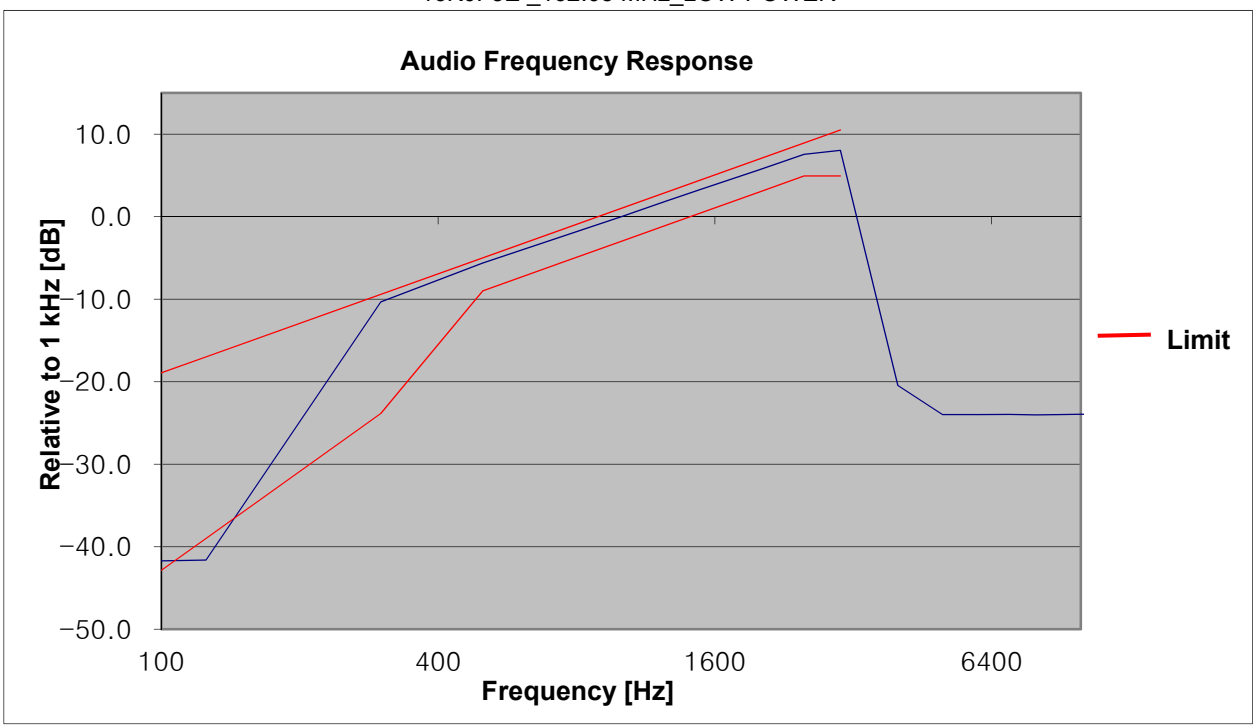
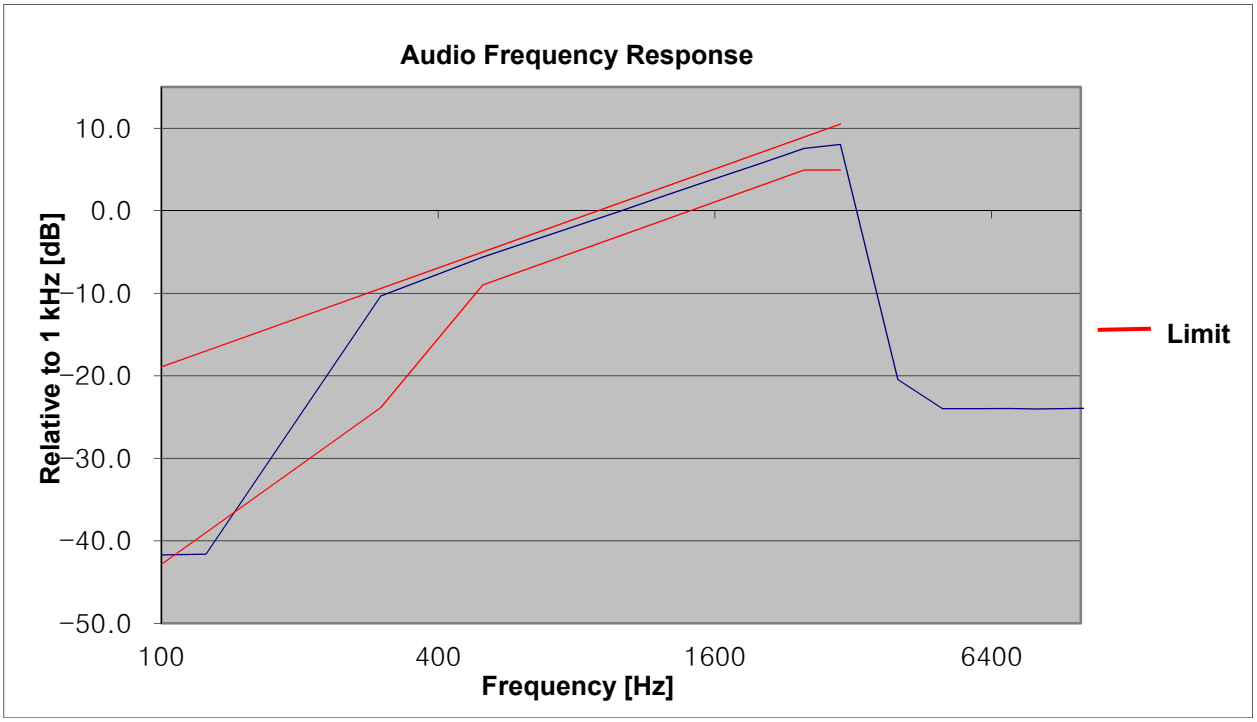
Frequency (Hz)	Attenuation Rel. to 1kHz (dB)	Upper limit (dB)	Lower limit (dB)
100	-41.83	-18.93	-42.86
125	-41.62	-17.00	-39.00
300	-10.27	-9.42	-23.84
500	-5.58	-5.00	-9.00
750	-2.32	-1.49	-5.49
1000	-0.01	1.00	-3.00
1250	1.82	2.93	-1.07
1500	3.31	4.51	0.51
2000	5.59	7.00	3.00
2500	7.42	8.93	4.93
3000	7.85	10.51	4.93
4000	-29.35	-	-
5000	-28.87	-	-
6000	-29.29	-	-
7000	-29.35	-	-
8000	-29.35	-	-
9000	-29.29	-	-
10000	-29.12	-	-
20000	-29.19	-	-
30000	-29.27	-	-
40000	-29.27	-	-
50000	-29.29	-	-

16K0F3E _162.05 MHz_LOW POWER



Frequency (Hz)	Attenuation Rel. to 1kHz (dB)	Upper limit (dB)	Lower limit (dB)
100	-41.72	-18.93	-42.86
125	-41.62	-17.00	-39.00
300	-10.33	-9.42	-23.84
500	-5.61	-5.00	-9.00
750	-2.33	-1.49	-5.49
1000	-0.01	1.00	-3.00
1250	1.86	2.93	-1.07
1500	3.37	4.51	0.51
2000	5.69	7.00	3.00
2500	7.56	8.93	4.93
3000	8.04	10.51	4.93
4000	-29.87	-	-
5000	-29.85	-	-
6000	-29.95	-	-
7000	-29.61	-	-
8000	-29.95	-	-
9000	-29.98	-	-
10000	-29.95	-	-
20000	-29.95	-	-
30000	-30.06	-	-
40000	-29.98	-	-
50000	-29.95	-	-

16K0F3E _173.95 MHz_LOW POWER

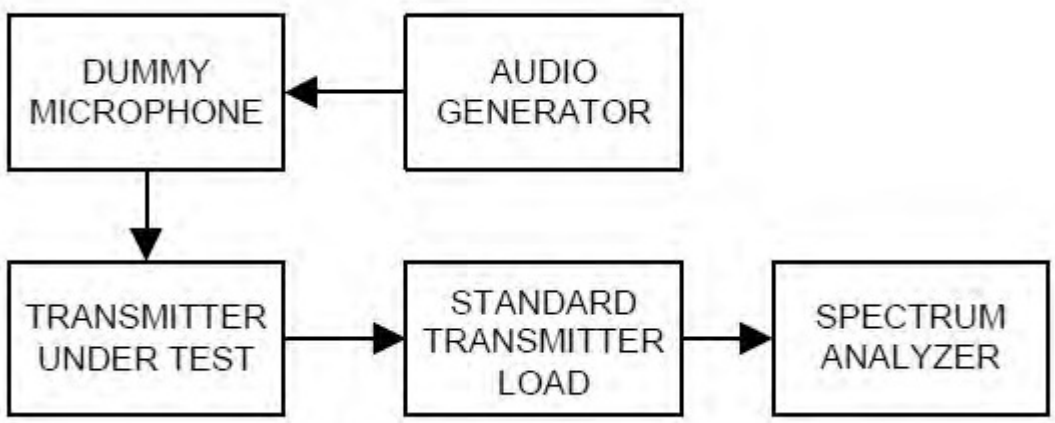


7.6 Emission Mask

▣ Definition

The transmitter sideband spectrum denotes the sideband power produced at a discrete frequency separation from the carrier up to the test bandwidth (see 1.3.4.4) due to all sources of unwanted noise within the transmitter in a modulated condition.

▣ TEST CONFIGURATION



▣ TEST PROCEDURE

According to 2.2.11 in TIA-603-D Standard.

a) Connect the equipment as illustrated. Use the table to determine the spectrum analyzer resolution bandwidth:

Spectrum Analyzer Resolution Bandwidth

Frequency Band (MHz)	Mask for Equipment with Audio Low Pass Filter	Mask for Equipment without Low Pass Filter	Spectrum Analyzer Resolution Bandwidth (Hz)
25-50	B	C	300
72-76	B	C	300
138-174	NTIA	NTIA	300
150-174	B	C	300
150-174	D or E	D or E	100
406-420	NTIA	NTIA	300
421-512	B	C	300
421-512	D or E	D or E	100
806-821/851-866	B or EA	G or EA	300
821-824/866-869	B	H	300
896-901/935-940	I	J	300

b) Adjust the spectrum analyzer for the following settings:
   1) Resolution Bandwidth per the above table
   2) Video Bandwidth at least 10 times the resolution bandwidth.
   3) Sweep Speed slow enough to maintain measurement calibration.
   4) Detector Mode = Positive Peak.
   5) Span that will allow proper viewing of the test bandwidth (see 1.3.4.4).

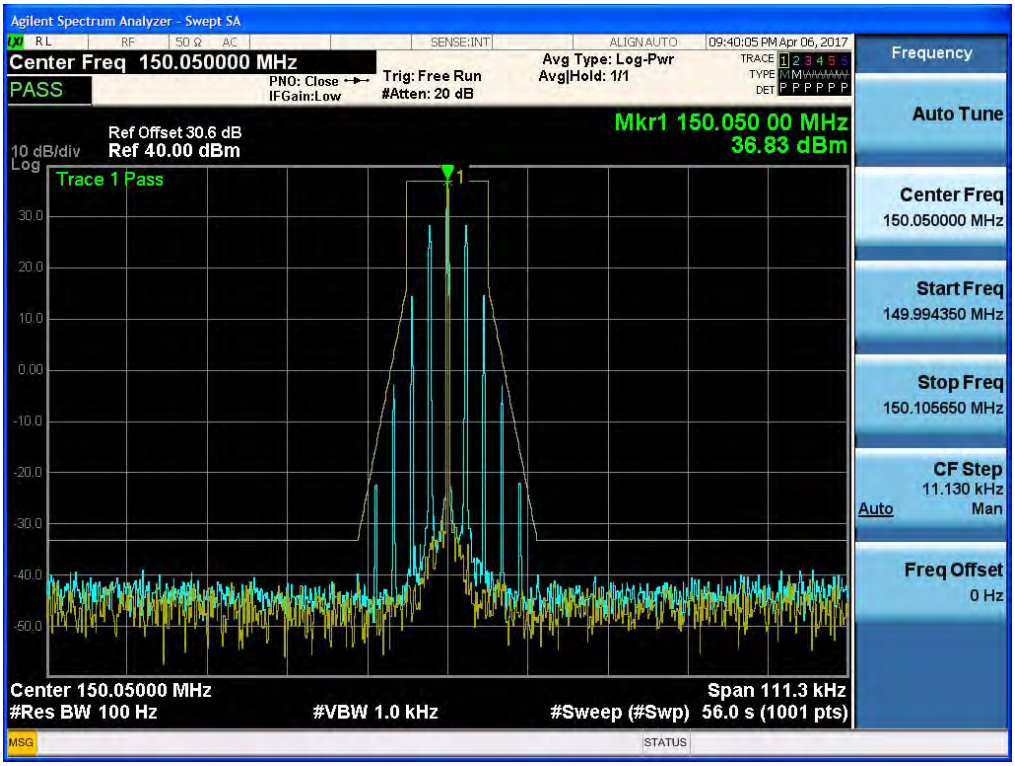
c) Set the center frequency of the spectrum analyzer to the assigned transmitter frequency. Key the transmitter, and set the level of the unmodulated carrier to a full scale reference line.
   This is the 0 dB reference for the measurement.

d) Modulate the transmitter with a 2500 Hz sine wave at an input level 16 dB greater than that necessary to produce 50% of rated system deviation. The input level shall be established at the frequency of maximum response of the audio modulating circuit. Transmitters employing digital modulation techniques that bypass the limiter and the audio low-pass filter shall be modulated as specified by the manufacturer.

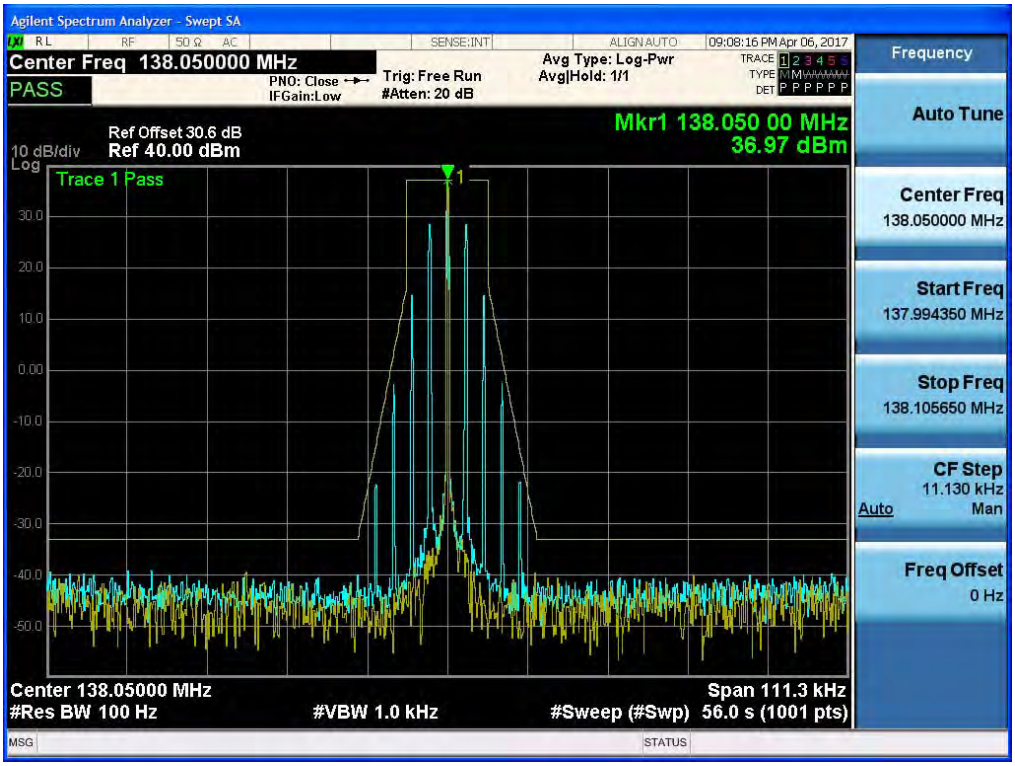
e) Record the resulting spectrum analyzer presentation of the emission level with an on-line recording device or in a photograph. It is recommended that the emission limit (as given in 3.2.11) be drawn on the plotted graph or photograph. The spectrum analyzer presentation is the sideband spectrum.

▣ Plots of Emission Mask

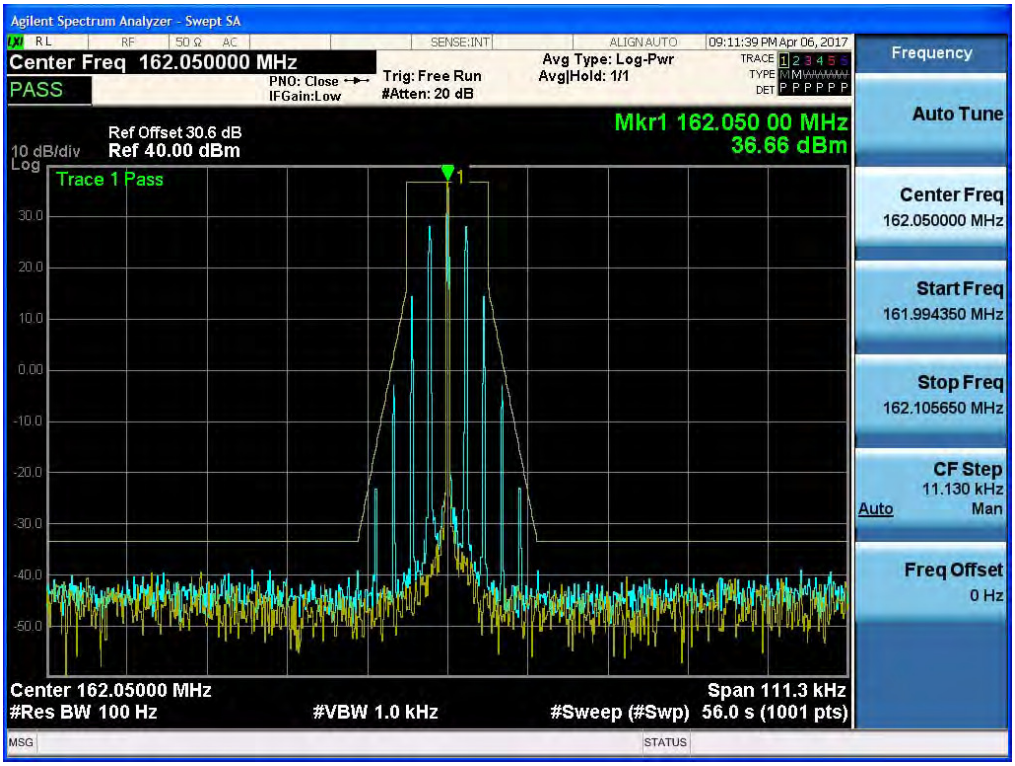
(11K0F3E _ 150.05 MHz)_High



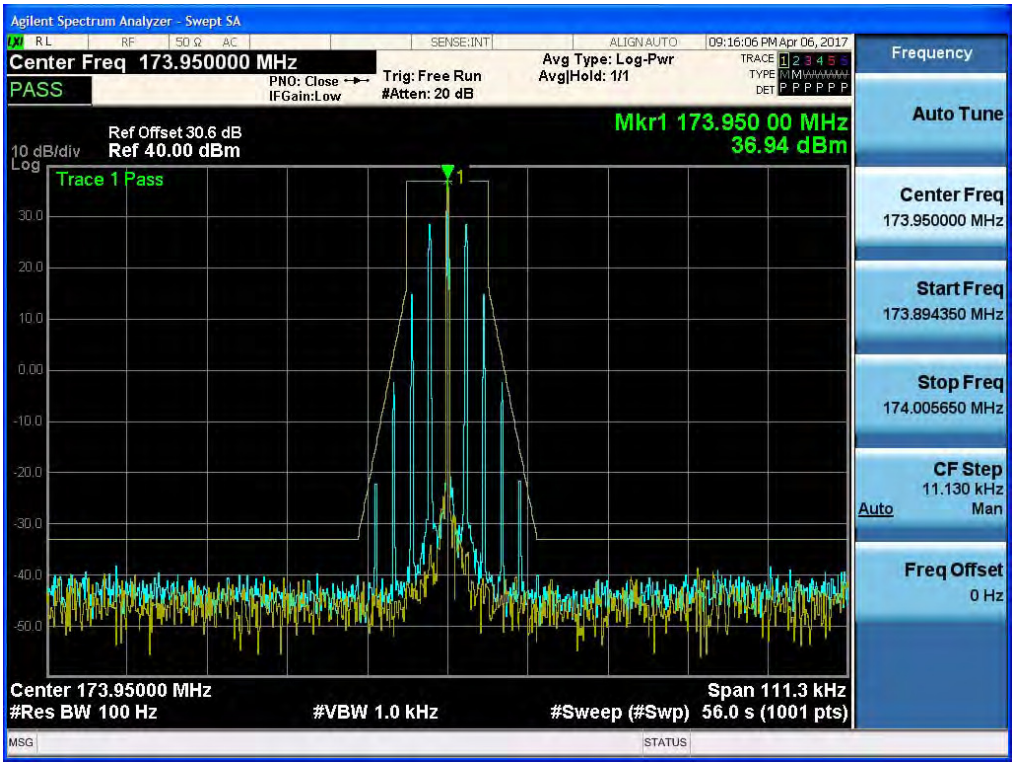
(11K0F3E _ 138.05 MHz)_High



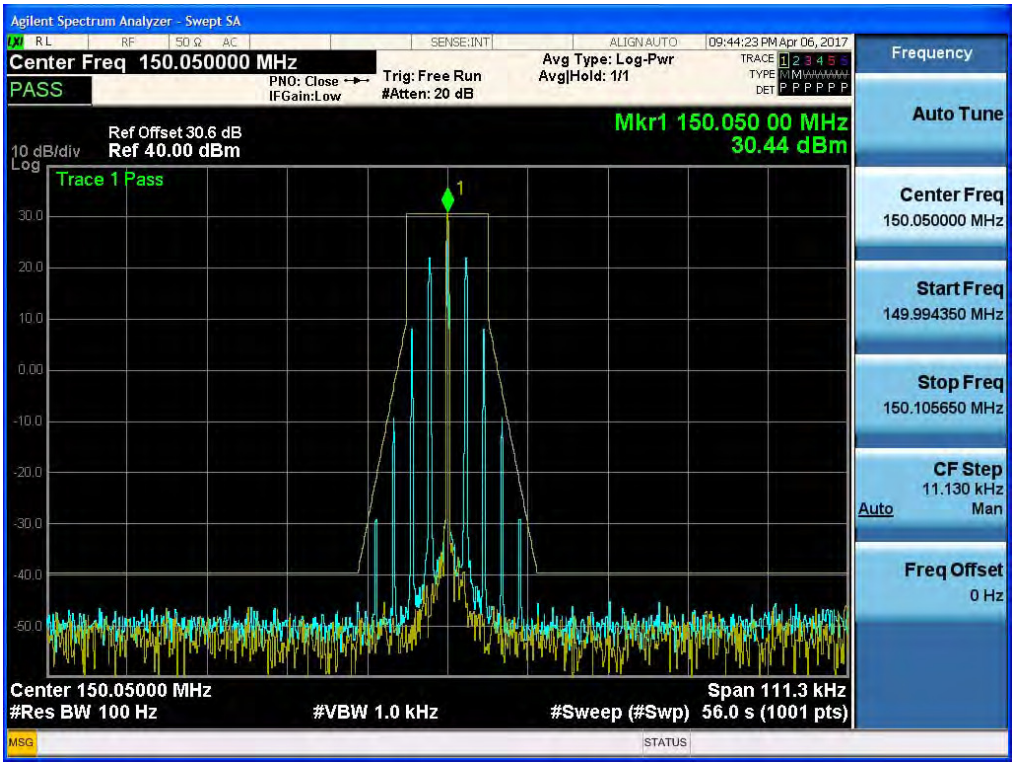
(11K0F3E _ 162.05 MHz)_High



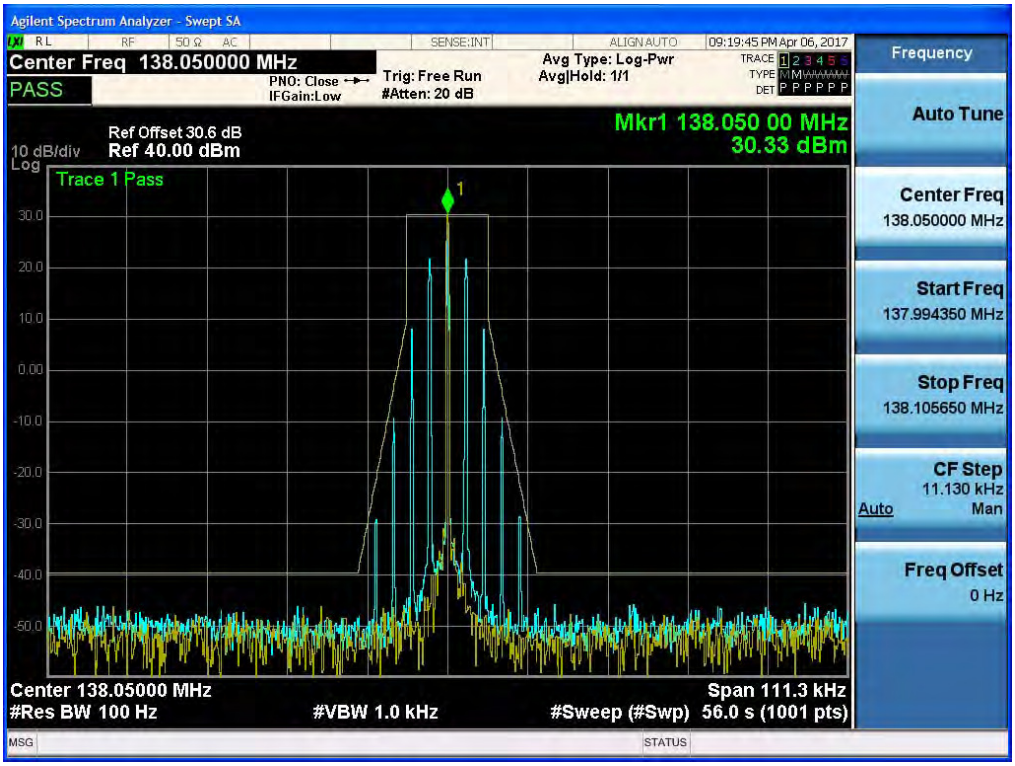
(11K0F3E _ 173.95 MHz)_High



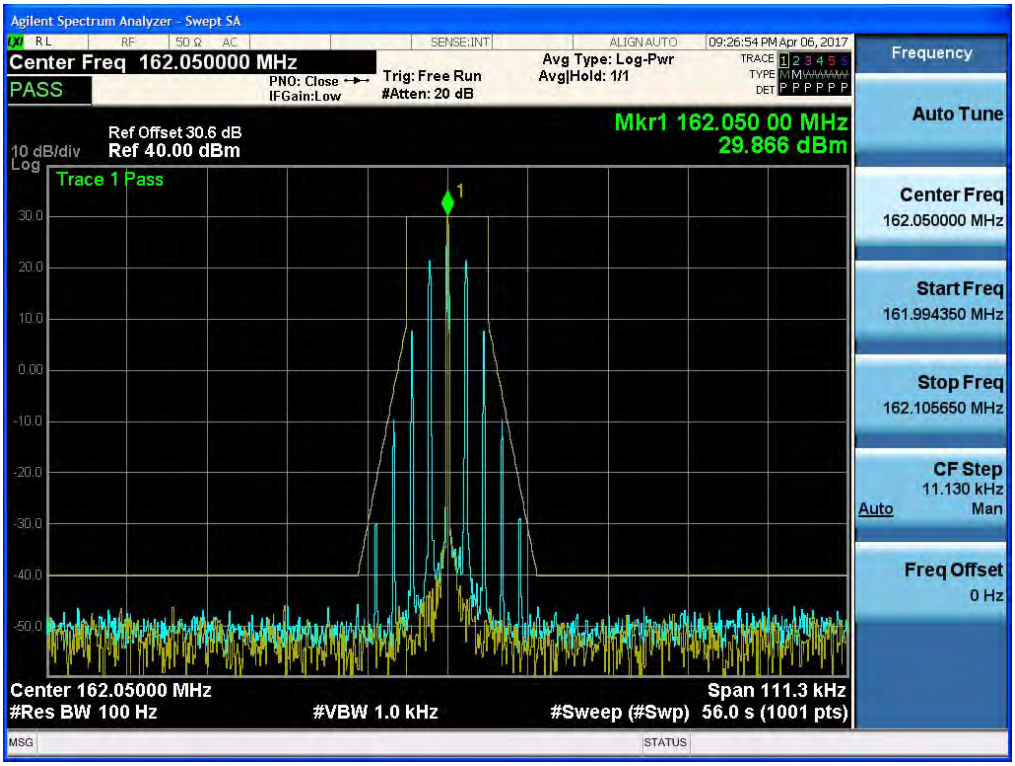
(11K0F3E _ 150.05 MHz)_Low



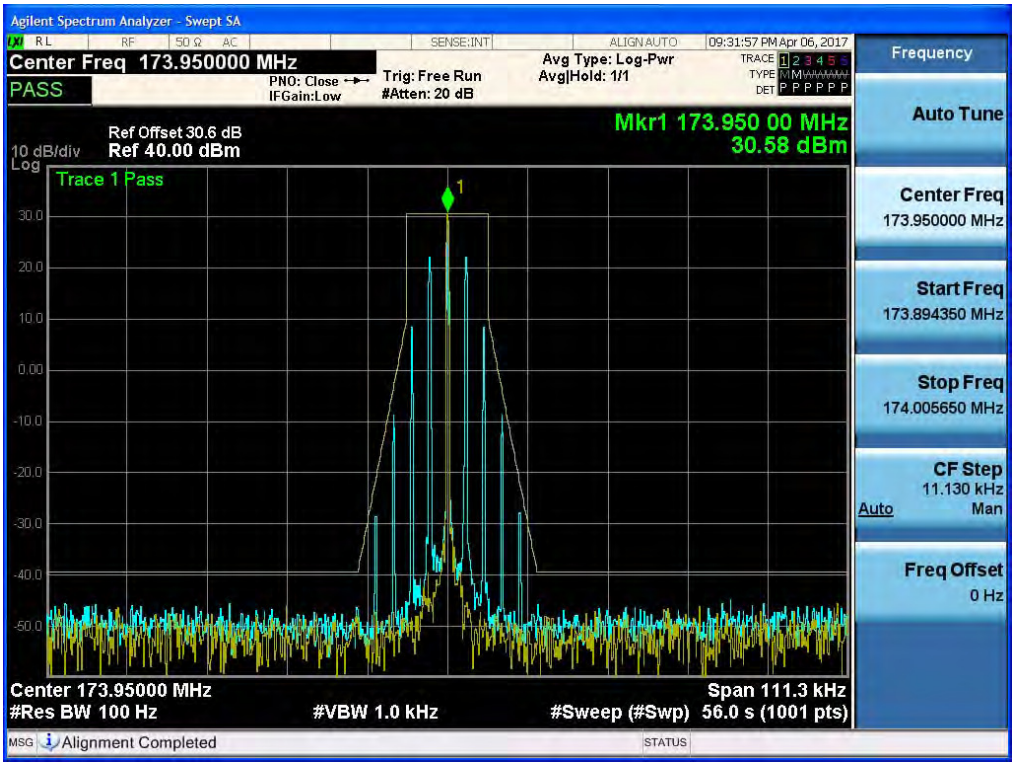
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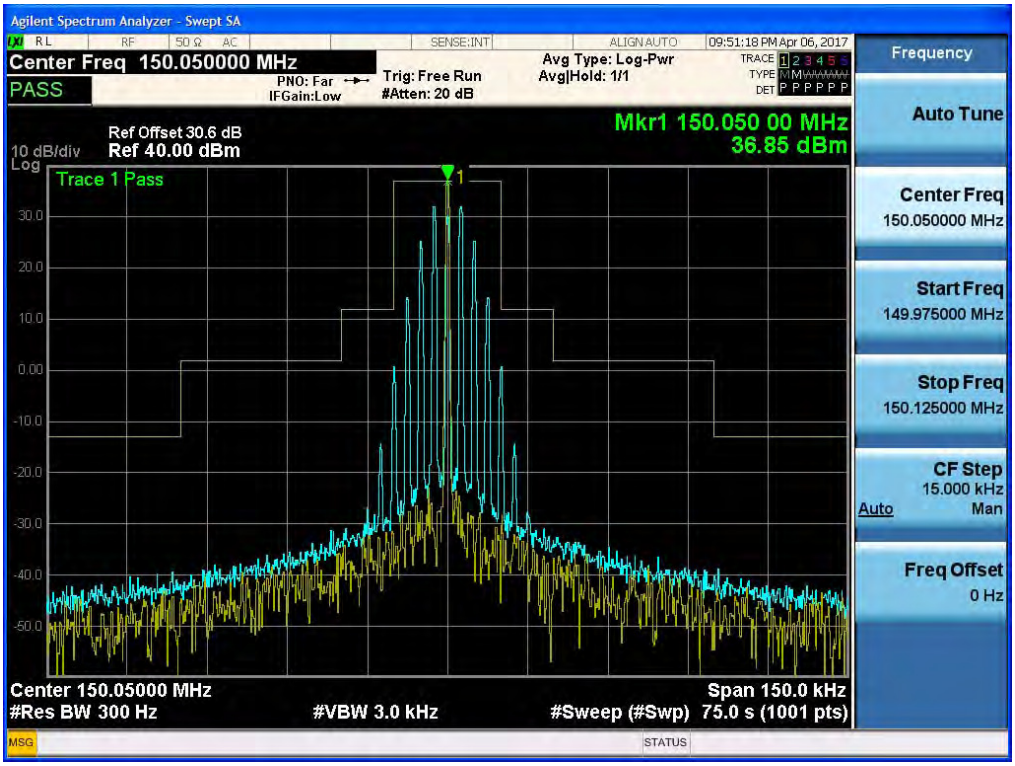
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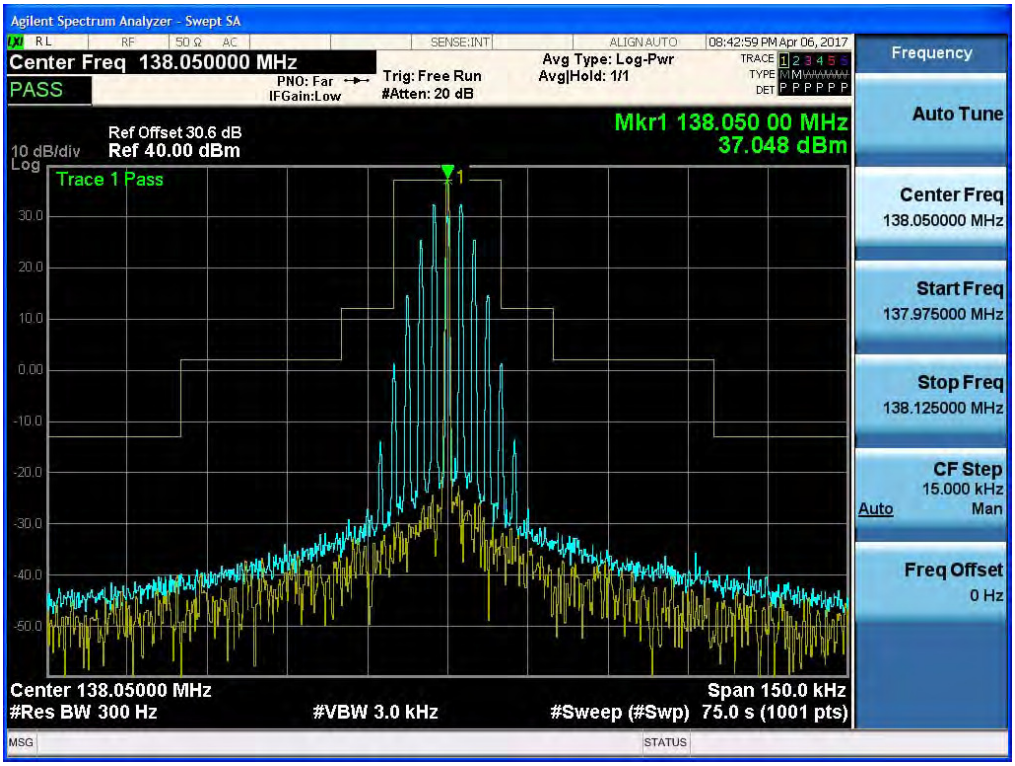
(11K0F3E _ 173.95 MHz)_Low



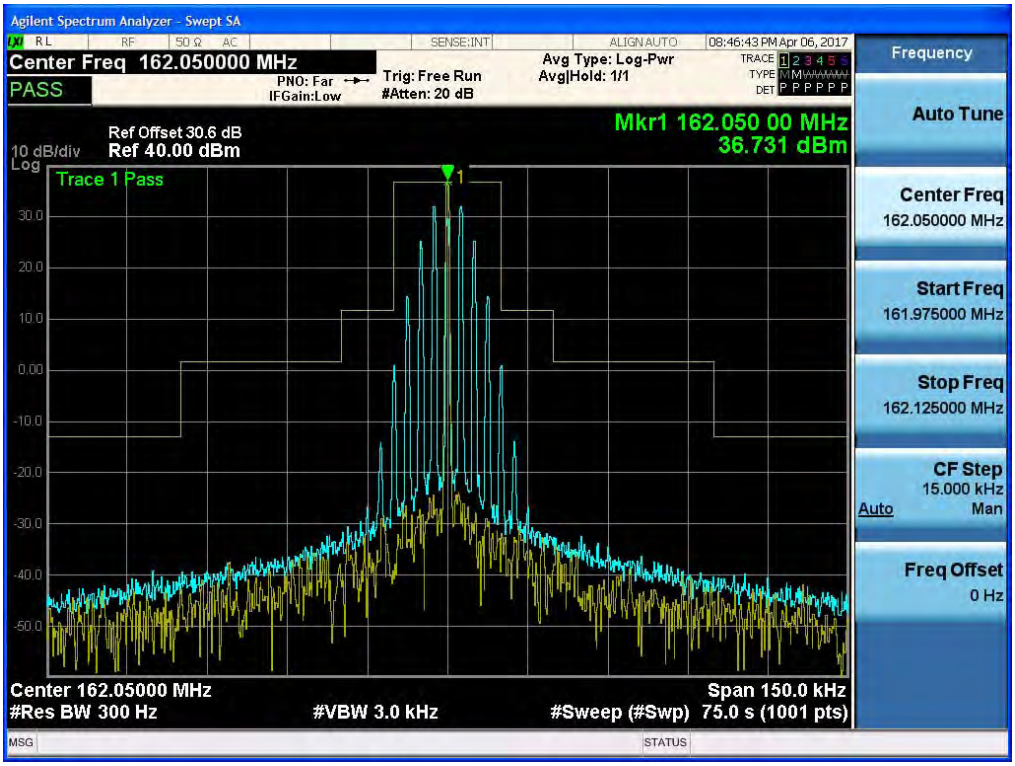
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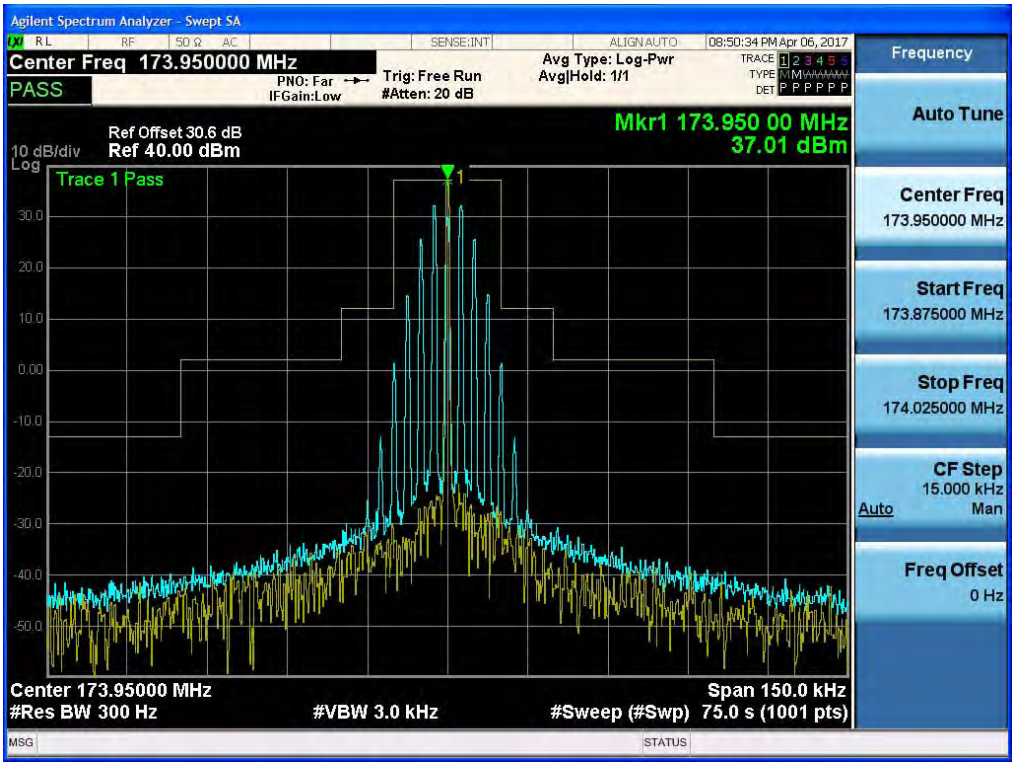
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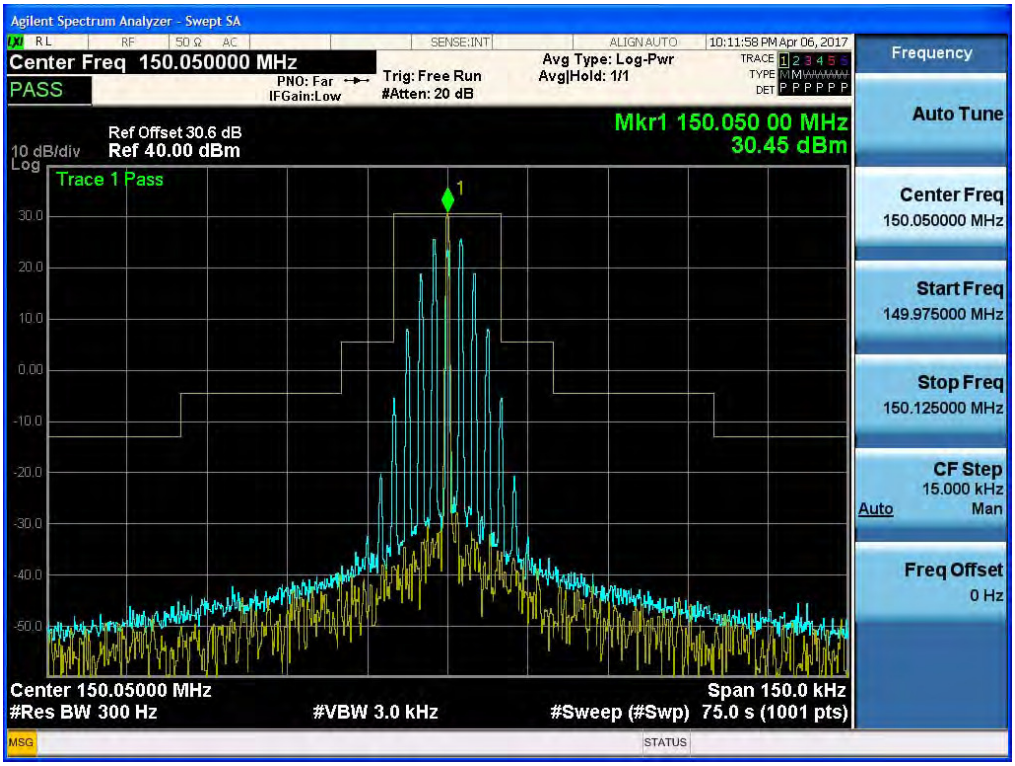
(16K0F3E _ 162.05 MHz)_High



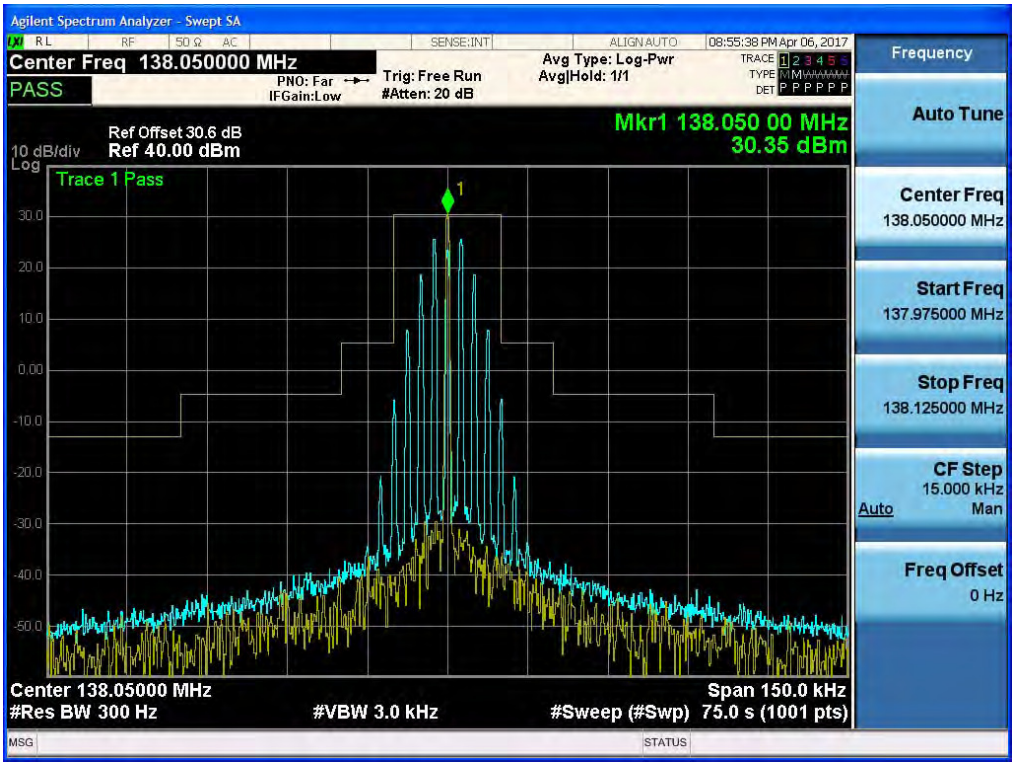
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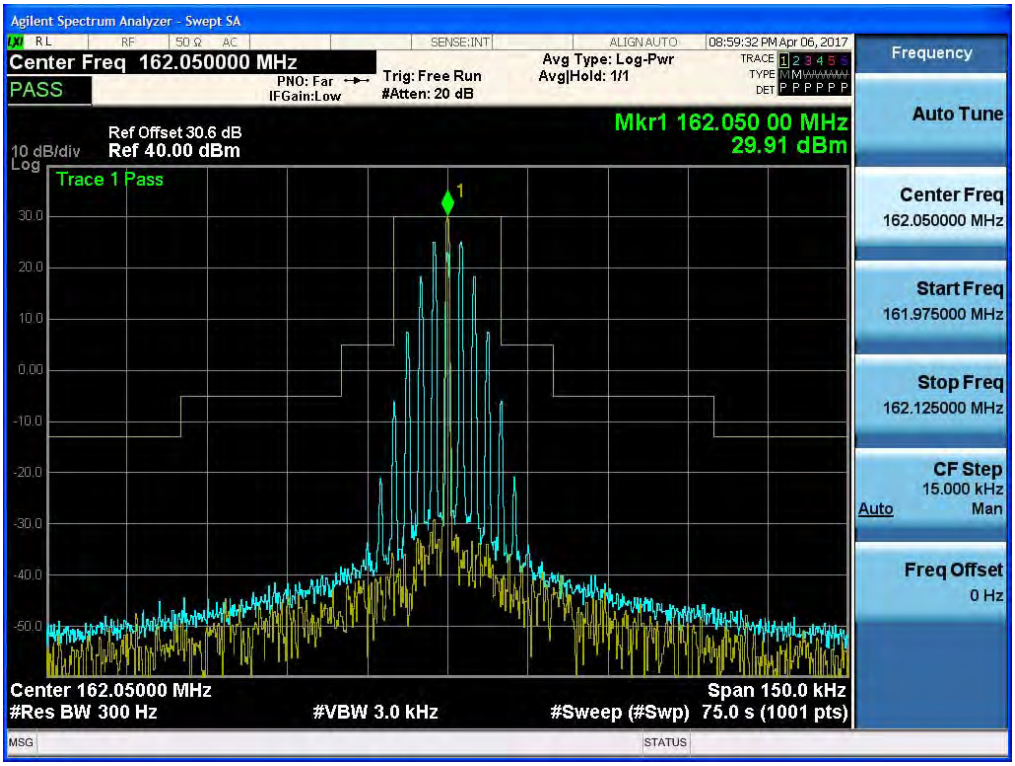
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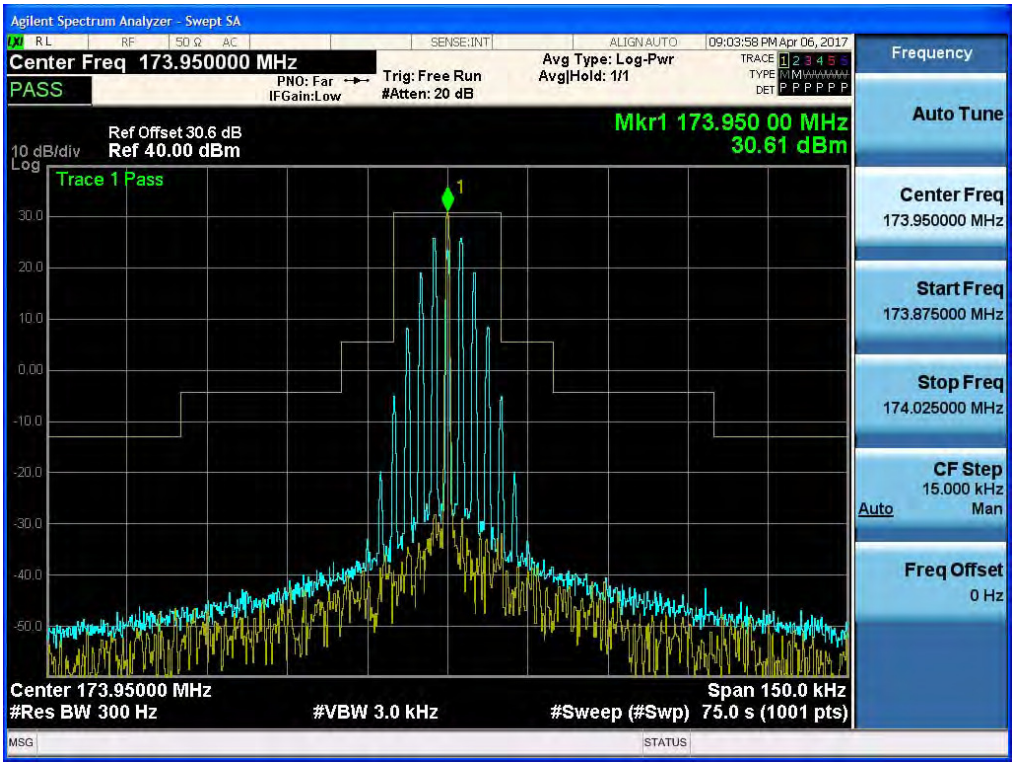
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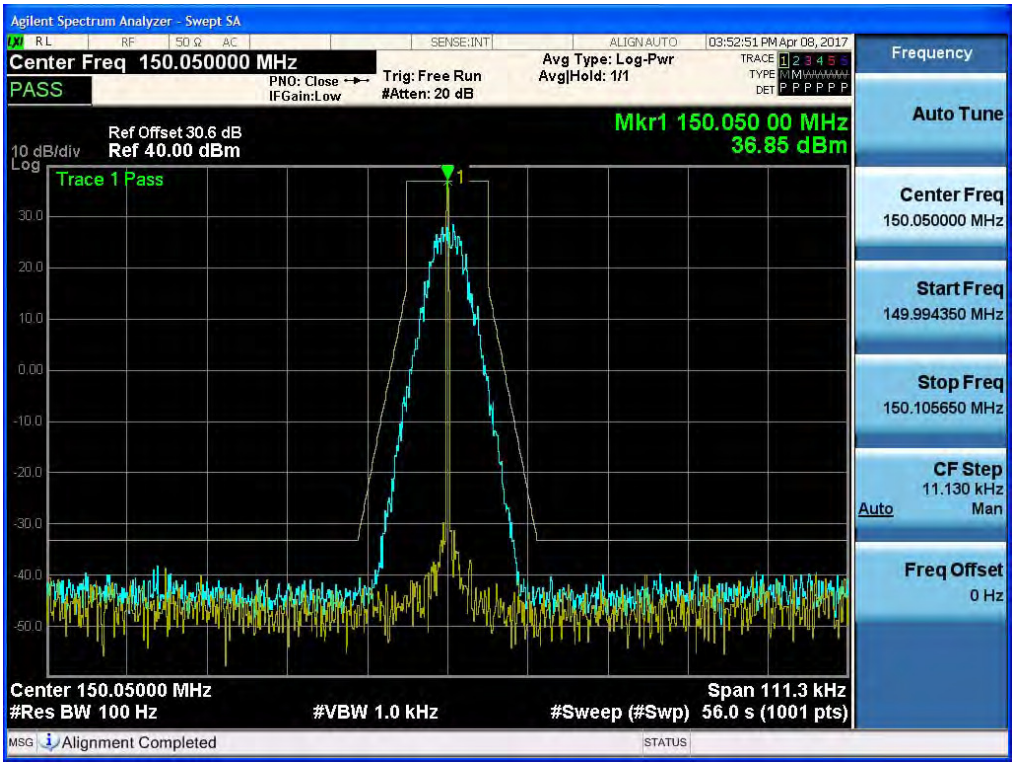
(16K0F3E _ 162.05 MHz)_Low



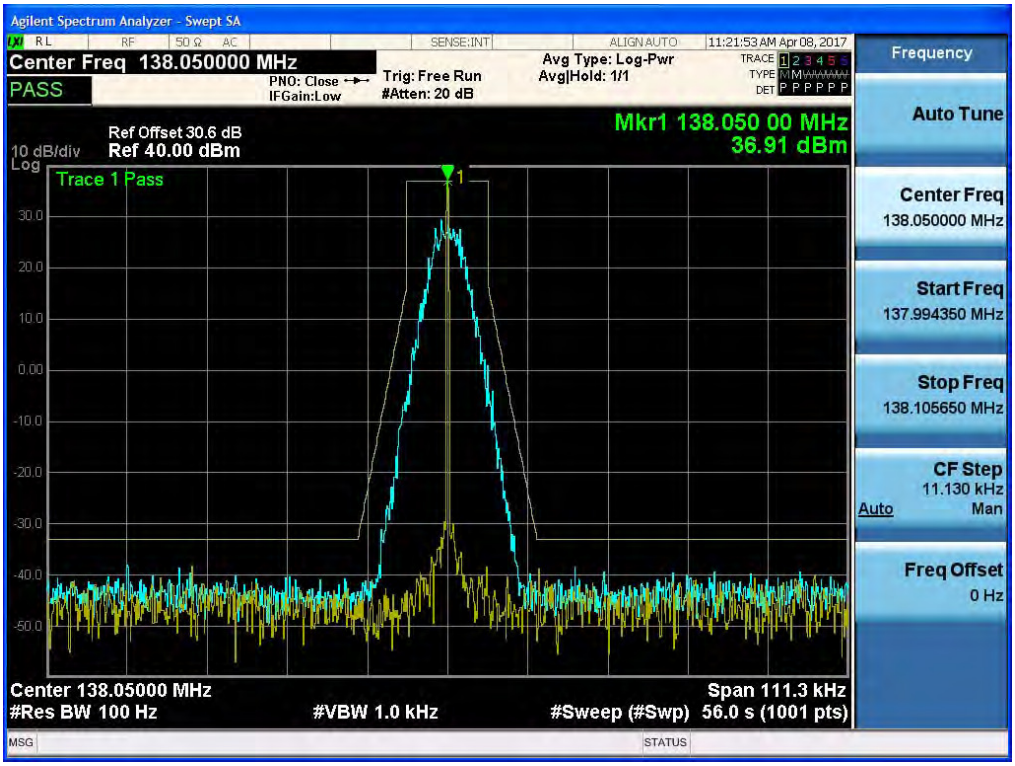
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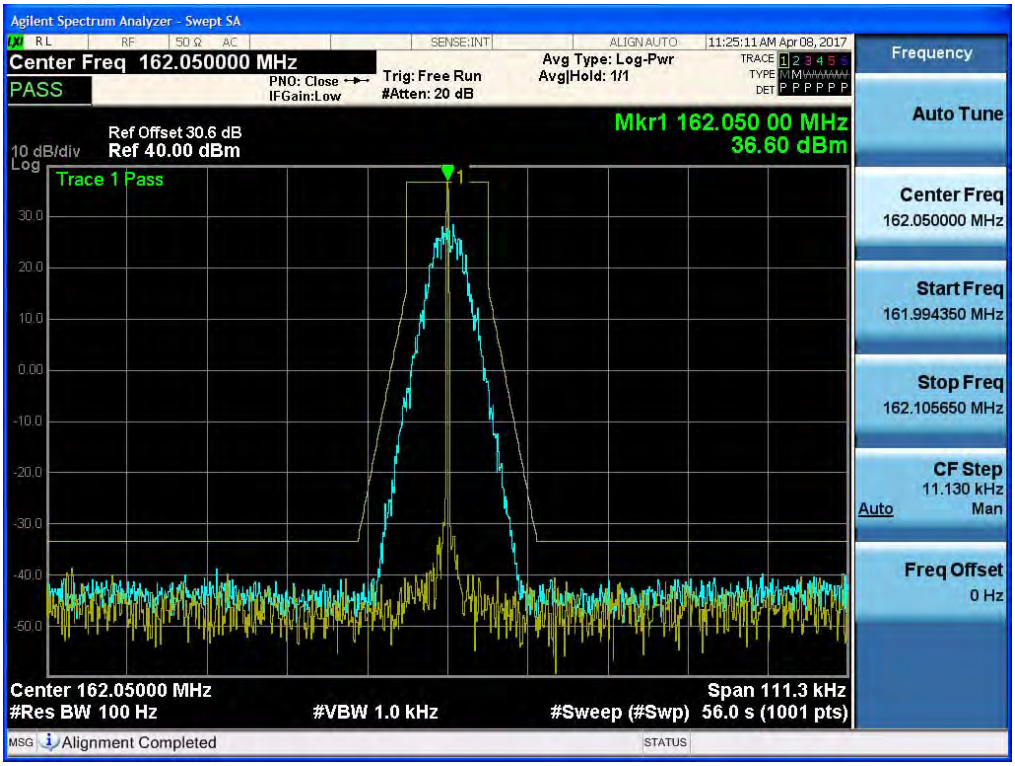
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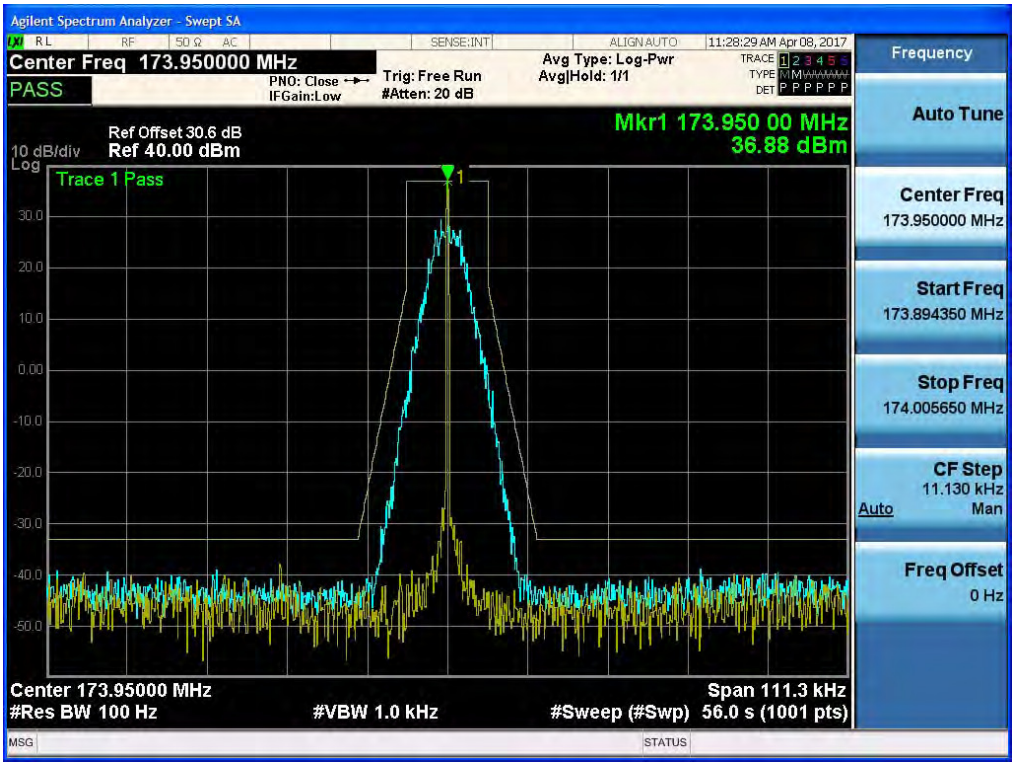
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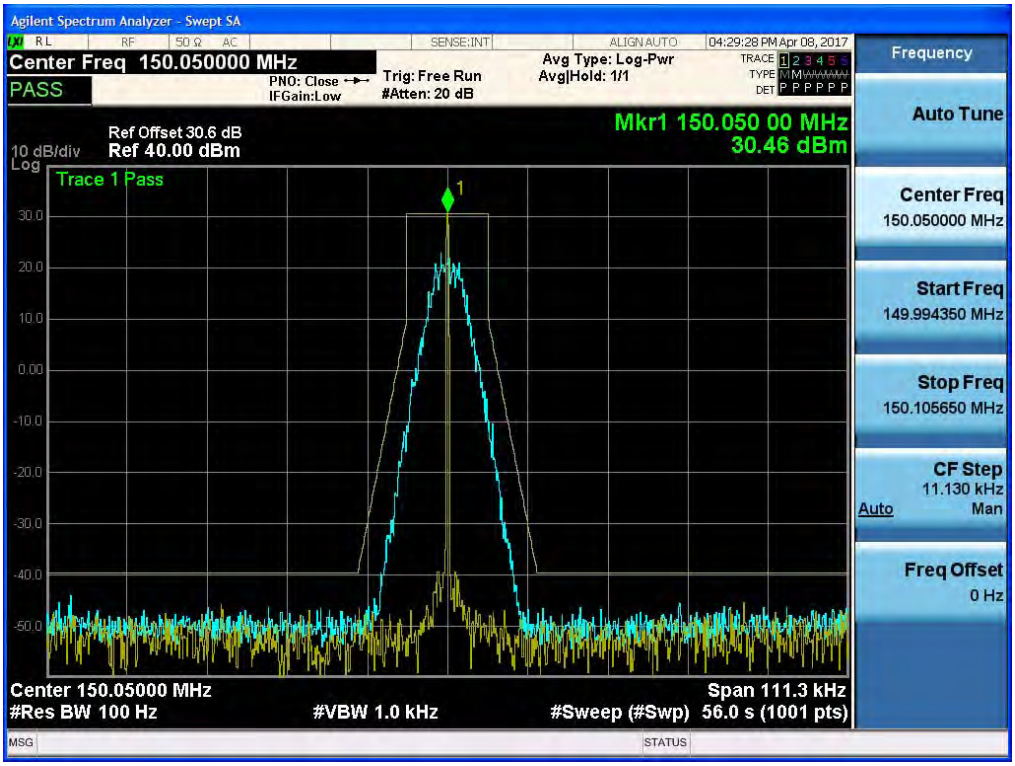
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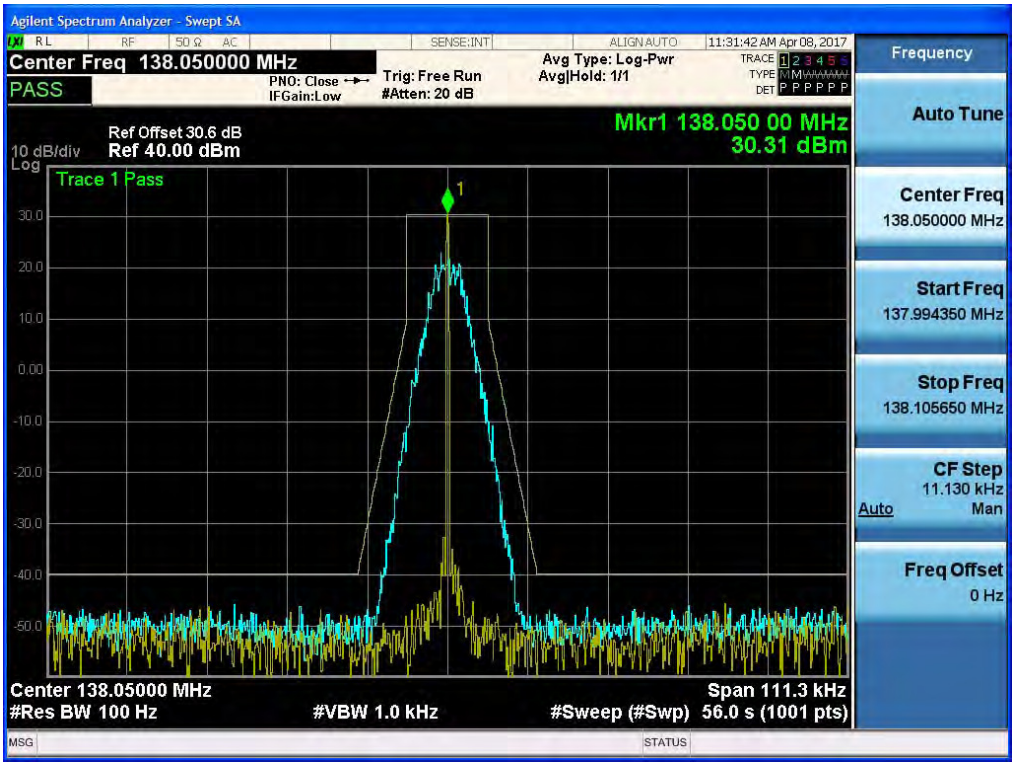
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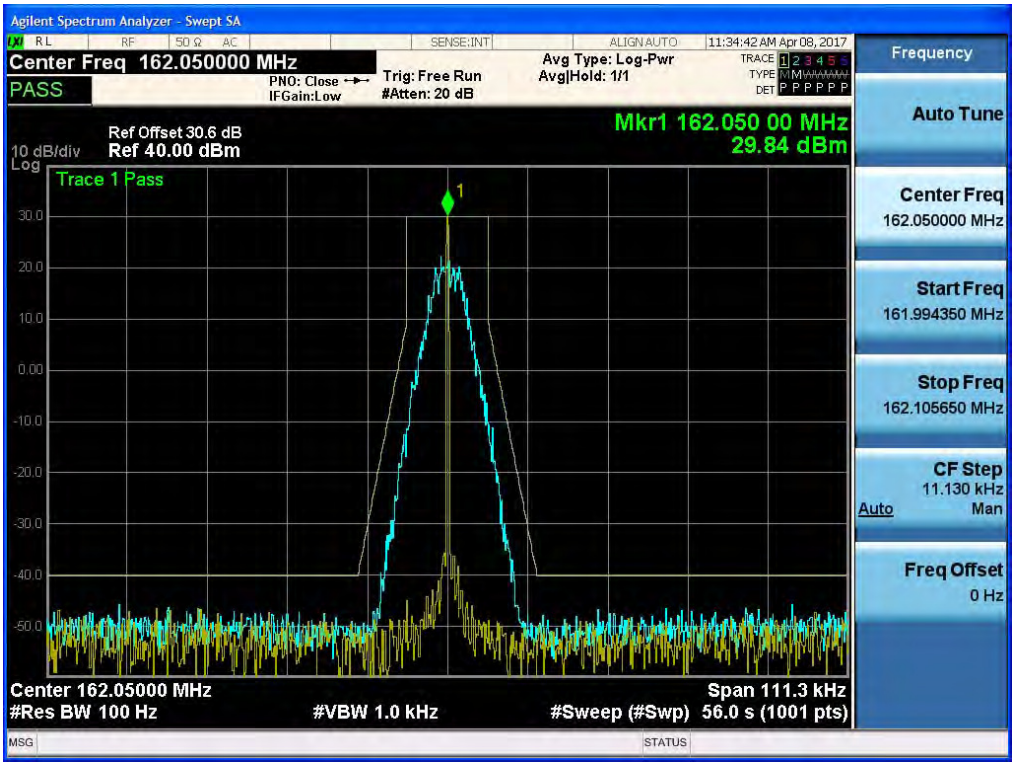
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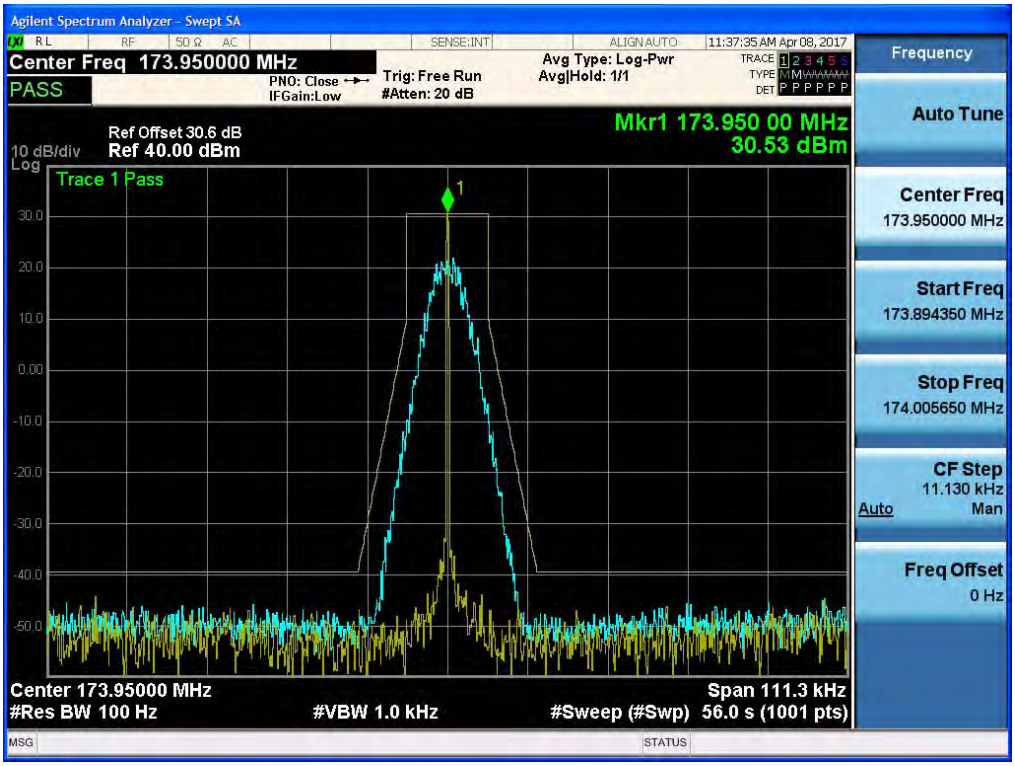
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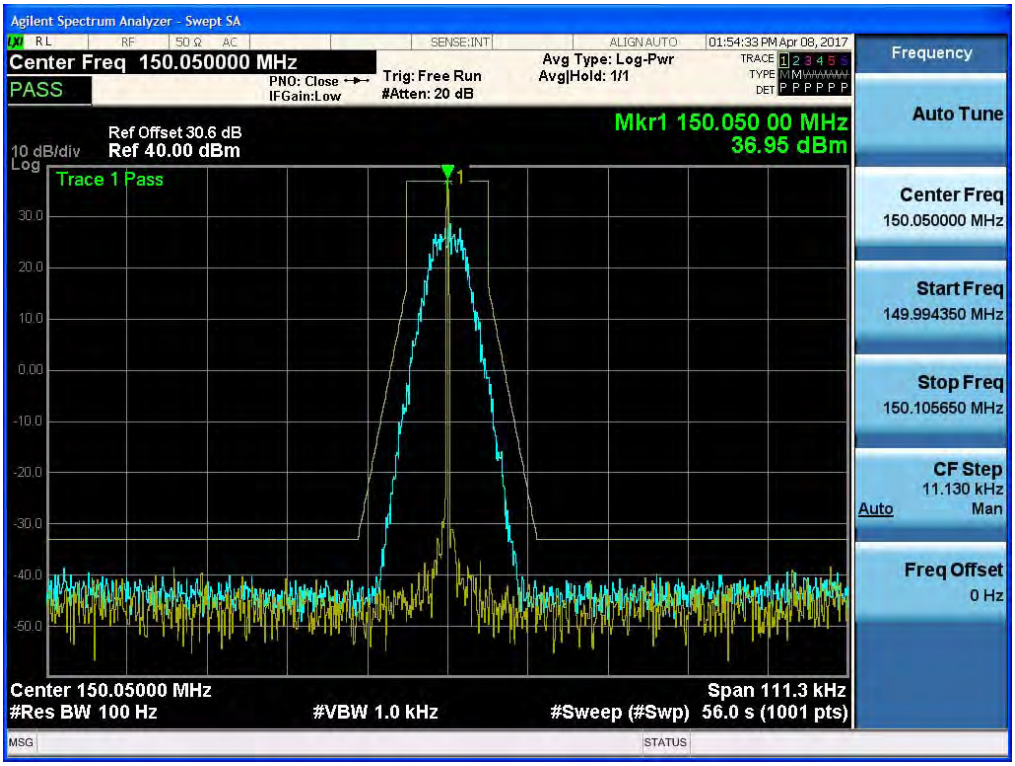
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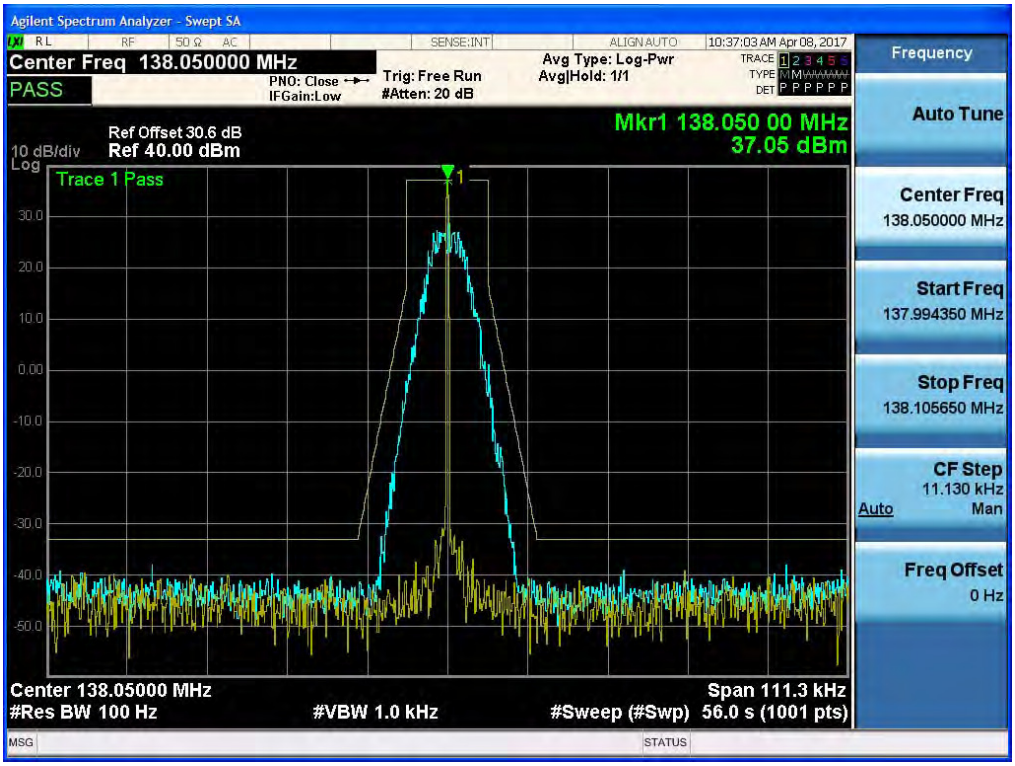
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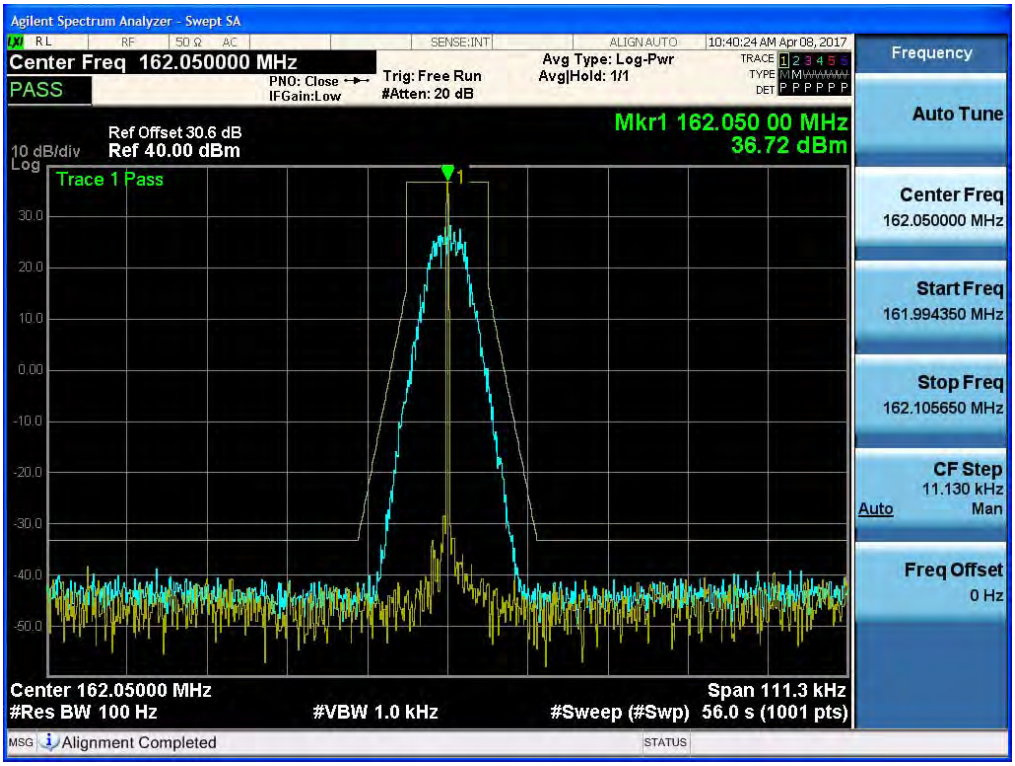
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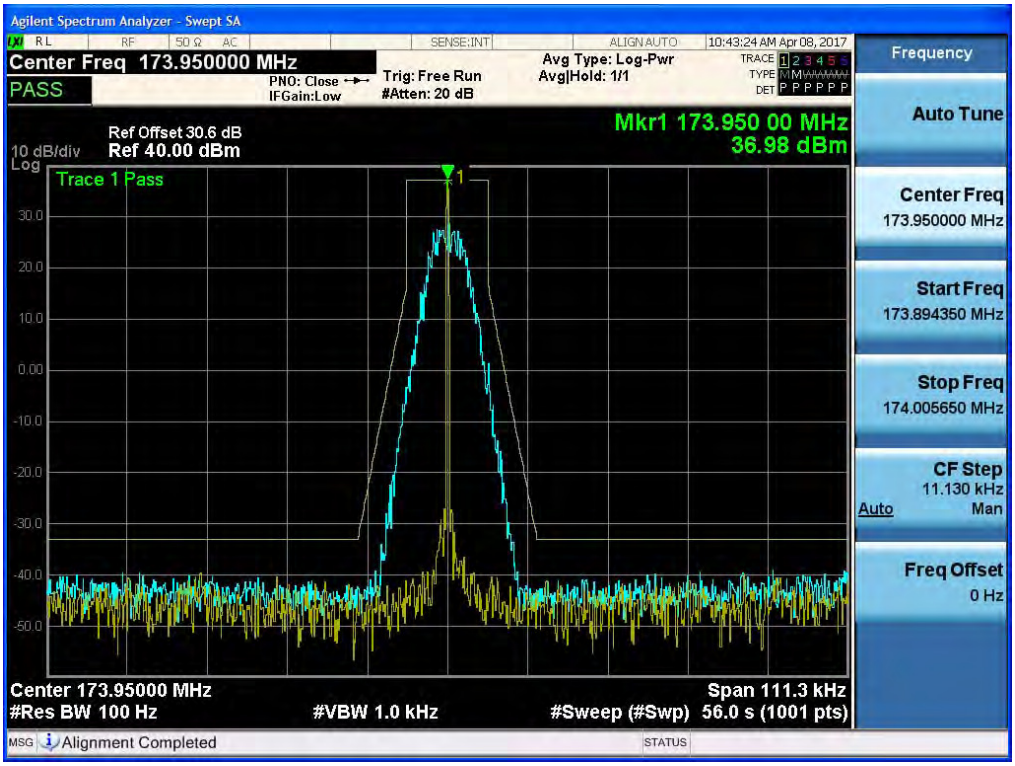
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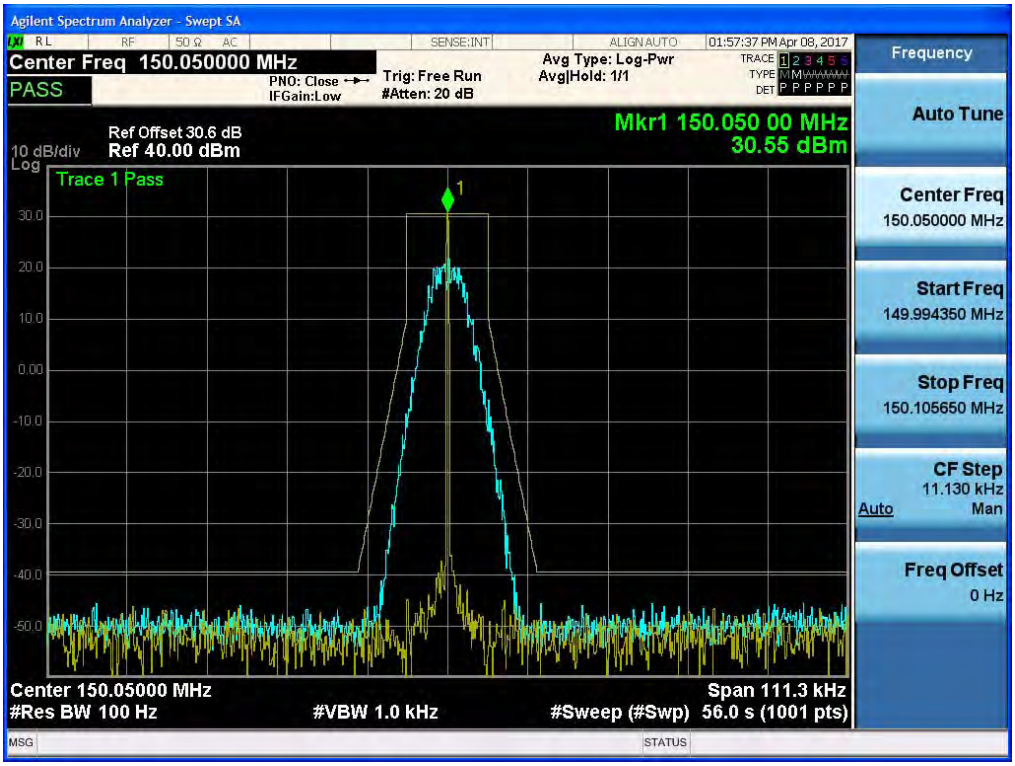
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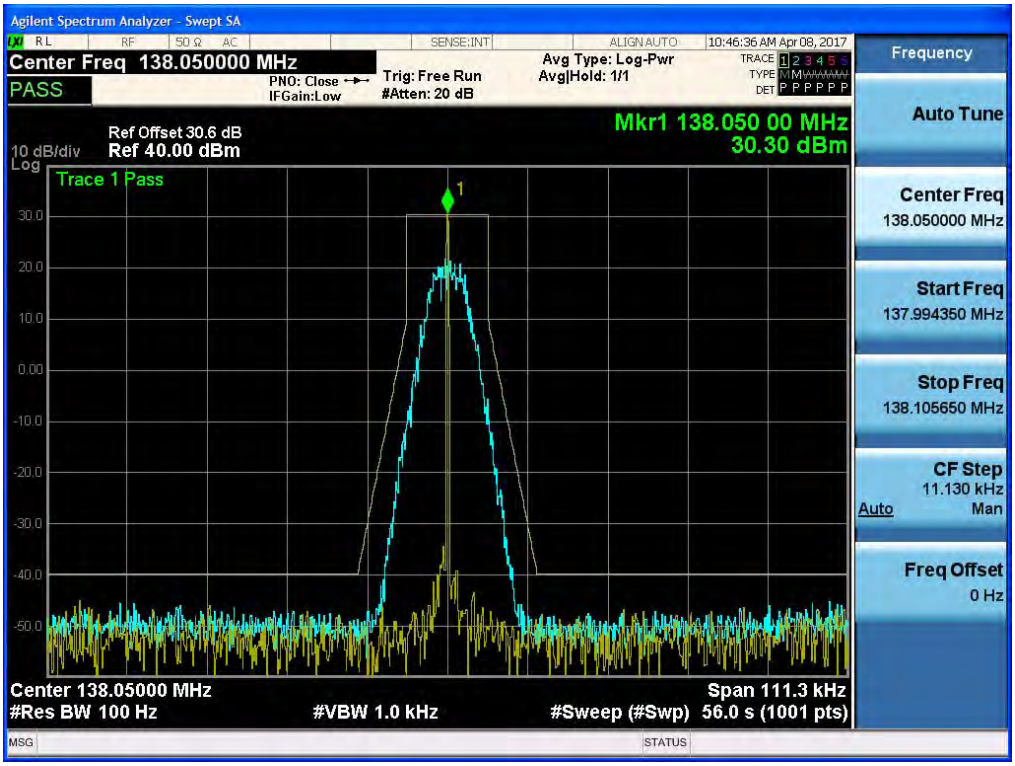
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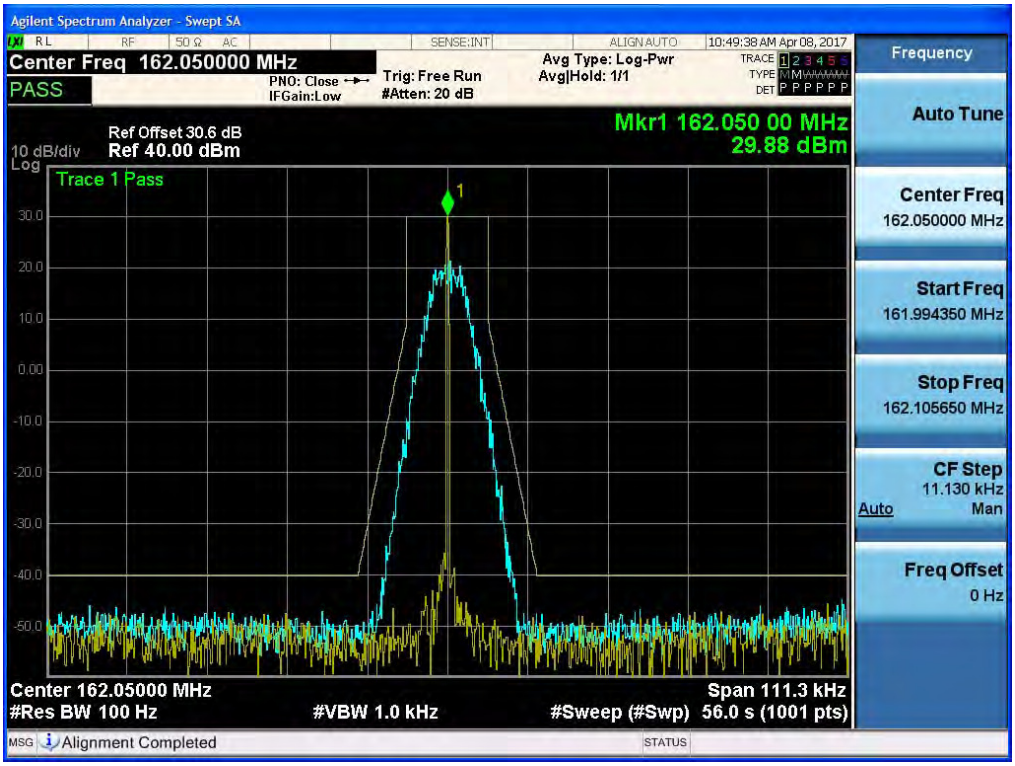
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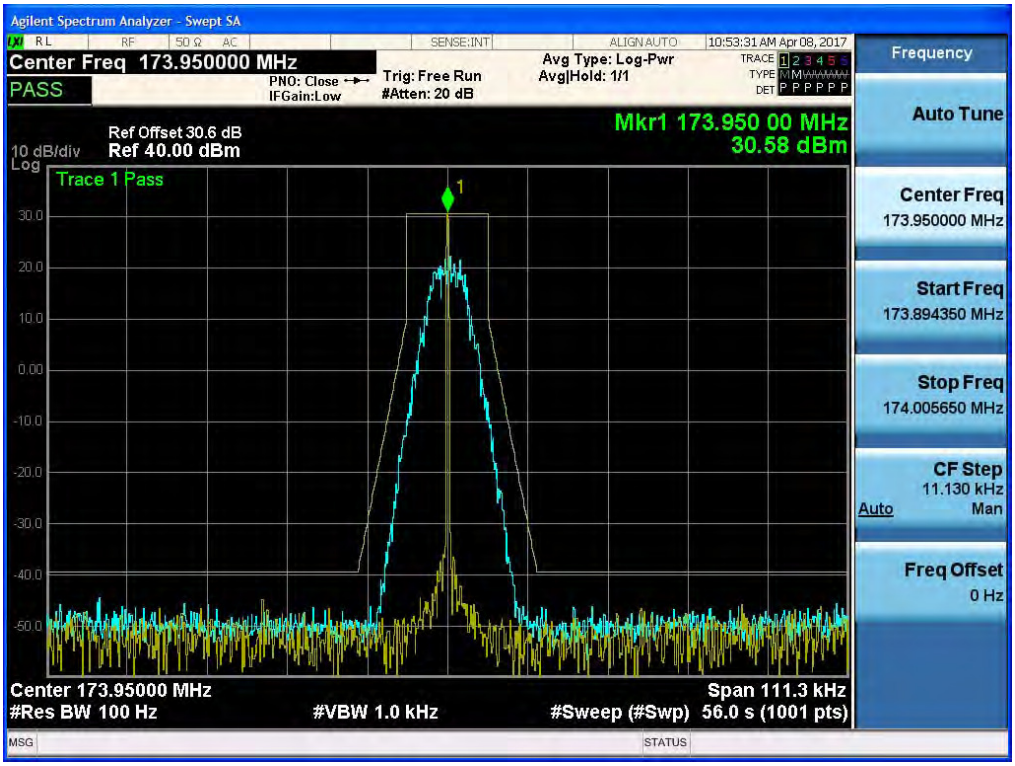
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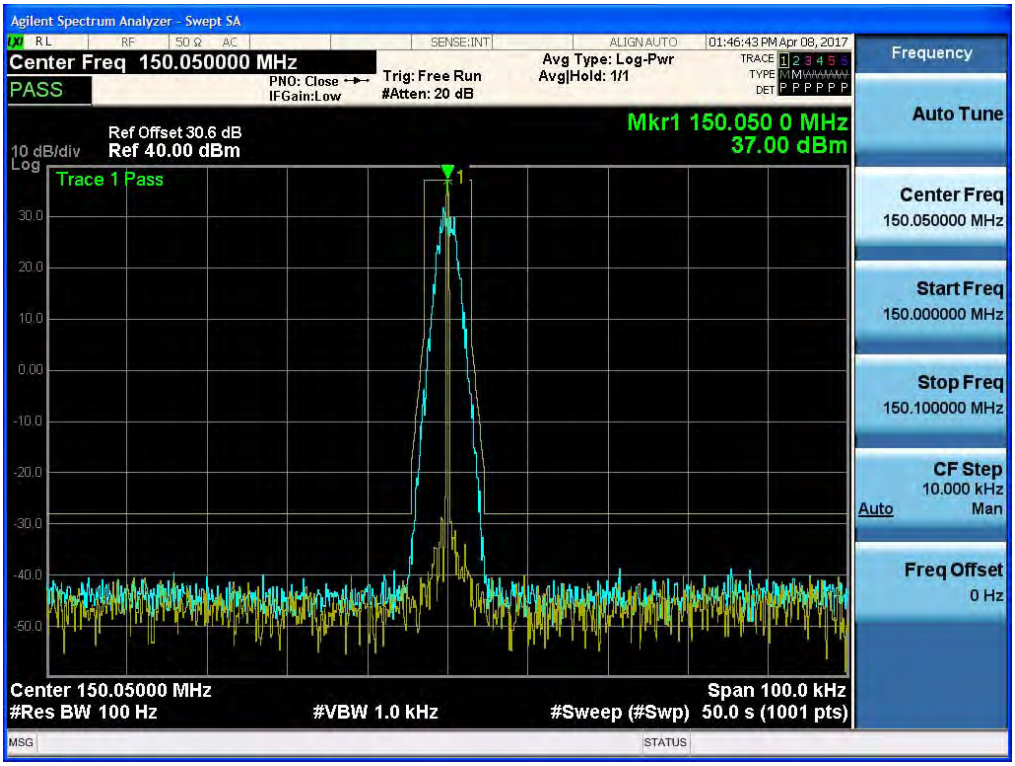
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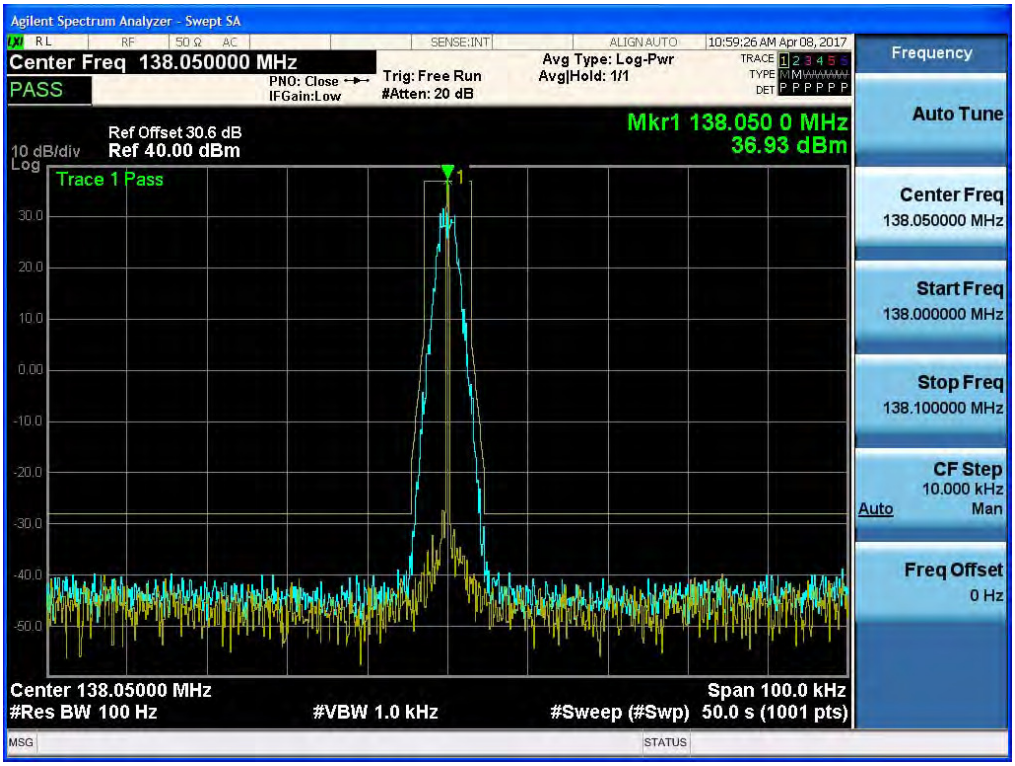
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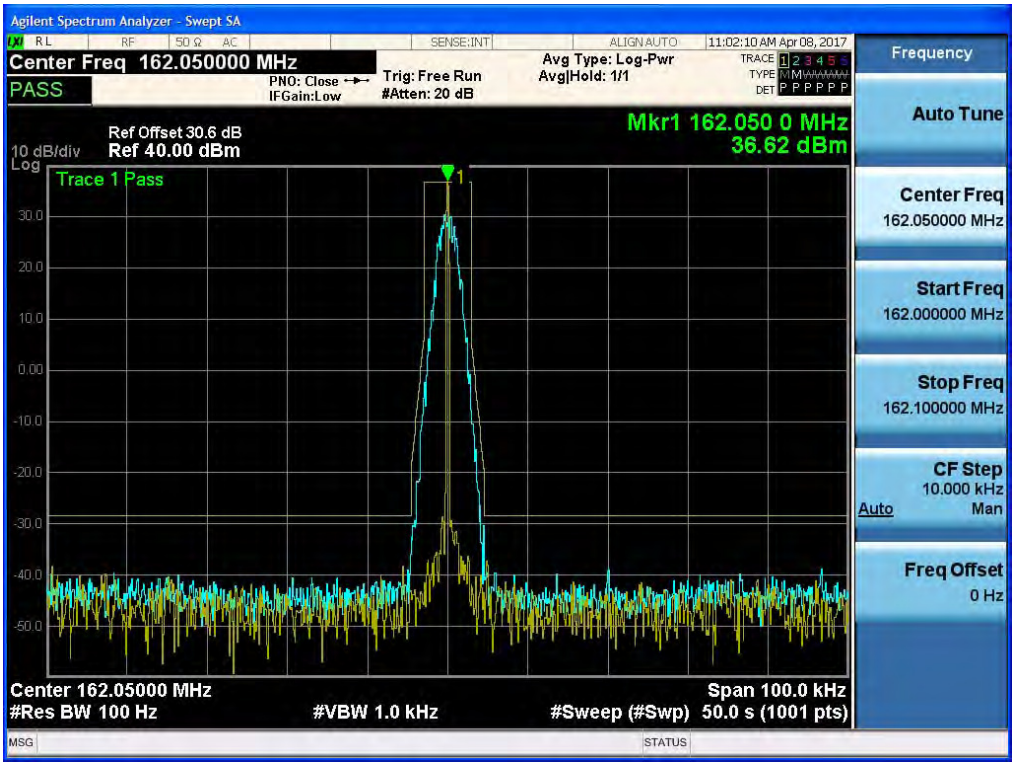
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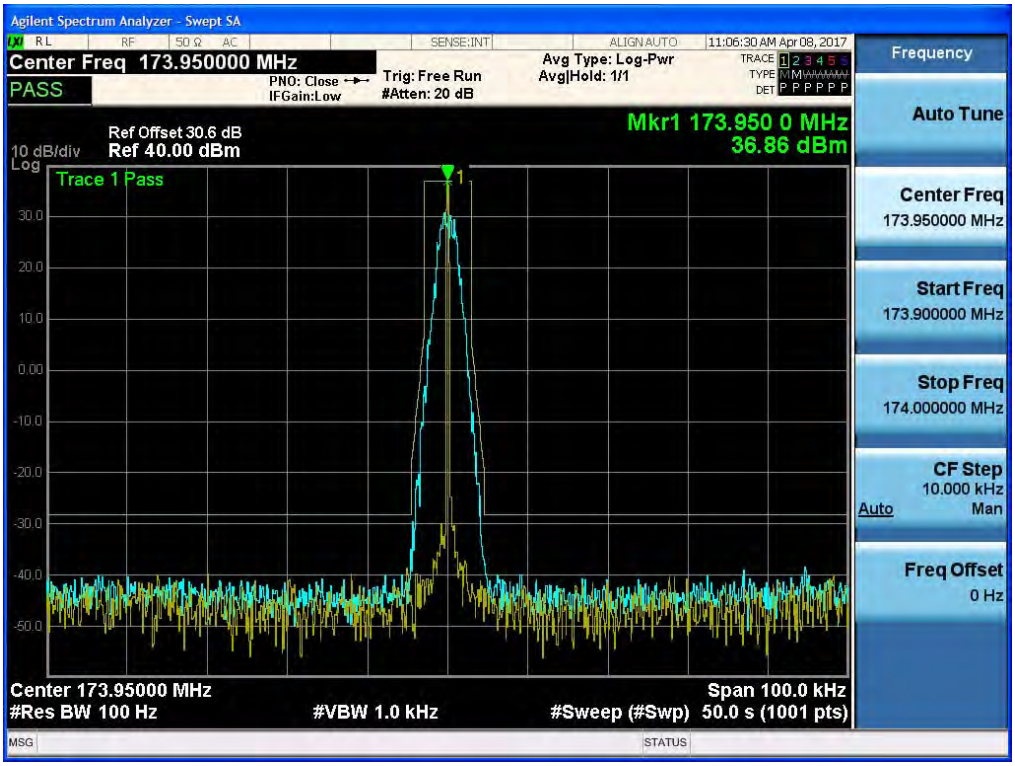
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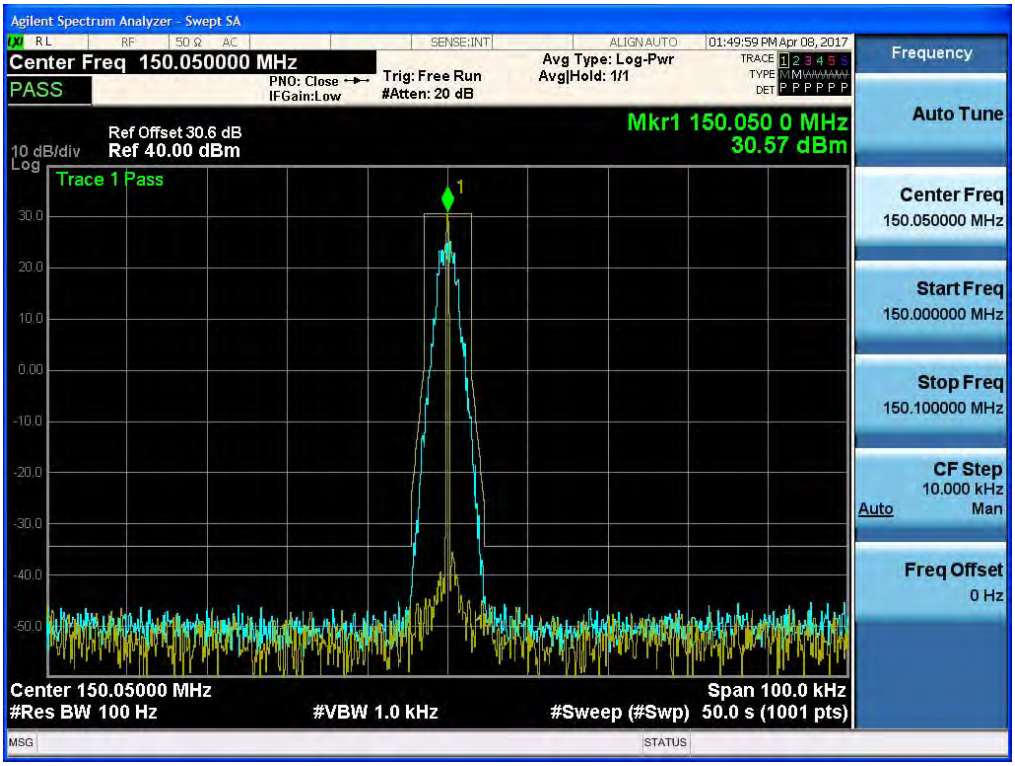
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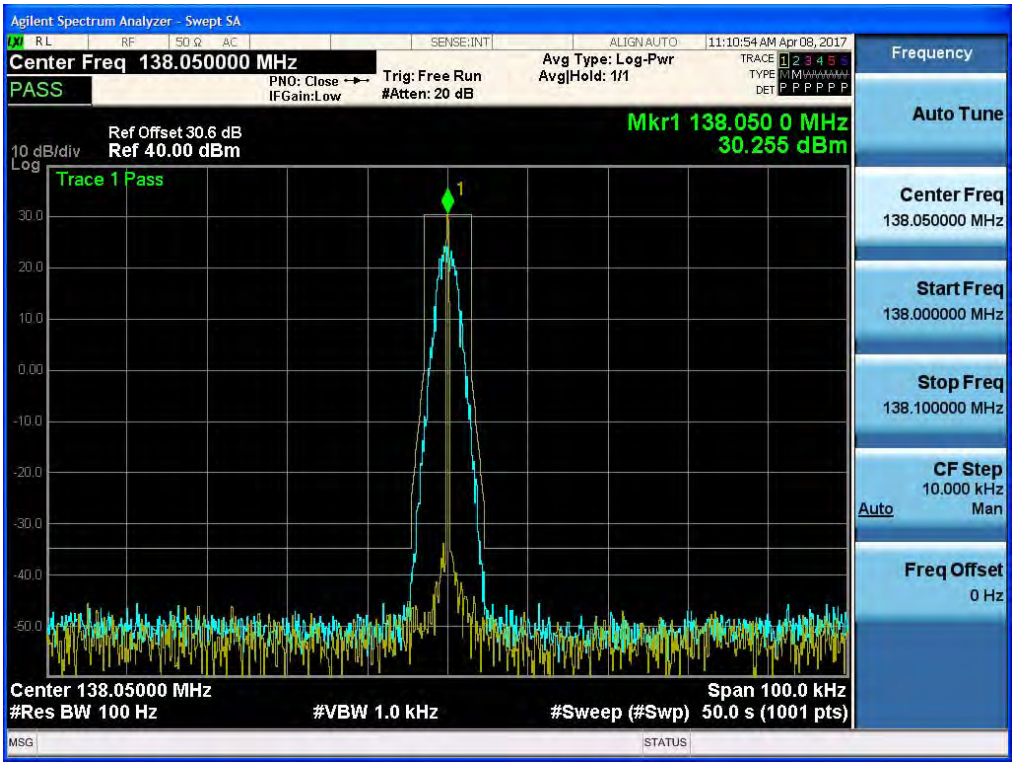
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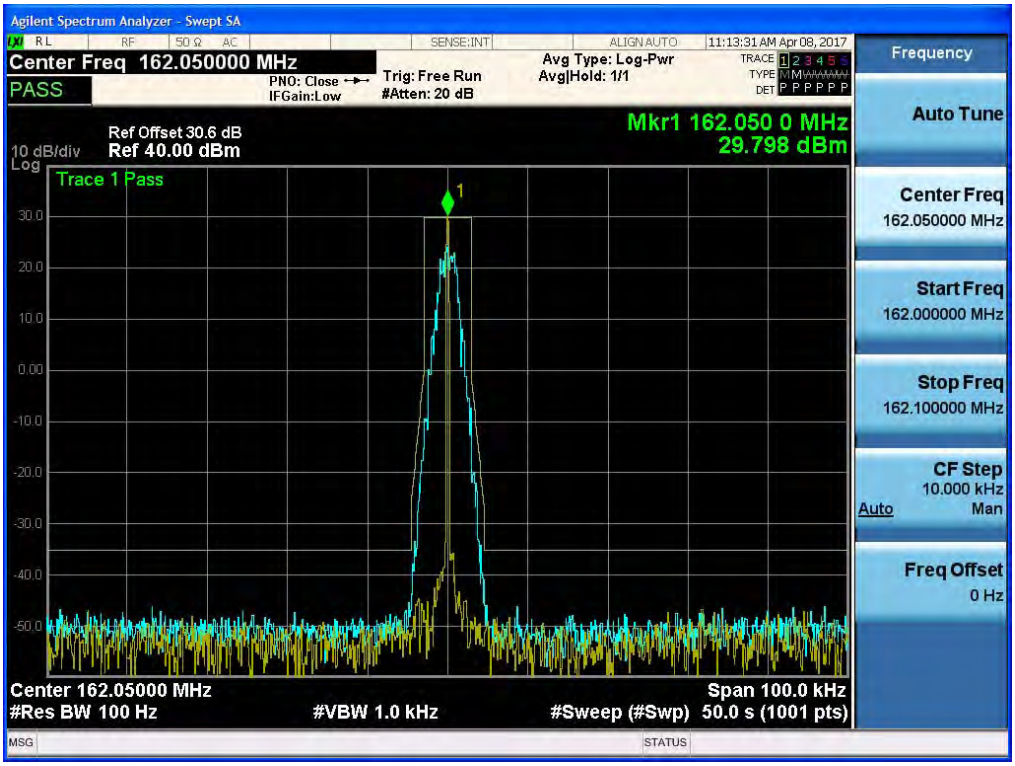
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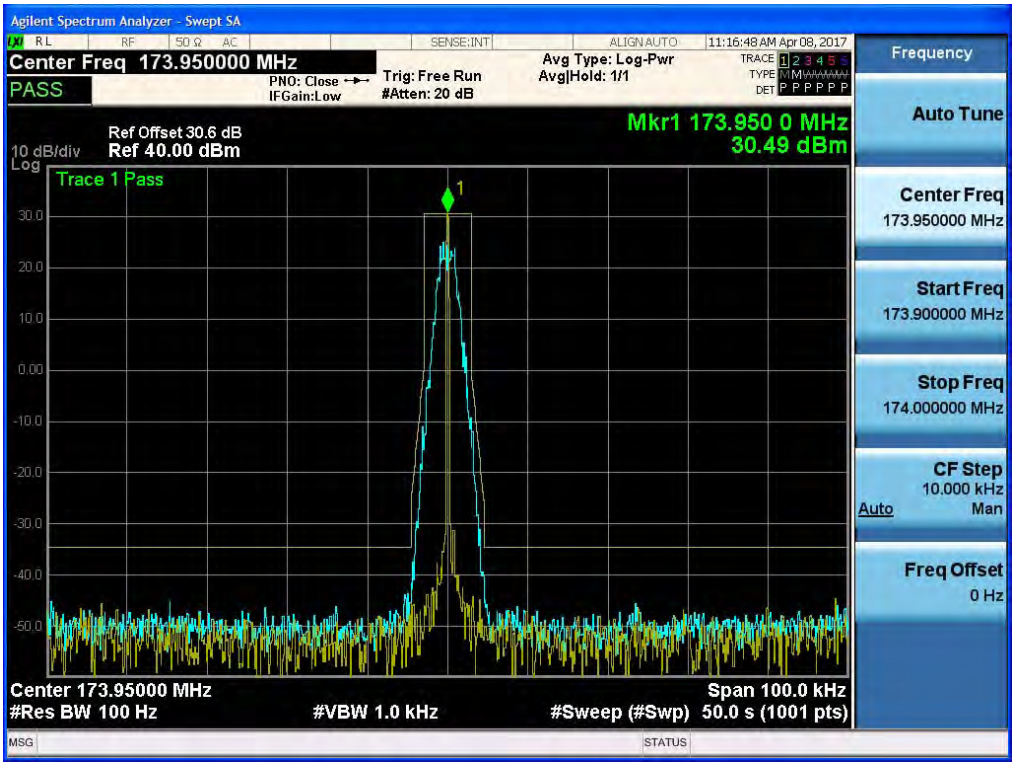
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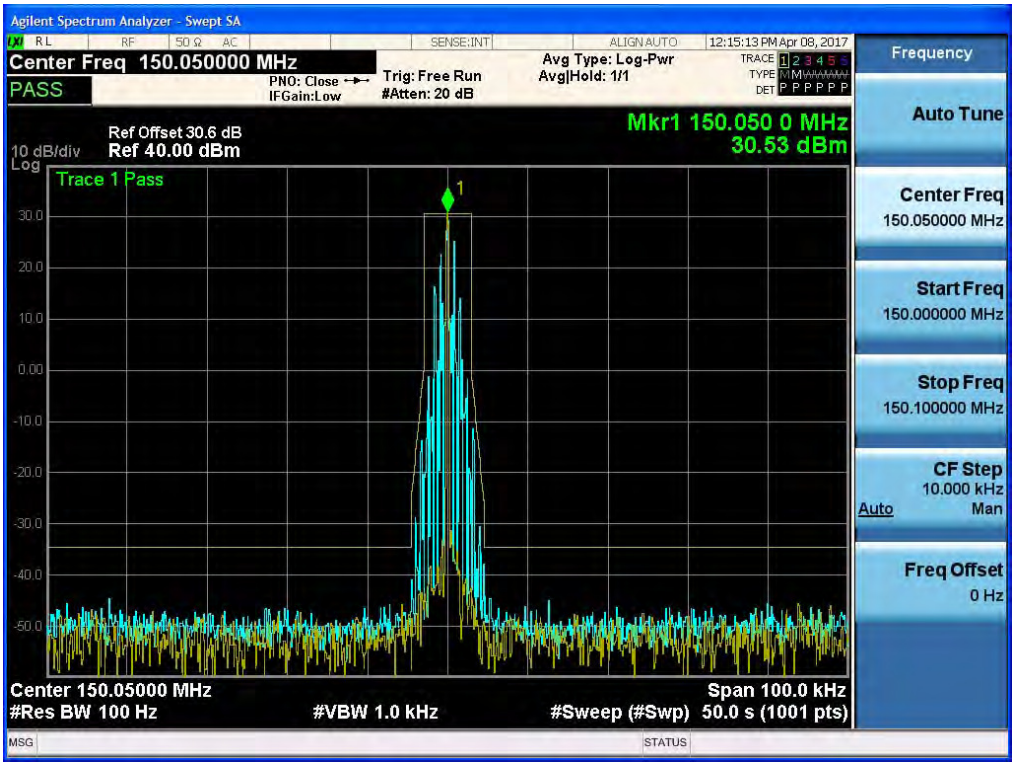
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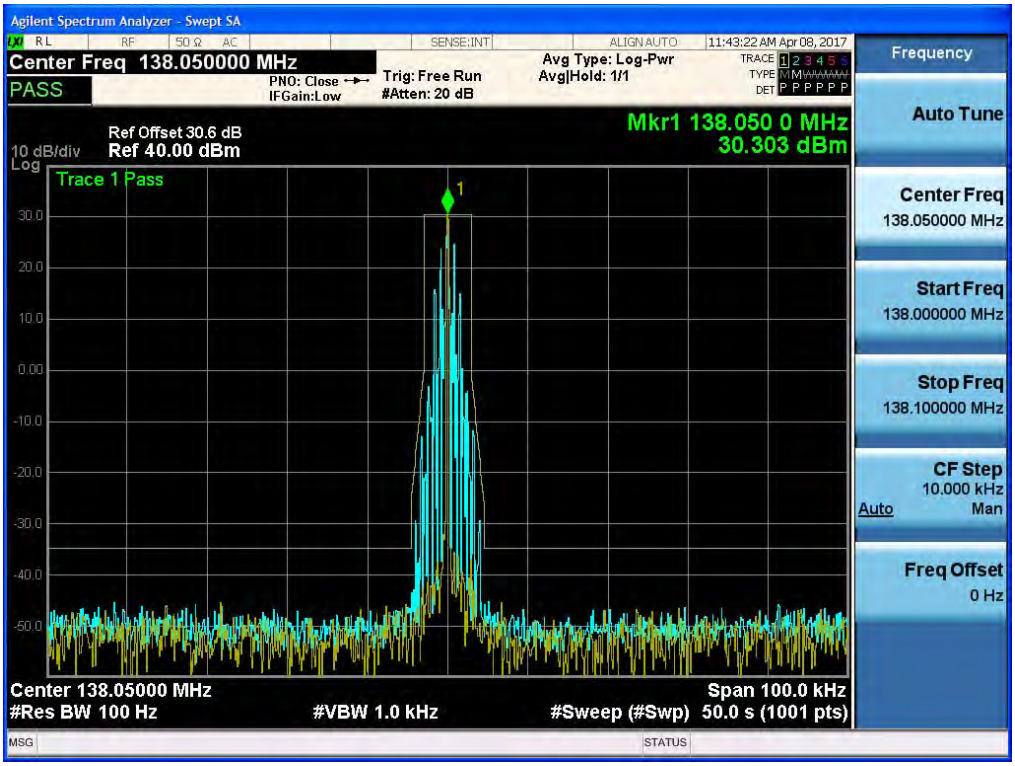
(4K00F1E, 4K00F1D, 4K00F7W _ 173.95 MHz)_Low



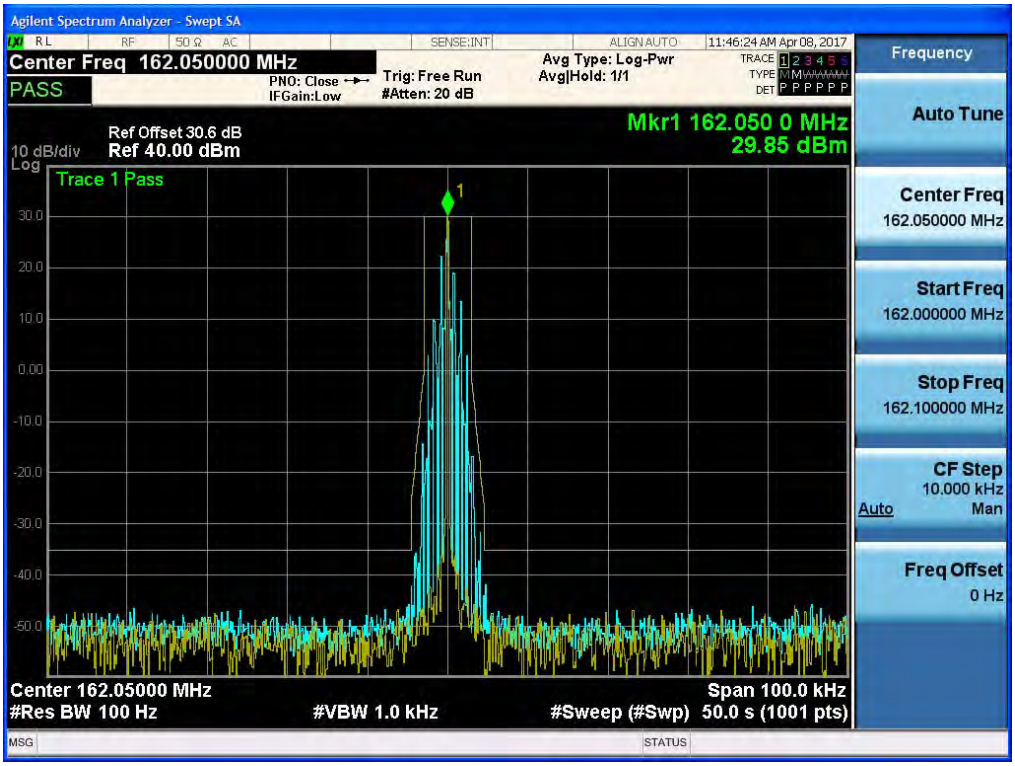
(4K00F2D_ 150.05 MHz)_Low



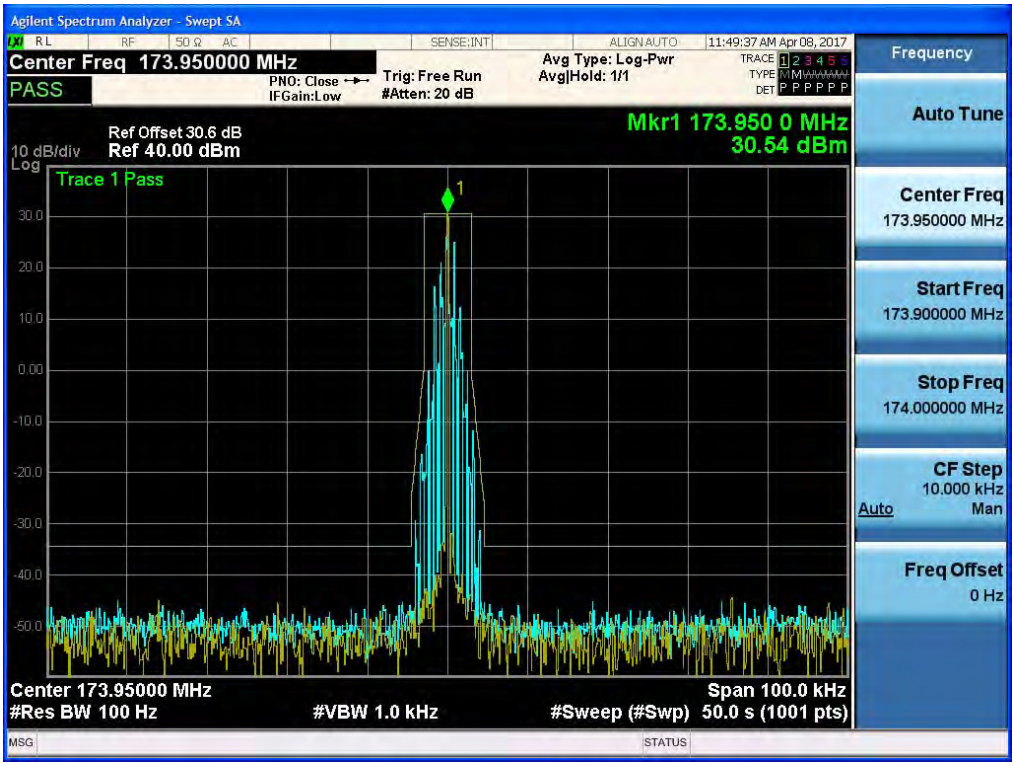
(4K00F2D_ 138.05 MHz)_Low



(4K00F2D_ 162.05 MHz)_Low



(4K00F2D_ 173.95 MHz)_Low

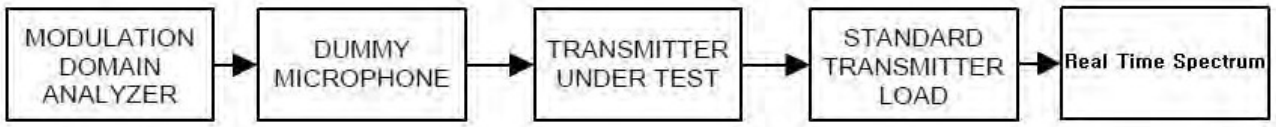


7.7 Transient Frequency Behavior

▣ Definition

Transient frequency behavior is a measure of the difference, as a function in time, of the actual transmitter frequency to the assigned transmitter frequency when the transmitted RF output power is switched on or off.

▣ TEST CONFIGURATION



▣ TEST PROCEDURE

According to 2.2.19 in TIA-603-D Standard.

a) Connect the equipment as illustrated.

b) Connect the output of the standard transmitter load to the RF power meter.
Supply sufficient attenuation via the RF attenuator to provide a level that is approximately 40 dB below the maximum allowable input to the modulation domain analyzer.

c) Unkey the transmitter.

d) Disconnect the RF power meter and connect the modulation domain analyzer in its place.
Set the envelope trigger of the modulation domain analyzer to the minimum level that will trigger when the transmitter is keyed.

e) Reduce the attenuation of the RF attenuator so that the input to the modulation domain analyzer is increased by 30 dB when the transmitter is keyed.

f) Set the modulation domain analyzer to trigger on the rising edge of the waveform in order to capture a single-shot turn-on of the transmitter signal.

g) Adjust the display of the modulation domain analyzer for proper viewing of the transmitter transient behavior. Set the time base reference to the left for observing the transmitter turn-on transient.

h) Key the transmitter.

i) Observe the stored display of the modulation domain analyzer.
The signal trace shall be maintained within the allowable limits during the periods t_1 and t_2, and shall also remain within limits following t_2.

j) Adjust the modulation domain analyzer to trigger on the falling edge of the transmitter waveform in order to capture a single-shot turn-off transient of the transmitter signal.

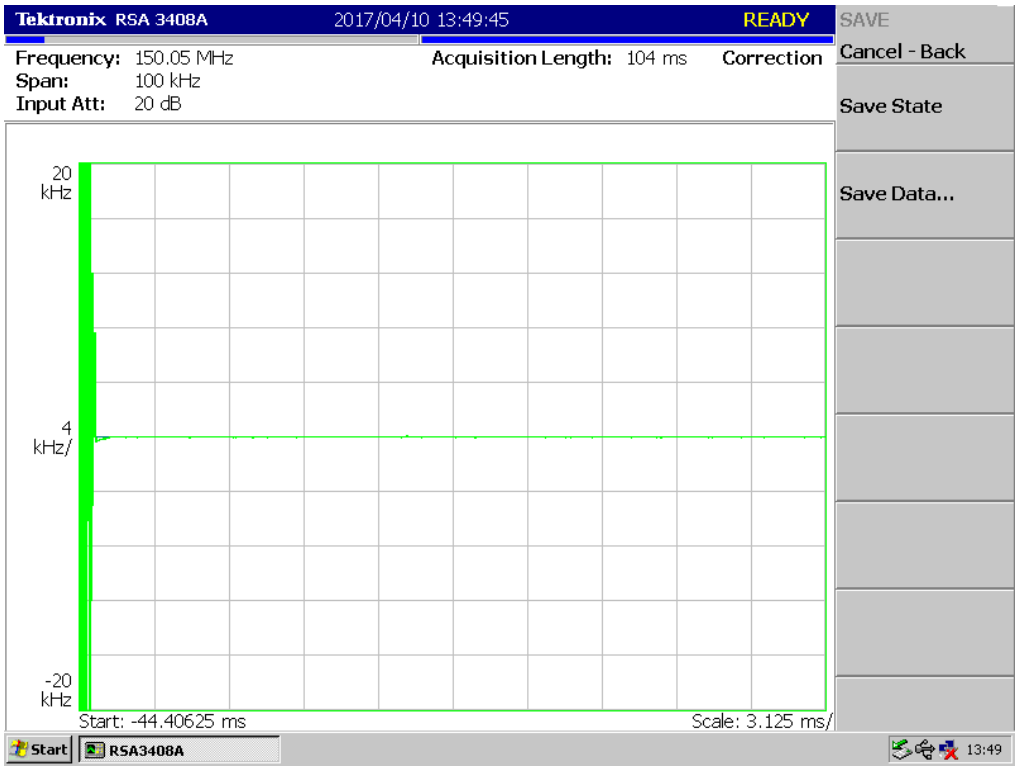
k) Adjust the display of the modulation domain analyzer for proper viewing of the transmitter transient behavior. Set the time base reference to the right for observing the transmitter turn-off transient.

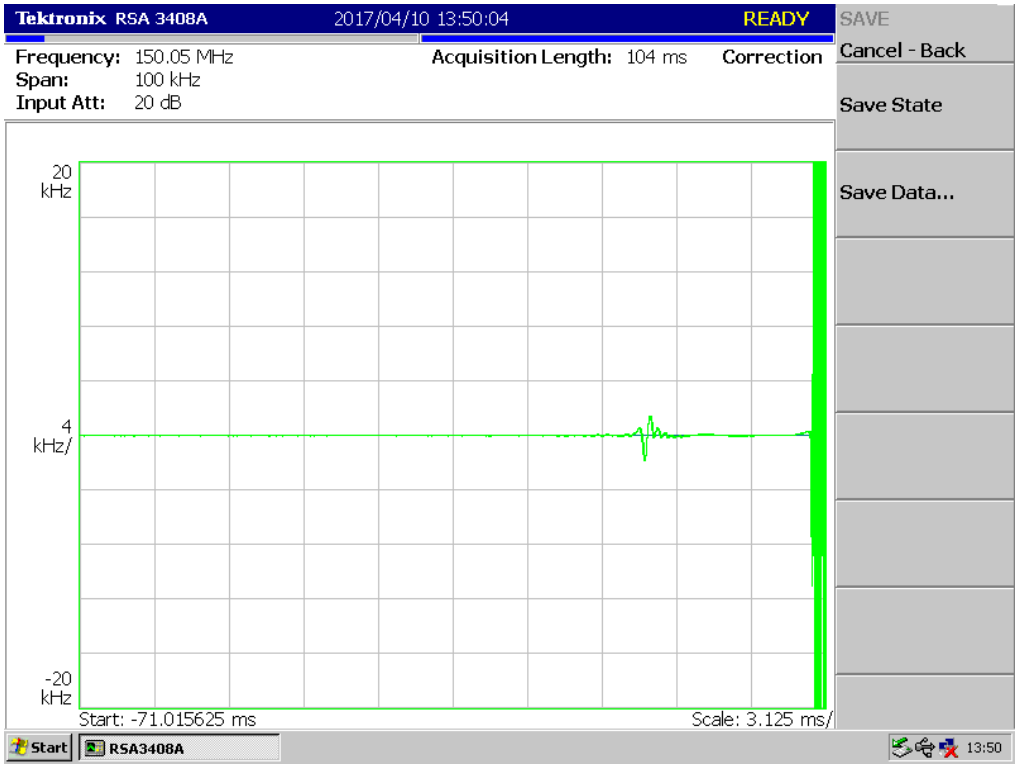
l) Unkey the transmitter.

m) Observe the stored display of the modulation domain analyzer. The signal trace shall be maintained within the allowable limits during the period t_3.

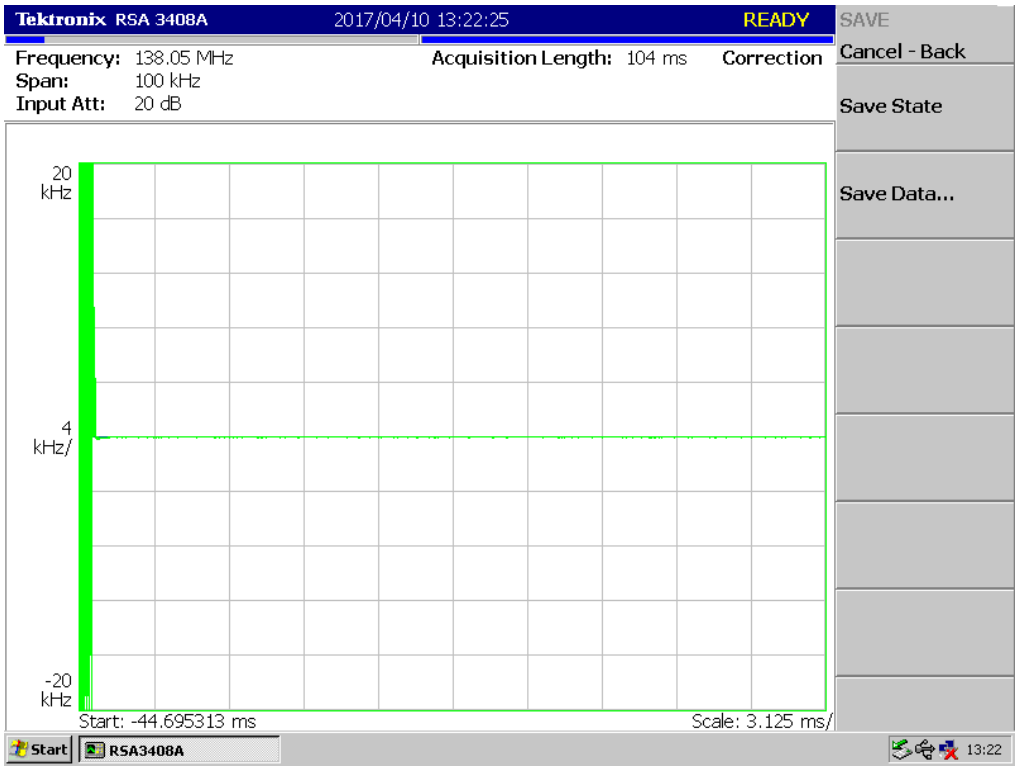
▣ Plots of Transient Frequency Behavior

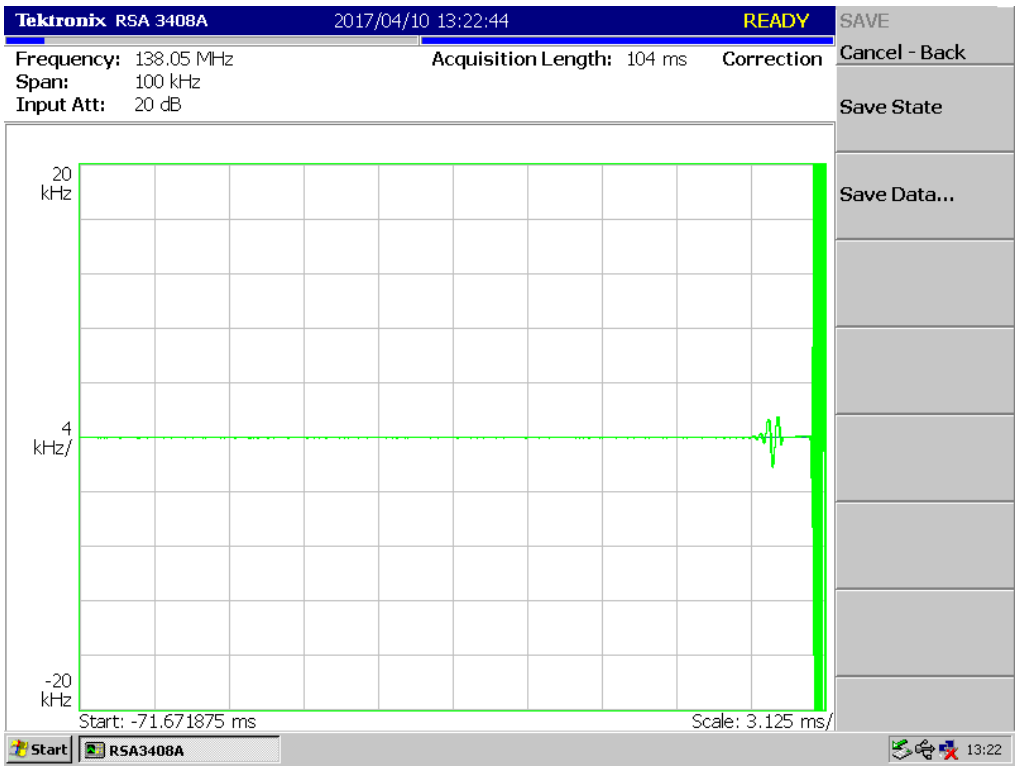
(11K0F3E _ 150.05 MHz)_High



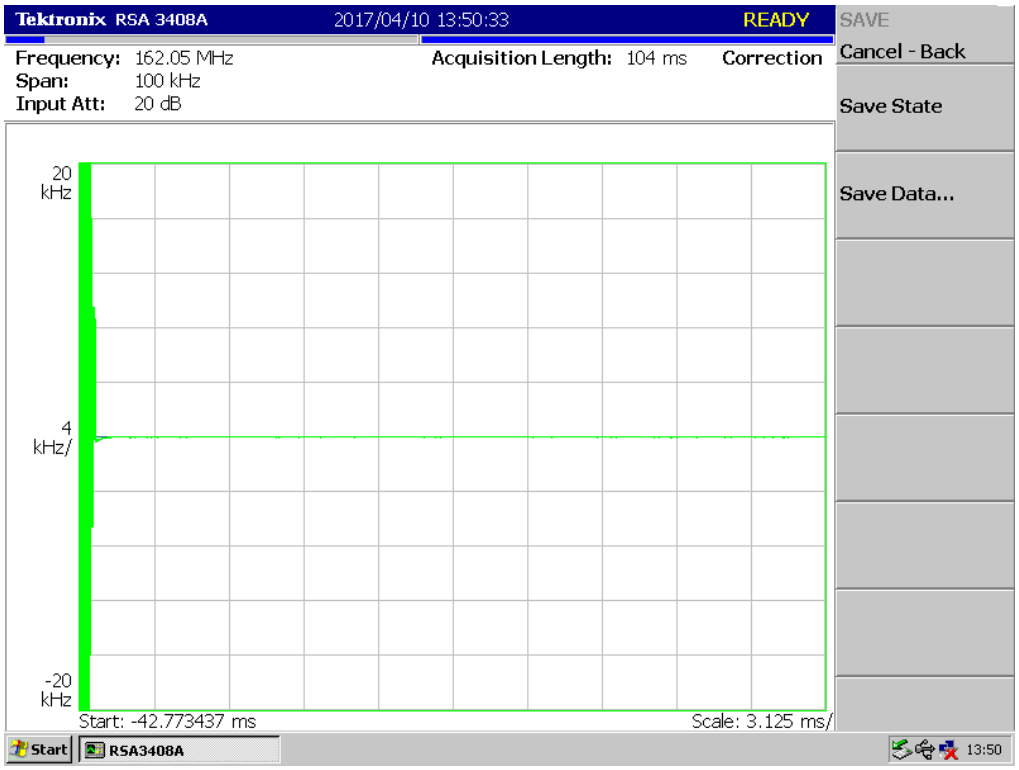


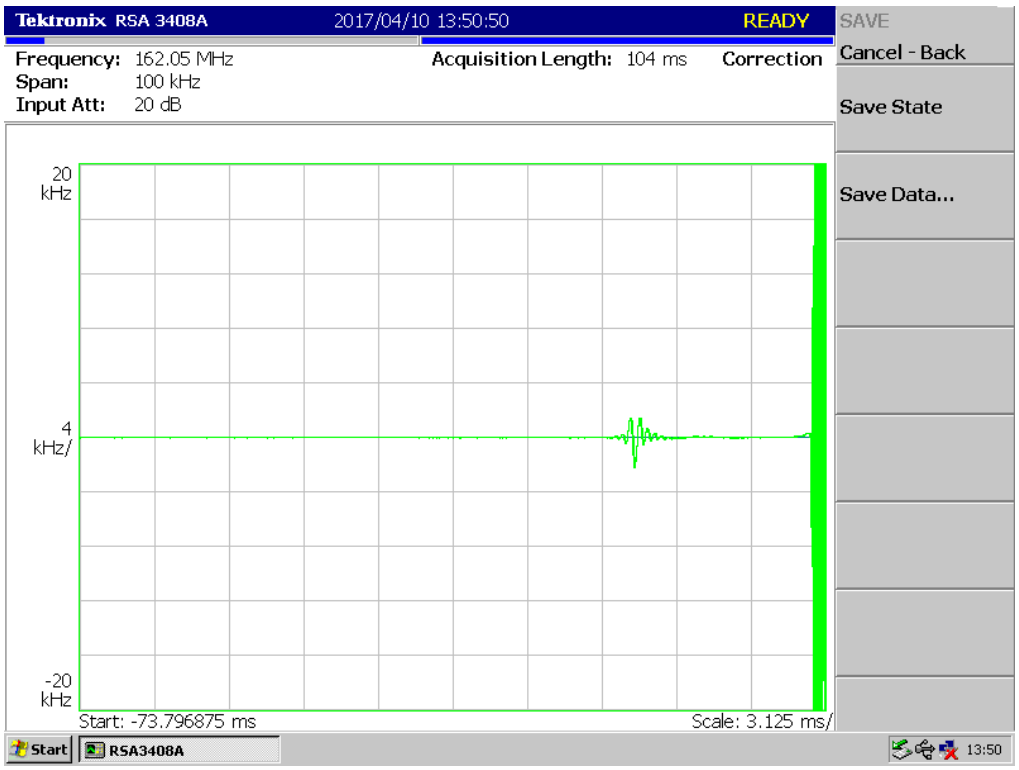
(11K0F3E _ 138.05 MHz)_High



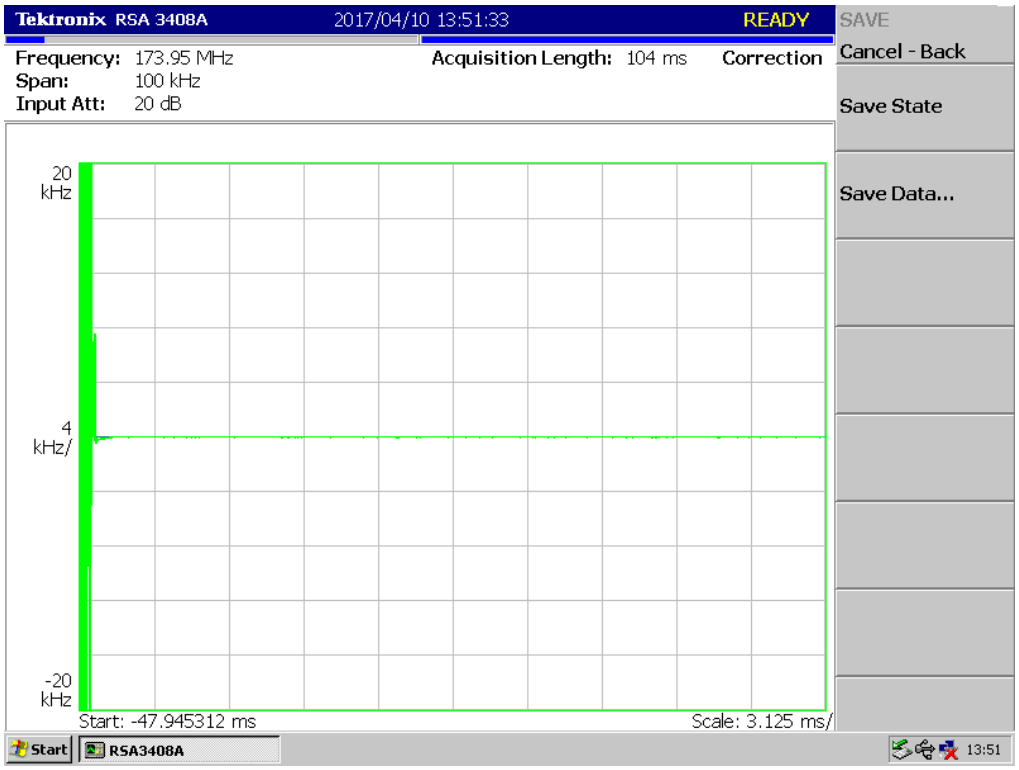


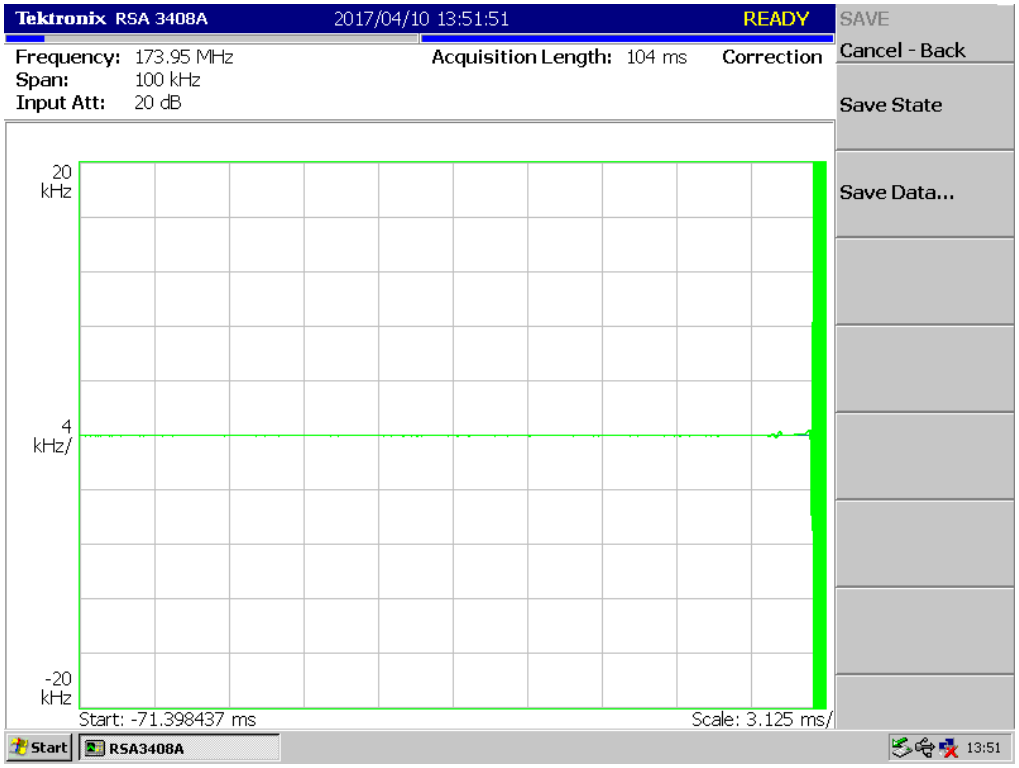
(11K0F3E _ 162.05 MHz)_High



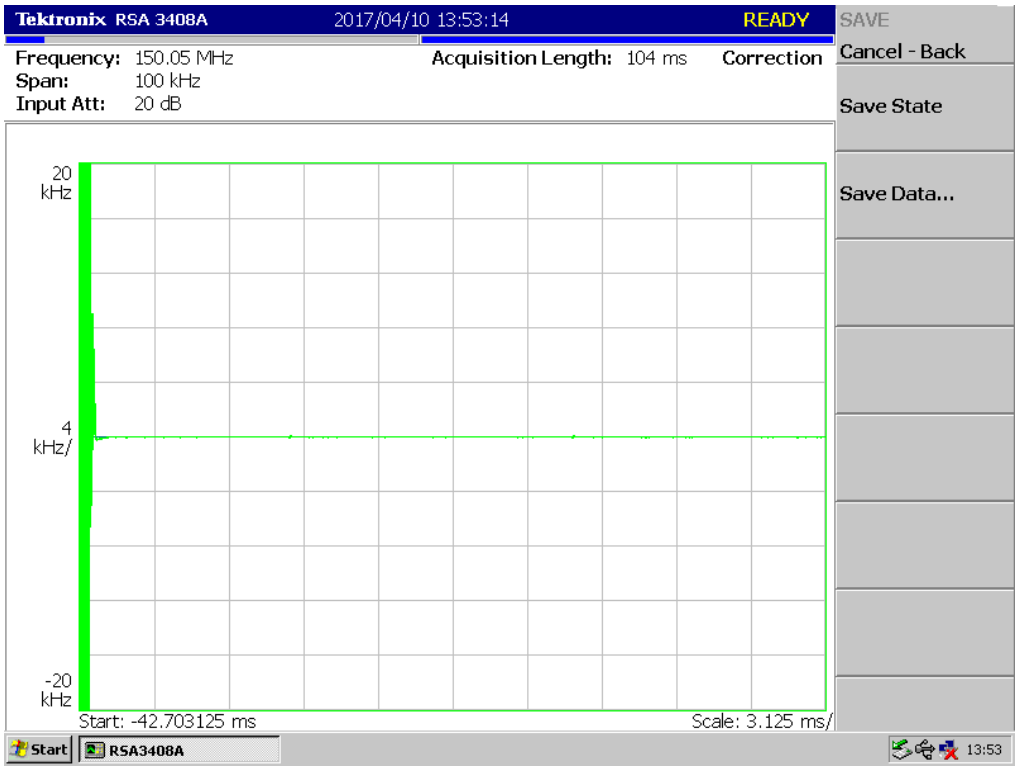


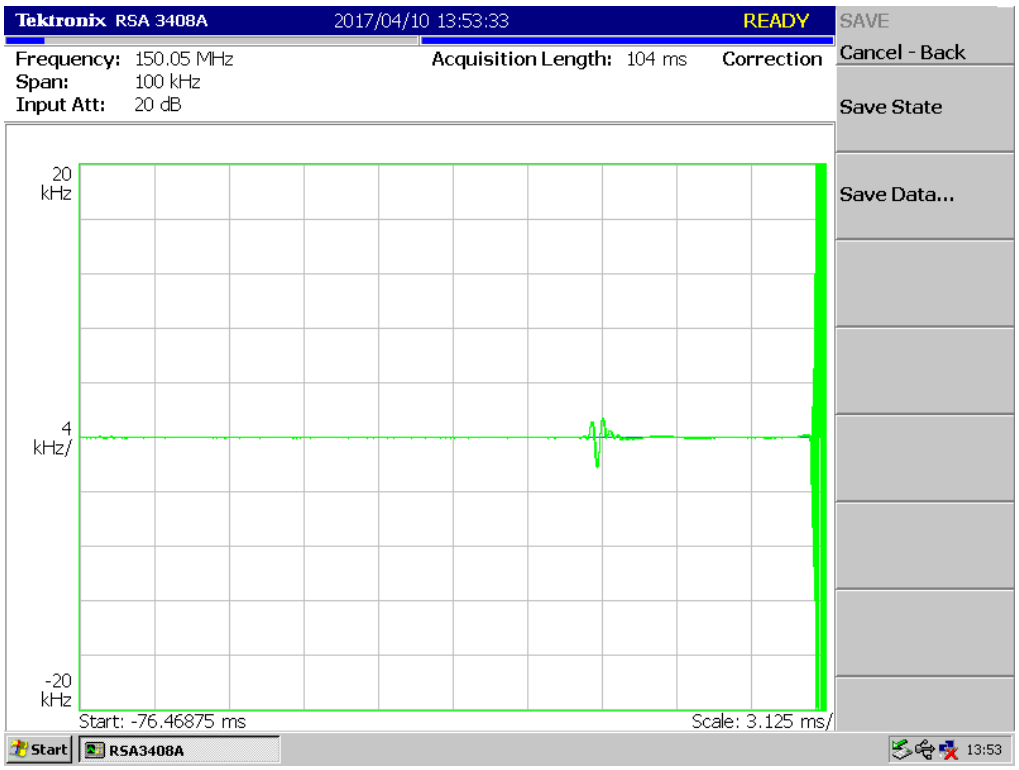
(11K0F3E _ 173.95 MHz)_High



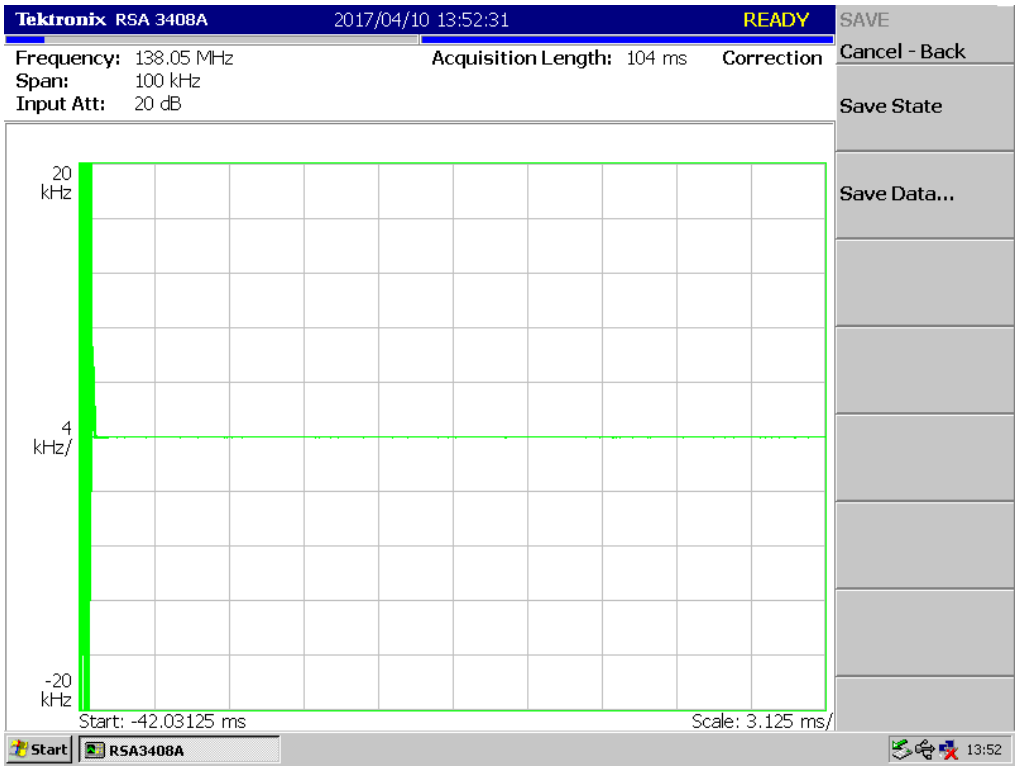


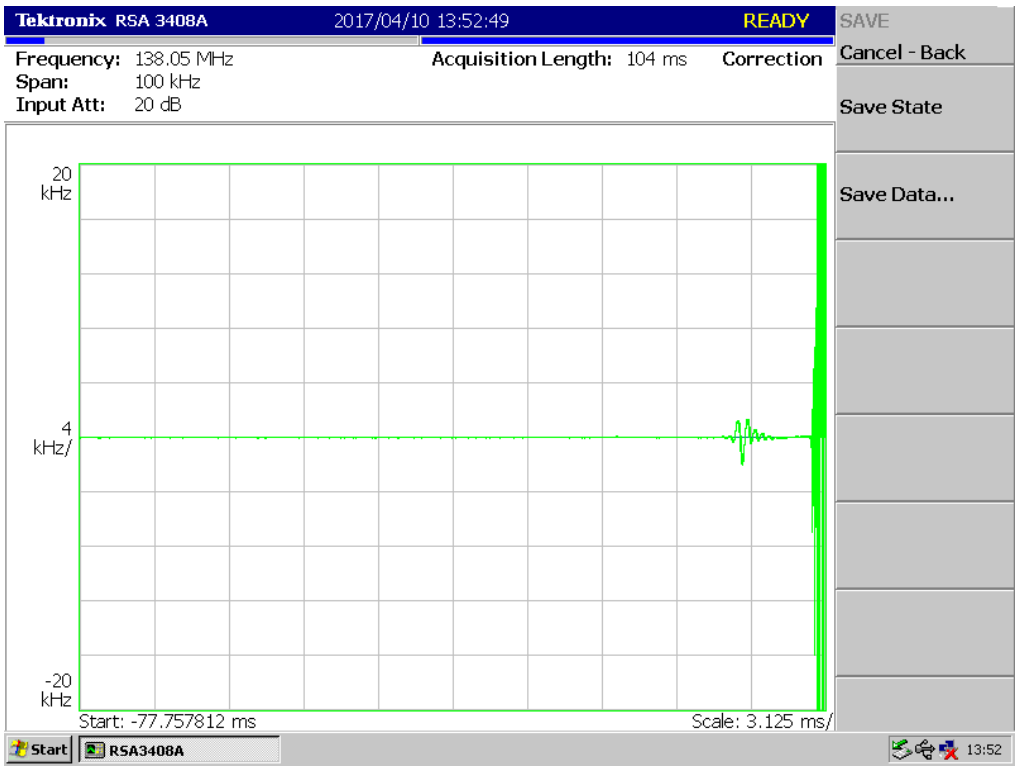
(11K0F3E _ 150.05 MHz)_Low



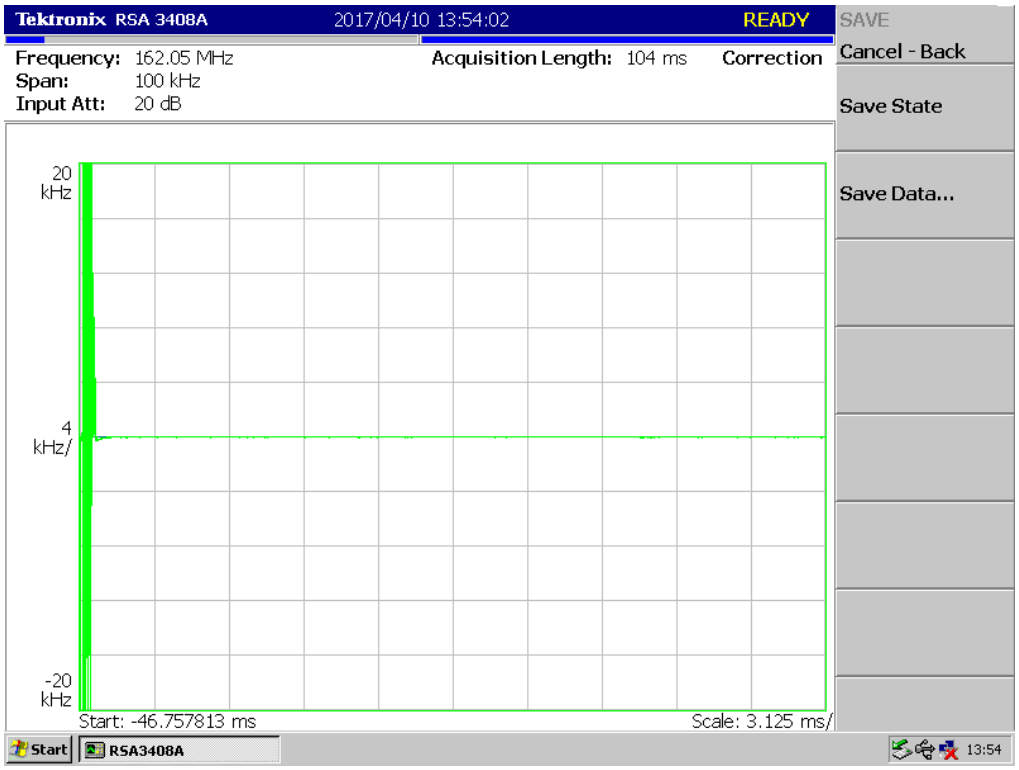


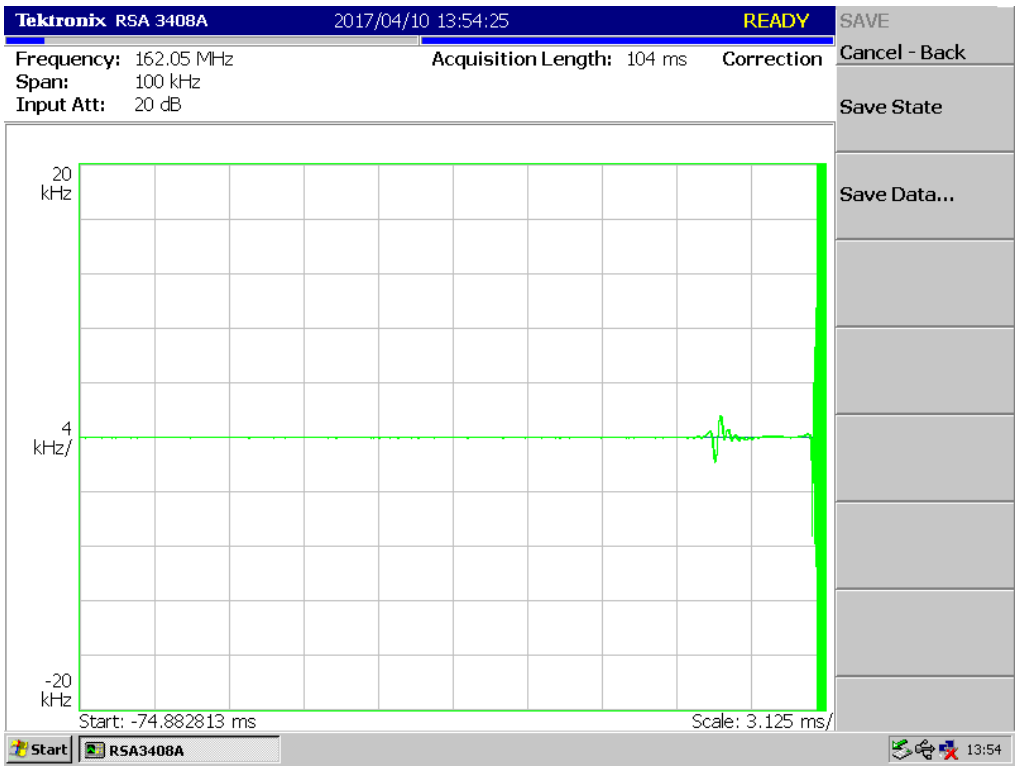
(11K0F3E _ 138.05 MHz)_Low



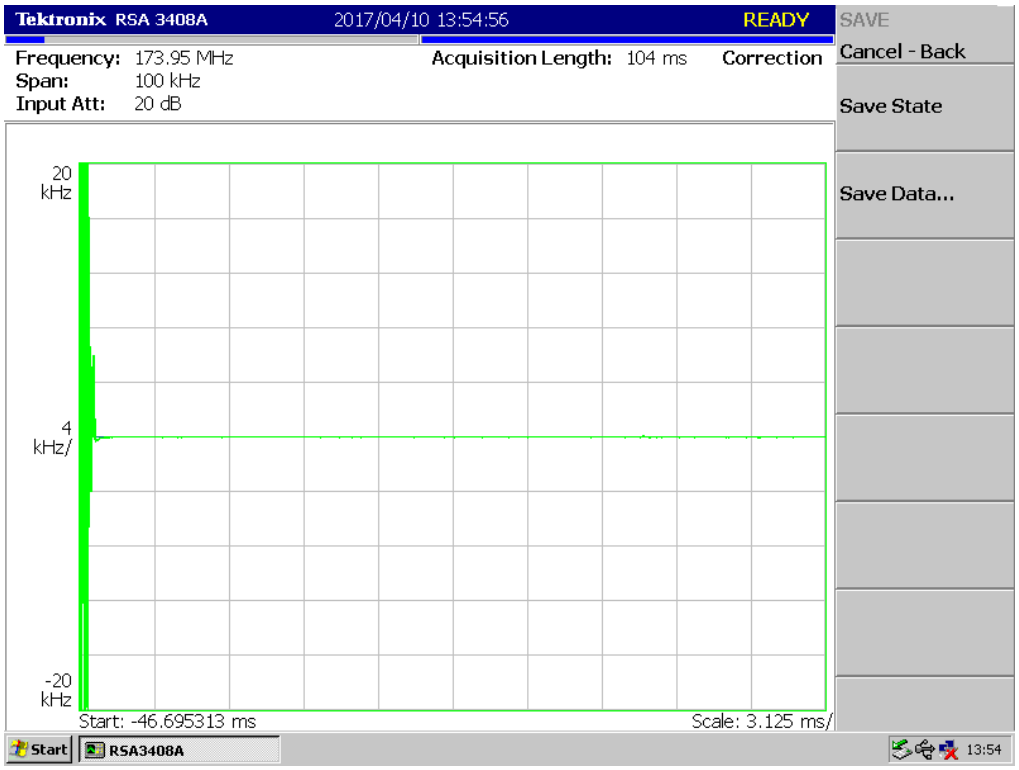


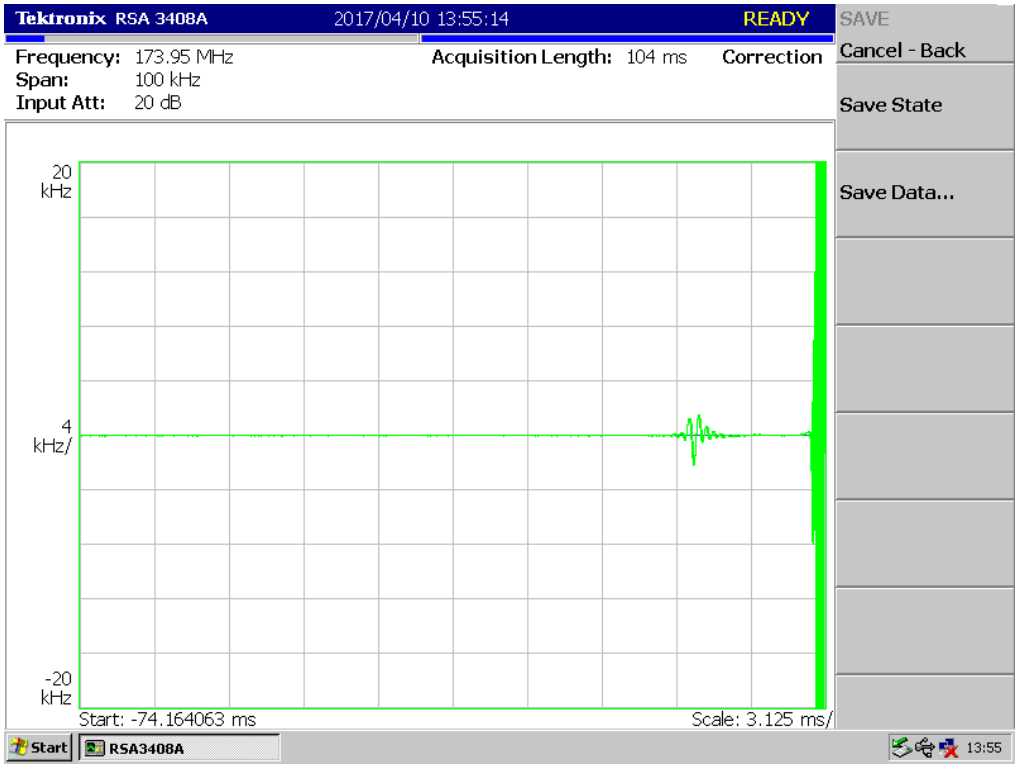
(11K0F3E _ 162.05 MHz)_Low



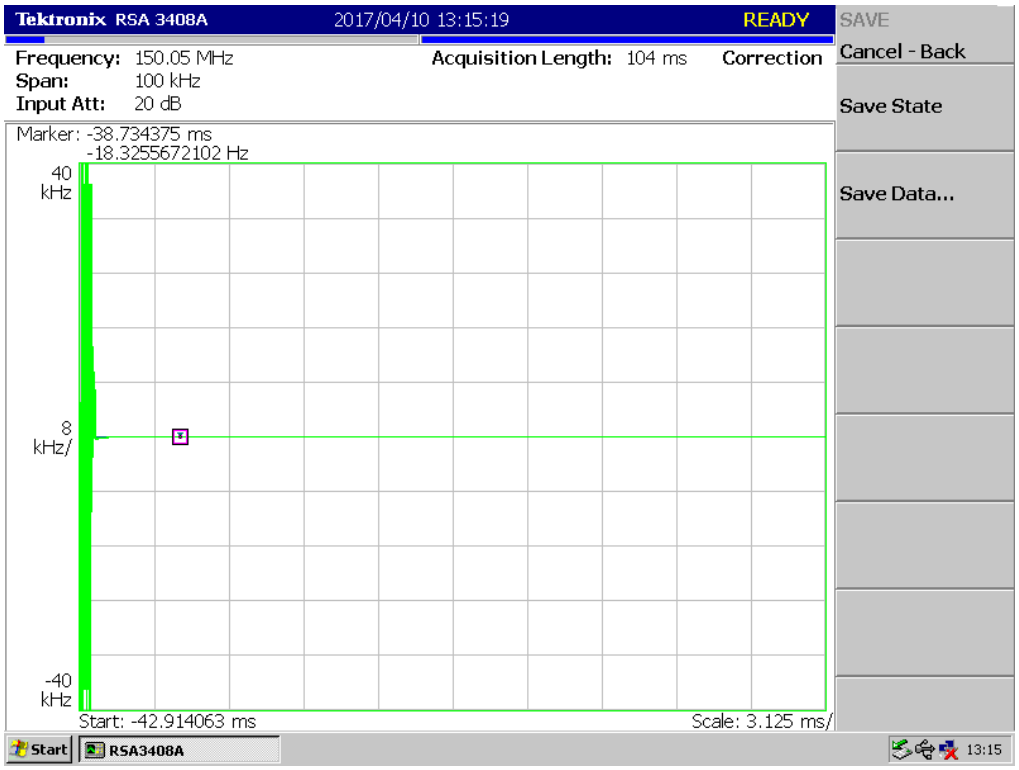


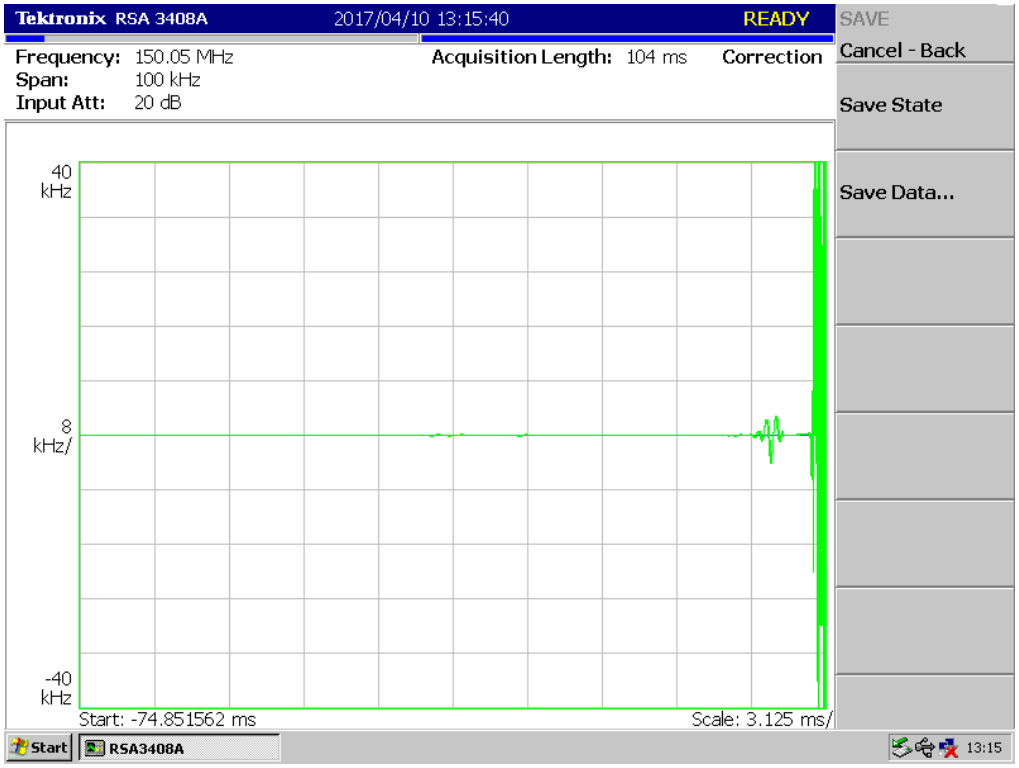
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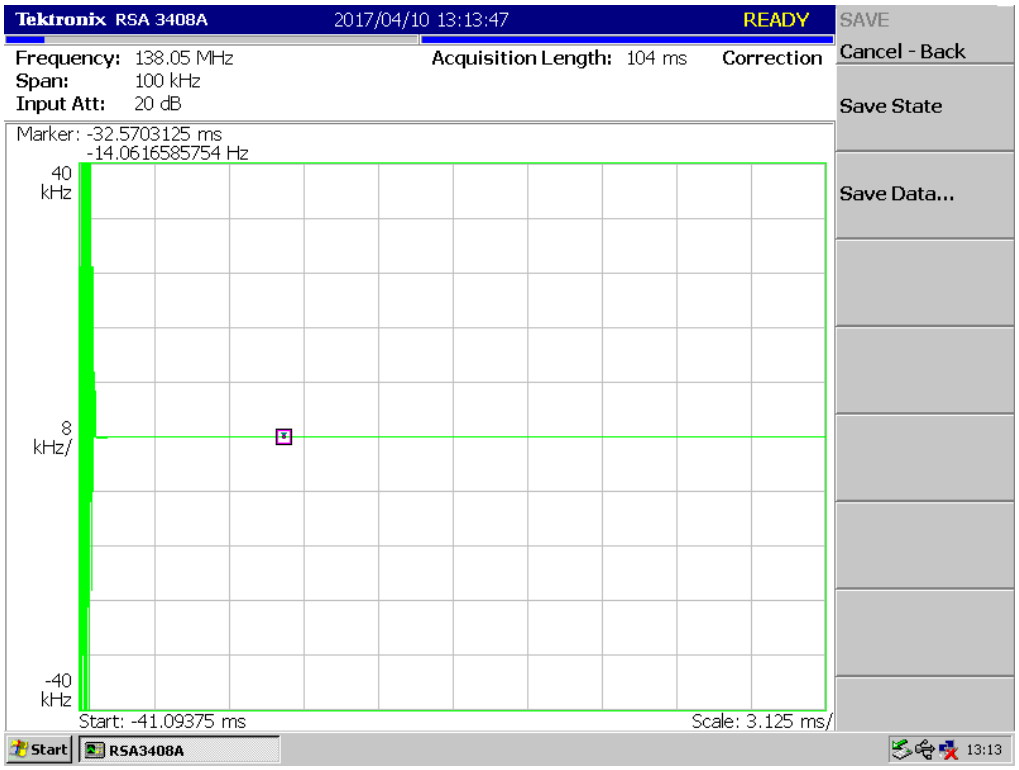


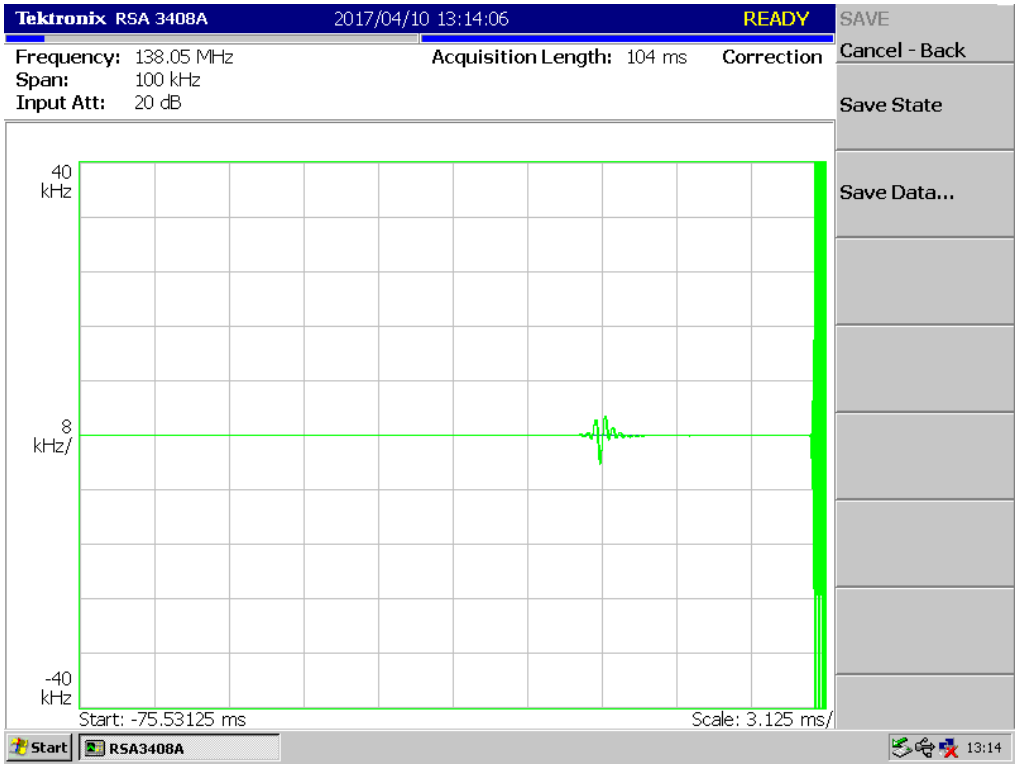
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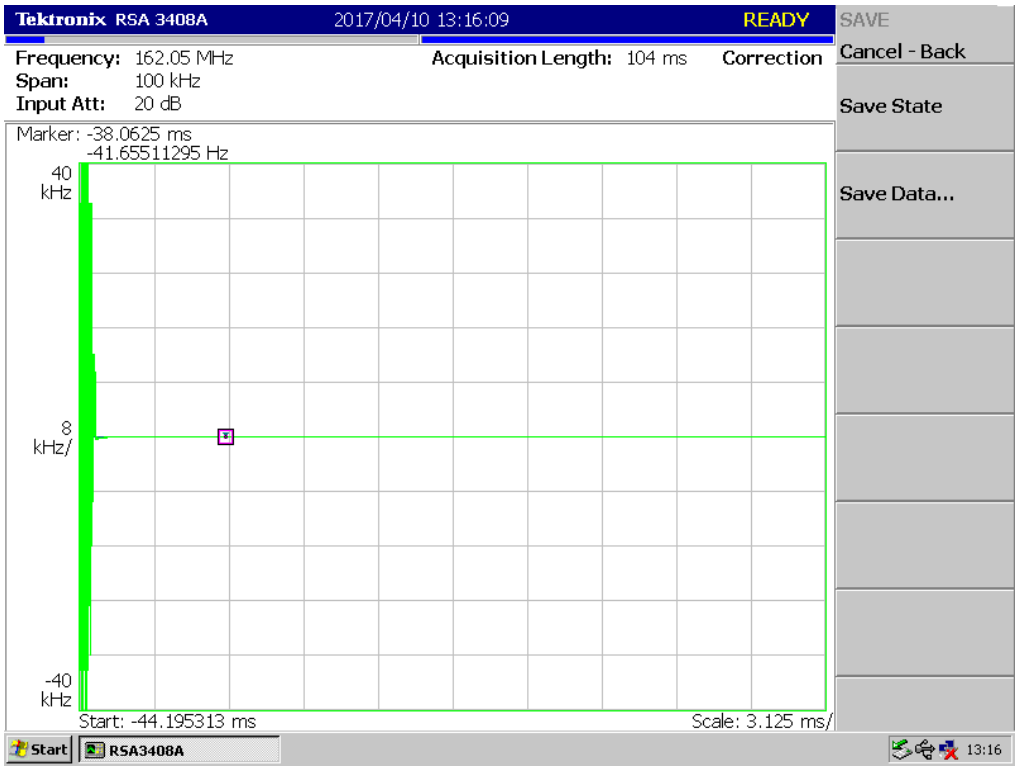


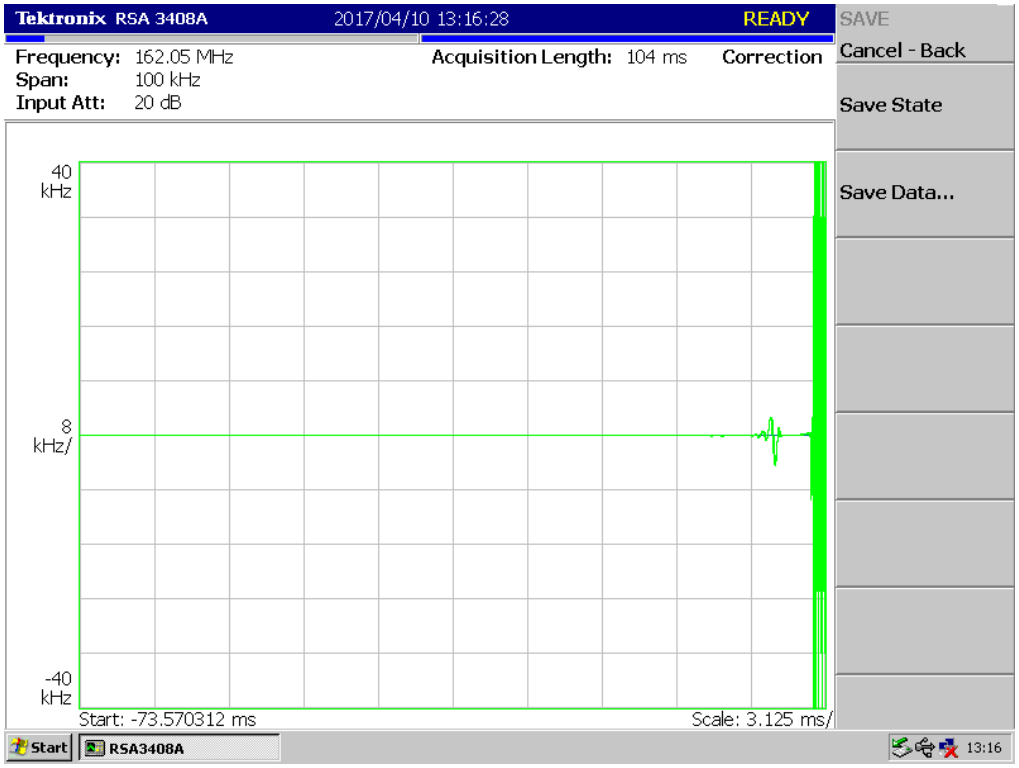
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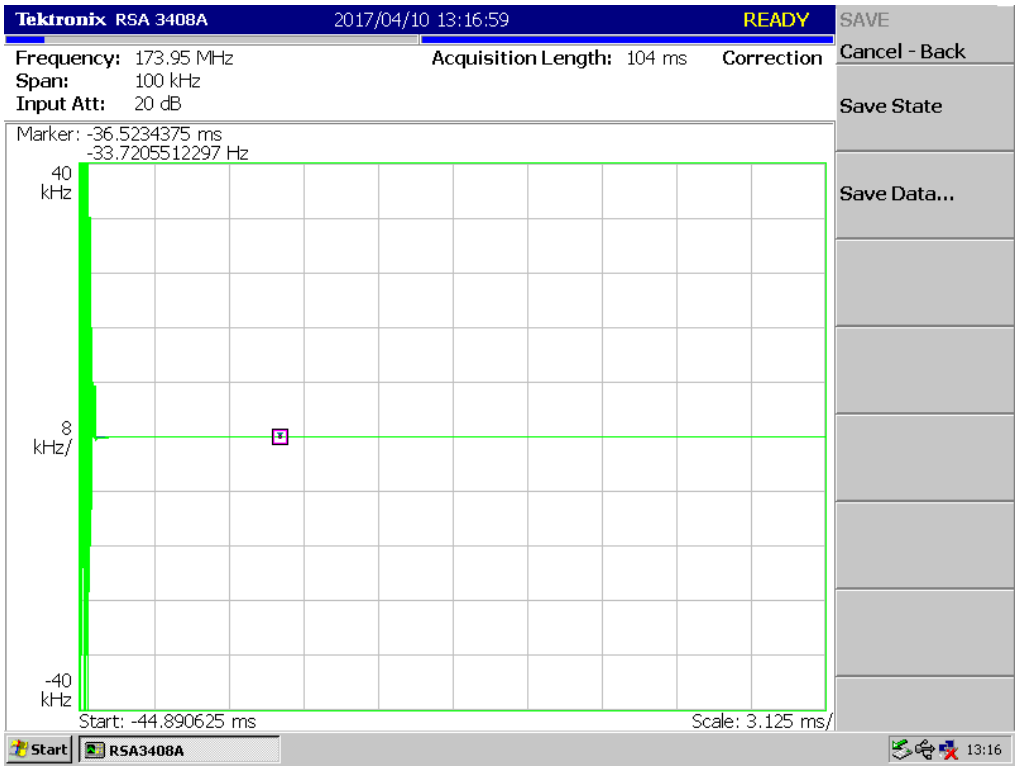


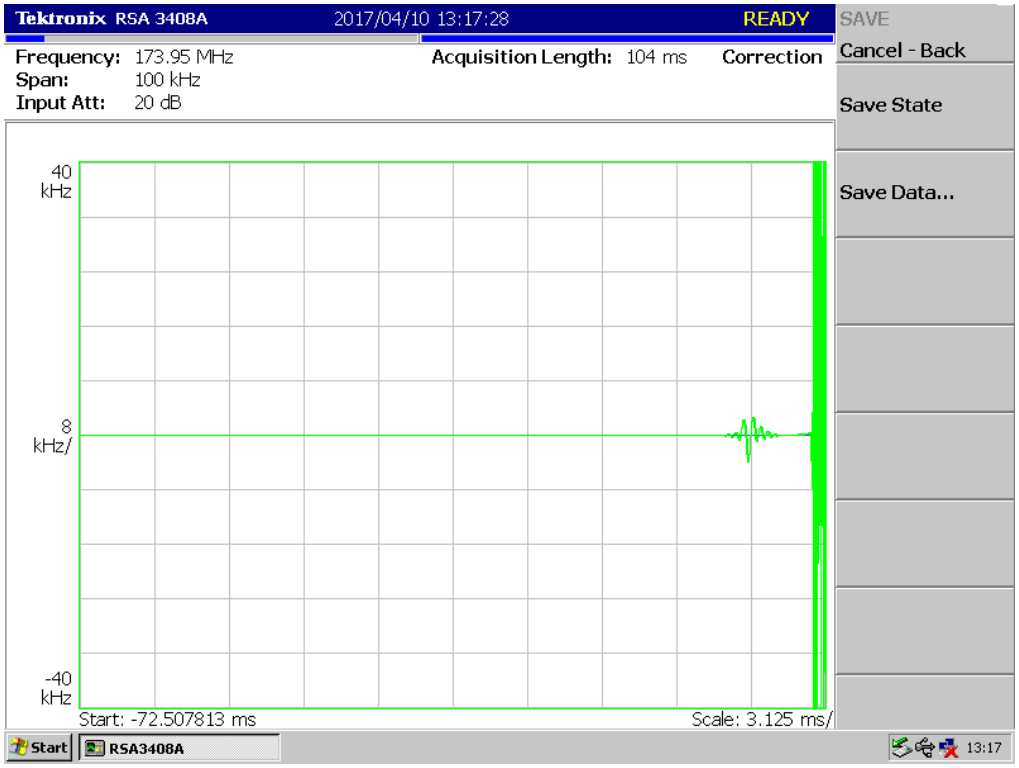
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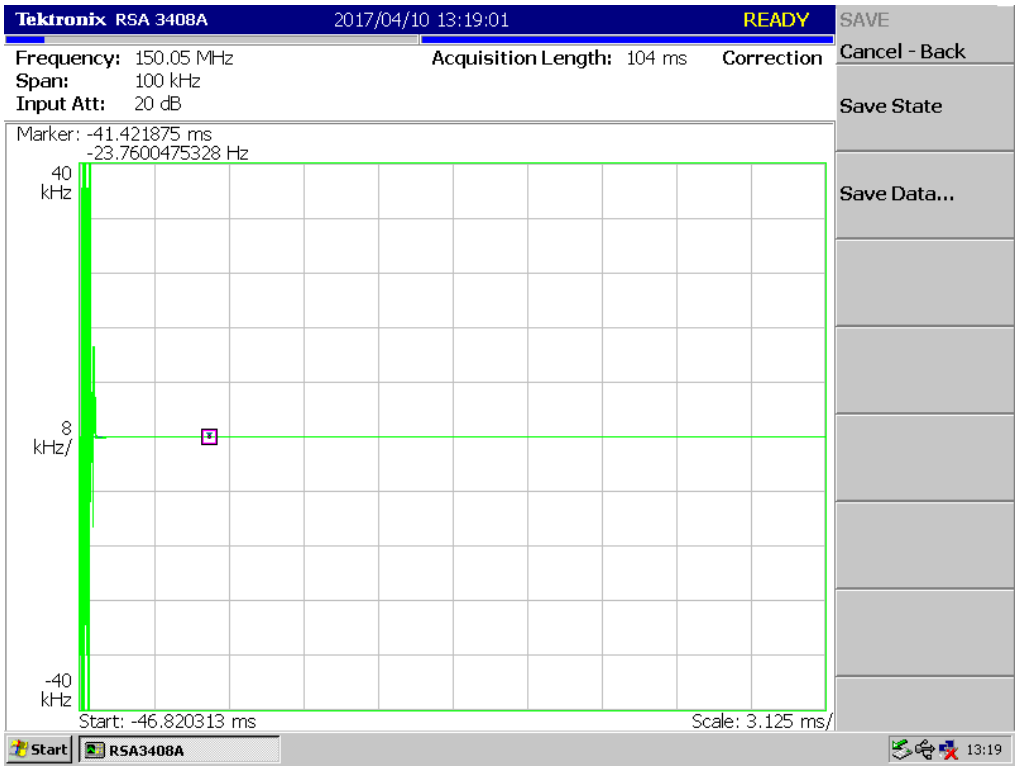


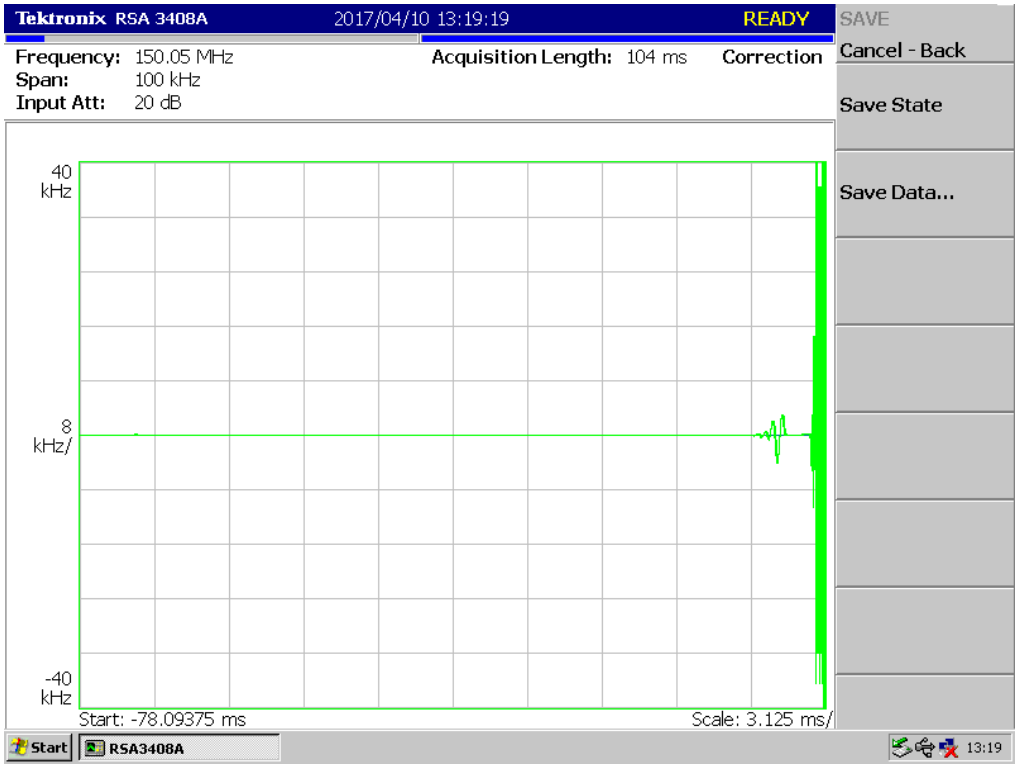
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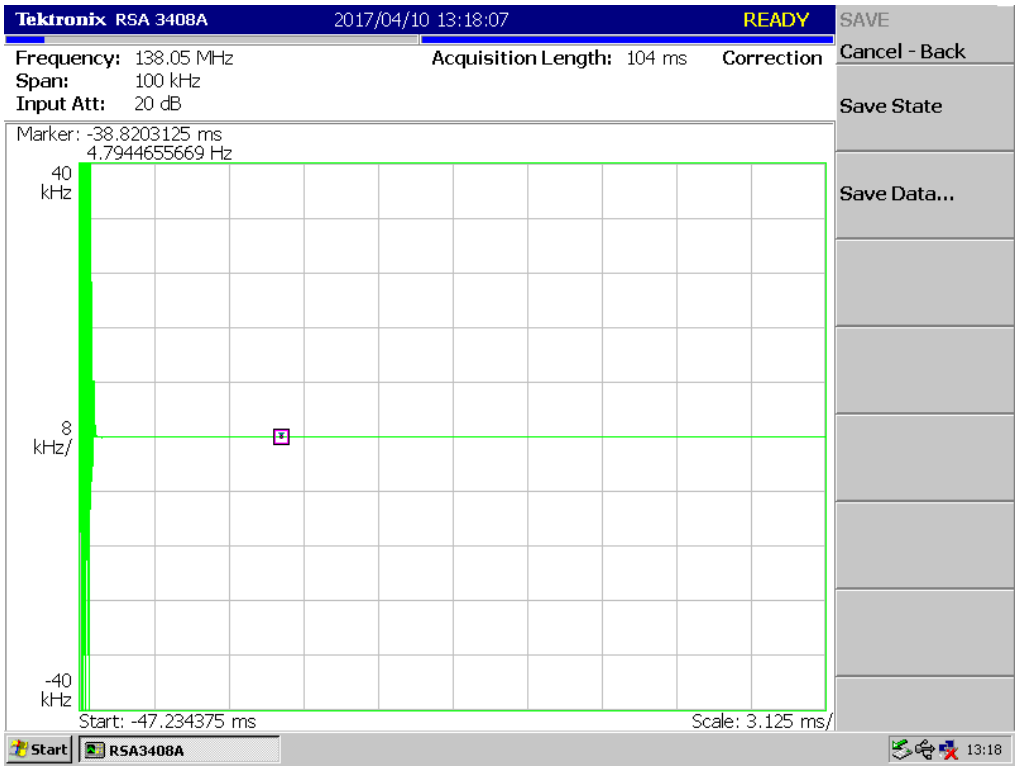


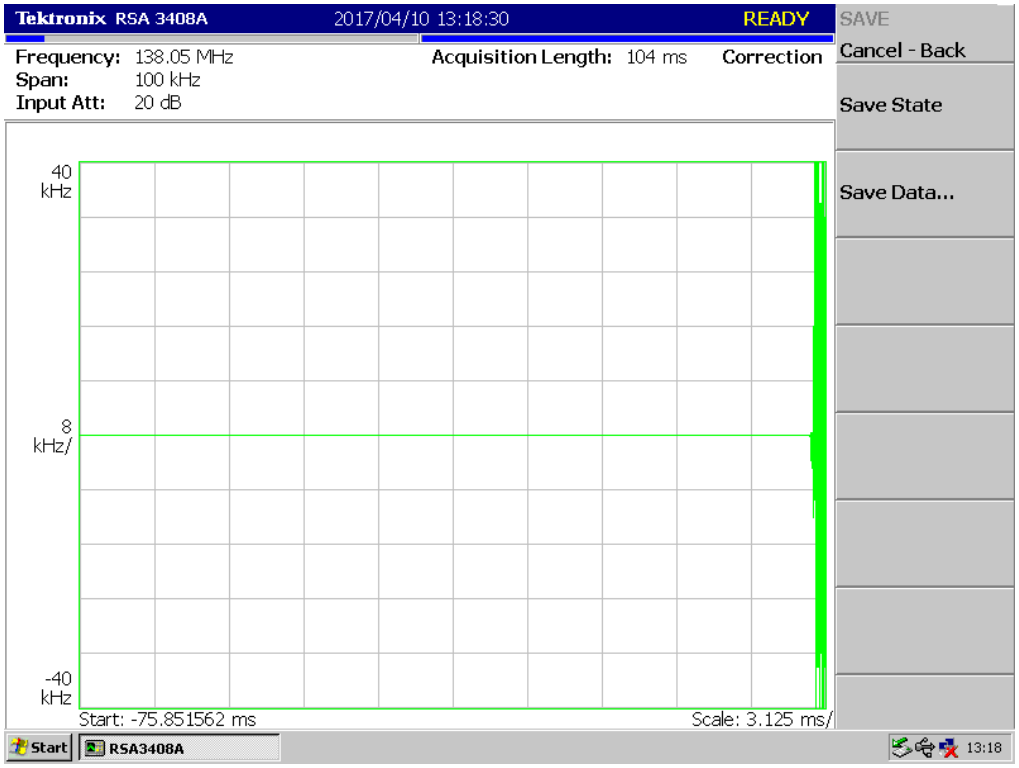
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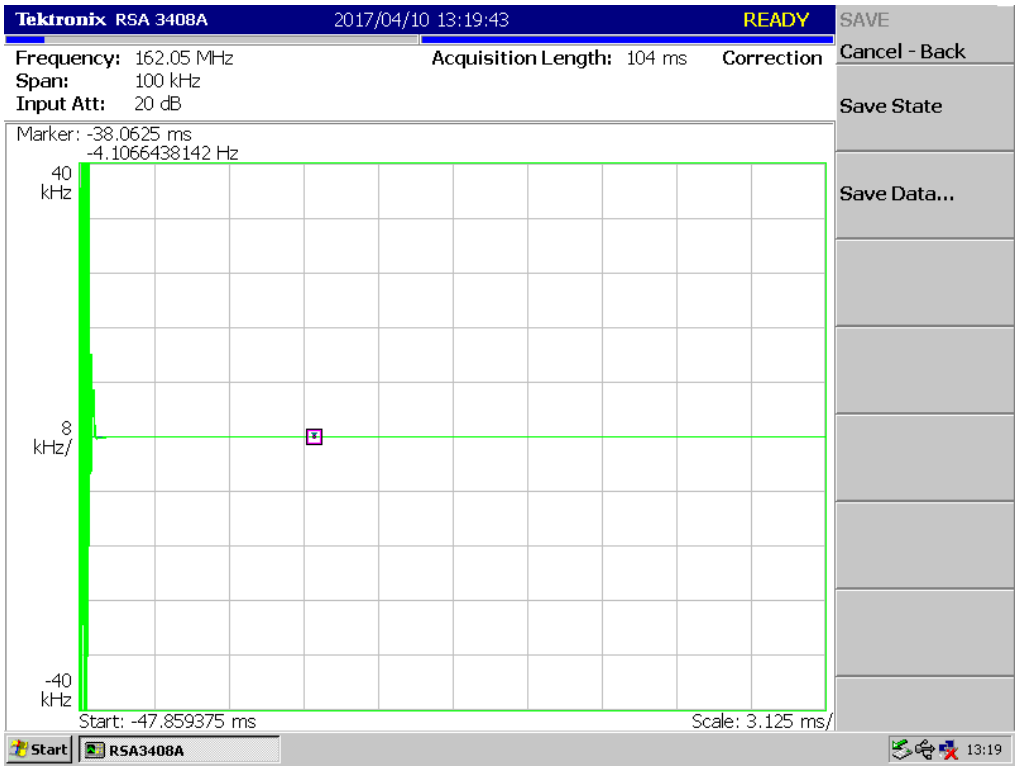


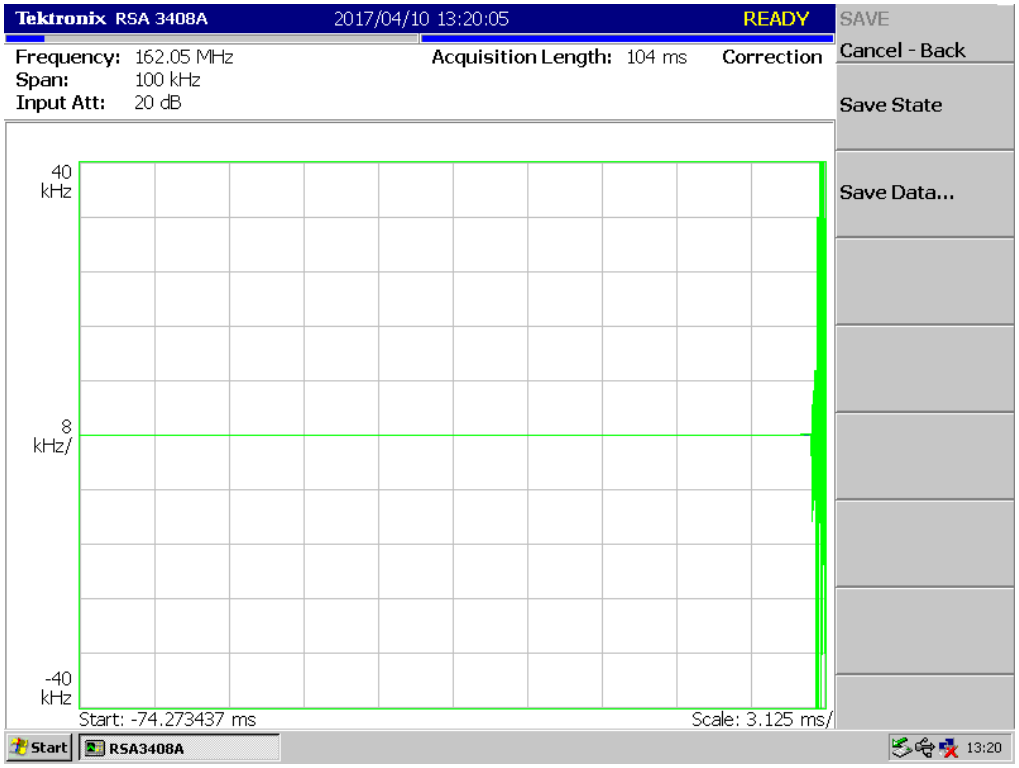
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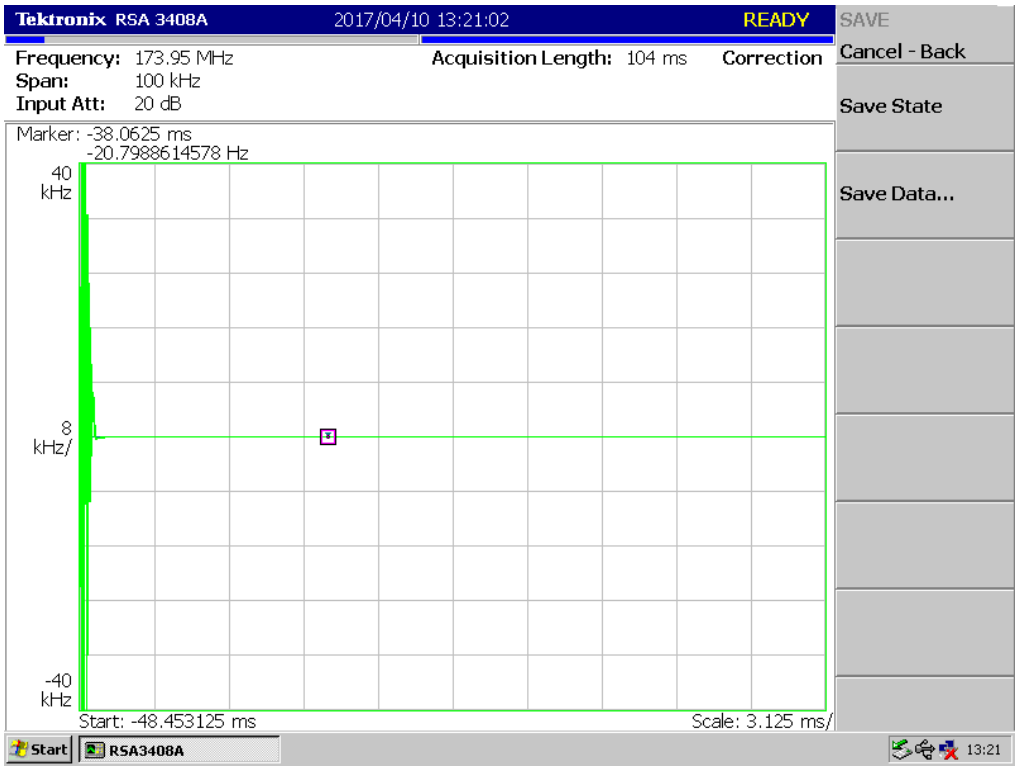


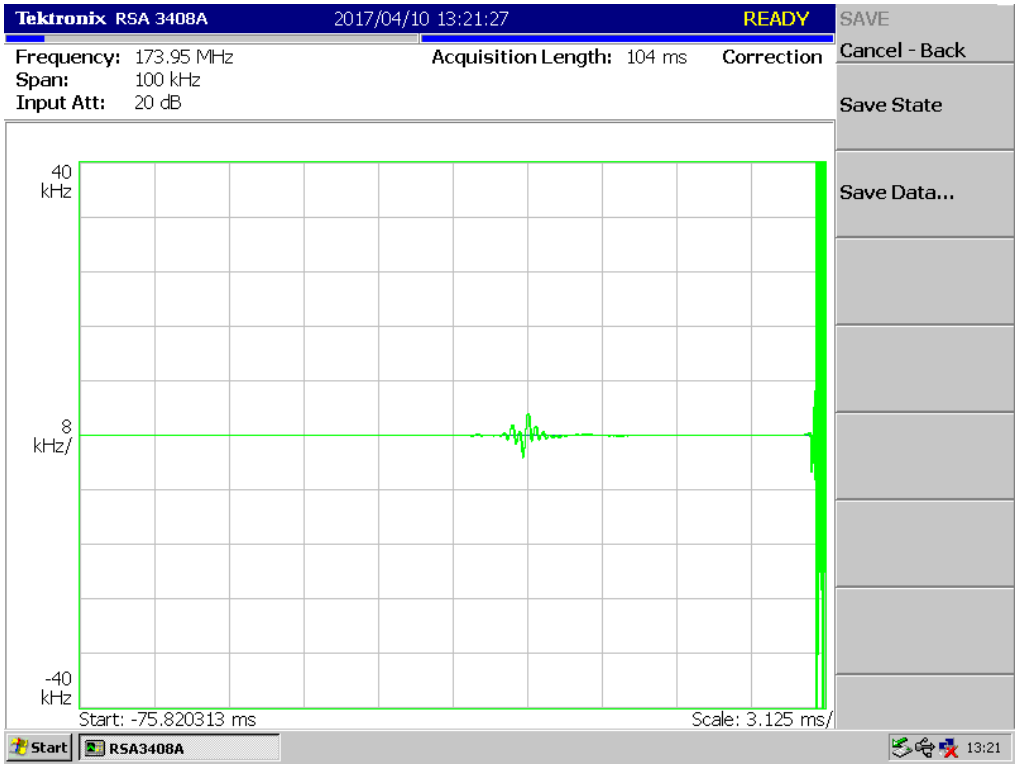
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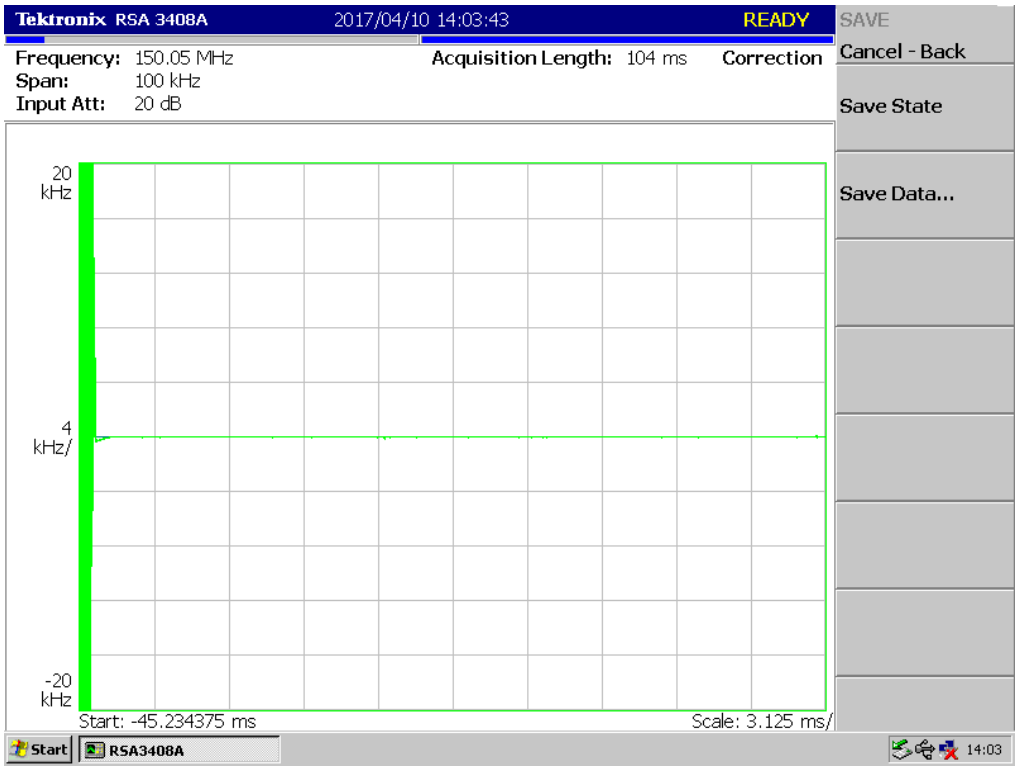


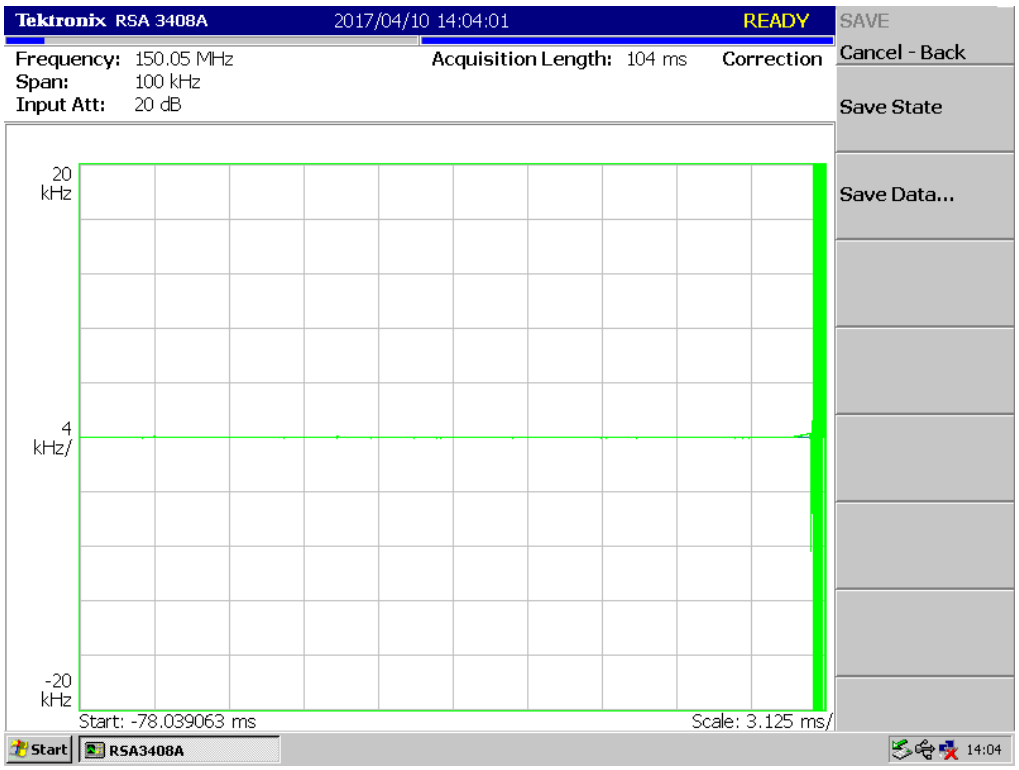
(16K0F3E _ 173.95 MHz)_Low



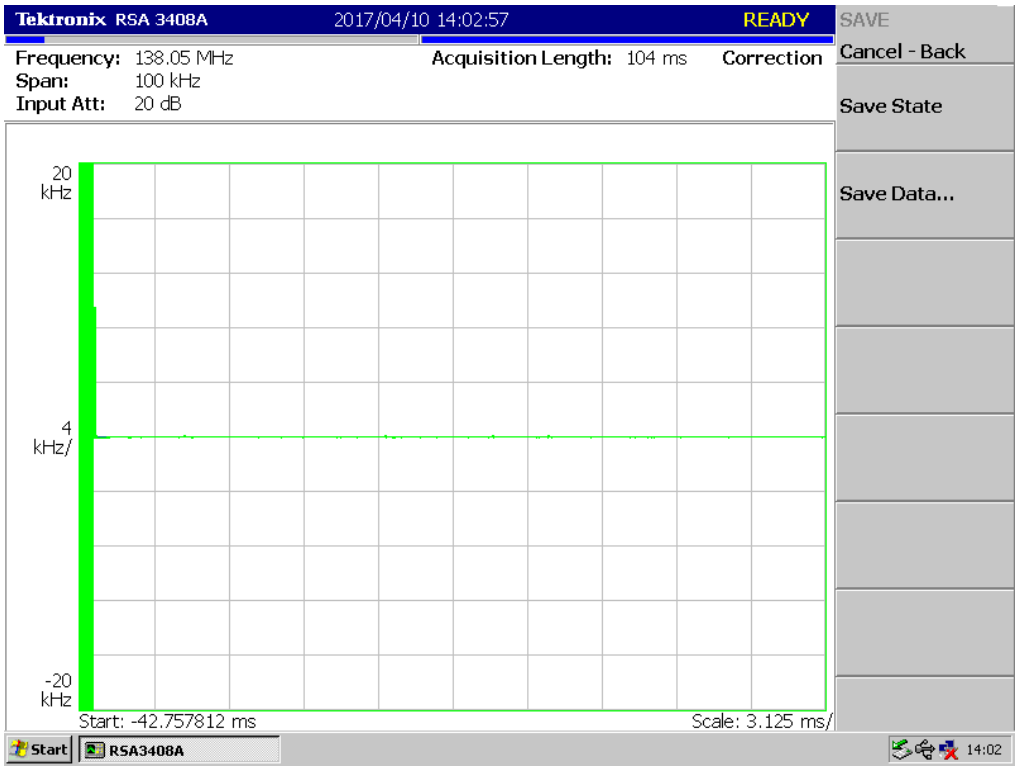


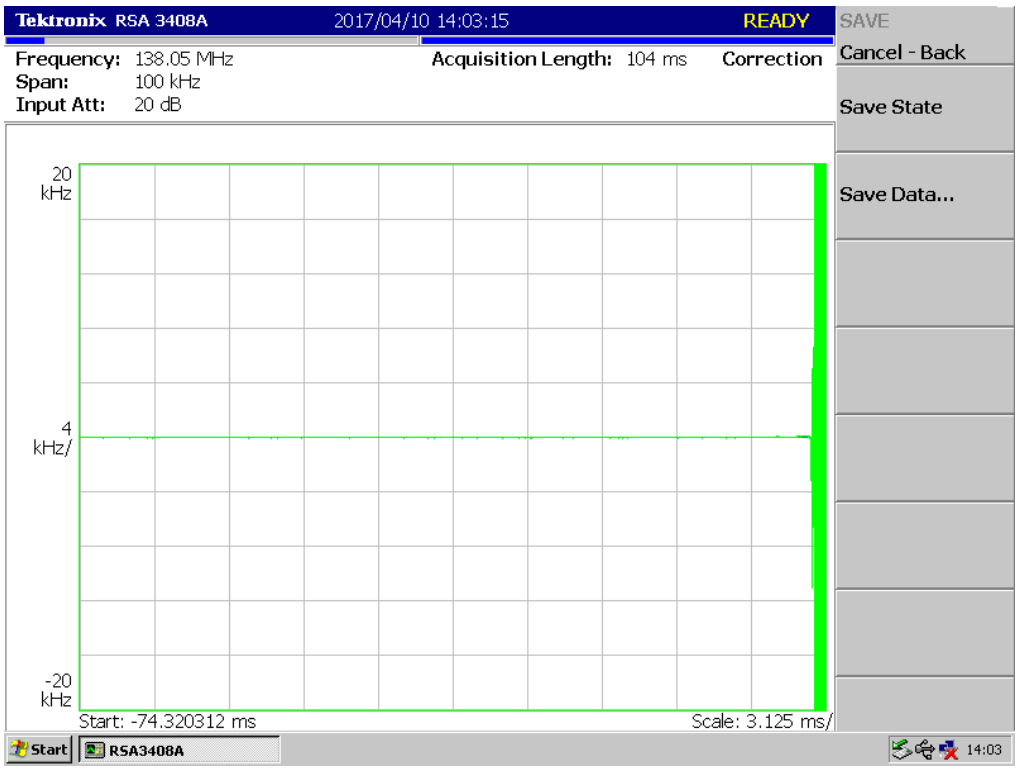
(7K60FXD, 7K60FXE _ 150.05 MHz)_High



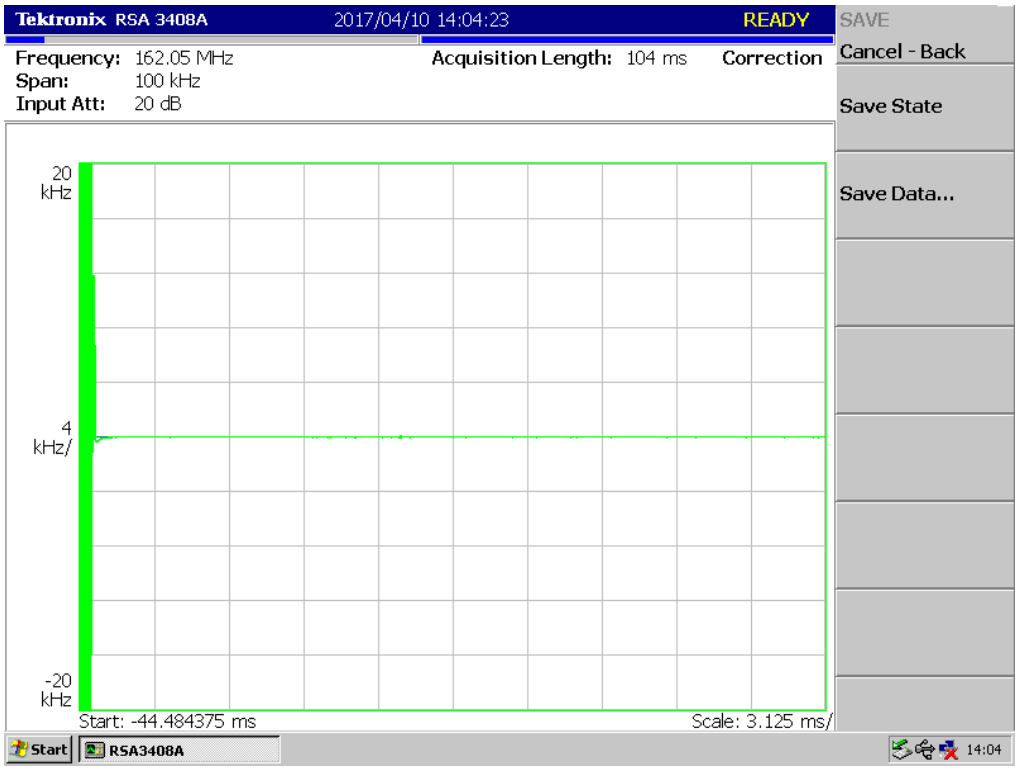


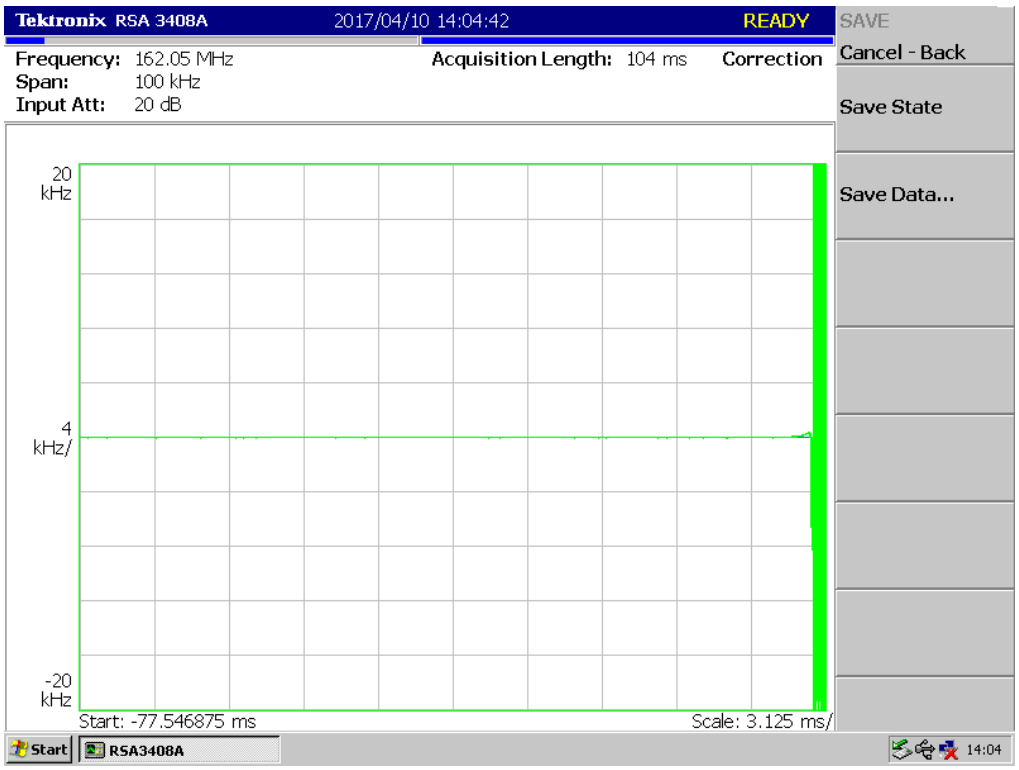
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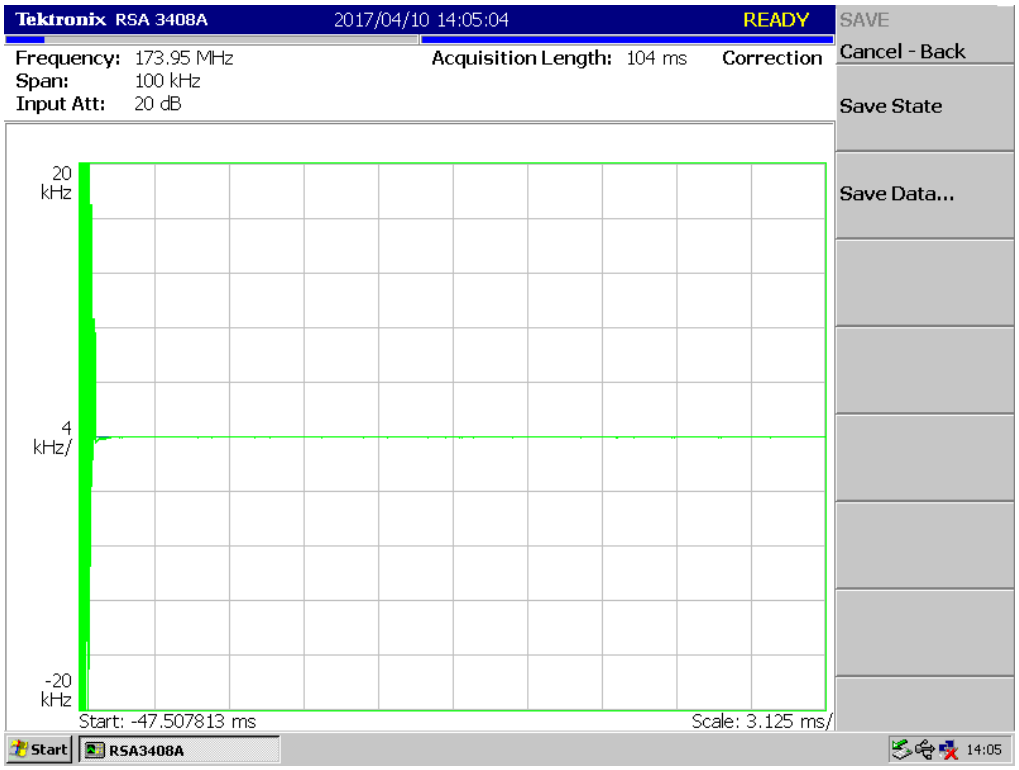


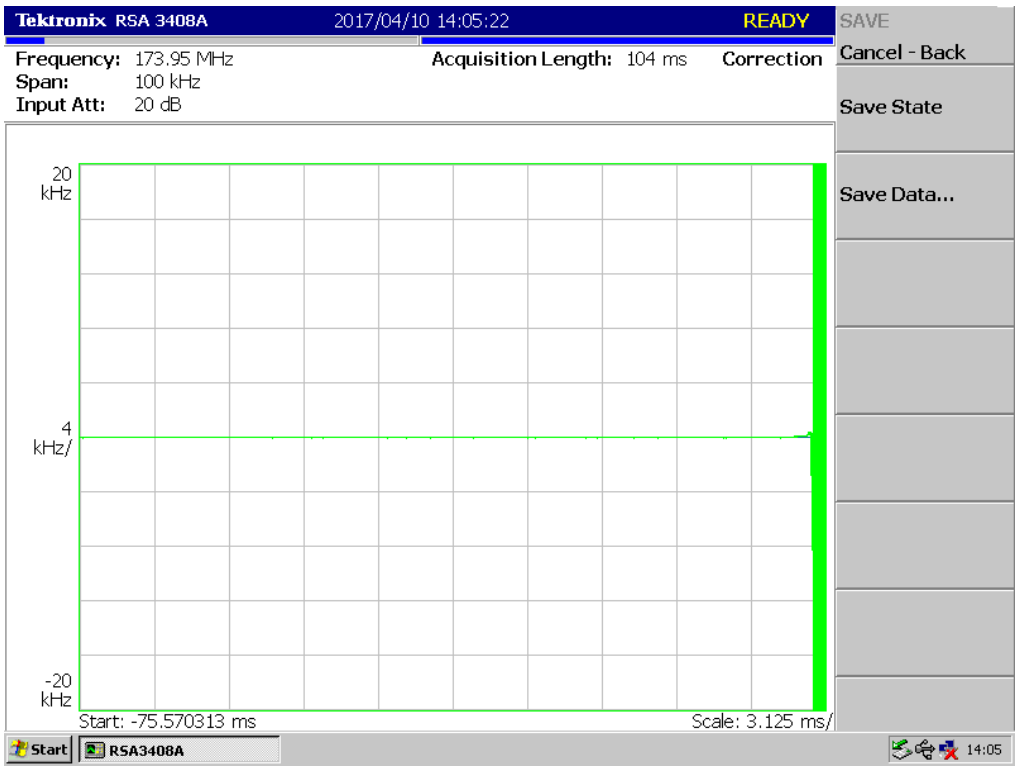
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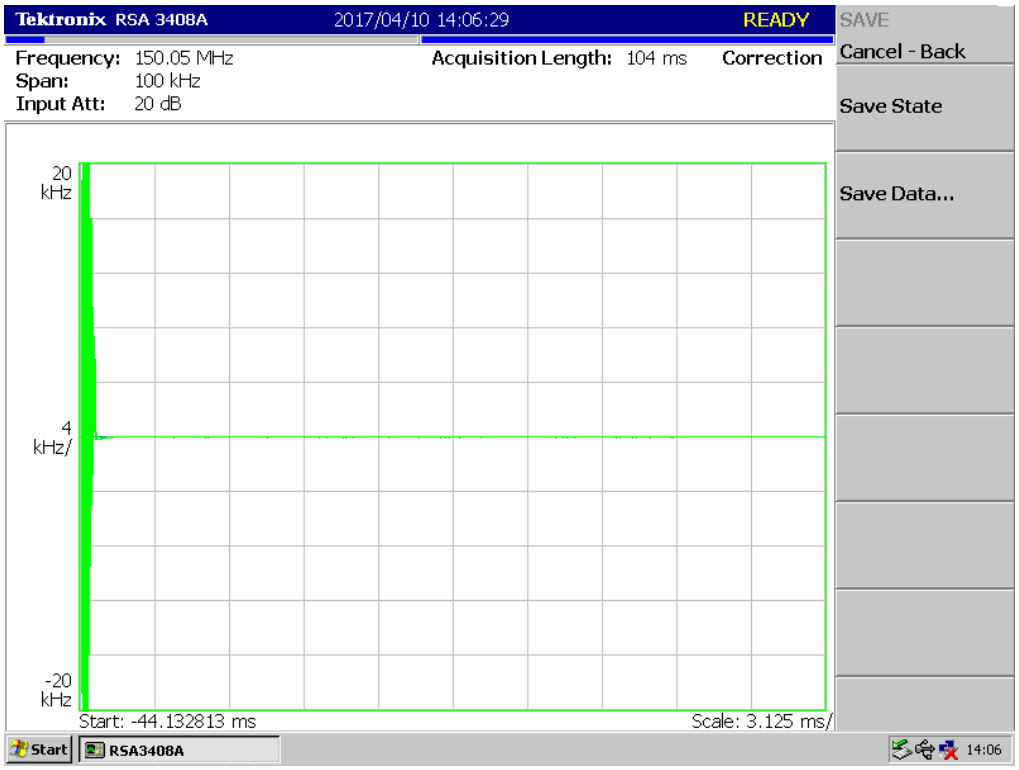


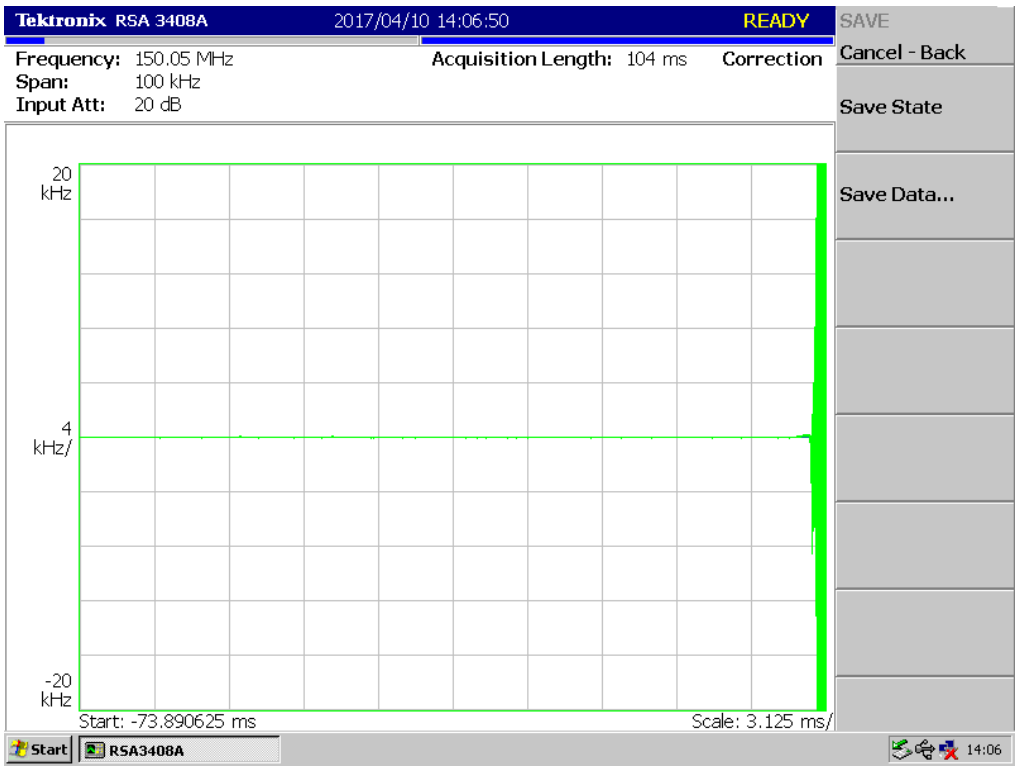
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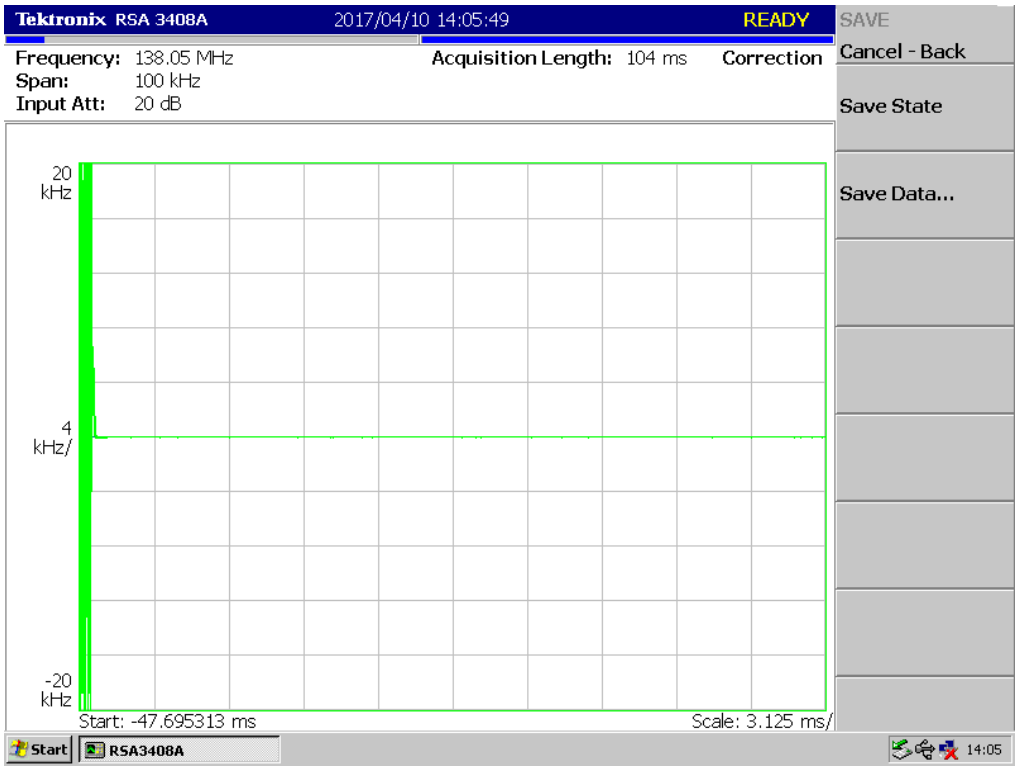


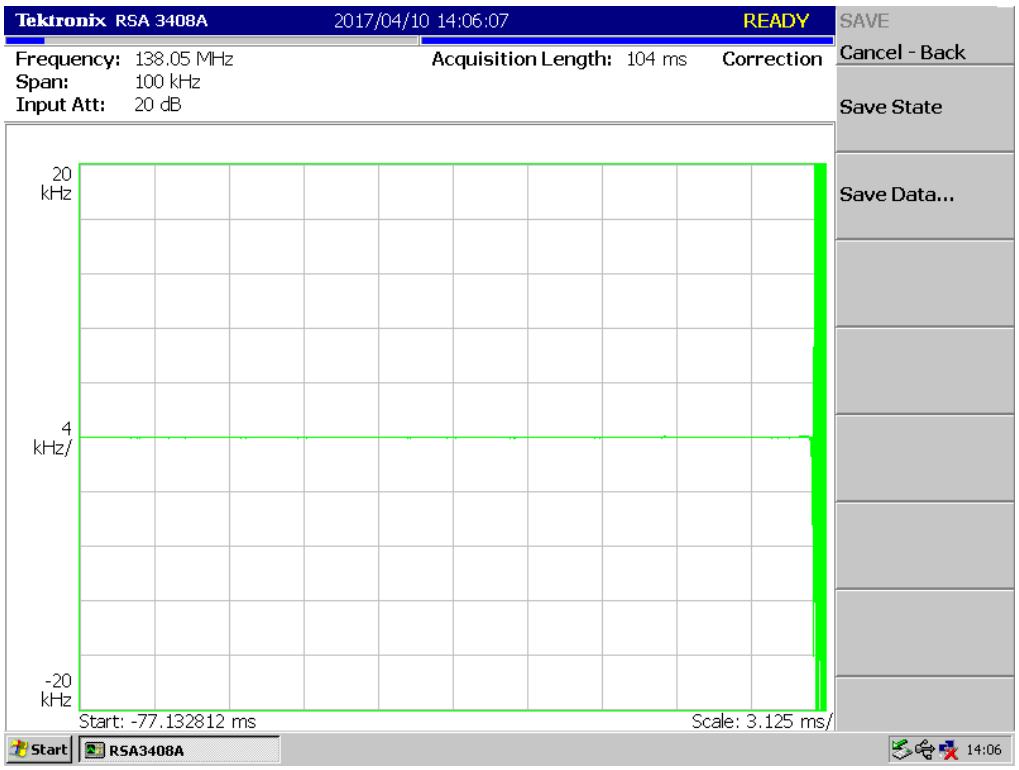
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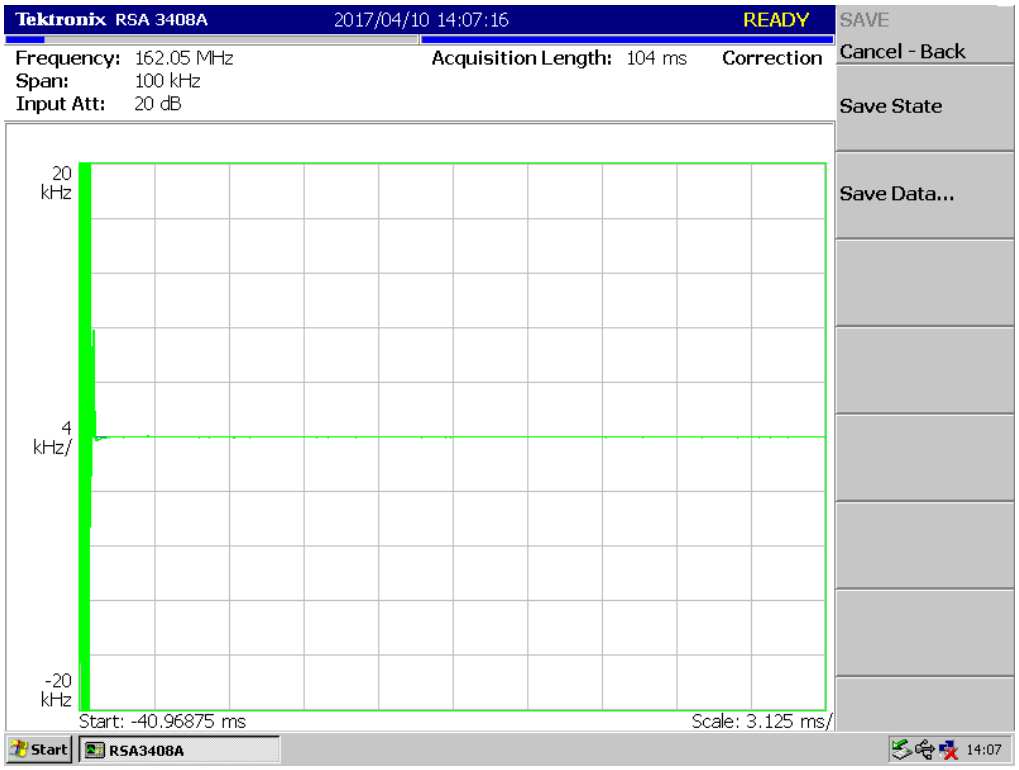


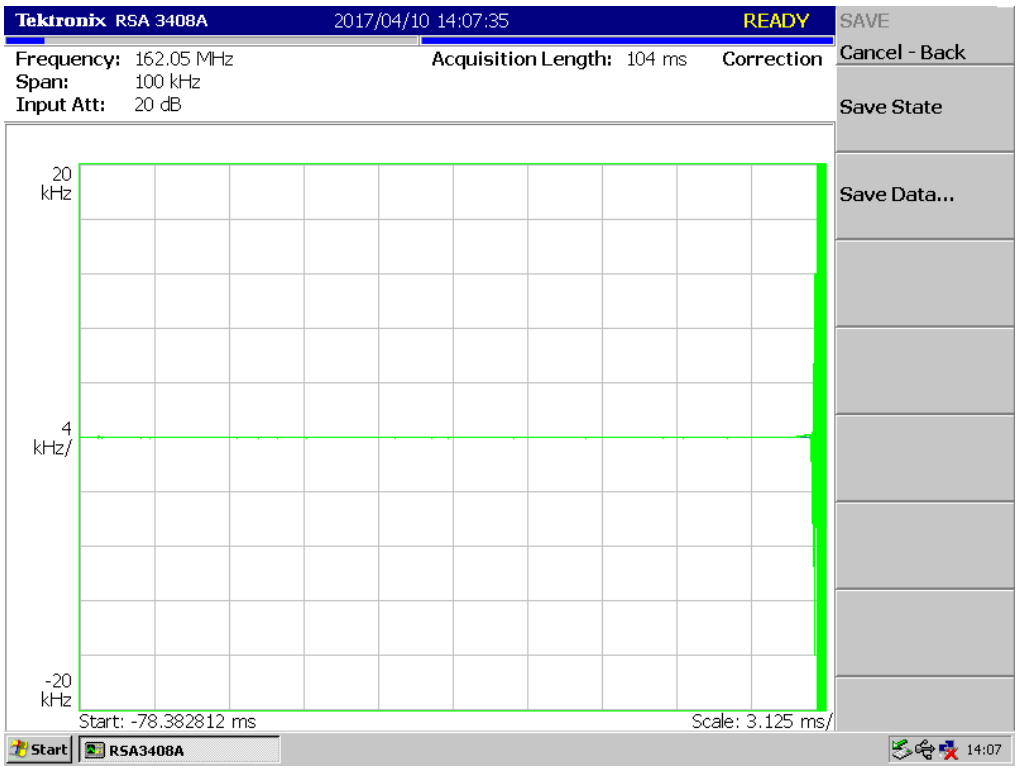
(7K60FXD, 7K60FXE _ 138.05 MHz)_Low



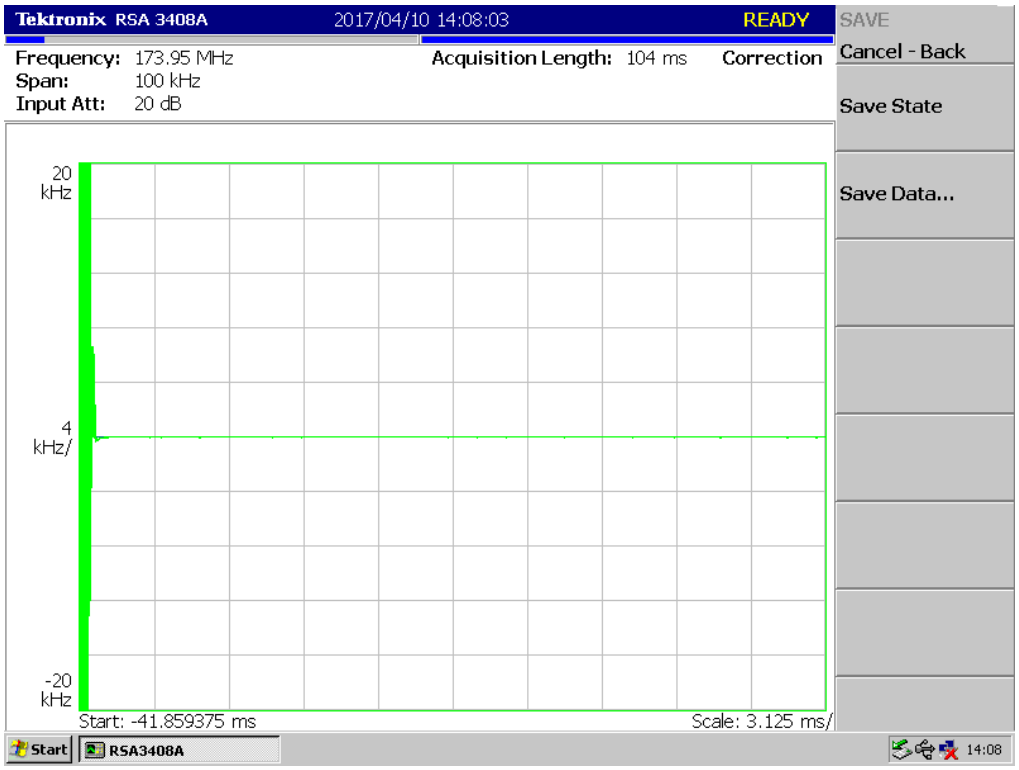


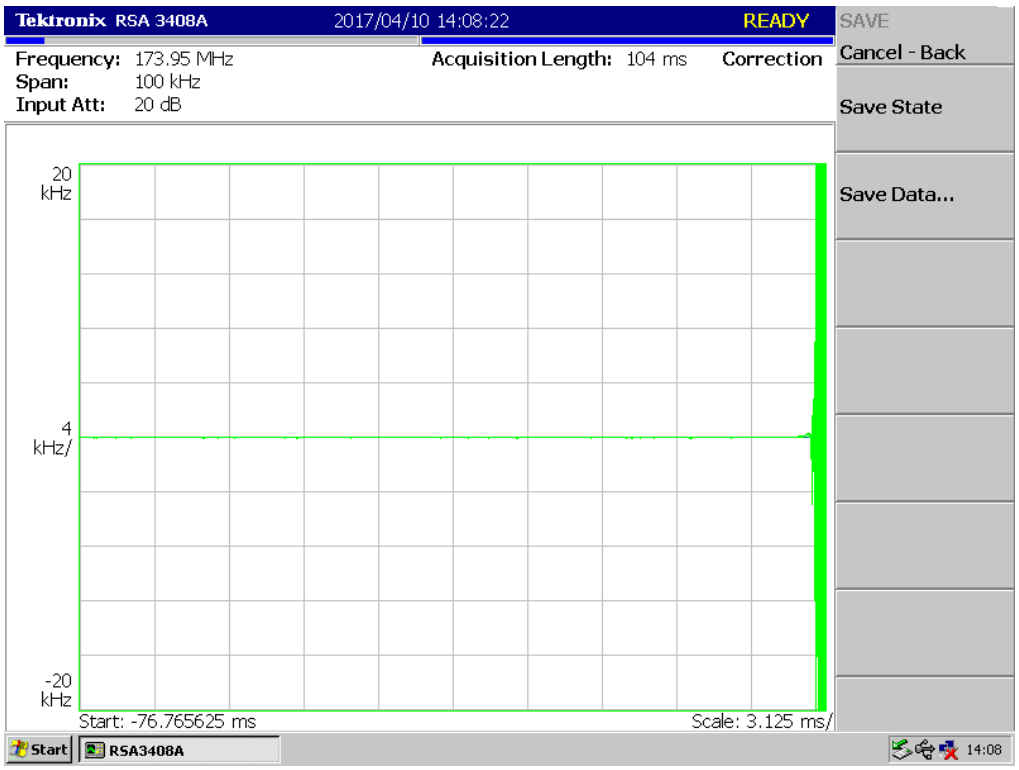
(7K60FXD, 7K60FXE _ 162.05 MHz)_Low



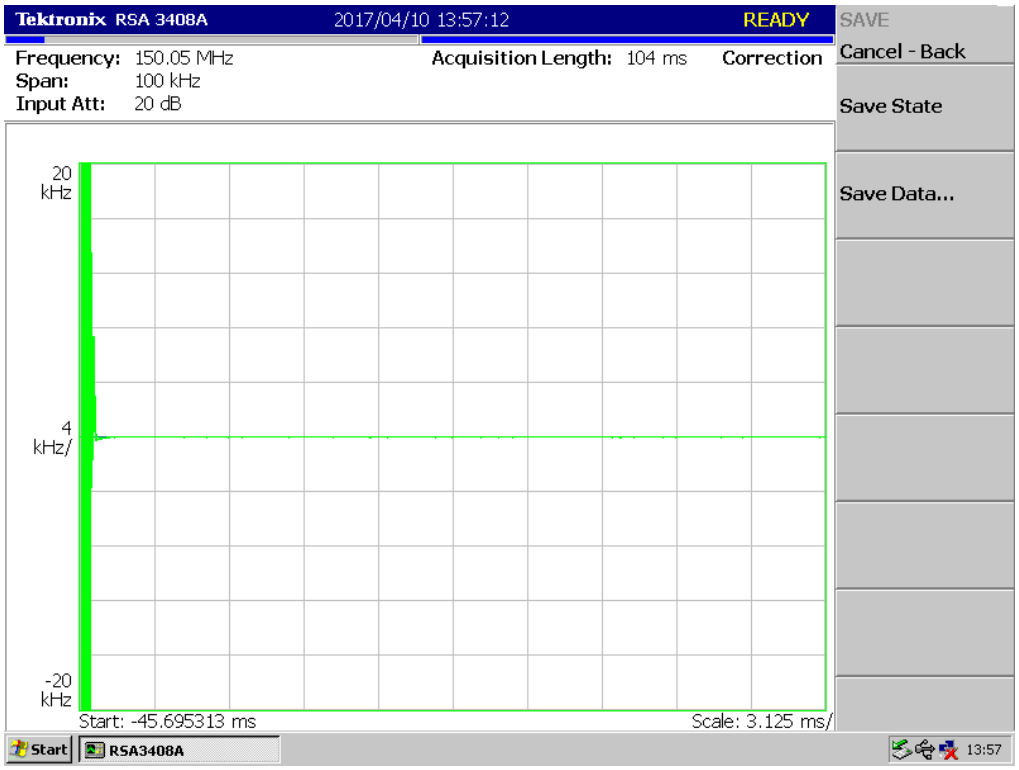


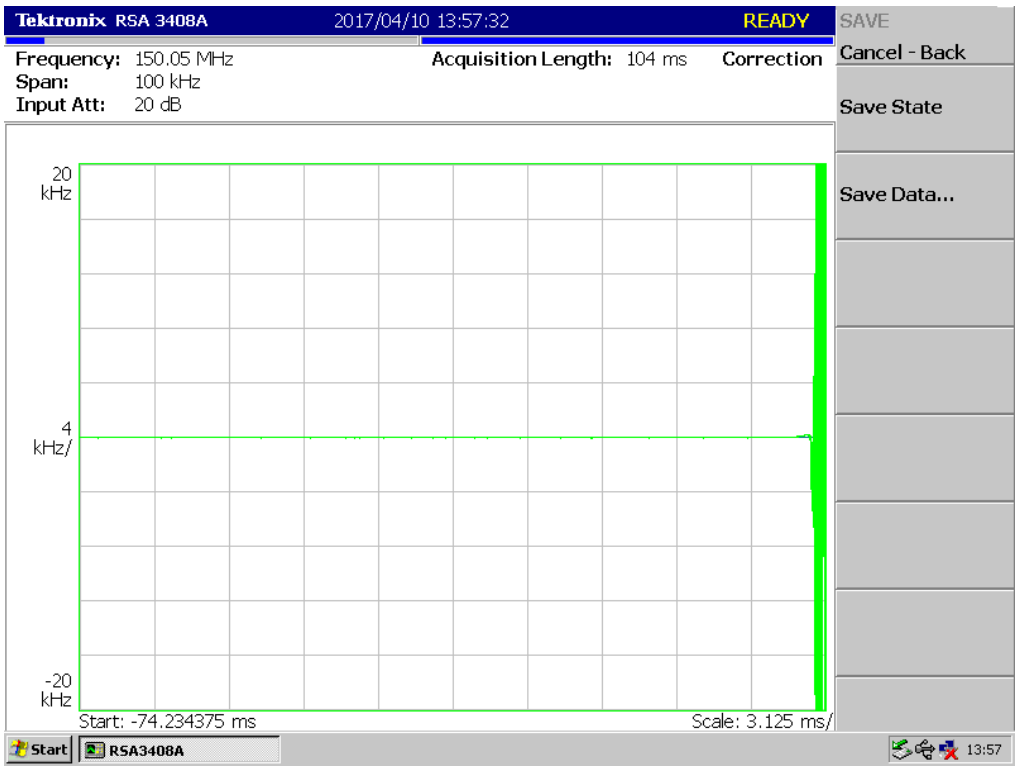
(7K60FXD, 7K60FXE _ 173.95 MHz)_Low



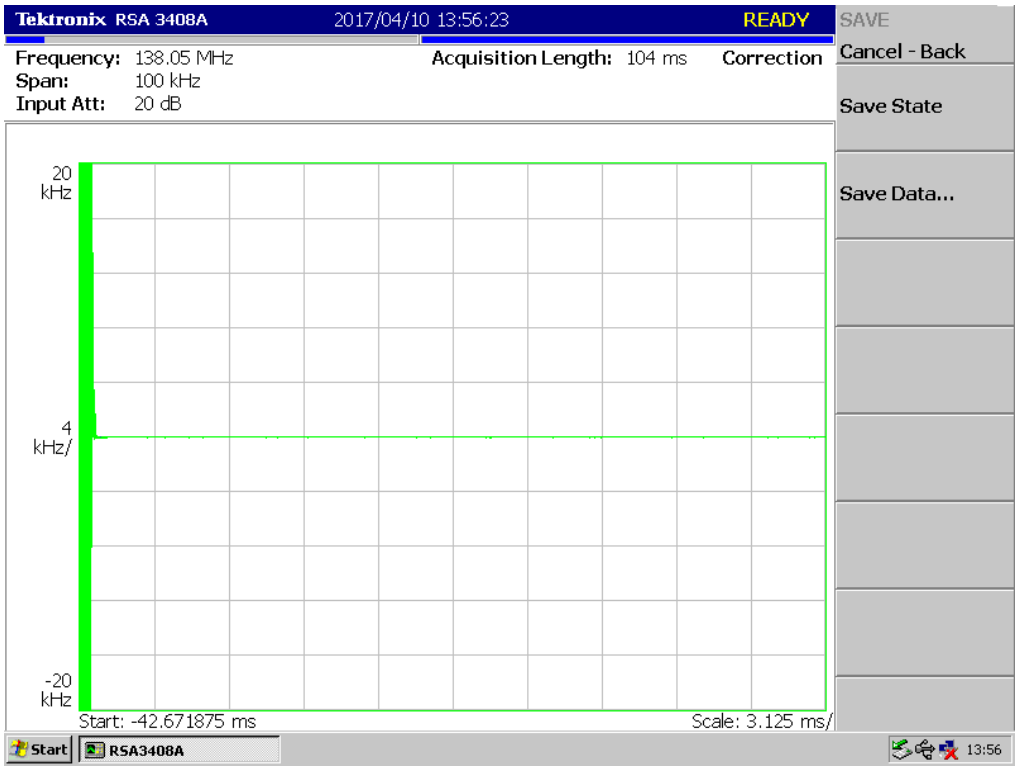


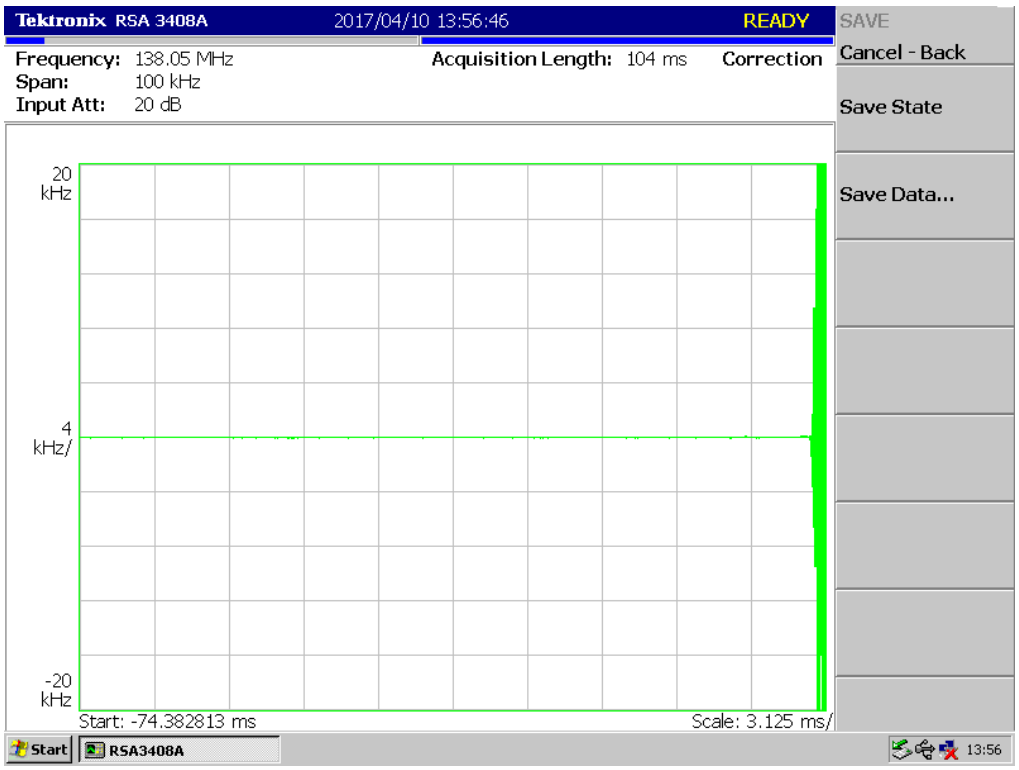
(8K30F1E, 8K30F1D, 8K30F7W _ 150.05 MHz)_High



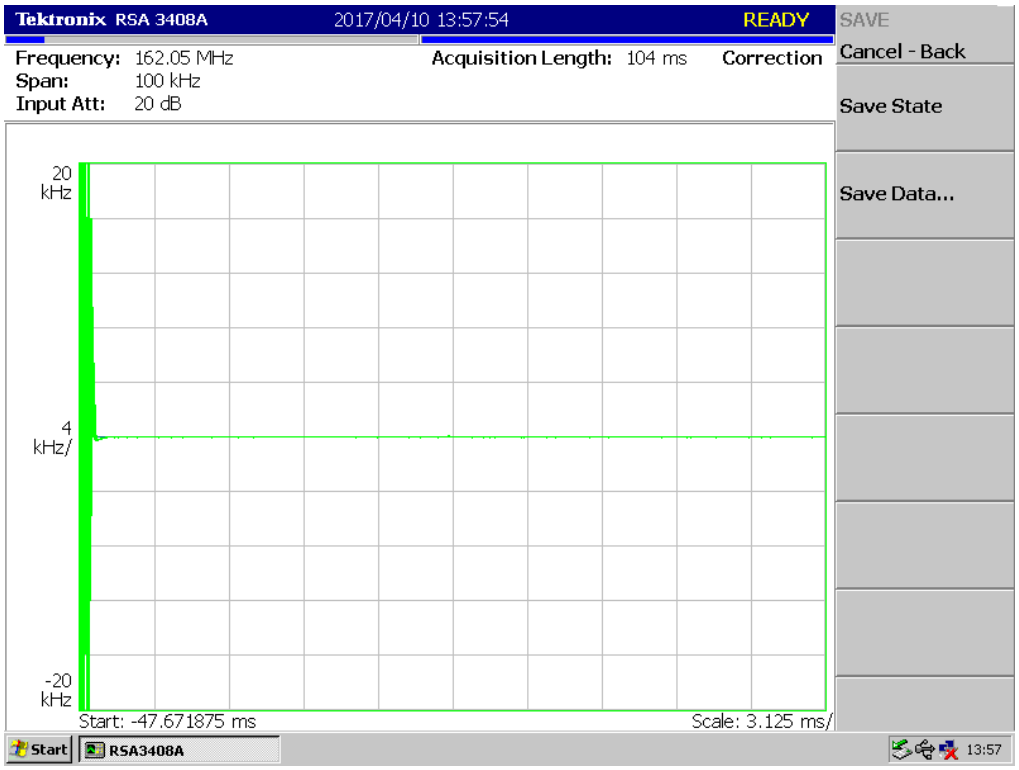


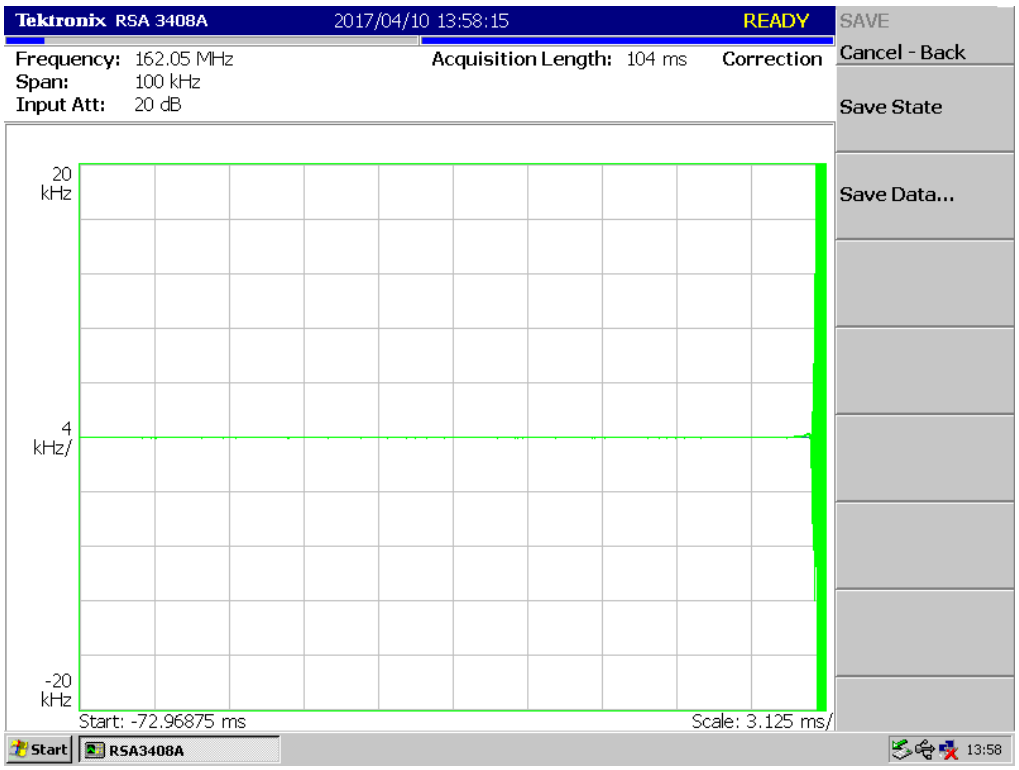
(8K30F1E, 8K30F1D, 8K30F7W _ 138.05 MHz)_High



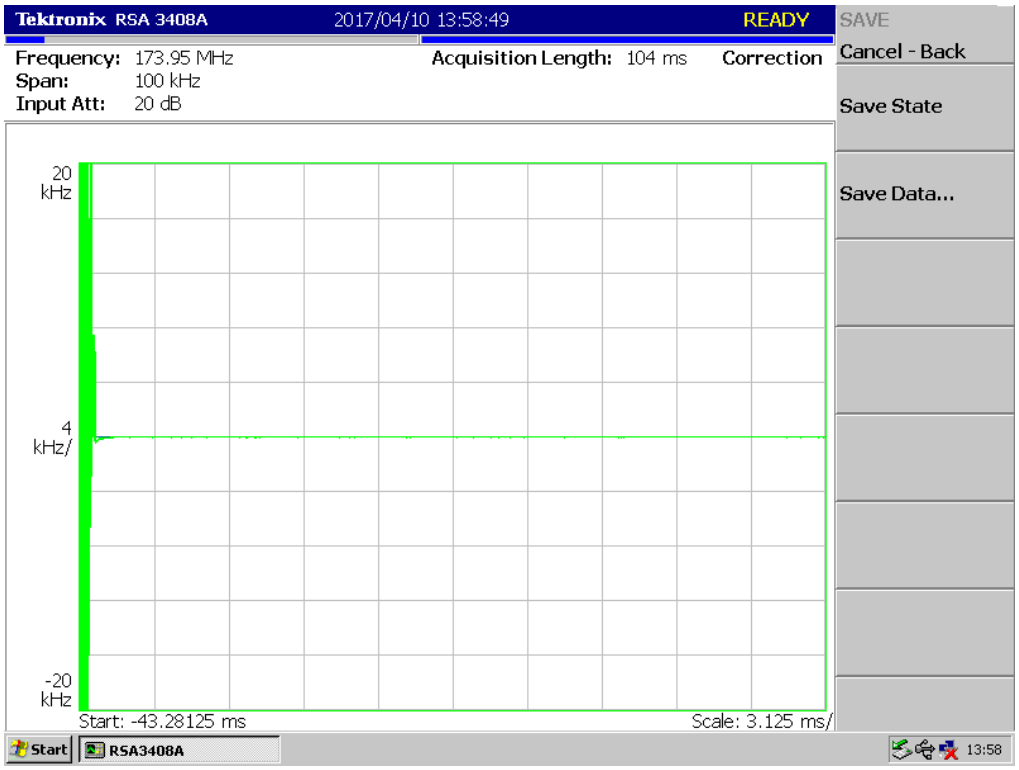


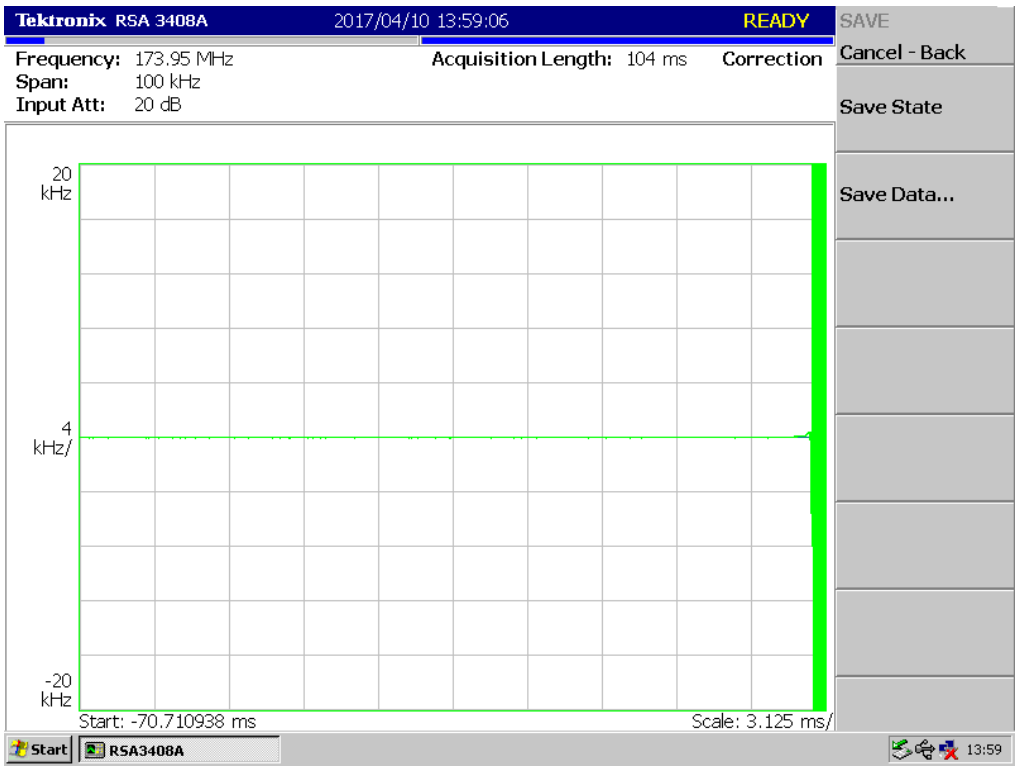
(8K30F1E, 8K30F1D, 8K30F7W _ 162.05 MHz)_High



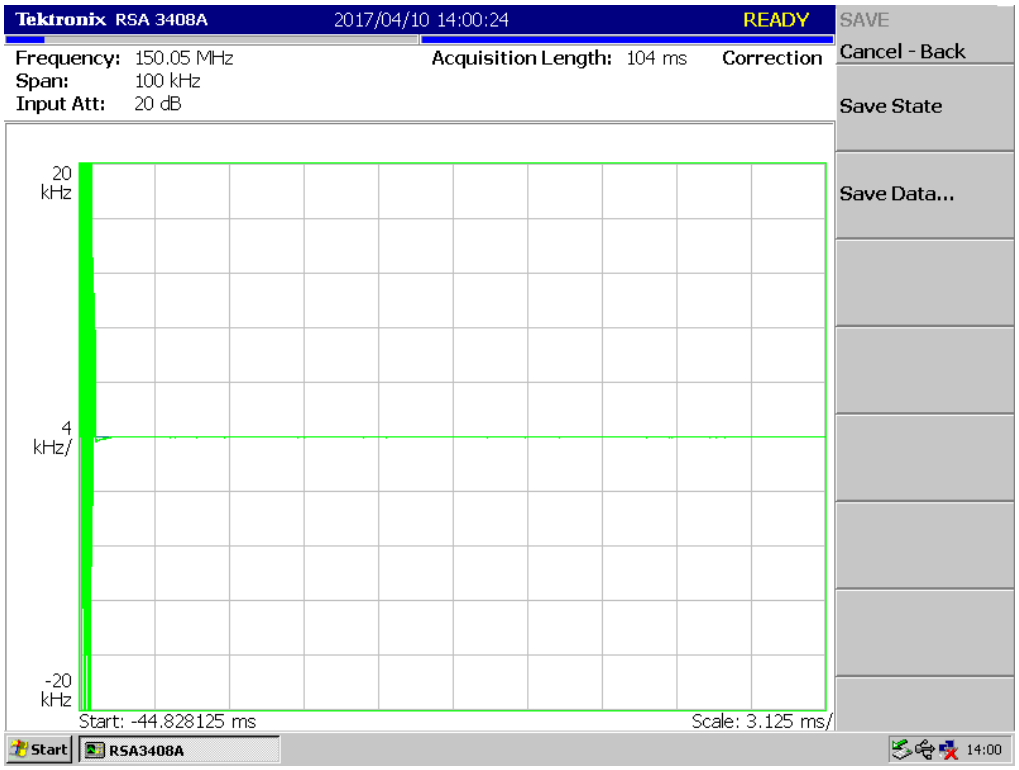


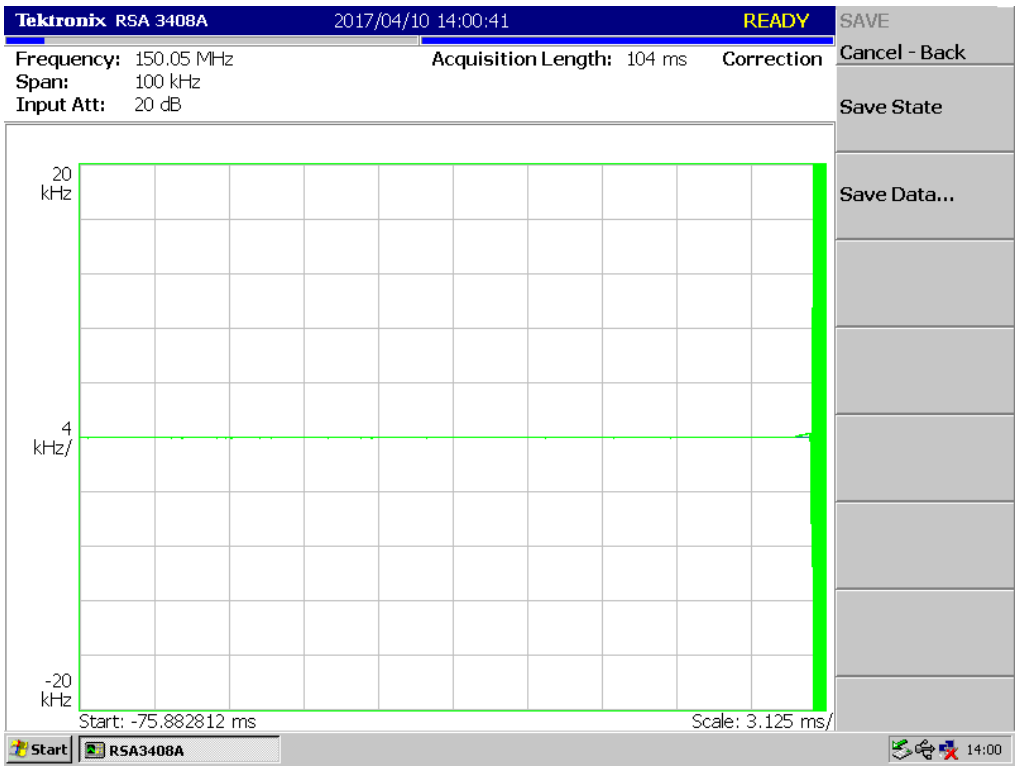
(8K30F1E, 8K30F1D, 8K30F7W _ 173.95 MHz)_High



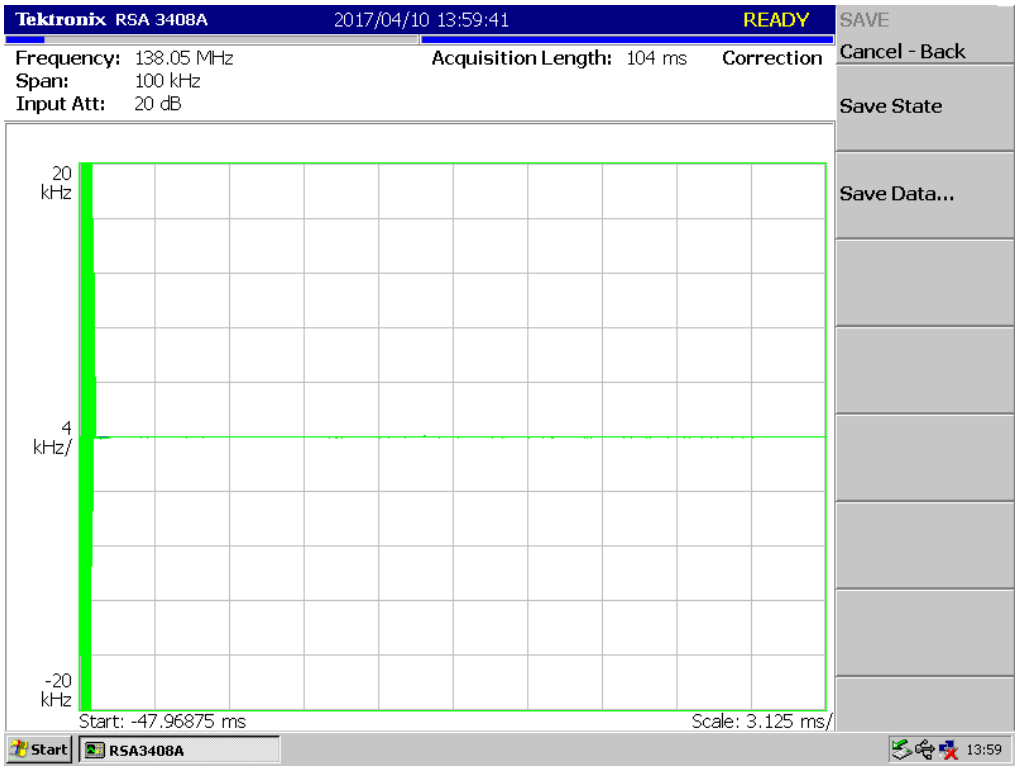


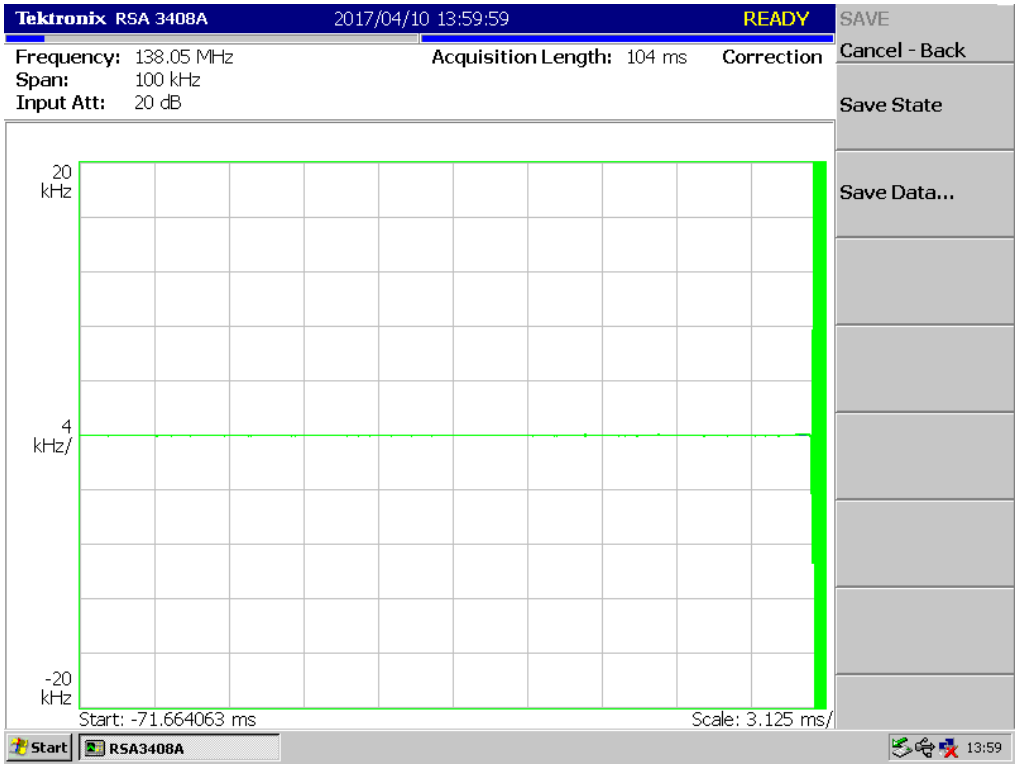
(8K30F1E, 8K30F1D, 8K30F7W _ 150.05 MHz)_Low



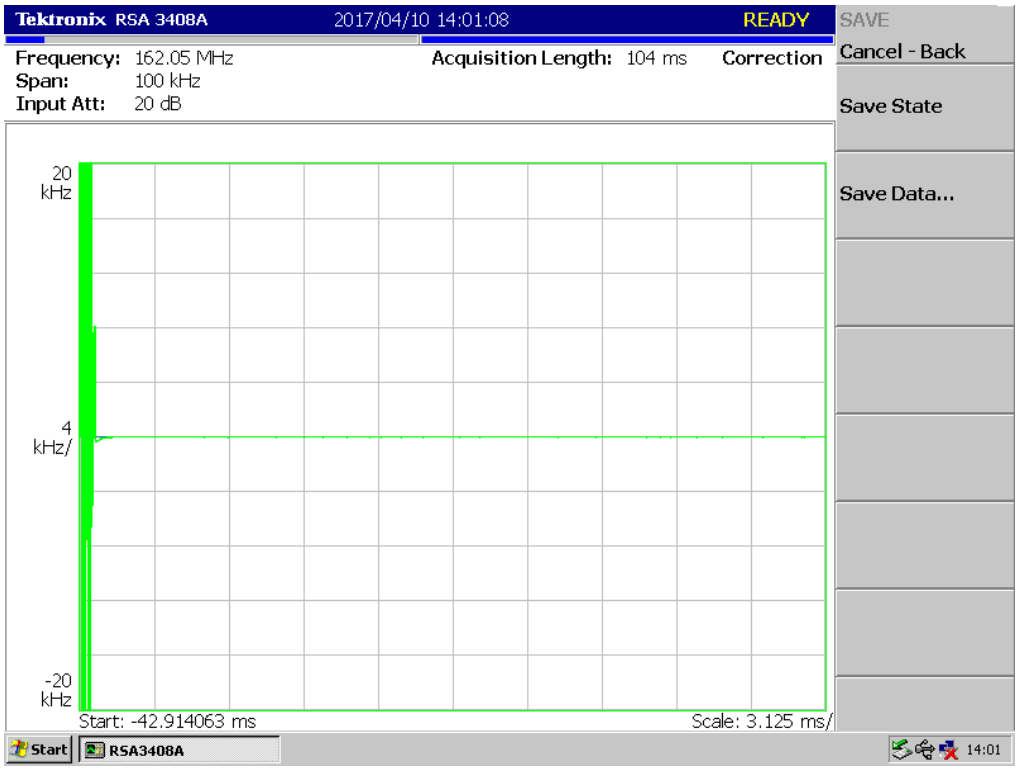


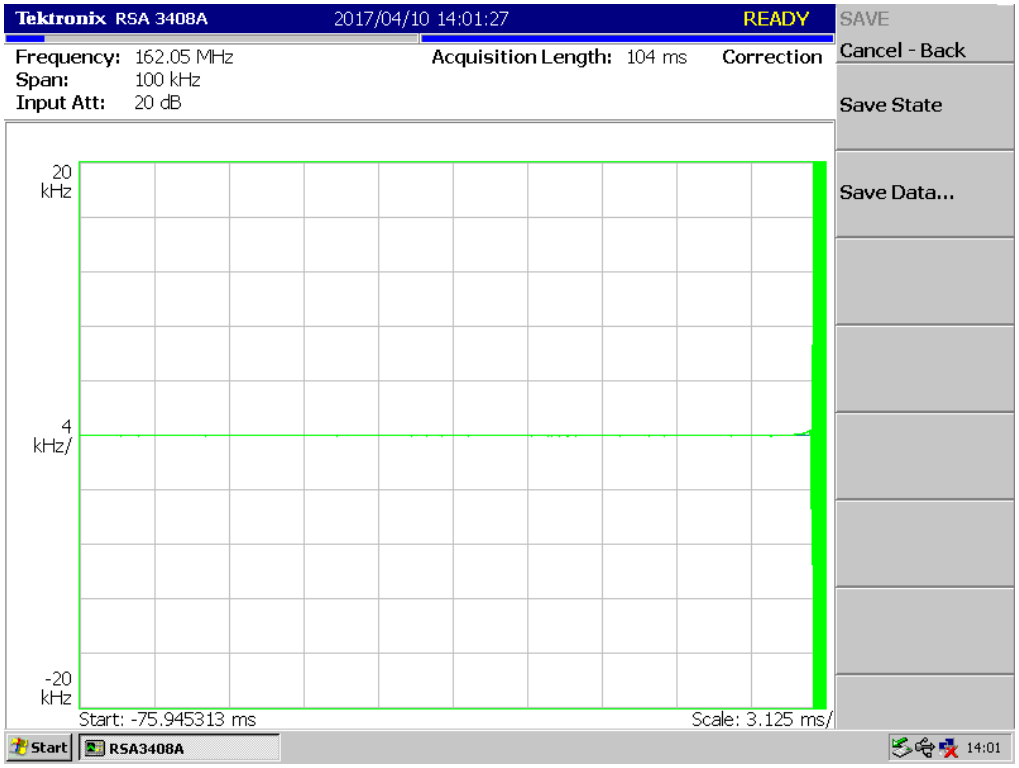
(8K30F1E, 8K30F1D, 8K30F7W _ 138.05 MHz)_Low



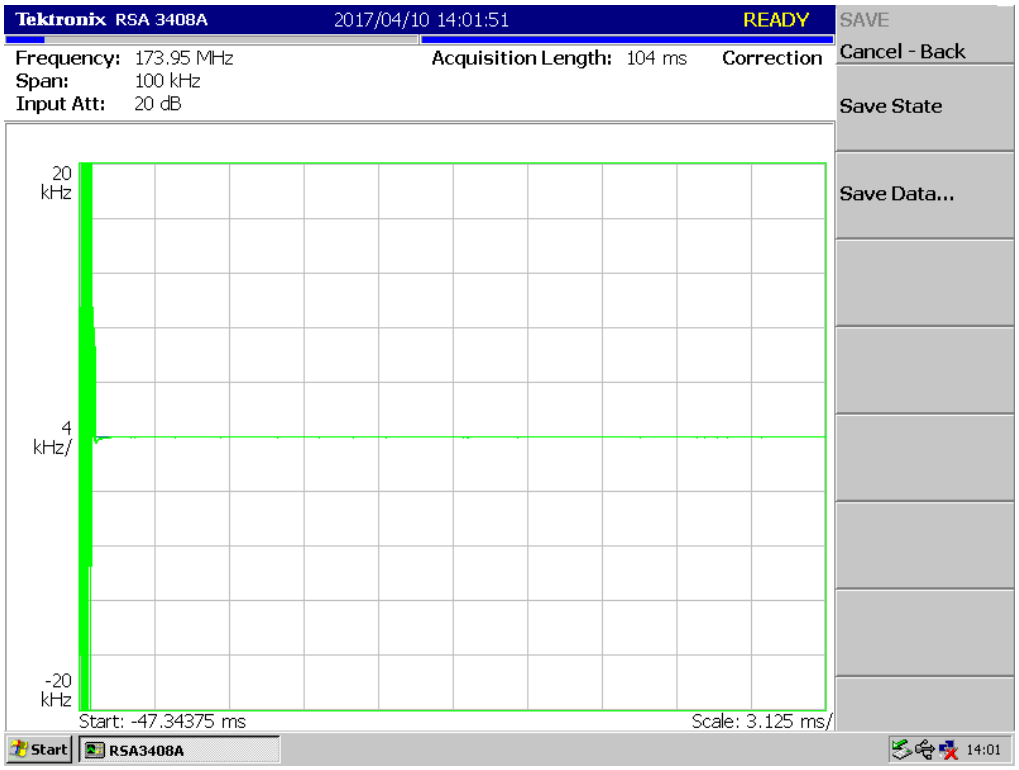


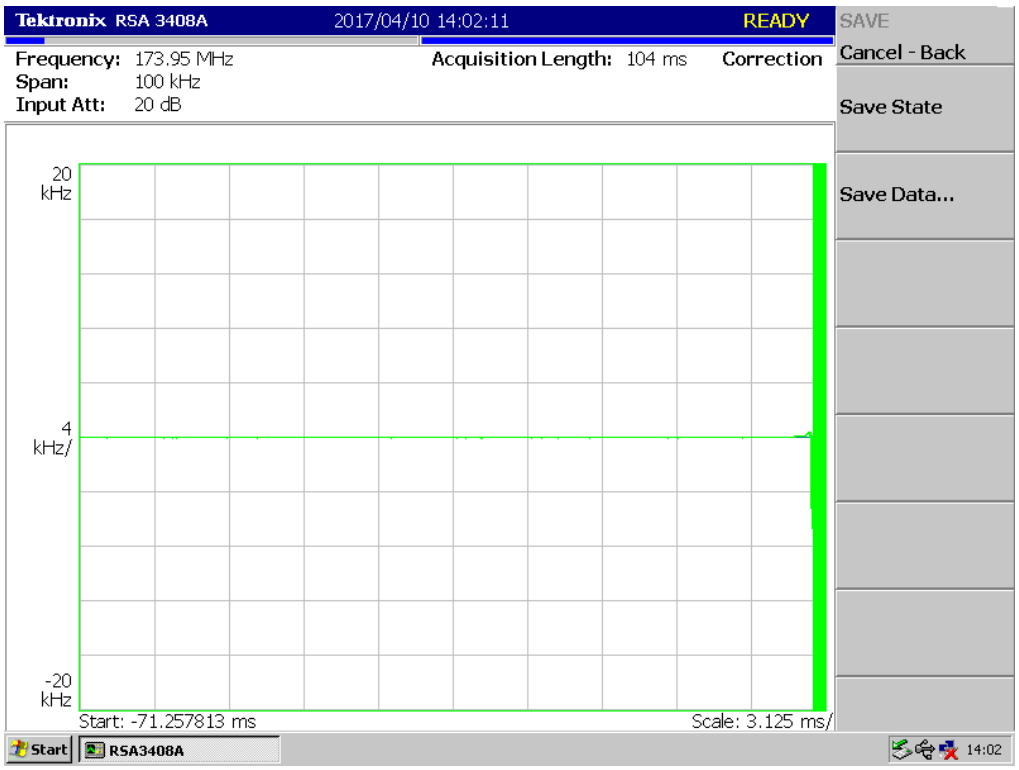
(8K30F1E, 8K30F1D, 8K30F7W _ 162.05 MHz)_Low



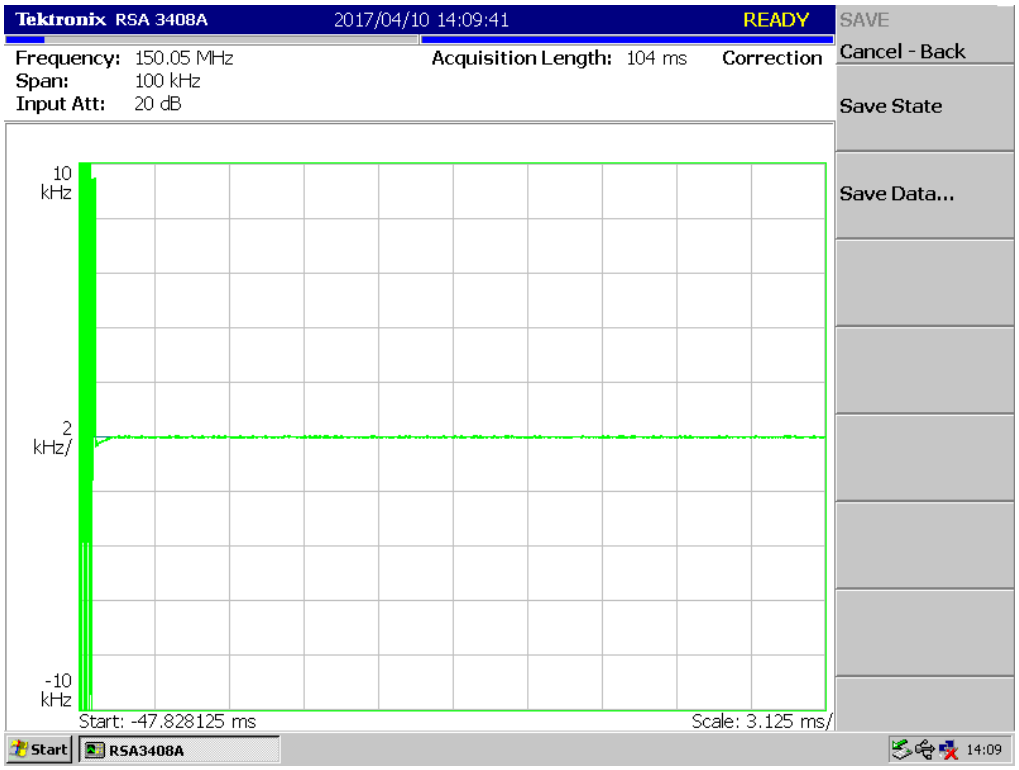


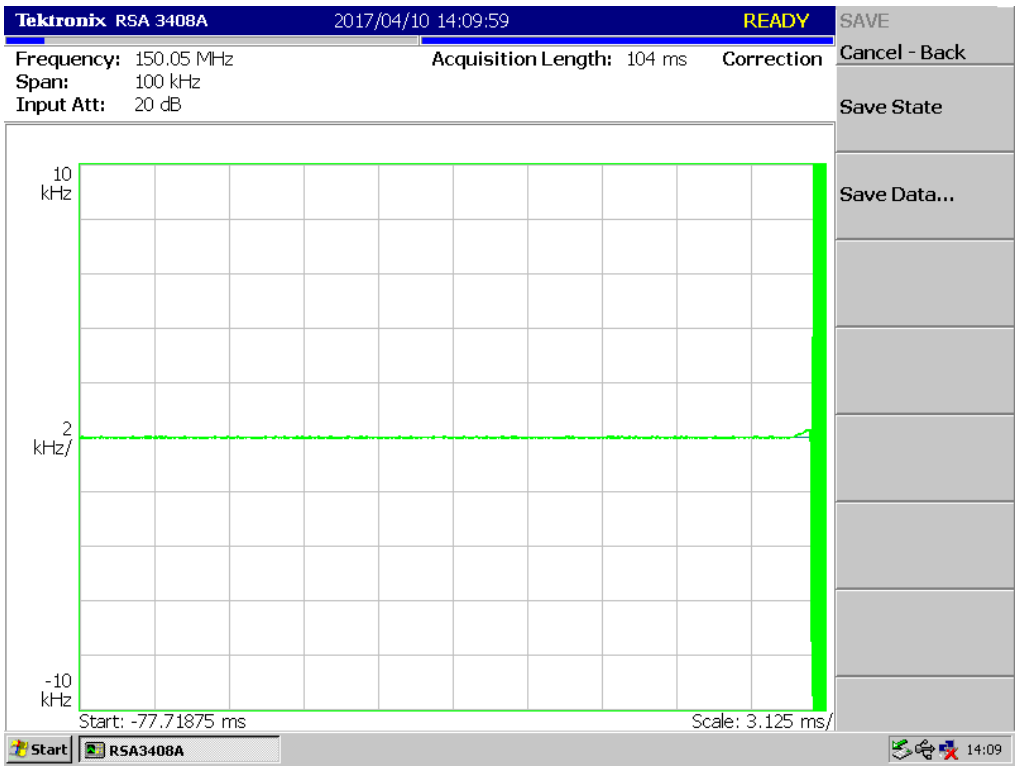
(8K30F1E, 8K30F1D, 8K30F7W _ 173.95 MHz)_Low



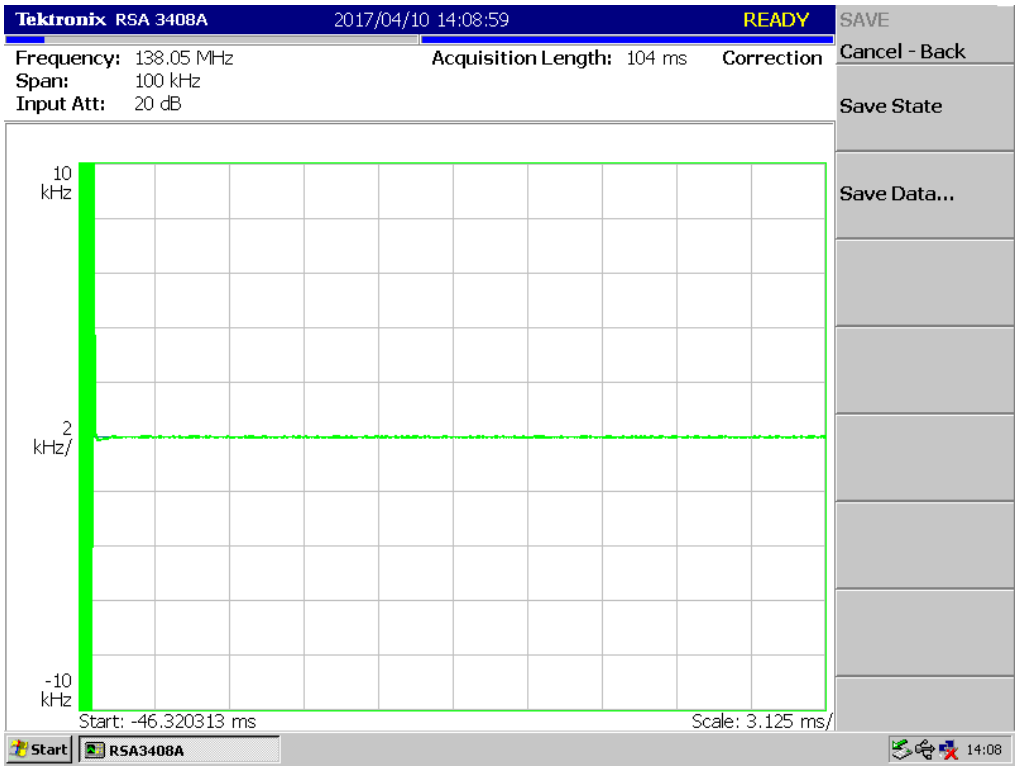


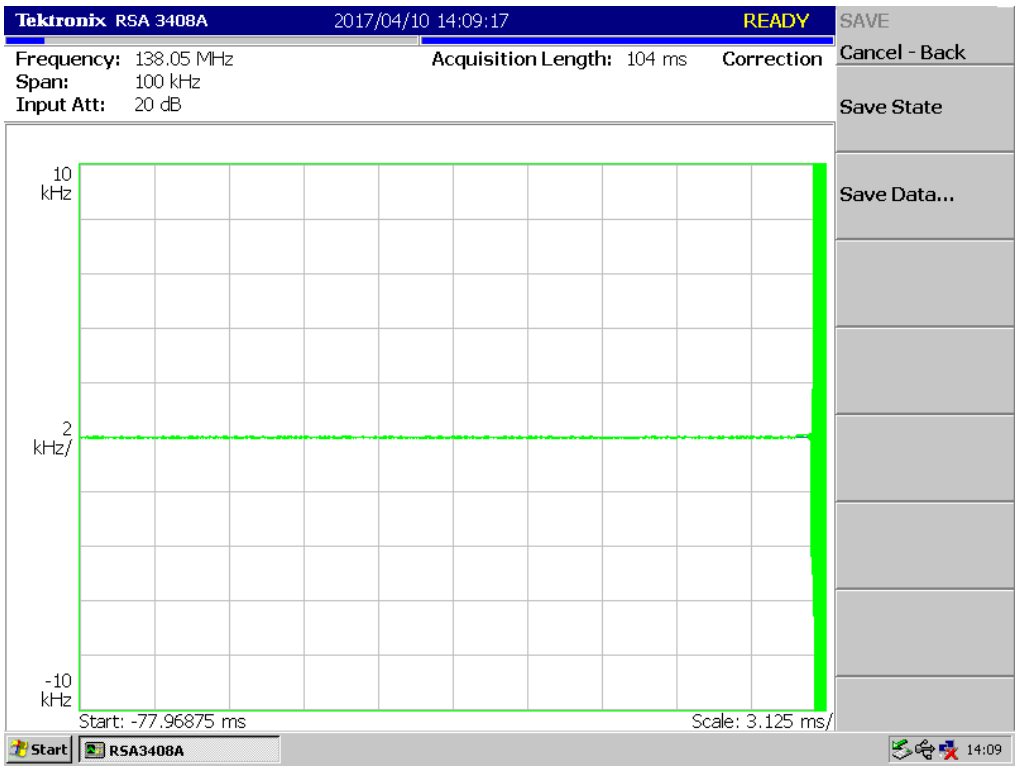
(4K00F1E, 4K00F1D, 4K00F7W _ 150.05 MHz)_High



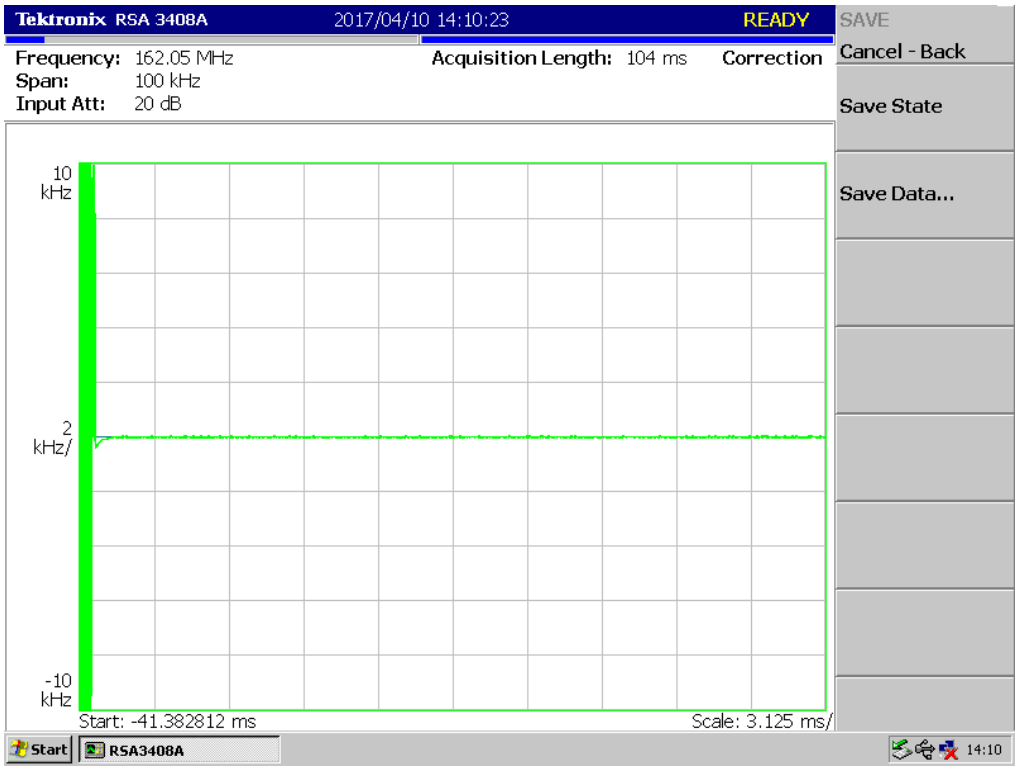


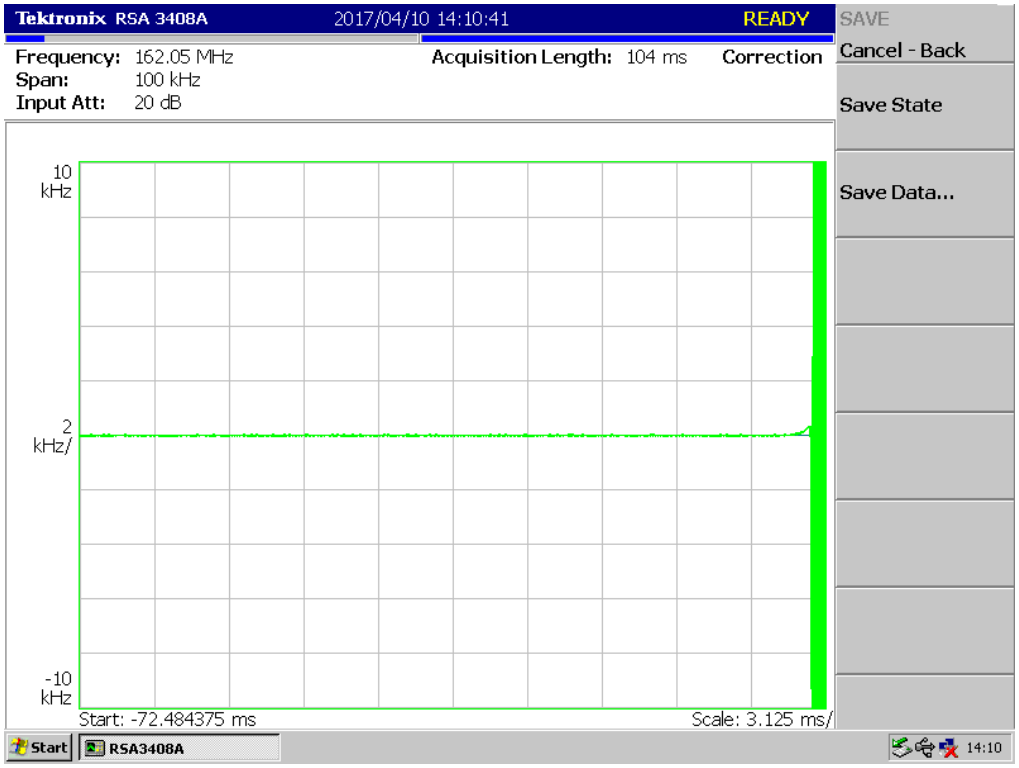
(4K00F1E, 4K00F1D, 4K00F7W _ 138.05 MHz)_High



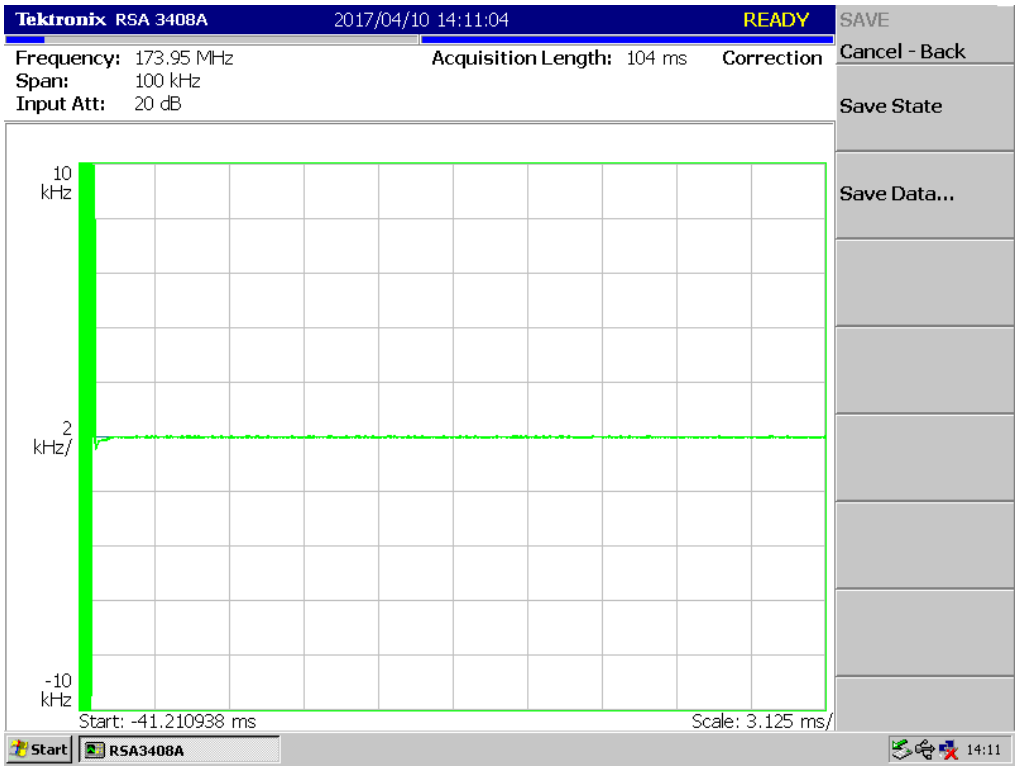


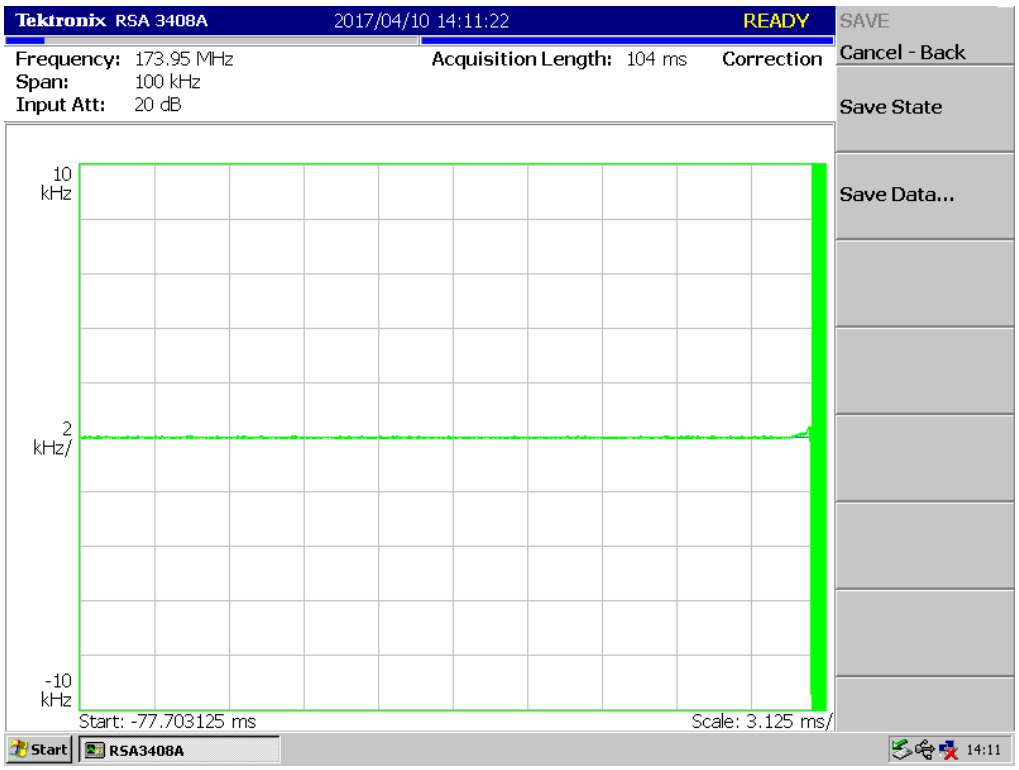
(4K00F1E, 4K00F1D, 4K00F7W _ 162.05 MHz)_High



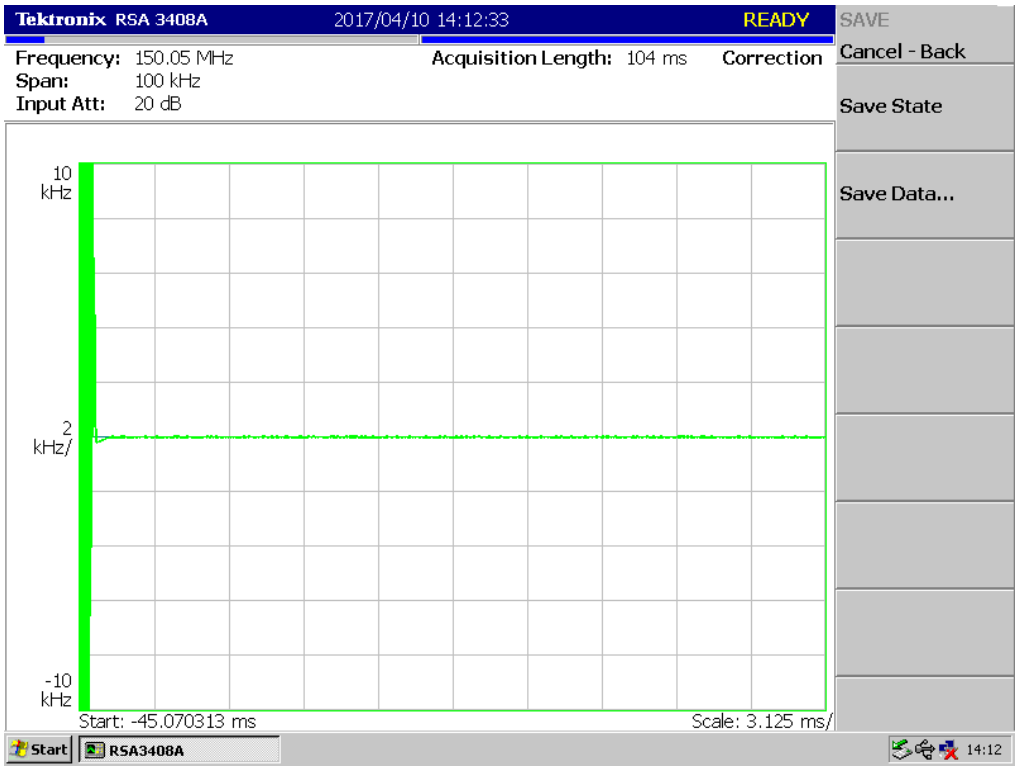


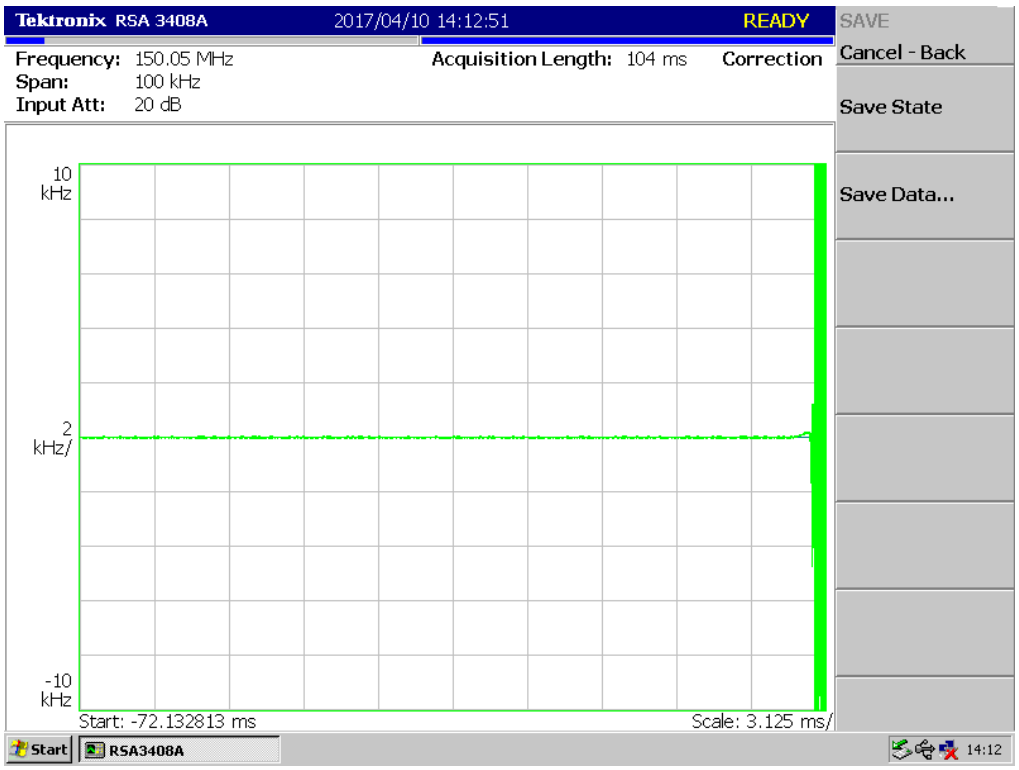
(4K00F1E, 4K00F1D, 4K00F7W _ 173.95 MHz)_High



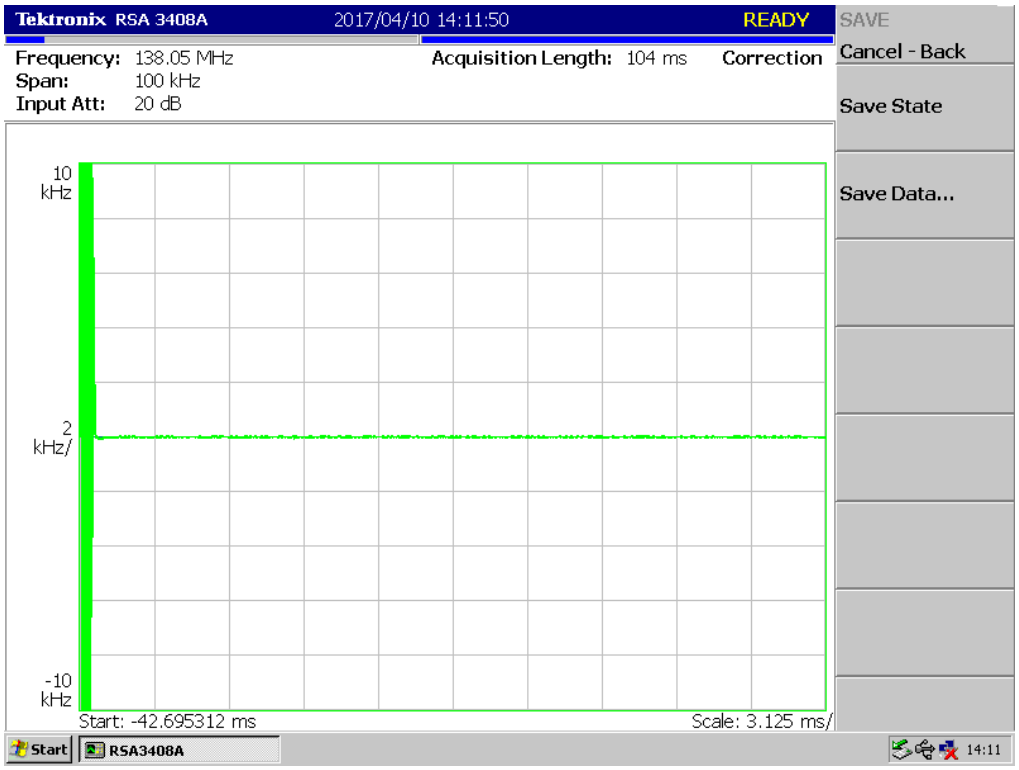


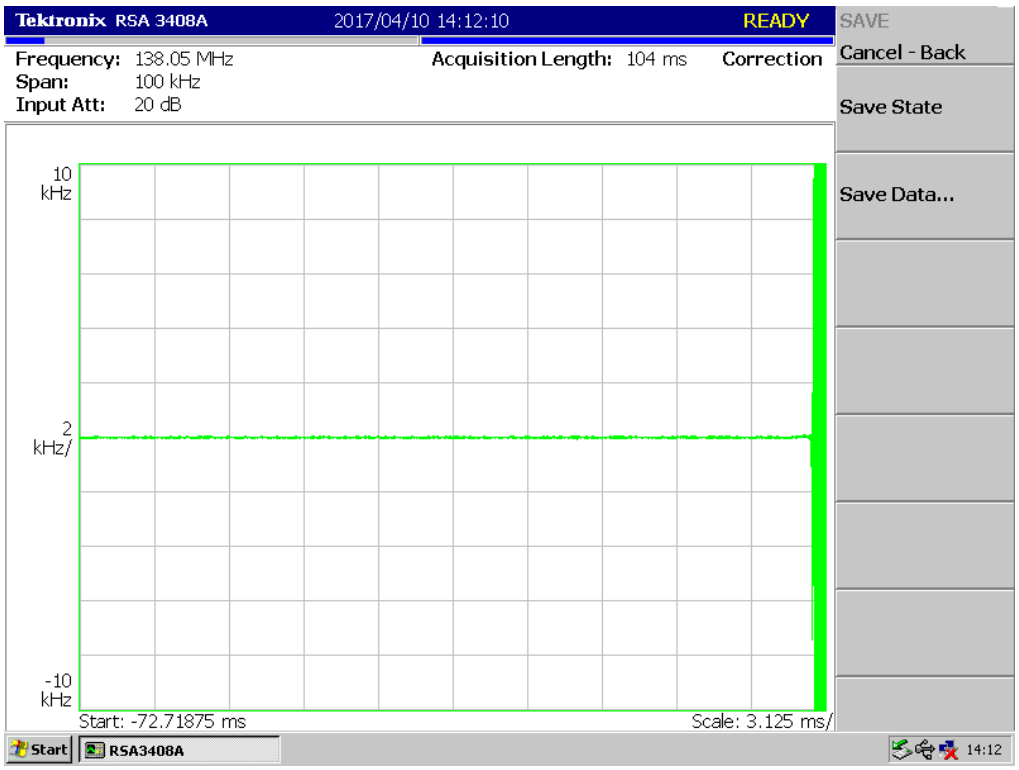
(4K00F1E, 4K00F1D, 4K00F7W _ 150.05 MHz)_Low



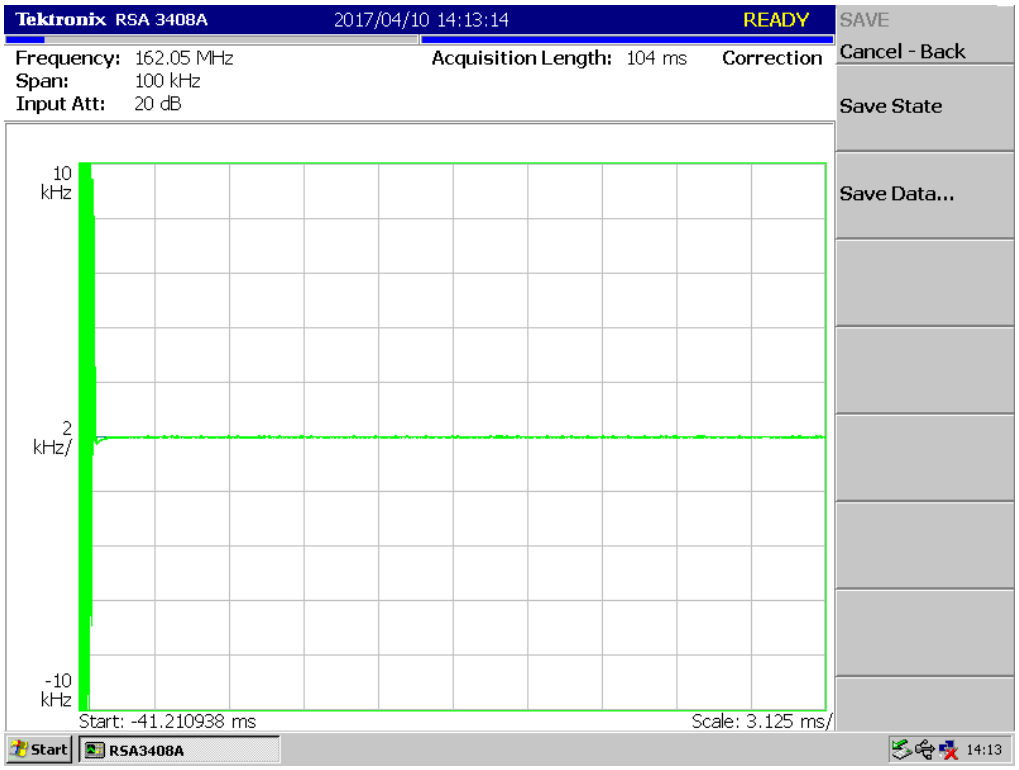


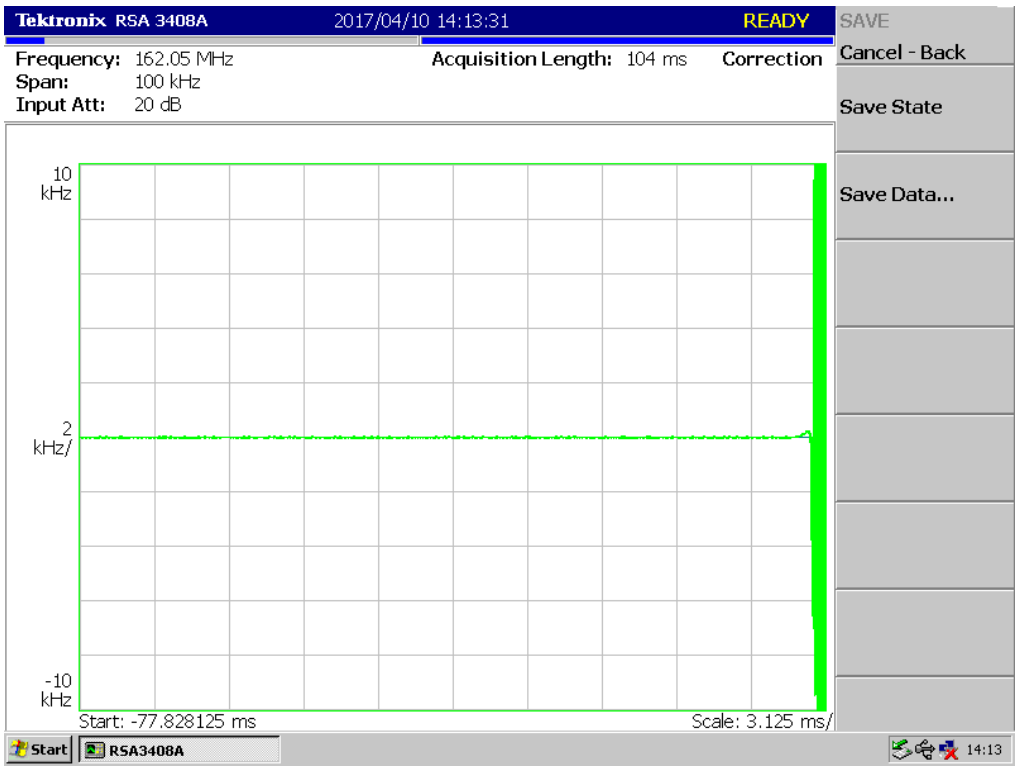
(4K00F1E, 4K00F1D, 4K00F7W _ 138.05 MHz)_Low



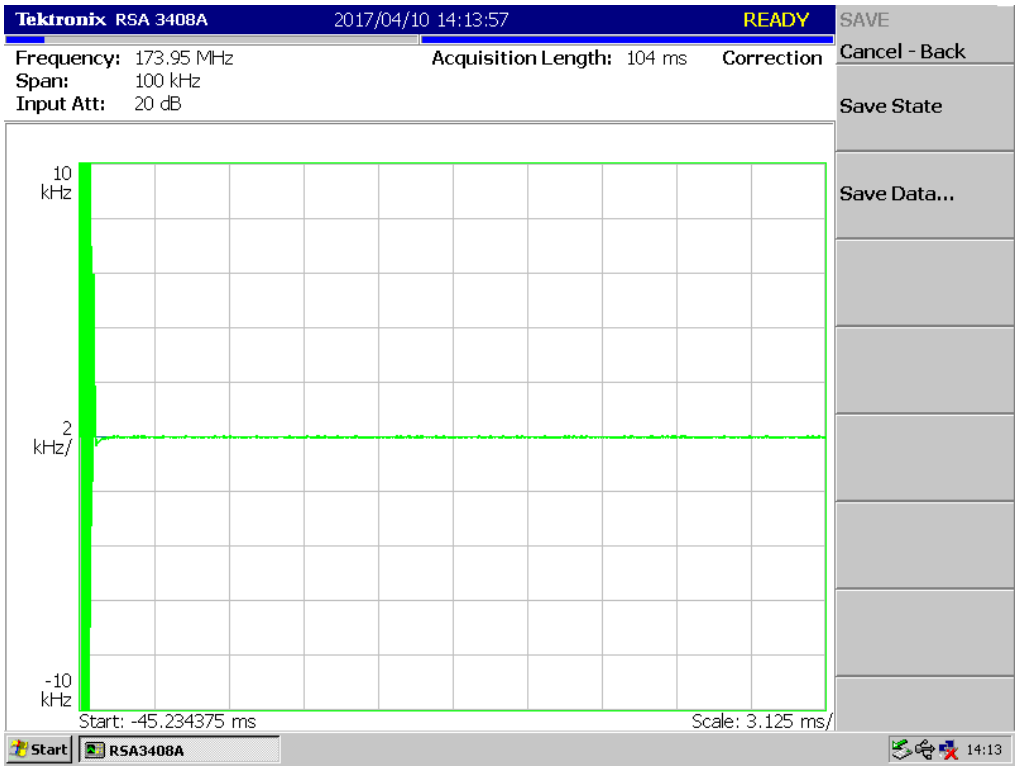


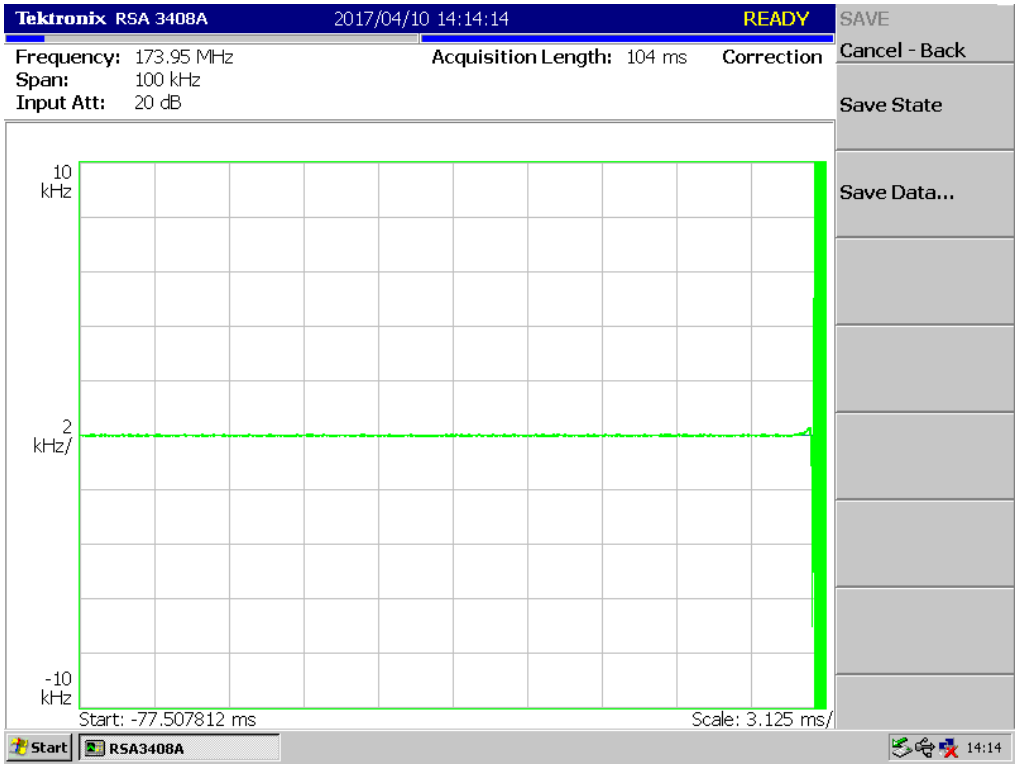
(4K00F1E, 4K00F1D, 4K00F7W _ 162.05 MHz)_Low



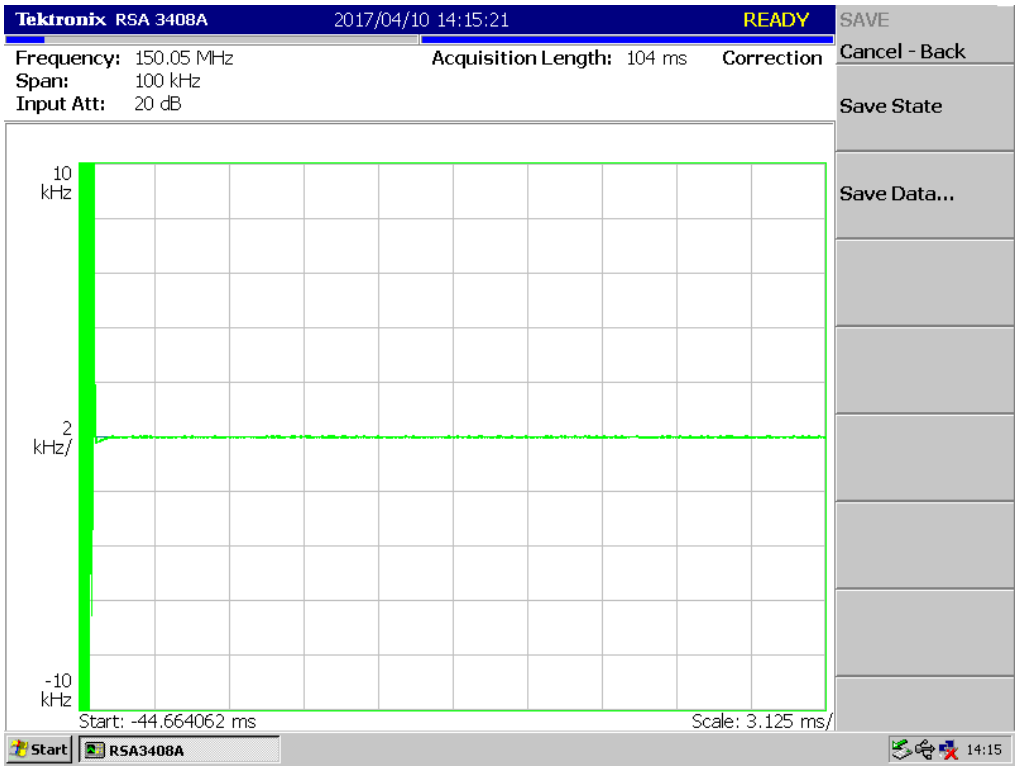


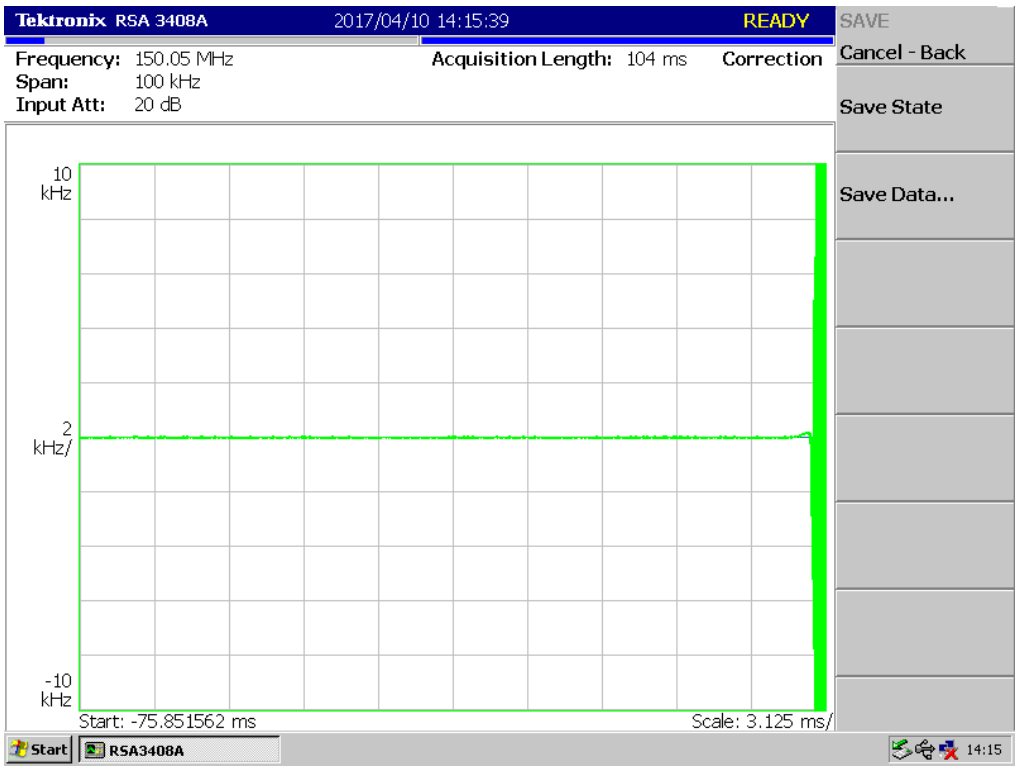
(4K00F1E, 4K00F1D, 4K00F7W _ 173.95 MHz)_Low



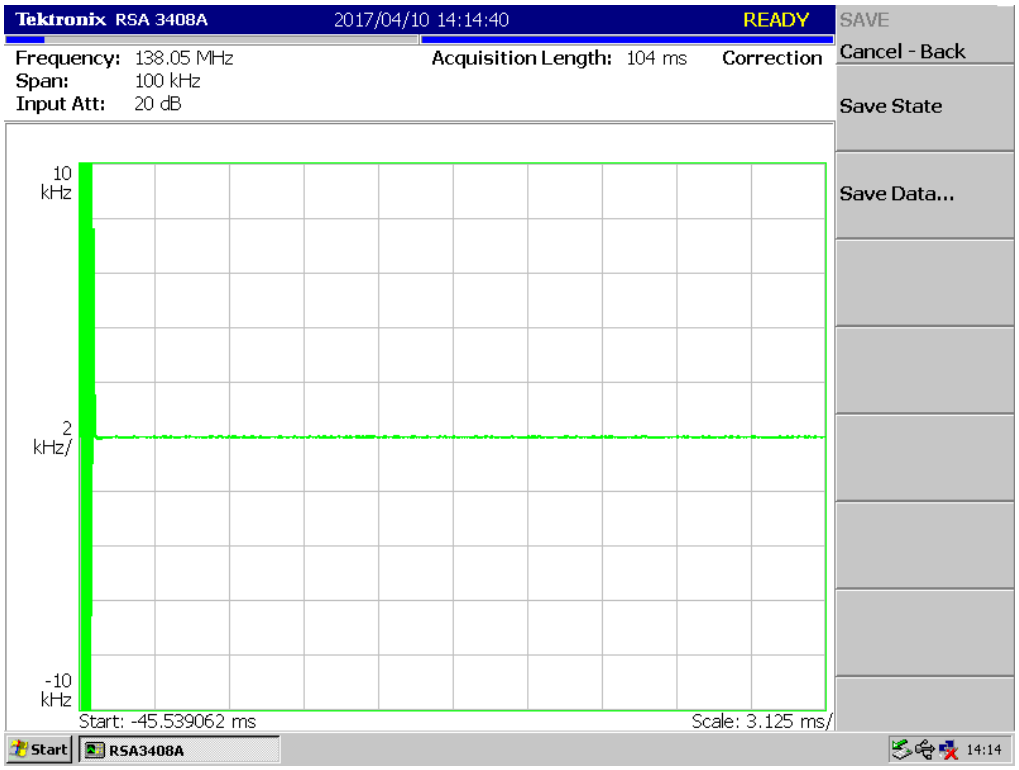


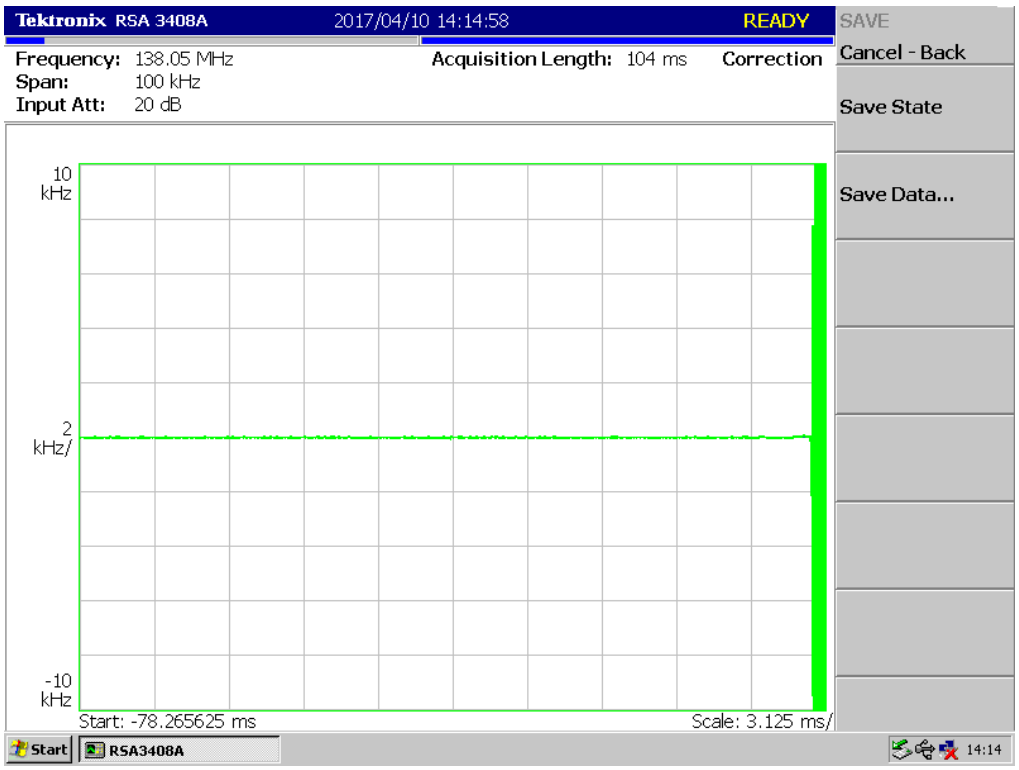
(4K00F2D_ 150.05 MHz)_Low



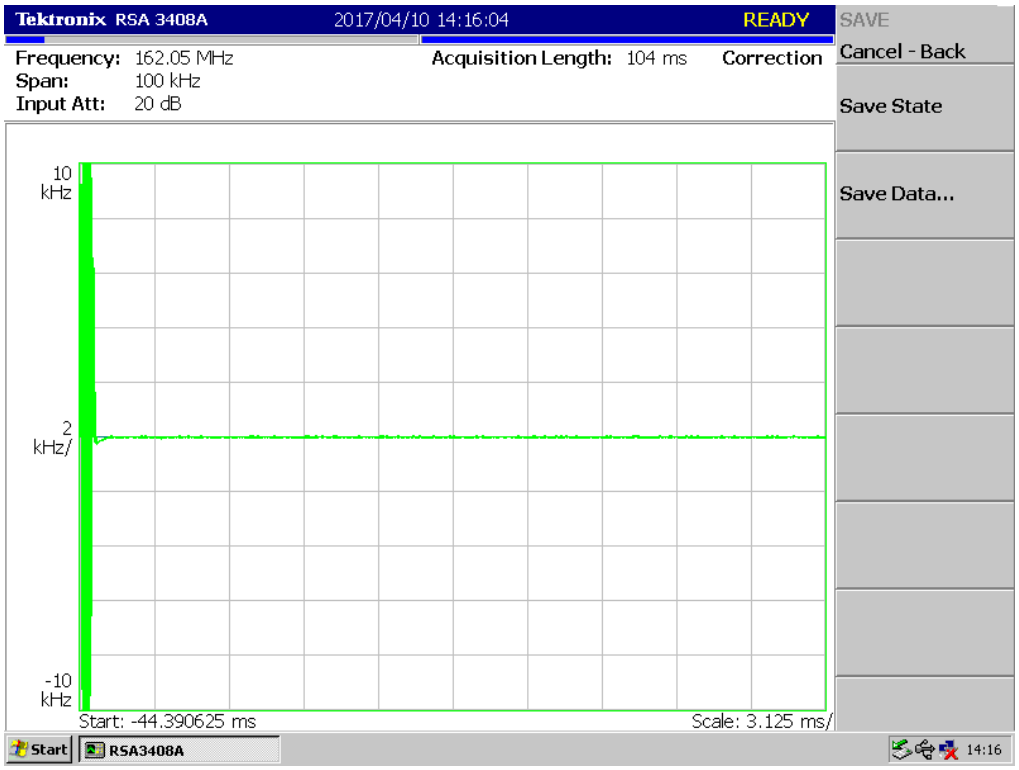


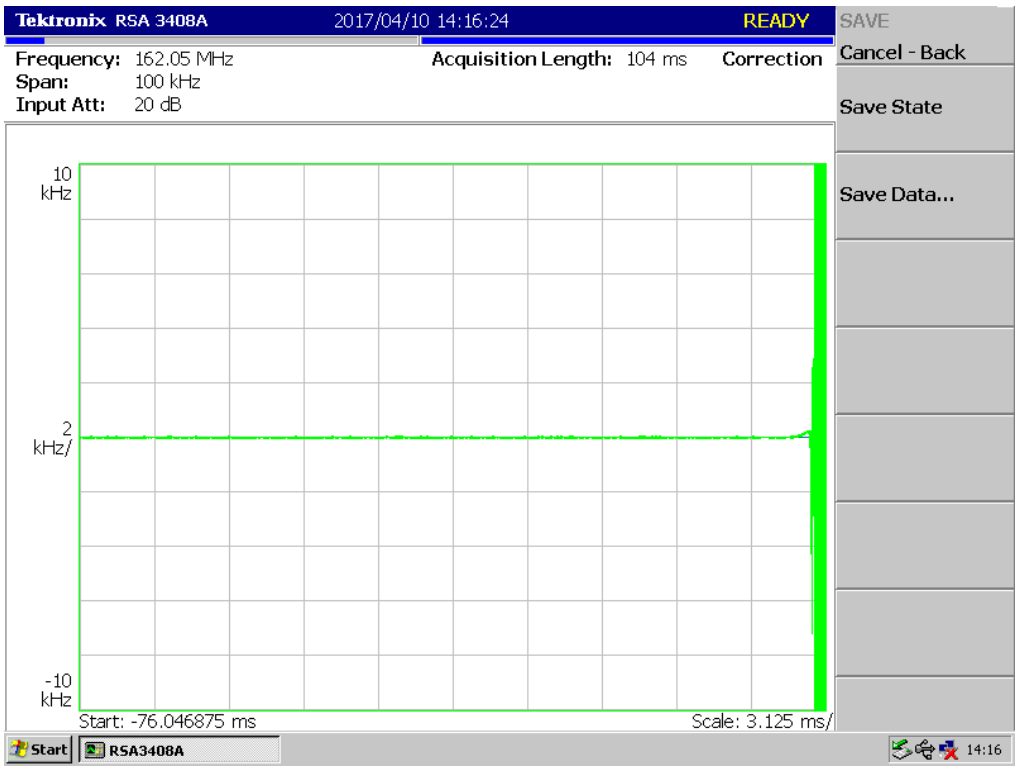
(4K00F2D_ 138.05 MHz)_Low



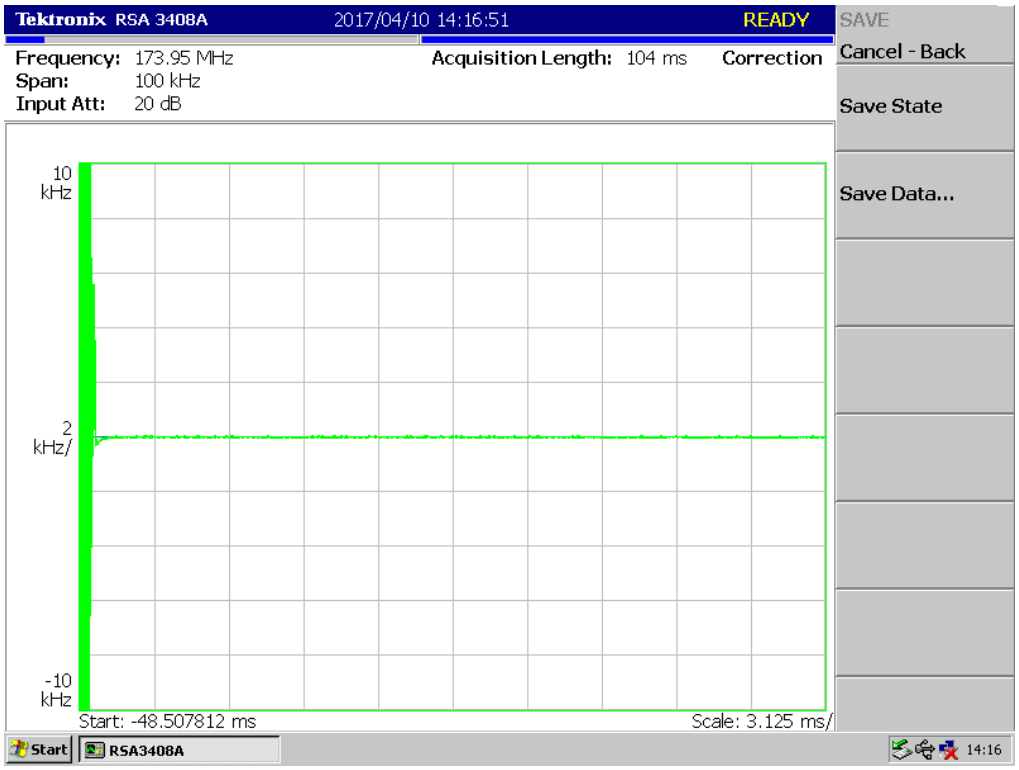


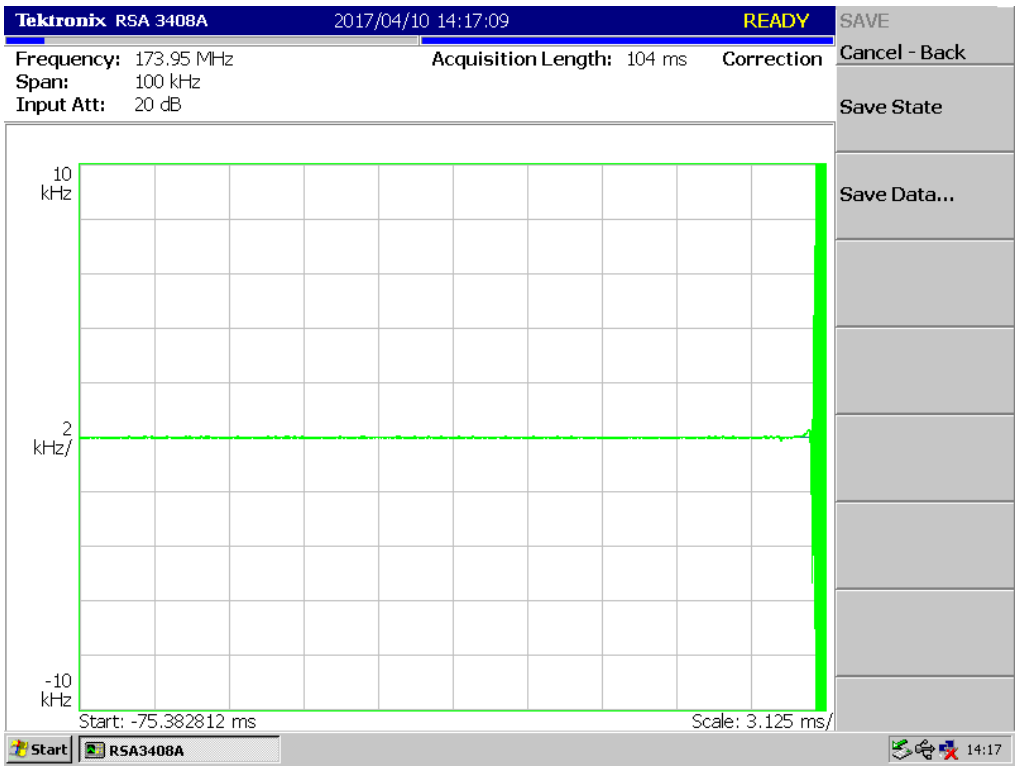
(4K00F2D_ 162.05 MHz)_Low





(4K00F2D_ 173.95 MHz)_Low



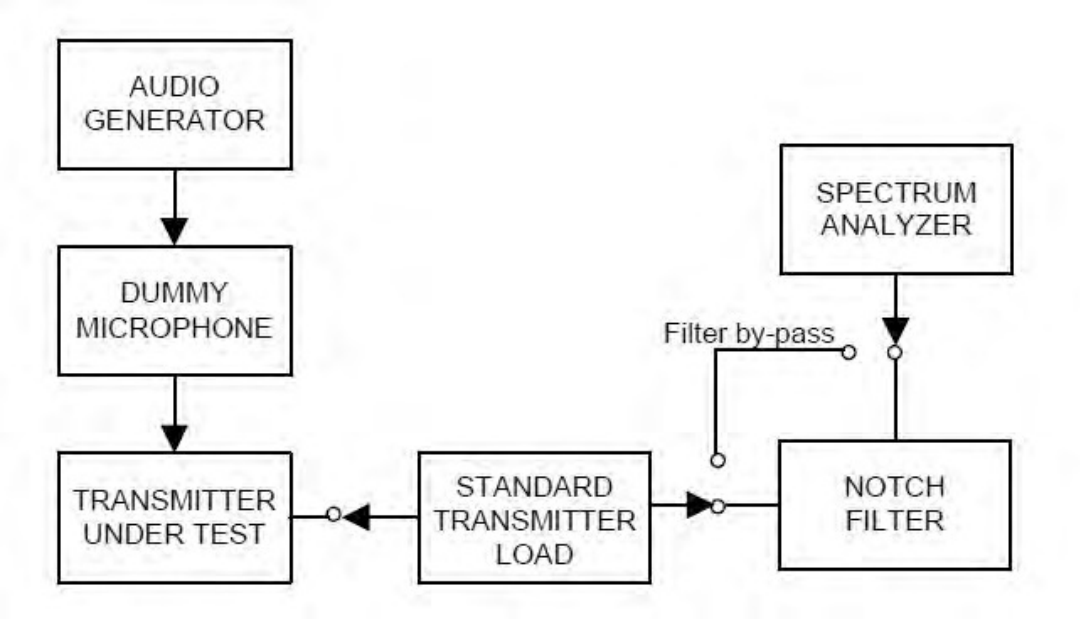


7.8 Unwanted Emissions : Conducted Spurious Emission

▣ Definition

Conducted spurious emissions are emissions at the antenna terminals on a frequency or frequencies that are outside a band sufficient to ensure transmission of information of required quality for the class of communication desired.

▣ TEST CONFIGURATION



▣ TEST PROCEDURE

According to 2.2.13 in TIA-603-D Standard.

e) Connect the equipment as illustrated, with the notch filter by-passed.

f) Set the center frequency of the spectrum analyzer to the assigned transmitter frequency, key the transmitter, and set the level of the carrier to the full scale reference line.

g) Modulate the transmitter with a 2500 Hz sine wave at an input level 16 dB greater than that necessary to produce 50% of rated system deviation. The input level shall be established at the frequency of maximum response of the audio modulation circuit.

h) Adjust the spectrum analyzer for the following settings:

1) Resolution Bandwidth = 10 kHz for spurious emissions below 1 GHz, and 1 MHz for spurious emissions above 1 GHz.

2) Video Bandwidth ≥3 times the resolution bandwidth.

3) Sweep Speed ≤2000 Hz per second.

4) Detector Mode = mean or average power.

e) Adjust the center frequency of the spectrum analyzer for incremental coverage of the range from:

1) The lowest radio frequency generated in the equipment to the carrier frequency minus the test bandwidth (see 1.3.4.4).

2) The carrier frequency plus the test bandwidth to a frequency less than 2 times the carrier frequency.

f) Record the frequencies and levels of spurious emissions from step e).

g) Unkey the transmitter. Replace the transmitter under test with the signal generator and adjust the signal level to reproduce the frequencies and levels of every spurious emission recorded in step f). Record the signal generator levels in dBm.

h) Insert the notch filter.

i) Adjust the spectrum analyzer for the following settings:

1) Resolution Bandwidth = 10 kHz for spurious emissions below 1 GHz, and 1 MHz for spurious emissions above 1 GHz.

2) Video Bandwidth ≥3 times the resolution bandwidth.

3) Sweep Speed ≤2000 Hz per second.

4) Detector Mode = mean or average power.

j) Key the transmitter. Adjust the center frequency of the spectrum analyzer for incremental coverage of the range from a frequency equal to 2 times the carrier frequency and to the tenth harmonic of the carrier frequency.

▣ LIMIT

Frequency Band (MHz)	Channel bandwidth (kHz)	Limit (dB)
138 - 174	12.5	50+10Log(P) or 70 dB
	6.25	55+10Log(P) or 65 dB
	25	43+10Log(p)

Note

1. Correct Level (dBm) : Substitute SG Level (dBm)
2. Emission Level (dBc) : Correct Level – 10Log(P*1000)
3. P = Carrier Output Power(W)

(P value, please refer to Section 7.1)

▣ TEST RESULTS

11K0F3E

No.	Frequency (MHz)	Band	Setting	Spurious Frequency (MHz)	Correct Level (dBm)	Emission Level (dBc)	Limit (dBc)	Margin (dB)
1	150.05	Low	High Power	0.01	-36.124	-72.956	-56.832	16.124
				0.16	-37.458	-74.290	-56.832	17.458
				131.85	-40.584	-77.416	-56.832	20.584
				5040.45	-37.535	-74.367	-56.832	17.535
2	138.05	Low		0.01	-33.609	-70.594	-56.985	13.609
				0.16	-37.786	-74.771	-56.985	17.786
				414.12	-42.403	-79.388	-56.985	22.403
				5181.96	-37.370	-74.355	-56.985	17.370
3	162.05	Middle		0.01	-35.049	-71.724	-56.675	15.049
				0.15	-35.283	-71.958	-56.675	15.283
				323.91	-41.998	-78.673	-56.675	21.998
				3449.77	-36.940	-73.615	-56.675	16.940
4	173.95	High		0.01	-35.757	-72.703	-56.946	15.757
				0.15	-38.537	-75.483	-56.946	18.537
				137.67	-44.024	-80.970	-56.946	24.024
				2764.20	-37.529	-74.475	-56.946	17.529
5	150.05	Low	Low Power	0.01	-37.960	-68.405	-50.445	17.960
				0.19	-39.595	-70.040	-50.445	19.595
				132.82	-45.425	-75.870	-50.445	25.425
				3412.77	-37.284	-67.729	-50.445	17.284
6	138.05	Low		0.01	-37.309	-67.647	-50.338	17.309
				0.15	-38.007	-68.345	-50.338	18.007
				129.91	-39.297	-69.635	-50.338	19.297
				5488.50	-37.150	-67.488	-50.338	17.150
7	162.05	Middle		0.01	-35.846	-65.720	-49.874	15.846
				0.15	-37.517	-67.391	-49.874	17.517
				136.70	-45.816	-75.690	-49.874	25.816
				5217.97	-36.342	-66.216	-49.874	16.342
8	173.95	High		0.01	-35.798	-66.380	-50.582	15.798
				0.15	-38.414	-68.996	-50.582	18.414
				135.73	-46.925	-77.507	-50.582	26.925
				5482.50	-37.088	-67.670	-50.582	17.088

16K0F3E

No.	Frequency (MHz)	Band	Setting	Spurious Frequency (MHz)	Correct Level (dBm)	Emission Level (dBc)	Limit (dBc)	Margin (dB)
1	150.05	Low	High Power	0.01	-36.850	-73.720	-56.870	16.850
				0.15	-38.609	-75.479	-56.870	18.609
				131.85	-39.518	-76.388	-56.870	19.518
				5085.95	-36.819	-73.689	-56.870	16.819
2	138.05	Low		0.01	-36.867	-73.930	-57.063	16.867
				0.15	-39.035	-76.098	-57.063	19.035
				125.06	-40.540	-77.603	-57.063	20.540
				5002.44	-36.825	-73.888	-57.063	16.825
3	162.05	Middle		0.01	-35.863	-72.616	-56.753	15.863
				0.15	-38.166	-74.919	-56.753	18.166
				485.90	-43.982	-80.735	-56.753	23.982
				5346.48	-36.608	-73.361	-56.753	16.608
4	173.95	High		0.01	-36.579	-73.600	-57.021	16.579
				0.15	-38.713	-75.734	-57.021	18.713
				135.73	-44.698	-81.719	-57.021	24.698
				3276.75	-37.111	-74.132	-57.021	17.111
5	150.05	Low	Low Power	0.01	-35.634	-66.091	-50.457	15.634
				0.15	-38.601	-69.058	-50.457	18.601
				132.82	-45.391	-75.848	-50.457	25.391
				3187.74	-37.187	-67.644	-50.457	17.187
6	138.05	Low		0.02	-38.441	-68.794	-50.353	18.441
				0.17	-39.450	-69.803	-50.353	19.450
				125.06	-42.990	-73.343	-50.353	22.990
				5415.49	-36.348	-66.701	-50.353	16.348
7	162.05	Middle		0.01	-36.089	-66.006	-49.917	16.089
				0.16	-37.370	-67.287	-49.917	17.370
				183.26	-48.584	-78.501	-49.917	28.584
				2663.68	-37.175	-67.092	-49.917	17.175
8	173.95	High		0.01	-36.150	-66.757	-50.607	16.150
				0.17	-37.674	-68.281	-50.607	17.674
				131.85	-45.945	-76.552	-50.607	25.945
				3220.25	-37.168	-67.775	-50.607	17.168

7K60FXD, 7K60FXE

No.	Frequency (MHz)	Band	Setting	Spurious Frequency (MHz)	Correct Level (dBm)	Emission Level (dBc)	Limit (dBc)	Margin (dB)
1	150.05	Low	High Power	0.01	-36.830	-73.701	-56.871	16.830
				0.15	-37.522	-74.393	-56.871	17.522
				299.66	-41.452	-78.323	-56.871	21.452
				5113.96	-36.532	-73.403	-56.871	16.532
2	138.05	Low		0.01	-36.367	-73.298	-56.931	16.367
				0.15	-38.653	-75.584	-56.931	18.653
				414.12	-42.154	-79.085	-56.931	22.154
				3047.23	-36.851	-73.782	-56.931	16.851
3	162.05	Middle		0.01	-33.682	-70.313	-56.631	13.682
				0.17	-36.702	-73.333	-56.631	16.702
				323.91	-42.509	-79.140	-56.631	22.509
				2745.69	-36.743	-73.374	-56.631	16.743
4	173.95	High		0.01	-36.428	-73.342	-56.914	16.428
				0.16	-37.542	-74.456	-56.914	17.542
				138.64	-43.756	-80.670	-56.914	23.756
				3196.24	-37.060	-73.974	-56.914	17.060
5	150.05	Low	Low Power	0.01	-33.600	-64.063	-50.463	13.600
				0.15	-37.276	-67.739	-50.463	17.276
				131.85	-45.078	-75.541	-50.463	25.078
				2393.65	-37.136	-67.599	-50.463	17.136
6	138.05	Low		0.01	-36.987	-67.297	-50.310	16.987
				0.15	-39.375	-69.685	-50.310	19.375
				128.94	-41.257	-71.567	-50.310	21.257
				5436.99	-37.222	-67.532	-50.310	17.222
7	162.05	Middle		0.01	-37.405	-67.255	-49.850	17.405
				0.18	-36.518	-66.368	-49.850	16.518
				323.91	-44.807	-74.657	-49.850	24.807
				2311.15	-37.568	-67.418	-49.850	17.568
8	173.95	High		0.01	-37.815	-68.350	-50.535	17.815
				0.16	-38.408	-68.943	-50.535	18.408
				139.61	-47.234	-77.769	-50.535	27.234
				5254.47	-37.447	-67.982	-50.535	17.447

8K30F1E, 8K30F1D, 8K30F7W

No.	Frequency (MHz)	Band	Setting	Spurious Frequency (MHz)	Correct Level (dBm)	Emission Level (dBc)	Limit (dBc)	Margin (dB)
1	150.05	Low	High Power	0.01	-38.838	-75.878	-57.040	18.838
				0.18	-38.451	-75.491	-57.040	18.451
				130.88	-40.305	-77.345	-57.040	20.305
				3063.23	-36.007	-73.047	-57.040	16.007
2	138.05	Low		0.01	-37.902	-74.969	-57.067	17.902
				0.15	-36.209	-73.276	-57.067	16.209
				414.12	-42.340	-79.407	-57.067	22.340
				5398.99	-37.331	-74.398	-57.067	17.331
3	162.05	Middle		0.01	-37.476	-74.231	-56.755	17.476
				0.15	-39.106	-75.861	-56.755	19.106
				323.91	-42.184	-78.939	-56.755	22.184
				2589.18	-36.655	-73.410	-56.755	16.655
4	173.95	High		0.01	-36.701	-73.711	-57.010	16.701
				0.16	-37.515	-74.525	-57.010	17.515
				133.79	-43.909	-80.919	-57.010	23.909
				4921.94	-37.174	-74.184	-57.010	17.174
5	150.05	Low	Low Power	0.01	-37.605	-68.169	-50.564	17.605
				0.15	-39.722	-70.286	-50.564	19.722
				131.85	-44.381	-74.945	-50.564	24.381
				3346.26	-37.372	-67.936	-50.564	17.372
6	138.05	Low		0.01	-36.234	-66.544	-50.310	16.234
				0.16	-37.874	-68.184	-50.310	17.874
				129.91	-40.863	-71.173	-50.310	20.863
				5170.96	-36.894	-67.204	-50.310	16.894
7	162.05	Middle		0.01	-37.319	-67.217	-49.898	17.319
				0.17	-36.868	-66.766	-49.898	16.868
				323.91	-45.173	-75.071	-49.898	25.173
				2872.71	-37.384	-67.282	-49.898	17.384
8	173.95	High		0.01	-36.458	-67.050	-50.592	16.458
				0.16	-37.202	-67.794	-50.592	17.202
				131.85	-47.152	-77.744	-50.592	27.152
				3189.24	-37.225	-67.817	-50.592	17.225

4K00F1E, 4K00F1D, 4K00F7W

No.	Frequency (MHz)	Band	Setting	Spurious Frequency (MHz)	Correct Level (dBm)	Emission Level (dBc)	Limit (dBc)	Margin (dB)
1	150.05	Low	High Power	0.01	-36.329	-73.361	-57.032	16.329
				0.15	-38.544	-75.576	-57.032	18.544
				130.88	-39.347	-76.379	-57.032	19.347
				5366.49	-37.355	-74.387	-57.032	17.355
2	138.05	Low		0.01	-37.020	-73.971	-56.951	17.020
				0.16	-38.650	-75.601	-56.951	18.650
				414.12	-42.101	-79.052	-56.951	22.101
				2553.67	-37.319	-74.270	-56.951	17.319
3	162.05	Middle		0.01	-35.570	-72.216	-56.646	15.570
				0.15	-37.225	-73.871	-56.646	17.225
				323.91	-42.206	-78.852	-56.646	22.206
				4541.39	-37.382	-74.028	-56.646	17.382
4	173.95	High		0.01	-36.063	-72.941	-56.878	16.063
				0.17	-38.538	-75.416	-56.878	18.538
				136.70	-44.855	-81.733	-56.878	24.855
				5464.00	-36.963	-73.841	-56.878	16.963
5	150.05	Low	Low Power	0.01	-35.573	-66.140	-50.567	15.573
				0.15	-37.965	-68.532	-50.567	17.965
				132.82	-45.149	-75.716	-50.567	25.149
				3189.74	-36.673	-67.240	-50.567	16.673
6	138.05	Low		0.01	-35.902	-66.159	-50.257	15.902
				0.16	-38.428	-68.685	-50.257	18.428
				128.94	-42.204	-72.461	-50.257	22.204
				5172.46	-37.593	-67.850	-50.257	17.593
7	162.05	Middle		0.01	-37.413	-67.224	-49.811	17.413
				0.15	-36.519	-66.330	-49.811	16.519
				137.67	-45.788	-75.599	-49.811	25.788
				3187.24	-37.068	-66.879	-49.811	17.068
8	173.95	High		0.01	-36.257	-66.755	-50.498	16.257
				0.16	-38.905	-69.403	-50.498	18.905
				145.43	-47.141	-77.639	-50.498	27.141
				5355.48	-37.529	-68.027	-50.498	17.529

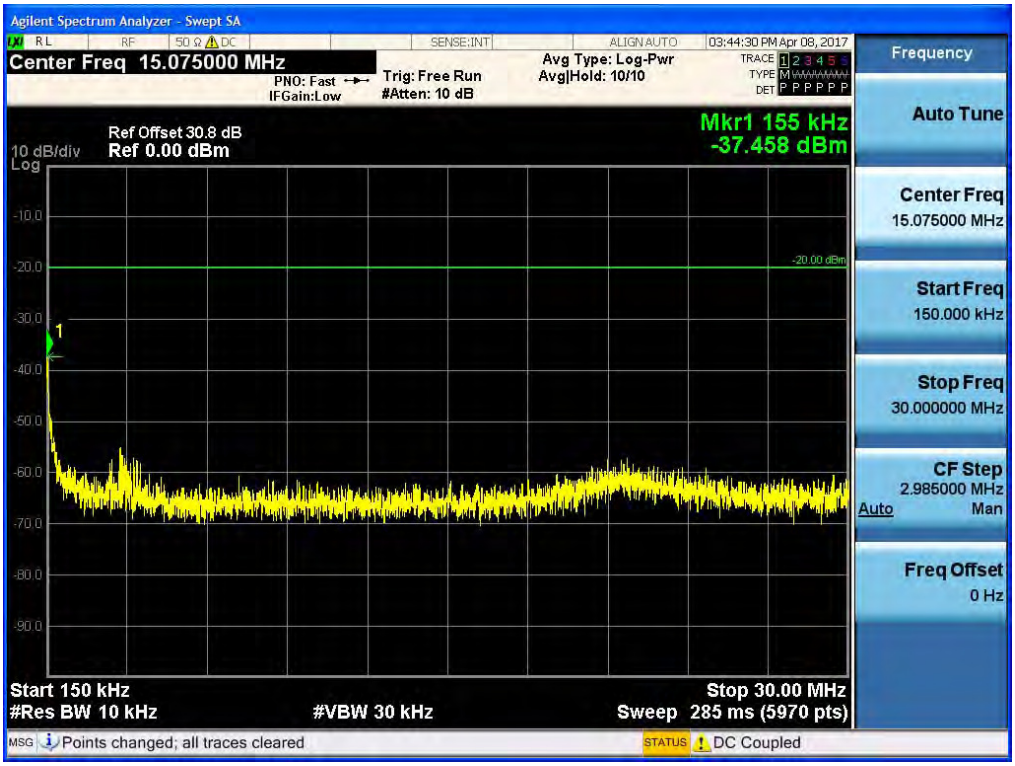
4K00F2D

No.	Frequency (MHz)	Band	Setting	Spurious Frequency (MHz)	Correct Level (dBm)	Emission Level (dBc)	Limit (dBc)	Margin (dB)
1	150.05	Low	Low Power	0.02	-37.829	-68.374	-50.545	17.829
				0.17	-38.174	-68.719	-50.545	18.174
				134.76	-44.130	-74.675	-50.545	24.130
				5081.45	-37.274	-67.819	-50.545	17.274
2	138.05	Low		0.01	-36.441	-66.750	-50.309	16.441
				0.17	-39.061	-69.370	-50.309	19.061
				129.91	-41.497	-71.806	-50.309	21.497
				4628.90	-37.286	-67.595	-50.309	17.286
3	162.05	Middle		0.01	-37.343	-67.198	-49.855	17.343
				0.16	-37.904	-67.759	-49.855	17.904
				323.91	-45.485	-75.340	-49.855	25.485
				5188.47	-37.440	-67.295	-49.855	17.440
4	173.95	High		0.01	-37.479	-68.041	-50.562	17.479
				0.16	-38.698	-69.260	-50.562	18.698
				145.43	-47.261	-77.823	-50.562	27.261
				3054.23	-37.693	-68.255	-50.562	17.693

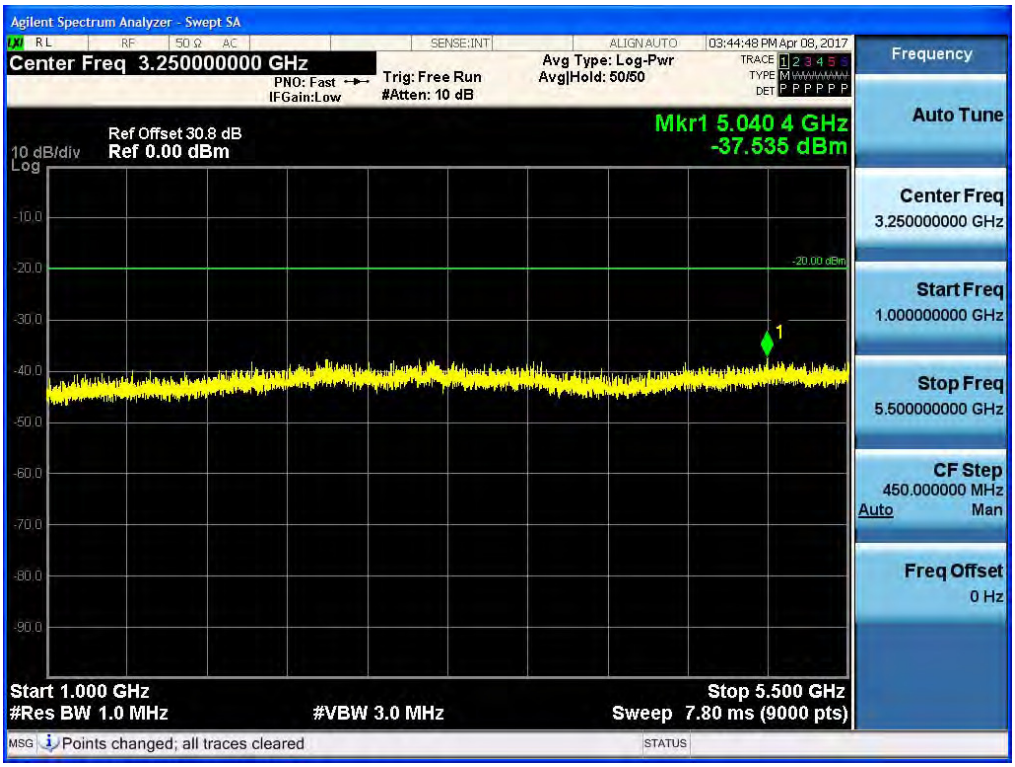
▣ Plots of Unwanted Emissions : Conducted Spurious Emission FCC

(11K0F3E _ 150.05 MHz)_High

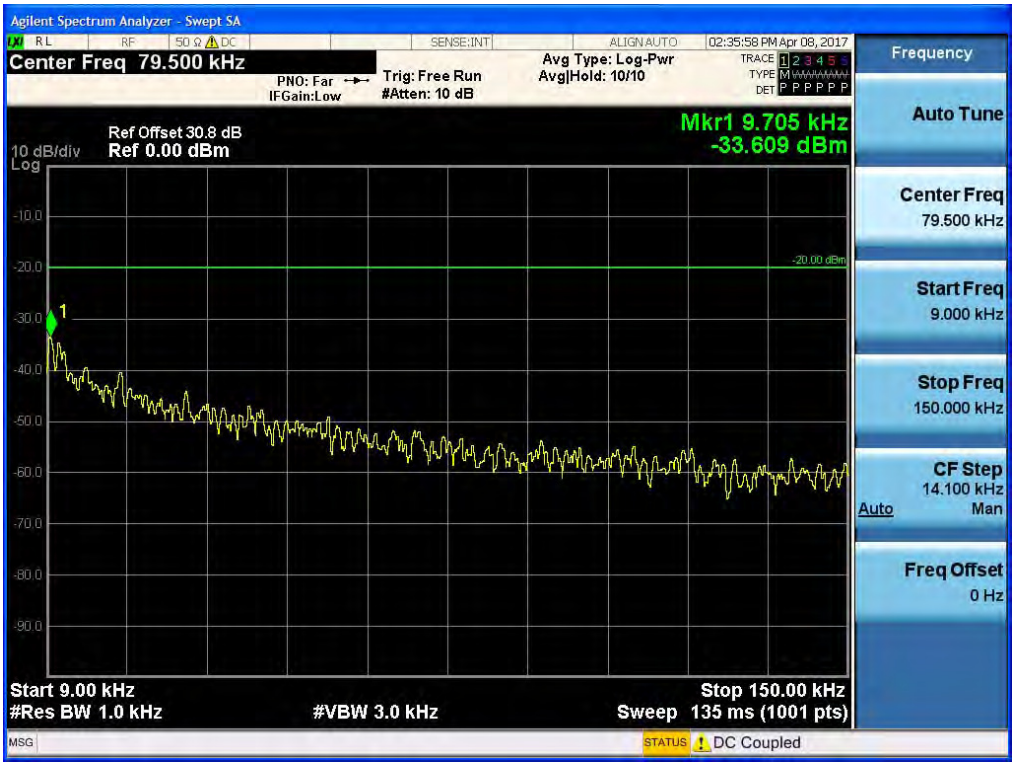


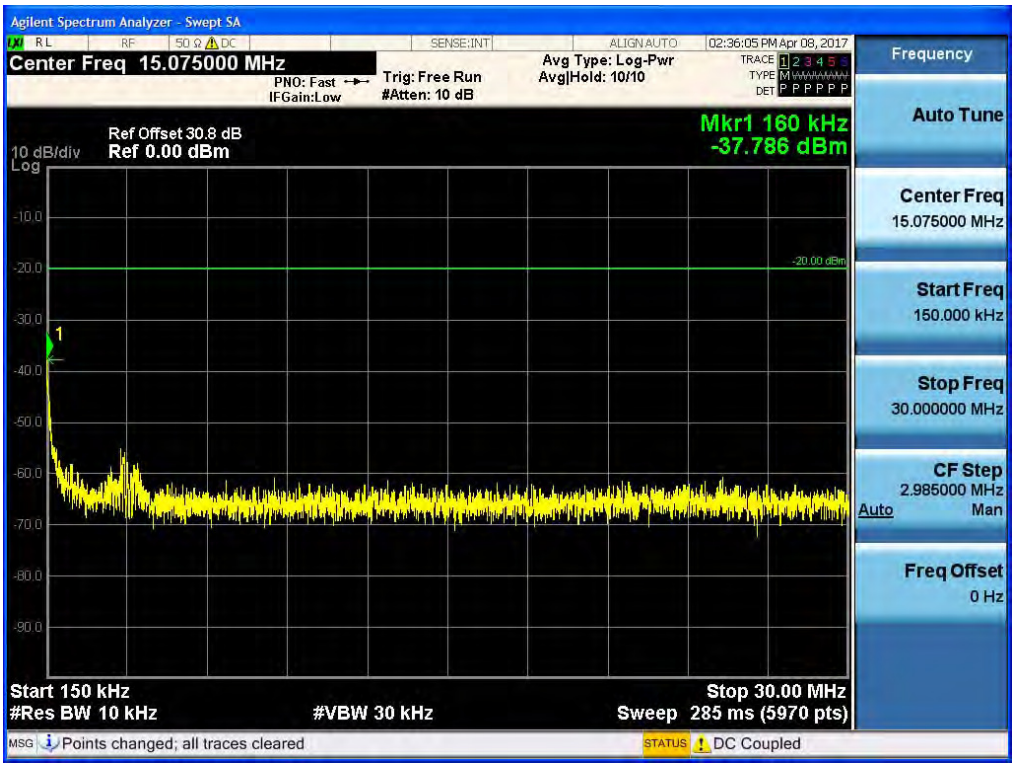


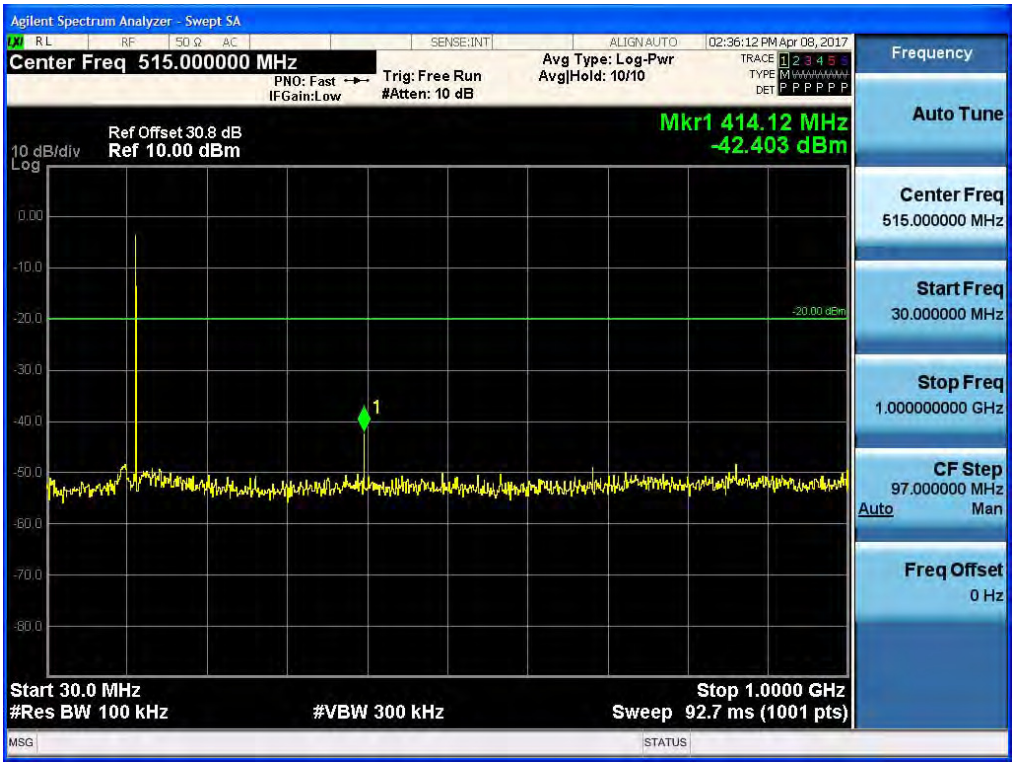

Agilent Spectrum Analyzer - Swept SA
Center Freq 515.000000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: Log-Pwr
Avg|Hold: 10/10
03:44:38 PM Apr 08, 2017
Ref Offset 30.8 dB
10 dB/div
Ref 10.00 dBm
Mkr1 131.85 MHz
-40.584 dBm
-20.00 dBm
Start 30.0 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 1.0000 GHz
Sweep 92.7 ms (1001 pts)
Frequency
Auto Tune
Center Freq
515.000000 MHz
Start Freq
30.000000 MHz
Stop Freq
1.000000000 GHz
CF Step
97.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

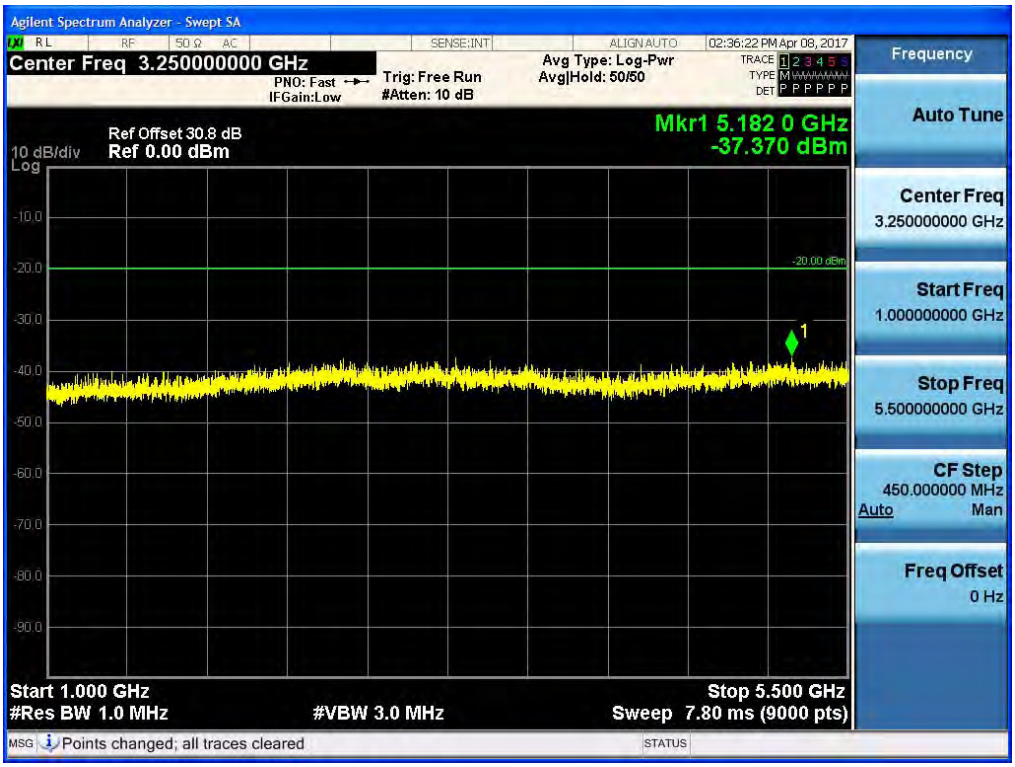

Agilent Spectrum Analyzer - Swept SA
Center Freq 3.250000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: Log-Pwr
Avg|Hold: 50/50
03:44:48 PM Apr 08, 2017
Ref Offset 30.8 dB
10 dB/div
Ref 0.00 dBm
Mkr1 5.040 4 GHz
-37.535 dBm
-20.00 dBm
Start 1.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 5.500 GHz
Sweep 7.80 ms (9000 pts)
Points changed; all traces cleared
Frequency
Auto Tune
Center Freq
3.250000000 GHz
Start Freq
1.000000000 GHz
Stop Freq
5.500000000 GHz
CF Step
450.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

(11K0F3E _ 138.05 MHz)_High



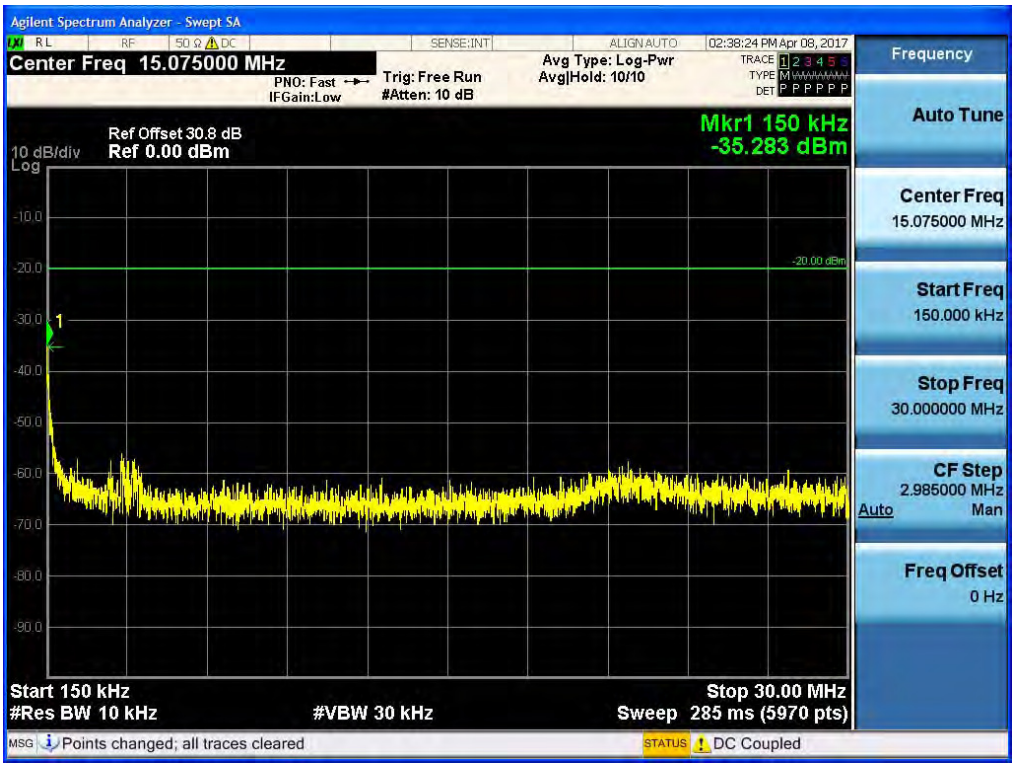


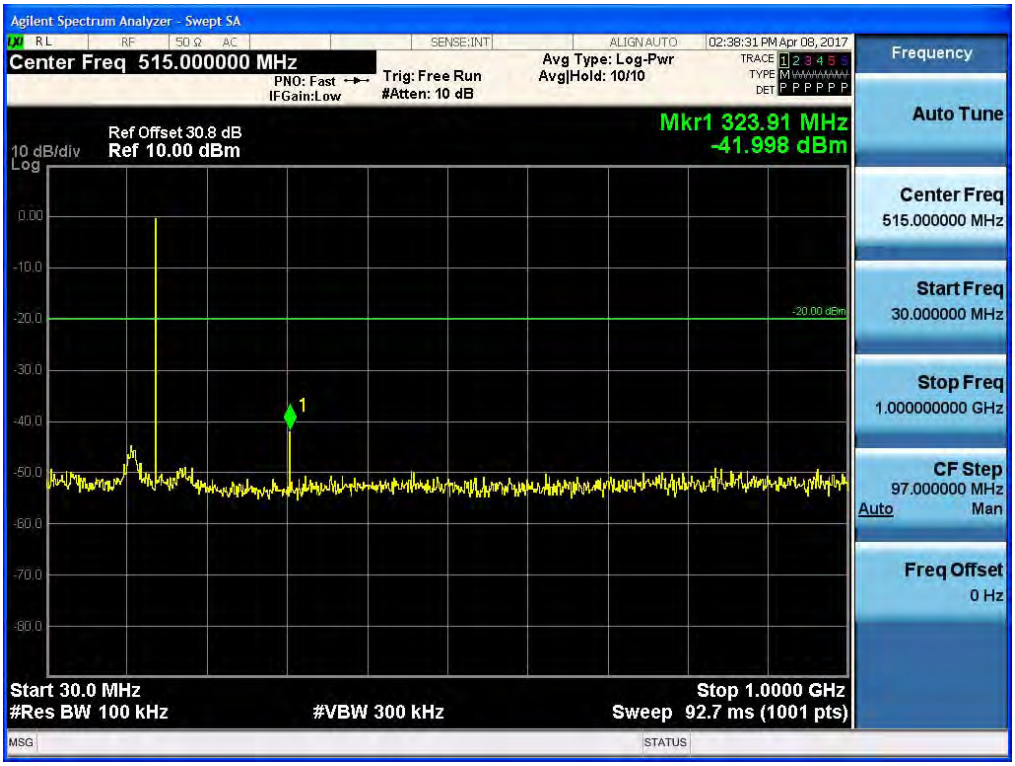

Agilent Spectrum Analyzer - Swept SA
Center Freq 515.000000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: Log-Pwr
Avg|Hold: 10/10
02:36:12 PM Apr 08, 2017
Ref Offset 30.8 dB
10 dB/div
Log
Ref 10.00 dBm
Mkr1 414.12 MHz
-42.403 dBm
-20.00 dBm
Start 30.0 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 1.0000 GHz
Sweep 92.7 ms (1001 pts)
Frequency
Auto Tune
Center Freq
515.000000 MHz
Start Freq
30.000000 MHz
Stop Freq
1.000000000 GHz
CF Step
97.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

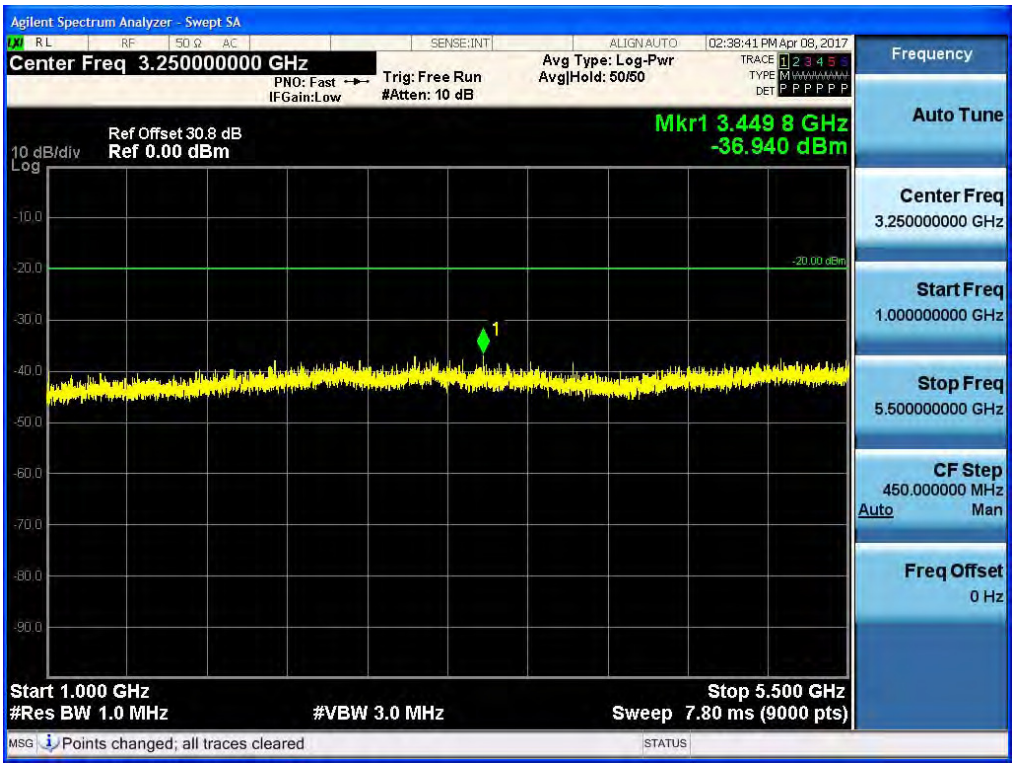

Agilent Spectrum Analyzer - Swept SA
Center Freq 3.250000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: Log-Pwr
Avg|Hold: 50/50
02:36:22 PM Apr 08, 2017
Ref Offset 30.8 dB
10 dB/div
Log
Ref 0.00 dBm
Mkr1 5.182 0 GHz
-37.370 dBm
-20.00 dBm
Start 1.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 5.500 GHz
Sweep 7.80 ms (9000 pts)
Points changed; all traces cleared
Frequency
Auto Tune
Center Freq
3.250000000 GHz
Start Freq
1.000000000 GHz
Stop Freq
5.500000000 GHz
CF Step
450.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

(11K0F3E _ 162.05 MHz)_High



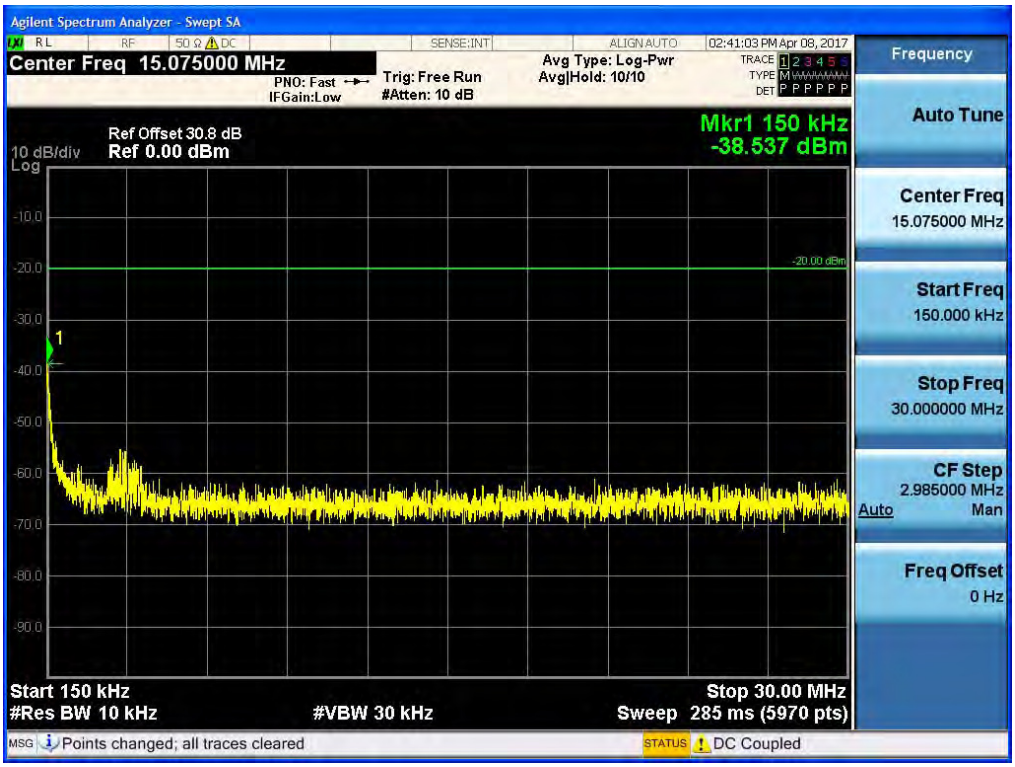



Agilent Spectrum Analyzer - Swept SA
Center Freq 515.000000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: Log-Pwr
Avg|Hold: 10/10
02:38:31 PM Apr 08, 2017
Ref Offset 30.8 dB
10 dB/div
Ref 10.00 dBm
Mkr1 323.91 MHz
-41.998 dBm
-20.00 dBm
Start 30.0 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 1.0000 GHz
Sweep 92.7 ms (1001 pts)
Frequency
Auto Tune
Center Freq
515.000000 MHz
Start Freq
30.000000 MHz
Stop Freq
1.000000000 GHz
CF Step
97.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS

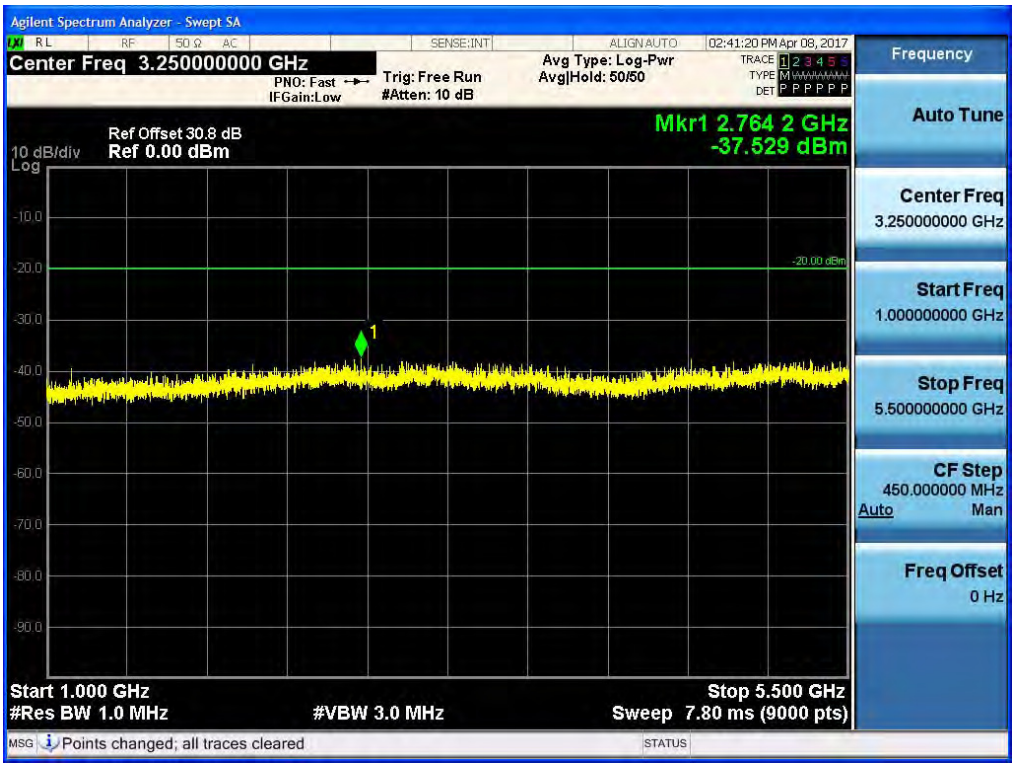

Agilent Spectrum Analyzer - Swept SA
Center Freq 3.250000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: Log-Pwr
Avg|Hold: 50/50
02:38:41 PM Apr 08, 2017
Ref Offset 30.8 dB
10 dB/div
Ref 0.00 dBm
Mkr1 3.449 8 GHz
-36.940 dBm
-20.00 dBm
Start 1.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 5.500 GHz
Sweep 7.80 ms (9000 pts)
Frequency
Auto Tune
Center Freq
3.250000000 GHz
Start Freq
1.000000000 GHz
Stop Freq
5.500000000 GHz
CF Step
450.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
Points changed; all traces cleared
STATUS

(11K0F3E _ 173.95 MHz)_High

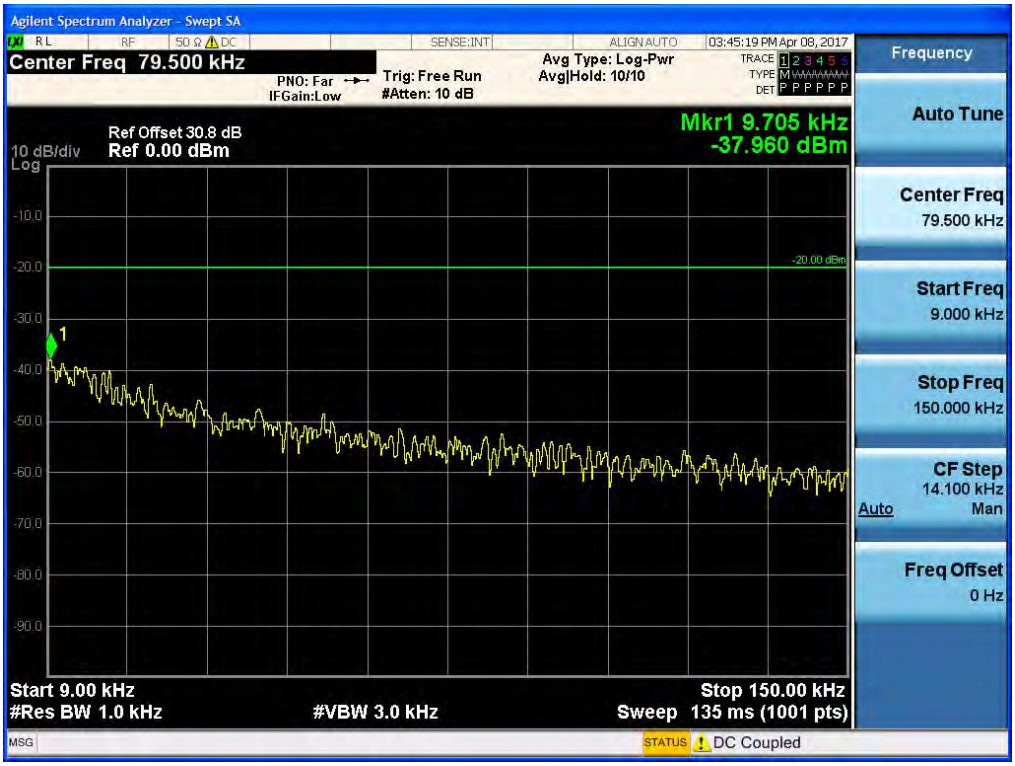




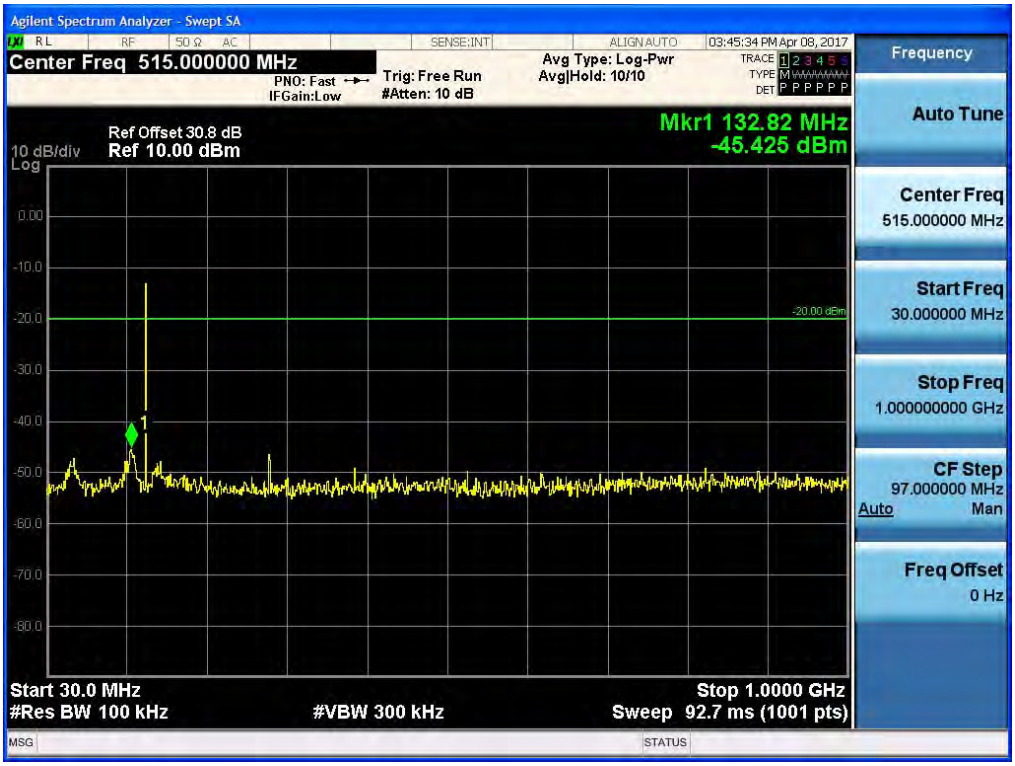

Agilent Spectrum Analyzer - Swept SA
Center Freq 515.000000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: Log-Pwr
Avg|Hold: 10/10
02:41:10 PM Apr 08, 2017
Ref Offset 30.8 dB
10 dB/div
Ref 10.00 dBm
Mkr1 137.67 MHz
-44.024 dBm
-20.00 dBm
Start 30.0 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 1.0000 GHz
Sweep 92.7 ms (1001 pts)
Frequency
Auto Tune
Center Freq
515.000000 MHz
Start Freq
30.000000 MHz
Stop Freq
1.000000000 GHz
CF Step
97.000000 MHz
Auto
Man
Freq Offset
0 Hz

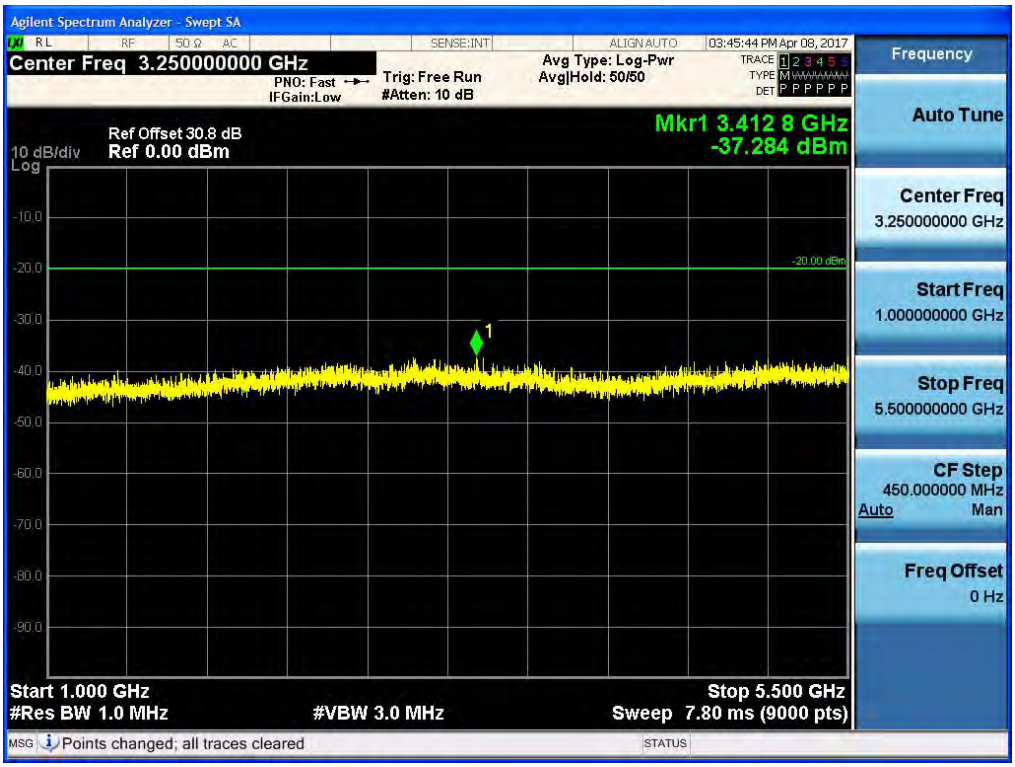

Agilent Spectrum Analyzer - Swept SA
Center Freq 3.250000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: Log-Pwr
Avg|Hold: 50/50
02:41:20 PM Apr 08, 2017
Ref Offset 30.8 dB
10 dB/div
Ref 0.00 dBm
Mkr1 2.764 2 GHz
-37.529 dBm
-20.00 dBm
Start 1.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 5.500 GHz
Sweep 7.80 ms (9000 pts)
Points changed; all traces cleared
Frequency
Auto Tune
Center Freq
3.250000000 GHz
Start Freq
1.000000000 GHz
Stop Freq
5.500000000 GHz
CF Step
450.000000 MHz
Auto
Man
Freq Offset
0 Hz

(11K0F3E _ 150.05 MHz)_Low

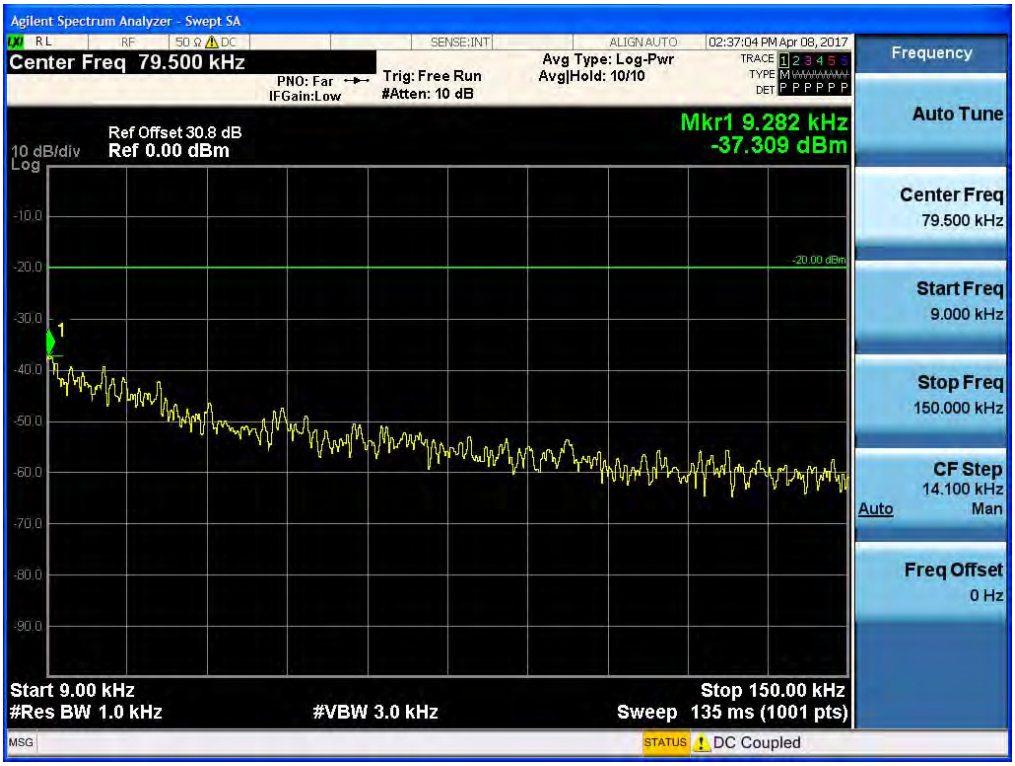




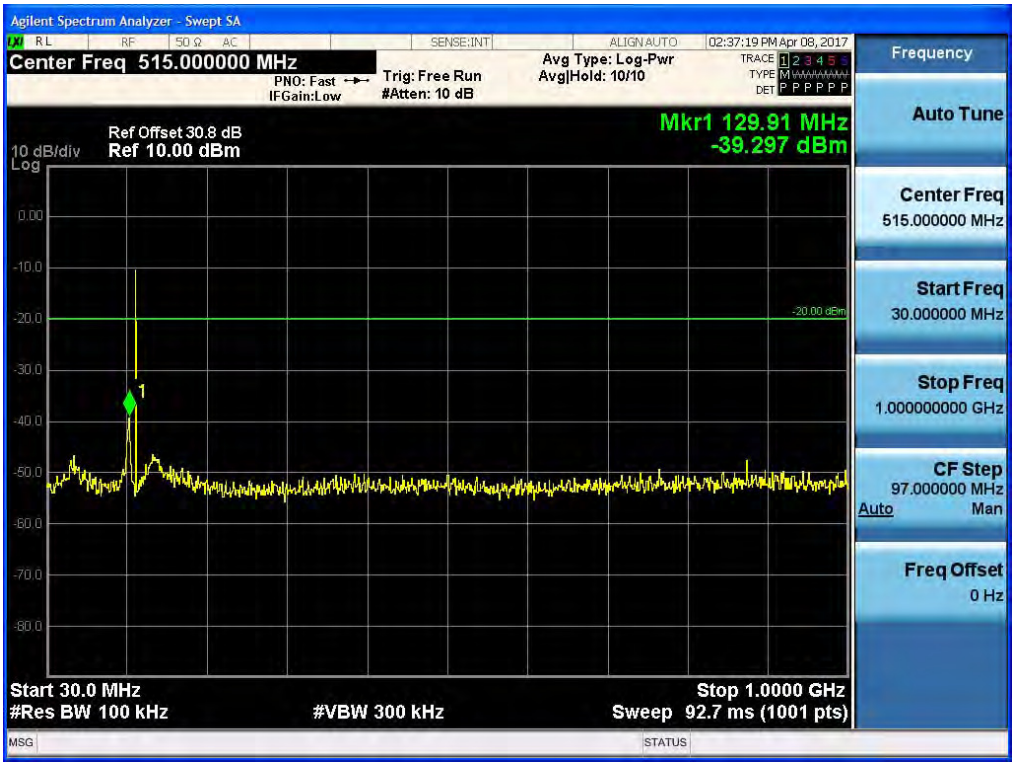

Agilent Spectrum Analyzer - Swept SA
Center Freq 515.000000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: Log-Pwr
Avg|Hold: 10/10
03:45:34 PM Apr 08, 2017
Ref Offset 30.8 dB
10 dB/div
Ref 10.00 dBm
Mkr1 132.82 MHz
-45.425 dBm
-20.00 dBm
Start 30.0 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 1.0000 GHz
Sweep 92.7 ms (1001 pts)
Frequency
Auto Tune
Center Freq
515.000000 MHz
Start Freq
30.000000 MHz
Stop Freq
1.000000000 GHz
CF Step
97.000000 MHz
Auto
Man
Freq Offset
0 Hz

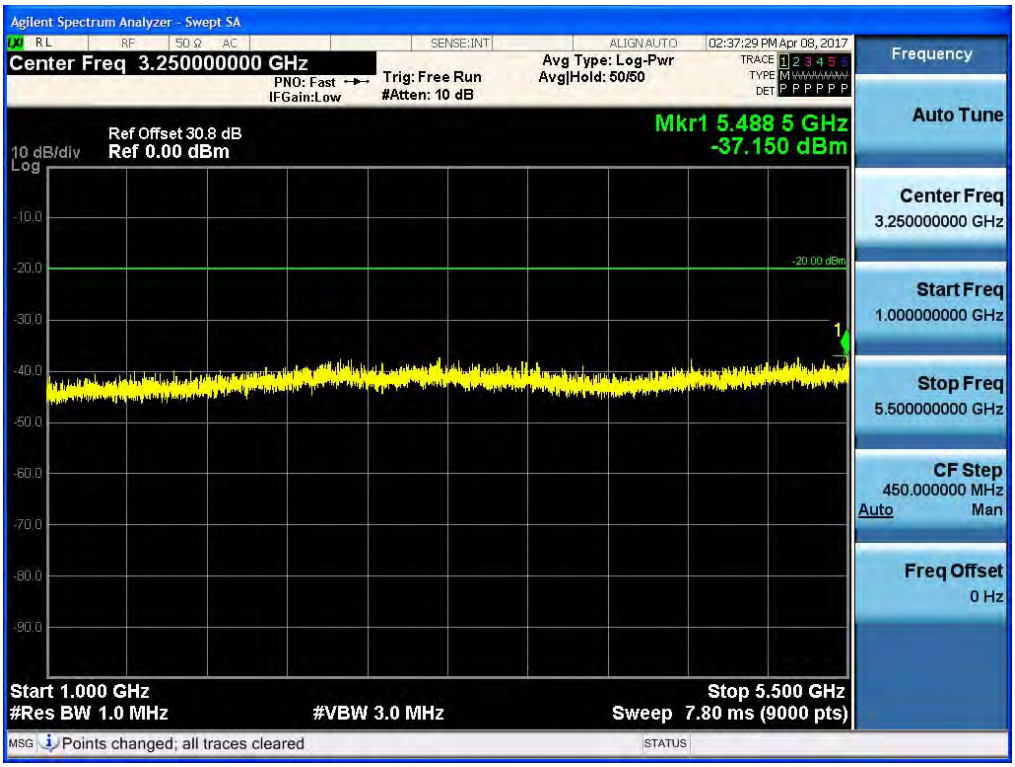

Agilent Spectrum Analyzer - Swept SA
Center Freq 3.250000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: Log-Pwr
Avg|Hold: 50/50
03:45:44 PM Apr 08, 2017
Ref Offset 30.8 dB
10 dB/div
Ref 0.00 dBm
Mkr1 3.412 8 GHz
-37.284 dBm
-20.00 dBm
Start 1.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 5.500 GHz
Sweep 7.80 ms (9000 pts)
Points changed; all traces cleared
Frequency
Auto Tune
Center Freq
3.250000000 GHz
Start Freq
1.000000000 GHz
Stop Freq
5.500000000 GHz
CF Step
450.000000 MHz
Auto
Man
Freq Offset
0 Hz

(11K0F3E _ 138.05 MHz)_Low






Agilent Spectrum Analyzer - Swept SA
Center Freq 515.000000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: Log-Pwr
Avg|Hold: 10/10
02:37:19 PM Apr 08, 2017
Ref Offset 30.8 dB
10 dB/div
Ref 10.00 dBm
Mkr1 129.91 MHz
-39.297 dBm
-20.00 dBm
Start 30.0 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 1.0000 GHz
Sweep 92.7 ms (1001 pts)
Frequency
Auto Tune
Center Freq
515.000000 MHz
Start Freq
30.000000 MHz
Stop Freq
1.000000000 GHz
CF Step
97.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS


Agilent Spectrum Analyzer - Swept SA
Center Freq 3.250000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: Log-Pwr
Avg|Hold: 50/50
02:37:29 PM Apr 08, 2017
Ref Offset 30.8 dB
10 dB/div
Ref 0.00 dBm
Mkr1 5.488 5 GHz
-37.150 dBm
-20.00 dBm
Start 1.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 5.500 GHz
Sweep 7.80 ms (9000 pts)
Frequency
Auto Tune
Center Freq
3.250000000 GHz
Start Freq
1.000000000 GHz
Stop Freq
5.500000000 GHz
CF Step
450.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
Points changed; all traces cleared
STATUS

(11K0F3E _ 162.05 MHz)_Low






Agilent Spectrum Analyzer - Swept SA
Center Freq 515.000000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: Log-Pwr
Avg|Hold: 10/10
02:39:42 PM Apr 08, 2017
Ref Offset 30.8 dB
10 dB/div
Ref 10.00 dBm
Mkr1 136.70 MHz
-45.816 dBm
-20.00 dBm
Start 30.0 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 1.0000 GHz
Sweep 92.7 ms (1001 pts)
Frequency
Auto Tune
Center Freq
515.000000 MHz
Start Freq
30.000000 MHz
Stop Freq
1.000000000 GHz
CF Step
97.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
STATUS


Agilent Spectrum Analyzer - Swept SA
Center Freq 3.250000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: Log-Pwr
Avg|Hold: 50/50
02:39:52 PM Apr 08, 2017
Ref Offset 30.8 dB
10 dB/div
Ref 0.00 dBm
Mkr1 5.218 0 GHz
-36.342 dBm
-20.00 dBm
Start 1.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 5.500 GHz
Sweep 7.80 ms (9000 pts)
Frequency
Auto Tune
Center Freq
3.250000000 GHz
Start Freq
1.000000000 GHz
Stop Freq
5.500000000 GHz
CF Step
450.000000 MHz
Auto
Man
Freq Offset
0 Hz
MSG
Points changed; all traces cleared
STATUS