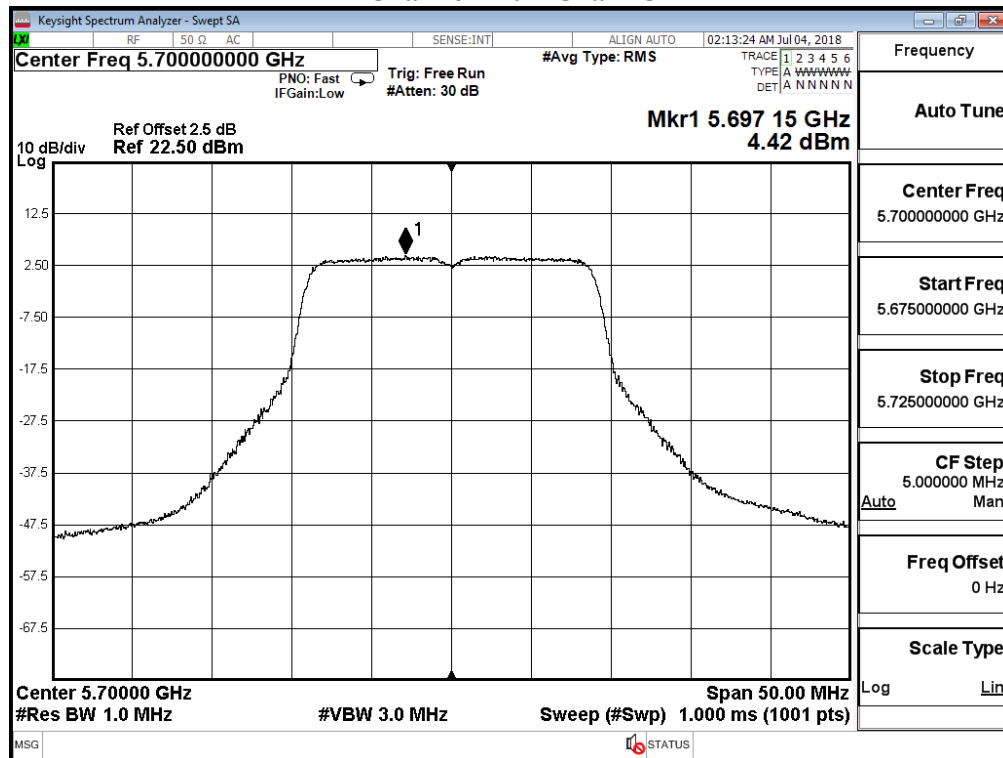
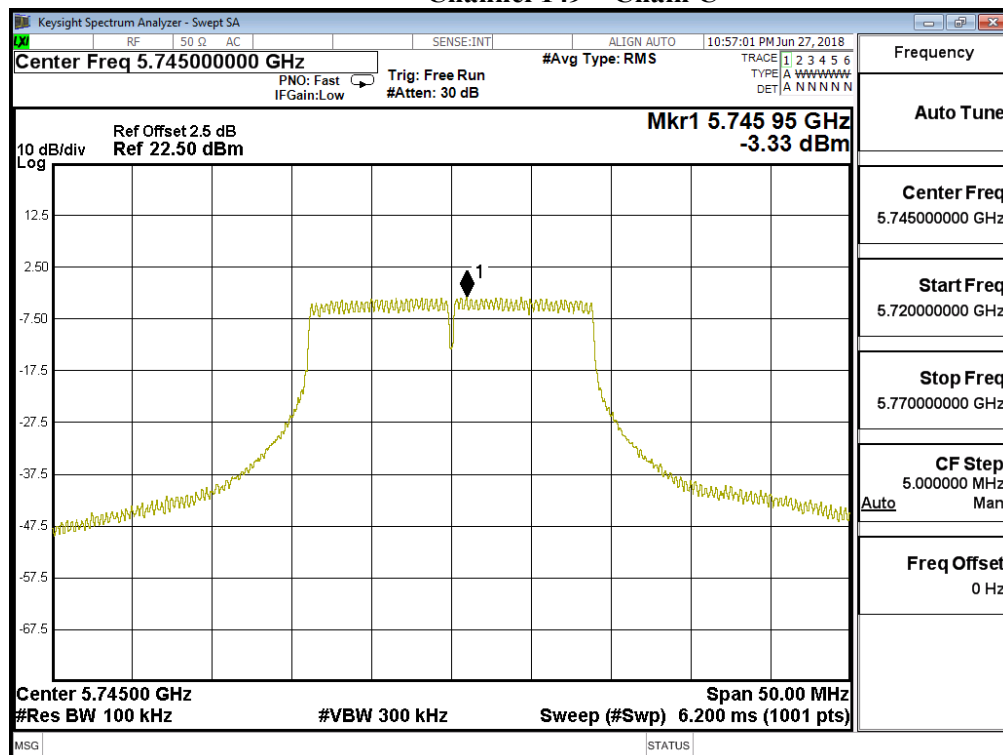


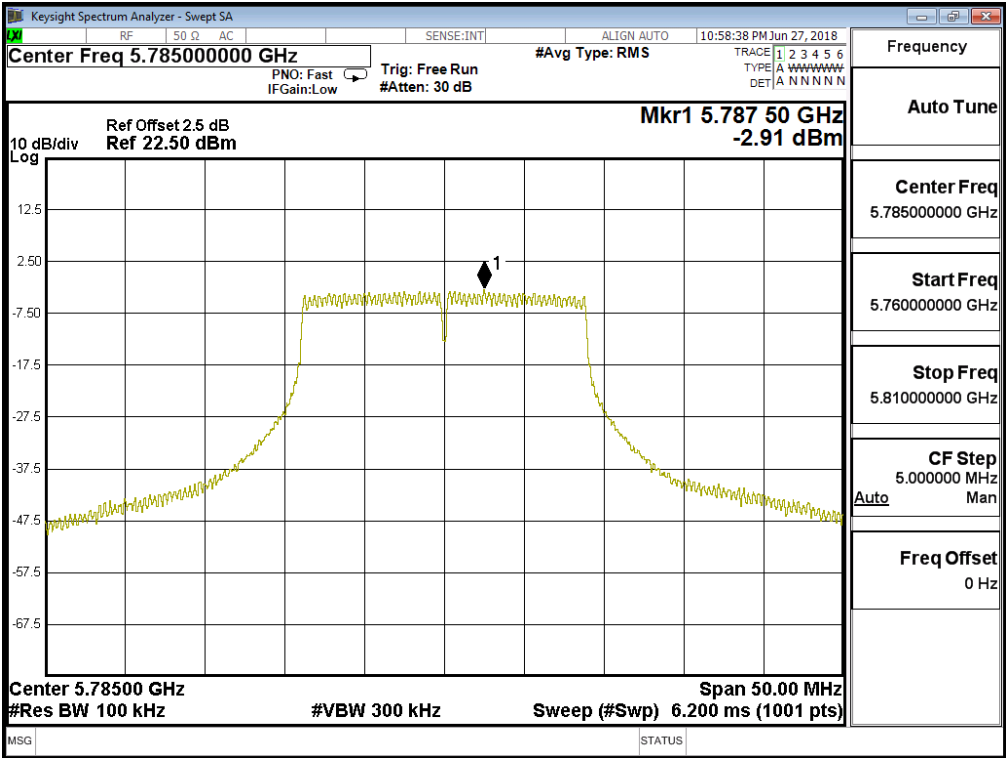
Channel 140 – Chain C



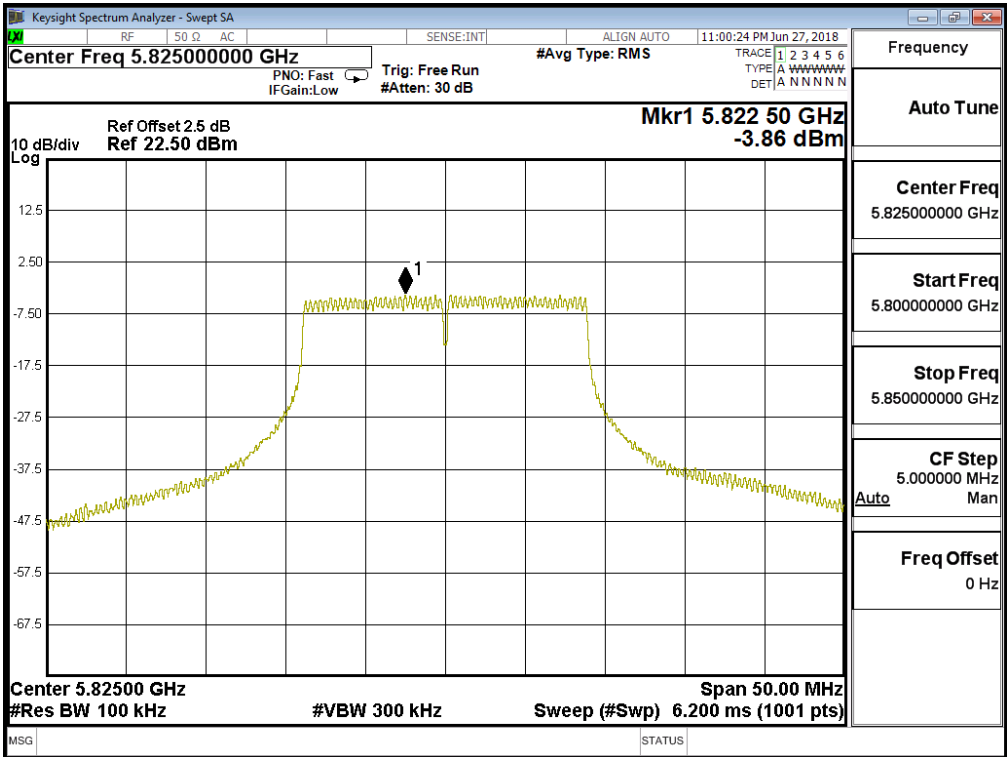
Channel 149 – Chain C



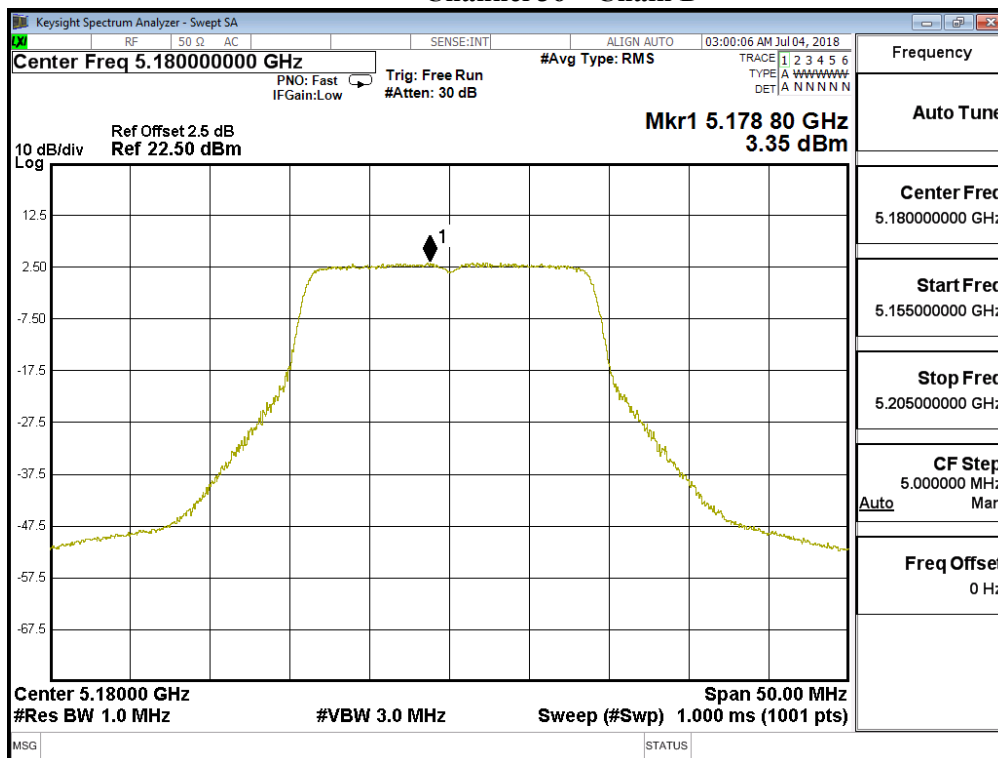
Channel 157 – Chain C



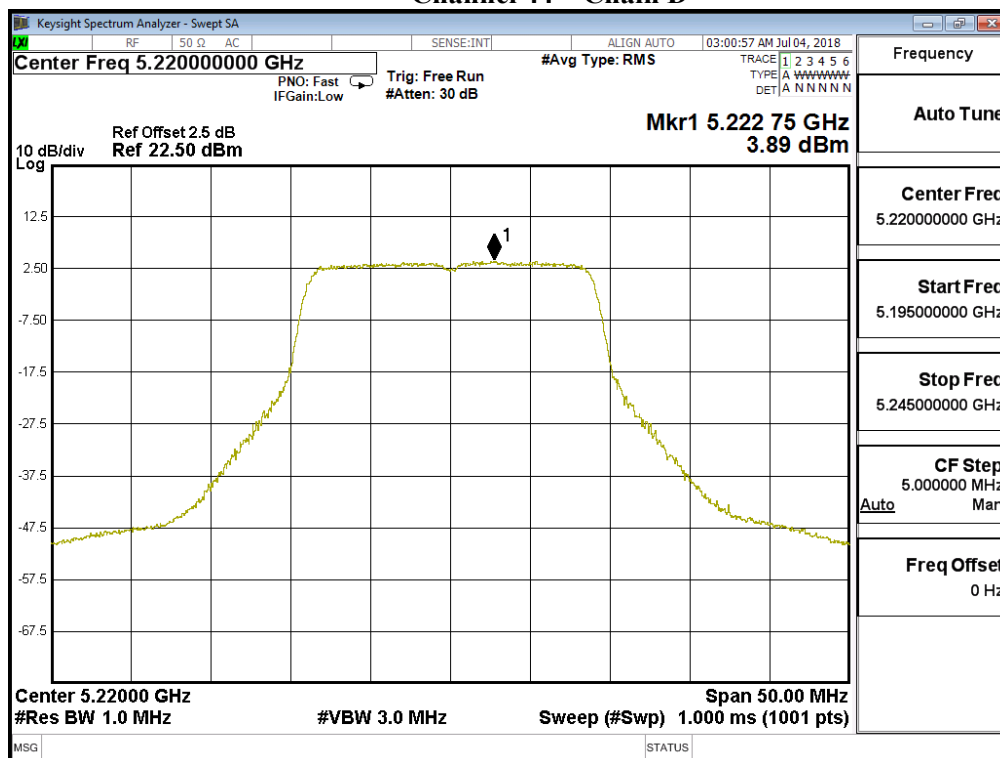
Channel 165 – Chain C



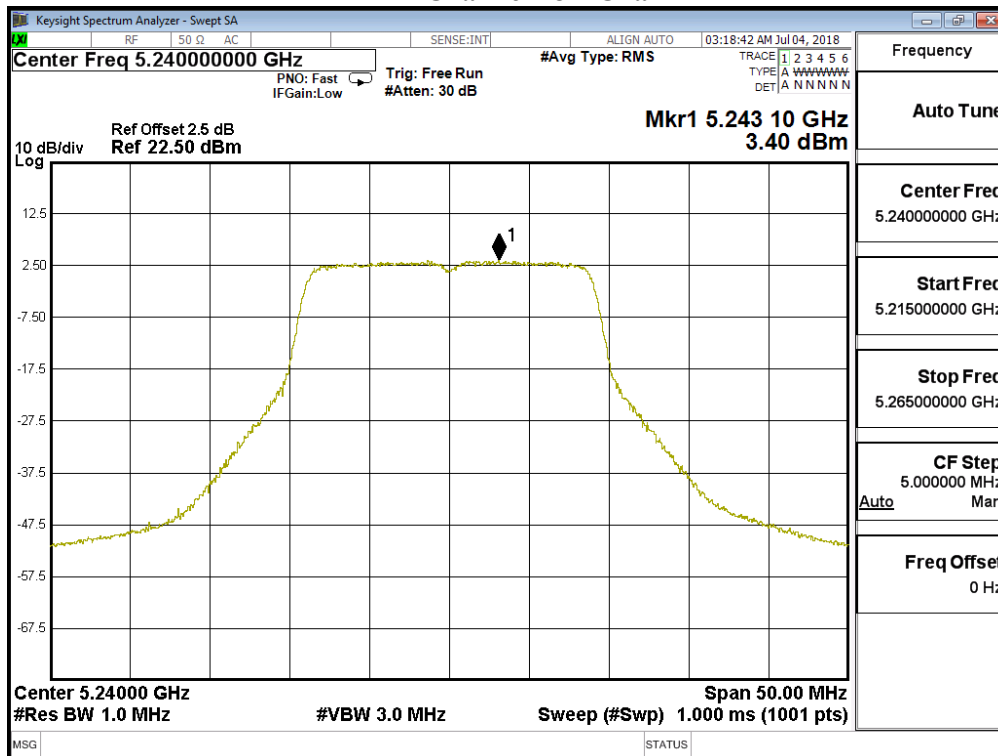
Channel 36 – Chain D



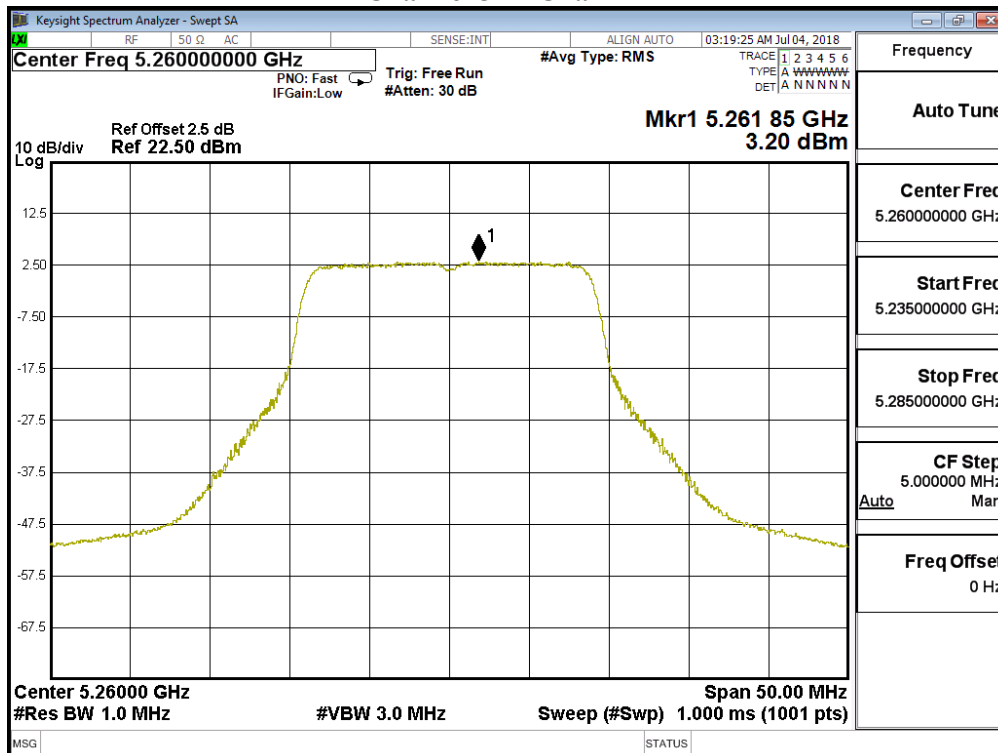
Channel 44 – Chain D



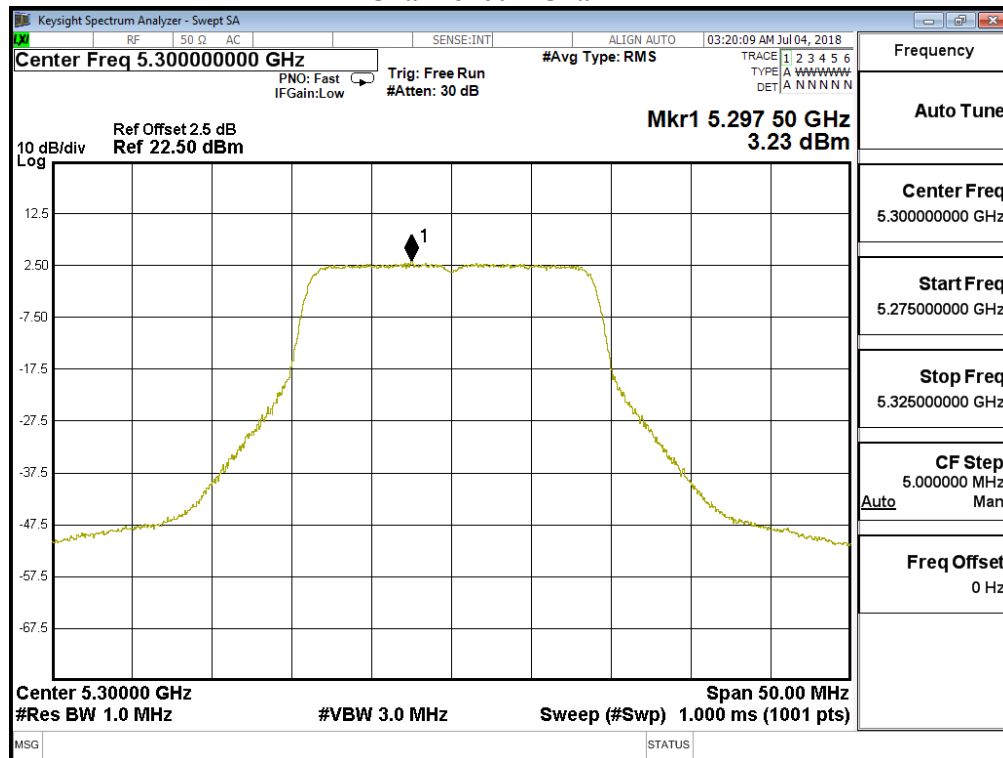
Channel 48 – Chain D



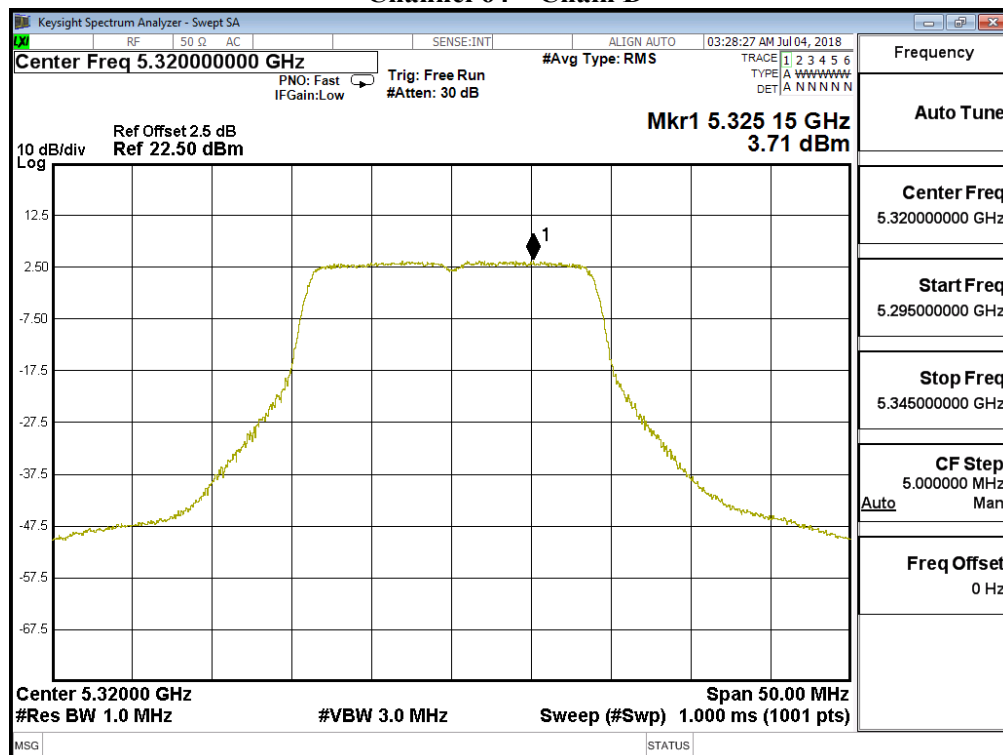
Channel 52 – Chain D



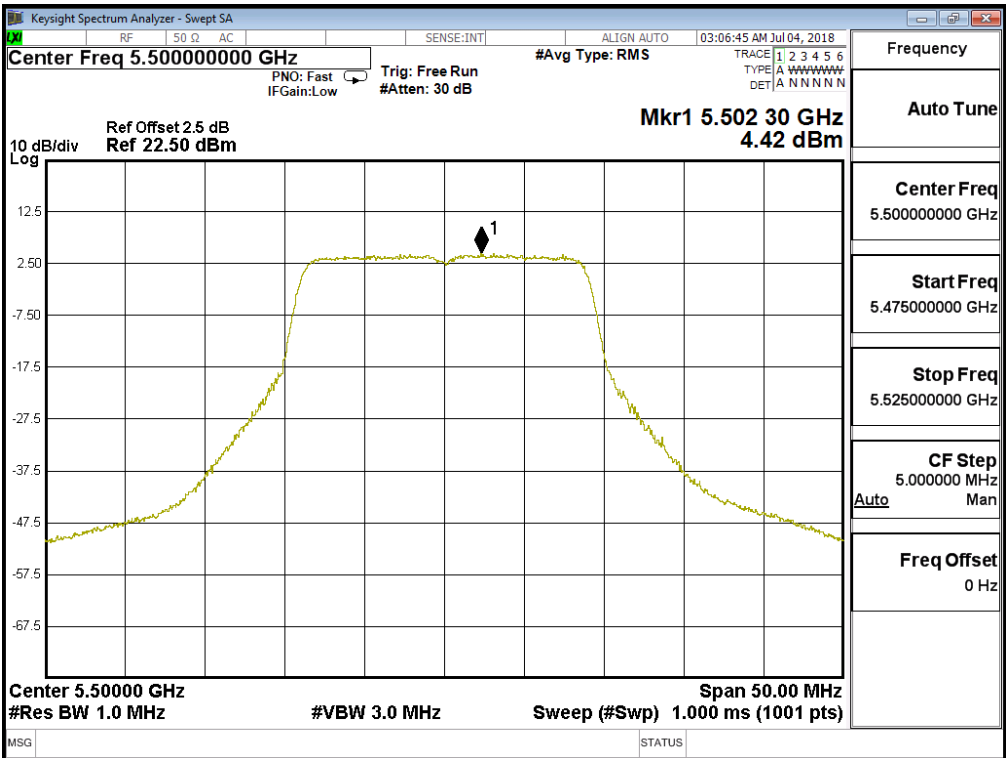
Channel 60 – Chain D



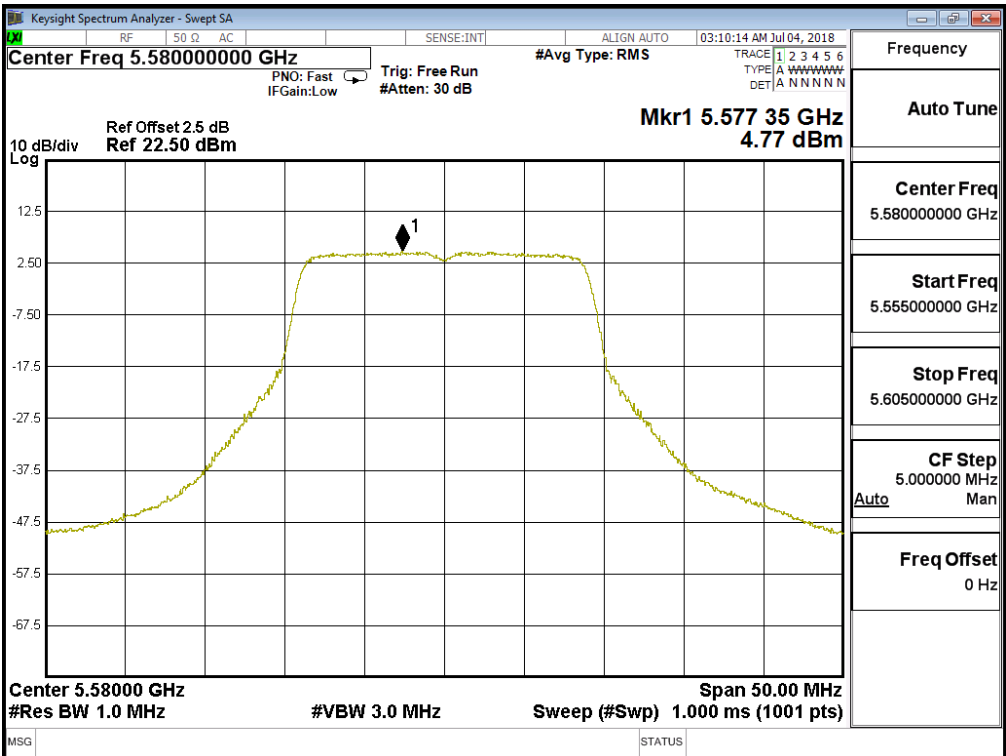
Channel 64 – Chain D



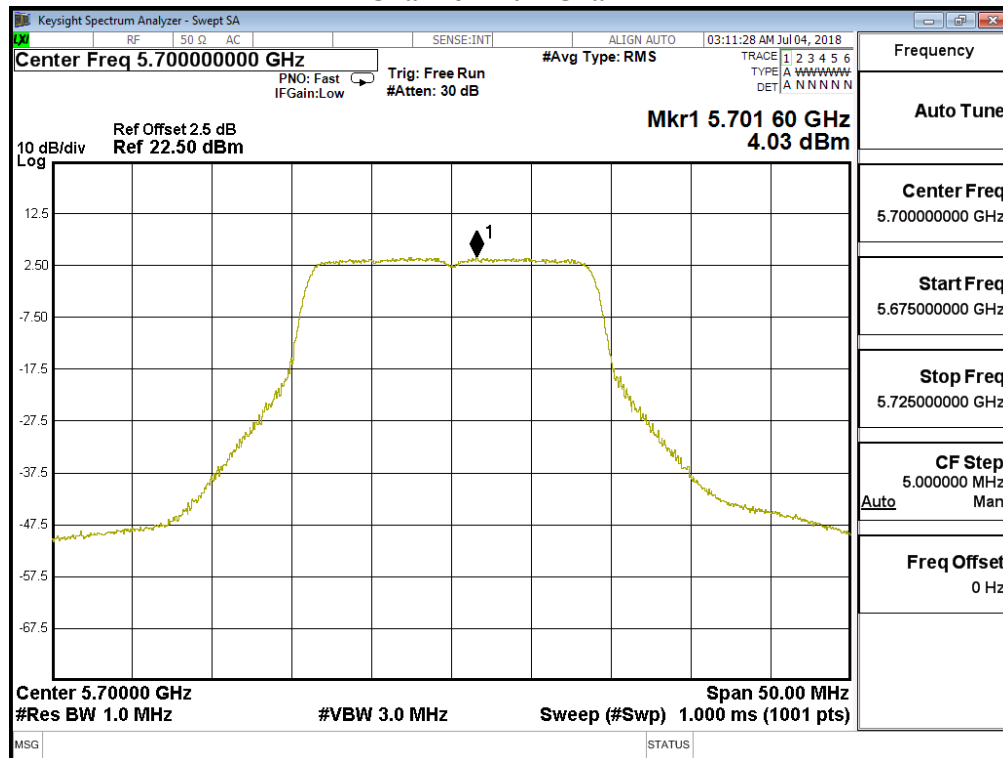
Channel 100 – Chain D



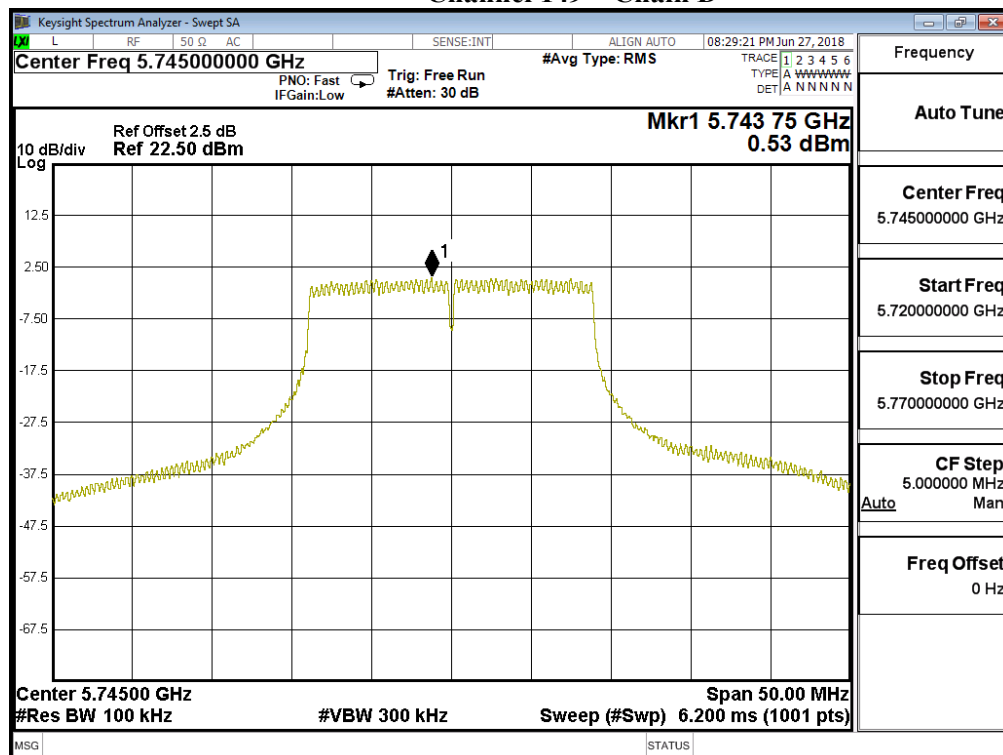
Channel 116 – Chain D



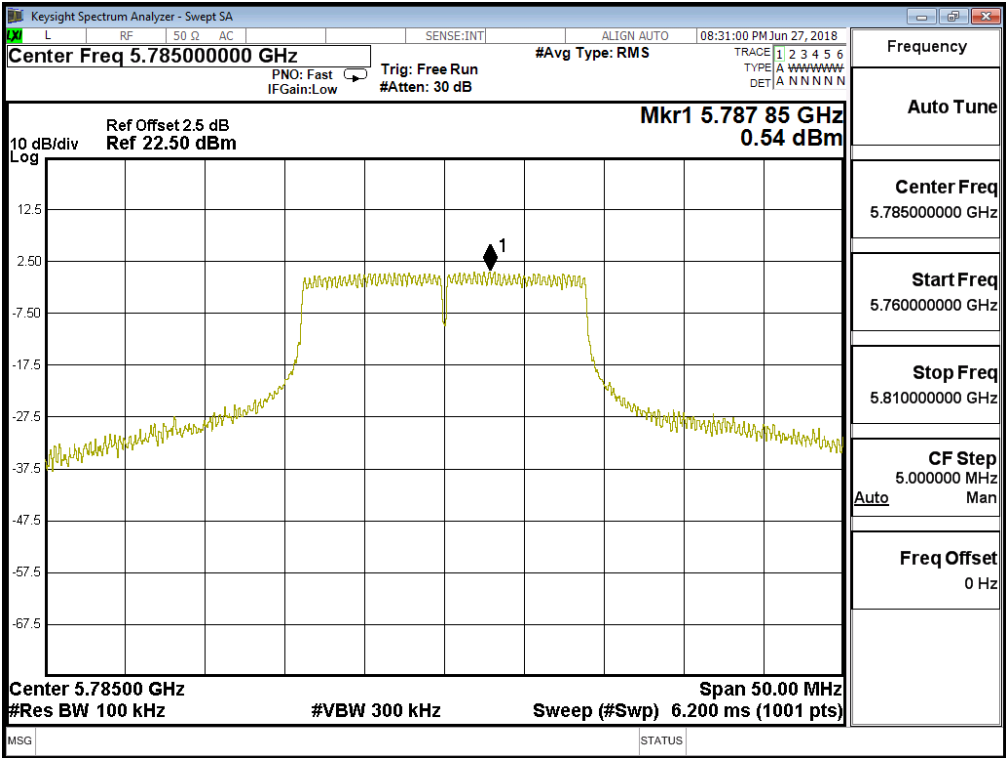
Channel 140 – Chain D



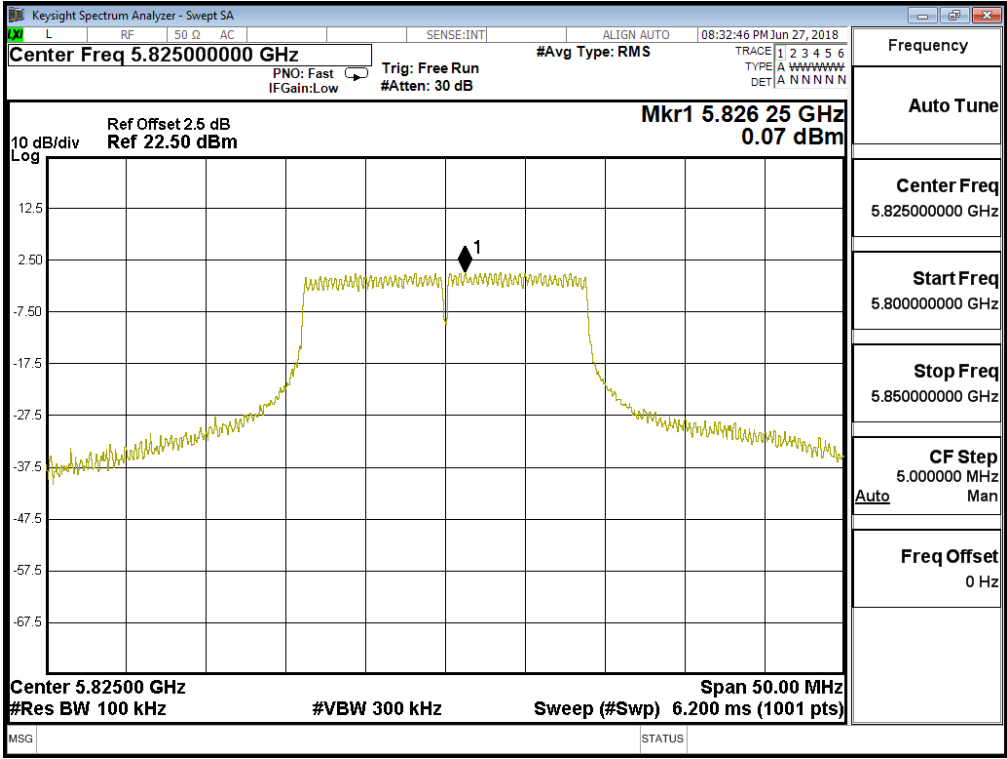
Channel 149 – Chain D



Channel 157 – Chain D



Channel 165 – Chain D



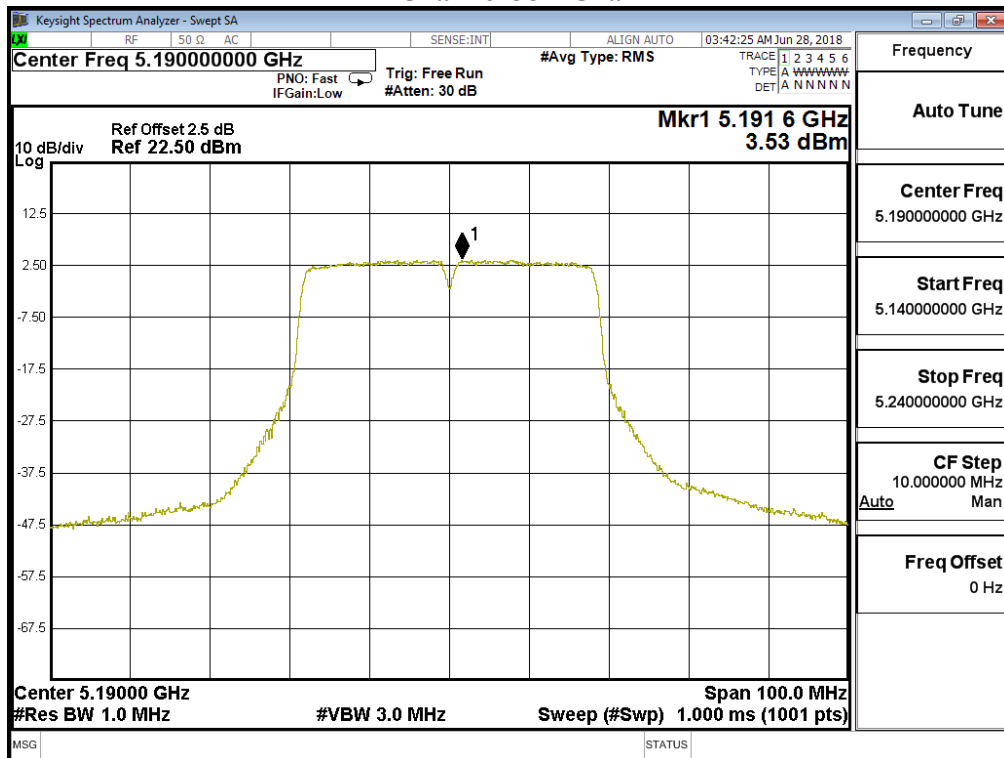
Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Peak Power Spectral Density
 Test Site : No.3 OATS
 Test Date : 2018/06/14
 Test Mode : Mode 3: Transmit (802.11n-40BW 60Mbps) (Antenna No.7)

Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	Total PSD (dBm) ¹	Required Limit (dBm)	Result
38	5190	A	3.53	9.55	11	Pass
		B	3.24	9.26	11	Pass
		C	3.59	9.61	11	Pass
		D	3.99	10.01	11	Pass
46	5230	A	3.68	9.70	11	Pass
		B	2.63	8.65	11	Pass
		C	3.51	9.53	11	Pass
		D	3.42	9.44	11	Pass
54	5270	A	2.64	8.66	11	Pass
		B	3.08	9.10	11	Pass
		C	3.74	9.76	11	Pass
		D	3.28	9.30	11	Pass
62	5310	A	3.01	9.03	11	Pass
		B	3.26	9.28	11	Pass
		C	3.56	9.58	11	Pass
		D	3.27	9.29	11	Pass
102	5510	A	2.83	8.85	11	Pass
		B	2.60	8.62	11	Pass
		C	2.46	8.48	11	Pass
		D	4.92	10.94	11	Pass
110	5550	A	3.13	9.15	11	Pass
		B	1.86	7.88	11	Pass
		C	1.95	7.97	11	Pass
		D	4.89	10.91	11	Pass
134	5670	A	1.89	7.91	11	Pass
		B	4.44	10.46	11	Pass
		C	3.32	9.34	11	Pass
		D	4.13	10.15	11	Pass

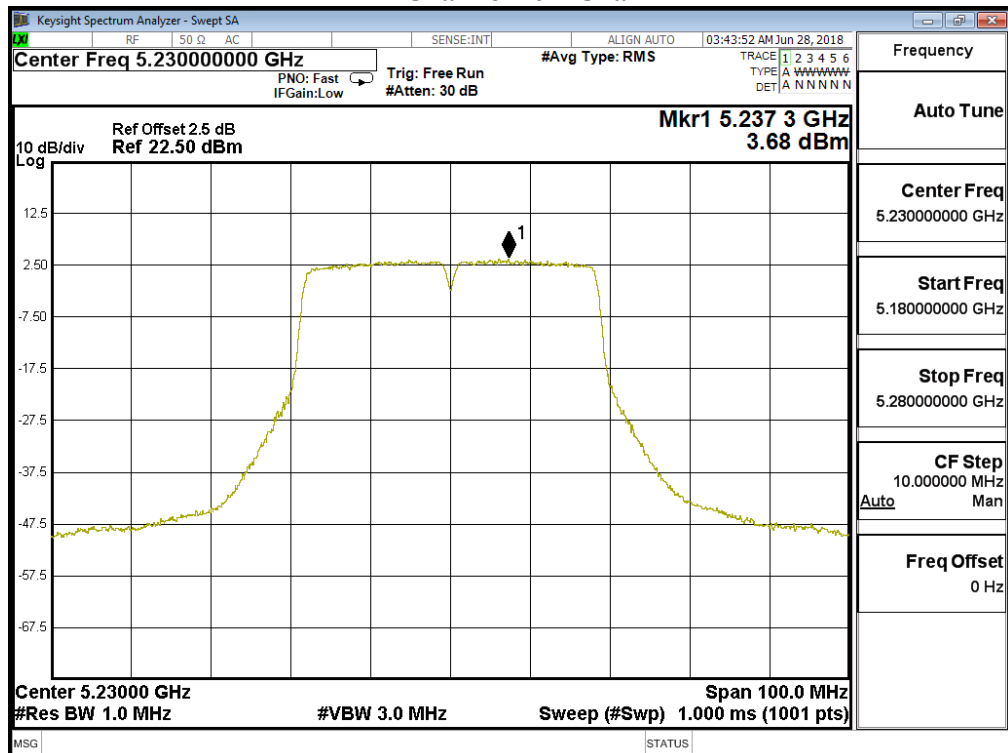
Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	BWCF (dB)	Total PSD (dBm) ₁	Required Limit (dBm)	Result
151	5755	A	-5.59	6.98	7.41	<30	Pass
		B	-5.87	6.98	7.13	<30	Pass
		C	-6.50	6.98	6.50	<30	Pass
		D	-3.10	6.98	9.90	<30	Pass
159	5795	A	-4.29	6.98	8.71	<30	Pass
		B	-5.66	6.98	7.34	<30	Pass
		C	-6.43	6.98	6.57	<30	Pass
		D	-2.76	6.98	10.24	<30	Pass

Note 1: The quantity $10 \cdot \log 4$ (four antennas) is added to the spectrum peak value according to document 662911 D01.

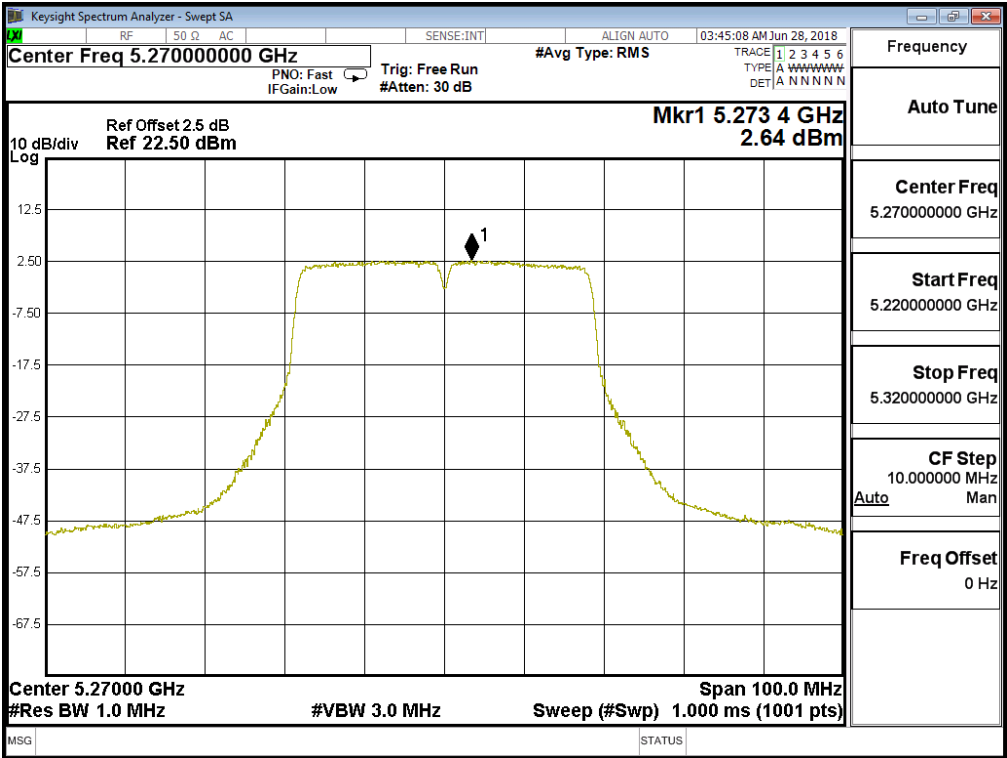
Channel 38 – Chain A



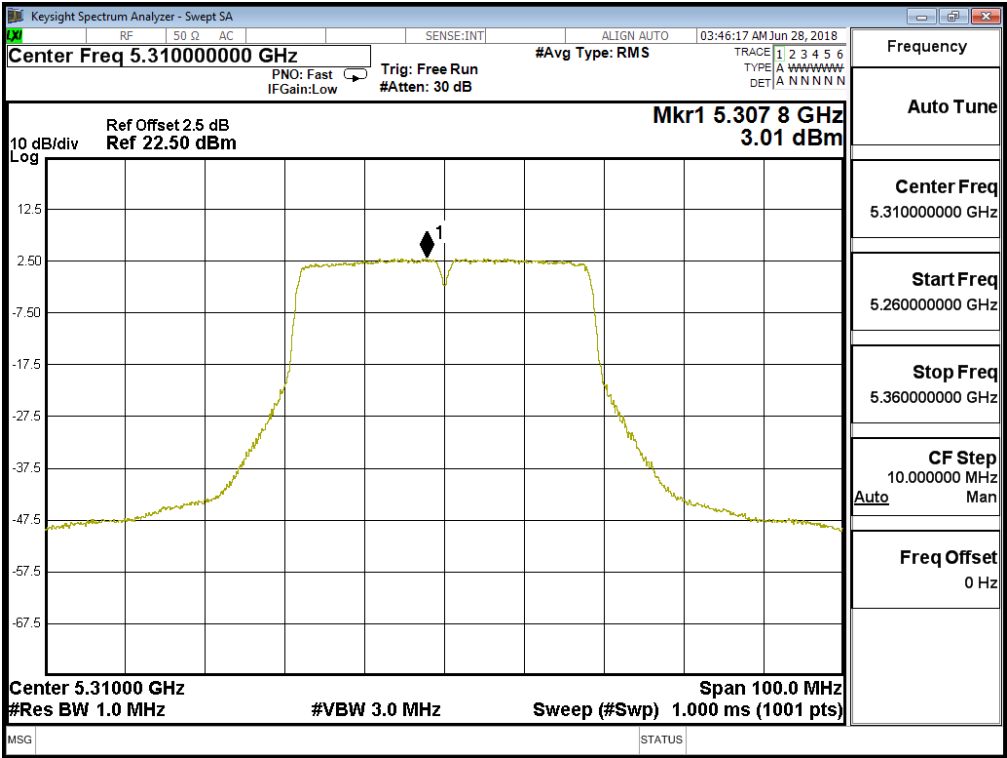
Channel 46 – Chain A



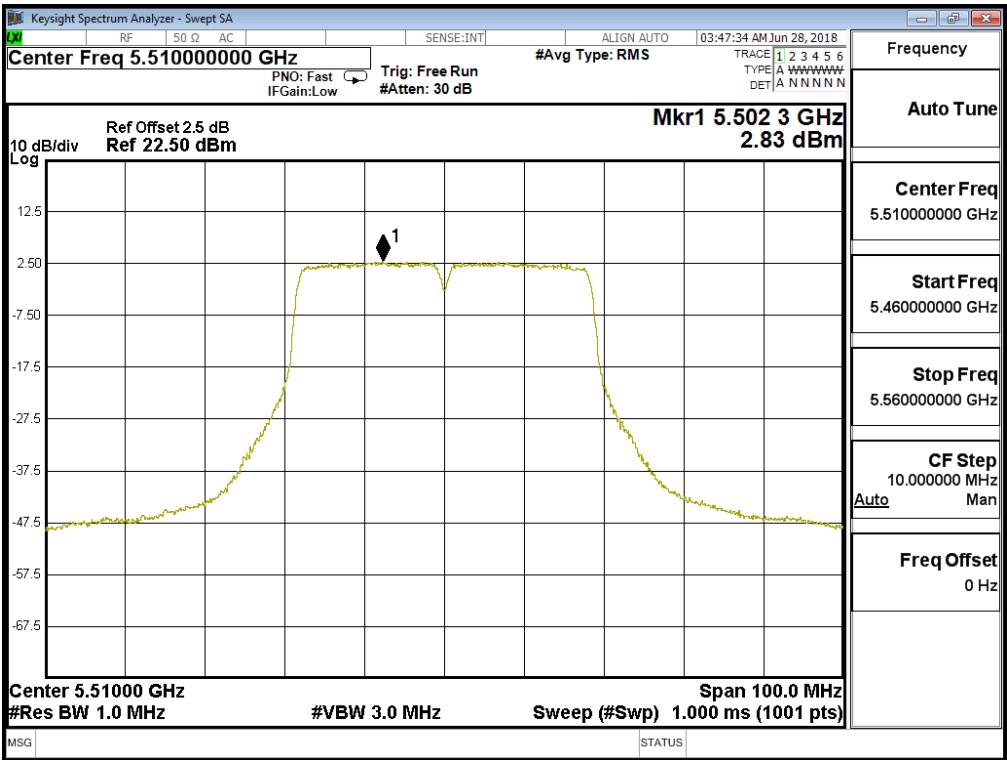
Channel 54 – Chain A



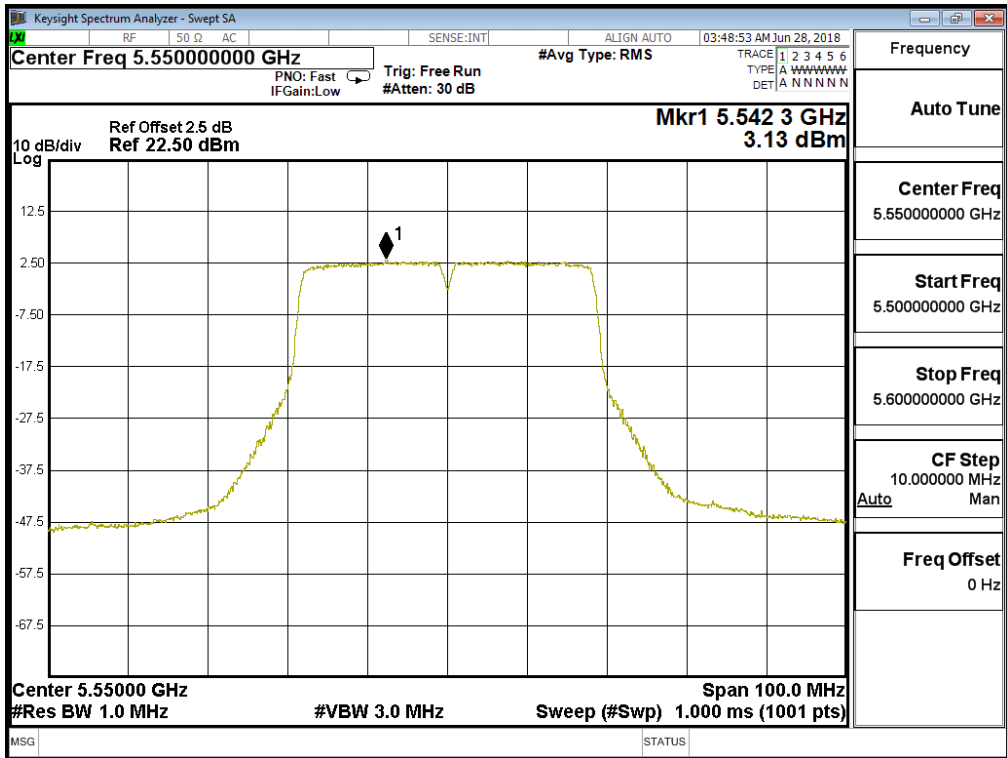
Channel 62 – Chain A



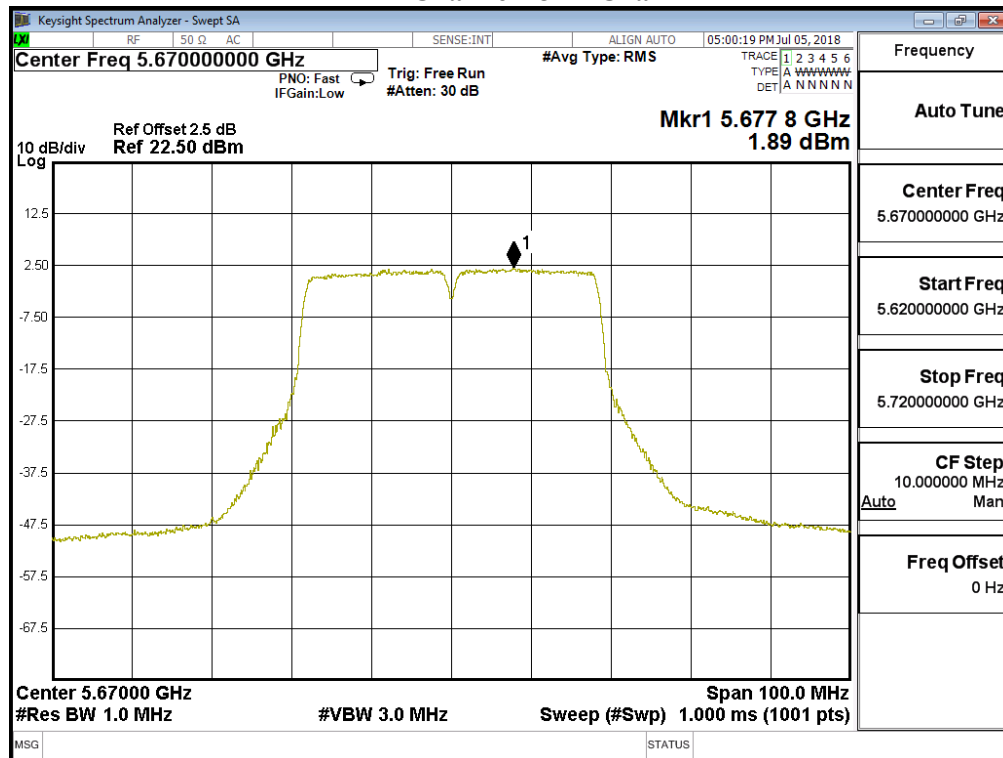
Channel 102 – Chain A



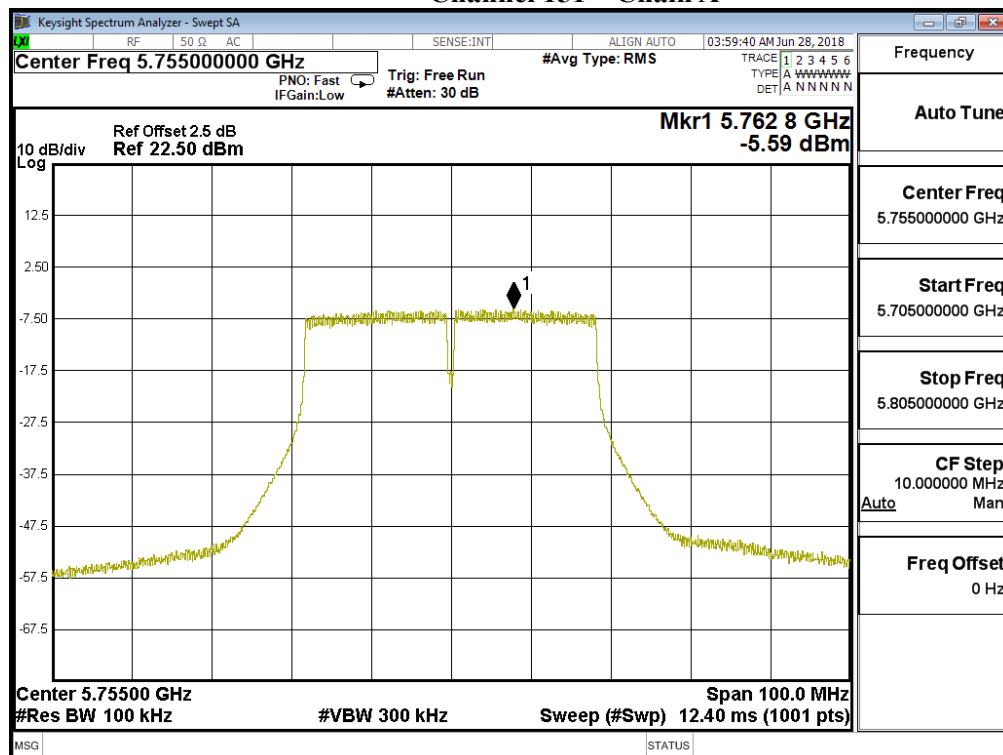
Channel 110 – Chain A



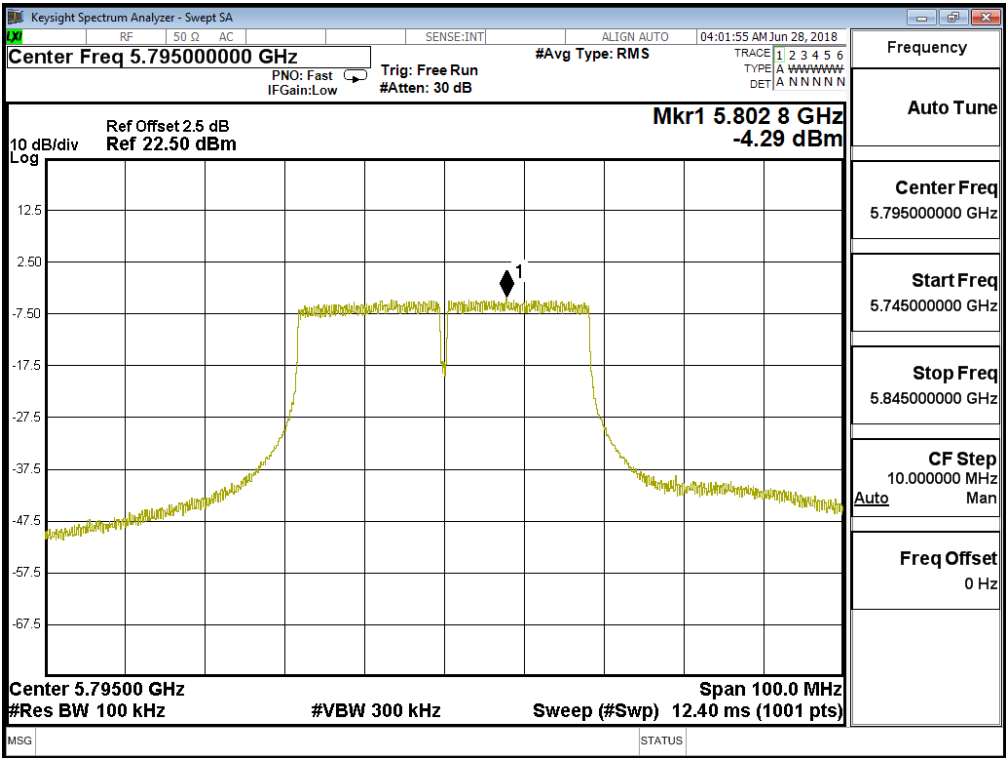
Channel 134 – Chain A



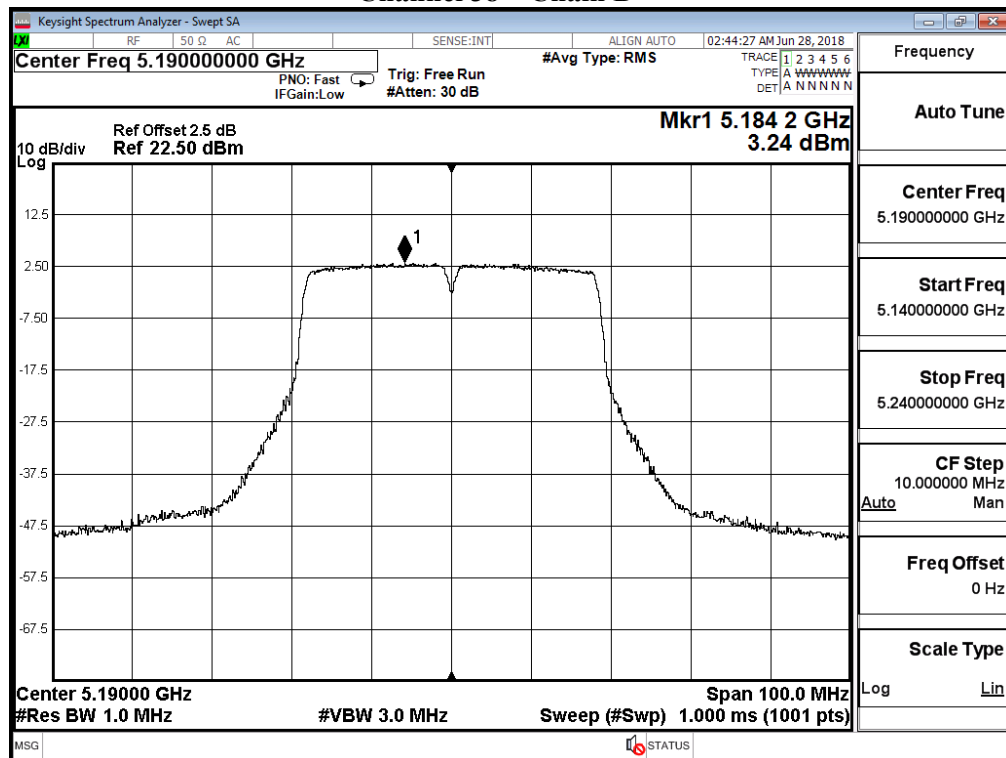
Channel 151 – Chain A



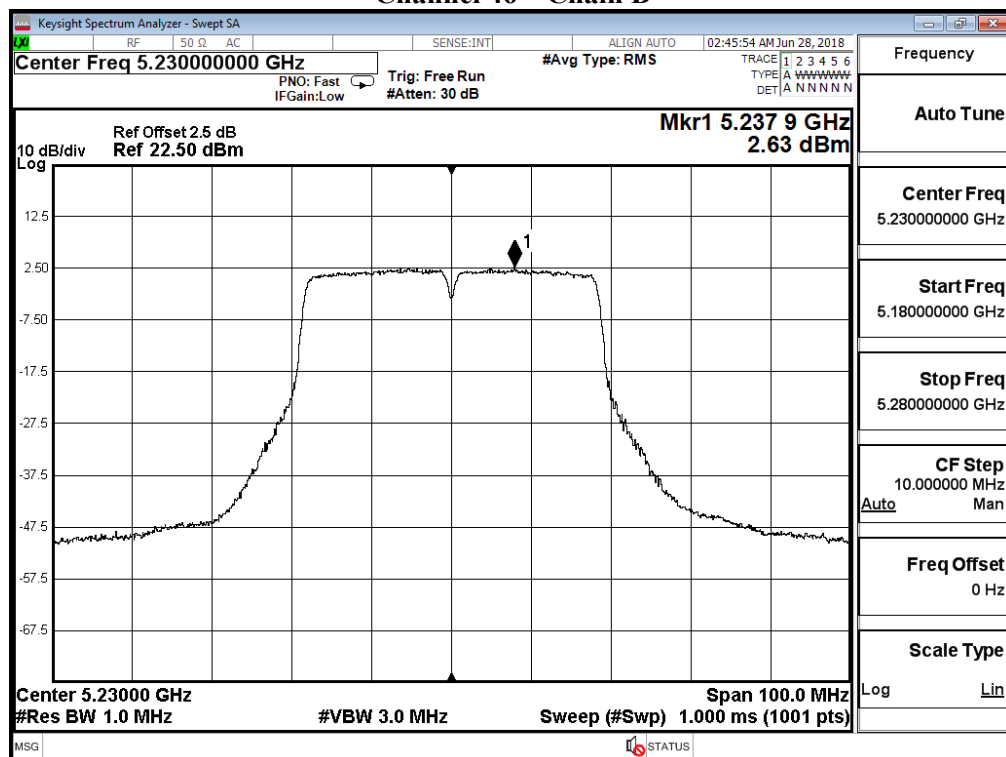
Channel 159 – Chain A



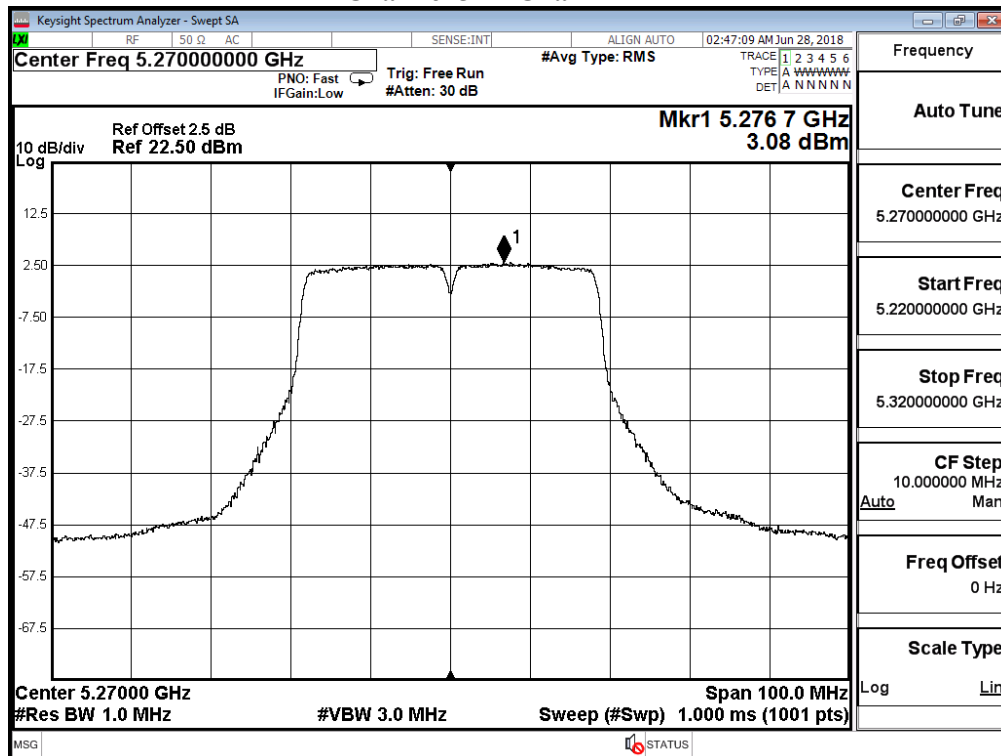
Channel 38 – Chain B



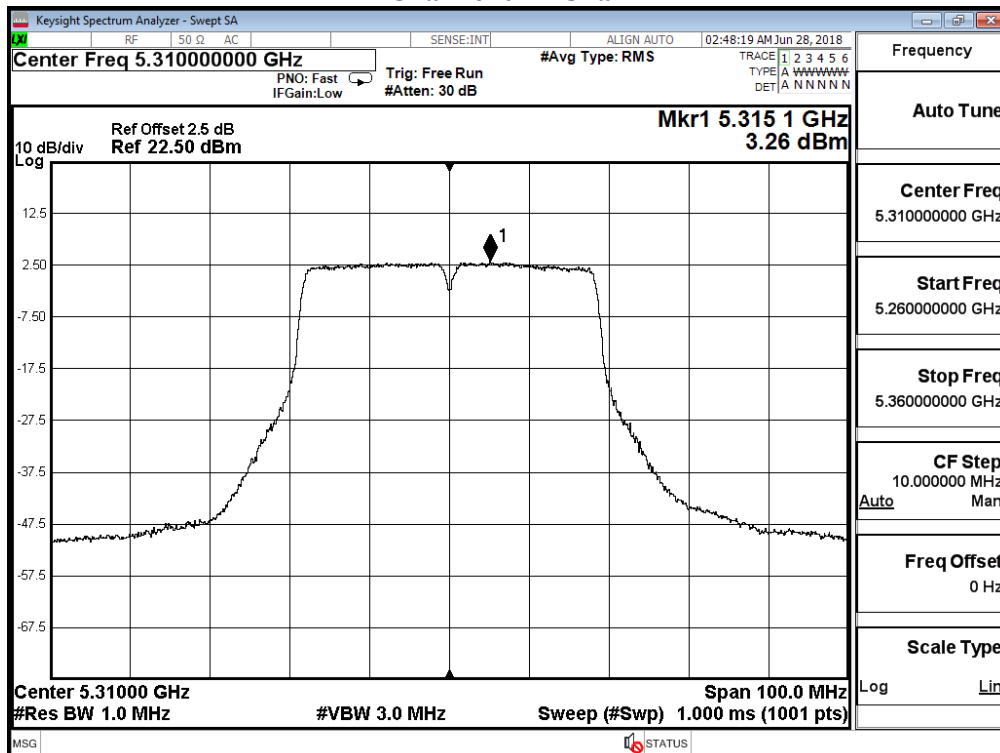
Channel 46 – Chain B



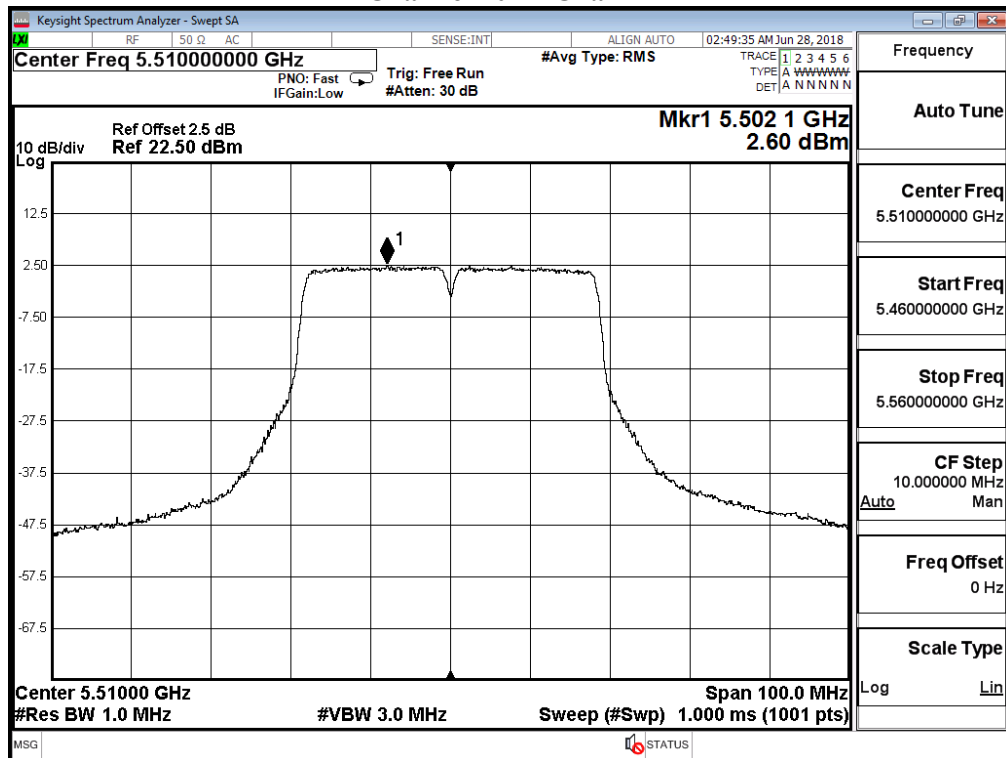
Channel 54 – Chain B



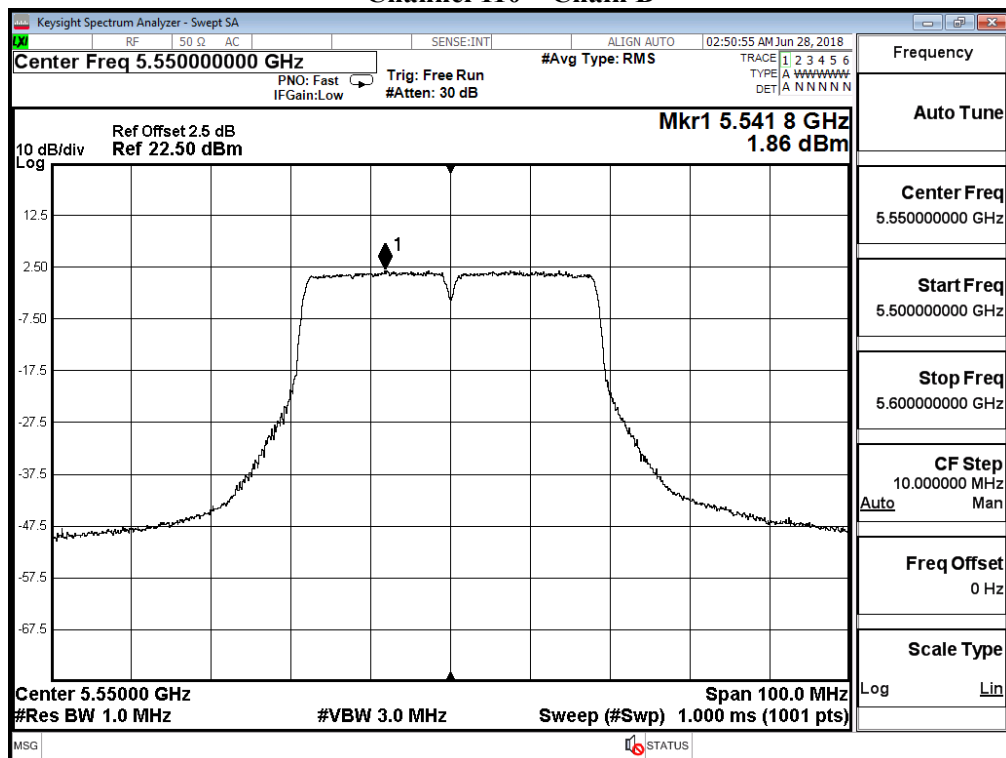
Channel 62 – Chain B



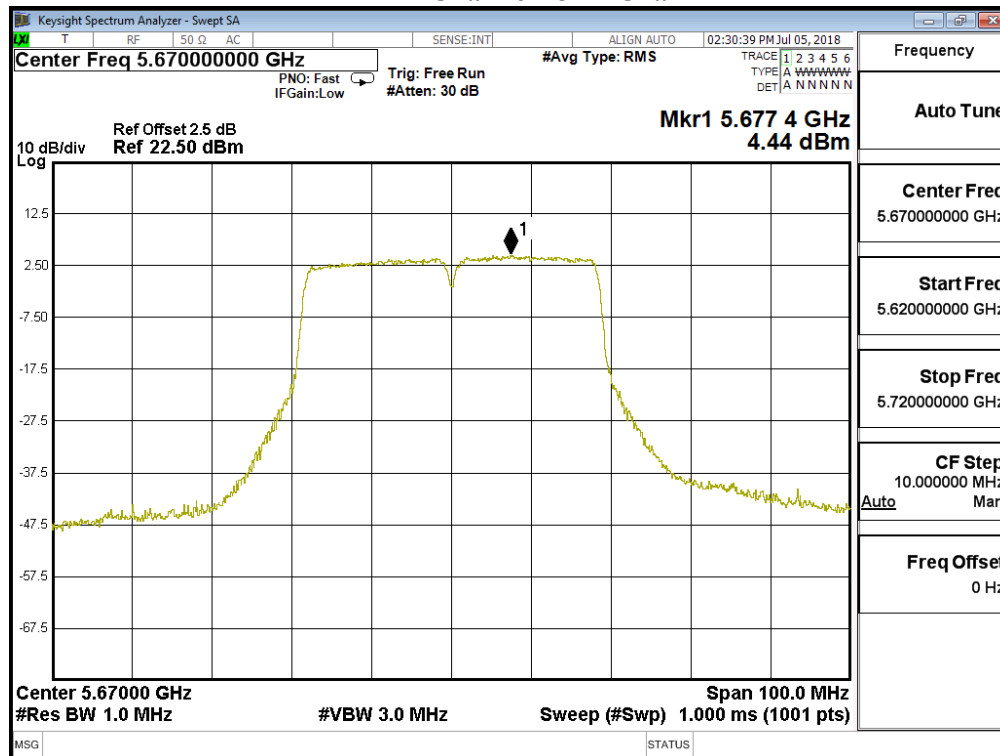
Channel 102 – Chain B



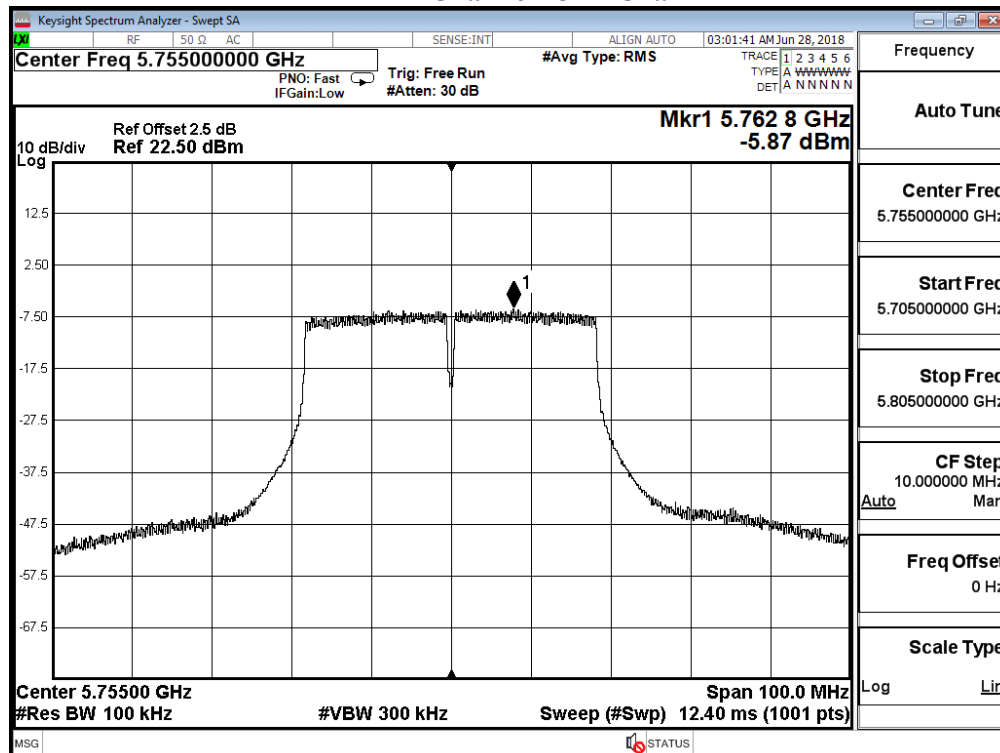
Channel 110 – Chain B



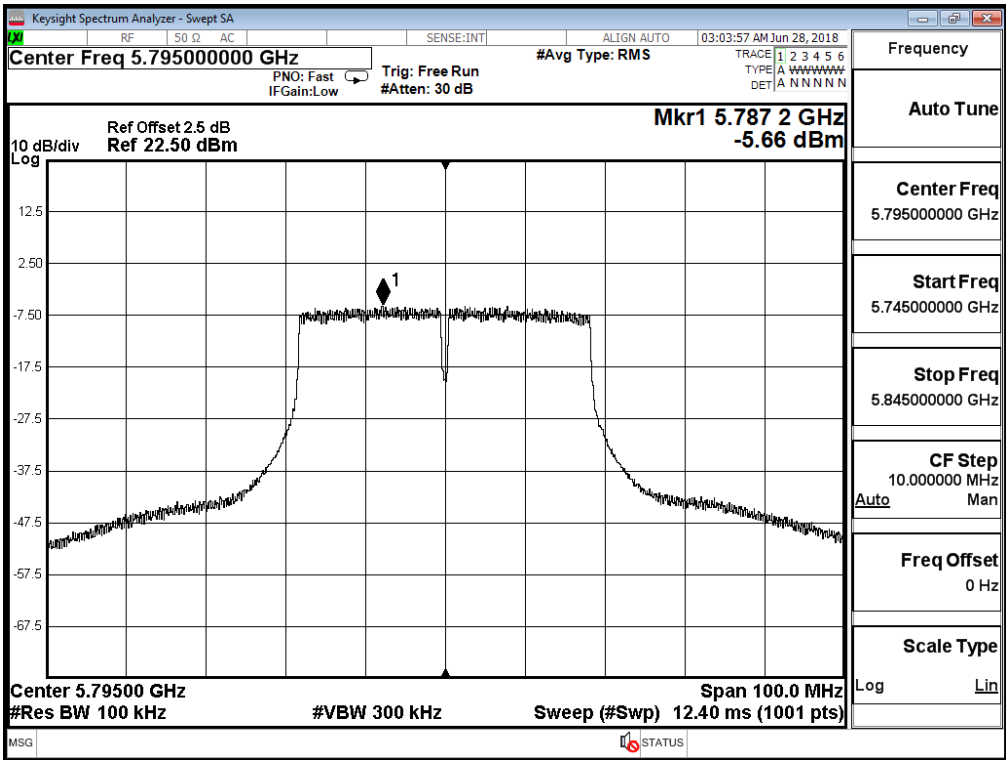
Channel 134 – Chain B



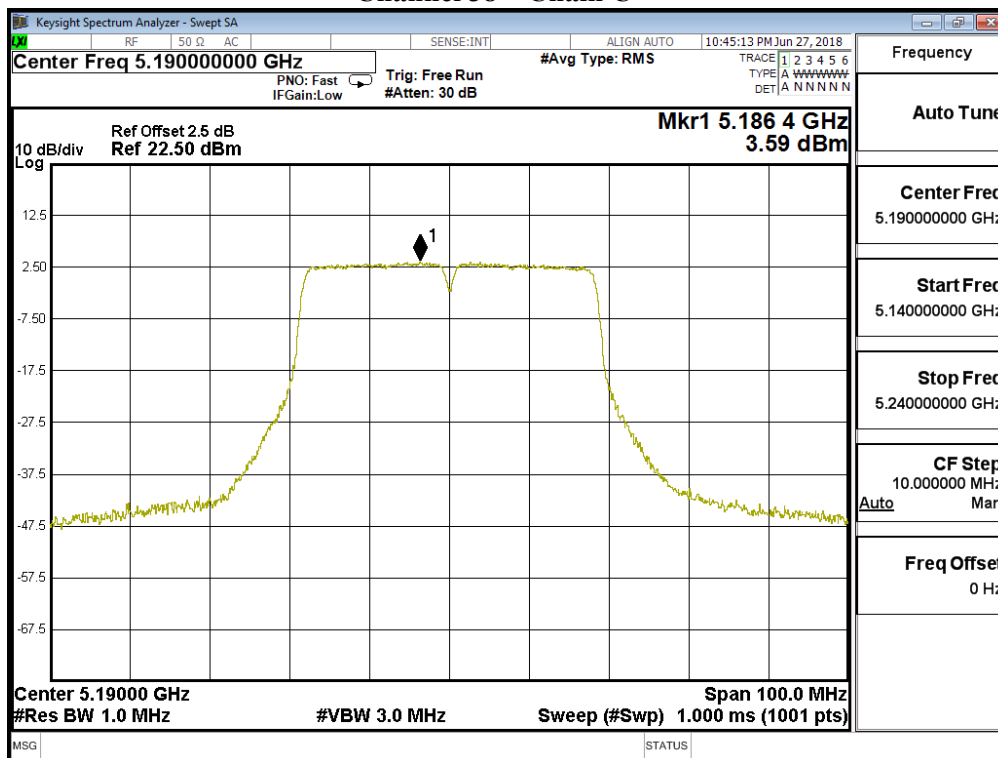
Channel 151 – Chain B



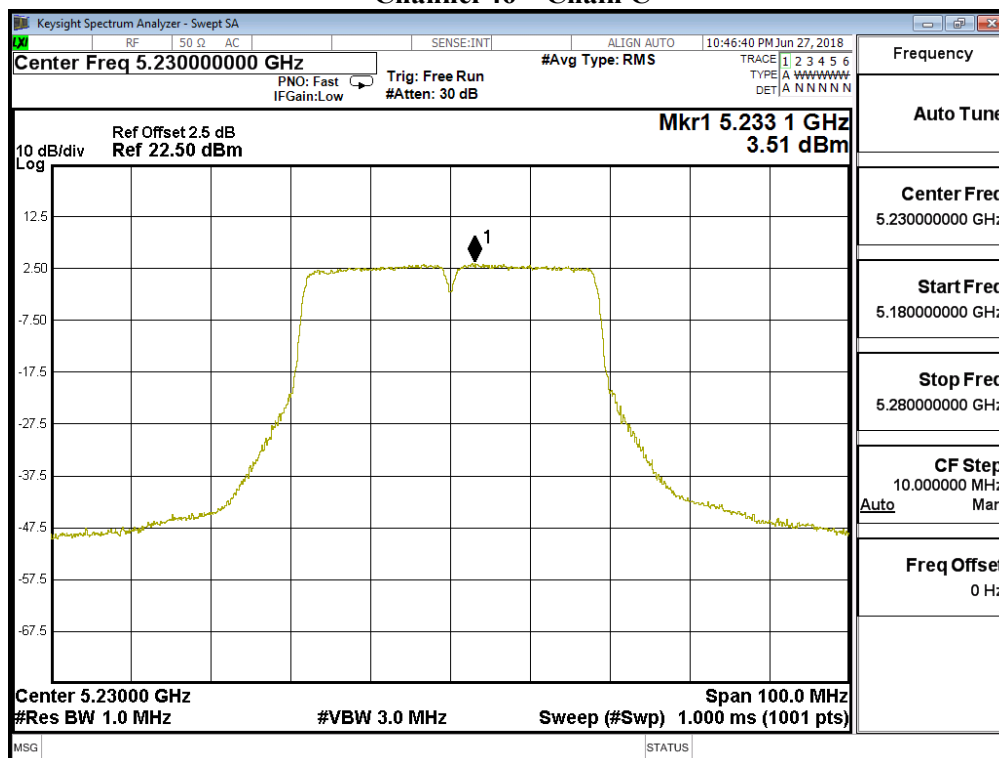
Channel 159 – Chain B



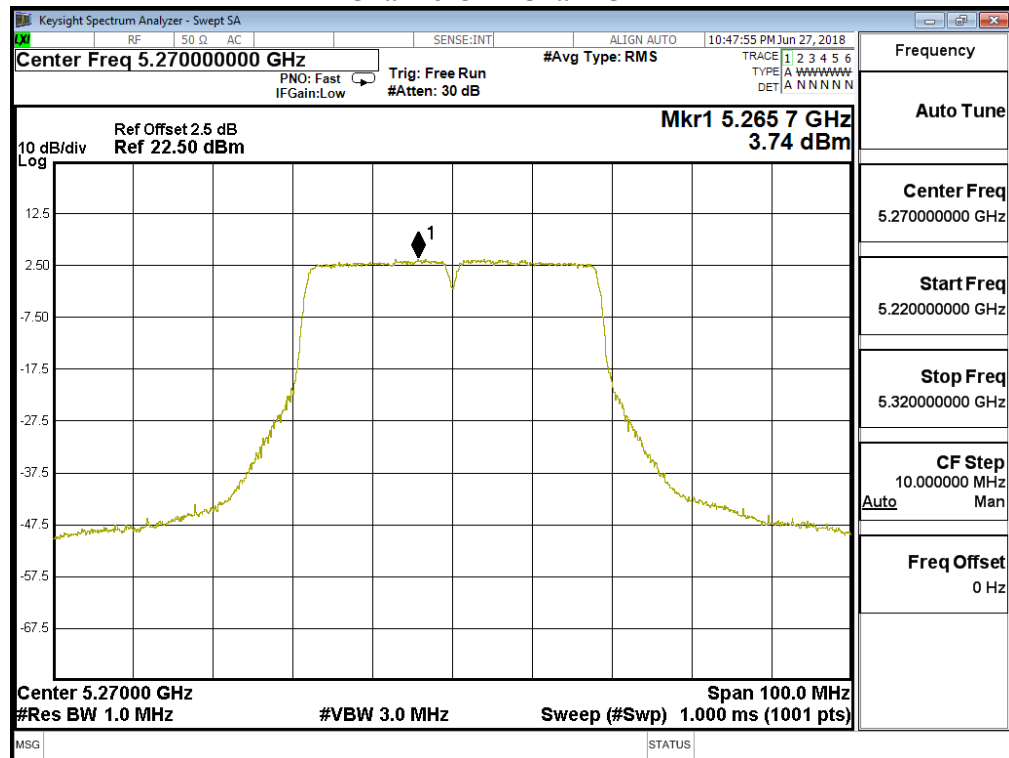
Channel 38 – Chain C



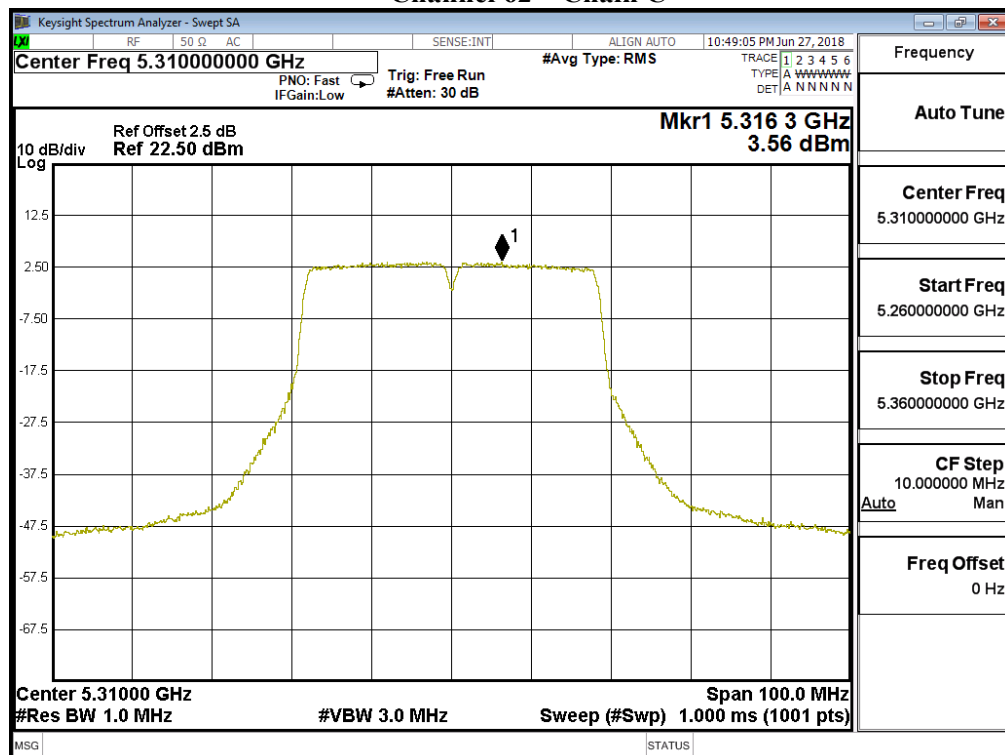
Channel 46 – Chain C



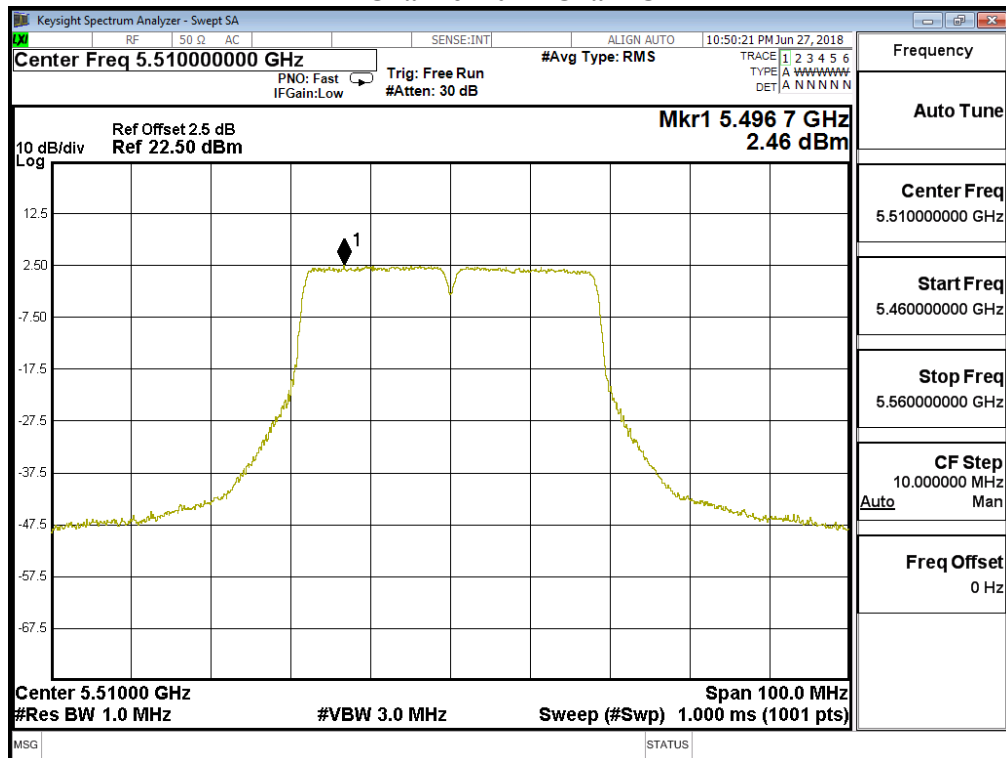
Channel 54 – Chain C



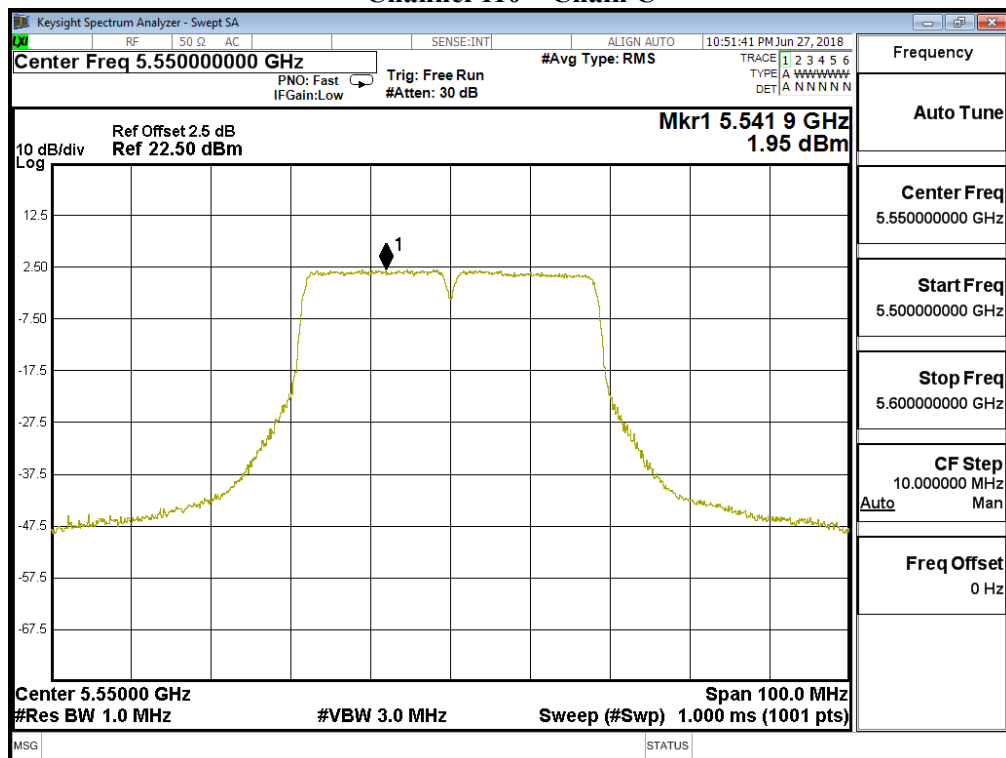
Channel 62 – Chain C



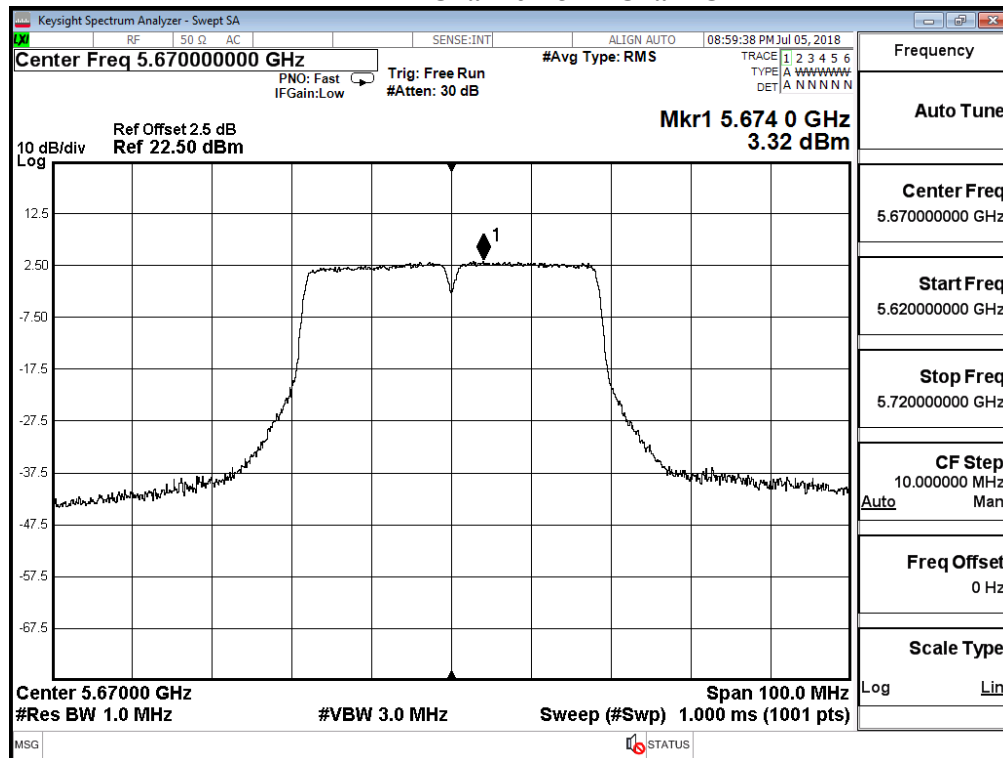
Channel 102 – Chain C



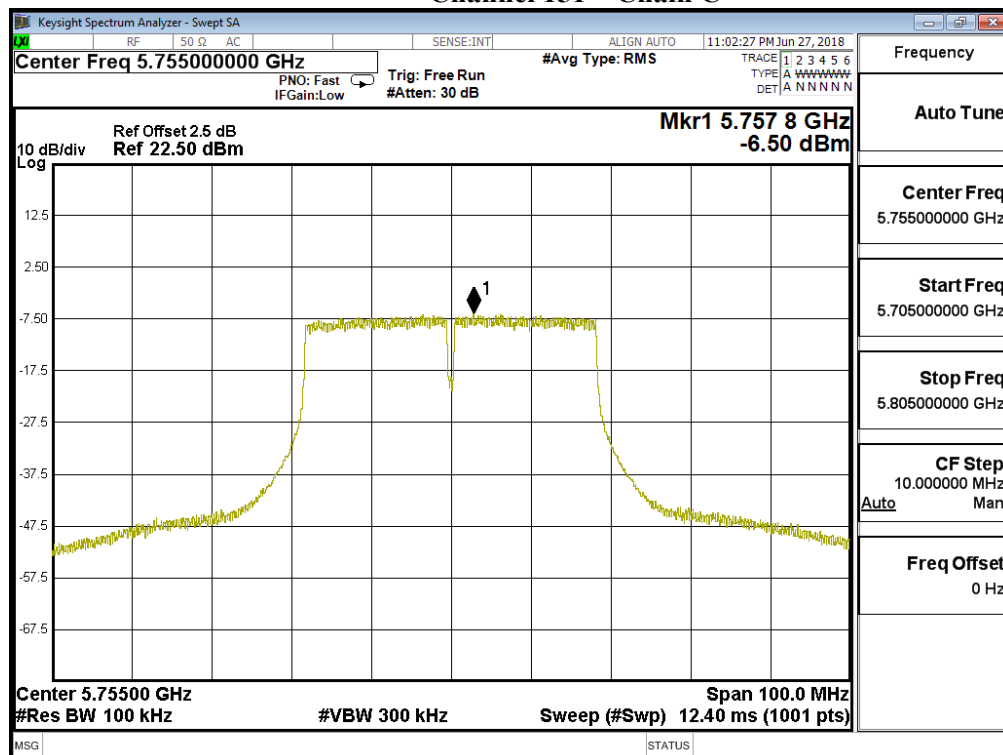
Channel 110 – Chain C



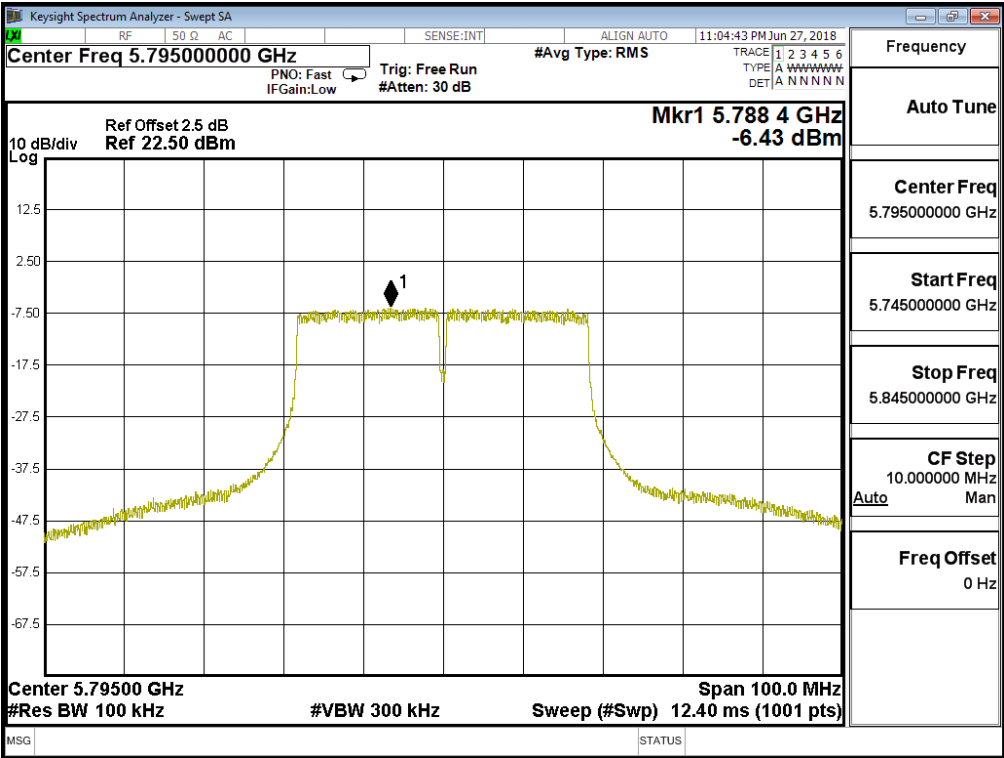
Channel 134 – Chain C



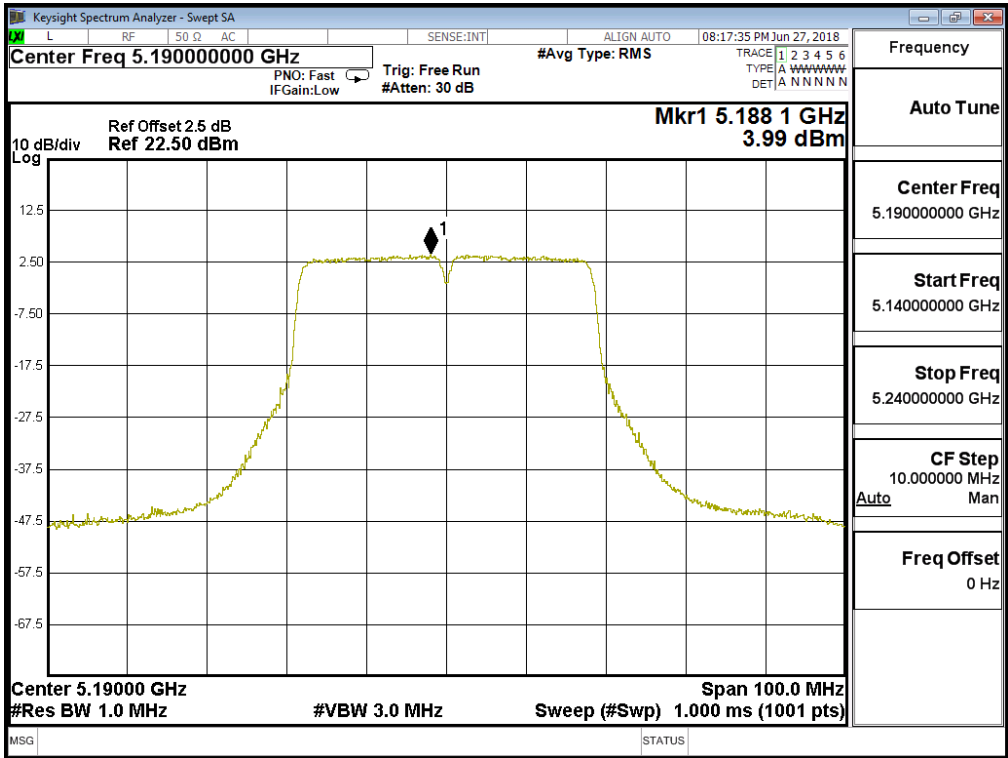
Channel 151 – Chain C



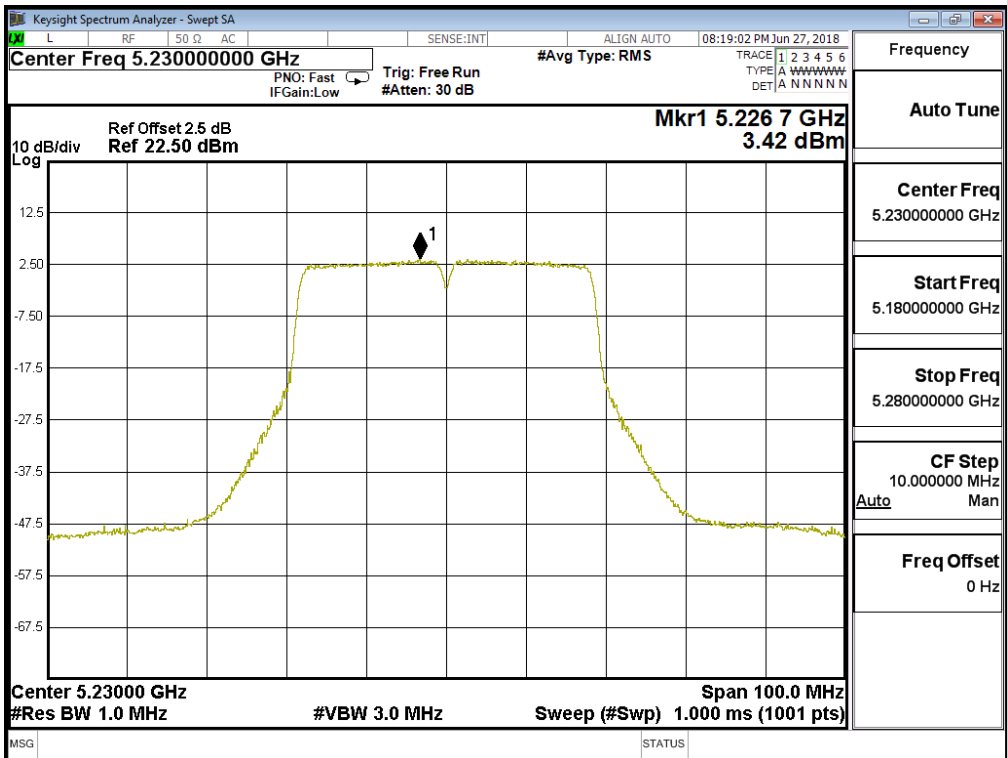
Channel 159 – Chain C



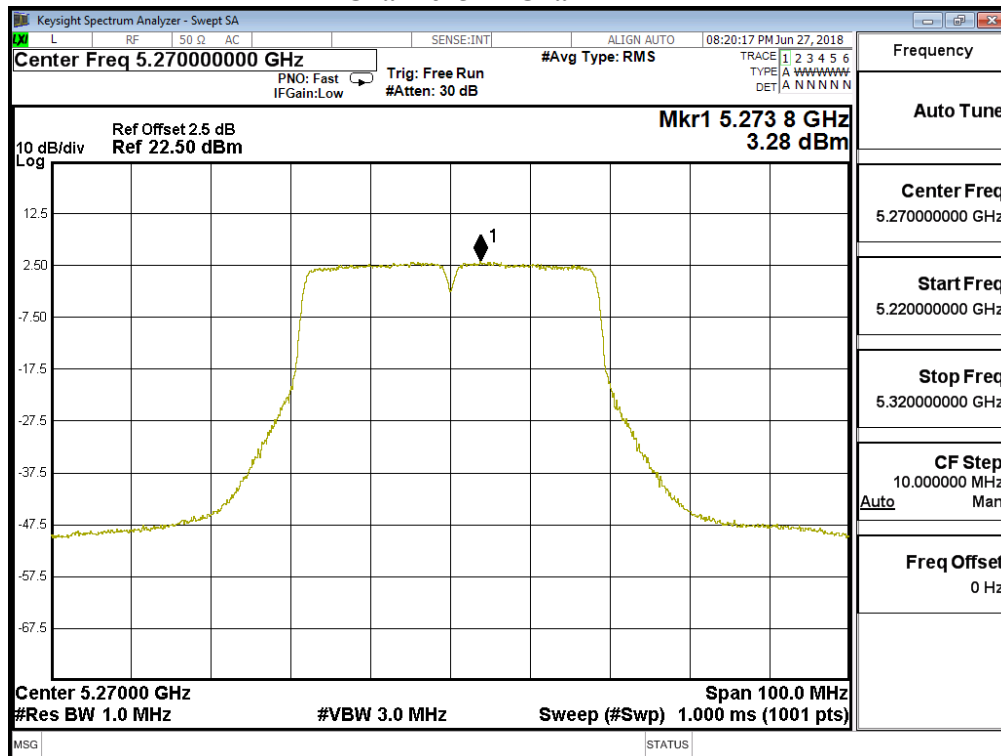
Channel 38 – Chain D



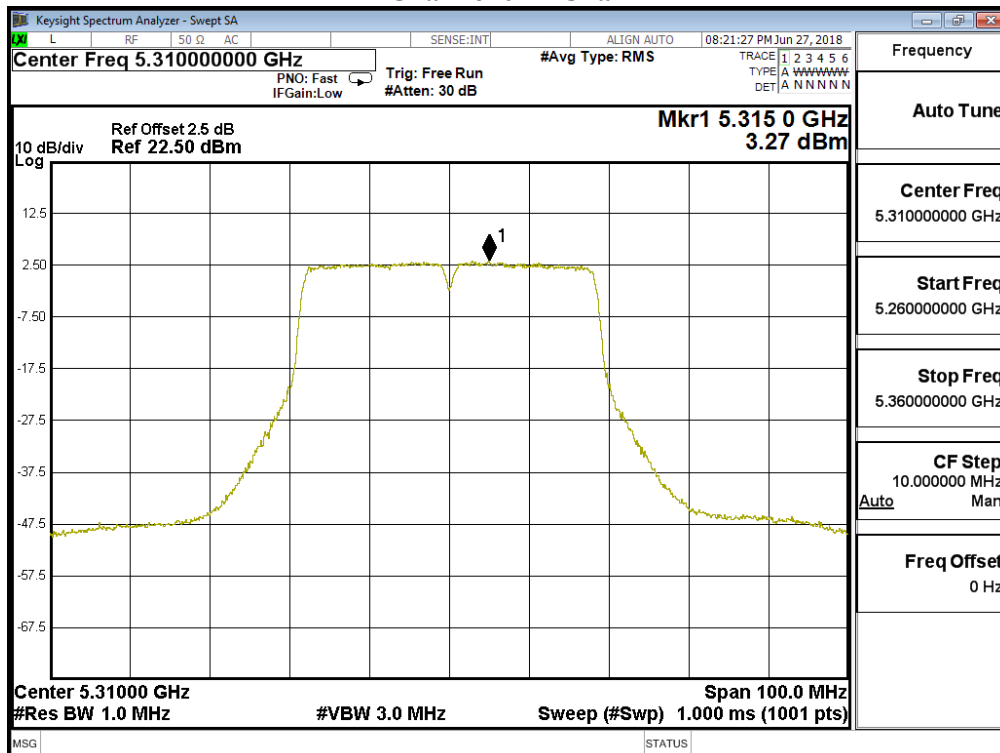
Channel 46 – Chain D



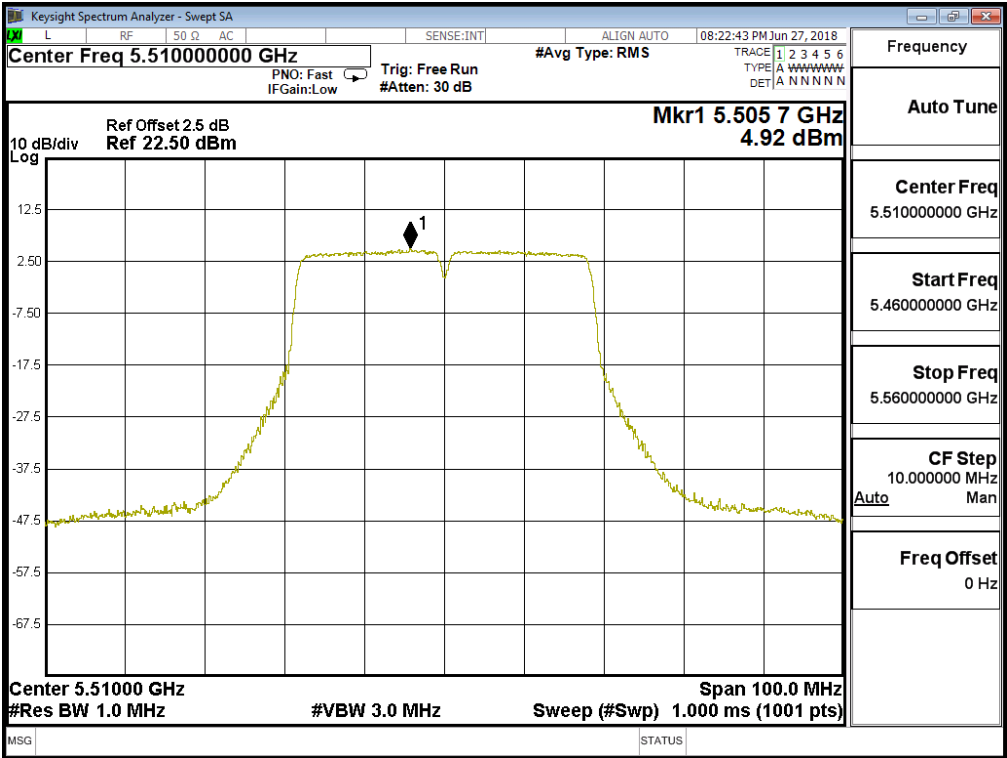
Channel 54 – Chain D



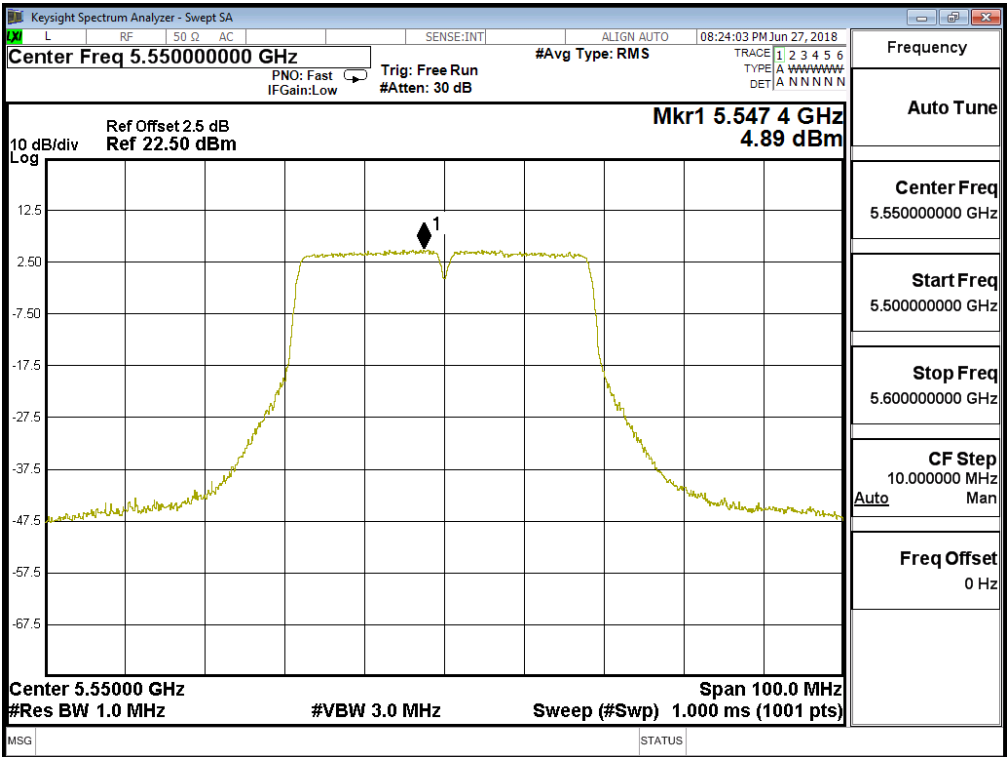
Channel 62 – Chain D



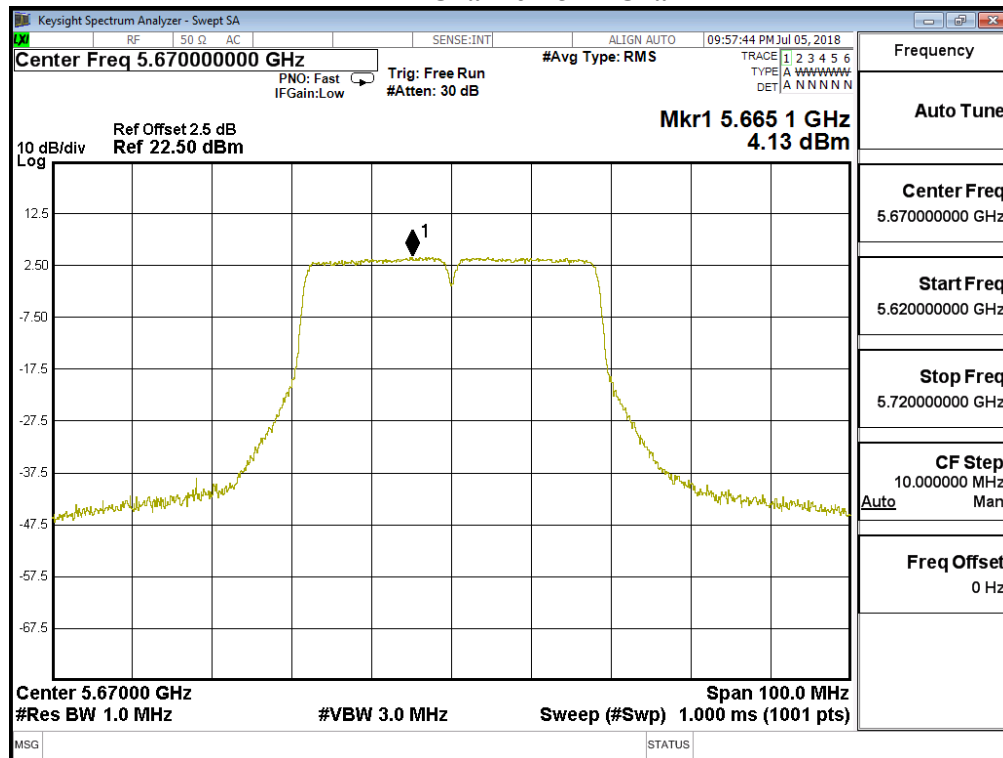
Channel 102 – Chain D



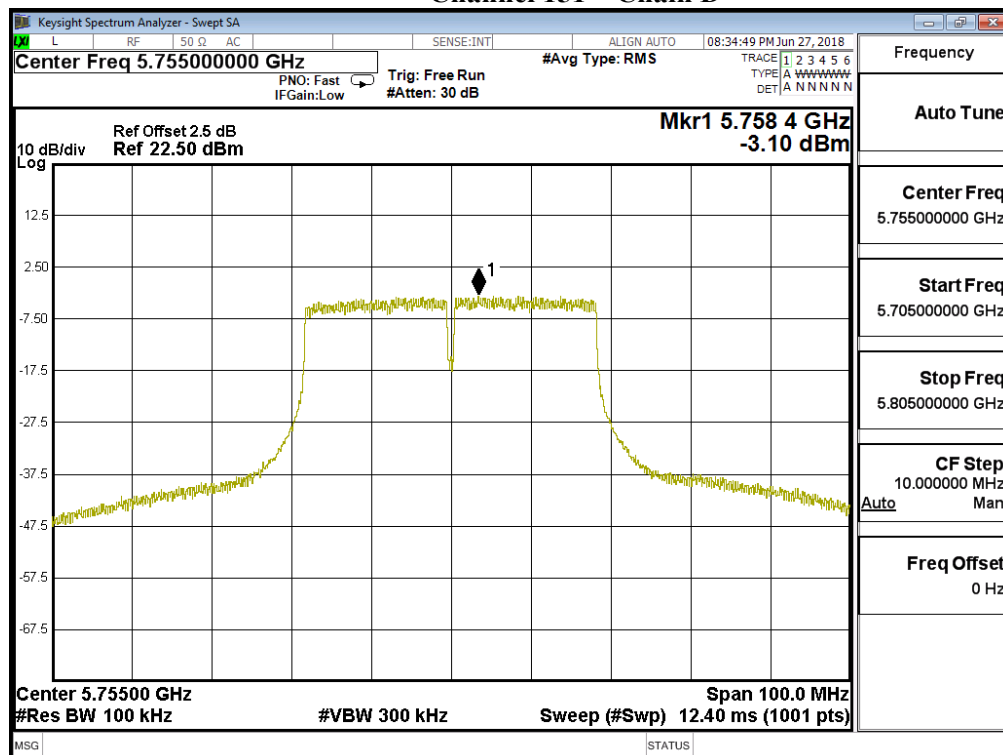
Channel 110 – Chain D



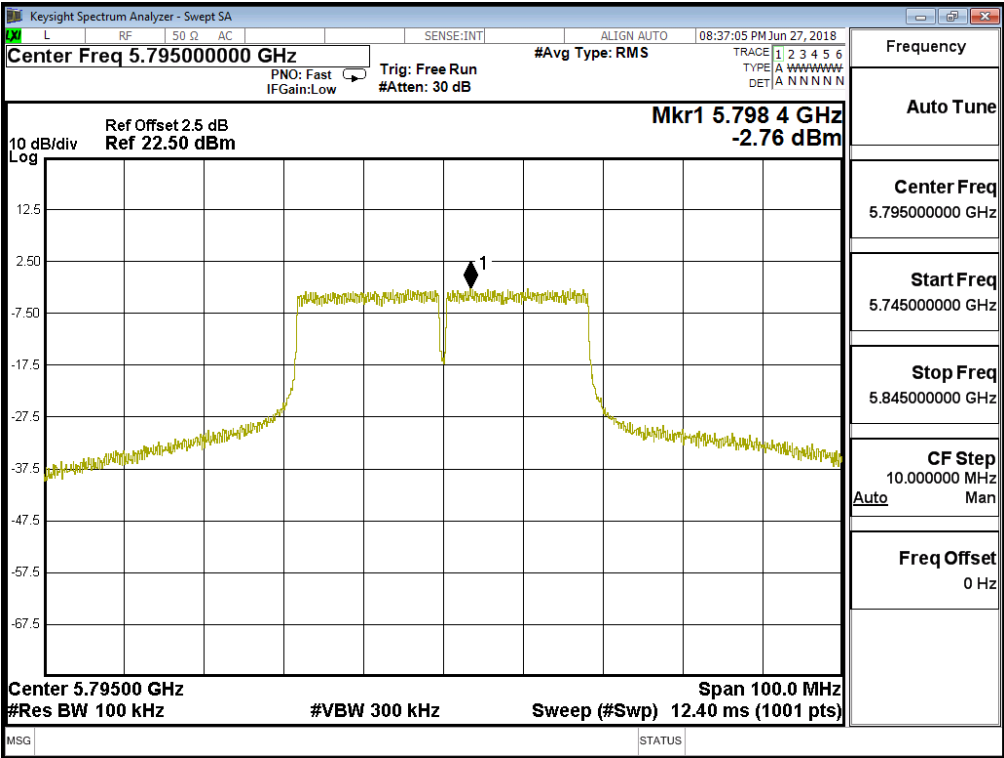
Channel 134 – Chain D



Channel 151 – Chain D



Channel 159 – Chain D

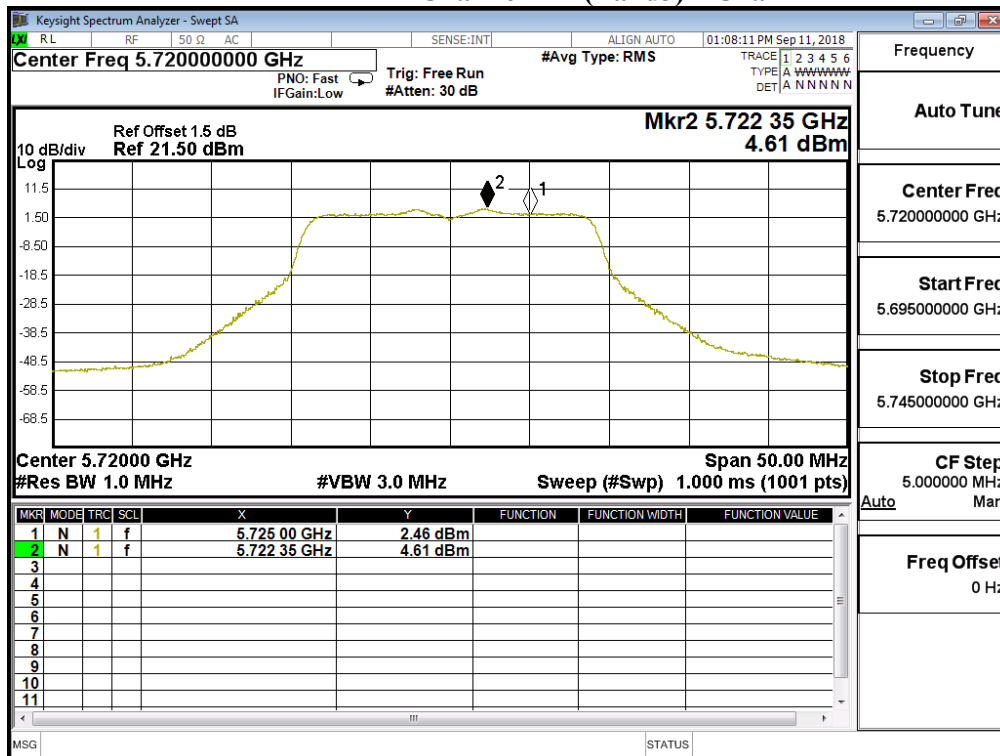


Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Peak Power Spectral Density
 Test Site : No.3 OATS
 Test Date : 2018/08/11
 Test Mode : Mode 4: Transmit (802.11ac-20BW-28.8Mbps) (Antenna No.7)

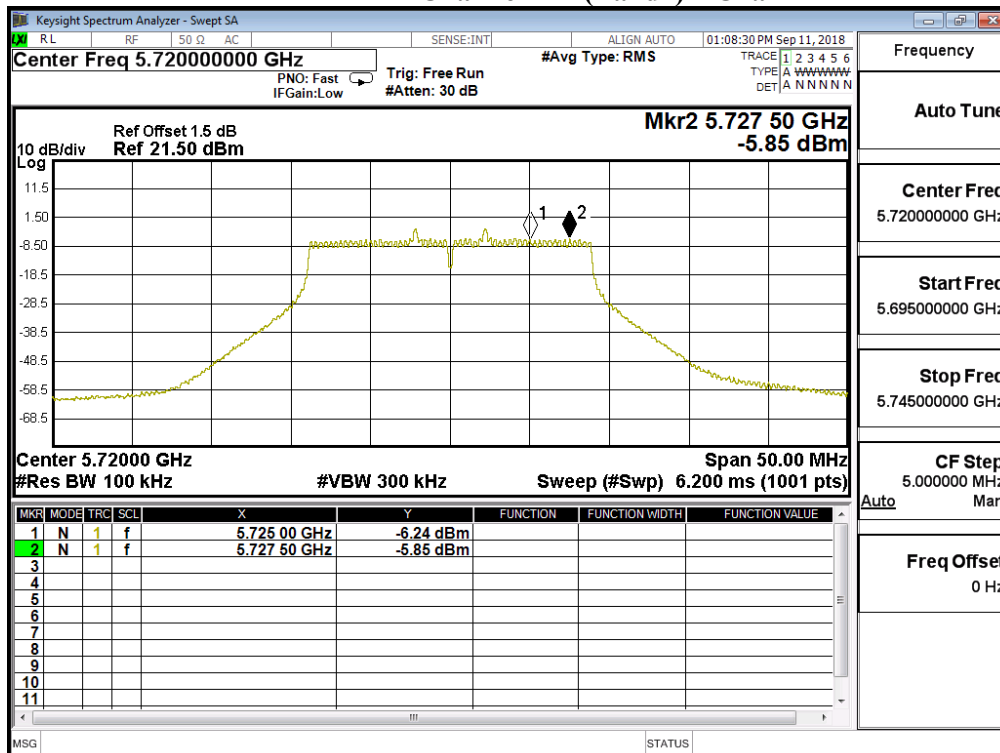
Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	BWCF (dB)	Total PSD (dBm) ¹	Required Limit (dBm)	Result
144	5720(Band3)	A	4.610	--	10.630	<11	Pass
		B	4.200	--	10.220	<11	Pass
		C	4.720	--	10.740	<11	Pass
		D	4.580	--	10.600	<11	Pass
144	5720(Band4)	A	-5.850	6.98	7.150	<30	Pass
		B	-5.620	6.98	7.380	<30	Pass
		C	-6.000	6.98	7.000	<30	Pass
		D	-5.910	6.98	7.090	<30	Pass

Note 1: The quantity $10 \cdot \log 4$ (four antennas) is added to the spectrum peak value according to document 662911 D01.

Channel 144 (Band3) – Chain A



Channel 144 (Band4) – Chain A



[illegible]

Keysight Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT ALIGN AUTO 01:09:13 PM Sep 11, 2018

Center Freq 5.72000000 GHz PNO: Fast IF Gain: Low Trig: Free Run #Avg Type: RMS

Ref Offset 1.5 dB Ref 21.50 dBm Mkr2 5.725 00 GHz -5.62 dBm

10 dB/div Log

Center 5.72000 GHz Span 50.00 MHz
#Res BW 100 kHz #VBW 300 kHz Sweep (#Swp) 6.200 ms (1001 pts)

Mkr	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	5.725 00 GHz	-5.62 dBm			
2	N	1	f	5.725 00 GHz	-5.62 dBm			
3								
4								
5								
6								
7								
8								
9								
10								
11								

MSG STATUS

Frequency

Auto Tune

Center Freq 5.72000000 GHz

Start Freq 5.695000000 GHz

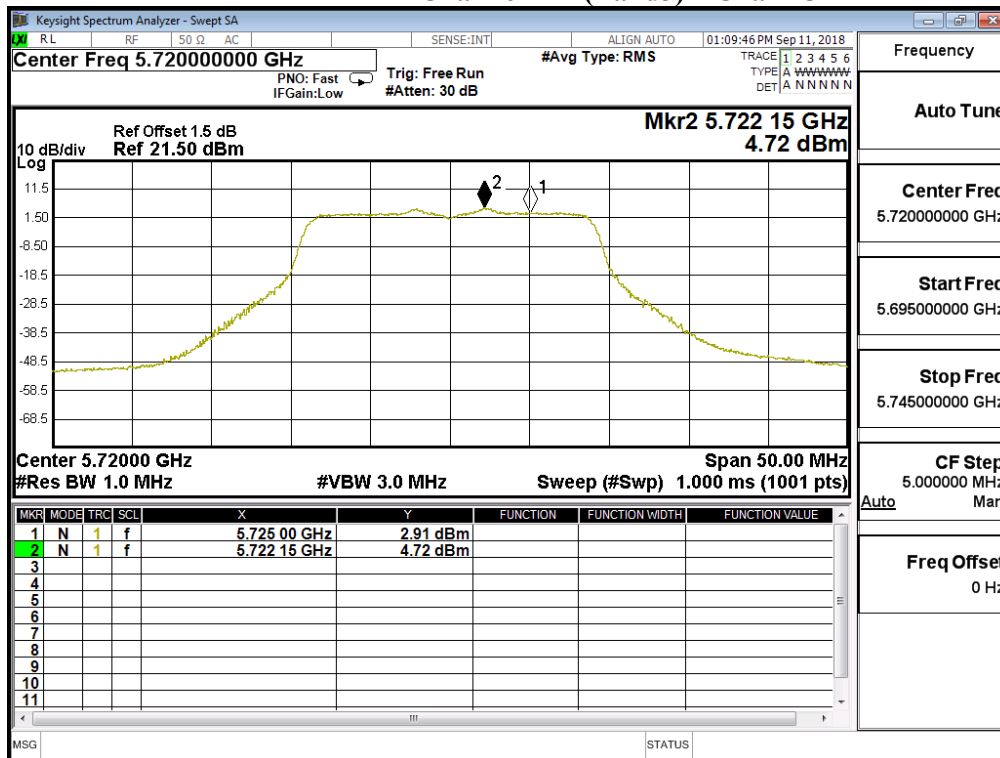
Stop Freq 5.745000000 GHz

CF Step 5.000000 MHz

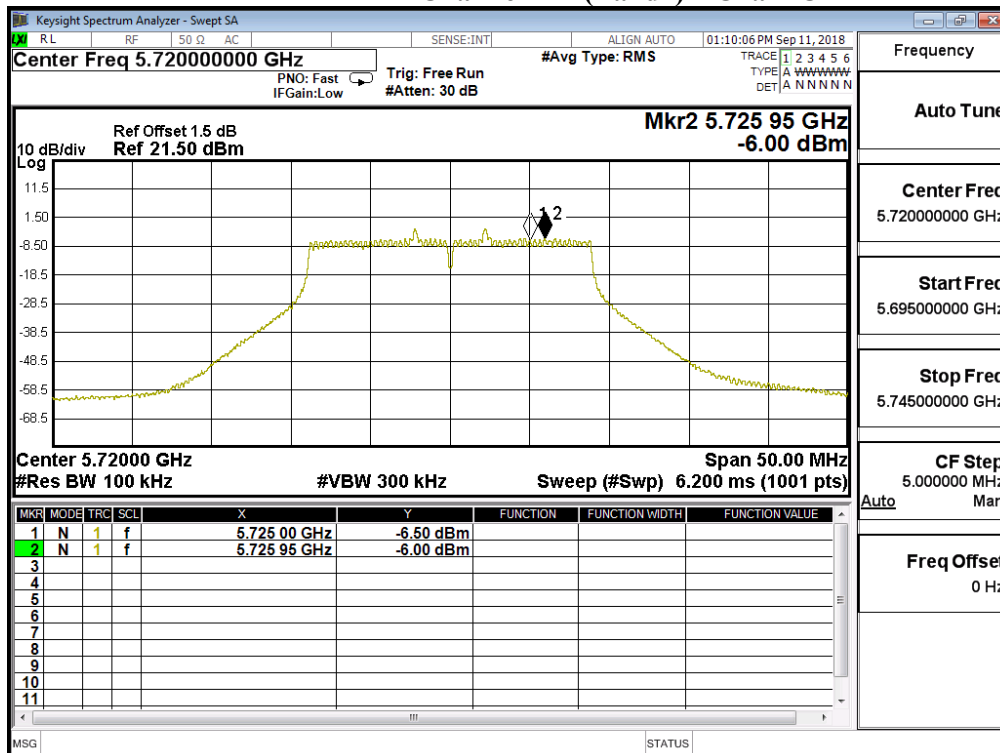
Auto Man

Freq Offset 0 Hz

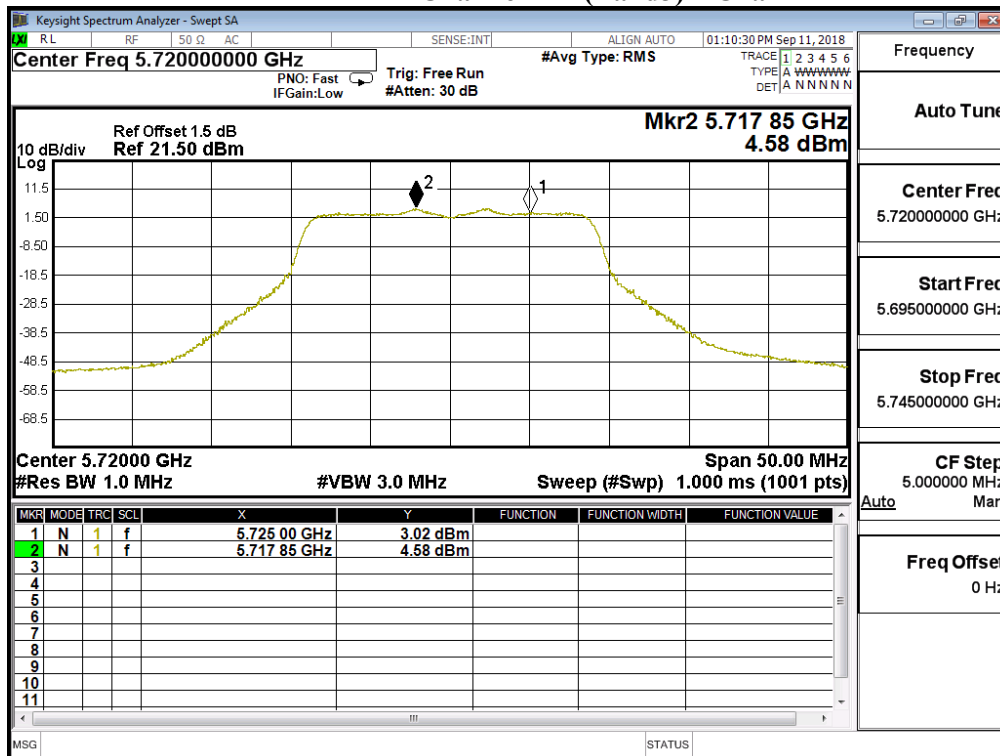
Channel 144 (Band3) – Chain C



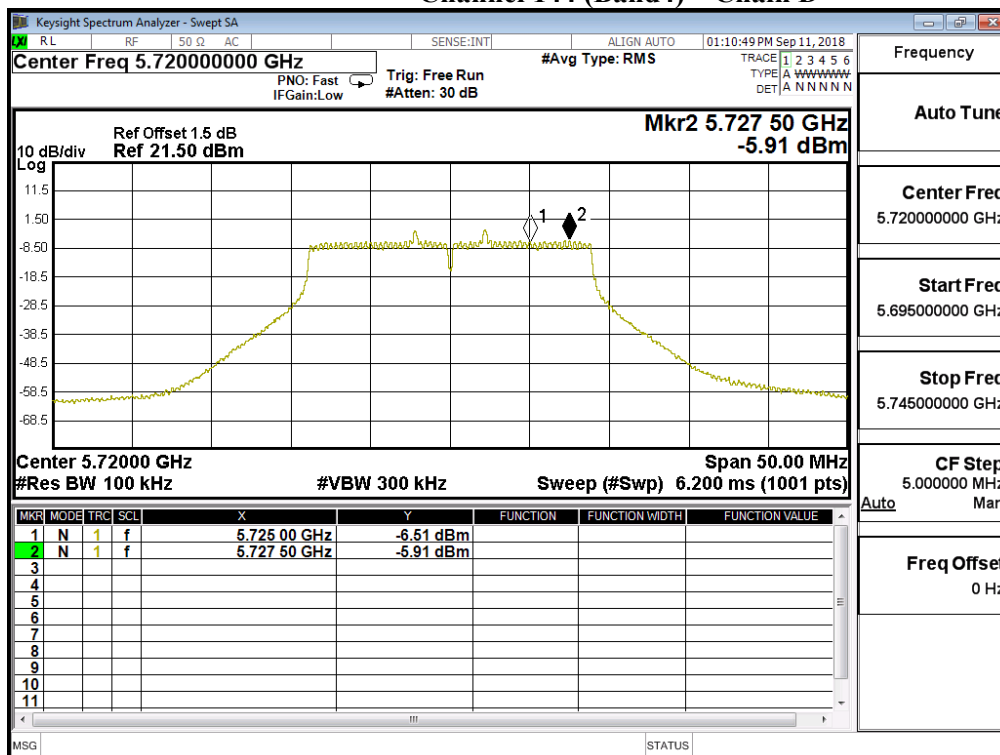
Channel 144 (Band4) – Chain C



Channel 144 (Band3) – Chain D



Channel 144 (Band4) – Chain D

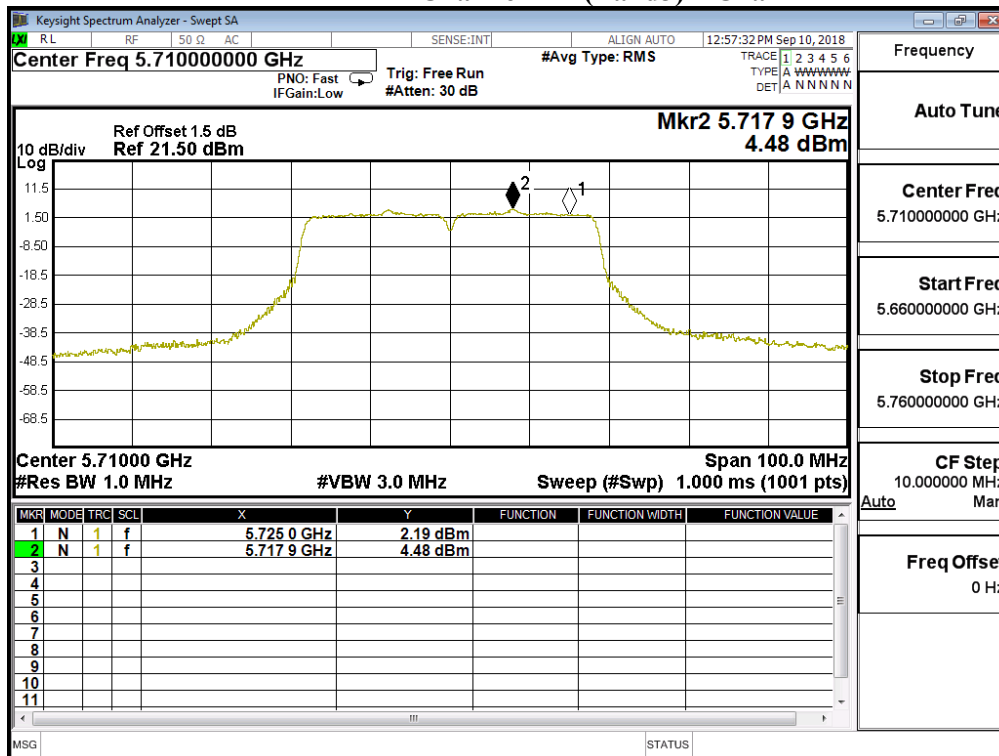


Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Peak Power Spectral Density
 Test Site : No.3 OATS
 Test Date : 2018/08/11
 Test Mode : Mode 5: Transmit (802.11ac-40BW-60Mbps) (Antenna No.7)

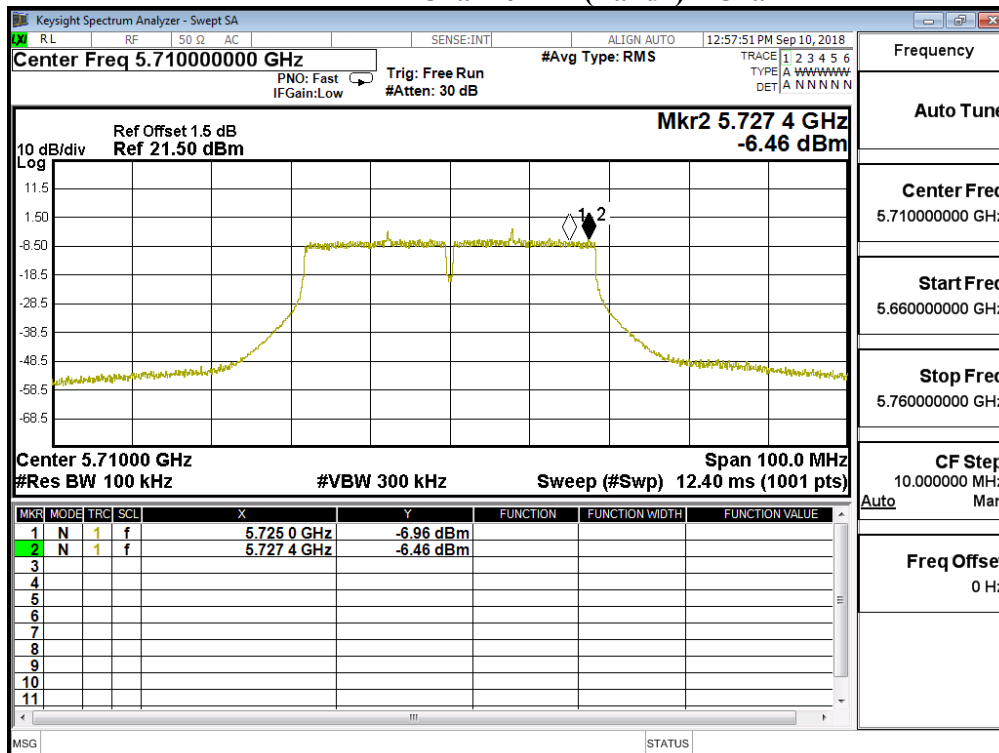
Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	BWCF (dB)	Total PPSD (dBm) ¹	Required Limit (dBm)	Result
142	5710(Band3)	A	4.480	--	10.500	<11	Pass
		B	4.690	--	10.710	<11	Pass
		C	4.500	--	10.520	<11	Pass
		D	4.540	--	10.560	<11	Pass
142	5710(Band4)	A	-6.460	6.98	6.540	<30	Pass
		B	-6.080	6.98	6.920	<30	Pass
		C	-5.810	6.98	7.190	<30	Pass
		D	-6.250	6.98	6.750	<30	Pass

Note 1: The quantity $10 \cdot \log 4$ (four antennas) is added to the spectrum peak value according to document 662911 D01.

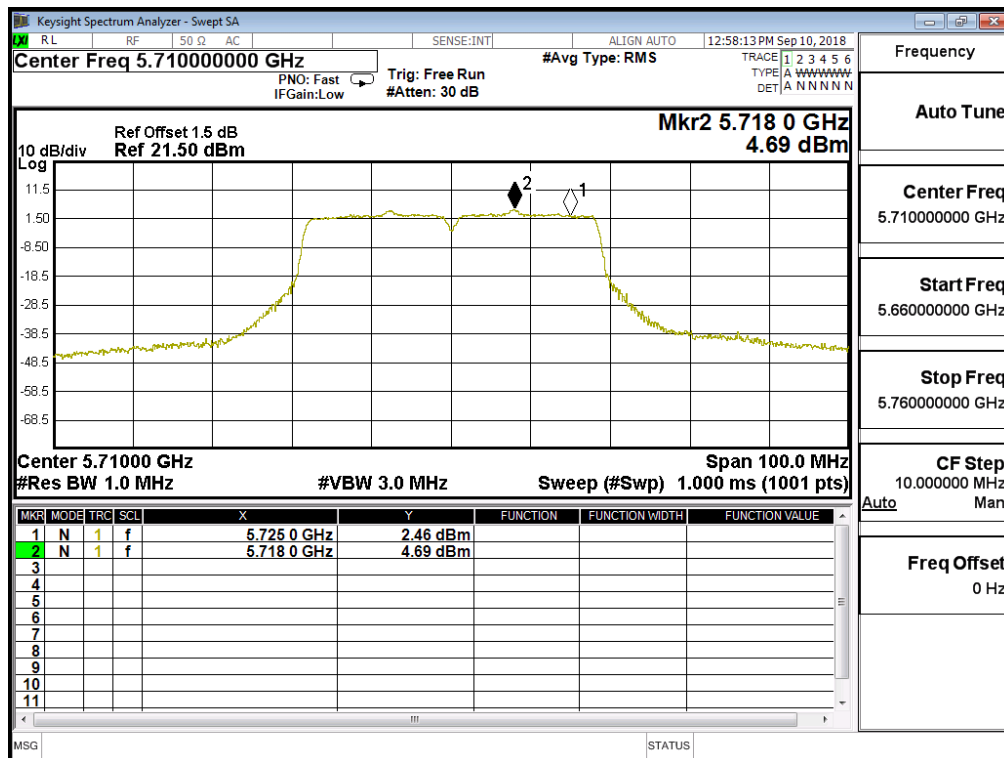
Channel 142 (Band3) – Chain A



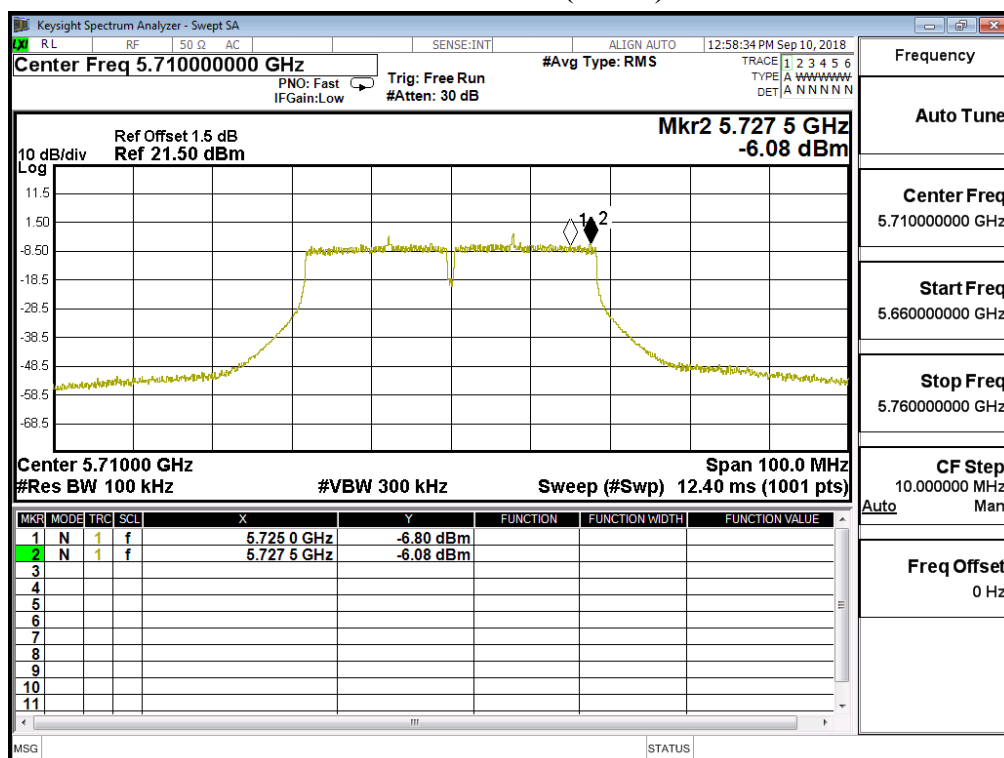
Channel 142 (Band4) – Chain A



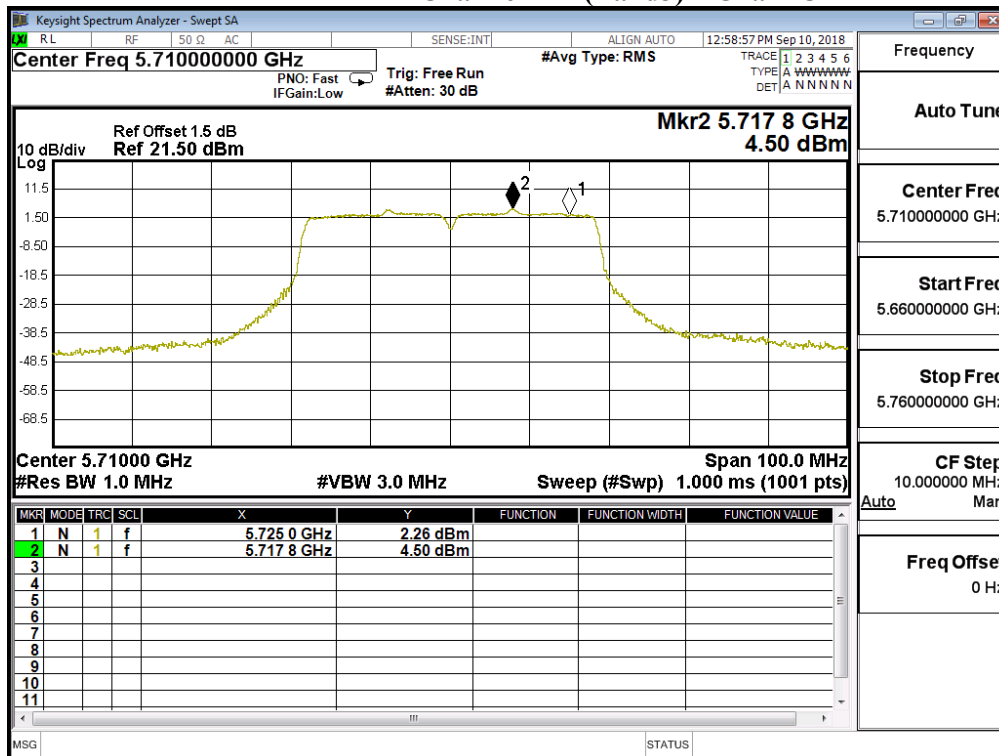
Channel 142 (Band3) – Chain B



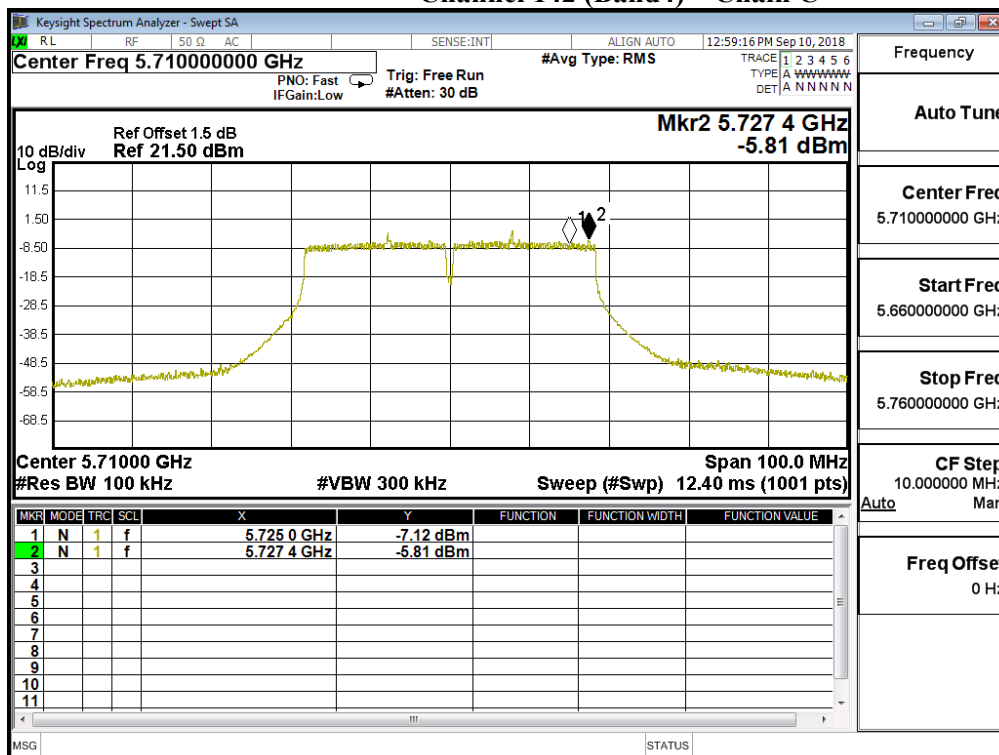
Channel 142 (Band4) – Chain B



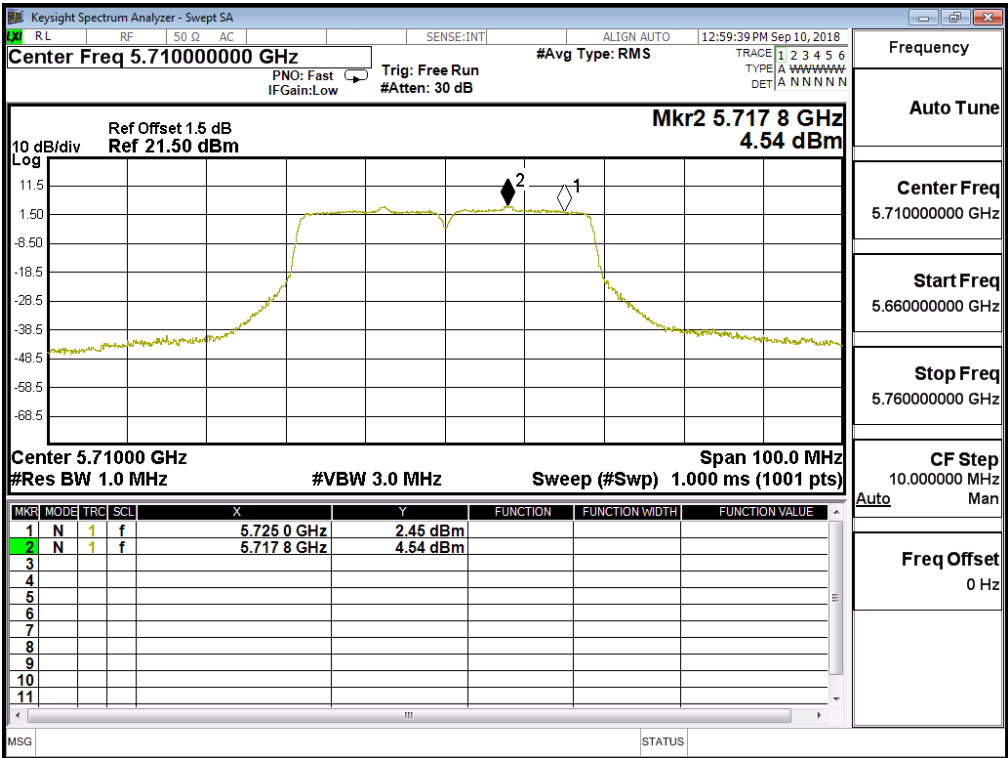
Channel 142 (Band3) – Chain C



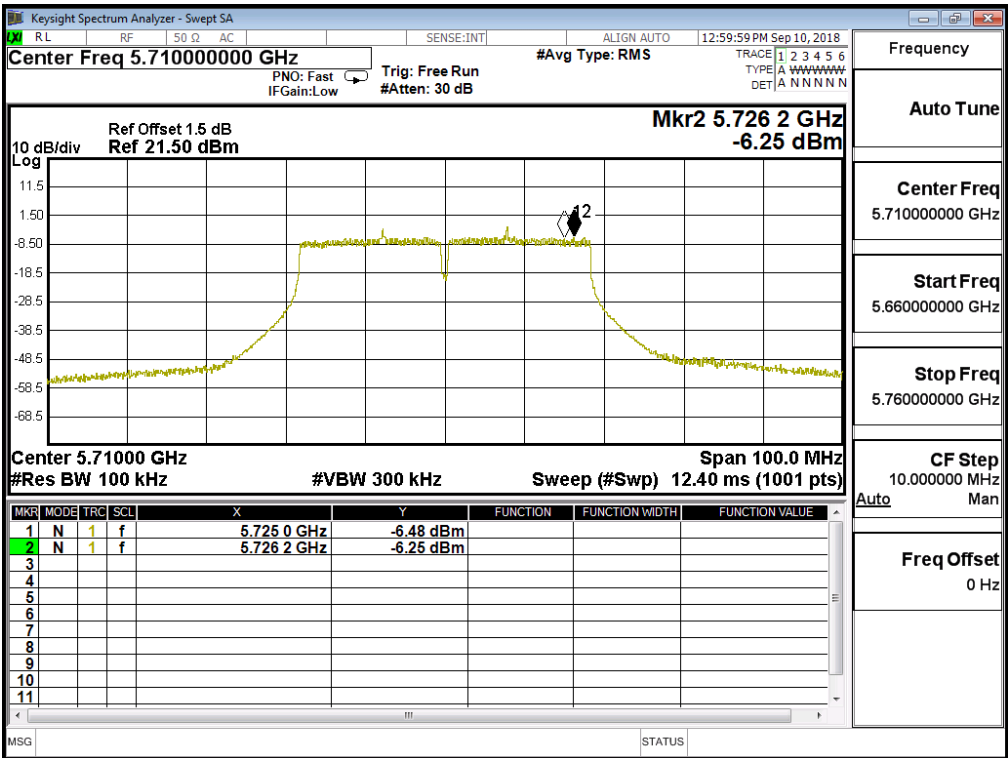
Channel 142 (Band4) – Chain C



Channel 142 (Band3) – Chain D



Channel 142 (Band4) – Chain D



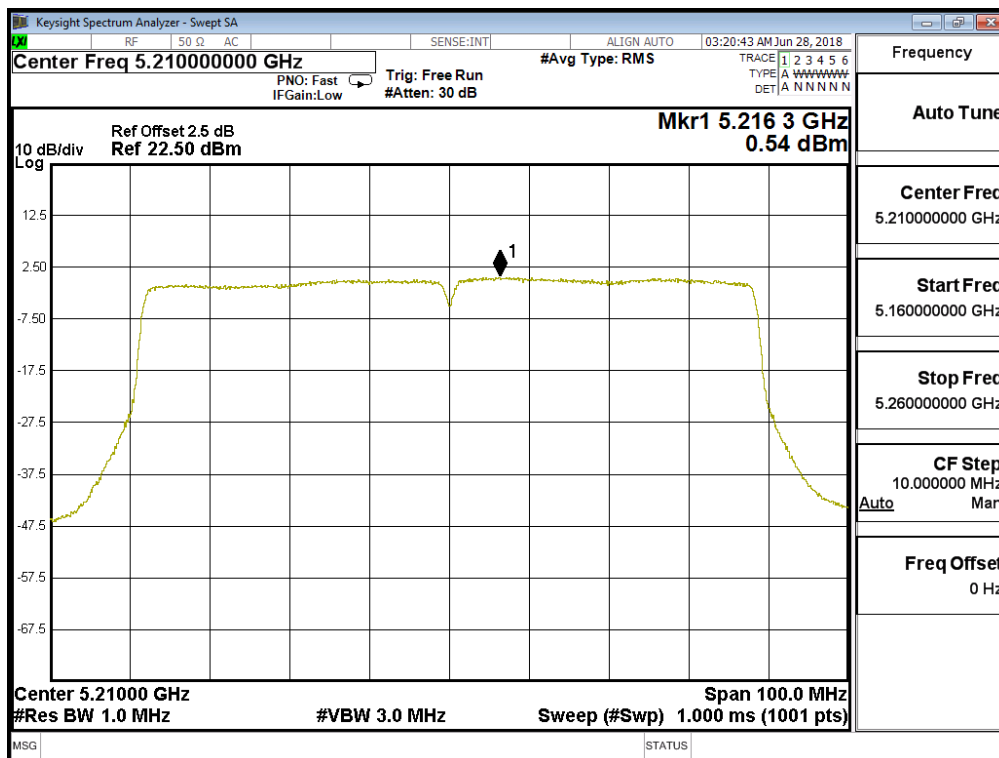
Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Peak Power Spectral Density
 Test Site : No.3 OATS
 Test Date : 2018/06/14
 Test Mode : Mode 6: Transmit (802.11ac-80BW-130Mbps) (Antenna No.7)

Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	Total PSD (dBm)	Required Limit (dBm)	Result
42	5210	A	0.540	6.560	<11	Pass
		B	-0.210	5.810	<11	Pass
		C	0.200	6.220	<11	Pass
		D	0.480	6.500	<11	Pass
58	5290	A	0.150	6.170	<11	Pass
		B	0.380	6.400	<11	Pass
		C	1.020	7.040	<11	Pass
		D	0.700	6.720	<11	Pass
106	5530	A	-0.270	5.750	<11	Pass
		B	-0.940	5.080	<11	Pass
		C	-0.660	5.360	<11	Pass
		D	1.760	7.780	<11	Pass
122	5610	A	-0.190	5.830	<11	Pass
		B	-1.220	4.800	<11	Pass
		C	-1.010	5.010	<11	Pass
		D	1.770	7.790	<11	Pass
138	5690 (Band3)	A	-1.430	4.590	<11	Pass
		B	1.720	7.740	<11	Pass
		C	0.600	6.620	<11	Pass
		D	0.440	6.460	<11	Pass

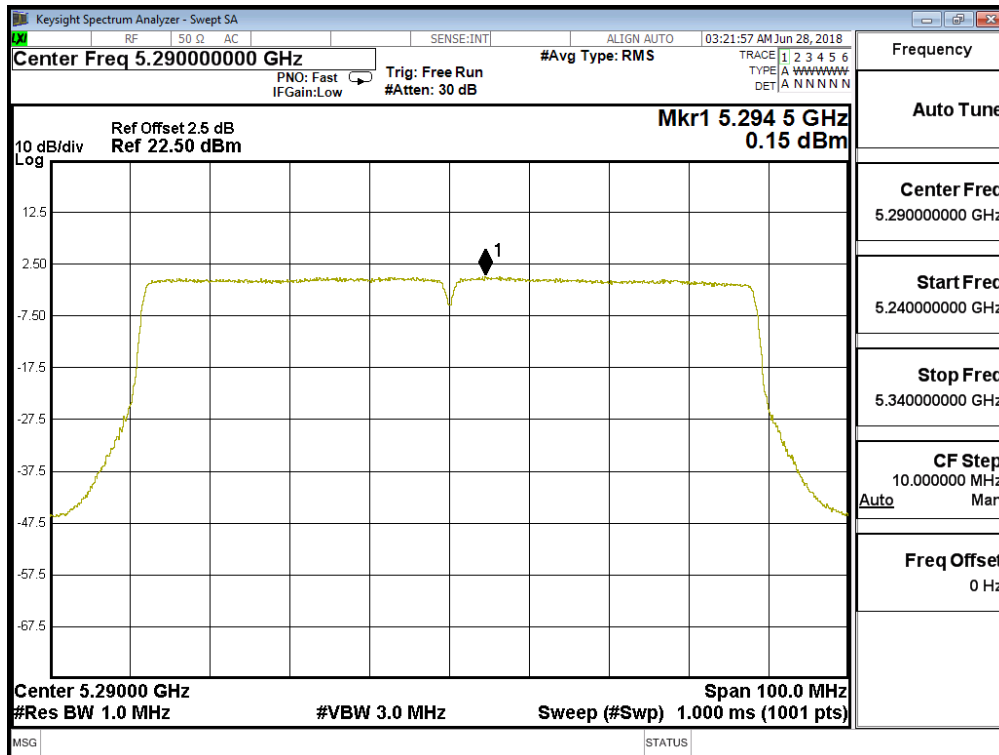
Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	BWCF (dB)	Total PSD (dBm) ₁	Required Limit (dBm)	Result
138	5690 (Band4)	A	-11.080	6.98	1.920	<30	Pass
		B	-8.080	6.98	4.920	<30	Pass
		C	-9.470	6.98	3.530	<30	Pass
		D	-9.200	6.98	3.800	<30	Pass
155	5775	A	-6.400	6.98	6.600	<30	Pass
		B	-6.910	6.98	6.090	<30	Pass
		C	-8.110	6.98	4.890	<30	Pass
		D	-4.430	6.98	8.570	<30	Pass

Note 1: The quantity $10 \cdot \log 4$ (four antennas) is added to the spectrum peak value according to document 662911 D01.

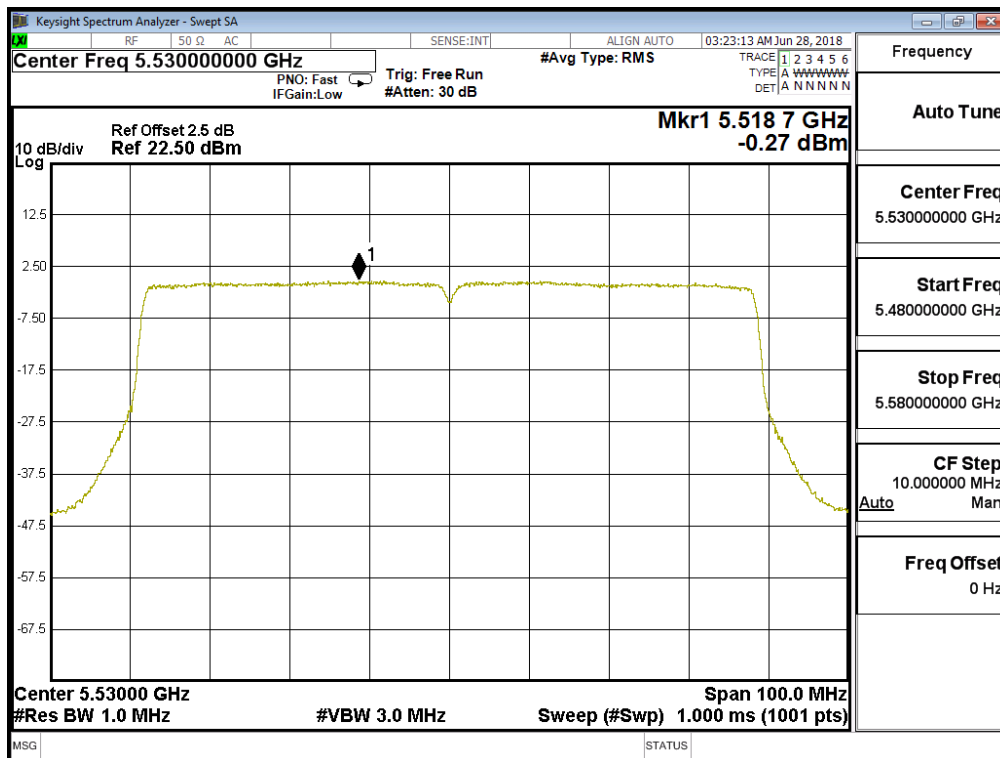
Channel 42 – Chain A



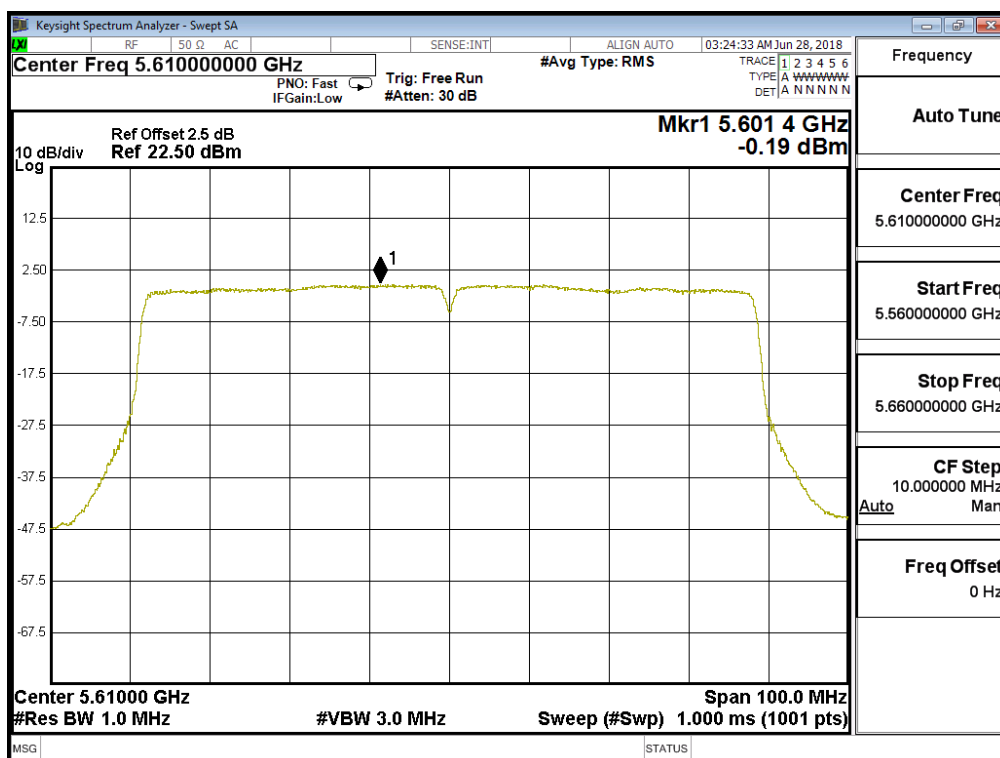
Channel 58 – Chain A



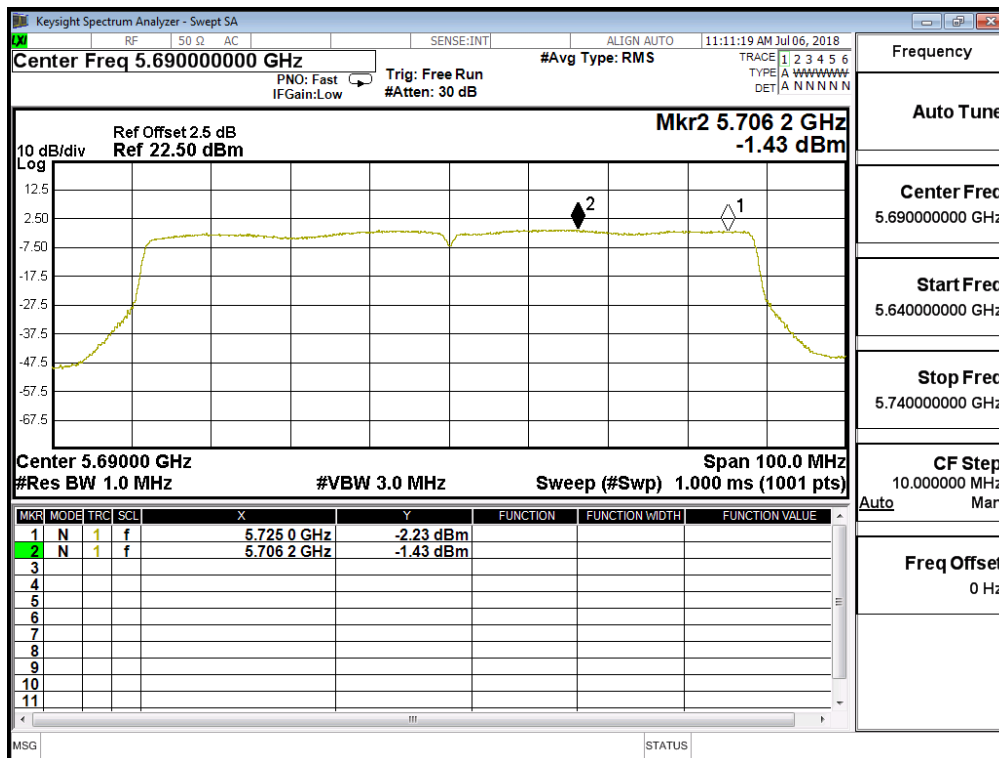
Channel 106 – Chain A



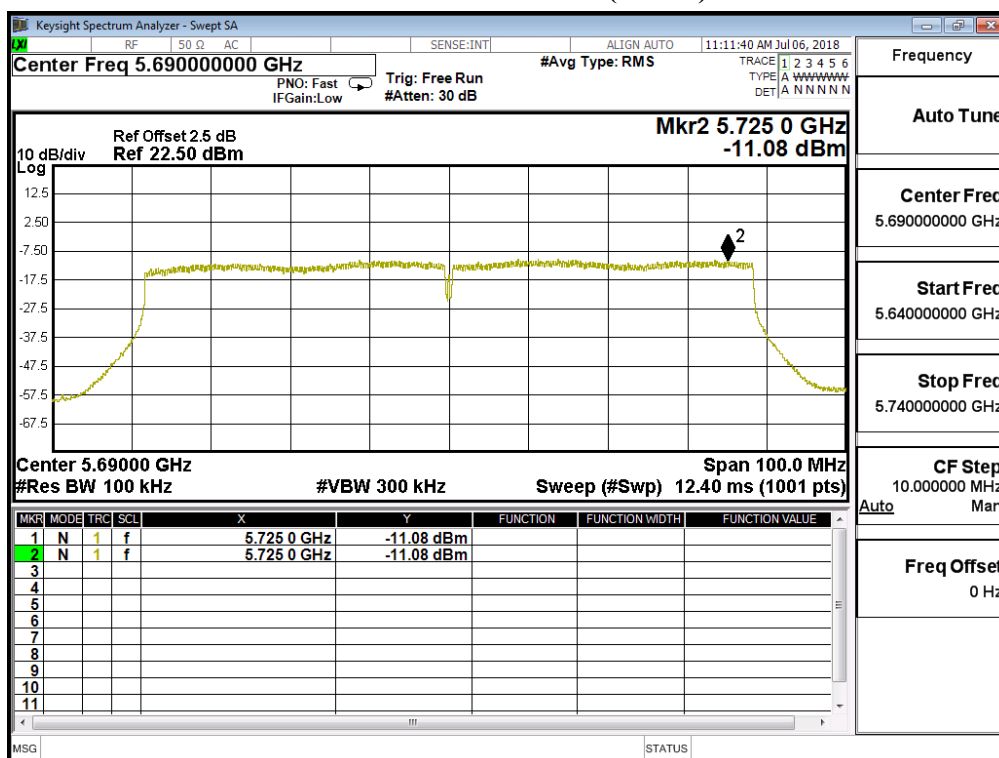
Channel 122 – Chain A



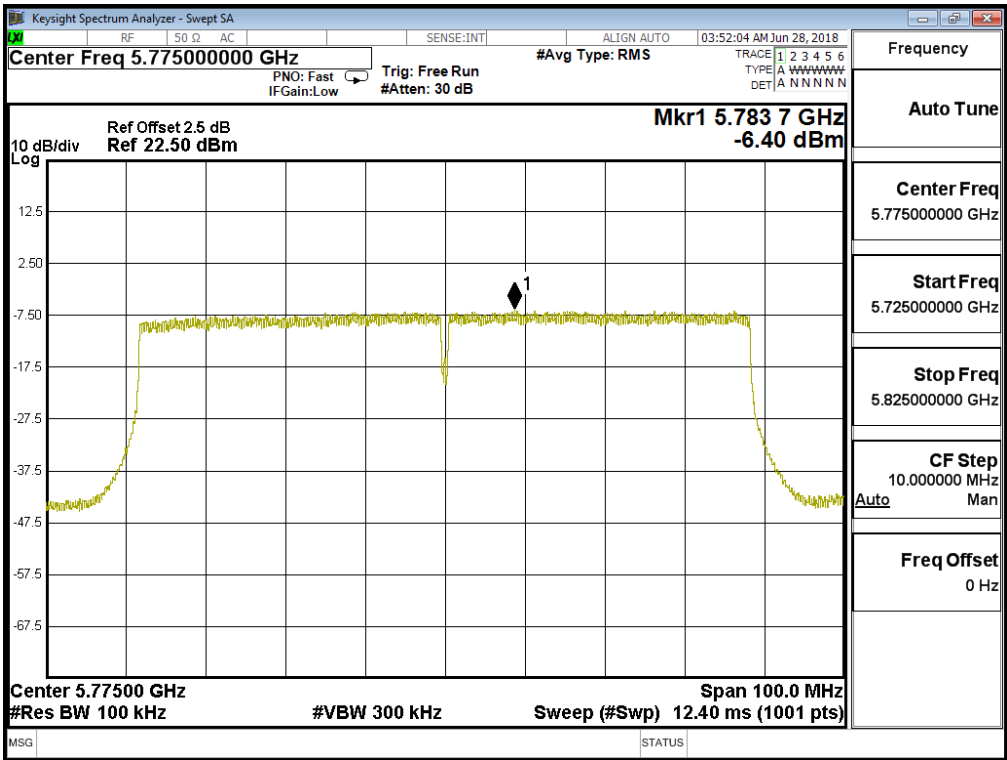
Channel 138(Band3) – Chain A



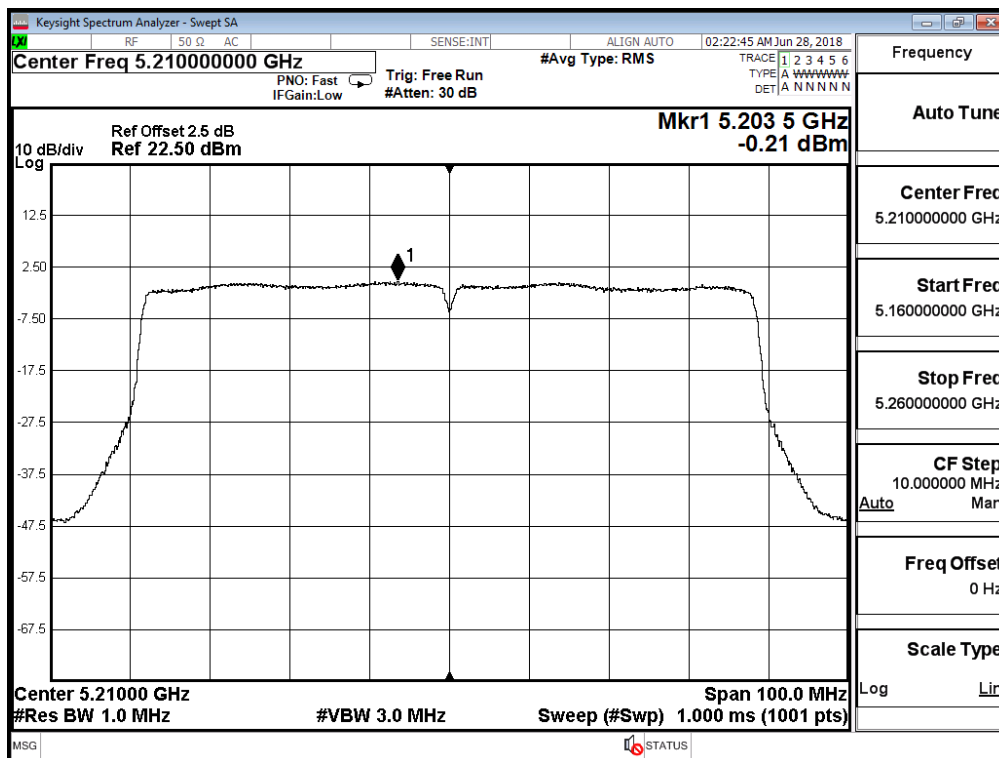
Channel 138(Band4) – Chain A



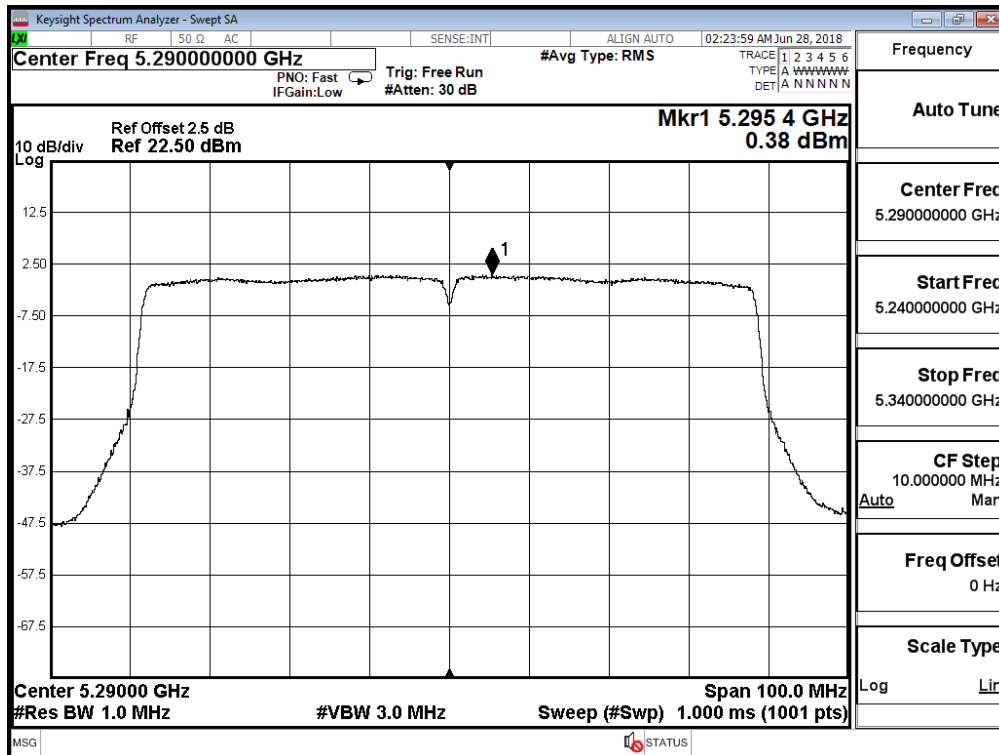
Channel 155: CHAIN A



Channel 42 – Chain B



Channel 58 – Chain B



Keysight Spectrum Analyzer - Swept SA

RF 50 Ω AC SENSE:INT ALIGN: AUTO 02:25:15 AM Jun 28, 2018

Center Freq 5.530000000 GHz #Avg Type: RMS

PNO: Fast Trg: Free Run
IFGain:Low #Atten: 30 dB

TRACE 1 2 3 4 5 6
TYPE A WWWWAA
DET A NNNNN

Frequency

Auto Tune

Center Freq 5.530000000 GHz

Start Freq 5.480000000 GHz

Stop Freq 5.580000000 GHz

CF Step 10.000000 MHz
Auto Man

Freq Offset 0 Hz

Scale Type Log Lin

10 dB/div
Log

Ref Offset 2.5 dB
Ref 22.50 dBm

Mkr1 5.528 4 GHz
-0.94 dBm

Center 5.53000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Sweep (#Swp) 1.000 ms (1001 pts)

Span 100.0 MHz

MSG STATUS

Keysight Spectrum Analyzer - Swept SA

RF 50 Ω AC SENSE:INT ALIGN: AUTO 02:26:35 AM Jun 28, 2018

Center Freq 5.61000000 GHz #Avg Type: RMS

PNO: Fast Trig: Free Run
IFGain:Low #Atten: 30 dB

Ref Offset 2.5 dB
Ref 22.50 dBm

Mkr1 5.606 7 GHz
-1.22 dBm

10 dB/div
Log

Center 5.61000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Sweep (#Swp) 1,000 ms (1001 pts)

Span 100.0 MHz

Frequency

Auto Tune

Center Freq
5.610000000 GHz

Start Freq
5.560000000 GHz

Stop Freq
5.660000000 GHz

CF Step
10.000000 MHz
Man

Auto

Freq Offset
0 Hz

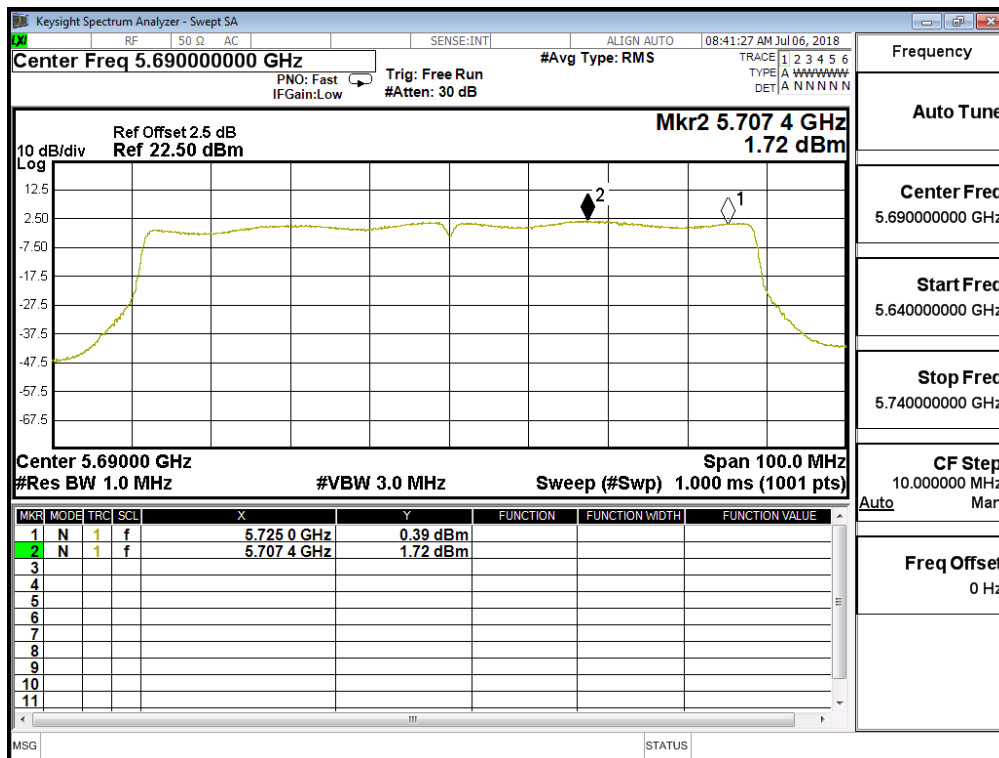
Scale Type

Log

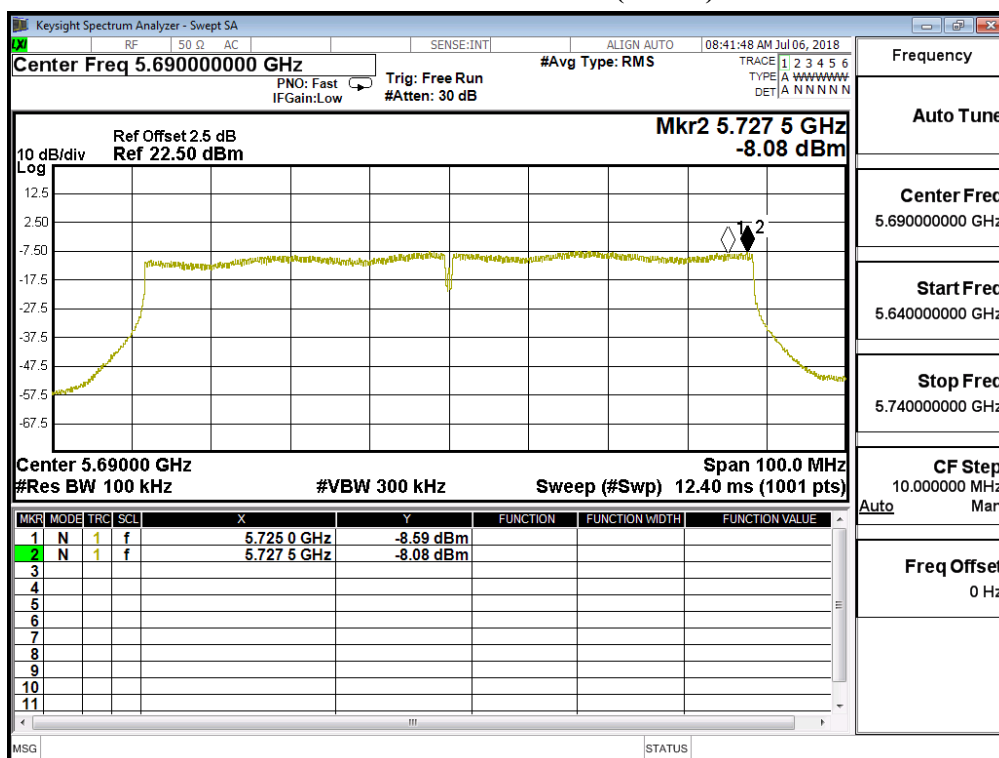
Lin

MSG STATUS

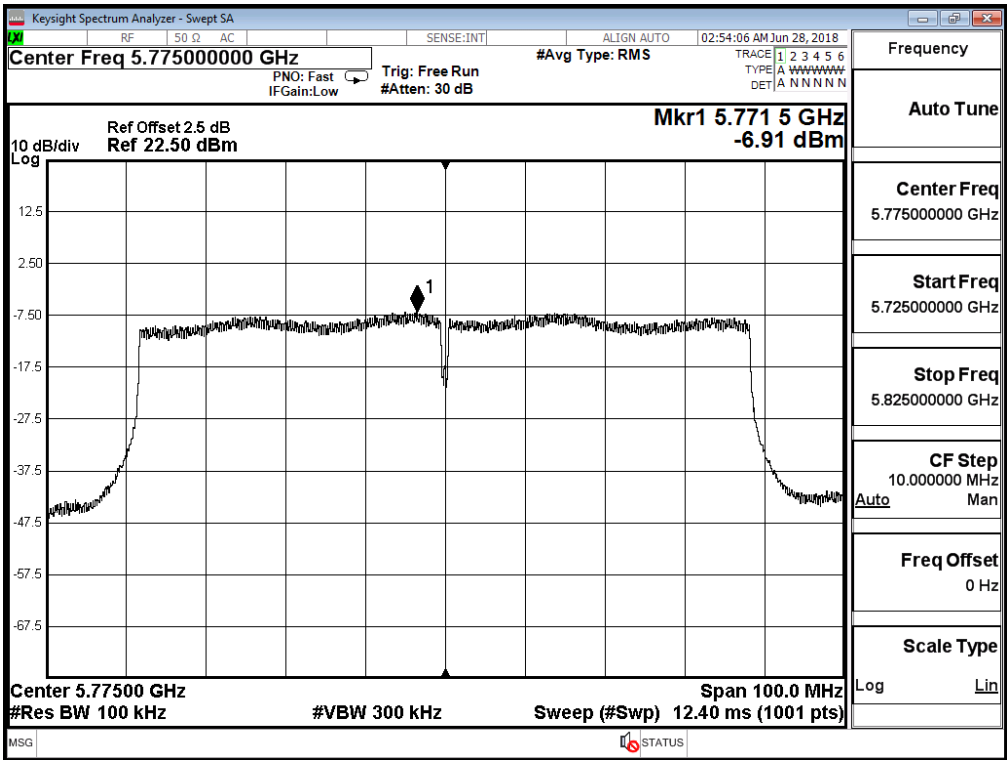
Channel 138 (Band3) – Chain B



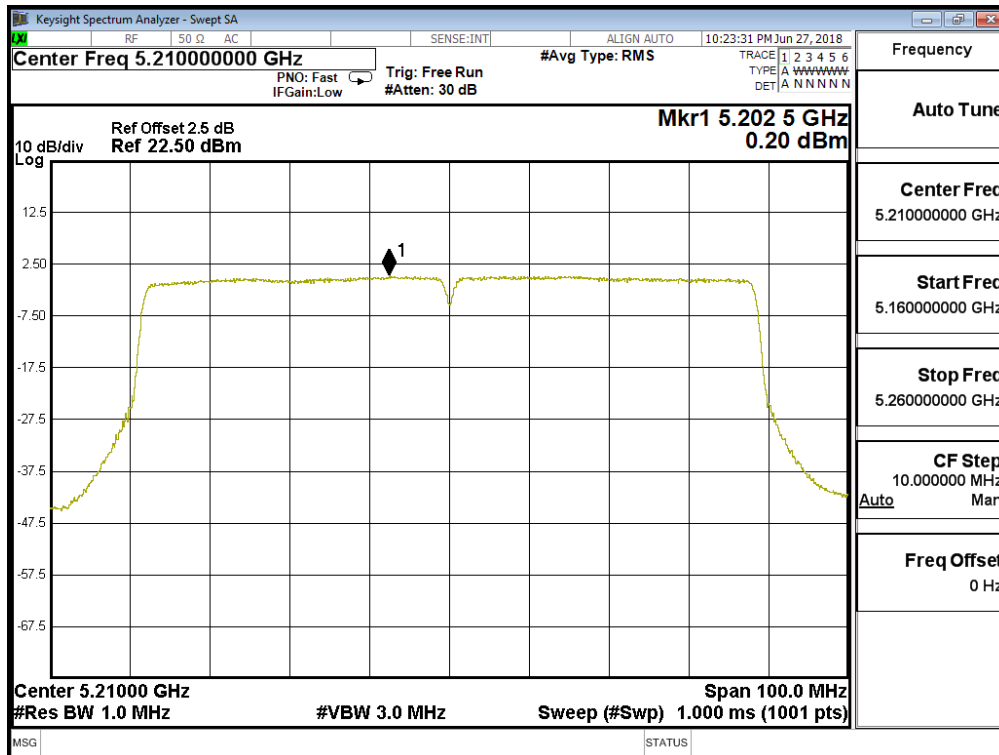
Channel 138 (Band4) – Chain B



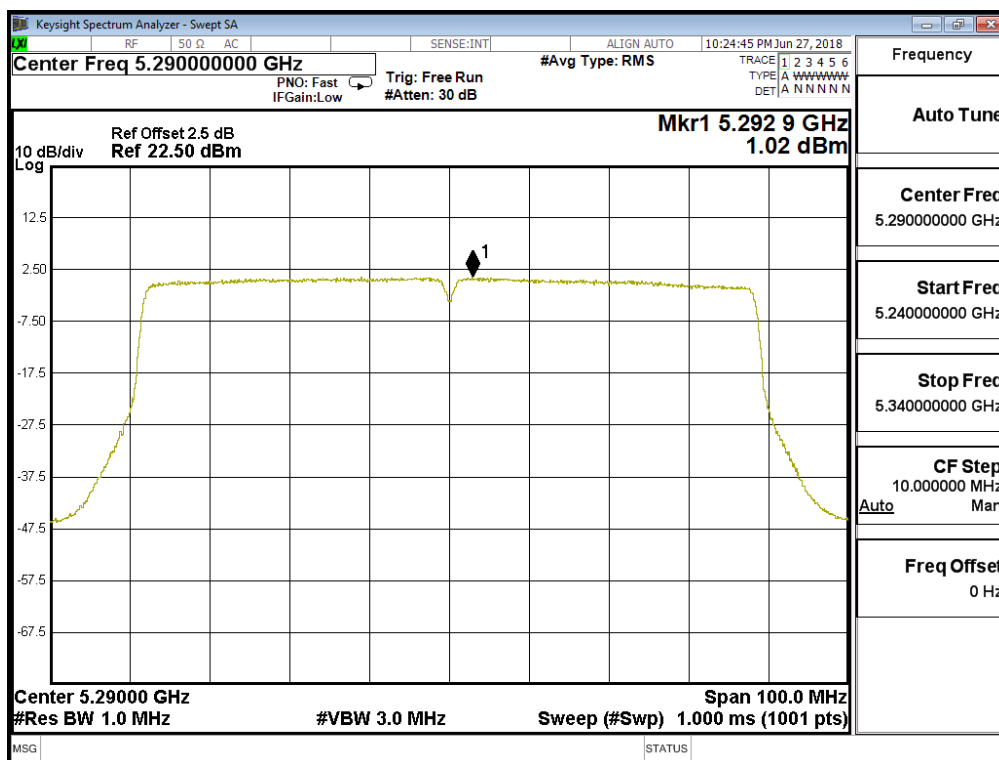
Channel 155: CHAIN B



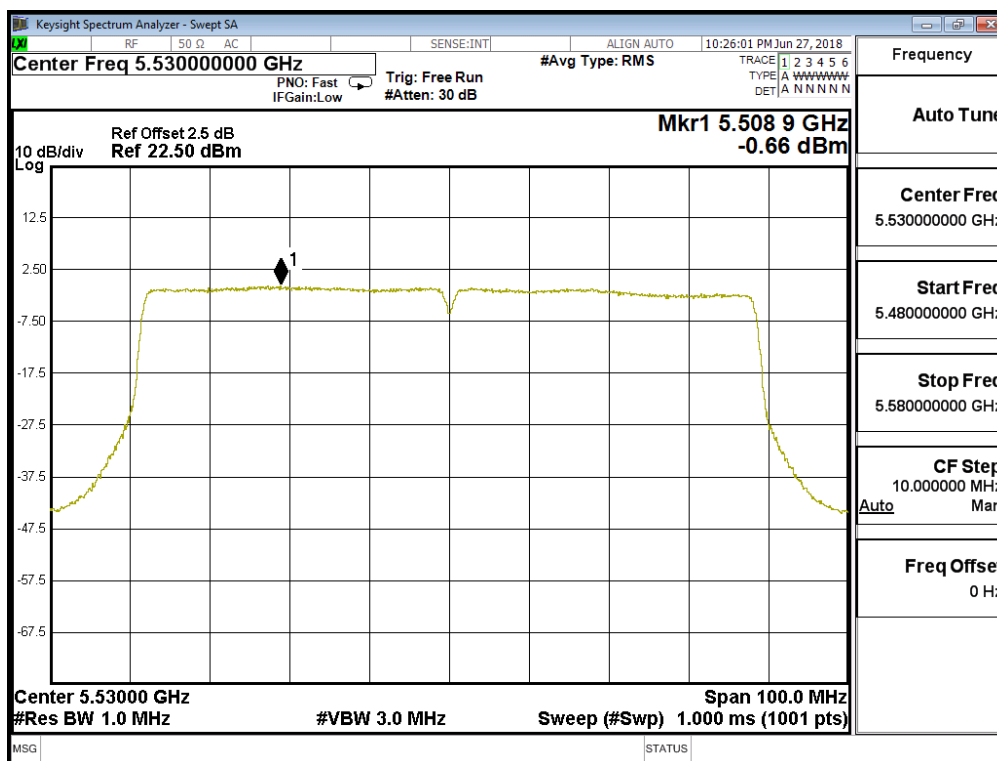
Channel 42 – Chain C



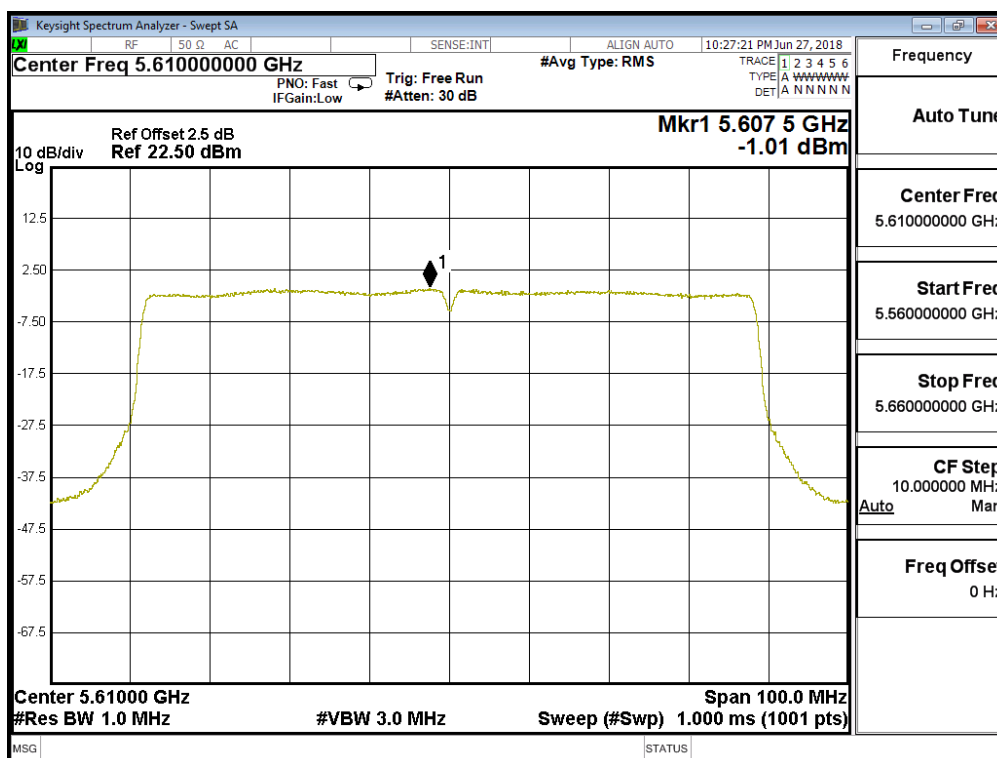
Channel 58 – Chain C



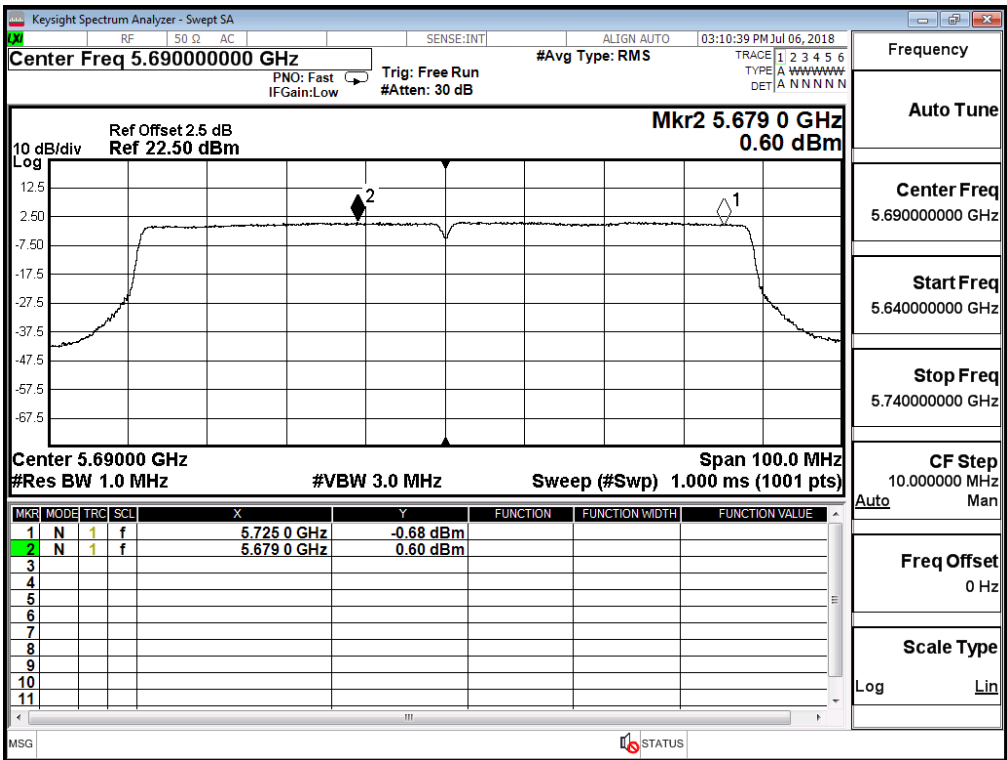
Channel 106 – Chain C



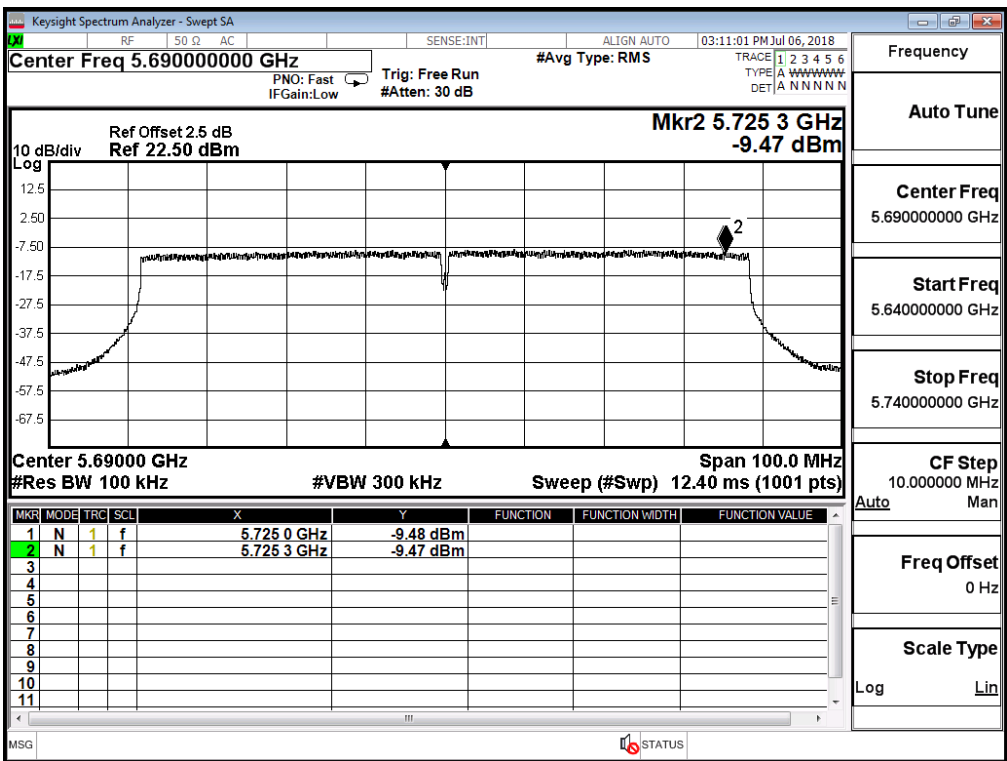
Channel 122 – Chain C



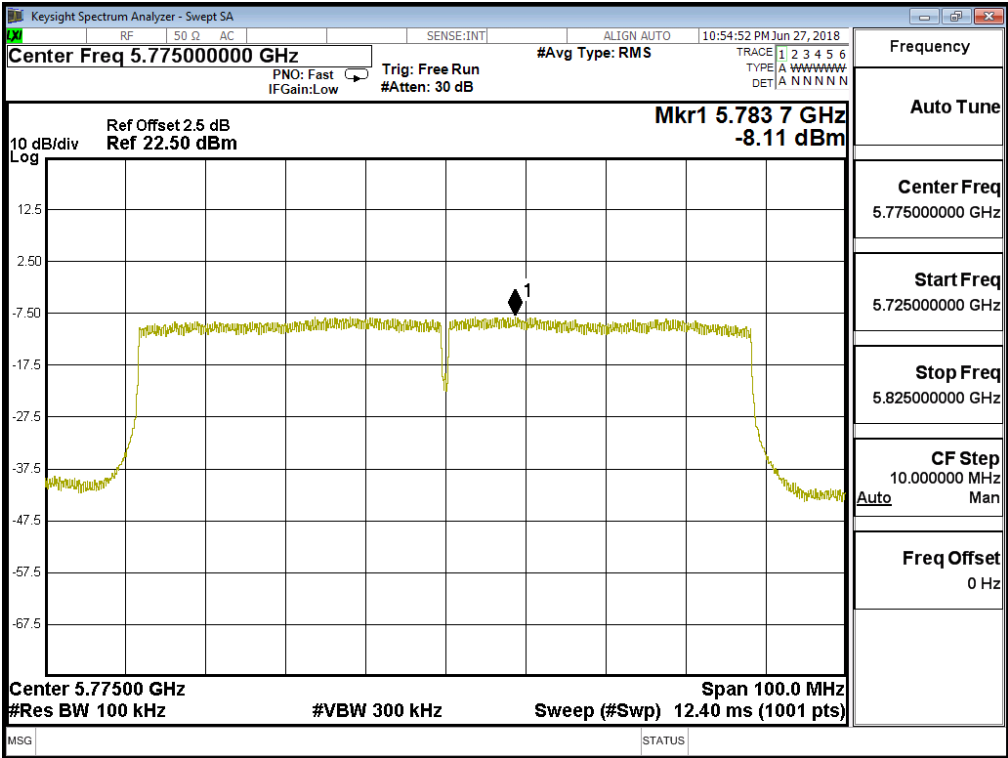
Channel 138 (Band3) – Chain C



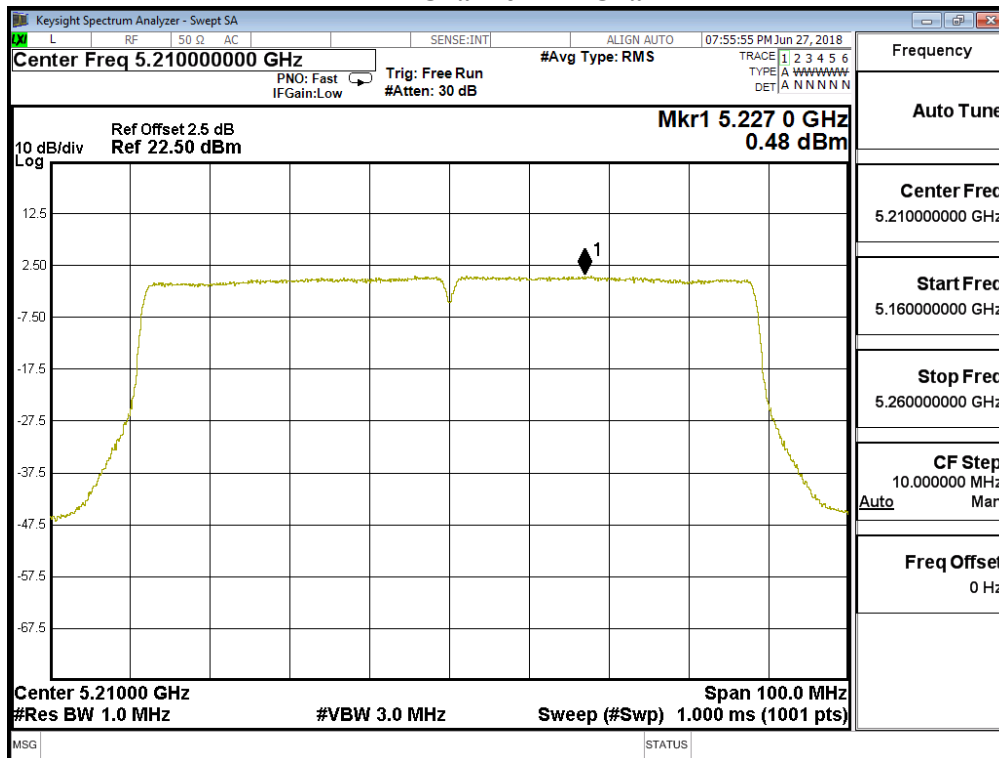
Channel 138 (Band4) – Chain C



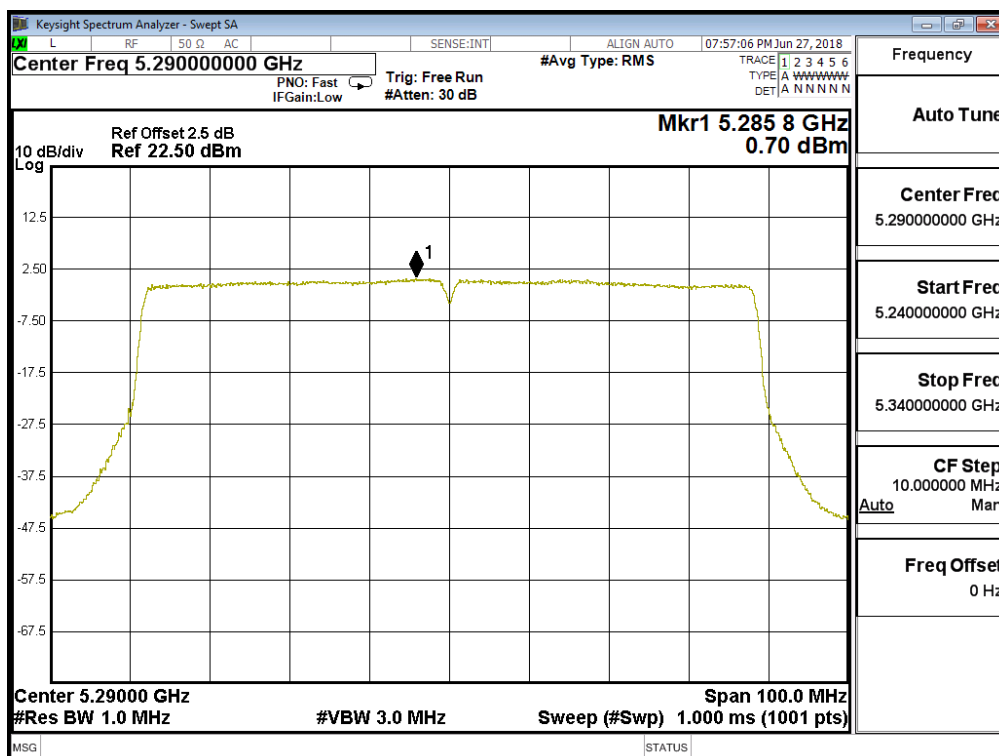
Channel 155: CHAIN C



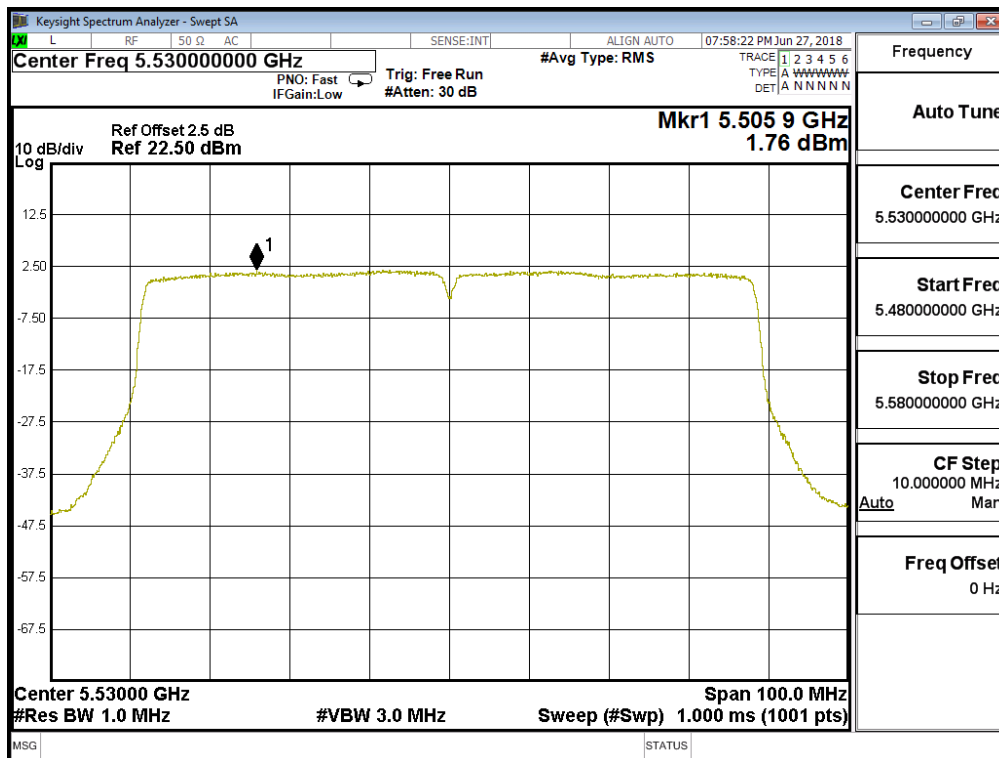
Channel 42 – Chain D



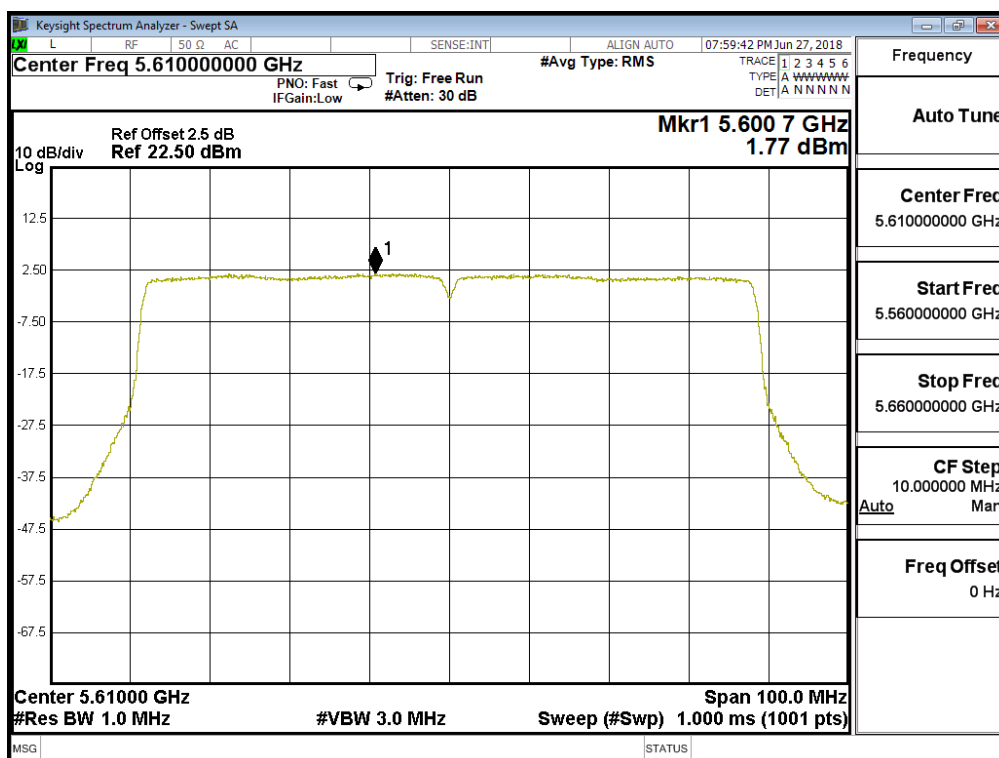
Channel 58 – Chain D



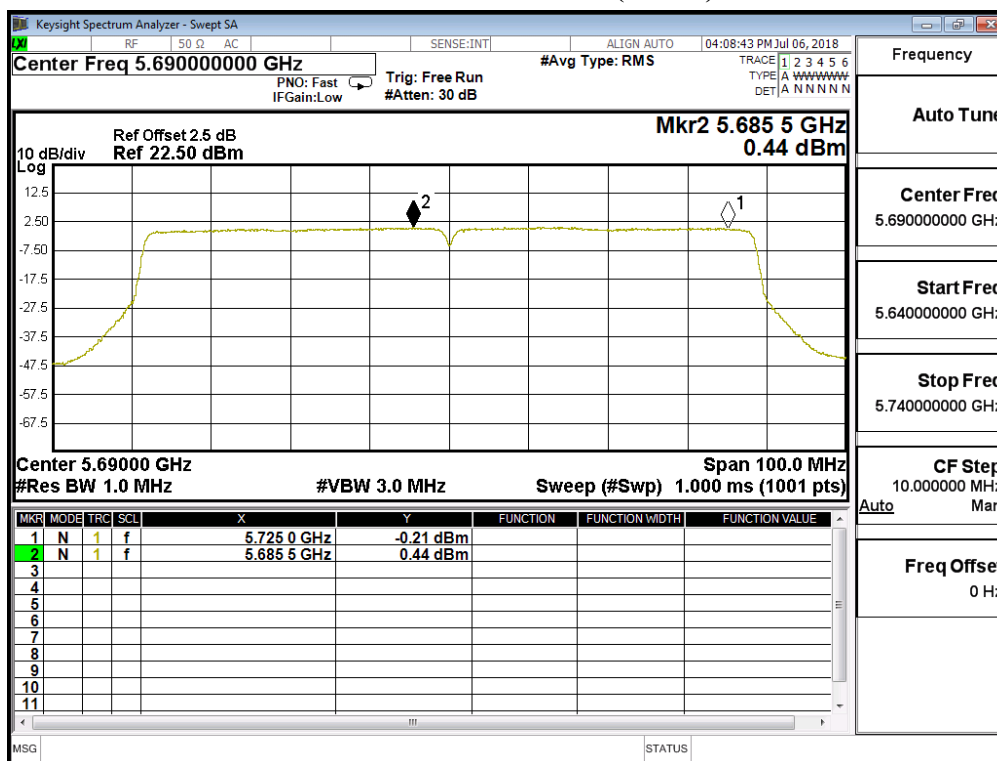
Channel 106 – Chain D



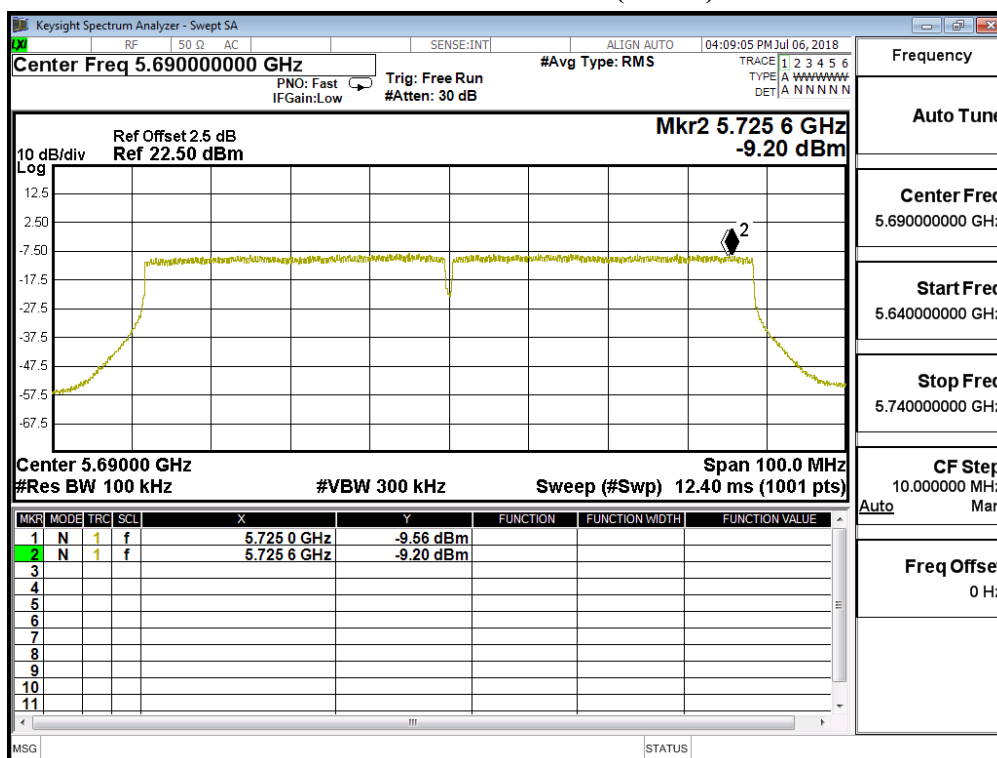
Channel 122 – Chain D



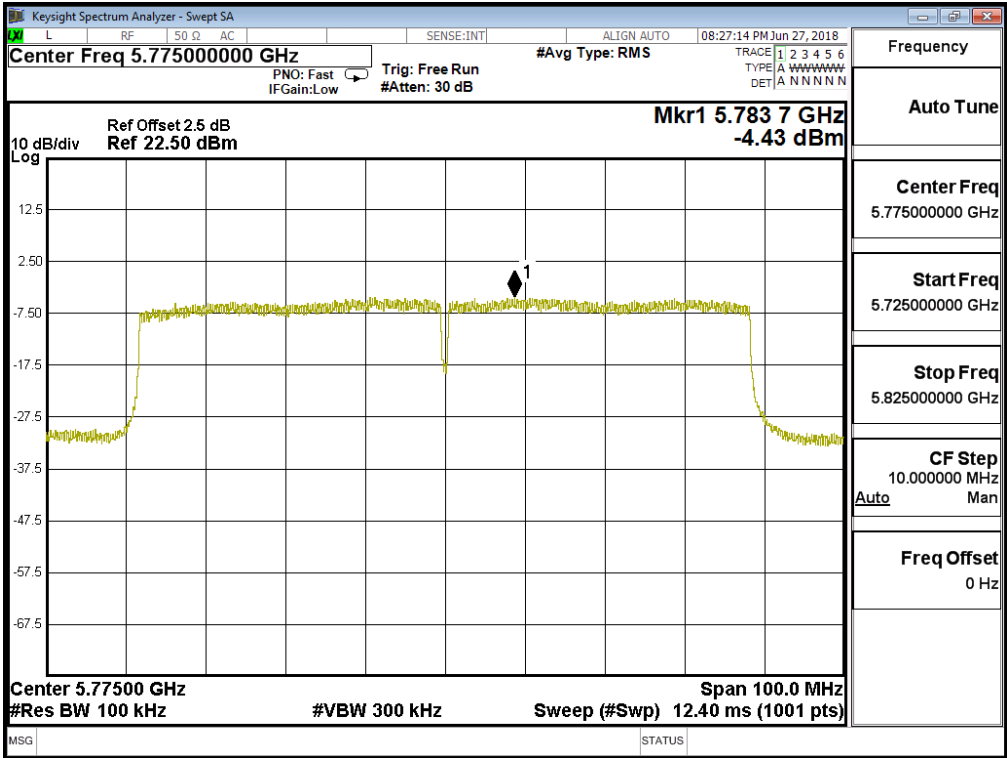
Channel 138 (Band3) – Chain D



Channel 138 (Band4) – Chain D



Channel 155: CHAIN D

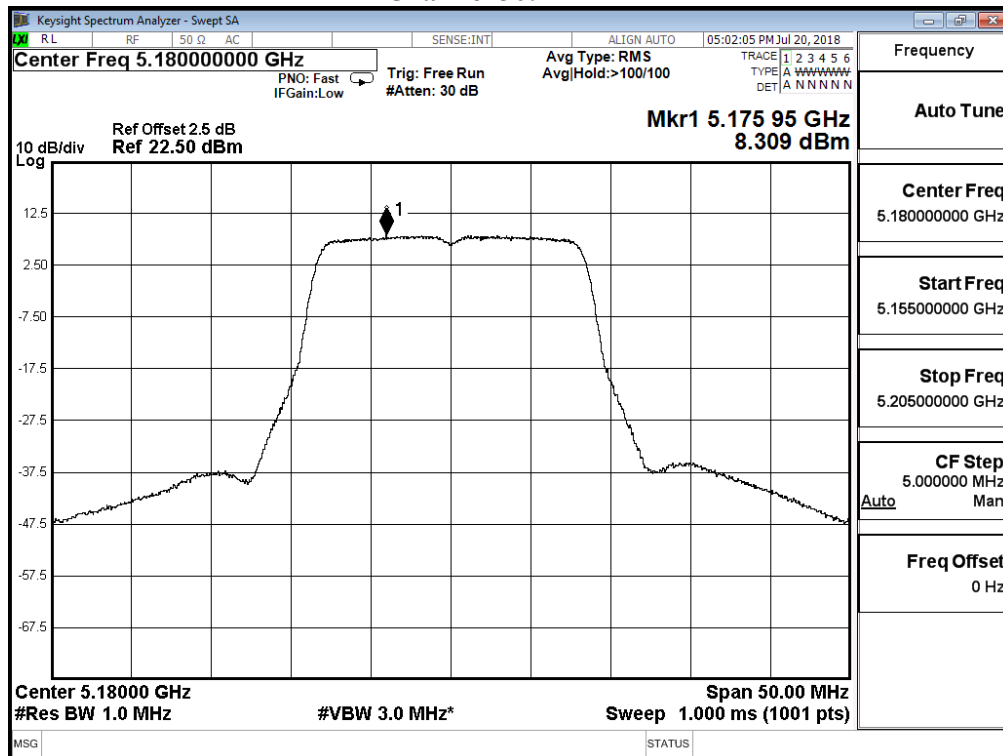


Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Peak Power Spectral Density
 Test Site : No.3 OATS
 Test Date : 2018/07/20
 Test Mode : Mode 1: Transmit (802.11a-6Mbps) (Antenna No.17)

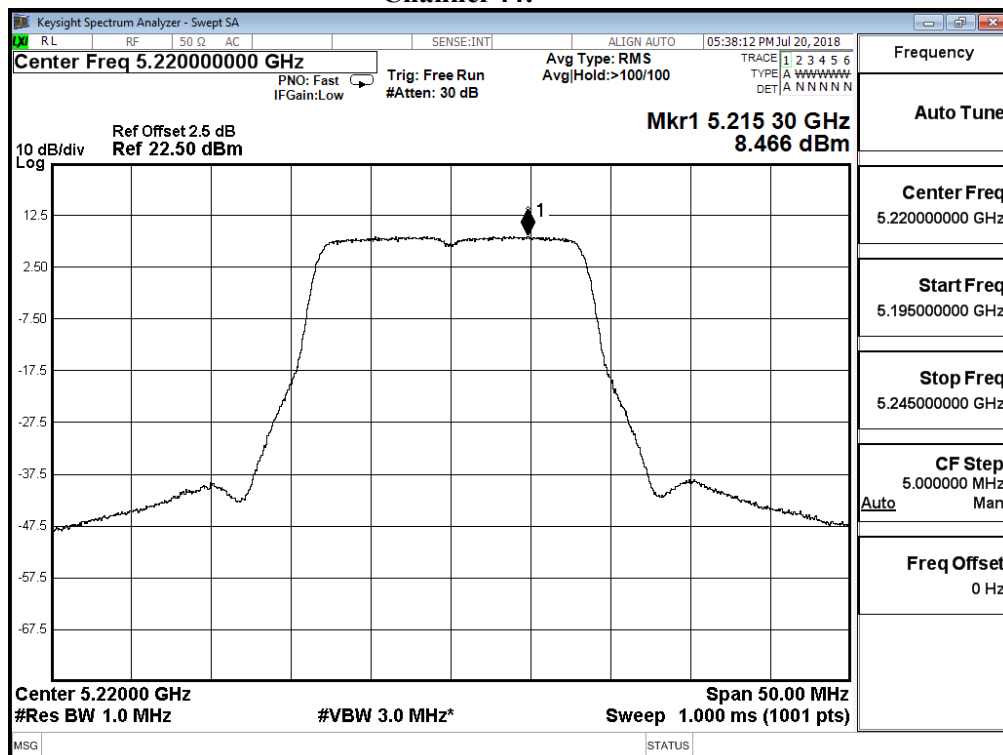
Channel Number	Frequency (MHz)	Data Rate (Mbps)	Measurement Level (dBm)	Required Limit (dBm)	Result
36	5180	6	8.31	9	Pass
44	5220	6	8.47	9	Pass
48	5240	6	8.61	9	Pass
52	5260	6	8.60	9	Pass
60	5300	6	8.73	9	Pass
64	5320	6	8.33	9	Pass
100	5500	6	8.55	9	Pass
116	5580	6	8.60	9	Pass
140	5700	6	8.69	9	Pass

Channel Number	Frequency (MHz)	Data Rate (Mbps)	PPSD (dBm)	BWCF (dB)	Total PSD (dBm)	Required Limit (dBm)	Result
149	5745	6	-0.33	6.98	12.67	<28	Pass
157	5785	6	0.40	6.98	13.40	<28	Pass
165	5825	6	0.06	6.98	13.06	<28	Pass

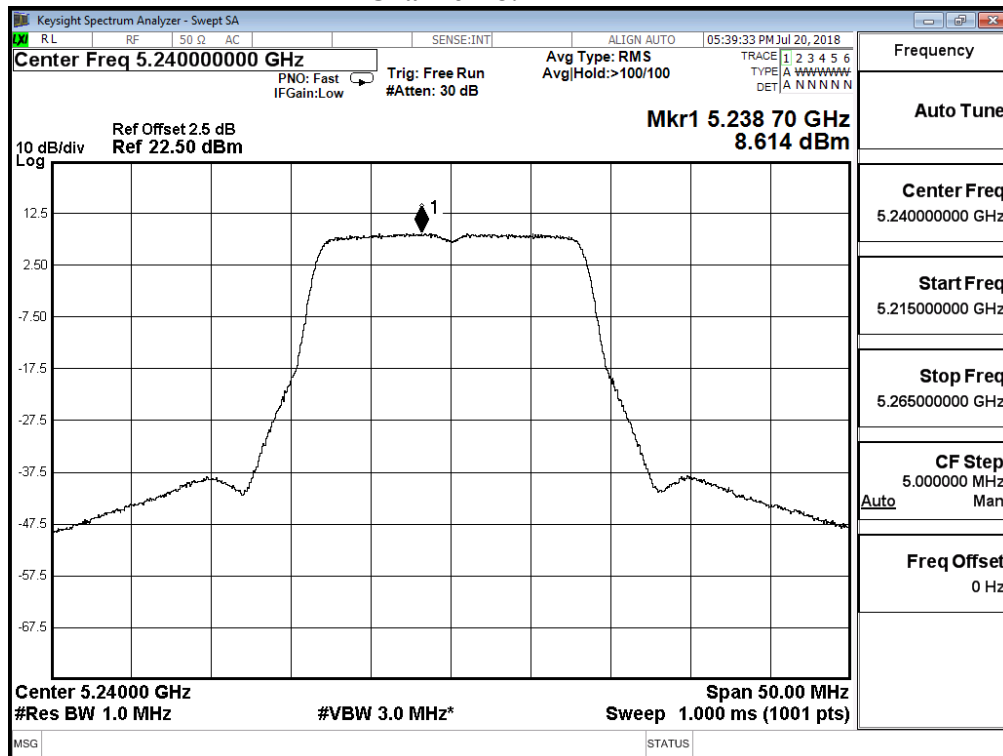
Channel 36:



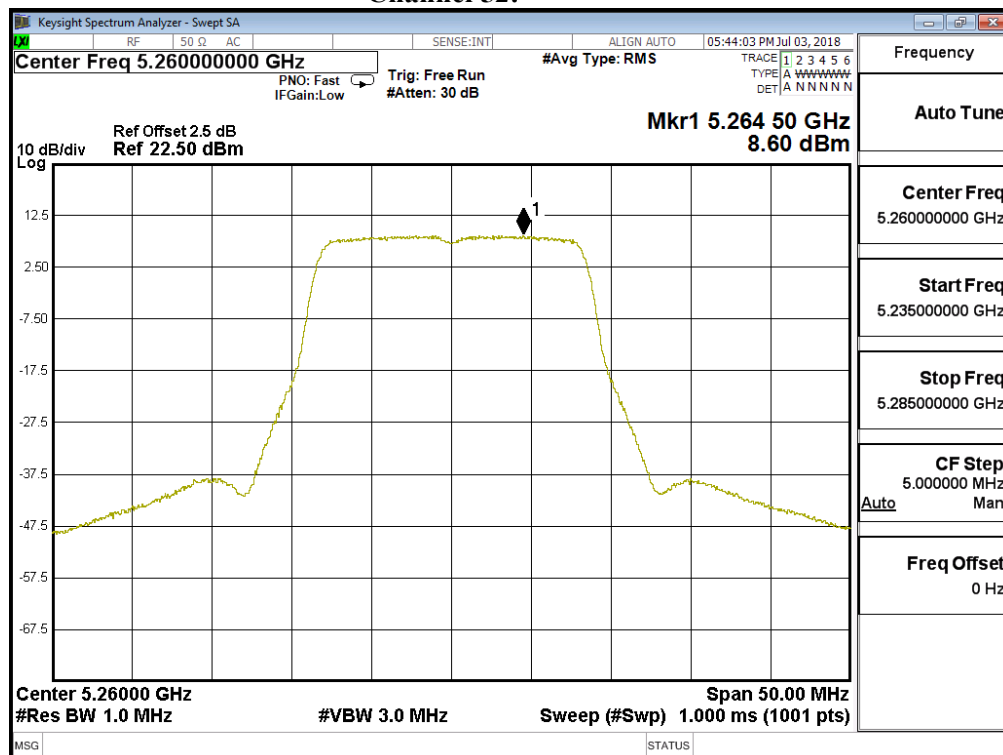
Channel 44:



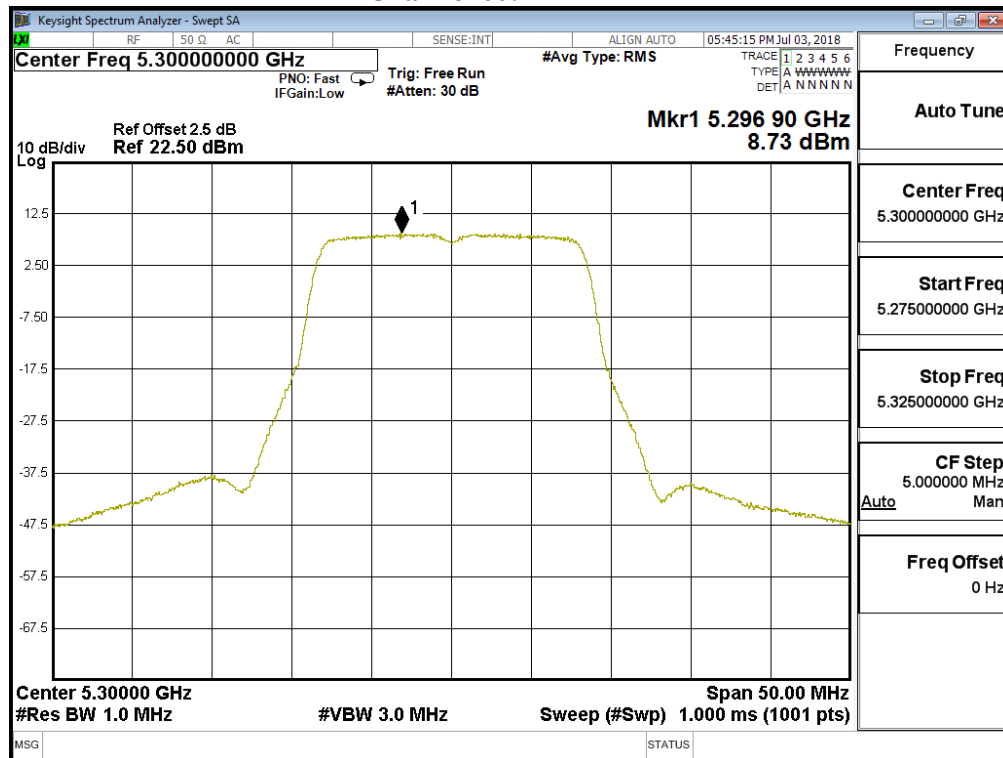
Channel 48:



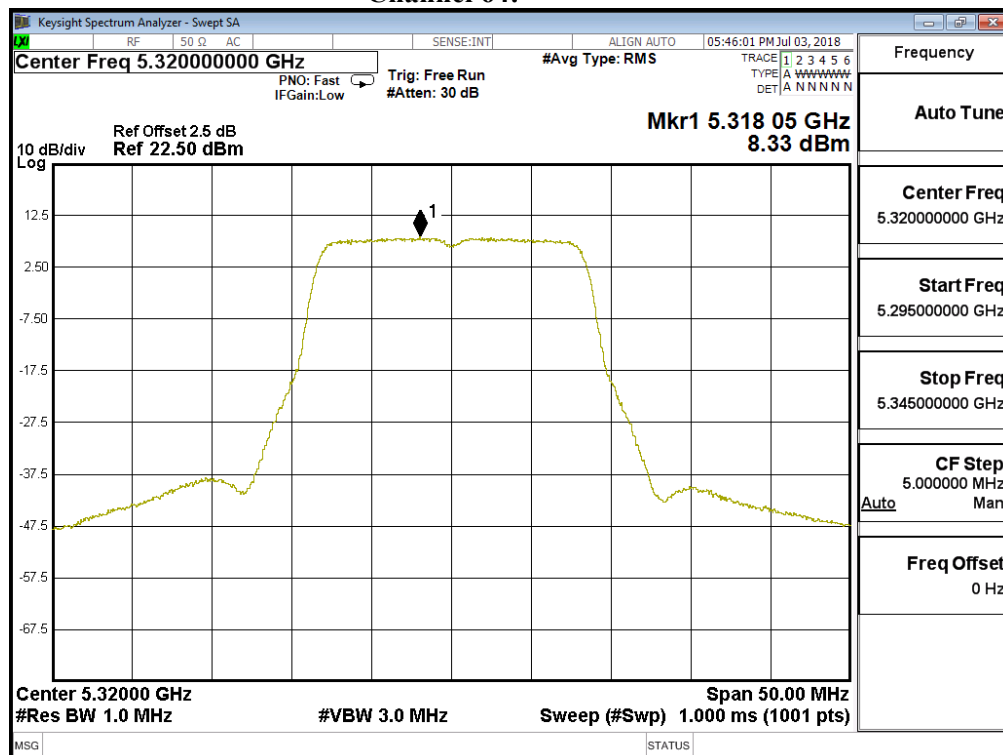
Channel 52:



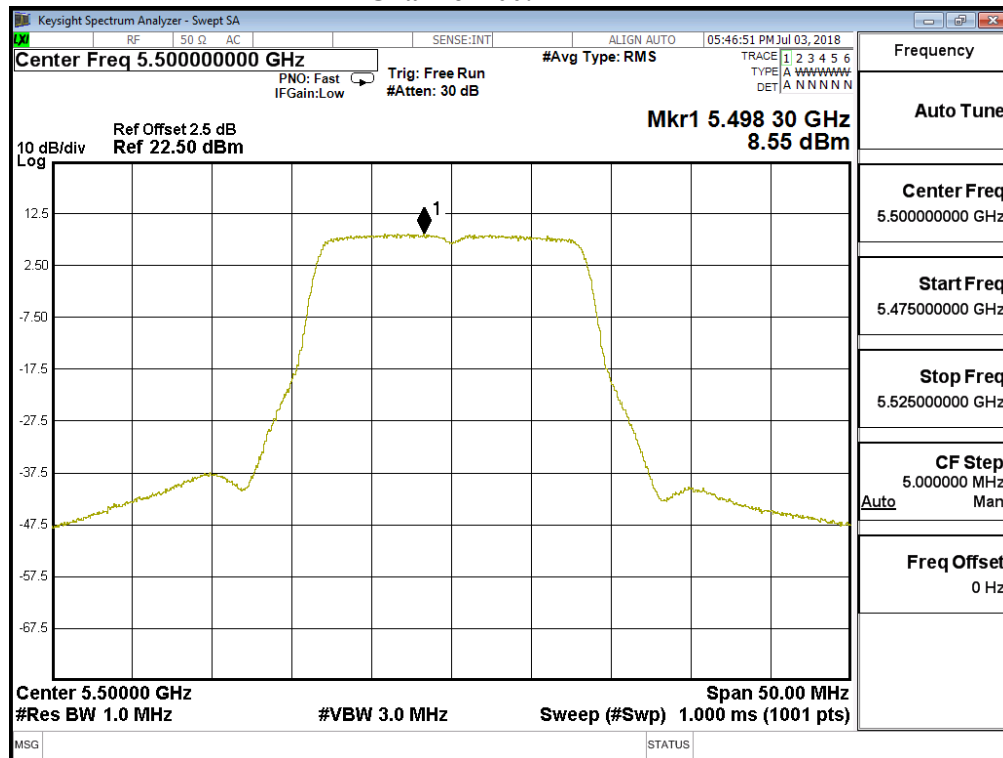
Channel 60:



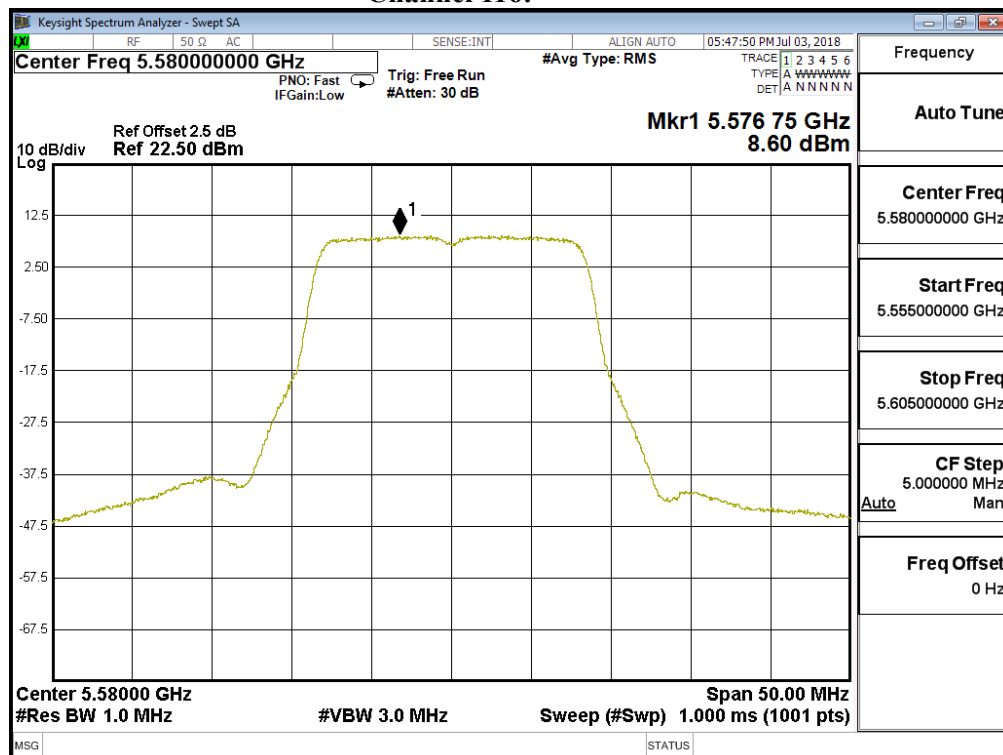
Channel 64:



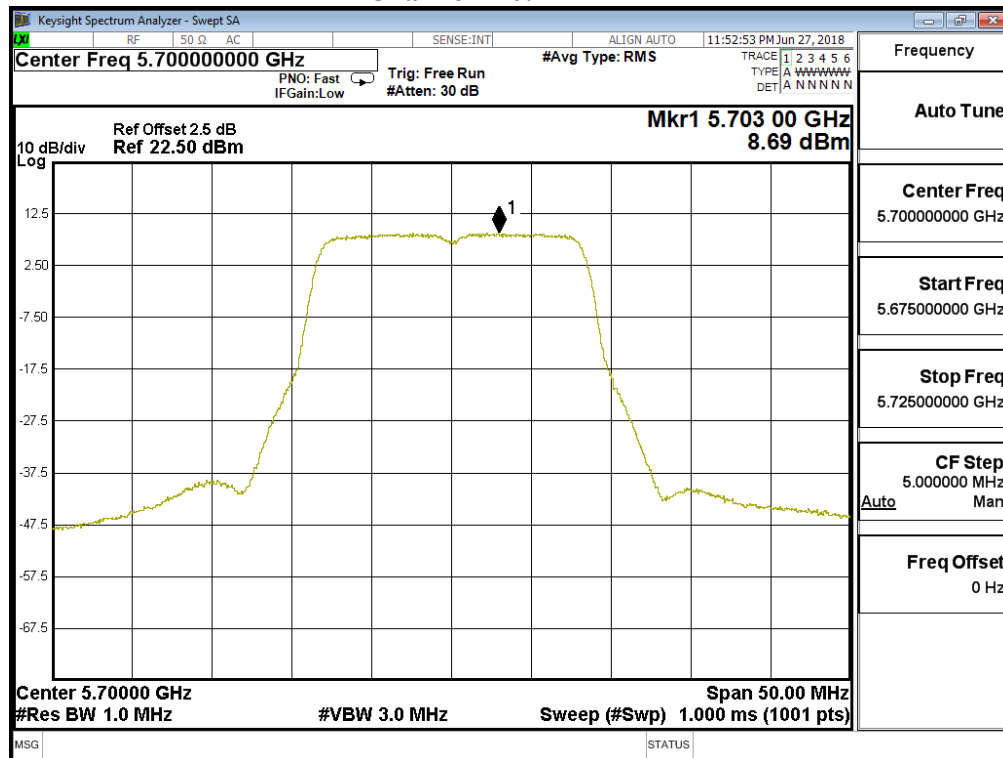
Channel 100:



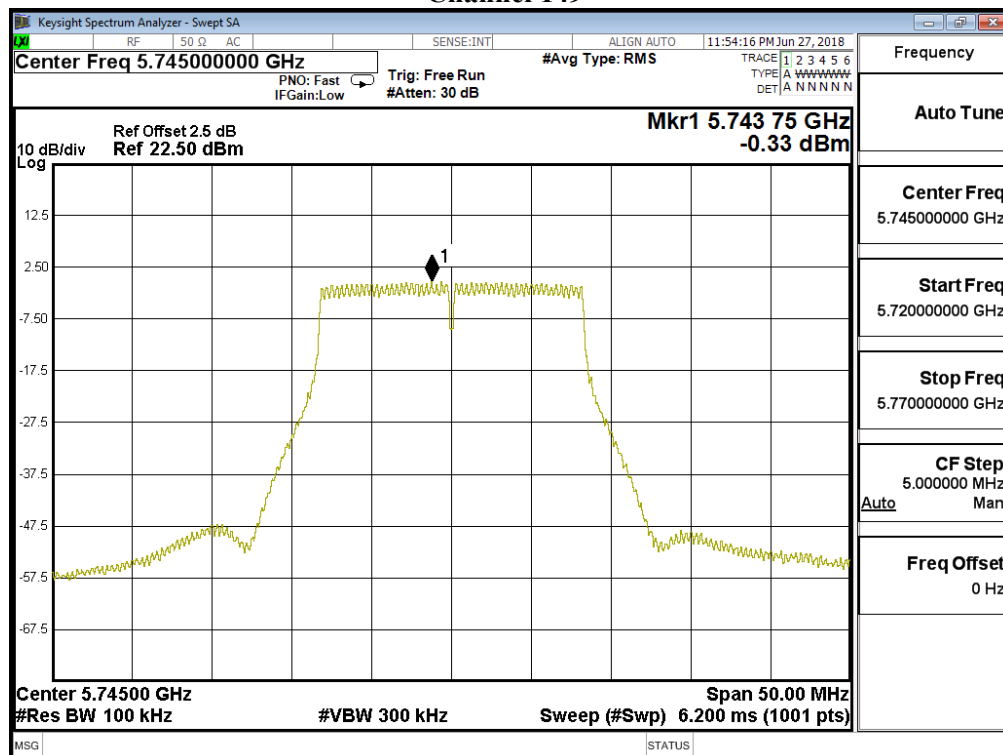
Channel 116:



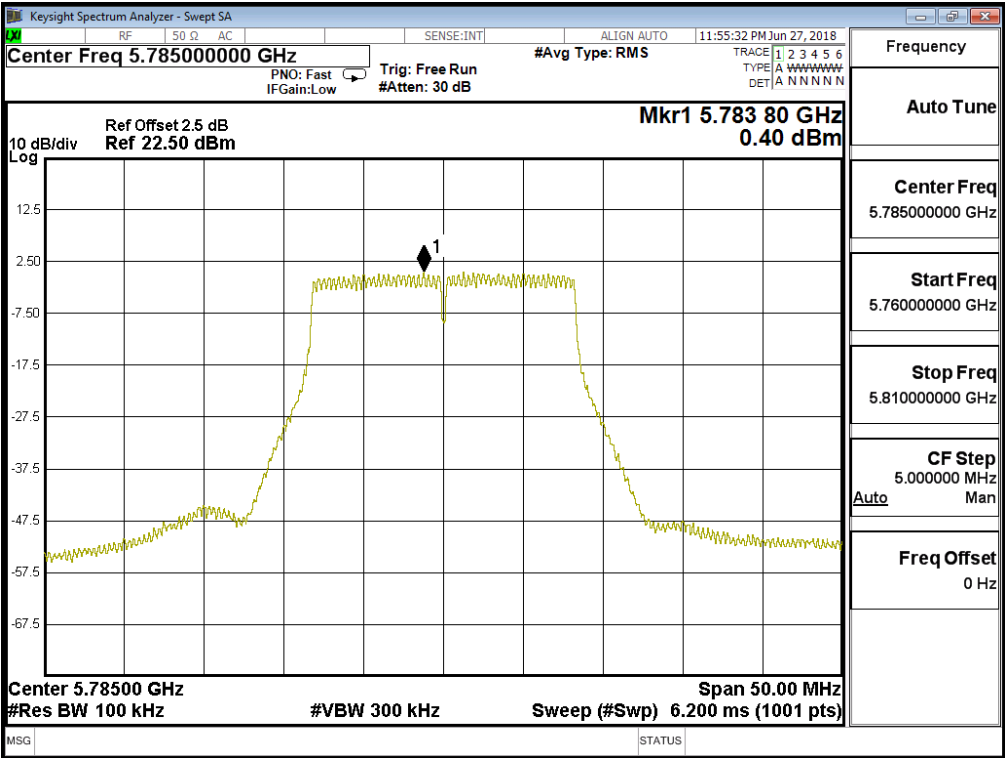
Channel 140:



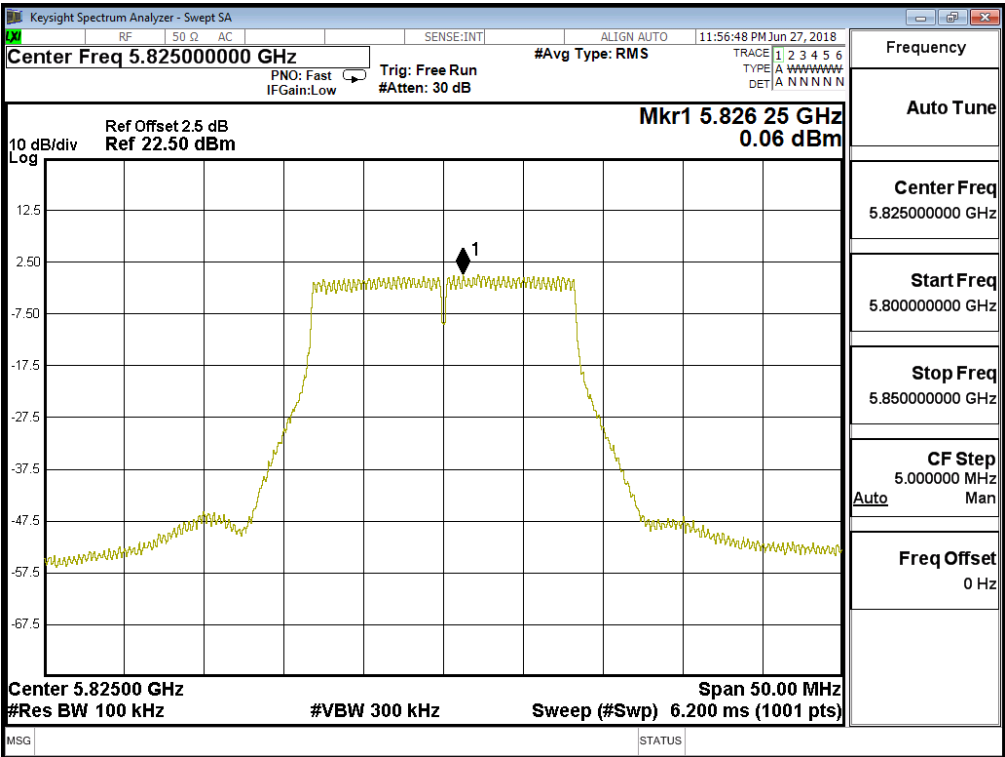
Channel 149



Channel 157



Channel 165



Product : MOXA IEEE 802.11a/n/ac 4*4 module
 Test Item : Peak Power Spectral Density
 Test Site : No.3 OATS
 Test Date : 2018/07/20
 Test Mode : Mode 2: Transmit (802.11n-20BW 28.8Mbps) (Antenna No.17)

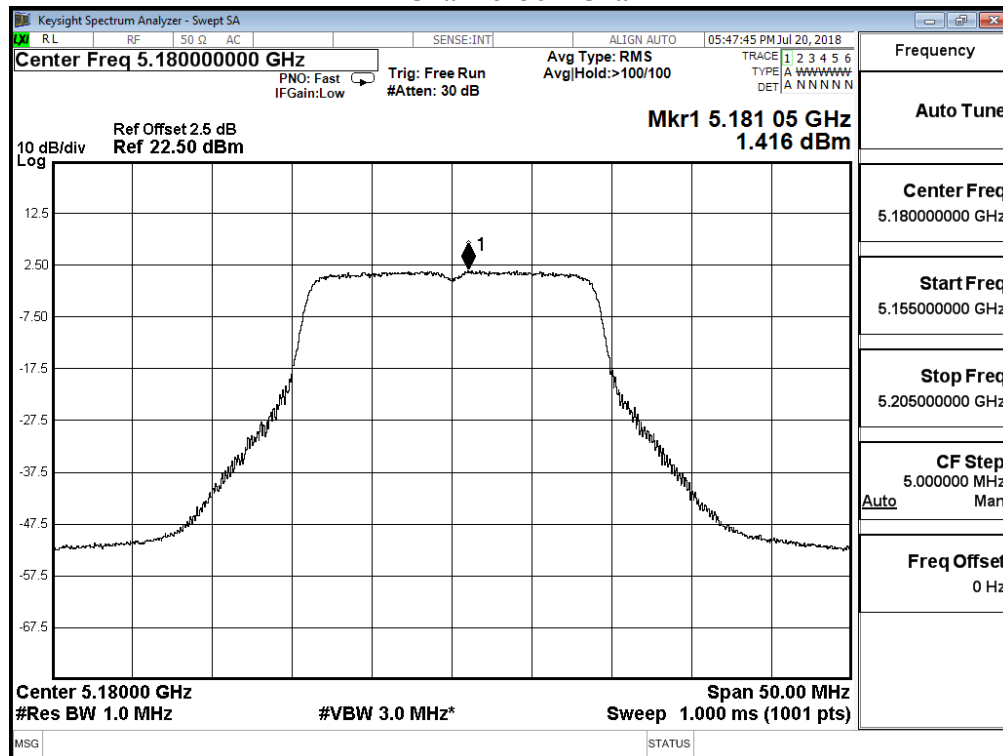
Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	Total PSD (dBm)	Required Limit (dBm)	Result
36	5180	A	1.42	7.44	9	Pass
		B	1.78	7.80	9	Pass
		C	2.85	8.87	9	Pass
		D	1.84	7.86	9	Pass
44	5220	A	1.49	7.51	9	Pass
		B	1.74	7.76	9	Pass
		C	2.55	8.57	9	Pass
		D	1.92	7.94	9	Pass
48	5240	A	1.69	7.71	9	Pass
		B	1.10	7.12	9	Pass
		C	2.50	8.52	9	Pass
		D	1.56	7.58	9	Pass
52	5260	A	2.07	8.09	9	Pass
		B	1.65	7.67	9	Pass
		C	2.95	8.97	9	Pass
		D	1.29	7.31	9	Pass
60	5300	A	1.68	7.70	9	Pass
		B	1.79	7.81	9	Pass
		C	2.97	8.99	9	Pass
		D	1.31	7.33	9	Pass
64	5320	A	1.39	7.41	9	Pass
		B	1.74	7.76	9	Pass
		C	2.64	8.66	9	Pass
		D	1.18	7.20	9	Pass
100	5500	A	0.71	6.73	9	Pass
		B	1.91	7.93	9	Pass
		C	2.52	8.54	9	Pass

		D	2.12	8.14	9	Pass
116	5580	A	-0.40	5.62	9	Pass
		B	2.00	8.02	9	Pass
		C	2.33	8.35	9	Pass
		D	2.20	8.22	9	Pass
140	5700	A	0.16	6.18	9	Pass
		B	2.32	8.34	9	Pass
		C	2.01	8.03	9	Pass
		D	2.31	8.33	9	Pass

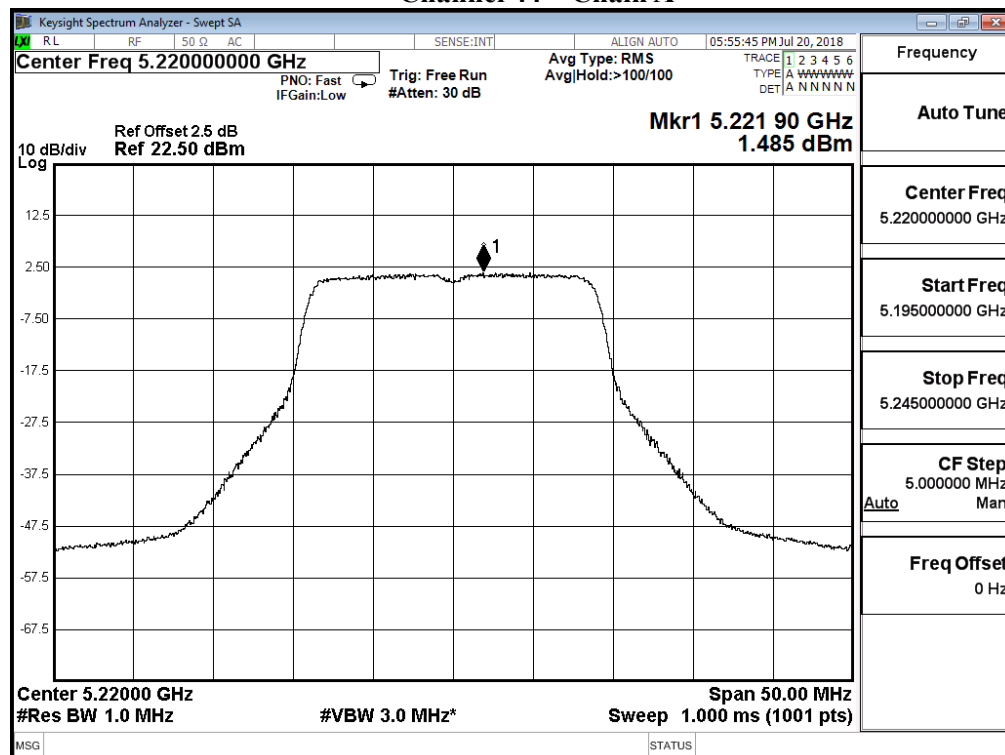
Channel Number	Frequency (MHz)	Chain	PPSD (dBm)	BWCF (dB)	Total PSD (dBm) ₁	Required Limit (dBm)	Result
149	5745	A	-2.41	6.98	10.59	<28	Pass
		B	-3.13	6.98	9.87	<28	Pass
		C	-3.83	6.98	9.17	<28	Pass
		D	-0.17	6.98	12.83	<28	Pass
157	5785	A	-1.82	6.98	11.18	<28	Pass
		B	-3.17	6.98	9.83	<28	Pass
		C	-3.50	6.98	9.50	<28	Pass
		D	0.44	6.98	13.44	<28	Pass
165	5825	A	-1.54	6.98	11.46	<28	Pass
		B	-2.99	6.98	10.01	<28	Pass
		C	-3.77	6.98	9.23	<28	Pass
		D	0.41	6.98	13.41	<28	Pass

Note 1: The quantity $10 \cdot \log 4$ (four antennas) is added to the spectrum peak value according to document 662911 D01.

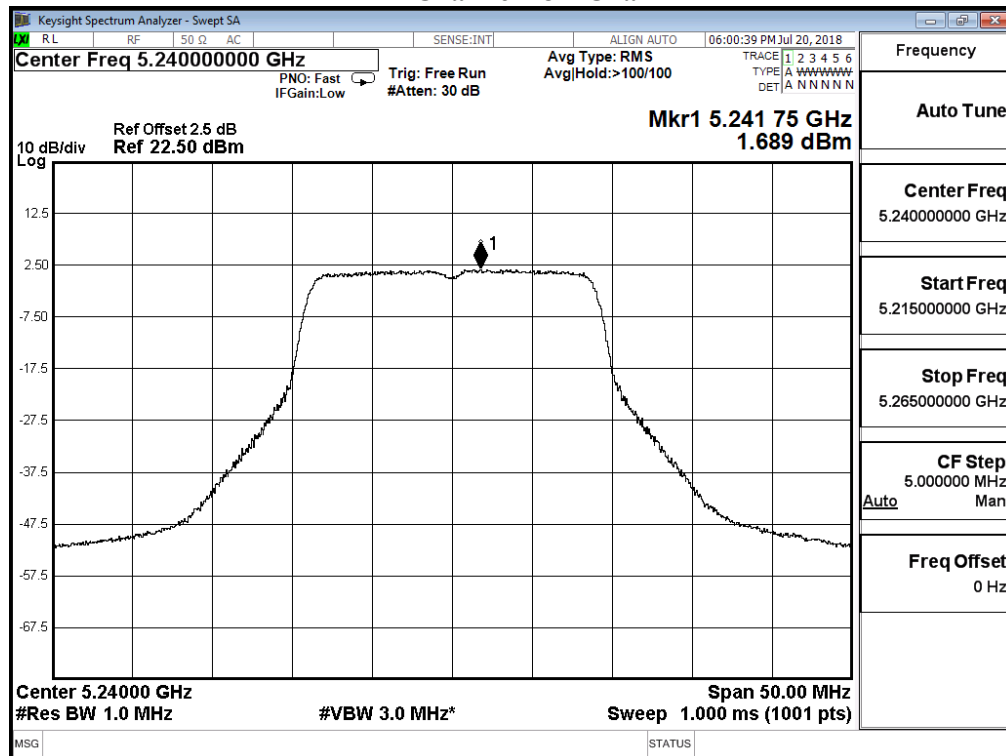
Channel 36 – Chain A



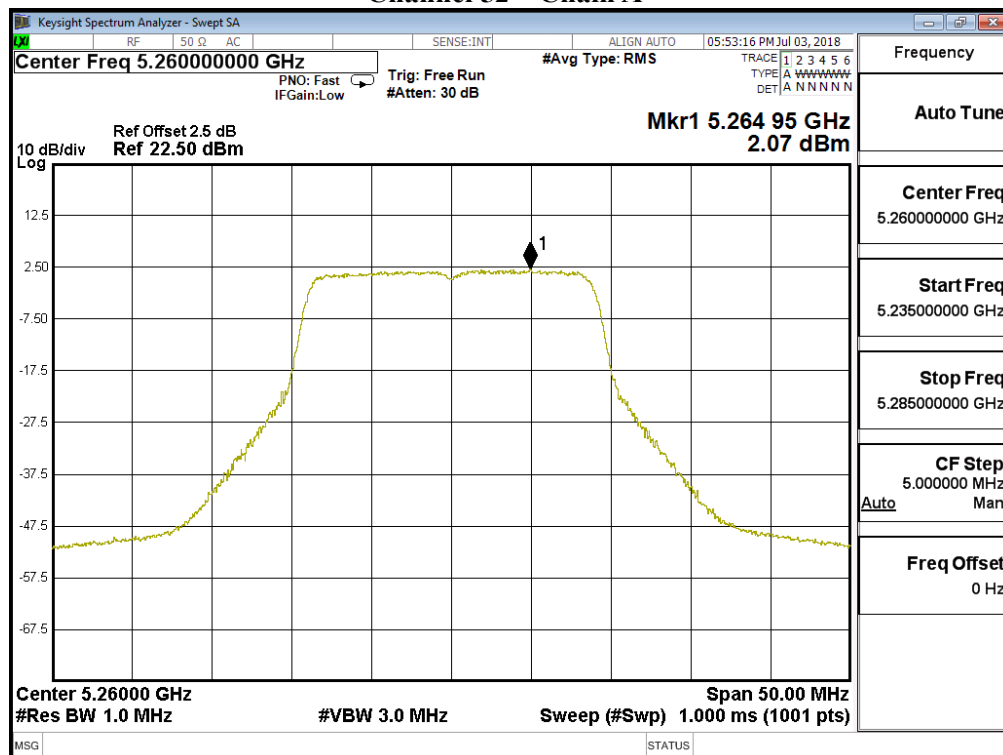
Channel 44 – Chain A



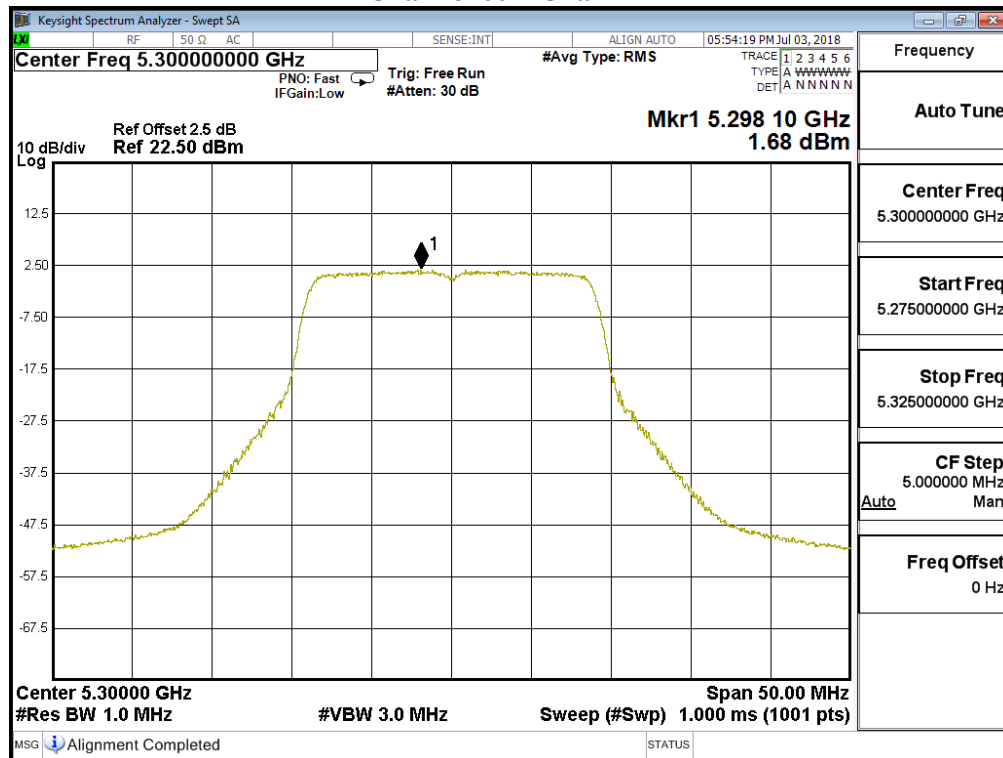
Channel 48 – Chain A



Channel 52 – Chain A



Channel 60 – Chain A



Channel 64 – Chain A

