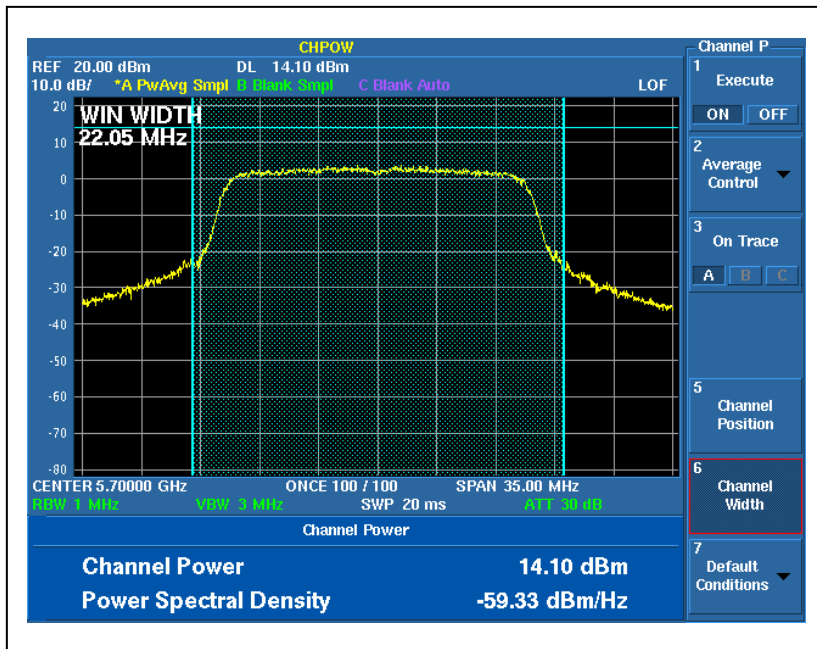
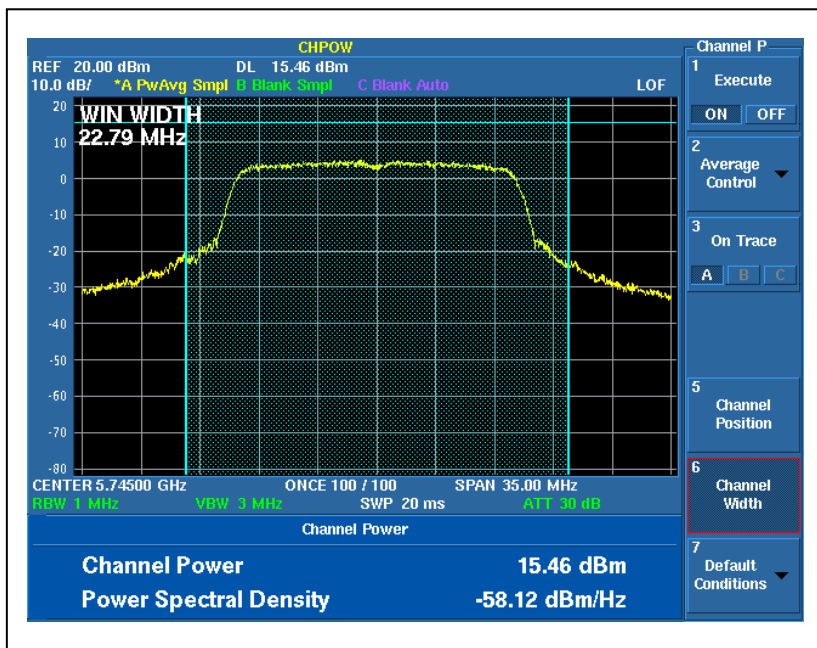




CH19

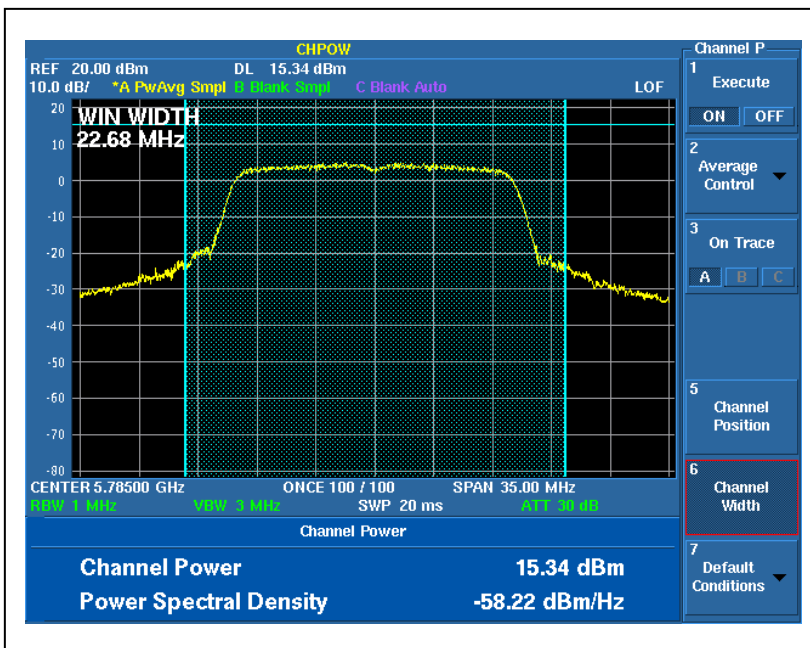


CH20

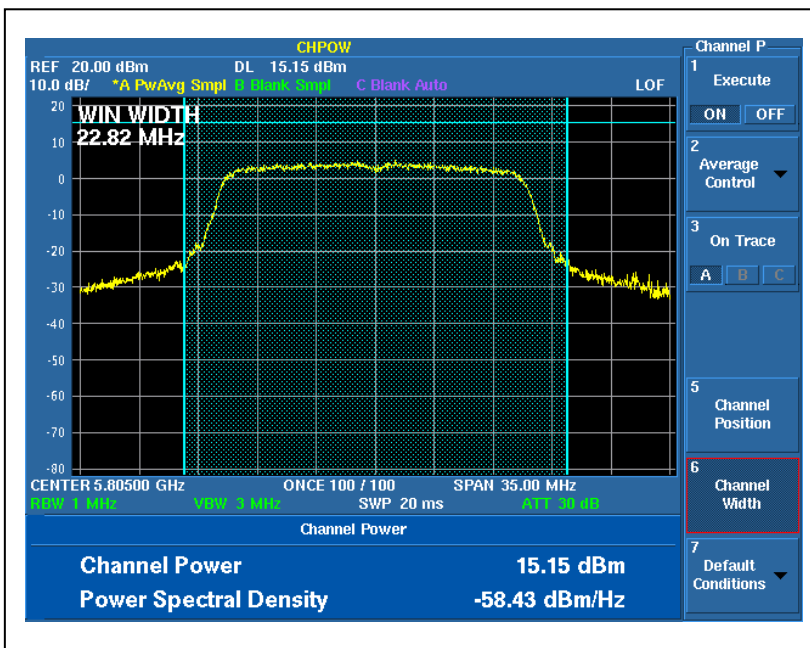




CH22

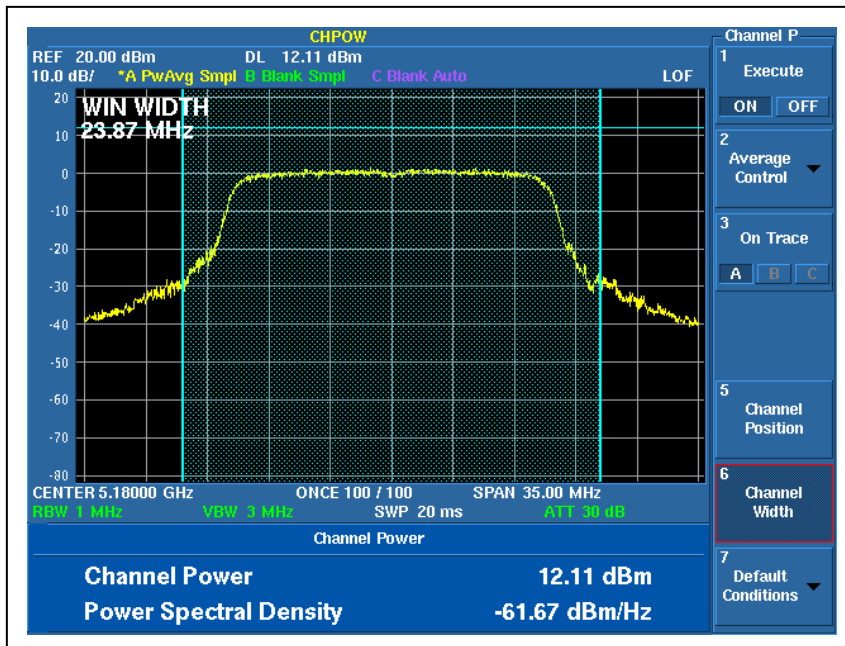


CH23

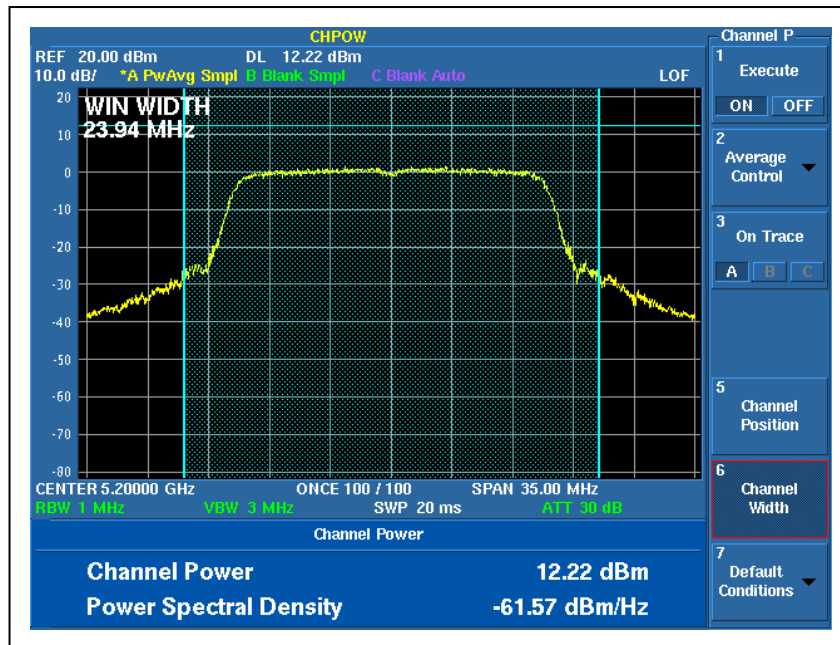




For Chain (1) :CH1



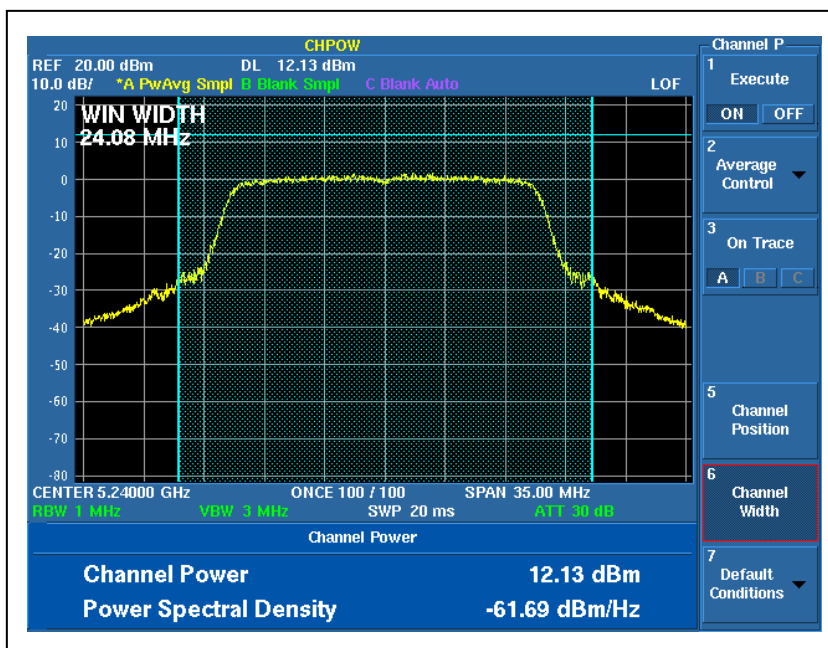
CH2



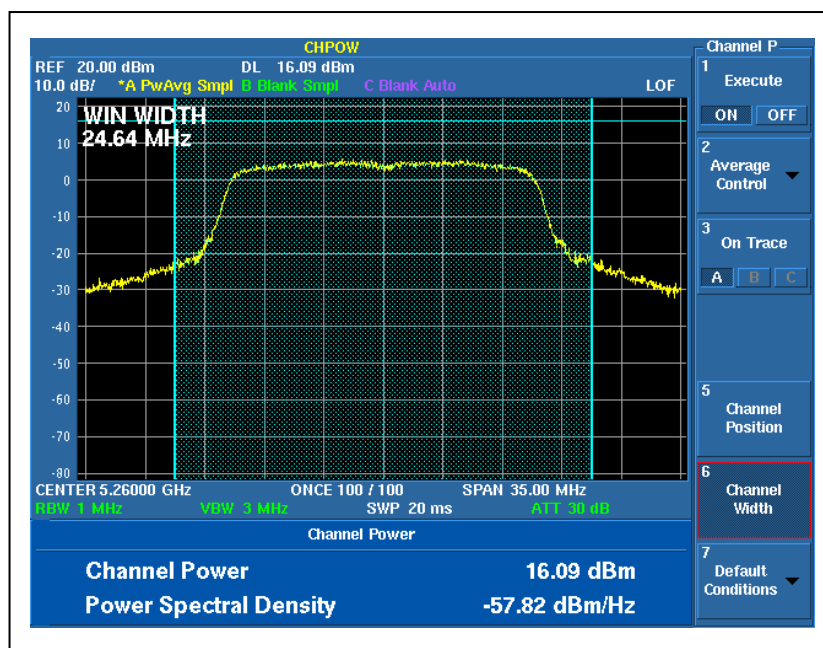


A D T

CH4

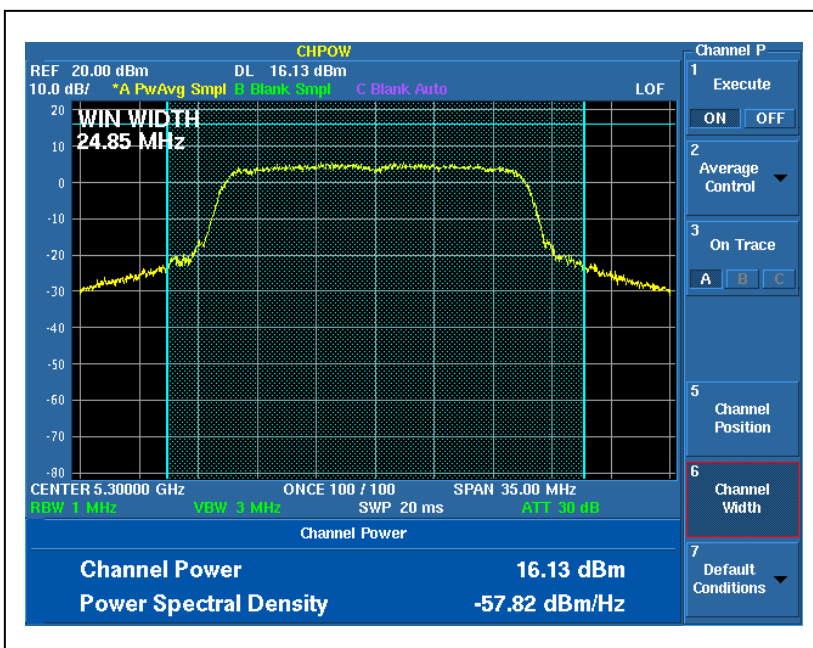


CH5

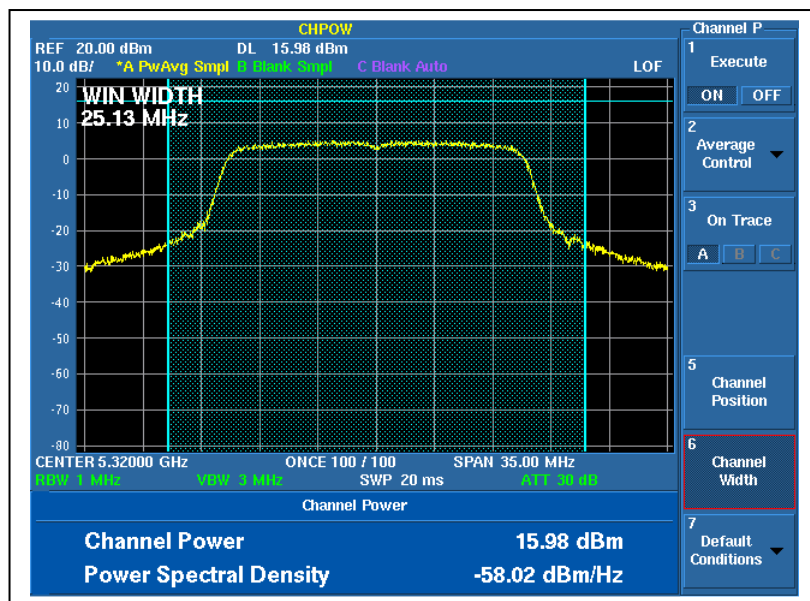




CH7

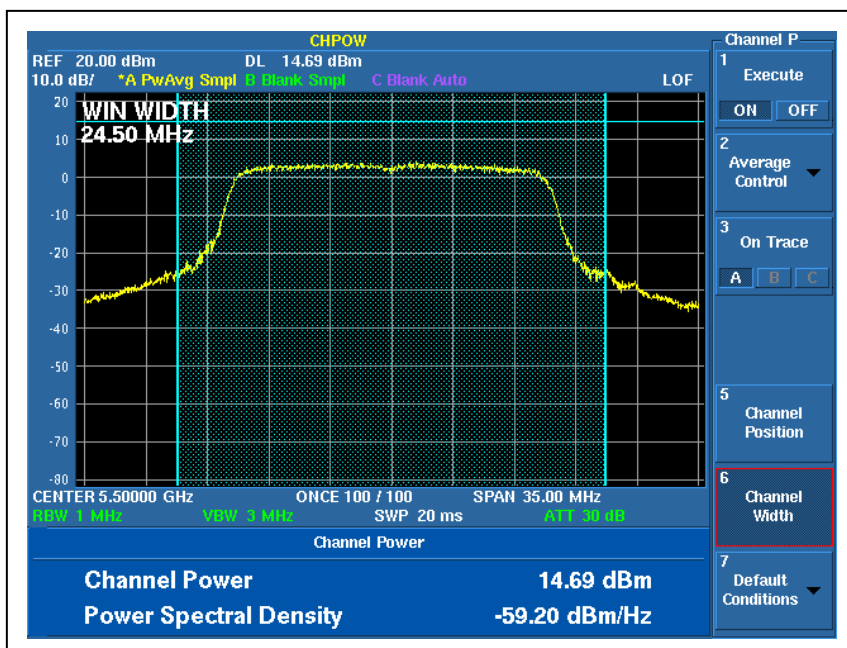


CH8

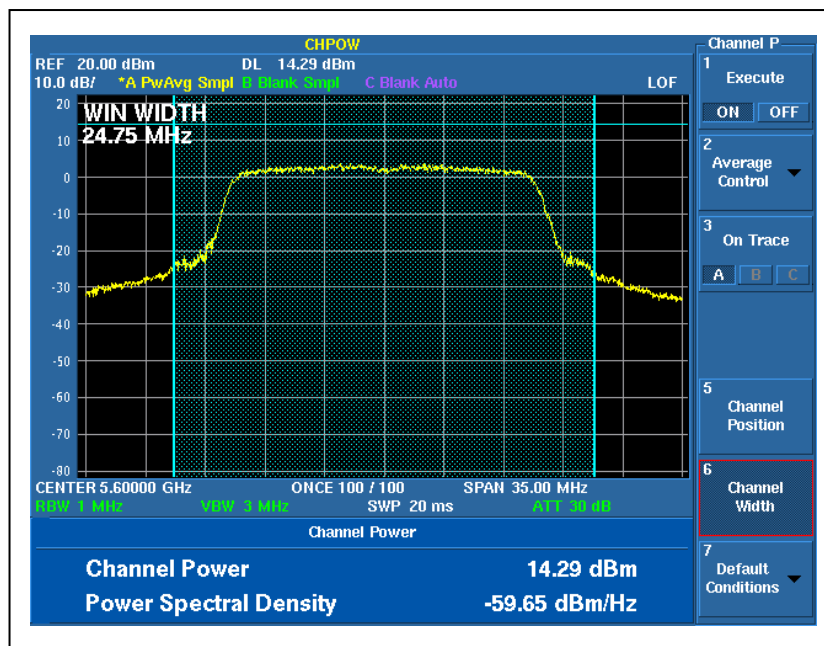




CH9

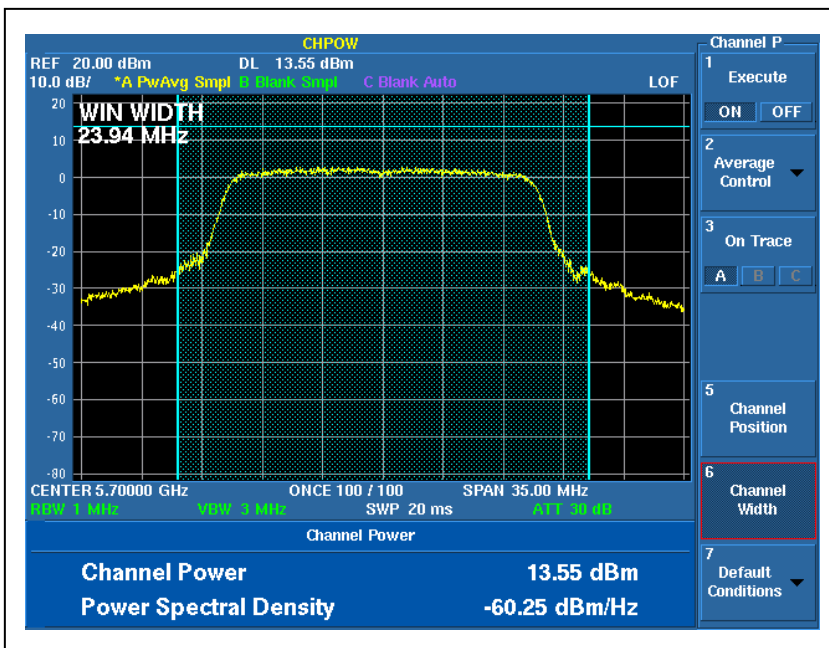


CH14

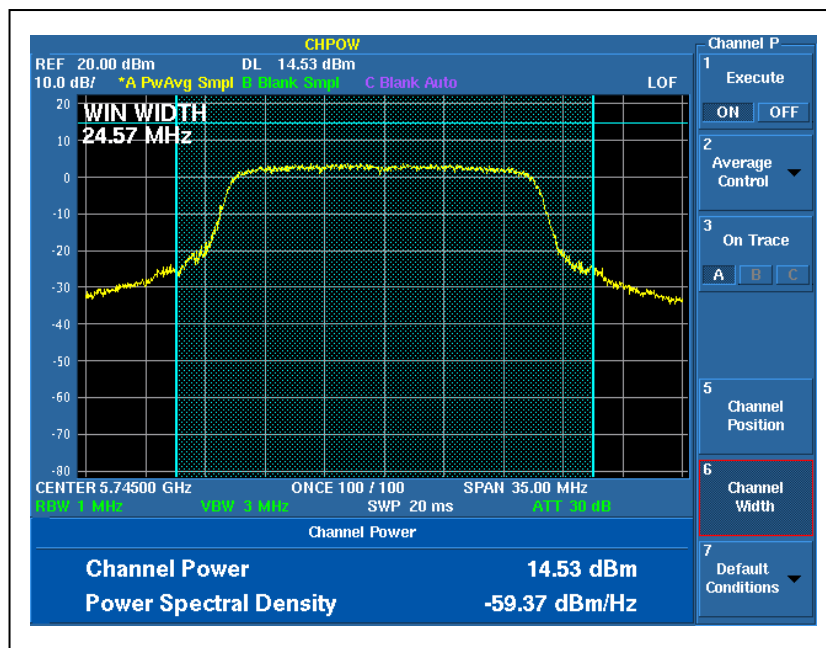




CH19

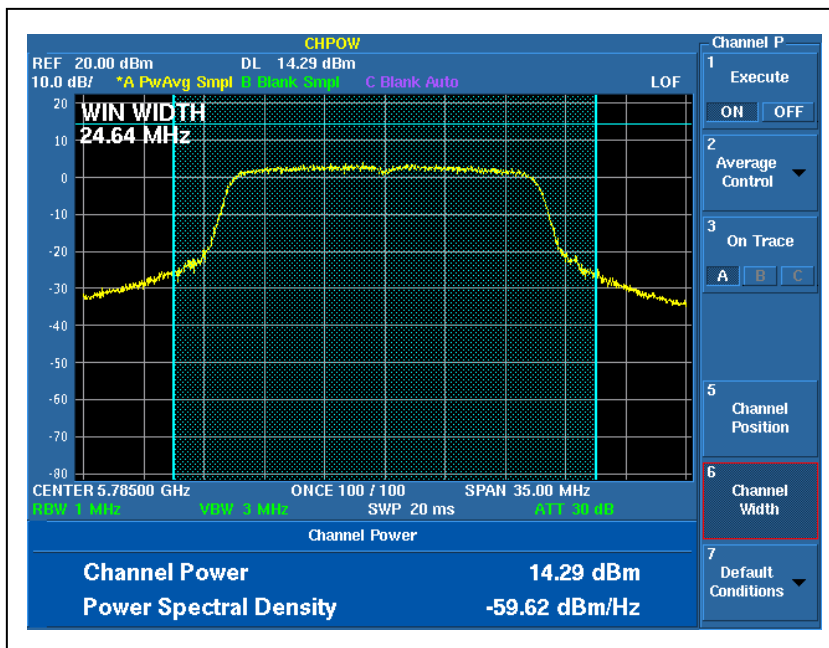


CH20

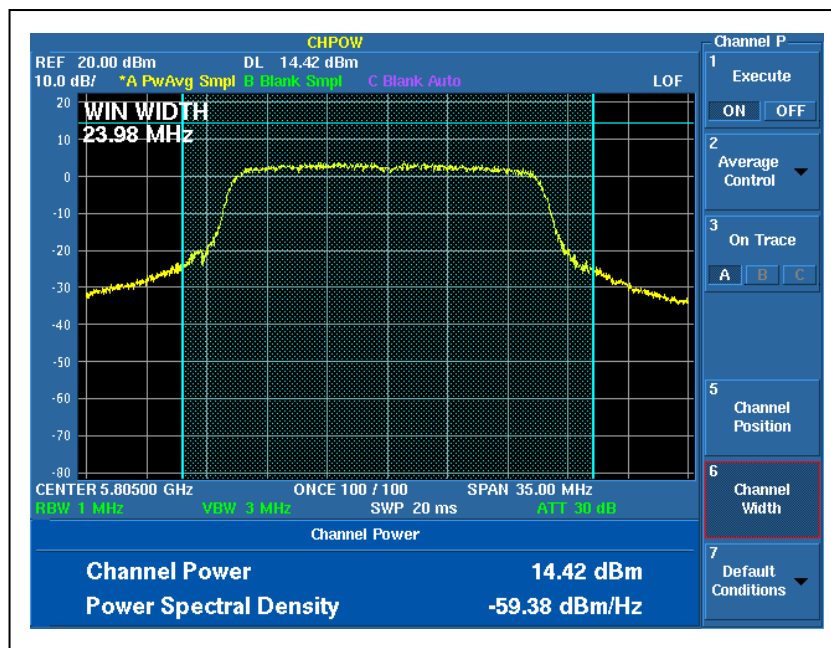




CH22



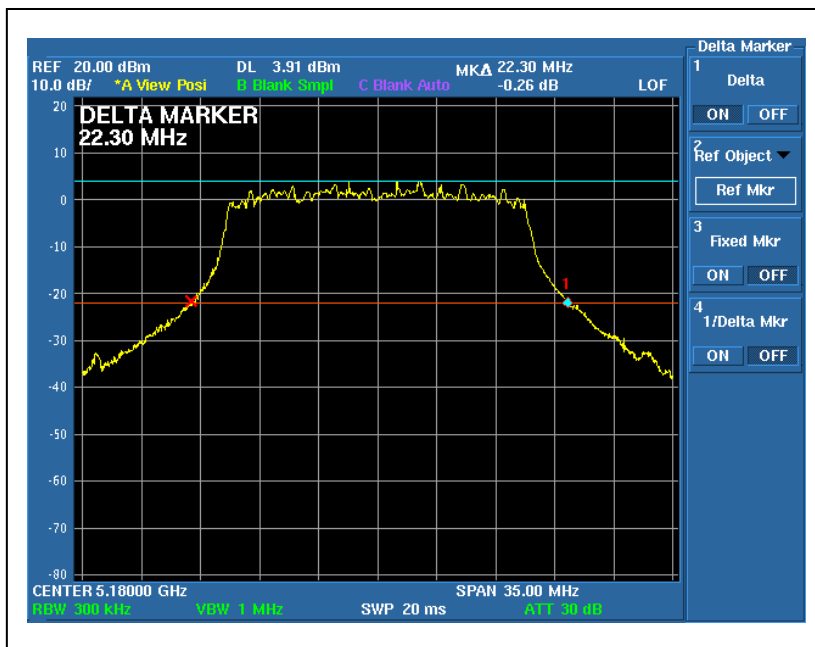
CH23



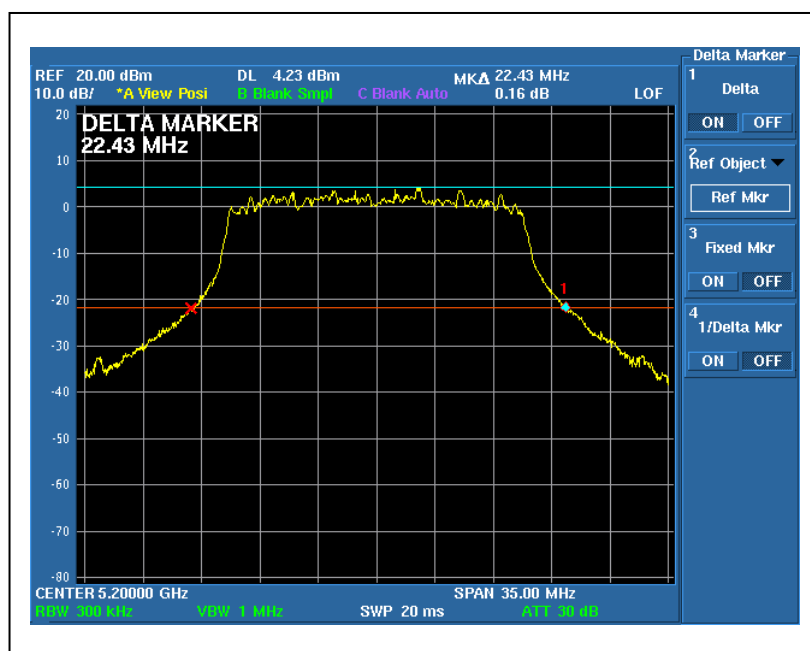


A D T

26dB Occupied Bandwidth: For Chain (0) :CH1

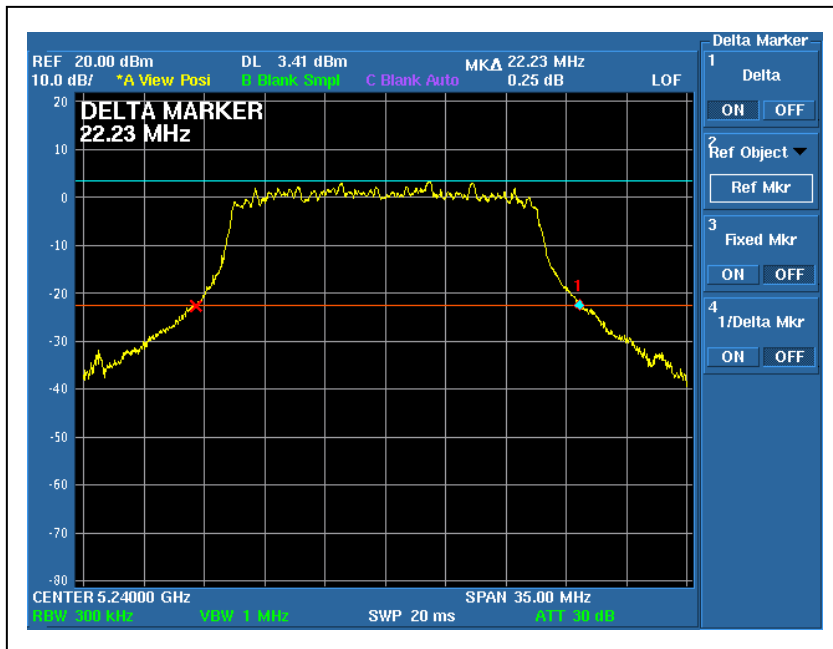


CH2

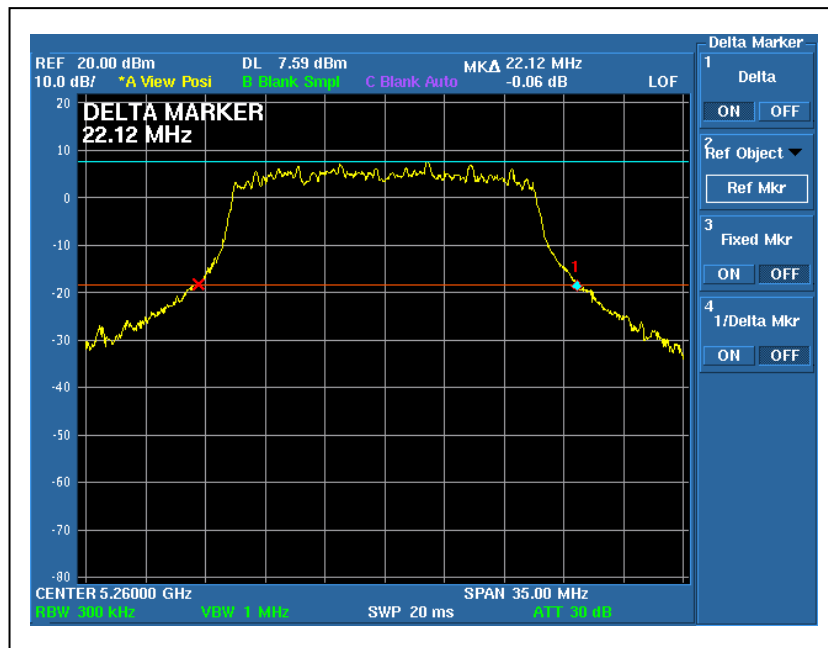




CH4

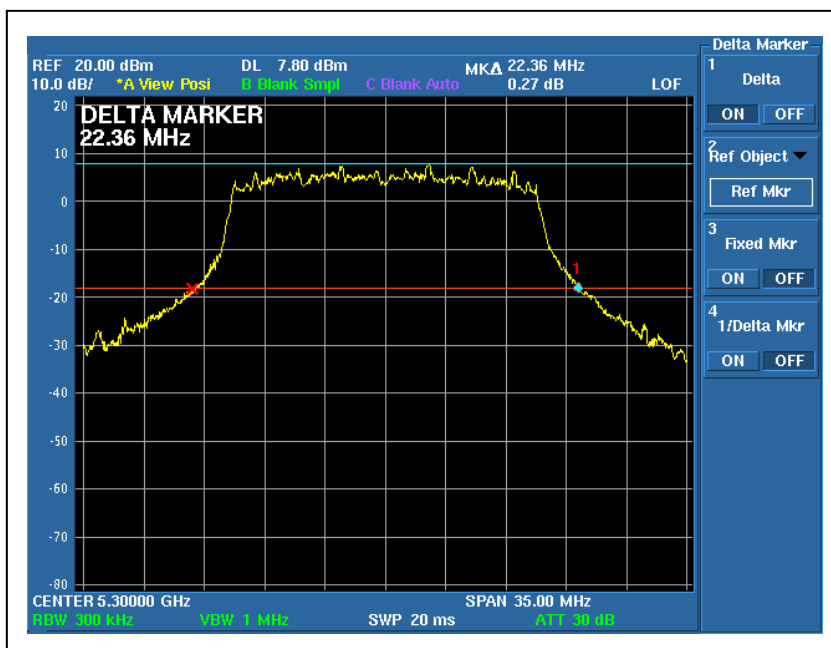


CH5

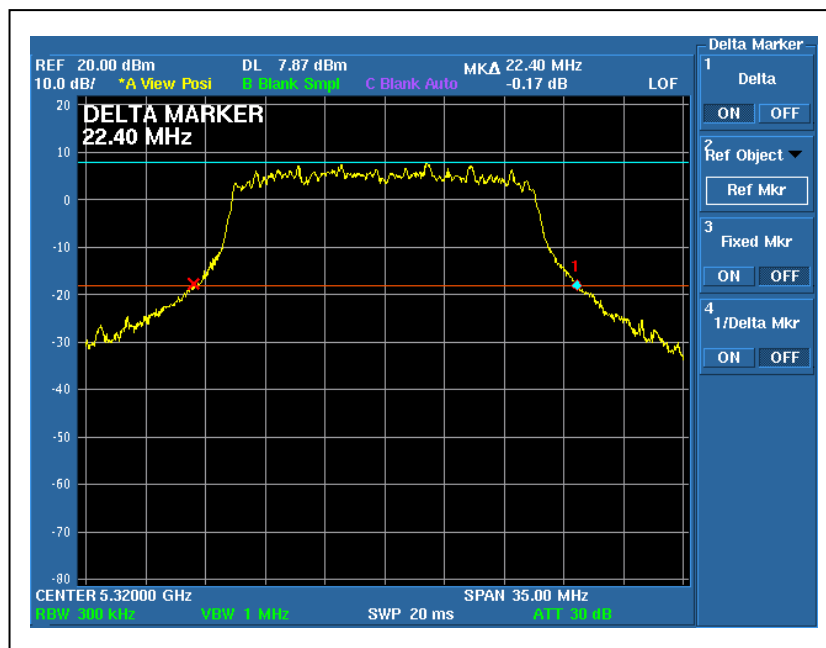




CH7

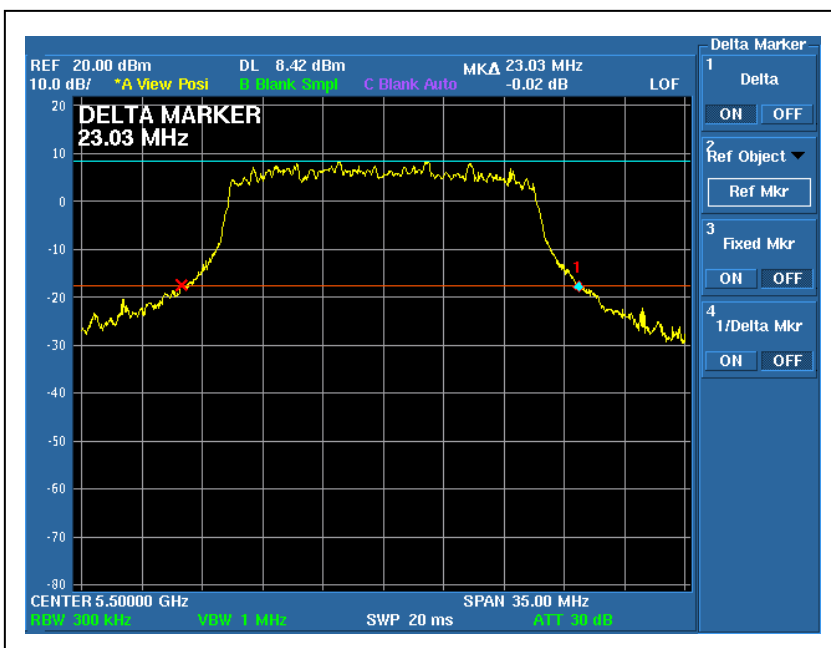


CH8

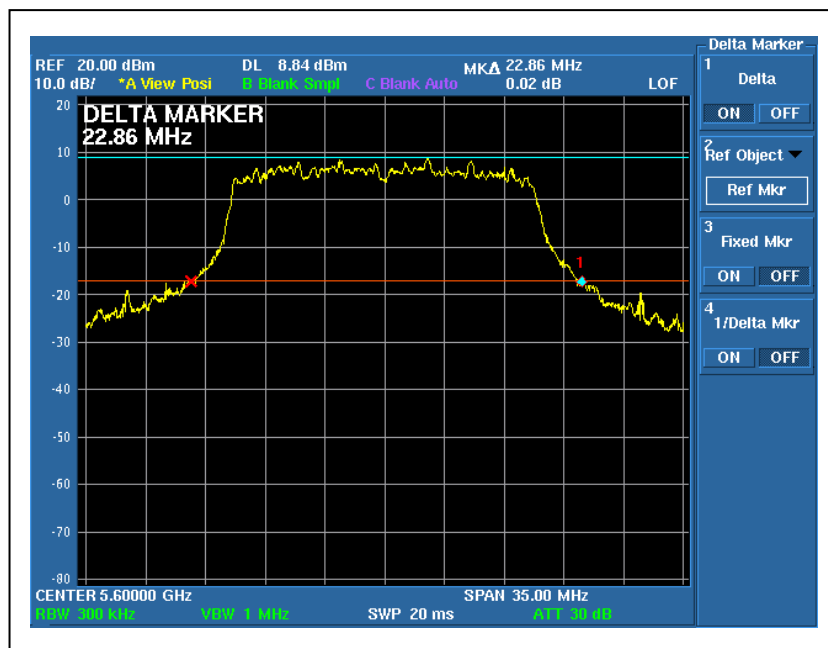




CH9



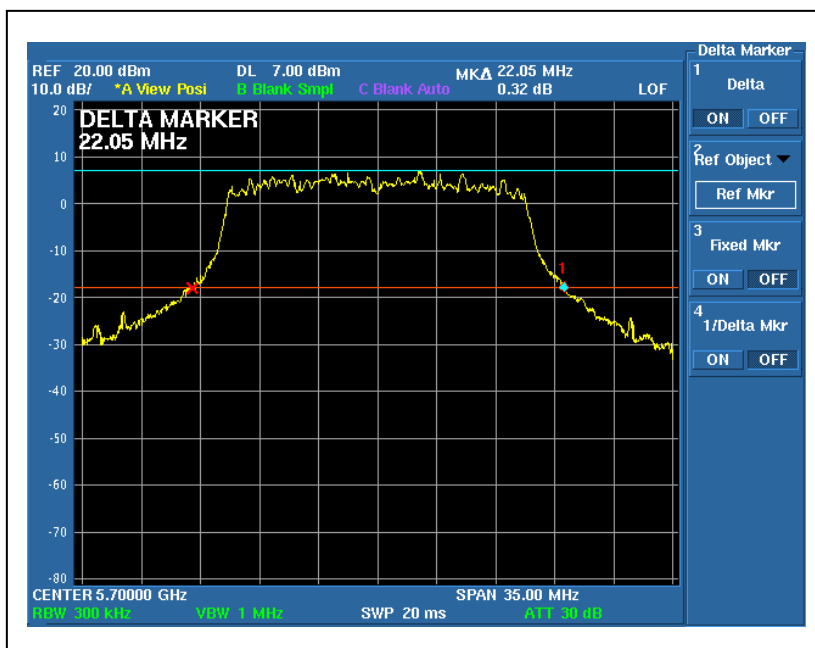
CH14



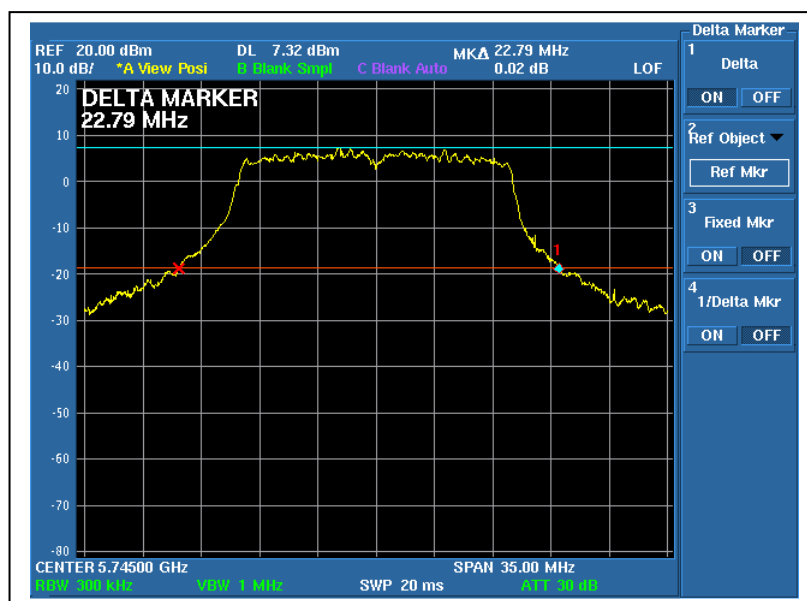


A D T

CH19

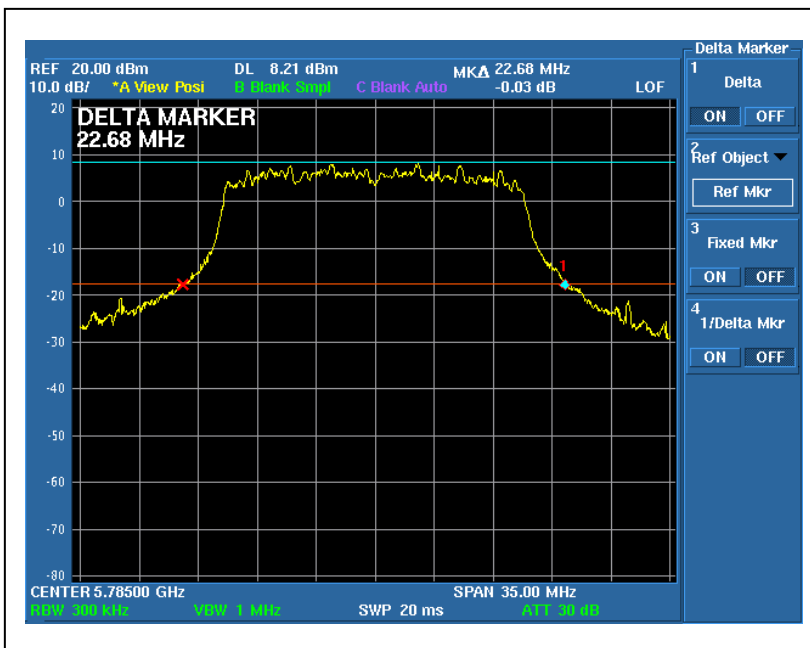


CH20

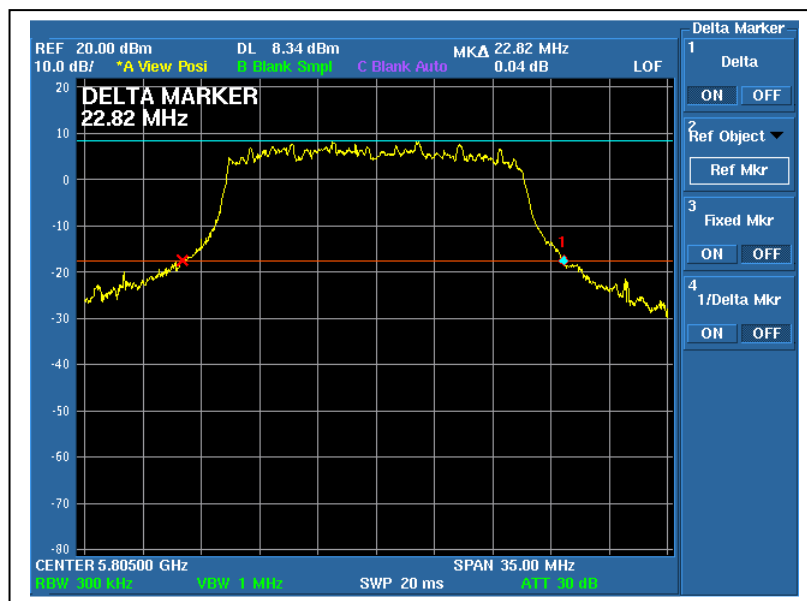




CH22

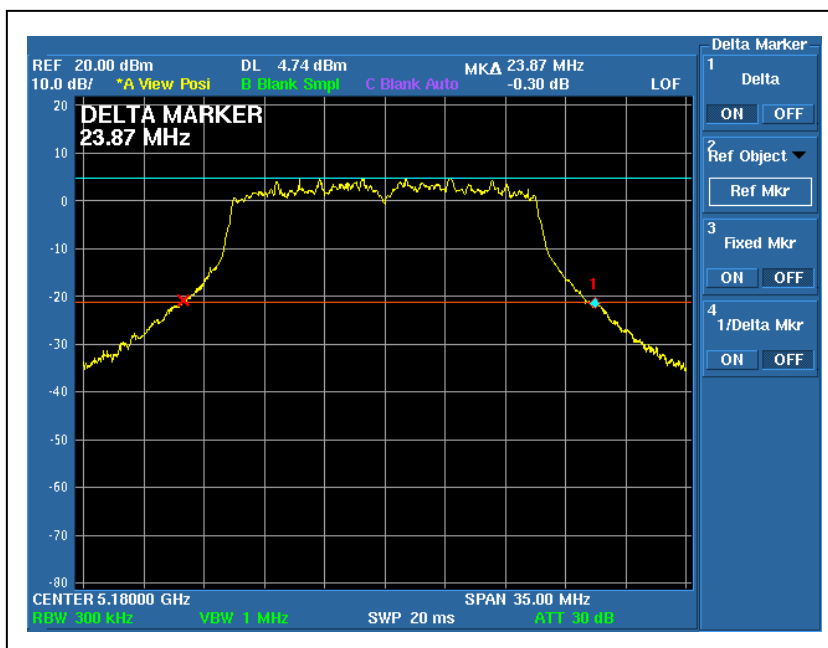


CH23

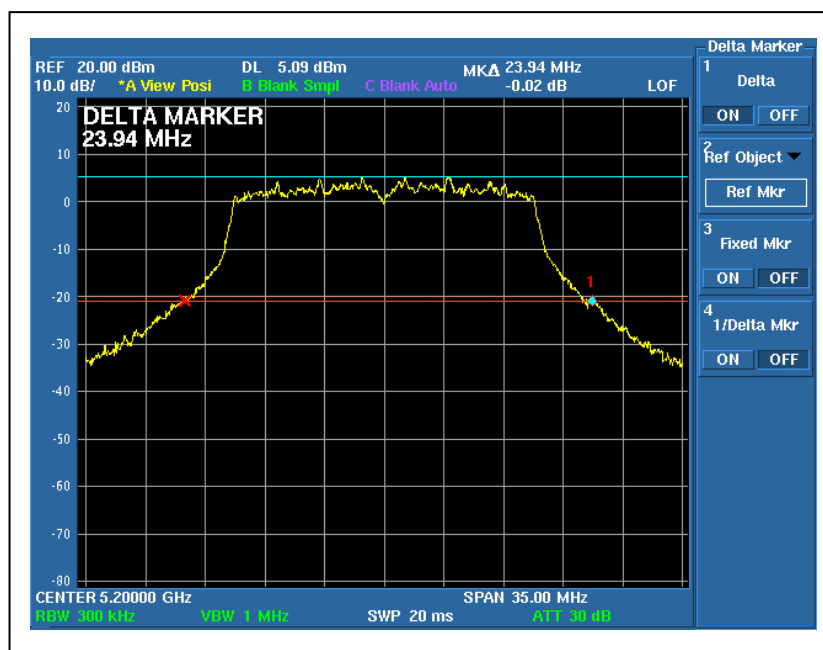




For Chain (1) :CH1

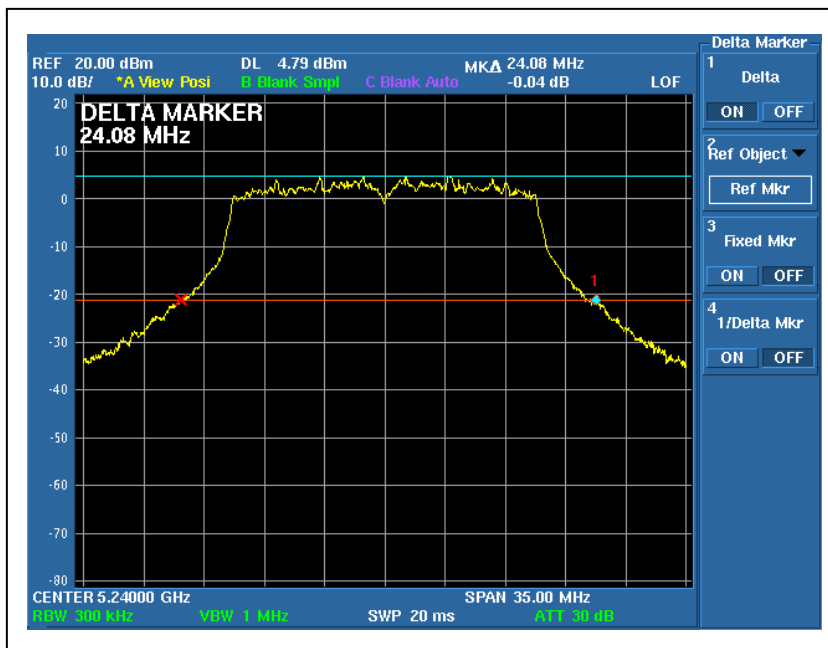


CH2

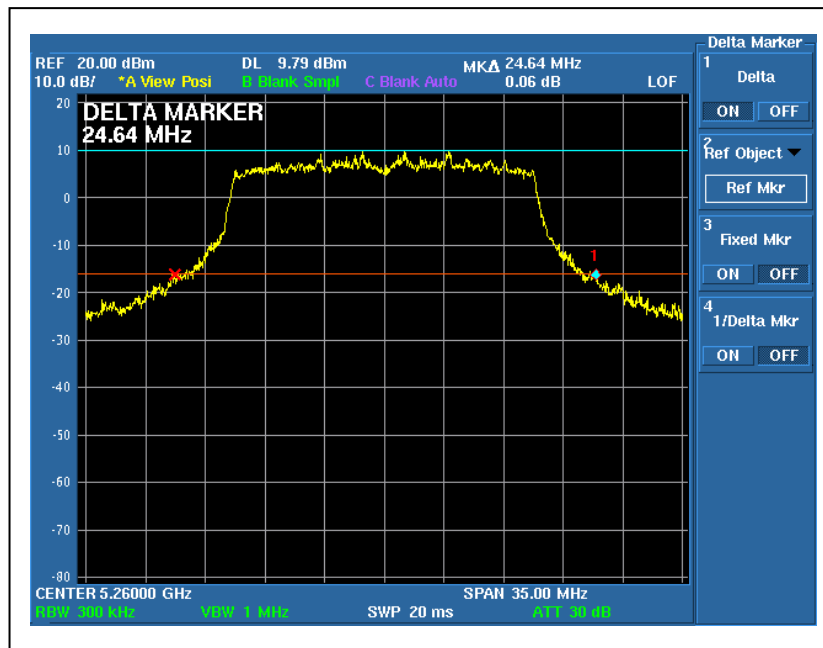




CH4

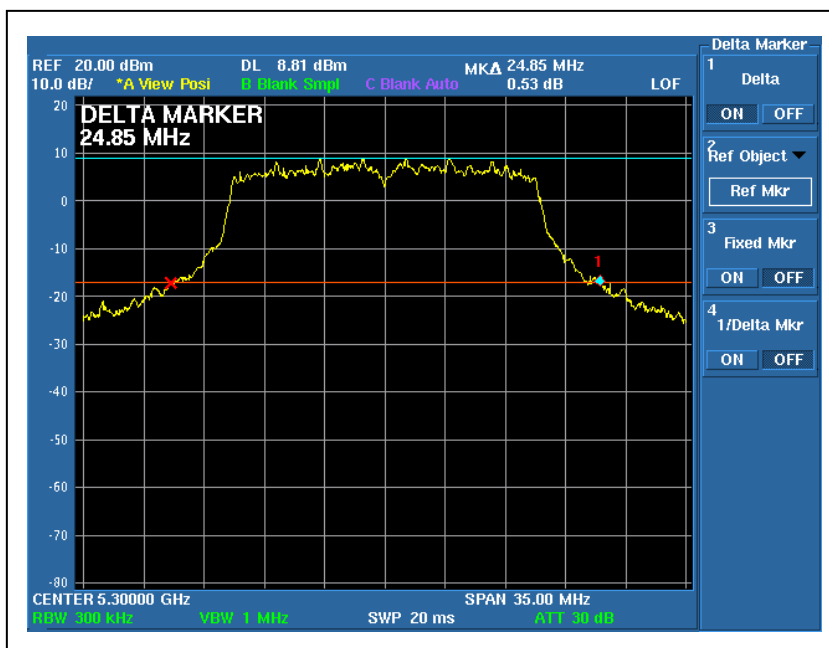


CH5

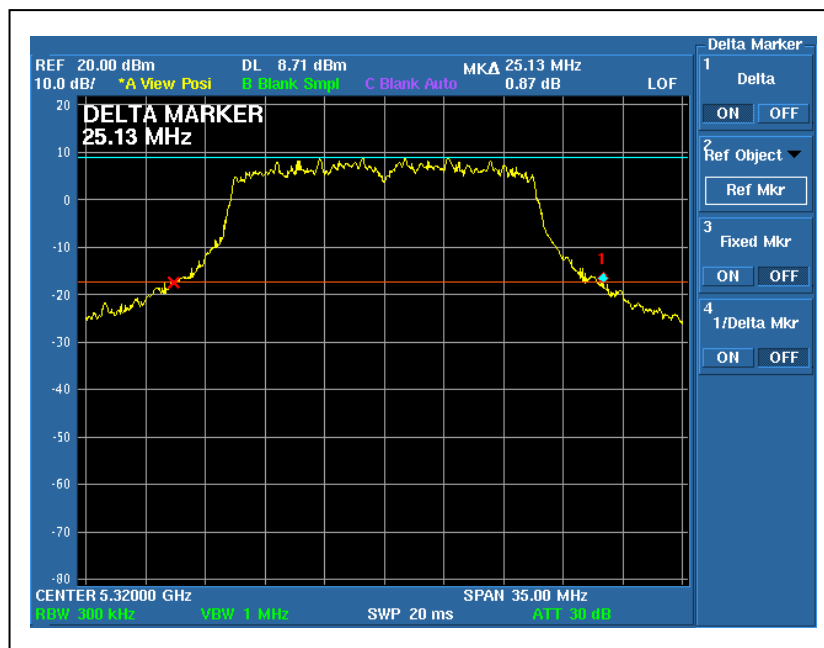




CH7

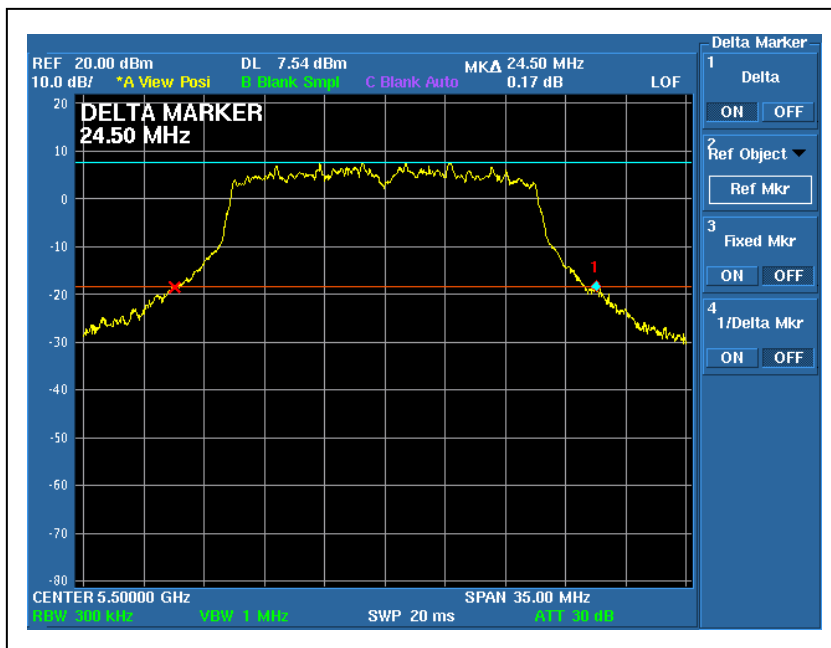


CH8

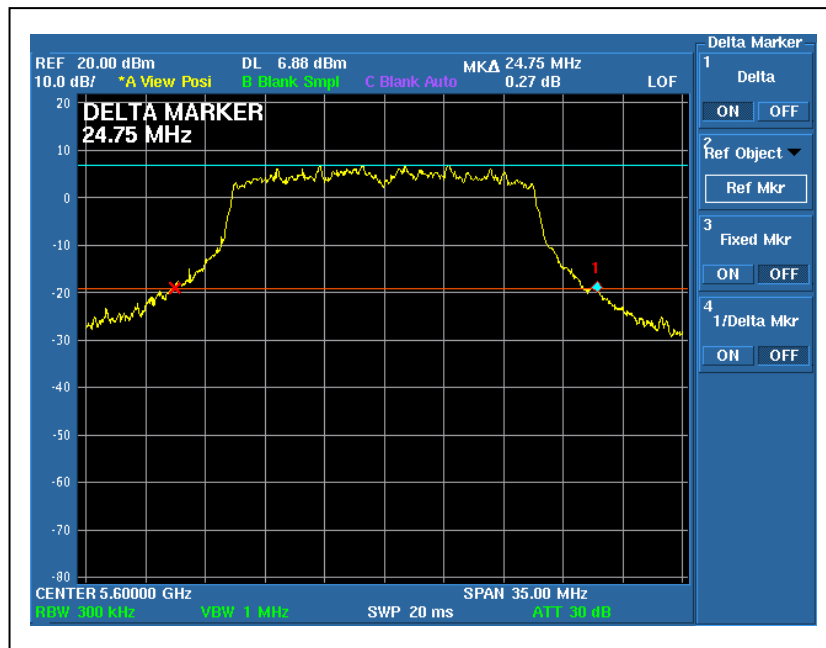




CH9

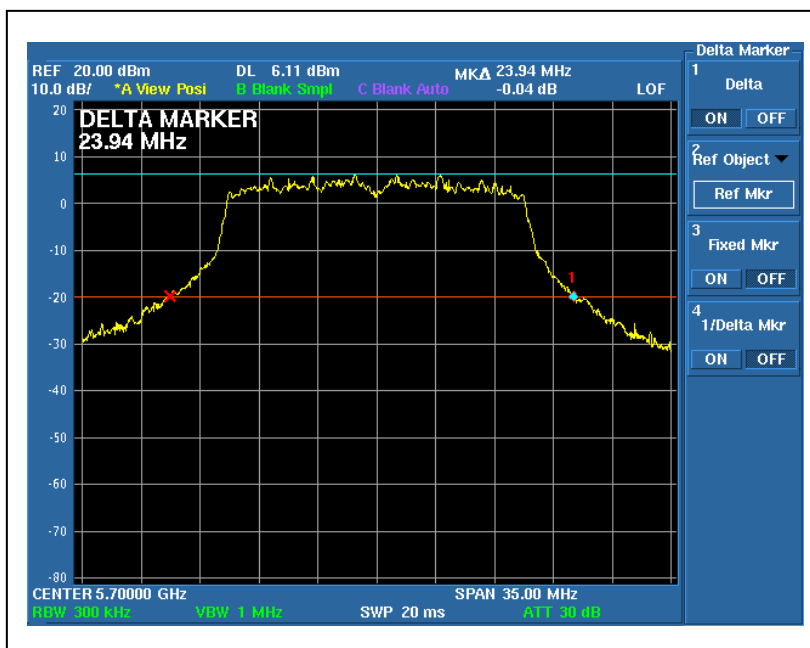


CH14





CH19

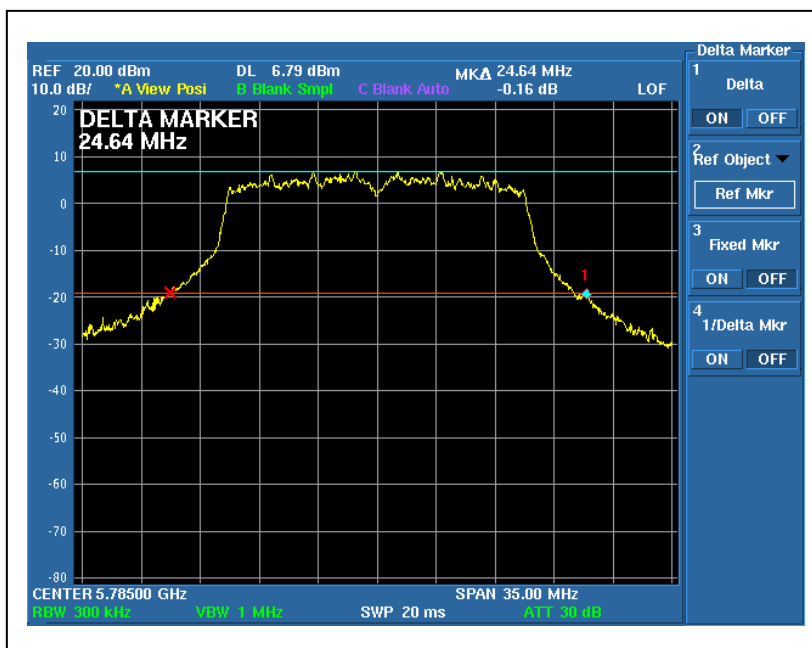


CH20

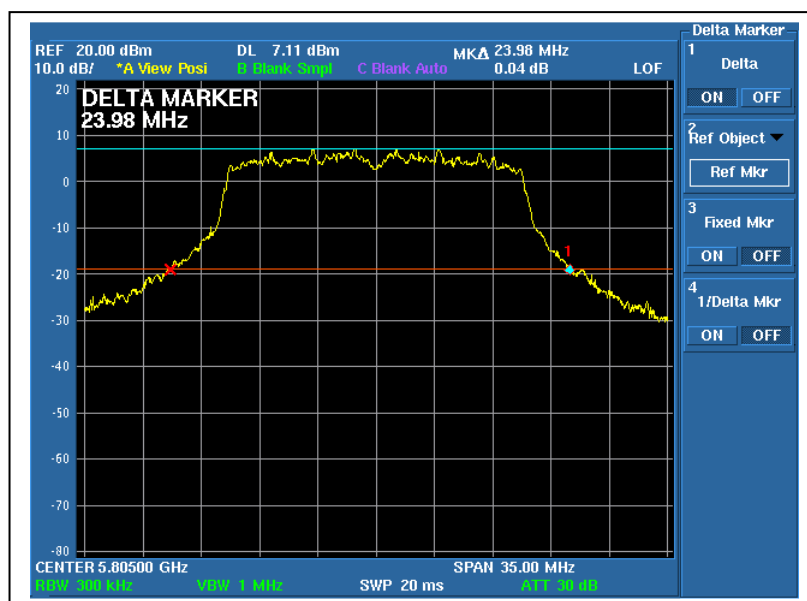




CH22



CH23





A D T

DRAFT 802.11n (40MHz) OFDM MODULATION:

MODULATION TYPE	BPSK	TRANSFER RATE	27Mbps
INPUT POWER	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 60%RH, 965hPa
TESTED BY	Wen Yu		

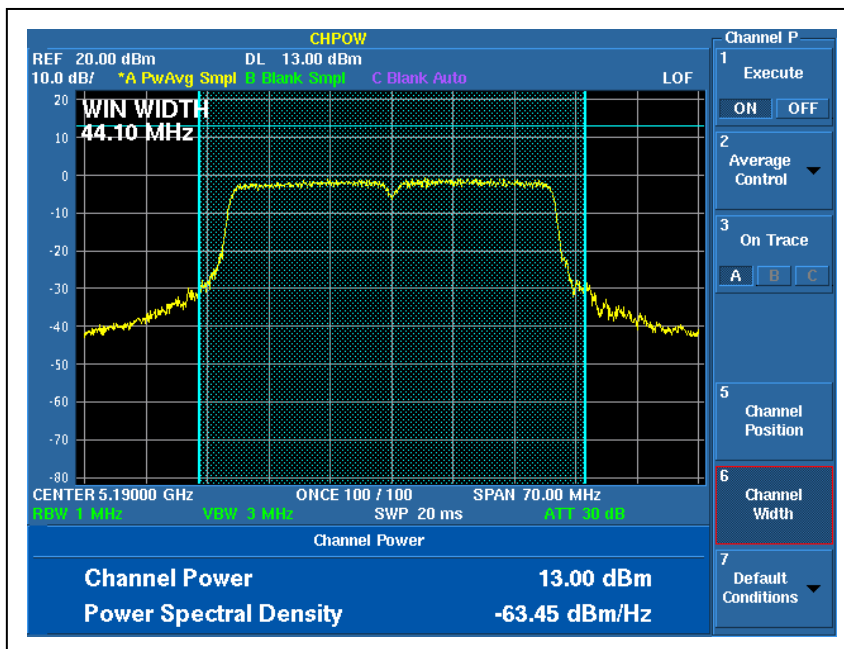
CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER OUTPUT (dBm)		PEAK POWER OUTPUT (mW)		TOTAL PEAK POWER (dBm)	TOTAL PEAK POWER (mW)	PEAK POWER LIMIT (dBm)	26dBc Occupied Bandwidth (MHz)		PASS/ FAIL
		Chain 0	Chain 1	Chain 0	Chain 1				Chain 0	Chain 1	
1	5190	13.00	14.75	19.953	29.854	16.97	49.807	17.00	44.10	45.29	PASS
2	5230	13.11	14.62	20.464	28.973	16.94	49.437	17.00	42.84	45.15	PASS
3	5270	13.87	15.61	24.378	36.392	17.84	60.770	24.00	42.84	45.22	PASS
4	5310	13.87	15.70	24.378	37.154	17.89	61.532	24.00	42.63	45.29	PASS
5	5510	12.69	14.96	18.578	31.333	16.98	49.911	24.00	42.91	45.15	PASS
7	5590	12.53	15.07	17.906	32.137	16.99	50.043	24.00	43.89	45.15	PASS
9	5670	13.71	15.24	23.496	33.420	17.55	56.916	24.00	43.82	45.08	PASS
10	5755	13.57	15.00	22.751	31.623	17.35	54.374	30.00	43.68	45.22	PASS
11	5795	14.20	15.07	26.303	32.137	17.67	58.440	30.00	44.17	45.78	PASS

NOTE: The 26dBc Occupied Bandwidth plot, please refer to the following pages.

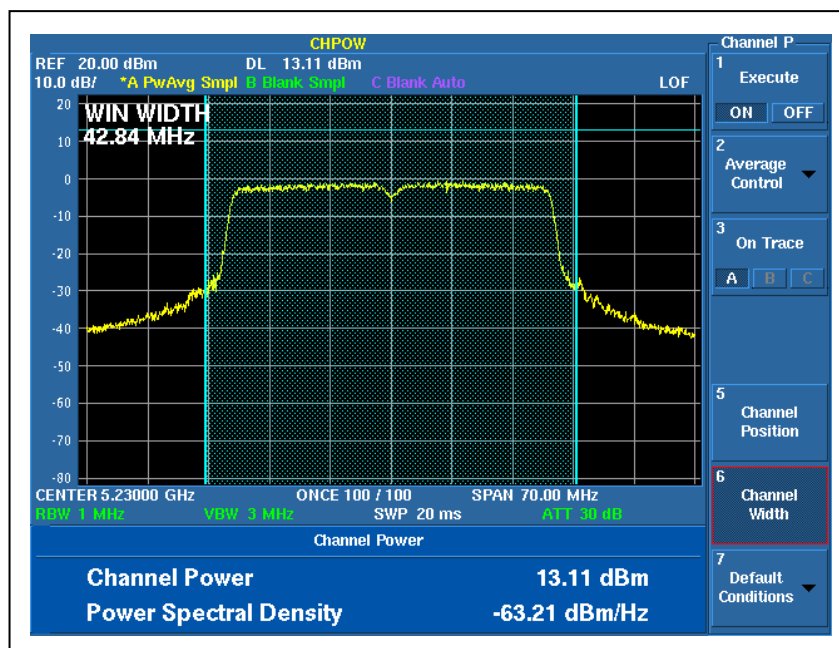


A D T

Peak Power Output:
For Chain (0) :CH1

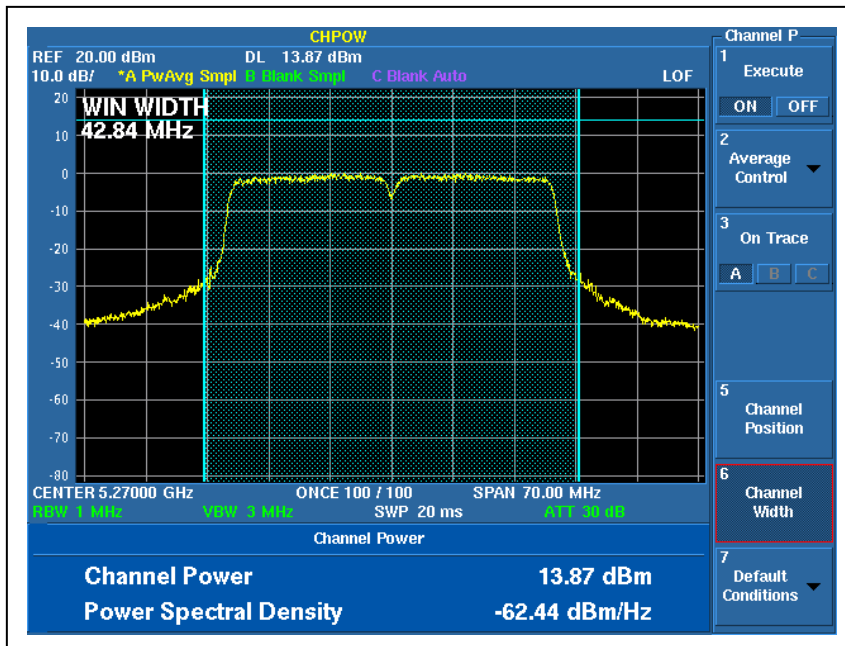


CH2

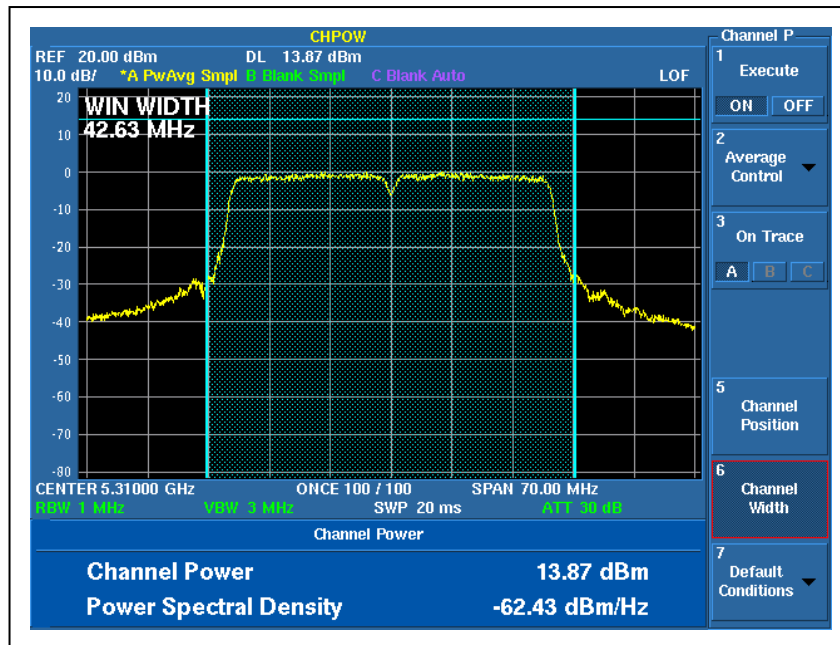




CH3

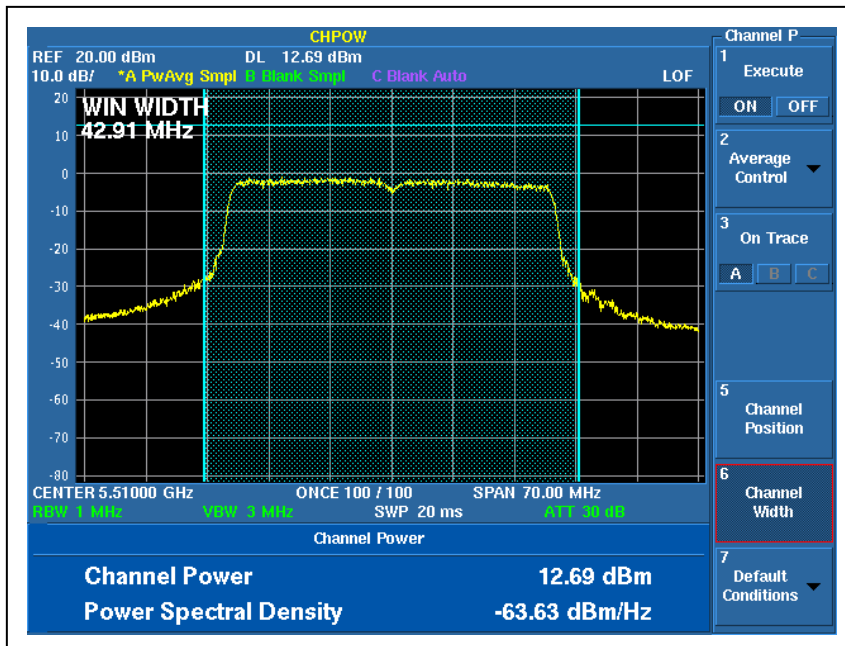


CH4

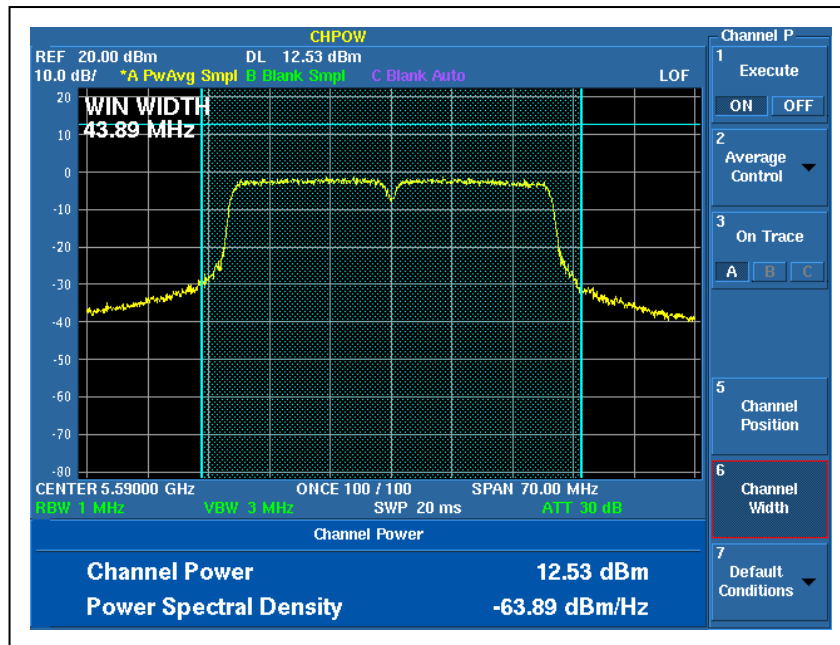




CH5

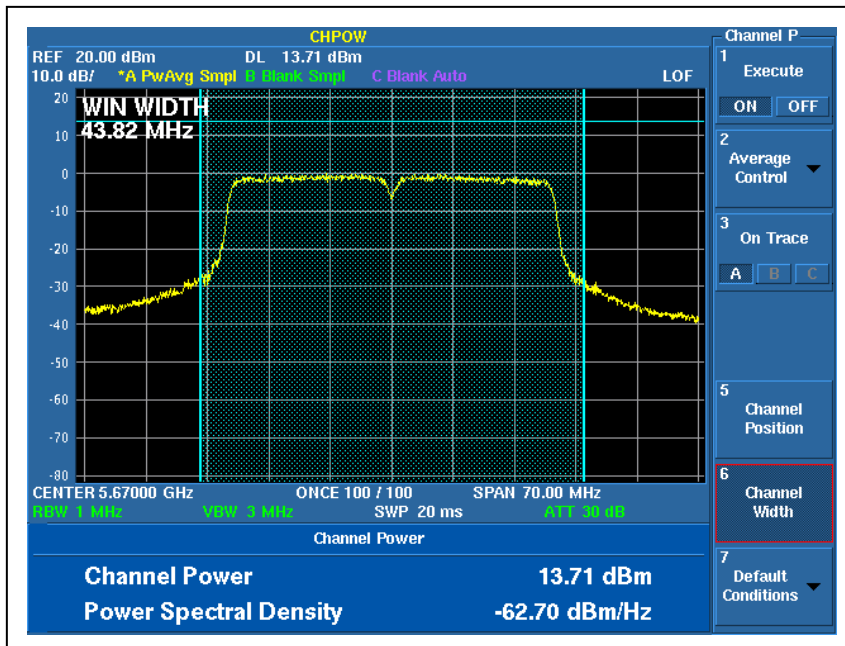


CH7

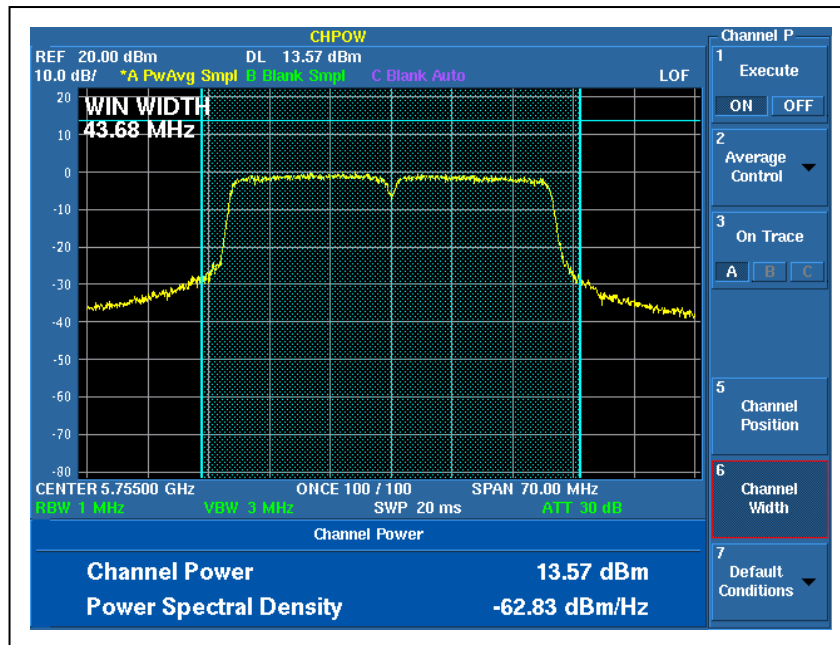




CH9



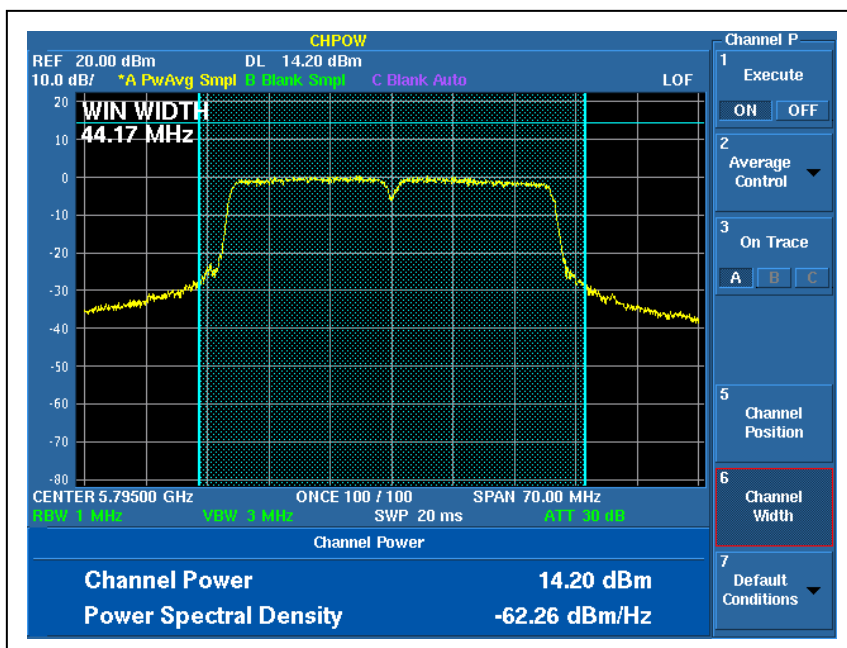
CH10





A D T

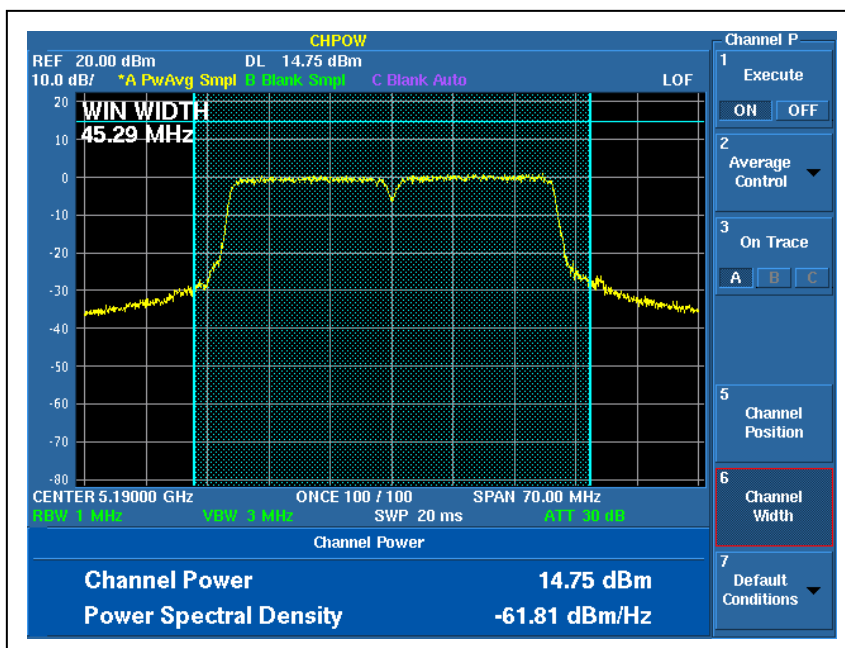
CH11



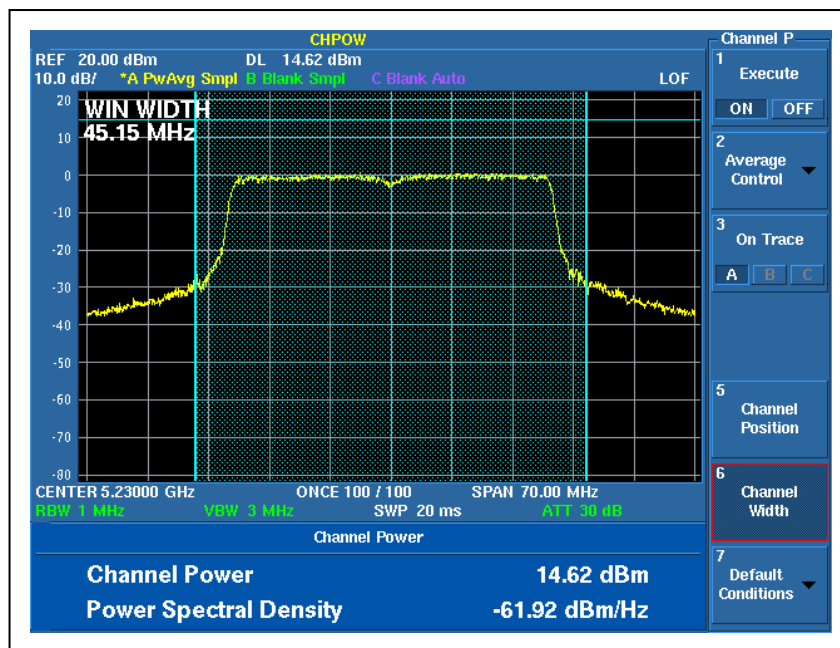


A D T

For Chain (1) :CH1

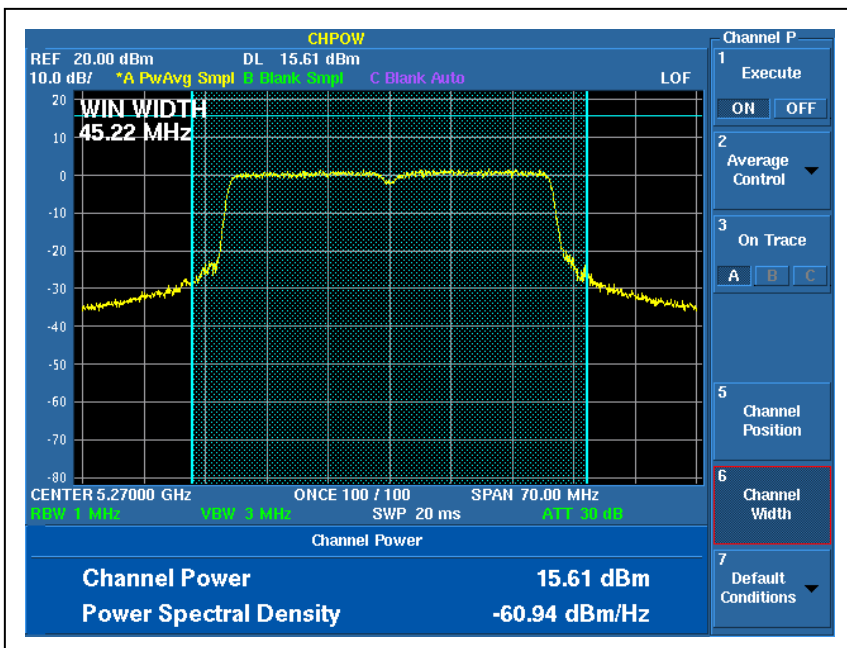


CH2

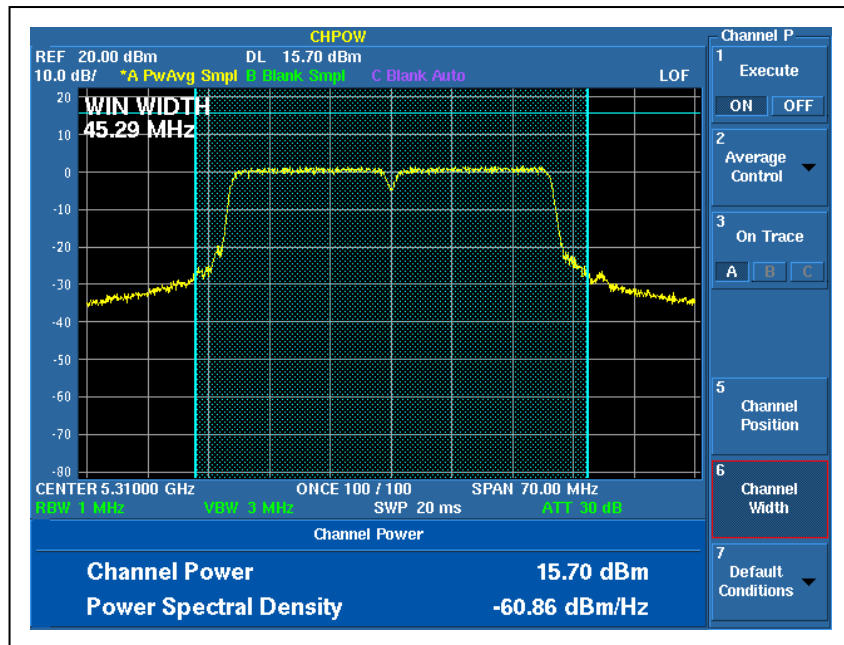




CH3

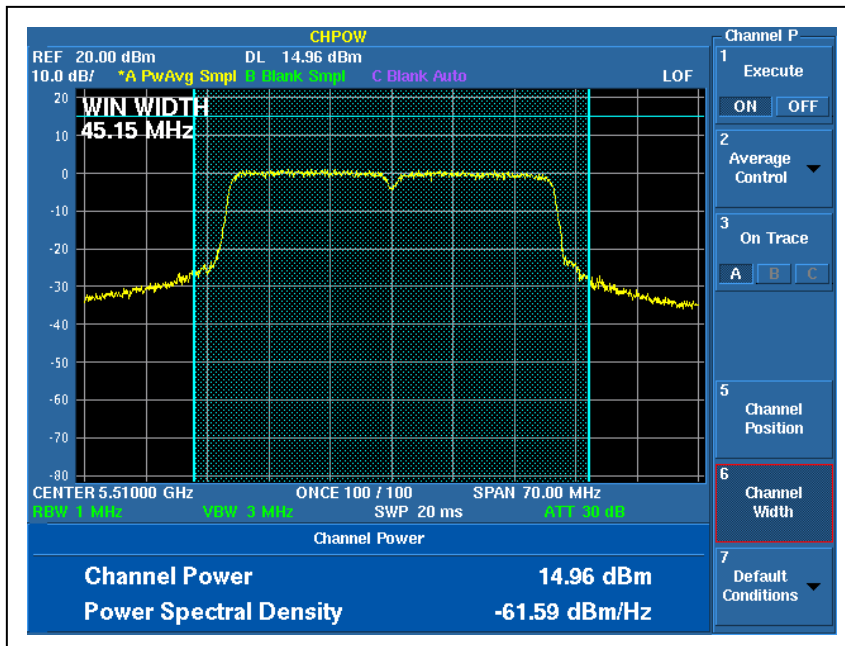


CH4

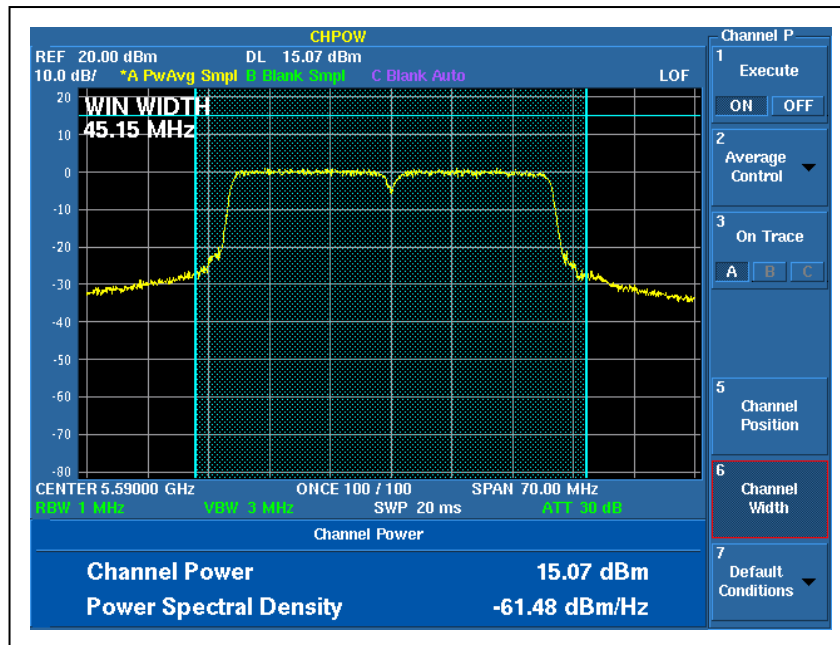




CH5

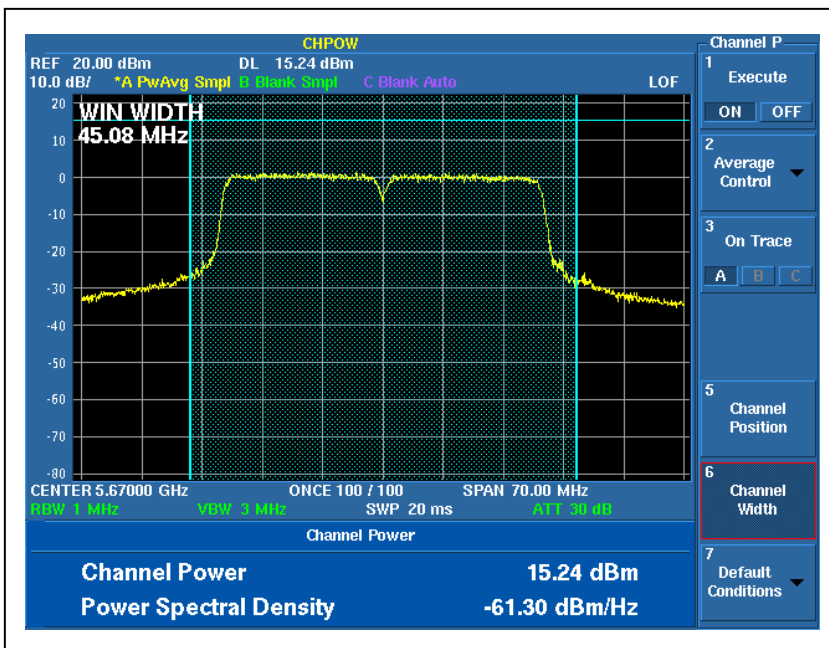


CH7

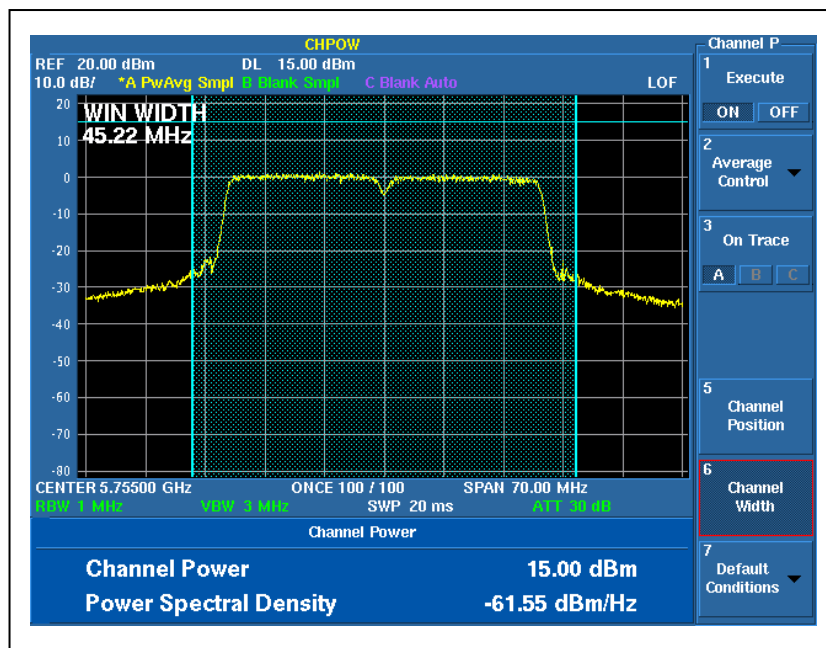




CH9

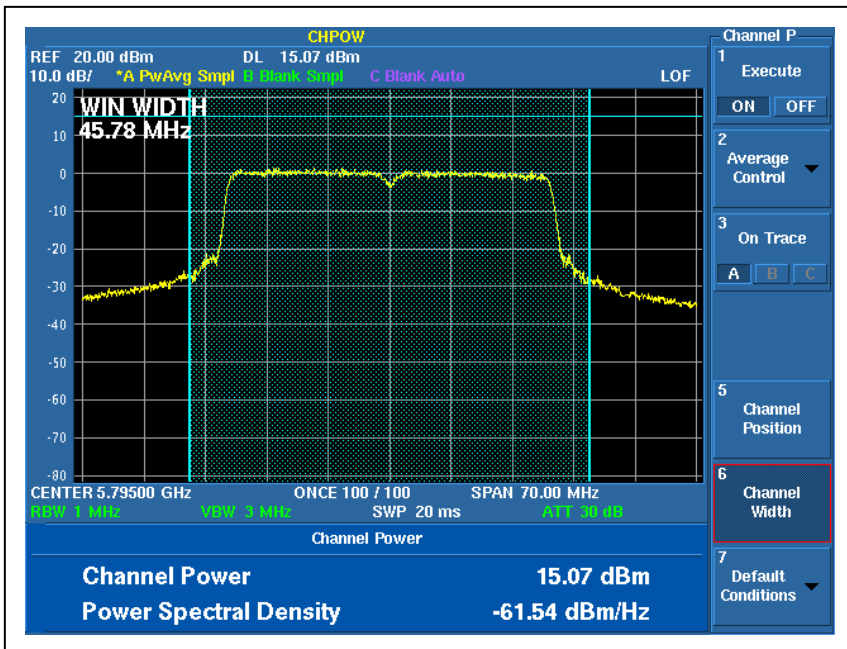


CH10





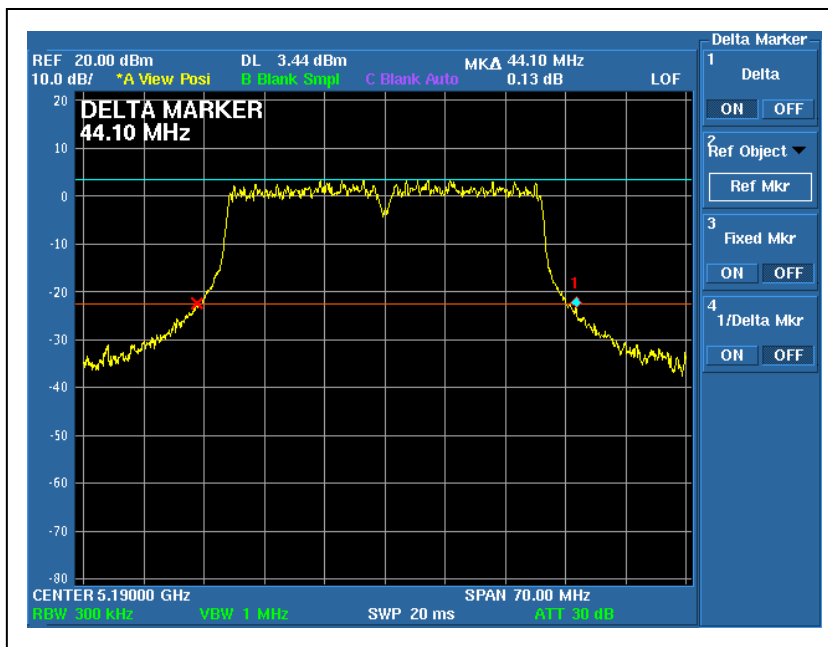
CH11



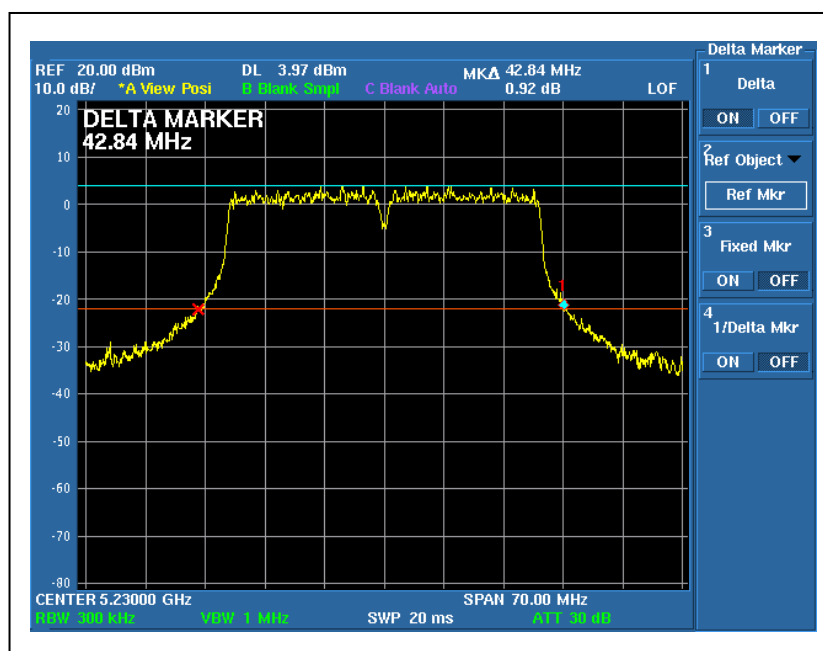


A D T

26dB Occupied Bandwidth:
For Chain (0) :CH1

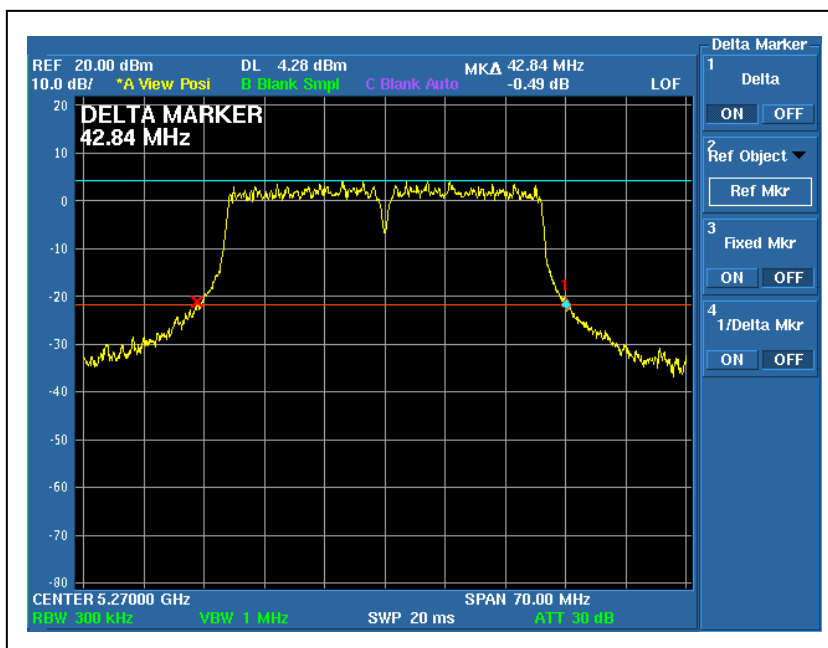


CH2

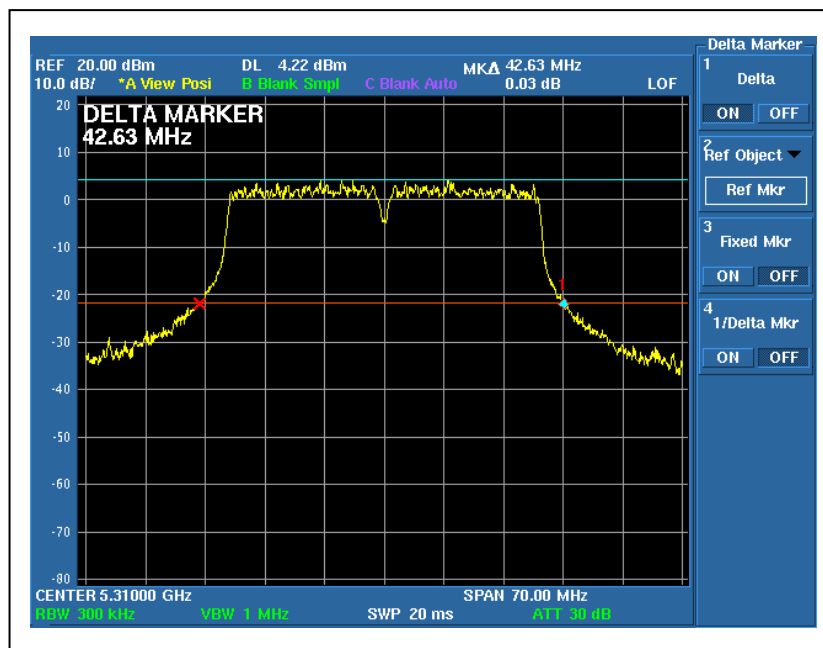




CH3

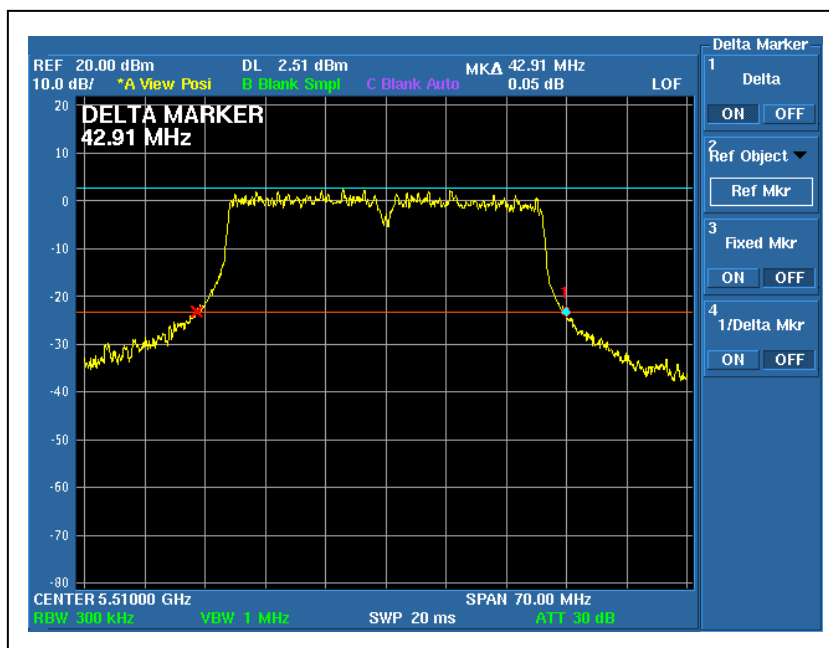


CH4

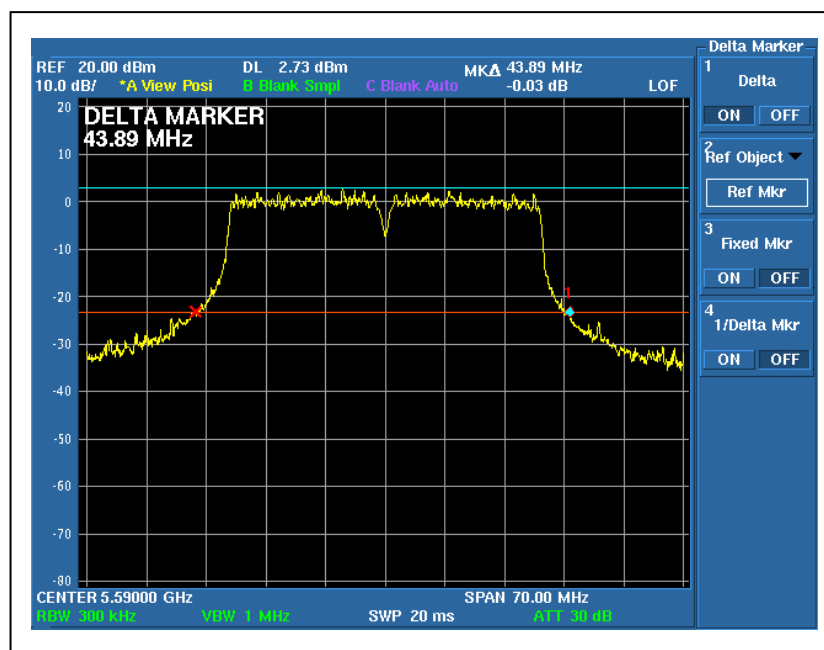




CH5

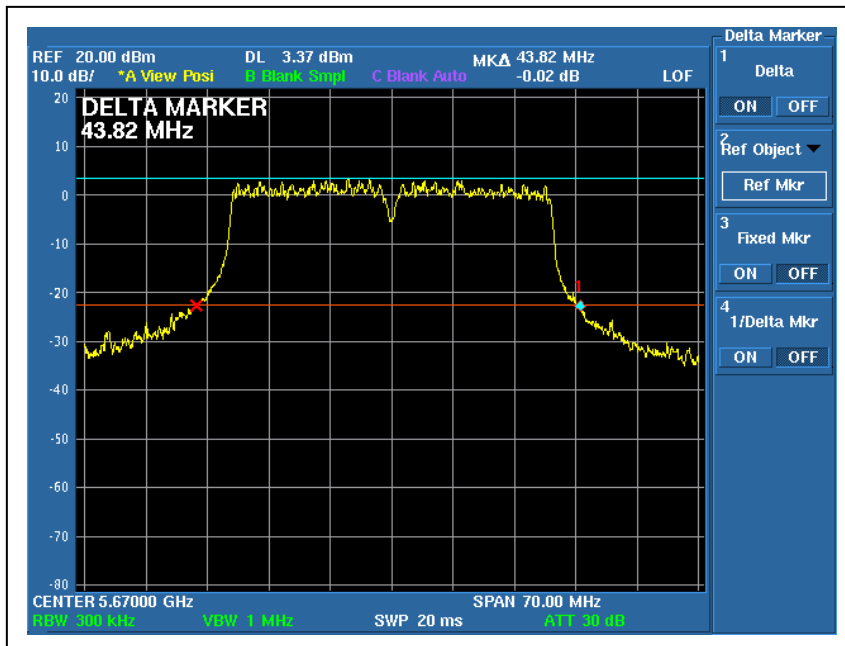


CH7

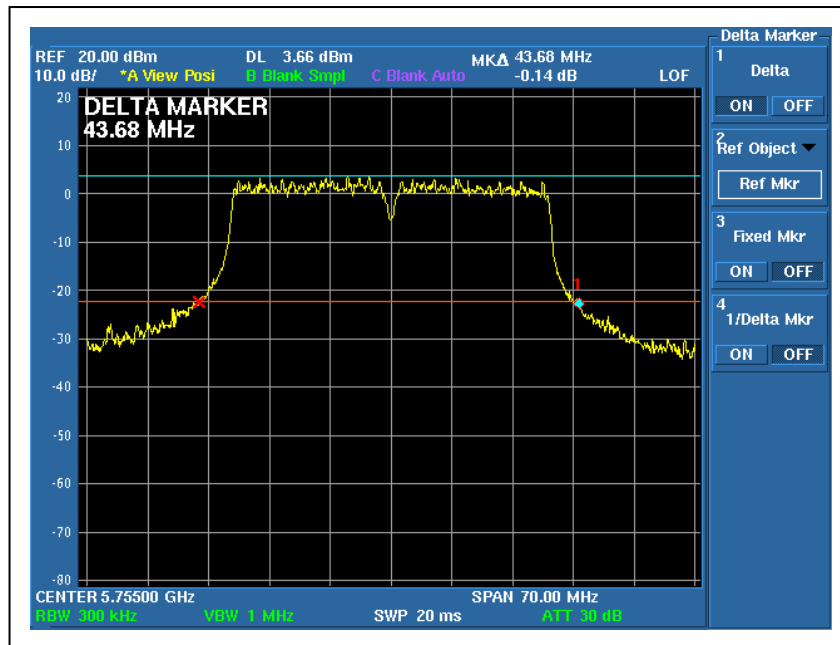




CH9



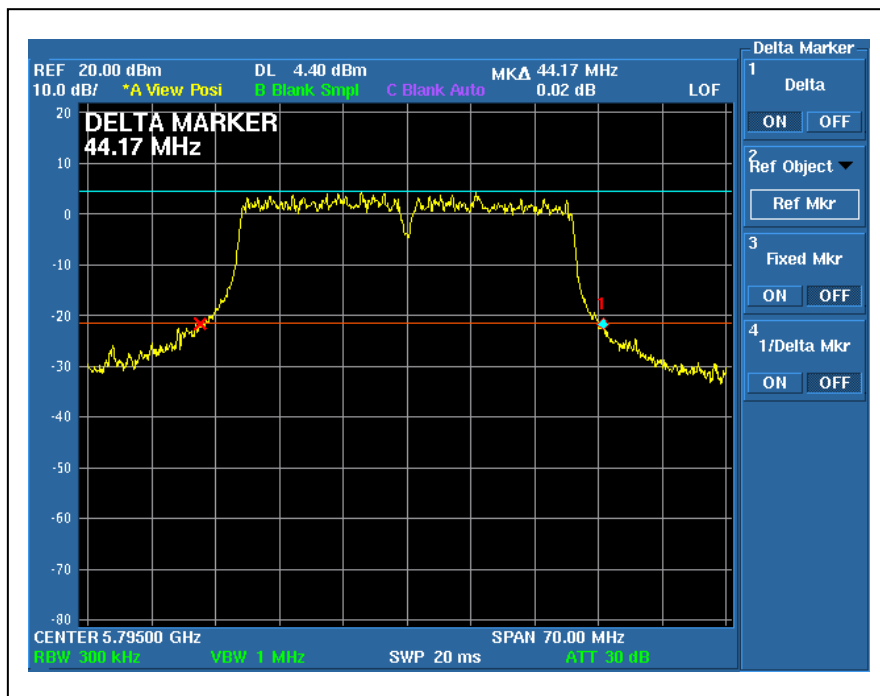
CH10





A D T

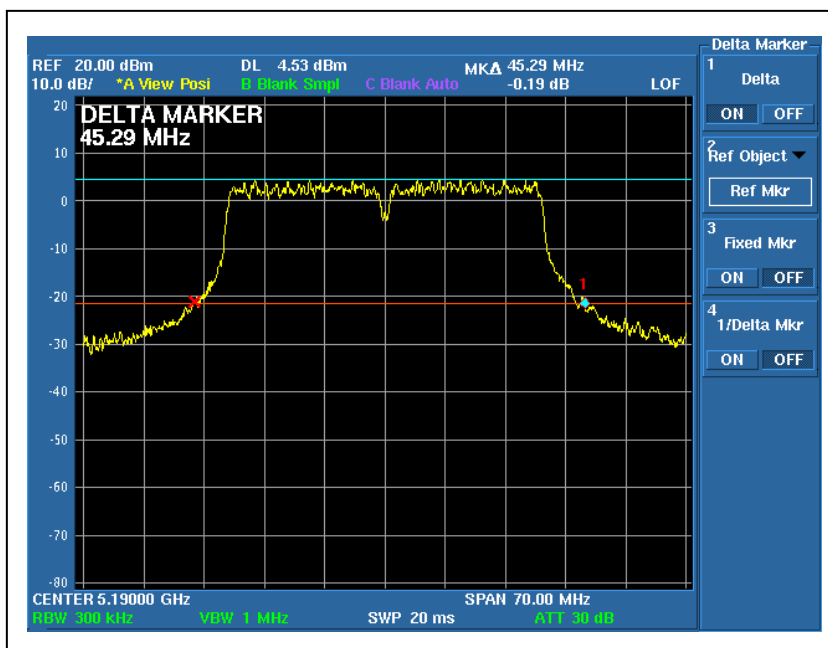
CH11



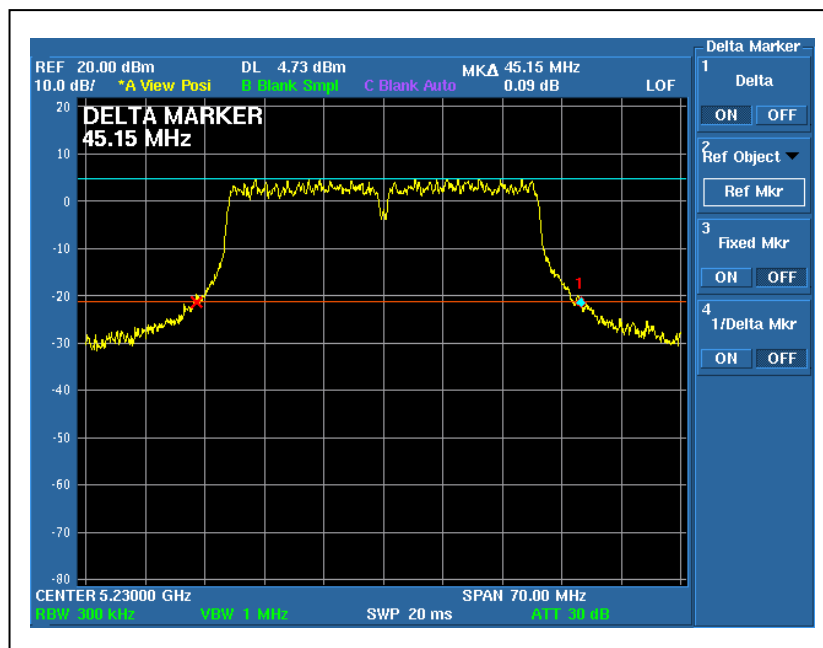


A D T

For Chain (1) :CH1

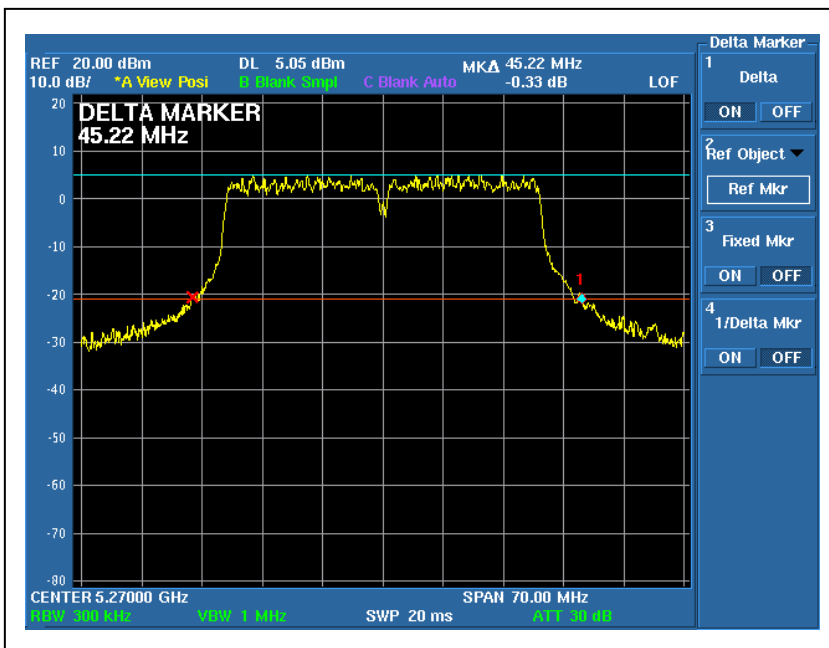


CH2

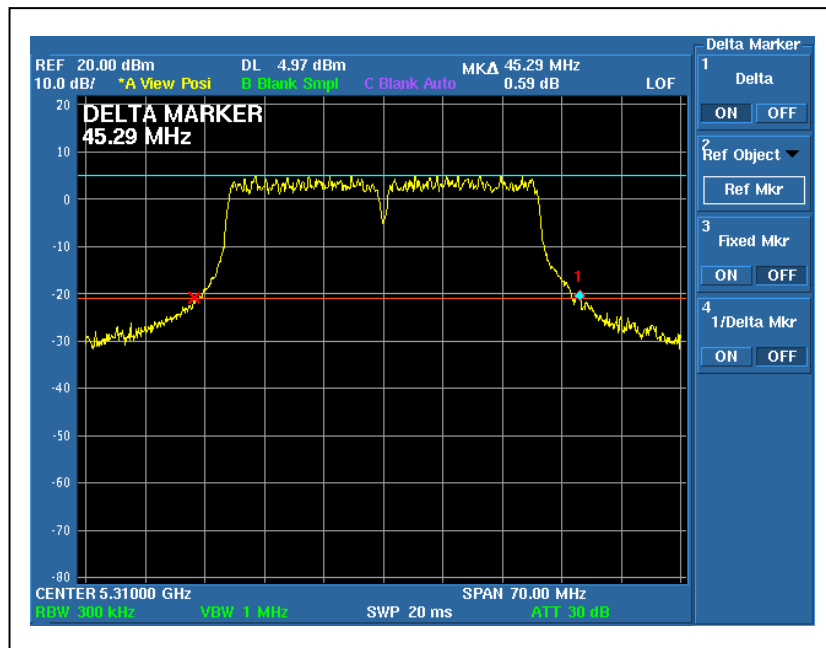




CH3

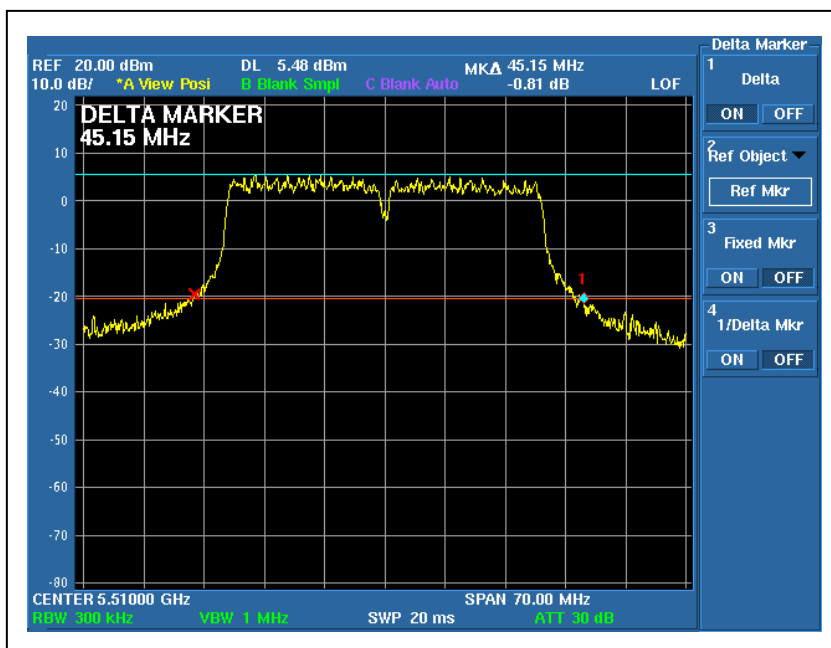


CH4

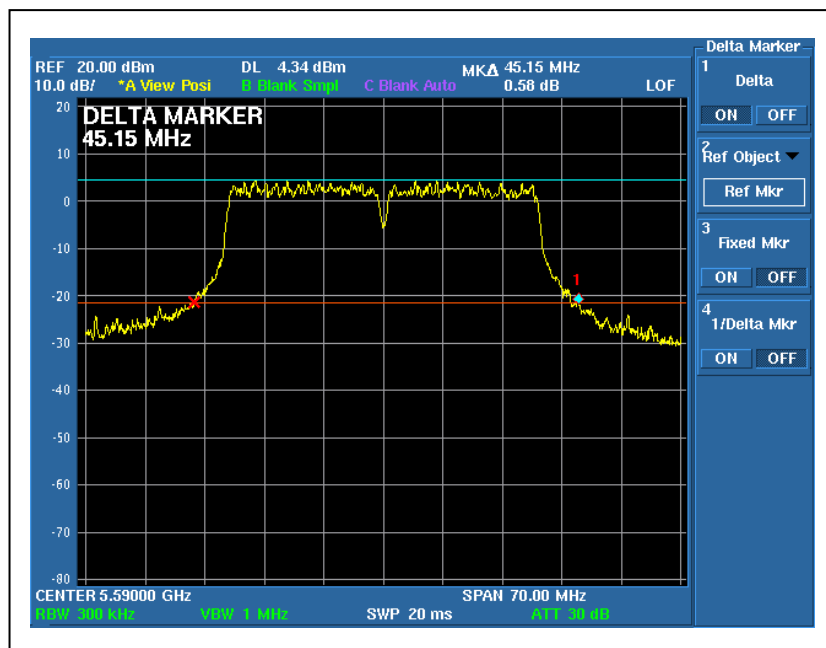




CH5

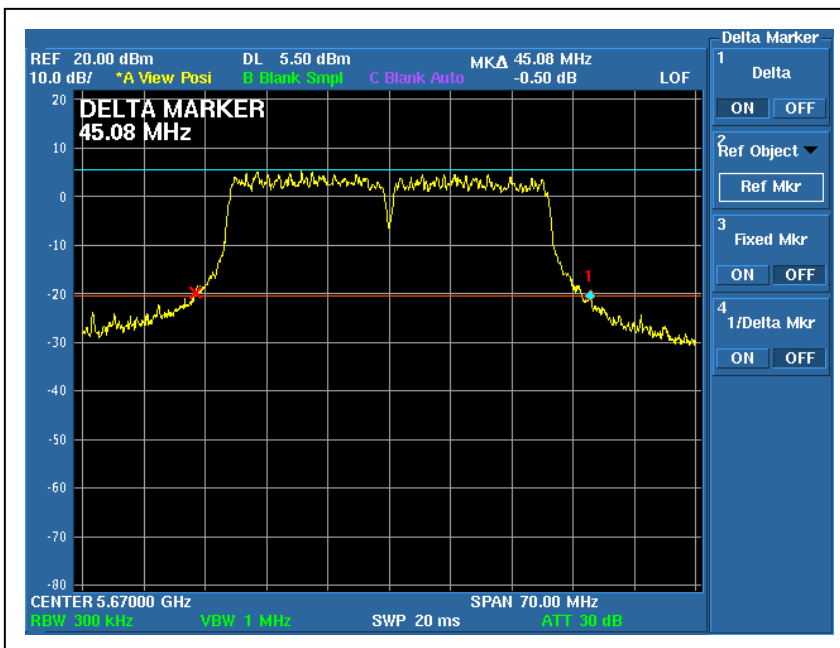


CH7

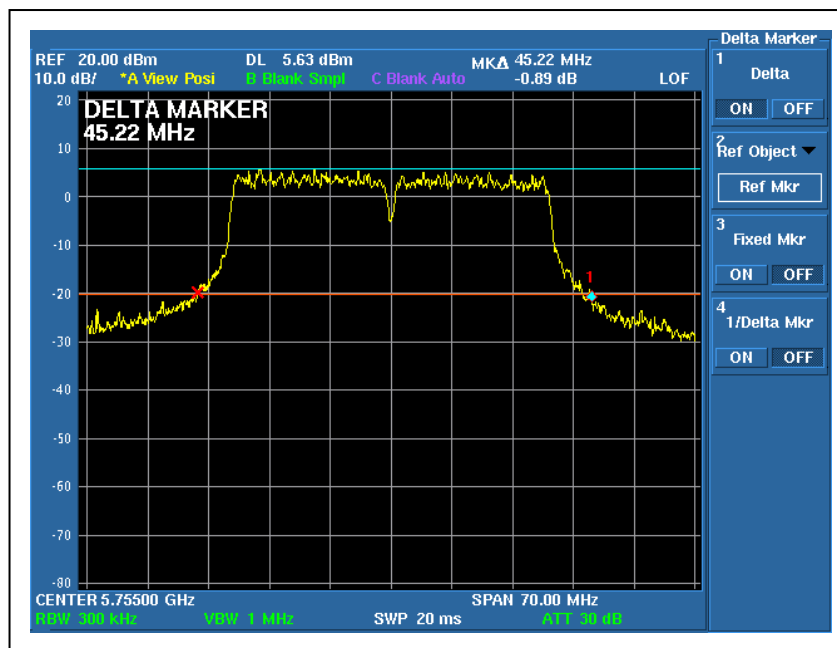




CH9



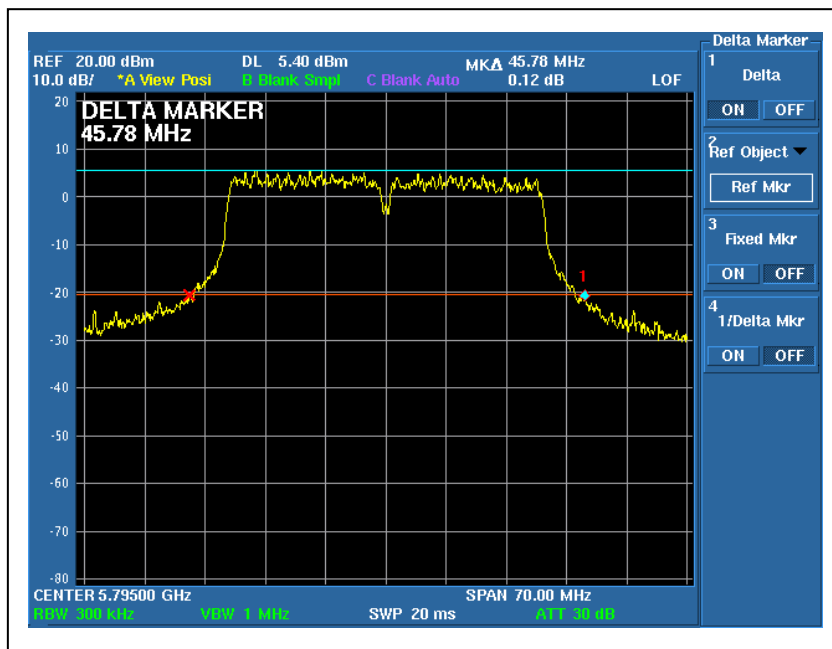
CH10





A D T

CH11





A D T

4.4 PEAK POWER EXCURSION MEASUREMENT

4.4.1 LIMITS OF PEAK POWER EXCURSION MEASUREMENT

Frequency Band	Limit
5.15 – 5.25 GHz	13dB
5.25 – 5.35 GHz	13dB
5.47 – 5.725GHz	13dB
5.725 – 5.825 GHz	13dB

4.4.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
ADVANTEST SPECTRUM ANALYZER	U3772	160100280	July 26, 2008	July 25, 2009

NOTE:

The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

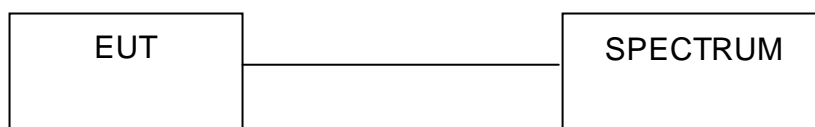
4.4.3 TEST PROCEDURE

1. The transmitter output was connected to the spectrum analyzer.
2. Set the spectrum bandwidth span to view the entire spectrum.
3. Using peak detector and Max-hold function for Trace 1 (RB=1MHz, VB=3MHz) and 2 (RB=1MHz, VB=300KHz).
4. The largest difference between Trace 1 and Trace 2 in any 1MHz band on any frequency was recorded.

4.4.4 DEVIATION FROM TEST STANDARD

No deviation

4.4.5 TEST SETUP



4.4.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.



4.4.7 TEST RESULTS

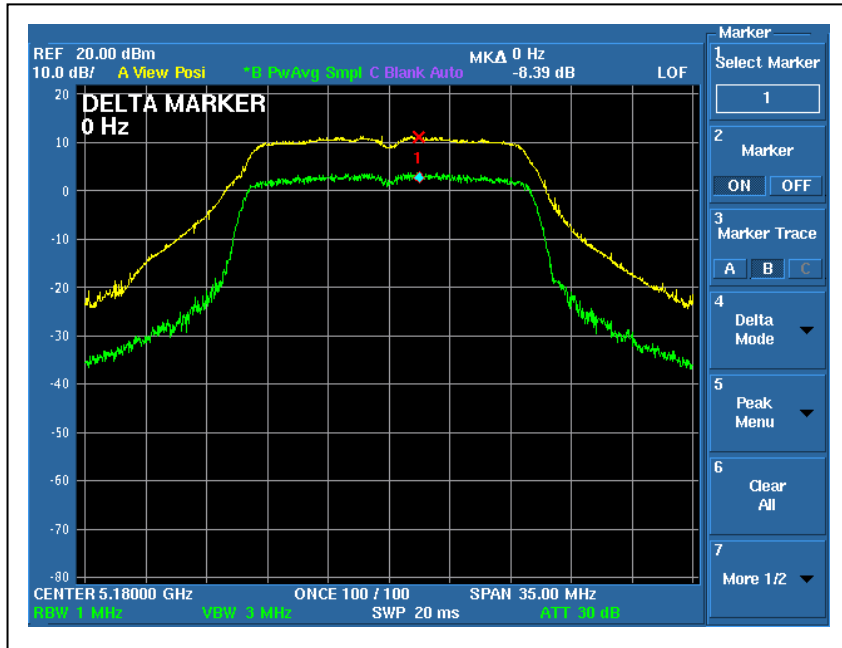
802.11a OFDM modulation

MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 60%RH, 965hPa
TESTED BY	Wen Yu		

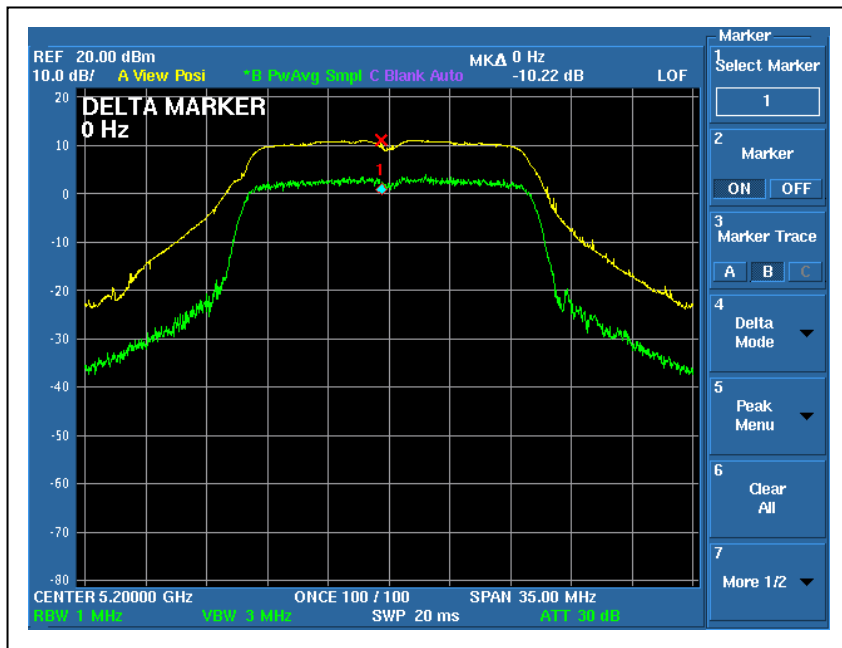
CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)	PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
1	5180	8.39	13	PASS
2	5200	10.22	13	PASS
4	5240	10.09	13	PASS
5	5260	7.72	13	PASS
7	5300	9.18	13	PASS
8	5320	8.97	13	PASS
9	5500	8.09	13	PASS
14	5600	8.03	13	PASS
19	5700	9.02	13	PASS
20	5745	9.30	13	PASS
22	5785	7.77	13	PASS
23	5805	9.76	13	PASS



CH1

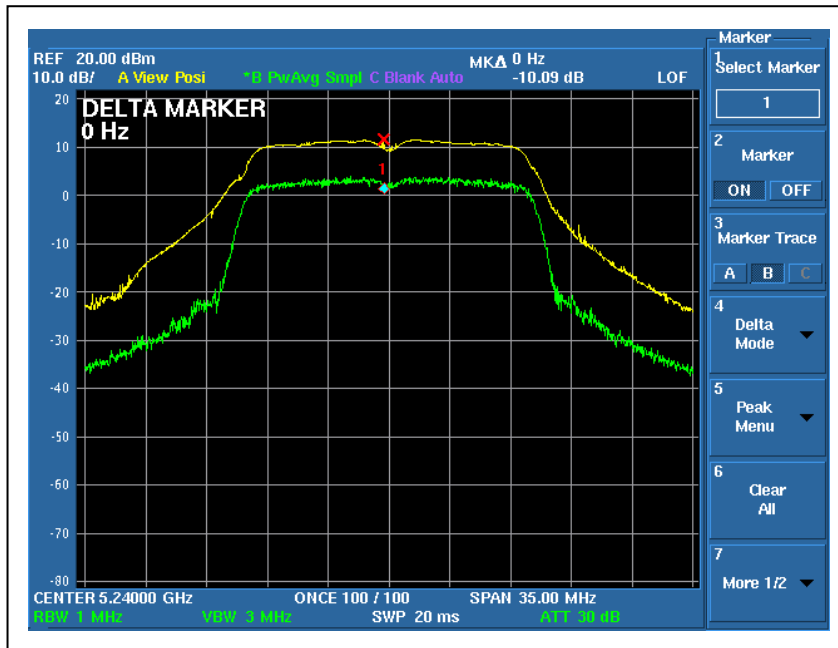


CH2

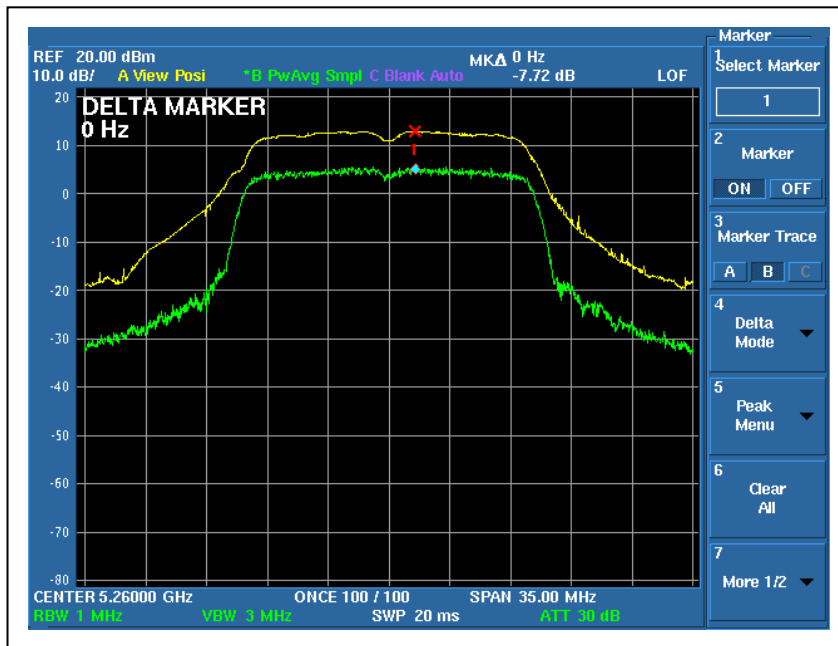




CH4

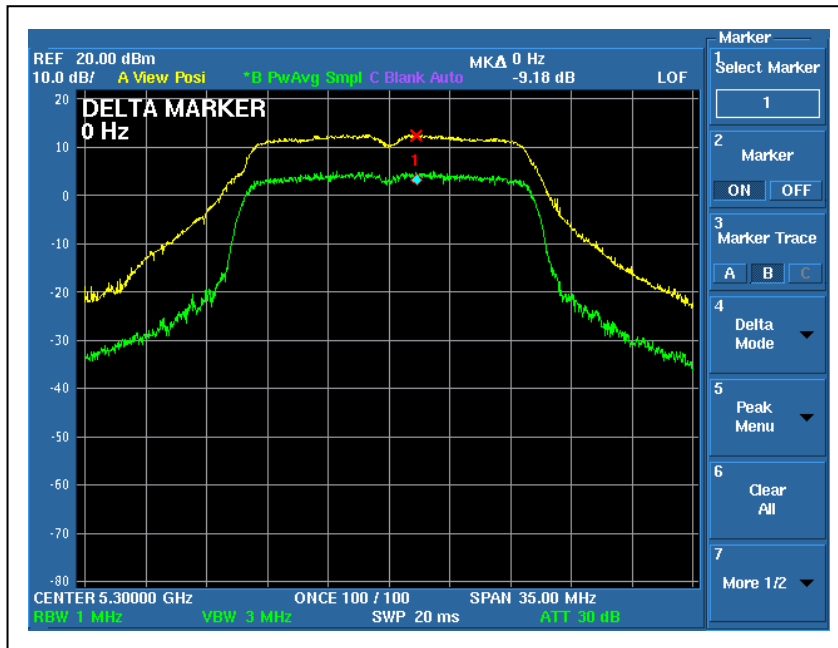


CH5

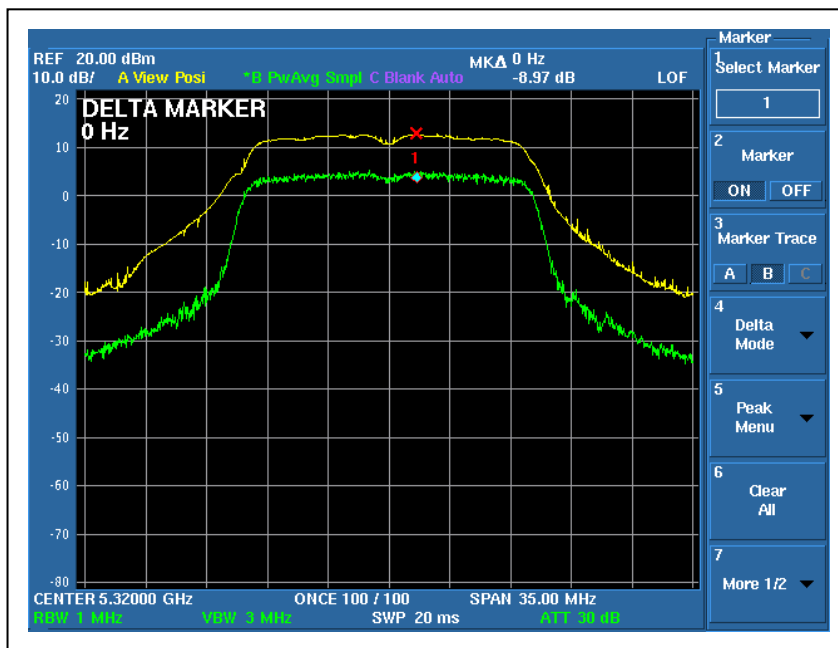




CH7

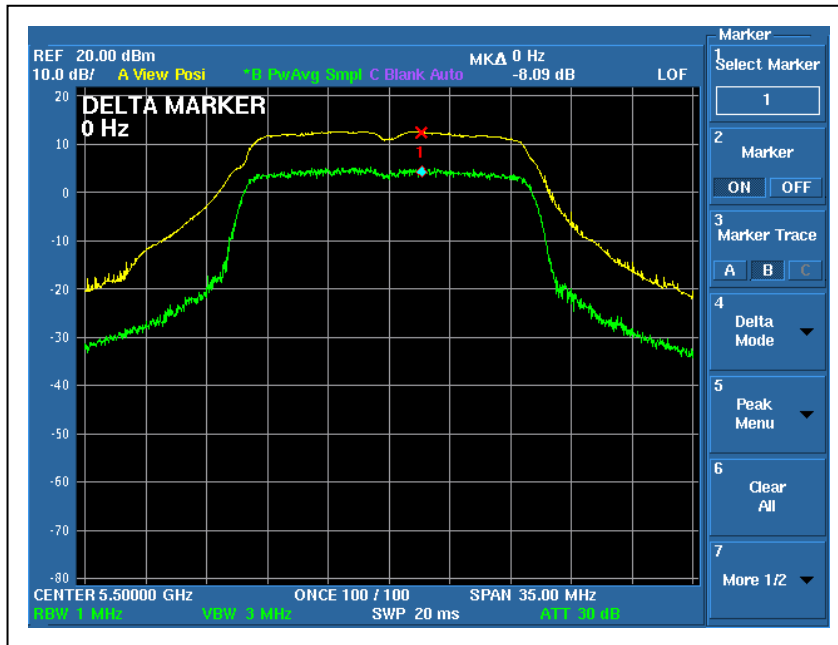


CH8

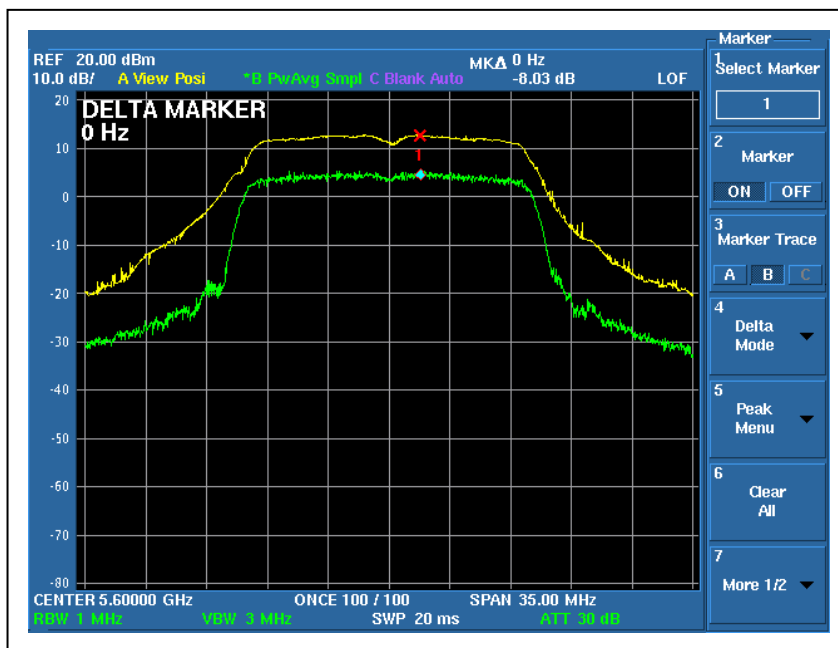




CH9

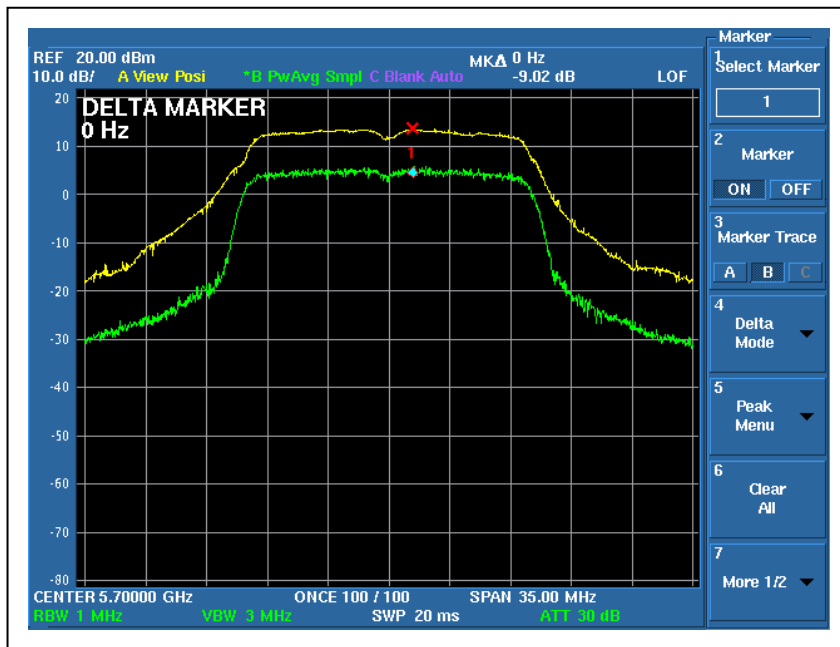


CH14

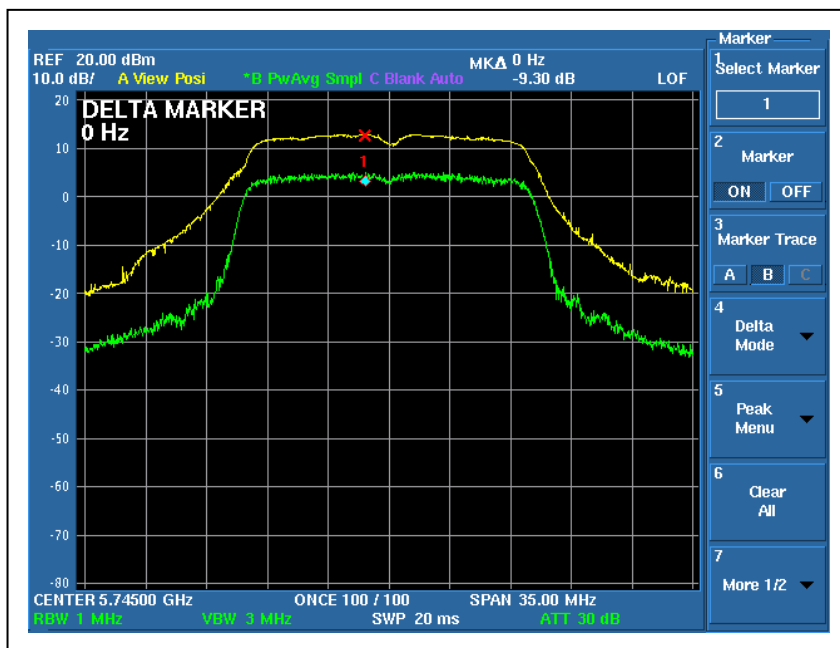




CH19

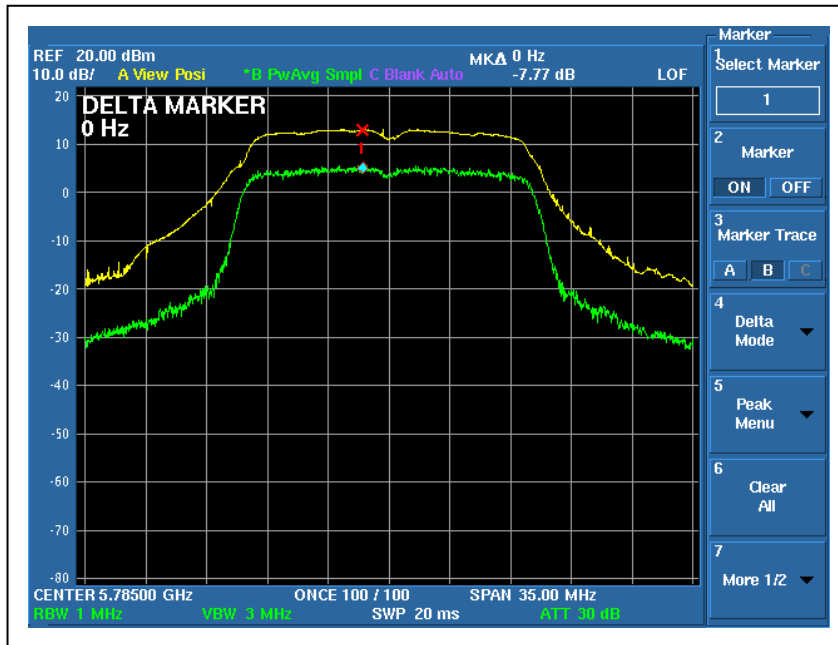


CH20

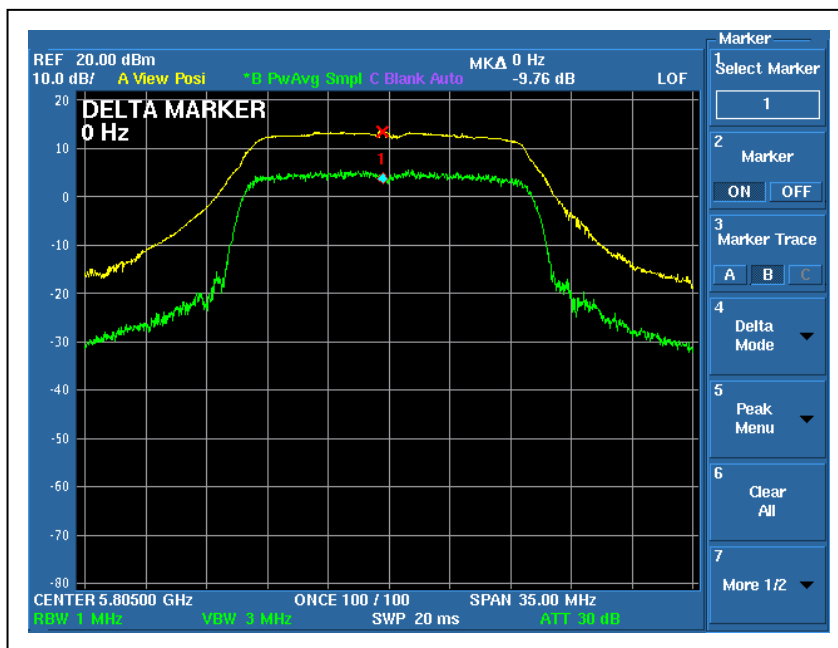




CH22



CH23





A D T

DRAFT 802.11n (20MHz) OFDM MODULATION:

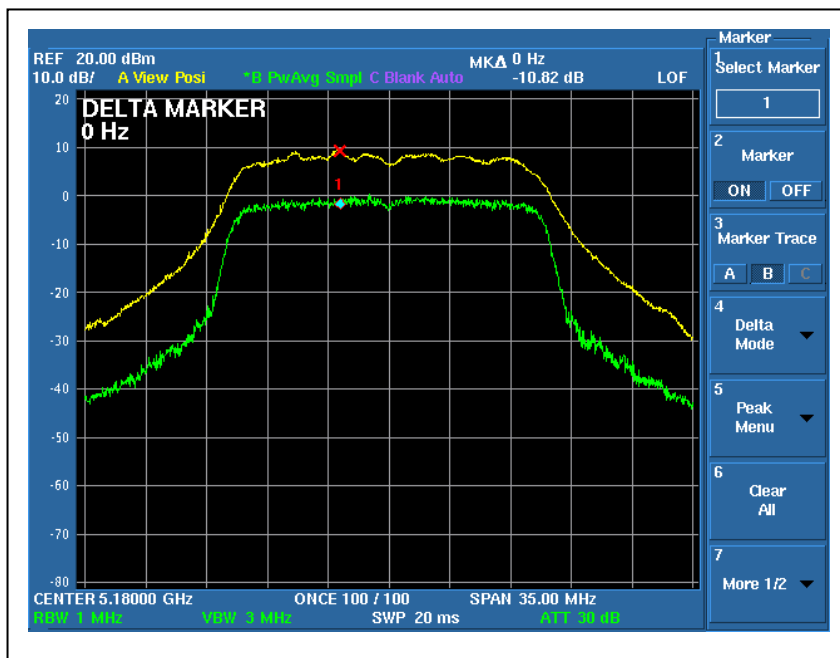
MODULATION TYPE	BPSK	TRANSFER RATE	13Mbps
INPUT POWER	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 60%RH, 965hPa
TESTED BY	Wen Yu		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)		PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
		Chain (0)	Chain(1)		
1	5180	10.82	9.65	13	PASS
2	5200	10.39	10.12	13	PASS
4	5240	10.55	10.72	13	PASS
5	5260	10.31	9.59	13	PASS
7	5300	10.67	9.61	13	PASS
8	5320	11.32	9.73	13	PASS
9	5500	9.99	10.34	13	PASS
14	5600	10.49	9.41	13	PASS
19	5700	9.27	10.23	13	PASS
20	5745	7.90	10.05	13	PASS
22	5785	10.29	10.24	13	PASS
23	5805	10.39	9.71	13	PASS

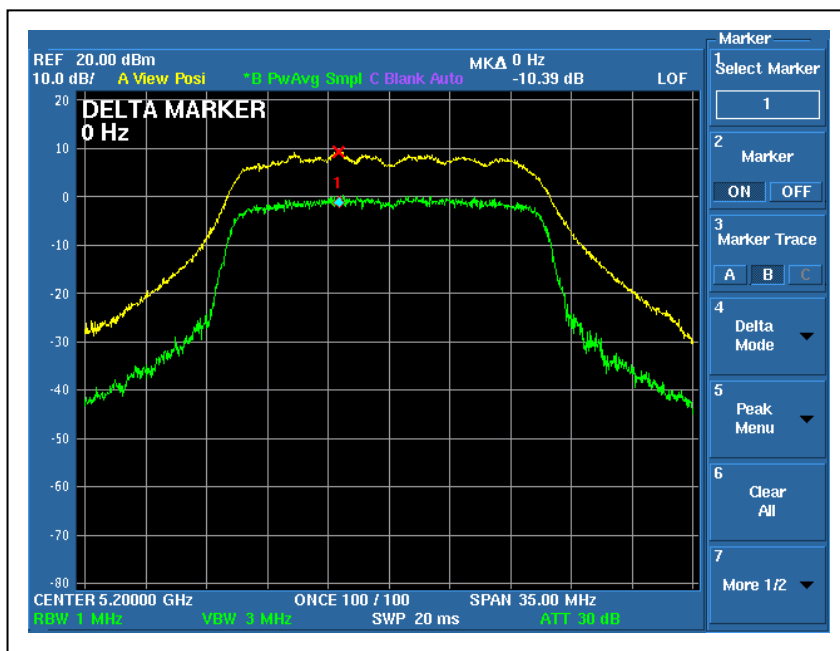


A D T

For Chain (0) : CH1

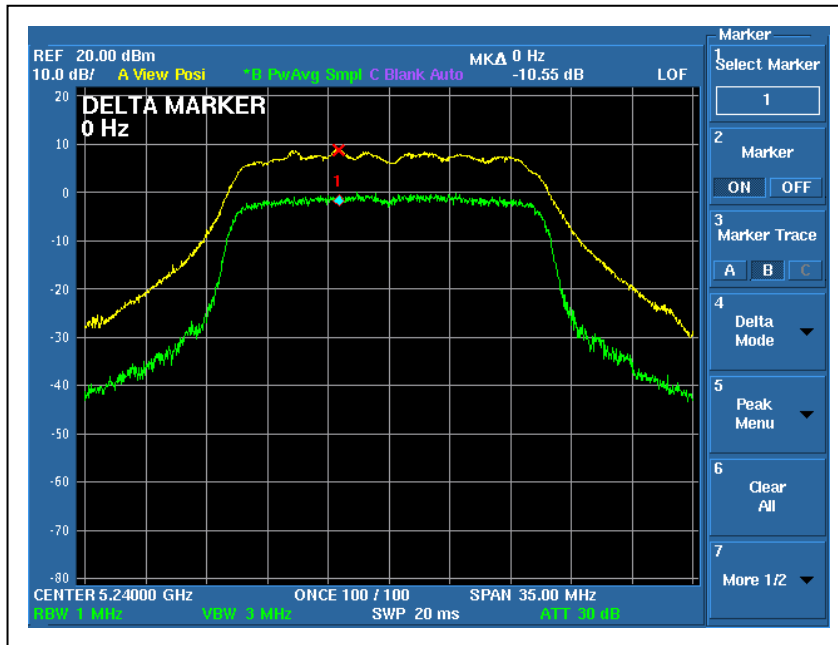


CH2

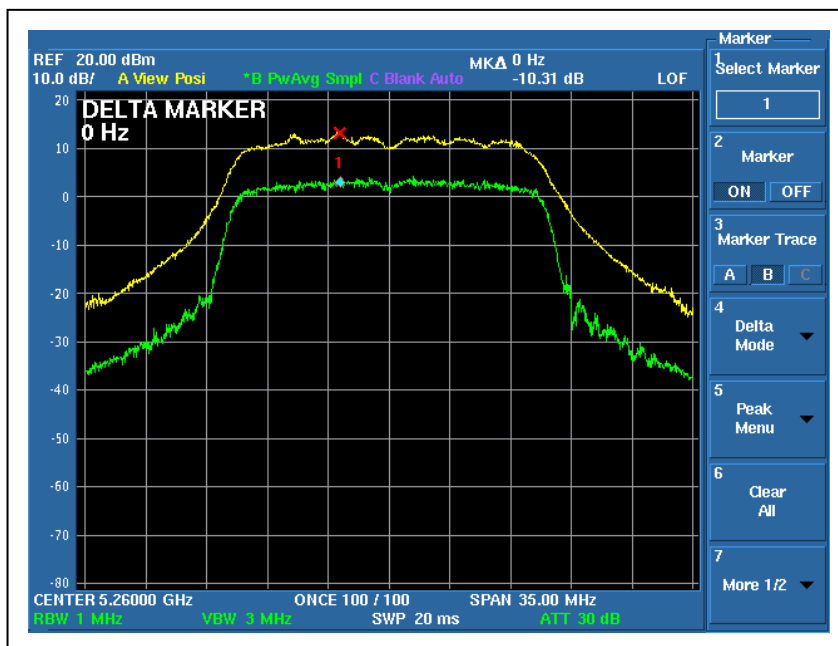




CH4



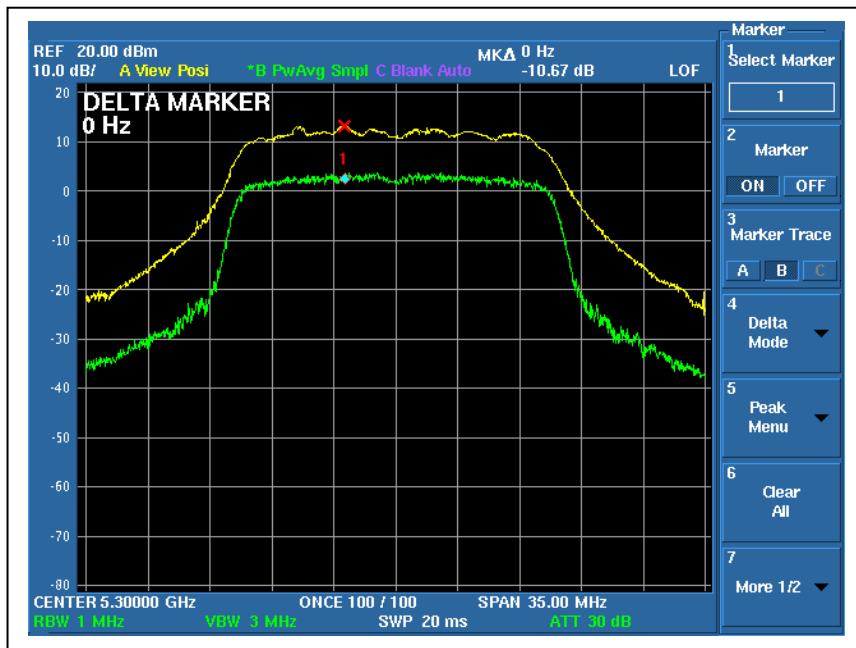
CH5



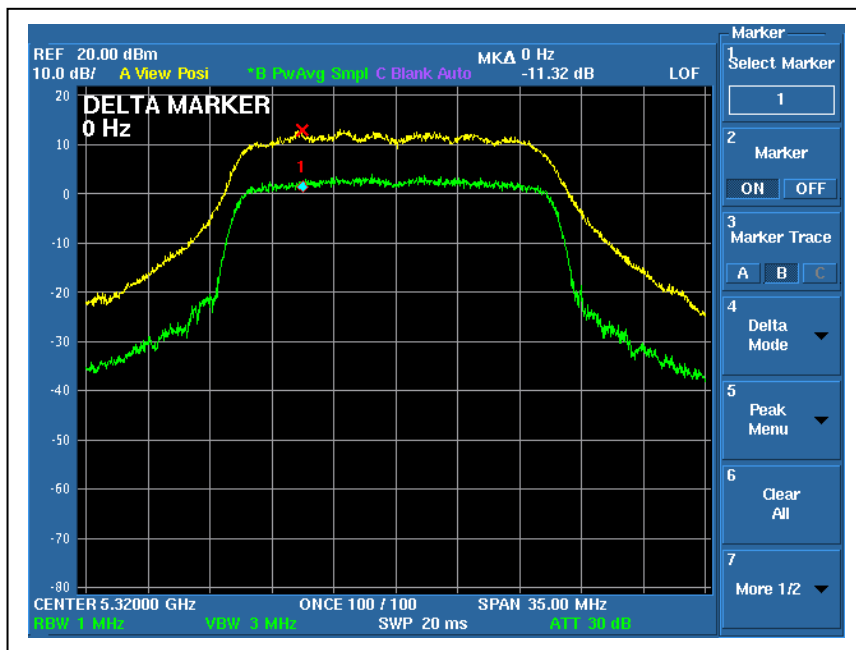


A D T

CH7

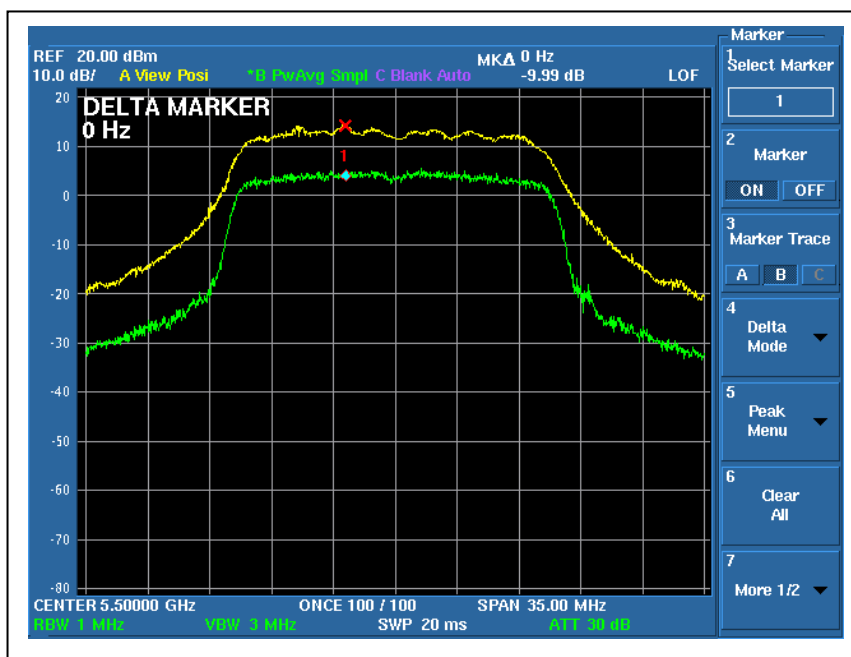


CH8

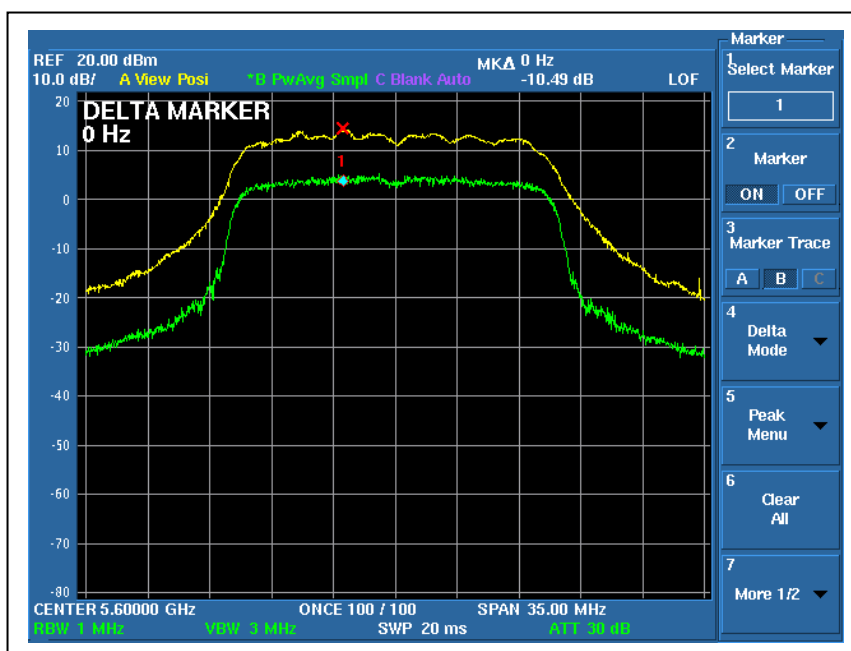




CH9



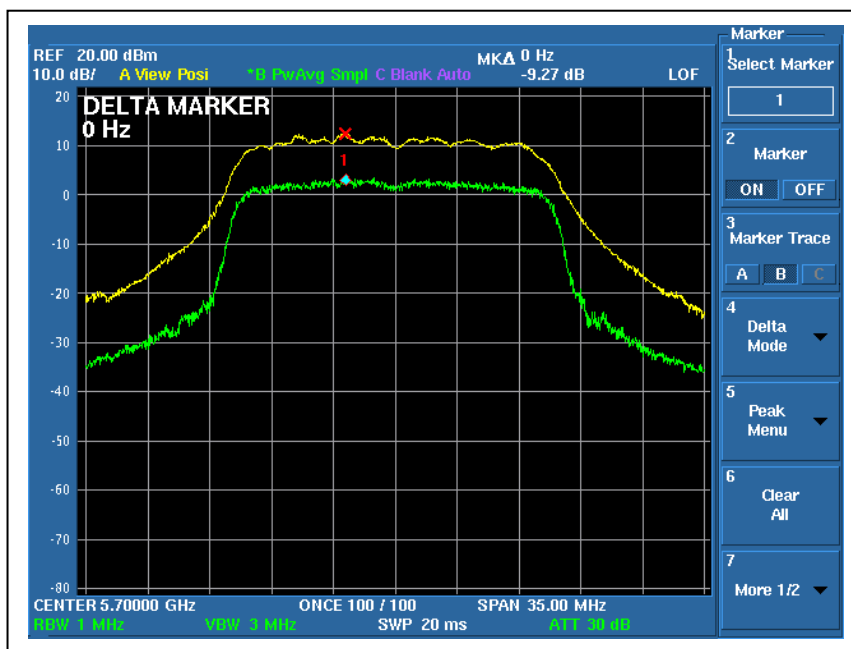
CH14



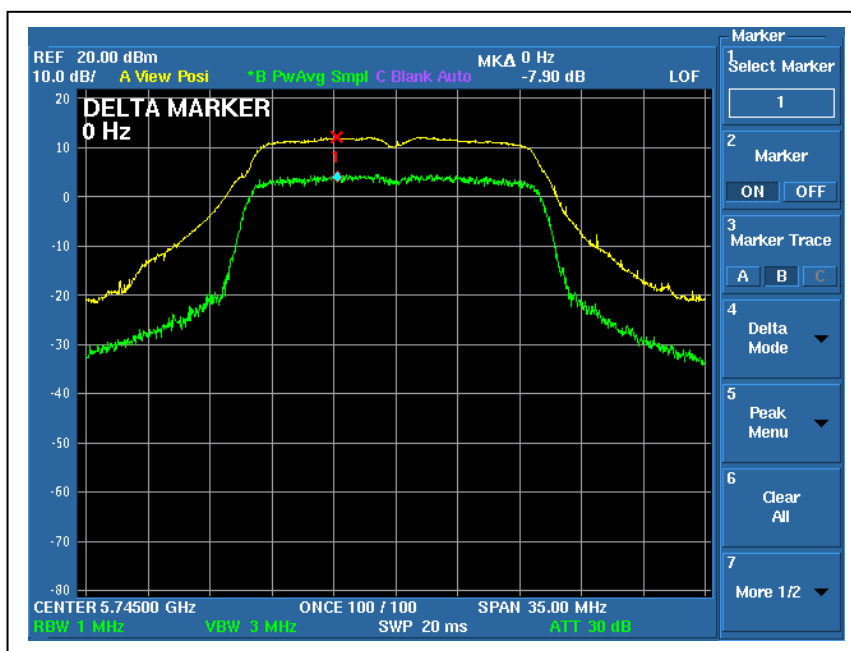


A D T

CH19

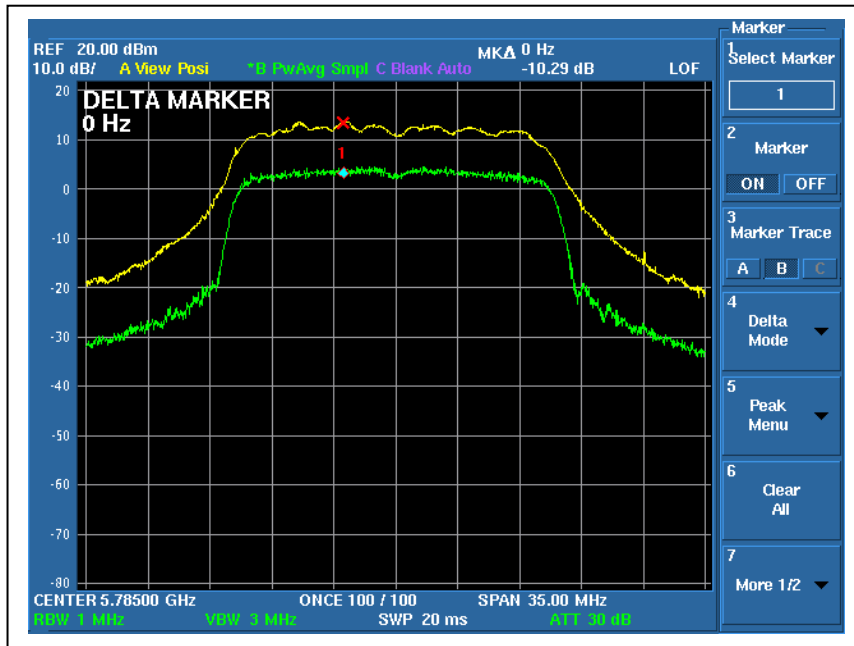


CH20

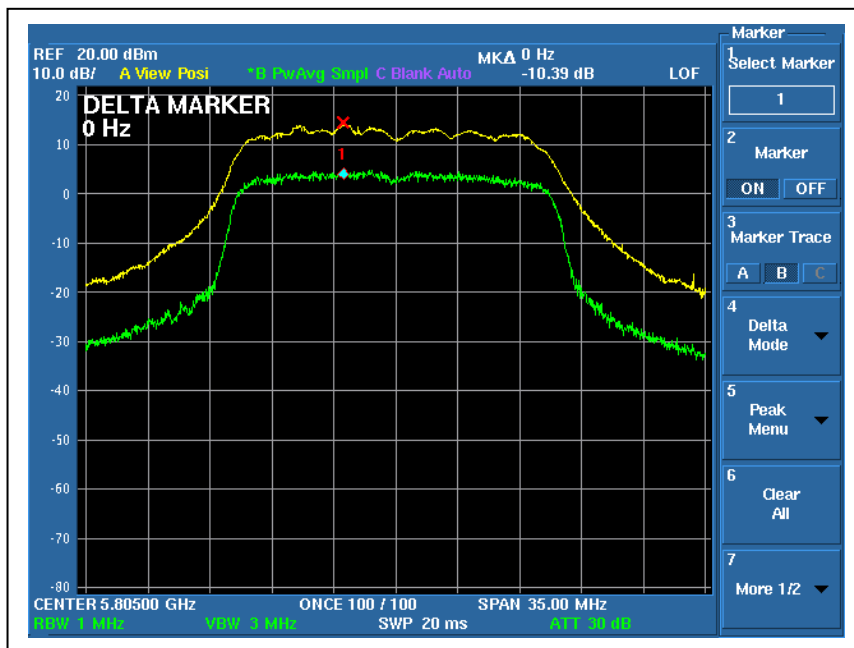




CH22



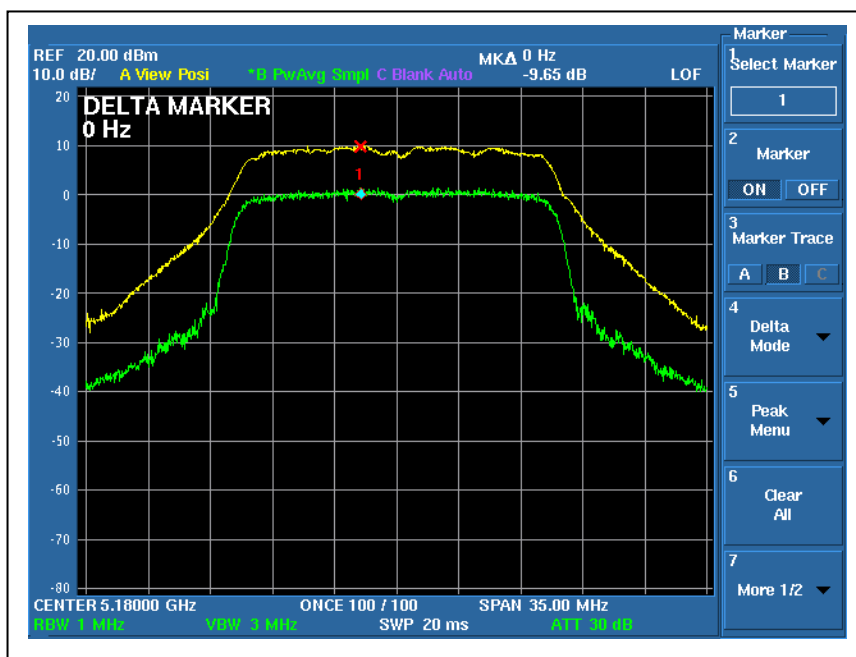
CH23



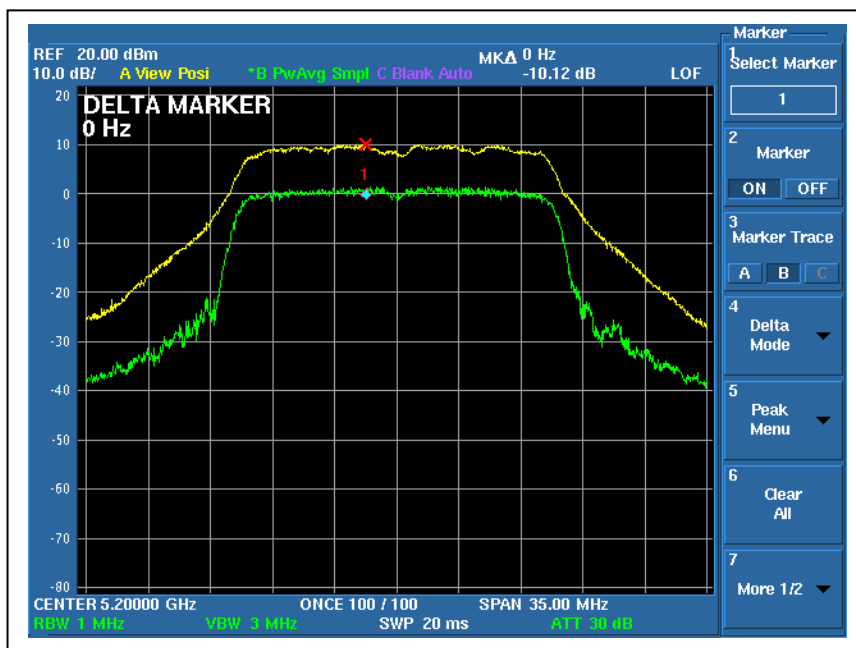


A D T

For Chain (1) : CH1



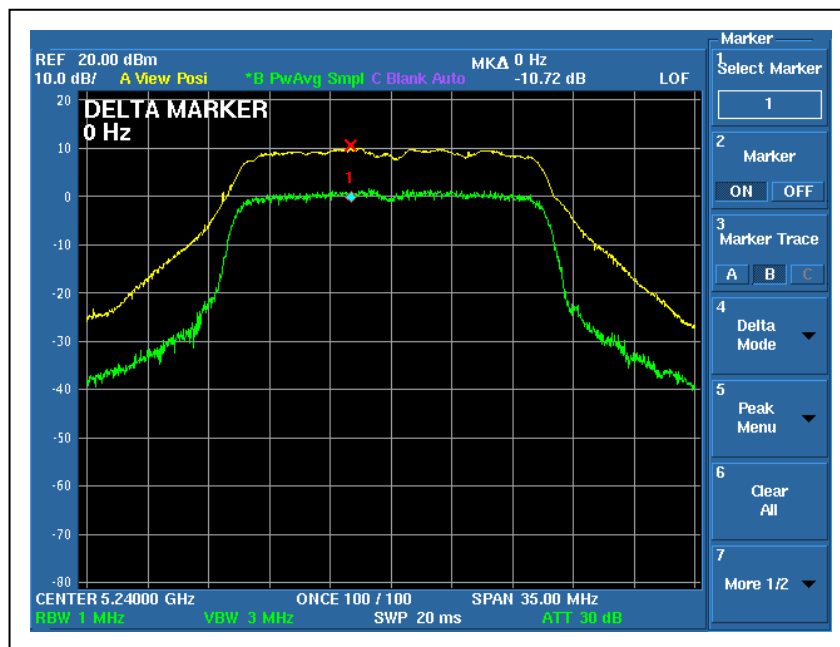
CH2



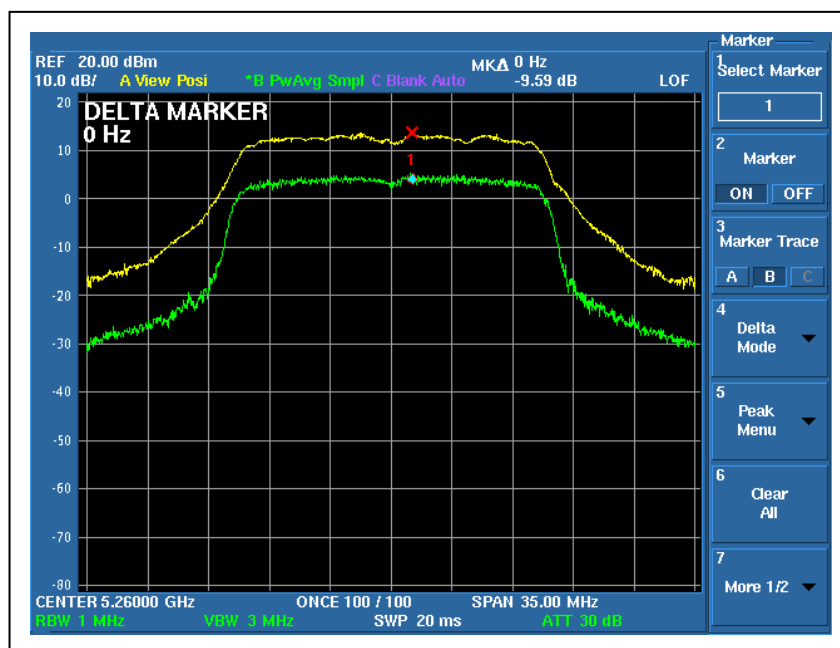


A D T

CH4



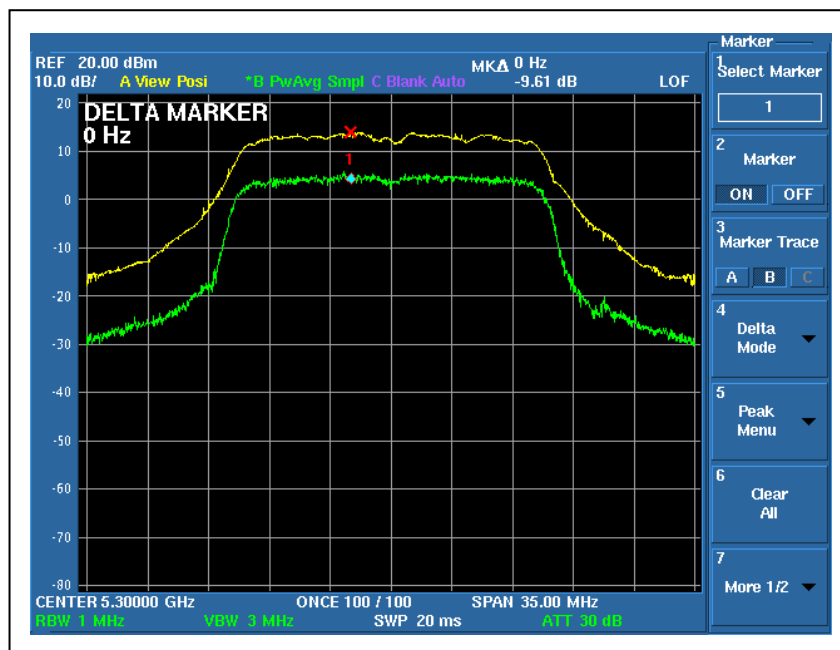
CH5



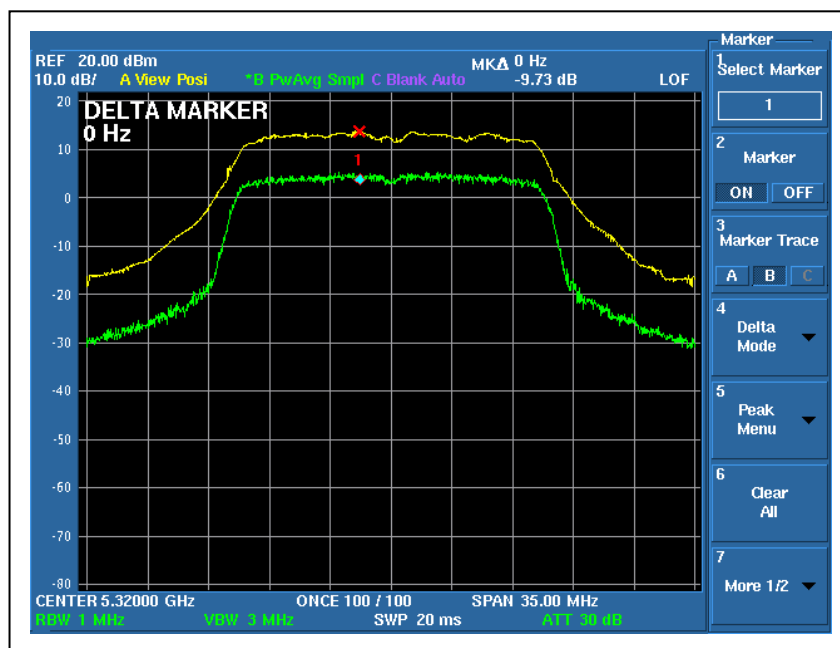


A D T

CH7

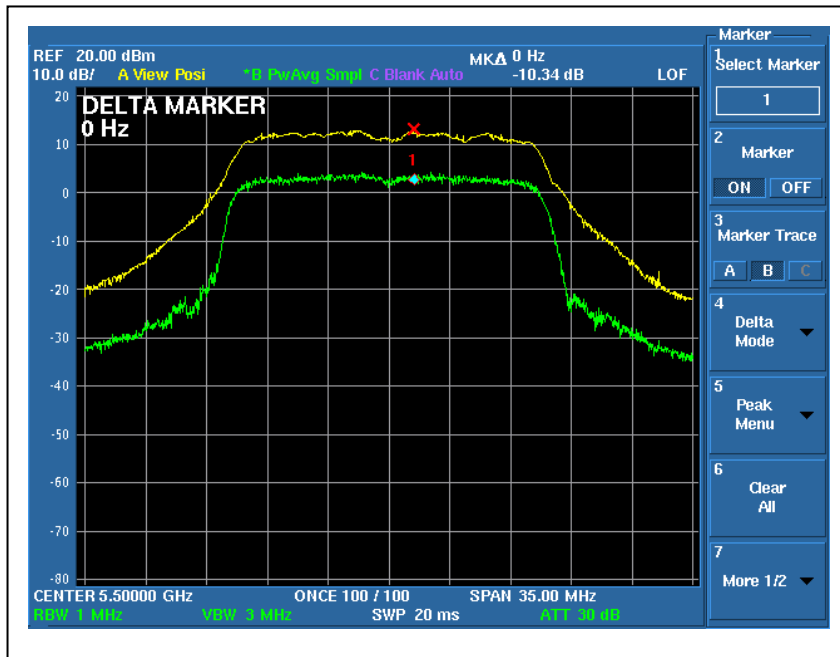


CH8

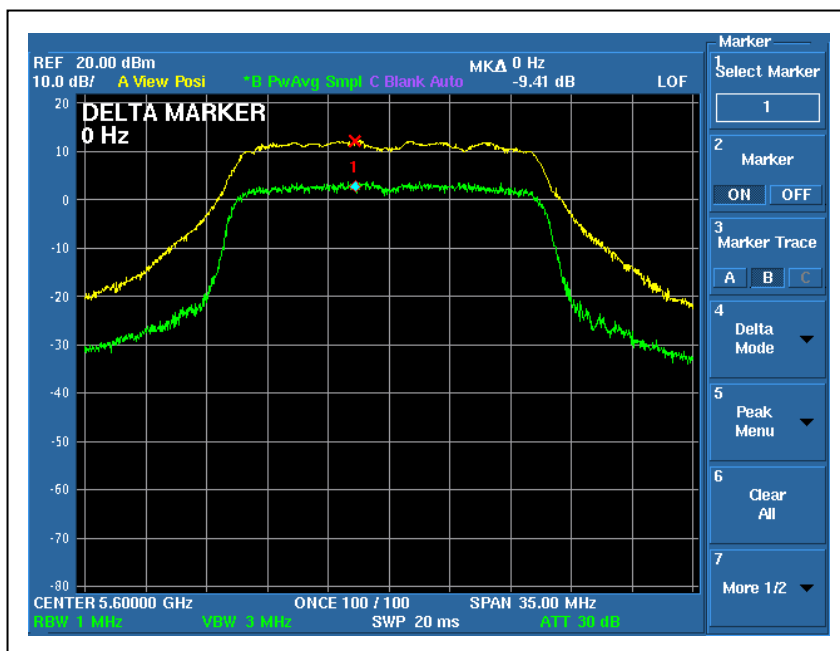




CH9



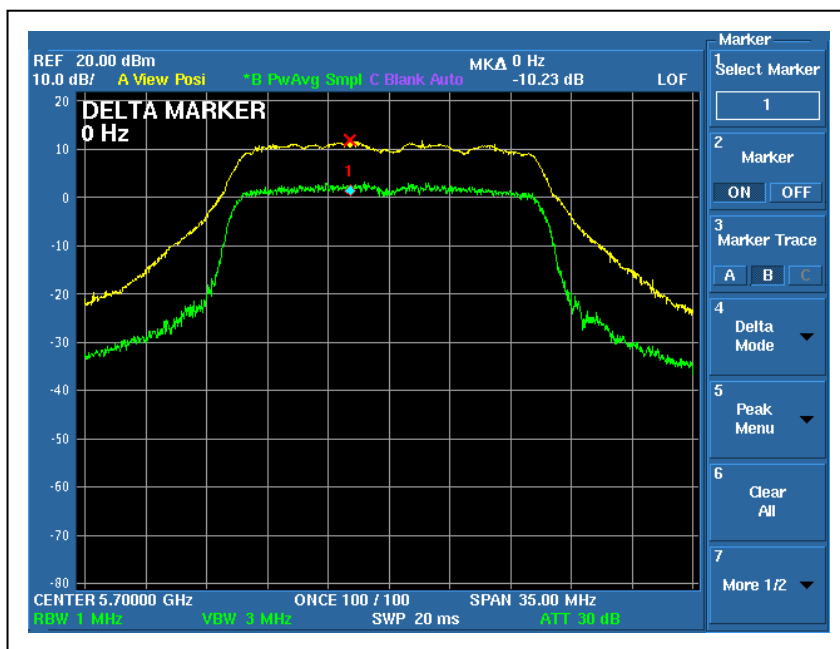
CH14



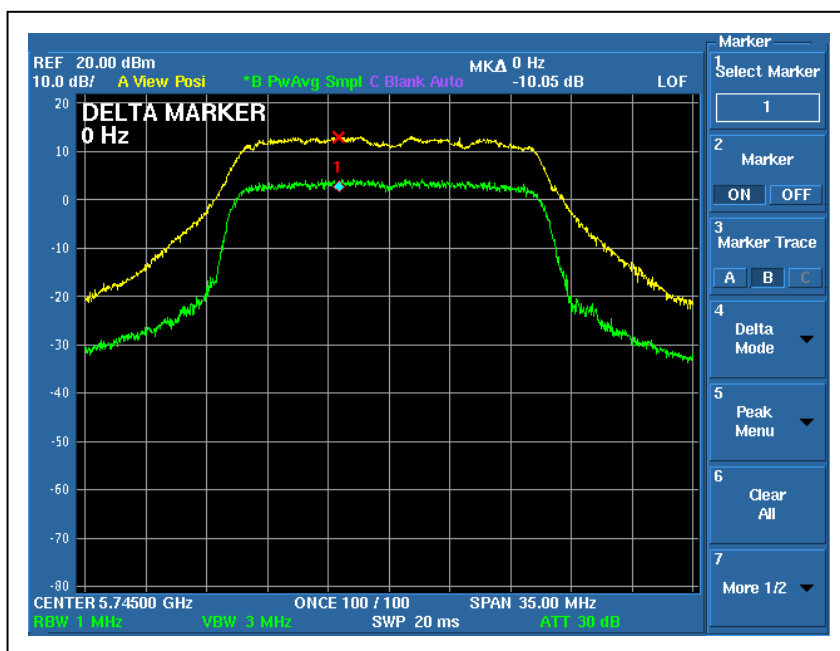


A D T

CH19



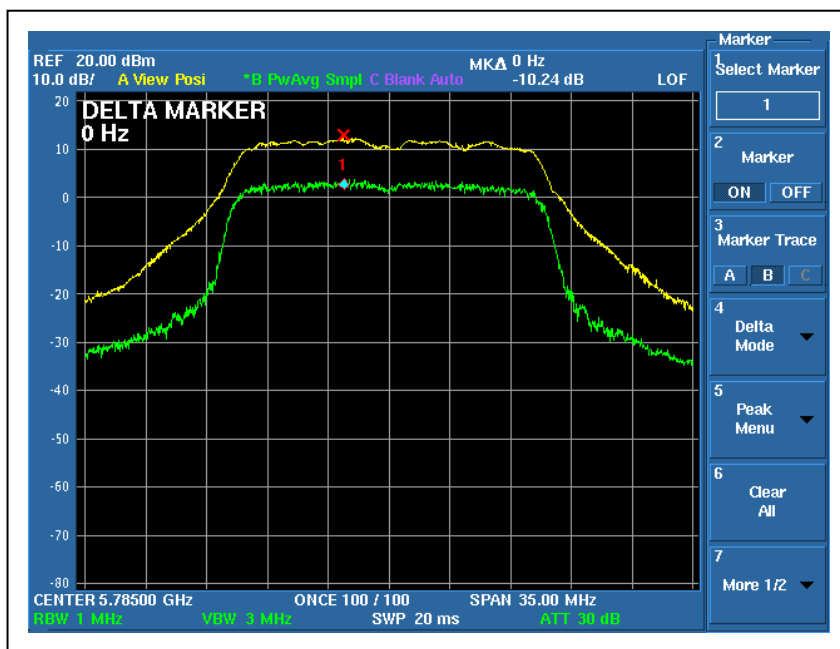
CH20



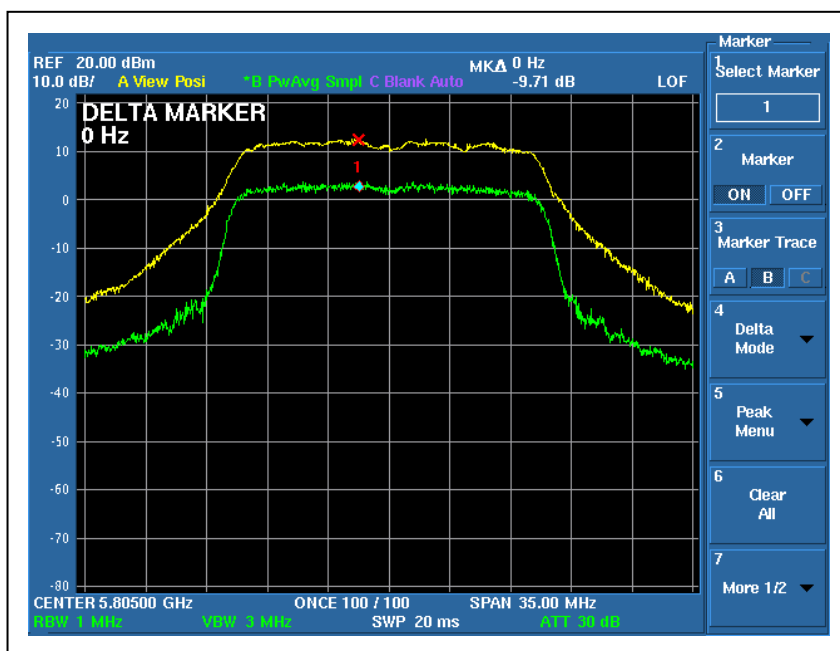


A D T

CH22



CH23





A D T

DRAFT 802.11n (40MHz) OFDM MODULATION:

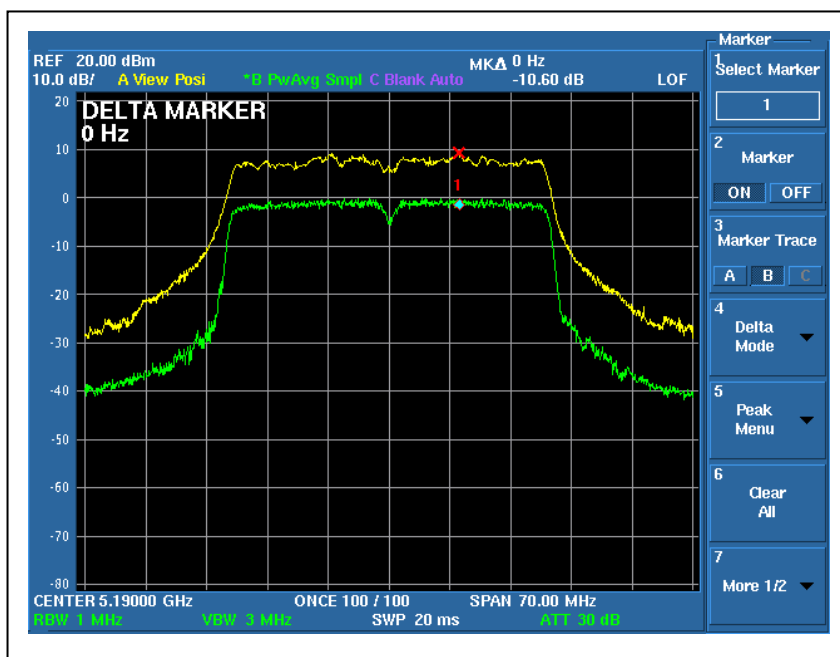
MODULATION TYPE	BPSK	TRANSFER RATE	27Mbps
INPUT POWER	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 60%RH, 965hPa
TESTED BY	Wen Yu		

CHANNEL	CHANNEL FREQUENCY (MHz)	PEAK POWER EXCURSION (dB)		PEAK to AVERAGE EXCURSION LIMIT (dB)	PASS/FAIL
		Chain (0)	Chain(1)		
1	5190	10.60	10.46	13	PASS
2	5230	9.49	9.72	13	PASS
3	5270	9.85	9.75	13	PASS
4	5310	10.59	10.19	13	PASS
5	5510	10.20	10.64	13	PASS
7	5590	10.79	10.36	13	PASS
9	5670	10.64	9.86	13	PASS
10	5755	10.71	10.50	13	PASS
11	5795	10.30	10.78	13	PASS

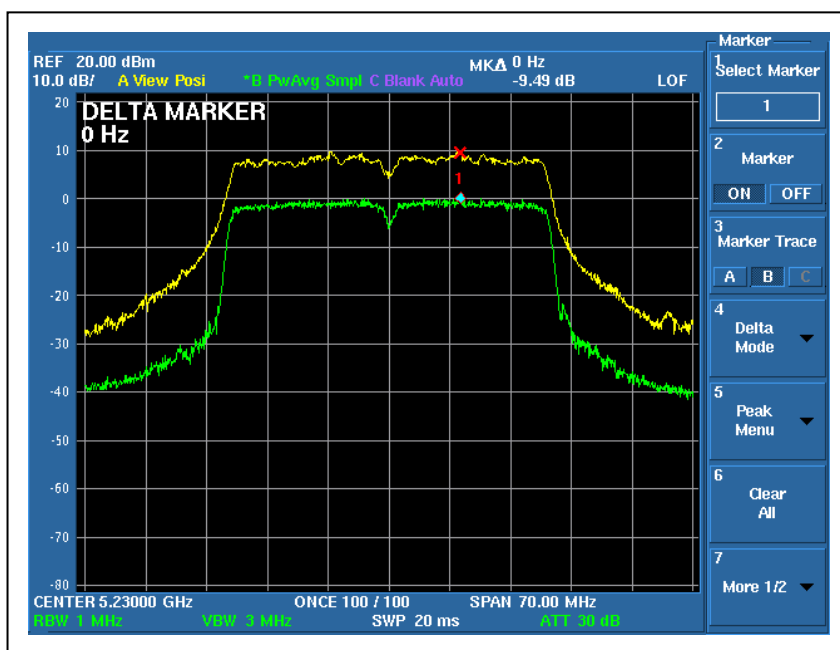


A D T

For Chain (0) : CH1

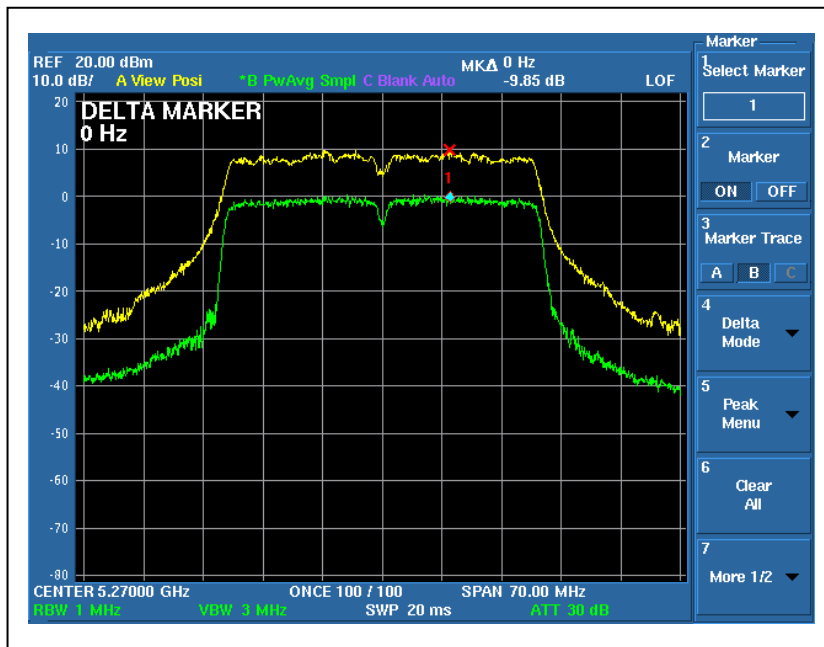


CH2

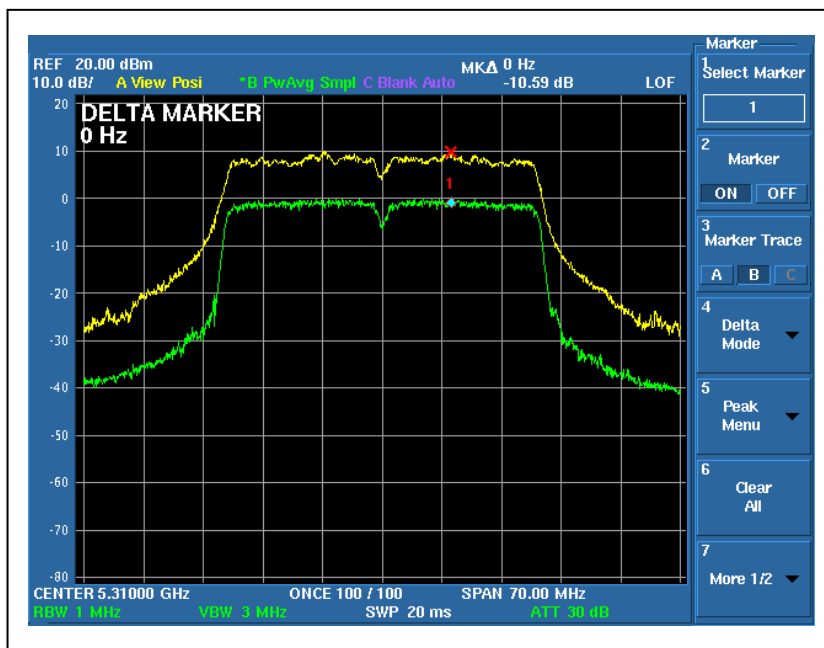




CH3

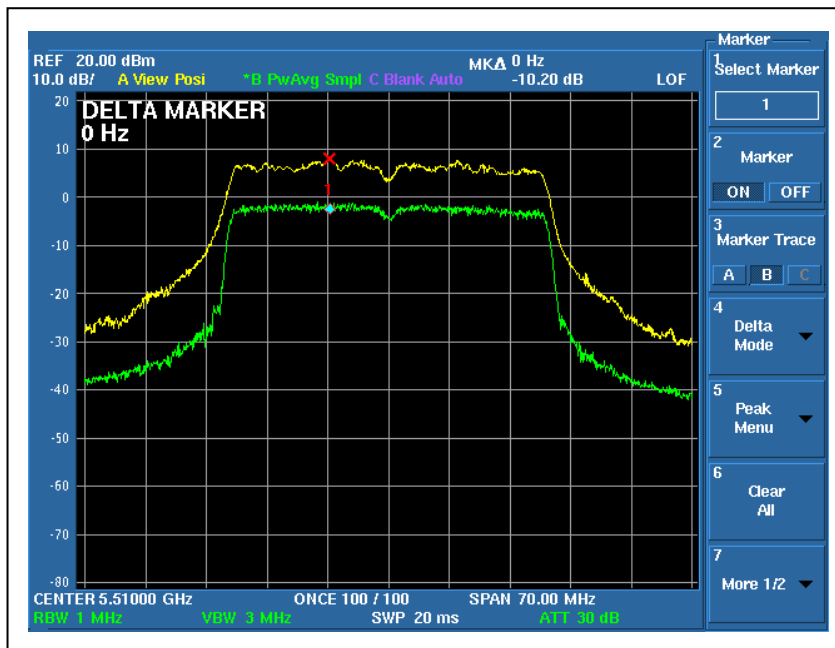


CH4

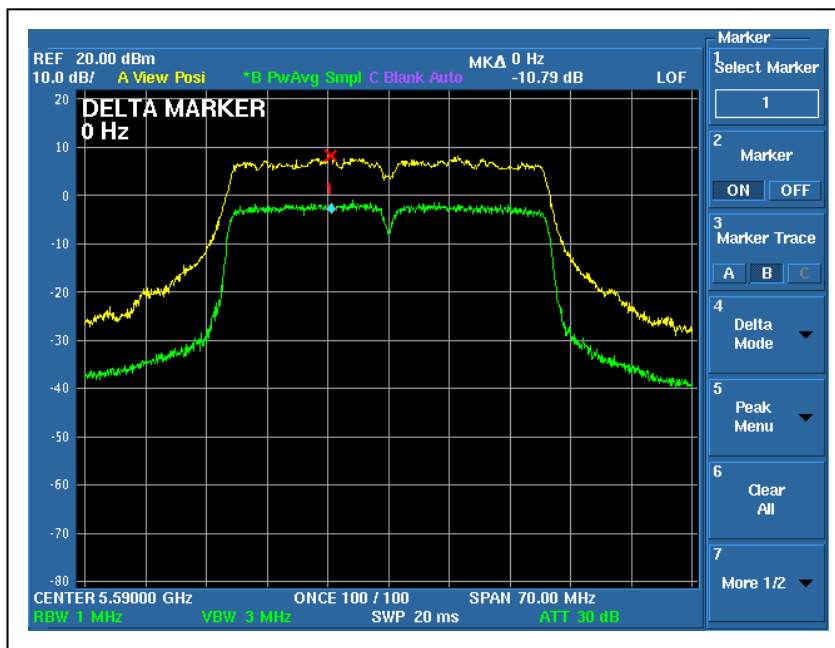




CH5

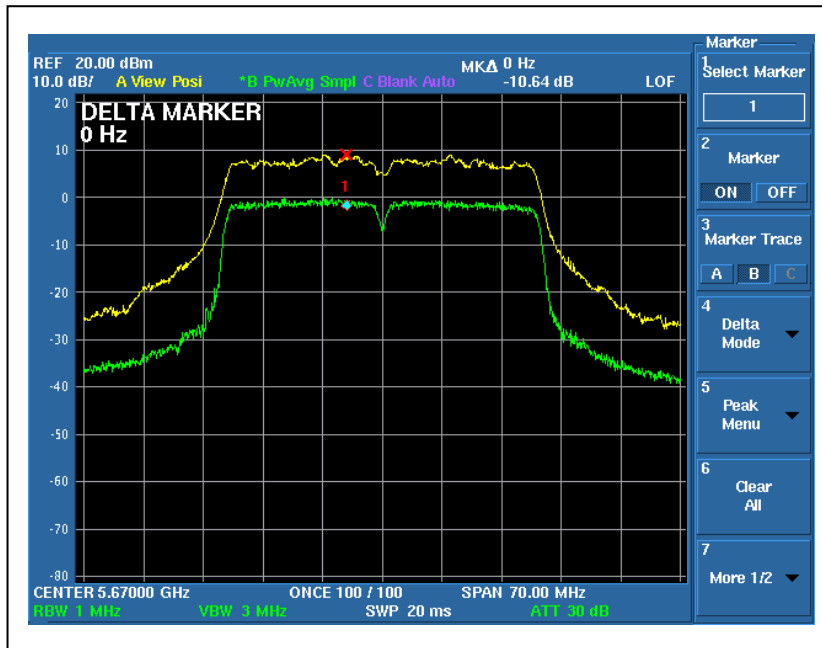


CH7

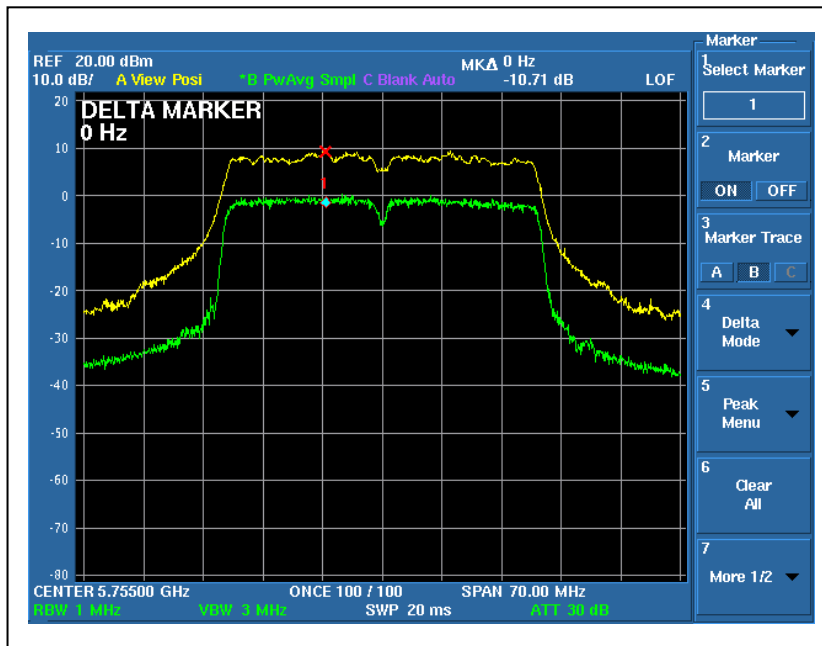




CH9



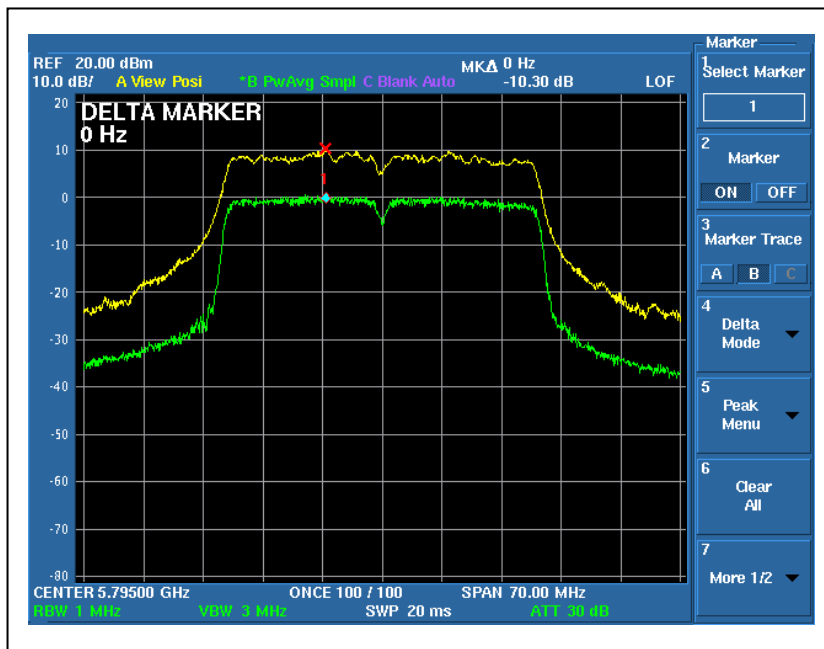
CH10





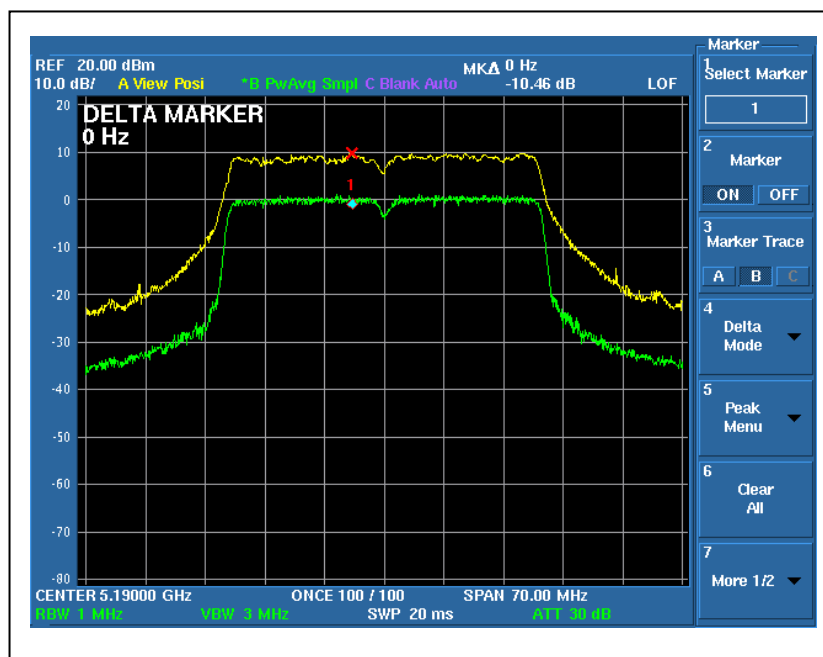
A D T

CH11

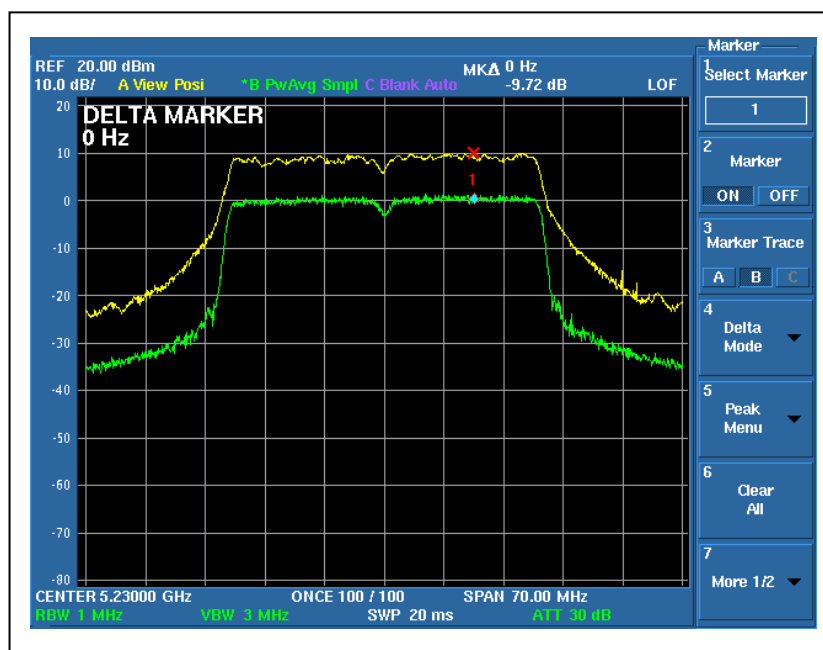




For Chain (1) : CH1

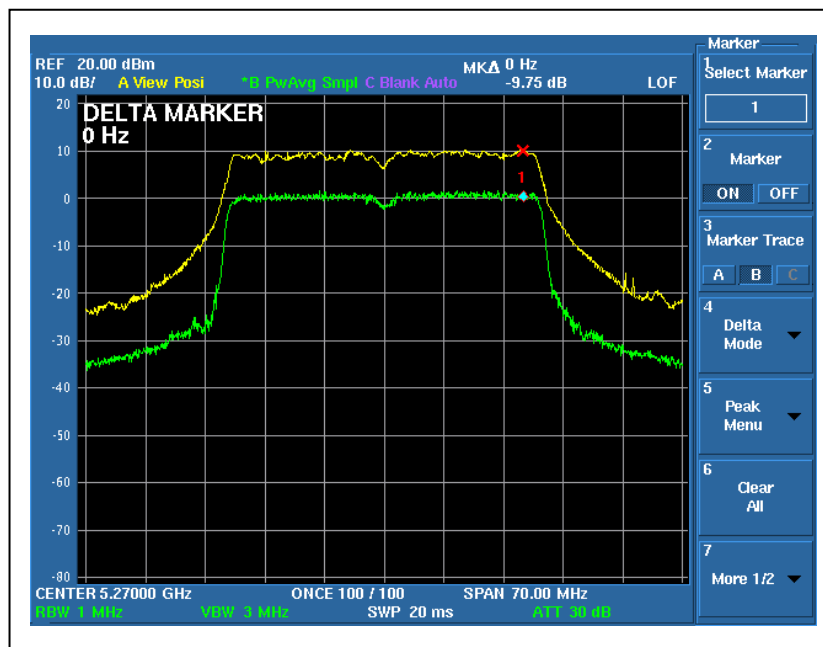


CH2

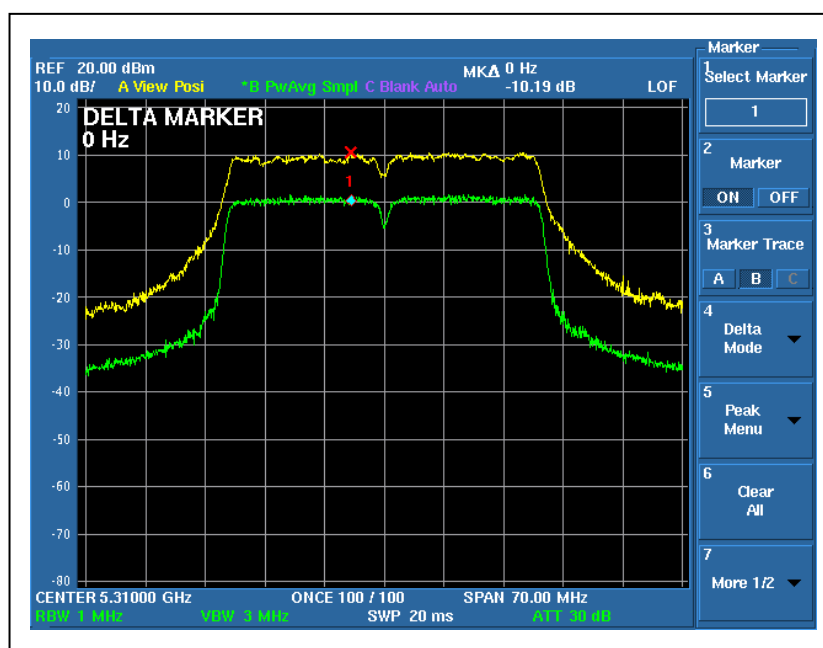




CH3

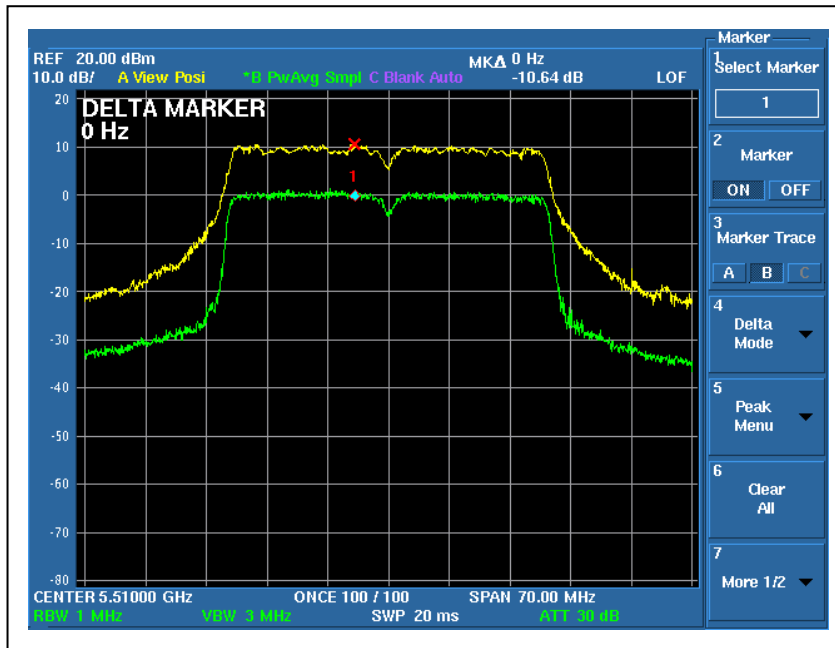


CH4

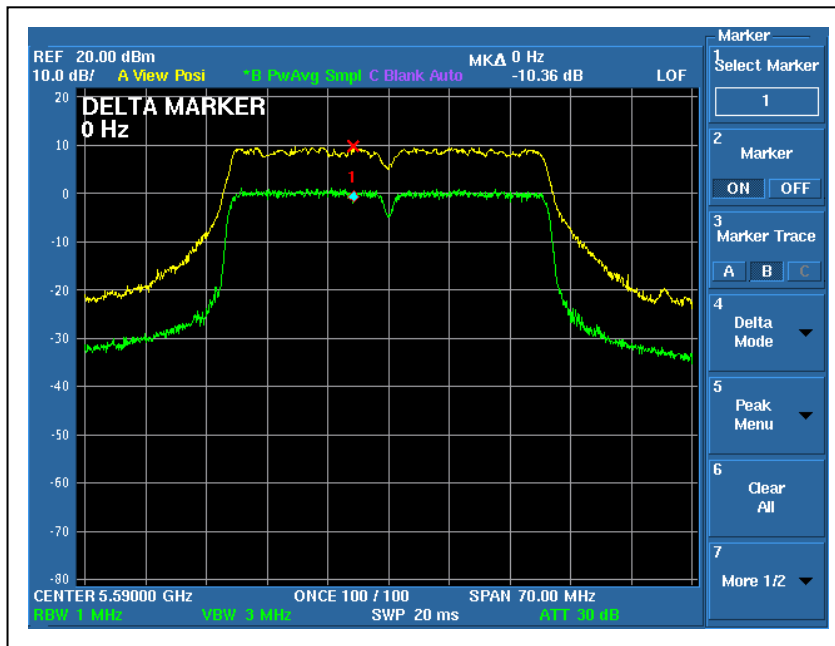




CH5



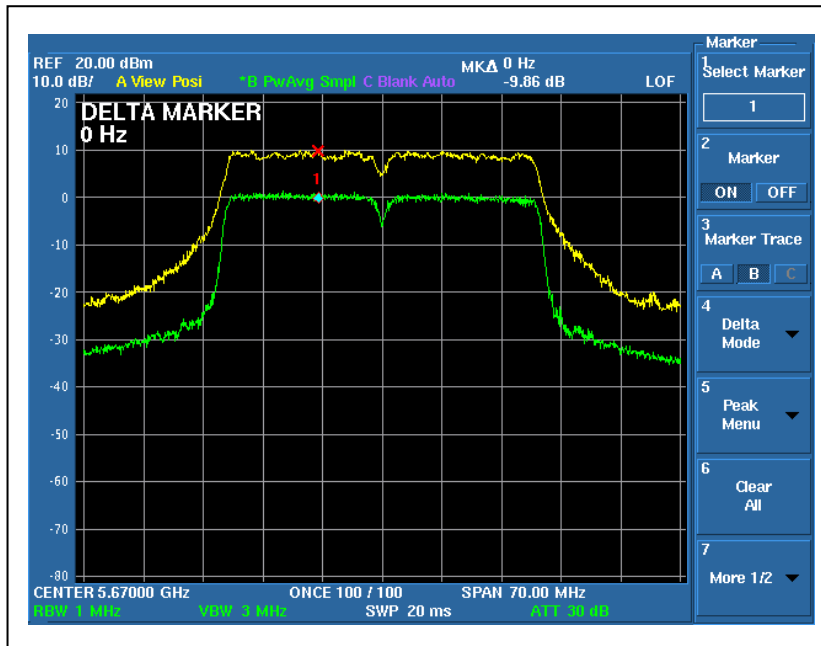
CH7



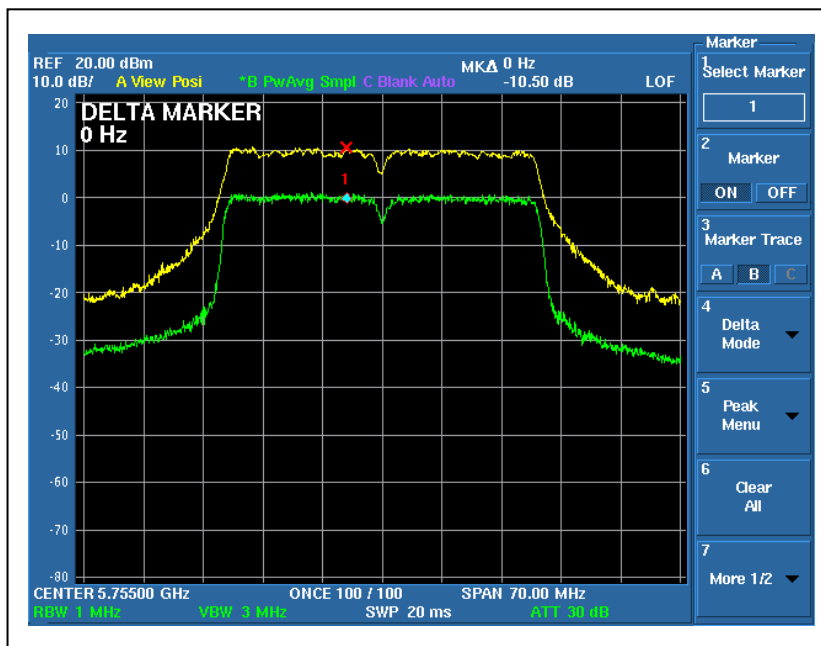


A D T

CH9



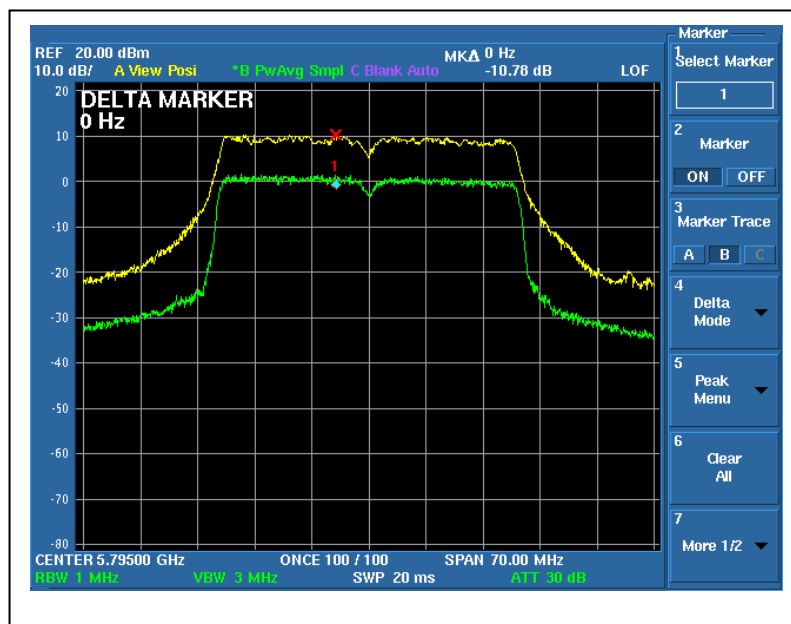
CH10





A D T

CH11





4.5 PEAK POWER SPECTRAL DENSITY MEASUREMENT

4.5.1 LIMITS OF PEAK POWER SPECTRAL DENSITY MEASUREMENT

Frequency Band	Limit
5.15 ~ 5.25GHz	4dBm
5.25 ~ 5.35GHz	11dBm
5.47 – 5.725GHz	11dBm
5.725 ~ 5.825GHz	17dBm

4.5.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
ADVANTEST SPECTRUM ANALYZER	U3772	160100280	July 26, 2008	July 25, 2009

NOTE:

- 1.The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81.
- 2.The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.



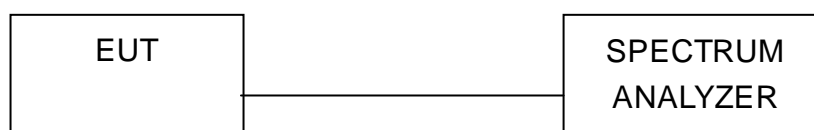
4.5.3 TEST PROCEDURES

1. The transmitter output was connected to the spectrum analyzer.
2. Set RBW=1MHz, VBW=3MHz. The PPSD is the highest level found across the emission in any 1MHz band.

4.5.4 DEVIATION FROM TEST STANDARD

No deviation

4.5.5 TEST SETUP



4.5.6 EUT OPERATING CONDITIONS

Same as 4.3.6



4.5.7 TEST RESULTS

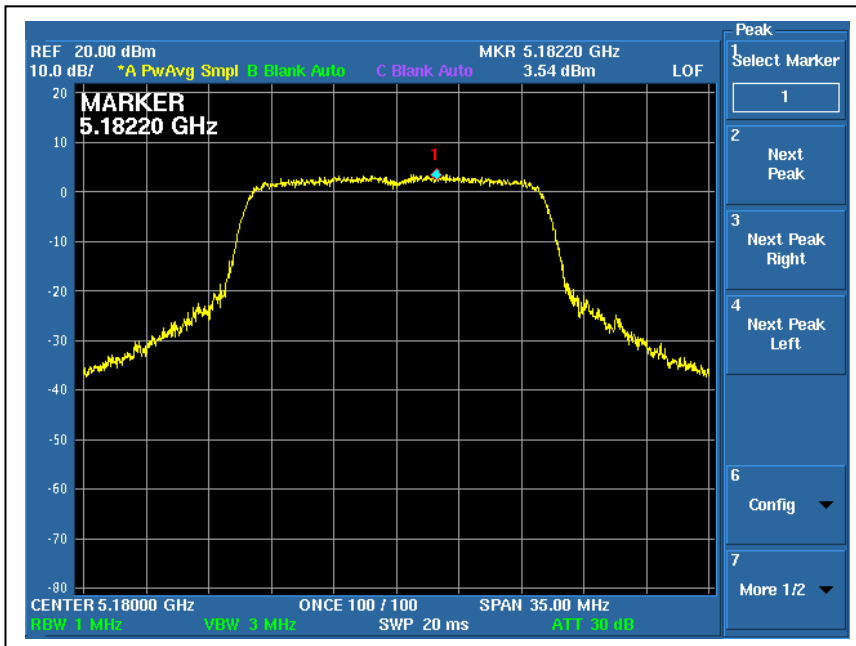
802.11a OFDM modulation

MODULATION TYPE	BPSK	TRANSFER RATE	6Mbps
INPUT POWER	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 60%RH, 965hPa
TESTED BY	Wen Yu		

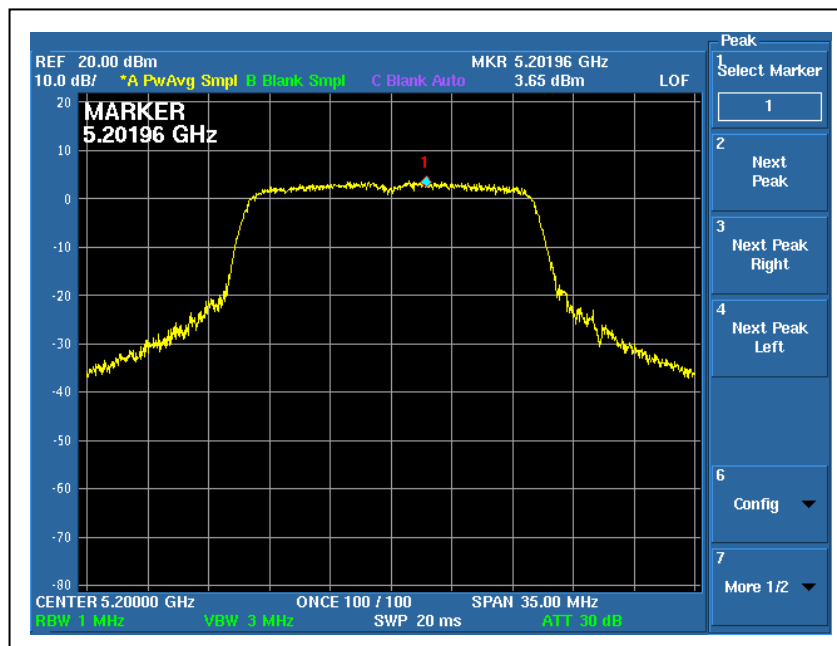
CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
1	5180	3.54	4	PASS
2	5200	3.65	4	PASS
4	5240	3.97	4	PASS
5	5260	5.53	11	PASS
7	5300	4.91	11	PASS
8	5320	5.31	11	PASS
9	5500	5.13	11	PASS
14	5600	5.34	11	PASS
19	5700	5.7	11	PASS
20	5745	5.13	17	PASS
22	5785	5.22	17	PASS
23	5805	5.51	17	PASS



CH1

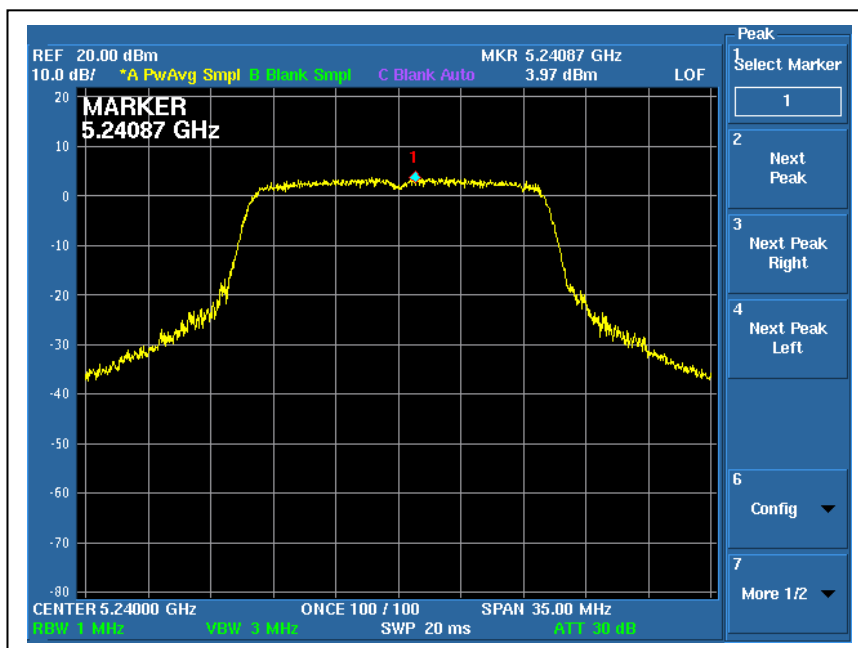


CH2

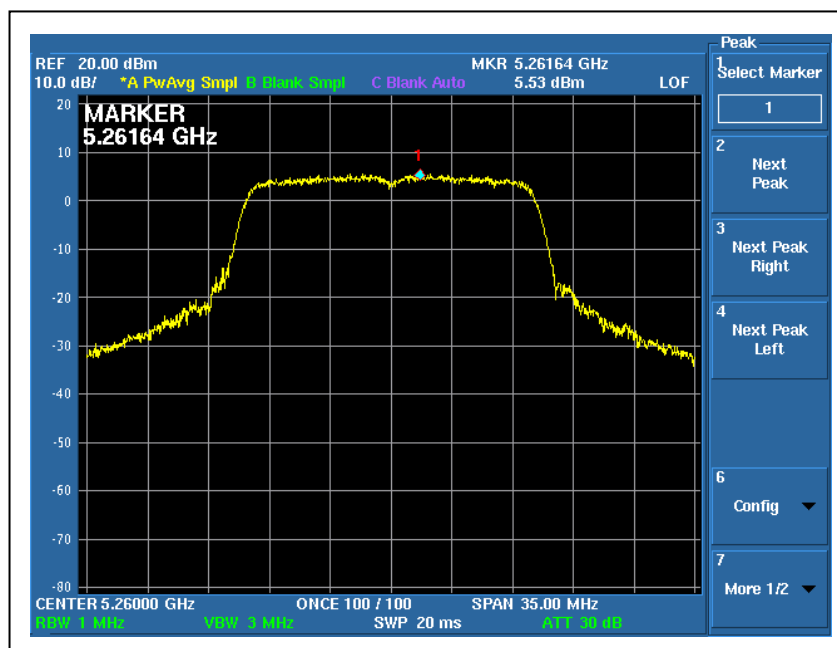




CH4

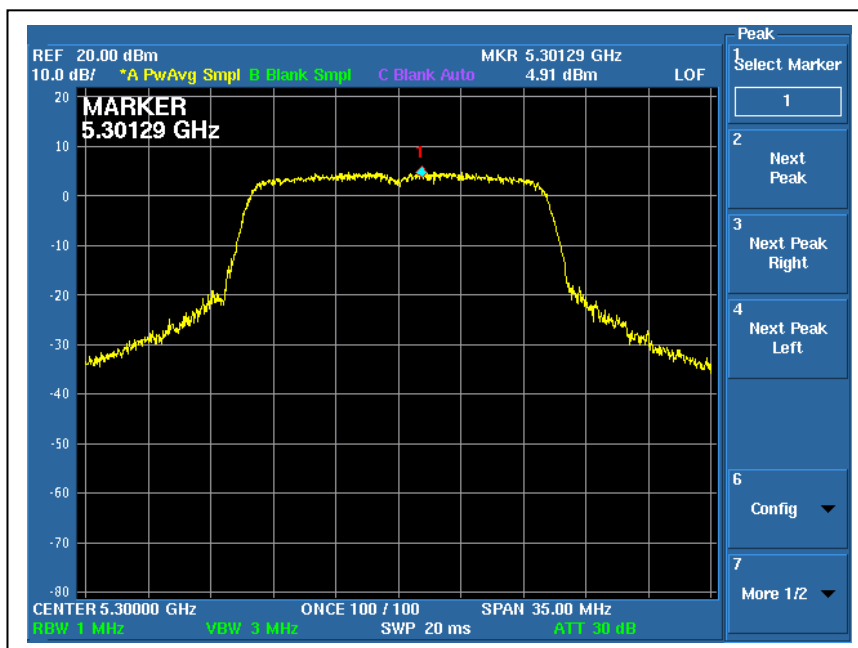


CH5

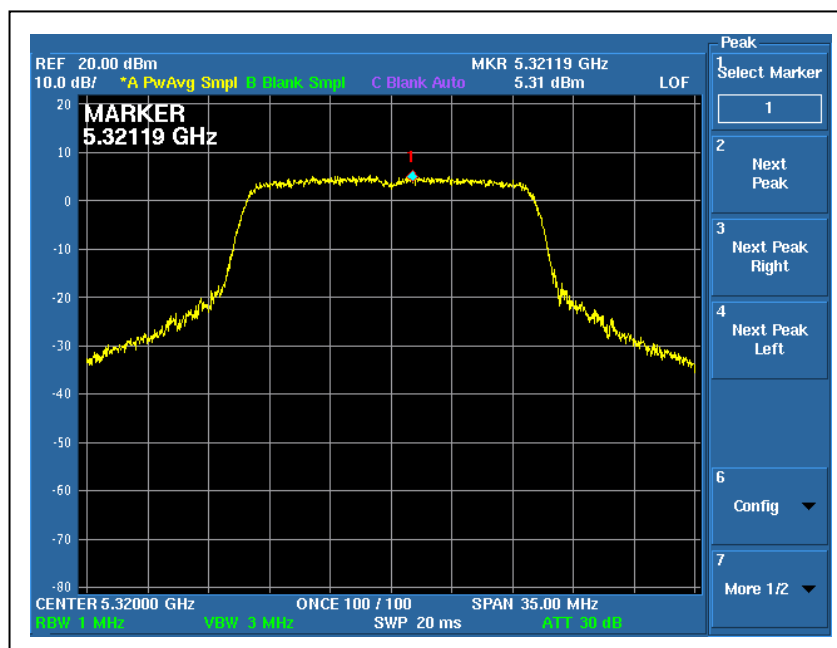




CH7



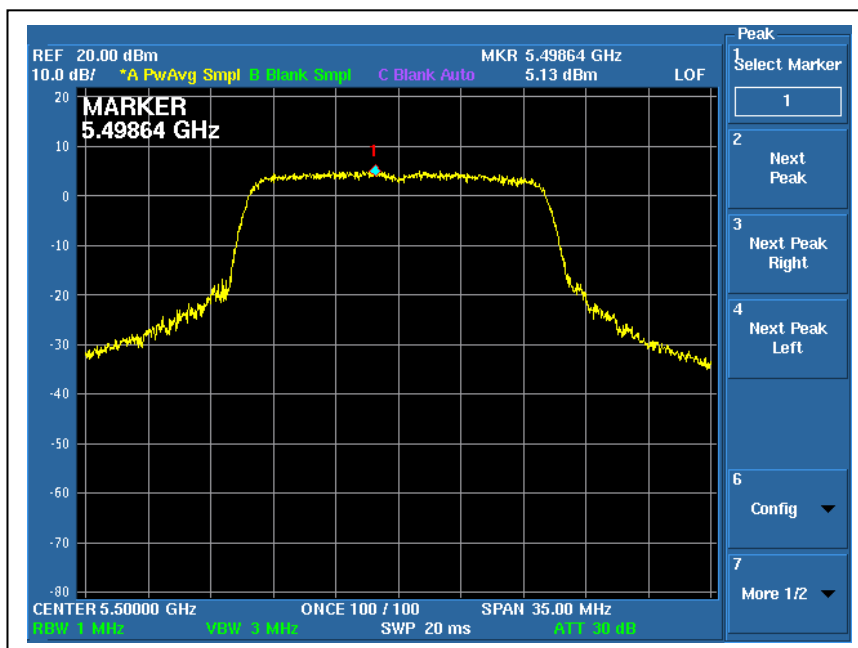
CH8



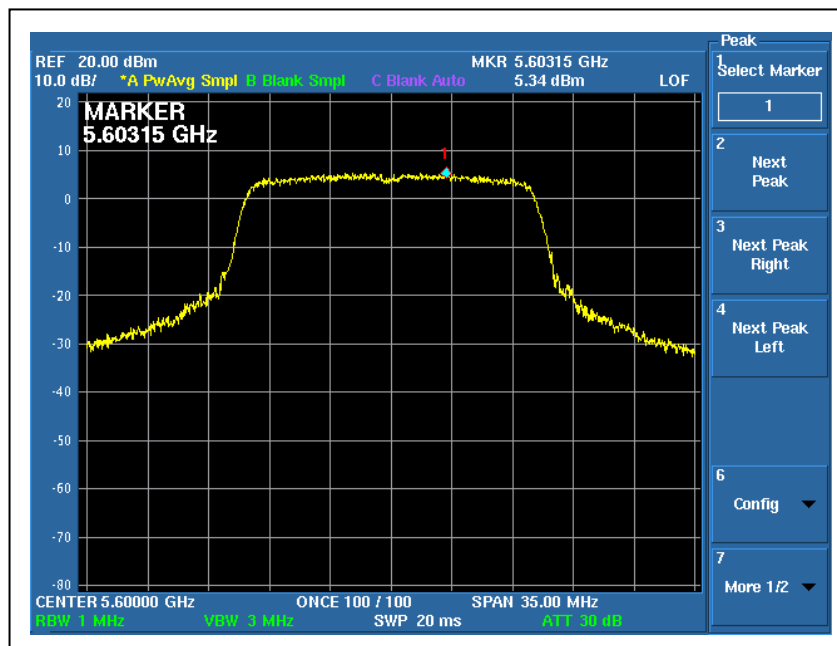


A D T

CH9



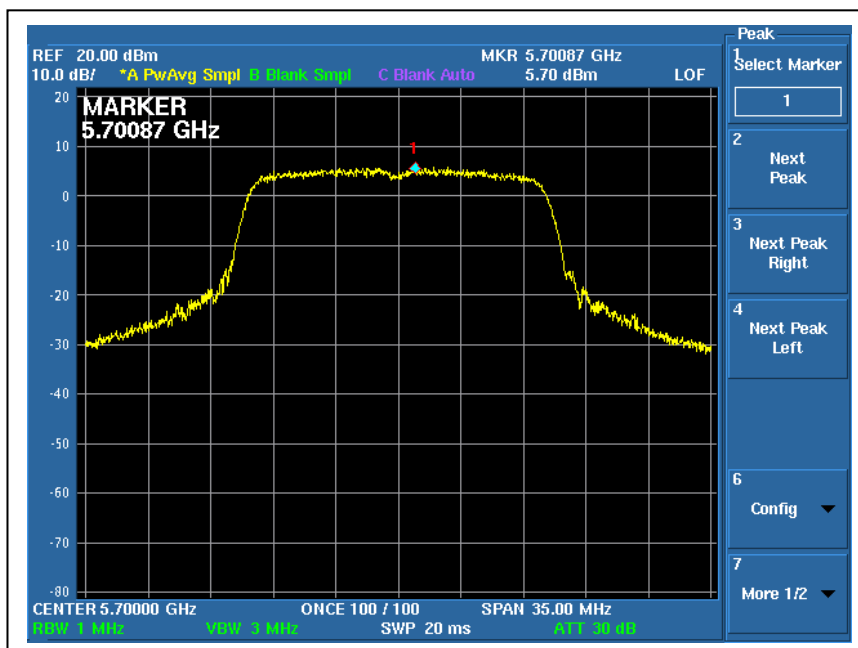
CH14



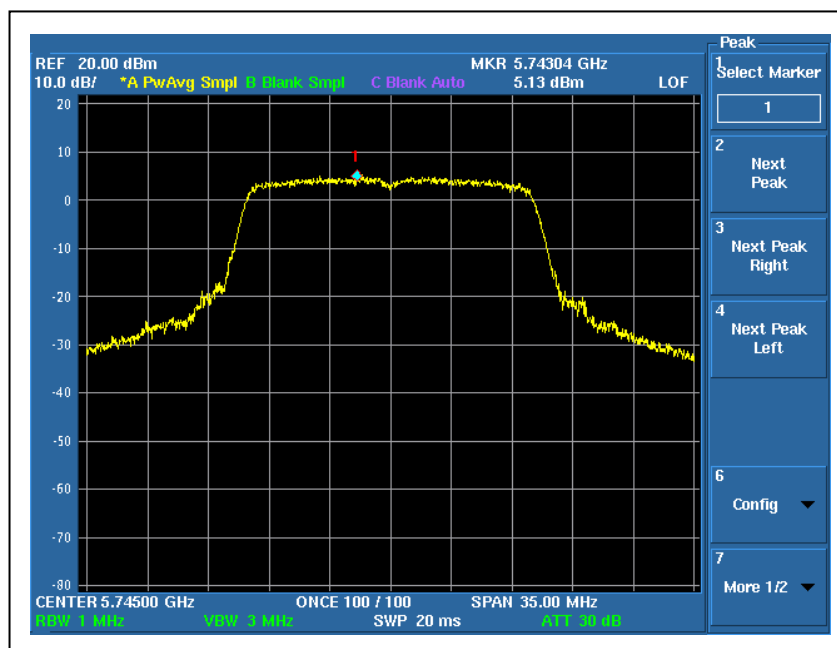


A D T

CH19



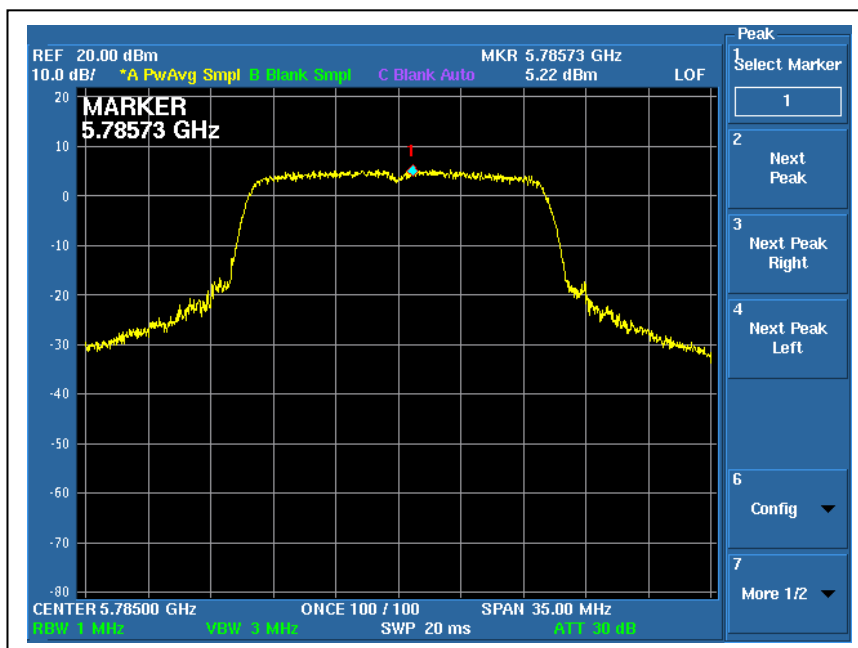
CH20



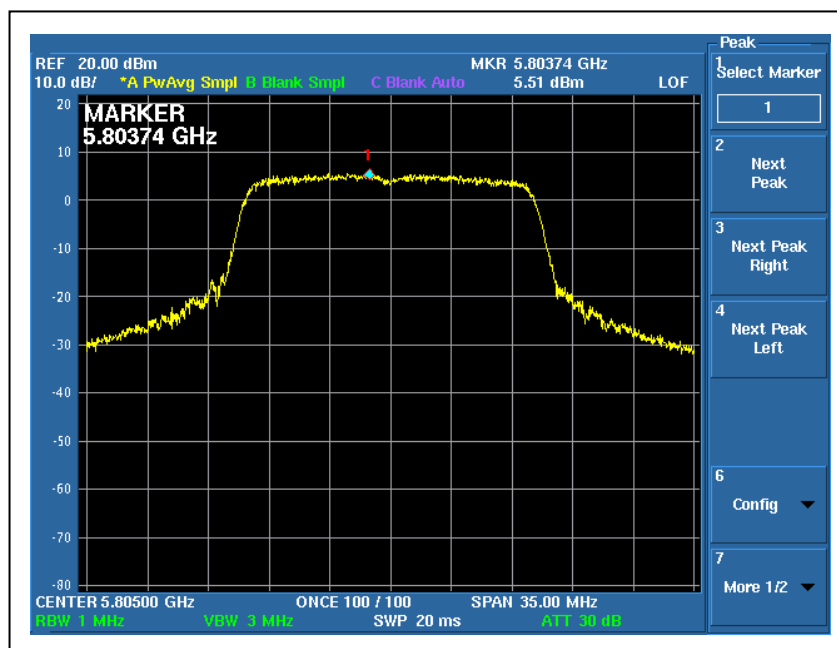


A D T

CH22



CH23





A D T

DRAFT 802.11n (20MHz) OFDM MODULATION:

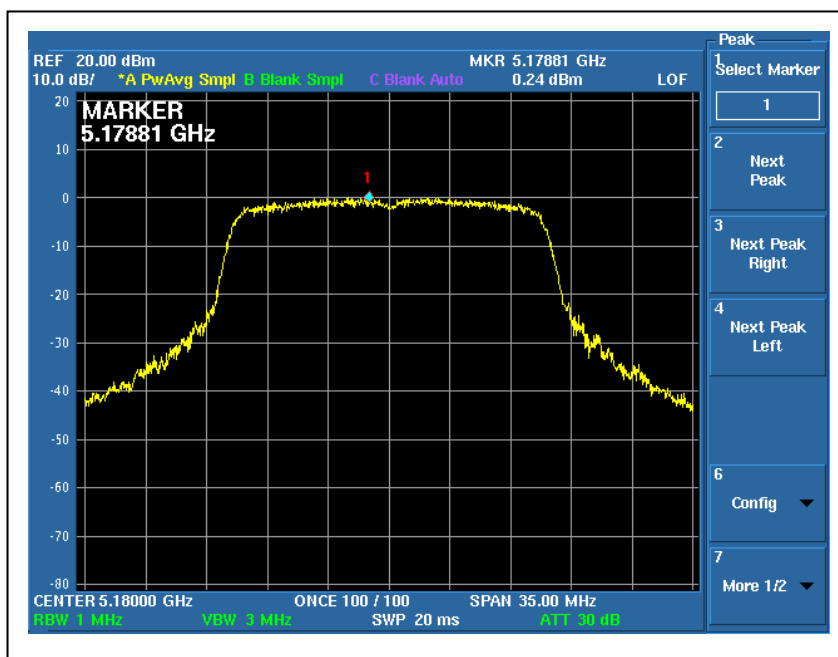
MODULATION TYPE	BPSK	TRANSFER RATE	13Mbps
INPUT POWER	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 60%RH, 965hPa
TESTED BY	Wen Yu		

CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)		TOTAL OUTPUT POWER DENSITY (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
		Chain (0)	Chain(1)			
1	5180	0.24	1.28	3.80	4	PASS
2	5200	0.27	1.50	3.94	4	PASS
4	5240	-0.44	1.38	3.58	4	PASS
5	5260	3.96	5.11	7.58	11	PASS
7	5300	4.02	5.29	7.71	11	PASS
8	5320	3.74	5.07	7.47	11	PASS
9	5500	5.31	4.29	7.84	11	PASS
14	5600	5.08	3.89	7.54	11	PASS
19	5700	3.16	2.97	6.08	11	PASS
20	5745	4.44	4.25	7.36	17	PASS
22	5785	4.51	3.79	7.18	17	PASS
23	5805	4.62	3.61	7.15	17	PASS

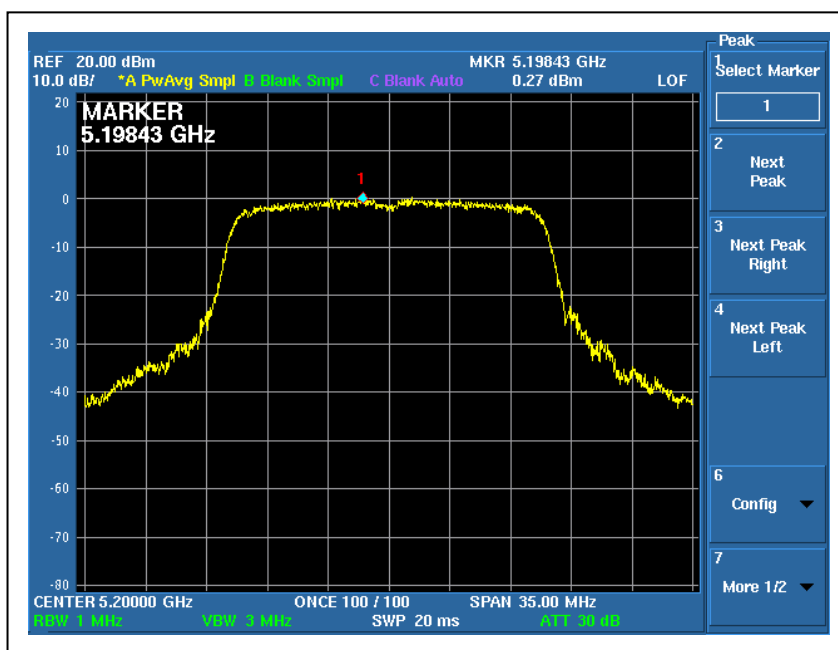


A D T

For Chain (0) : CH1

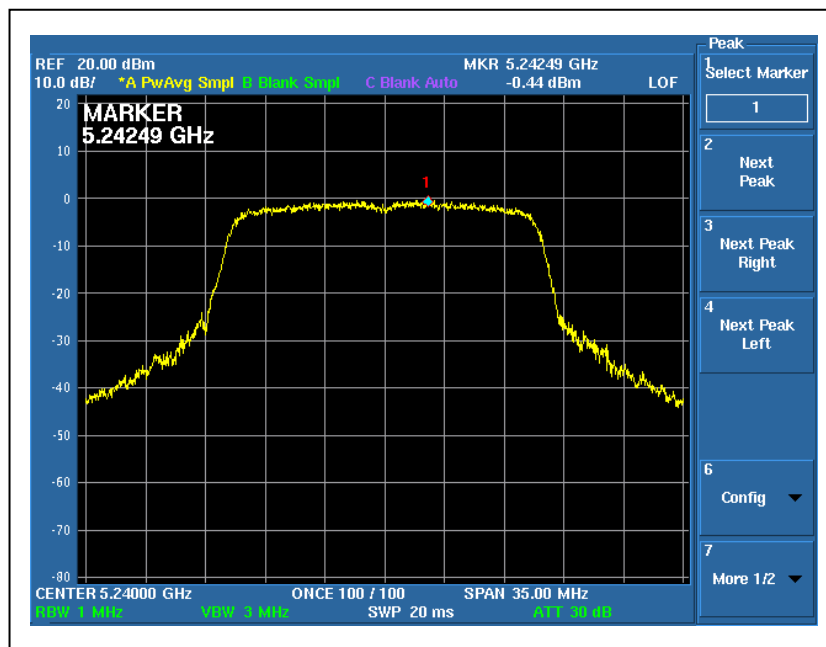


CH2

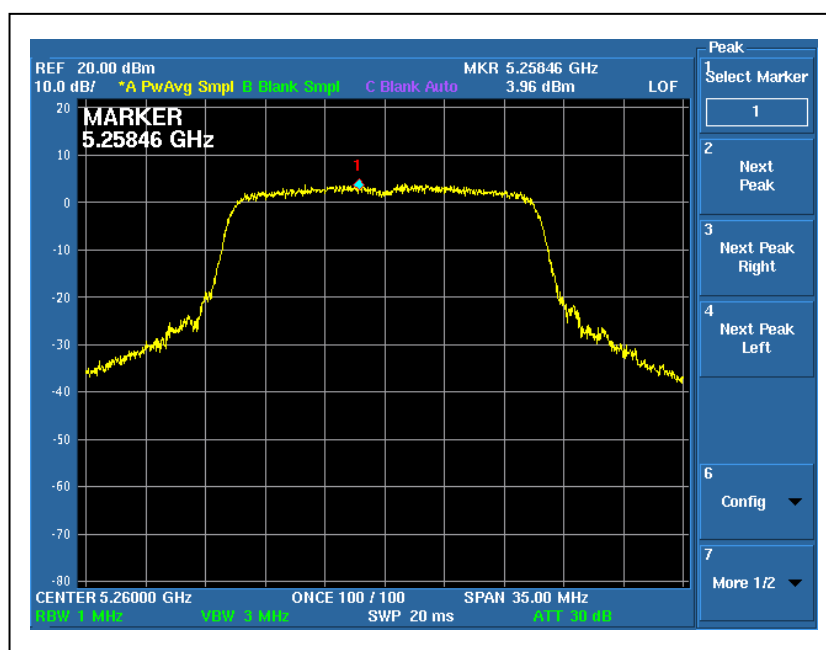




CH4

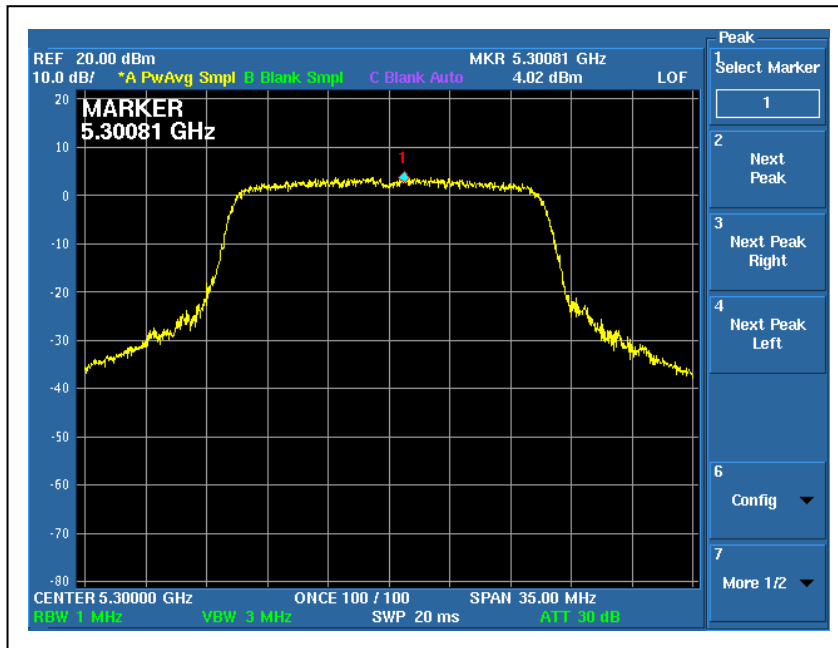


CH5

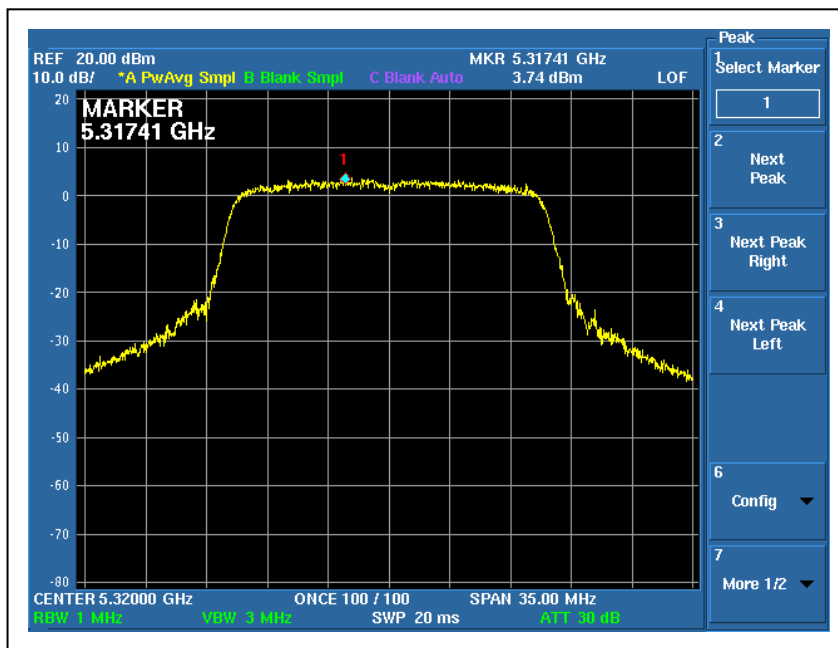




CH7



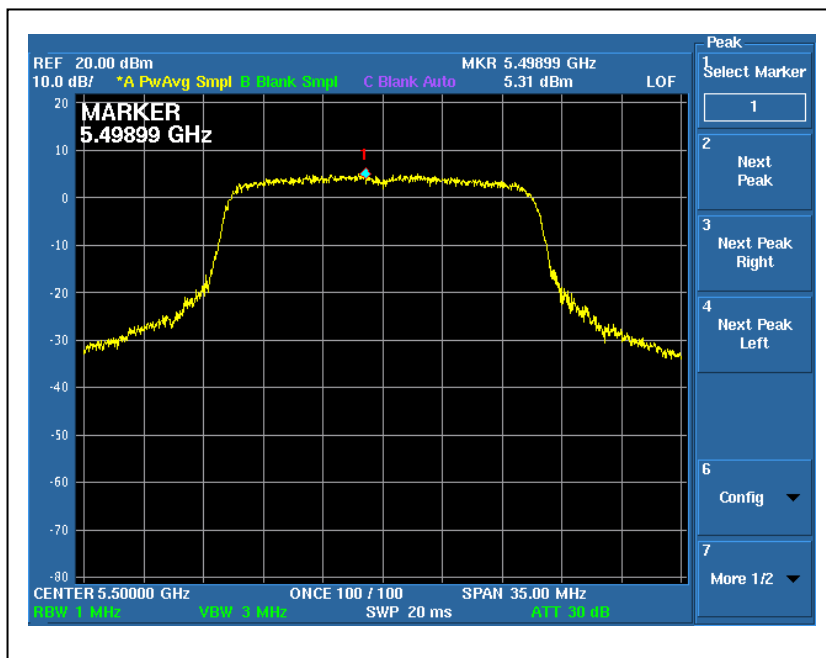
CH8



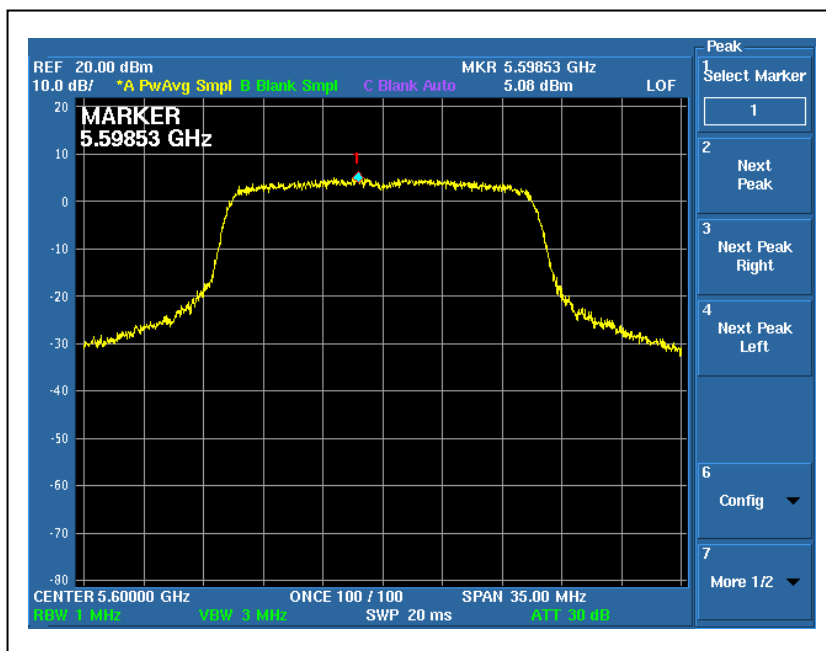


A D T

CH9



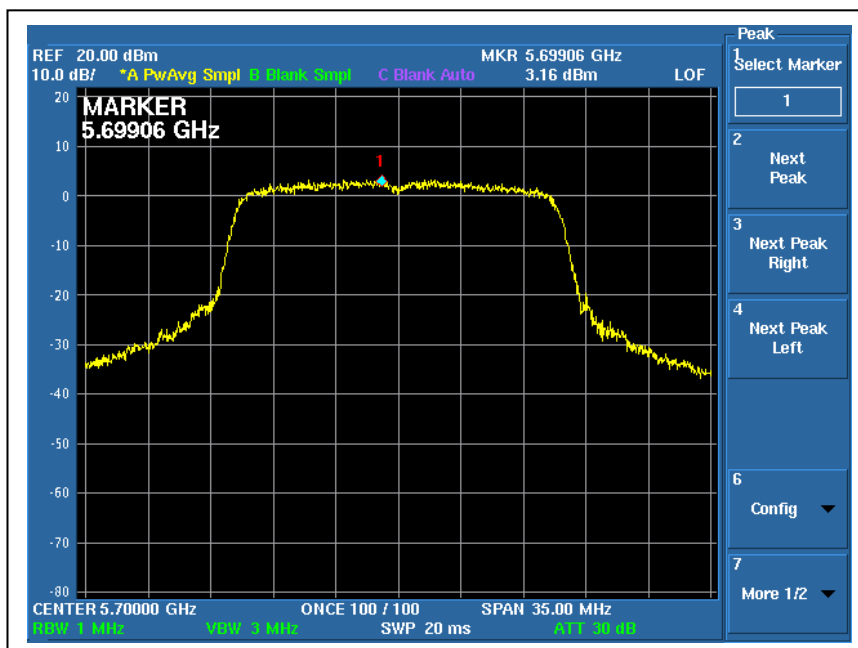
CH14



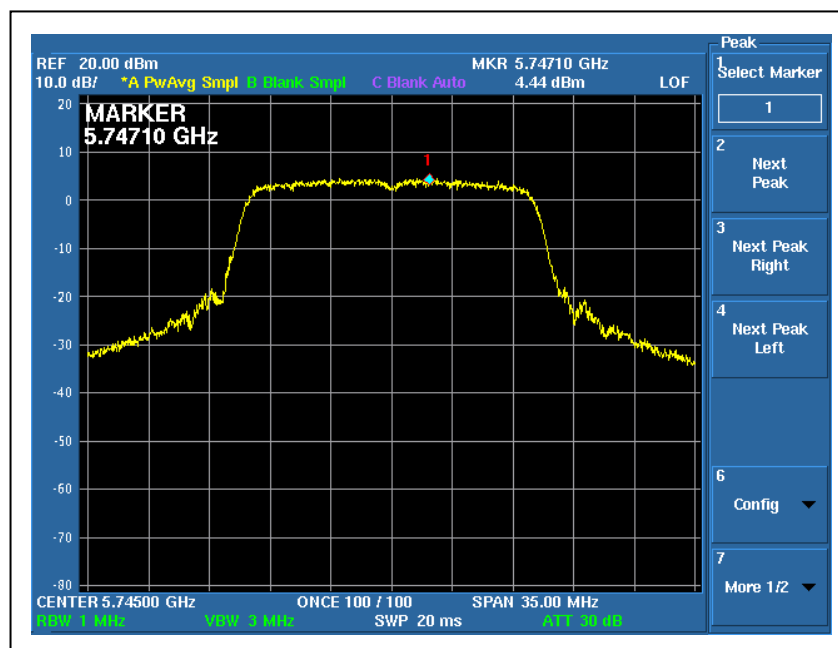


A D T

CH19



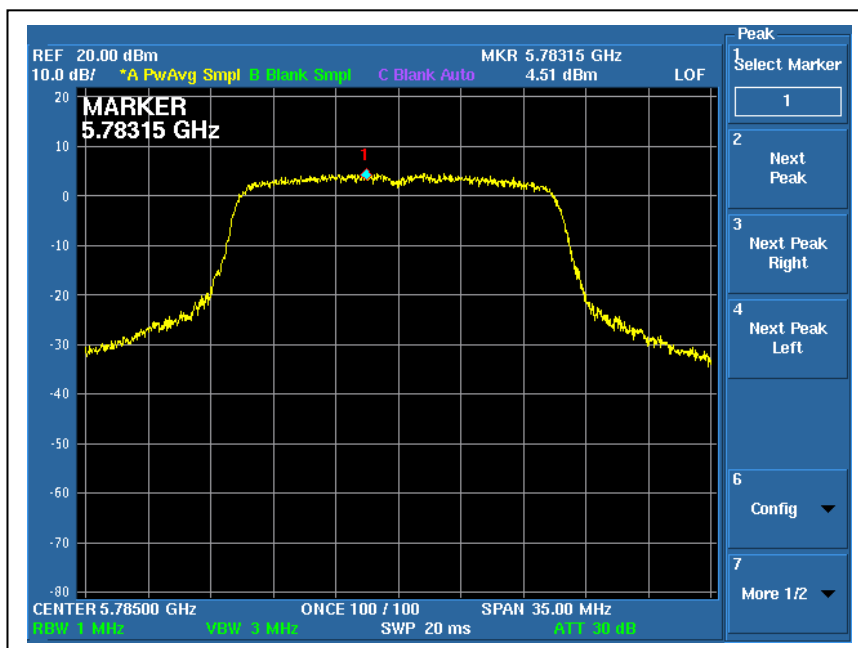
CH20



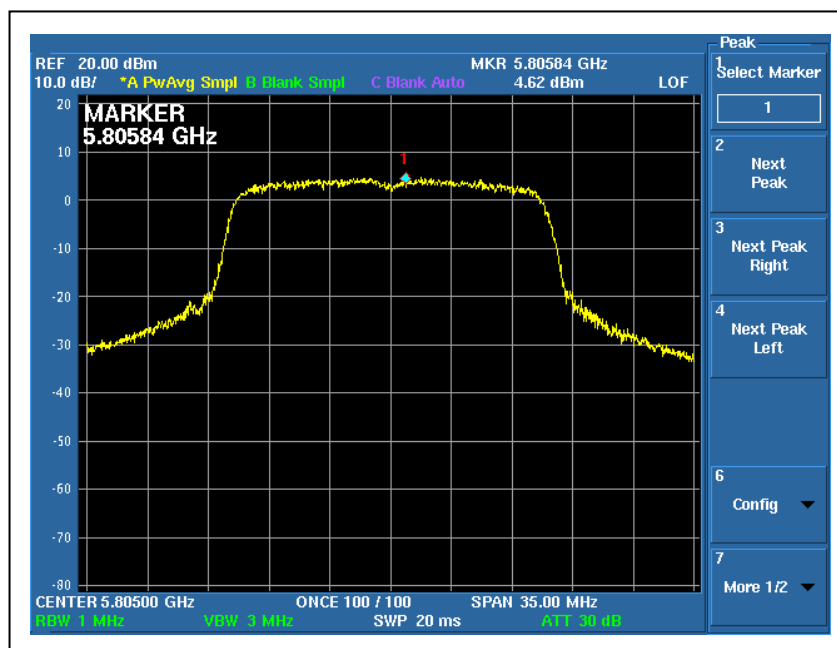


A D T

CH22



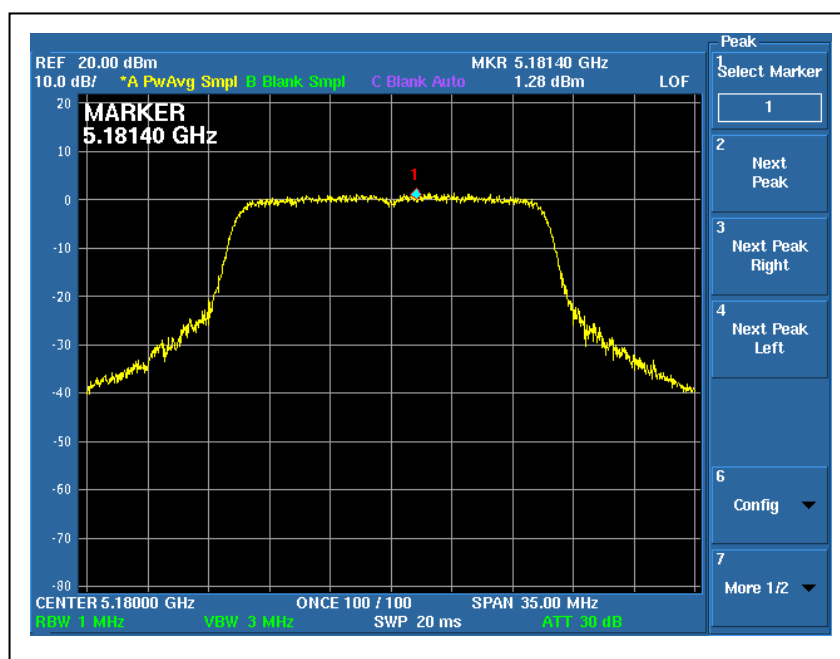
CH23



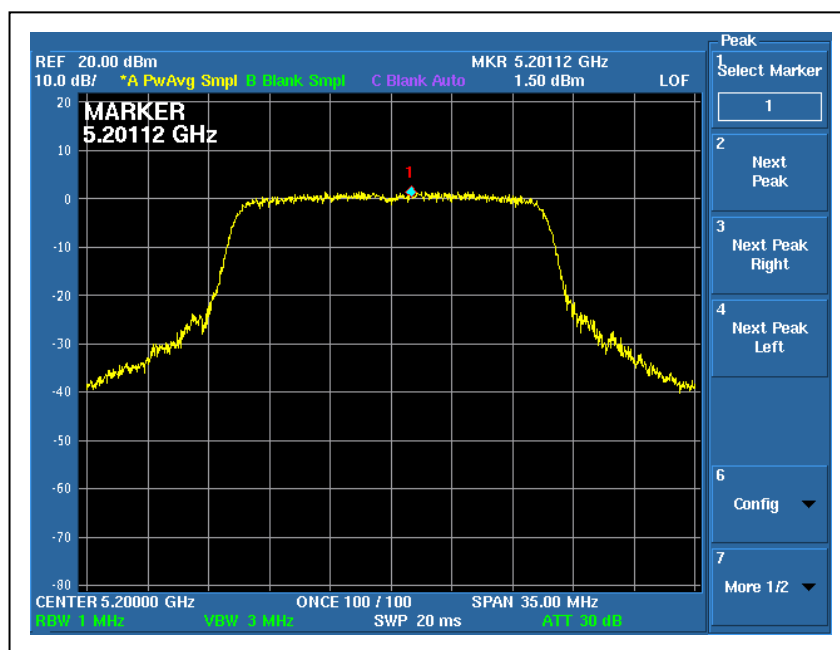


A D T

For Chain (1) : CH1

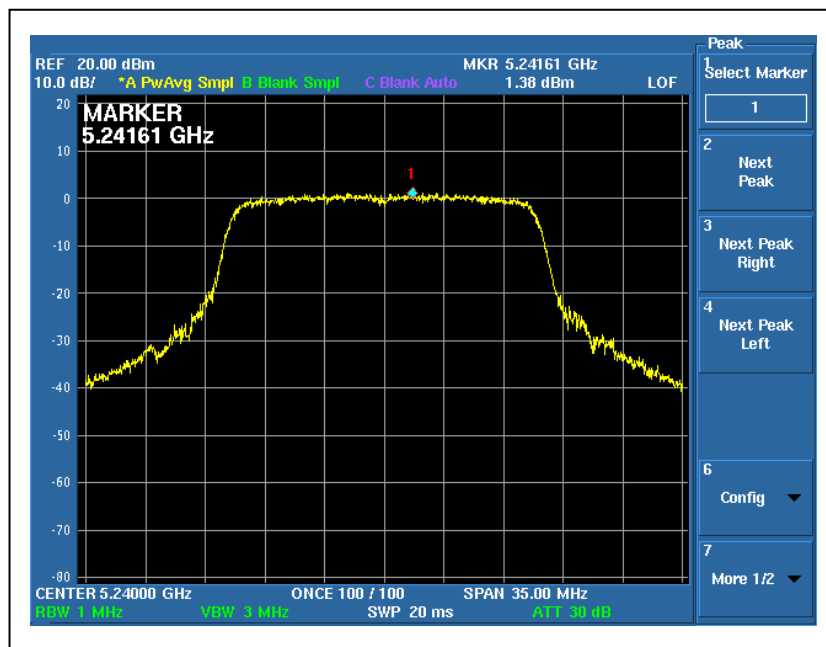


CH2

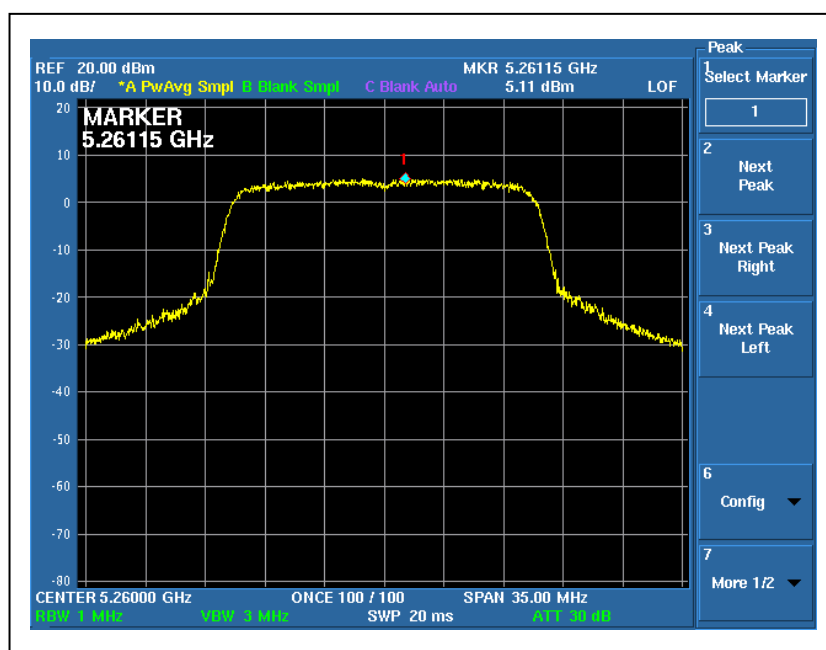




CH4

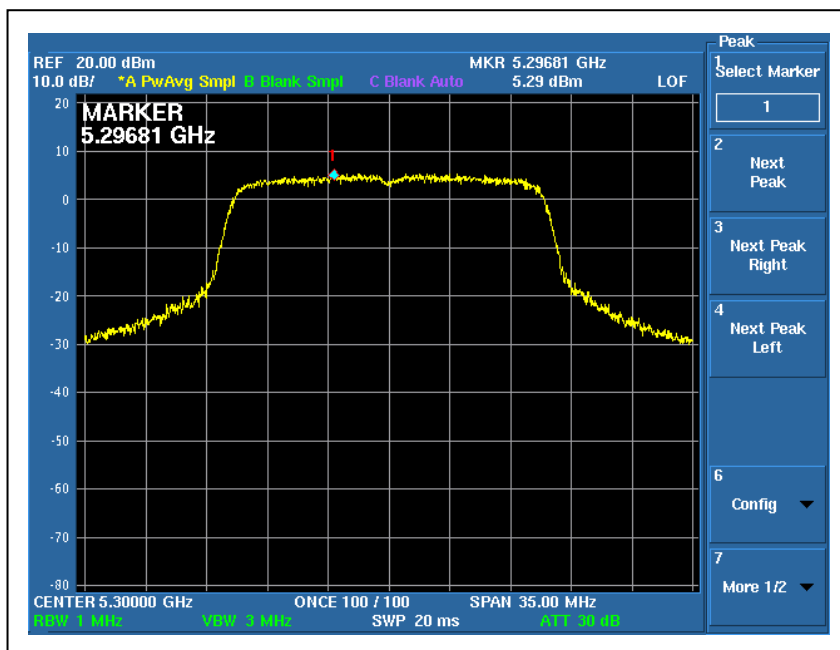


CH5

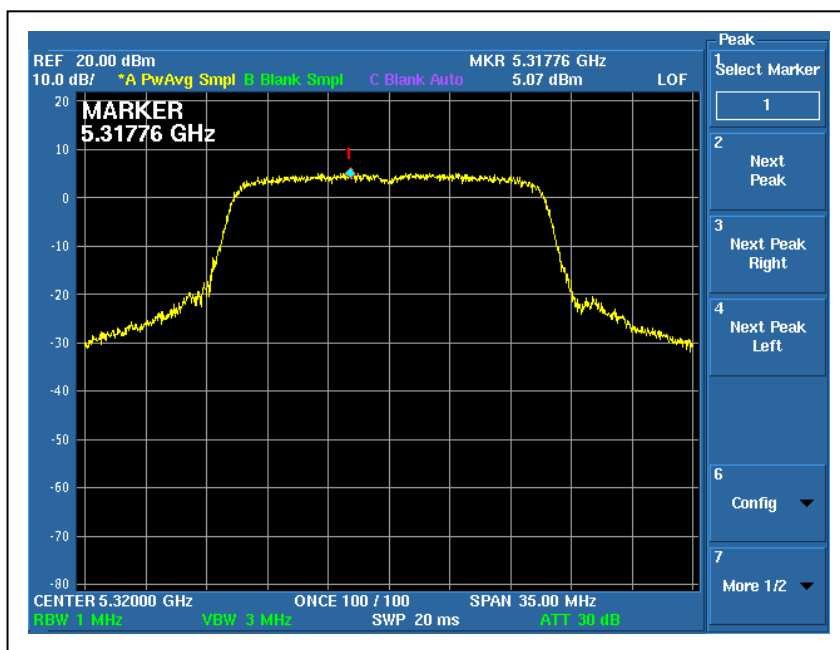




CH7

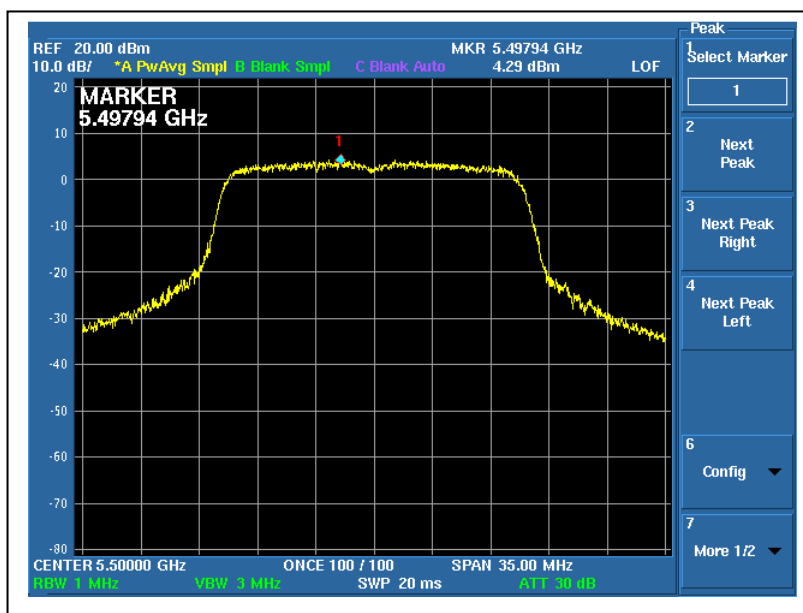


CH8

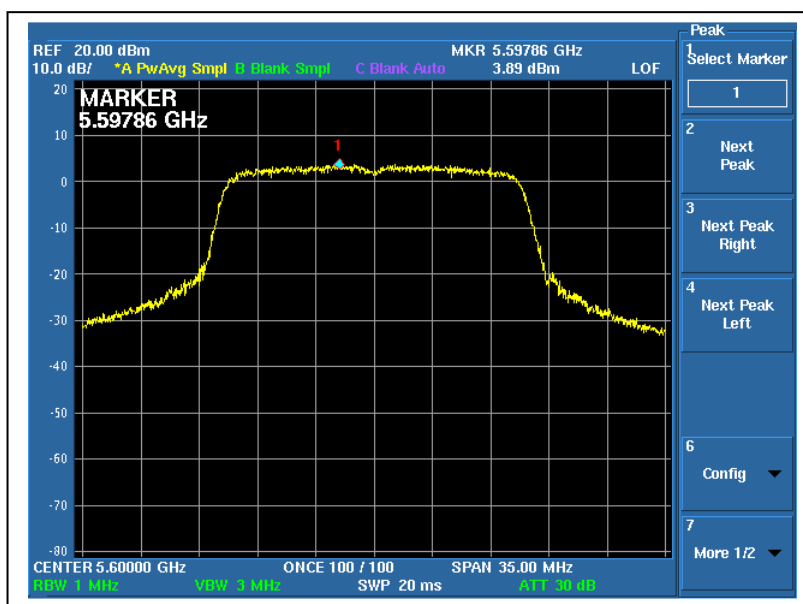




CH9

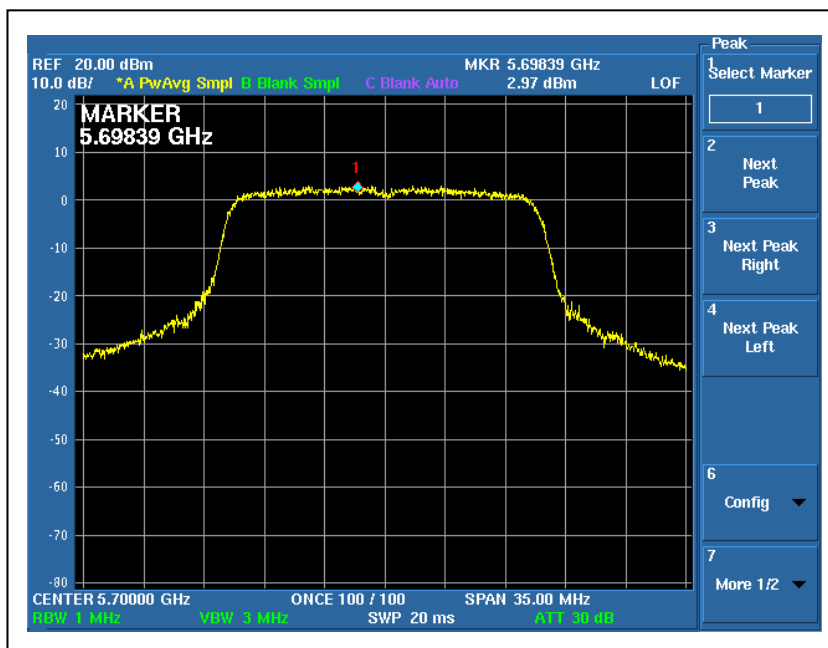


CH14

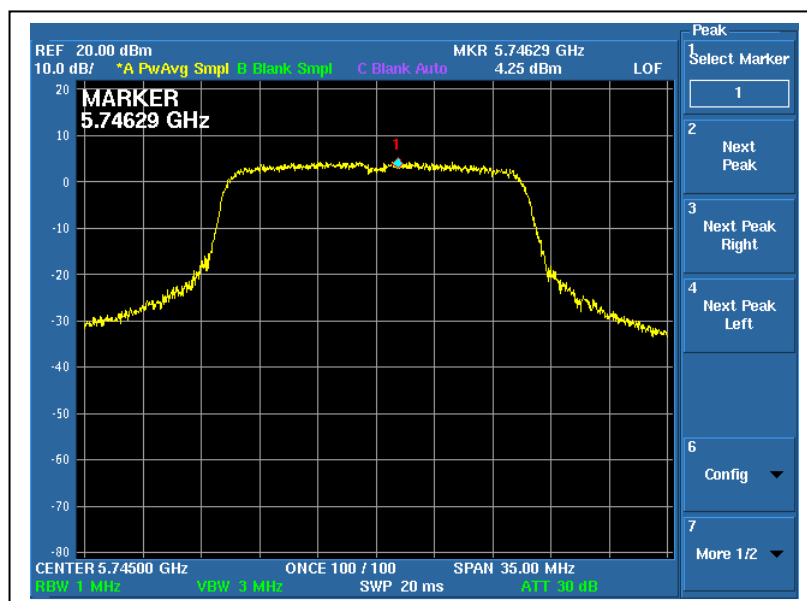




CH19

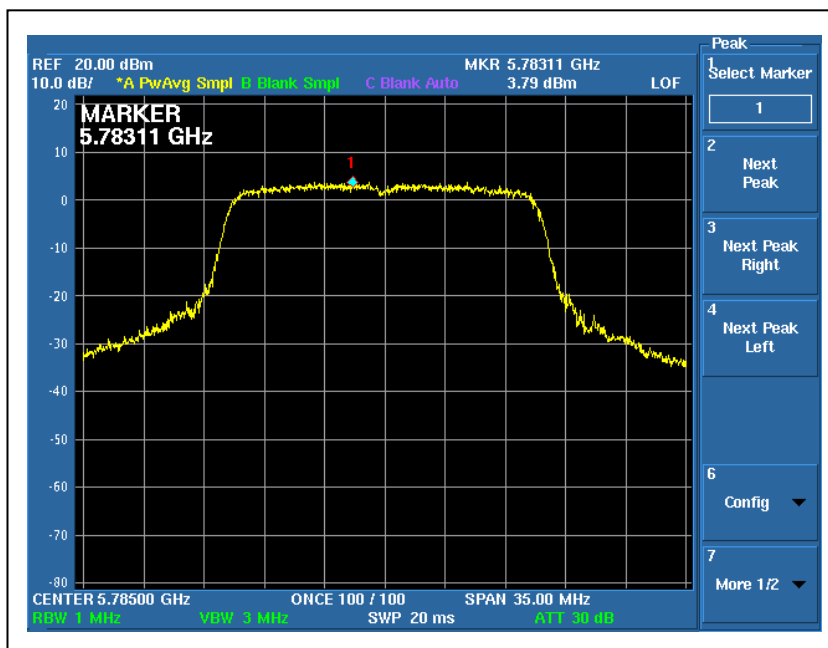


CH20

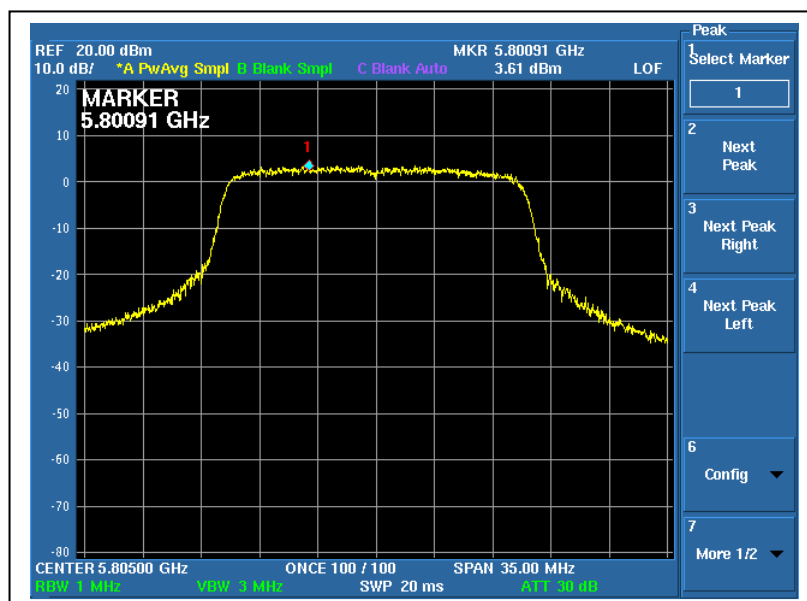




CH22



CH23





A D T

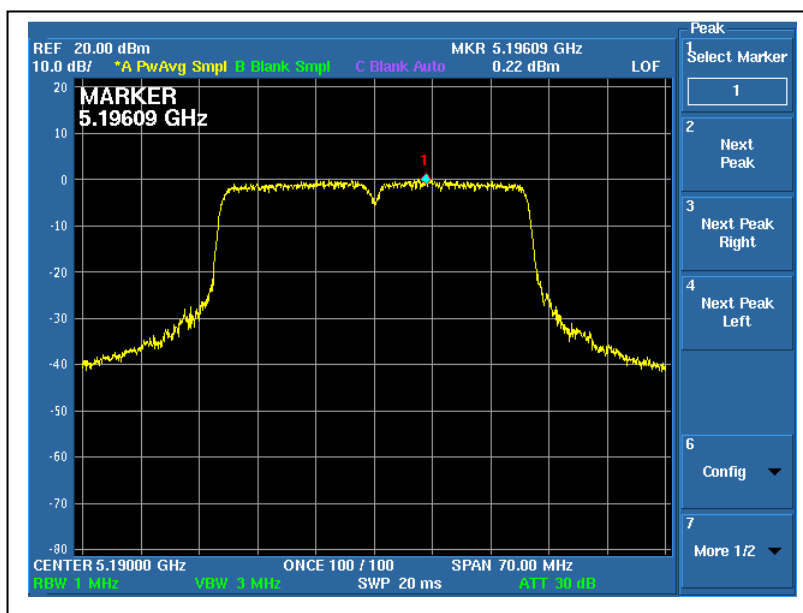
DRAFT 802.11n (40MHz) OFDM MODULATION:

MODULATION TYPE	BPSK	TRANSFER RATE	27Mbps
INPUT POWER	120Vac, 60 Hz	ENVIRONMENTAL CONDITIONS	25deg.C, 60%RH, 965hPa
TESTED BY	Wen Yu		

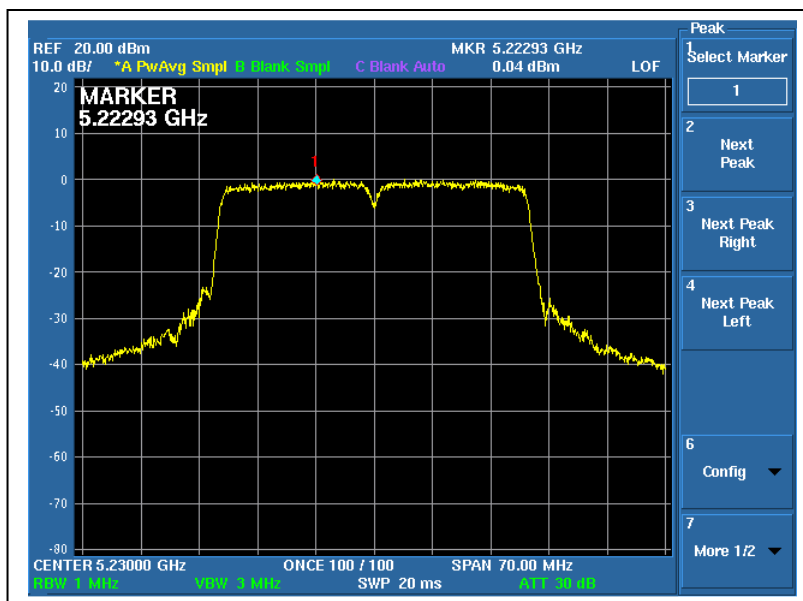
CHANNEL	CHANNEL FREQUENCY (MHz)	RF POWER LEVEL IN 1MHz BW (dBm)		TOTAL OUTPUT POWER DENSITY (dBm)	MAXIMUM LIMIT (dBm)	PASS/FAIL
		Chain (0)	Chain(1)			
1	5190	0.22	1.15	3.72	4	PASS
2	5230	0.04	1.36	3.76	4	PASS
3	5270	0.24	1.53	3.94	11	PASS
4	5310	-0.22	1.81	3.92	11	PASS
5	5510	-1.36	1.38	3.23	11	PASS
7	5590	-1.24	0.97	3.01	11	PASS
9	5670	-0.42	1.05	3.39	11	PASS
10	5755	0.13	0.83	3.50	17	PASS
11	5795	0.08	1.56	3.89	17	PASS



For Chain (0) : CH1

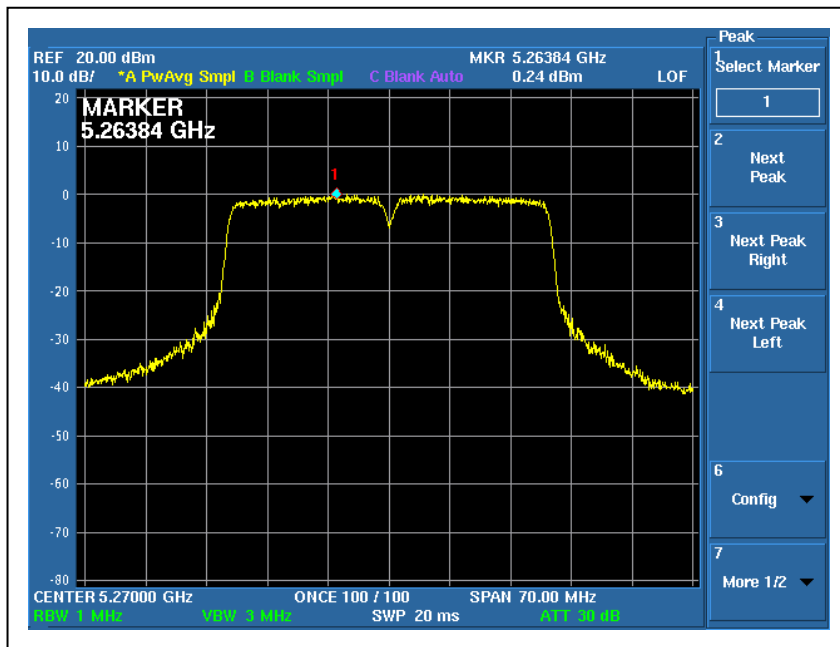


CH2

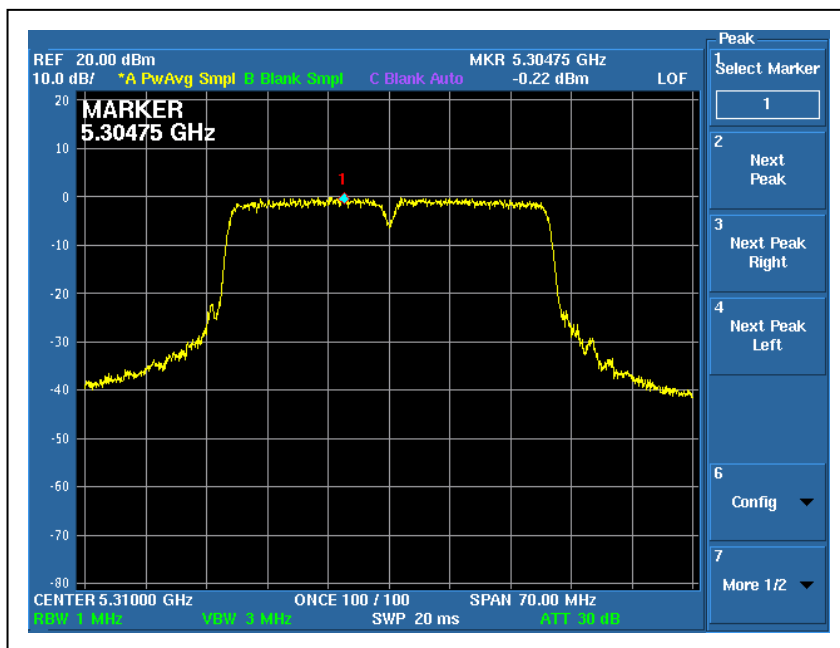




CH3

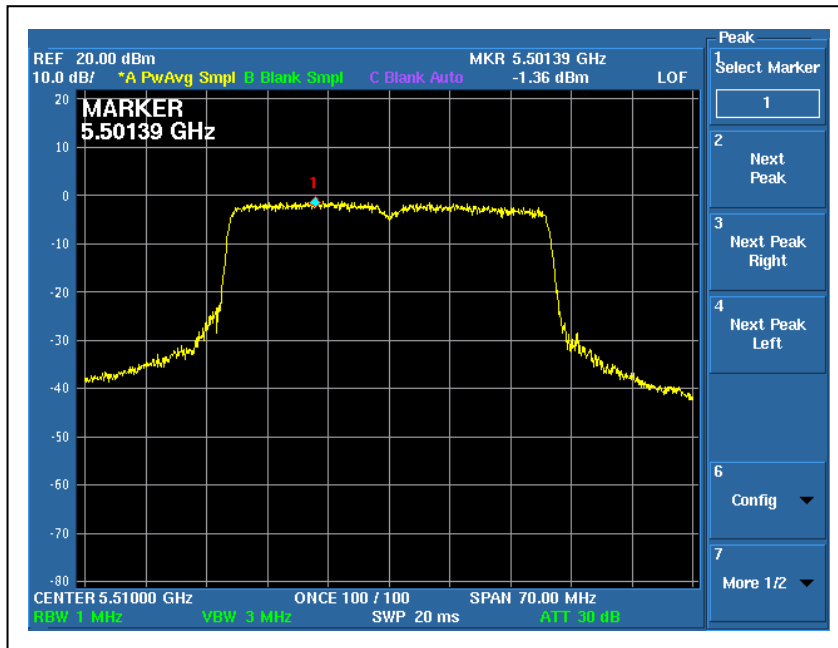


CH4

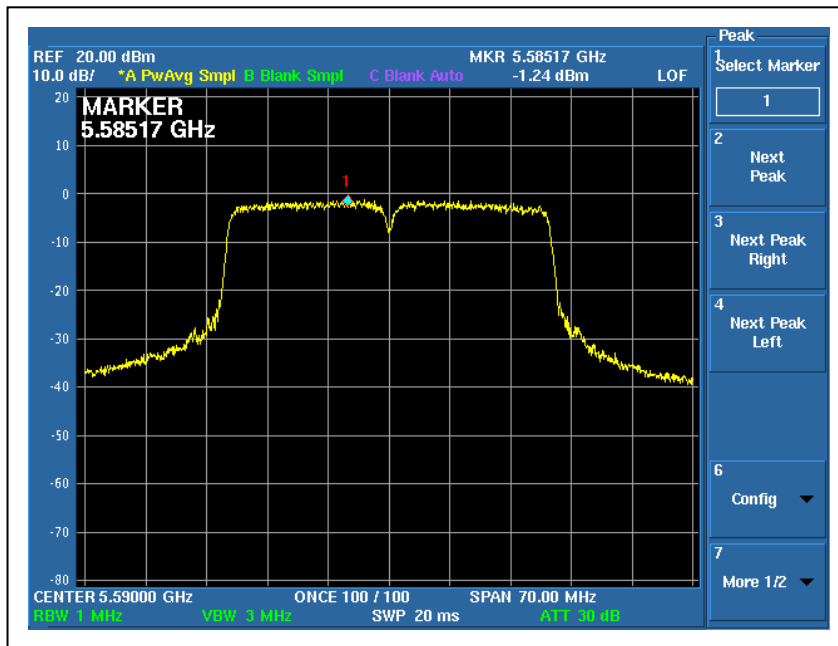




CH5



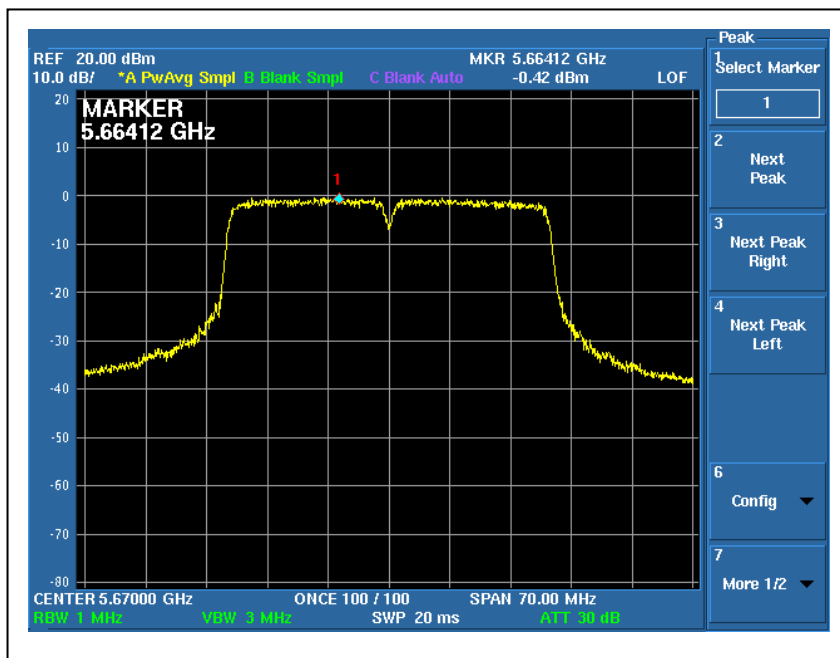
CH7



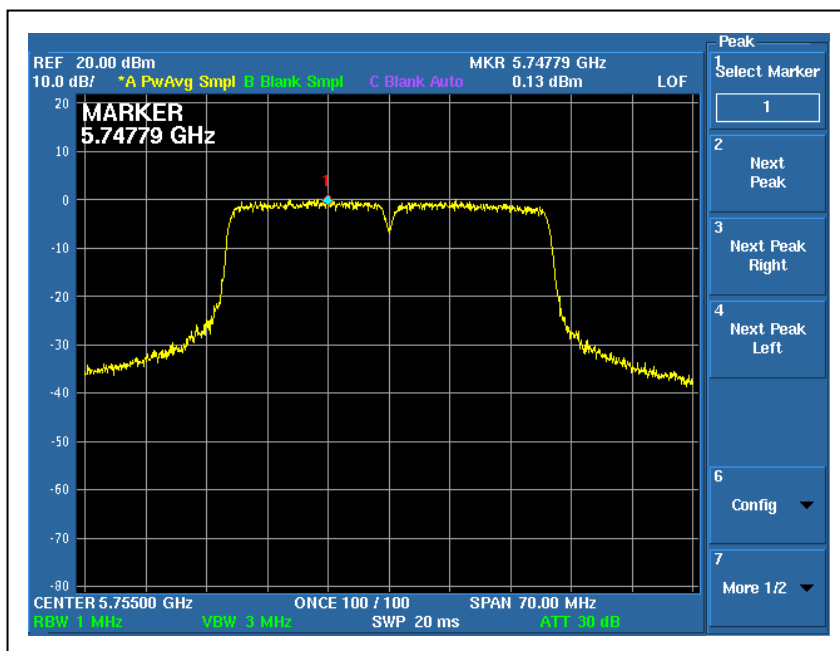


A D T

CH9



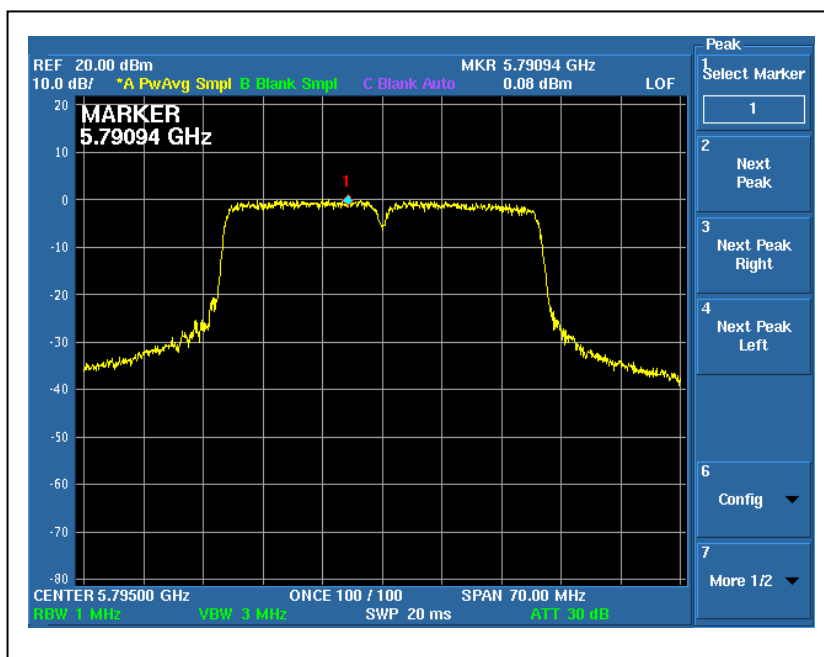
CH10





A D T

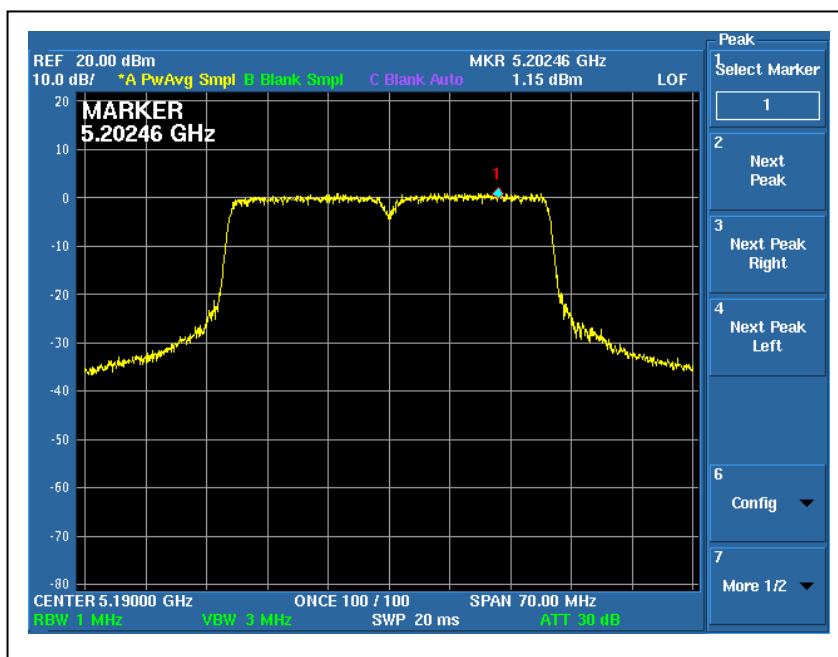
CH11



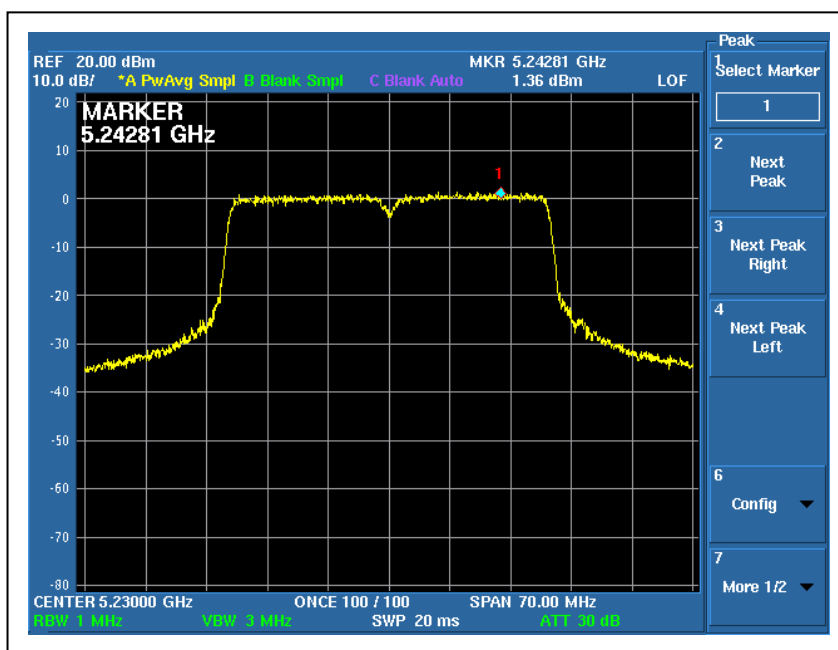


A D T

For Chain (1) : CH1

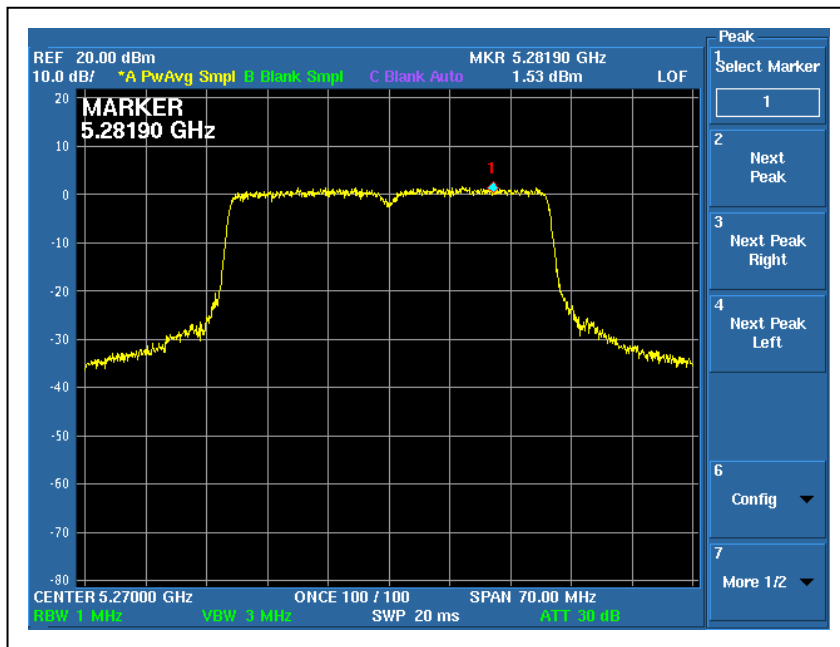


CH2

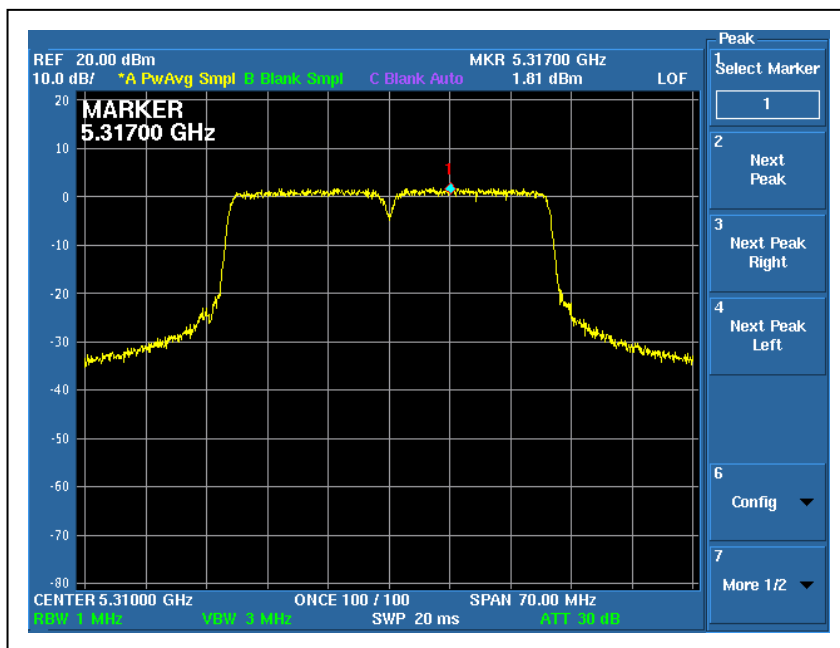




CH3

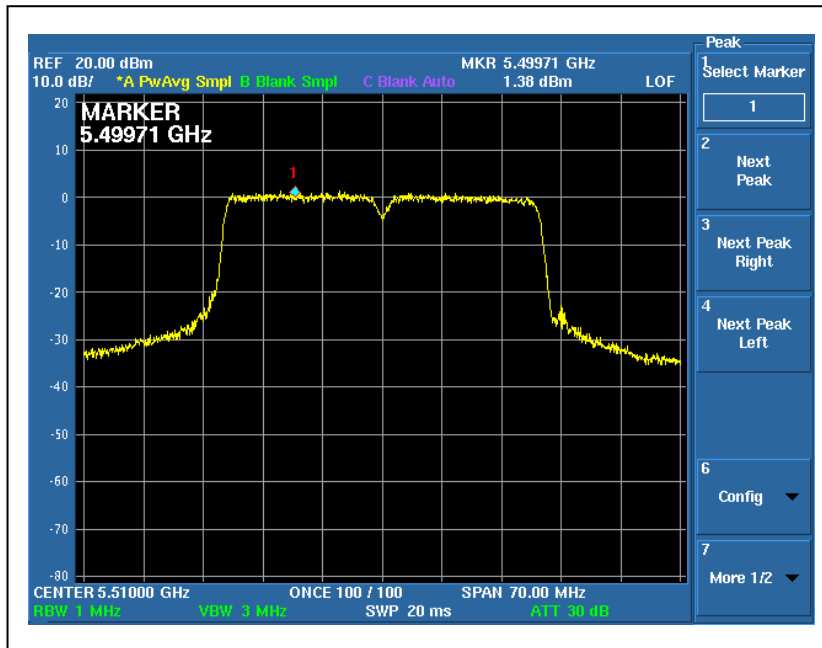


CH4

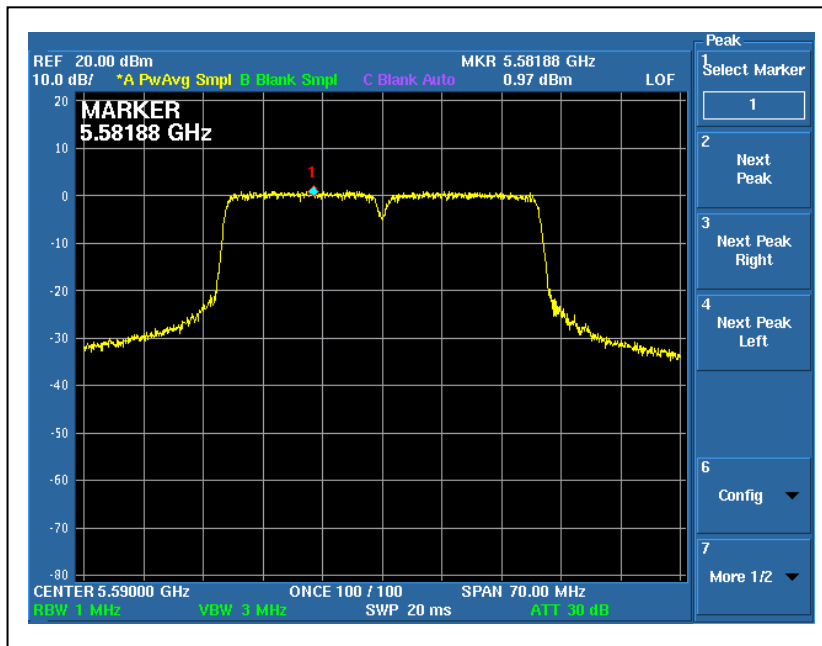




CH5

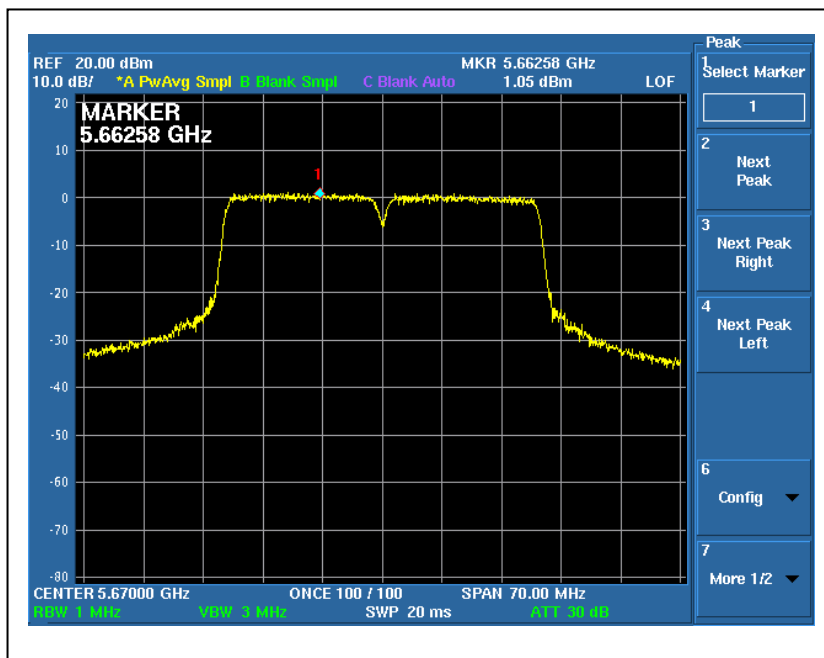


CH7

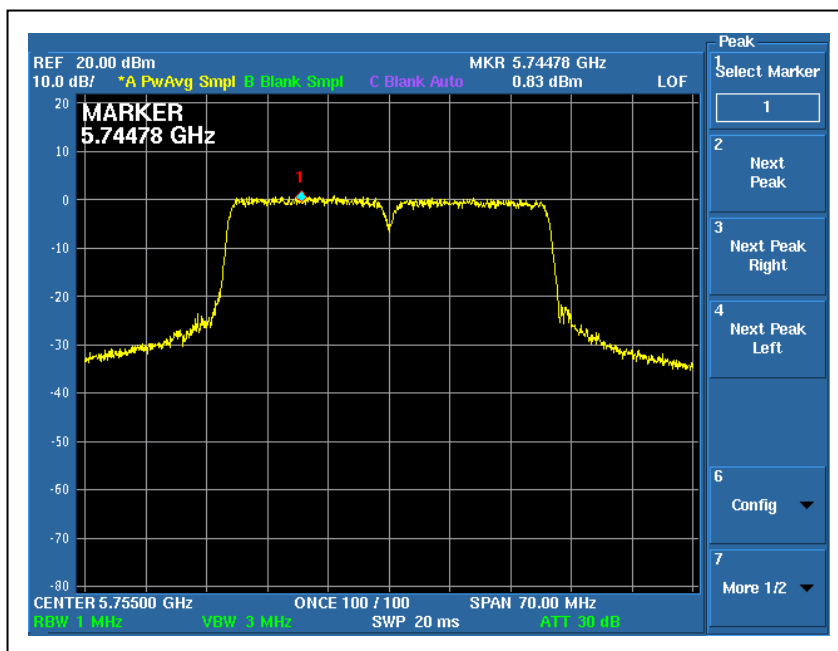




CH9



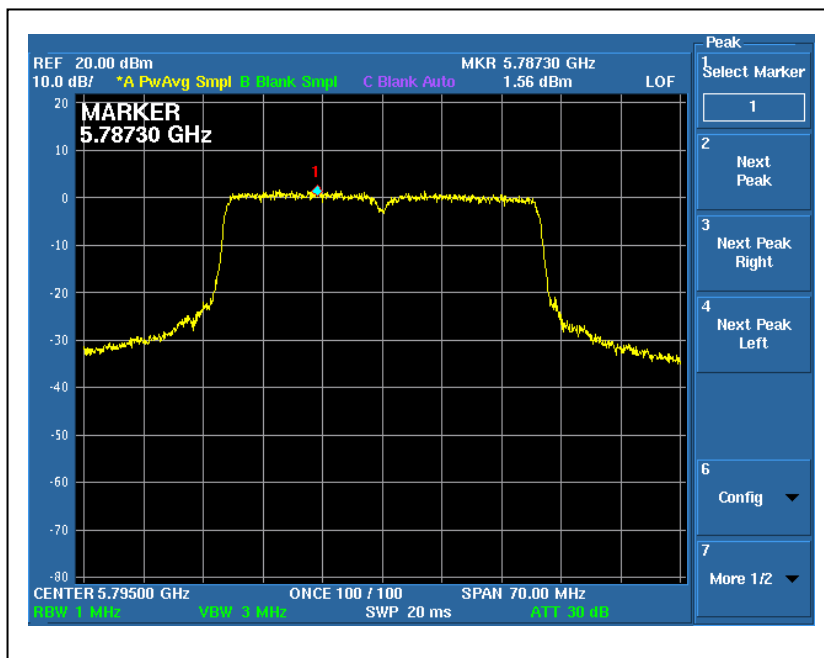
CH10





A D T

CH11





4.6 FREQUENCY STABILITY

4.6.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

The frequency tolerance of the carrier signal shall be maintained within +/- 0.02% of the operating frequency over a temperature variation of -30 degrees to 50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C.

4.6.2 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100037	July 26, 2008	July 25, 2009

NOTE:

- 1.The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.
- 2.The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

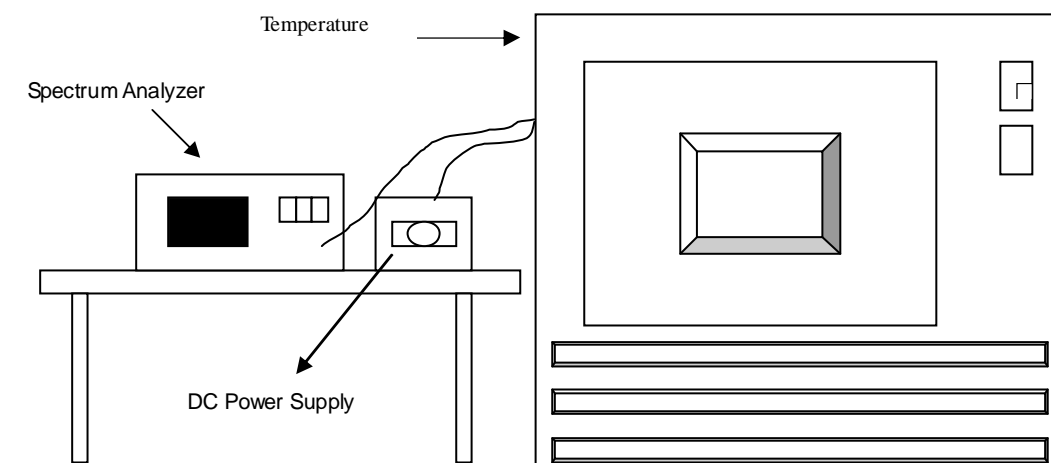
4.6.3 TEST PROCEDURE

1. The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.
2. Turn the EUT on and couple its output to a spectrum analyzer.
3. Turn the EUT off and set the chamber to the highest temperature specified.
4. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 minutes.
5. Repeat step 2 and 3 with the temperature chamber set to the lowest temperature.
6. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.

4.6.4 DEVIATION FROM TEST STANDARD

No deviation

4.6.5 TEST SETUP



4.6.6 EUT OPERATING CONDITION

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.



4.6.7 TEST RESULTS

		Operating frequency: 5320MHz				Limit : ± 0.02%	
Temp. (°C)	Power supply (VAC)	2 minute		5 minute		10 minute	
		(MHz)	(%)	(MHz)	(%)	(MHz)	(%)
50	126.5	5320.028	0.000526	5320.0264	0.000496	5320.0244	0.000459
	110	5320.0278	0.000523	5320.0284	0.000534	5320.0264	0.000496
	93.5	5320.0278	0.000523	5320.0254	0.000477	5320.0244	0.000459
40	126.5	5320.0338	0.000635	5320.0341	0.000641	5320.0342	0.000643
	110	5320.0338	0.000635	5320.034	0.000639	5320.0342	0.000643
	93.5	5320.034	0.000639	5320.0338	0.000635	5320.0342	0.000643
30	126.5	5320.009	0.000169	5320.0085	0.000160	5320.0082	0.000154
	110	5320.009	0.000169	5320.0087	0.000164	5320.0085	0.000160
	93.5	5320.009	0.000169	5320.0085	0.000160	5320.0082	0.000154
20	126.5	5319.9896	0.000195	5319.9893	0.000201	5319.9891	0.000205
	110	5319.9896	0.000195	5319.9895	0.000197	5319.9892	0.000203
	93.5	5319.9896	0.000195	5319.9893	0.000201	5319.9890	0.000207
10	126.5	5320.0274	0.000515	5320.0224	0.000421	5320.0184	0.000346
	110	5320.0274	0.000515	5320.0254	0.000477	5320.0214	0.000402
	93.5	5320.0274	0.000515	5320.0214	0.000402	5320.0194	0.000365
0	126.5	5320.0098	0.000184	5320.0096	0.000180	5320.0093	0.000175
	110	5320.0098	0.000184	5320.0096	0.000180	5320.0095	0.000179
	93.5	5320.0098	0.000184	5320.0095	0.000179	5320.0092	0.000173
-10	126.5	5320.0045	0.000085	5320.0042	0.000079	5320.0039	0.000073
	110	5320.0046	0.000086	5320.0046	0.000086	5320.0043	0.000081
	93.5	5320.0045	0.000085	5320.0042	0.000079	5320.0039	0.000073
-20	126.5	5320.0204	0.000383	5320.0154	0.000289	5320.0154	0.000289
	110	5320.0204	0.000383	5320.0184	0.000346	5320.0164	0.000308
	93.5	5320.0184	0.000346	5320.0154	0.000289	5320.0154	0.000289
-30	126.5	5319.9855	0.000273	5319.995	0.000094	5319.9947	0.000100
	110	5319.9856	0.000271	5319.995	0.000094	5319.9949	0.000096
	93.5	5319.9955	0.000085	5319.9953	0.000088	5319.9946	0.000102



4.7 CONDUCTED OUT-BAND EMISSION MEASUREMENT

4.7.1 TEST INSTRUMENTS

DESCRIPTION & MANUFACTURER	MODEL NO.	SERIAL NO.	CALIBRATED DATE	CALIBRATED UNTIL
R&S SPECTRUM ANALYZER	FSP40	100037	July 26, 2008	July 25, 2009

NOTE:

- 1.The measurement uncertainty is less than +/- 2.6dB, which is calculated as per the NAMAS document NIS81. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.
- 2.The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

4.7.2 TEST PROCEDURE

The transmitter output was connected to the spectrum analyzer via a low loss cable. Set RBW of spectrum analyzer to 1MHz with suitable frequency span including 100 MHz bandwidth from band edge. The band edges was measured and recorded.

4.7.3 EUT OPERATING CONDITION

The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.



A D T

4.7.4 TEST RESULTS

For 5.15 to 5.35GHz band:

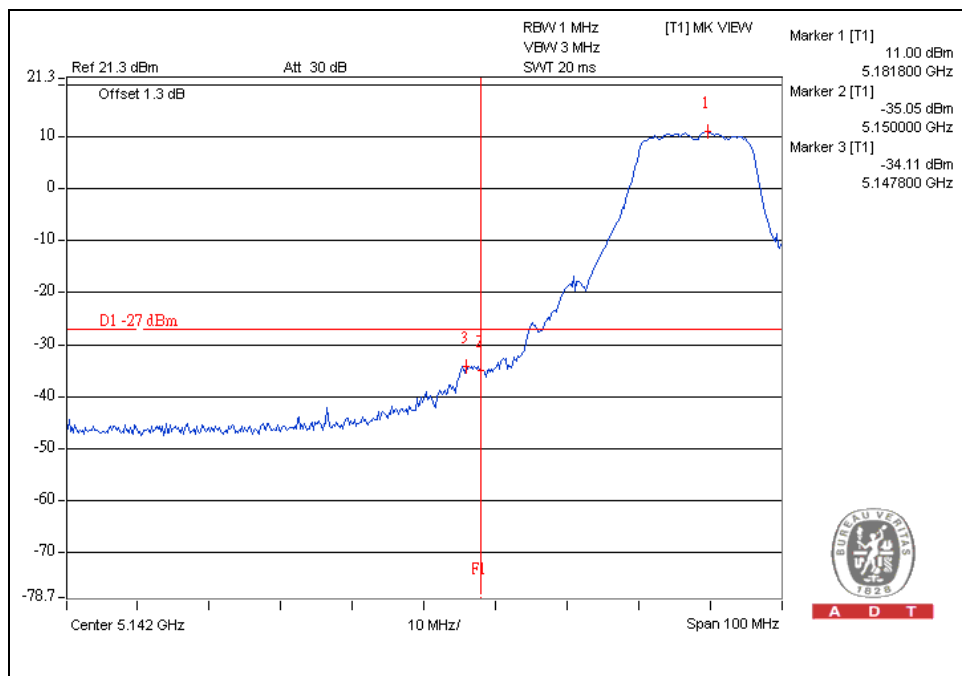
The spectrum plots (RBW=1MHz, VBW=3MHz) are attached on the following pages.



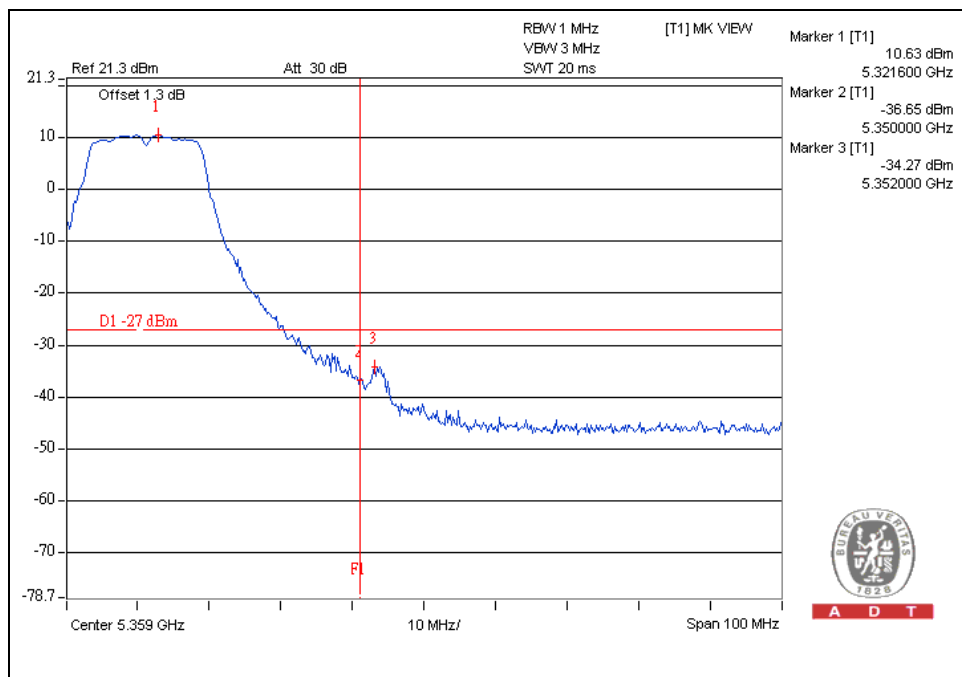
A D T

802.11a OFDM modulation

CH 1



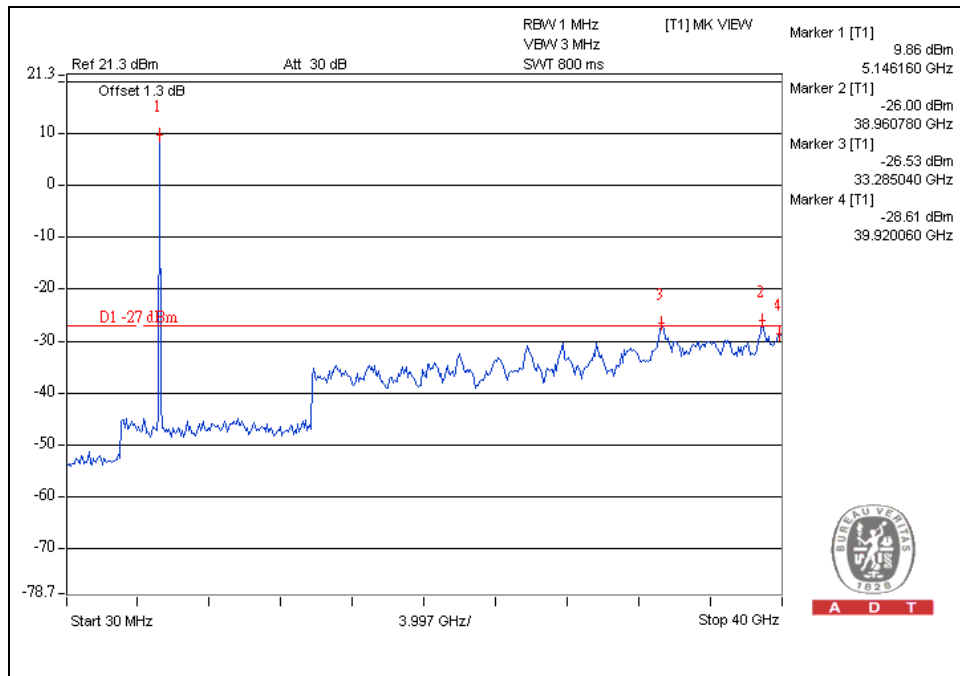
CH 8



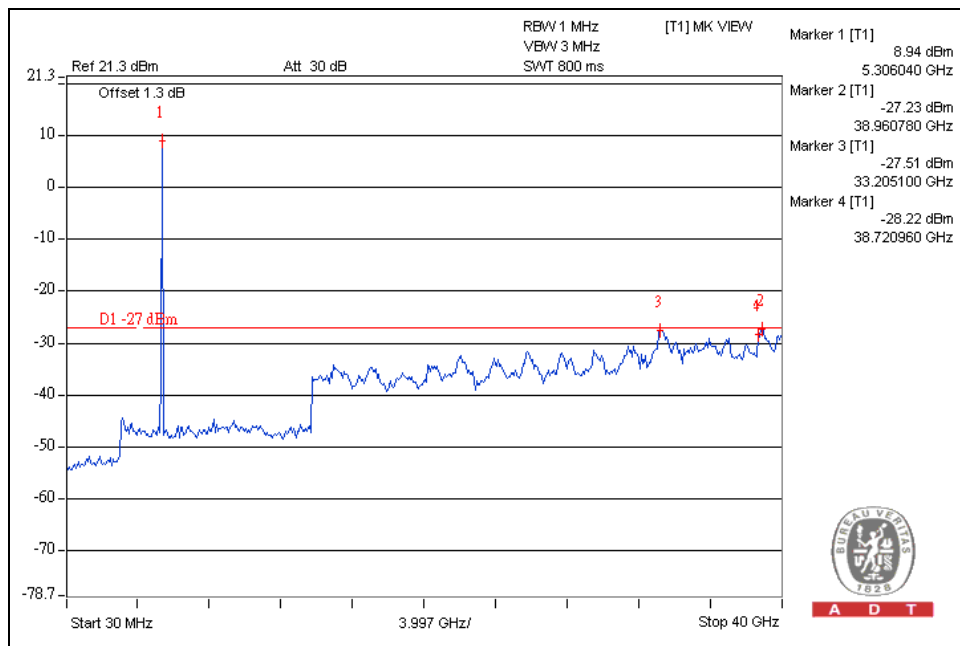


A D T

CH 1



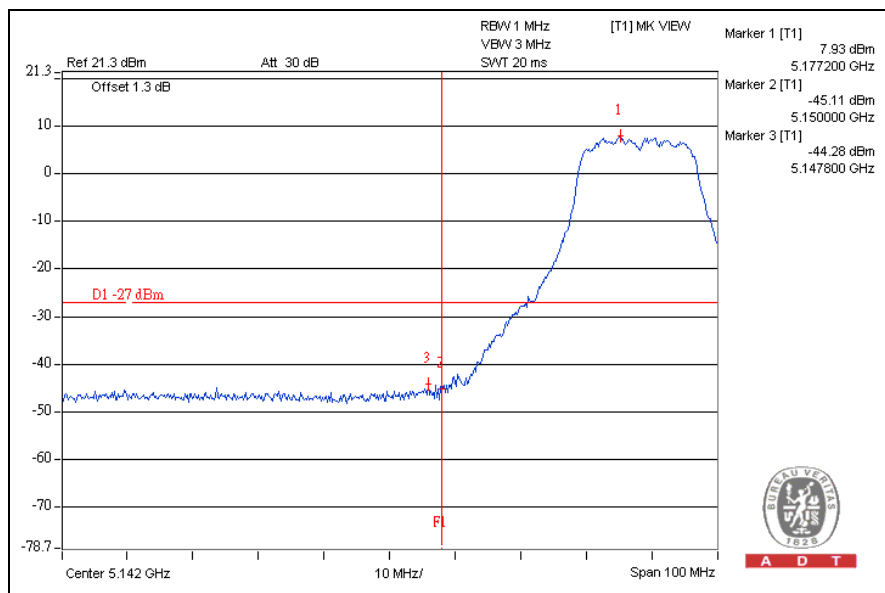
CH 8



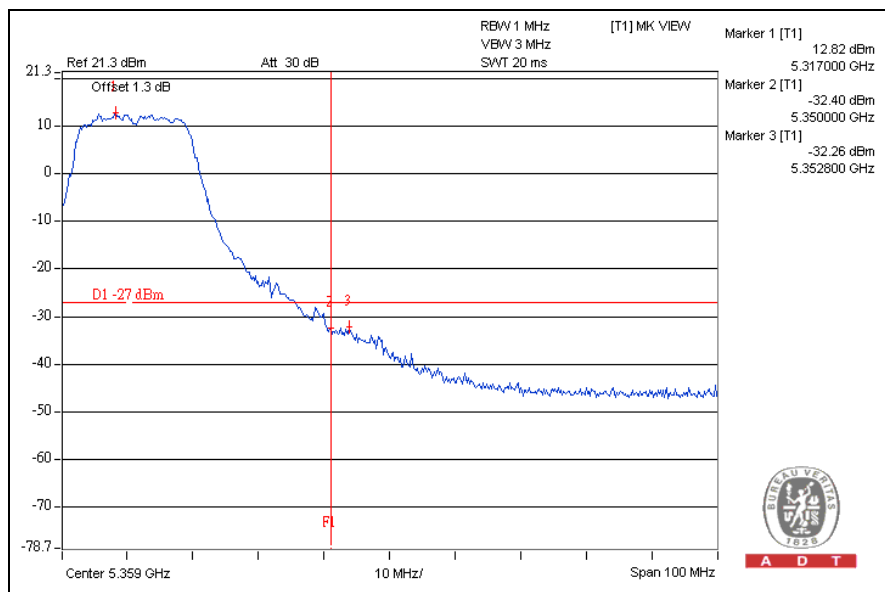
DRAFT 802.11n (20MHz) OFDM MODULATION:

For chain (0):

CH1

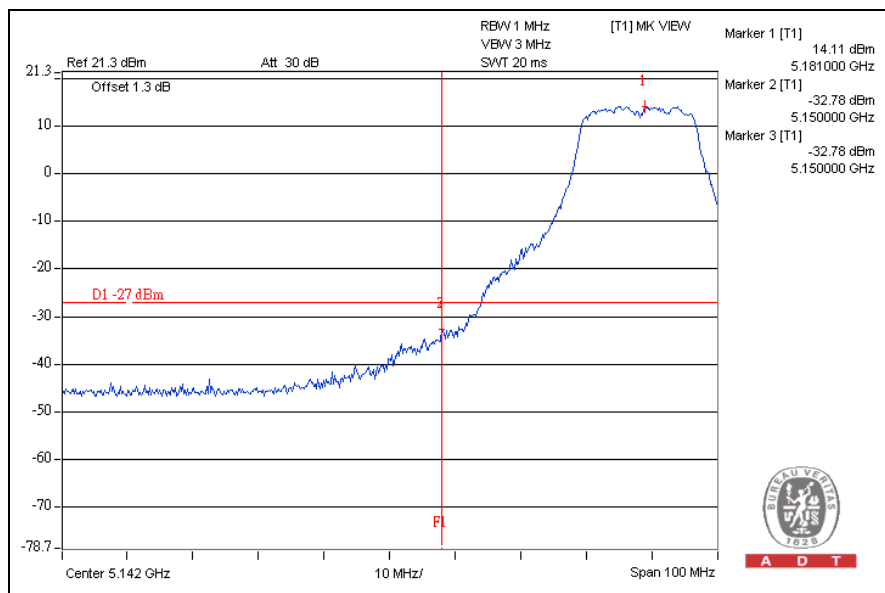


CH8

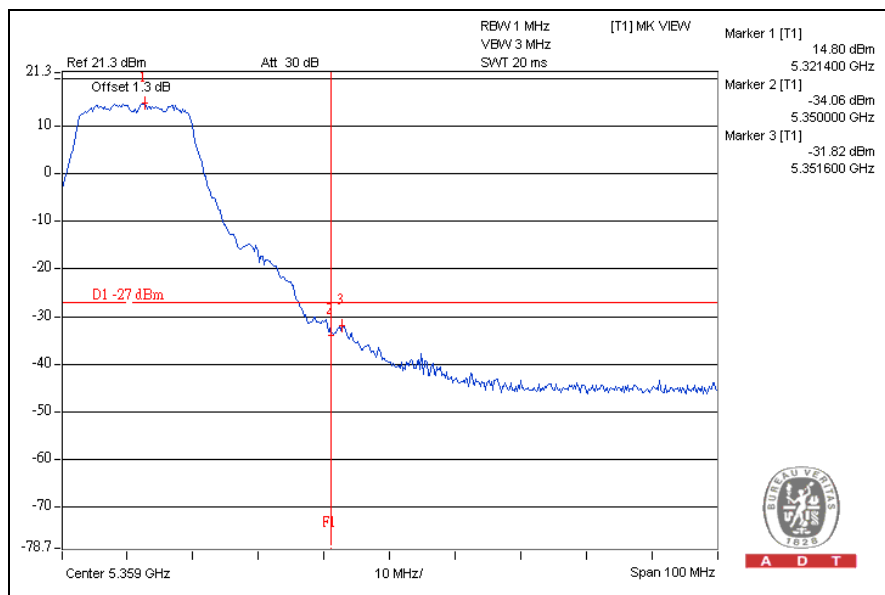


For chain (1):

CH1



CH8

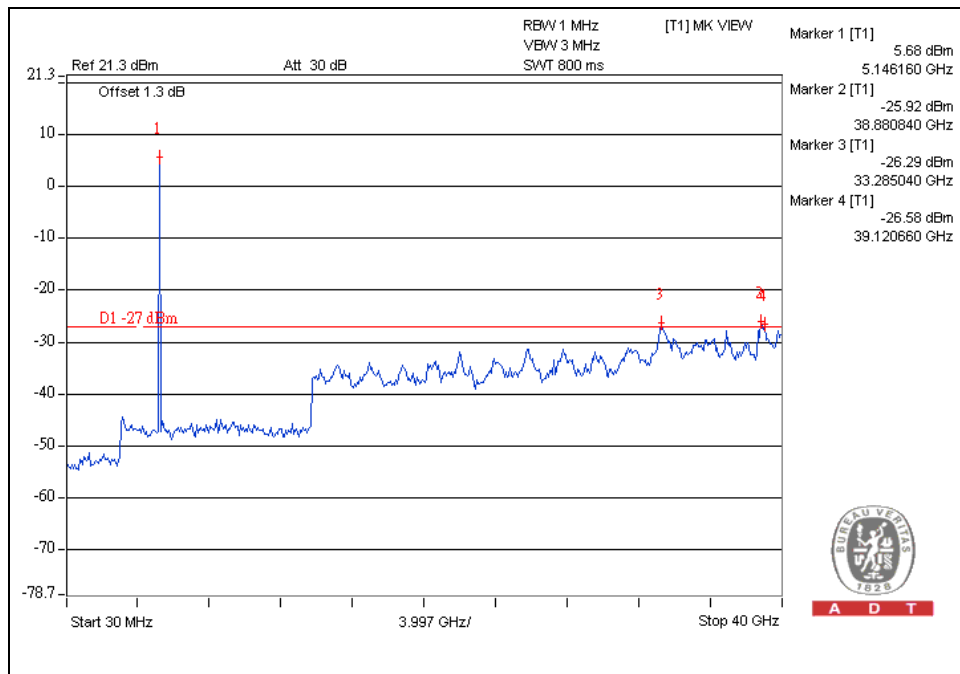




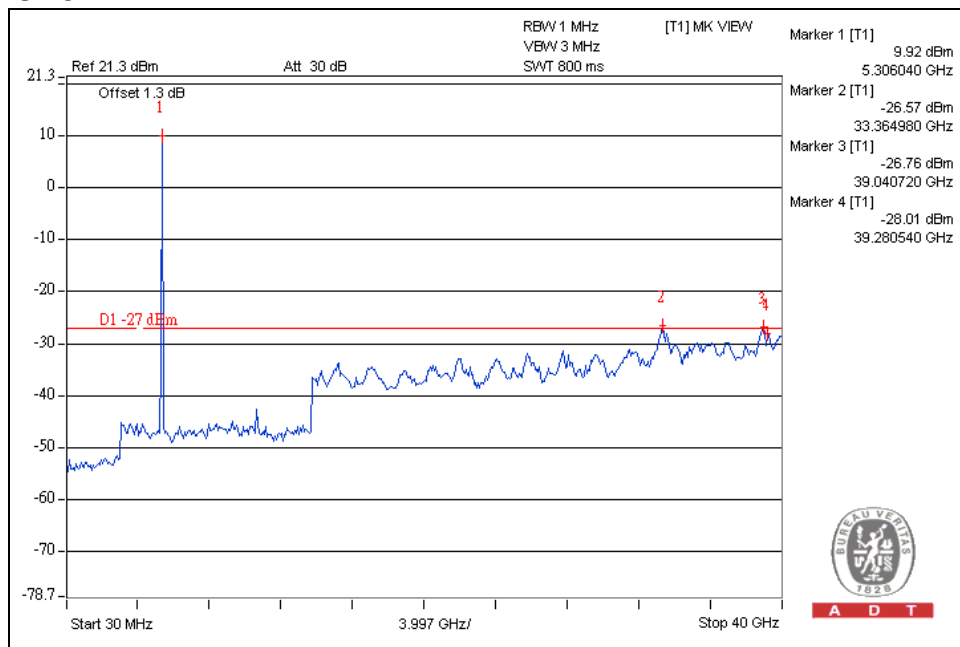
A D T

For chain (0):

CH1

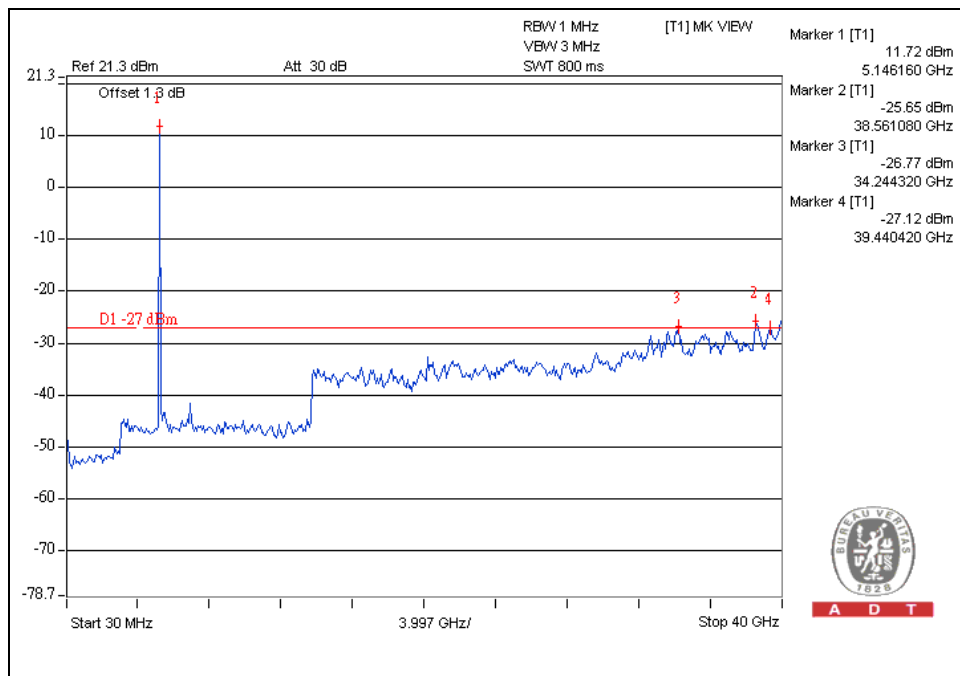


CH8

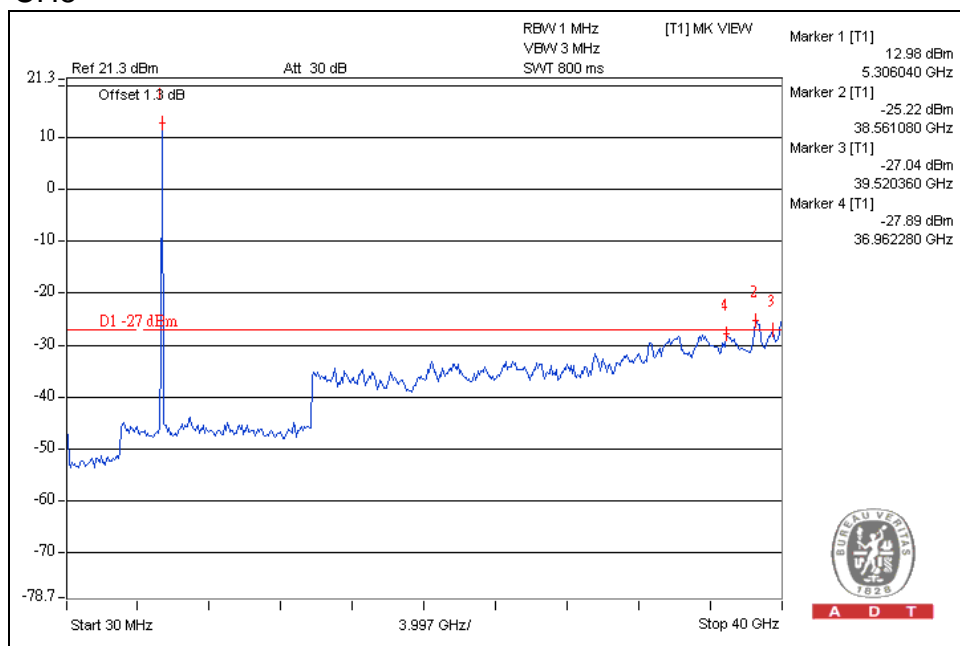


For chain (1):

CH1



CH8



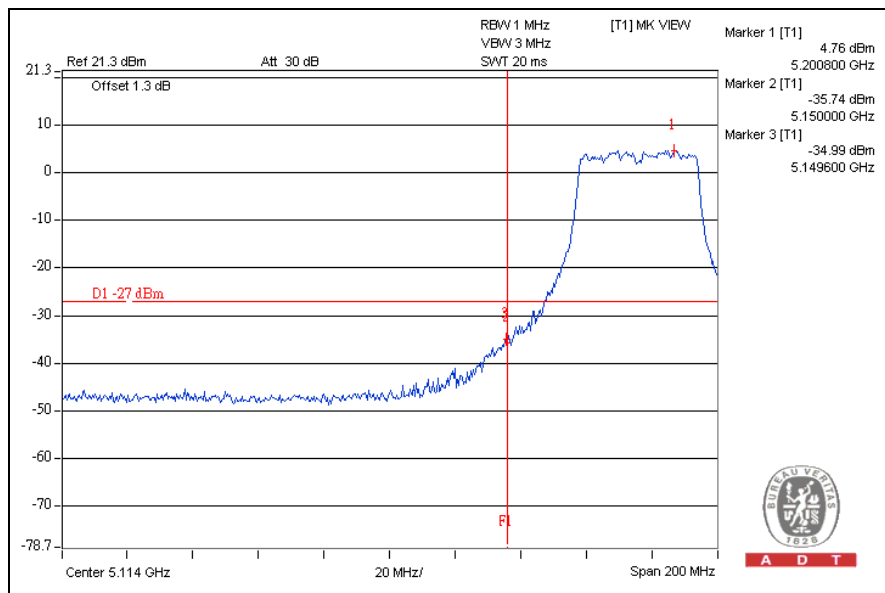


A D T

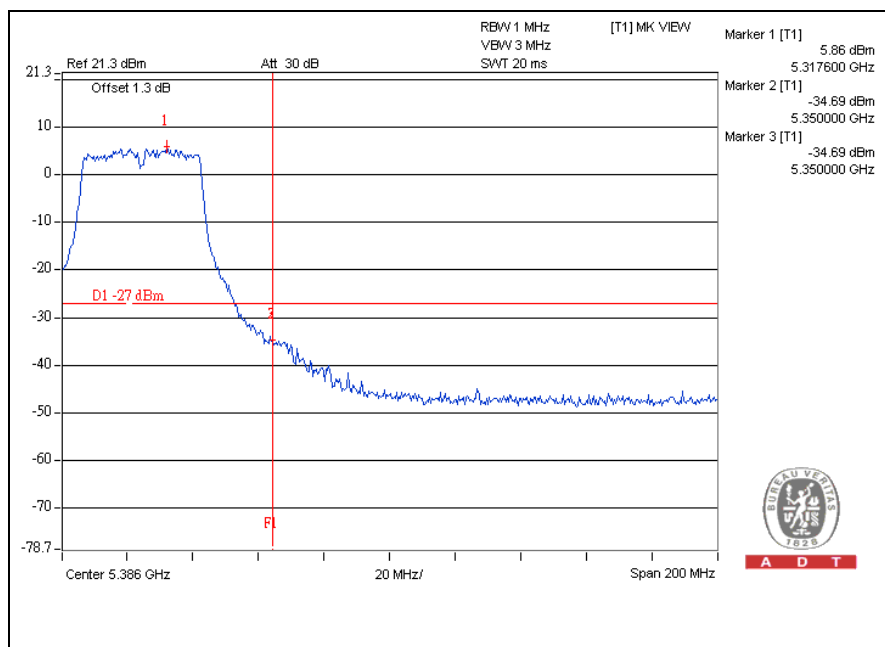
DRAFT 802.11n (40MHz) OFDM MODULATION:

For chain (0):

CH1



CH4

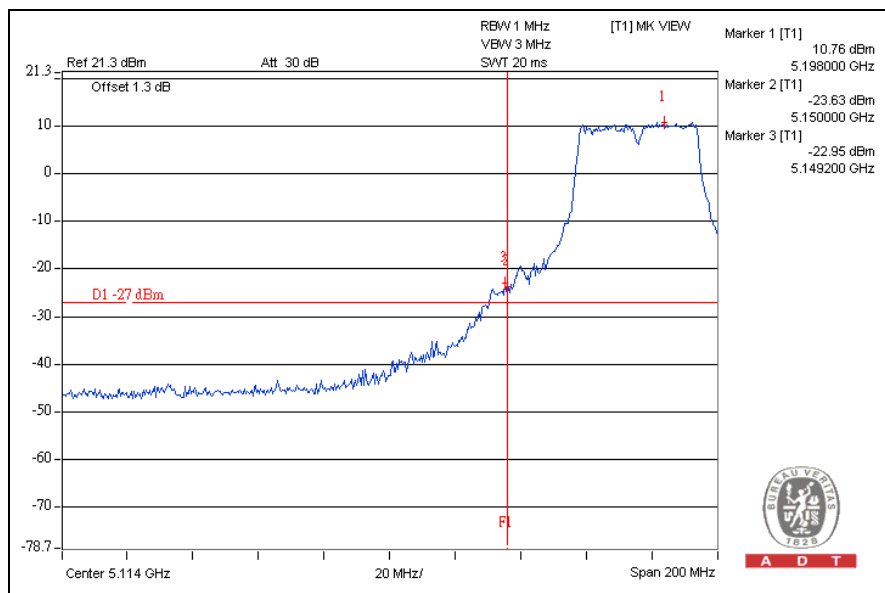




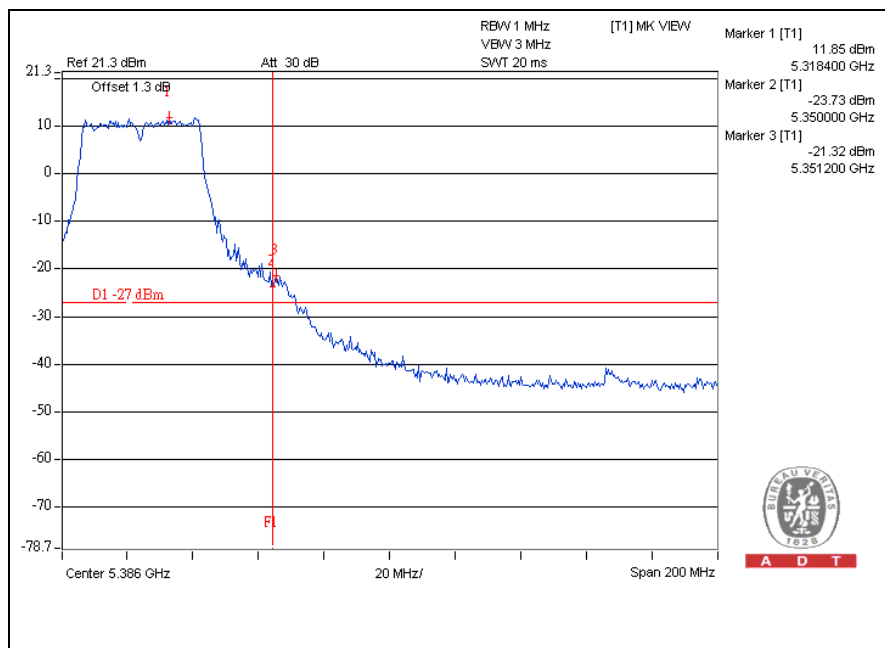
A D T

For chain (1):

CH1

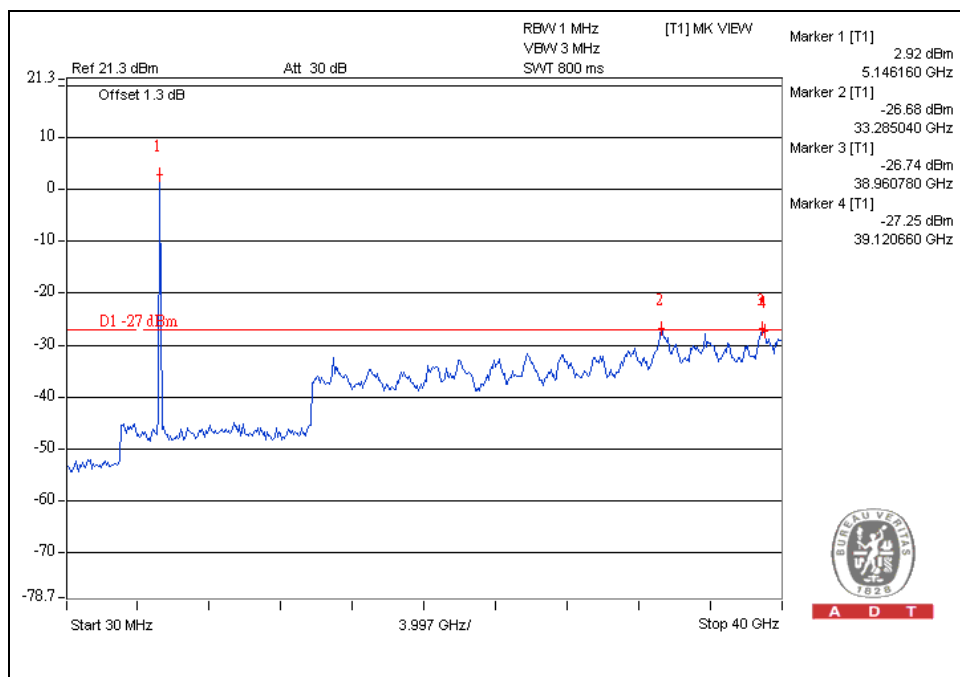


CH4

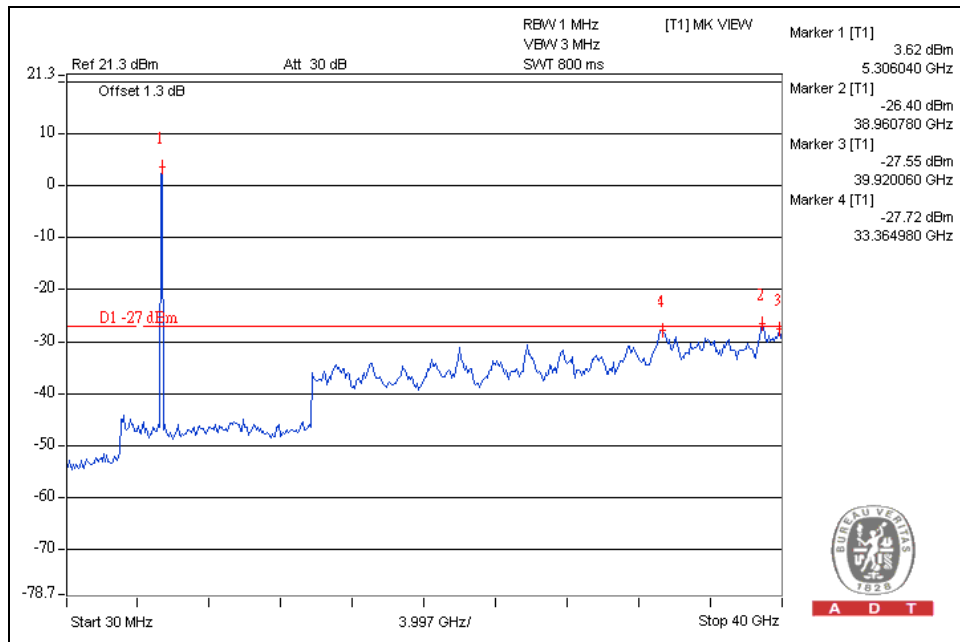


For chain (0):

CH1



CH4

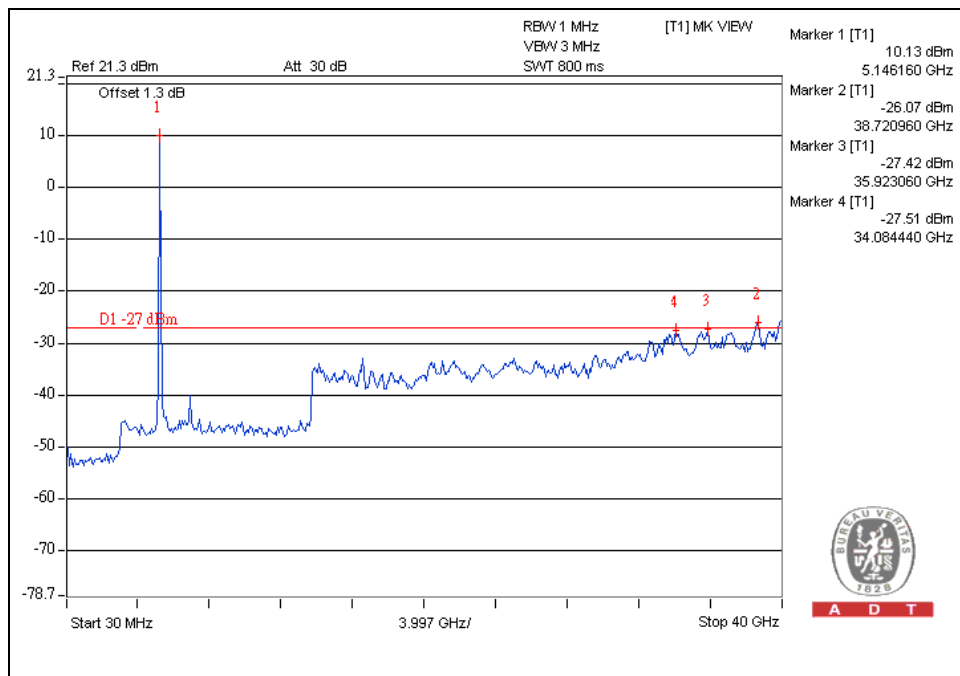




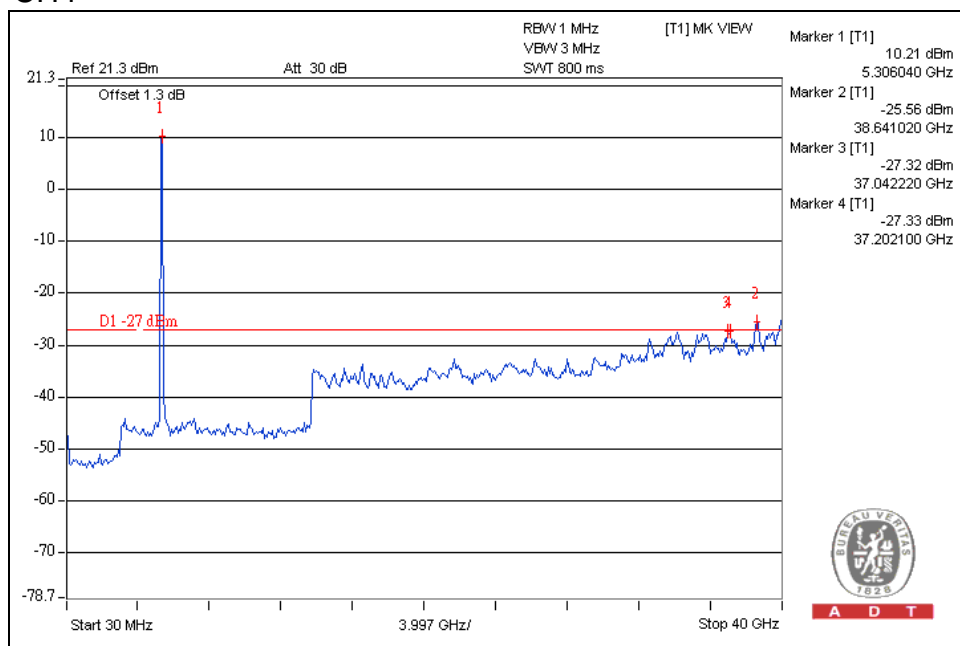
A D T

For chain (1):

CH1



CH4





A D T

For 5.47 to 5.725GHz band:

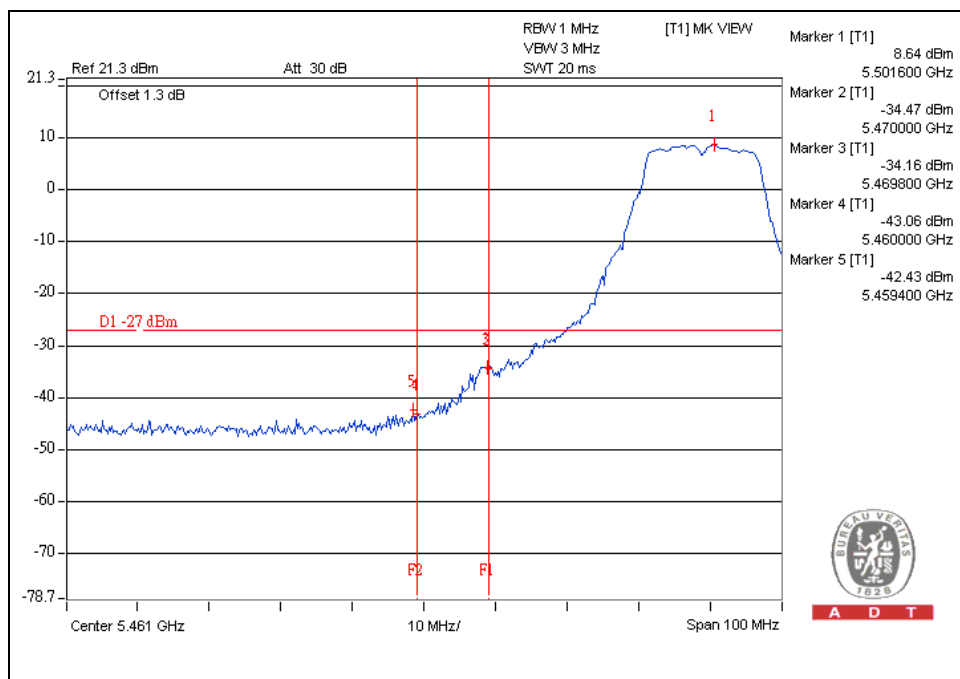
The spectrum plots (RBW=1MHz, VBW=3MHz) are attached on the following pages.



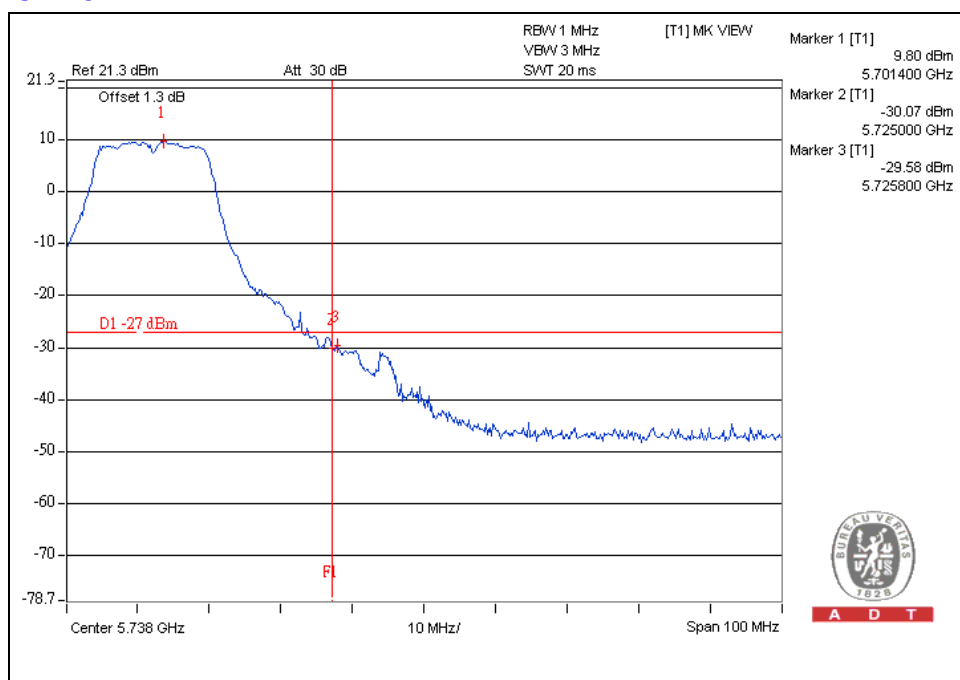
A D T

802.11a OFDM modulation

CH 9



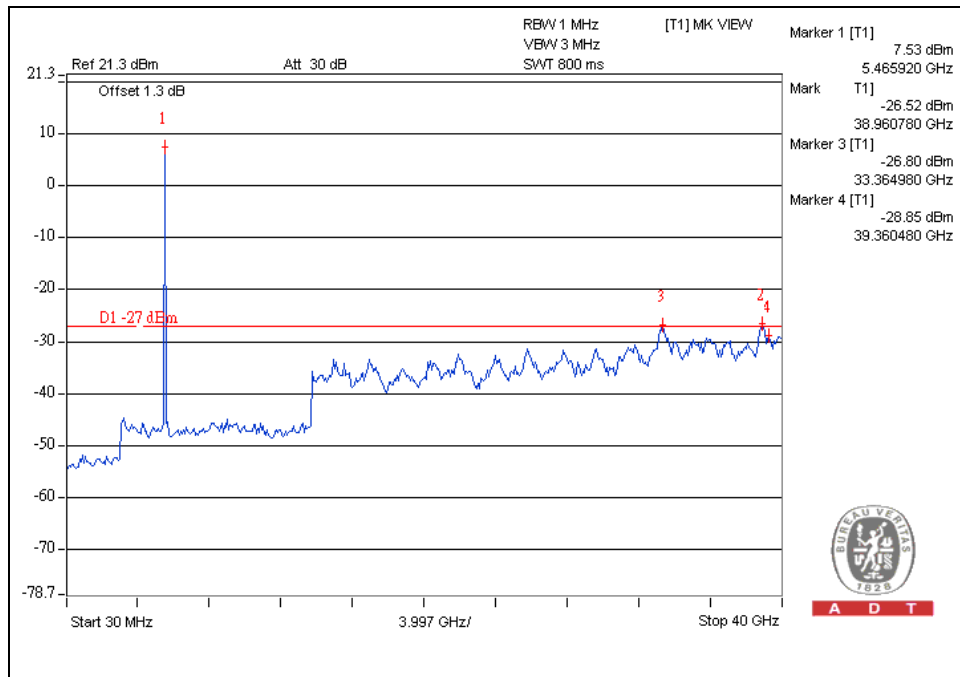
CH 19



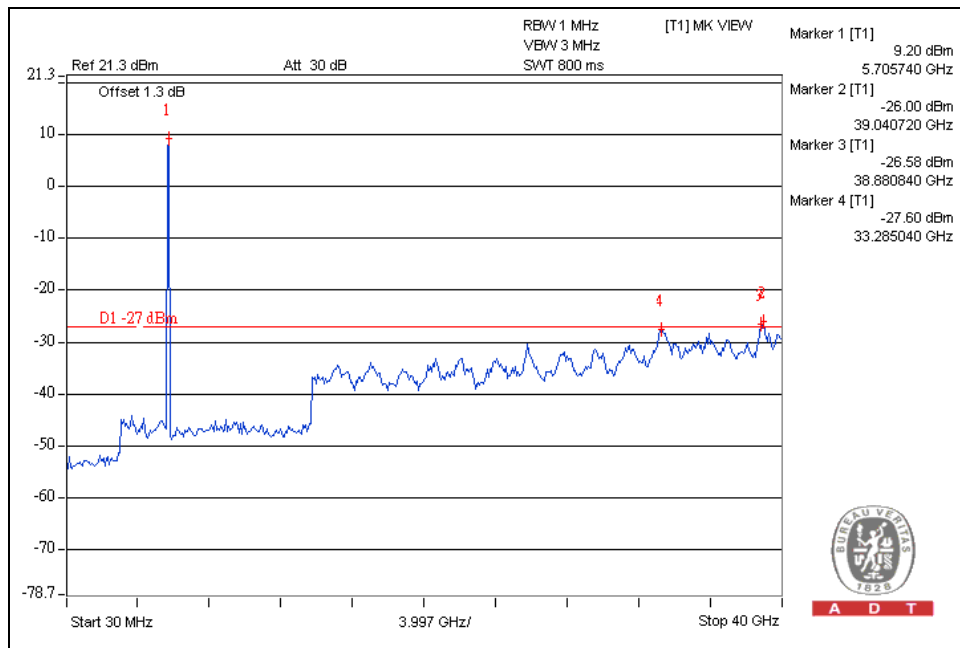


A D T

CH 9



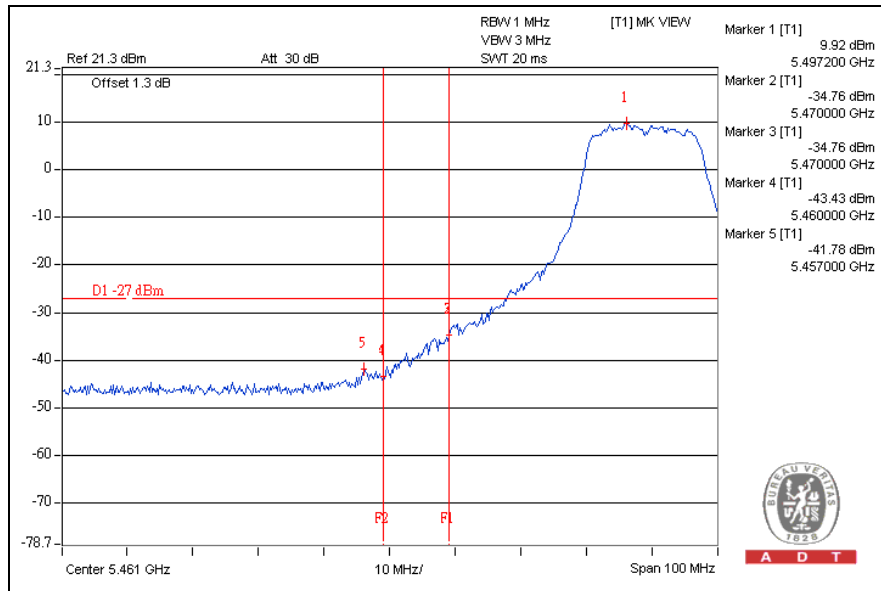
CH 19



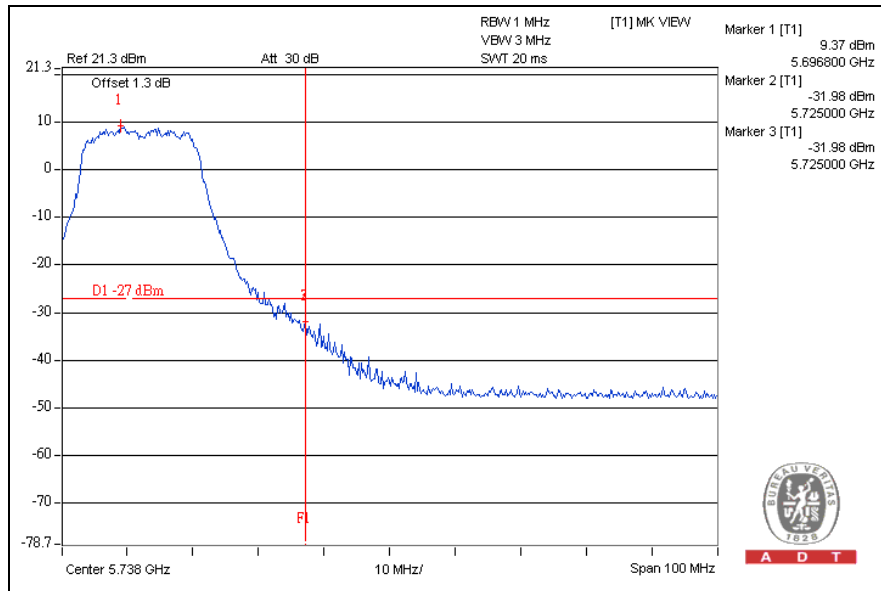
DRAFT 802.11n (20MHz) OFDM MODULATION:

For chain (0):

CH9

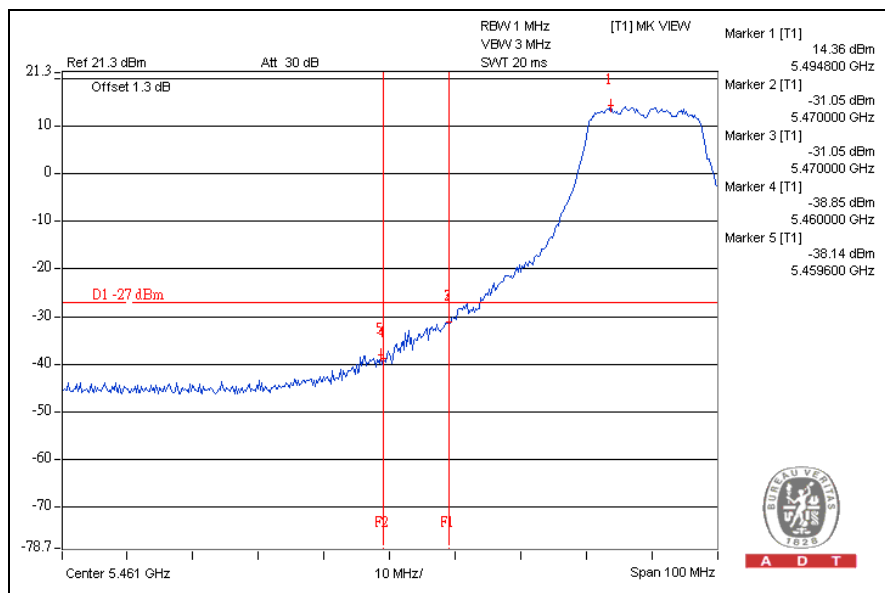


CH19

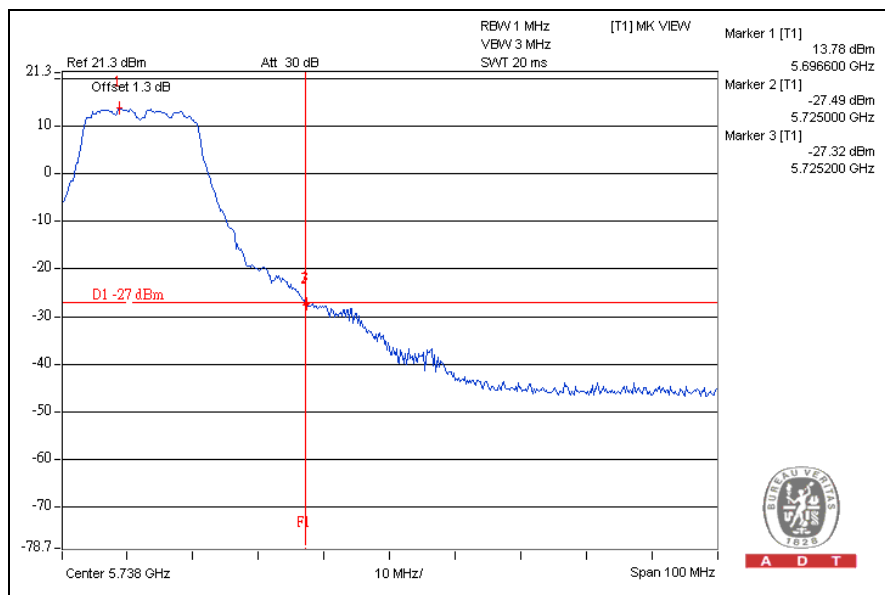


For chain (1):

CH9



CH19

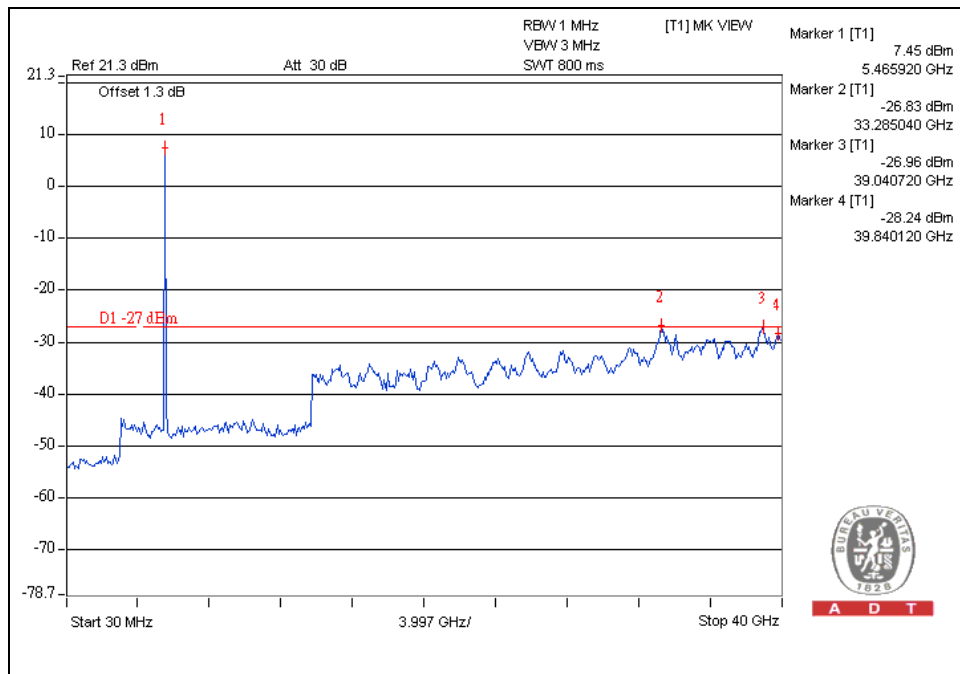




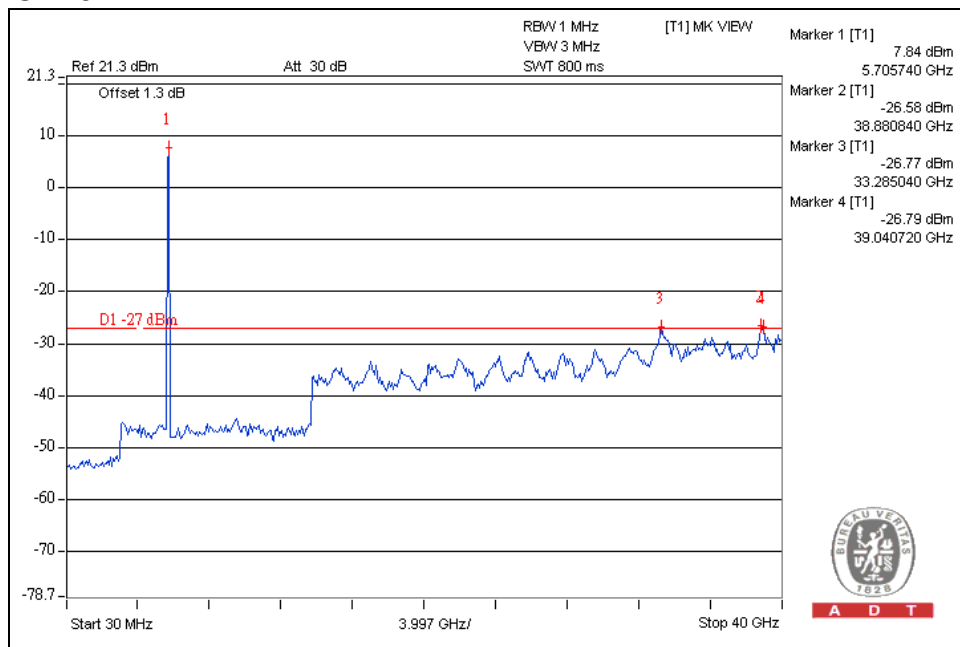
A D T

For chain (0):

CH9



CH19

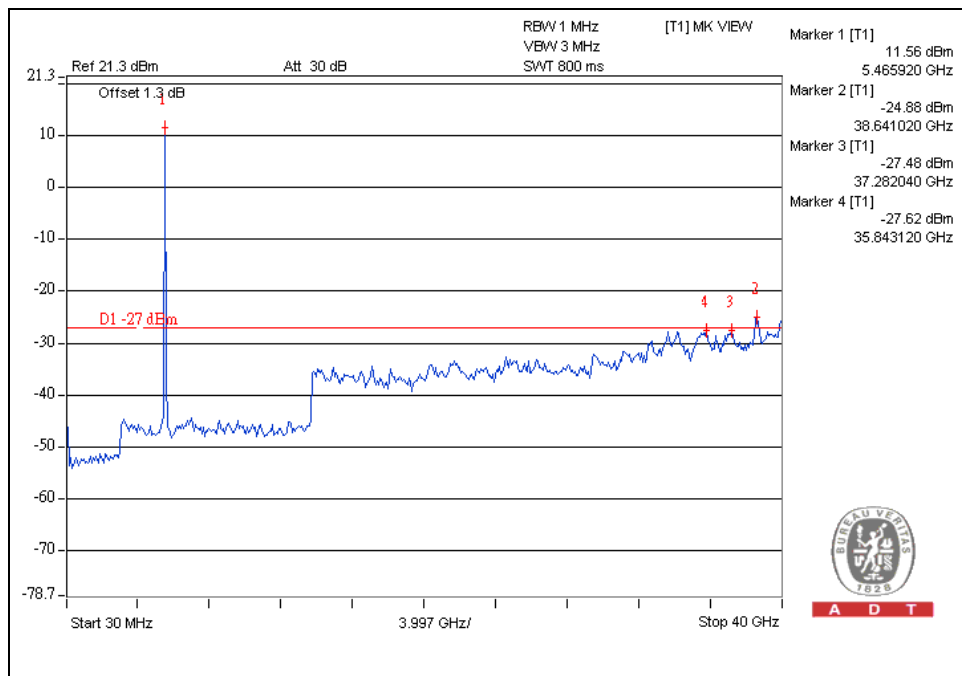




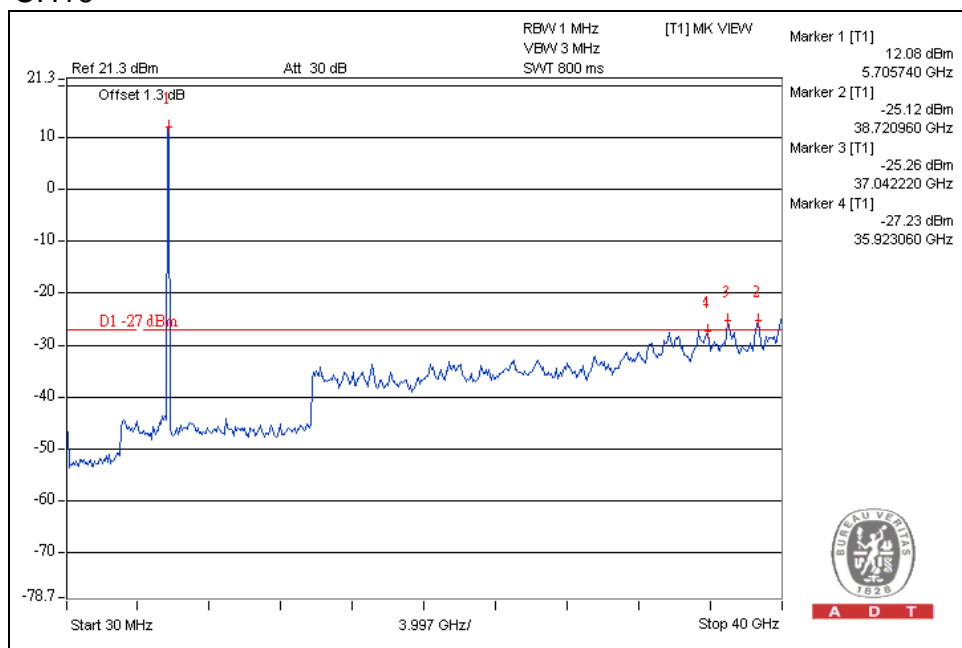
A D T

For chain (1):

CH9



CH19



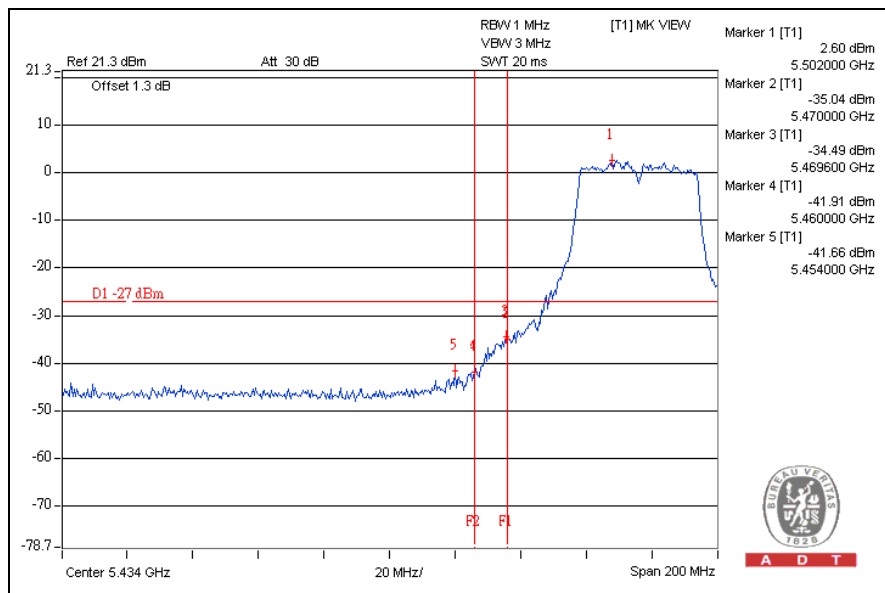


A D T

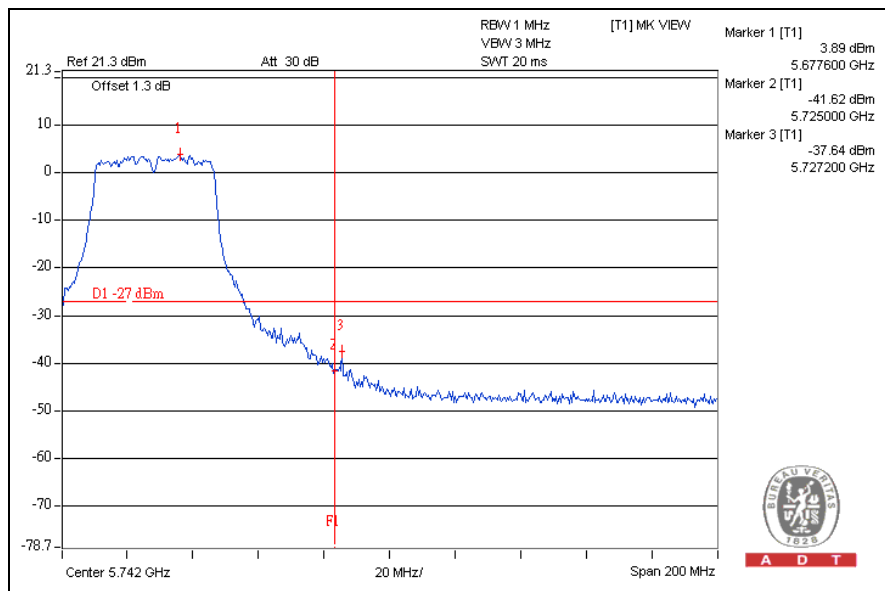
DRAFT 802.11n (40MHz) OFDM MODULATION:

For chain (0):

CH5



CH9

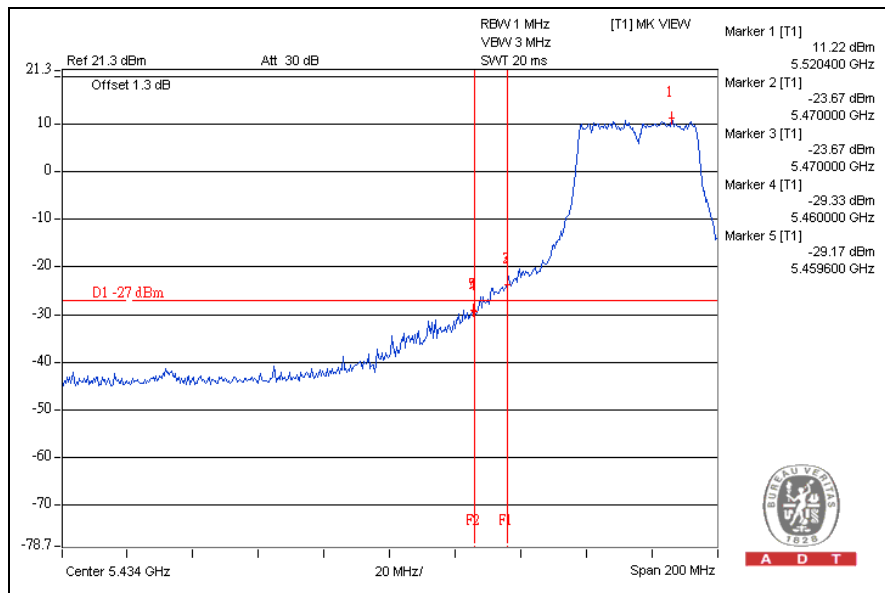




A D T

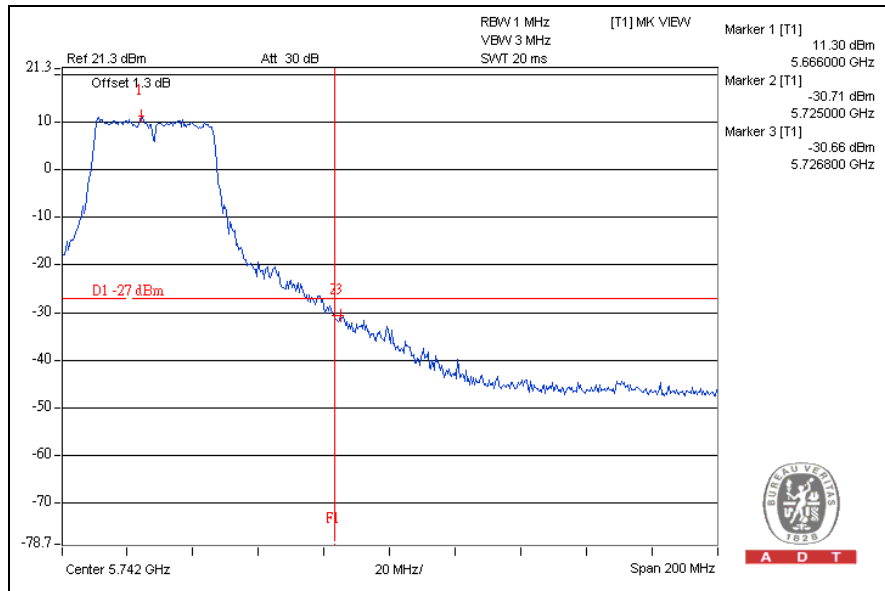
For chain (1):

CH5



A D T

CH9



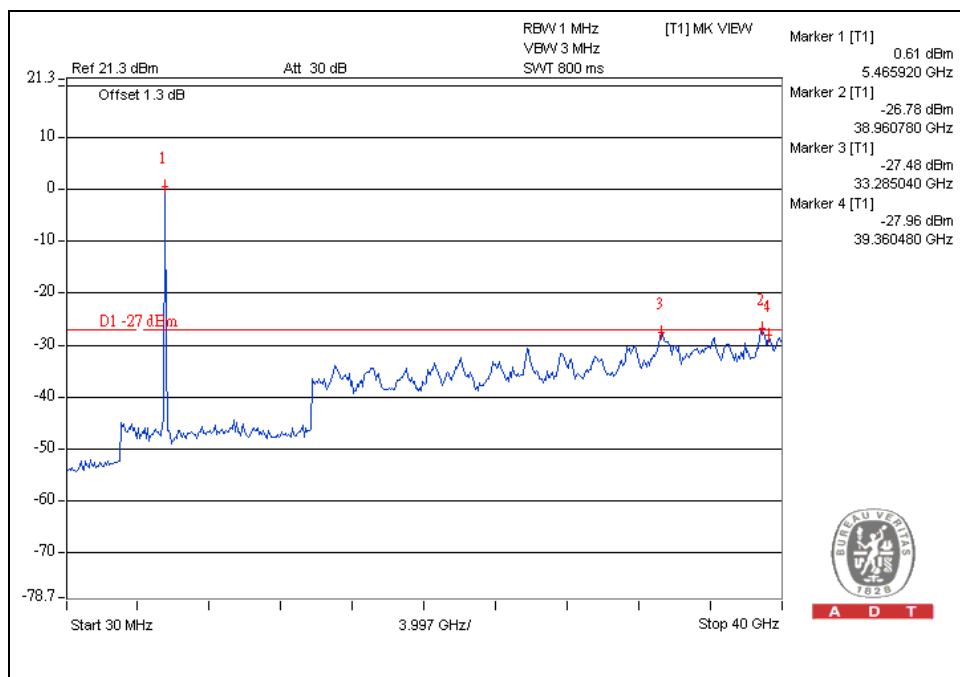
A D T



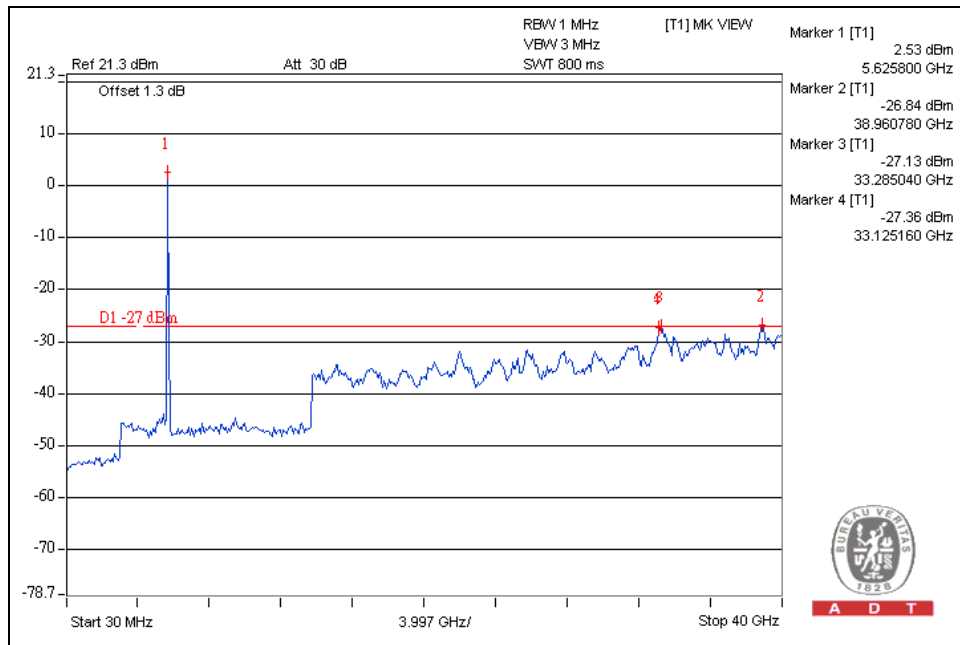
A D T

For chain (0):

CH5

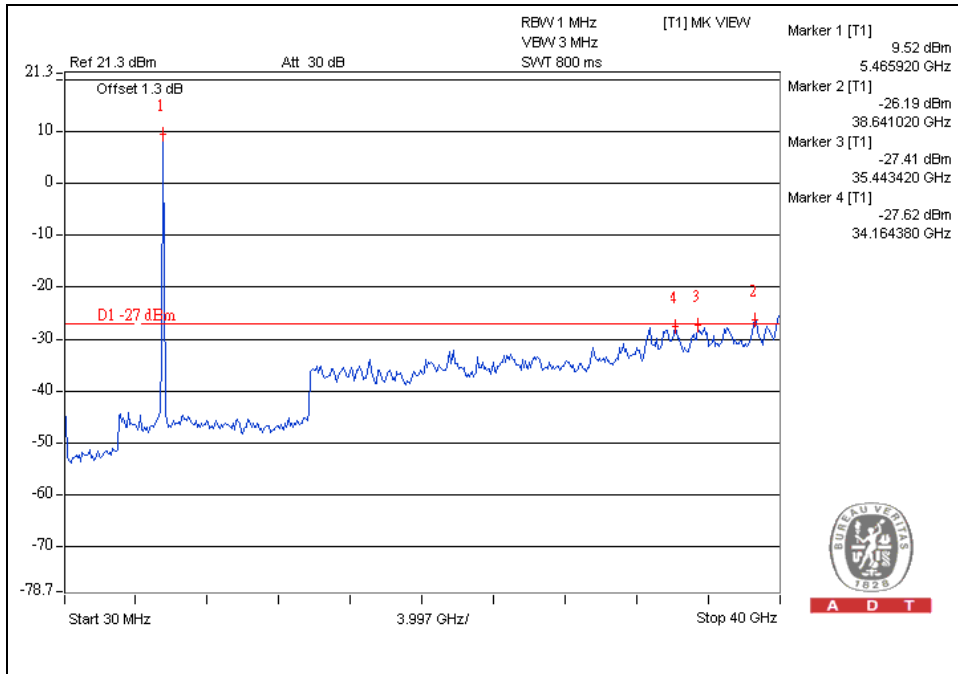


CH9

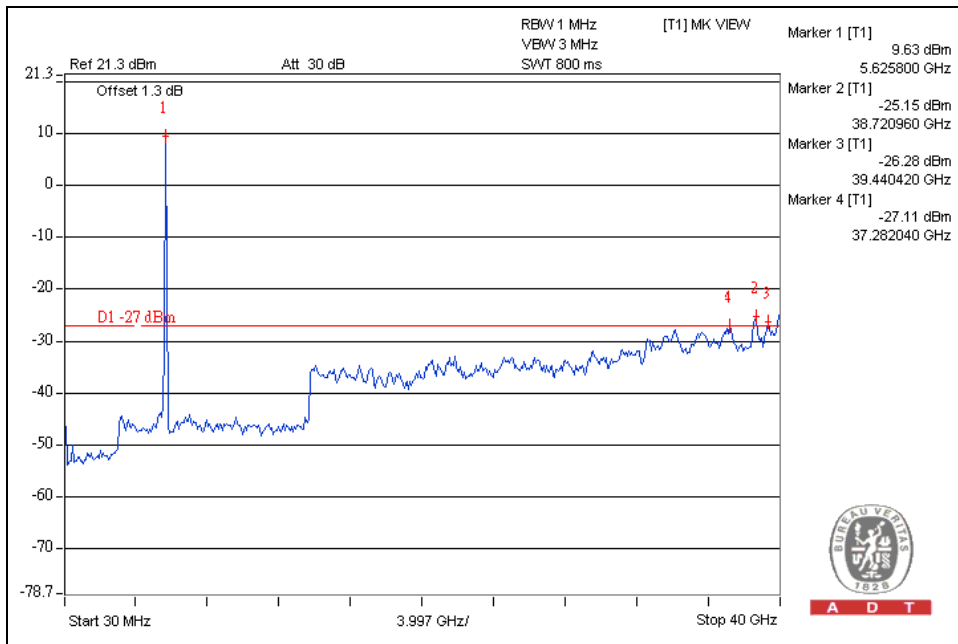


For chain (1):

CH5



CH9





A D T

For 5.725 to 5.825GHz band:

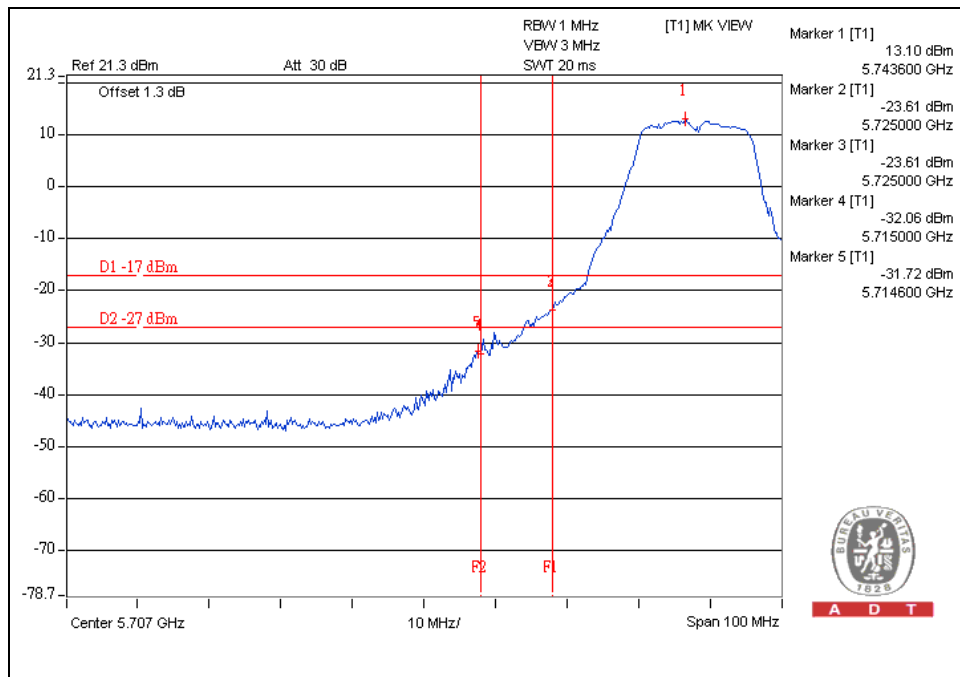
The spectrum plots (RBW=1MHz, VBW=3MHz) are attached on the following pages.



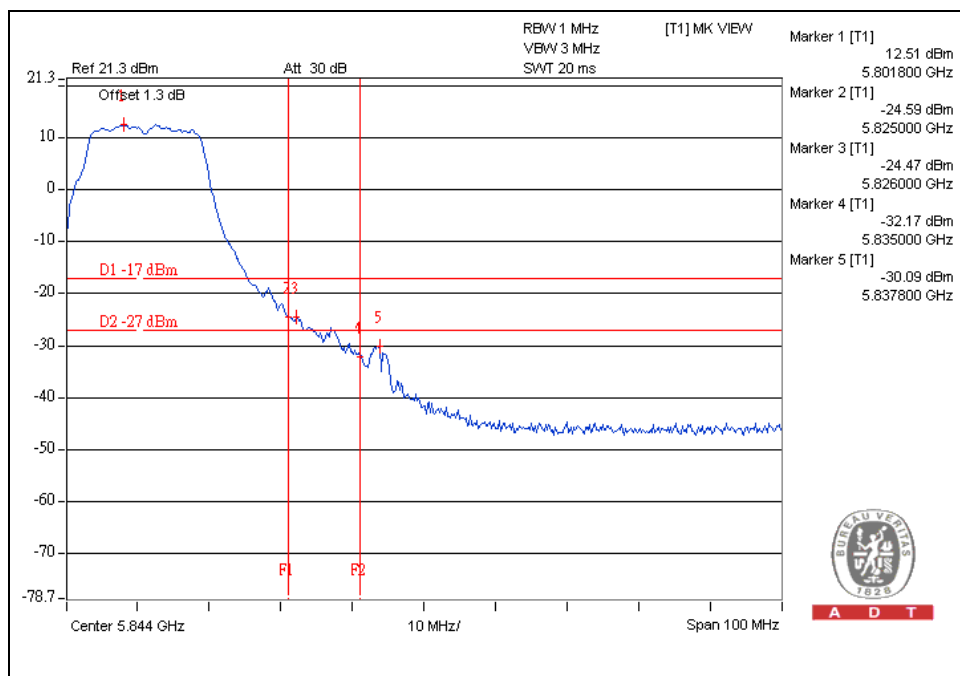
A D T

802.11a OFDM modulation

CH 20



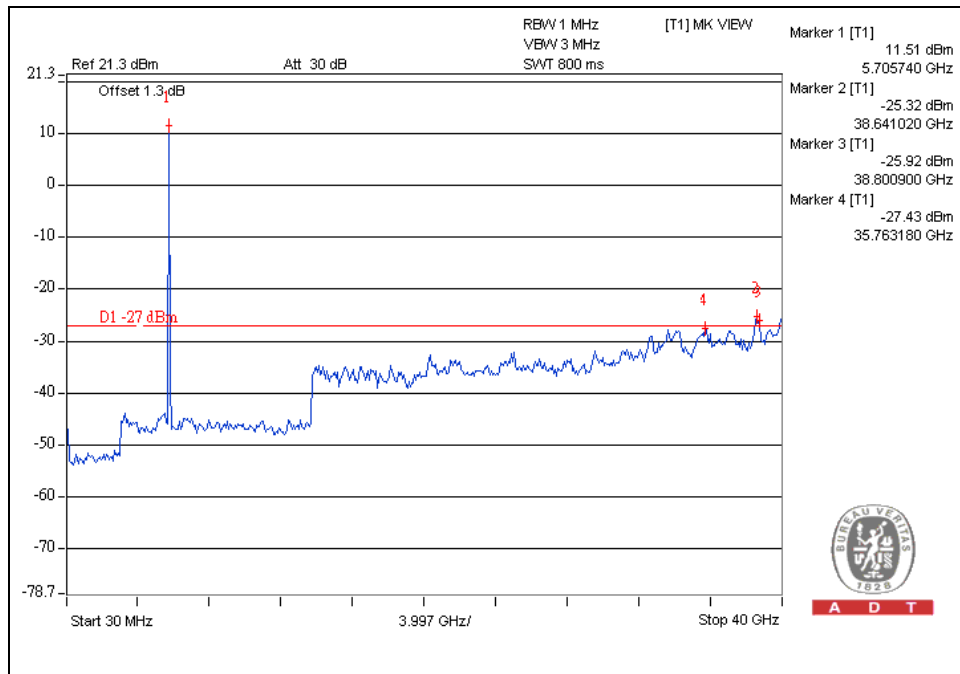
CH 23



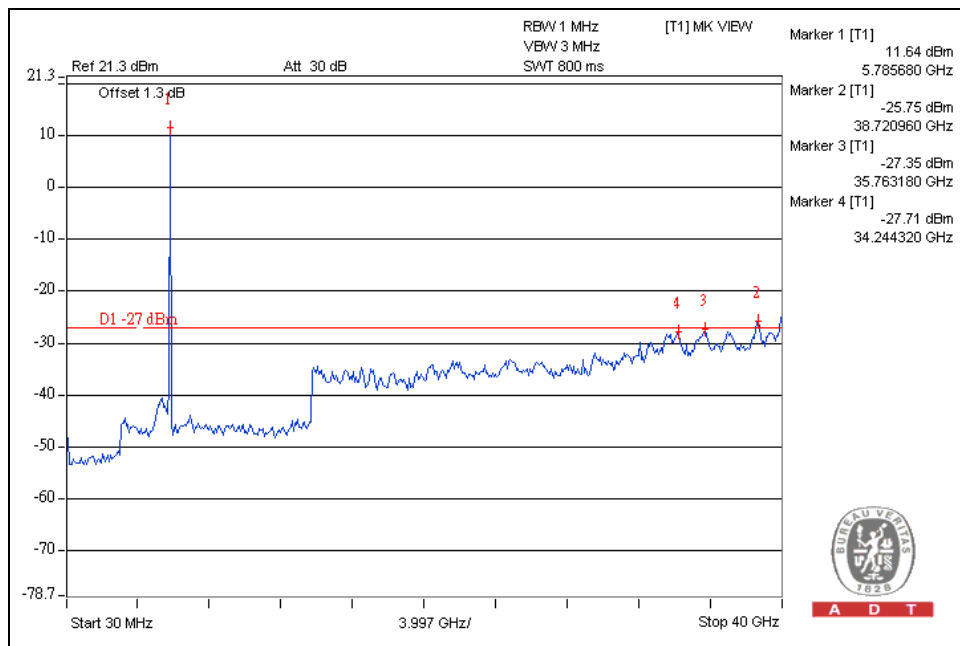


A D T

CH 20



CH 23



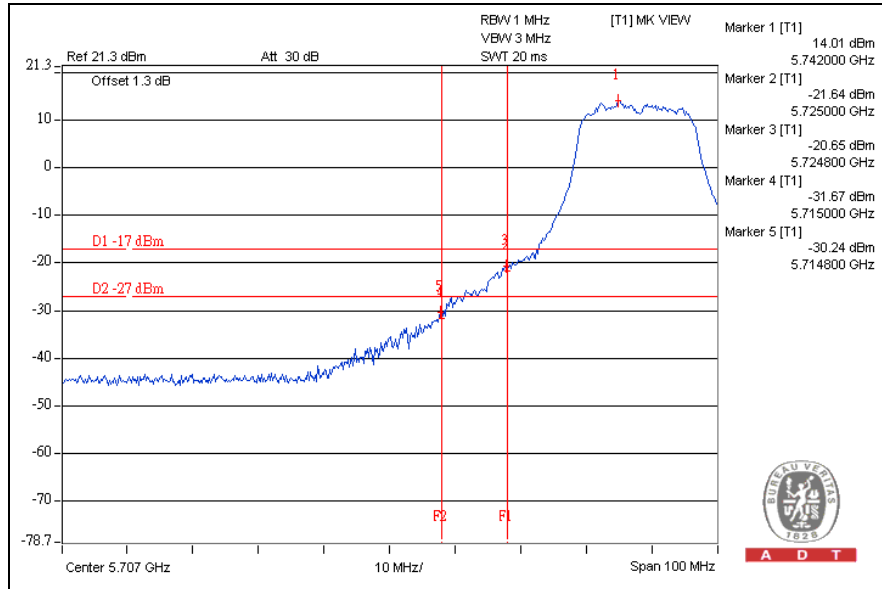


A D T

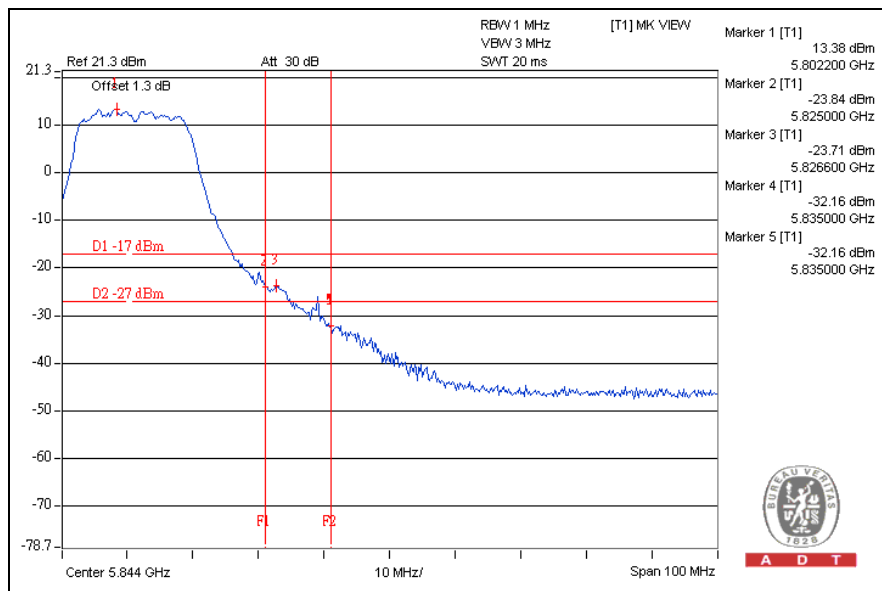
DRAFT 802.11n (20MHz) OFDM MODULATION:

For chain (0):

CH20



CH23

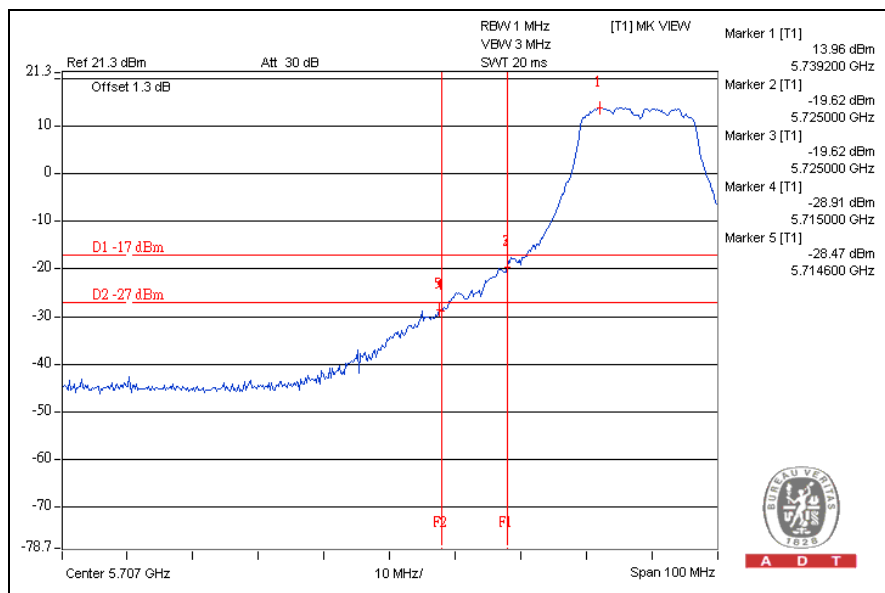




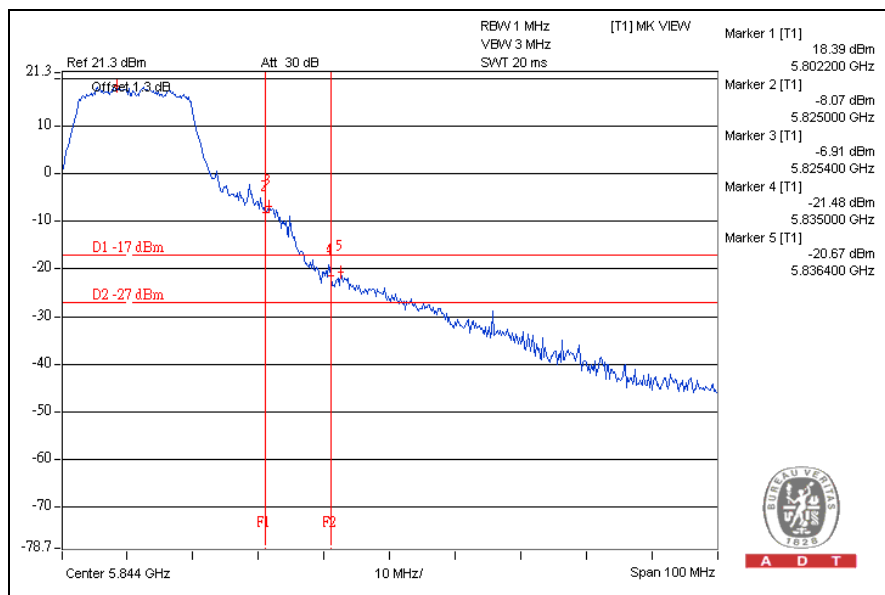
A D T

For chain (1):

CH20



CH23

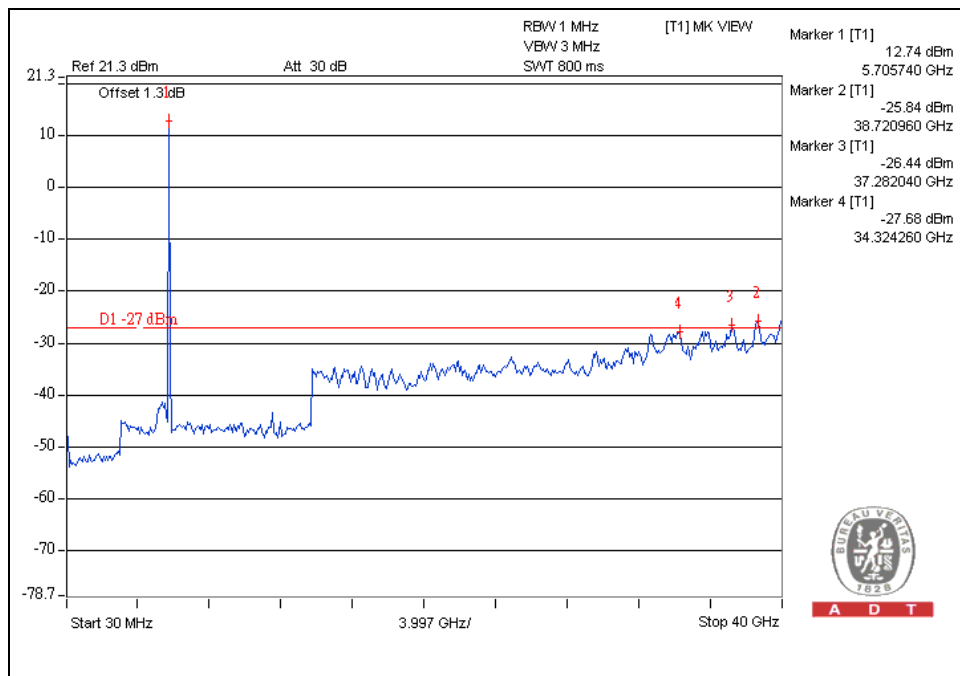




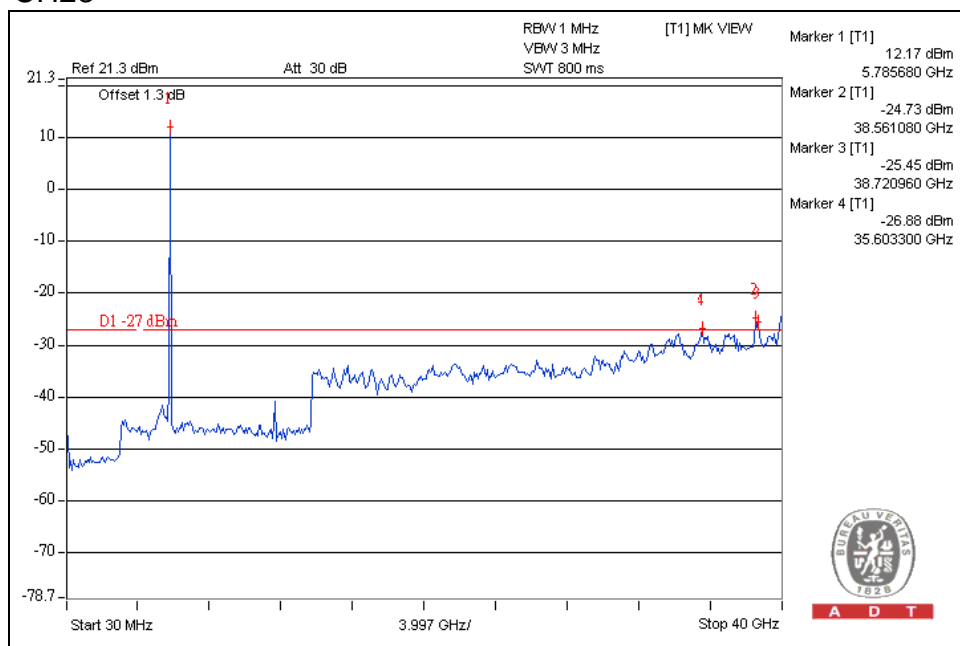
A D T

For chain (0):

CH20



CH23

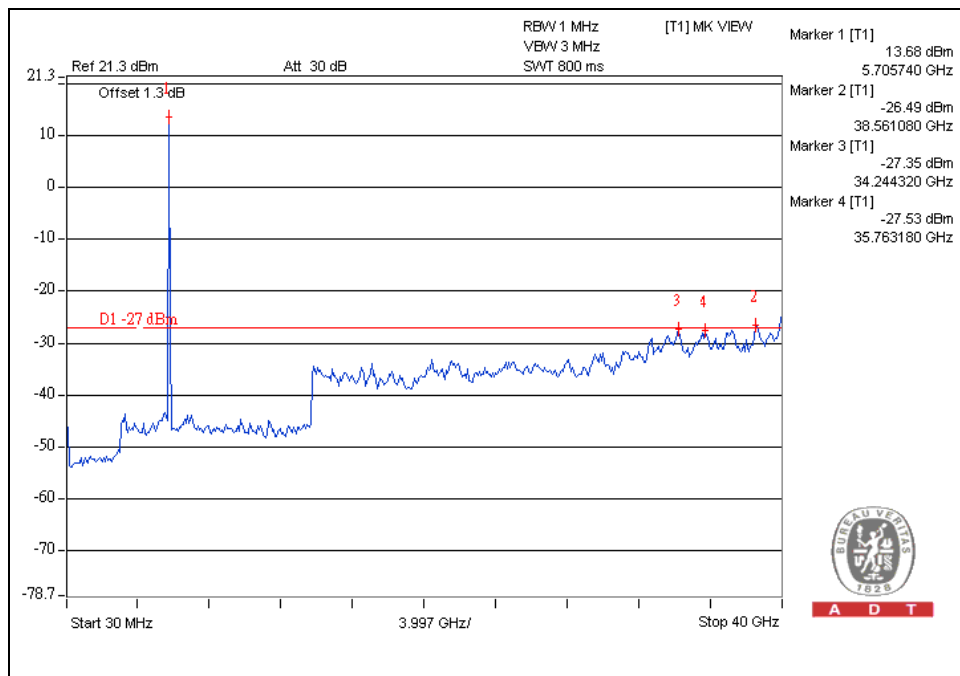




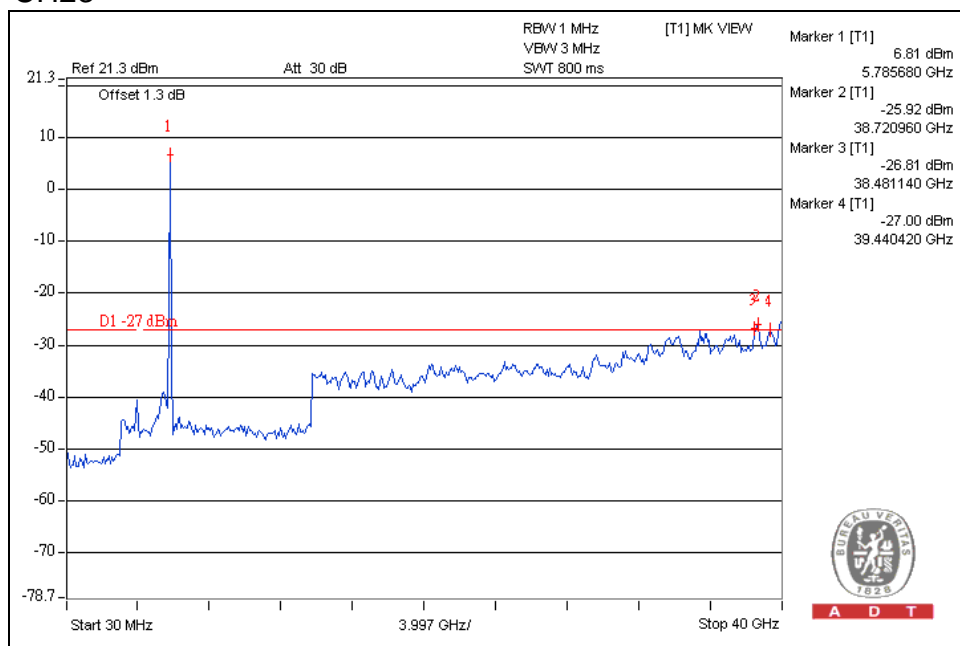
A D T

For chain (1):

CH20



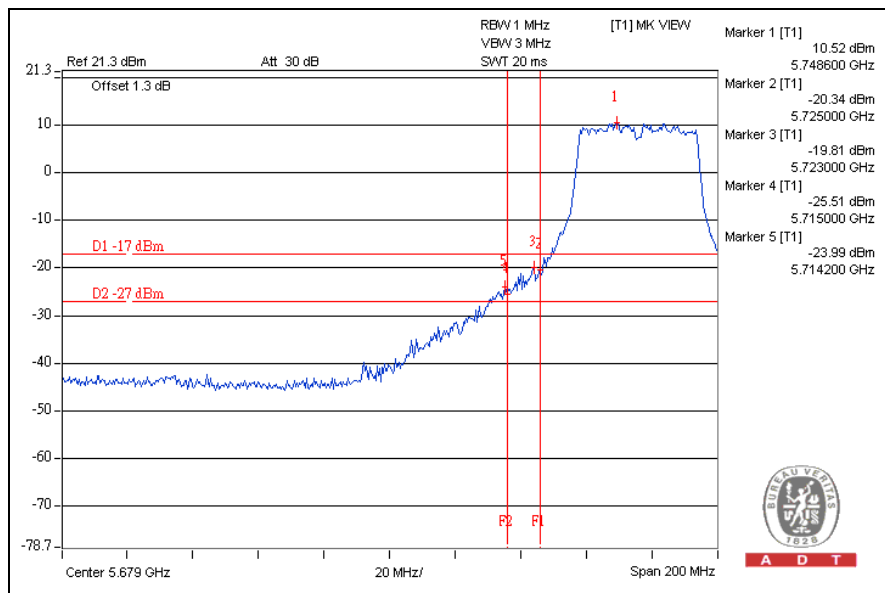
CH23



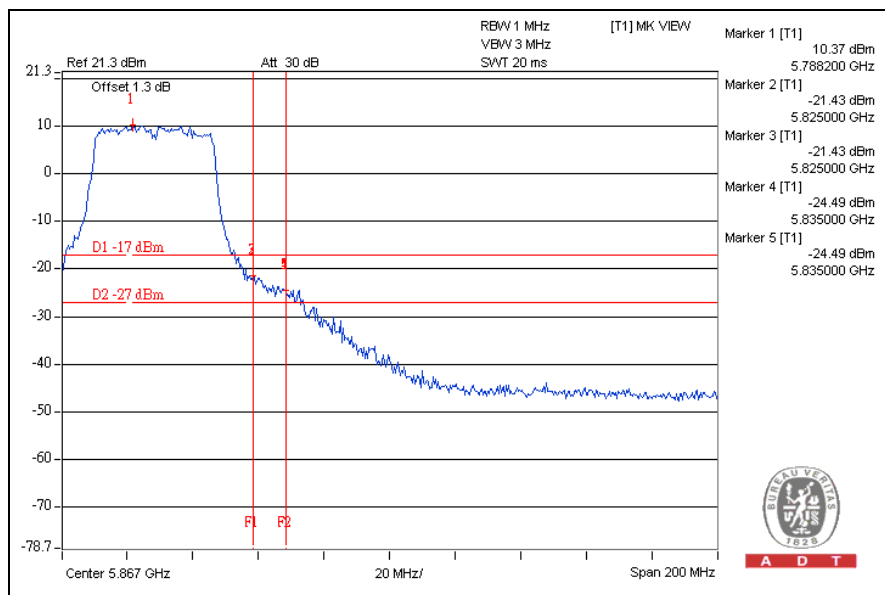
DRAFT 802.11n (40MHz) OFDM MODULATION:

For chain (0):

CH10

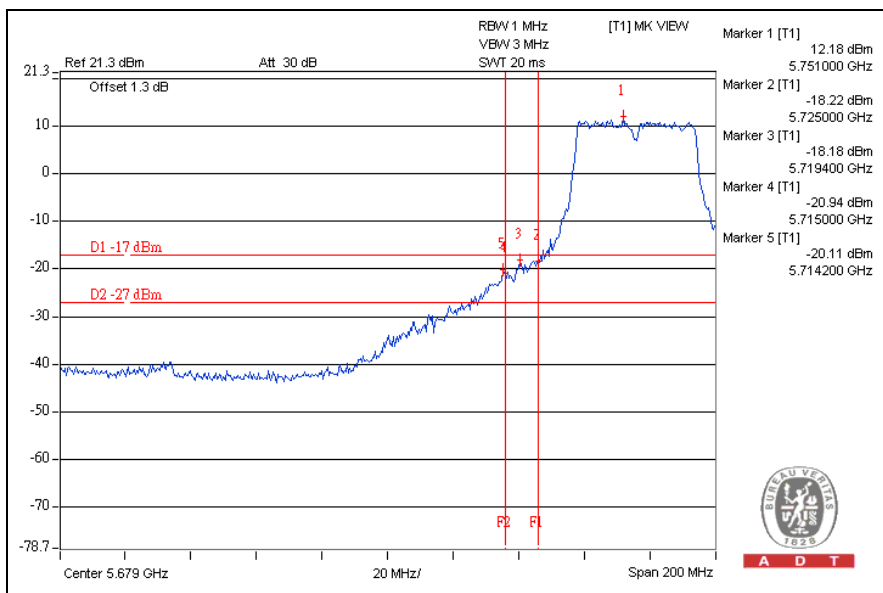


CH11

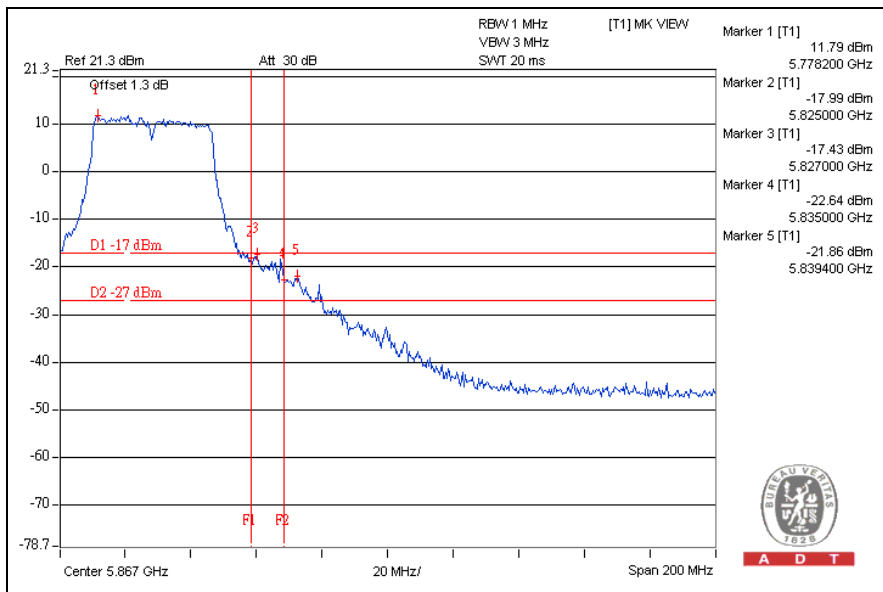


For chain (1):

CH10



CH11

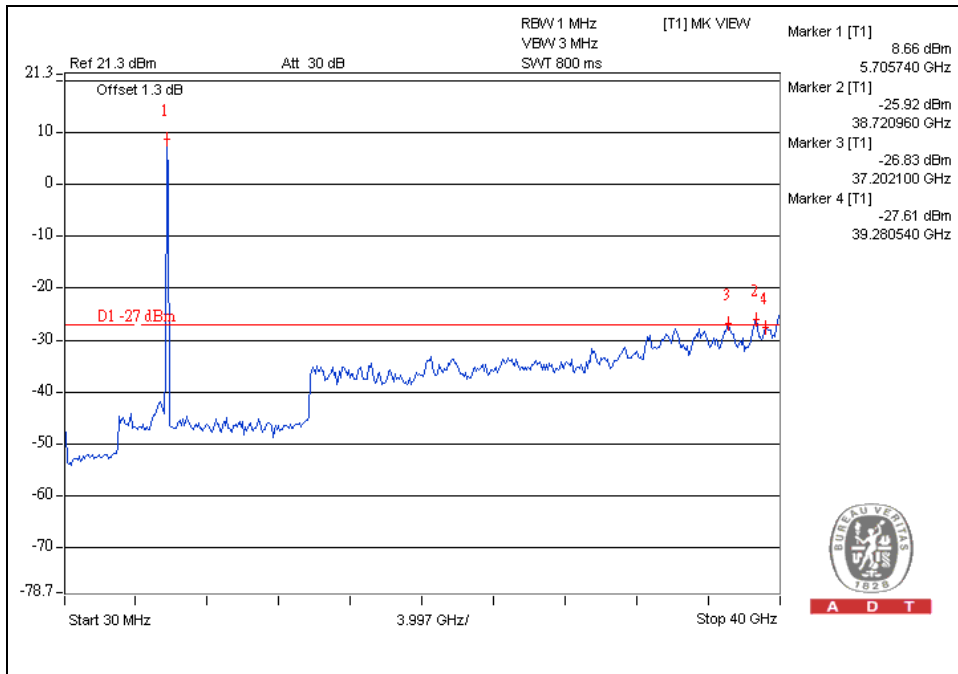




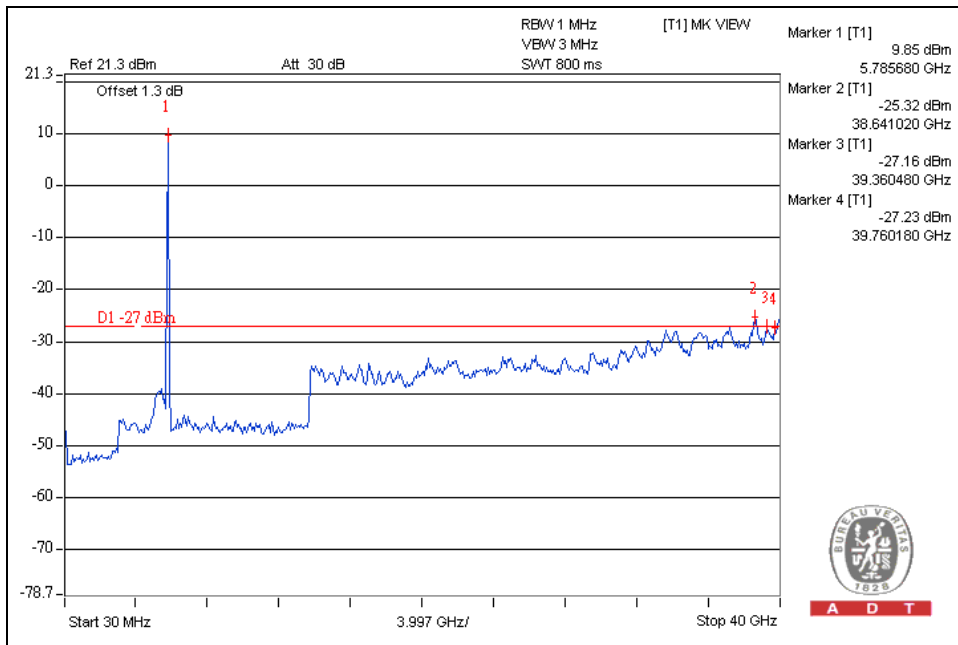
A D T

For chain (0):

CH10



CH11

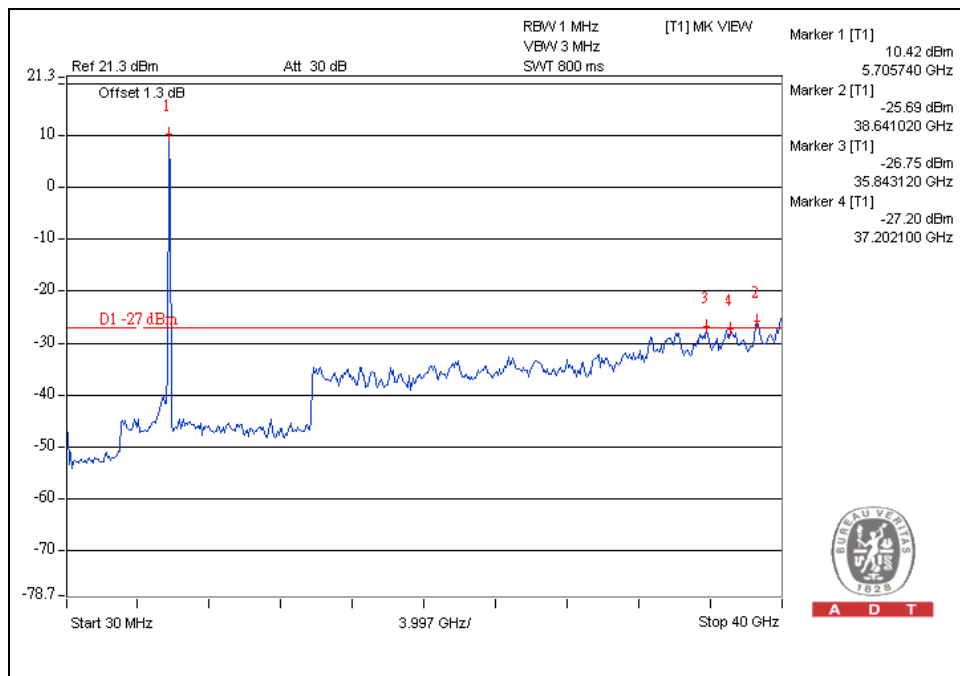




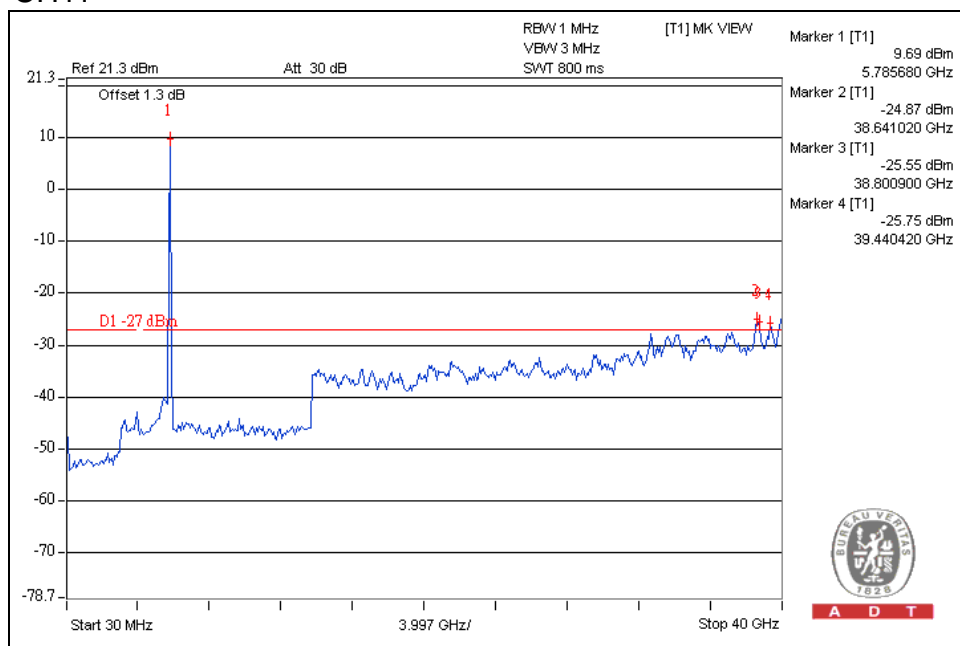
A D T

For chain (1):

CH10



CH11





4.8 ANTENNA REQUIREMENT

4.8.1 STANDARD APPLICABLE

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

And according to FCC 47 CFR Section 15.407(a), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

4.8.2 ANTENNA CONNECTED CONSTRUCTION

There are two antennas provided to this EUT, please refer to the following table:

Chain	Antenna Type	For 2.4GHz Gain (dBi)	For 5GHz Gain (dBi)				Antenna Connector
			5.15~5.25GHz	5.25~5.35GHz	5.47~5.725GHz	5.725~5.825GHz	
0	PCB Printed	0.29	-0.14	-0.86	0.21	0.14	NA
1	PCB Printed						



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5. INFORMATION ON THE TESTING LABORATORIES

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

USA	FCC, NVLAP
Germany	TUV Rheinland
Japan	VCCI
Norway	NEMKO
Canada	INDUSTRY CANADA , CSA
R.O.C.	TAF, BSMI, NCC
Netherlands	Telefication
Singapore	GOST-ASIA(MOU)
Russia	CERTIS(MOU)

Copies of accreditation certificates of our laboratories obtained from approval agencies can be downloaded from our web site:
www.adt.com.tw/index.5/phtml. If you have any comments, please feel free to contact us at the following:

Linko EMC/RF Lab:

Tel: 886-2-26052180
Fax: 886-2-26052943

Hsin Chu EMC/RF Lab:

Tel: 886-3-5935343
Fax: 886-3-5935342

Hwa Ya EMC/RF/Safety Telecom Lab:

Tel: 886-3-3183232
Fax: 886-3-3185050

Web Site: www.adt.com.tw

The address and road map of all our labs can be found in our web site also



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6.APPENDIX-A- MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.

---END---