

### 9.2.3. TX ABOVE 1 GHz IN THE 2.4 GHz BAND: 18-26 GHz

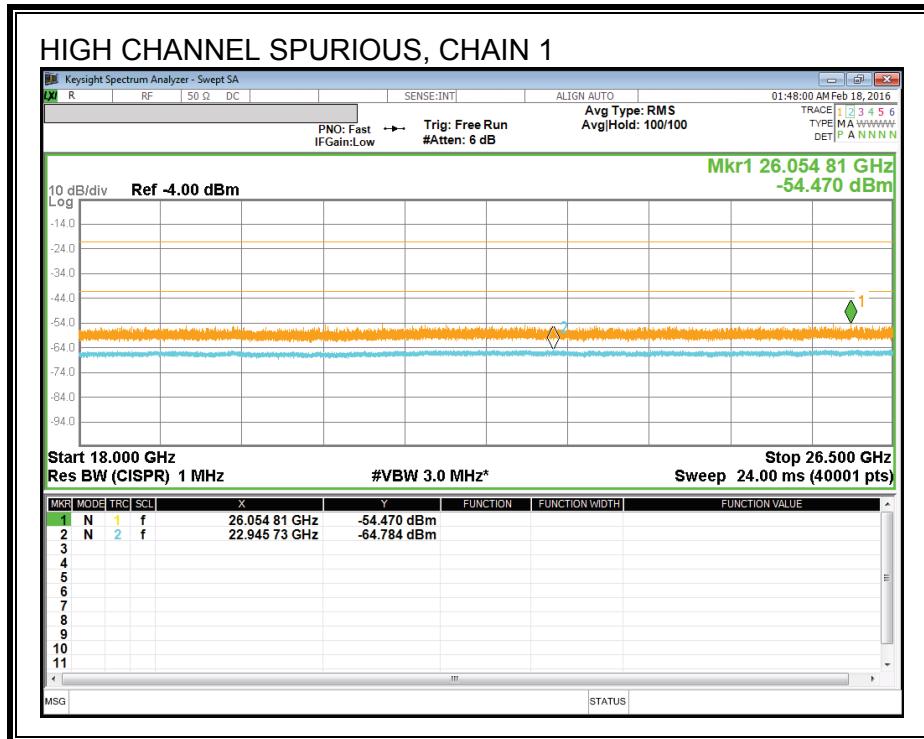
#### HARMONICS AND SPURIOUS EMISSIONS, HIGH CHANNEL, TABULAR DATA

The following measurements include an antenna gain of:

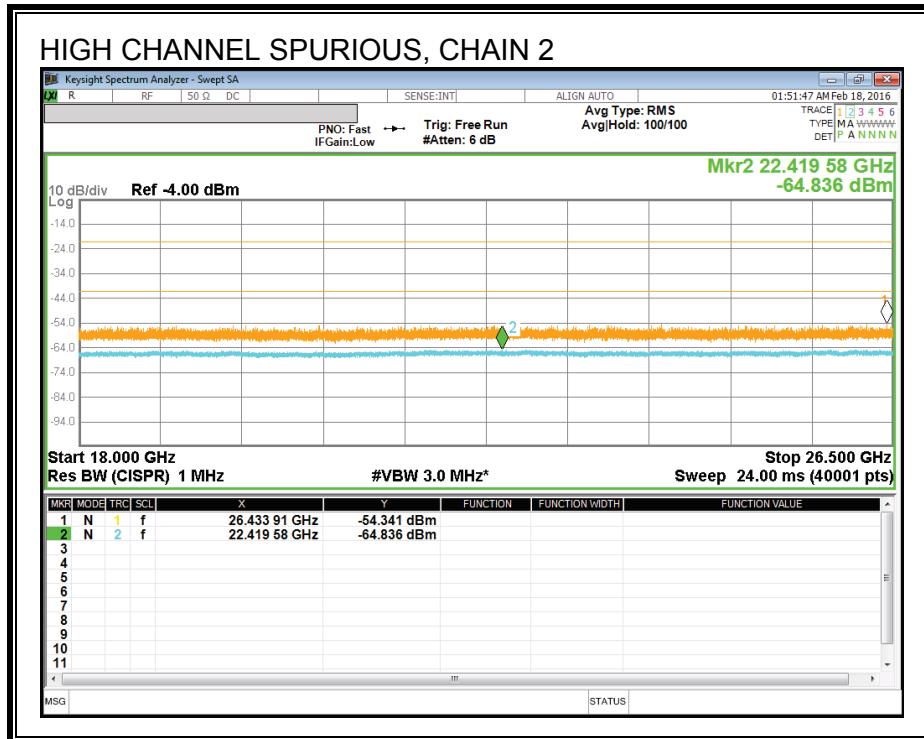
AG Chain 1 (dBi)	AG Chain 2 (dBi)	AG Chain 3 (dBi)	AG Chain 4 (dBi)	AG Chain 5 (dBi)	AG Chain 6 (dBi)	AG Chain 7 (dBi)	AG Chain 8 (dBi)
19.7	19.9	20	20.2	20.2	20.1	19.9	19.6

Frequency (MHz)		Meter PK Reading Chain 1 (dBm)	Meter PK Reading Chain 2 (dBm)	Meter PK Reading Chain 3 (dBm)	Meter PK Reading Chain 4 (dBm)	Meter PK Reading Chain 5 (dBm)	Meter PK Reading Chain 6 (dBm)	Meter PK Reading Chain 7 (dBm)	Meter PK Reading Chain 8 (dBm)	PK EIRP (dBm)	PK E-field Limit (dBm)	PK E-field Margin (dB)
Enter SA Value here		-53.689	-54.588	-54.264	-54.453	-54.176	-54.261	-54.26	-54.532			
18000-26500	AMP	-27.445	-27.445	-27.445	-27.445	-27.445	-27.445	-27.445	-27.445			
	CBL1	1.773	1.773	1.773	1.773	1.773	1.773	1.773	1.773			
	CBL2	1.808	1.808	1.808	1.808	1.808	1.808	1.808	1.808			
Final Value		-77.553	-78.452	-78.128	-78.317	-78.04	-78.125	-78.124	-78.396	-49.15	-21.2	-27.95

Frequency (MHz)		Meter AVG Reading Chain 1	Meter AVG Reading Chain 2	Meter AVG Reading Chain 3	Meter AVG Reading Chain 4	Meter AVG Reading Chain 5	Meter AVG Reading Chain 6	Meter AVG Reading Chain 7 (dBm)	Meter AVG Reading Chain 8	AVG EIRP (dBm)	AVG E-field Limit (dBm)	AVG E-field Margin (dB)
Enter SA Value here		-64.621	-65.045	-65.005	-64.948	-65.011	-65.09	-64.933	-64.792			
18000-26500	AMP	-27.445	-27.445	-27.445	-27.445	-27.445	-27.445	-27.445	-27.445			
	CBL1	1.773	1.773	1.773	1.773	1.773	1.773	1.773	1.773			
	CBL2	1.808	1.808	1.808	1.808	1.808	1.808	1.808	1.808			
DCCF		0.68	0	0	0	0.68	0.67	0.75	0.73			
Final Value		-87.805	-88.909	-88.869	-88.812	-88.195	-88.284	-88.047	-87.926	-59.36	-41.2	-18.16

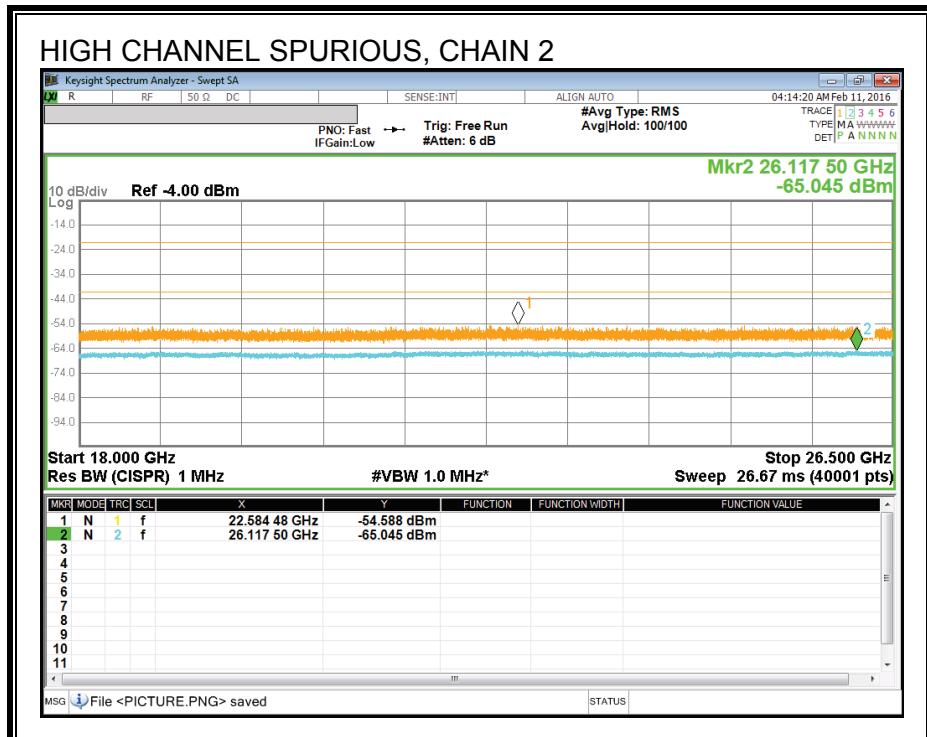
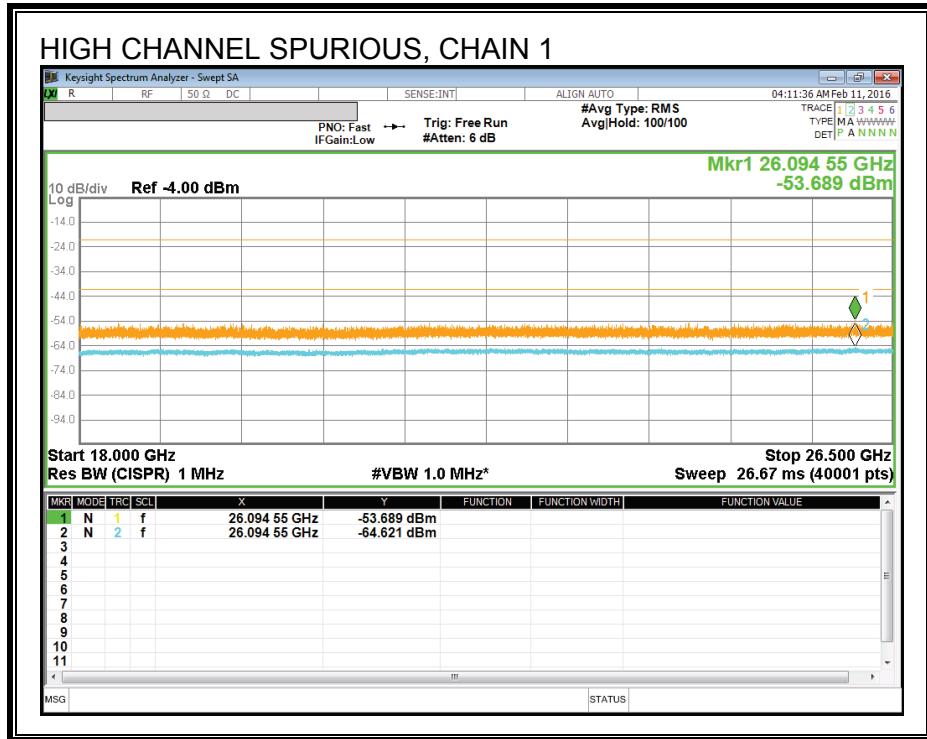


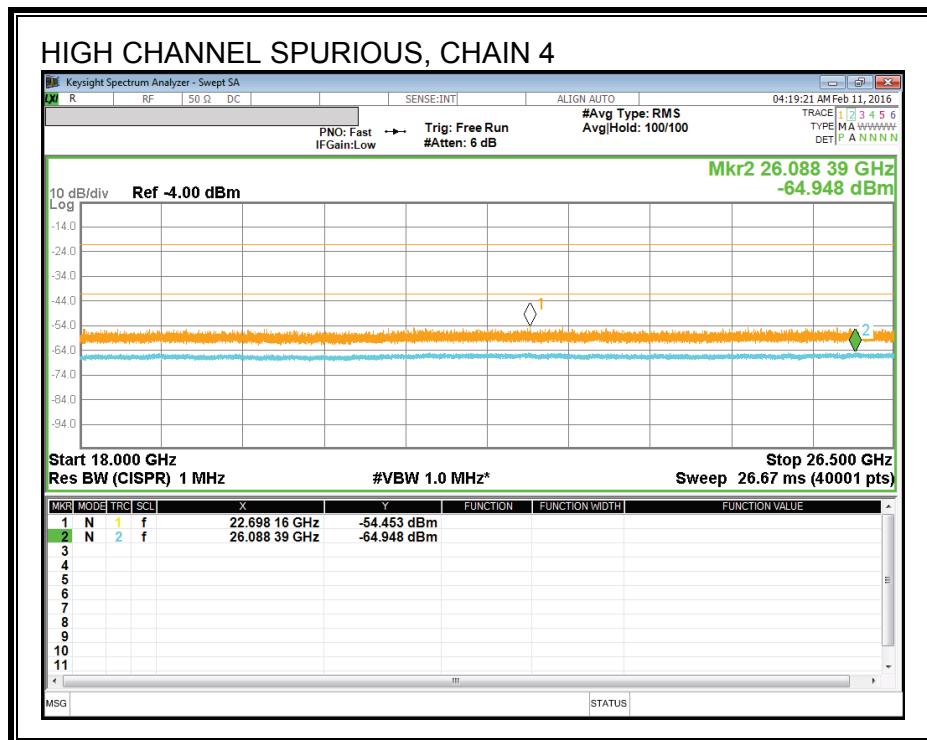
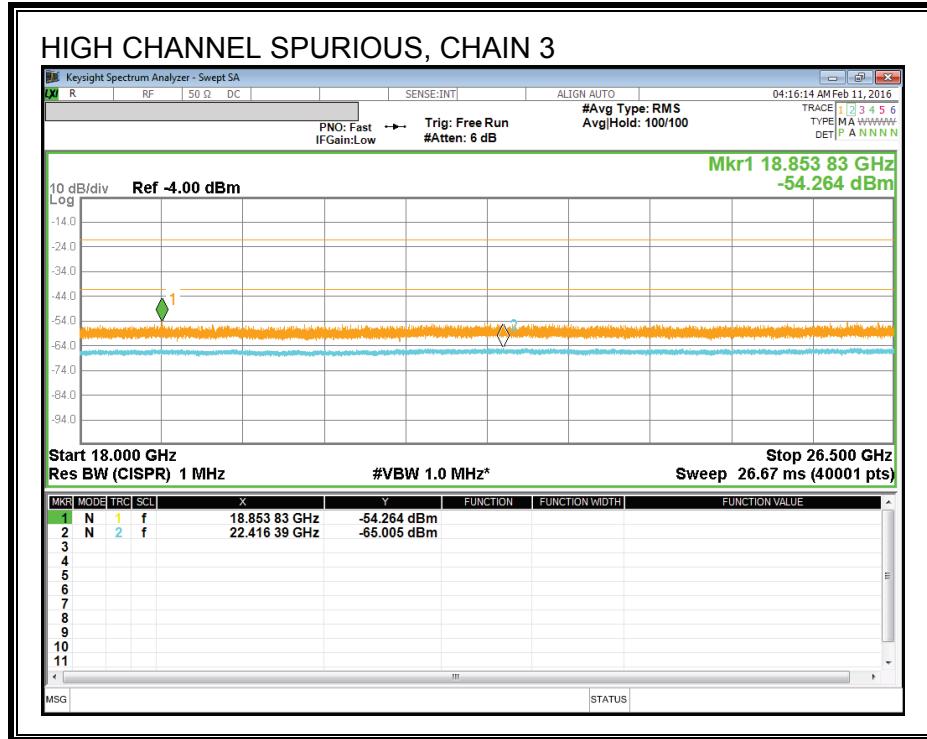
Note - The following HIGH Channel spurious plots were taken with an RBW of 1MHz and VBW of 1MHz. The above was taken at RBW – 1MHz and VBW – 3MHz to show that the results were not impacted by the change in VBW. This plot represents all chains operating at 85% duty cycle (Chains 1, 5-8).

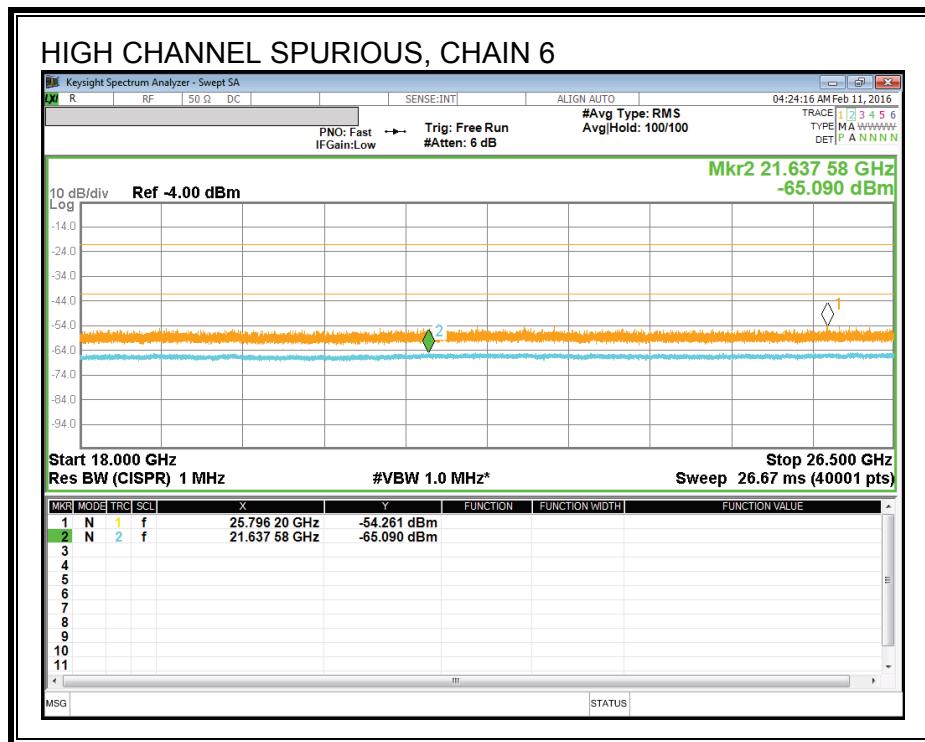
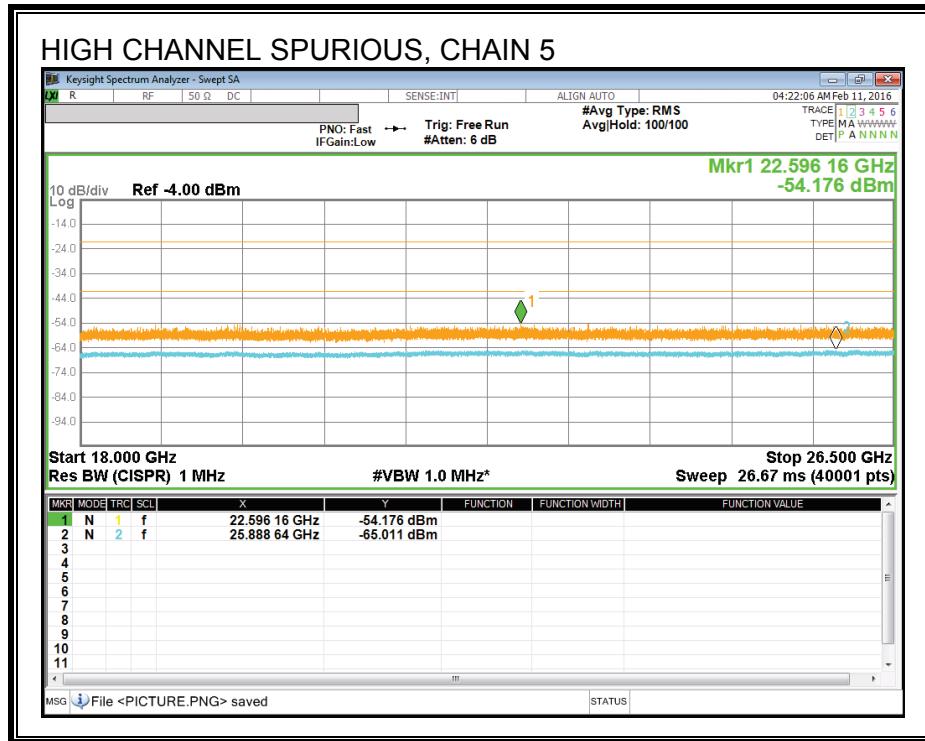


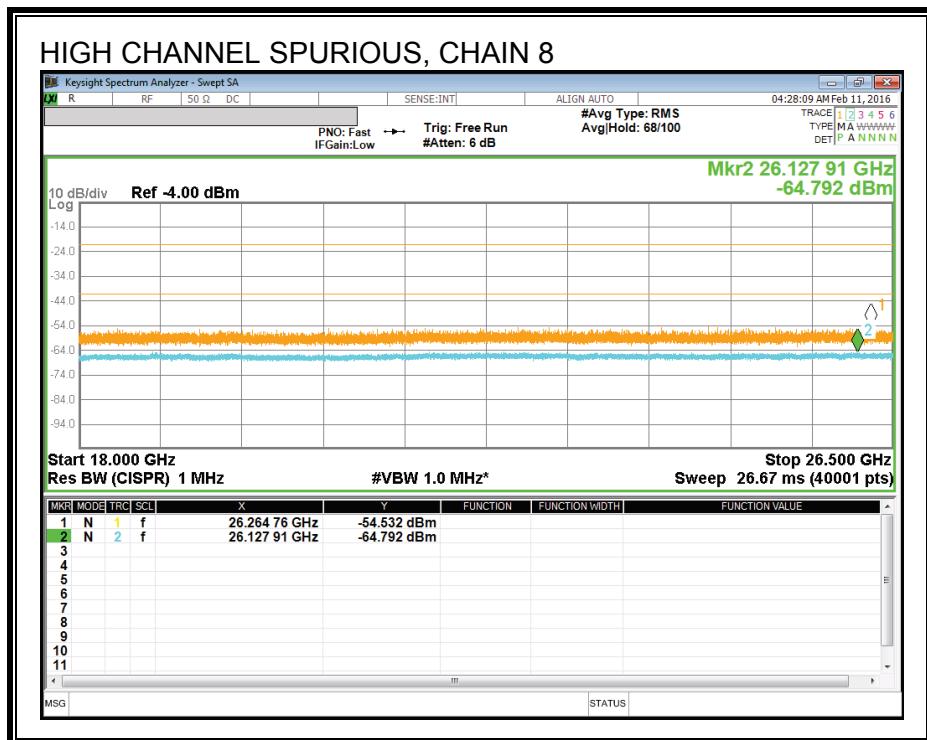
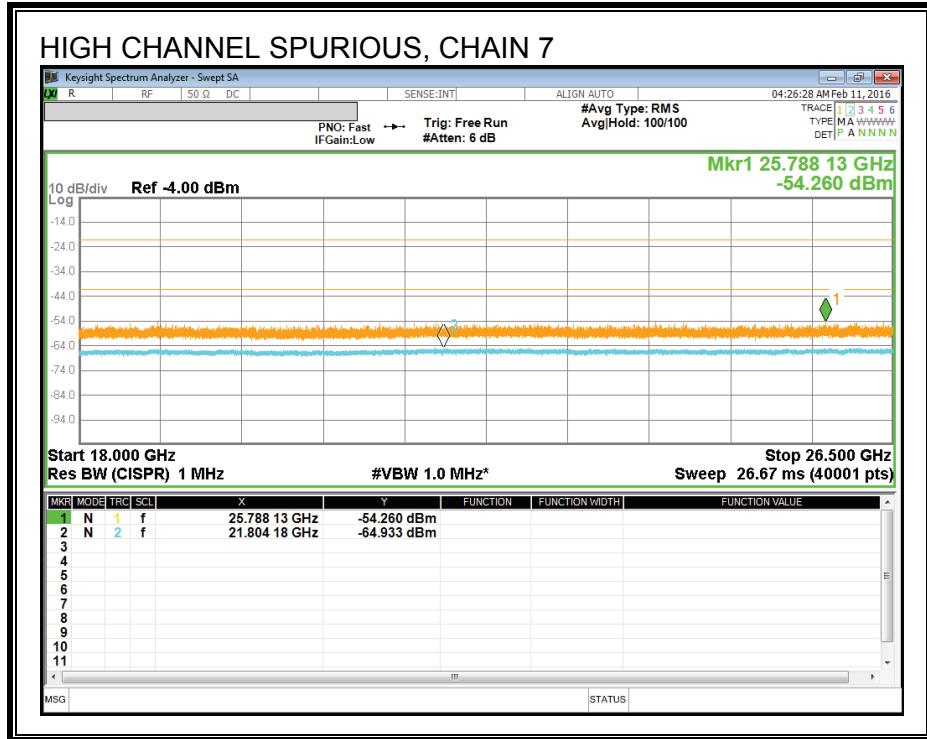
Note - The following High Channel spurious plots were taken with an RBW of 1MHz and VBW of 1MHz. The above was taken at RBW – 1MHZ and VBW – 3MHz to show that the results were not impacted by the change in VBW. This plot represents all chains operating at 100% duty cycle (Chains 2-4).

**HARMONICS AND SPURIOUS EMISSIONS, HIGH CHANNEL**









## 9.2.4. TX BELOW 1 GHz IN THE 2.4 GHz BAND: 30-1000 MHz

### RESULTS – 30-1000 MHz, WORST CASE

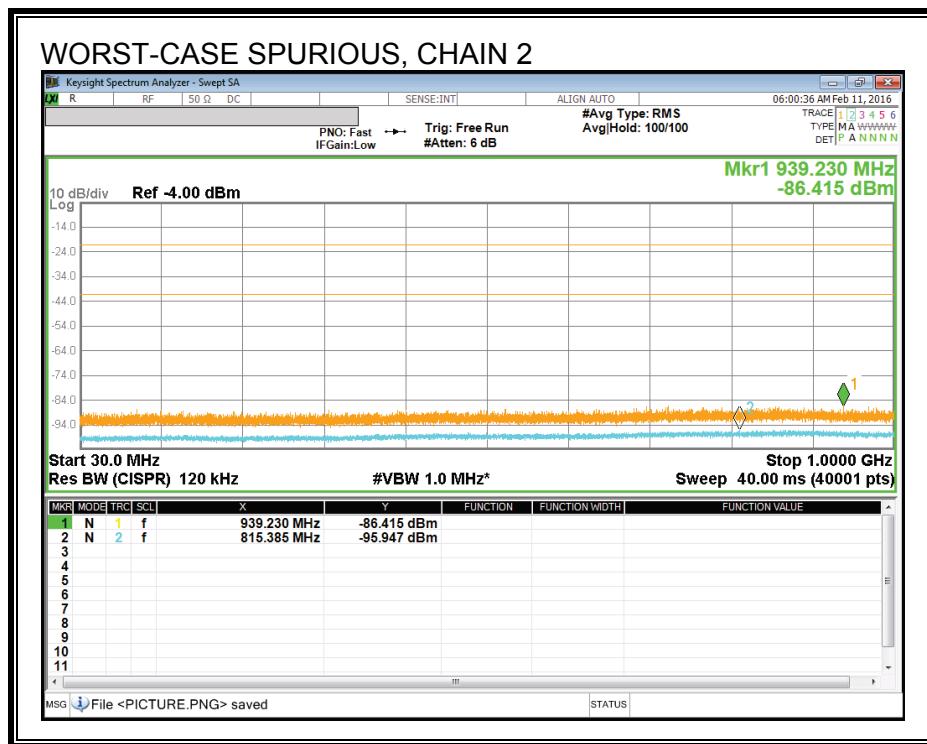
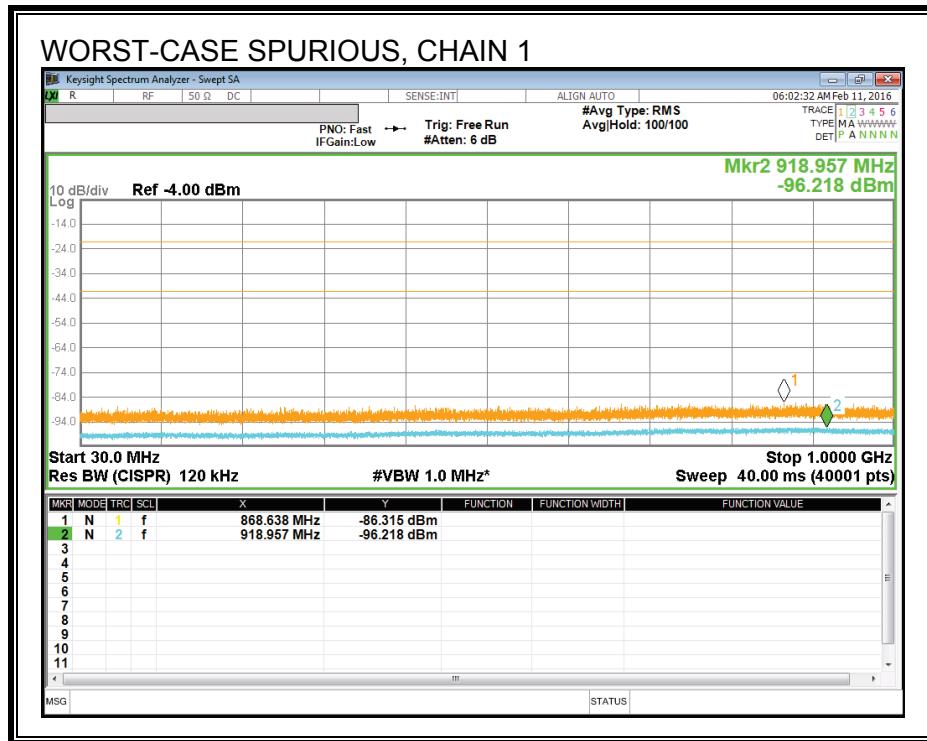
#### HARMONICS AND SPURIOUS EMISSIONS, WORST-CASE TABULAR DATA

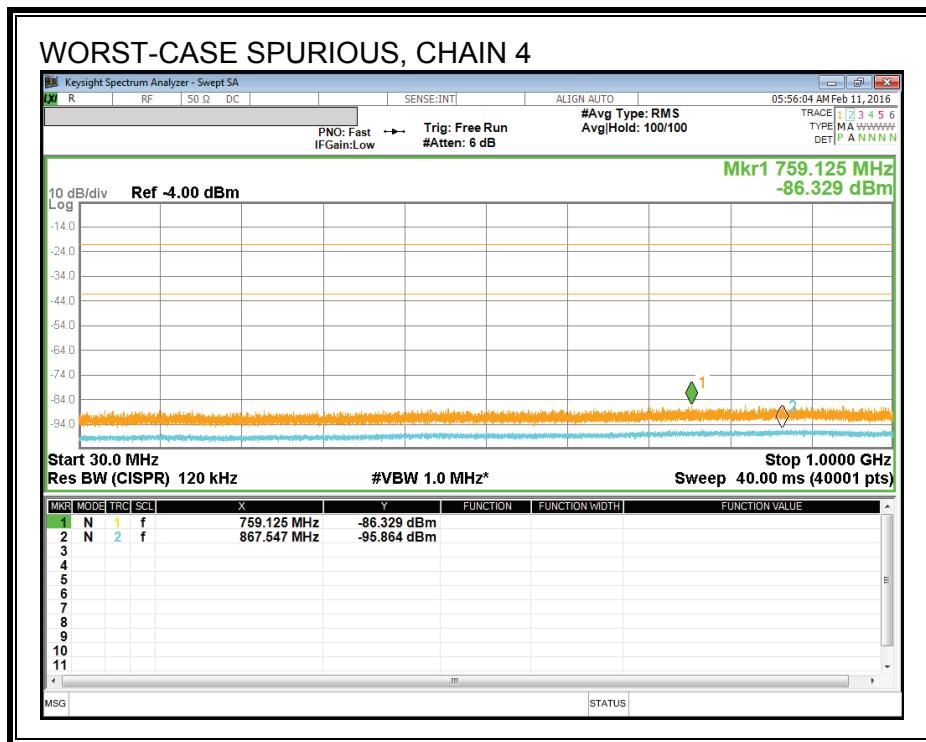
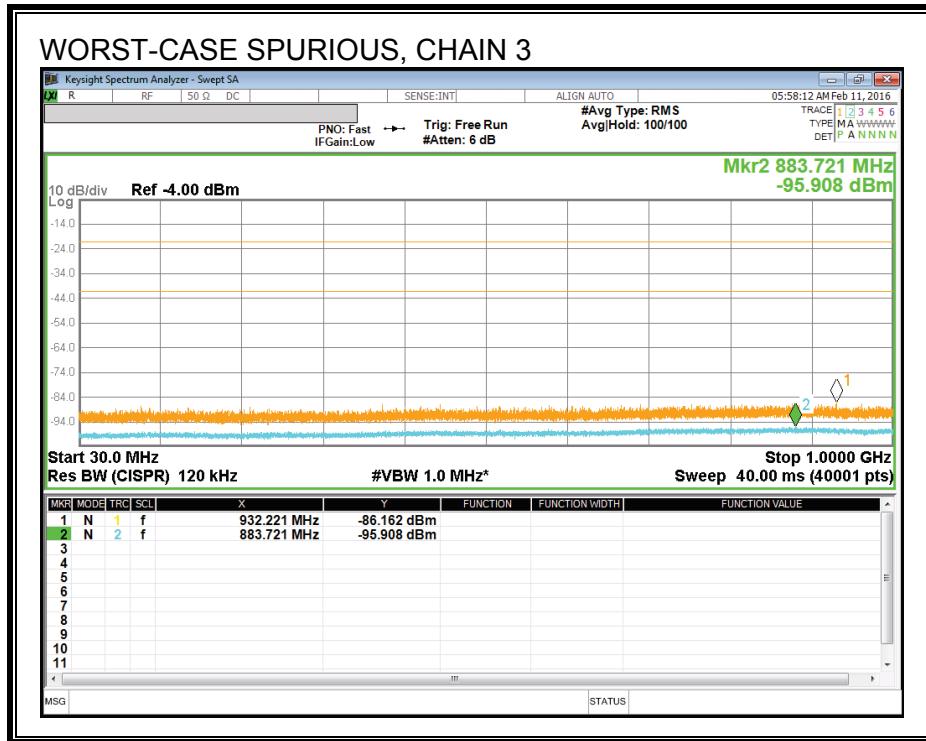
The following measurements include the 4.7 dB ground reflection factor and an antenna gain of:

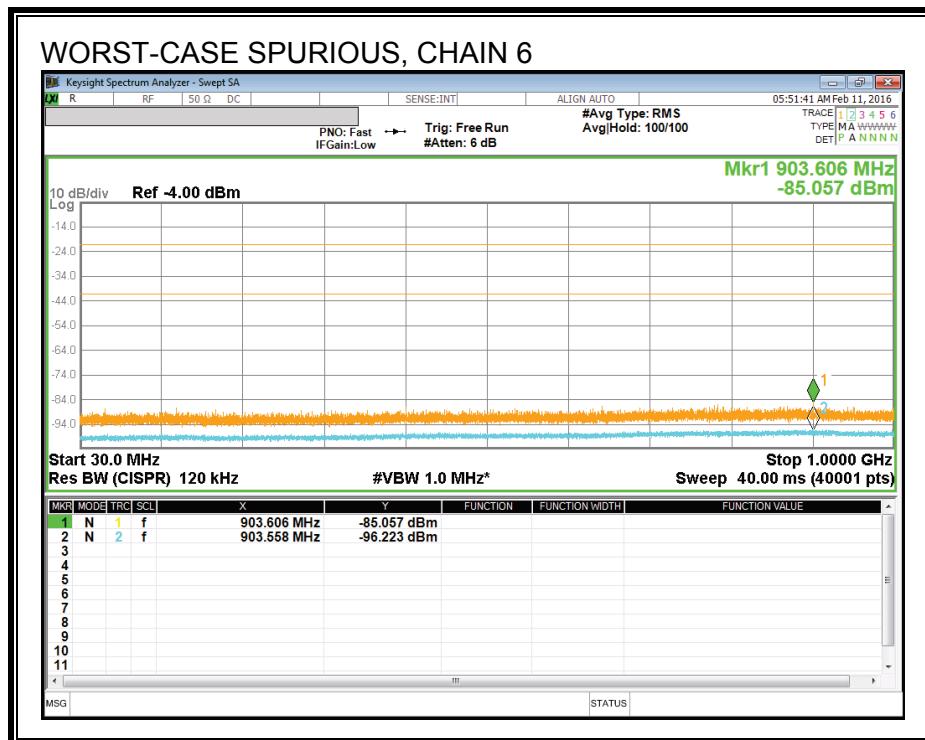
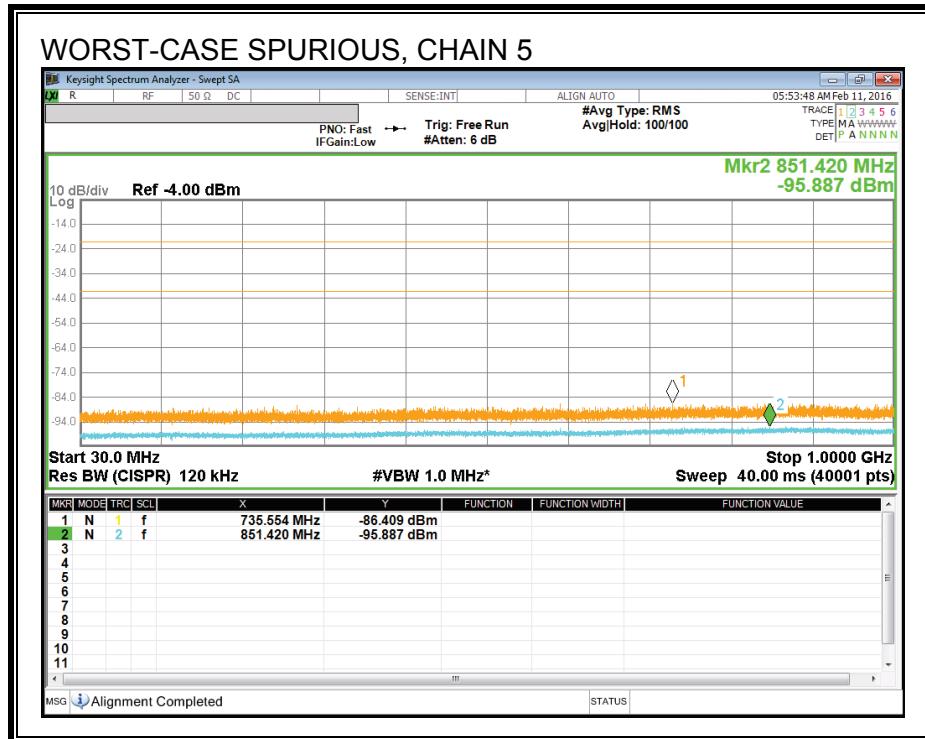
AG Chain 1 (dBi)	AG Chain 2 (dBi)	AG Chain 3 (dBi)	AG Chain 4 (dBi)	AG Chain 5 (dBi)	AG Chain 6 (dBi)	AG Chain 7 (dBi)	AG Chain 8 (dBi)
19.7	19.9	20	20.2	20.2	20.1	19.9	19.6

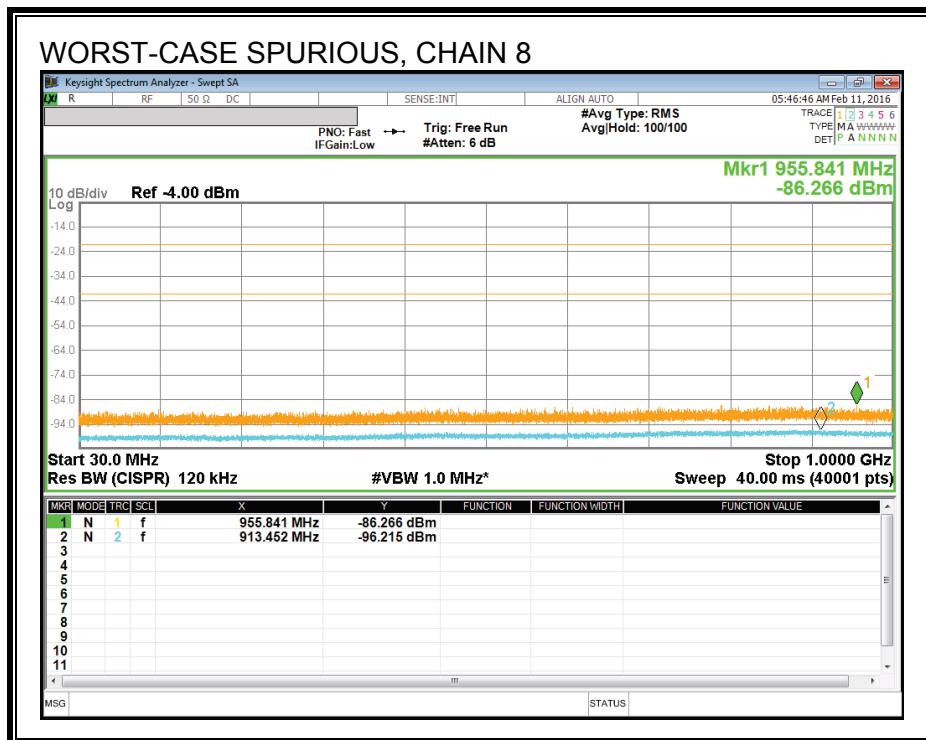
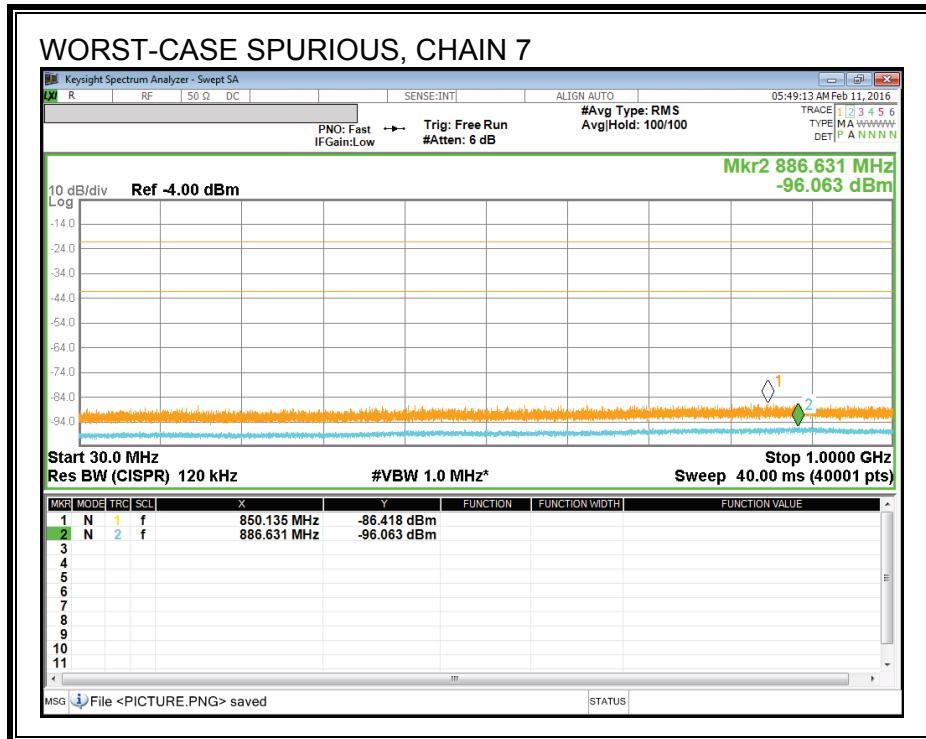
Frequency (MHz)		Meter PK Reading Chain 1 (dBm)	Meter PK Reading Chain 2 (dBm)	Meter PK Reading Chain 3 (dBm)	Meter PK Reading Chain 4 (dBm)	Meter PK Reading Chain 5 (dBm)	Meter PK Reading Chain 6 (dBm)	Meter PK Reading Chain 7 (dBm)	Meter PK Reading Chain 8 (dBm)	PK EIRP (dBm)	PK E-field Limit (dBm)	PK E-field Margin (dB)
Enter SA Value here		-86.315	-86.415	-86.162	-86.329	-86.409	-85.057	-86.418	-86.266			
30-1000	FILTER	1.782	1.782	1.782	1.782	1.782	1.782	1.782	1.782			
	CBL1	0.213	0.213	0.213	0.213	0.213	0.213	0.213	0.213			
Final Value		-84.109	-84.209	-83.956	-84.123	-84.203	-82.851	-84.212	-84.06	-50.25	-21.2	-29.05

**HARMONICS AND SPURIOUS EMISSIONS, WORST-CASE, PLOTS**









### 9.3. 9 MHz MODE IN THE RESTRICTED BAND

#### 9.3.1. TX ABOVE 1 GHz IN THE 2.4 GHz BAND: 1-4 GHz

##### RESTRICTED BANDEDGE (LOW CHANNEL) TABULAR SUMMED DATA

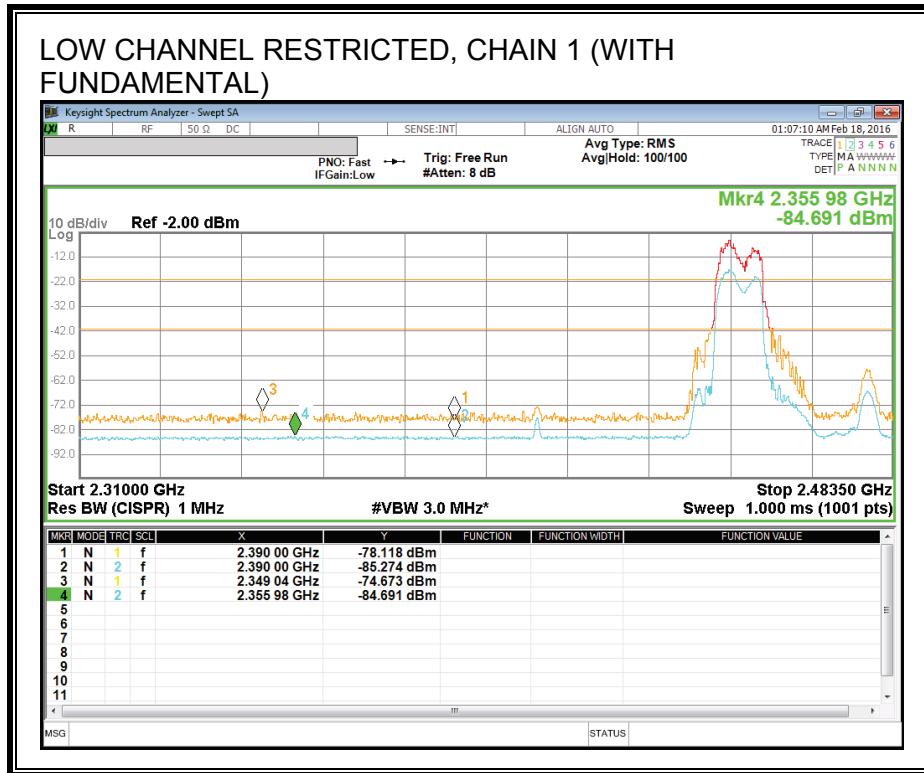
The following measurements include an antenna gain of:

AG Chain 1 (dBi)	AG Chain 2 (dBi)	AG Chain 3 (dBi)	AG Chain 4 (dBi)	AG Chain 5 (dBi)	AG Chain 6 (dBi)	AG Chain 7 (dBi)	AG Chain 8 (dBi)
19.7	19.9	20	20.2	20.2	20.1	19.9	19.6

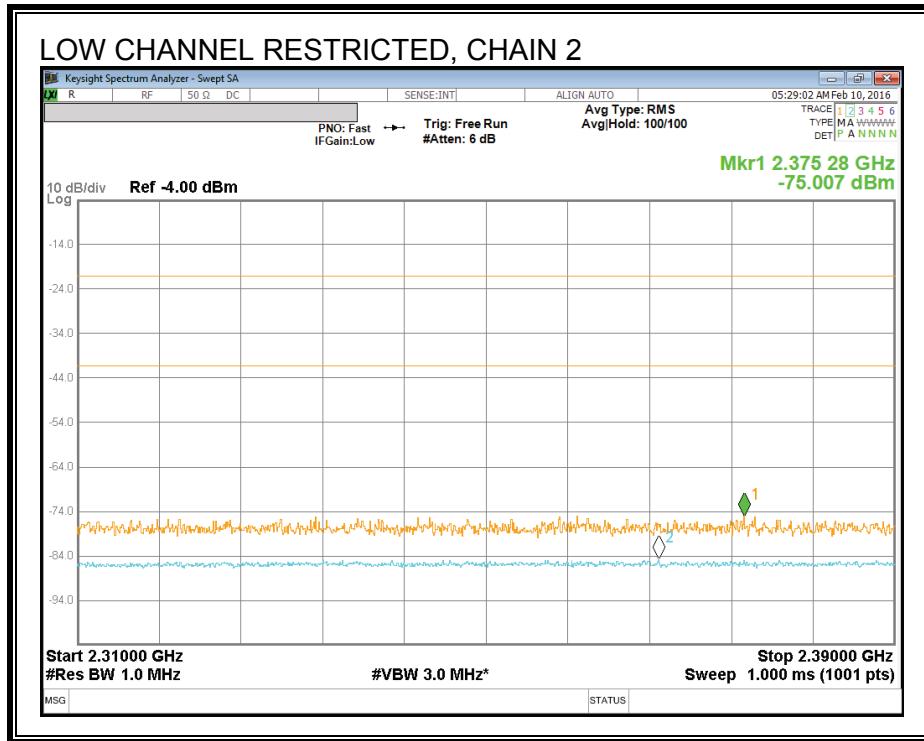
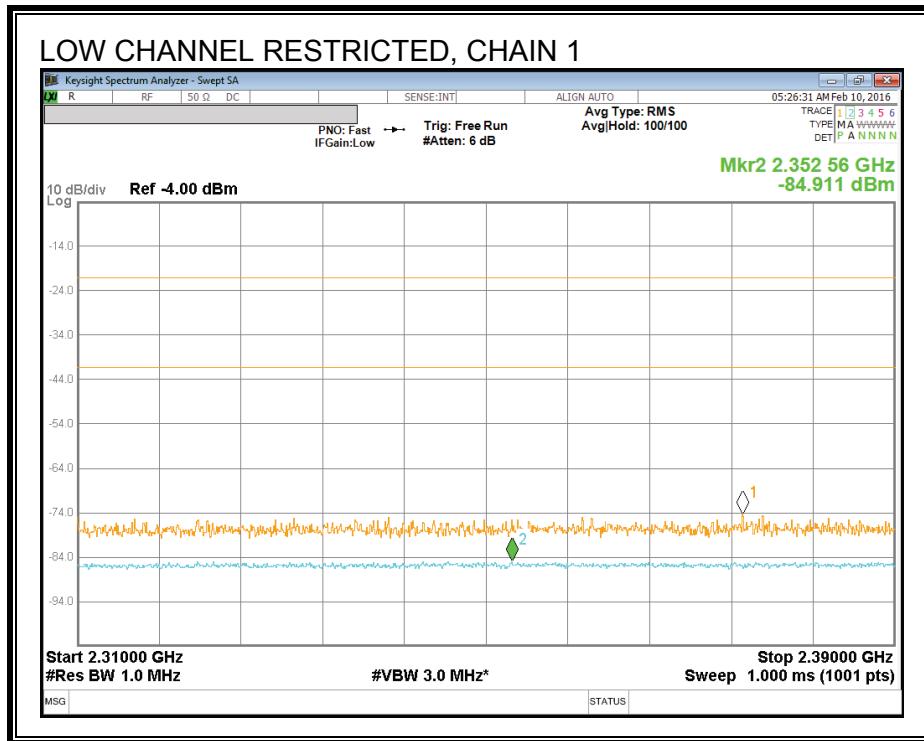
Frequency (MHz)		Meter PK Reading Chain 1 (dBm)	Meter PK Reading Chain 2 (dBm)	Meter PK Reading Chain 3 (dBm)	Meter PK Reading Chain 4 (dBm)	Meter PK Reading Chain 5 (dBm)	Meter PK Reading Chain 6 (dBm)	Meter PK Reading Chain 7 (dBm)	Meter PK Reading Chain 8 (dBm)	PK EIRP (dBm)	PK E-field Limit (dBm)	PK E-field Margin (dB)
Enter SA Value here		-74	-75.007	-74	-74.26	-74	-74.856	-74	-73.371			
2310-2390	FILTER	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
	CBL1	0.416	0.416	0.416	0.416	0.416	0.416	0.416	0.416			
	CBL2	0.404	0.404	0.404	0.404	0.404	0.404	0.404	0.404			
Final Value		-73.08	-74.087	-73.08	-73.34	-73.08	-73.936	-73.08	-72.451	-44.26	-21.2	-23.06

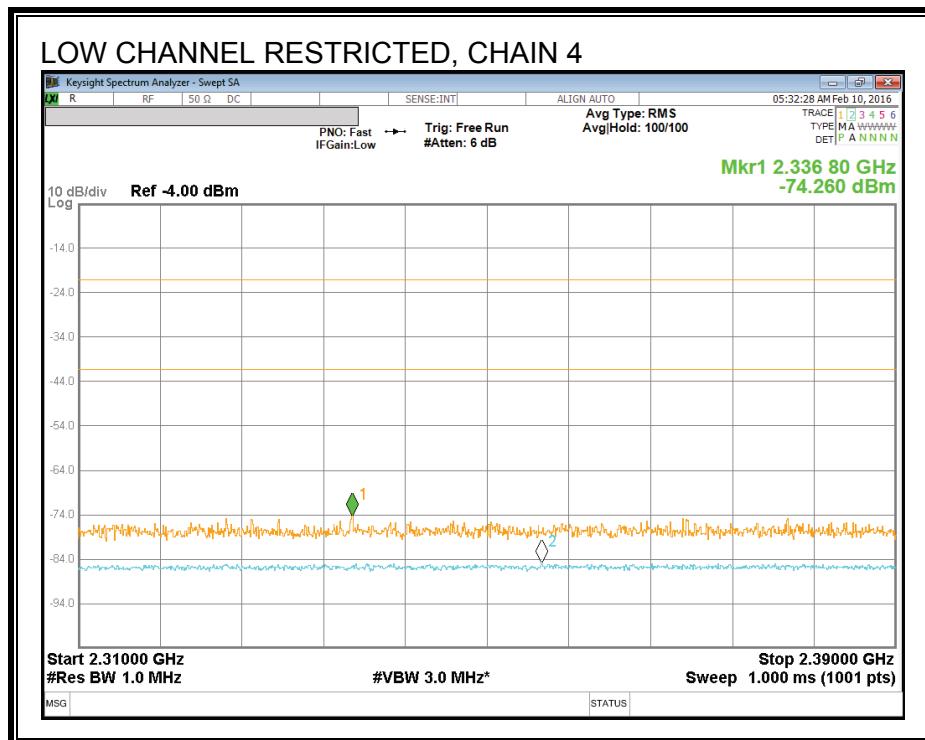
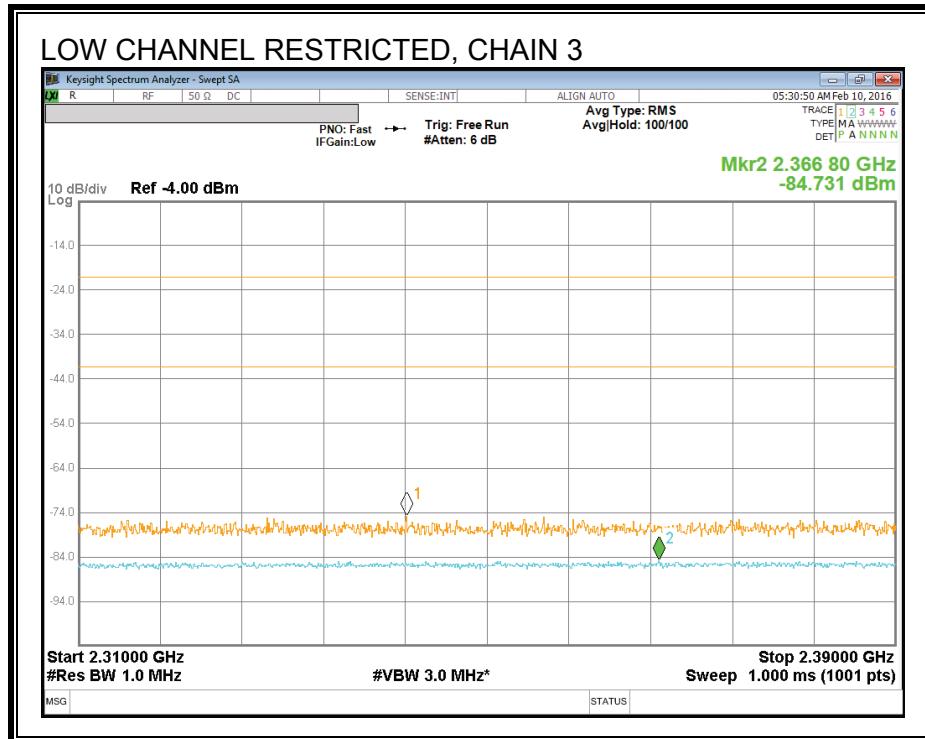
Frequency (MHz)		Meter AVG Reading Chain 1	Meter AVG Reading Chain 2	Meter AVG Reading Chain 3	Meter AVG Reading Chain 4	Meter AVG Reading Chain 5	Meter AVG Reading Chain 6	Meter AVG Reading Chain 7 (dBm)	Meter AVG Reading Chain 8 (dBm)	Avg EIRP (dBm)	Avg E-field Limit (dBm)	Avg E-field Margin (dB)
Enter SA Value here		-84.911	-84	-84.731	-84	-84.981	-84.5	-84.785	-84			
2310-2390	FILTER	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
	CBL1	0.416	0.416	0.416	0.416	0.416	0.416	0.416	0.416			
	CBL2	0.404	0.404	0.404	0.404	0.404	0.404	0.404	0.404			
DCCF		0.68	0	0	0	0.67	0.67	0.68	0.68			
Final Value		-83.311	-83.08	-83.811	-83.08	-83.391	-82.91	-83.185	-82.4	-54.15	-41.2	-12.95

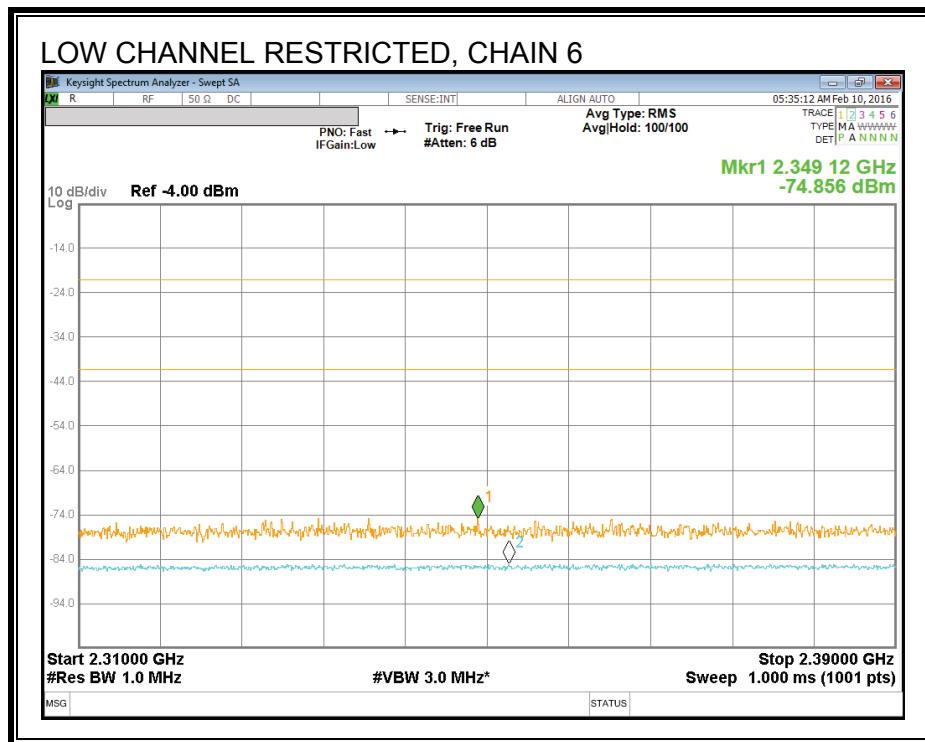
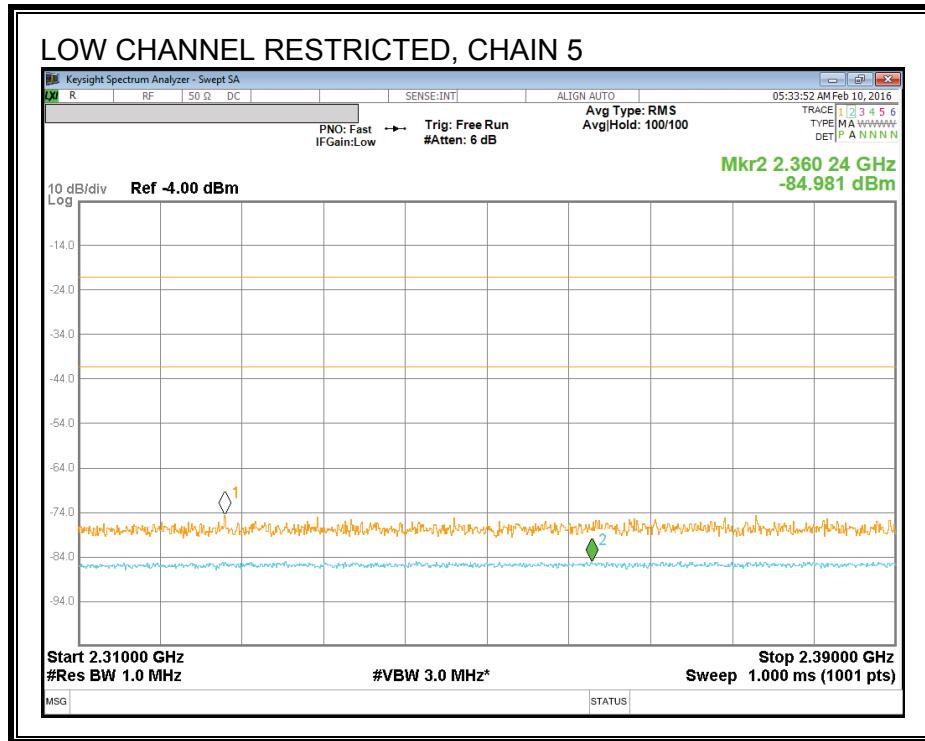
**RESTRICTED BANDEDGE (LOW CHANNEL) PLOTS**

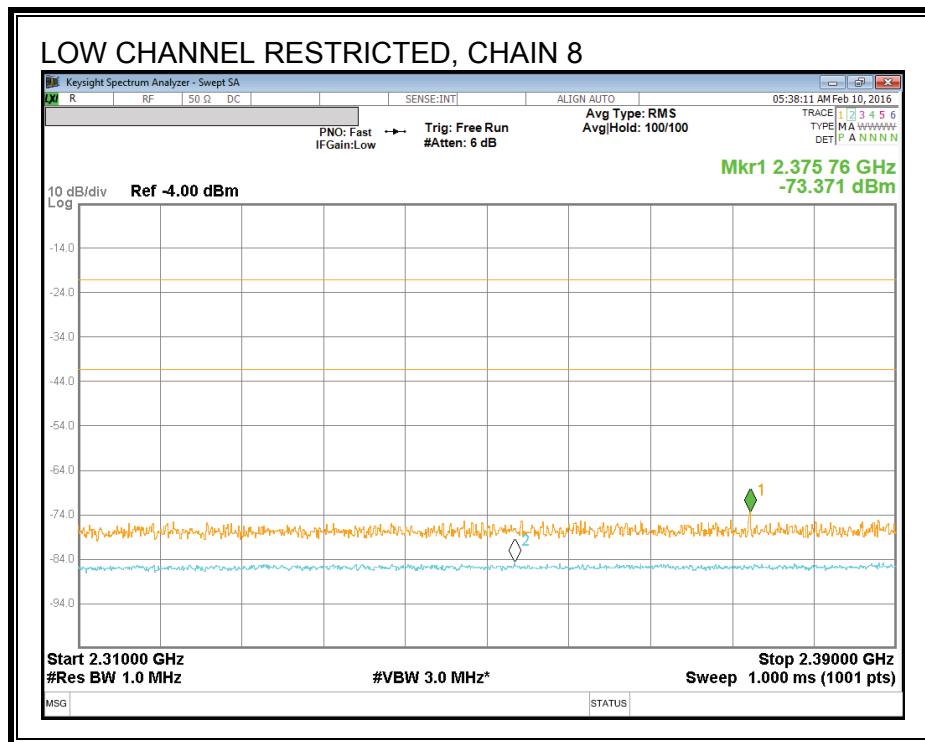
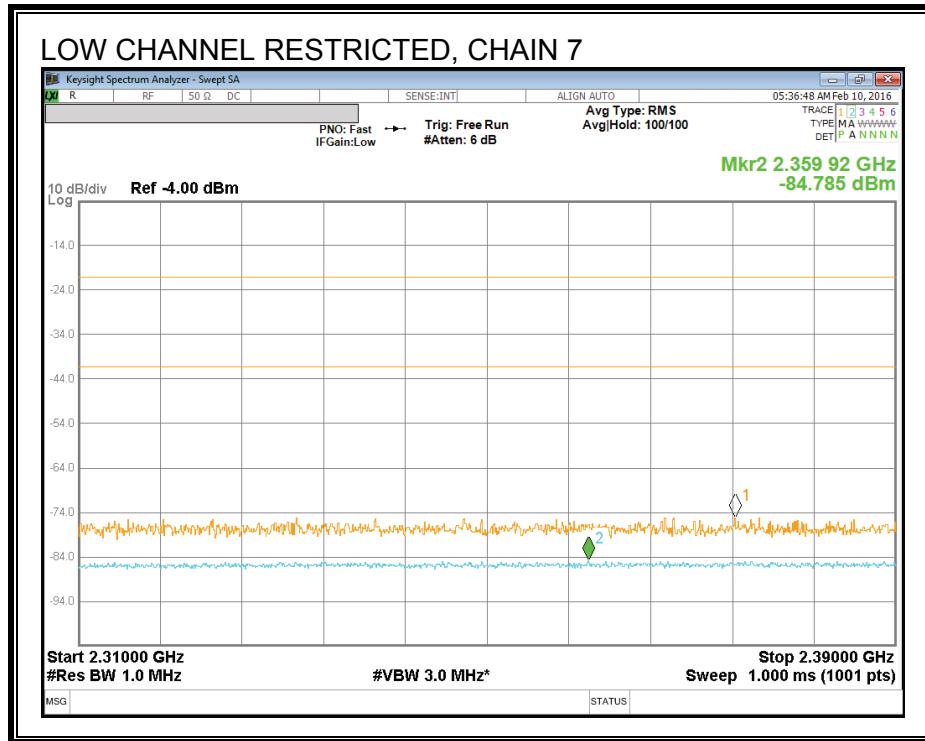


Note – Initially, all Bandedge plots were taken with the fundamental not included in the plot. The above bandedge measurement was taken with the fundamental included to show the fundamental was present.









**RESTRICTED BANDEDGE (HIGH CHANNEL) TABULAR SUMMED DATA**

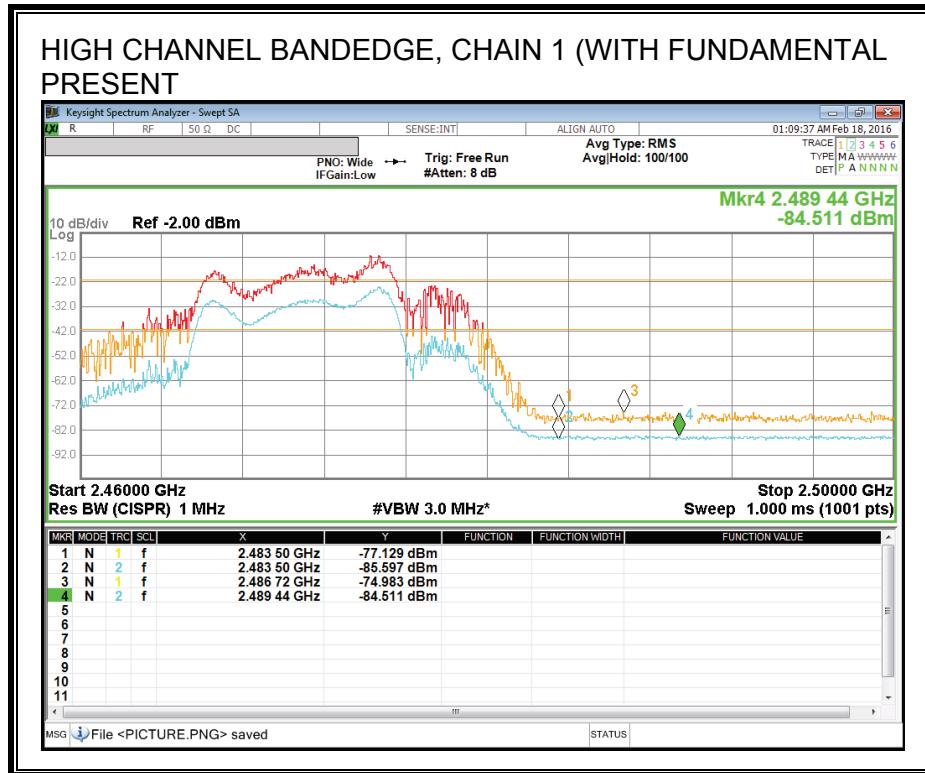
The following measurements include an antenna gain of:

AG Chain 1 (dBi)	AG Chain 2 (dBi)	AG Chain 3 (dBi)	AG Chain 4 (dBi)	AG Chain 5 (dBi)	AG Chain 6 (dBi)	AG Chain 7 (dBi)	AG Chain 8 (dBi)
19.7	19.9	20	20.2	20.2	20.1	19.9	19.6

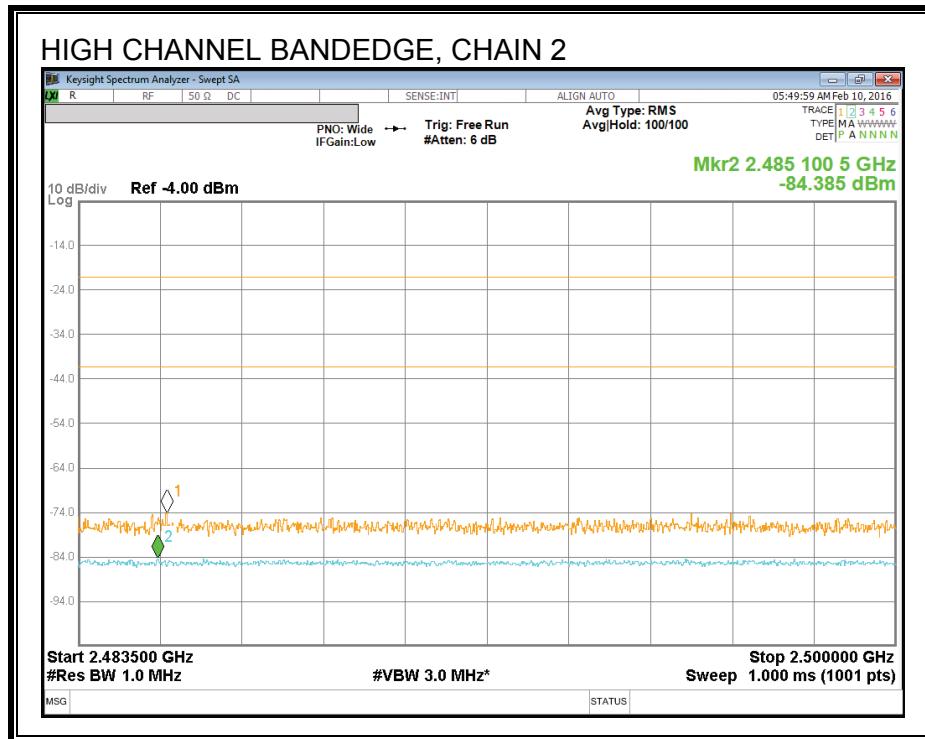
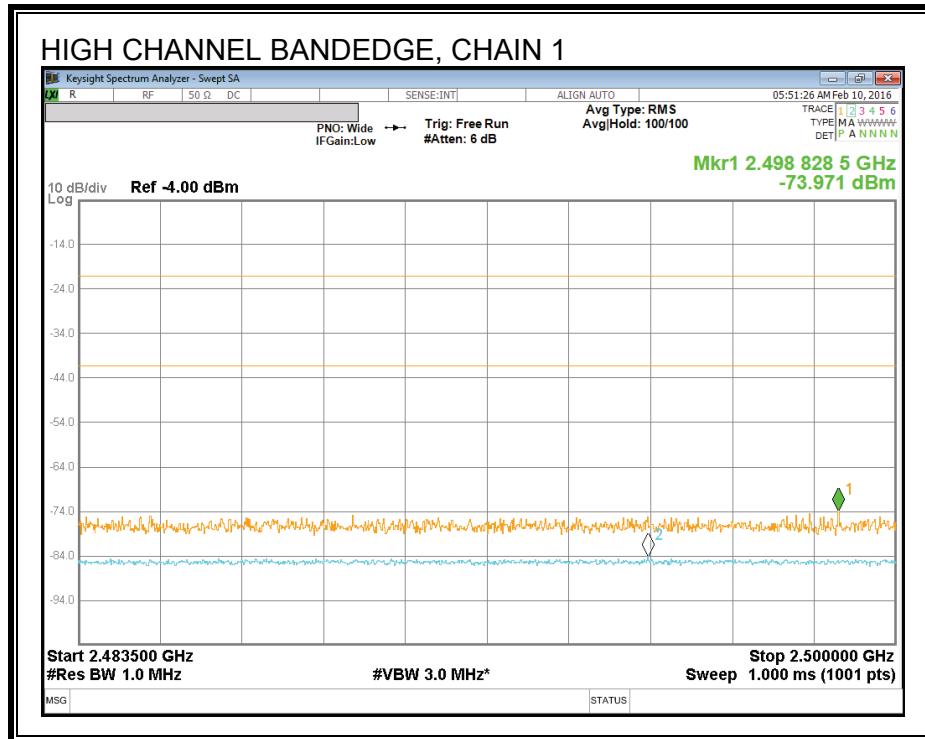
Frequency (MHz)		Meter PK Reading Chain 1 (dBm)	Meter PK Reading Chain 2 (dBm)	Meter PK Reading Chain 3 (dBm)	Meter PK Reading Chain 4 (dBm)	Meter PK Reading Chain 5 (dBm)	Meter PK Reading Chain 6 (dBm)	Meter PK Reading Chain 7 (dBm)	Meter PK Reading Chain 8 (dBm)	PK EIRP (dBm)	PK E-field Limit (dBm)	PK E-field Margin (dB)
Enter SA Value here		-73.971	-73.75	-73.989	-73.75	-73.298	-73.75	-74.64	-73.75			
<b>2483.5-2500</b>	FILTER	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
	CBL1	0.416	0.416	0.416	0.416	0.416	0.416	0.416	0.416			
	CBL2	0.404	0.404	0.404	0.404	0.404	0.404	0.404	0.404			
Final Value		-73.051	-72.83	-73.069	-72.83	-72.378	-72.83	-73.72	-72.83	-43.94	-21.2	-22.74

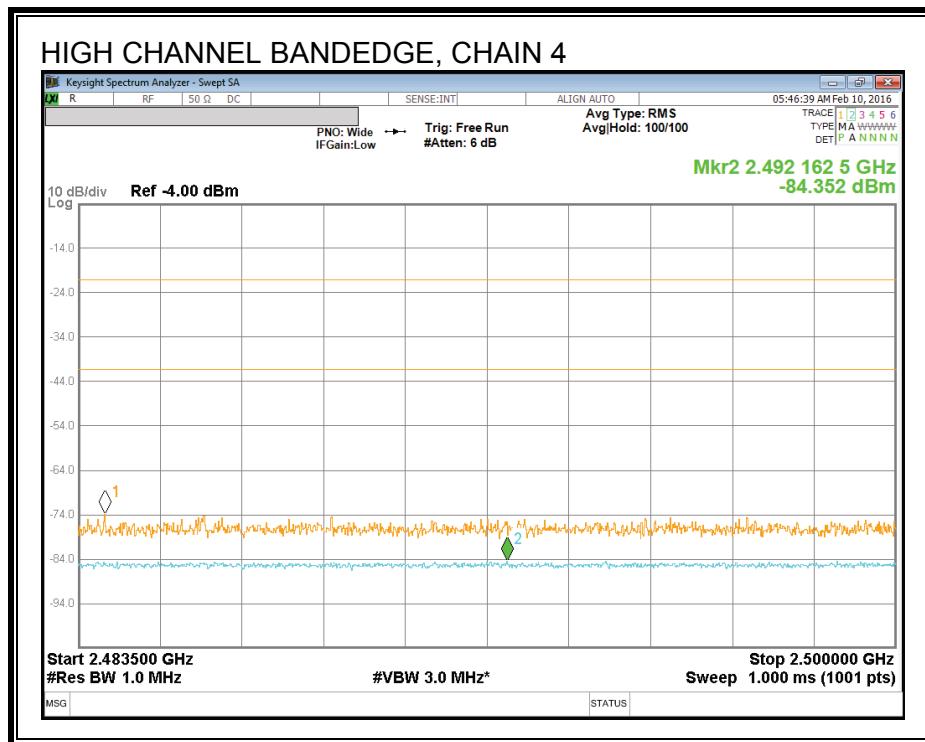
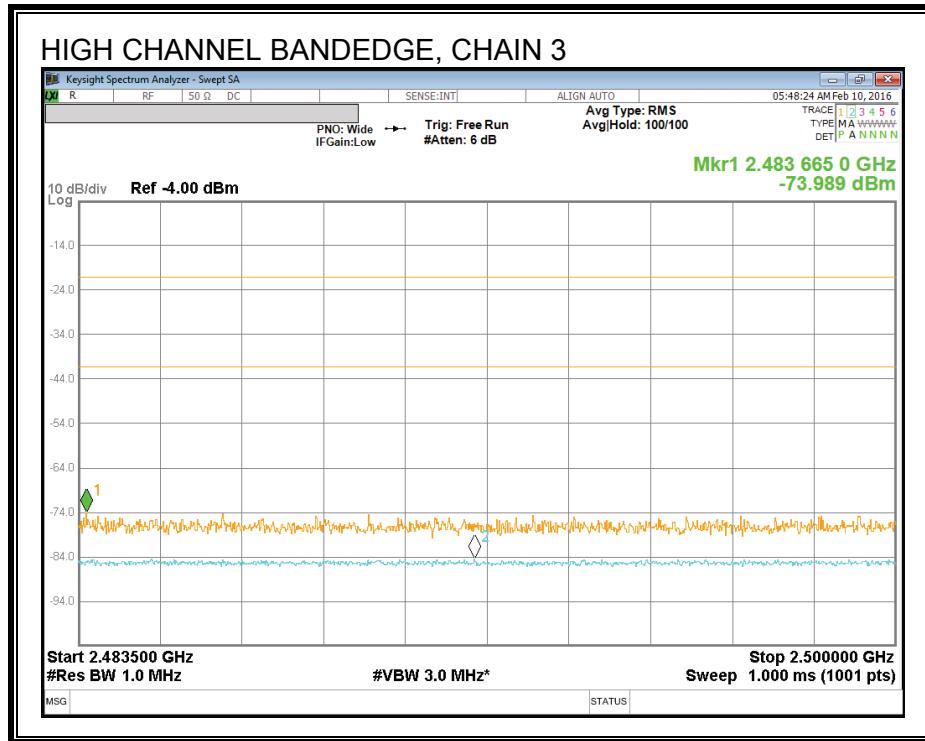
Frequency (MHz)		Meter AVG Reading Chain 1	Meter AVG Reading Chain 2	Meter AVG Reading Chain 3	Meter AVG Reading Chain 4	Meter AVG Reading Chain 5	Meter AVG Reading Chain 6	Meter AVG Reading Chain 7 (dBm)	Meter AVG Reading Chain 8 (dBm)	AVG EIRP (dBm)	AVG E-field Limit (dBm)	AVG E-field Margin (dB)
Enter SA Value here		-84	-84.385	-84	-84.352	-84	-84.355	-84	-84.533			
<b>2483.5-2500</b>	FILTER	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
	CBL1	0.416	0.416	0.416	0.416	0.416	0.416	0.416	0.416			
	CBL2	0.404	0.404	0.404	0.404	0.404	0.404	0.404	0.404			
	DCCF	0.68	0	0	0	0.67	0.67	0.68	0.68			
Final Value		-82.4	-83.465	-83.08	-83.432	-82.41	-82.765	-82.4	-82.933	-53.86	-41.2	-12.66

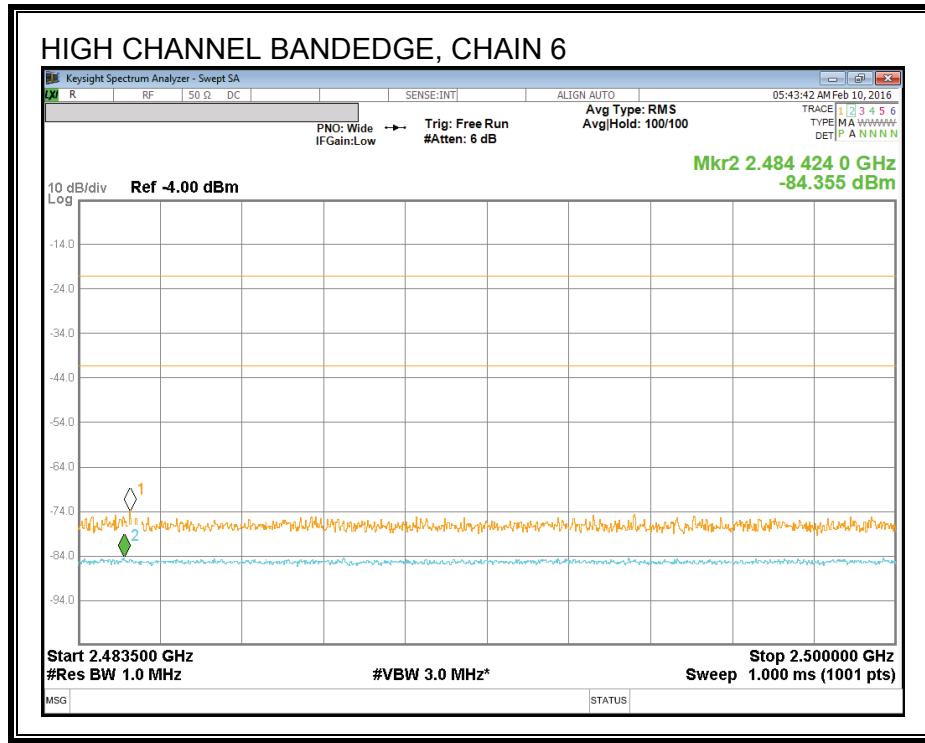
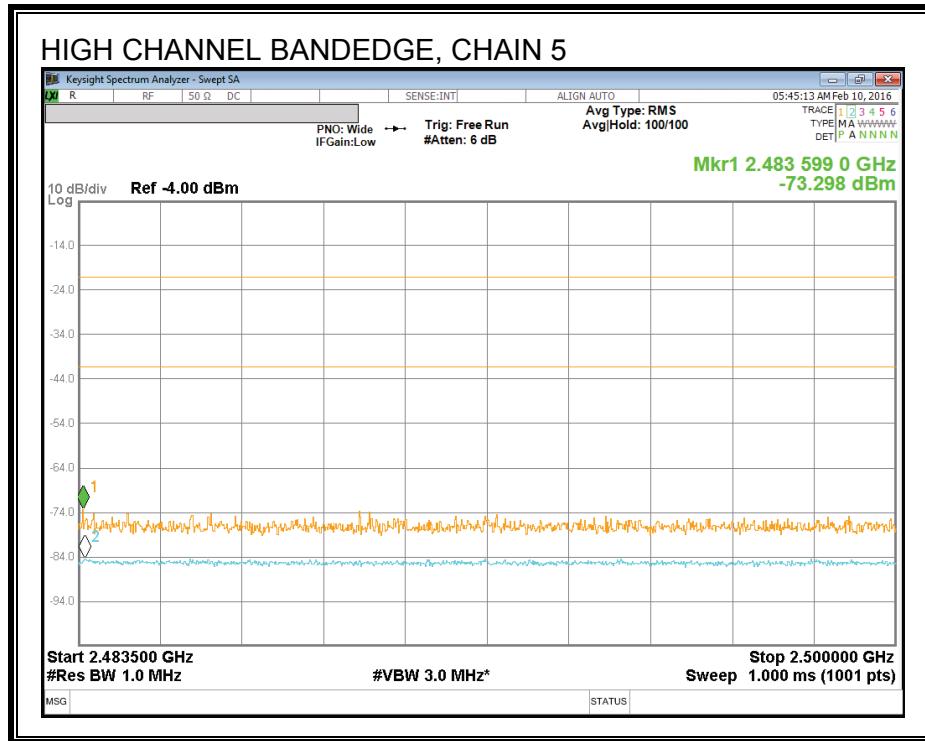
**RESTRICTED BANDEDGE (HIGH CHANNEL) PLOTS**

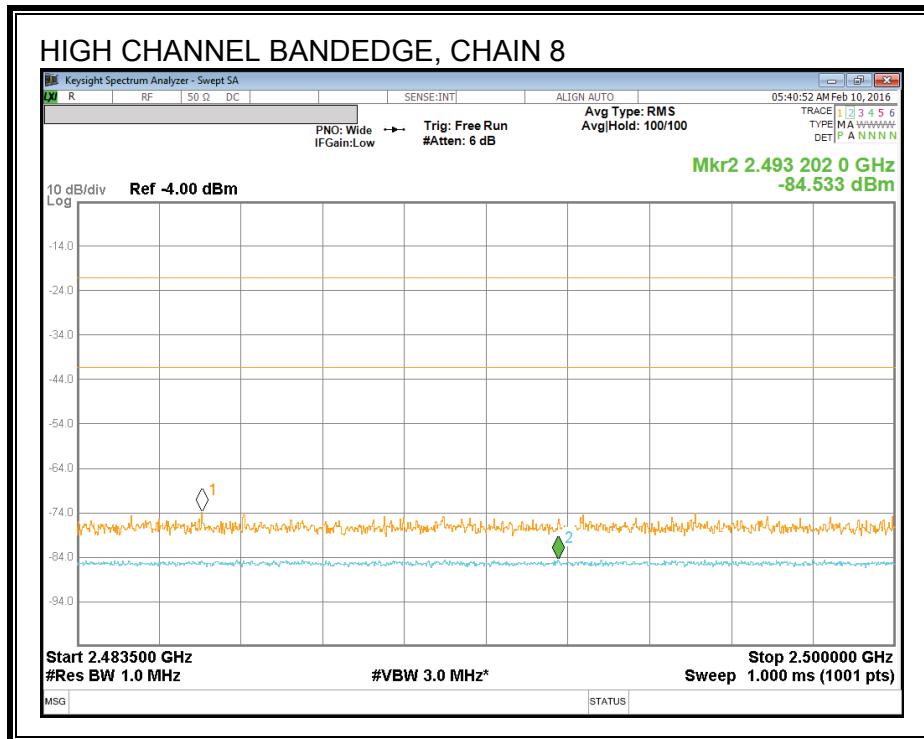
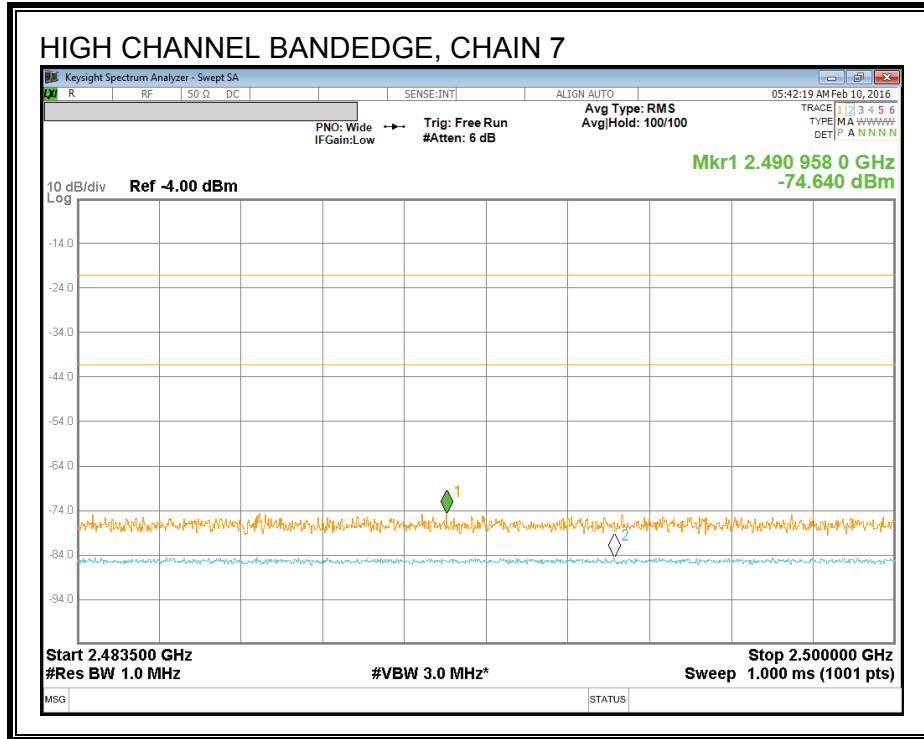


Note – Initially, all Bandedge plots were taken with the fundamental not included in the plot. The above bandedge measurement was taken with the fundamental included to show the fundamental was present.









**HARMONICS AND SPURIOUS EMISSIONS, LOW CHANNEL, TABULAR DATA**

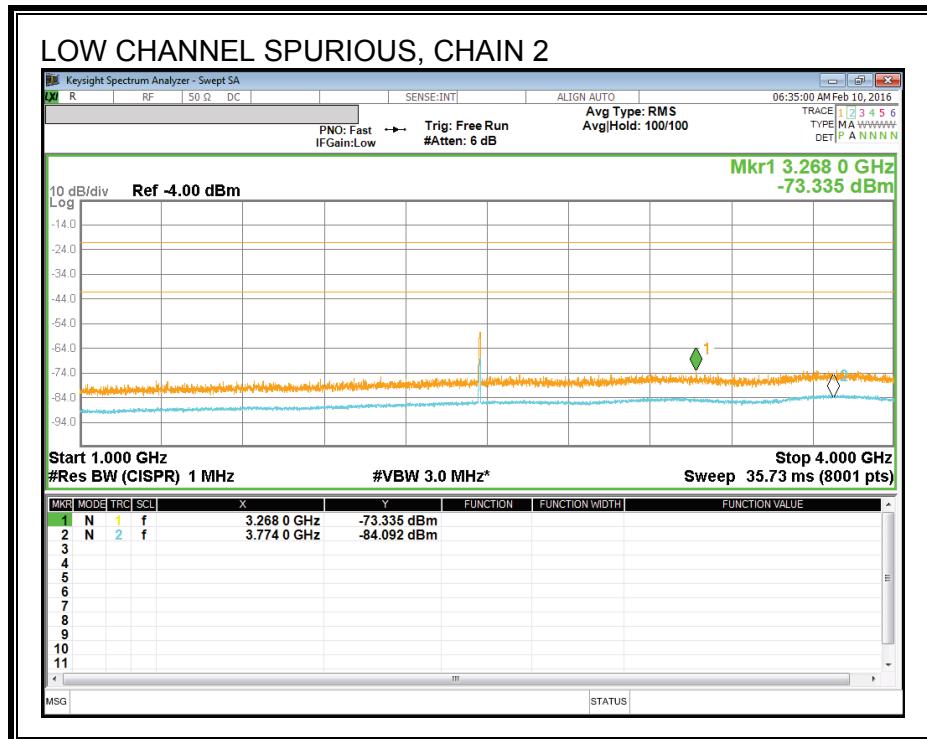
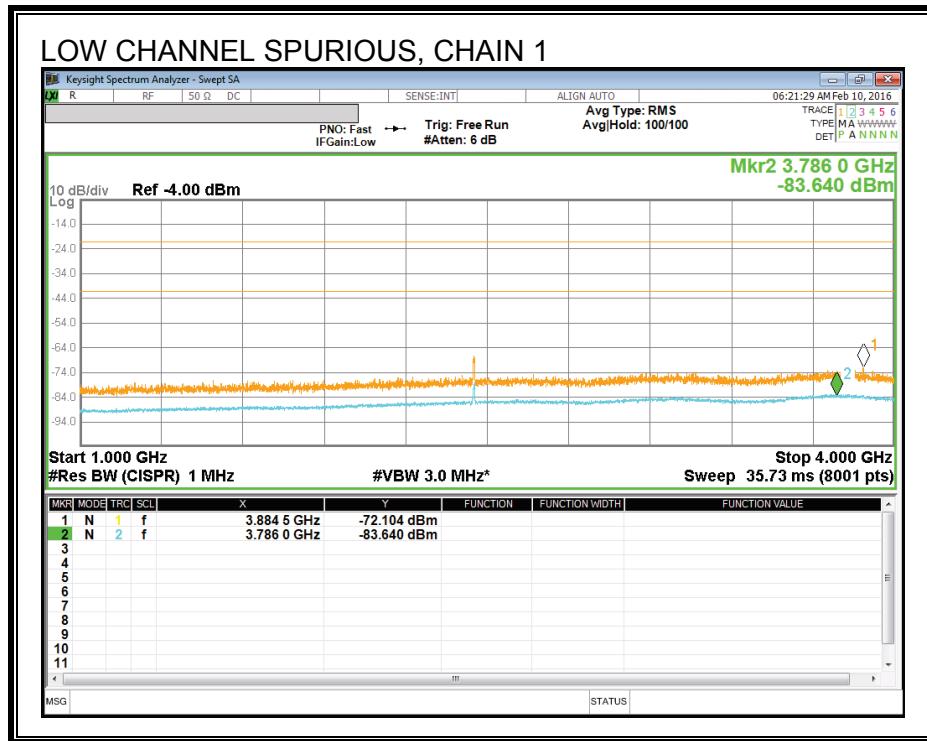
The following measurements include an antenna gain of:

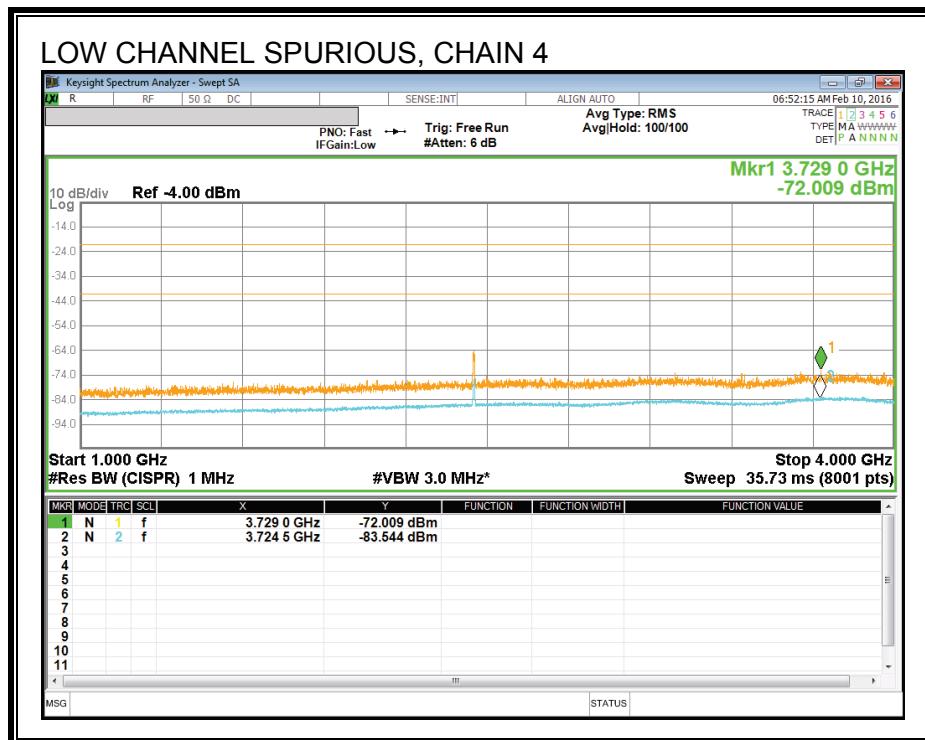
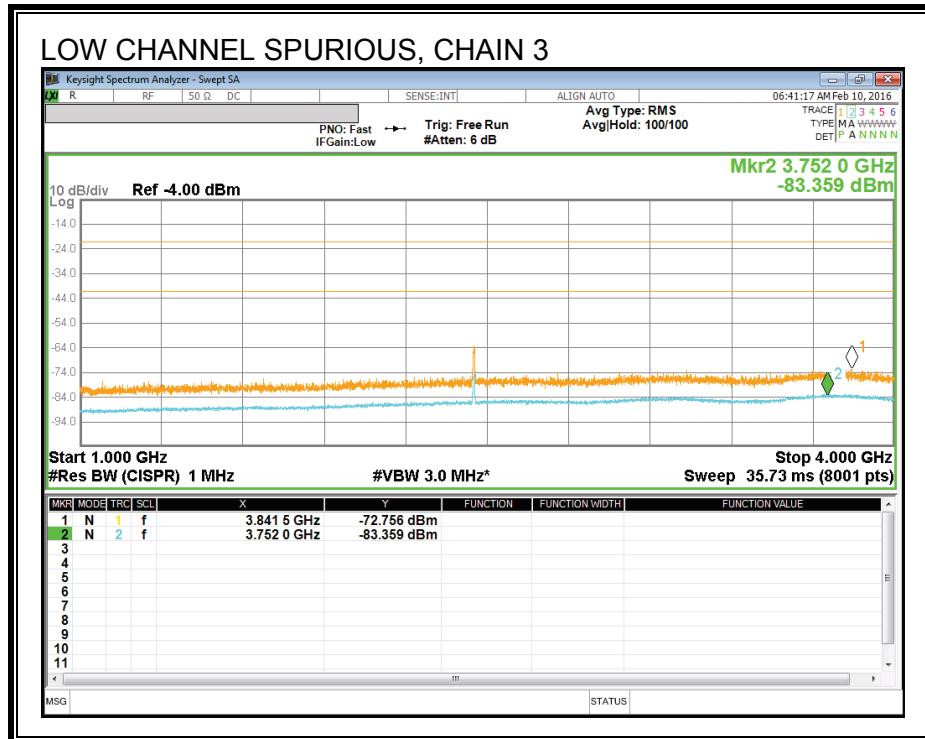
AG Chain 1 (dBi)	AG Chain 2 (dBi)	AG Chain 3 (dBi)	AG Chain 4 (dBi)	AG Chain 5 (dBi)	AG Chain 6 (dBi)	AG Chain 7 (dBi)	AG Chain 8 (dBi)
19.7	19.9	20	20.2	20.2	20.1	19.9	19.6

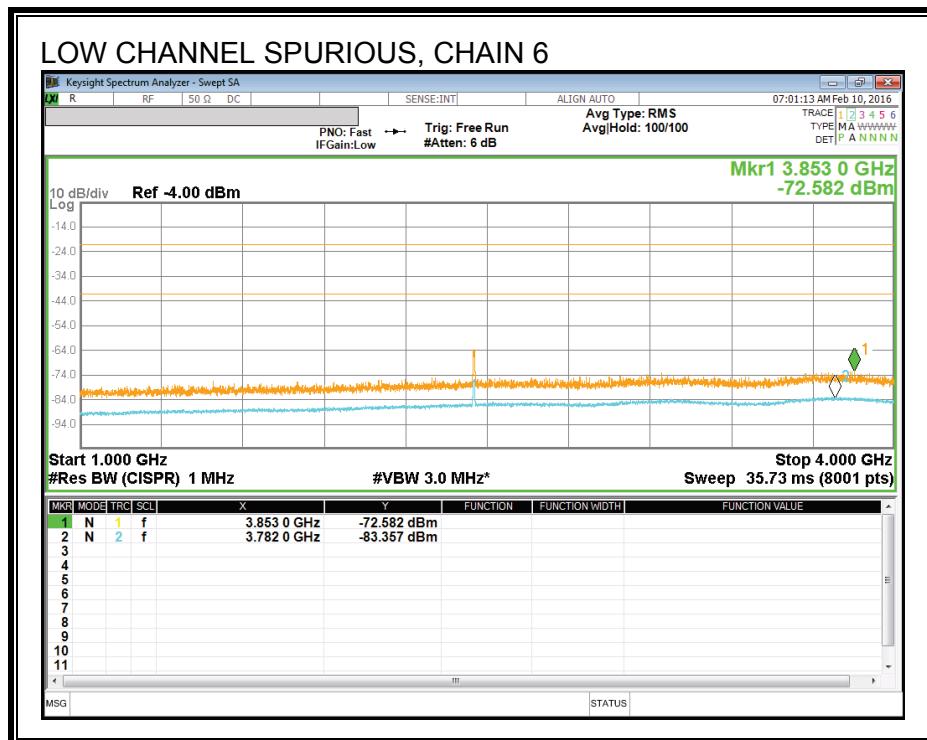
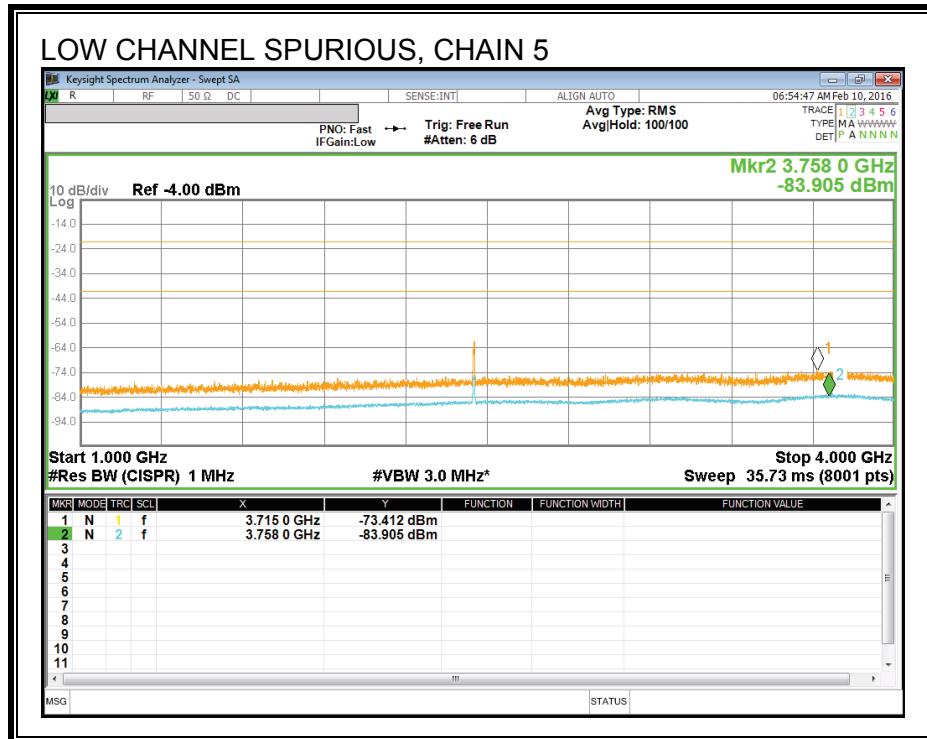
Frequency (MHz)		Meter PK Reading Chain 1 (dBm)	Meter PK Reading Chain 2 (dBm)	Meter PK Reading Chain 3 (dBm)	Meter PK Reading Chain 4 (dBm)	Meter PK Reading Chain 5 (dBm)	Meter PK Reading Chain 6 (dBm)	Meter PK Reading Chain 7 (dBm)	Meter PK Reading Chain 8 (dBm)	PK EIRP (dBm)	PK E-field Limit (dBm)	PK E-field Margin (dB)
Enter SA Value here		-72.104	-73.335	-72.756	-72.009	-73.412	-72.582	-73.45	-72.67			
1000-4000	FILTER	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
	CBL1	0.416	0.416	0.416	0.416	0.416	0.416	0.416	0.416			
	CBL2	0.404	0.404	0.404	0.404	0.404	0.404	0.404	0.404			
Final Value		-71.184	-72.415	-71.836	-71.089	-72.492	-71.662	-72.53	-71.75	-42.85	-21.2	-21.65

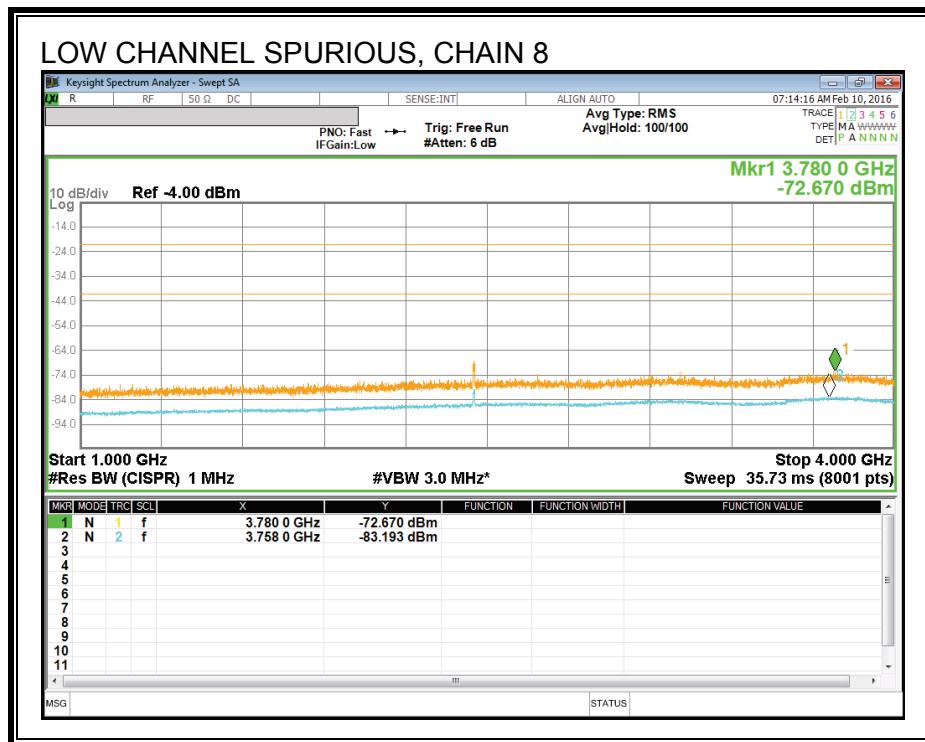
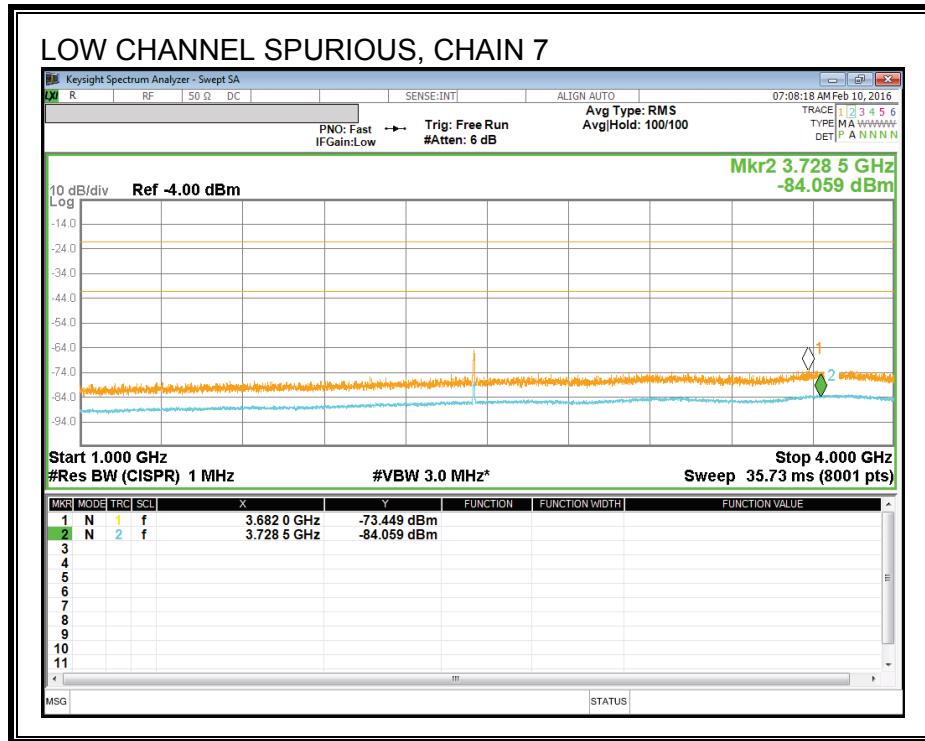
Frequency (MHz)		Meter AVG Reading Chain 1	Meter AVG Reading Chain 2	Meter AVG Reading Chain 3	Meter AVG Reading Chain 4	Meter AVG Reading Chain 5	Meter AVG Reading Chain 6	Meter AVG Reading Chain 7 (dBm)	Meter AVG Reading Chain 8 (dBm)	AVG EIRP (dBm)	AVG E-field Limit (dBm)	AVG E-field Margin (dB)
Enter SA Value here		-83.64	-84.092	-83.359	-83.544	-83.905	-83.357	-84.059	-83.193			
1000-4000	FILTER	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
	CBL1	0.416	0.416	0.416	0.416	0.416	0.416	0.416	0.416			
	CBL2	0.404	0.404	0.404	0.404	0.404	0.404	0.404	0.404			
	DCCF	0.68	0	0	0	0.67	0.67	0.68	0.68			
Final Value		-82.04	-83.172	-82.439	-82.624	-82.315	-81.767	-82.459	-81.593	-53.30	-41.2	-12.10

**HARMONICS AND SPURIOUS EMISSIONS, LOW CHANNEL**









**HARMONICS AND SPURIOUS EMISSIONS, MID CHANNEL, TABULAR DATA**

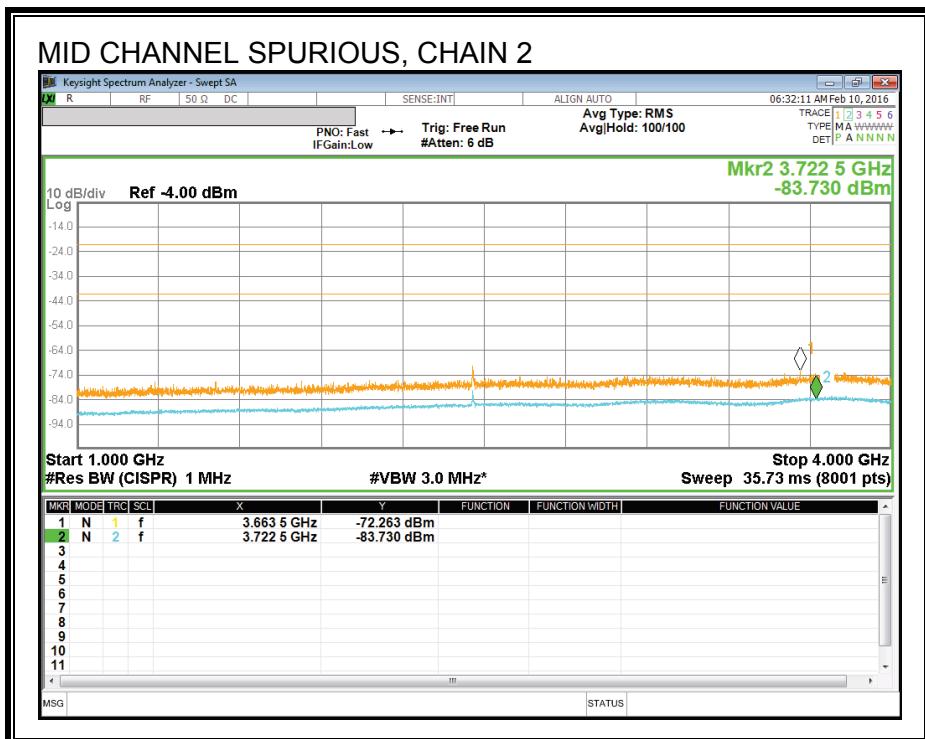
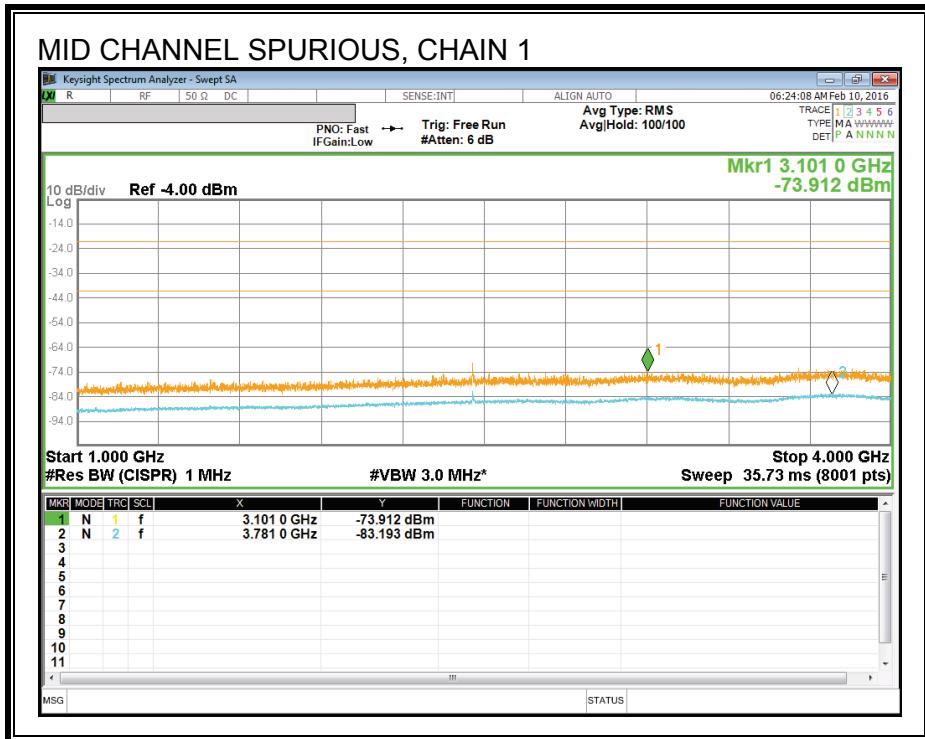
The following measurements include an antenna gain of:

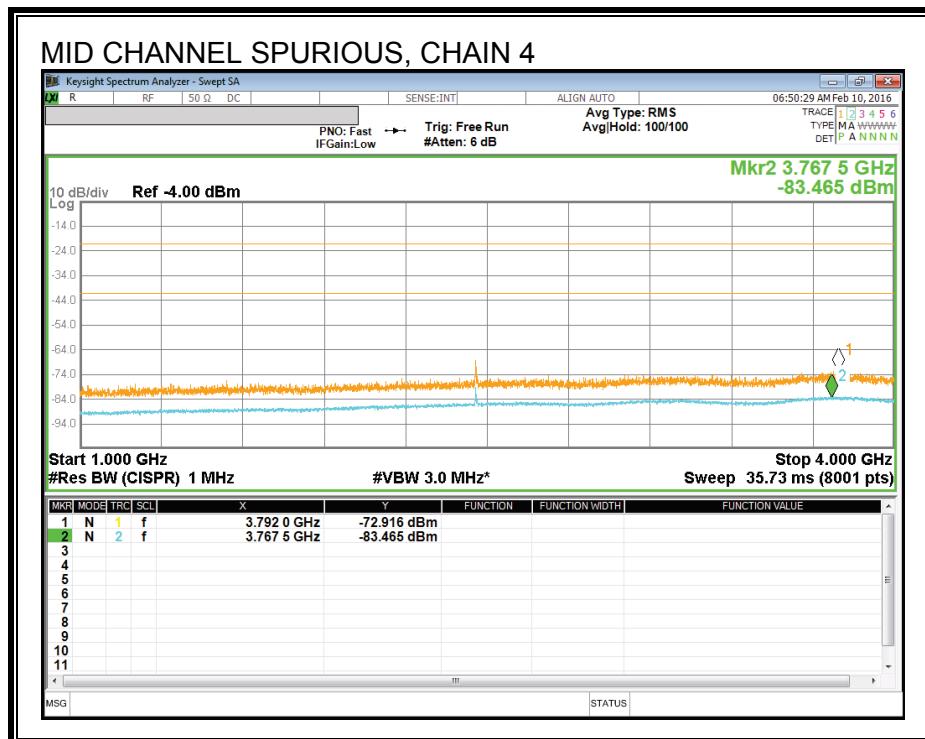
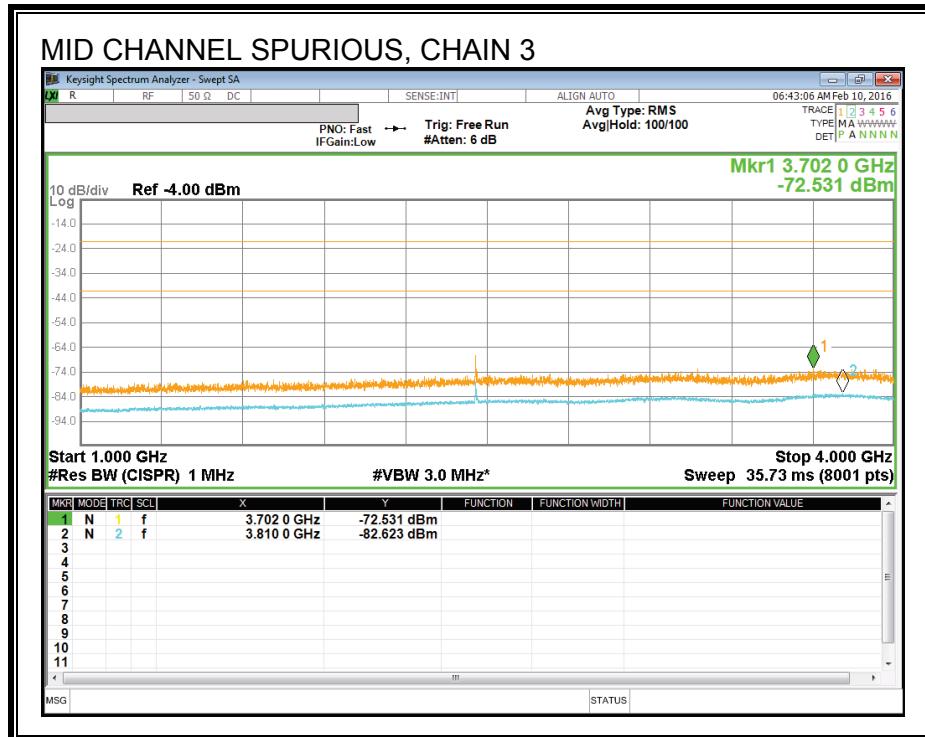
AG Chain 1 (dBi)	AG Chain 2 (dBi)	AG Chain 3 (dBi)	AG Chain 4 (dBi)	AG Chain 5 (dBi)	AG Chain 6 (dBi)	AG Chain 7 (dBi)	AG Chain 8 (dBi)
19.7	19.9	20	20.2	20.2	20.1	19.9	19.6

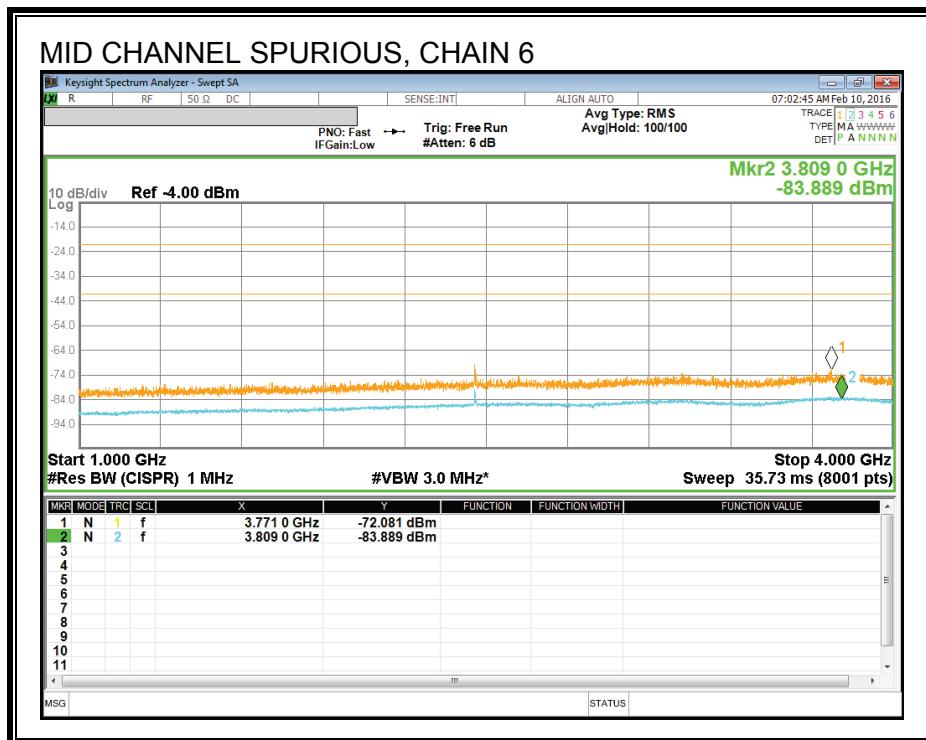
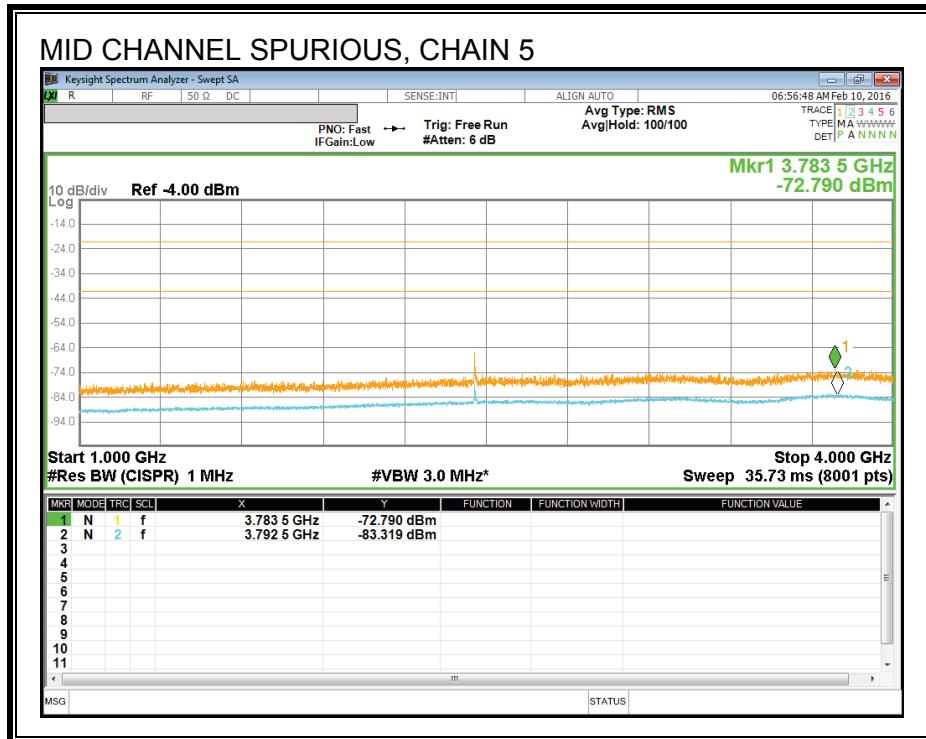
Frequency (MHz)		Meter PK Reading Chain 1 (dBm)	Meter PK Reading Chain 2 (dBm)	Meter PK Reading Chain 3 (dBm)	Meter PK Reading Chain 4 (dBm)	Meter PK Reading Chain 5 (dBm)	Meter PK Reading Chain 6 (dBm)	Meter PK Reading Chain 7 (dBm)	Meter PK Reading Chain 8 (dBm)	PK EIRP (dBm)	PK E-field Limit (dBm)	PK E-field Margin (dB)
Enter SA Value here		-73.912	-72.263	-72.531	-72.916	-72.79	-72.081	-73.117	-72.304			
1000-4000	FILTER	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
	CBL1	0.416	0.416	0.416	0.416	0.416	0.416	0.416	0.416			
	CBL2	0.404	0.404	0.404	0.404	0.404	0.404	0.404	0.404			
Final Value		-72.992	-71.343	-71.611	-71.996	-71.87	-71.161	-72.197	-71.384	-42.80	-21.2	-21.60

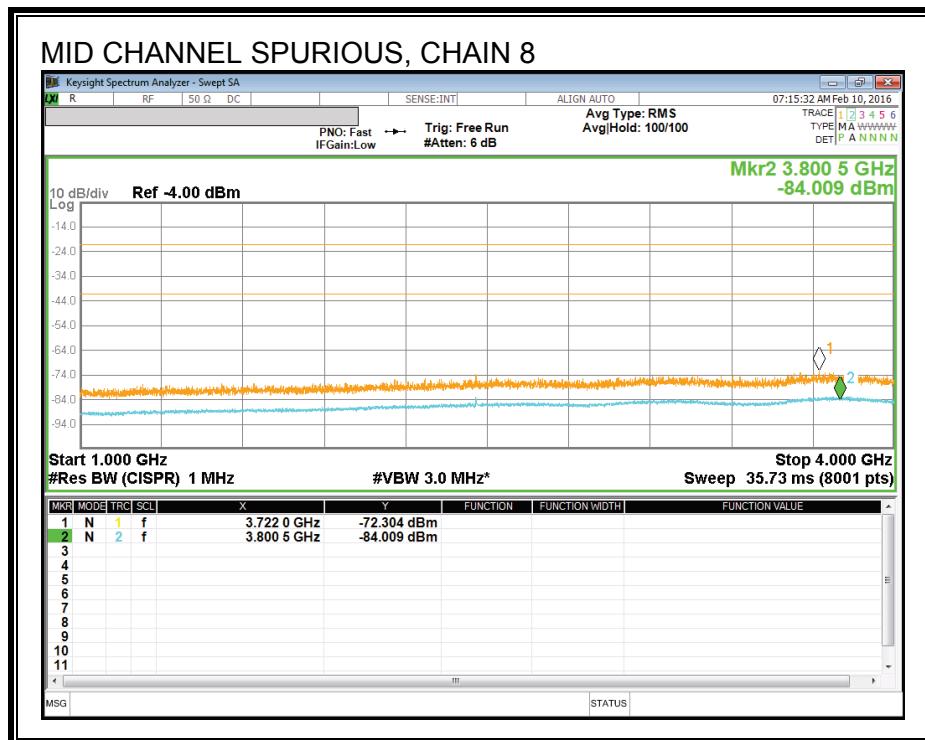
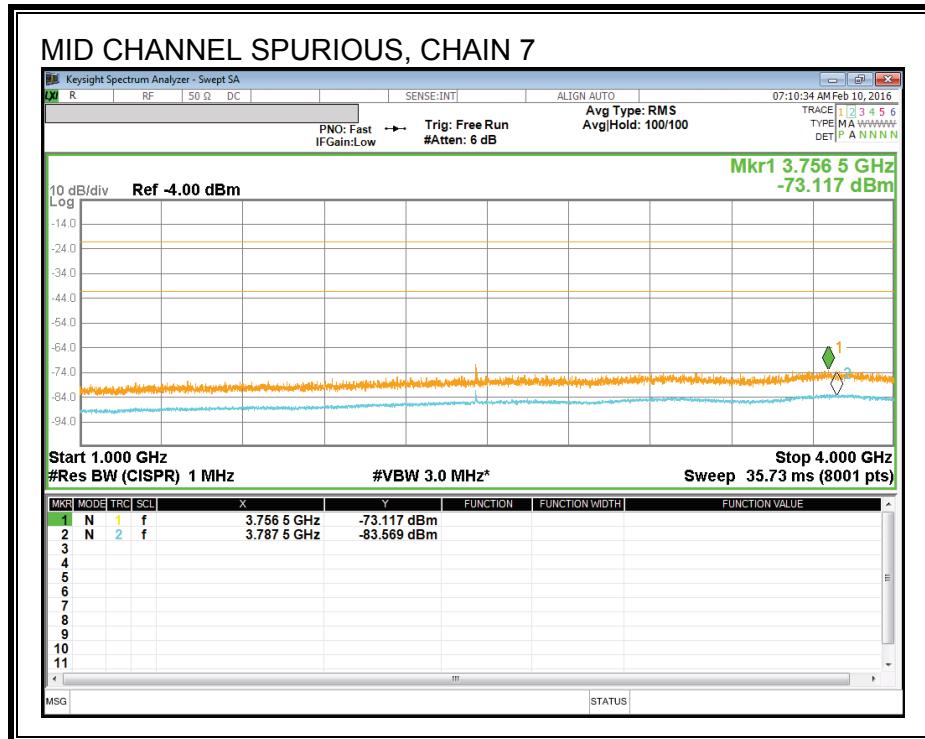
Frequency (MHz)		Meter AVG Reading Chain 1	Meter AVG Reading Chain 2	Meter AVG Reading Chain 3	Meter AVG Reading Chain 4	Meter AVG Reading Chain 5	Meter AVG Reading Chain 6	Meter AVG Reading Chain 7 (dBm)	Meter AVG Reading Chain 8 (dBm)	Avg EIRP (dBm)	Avg E-field Limit (dBm)	Avg E-field Margin (dB)
Enter SA Value here		-83.193	-83.73	-82.623	-83.465	-83.319	-83.889	-83.569	-84.009			
1000-4000	FILTER	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
	CBL1	0.416	0.416	0.416	0.416	0.416	0.416	0.416	0.416			
	CBL2	0.404	0.404	0.404	0.404	0.404	0.404	0.404	0.404			
	DCCF	0.68	0	0	0	0.67	0.67	0.68	0.68			
Final Value		-81.593	-82.81	-81.703	-82.545	-81.729	-82.299	-81.969	-82.409	-53.13	-41.2	-11.93

**HARMONICS AND SPURIOUS EMISSIONS, MID CHANNEL**









**HARMONICS AND SPURIOUS EMISSIONS, HIGH CHANNEL, TABULAR DATA**

The following measurements include an antenna gain of:

AG Chain 1 (dBi)	AG Chain 2 (dBi)	AG Chain 3 (dBi)	AG Chain 4 (dBi)	AG Chain 5 (dBi)	AG Chain 6 (dBi)	AG Chain 7 (dBi)	AG Chain 8 (dBi)
19.7	19.9	20	20.2	20.2	20.1	19.9	19.6

Frequency (MHz)		Meter PK Reading Chain 1 (dBm)	Meter PK Reading Chain 2 (dBm)	Meter PK Reading Chain 3 (dBm)	Meter PK Reading Chain 4 (dBm)	Meter PK Reading Chain 5 (dBm)	Meter PK Reading Chain 6 (dBm)	Meter PK Reading Chain 7 (dBm)	Meter PK Reading Chain 8 (dBm)	PK EIRP (dBm)	PK E-field Limit (dBm)	PK E-field Margin (dB)
Enter SA Value here		-72.784	-73.117	-73.617	-73.437	-73.027	-72.761	-72.48	-72.757			
<b>1000-4000</b>	FILTER	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
	CBL1	0.416	0.416	0.416	0.416	0.416	0.416	0.416	0.416			
	CBL2	0.404	0.404	0.404	0.404	0.404	0.404	0.404	0.404			
Final Value		-71.864	-72.197	-72.697	-72.517	-72.107	-71.841	-71.56	-71.837	-43.08	-21.2	-21.88

Frequency (MHz)		Meter AVG Reading Chain 1	Meter AVG Reading Chain 2	Meter AVG Reading Chain 3	Meter AVG Reading Chain 4	Meter AVG Reading Chain 5	Meter AVG Reading Chain 6	Meter AVG Reading Chain 7 (dBm)	Meter AVG Reading Chain 8	AVG EIRP (dBm)	AVG E-field Limit (dBm)	AVG E-field Margin (dB)
Enter SA Value here		-83.129	-83.516	-83.976	-83.55	-83.528	-83.589	-82.723	-83.496			
<b>1000-4000</b>	FILTER	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
	CBL1	0.416	0.416	0.416	0.416	0.416	0.416	0.416	0.416			
	CBL2	0.404	0.404	0.404	0.404	0.404	0.404	0.404	0.404			
	DCCF	0.68	0	0	0	0.67	0.67	0.68	0.68			
Final Value		-81.529	-82.596	-83.056	-82.63	-81.938	-81.999	-81.123	-81.896	-53.08	-41.2	-11.88

**HARMONICS AND SPURIOUS EMISSIONS, HIGH CHANNEL**

