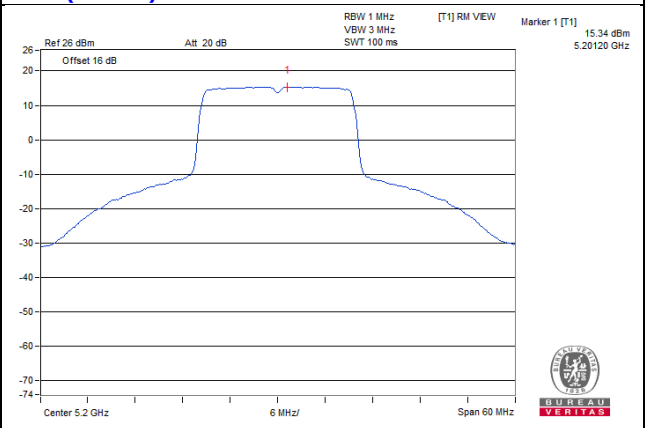
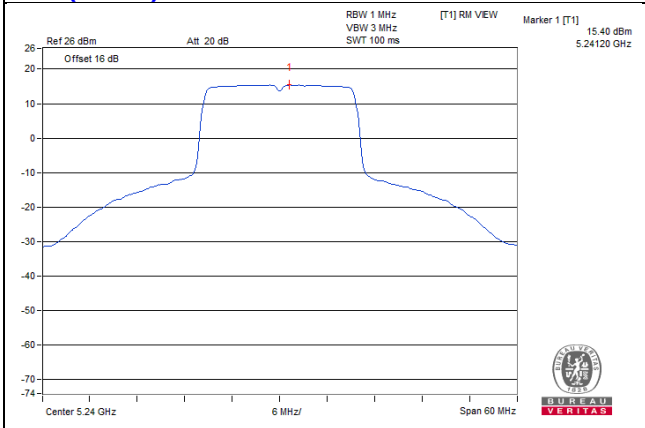
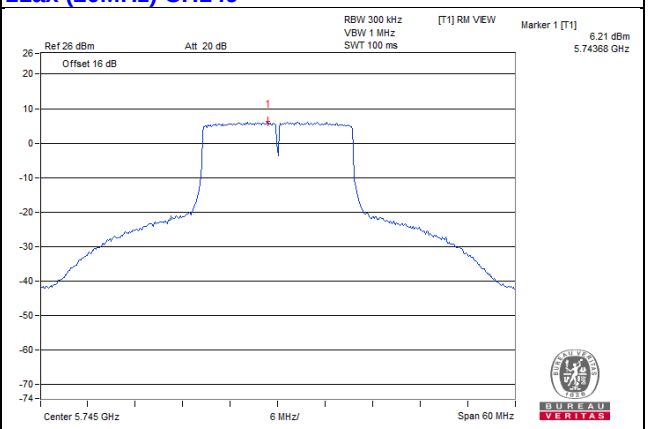
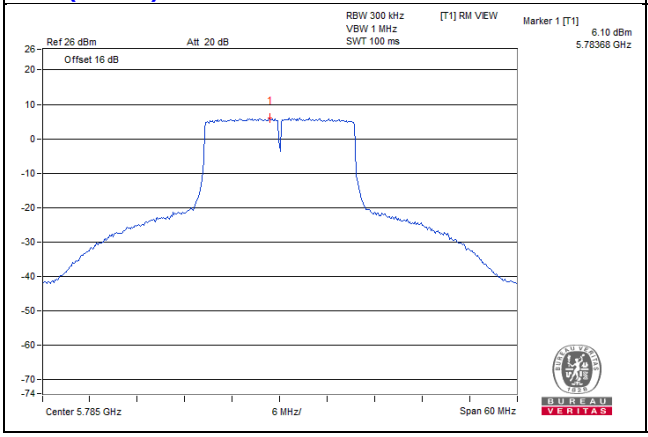
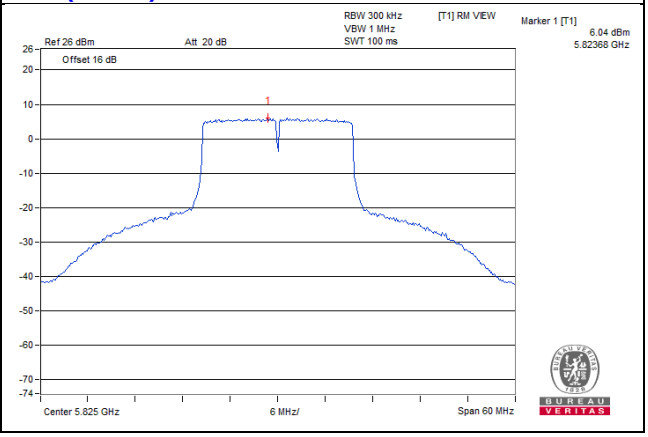
11ax (80MHz) CH42



11ax (80MHz) CH155

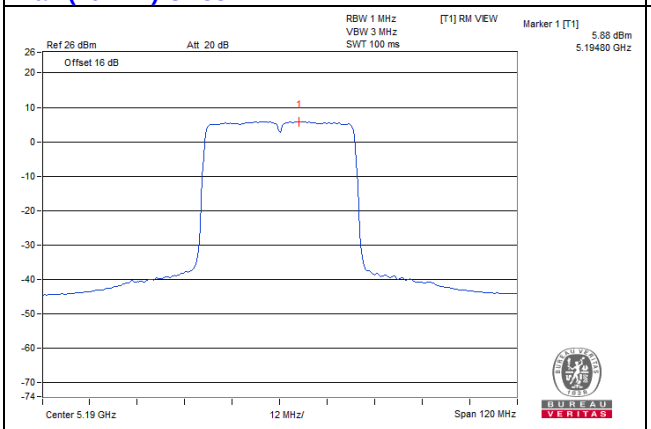


2S4T TxBF

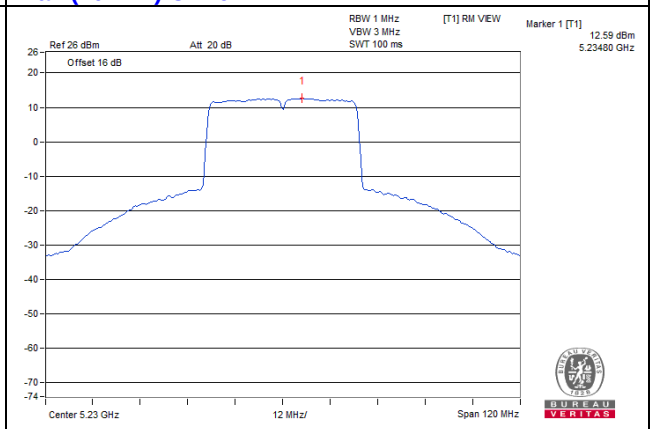
PSD SPECTRUM PLOT	
11ax (20MHz) CH36	**11ax (20MHz) CH40**
	
11ax (20MHz) CH48	**11ax (20MHz) CH149**
	
11ax (20MHz) CH157	**11ax (20MHz) CH165**
	

PSD SPECTRUM PLOT

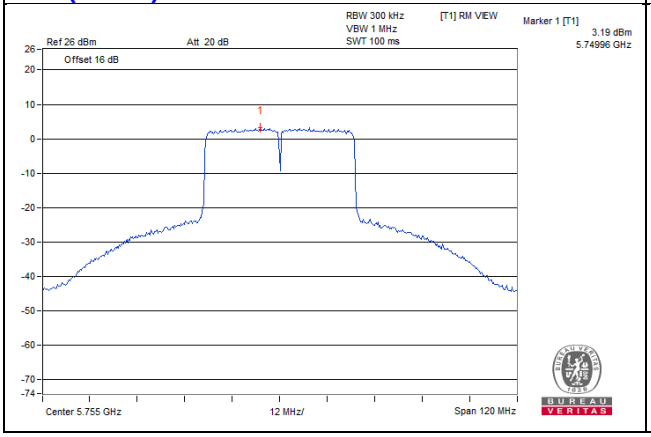
11ax (40MHz) CH38



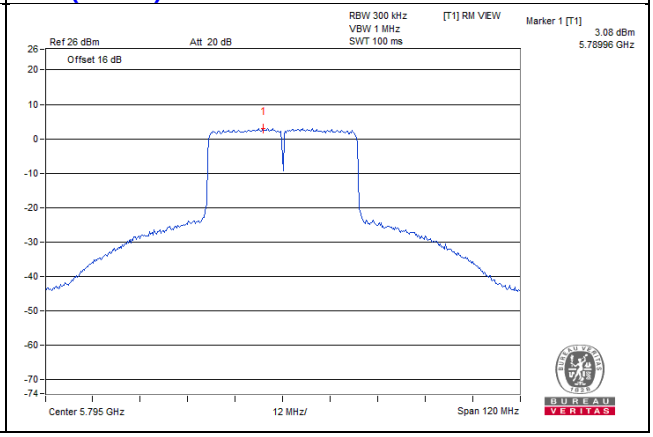
11ax (40MHz) CH46



11ax (40MHz) CH151

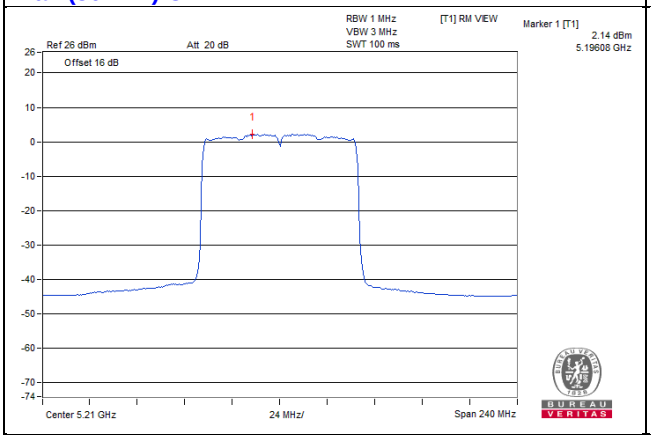


11ax (40MHz) CH159

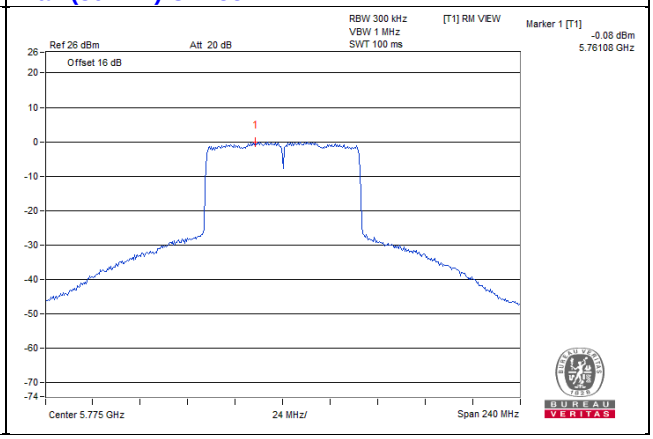


PSD SPECTRUM PLOT

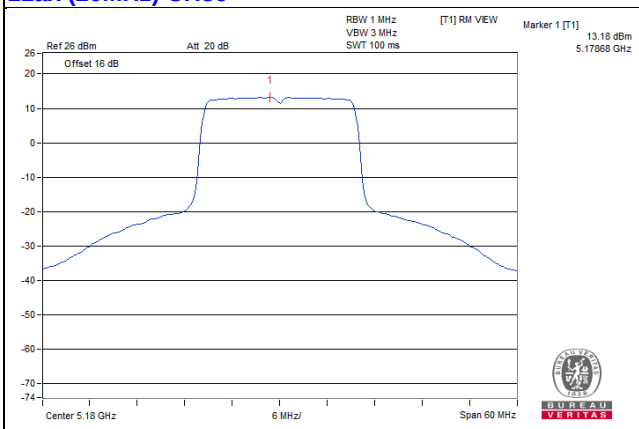
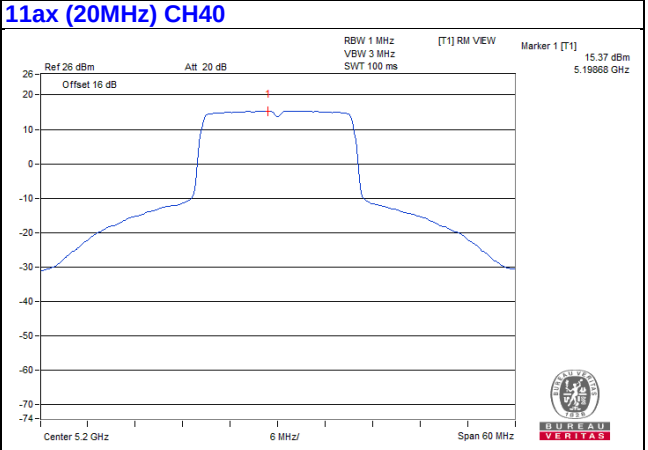
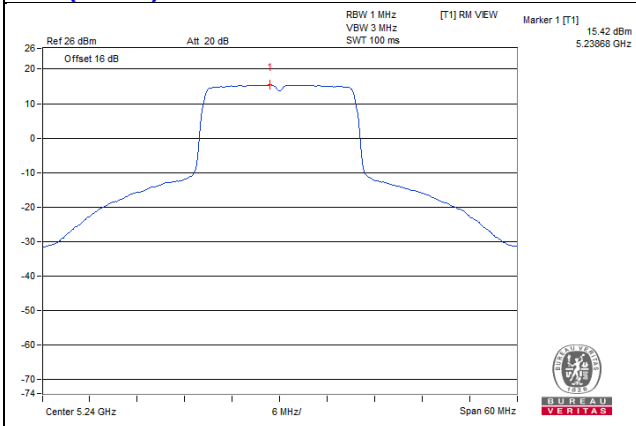
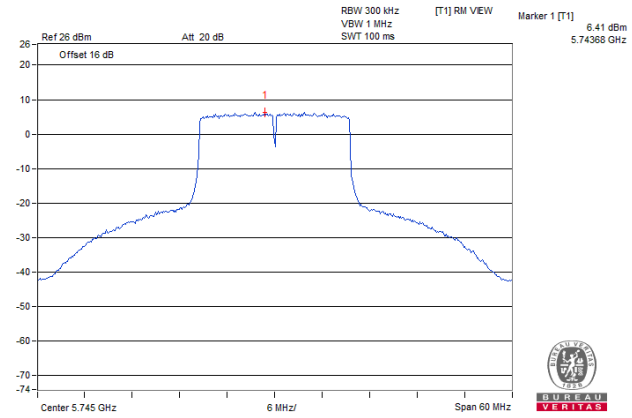
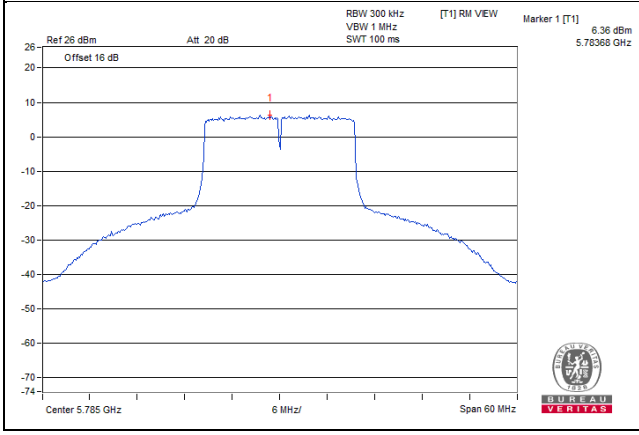
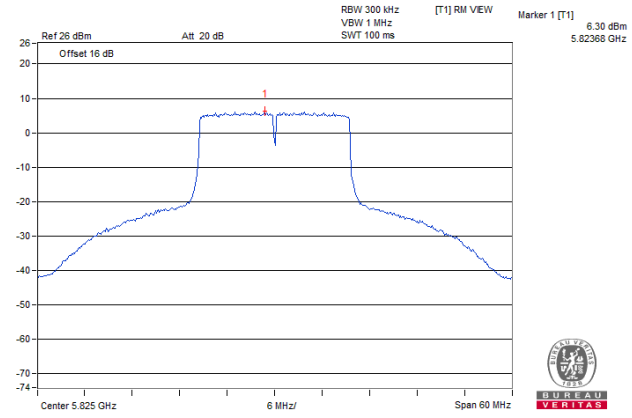
11ax (80MHz) CH42



11ax (80MHz) CH155

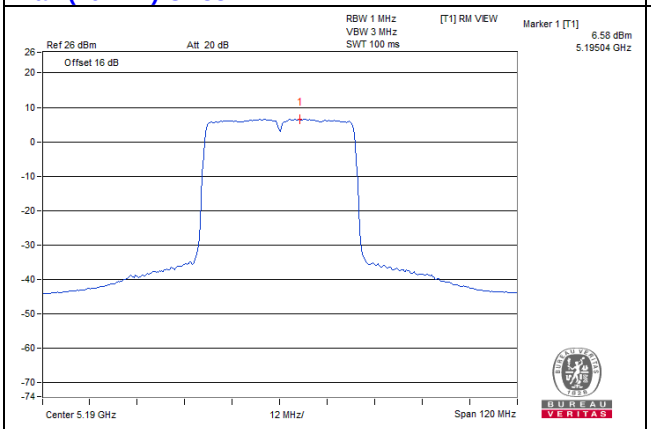


3S4T TxBF

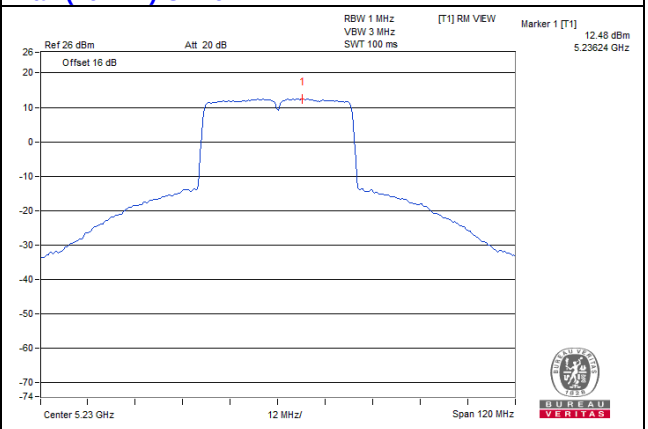
PSD SPECTRUM PLOT	
11ax (20MHz) CH36	**11ax (20MHz) CH40**
	
11ax (20MHz) CH48	**11ax (20MHz) CH149**
	
11ax (20MHz) CH157	**11ax (20MHz) CH165**
	

PSD SPECTRUM PLOT

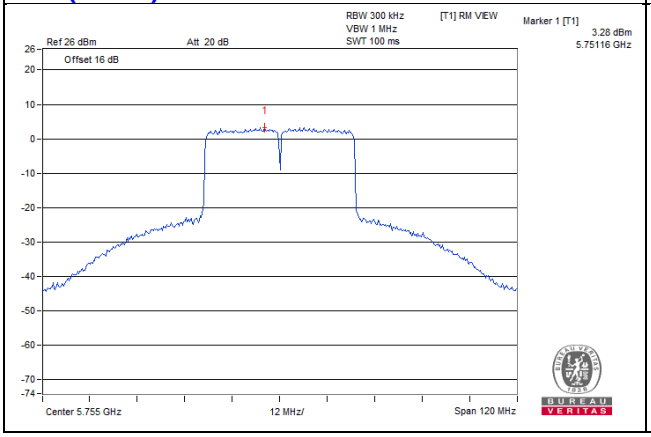
11ax (40MHz) CH38



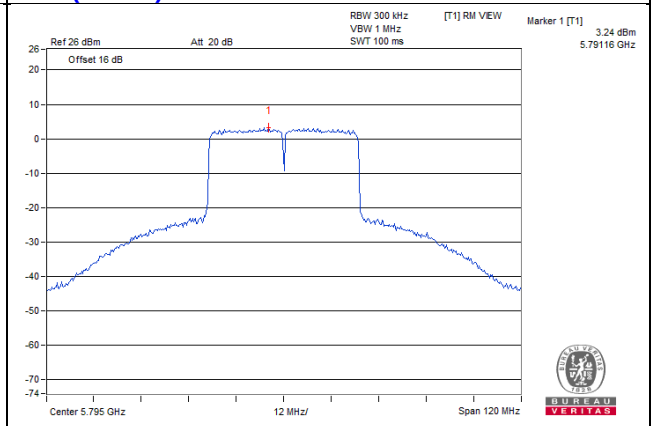
11ax (40MHz) CH46



11ax (40MHz) CH151

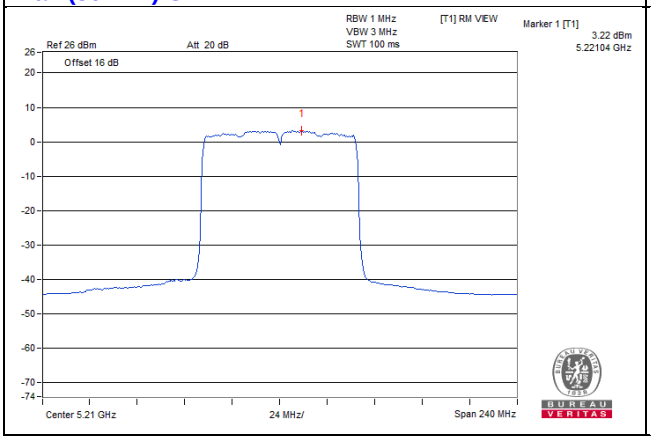


11ax (40MHz) CH159



PSD SPECTRUM PLOT

11ax (80MHz) CH42



11ax (80MHz) CH155