

Appendix for WCDMA

## CONTENTS

Appendix A: Effective (Isotropic) Radiated Power Output Data .....	3
Test Result .....	3
Appendix B: Peak-to-Average Ratio .....	8
Test Result .....	8
Test Graphs .....	9
Appendix C: 26dB Bandwidth and Occupied Bandwidth .....	14
Test Result .....	14
Test Graphs .....	15
Appendix D: Band Edge .....	20
Test Result .....	20
Test Graphs .....	21
Appendix E: Conducted Spurious Emission .....	24
Test Result .....	24
Test Graphs .....	27
Appendix F: Frequency Stability .....	54
Test Result .....	54

## Appendix A: Effective (Isotropic) Radiated Power Output Data

### Test Result

Band	Channel	Power(dBm)	Limit(dBm)	Verdict
Band2	9262	22.64	33	PASS
Band2	9400	22.32	33	PASS
Band2	9538	22.41	33	PASS
Band4	1312	22.90	30	PASS
Band4	1413	22.95	30	PASS
Band4	1513	22.75	30	PASS
Band5	4132	24.63	38.5	PASS
Band5	4182	24.39	38.5	PASS
Band5	4233	24.27	38.5	PASS

Band	Channel	SubTest	Power(dBm)	Limit(dBm)	Verdict
Band2	9262	1	22.98	33	PASS
Band2	9262	2	21.29	33	PASS
Band2	9262	3	21.29	33	PASS
Band2	9262	4	19.15	33	PASS
Band2	9400	1	21.74	33	PASS
Band2	9400	2	20.05	33	PASS
Band2	9400	3	19.74	33	PASS
Band2	9400	4	17.85	33	PASS

Band2	9538	1	22.46	33	PASS
Band2	9538	2	20.40	33	PASS
Band2	9538	3	20.77	33	PASS
Band2	9538	4	18.06	33	PASS
Band4	1312	1	20.19	30	PASS
Band4	1312	2	20.22	30	PASS
Band4	1312	3	17.59	30	PASS
Band4	1312	4	17.98	30	PASS
Band4	1413	1	19.19	30	PASS
Band4	1413	2	19.24	30	PASS
Band4	1413	3	16.71	30	PASS
Band4	1413	4	16.48	30	PASS
Band4	1513	1	19.76	30	PASS
Band4	1513	2	19.80	30	PASS
Band4	1513	3	17.24	30	PASS
Band4	1513	4	17.58	30	PASS
Band5	4132	1	23.22	38.5	PASS
Band5	4132	2	22.79	38.5	PASS
Band5	4132	3	22.66	38.5	PASS
Band5	4132	4	22.64	38.5	PASS
Band5	4182	1	23.26	38.5	PASS
Band5	4182	2	22.79	38.5	PASS

Band5	4182	3	22.72	38.5	PASS
Band5	4182	4	22.67	38.5	PASS
Band5	4233	1	23.20	38.5	PASS
Band5	4233	2	22.67	38.5	PASS
Band5	4233	3	22.65	38.5	PASS
Band5	4233	4	22.62	38.5	PASS

Band	Channel	SubTest	Power(dBm)	Limit(dBm)	Verdict
Band2	9262	1	22.12	33	PASS
Band2	9262	2	22.07	33	PASS
Band2	9262	3	22.03	33	PASS
Band2	9262	4	21.98	33	PASS
Band2	9262	5	22.64	33	PASS
Band2	9400	1	20.94	33	PASS
Band2	9400	2	20.90	33	PASS
Band2	9400	3	20.81	33	PASS
Band2	9400	4	20.75	33	PASS
Band2	9400	5	21.41	33	PASS
Band2	9538	1	21.55	33	PASS
Band2	9538	2	21.48	33	PASS
Band2	9538	3	21.43	33	PASS
Band2	9538	4	21.45	33	PASS

Band2	9538	5	22.03	33	PASS
Band4	1312	1	20.67	30	PASS
Band4	1312	2	21.16	30	PASS
Band4	1312	3	21.06	30	PASS
Band4	1312	4	21.08	30	PASS
Band4	1312	5	21.25	30	PASS
Band4	1413	1	20.04	30	PASS
Band4	1413	2	20.44	30	PASS
Band4	1413	3	20.36	30	PASS
Band4	1413	4	20.45	30	PASS
Band4	1413	5	20.43	30	PASS
Band4	1513	1	20.28	30	PASS
Band4	1513	2	20.79	30	PASS
Band4	1513	3	20.72	30	PASS
Band4	1513	4	20.77	30	PASS
Band4	1513	5	20.82	30	PASS
Band5	4132	1	21.29	38.5	PASS
Band5	4132	2	21.80	38.5	PASS
Band5	4132	3	21.77	38.5	PASS
Band5	4132	4	21.29	38.5	PASS
Band5	4132	5	23.28	38.5	PASS
Band5	4182	1	21.32	38.5	PASS



Band5	4182	2	21.80	38.5	PASS
Band5	4182	3	21.80	38.5	PASS
Band5	4182	4	21.37	38.5	PASS
Band5	4182	5	23.35	38.5	PASS
Band5	4233	1	21.27	38.5	PASS
Band5	4233	2	21.78	38.5	PASS
Band5	4233	3	21.83	38.5	PASS
Band5	4233	4	21.34	38.5	PASS
Band5	4233	5	23.31	38.5	PASS

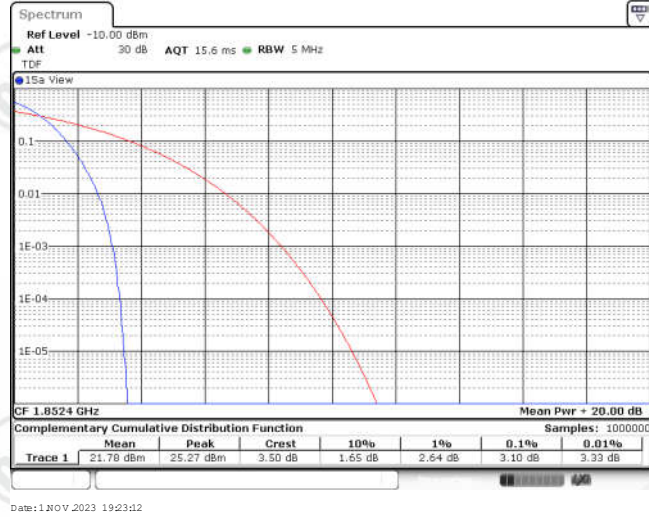
**Appendix B: Peak-to-Average Ratio****Test Result**

Band	Channel	Peak-to-Average Ratio(dB)	Limit(dBm)	Verdict
Band2	9262	3.1	13	PASS
Band2	9400	3.1	13	PASS
Band2	9538	3.16	13	PASS
Band4	1312	3.07	13	PASS
Band4	1413	3.13	13	PASS
Band4	1513	3.07	13	PASS
Band5	4132	2.96	13	PASS
Band5	4182	3.01	13	PASS
Band5	4233	3.01	13	PASS

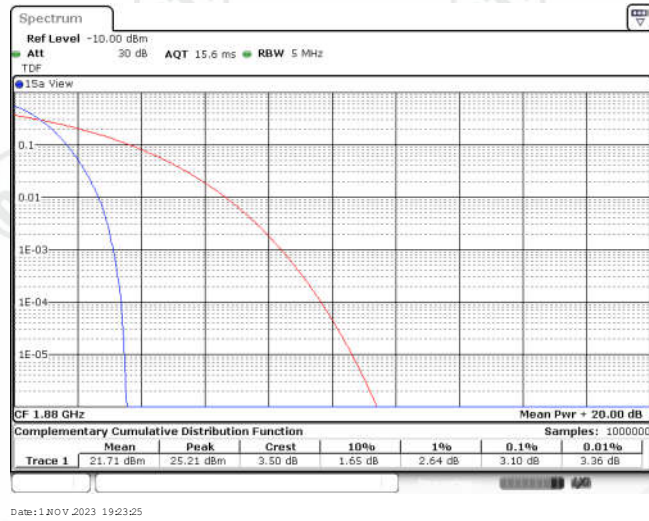


## Test Graphs

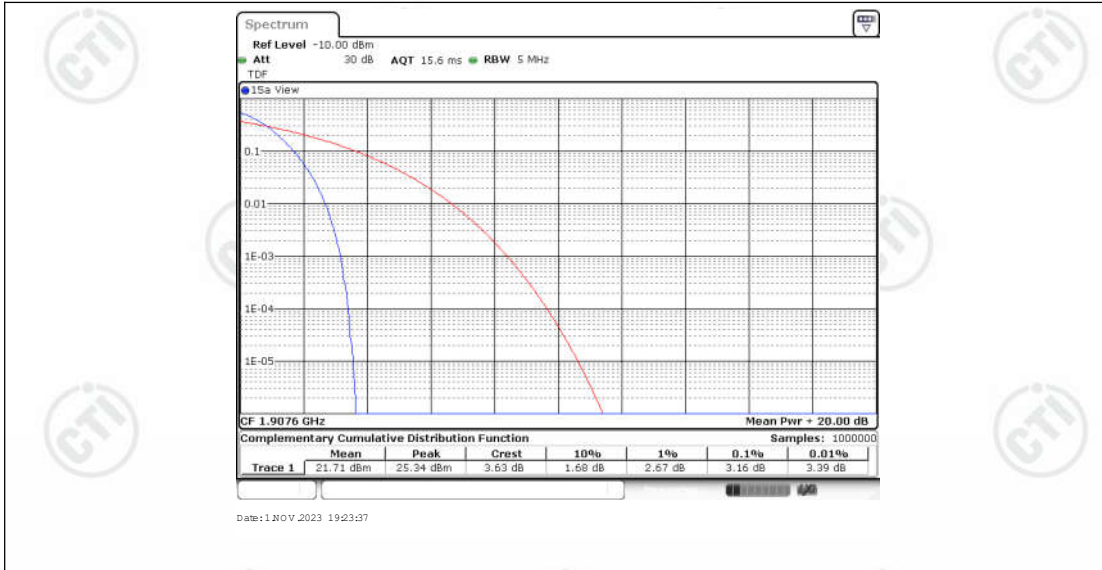
Band2-9262



Band2-9400



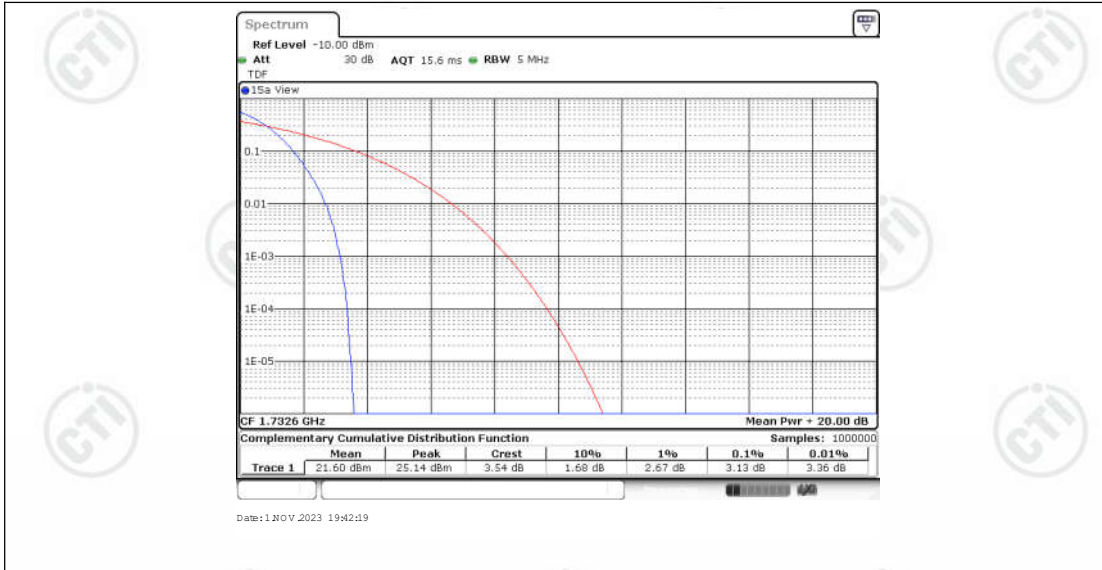
Band2-9538



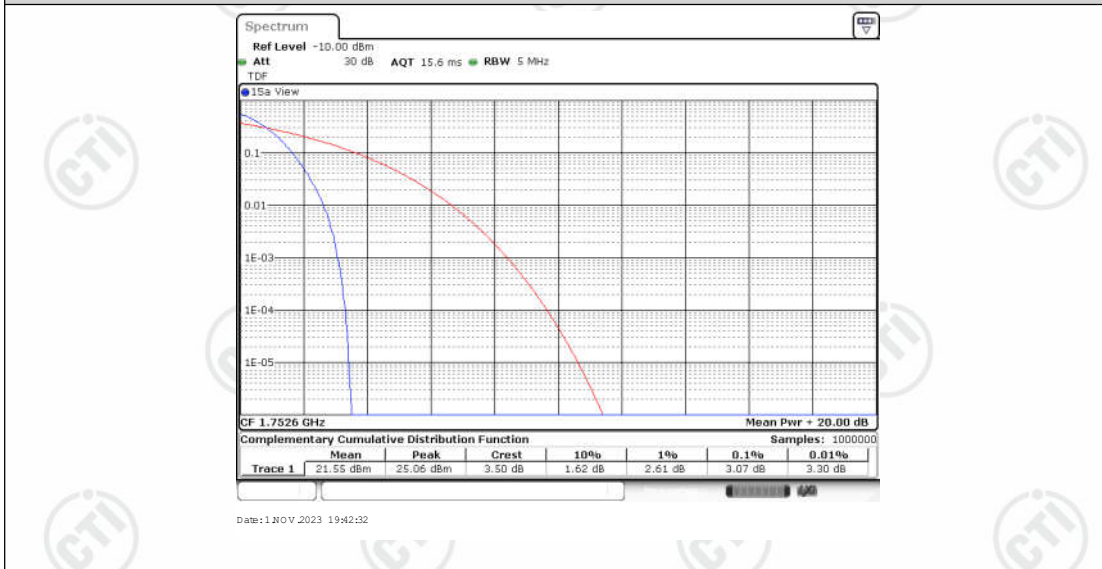
Band4-1312



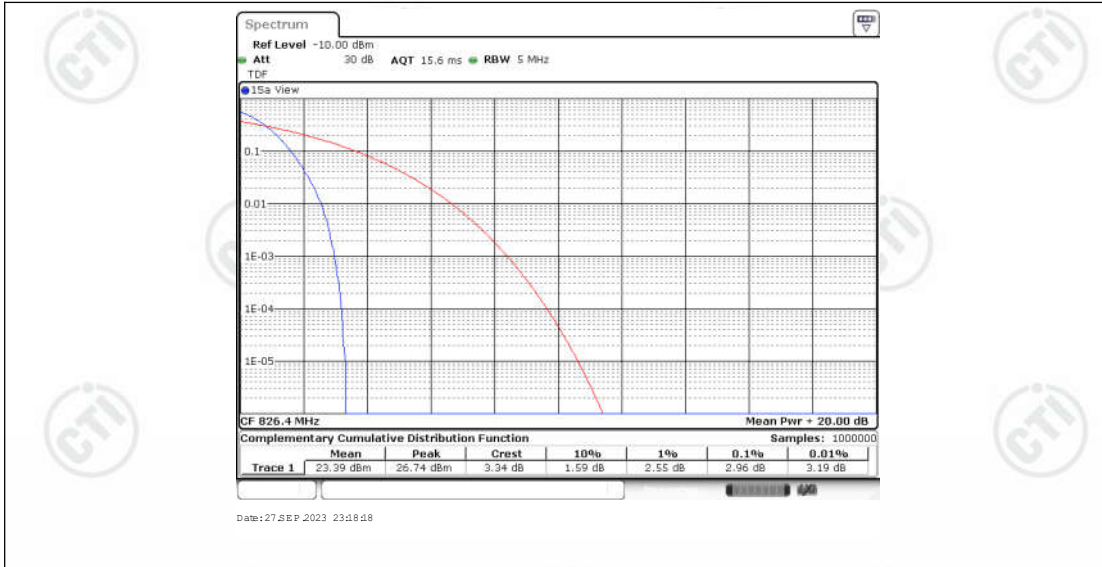
Band4-1413



Band4-1513



Band5-4132

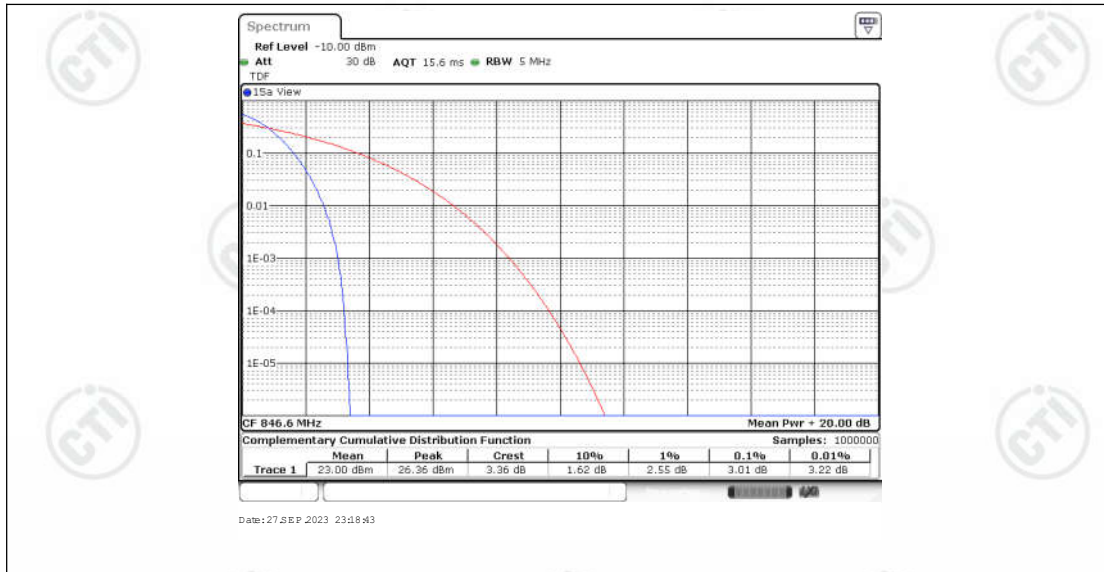


Band5-4182



Band5-4233



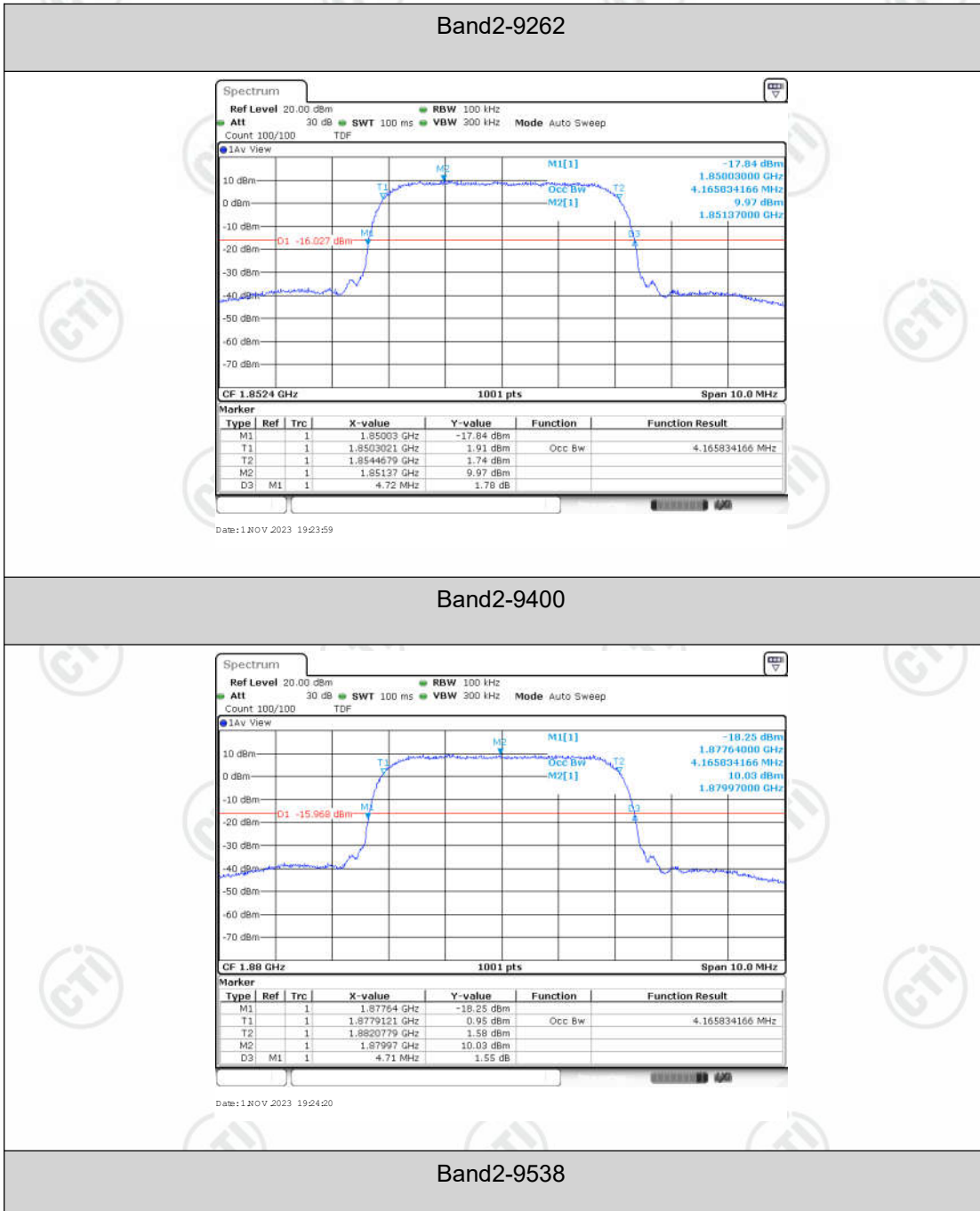


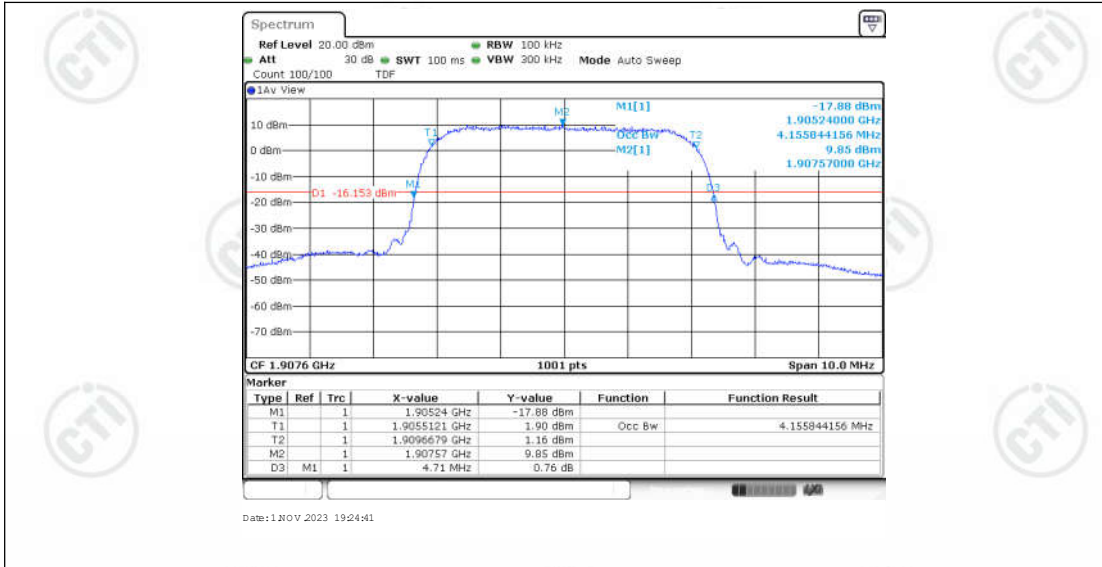
**Appendix C: 26dB Bandwidth and Occupied Bandwidth****Test Result**

Band	Channel	Occupied Bandwidth (kHz)	26dB Bandwidth (kHz)	Limit(kHz)	Verdict
Band2	9262	4.166	4.720	---	PASS
Band2	9400	4.166	4.710	---	PASS
Band2	9538	4.156	4.710	---	PASS
Band4	1312	4.176	4.710	---	PASS
Band4	1413	4.166	4.700	---	PASS
Band4	1513	4.166	4.710	---	PASS
Band5	4132	4.176	4.710	---	PASS
Band5	4182	4.166	4.710	---	PASS
Band5	4233	4.166	4.710	---	PASS

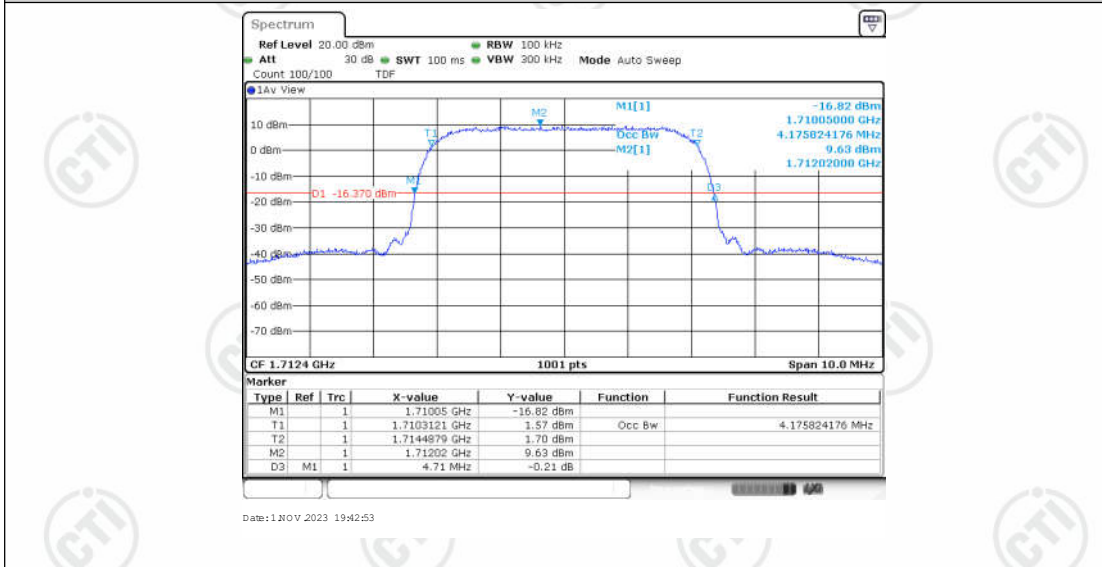


## Test Graphs

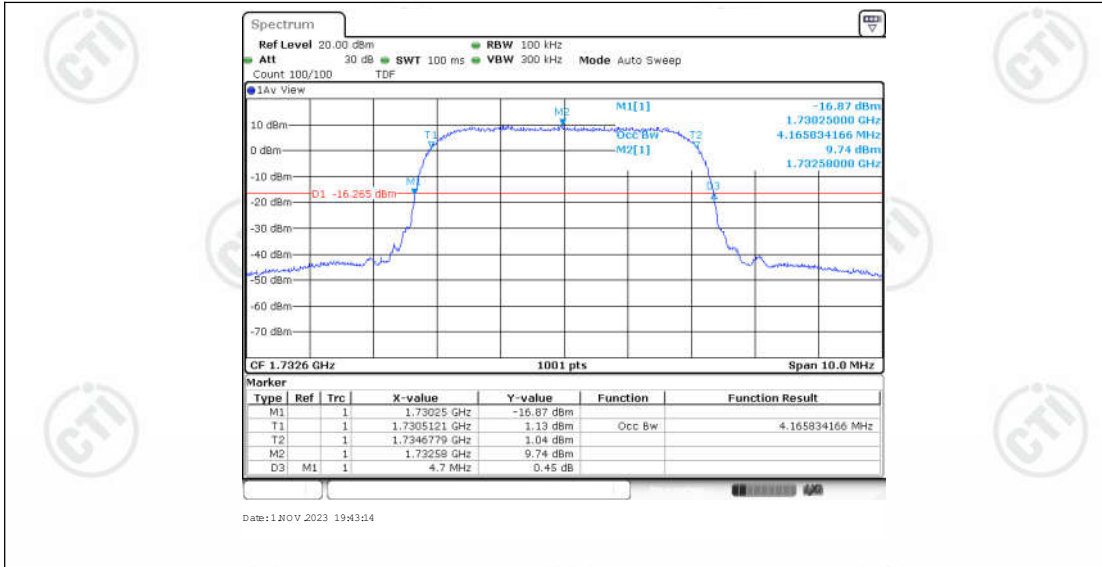




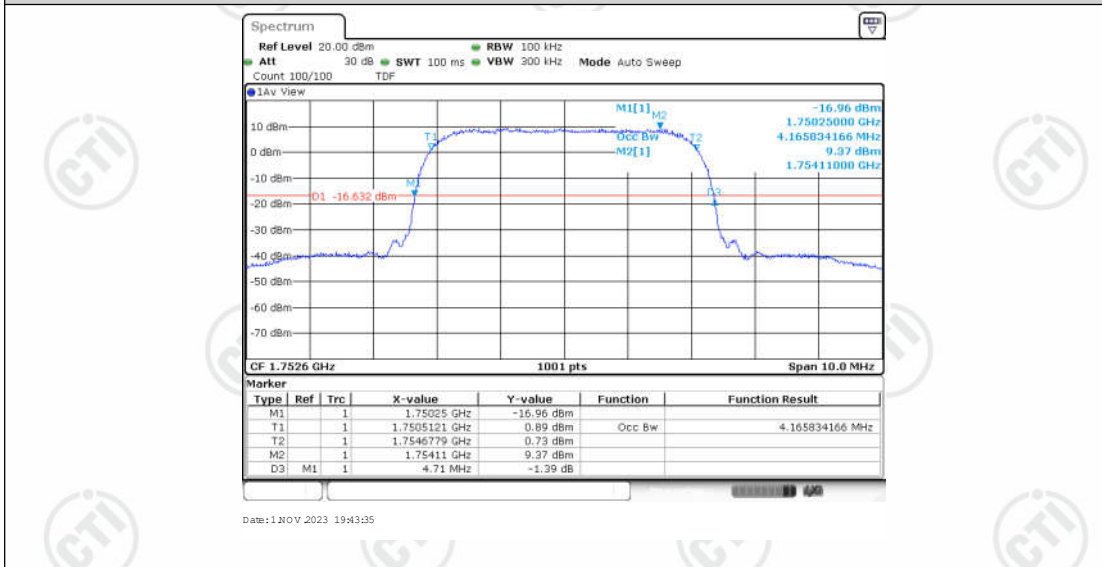
## Band4-1312



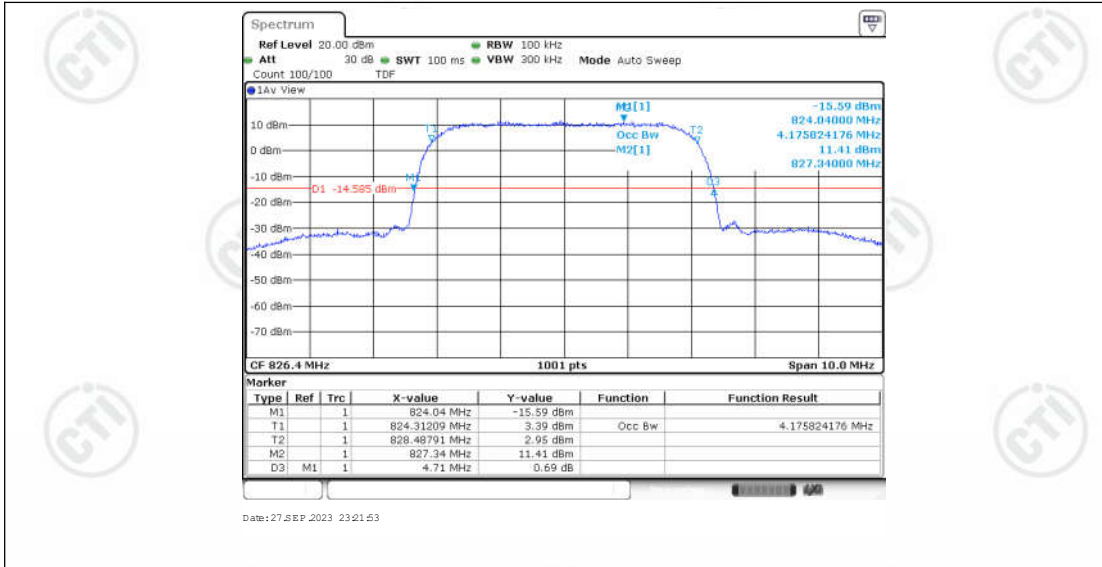
## Band4-1413



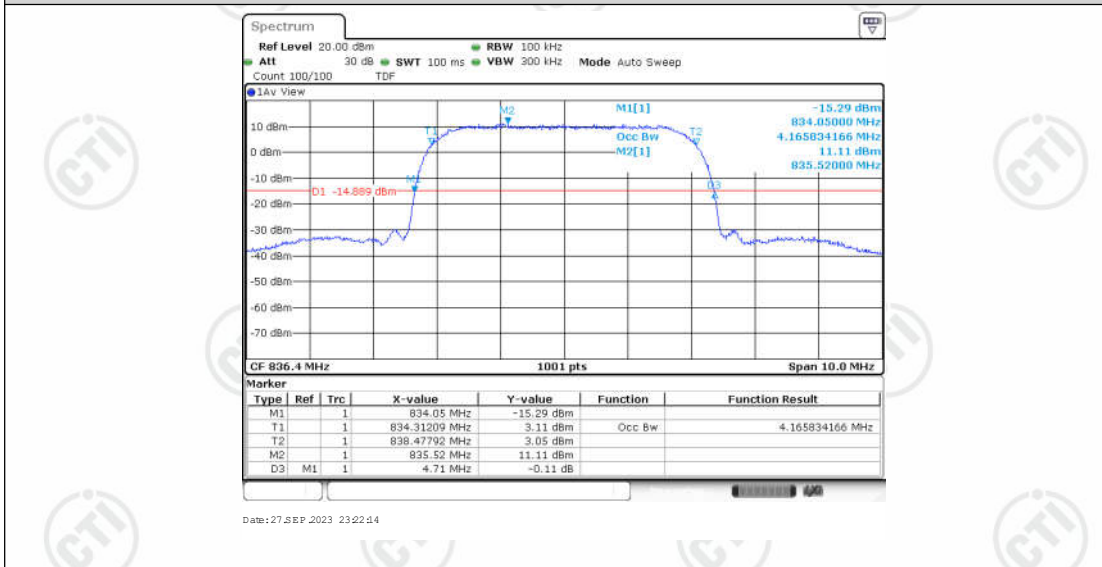
### Band4-1513



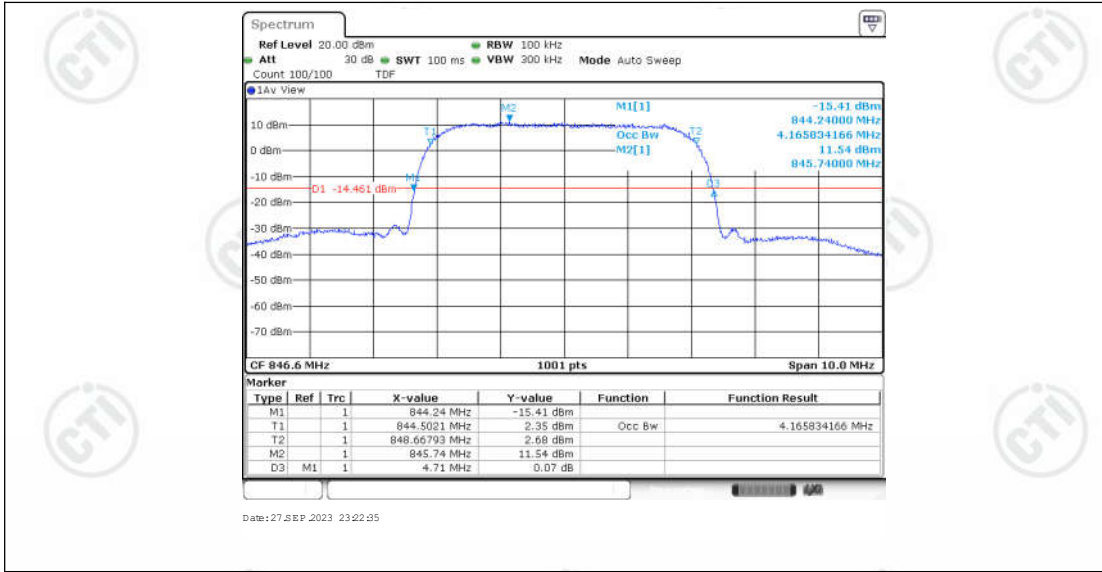
### Band5-4132



## Band5-4182



## Band5-4233





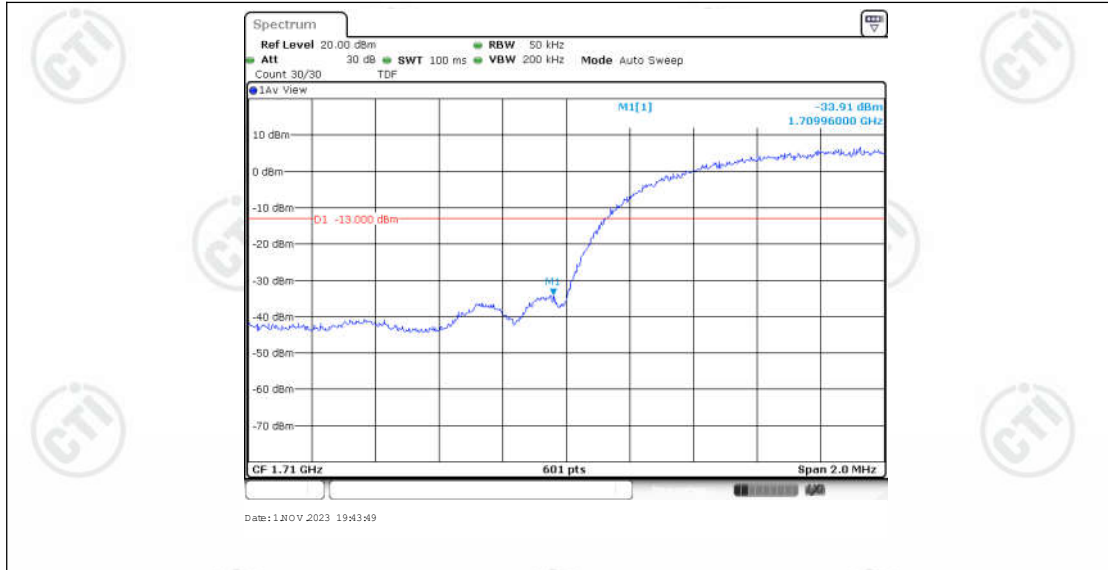
**Appendix D: Band Edge****Test Result**

Band	Channel	Frequency (MHz)	Result (dBm)	Limit(dBm)	Verdict
Band2	9262	1849.94	-32.92	-13	PASS
Band2	9538	1910.09	-34.79	-13	PASS
Band4	1312	1709.96	-33.91	-13	PASS
Band4	1513	1755.00	-33.42	-13	PASS
Band5	4132	824.00	-30.46	-13	PASS
Band5	4233	849.00	-31.69	-13	PASS

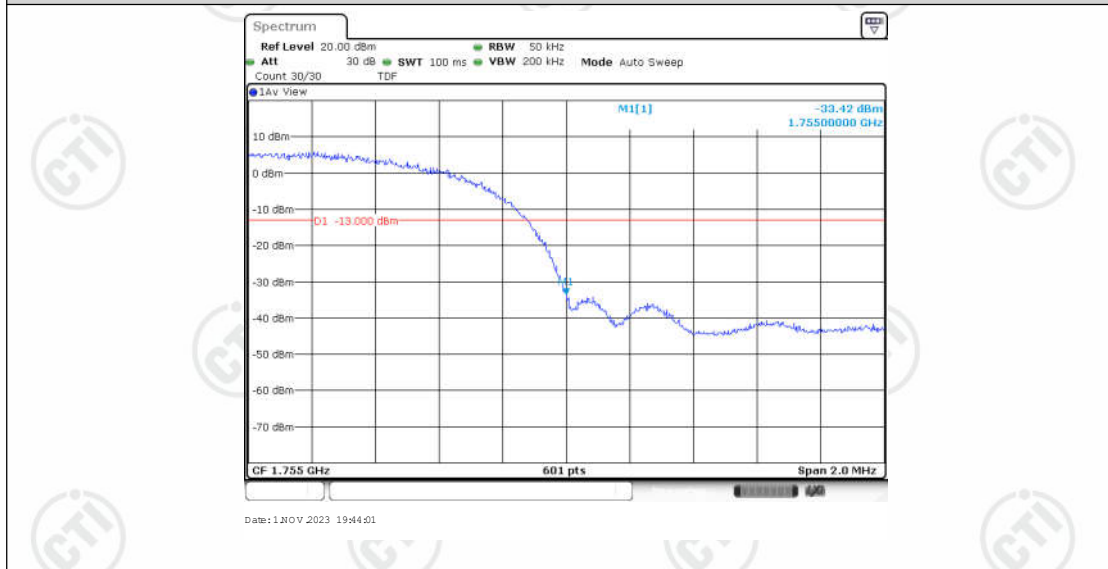


## Test Graphs

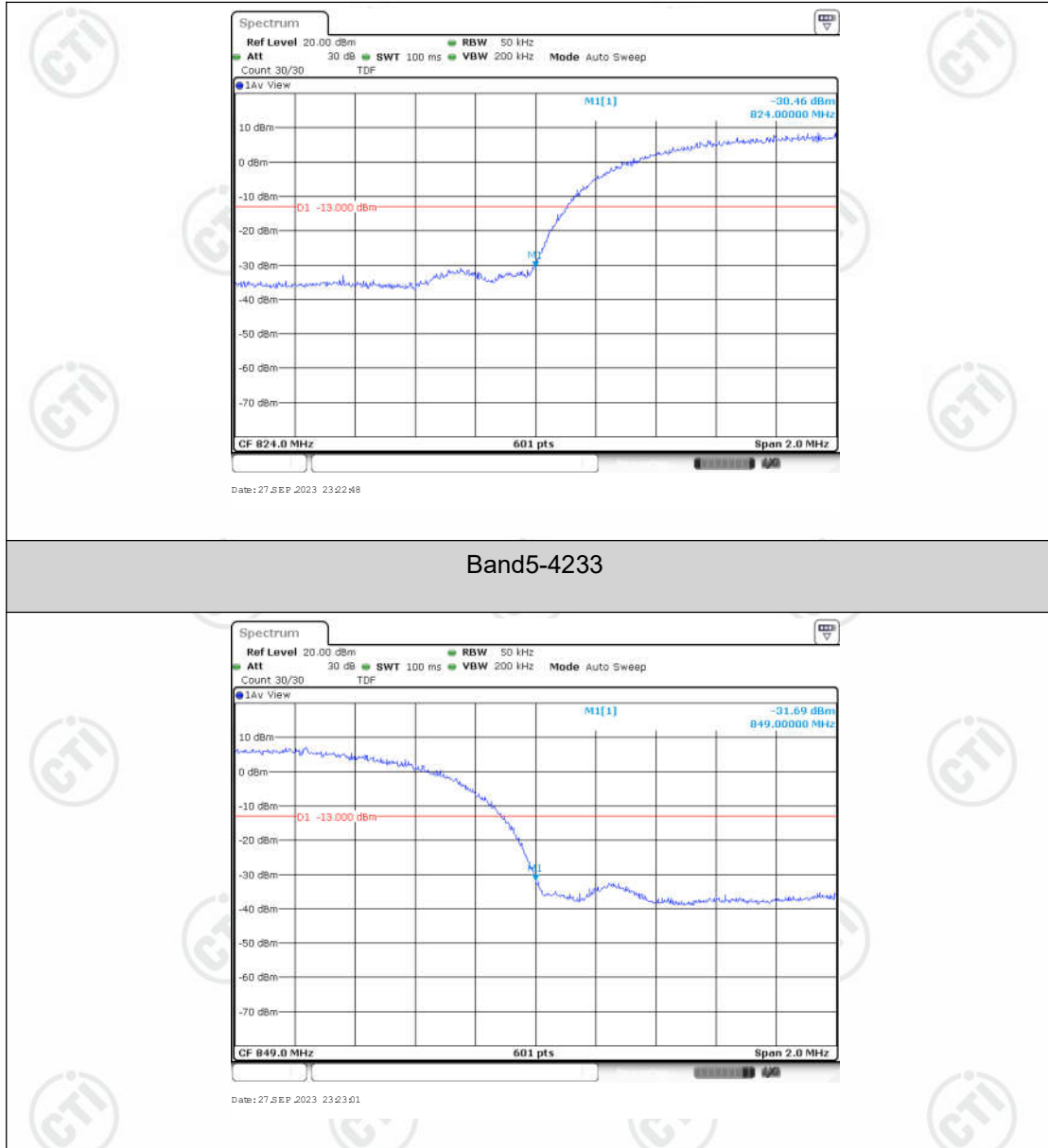




Band4-1513



Band5-4132



## Appendix E: Conducted Spurious Emission

### Test Result

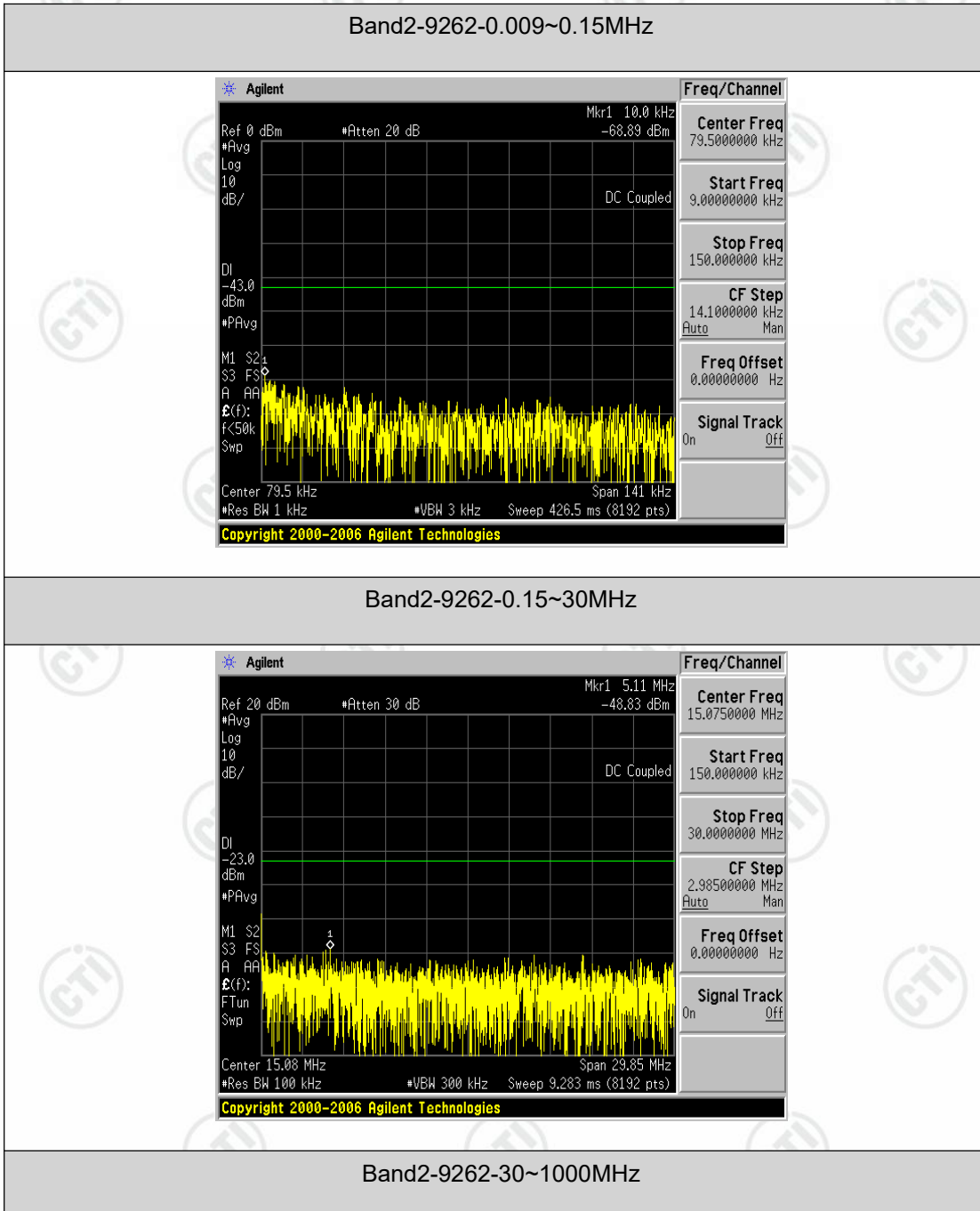
Band	Channel	Frequency Range (Mhz)	Frequency (dBm)	Result (dBm)	Limit (dBm)	Verdict
Band2	9262	0.009~0.15MHz	0.01	-68.89	-43	PASS
Band2	9262	0.15~30MHz	5.11	-48.84	-23	PASS
Band2	9262	30~1000MHz	824.4	-31.4	-13	PASS
Band2	9262	1000~3000MHz	2867	-38.4	-13	PASS
Band2	9262	3000~10000MHz	7875	-49.25	-13	PASS
Band2	9262	10000~20000MHz	19910	-42.18	-13	PASS
Band2	9400	0.009~0.15MHz	0.01	-67.02	-43	PASS
Band2	9400	0.15~30MHz	1.02	-48.9	-23	PASS
Band2	9400	30~1000MHz	284.7	-31.82	-13	PASS
Band2	9400	1000~3000MHz	1000	-243.6 6	-13	PASS
Band2	9400	3000~10000MHz	7892	-49.21	-13	PASS
Band2	9400	10000~20000MHz	19860	-42.17	-13	PASS
Band2	9538	0.009~0.15MHz	0.01	-68.58	-43	PASS
Band2	9538	0.15~30MHz	4.02	-49.29	-23	PASS
Band2	9538	30~1000MHz	385.5	-31.99	-13	PASS
Band2	9538	1000~3000MHz	2860	-38.16	-13	PASS
Band2	9538	3000~10000MHz	7867	-49.24	-13	PASS

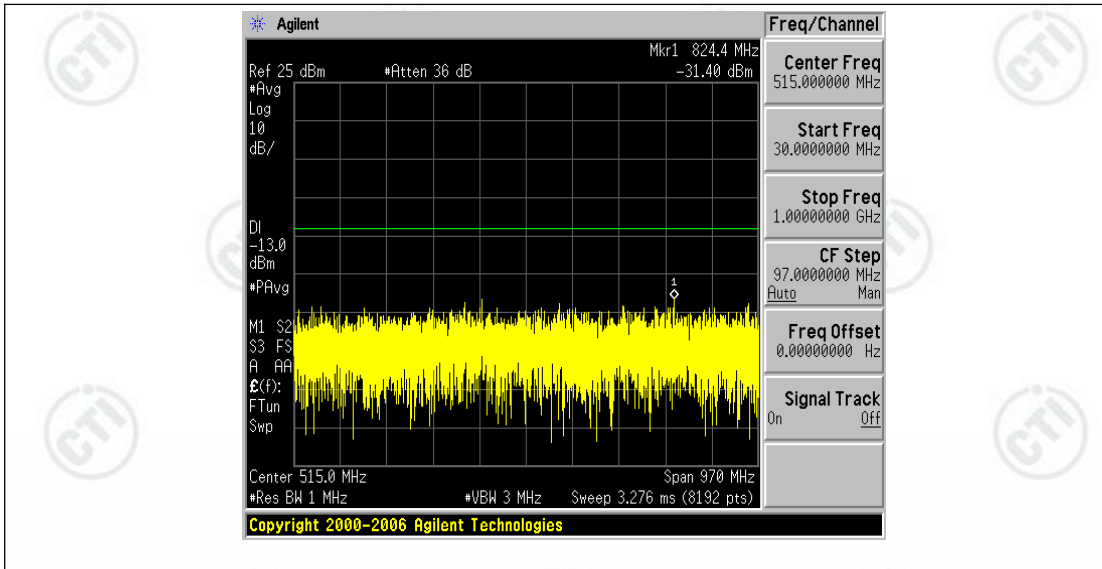
Band2	9538	10000~20000MHz	19890	-41.98	-13	PASS
Band4	1312	0.009~0.15MHz	0.01	-68.75	-43	PASS
Band4	1312	0.15~30MHz	1.69	-48.66	-23	PASS
Band4	1312	30~1000MHz	499.9	-31.57	-13	PASS
Band4	1312	1000~3000MHz	2856	-38.37	-13	PASS
Band4	1312	3000~10000MHz	3423	-45.2	-13	PASS
Band4	1312	10000~20000MHz	19890	-42.16	-13	PASS
Band4	1413	0.009~0.15MHz	0.01	-66.97	-43	PASS
Band4	1413	0.15~30MHz	1.64	-48.33	-23	PASS
Band4	1413	30~1000MHz	553.1	-32.32	-13	PASS
Band4	1413	1000~3000MHz	2861	-38.39	-13	PASS
Band4	1413	3000~10000MHz	3463	-48.05	-13	PASS
Band4	1413	10000~20000MHz	19870	-42	-13	PASS
Band4	1513	0.009~0.15MHz	0.01	-67.55	-43	PASS
Band4	1513	0.15~30MHz	0.39	-46.7	-23	PASS
Band4	1513	30~1000MHz	972.4	-31.76	-13	PASS
Band4	1513	1000~3000MHz	2865	-38.36	-13	PASS
Band4	1513	3000~10000MHz	3503	-46.06	-13	PASS
Band4	1513	10000~20000MHz	19870	-41.97	-13	PASS
Band5	4132	0.009~0.15MHz	0.02	-69.64	-33	PASS
Band5	4132	0.15~30MHz	0.18	-45.39	-13	PASS
Band5	4132	30~1000MHz	439.6	-32.04	-13	PASS

Band5	4132	1000~3000MHz	2850	-38.22	-13	PASS
Band5	4132	3000~10000MHz	7899	-49.29	-13	PASS
Band5	4132	10000~18000MHz	17718	-43.7	-13	PASS
Band5	4182	0.009~0.15MHz	0.01	-68.79	-33	PASS
Band5	4182	0.15~30MHz	0.37	-47.74	-13	PASS
Band5	4182	30~1000MHz	542.3	-31.53	-13	PASS
Band5	4182	1000~3000MHz	2852	-38.24	-13	PASS
Band5	4182	3000~10000MHz	7896	-49.1	-13	PASS
Band5	4182	10000~18000MHz	17796	-43.67	-13	PASS
Band5	4233	0.009~0.15MHz	0.01	-70.62	-33	PASS
Band5	4233	0.15~30MHz	0.49	-47.94	-13	PASS
Band5	4233	30~1000MHz	355.9	-31.8	-13	PASS
Band5	4233	1000~3000MHz	2847	-38.22	-13	PASS
Band5	4233	3000~10000MHz	7901	-49.17	-13	PASS
Band5	4233	10000~18000MHz	17799	-43.53	-13	PASS

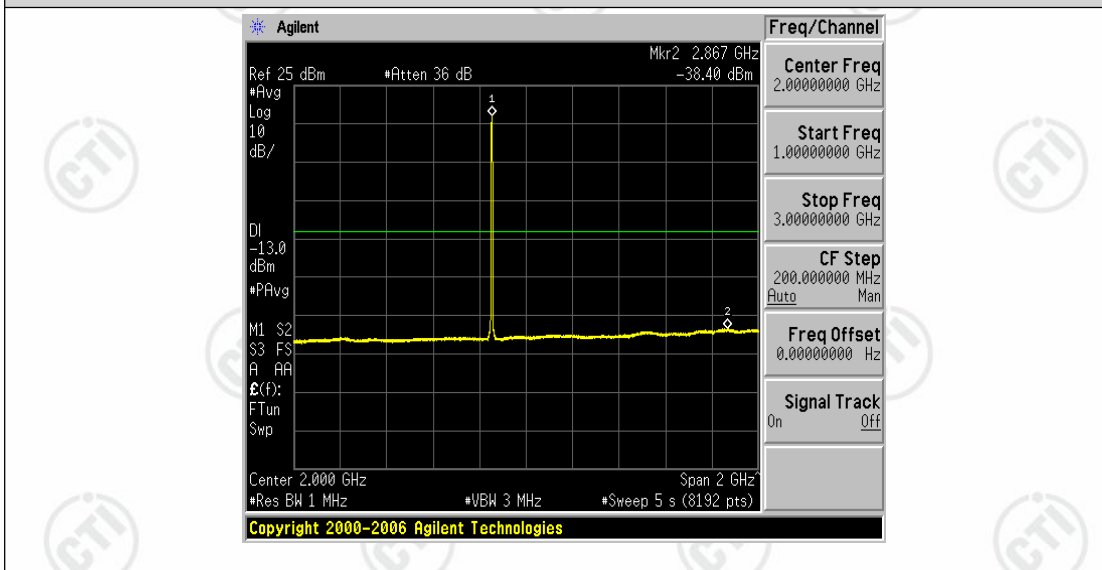


## Test Graphs

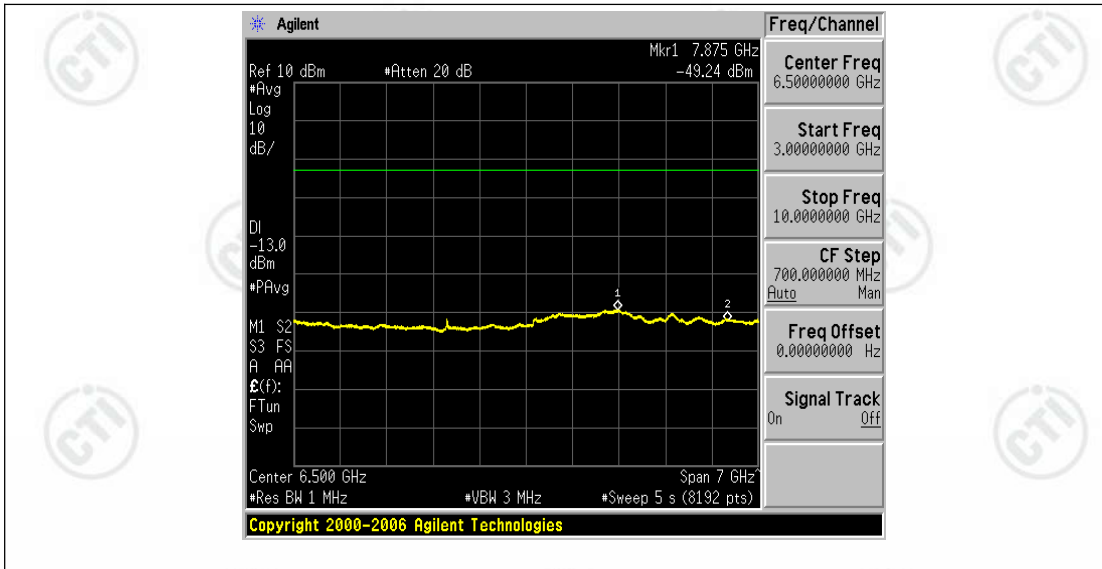




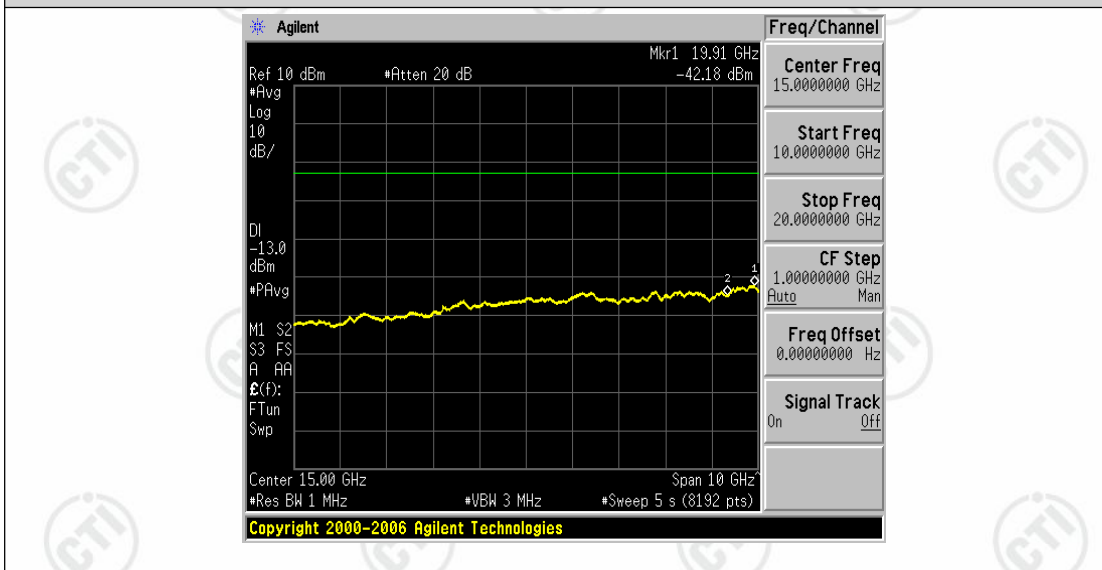
Band2-9262-1000~3000MHz



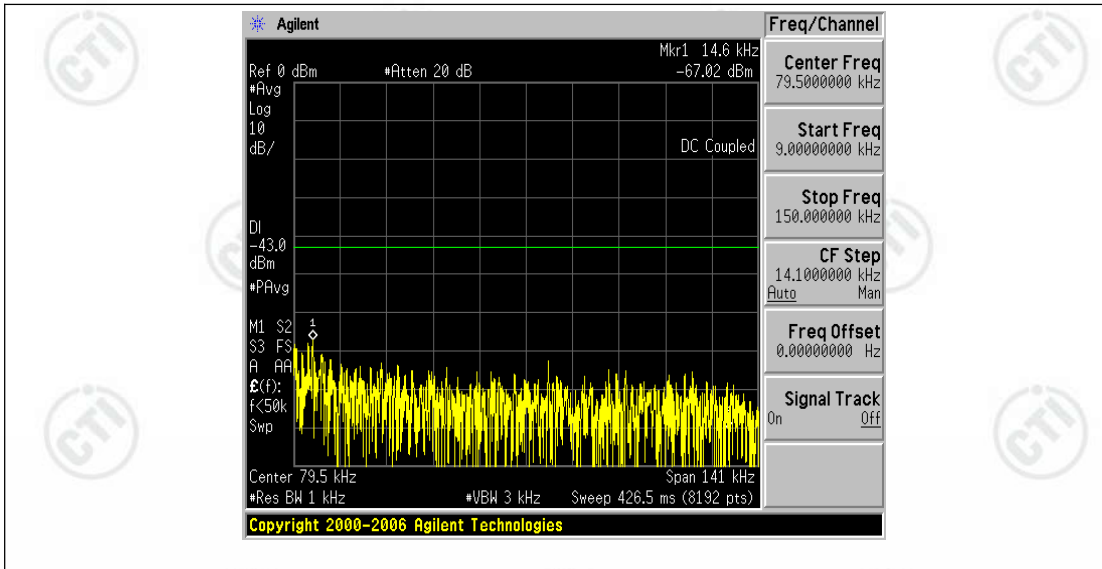
Band2-9262-3000~10000MHz



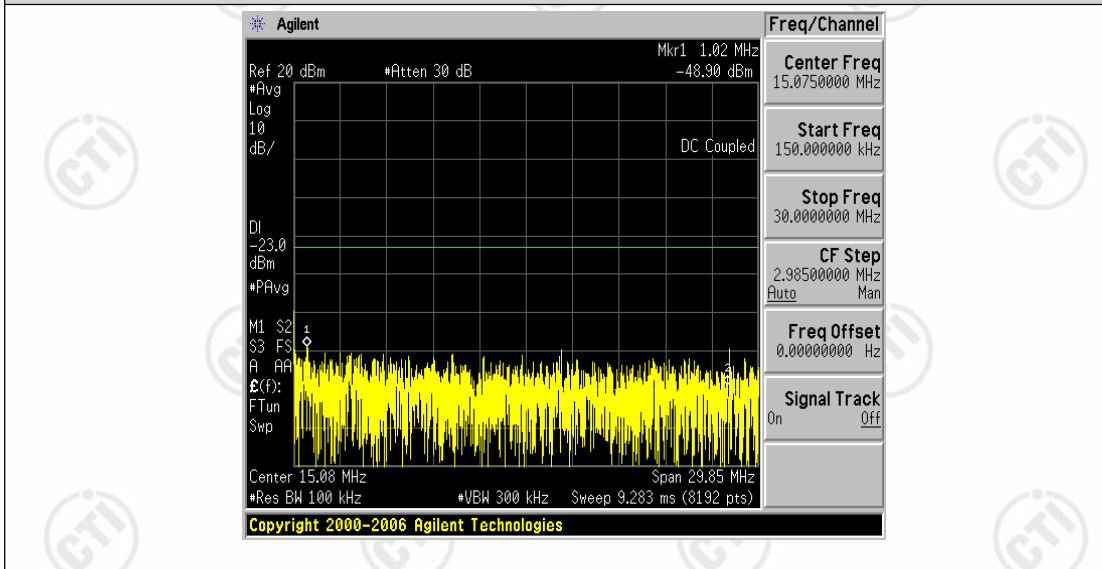
Band2-9262-10000~20000MHz



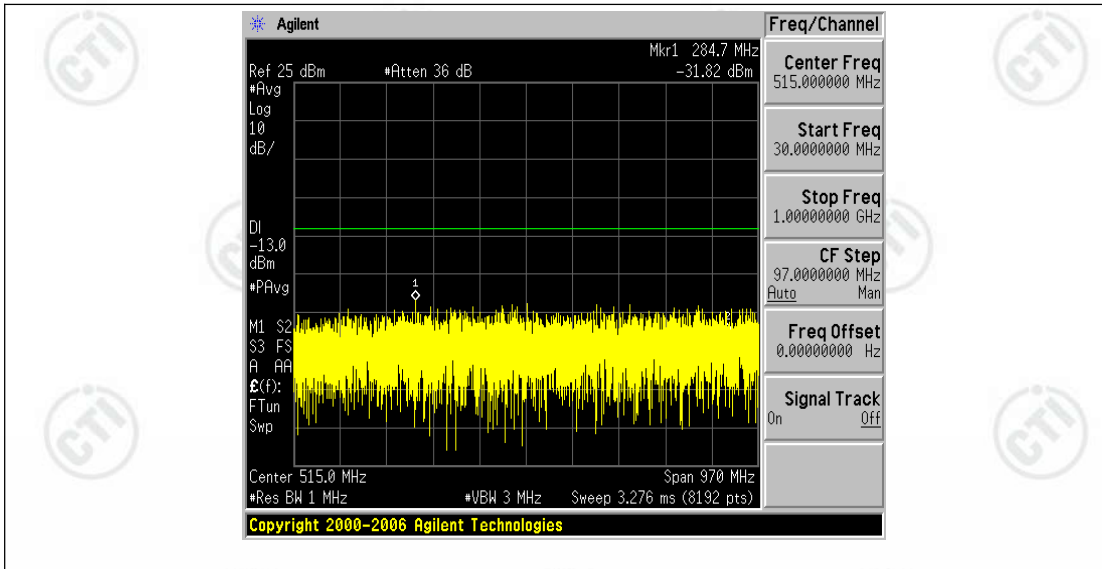
Band2-9400-0.009~0.15MHz



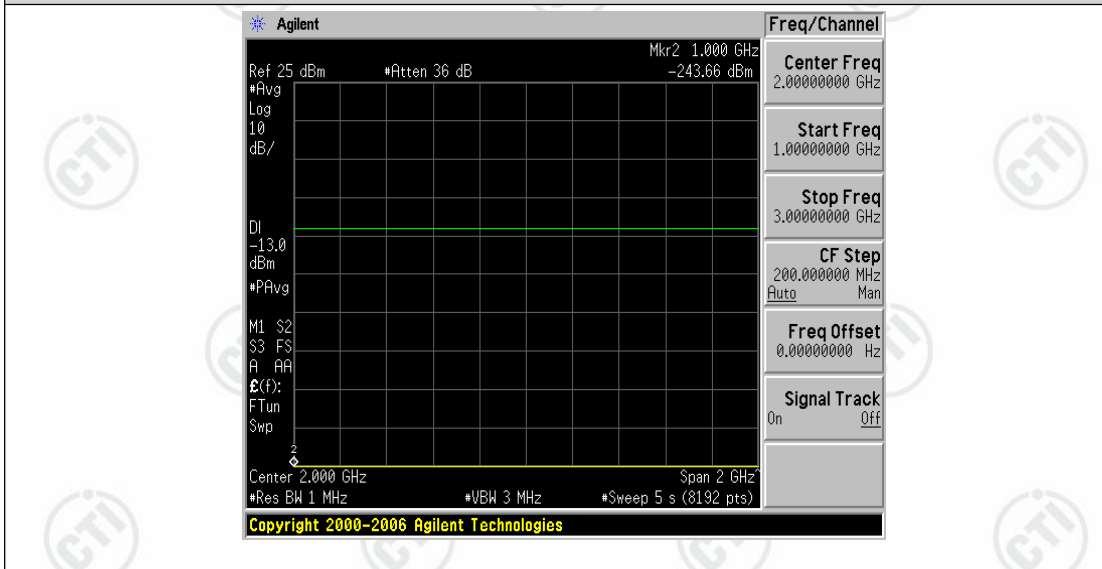
Band2-9400-0.15~30MHz



Band2-9400-30~1000MHz

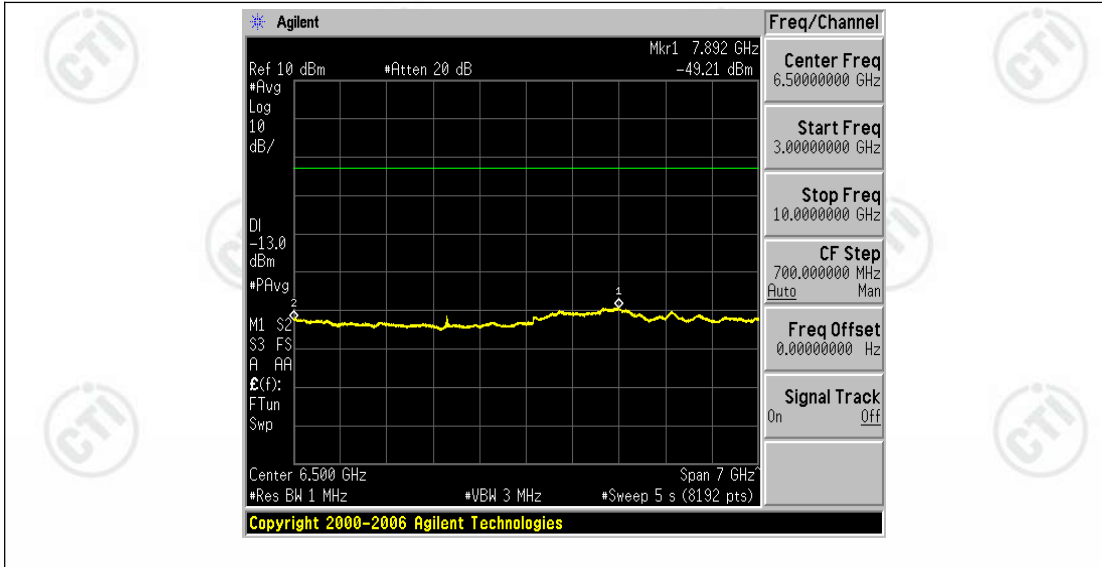


Band2-9400-1000~3000MHz

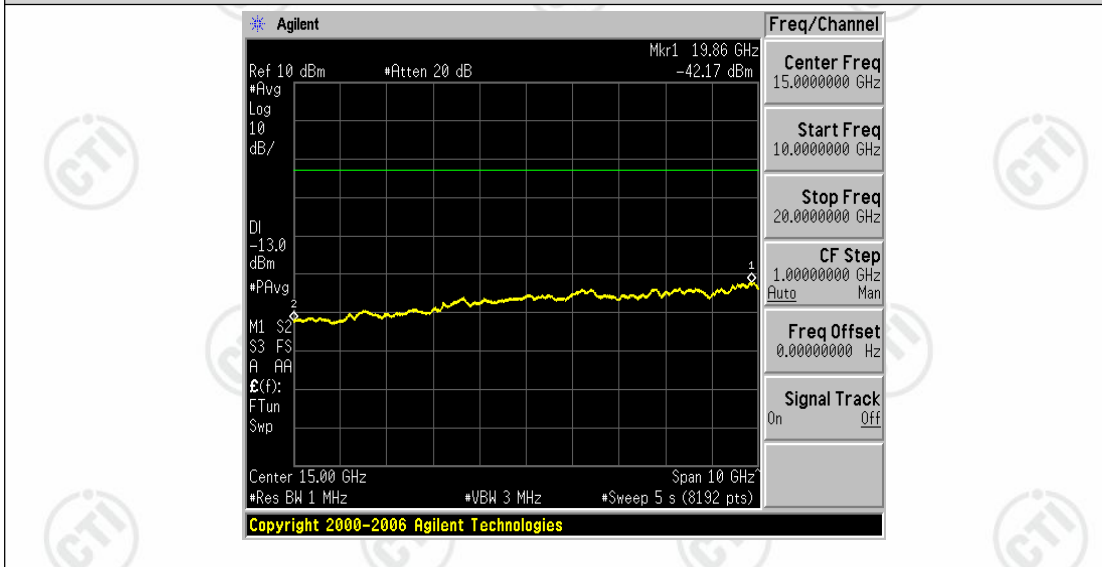


Band2-9400-3000~10000MHz

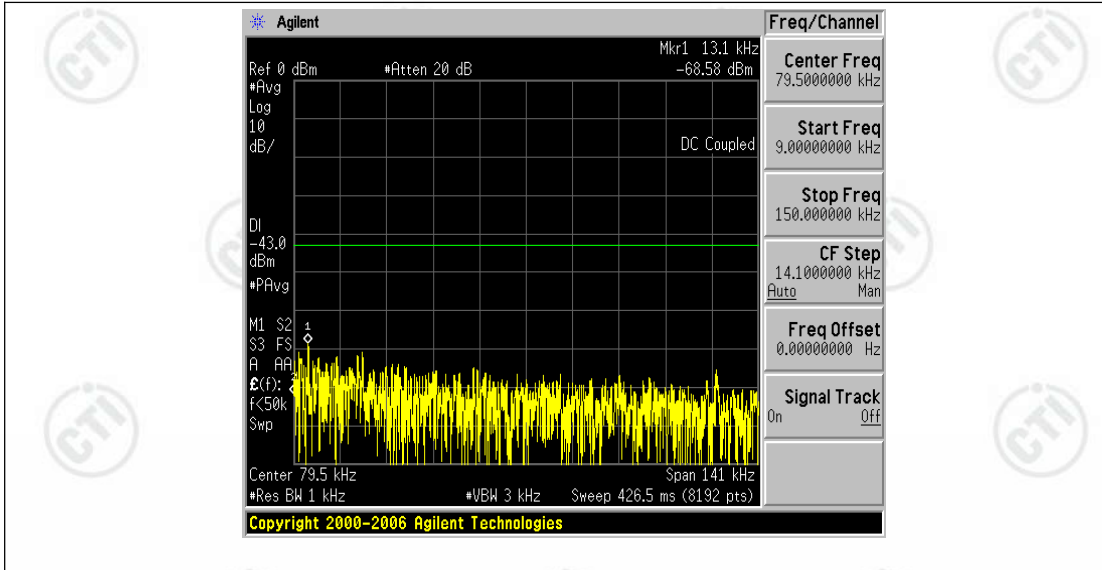




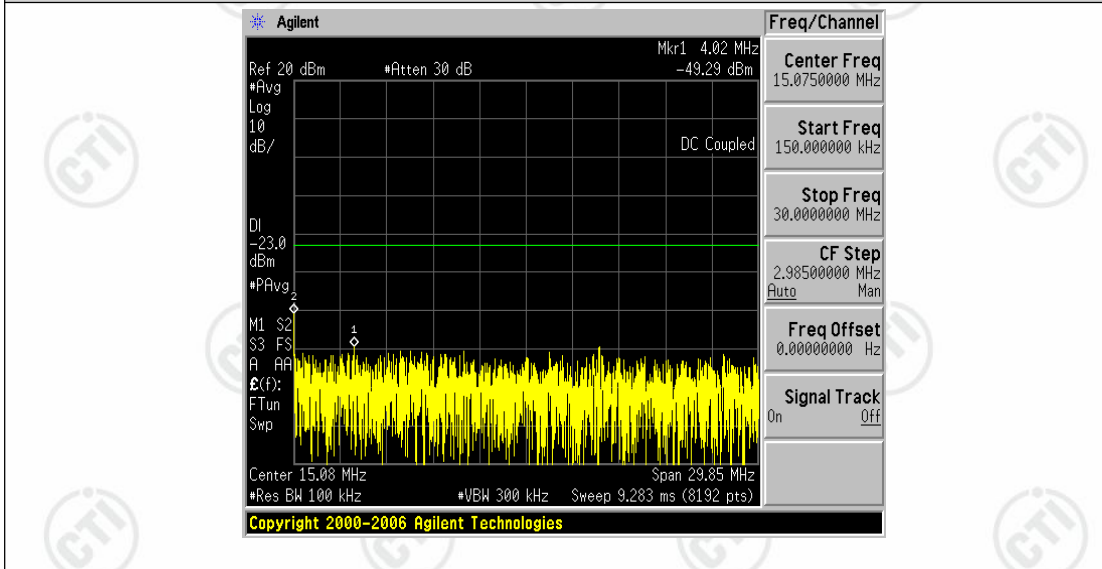
Band2-9400-10000~20000MHz



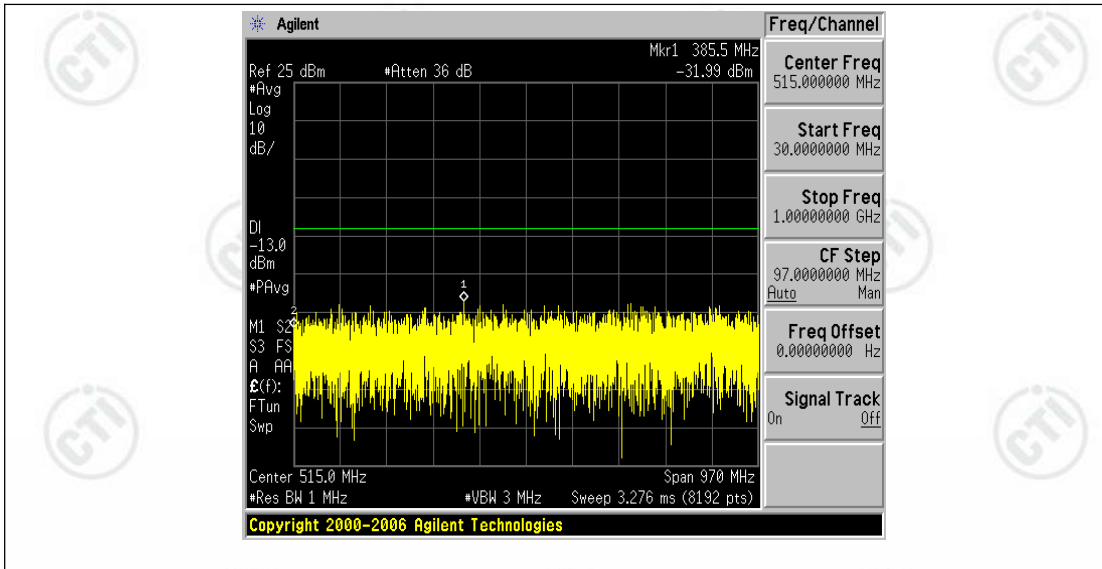
Band2-9538-0.009~0.15MHz



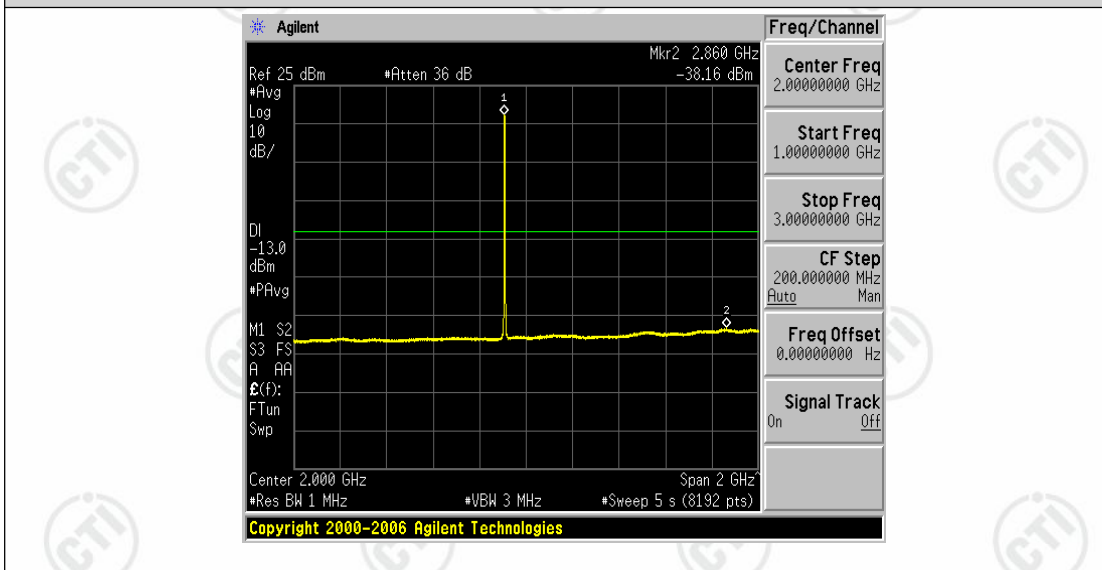
Band2-9538-0.15~30MHz



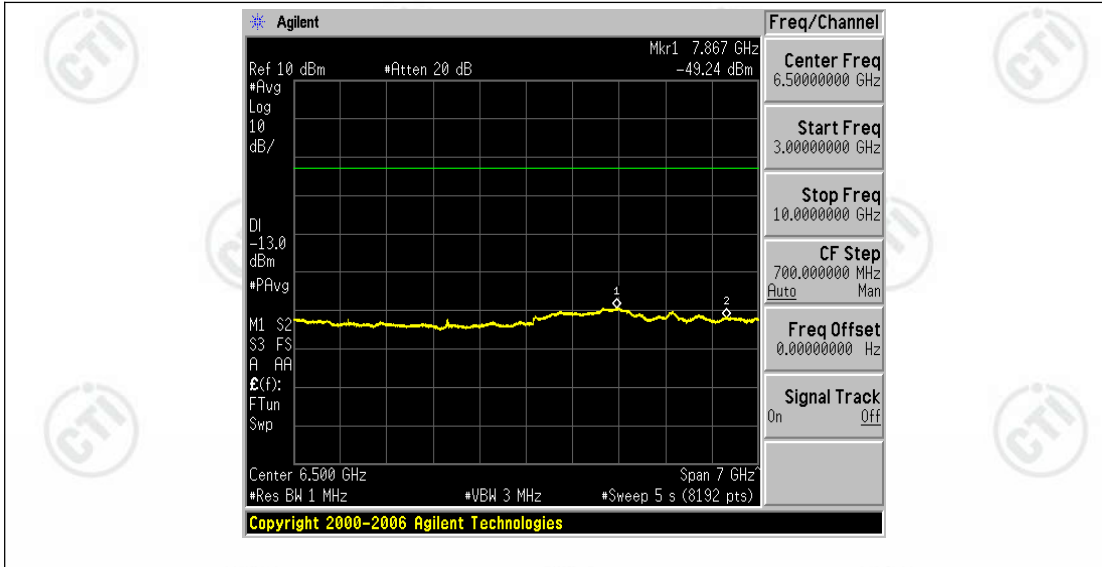
Band2-9538-30~1000MHz



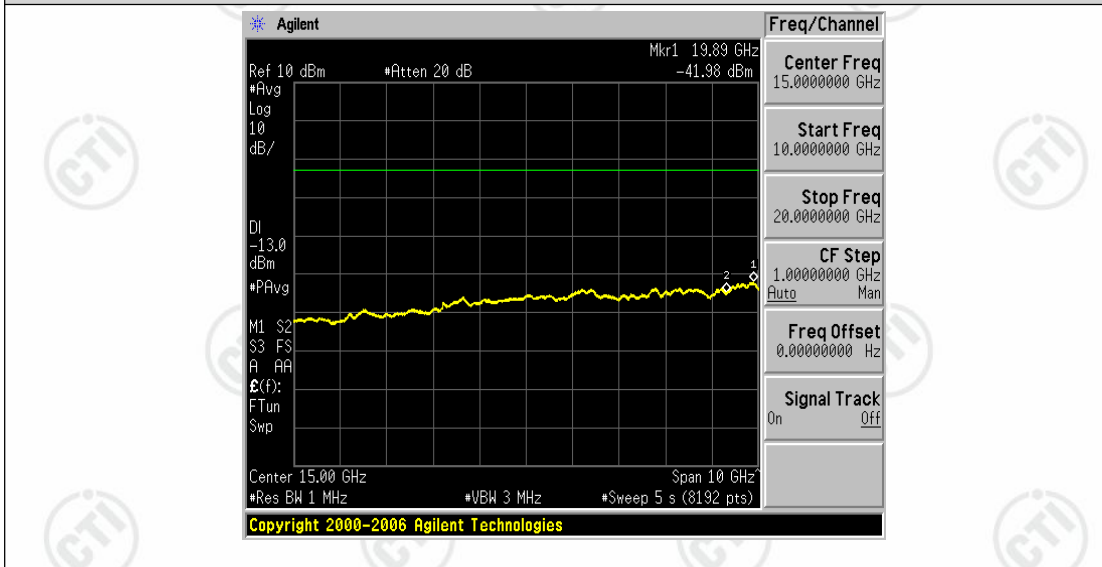
Band2-9538-1000~3000MHz



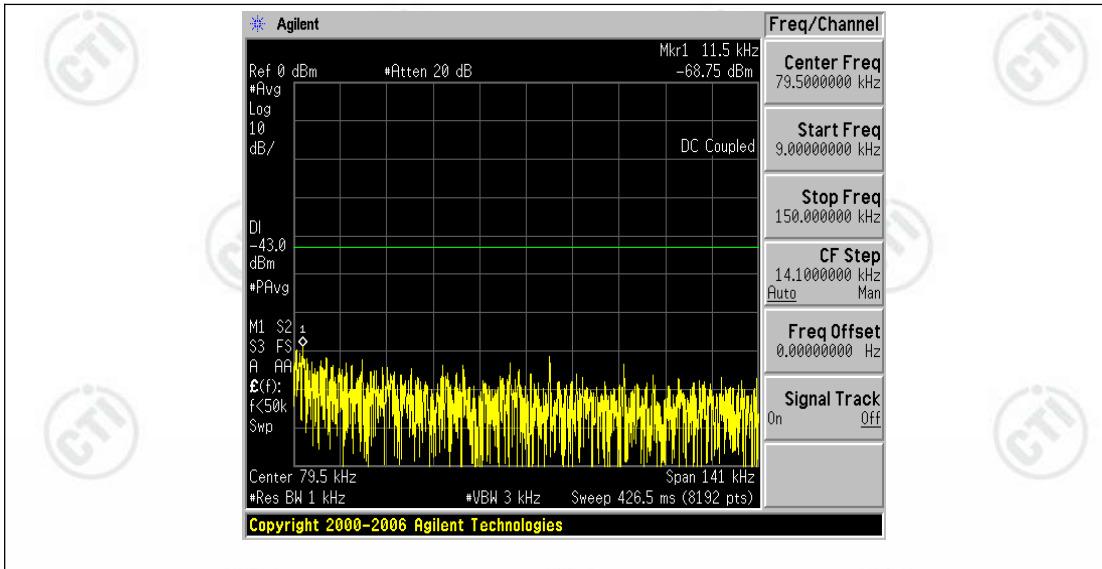
Band2-9538-3000~10000MHz



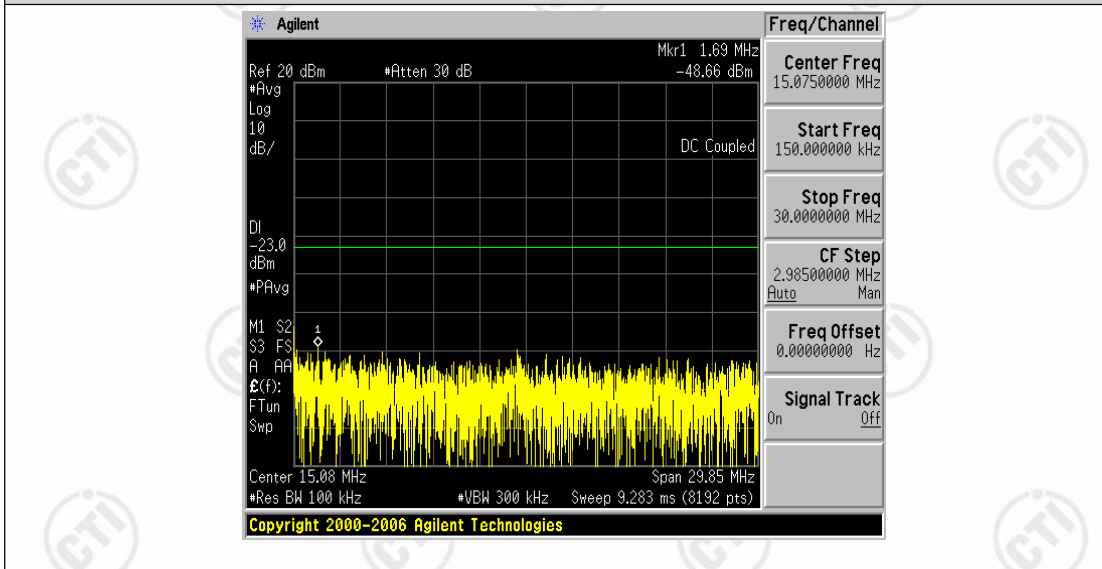
Band2-9538-10000~20000MHz



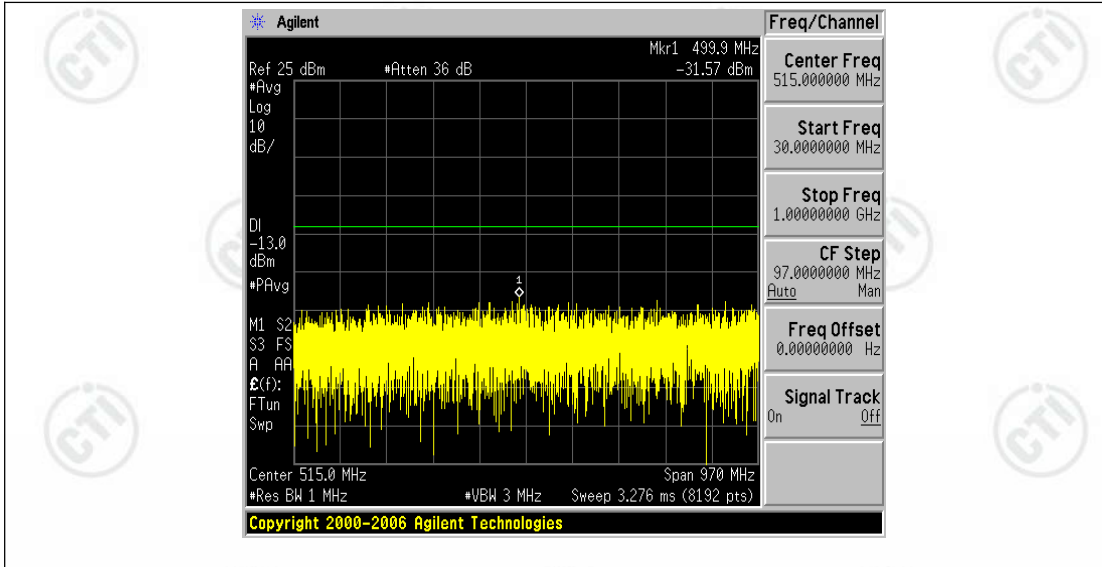
Band4-1312-0.009~0.15MHz



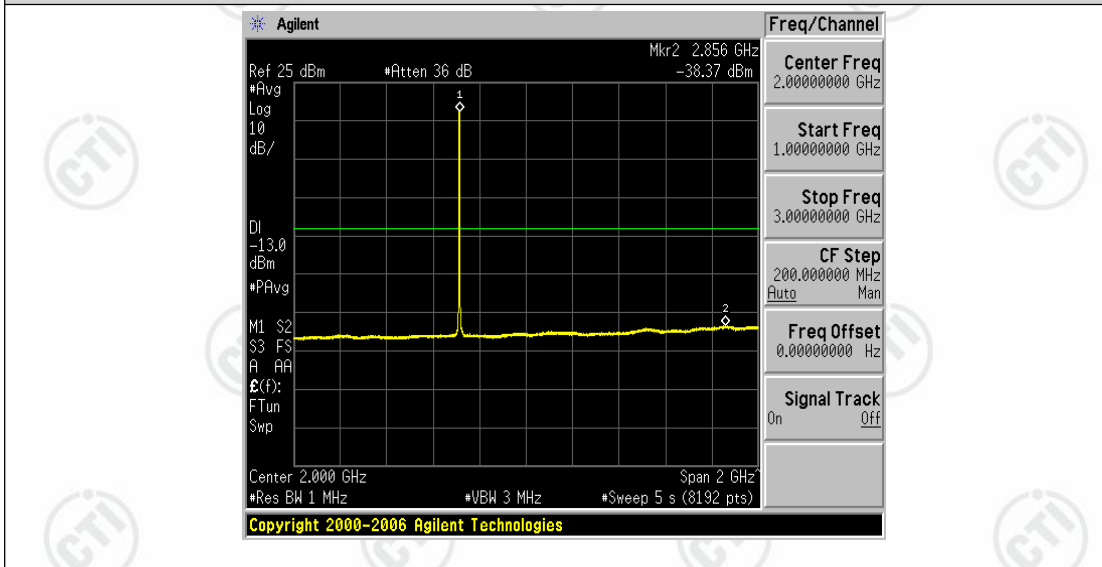
Band4-1312-0.15~30MHz



Band4-1312-30~1000MHz

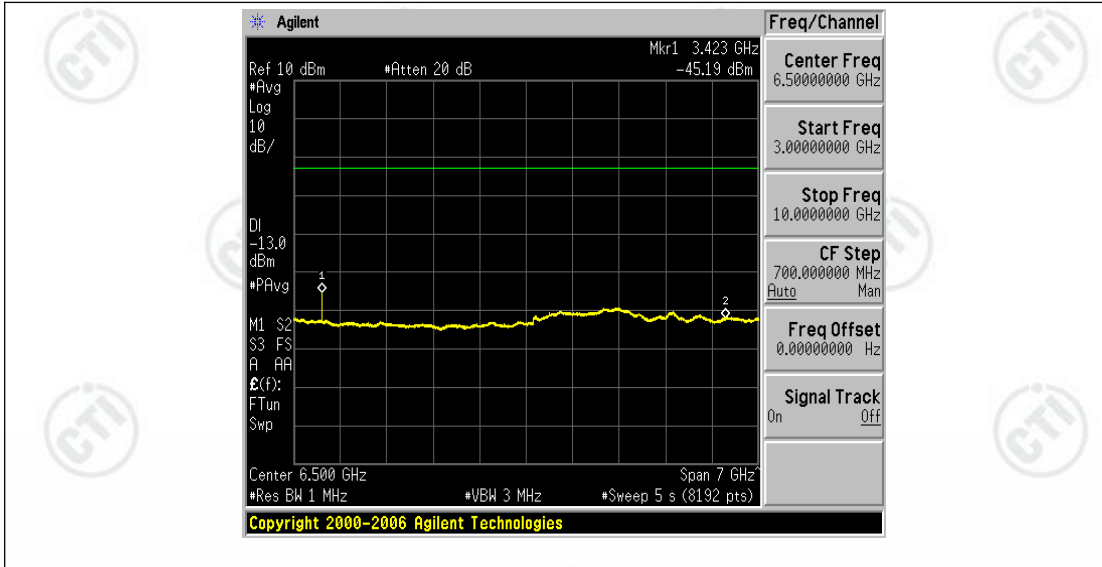


Band4-1312-1000~3000MHz

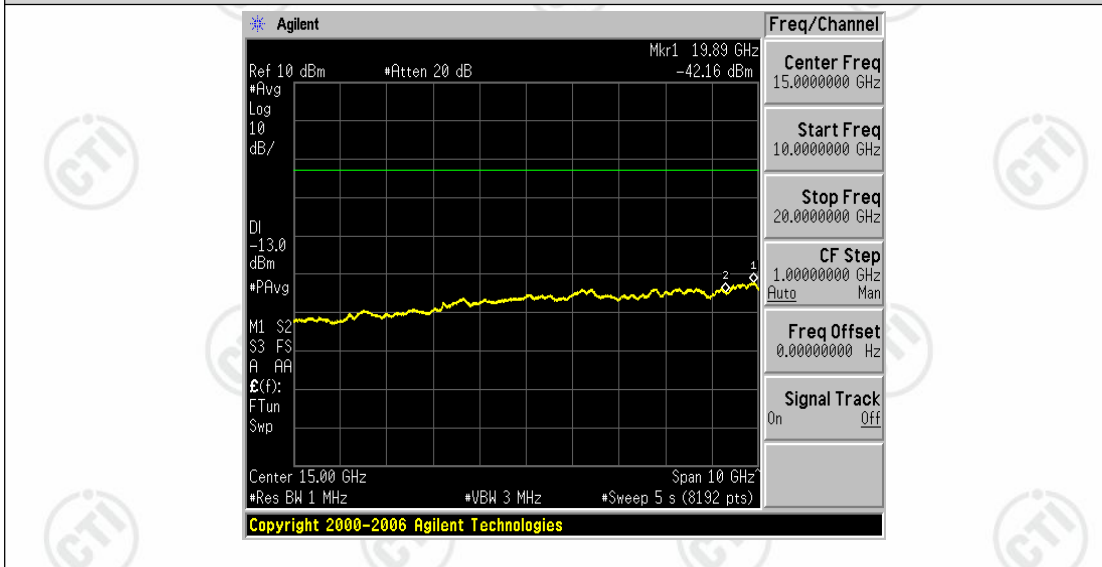


Band4-1312-3000~10000MHz

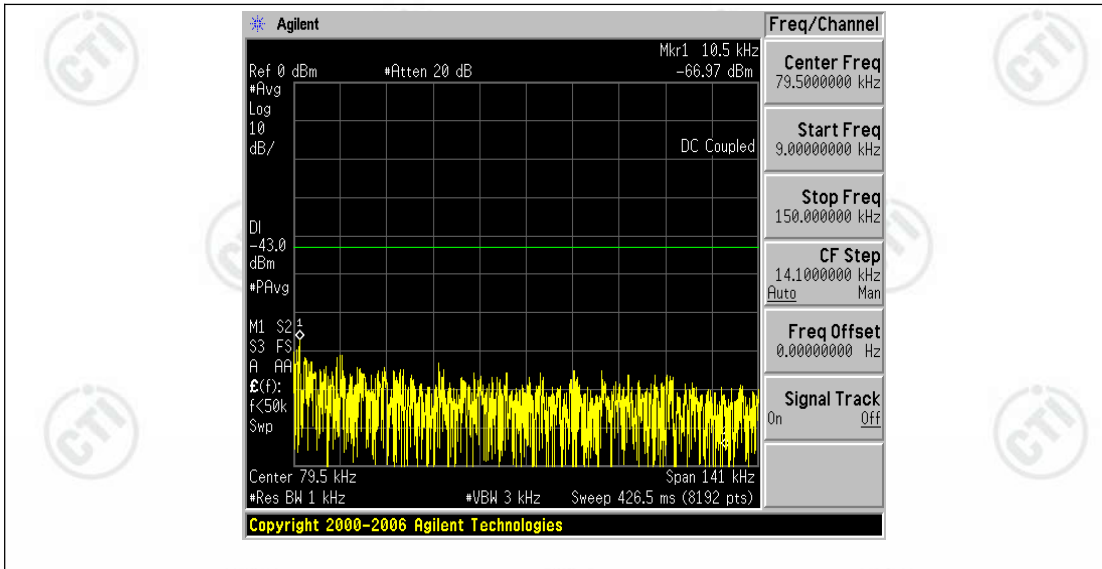




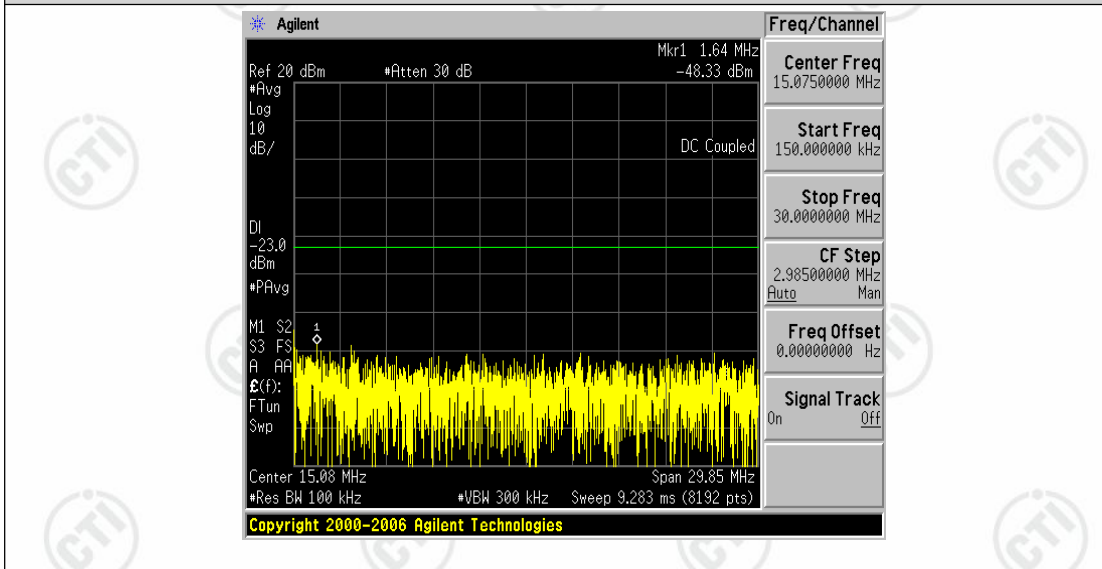
Band4-1312-10000~20000MHz



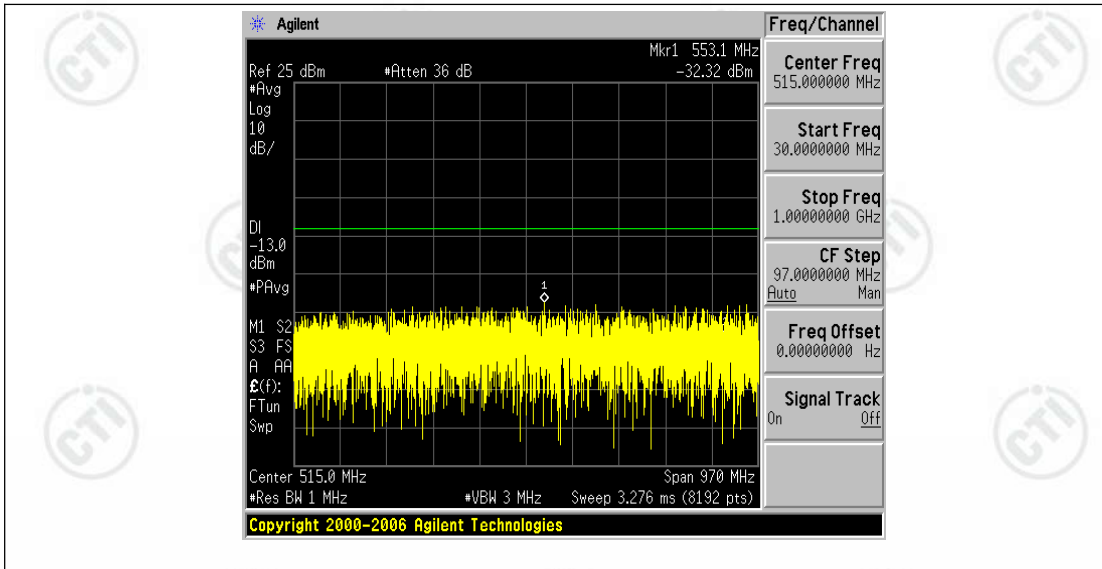
Band4-1413-0.009~0.15MHz



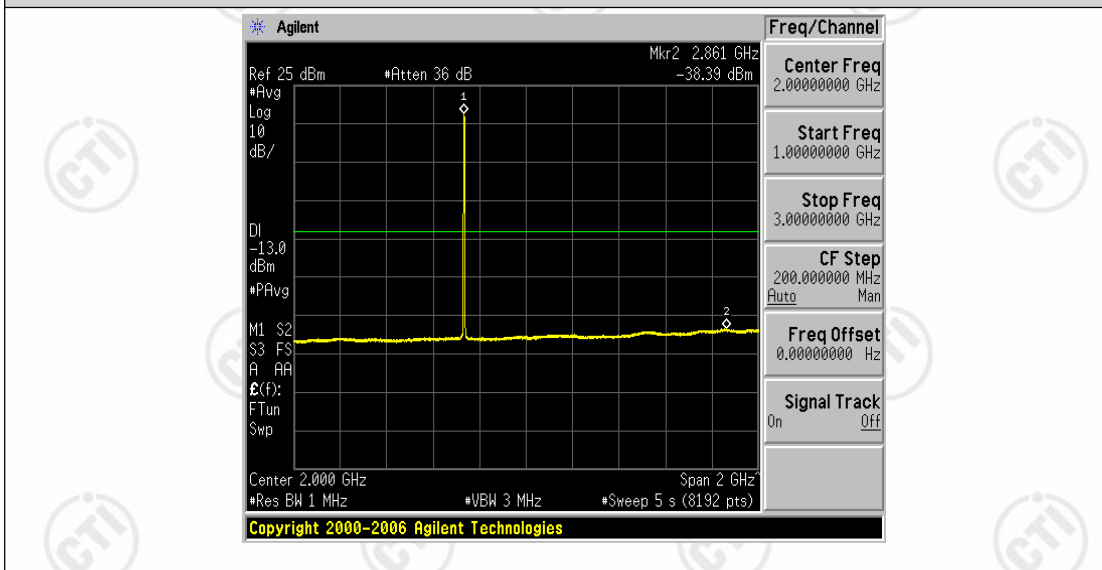
Band4-1413-0.15~30MHz



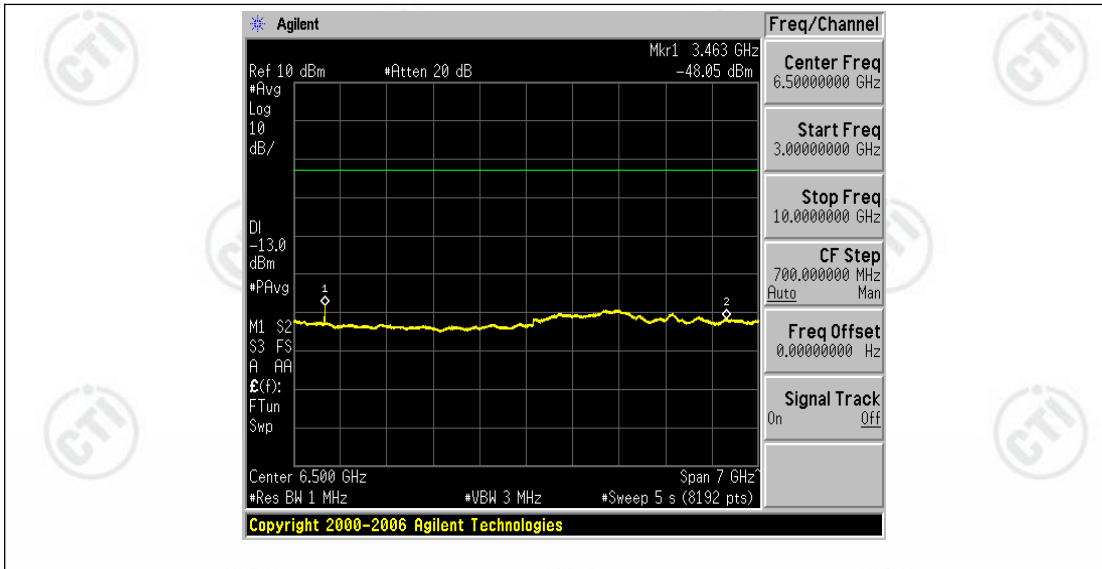
Band4-1413-30~1000MHz



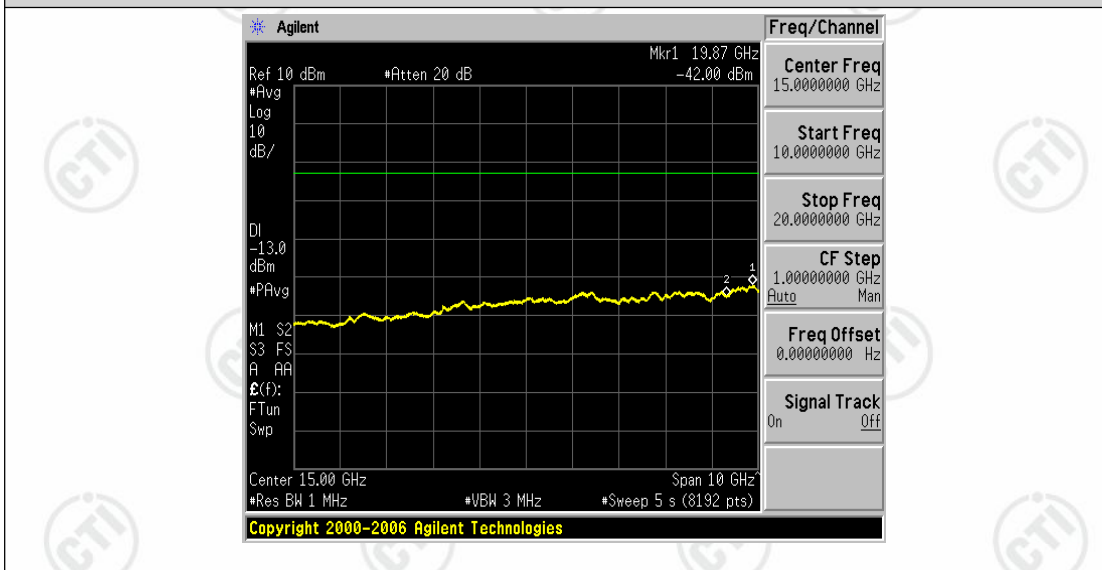
Band4-1413-1000~3000MHz



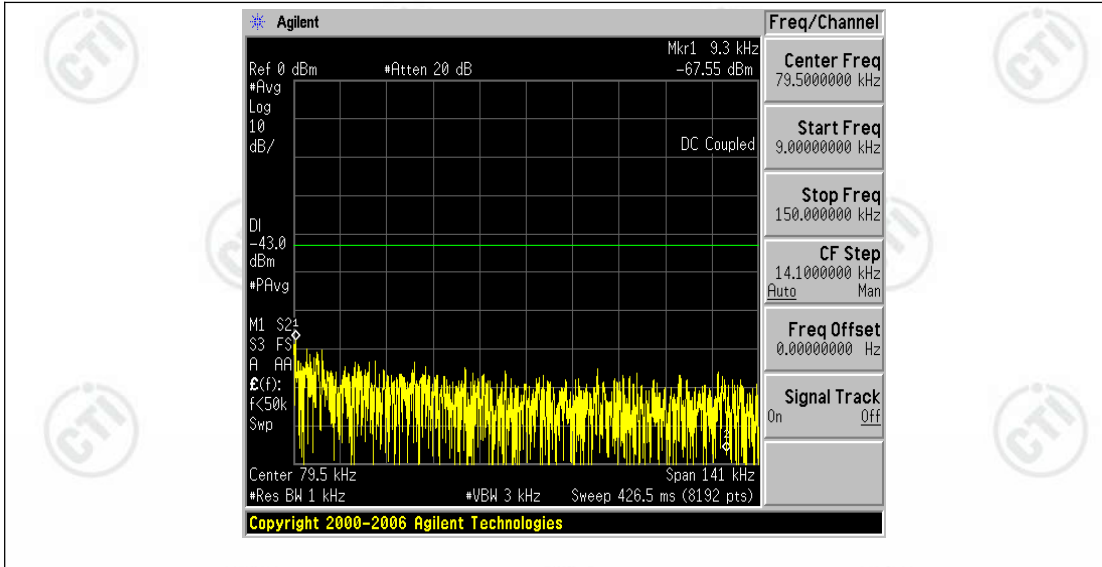
Band4-1413-3000~10000MHz



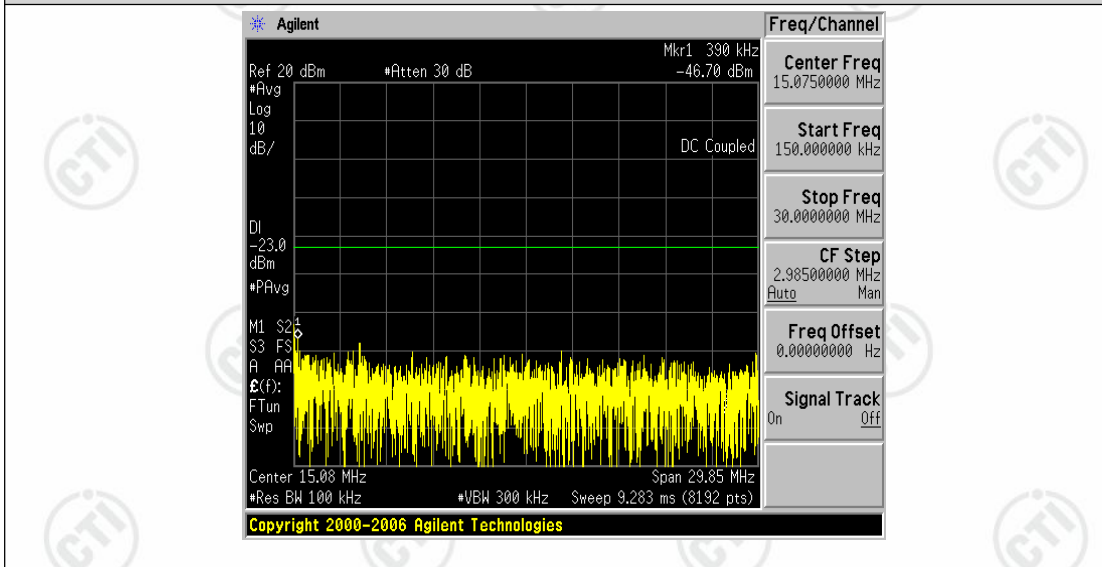
Band4-1413-10000~20000MHz



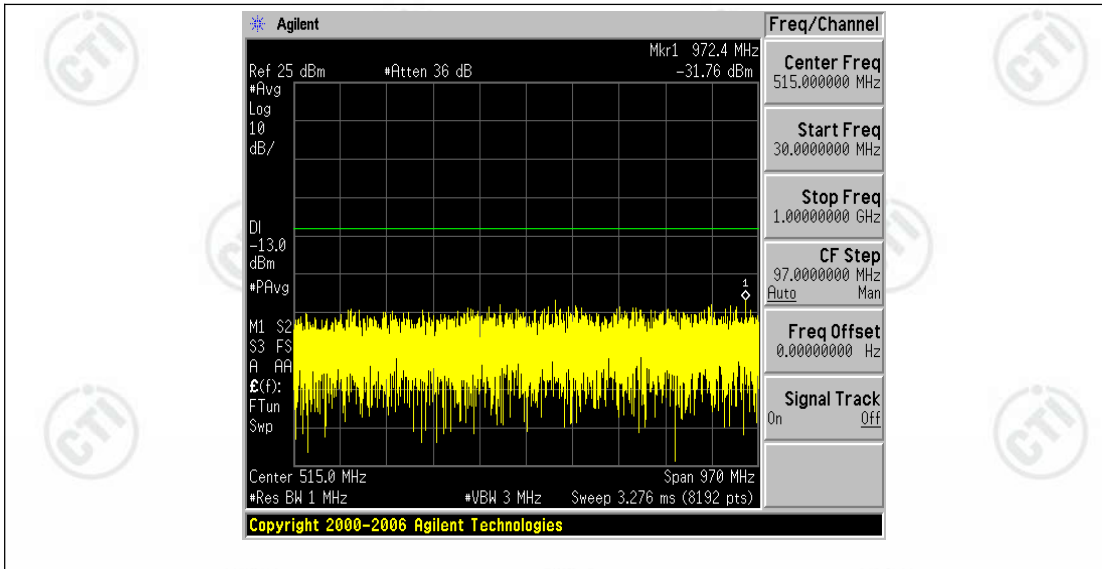
Band4-1513-0.009~0.15MHz



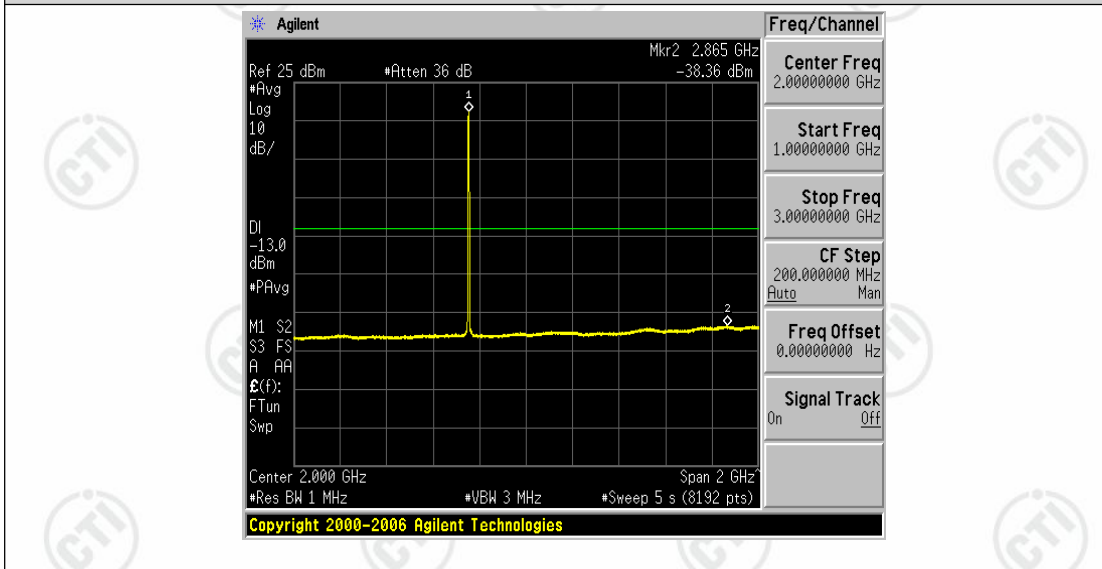
Band4-1513-0.15~30MHz



Band4-1513-30~1000MHz

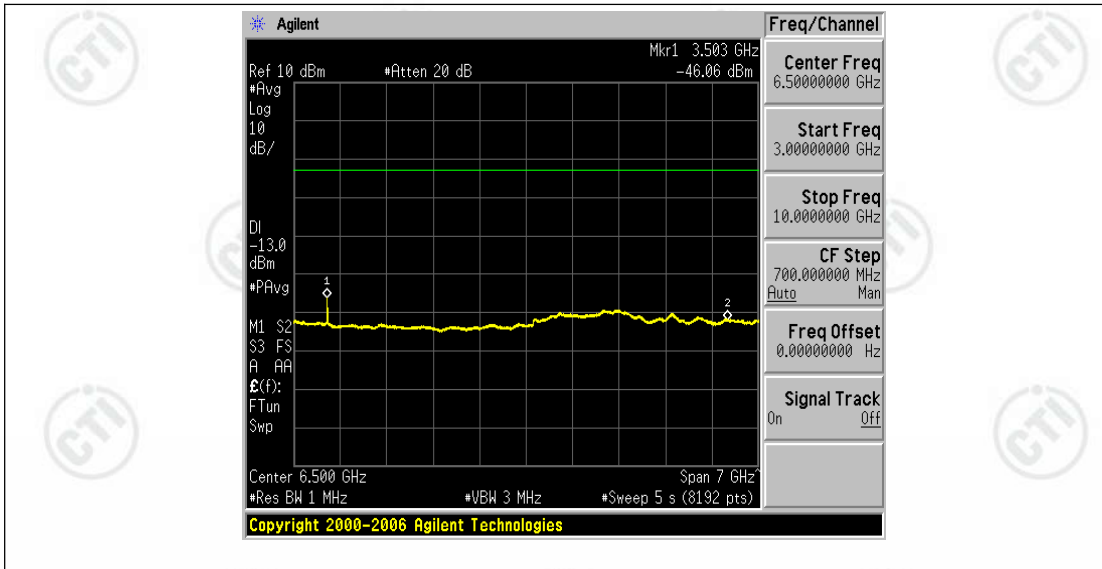


Band4-1513-1000~3000MHz

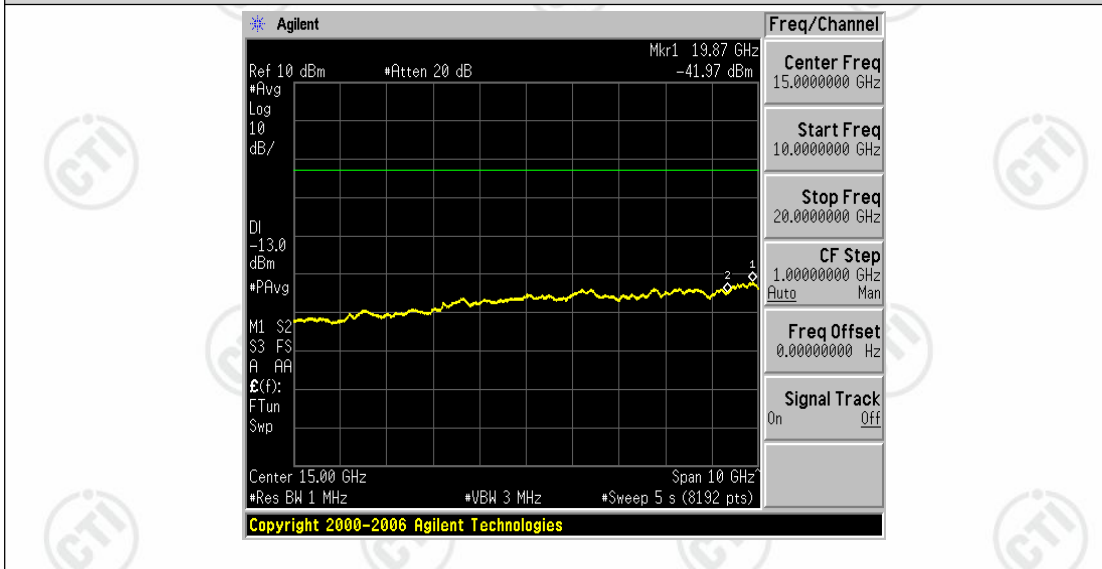


Band4-1513-3000~10000MHz

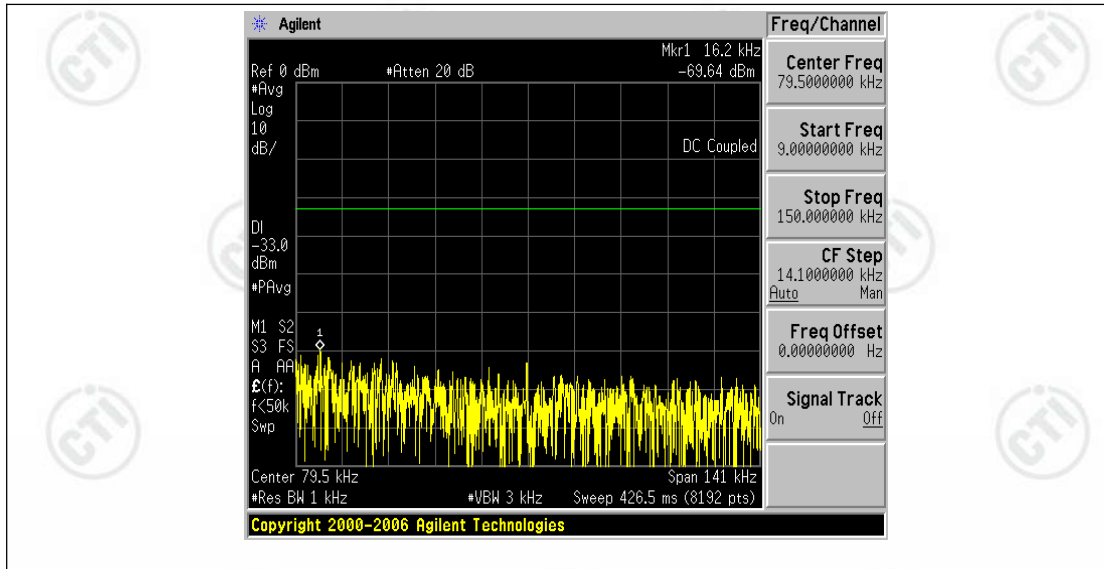




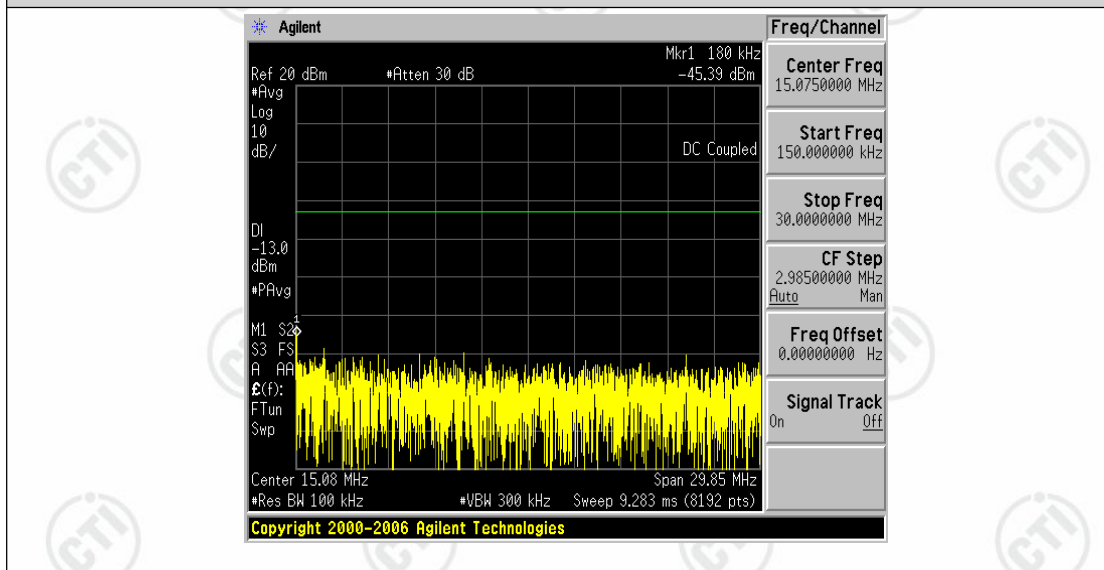
Band4-1513-10000~20000MHz



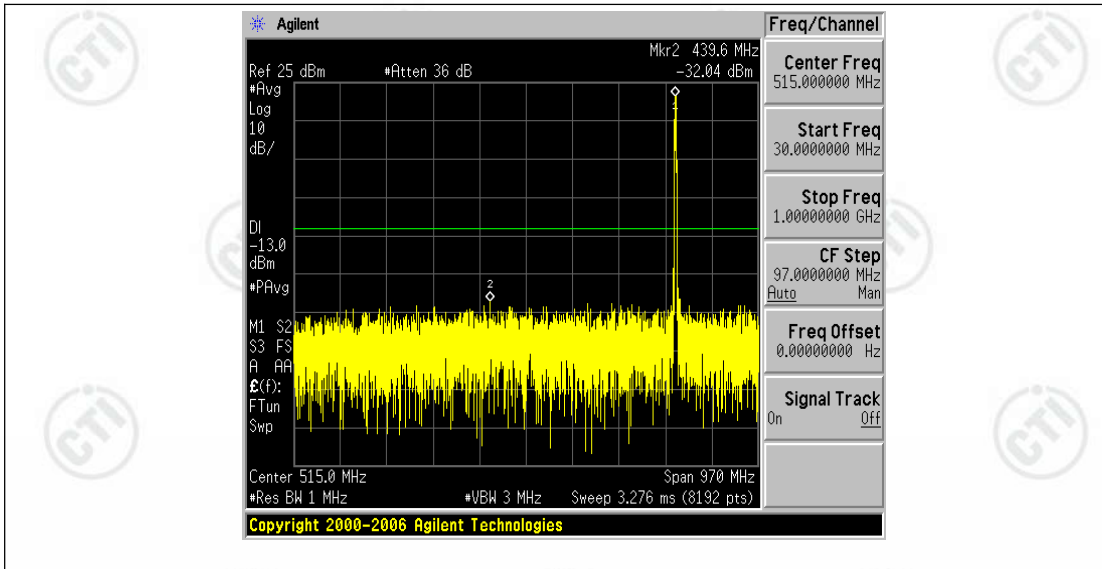
Band5-4132-0.009~0.15MHz



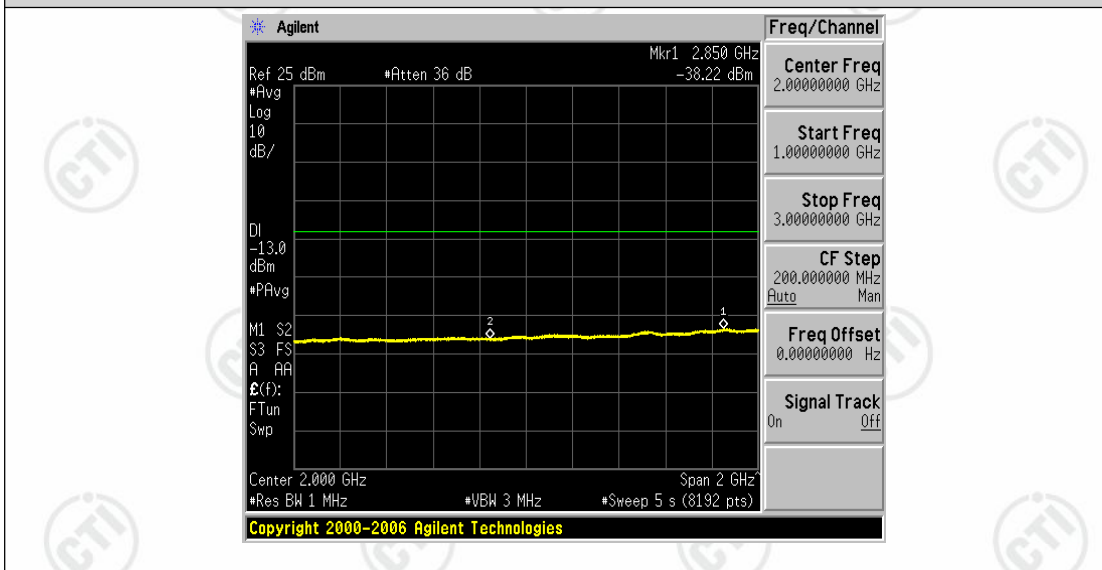
Band5-4132-0.15~30MHz



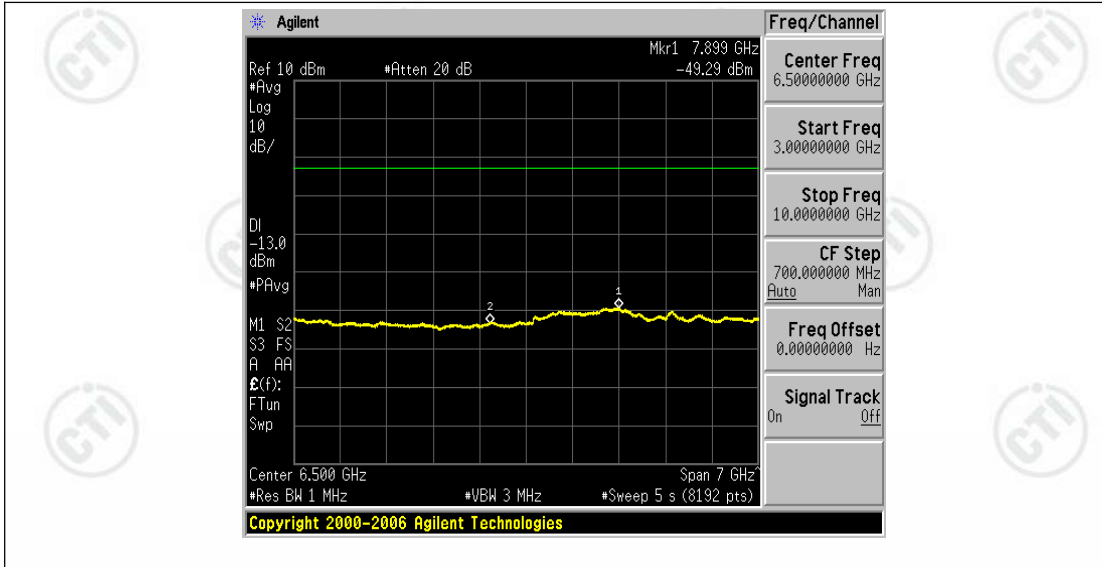
Band5-4132-30~1000MHz



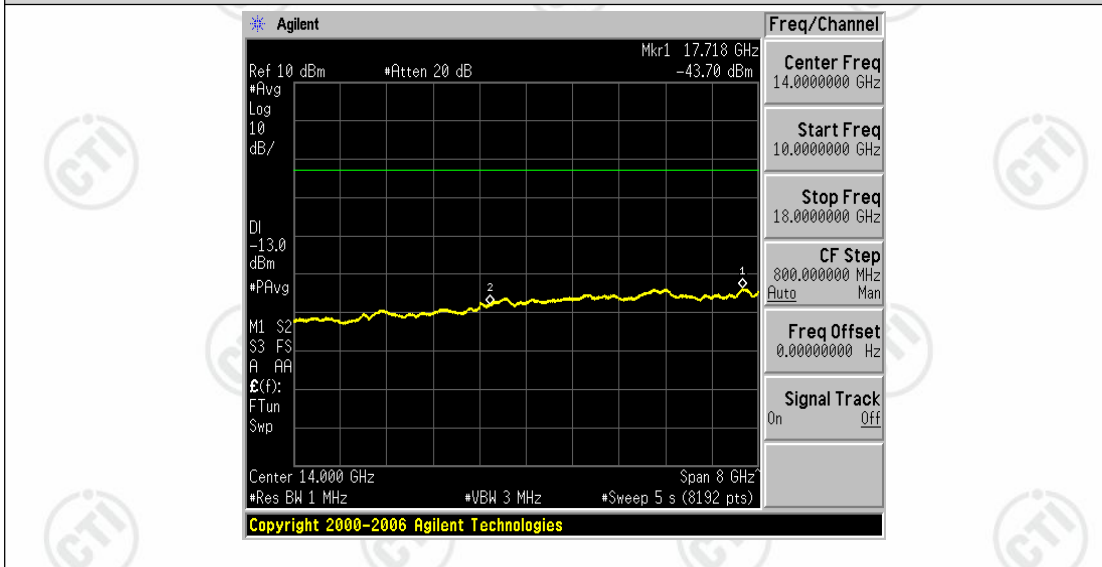
Band5-4132-1000~3000MHz



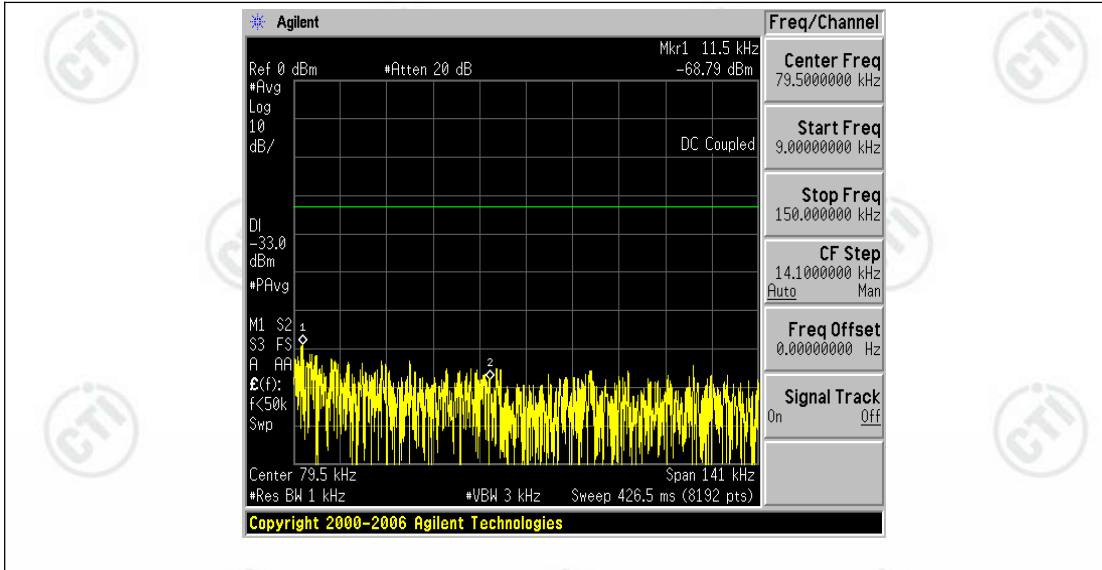
Band5-4132-3000~10000MHz



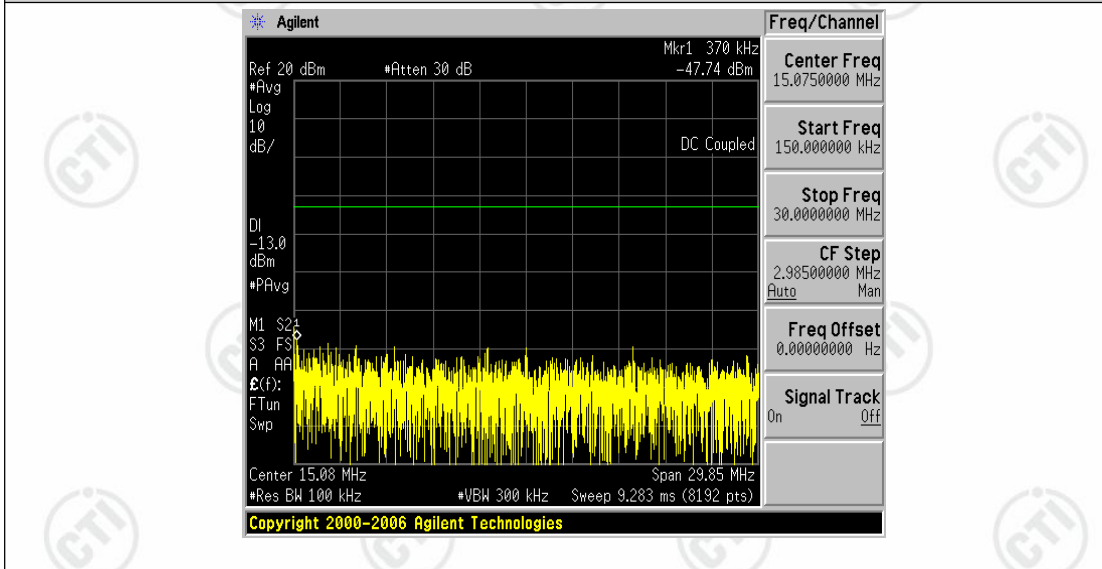
Band5-4132-10000~18000MHz



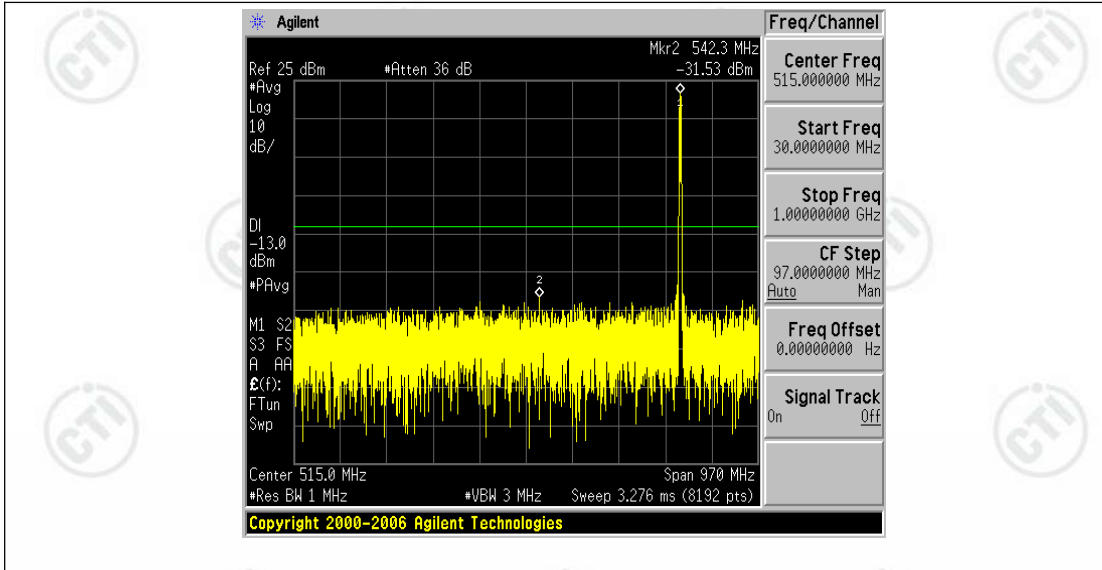
Band5-4182-0.009~0.15MHz



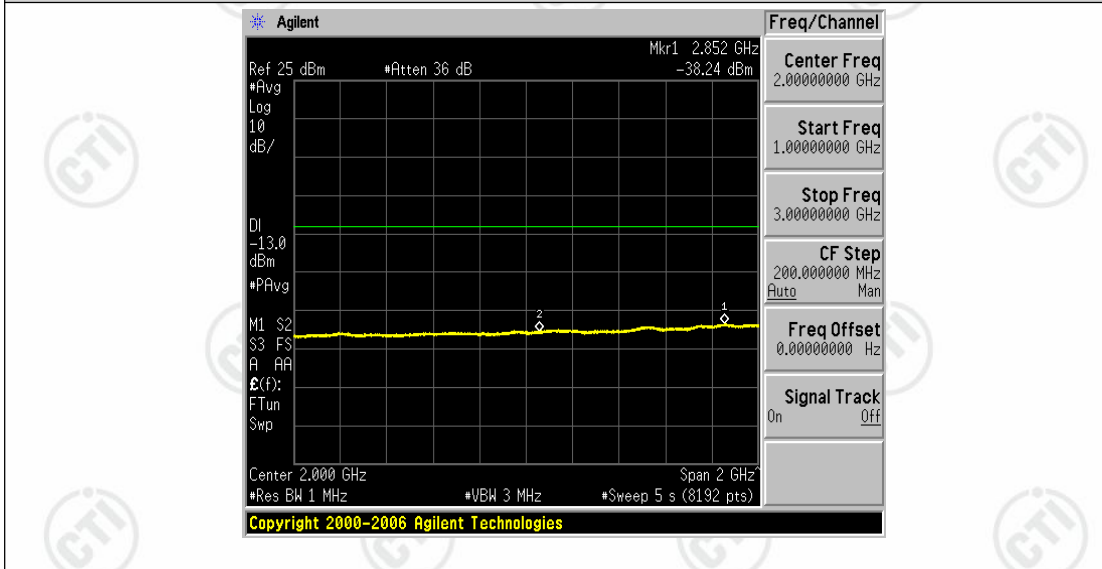
Band5-4182-0.15~30MHz



Band5-4182-30~1000MHz

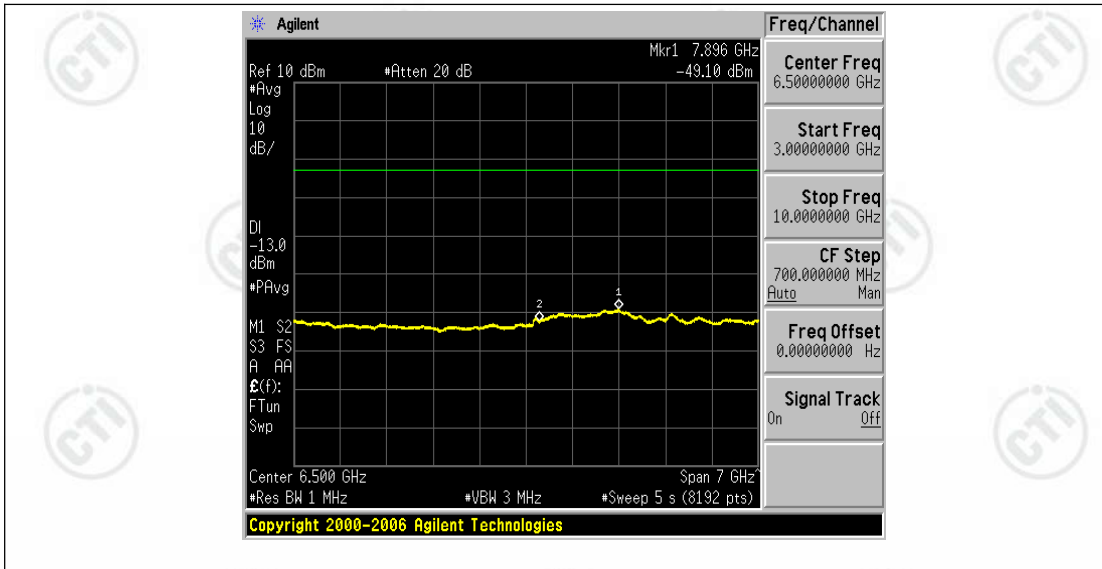


Band5-4182-1000~3000MHz

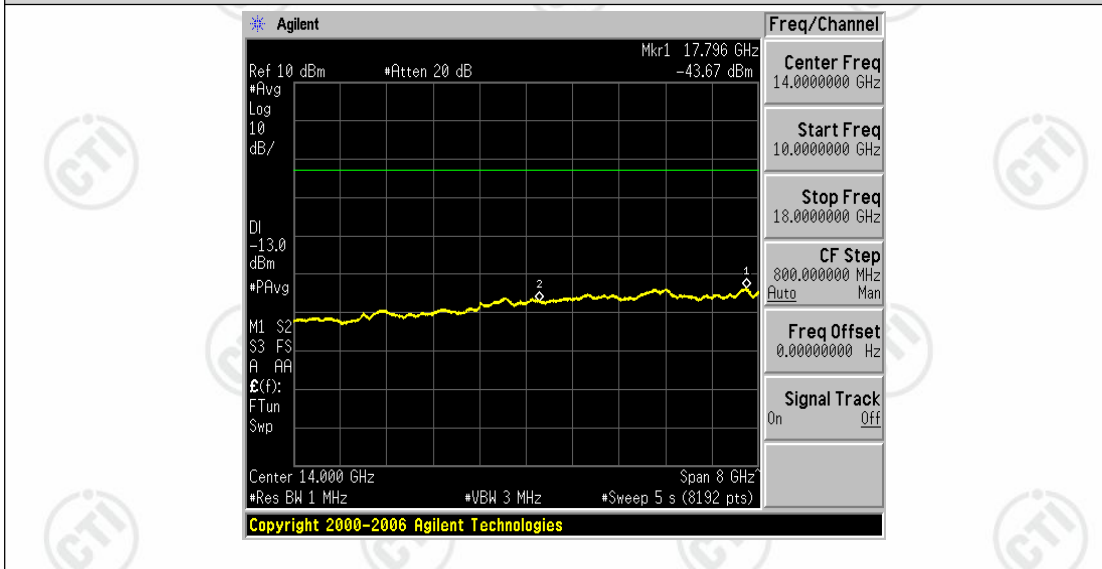


Band5-4182-3000~10000MHz

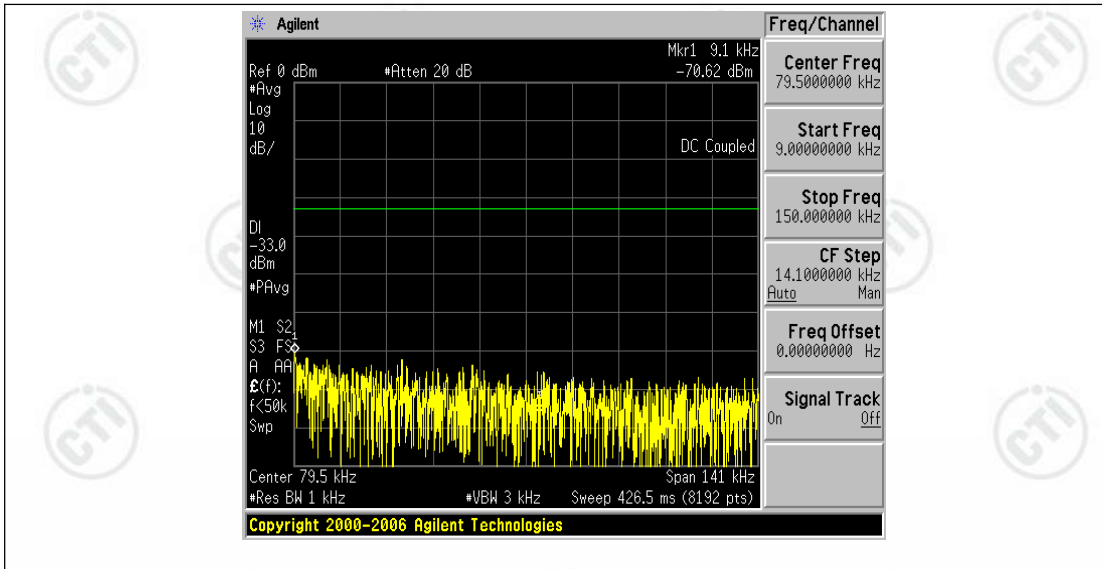




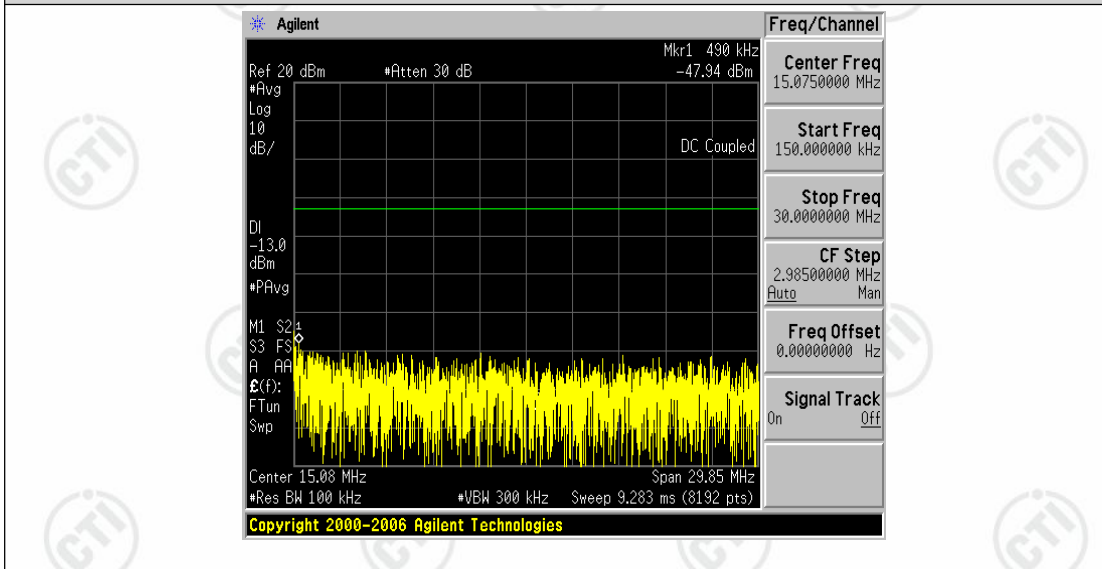
Band5-4182-10000~18000MHz



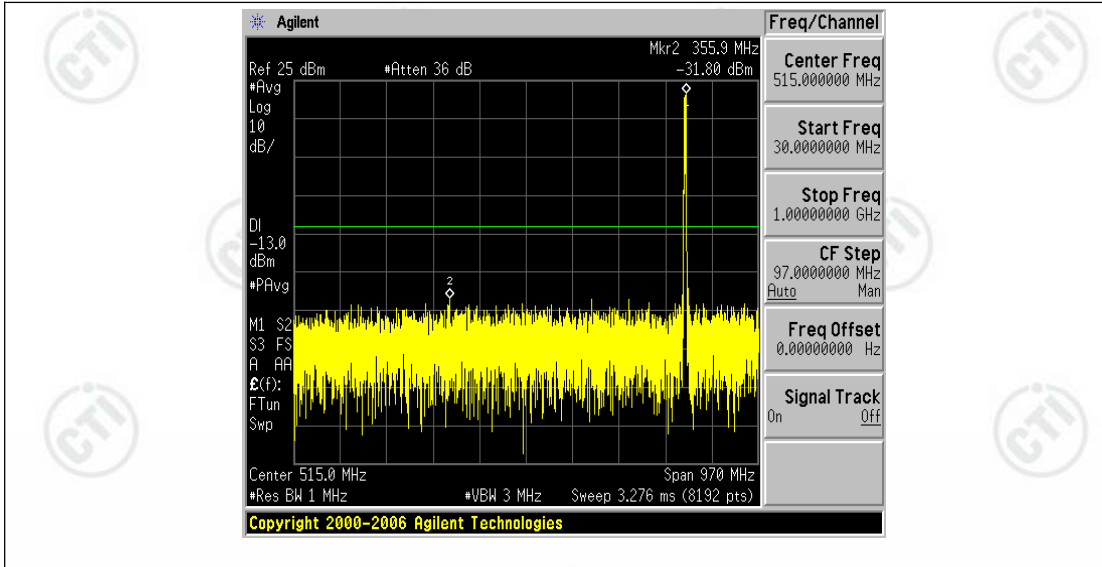
Band5-4233-0.009~0.15MHz



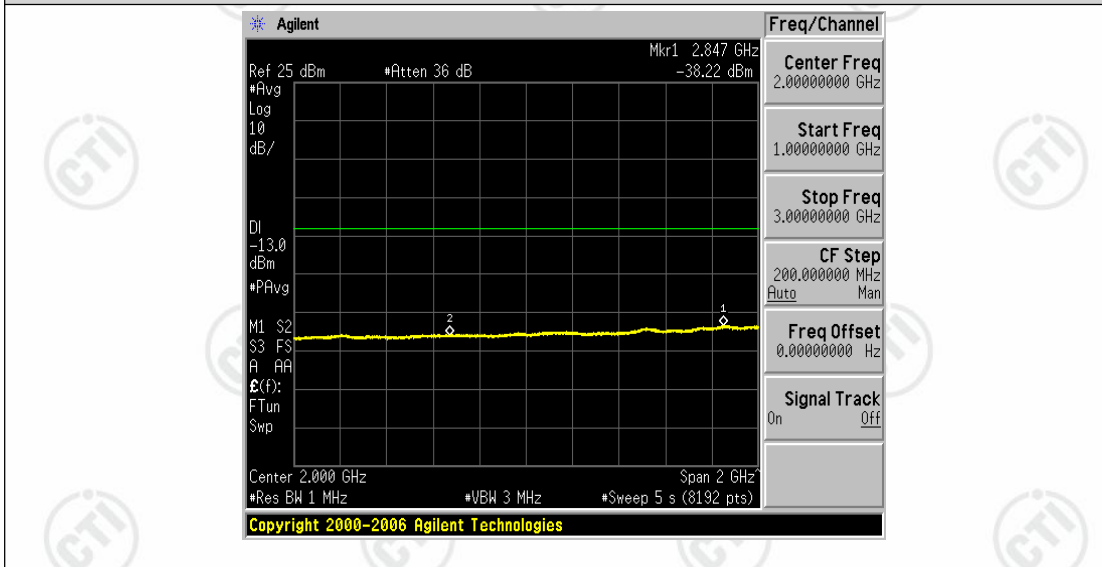
Band5-4233-0.15~30MHz



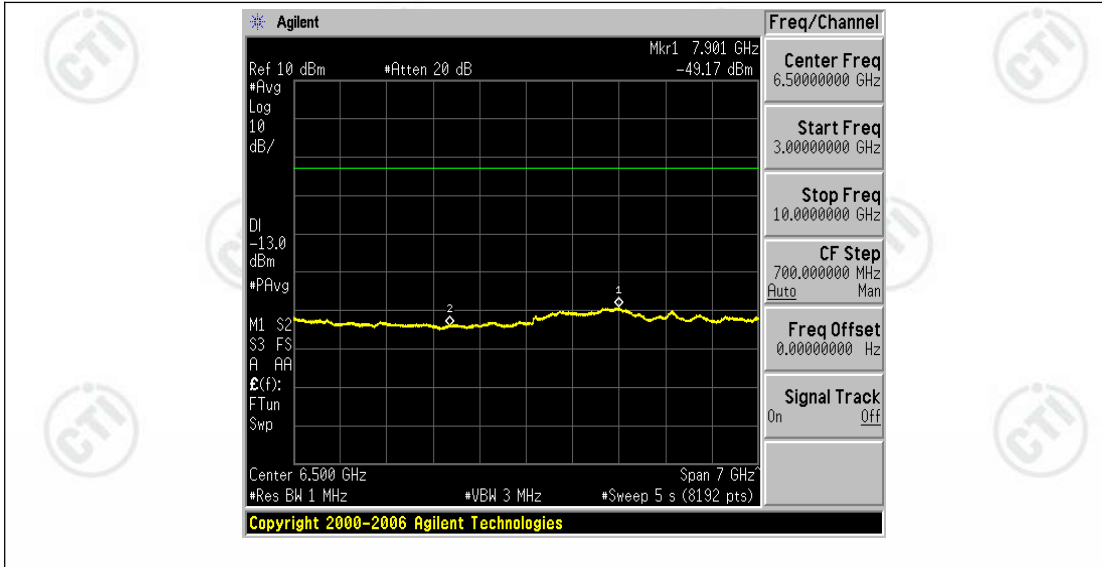
Band5-4233-30~1000MHz



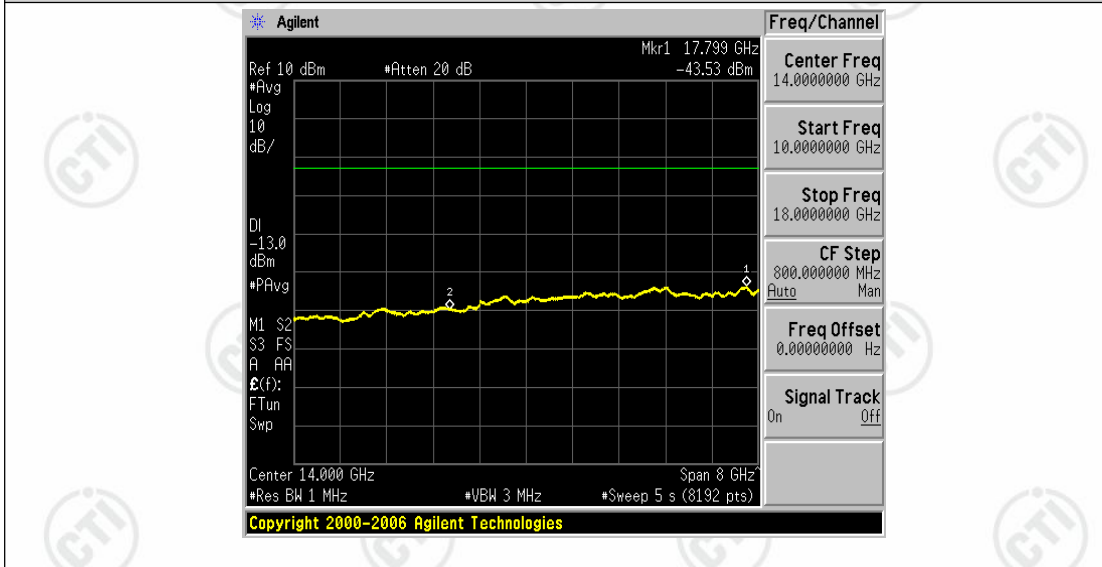
Band5-4233-1000~3000MHz



Band5-4233-3000~10000MHz



Band5-4233-10000~18000MHz



## Appendix F: Frequency Stability

### Test Result

Voltage							
Band	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band2	9262	VL	NT	1.22	0.000659	±2.5	PASS
Band2	9262	VN	NT	0.72	0.000389	±2.5	PASS
Band2	9262	VH	NT	-0.56	-0.000302	±2.5	PASS
Band2	9400	VL	NT	1.90	0.001011	±2.5	PASS
Band2	9400	VN	NT	-4.69	-0.002495	±2.5	PASS
Band2	9400	VH	NT	0.45	0.000239	±2.5	PASS
Band2	9538	VL	NT	-0.27	-0.000142	±2.5	PASS
Band2	9538	VN	NT	-1.56	-0.000818	±2.5	PASS
Band2	9538	VH	NT	-0.48	-0.000252	±2.5	PASS
Band4	1312	VL	NT	0.95	0.000555	±2.5	PASS
Band4	1312	VN	NT	-0.50	-0.000292	±2.5	PASS
Band4	1312	VH	NT	0.62	0.000362	±2.5	PASS
Band4	1413	VL	NT	-0.33	-0.000190	±2.5	PASS
Band4	1413	VN	NT	2.08	0.001201	±2.5	PASS
Band4	1413	VH	NT	-3.91	-0.002257	±2.5	PASS
Band4	1513	VL	NT	-2.93	-0.001672	±2.5	PASS
Band4	1513	VN	NT	0.21	0.000120	±2.5	PASS

Band4	1513	VH	NT	-5.96	-0.003401	±2.5	PASS
Band5	4132	VL	NT	-0.82	-0.000992	±2.5	PASS
Band5	4132	VN	NT	-1.56	-0.001888	±2.5	PASS
Band5	4132	VH	NT	-0.74	-0.000895	±2.5	PASS
Band5	4182	VL	NT	-0.94	-0.001124	±2.5	PASS
Band5	4182	VN	NT	-1.19	-0.001423	±2.5	PASS
Band5	4182	VH	NT	-0.22	-0.000263	±2.5	PASS
Band5	4233	VL	NT	0.72	0.000850	±2.5	PASS
Band5	4233	VN	NT	-0.50	-0.000591	±2.5	PASS
Band5	4233	VH	NT	-2.06	-0.002433	±2.5	PASS

Temperature							
Band	Channel	Voltage (Vdc)	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band2	9262	NV	-30	-0.21	-0.000113	±2.5	PASS
Band2	9262	NV	-20	-0.77	-0.000416	±2.5	PASS
Band2	9262	NV	0	4.28	0.002311	±2.5	PASS
Band2	9262	NV	10	-6.47	-0.003493	±2.5	PASS
Band2	9262	NV	20	-10.41	-0.005620	±2.5	PASS
Band2	9400	NV	-30	3.50	0.001862	±2.5	PASS
Band2	9400	NV	-20	-2.60	-0.001383	±2.5	PASS
Band2	9400	NV	0	-4.37	-0.002324	±2.5	PASS
Band2	9400	NV	10	-4.78	-0.002543	±2.5	PASS



Band2	9400	NV	20	-3.00	-0.001596	±2.5	PASS
Band2	9538	NV	-30	-1.70	-0.000891	±2.5	PASS
Band2	9538	NV	-20	-1.14	-0.000598	±2.5	PASS
Band2	9538	NV	0	-7.36	-0.003858	±2.5	PASS
Band2	9538	NV	10	8.33	0.004367	±2.5	PASS
Band2	9538	NV	20	6.91	0.003622	±2.5	PASS
Band4	1312	NV	-30	-7.20	-0.004205	±2.5	PASS
Band4	1312	NV	-20	-4.91	-0.002867	±2.5	PASS
Band4	1312	NV	0	3.25	0.001898	±2.5	PASS
Band4	1312	NV	10	-1.71	-0.000999	±2.5	PASS
Band4	1312	NV	20	1.29	0.000753	±2.5	PASS
Band4	1413	NV	-30	0.07	0.000040	±2.5	PASS
Band4	1413	NV	-20	4.02	0.002320	±2.5	PASS
Band4	1413	NV	0	-7.72	-0.004456	±2.5	PASS
Band4	1413	NV	10	6.47	0.003734	±2.5	PASS
Band4	1413	NV	20	2.10	0.001212	±2.5	PASS
Band4	1513	NV	-30	0.11	0.000063	±2.5	PASS
Band4	1513	NV	-20	-2.19	-0.001250	±2.5	PASS
Band4	1513	NV	0	-1.58	-0.000902	±2.5	PASS
Band4	1513	NV	10	-5.53	-0.003155	±2.5	PASS
Band4	1513	NV	20	5.57	0.003178	±2.5	PASS
Band5	4132	NV	-30	-0.12	-0.000145	±2.5	PASS

Band5	4132	NV	-20	0.13	0.000157	±2.5	PASS
Band5	4132	NV	0	0.42	0.000508	±2.5	PASS
Band5	4132	NV	10	-0.77	-0.000932	±2.5	PASS
Band5	4132	NV	20	0.08	0.000097	±2.5	PASS
Band5	4182	NV	-30	0.11	0.000132	±2.5	PASS
Band5	4182	NV	-20	-0.55	-0.000658	±2.5	PASS
Band5	4182	NV	0	-2.24	-0.002678	±2.5	PASS
Band5	4182	NV	10	0.15	0.000179	±2.5	PASS
Band5	4182	NV	20	-0.84	-0.001004	±2.5	PASS
Band5	4233	NV	-30	-1.37	-0.001618	±2.5	PASS
Band5	4233	NV	-20	0.13	0.000154	±2.5	PASS
Band5	4233	NV	0	0.36	0.000425	±2.5	PASS
Band5	4233	NV	10	0.28	0.000331	±2.5	PASS
Band5	4233	NV	20	1.32	0.001559	±2.5	PASS

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