

**Electrical
Parameter Summary:**

Frequency

Data	Unit of Measure
-40°C	100,000,075.692 Hz
25°C	100,000,079.895 Hz
85°C	100,000,084.739 Hz

EFC

Data	Unit of Measure
0 Volts	99,999,763.570 Hz
5 Volts	100,000,088.174 Hz
10 Volts	100,000,232.041 Hz
linearity	18.05 %

Supply Voltage

Data	Unit of Measure
+12.0	Vdc
Turn-on Current	332 mA
Turn-on Power	3.984 W
Idle Current	130 mA
Idle Power	1.560 W

Voltage Stability

Data	Unit of Measure
11.4 Vdc	7.0 ppb
12.6 Vdc	3.5 ppb

Output Characteristics

Data	Unit of Measure
Sine Wave	12.46 dBm
RF Output Power	-40.1 dBc
Harmonics	<-80 dBc
Spurious	<-80 dBc

Phase Noise

Data	Unit of Measure
10 Hz	-105 dBc/Hz
100 Hz	-137 dBc/Hz
1,000 Hz	-160 dBc/Hz
10,000 Hz	-172 dBc/Hz
100,000 Hz	-175 dBc/Hz

Allan Deviation

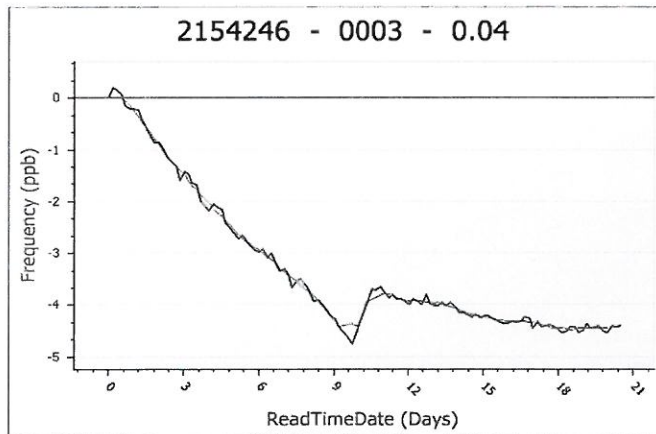
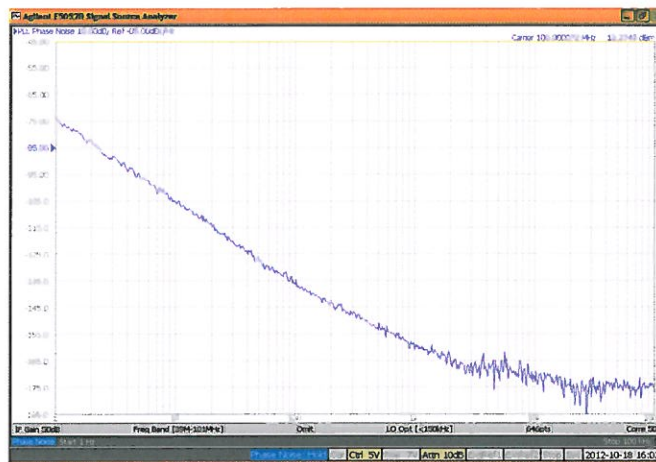
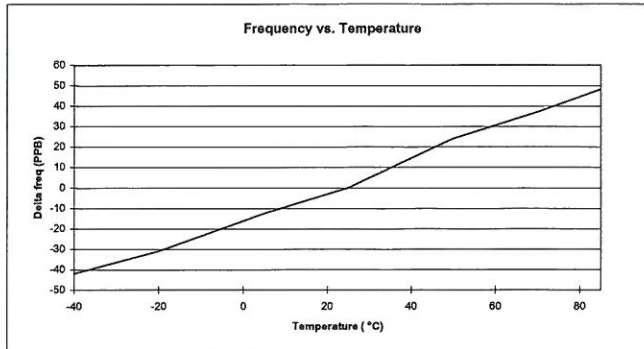
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0.1 sec	0.368 E-11
1.0 sec	0.435 E-11

Voltage Reference

Data	Unit of Measure
9.896	Vdc

Daily Aging

Data	Unit of Measure
0.04	ppb/day



NOTES: 1. All testing performed by G.Snyder 11/15/12.

**Electrical
Parameter Summary:**

Frequency	Data	Unit of Measure
85°C	100,000,093.627	Hz
25°C	100,000,090.909	Hz
-40°C	100,000,088.025	Hz

EFC	Data	Unit of Measure
0 Volts	99,999,771.520	Hz
5 Volts	100,000,088.959	Hz
10 Volts	100,000,233.398	Hz
linearity	17.41	%

Supply Voltage	+12.0	Vdc
Turn-on Current	331	mA
Turn-on Power	3.972	W
Idle Current	121	mA
Idle Power	1.452	W

Voltage Stability	11.4 Vdc	13.2	ppb
	12.6 Vdc	-3.1	ppb

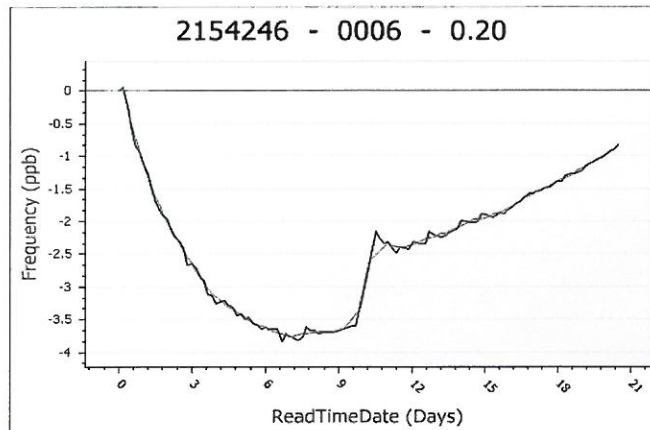
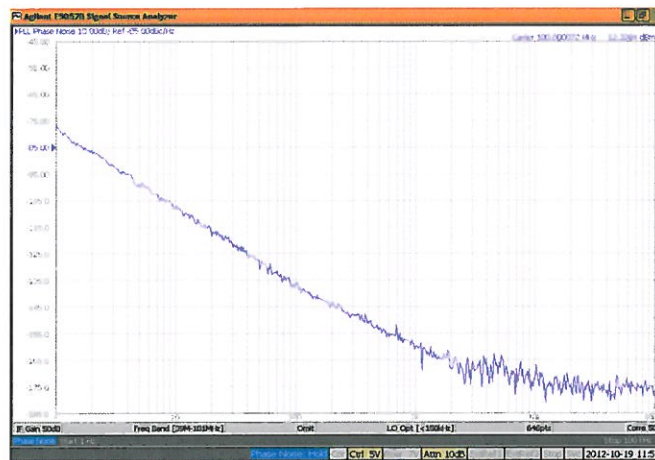
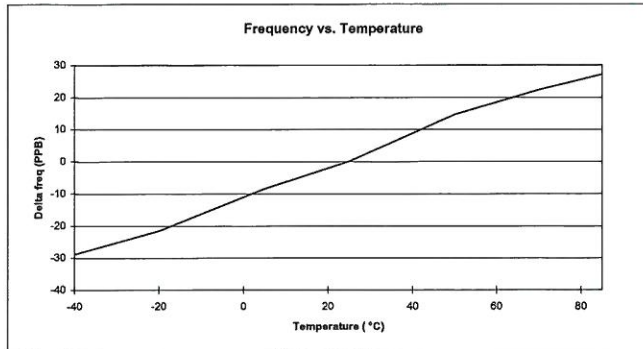
Output Characteristics	Sine Wave	
RF Output Power	12.35	dBm
Harmonics	-42.6	dBc
Spurious	<-80	dBc

Phase Noise		
10 Hz	-107	dBc/Hz
100 Hz	-137	dBc/Hz
1,000 Hz	-160	dBc/Hz
10,000 Hz	-172	dBc/Hz
100,000 Hz	-176	dBc/Hz

Allan Deviation		
0.1 sec	0.449	E-11
1.0 sec	0.762	E-11

Voltage Reference	9.927	Vdc
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Daily Aging	0.20	ppb/day
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NOTES: 1. All testing performed by G.Snyder 11/15/12.

**Electrical
Parameter Summary:**

Frequency	Data	Unit of Measure
85°C	100,000,083.817	Hz
25°C	100,000,082.134	Hz
-40°C	100,000,080.747	Hz

EFC	Data	Unit of Measure
0 Volts	99,999,784.461	Hz
5 Volts	100,000,081.361	Hz
10 Volts	100,000,214.587	Hz
linearity	17.73	%

Supply Voltage	+12.0	Vdc
Turn-on Current	335	mA
Turn-on Power	4.020	W
Idle Current	119	mA
Idle Power	1.428	W

Voltage Stability		
11.4 Vdc	9.5	ppb
12.6 Vdc	-0.7	ppb

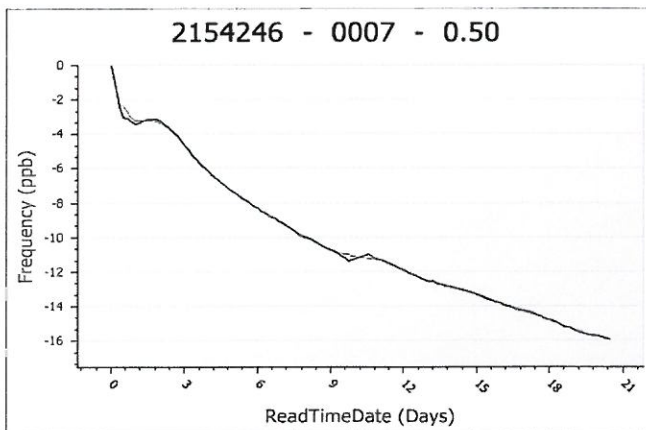
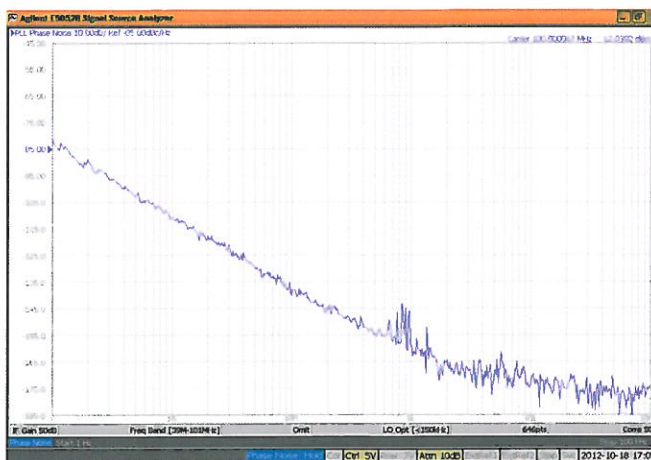
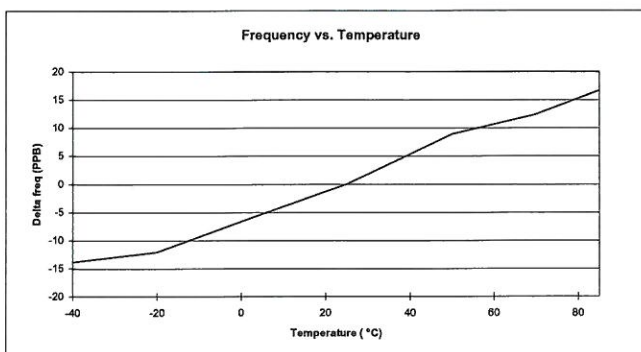
Output Characteristics	Sine Wave	
RF Output Power	11.91	dBm
Harmonics	-44.3	dBc
Spurious	<-80	dBc

Phase Noise		
10 Hz	-108	dBc/Hz
100 Hz	-138	dBc/Hz
1,000 Hz	-161	dBc/Hz
10,000 Hz	-172	dBc/Hz
100,000 Hz	-175	dBc/Hz

Allan Deviation		
0.1 sec	0.227	E-11
1.0 sec	0.262	E-11

Voltage Reference	9.919	Vdc
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Daily Aging	0.50	ppb/day
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NOTES: 1. All testing performed by G.Snyder 11/15/12.

**Electrical
Parameter Summary:**

Frequency	Data	Unit of Measure
85°C	100,000,085.425	Hz
25°C	100,000,083.367	Hz
-40°C	100,000,080.744	Hz

EFC		
0 Volts	99,999,762.409	Hz
5 Volts	100,000,084.880	Hz
10 Volts	100,000,227.202	Hz
linearity	18.13	%

Supply Voltage	+12.0	Vdc
Turn-on Current	334	mA
Turn-on Power	4.008	W
Idle Current	125	mA
Idle Power	1.500	W

Voltage Stability		
11.4 Vdc	5.9	ppb
12.6 Vdc	4.7	ppb

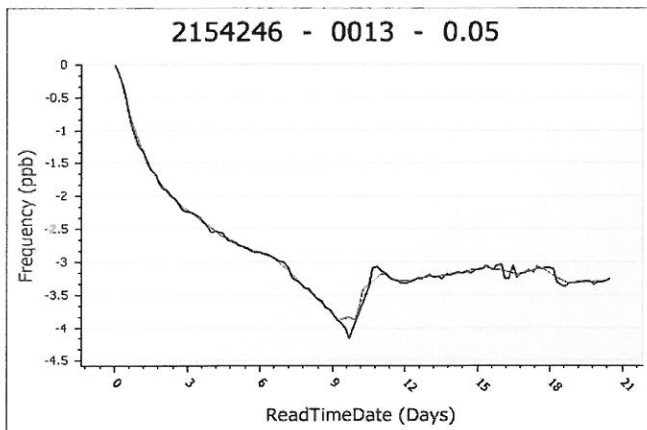
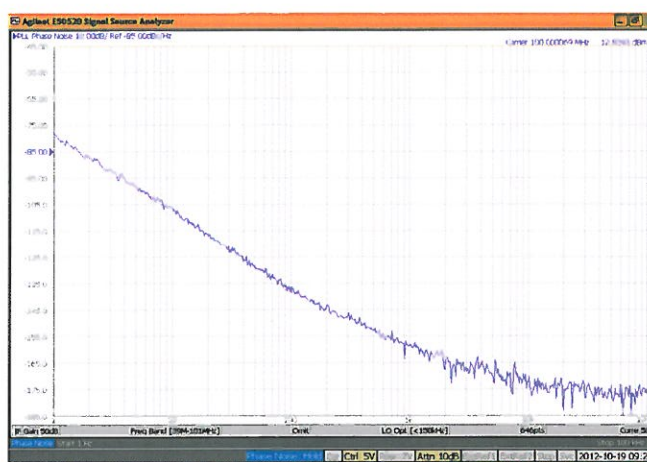
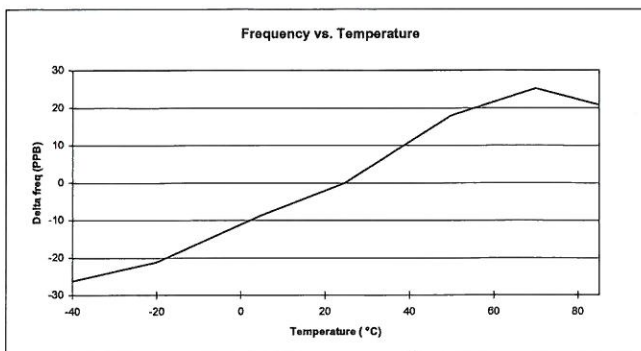
Output Characteristics	Sine Wave	
RF Output Power	12.96	dBm
Harmonics	-41.3	dBc
Spurious	<-80	dBc

Phase Noise		
10 Hz	-106	dBc/Hz
100 Hz	-137	dBc/Hz
1,000 Hz	-159	dBc/Hz
10,000 Hz	-172	dBc/Hz
100,000 Hz	-176	dBc/Hz

Allan Deviation		
0.1 sec	0.305	E-11
1.0 sec	0.417	E-11

Voltage Reference	9.952	Vdc
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Daily Aging	0.05	ppb/day
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NOTES: 1. All testing performed by G.Snyder 11/15/12.

**Electrical
Parameter Summary:**

Frequency	Data	Unit of Measure
85°C	100,000,091.255	Hz
25°C	100,000,087.165	Hz
-40°C	100,000,083.057	Hz

EFC	Data	Unit of Measure
0 Volts	99,999,788.461	Hz
5 Volts	100,000,084.513	Hz
10 Volts	100,000,219.451	Hz
linearity	17.39	%

Supply Voltage	+12.0	Vdc
Turn-on Current	340	mA
Turn-on Power	4.080	W
Idle Current	118	mA
Idle Power	1.416	W

Voltage Stability	11.4 Vdc	9.8	ppb
	12.6 Vdc	-0.4	ppb

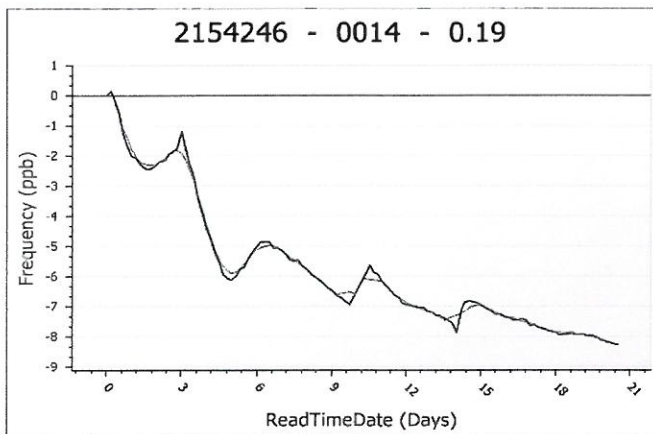
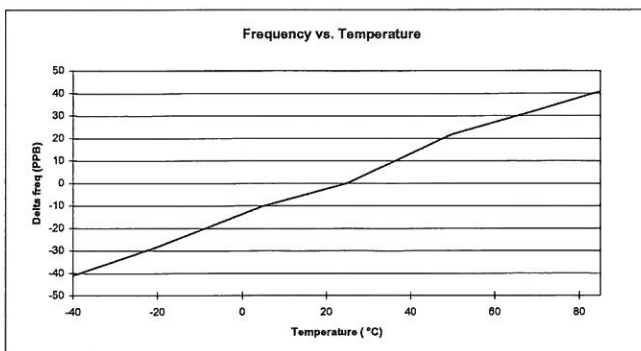
Output Characteristics	Sine Wave	
RF Output Power	12.10	dBm
Harmonics	-44.3	dBc
Spurious	<-80	dBc

Phase Noise		
10 Hz	-108	dBc/Hz
100 Hz	-137	dBc/Hz
1,000 Hz	-160	dBc/Hz
10,000 Hz	-172	dBc/Hz
100,000 Hz	-176	dBc/Hz

Allan Deviation		
0.1 sec	0.229	E-11
1.0 sec	0.270	E-11

Voltage Reference	9.960	Vdc
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Daily Aging	0.19	ppb/day
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NOTES: 1. All testing performed by G.Snyder 11/15/12.

**Electrical
Parameter Summary:**

Frequency	Data	Unit of Measure
85°C	100,000,088.725	Hz
25°C	100,000,086.478	Hz
-40°C	100,000,084.530	Hz

EFC	Data	Unit of Measure
0 Volts	99,999,751.205	Hz
5 Volts	100,000,082.379	Hz
10 Volts	100,000,229.481	Hz
linearity	17.99	%

Supply Voltage	+12.0	Vdc
Turn-on Current	336	mA
Turn-on Power	4.032	W
Idle Current	125	mA
Idle Power	1.500	W

Voltage Stability	11.4 Vdc	14.6	ppb
	12.6 Vdc	-5.1	ppb

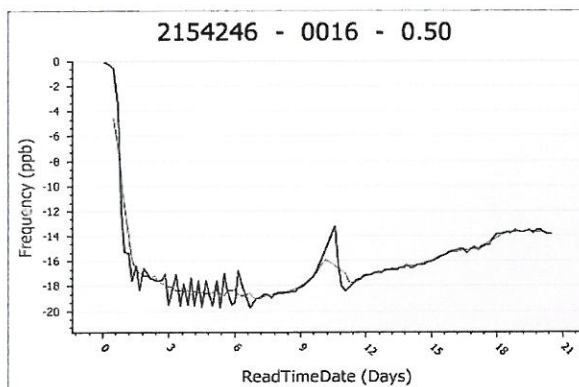
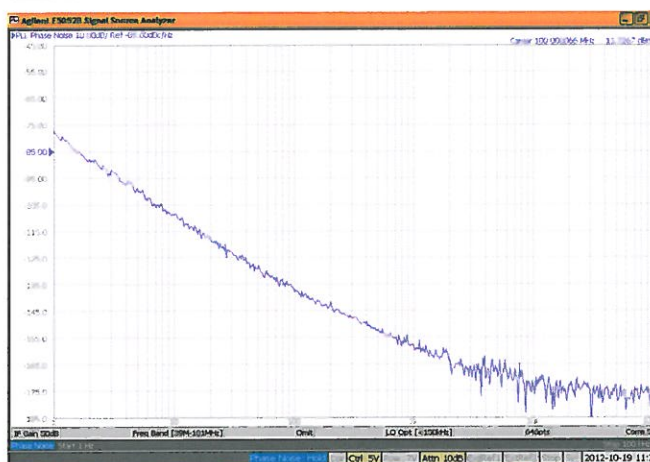
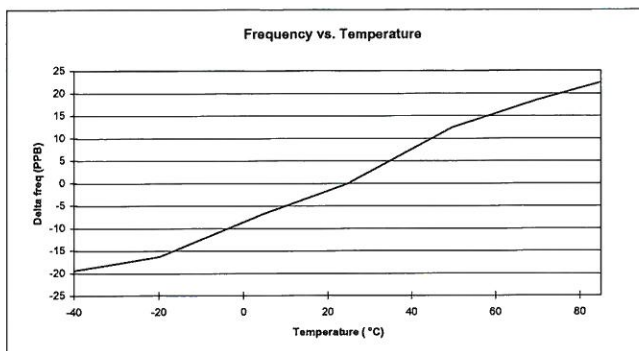
Output Characteristics	Sine Wave	
RF Output Power	11.73	dBm
Harmonics	-44.5	dBc
Spurious	<-80	dBc

Phase Noise		
10 Hz	-108	dBc/Hz
100 Hz	-137	dBc/Hz
1,000 Hz	-160	dBc/Hz
10,000 Hz	-172	dBc/Hz
100,000 Hz	-176	dBc/Hz

Allan Deviation		
0.1 sec	0.227	E-11
1.0 sec	0.307	E-11

Voltage Reference	9.863	Vdc
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Daily Aging	0.50	ppb/day
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NOTES: 1. All testing performed by G.Snyder 11/15/12.

**Electrical
Parameter Summary:**
Frequency

Data	Unit of Measure
85°C	100,000,085.846 Hz
25°C	100,000,084.045 Hz
-40°C	100,000,083.064 Hz

EFC

Data	Unit of Measure
0 Volts	99,999,738.479 Hz
5 Volts	100,000,082.708 Hz
10 Volts	100,000,239.379 Hz
linearity	17.45 %

Supply Voltage

+12.0	Vdc
Turn-on Current	335 mA
Turn-on Power	4.020 W
Idle Current	122 mA
Idle Power	1.464 W

Voltage Stability

11.4 Vdc	12.3 ppb
12.6 Vdc	-1.8 ppb

Output Characteristics

Sine Wave	11.34 dBm
RF Output Power	-45.2 dBc
Harmonics	<-80 dBc
Spurious	

Phase Noise

10 Hz	-110 dBc/Hz
100 Hz	-138 dBc/Hz
1,000 Hz	-160 dBc/Hz
10,000 Hz	-172 dBc/Hz
100,000 Hz	-176 dBc/Hz

Allan Deviation

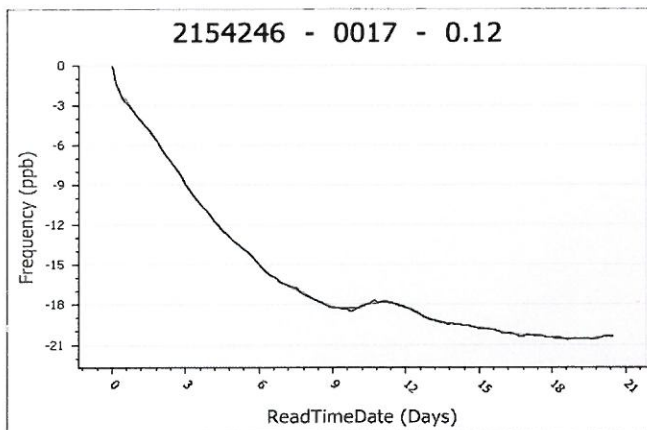
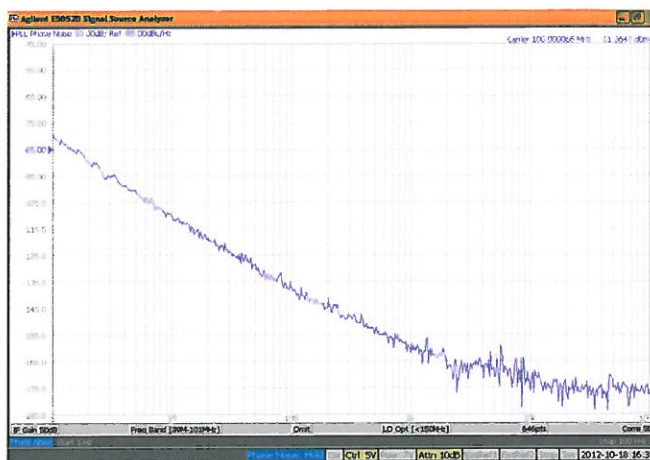
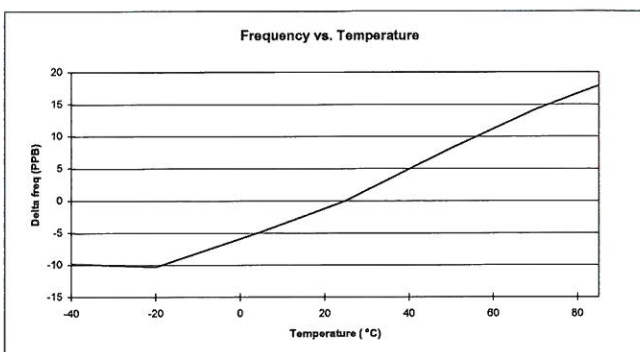
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1.0 sec	0.291 E-11

Voltage Reference

9.990	Vdc
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Daily Aging

0.12	ppb/day
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NOTES: 1. All testing performed by G.Snyder 11/15/12.

**Electrical
Parameter Summary:**

Frequency	Data	Unit of Measure
85°C	100,000,092.426	Hz
25°C	100,000,088.842	Hz
-40°C	100,000,085.864	Hz

EFC	Data	Unit of Measure
0 Volts	99,999,760.286	Hz
5 Volts	100,000,087.264	Hz
10 Volts	100,000,232.125	Hz
linearity	17.99	%

Supply Voltage	Data	Unit of Measure
Turn-on Current	330	mA
Turn-on Power	3.960	W
Idle Current	123	mA
Idle Power	1.476	W

Voltage Stability	Data	Unit of Measure
11.4 Vdc	9.5	ppb
12.6 Vdc	-0.5	ppb

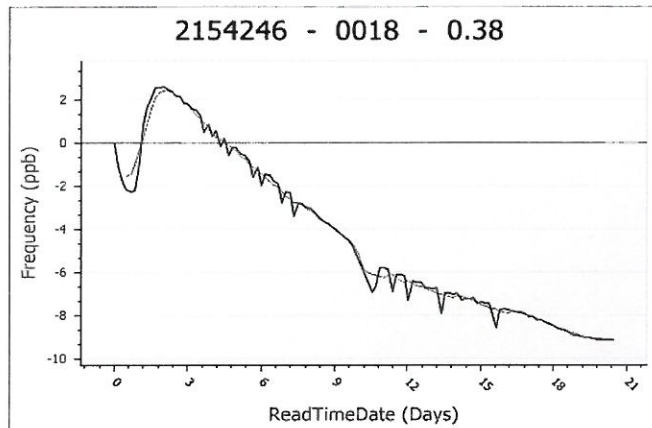
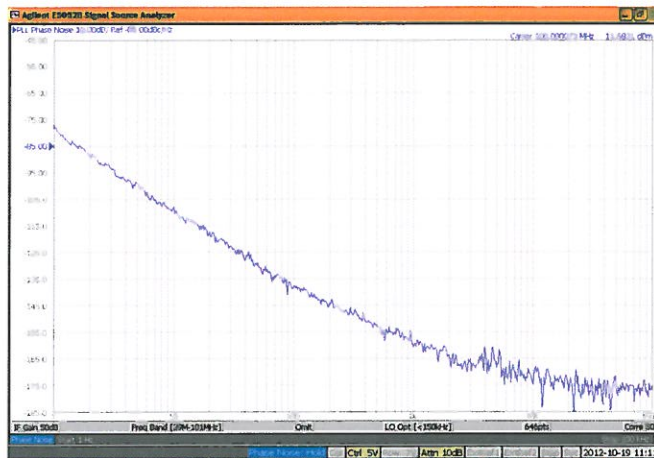
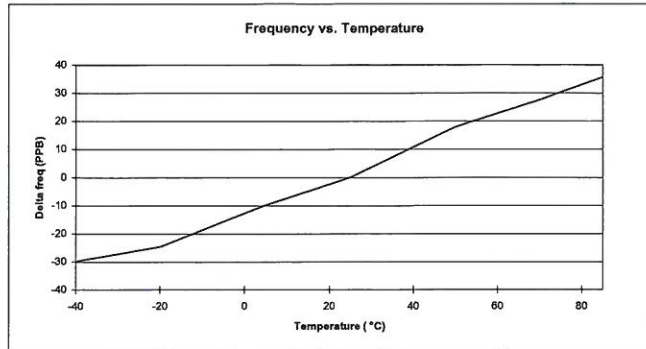
Output Characteristics	Sine Wave	Unit of Measure
RF Output Power	11.62	dBm
Harmonics	-45.2	dBc
Spurious	<-80	dBc

Phase Noise	Data	Unit of Measure
10 Hz	-107	dBc/Hz
100 Hz	-137	dBc/Hz
1,000 Hz	-160	dBc/Hz
10,000 Hz	-172	dBc/Hz
100,000 Hz	-177	dBc/Hz

Allan Deviation	Data	Unit of Measure
0.1 sec	0.234	E-11
1.0 sec	0.403	E-11

Voltage Reference	Data	Unit of Measure
	9.928	Vdc

Daily Aging	Data	Unit of Measure
	0.38	ppb/day



NOTES: 1. All testing performed by G.Snyder 11/15/12.

**Electrical
Parameter Summary:**

Frequency	Data	Unit of Measure
85°C	100,000,085.409	Hz
25°C	100,000,081.919	Hz
-40°C	100,000,078.580	Hz

EFC	Data	Unit of Measure
0 Volts	99,999,768.304	Hz
5 Volts	100,000,087.368	Hz
10 Volts	100,000,229.241	Hz
linearity	17.99	%

Supply Voltage	Data	Unit of Measure
Turn-on Current	336	mA
Turn-on Power	4.032	W
Idle Current	129	mA
Idle Power	1.548	W

Voltage Stability	Data	Unit of Measure
11.4 Vdc	3.0	ppb
12.6 Vdc	6.2	ppb

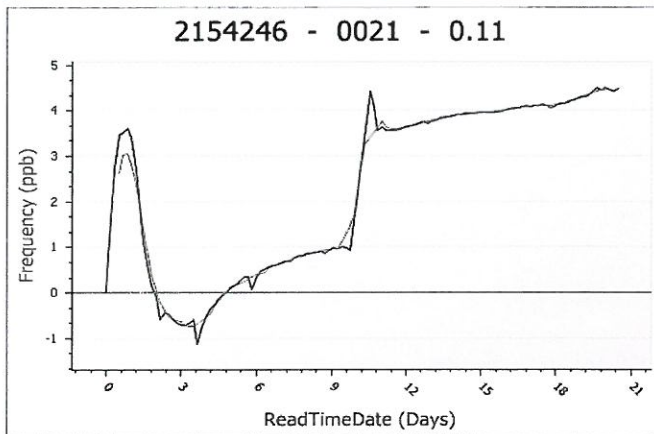
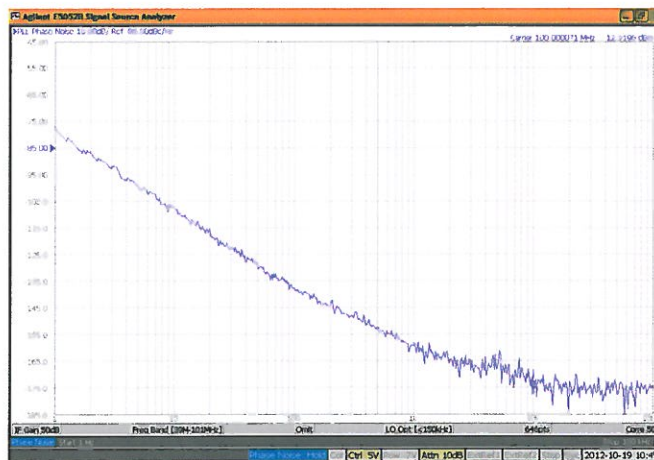
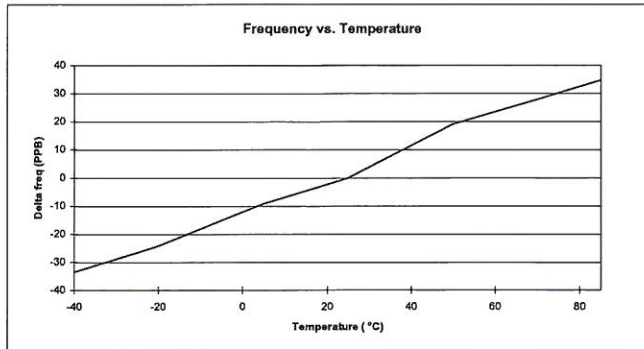
Output Characteristics	Sine Wave	Unit of Measure
RF Output Power	12.38	dBm
Harmonics	-41.4	dBc
Spurious	<-80	dBc

Phase Noise	Data	Unit of Measure
10 Hz	-107	dBc/Hz
100 Hz	-138	dBc/Hz
1,000 Hz	-160	dBc/Hz
10,000 Hz	-172	dBc/Hz
100,000 Hz	-176	dBc/Hz

Allan Deviation	Data	Unit of Measure
0.1 sec	0.285	E-11
1.0 sec	0.371	E-11

Voltage Reference	Data	Unit of Measure
	9.899	Vdc

Daily Aging	Data	Unit of Measure
	0.11	ppb/day



NOTES: 1. All testing performed by G.Snyder 11/15/12.

**Electrical
Parameter Summary:**

Frequency	Data	Unit of Measure
85°C	100,000,089.810	Hz
25°C	100,000,087.204	Hz
-40°C	100,000,084.281	Hz

EFC	Data	Unit of Measure
0 Volts	99,999,760.856	Hz
5 Volts	100,000,081.415	Hz
10 Volts	100,000,224.825	Hz
linearity	17.82	%

Supply Voltage	+12.0	Vdc
Turn-on Current	332	mA
Turn-on Power	3.984	W
Idle Current	120	mA
Idle Power	1.440	W

Voltage Stability	11.4 Vdc	15.8	ppb
	12.6 Vdc	-5.3	ppb

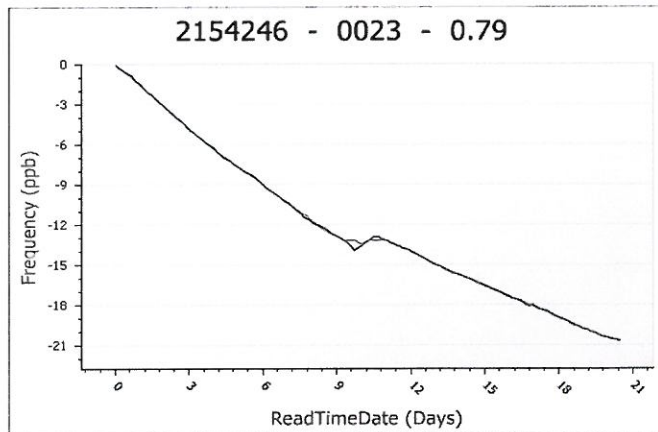
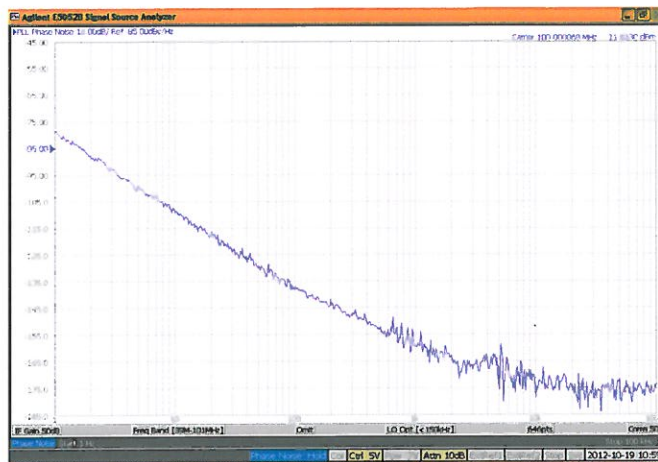
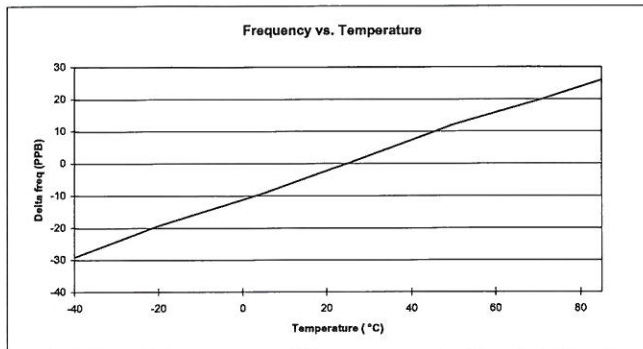
Output Characteristics	Sine Wave	
RF Output Power	11.65	dBm
Harmonics	-45.8	dBc
Spurious	<-80	dBc

Phase Noise		
10 Hz	-108	dBc/Hz
100 Hz	-138	dBc/Hz
1,000 Hz	-160	dBc/Hz
10,000 Hz	-173	dBc/Hz
100,000 Hz	-177	dBc/Hz

Allan Deviation		
0.1 sec	0.229	E-11
1.0 sec	0.267	E-11

Voltage Reference	9.885	Vdc
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Daily Aging	0.79	ppb/day
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NOTES: 1. All testing performed by G.Snyder 11/15/12.