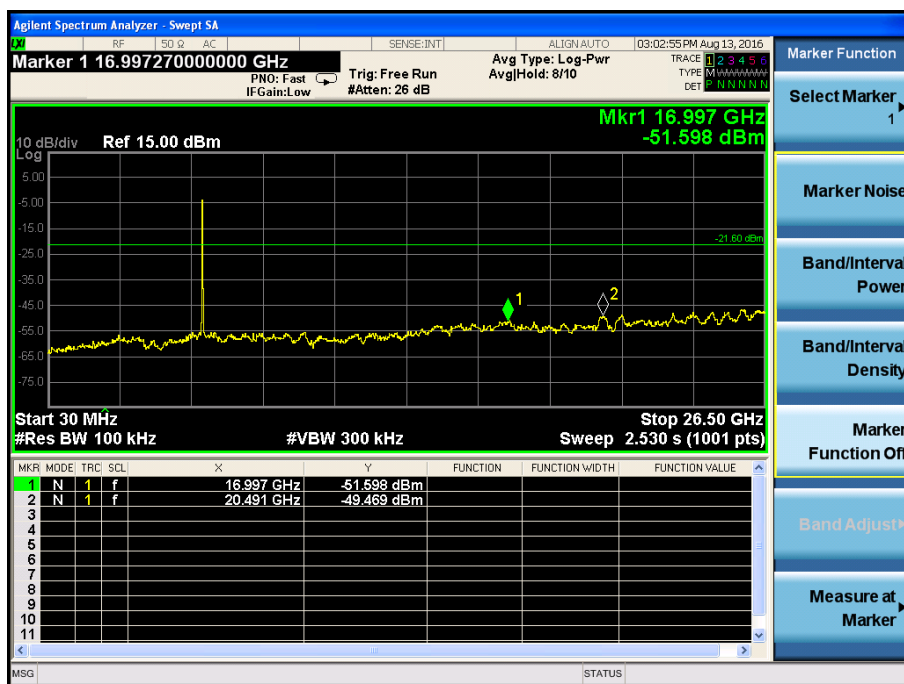
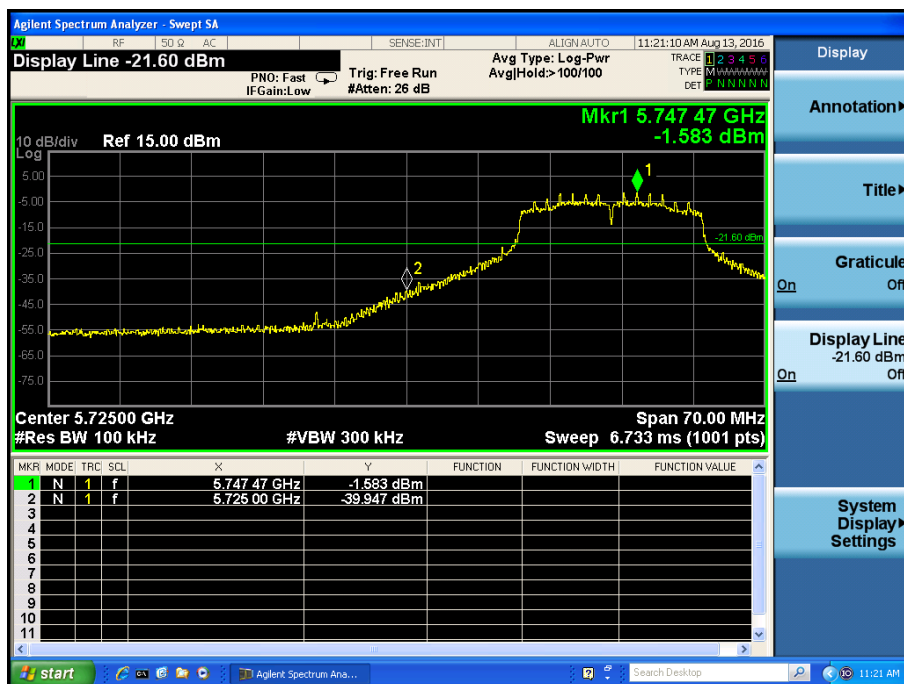
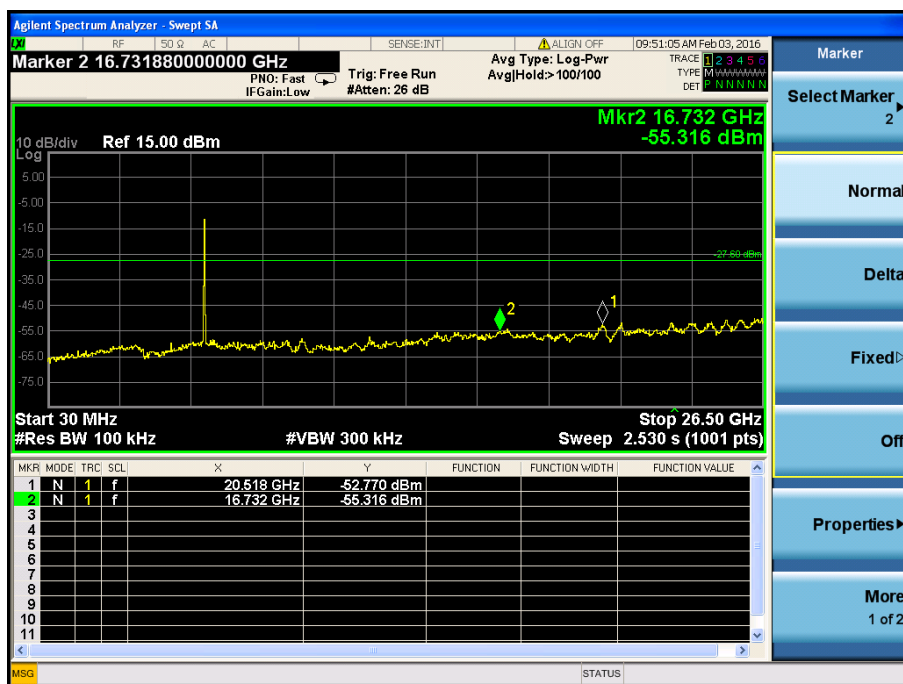
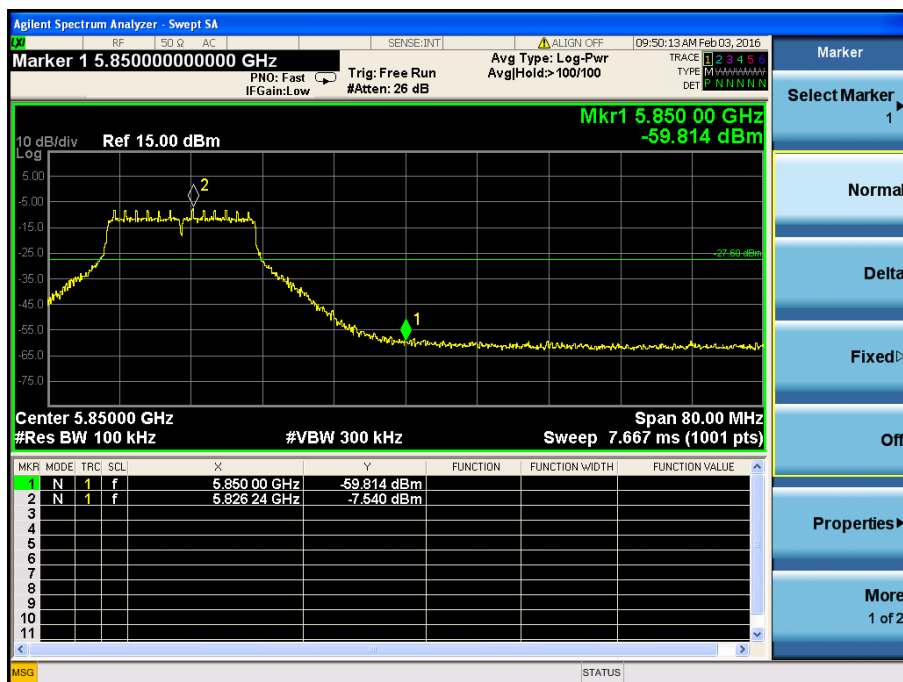


5745MHz

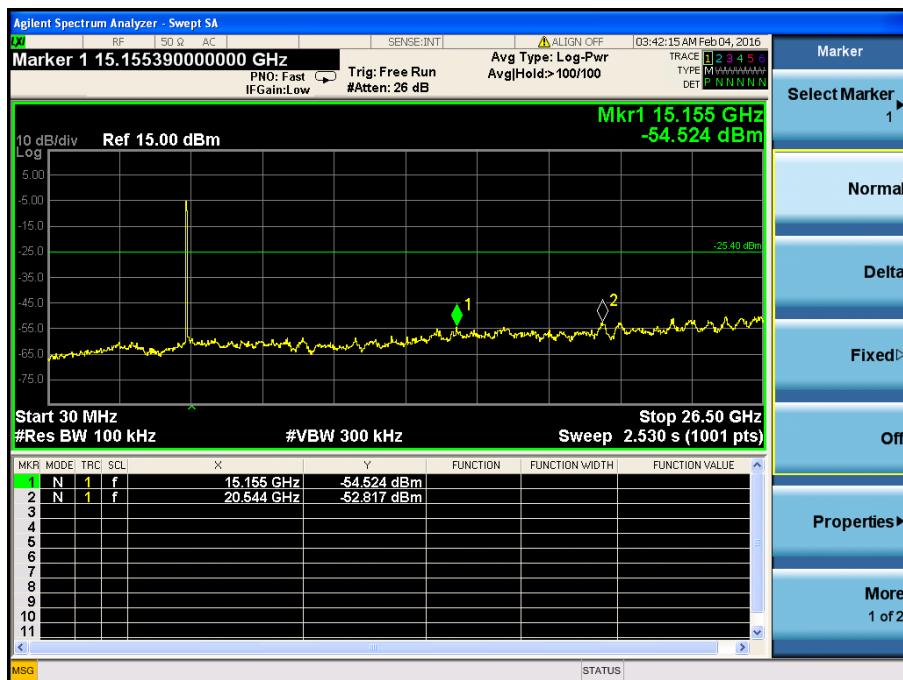
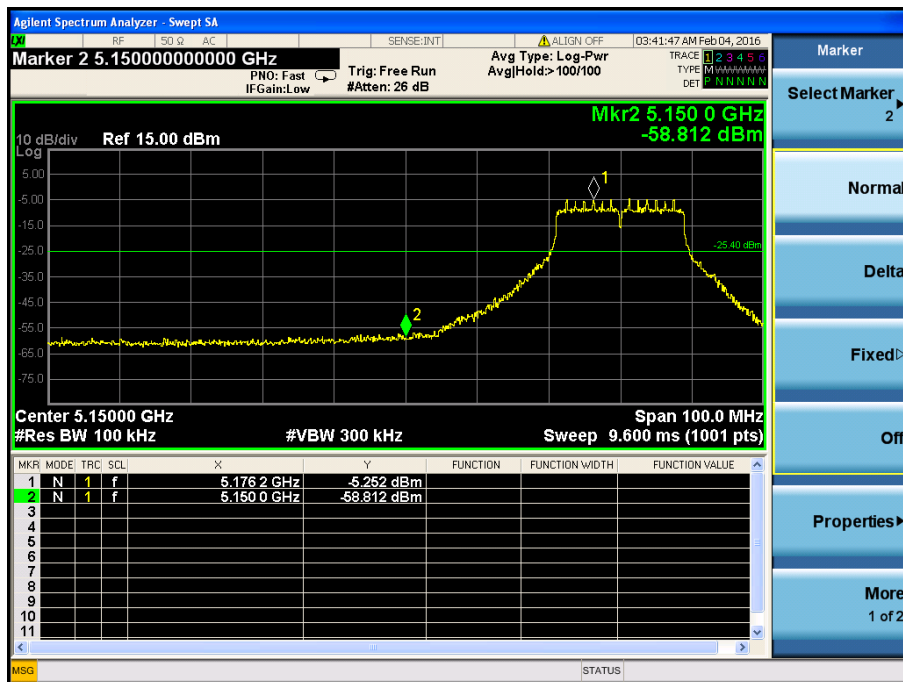


5805MHz

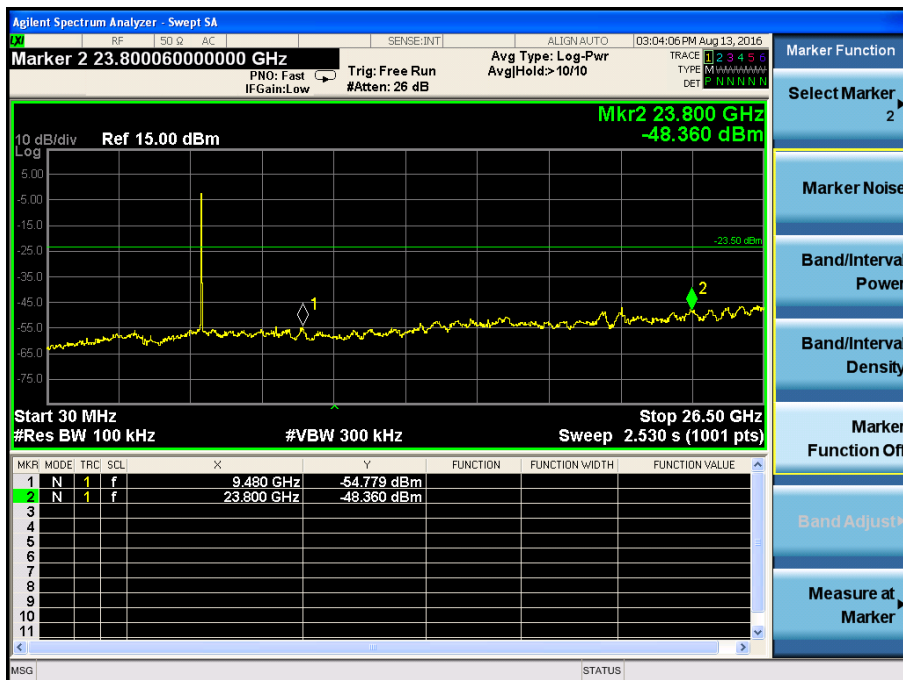


802.11n-HT20 Bandedge (Conducted)

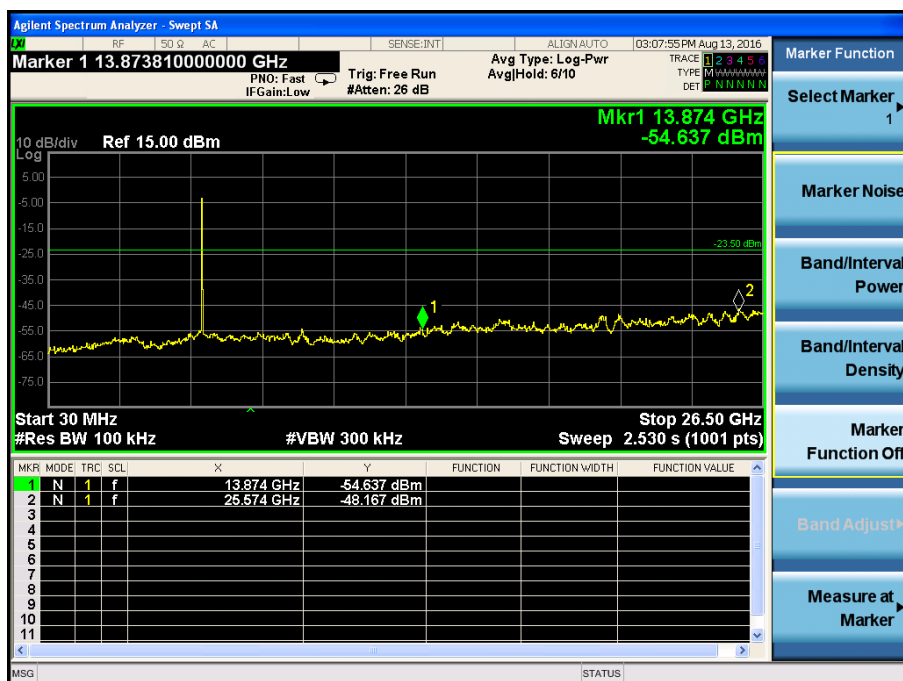
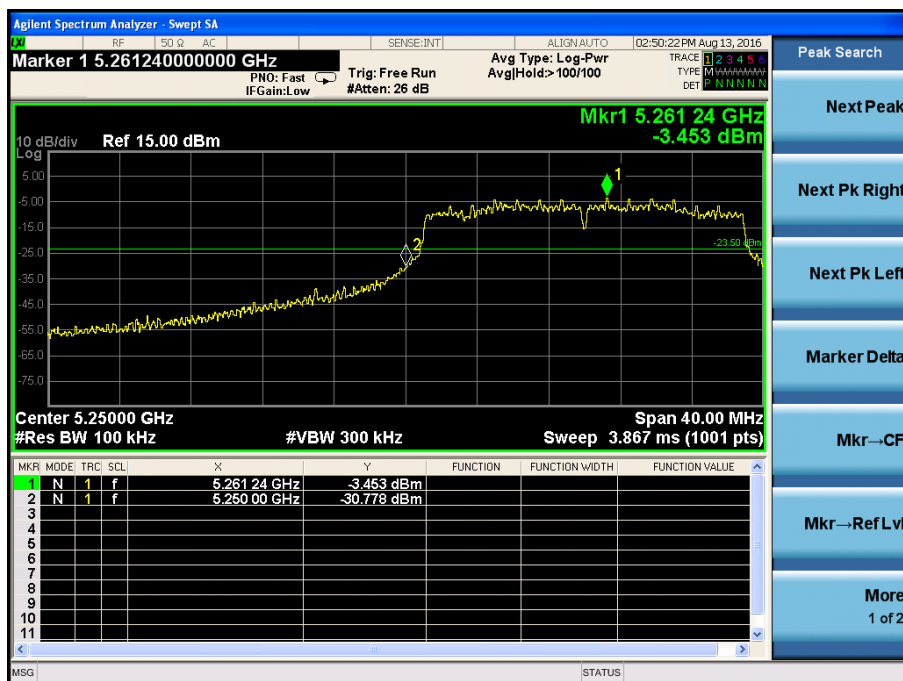
5180MHz



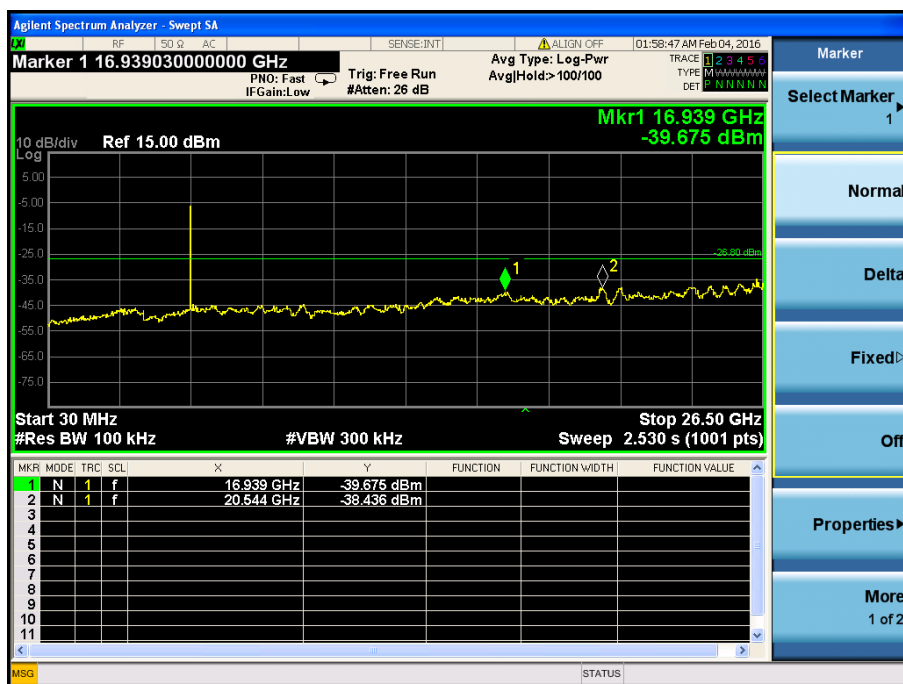
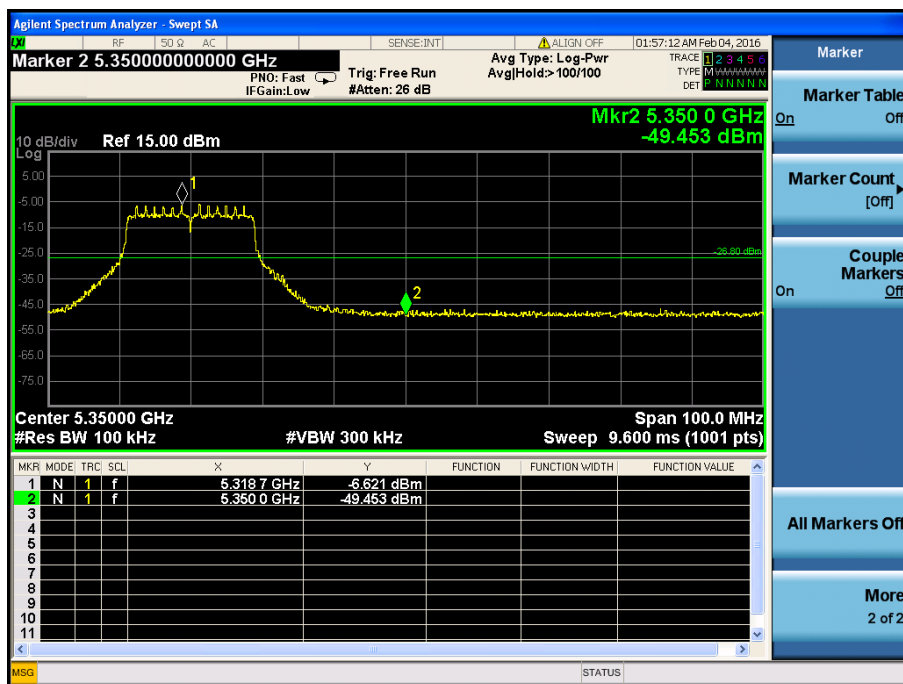
5240MHz



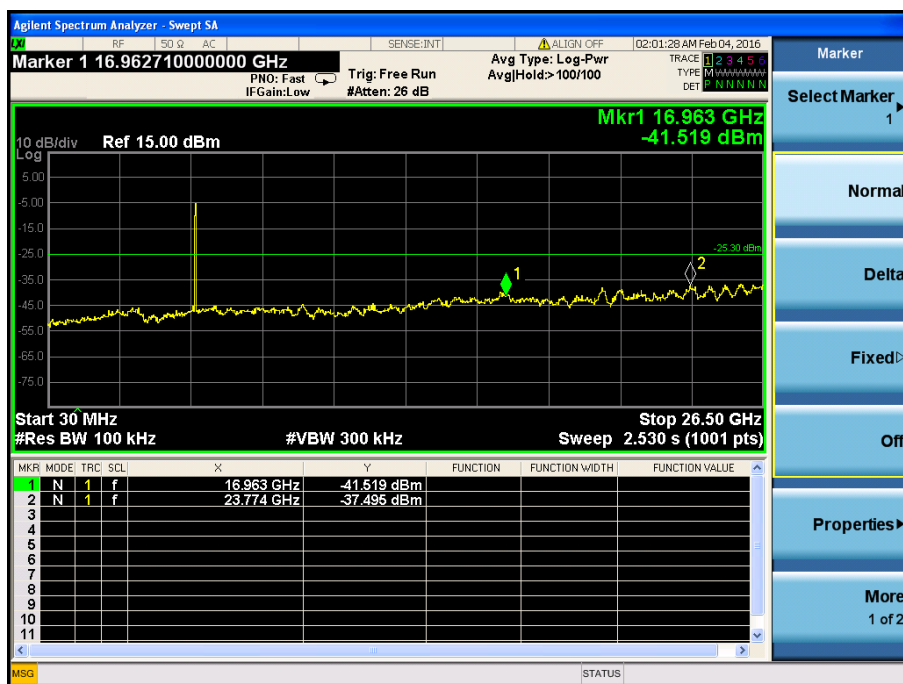
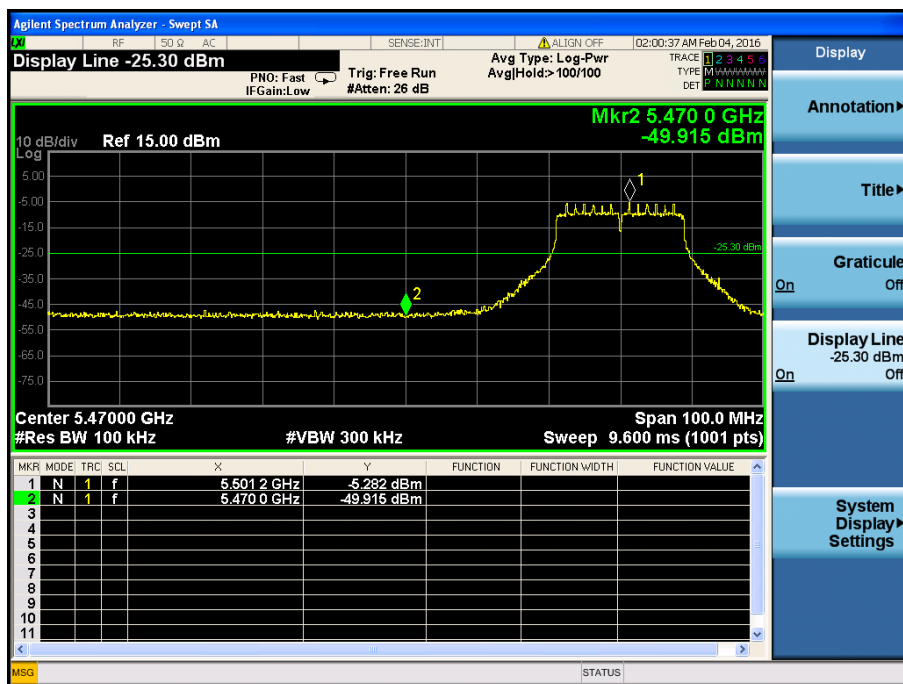
5260MHz



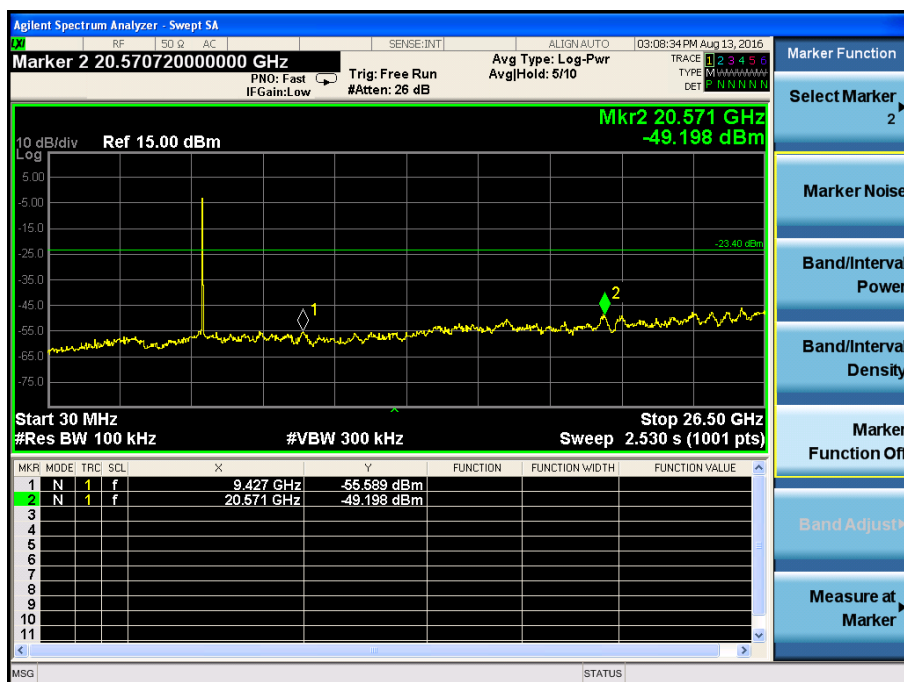
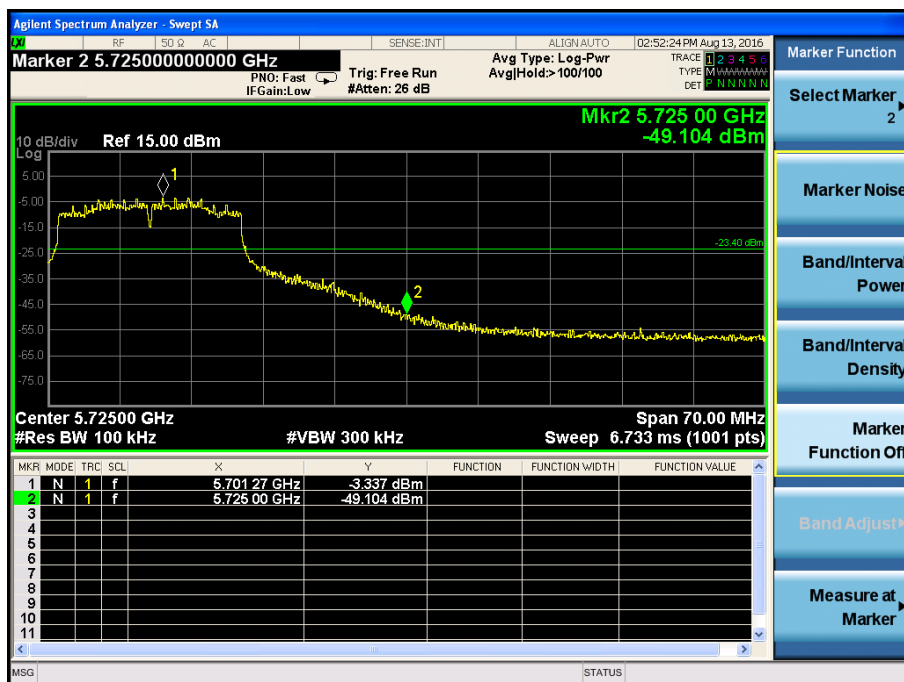
5320MHz



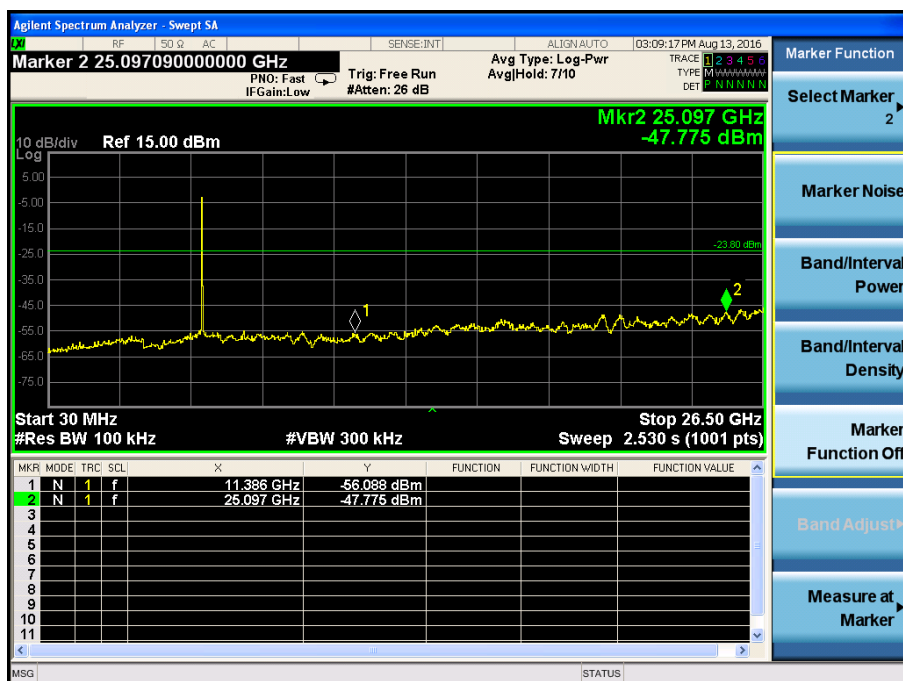
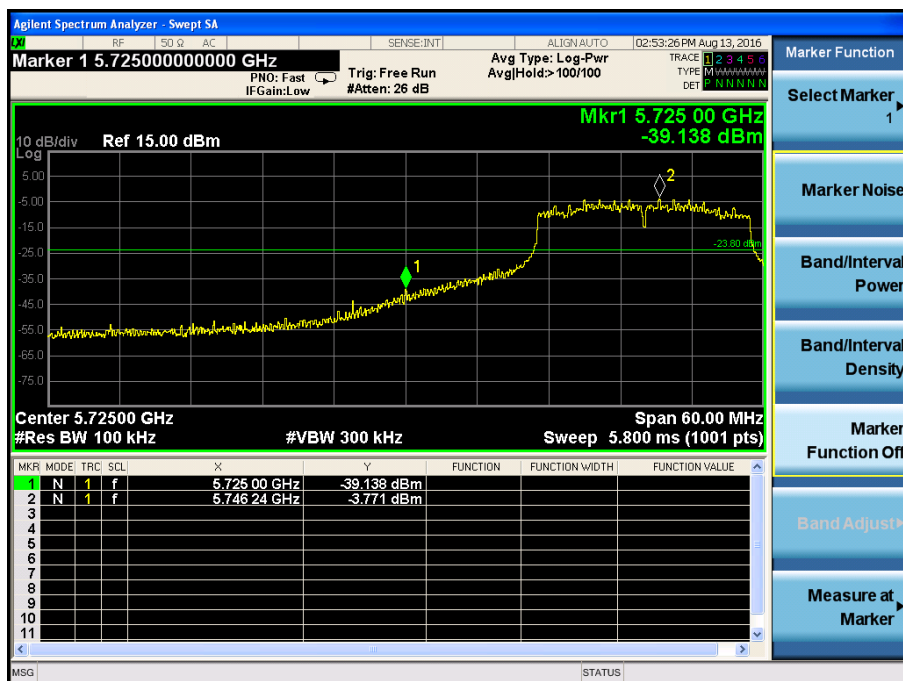
5500MHz



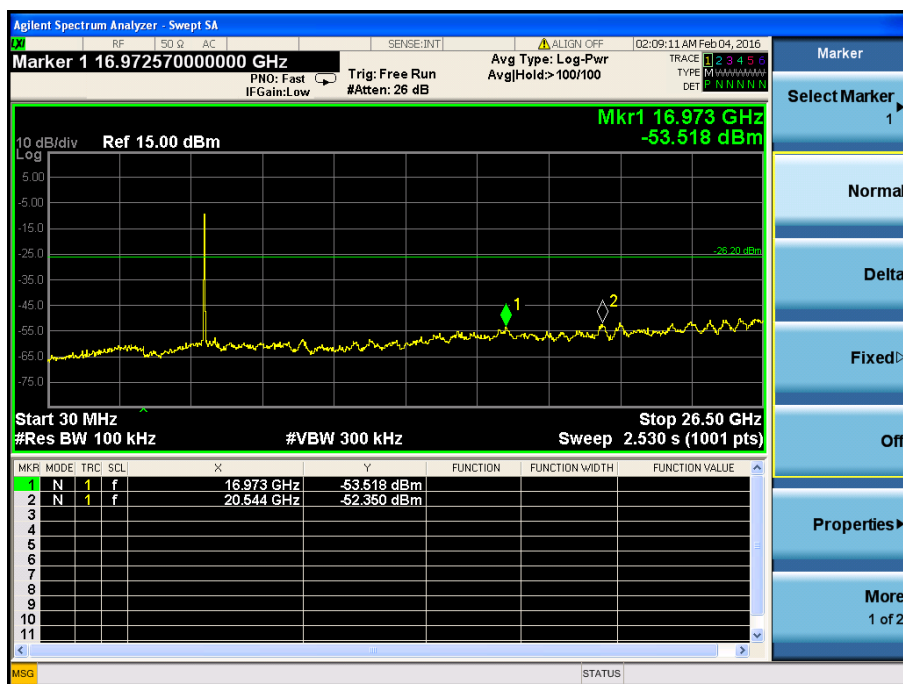
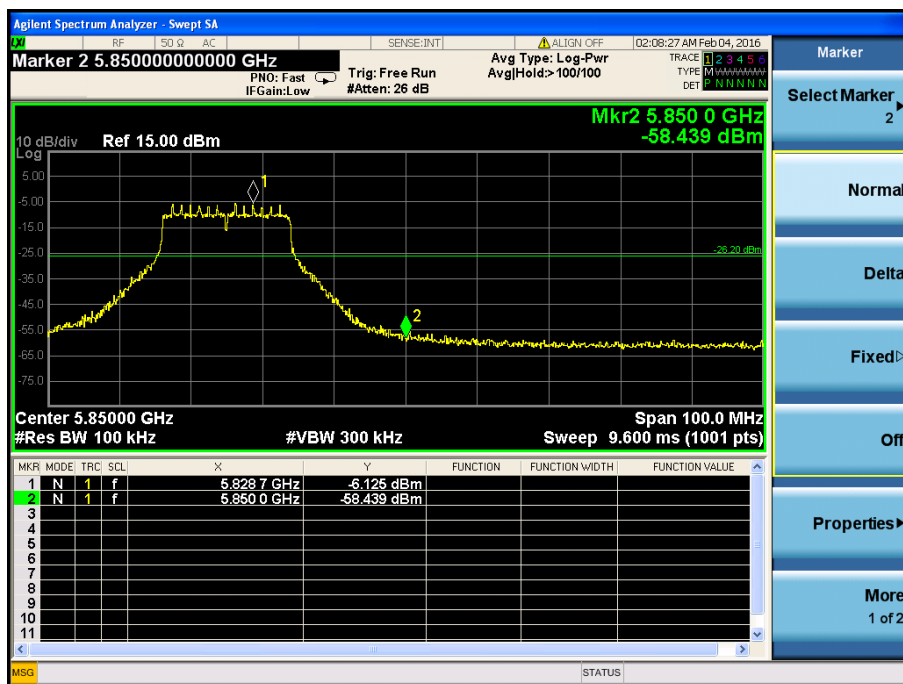
5700MHz



5745MHz

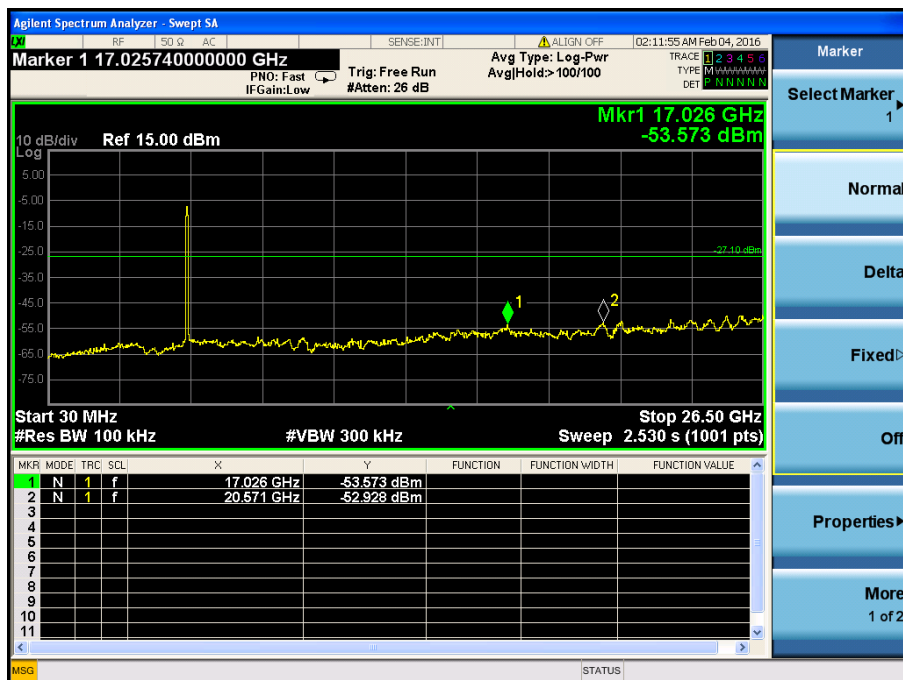
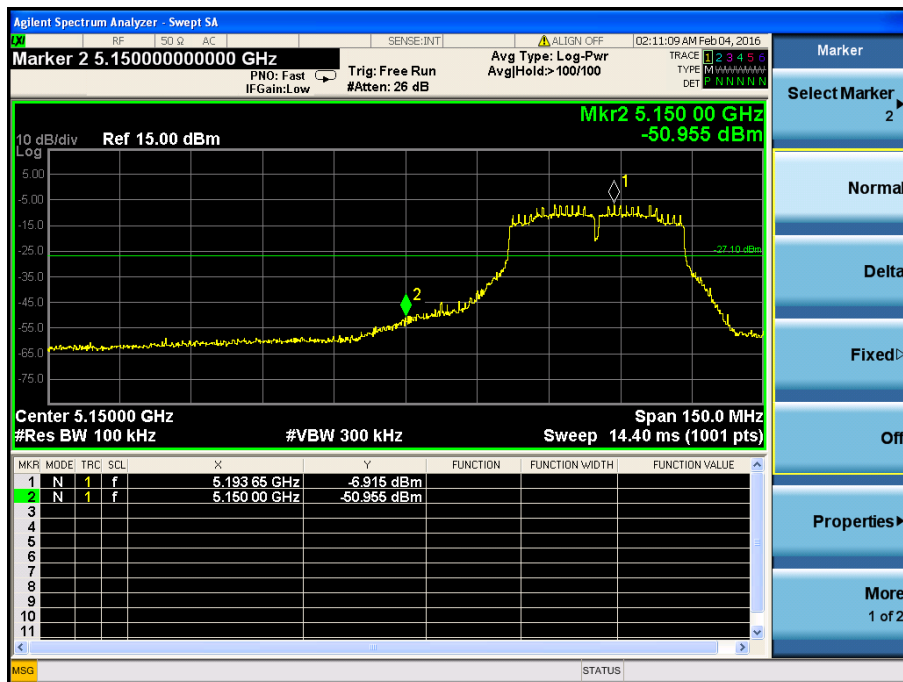


5805MHz

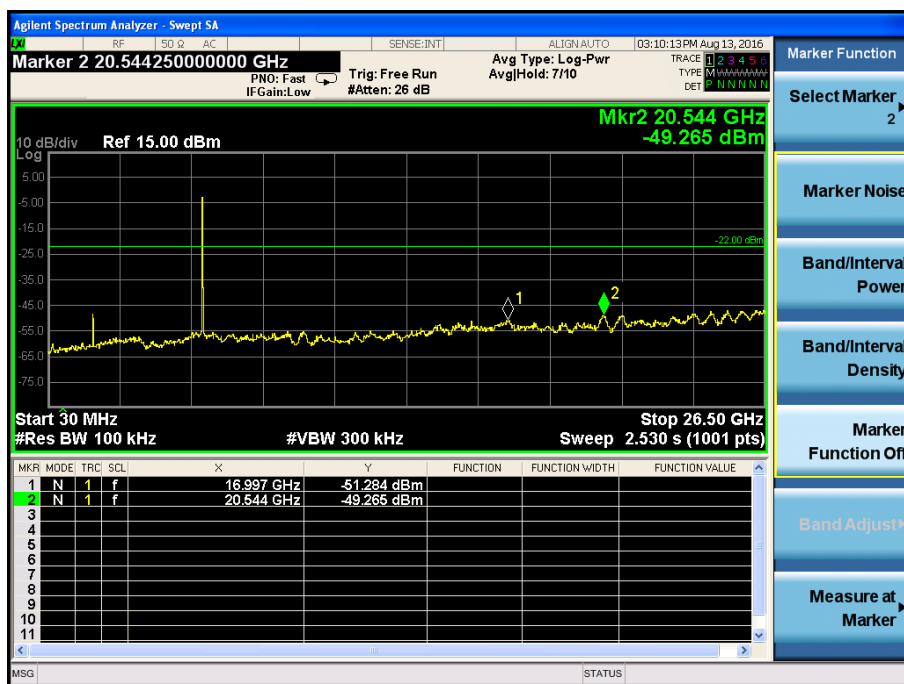


802.11n-HT40 Bandedge (Conducted)

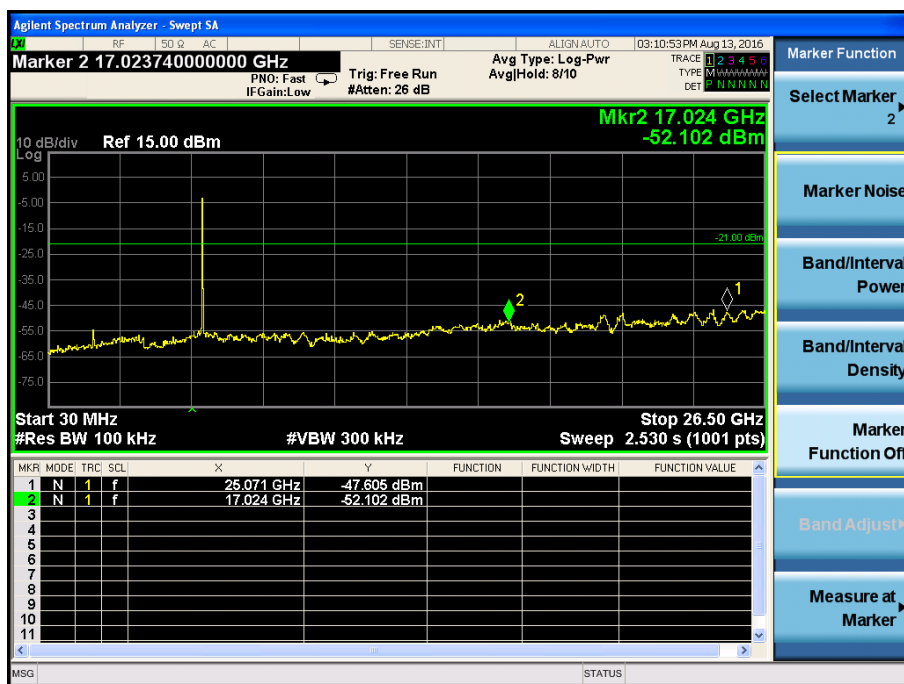
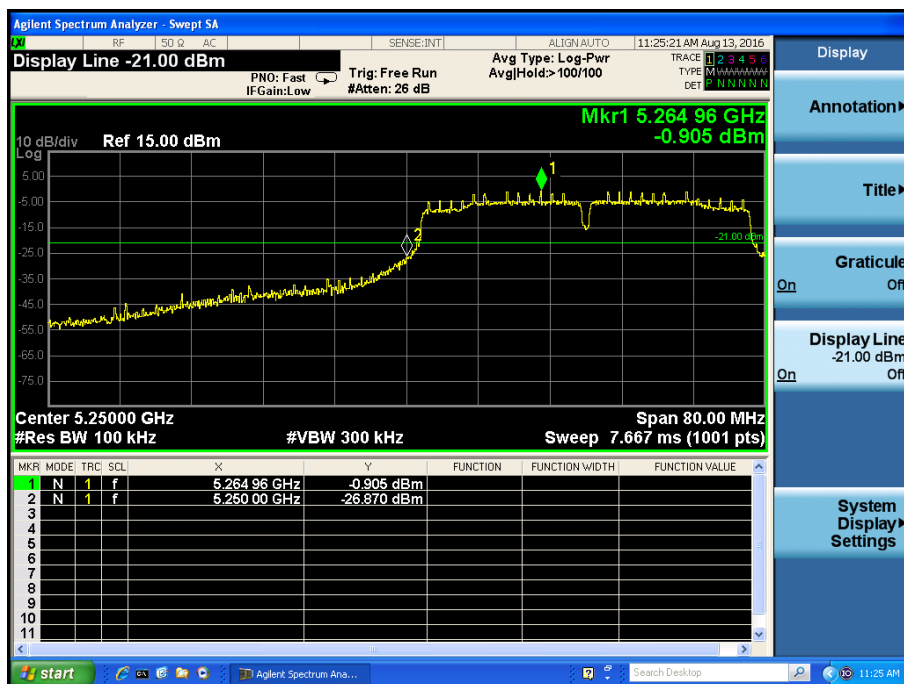
5190MHz



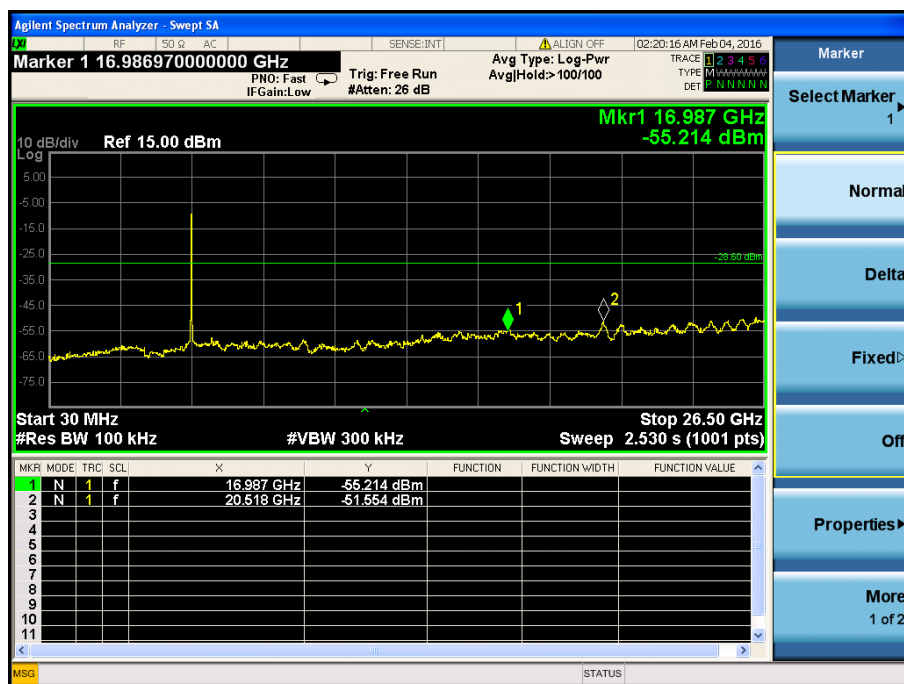
5230MHz



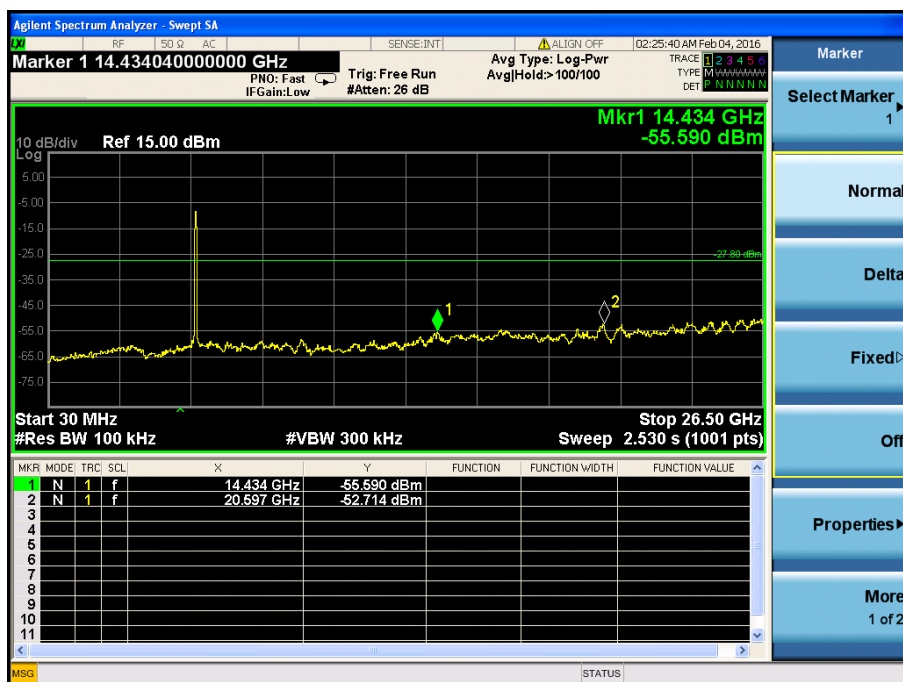
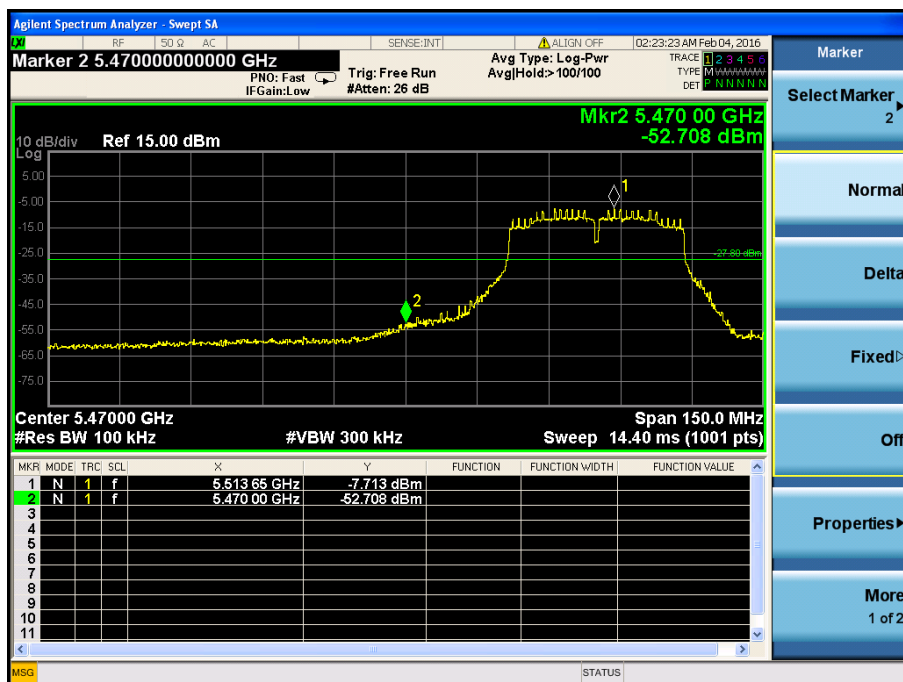
5270MHz



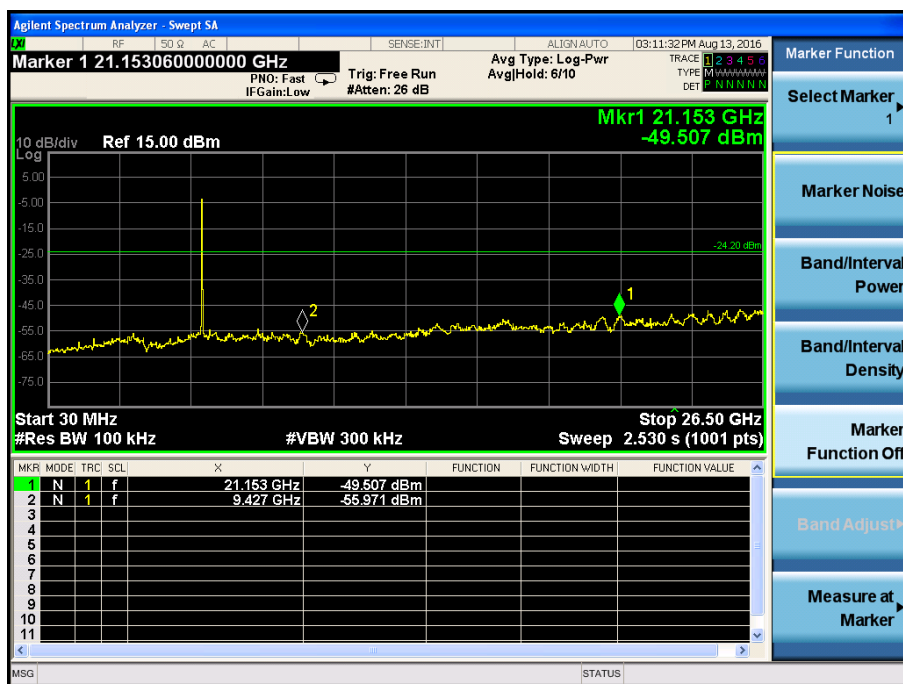
5310MHz



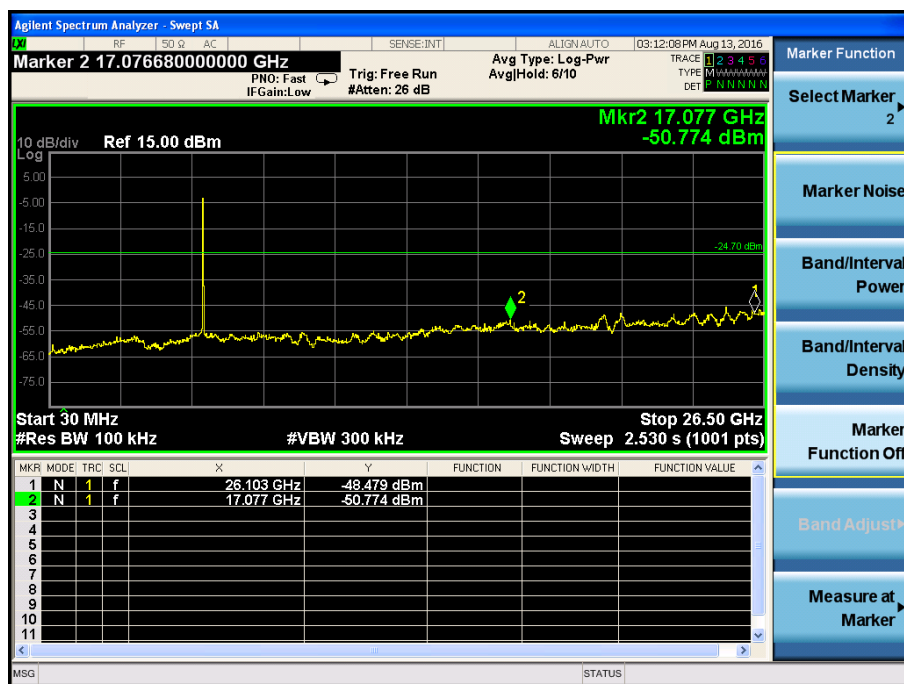
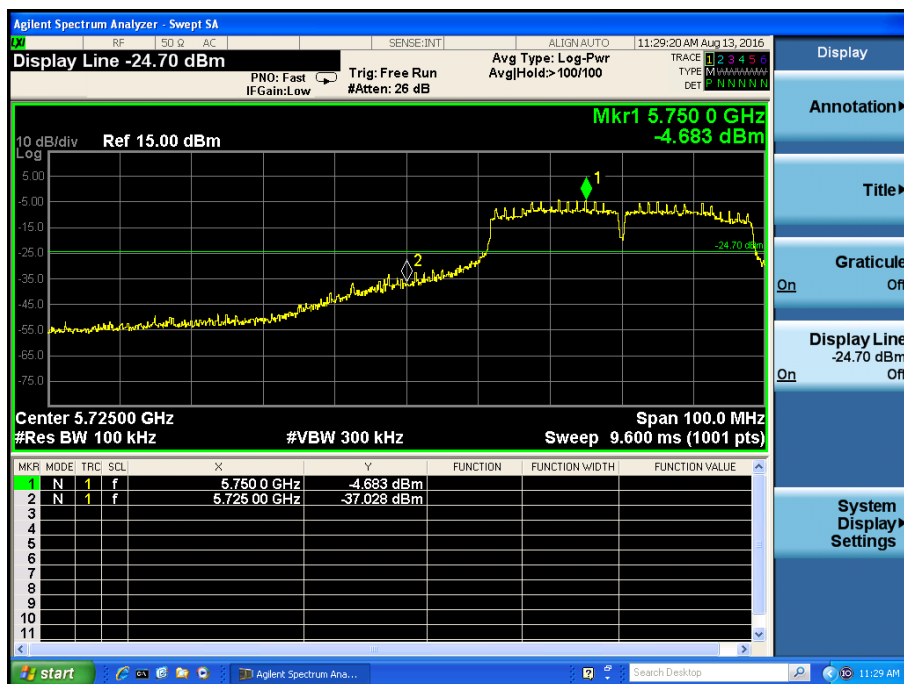
5510MHz



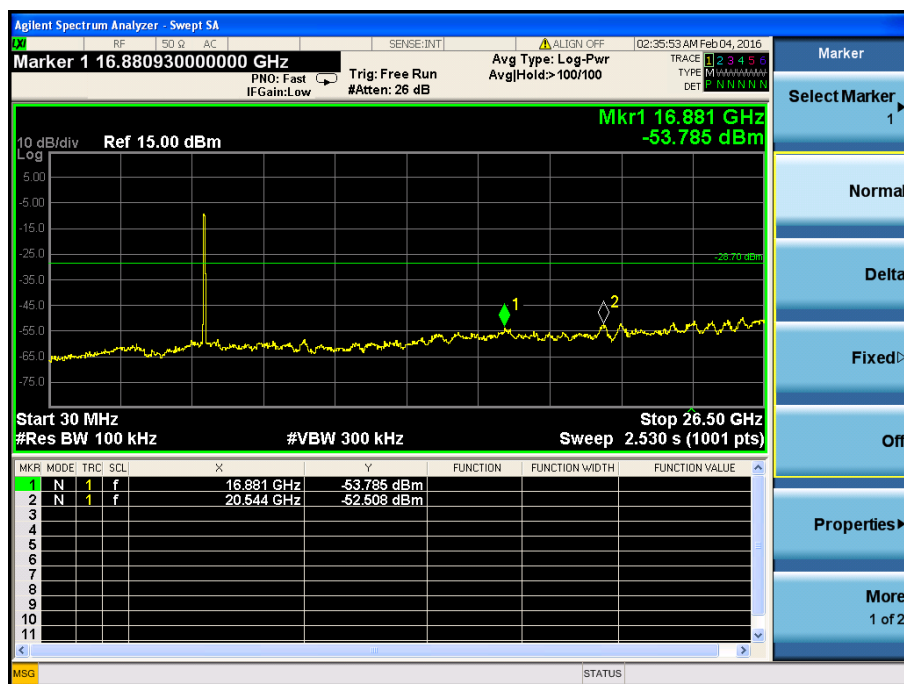
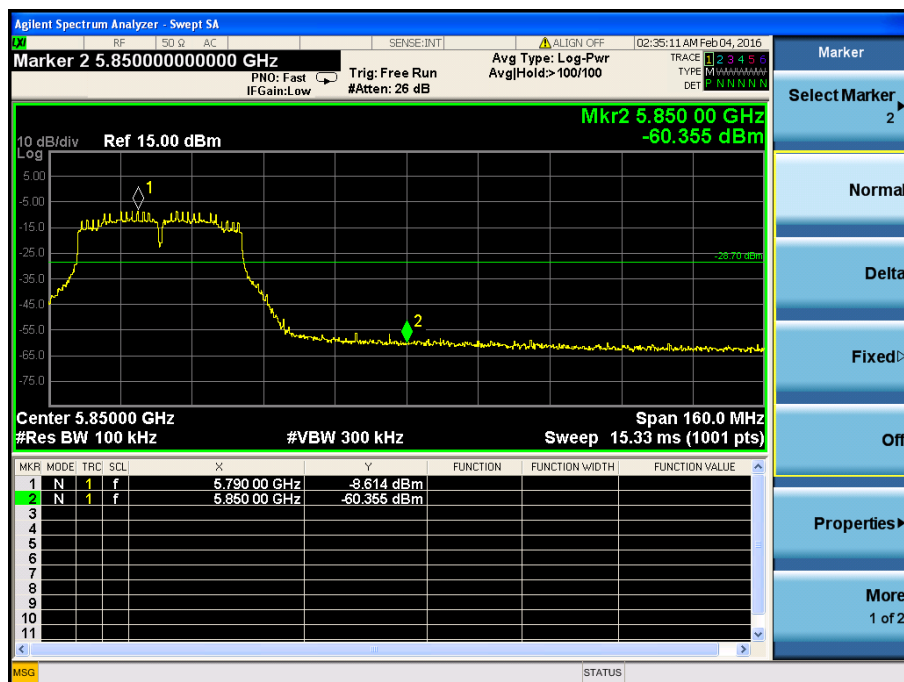
5670MHz



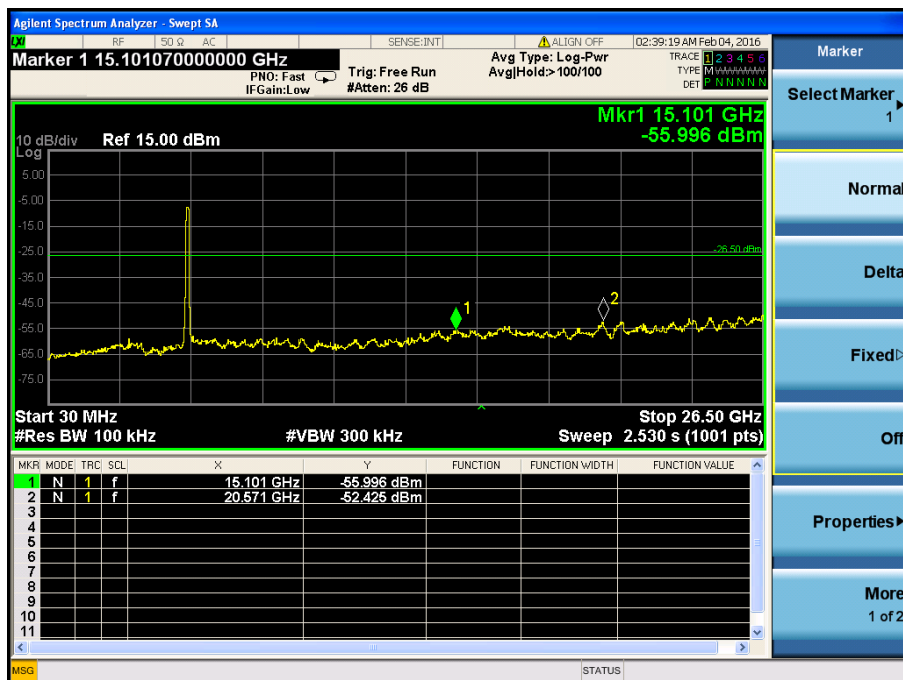
5755MHz

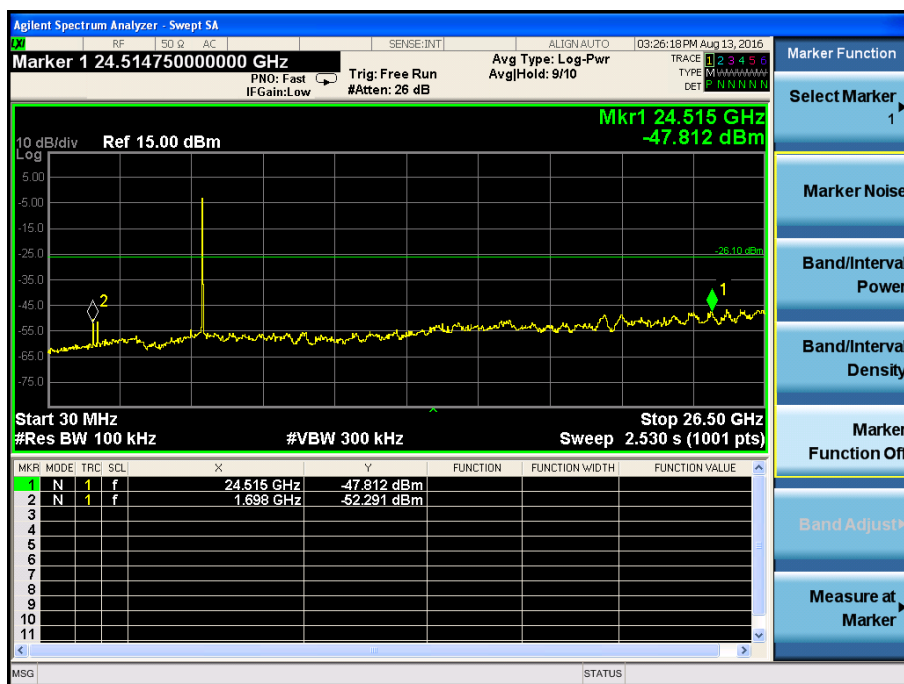
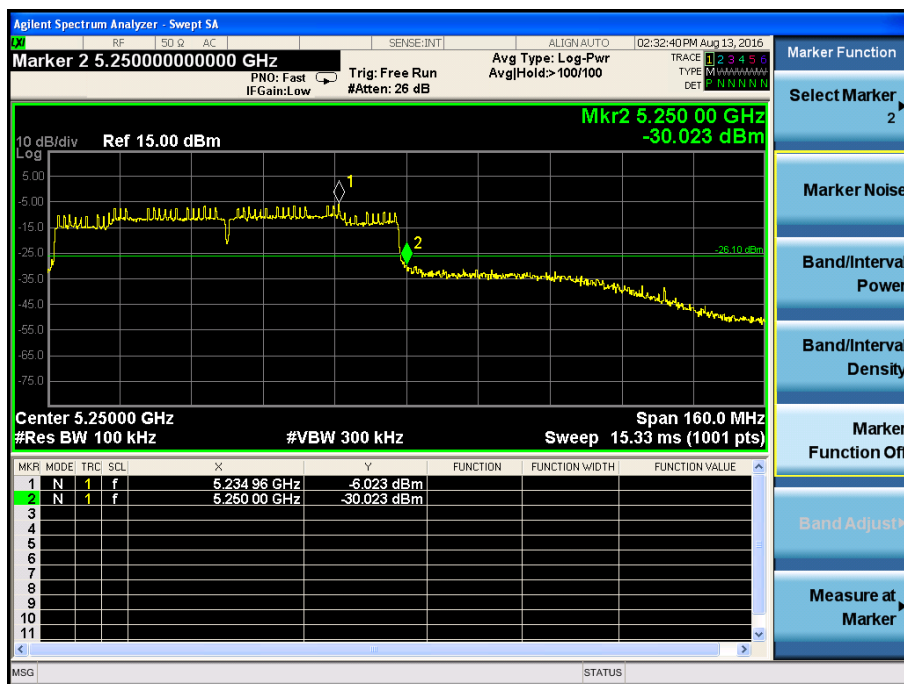


5795MHz

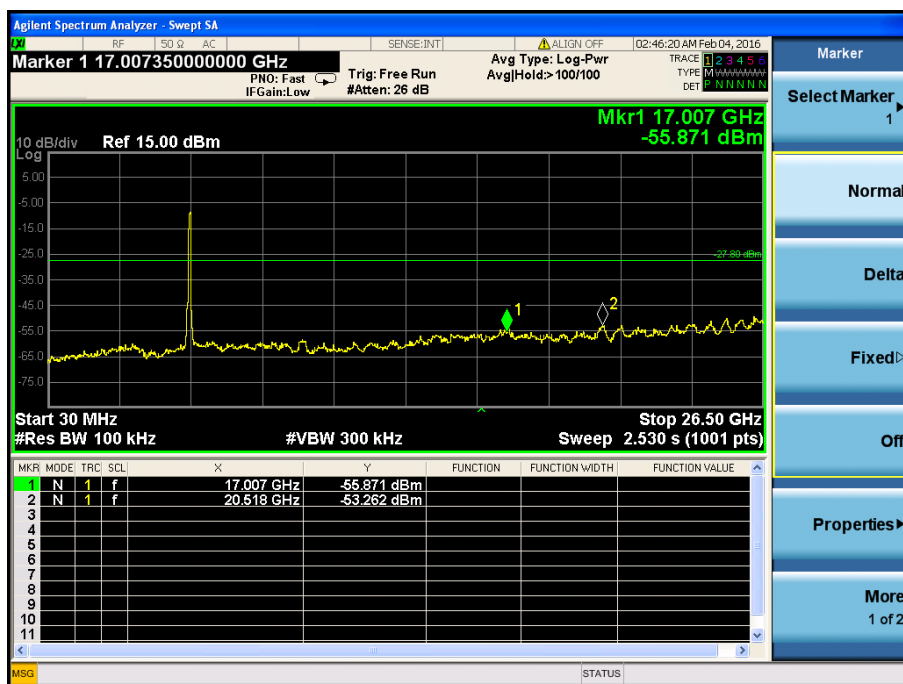
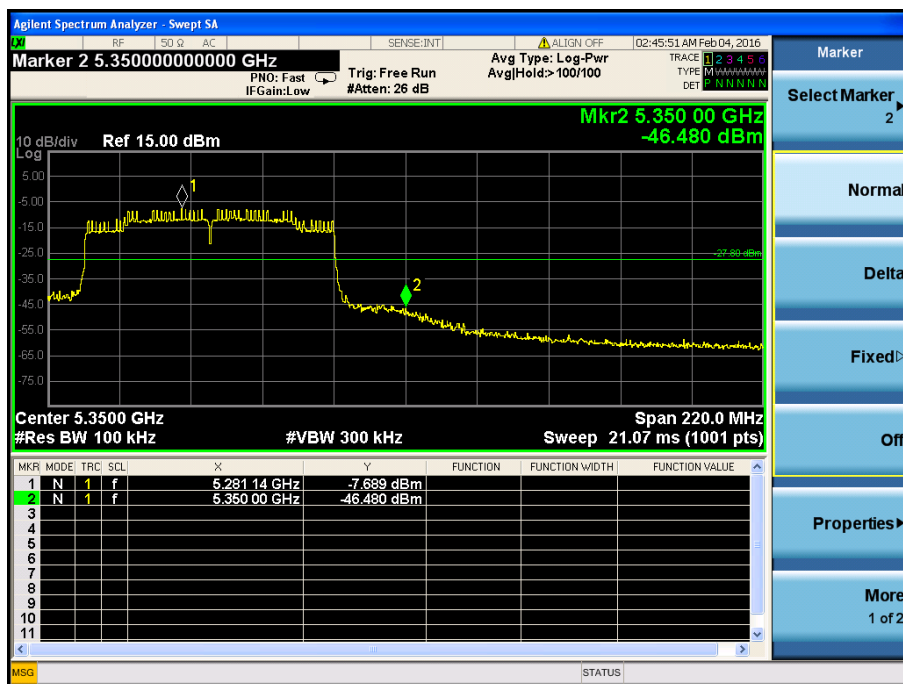


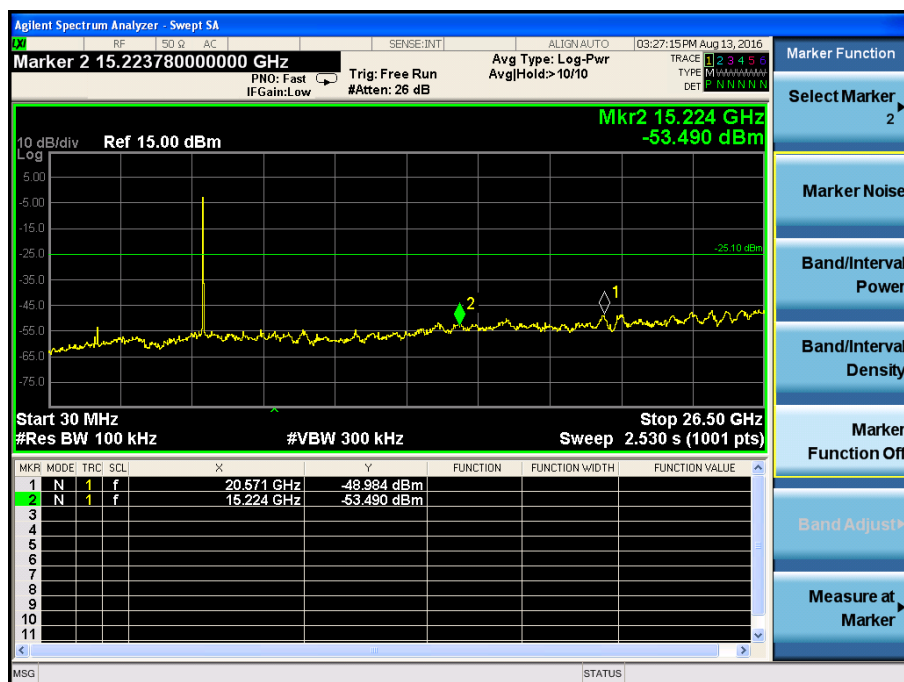
802.11ac-HT80 Bandedge (Conducted)
5210MHz



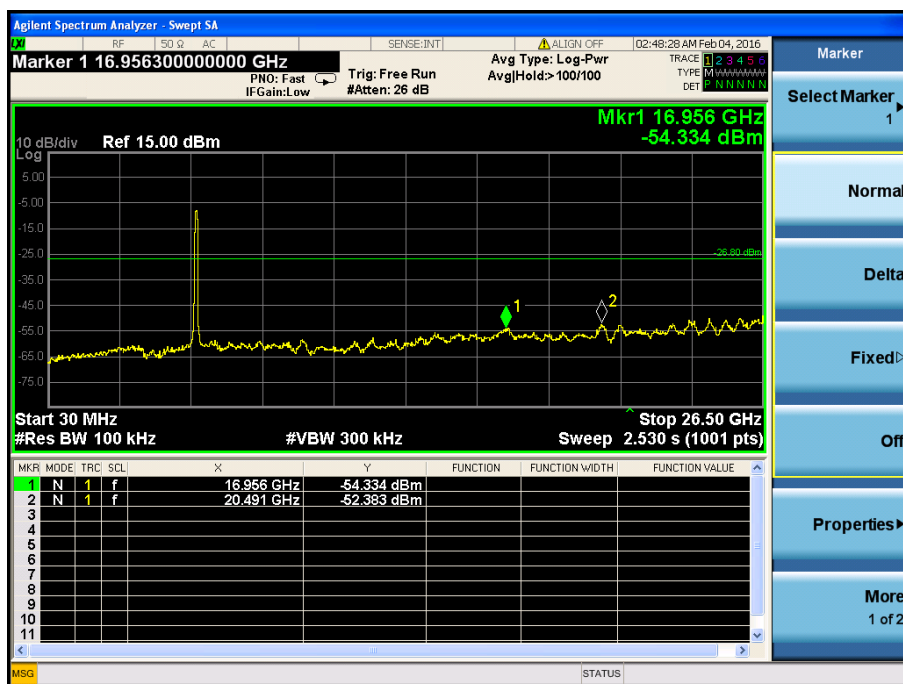
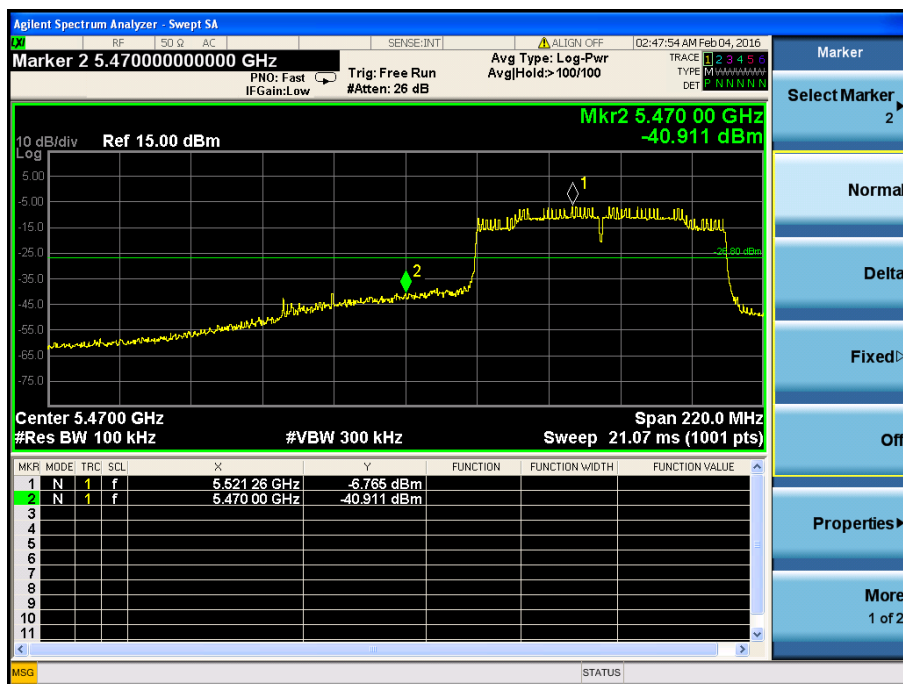


5290MHz

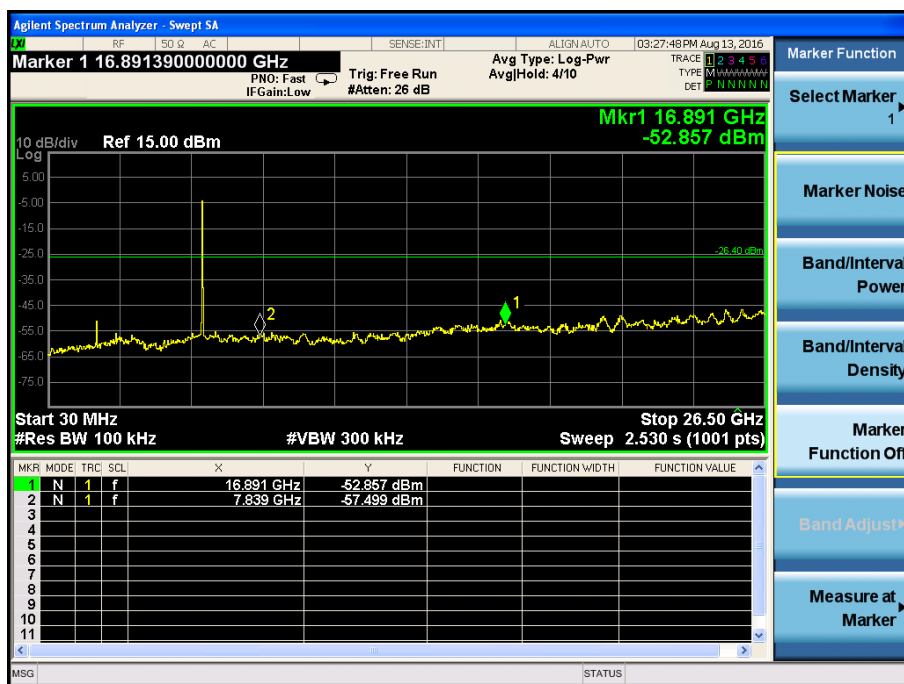




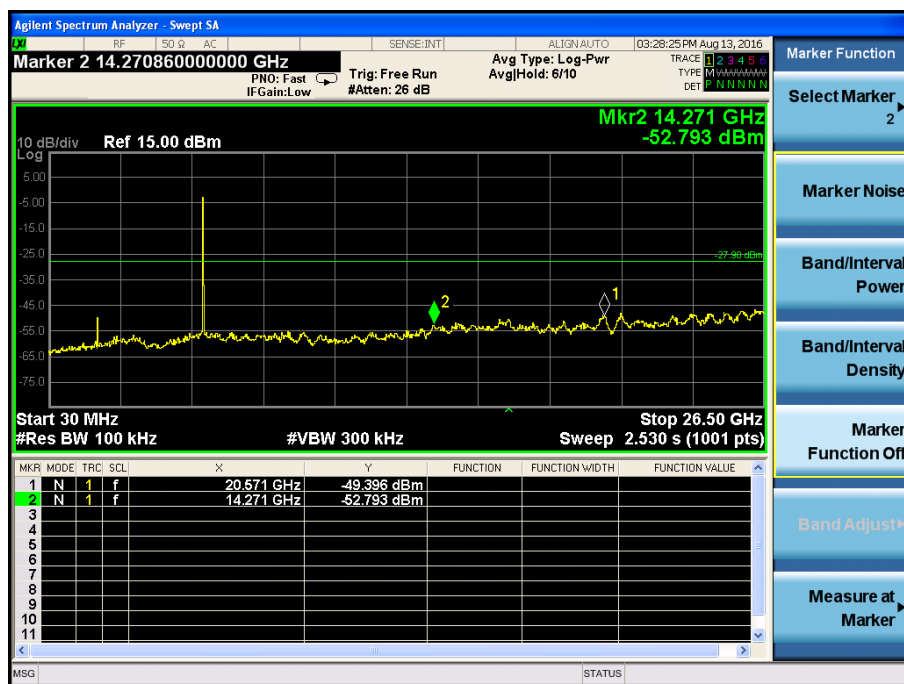
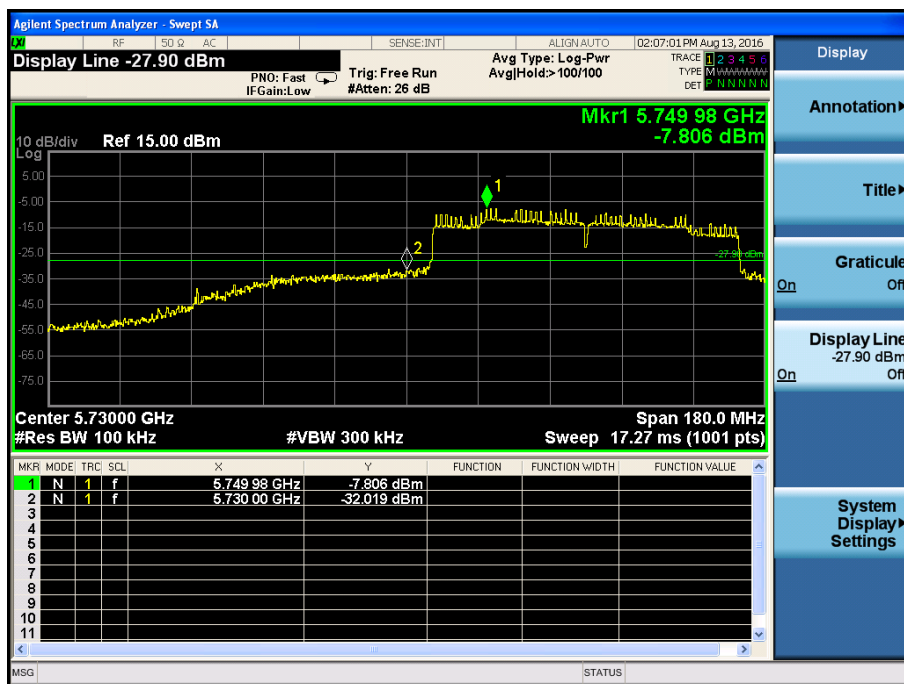
5530MHz

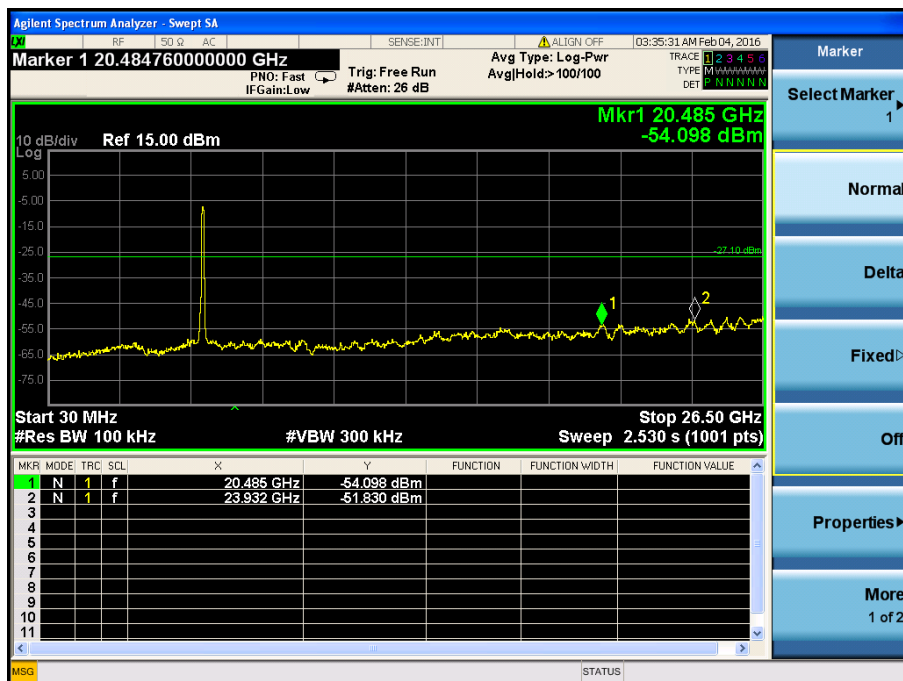


5670MHz



5775MHz





11. Frequency Stability

11.1 Standard Applicable

According to §15.407(g), Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.

11.2 Test Procedure

According to §2.1055, the following test procedure was performed.

The Frequency Stability is measured directly with a Frequency Domain Analyzer. Frequency Deviation in ppm is calculated from the measured peak to peak value.

The Carrier Frequency Stability over Power Supply Voltage and over Temperature is measured with a Frequency Domain Analyzer in histogram mode

Temperature:	Supply Voltage
20°C	DC 6.3-8.5V declared by manufacturer
-30°C to +50°C	Normal

11.3 Environmental Conditions

Temperature:	20°C
Relative Humidity:	54%
ATM Pressure:	1011 mbar

11.4 Summary of Test Results/Plots

5150-5250MHz

802.11a

Reference Frequency(Middle Channel): 5200 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	7.4	121	0.0231
40	7.4	118	0.0225
30	7.4	116	0.0221
20	7.4	124	0.0237
10	7.4	136	0.0260
0	7.4	141	0.0269
-10	7.4	133	0.0254
-20	7.4	128	0.0244
-30	7.4	144	0.0275

802.11n_HT20

Reference Frequency(Middle Channel): 5200 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	7.4	141	0.0269
40	7.4	128	0.0244
30	7.4	124	0.0237
20	7.4	154	0.0294
10	7.4	114	0.0218
0	7.4	134	0.0256
-10	7.4	147	0.0281
-20	7.4	118	0.0225
-30	7.4	126	0.0240

802.11n_HT40

Reference Frequency(Middle Channel): 5200 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	7.4	142	0.0277
40	7.4	147	0.0274
30	7.4	143	0.0276
20	7.4	134	0.0254
10	7.4	149	0.0285
0	7.4	150	0.0296
-10	7.4	156	0.0300
-20	7.4	150	0.0270
-30	7.4	146	0.0281

802.11ac_HT80

Reference Frequency(Middle Channel): 5200 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	7.4	141	0.0270
40	7.4	145	0.0277
30	7.4	141	0.0270
20	7.4	131	0.0250
10	7.4	148	0.0283
0	7.4	152	0.0291
-10	7.4	158	0.0302
-20	7.4	151	0.0289
-30	7.4	149	0.0285

5250-5350MHz

802.11a

Reference Frequency(Middle Channel): 5300 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	7.4	118	0.0284
40	7.4	124	0.0286
30	7.4	134	0.0290
20	7.4	127	0.0283
10	7.4	116	0.0290
0	7.4	148	0.0291
-10	7.4	157	0.0309
-20	7.4	179	0.0253
-30	7.4	162	0.0327

802.11n_HT20

Reference Frequency(Middle Channel): 5300MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	7.4	114	0.0267
40	7.4	131	0.0262
30	7.4	142	0.0273
20	7.4	151	0.0260
10	7.4	163	0.0265
0	7.4	182	0.0278
-10	7.4	154	0.0278
-20	7.4	183	0.0288
-30	7.4	156	0.0295

802.11n_HT40

Reference Frequency(Middle Channel): 5300 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	7.4	140	0.0251
40	7.4	143	0.0262
30	7.4	144	0.0251
20	7.4	132	0.0221
10	7.4	119	0.0223
0	7.4	183	0.0314
-10	7.4	153	0.0222
-20	7.4	156	0.0253
-30	7.4	149	0.0259

802.11ac_HT80

Reference Frequency(Middle Channel): 5300 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	7.4	147	0.0251
40	7.4	146	0.0256
30	7.4	149	0.0253
20	7.4	133	0.0242
10	7.4	121	0.0231
0	7.4	189	0.0312
-10	7.4	153	0.0227
-20	7.4	151	0.0239
-30	7.4	147	0.0251

5470-5725MHz

802.11a

Reference Frequency(Middle Channel): 5600 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	7.4	118	0.0284
40	7.4	124	0.0286
30	7.4	134	0.0290
20	7.4	125	0.0276
10	7.4	116	0.0290
0	7.4	147	0.0299
-10	7.4	157	0.0309
-20	7.4	184	0.0296
-30	7.4	164	0.0307

802.11n_HT20

Reference Frequency(Middle Channel): 5600 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	7.4	117	0.0269
40	7.4	124	0.0265
30	7.4	143	0.0277
20	7.4	159	0.0260
10	7.4	163	0.0268
0	7.4	185	0.0288
-10	7.4	151	0.0288
-20	7.4	180	0.0278
-30	7.4	161	0.0263

802.11n_HT40

Reference Frequency(Middle Channel): 5600 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	7.4	144	0.0254
40	7.4	149	0.0279
30	7.4	145	0.0261
20	7.4	136	0.0253
10	7.4	117	0.0281
0	7.4	186	0.0367
-10	7.4	167	0.0269
-20	7.4	161	0.0273
-30	7.4	152	0.0251

802.11ac_HT80

Reference Frequency(Middle Channel): 5600 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	7.4	149	0.0224
40	7.4	156	0.0232
30	7.4	151	0.0231
20	7.4	169	0.0247
10	7.4	181	0.0307
0	7.4	183	0.0314
-10	7.4	167	0.0262
-20	7.4	161	0.0259
-30	7.4	152	0.0237

5725-5850MHz

802.11a

Reference Frequency(Middle Channel): 5785 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	7.4	131	0.0284
40	7.4	124	0.0286
30	7.4	131	0.0290
20	7.4	135	0.0276
10	7.4	121	0.0290
0	7.4	142	0.0299
-10	7.4	153	0.0309
-20	7.4	181	0.0296
-30	7.4	162	0.0277

802.11n_HT20

Reference Frequency(Middle Channel): 5785 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	7.4	132	0.0260
40	7.4	117	0.0251
30	7.4	146	0.0271
20	7.4	151	0.0269
10	7.4	163	0.0264
0	7.4	187	0.0267
-10	7.4	156	0.0286
-20	7.4	180	0.0275
-30	7.4	161	0.0279

802.11n_HT40

Reference Frequency(Middle Channel): 5785 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	7.4	144	0.0254
40	7.4	146	0.0247
30	7.4	149	0.0251
20	7.4	132	0.0239
10	7.4	117	0.0227
0	7.4	183	0.0314
-10	7.4	159	0.0220
-20	7.4	148	0.0227
-30	7.4	151	0.0259

802.11ac_HT80

Reference Frequency(Middle Channel): 5785 MHz			
Environment Temperature (°C)	Power Supplied (VDC)	Frequency Measure with Time Elapsed	
		MCF (Hz)	Error (ppm)
50	7.4	141	0.0254
40	7.4	148	0.0262
30	7.4	147	0.0251
20	7.4	134	0.0227
10	7.4	115	0.0227
0	7.4	185	0.0314
-10	7.4	155	0.0222
-20	7.4	152	0.0219
-30	7.4	145	0.0257

So, Frequency Stability Versus Input Voltage is:

5150-5250MHz

802.11a

Reference Frequency(Middle Channel): 5200 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	6.3	121	0.0231
	7.4	124	0.0237
	8.5	133	0.0254

802.11n_HT20

Reference Frequency(Middle Channel): 5200 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	6.3	145	0.0277
	7.4	154	0.0294
	8.5	152	0.0290

802.11n_HT40

Reference Frequency(Middle Channel): 5200 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	6.3	138	0.0263
	7.4	134	0.0254
	8.5	134	0.0254

802.11ac_HT80

Reference Frequency(Middle Channel): 5200 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	6.3	154	0.0268
	7.4	131	0.0250
	8.5	141	0.0270

5250-5350MHz

802.11a

Reference Frequency(Middle Channel): 5300 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	6.3	135	0.0257
	7.4	127	0.0283
	8.5	133	0.0254

802.11n_HT20

Reference Frequency(Middle Channel): 5300 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	6.3	146	0.0281
	7.4	151	0.0260
	8.5	152	0.0290

802.11n_HT40

Reference Frequency(Middle Channel): 5300 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	6.3	142	0.0257
	7.4	132	0.0221
	8.5	156	0.0284

802.11ac_HT80

Reference Frequency(Middle Channel): 5300 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	6.3	147	0.0264
	7.4	133	0.0242
	8.5	155	0.0292

5470-5725MHz

802.11a

Reference Frequency(Middle Channel): 5600 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	6.3	142	0.0264
	7.4	125	0.0276
	8.5	133	0.0254

802.11n_HT20

Reference Frequency(Middle Channel): 5600 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	6.3	149	0.0291
	7.4	159	0.0260
	8.5	152	0.0299

802.11n_HT40

Reference Frequency(Middle Channel): 5600 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	6.3	146	0.0261
	7.4	136	0.0253
	8.5	151	0.0291

802.11ac_HT80

Reference Frequency(Middle Channel): 5600 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	6.3	146	0.0269
	7.4	169	0.0247
	8.5	159	0.0289

5725-5850MHz

802.11a_HT20

Reference Frequency(Middle Channel): 5785 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	6.3	153	0.0256
	7.4	135	0.0276
	8.5	178	0.0324

802.11n_HT20

Reference Frequency(Middle Channel): 5785 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	6.3	186	0.0316
	7.4	151	0.0269
	8.5	163	0.0312

802.11n_HT40

Reference Frequency(Middle Channel): 5785 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	6.3	173	0.0257
	7.4	132	0.0239
	8.5	162	0.0342

802.11ac_HT80

Reference Frequency(Middle Channel): 5785 MHz			
Environment Temperature (°C)	Power Supplied (VAC)	Frequency Measure with Time Elapsed	
		Frequency (Hz)	Error (ppm)
20	6.3	156	0.0287
	7.4	134	0.0227
	8.5	169	0.0331

***** END OF REPORT *****