Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#0

Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#24

Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#49

Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#0

Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#24

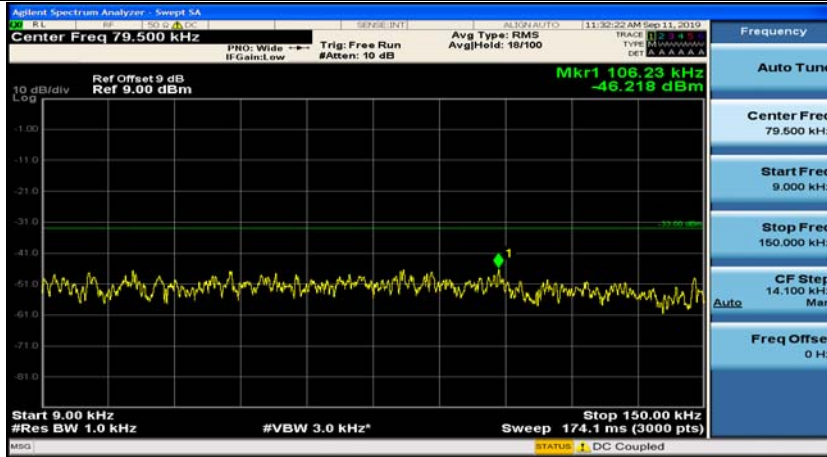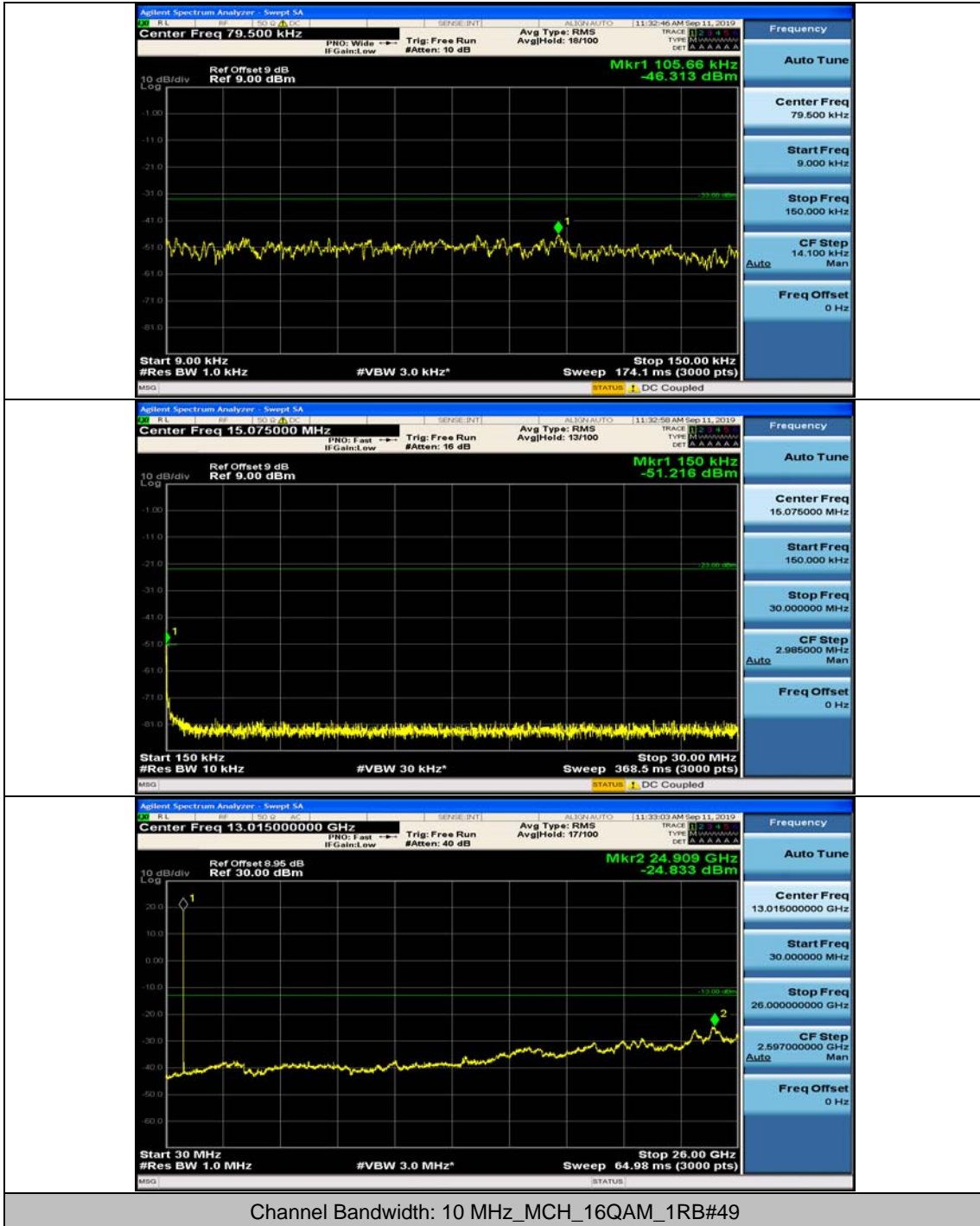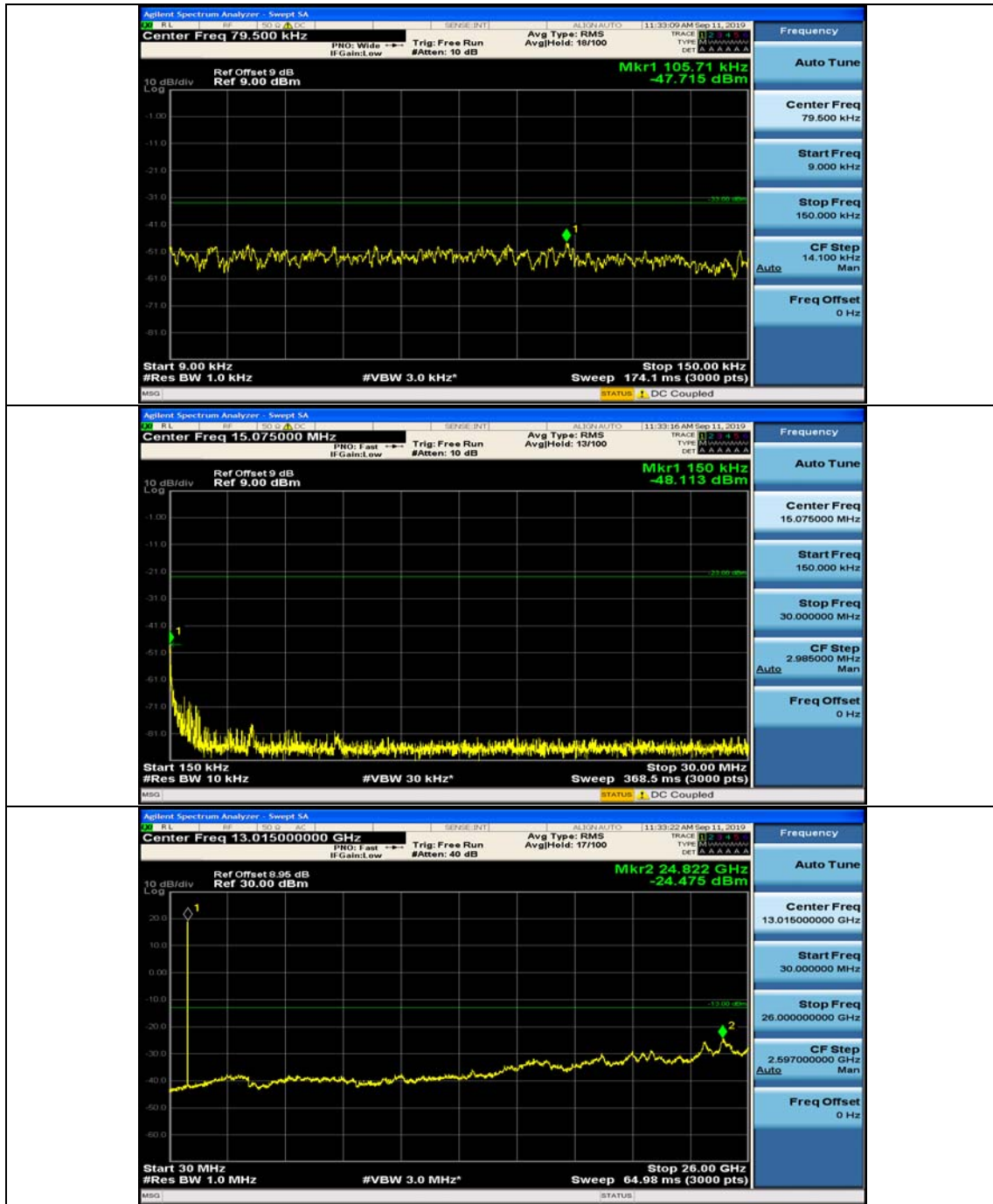Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#49

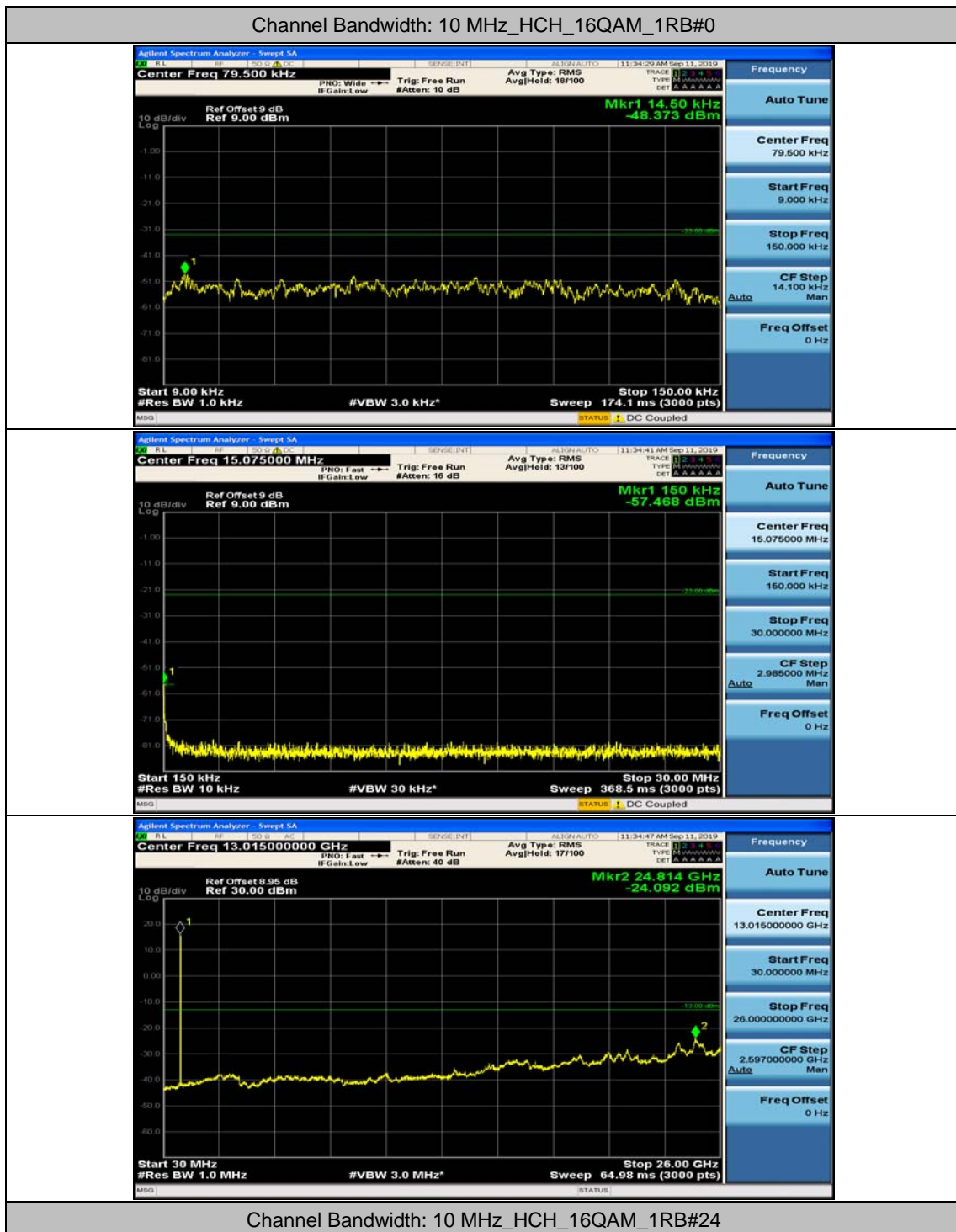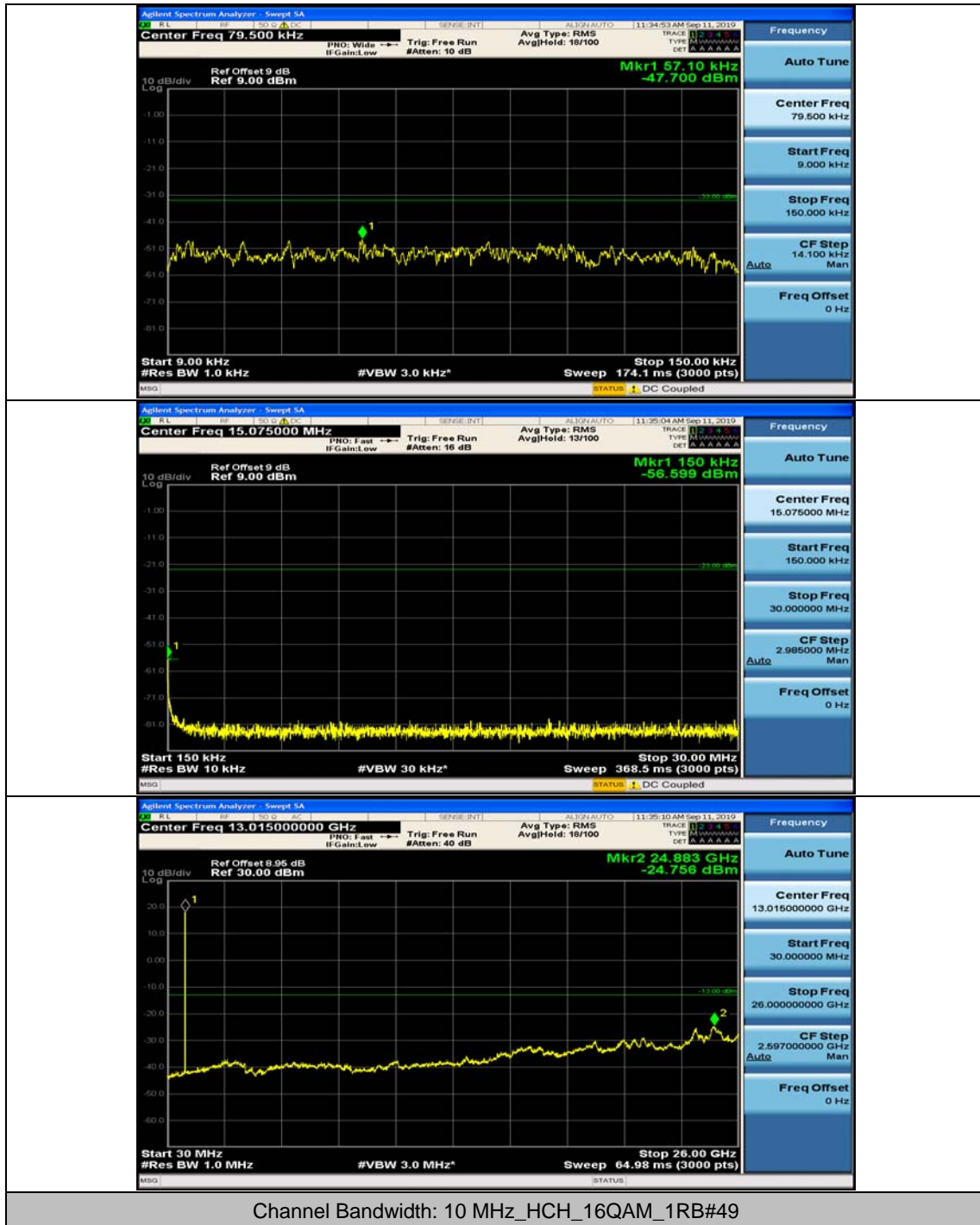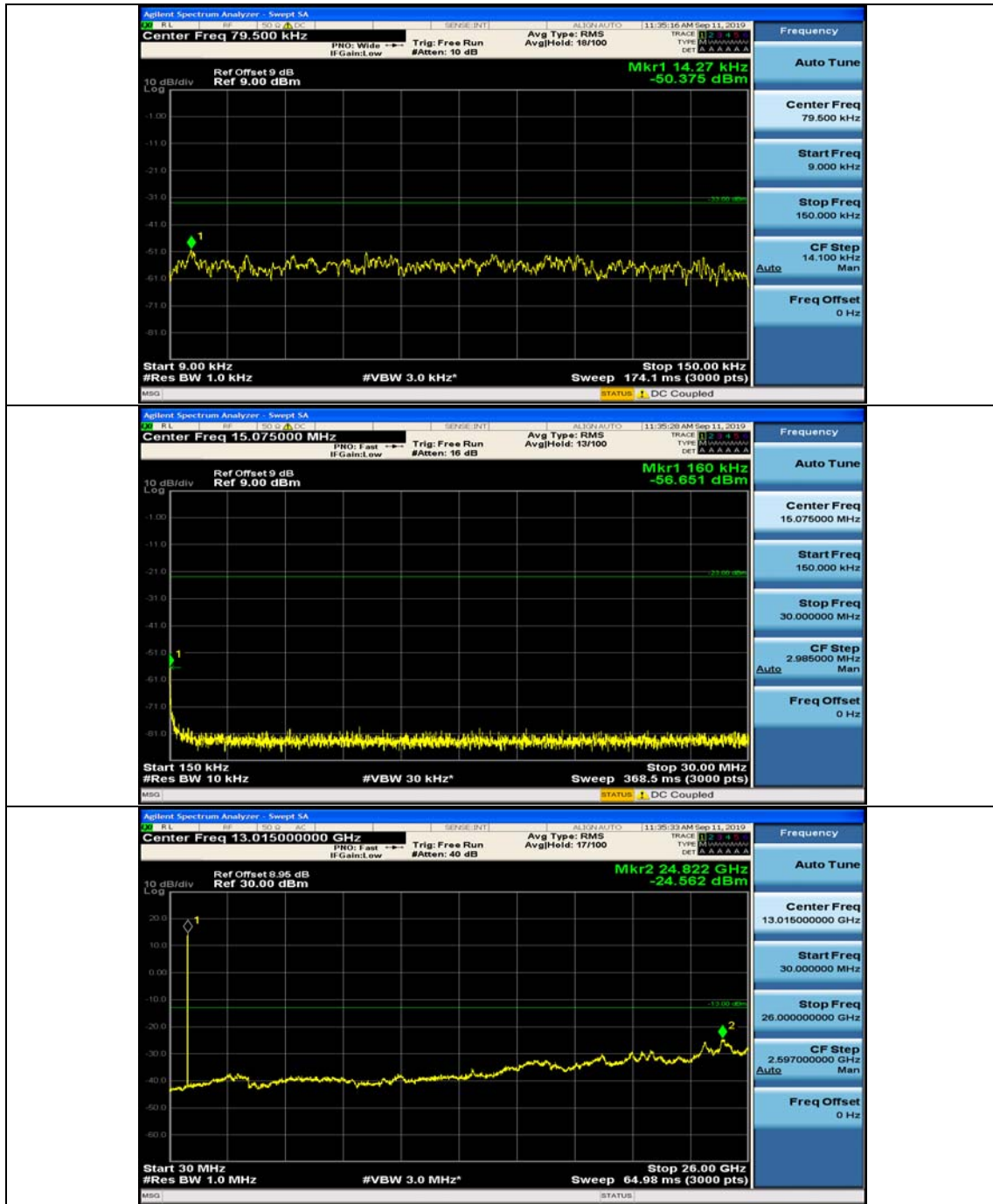| Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#0 |
|---|
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| Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#24 |

Channel Bandwidth: 10 MHz_HCH_16QAM_1RB#49

Appendix F: Frequency Stability

Test Result

Channel Bandwidth: 1.4 MHz

Channel Bandwidth: 1.4 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	-1.75	-0.002122	± 2.5	PASS
		VN	TN	-0.92	-0.001116	± 2.5	PASS
		VH	TN	3.79	0.004596	± 2.5	PASS
	MCH	VL	TN	-1.27	-0.001518	± 2.5	PASS
		VN	TN	2.43	0.002905	± 2.5	PASS
		VH	TN	4.59	0.005487	± 2.5	PASS
	HCH	VL	TN	4	0.004715	± 2.5	PASS
		VN	TN	-0.12	-0.000141	± 2.5	PASS
		VH	TN	2.68	0.003159	± 2.5	PASS
16QAM	LCH	VL	TN	3.46	0.004195	± 2.5	PASS
		VN	TN	-1.27	-0.001540	± 2.5	PASS
		VH	TN	0.46	0.000558	± 2.5	PASS
	MCH	VL	TN	3.78	0.004519	± 2.5	PASS
		VN	TN	-0.08	-0.000096	± 2.5	PASS
		VH	TN	0.13	0.000155	± 2.5	PASS
	HCH	VL	TN	1.14	0.001344	± 2.5	PASS
		VN	TN	-0.18	-0.000212	± 2.5	PASS
		VH	TN	-0.17	-0.000200	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	4.69	0.005687	± 2.5	PASS
		VN	-20	1.3	0.001576	± 2.5	PASS
		VN	-10	-1.5	-0.001819	± 2.5	PASS
		VN	0	-0.06	-0.000073	± 2.5	PASS
		VN	10	2.71	0.003286	± 2.5	PASS
		VN	20	1.31	0.001588	± 2.5	PASS
		VN	30	-1.31	-0.001588	± 2.5	PASS
		VN	40	0.73	0.000885	± 2.5	PASS
		VN	50	3.93	0.004765	± 2.5	PASS
	MCH	VN	-30	0.02	0.000024	± 2.5	PASS
		VN	-20	3.92	0.004686	± 2.5	PASS

		VN	-10	4.15	0.004961	± 2.5	PASS
		VN	0	2.78	0.003323	± 2.5	PASS
		VN	10	4.07	0.004866	± 2.5	PASS
		VN	20	3.9	0.004662	± 2.5	PASS
		VN	30	-0.56	-0.000669	± 2.5	PASS
		VN	40	2.22	0.002654	± 2.5	PASS
		VN	50	2.13	0.002546	± 2.5	PASS
	HCH	VN	-30	2.47	0.002912	± 2.5	PASS
		VN	-20	1.7	0.002004	± 2.5	PASS
		VN	-10	4.25	0.005010	± 2.5	PASS
		VN	0	-0.38	-0.000448	± 2.5	PASS
		VN	10	-1.57	-0.001851	± 2.5	PASS
		VN	20	4.09	0.004821	± 2.5	PASS
		VN	30	4.72	0.005564	± 2.5	PASS
		VN	40	-0.2	-0.000236	± 2.5	PASS
		VN	50	4.87	0.005741	± 2.5	PASS
16QAM	LCH	VN	-30	-1.11	-0.001346	± 2.5	PASS
		VN	-20	2.21	0.002680	± 2.5	PASS
		VN	-10	2.59	0.003141	± 2.5	PASS
		VN	0	-0.25	-0.000303	± 2.5	PASS
		VN	10	3.3	0.004001	± 2.5	PASS
		VN	20	2	0.002425	± 2.5	PASS
		VN	30	-0.21	-0.000255	± 2.5	PASS
		VN	40	2.32	0.002813	± 2.5	PASS
		VN	50	4.91	0.005954	± 2.5	PASS
	MCH	VN	-30	1.97	0.002322	± 2.5	PASS
		VN	-20	3.4	0.004008	± 2.5	PASS
		VN	-10	-0.36	-0.000424	± 2.5	PASS
		VN	0	1.73	0.002039	± 2.5	PASS
		VN	10	-1.05	-0.001238	± 2.5	PASS
		VN	20	2.07	0.002440	± 2.5	PASS
		VN	30	0.34	0.000401	± 2.5	PASS
		VN	40	1.28	0.001509	± 2.5	PASS
		VN	50	1.37	0.001615	± 2.5	PASS
	HCH	VN	-30	-1.63	-0.001921	± 2.5	PASS
		VN	-20	3.06	0.003607	± 2.5	PASS
		VN	-10	-0.13	-0.000153	± 2.5	PASS
		VN	0	0.79	0.000931	± 2.5	PASS
		VN	10	-0.27	-0.000318	± 2.5	PASS
		VN	20	0.79	0.000931	± 2.5	PASS
		VN	30	-1.8	-0.002122	± 2.5	PASS

| | | VN | 40 | 1.92 | 0.002263 | ± 2.5 | PASS |
| | | VN | 50 | 3.89 | 0.004586 | ± 2.5 | PASS |

Channel Bandwidth: 3 MHz

Channel Bandwidth: 3 MHz+							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	3.12	0.003780	± 2.5	PASS
		VN	TN	1.56	0.001890	± 2.5	PASS
		VH	TN	2.08	0.002520	± 2.5	PASS
	MCH	VL	TN	4.94	0.005906	± 2.5	PASS
		VN	TN	4.71	0.005631	± 2.5	PASS
		VH	TN	-0.54	-0.000646	± 2.5	PASS
	HCH	VL	TN	3.31	0.003906	± 2.5	PASS
		VN	TN	-1.58	-0.001864	± 2.5	PASS
		VH	TN	-1.12	-0.001322	± 2.5	PASS
16QAM	LCH	VL	TN	1.14	0.001381	± 2.5	PASS
		VN	TN	-0.94	-0.001139	± 2.5	PASS
		VH	TN	4.21	0.005100	± 2.5	PASS
	MCH	VL	TN	-0.3	-0.000359	± 2.5	PASS
		VN	TN	4.06	0.004854	± 2.5	PASS
		VH	TN	-0.48	-0.000574	± 2.5	PASS
	HCH	VL	TN	1.2	0.001416	± 2.5	PASS
		VN	TN	1.21	0.001428	± 2.5	PASS
		VH	TN	-1.58	-0.001864	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	-0.47	-0.000569	± 2.5	PASS
		VN	-20	4.91	0.005948	± 2.5	PASS
		VN	-10	-0.19	-0.000230	± 2.5	PASS
		VN	0	-1.12	-0.001357	± 2.5	PASS
		VN	10	3.78	0.004579	± 2.5	PASS
		VN	20	1.96	0.002374	± 2.5	PASS
		VN	30	4.83	0.005851	± 2.5	PASS
		VN	40	3.1	0.003755	± 2.5	PASS
		VN	50	1.37	0.001660	± 2.5	PASS
	MCH	VN	-30	0.18	0.000215	± 2.5	PASS
		VN	-20	-0.44	-0.000526	± 2.5	PASS
		VN	-10	-0.54	-0.000646	± 2.5	PASS

		VN	0	-0.89	-0.001064	± 2.5	PASS
		VN	10	0.83	0.000992	± 2.5	PASS
		VN	20	-0.42	-0.000502	± 2.5	PASS
		VN	30	-0.84	-0.001004	± 2.5	PASS
		VN	40	1.49	0.001781	± 2.5	PASS
		VN	50	2.78	0.003323	± 2.5	PASS
	HCH	VN	-30	4.98	0.005876	± 2.5	PASS
		VN	-20	-0.48	-0.000566	± 2.5	PASS
		VN	-10	0.17	0.000201	± 2.5	PASS
		VN	0	2.03	0.002395	± 2.5	PASS
		VN	10	-0.53	-0.000625	± 2.5	PASS
		VN	20	3.11	0.003670	± 2.5	PASS
		VN	30	-0.1	-0.000118	± 2.5	PASS
		VN	40	-1.58	-0.001864	± 2.5	PASS
		VN	50	4.8	0.005664	± 2.5	PASS
QPSK	LCH	VN	-30	3.85	0.004603	± 2.5	PASS
		VN	-20	-0.66	-0.000789	± 2.5	PASS
		VN	-10	0.39	0.000466	± 2.5	PASS
		VN	0	-1.3	-0.001554	± 2.5	PASS
		VN	10	-0.19	-0.000227	± 2.5	PASS
		VN	20	0.41	0.000490	± 2.5	PASS
		VN	30	0.49	0.000586	± 2.5	PASS
		VN	40	3.02	0.003610	± 2.5	PASS
		VN	50	-1.42	-0.001698	± 2.5	PASS
	MCH	VN	-30	-1.94	-0.002289	± 2.5	PASS
		VN	-20	3.78	0.004460	± 2.5	PASS
		VN	-10	-1.63	-0.001923	± 2.5	PASS
		VN	0	2.1	0.002478	± 2.5	PASS
		VN	10	3.22	0.003799	± 2.5	PASS
		VN	20	2.86	0.003375	± 2.5	PASS
		VN	30	-1.5	-0.001770	± 2.5	PASS
		VN	40	-0.51	-0.000602	± 2.5	PASS
		VN	50	1.63	0.001923	± 2.5	PASS
	HCH	VN	-30	2.57	0.003032	± 2.5	PASS
		VN	-20	2.92	0.003445	± 2.5	PASS
		VN	-10	2.43	0.002867	± 2.5	PASS
		VN	0	1.4	0.001652	± 2.5	PASS
		VN	10	0.73	0.000861	± 2.5	PASS
		VN	20	0	0.000000	± 2.5	PASS
		VN	30	2.23	0.002631	± 2.5	PASS
		VN	40	-1.24	-0.001463	± 2.5	PASS

		VN	50	1.46	0.001723	± 2.5	PASS

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	2.32	0.002807	± 2.5	PASS
		VN	TN	4.67	0.005650	± 2.5	PASS
		VH	TN	0.74	0.000895	± 2.5	PASS
	MCH	VL	TN	2.21	0.002642	± 2.5	PASS
		VN	TN	1.71	0.002044	± 2.5	PASS
		VH	TN	-1.44	-0.001721	± 2.5	PASS
	HCH	VL	TN	3.14	0.003709	± 2.5	PASS
		VN	TN	4.55	0.005375	± 2.5	PASS
		VH	TN	0.76	0.000898	± 2.5	PASS
16QAM	LCH	VL	TN	-0.01	-0.000012	± 2.5	PASS
		VN	TN	3.06	0.003702	± 2.5	PASS
		VH	TN	1.94	0.002347	± 2.5	PASS
	MCH	VL	TN	0.6	0.000717	± 2.5	PASS
		VN	TN	3	0.003586	± 2.5	PASS
		VH	TN	0.69	0.000825	± 2.5	PASS
	HCH	VL	TN	4.9	0.005789	± 2.5	PASS
		VN	TN	4.81	0.005682	± 2.5	PASS
		VH	TN	4.75	0.005611	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VN	-30	3.75	0.004537	± 2.5	PASS
		VN	-20	2.98	0.003606	± 2.5	PASS
		VN	-10	1.72	0.002081	± 2.5	PASS
		VN	0	-1.09	-0.001319	± 2.5	PASS
		VN	10	3.07	0.003714	± 2.5	PASS
		VN	20	-1.99	-0.002408	± 2.5	PASS
		VN	30	0.36	0.000436	± 2.5	PASS
		VN	40	-1.15	-0.001391	± 2.5	PASS
		VN	50	0.32	0.000387	± 2.5	PASS
	MCH	VN	-30	-1.05	-0.001255	± 2.5	PASS
		VN	-20	4.85	0.005798	± 2.5	PASS
		VN	-10	1.89	0.002259	± 2.5	PASS
		VN	0	2.28	0.002726	± 2.5	PASS

		VN	10	4.48	0.005356	± 2.5	PASS
		VN	20	-0.37	-0.000442	± 2.5	PASS
		VN	30	2.76	0.003299	± 2.5	PASS
		VN	40	1.24	0.001482	± 2.5	PASS
		VN	50	1.04	0.001243	± 2.5	PASS
	HCH	VN	-30	-1.81	-0.002138	± 2.5	PASS
		VN	-20	0.31	0.000366	± 2.5	PASS
		VN	-10	3.88	0.004584	± 2.5	PASS
		VN	0	0.33	0.000390	± 2.5	PASS
		VN	10	3.57	0.004217	± 2.5	PASS
		VN	20	3.56	0.004206	± 2.5	PASS
		VN	30	-1.96	-0.002315	± 2.5	PASS
		VN	40	-1.03	-0.001217	± 2.5	PASS
		VN	50	-0.02	-0.000024	± 2.5	PASS
16QAM	LCH	VN	-30	2.82	0.003371	± 2.5	PASS
		VN	-20	2.2	0.002630	± 2.5	PASS
		VN	-10	-1.53	-0.001829	± 2.5	PASS
		VN	0	1.78	0.002128	± 2.5	PASS
		VN	10	1.6	0.001913	± 2.5	PASS
		VN	20	2.36	0.002821	± 2.5	PASS
		VN	30	-1.64	-0.001961	± 2.5	PASS
		VN	40	4.06	0.004854	± 2.5	PASS
		VN	50	3.91	0.004674	± 2.5	PASS
	MCH	VN	-30	1.27	0.001500	± 2.5	PASS
		VN	-20	-0.27	-0.000319	± 2.5	PASS
		VN	-10	-1.68	-0.001985	± 2.5	PASS
		VN	0	4.29	0.005068	± 2.5	PASS
		VN	10	1.13	0.001335	± 2.5	PASS
		VN	20	0.18	0.000213	± 2.5	PASS
		VN	30	1.99	0.002351	± 2.5	PASS
		VN	40	-0.14	-0.000165	± 2.5	PASS
		VN	50	1.67	0.001973	± 2.5	PASS
	HCH	VN	-30	1.91	0.002256	± 2.5	PASS
		VN	-20	0.96	0.001134	± 2.5	PASS
		VN	-10	3.67	0.004335	± 2.5	PASS
		VN	0	0.36	0.000425	± 2.5	PASS
		VN	10	-1.53	-0.001807	± 2.5	PASS
		VN	20	-1.85	-0.002185	± 2.5	PASS
		VN	30	2.13	0.002516	± 2.5	PASS
		VN	40	-0.44	-0.000520	± 2.5	PASS
		VN	50	-1.03	-0.001217	± 2.5	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz							
Voltage							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
QPSK	LCH	VL	TN	0.77	0.000929	± 2.5	PASS
		VN	TN	4.12	0.004970	± 2.5	PASS
		VH	TN	1.63	0.001966	± 2.5	PASS
	MCH	VL	TN	-0.96	-0.001148	± 2.5	PASS
		VN	TN	-1.03	-0.001231	± 2.5	PASS
		VH	TN	3.88	0.004638	± 2.5	PASS
	HCH	VL	TN	4.55	0.005391	± 2.5	PASS
		VN	TN	0.15	0.000178	± 2.5	PASS
		VH	TN	1.58	0.001872	± 2.5	PASS
16QAM	LCH	VL	TN	-1.46	-0.001761	± 2.5	PASS
		VN	TN	0.02	0.000024	± 2.5	PASS
		VH	TN	1.79	0.002159	± 2.5	PASS
	MCH	VL	TN	-0.77	-0.000921	± 2.5	PASS
		VN	TN	3.54	0.004232	± 2.5	PASS
		VH	TN	0.27	0.000323	± 2.5	PASS
	HCH	VL	TN	0.09	0.000107	± 2.5	PASS
		VN	TN	3.01	0.003566	± 2.5	PASS
		VH	TN	4.52	0.005355	± 2.5	PASS
Temperature							
Modulation	Channel	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
16QAM	LCH	VN	-30	-0.9	-0.001086	± 2.5	PASS
		VN	-20	0.75	0.000905	± 2.5	PASS
		VN	-10	3.99	0.004813	± 2.5	PASS
		VN	0	-0.15	-0.000181	± 2.5	PASS
		VN	10	0.86	0.001037	± 2.5	PASS
		VN	20	1.11	0.001339	± 2.5	PASS
		VN	30	-0.59	-0.000712	± 2.5	PASS
		VN	40	-1.58	-0.001906	± 2.5	PASS
		VN	50	0.59	0.000712	± 2.5	PASS
	MCH	VN	-30	0.23	0.000275	± 2.5	PASS
		VN	-20	1.54	0.001841	± 2.5	PASS
		VN	-10	-1.35	-0.001614	± 2.5	PASS
		VN	0	-0.42	-0.000502	± 2.5	PASS
		VN	10	0.81	0.000968	± 2.5	PASS
		VN	20	2.27	0.002714	± 2.5	PASS

		VN	30	-1.94	-0.002319	± 2.5	PASS
		VN	40	-0.76	-0.000909	± 2.5	PASS
		VN	50	-1.65	-0.001973	± 2.5	PASS
	HCH	VN	-30	0.33	0.000391	± 2.5	PASS
		VN	-20	3.65	0.004325	± 2.5	PASS
		VN	-10	1.42	0.001682	± 2.5	PASS
		VN	0	-1.91	-0.002263	± 2.5	PASS
		VN	10	-1.91	-0.002263	± 2.5	PASS
		VN	20	3.38	0.004005	± 2.5	PASS
		VN	30	0.08	0.000095	± 2.5	PASS
		VN	40	-1.97	-0.002334	± 2.5	PASS
		VN	50	0.33	0.000391	± 2.5	PASS
QPSK	LCH	VN	-30	-0.7	-0.000837	± 2.5	PASS
		VN	-20	4.84	0.005786	± 2.5	PASS
		VN	-10	2.76	0.003299	± 2.5	PASS
		VN	0	2.73	0.003264	± 2.5	PASS
		VN	10	0.65	0.000777	± 2.5	PASS
		VN	20	1.66	0.001984	± 2.5	PASS
		VN	30	0	0.000000	± 2.5	PASS
		VN	40	2.32	0.002773	± 2.5	PASS
		VN	50	-0.13	-0.000155	± 2.5	PASS
	MCH	VN	-30	1.9	0.002251	± 2.5	PASS
		VN	-20	-0.53	-0.000628	± 2.5	PASS
		VN	-10	4.7	0.005569	± 2.5	PASS
		VN	0	4.5	0.005332	± 2.5	PASS
		VN	10	0.18	0.000213	± 2.5	PASS
		VN	20	-1.43	-0.001694	± 2.5	PASS
		VN	30	3.9	0.004621	± 2.5	PASS
		VN	40	-1.91	-0.002263	± 2.5	PASS
		VN	50	-1.66	-0.001967	± 2.5	PASS
	HCH	VN	-30	1.83	0.002168	± 2.5	PASS
		VN	-20	3.85	0.004562	± 2.5	PASS
		VN	-10	3.57	0.004230	± 2.5	PASS
		VN	0	1.2	0.001422	± 2.5	PASS
		VN	10	2.7	0.003199	± 2.5	PASS
		VN	20	0.2	0.000237	± 2.5	PASS
		VN	30	-1.01	-0.001197	± 2.5	PASS
		VN	40	-0.21	-0.000249	± 2.5	PASS
		VN	50	1.26	0.001493	± 2.5	PASS