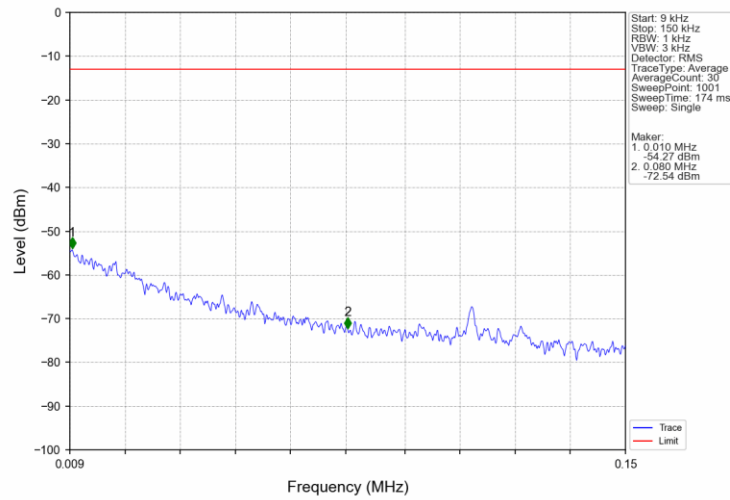
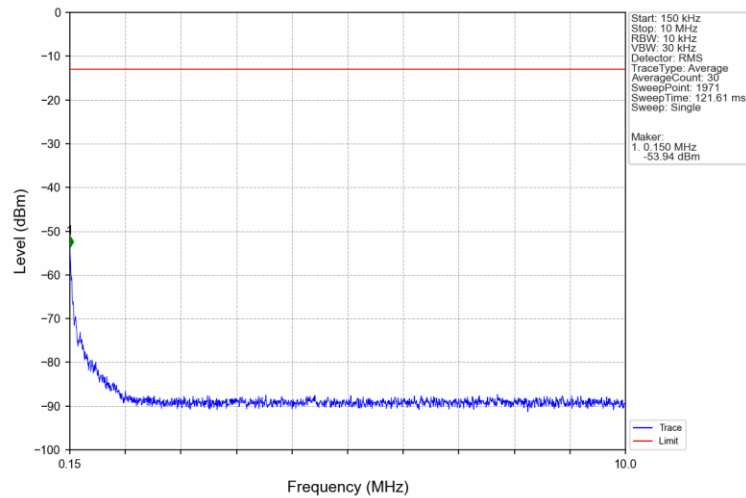


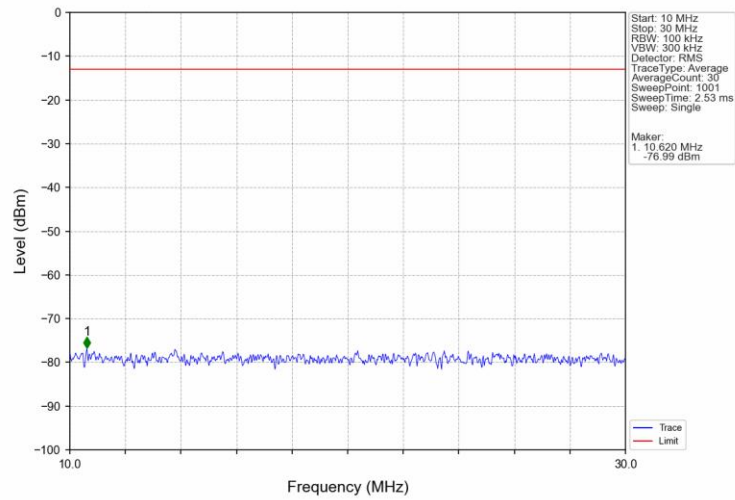
Band12_10MHz_QPSK_MCH_707.5MHz_RB_1_0_NTNV



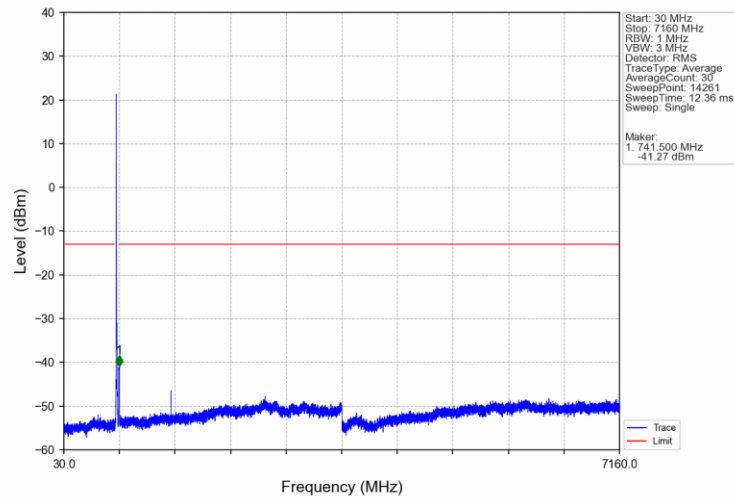
Band12_10MHz_QPSK_MCH_707.5MHz_RB_1_0_NTNV



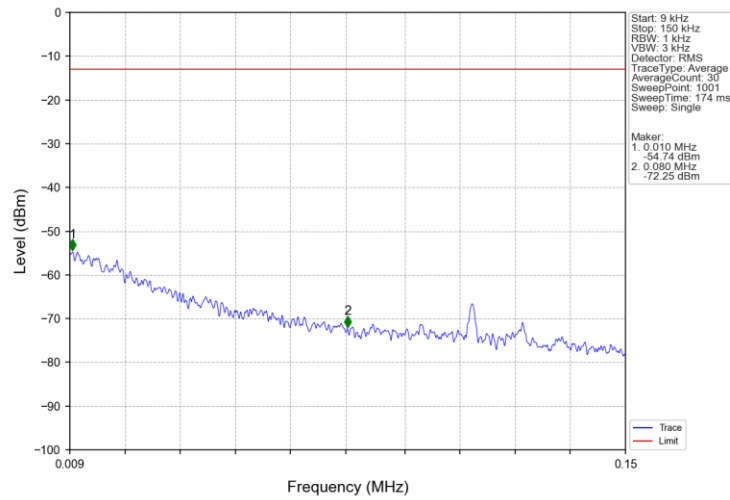
Band12_10MHz_QPSK_MCH_707.5MHz_RB_1_0_NTNV



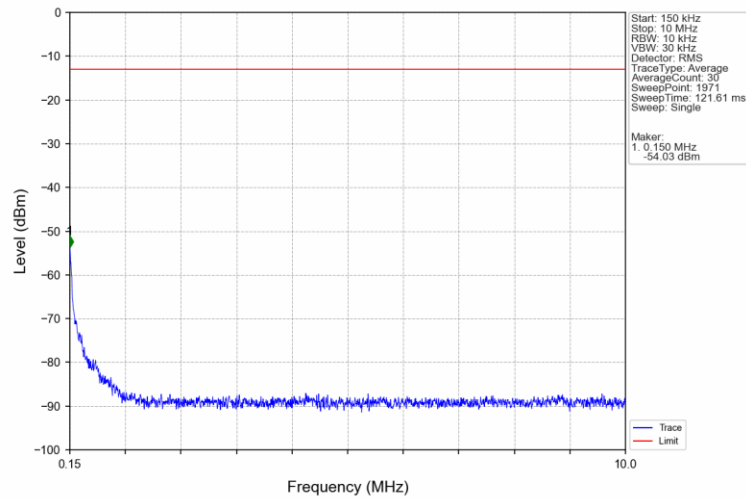
Band12_10MHz_QPSK_MCH_707.5MHz_RB_1_0_NTNV



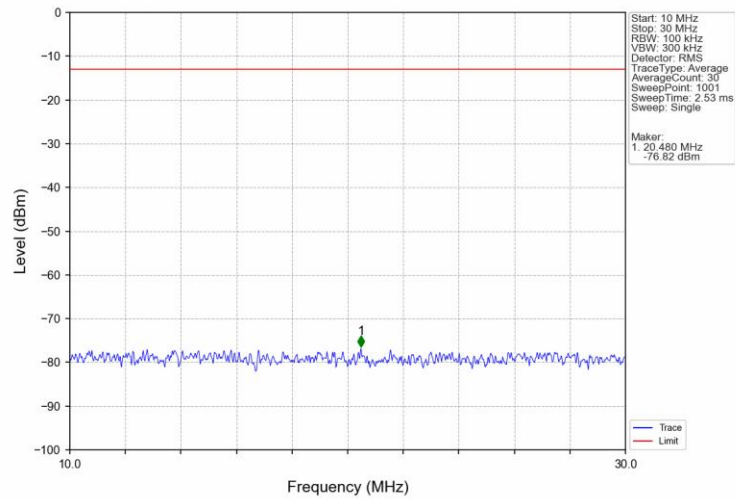
Band12_10MHz_QPSK_HCH_711MHz_RB_1_0_NTNV



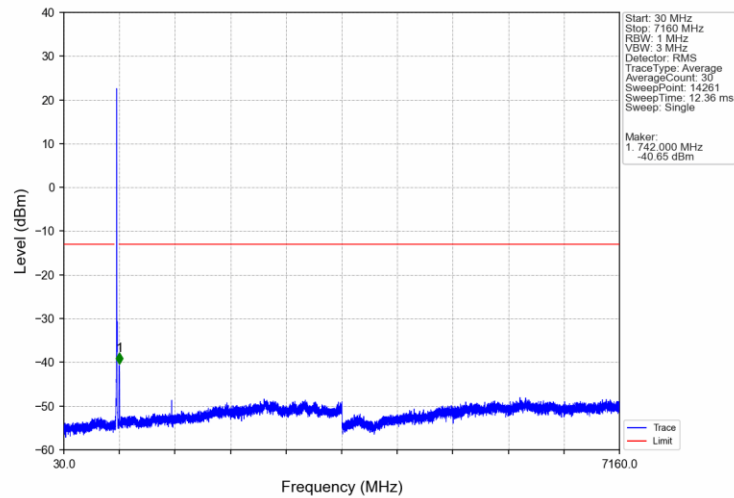
Band12_10MHz_QPSK_HCH_711MHz_RB_1_0_NTNV



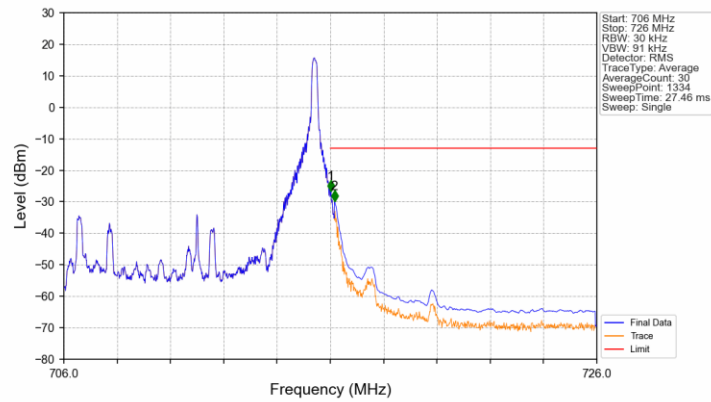
Band12_10MHz_QPSK_HCH_711MHz_RB_1_0_NTNV



Band12_10MHz_QPSK_HCH_711MHz_RB_1_0_NTNV

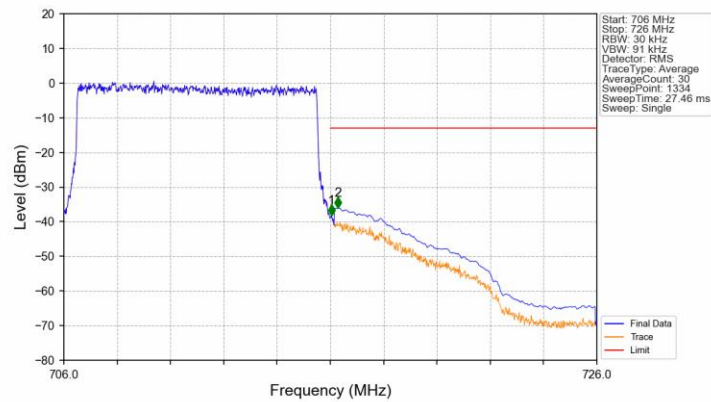


Band12_10MHz_QPSK_HCH_711MHz_RB_1_49_NTNV



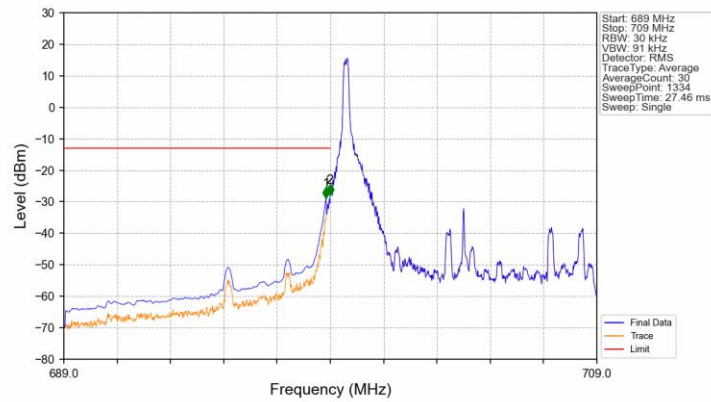
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
706	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.023	-26.68	-13	Pass
716.1	726	0.1	CHP	2	716.158	-29.92	-13	Pass

Band12_10MHz_QPSK_HCH_711MHz_RB_50_0_NTNV



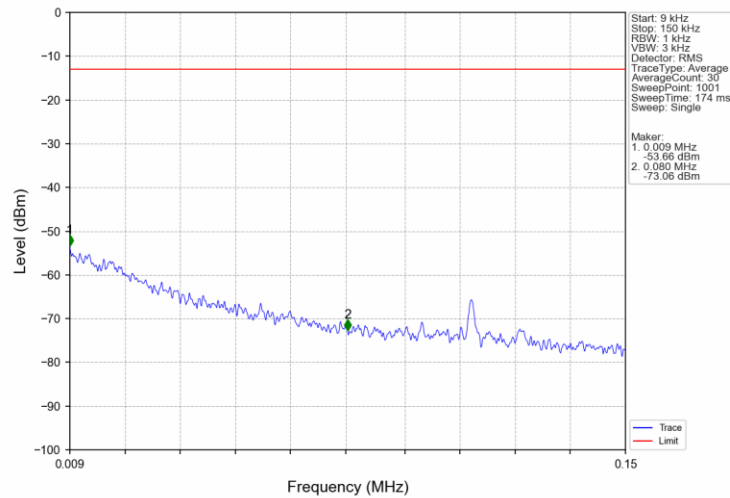
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
706	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.038	-38.17	-13	Pass
716.1	726	0.1	CHP	2	716.293	-36.04	-13	Pass

Band12_10MHz_16QAM_LCH_704MHz_RB_1_0_NTNV

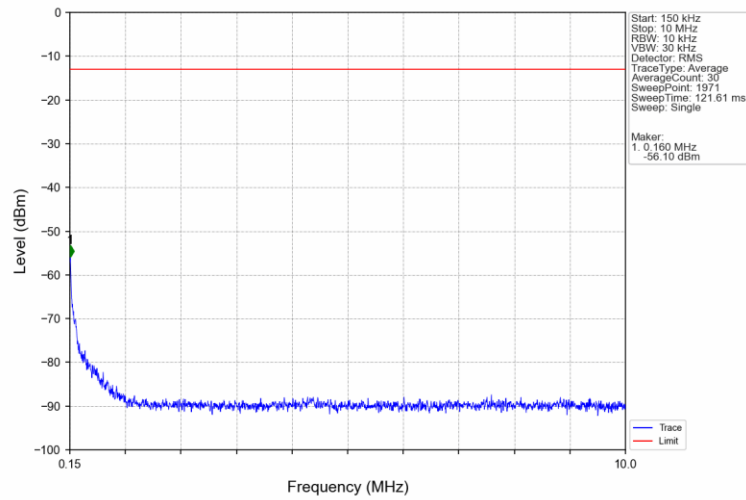


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
689	698.9	0.1	CHP	1	698.842	-28.83	-13	Pass
698.9	699	0.03	/	2	698.992	-27.85	-13	Pass
699	709	0.03	/	/	/	/	/	/

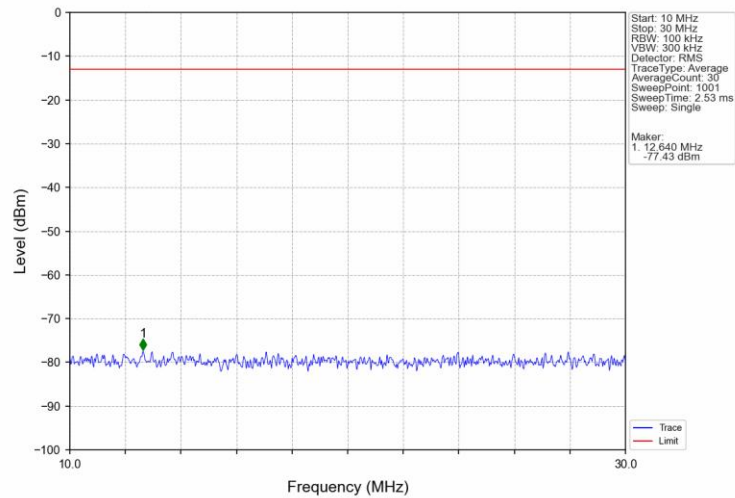
Band12_10MHz_16QAM_LCH_704MHz_RB_1_0_NTNV



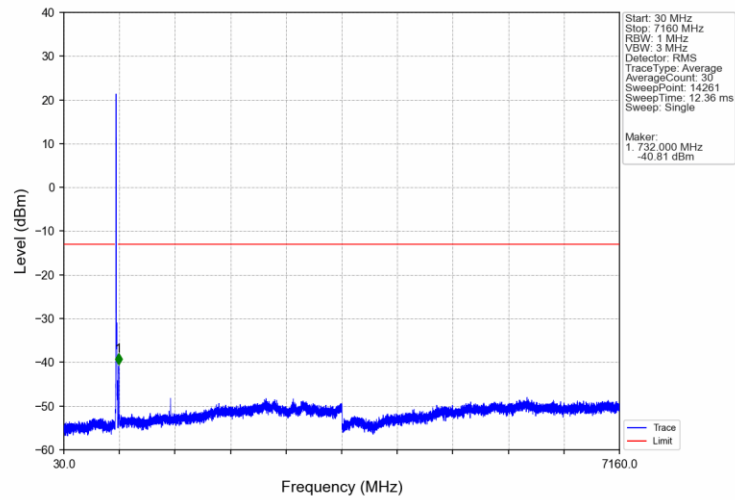
Band12_10MHz_16QAM_LCH_704MHz_RB_1_0_NTNV



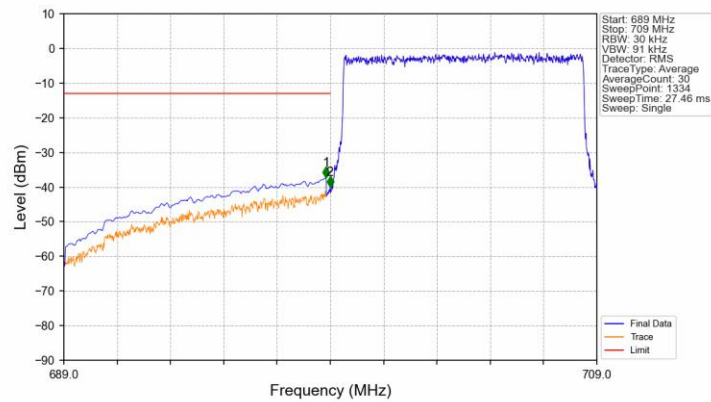
Band12_10MHz_16QAM_LCH_704MHz_RB_1_0_NTNV



Band12_10MHz_16QAM_LCH_704MHz_RB_1_0_NTNV

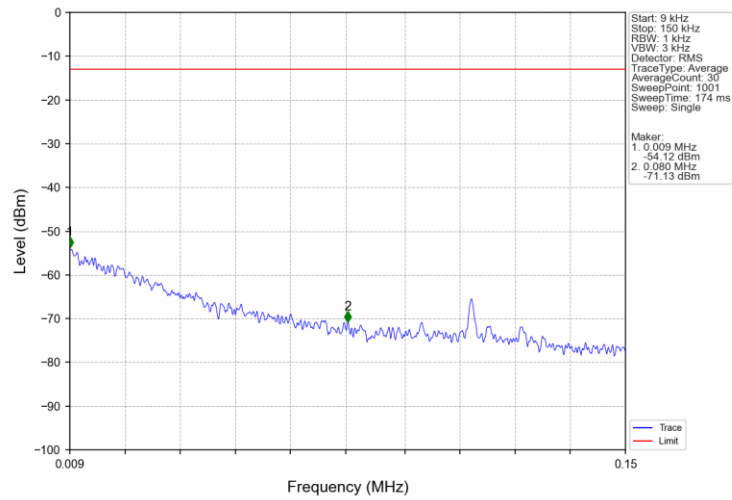


Band12_10MHz_16QAM_LCH_704MHz_RB_50_0_NTNV

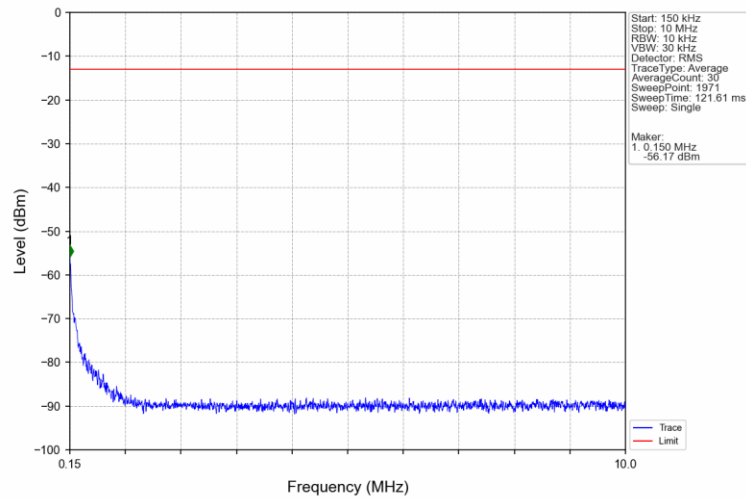


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
689	698.9	0.1	CHP	1	698.842	-37.35	-13	Pass
698.9	699	0.03	/	2	698.992	-40.03	-13	Pass
699	709	0.03	/	/	/	/	/	/

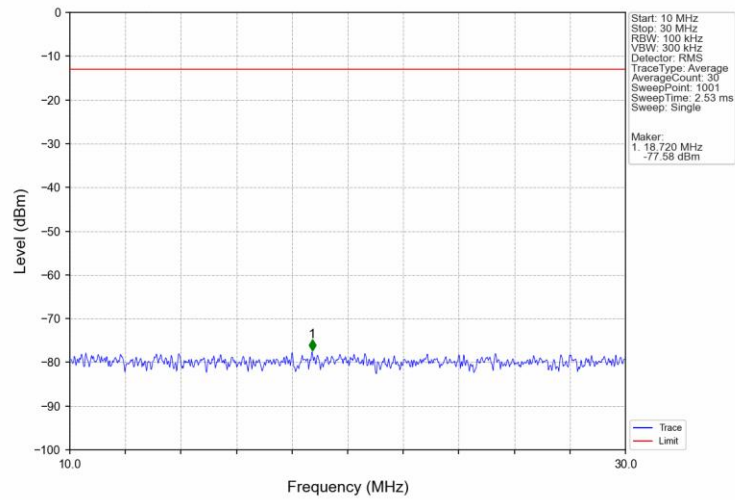
Band12_10MHz_16QAM_MCH_707.5MHz_RB_1_0_NTNV



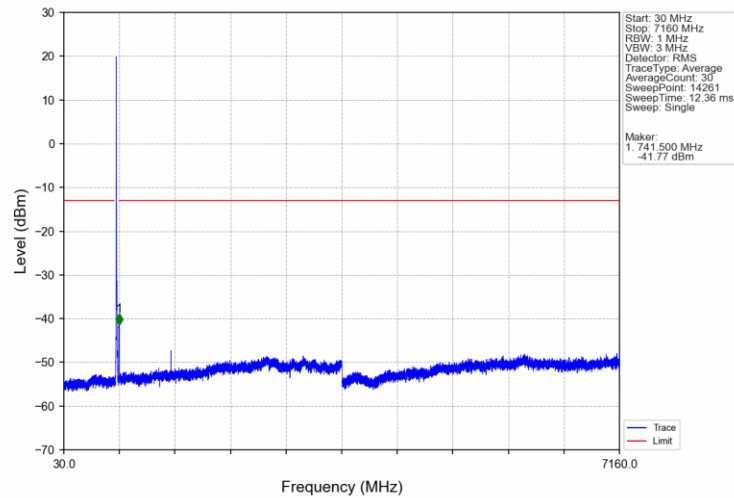
Band12_10MHz_16QAM_MCH_707.5MHz_RB_1_0_NTNV



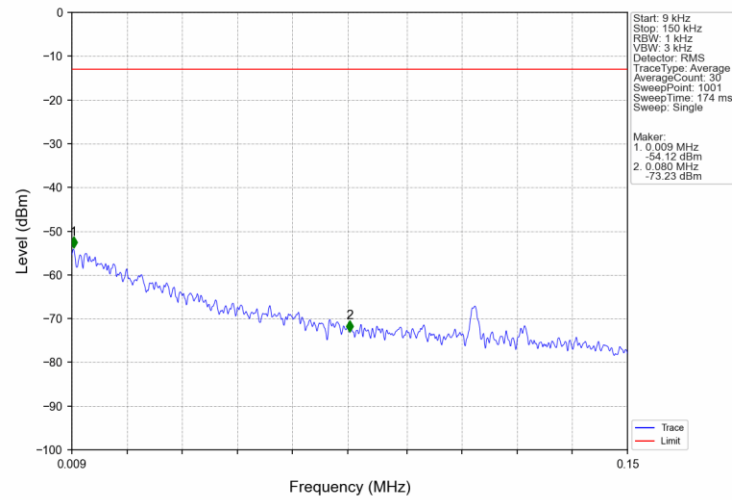
Band12_10MHz_16QAM_MCH_707.5MHz_RB_1_0_NTNV



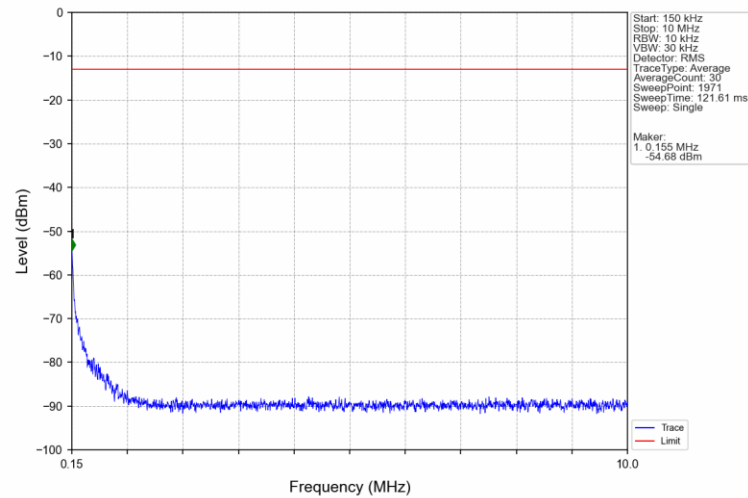
Band12_10MHz_16QAM_MCH_707.5MHz_RB_1_0_NTNV



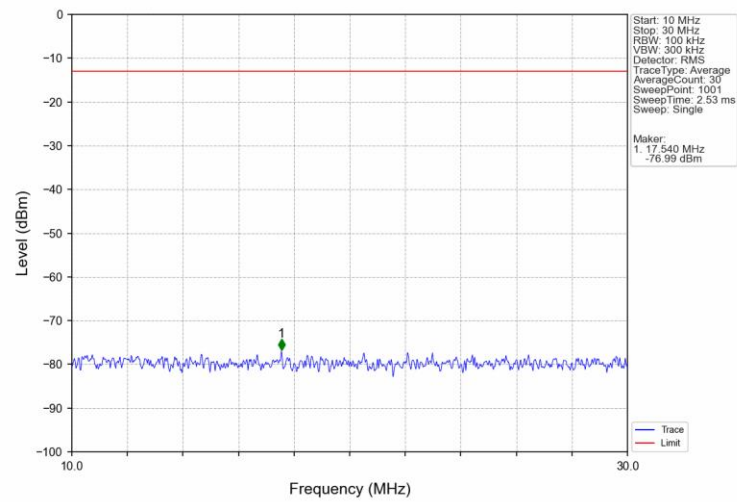
Band12_10MHz_16QAM_HCH_711MHz_RB_1_0_NTNV



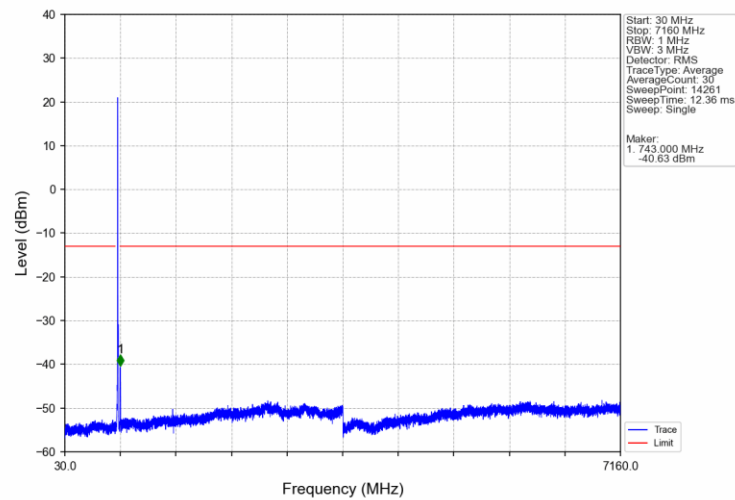
Band12_10MHz_16QAM_HCH_711MHz_RB_1_0_NTNV



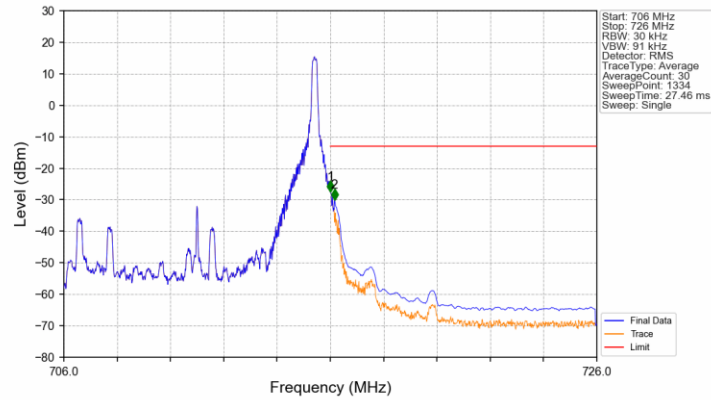
Band12_10MHz_16QAM_HCH_711MHz_RB_1_0_NTNV



Band12_10MHz_16QAM_HCH_711MHz_RB_1_0_NTNV

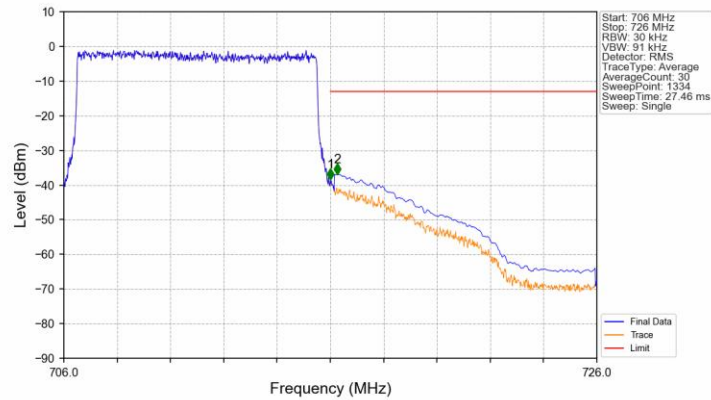


Band12_10MHz_16QAM_HCH_711MHz_RB_1_49_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
706	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.008	-27.53	-13	Pass
716.1	726	0.1	CHP	2	716.158	-30.03	-13	Pass

Band12_10MHz_16QAM_HCH_711MHz_RB_50_0_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
706	716	0.03	/	/	/	/	/	/
716	716.1	0.03	/	1	716.008	-38.38	-13	Pass
716.1	726	0.1	CHP	2	716.263	-36.90	-13	Pass

7. Frequency Stability (IC)

7.1 Test Result

7.1.1 B12_1.4MHz

Band: 12 / Bandwidth: 1.4MHz / NTV									
Modulation	Frequency (MHz)	RB Allocation		Temp. (°C)	Voltage (VDC)	OBW (FL - FH) (MHz)		Limit	Verdict
		Size	Offset			FL	FH		
QPSK	699.7	6	0	20	3.15	699.142	700.260	698 to 704	Pass
					3.70	699.138	700.251	698 to 704	Pass
					4.30	699.140	700.262	698 to 704	Pass
				-30	3.70	699.144	700.255	698 to 704	Pass
				-20	3.70	699.145	700.255	698 to 704	Pass
				-10	3.70	699.142	700.261	698 to 704	Pass
				0	3.70	699.145	700.264	698 to 704	Pass
				10	3.70	699.139	700.255	698 to 704	Pass
				30	3.70	699.137	700.255	698 to 704	Pass
				40	3.70	699.143	700.262	698 to 704	Pass
				50	3.70	699.146	700.264	698 to 704	Pass
	707.5	6	0	20	3.15	706.947	708.059	704 to 710	Pass
					3.70	706.947	708.052	704 to 710	Pass
					4.30	706.945	708.058	704 to 710	Pass
				-30	3.70	706.953	708.055	704 to 710	Pass
				-20	3.70	706.945	708.055	704 to 710	Pass
				-10	3.70	706.949	708.062	704 to 710	Pass
				0	3.70	706.950	708.055	704 to 710	Pass
				10	3.70	706.950	708.061	704 to 710	Pass
				30	3.70	706.948	708.063	704 to 710	Pass
				40	3.70	706.949	708.064	704 to 710	Pass
				50	3.70	706.947	708.057	704 to 710	Pass
	715.3	6	0	20	3.15	714.748	715.856	710 to 716	Pass
					3.70	714.750	715.853	710 to 716	Pass
					4.30	714.745	715.853	710 to 716	Pass
				-30	3.70	714.745	715.857	710 to 716	Pass
				-20	3.70	714.742	715.855	710 to 716	Pass
				-10	3.70	714.744	715.857	710 to 716	Pass
				0	3.70	714.745	715.855	710 to 716	Pass
				10	3.70	714.751	715.857	710 to 716	Pass
				30	3.70	714.746	715.855	710 to 716	Pass
				40	3.70	714.744	715.855	710 to 716	Pass
				50	3.70	714.752	715.855	710 to 716	Pass
16QAM	699.7	6	0	20	3.15	699.146	700.259	698 to 704	Pass
					3.70	699.150	700.261	698 to 704	Pass
					4.30	699.149	700.254	698 to 704	Pass
				-30	3.70	699.149	700.259	698 to 704	Pass
				-20	3.70	699.147	700.255	698 to 704	Pass
				-10	3.70	699.150	700.260	698 to 704	Pass
				0	3.70	699.149	700.259	698 to 704	Pass
				10	3.70	699.148	700.261	698 to 704	Pass
				30	3.70	699.147	700.258	698 to 704	Pass
				40	3.70	699.146	700.253	698 to 704	Pass
				50	3.70	699.150	700.261	698 to 704	Pass
	707.5	6	0	20	3.15	706.947	708.050	704 to 710	Pass
					3.70	706.947	708.051	704 to 710	Pass
					4.30	706.949	708.050	704 to 710	Pass
				-30	3.70	706.949	708.058	704 to 710	Pass

				-20	3.70	706.950	708.058	704 to 710	Pass
				-10	3.70	706.946	708.055	704 to 710	Pass
				0	3.70	706.949	708.057	704 to 710	Pass
				10	3.70	706.949	708.053	704 to 710	Pass
				30	3.70	706.948	708.050	704 to 710	Pass
				40	3.70	706.948	708.053	704 to 710	Pass
				50	3.70	706.946	708.057	704 to 710	Pass
	715.3	6	0	20	3.15	714.739	715.855	710 to 716	Pass
					3.70	714.739	715.857	710 to 716	Pass
					4.30	714.739	715.857	710 to 716	Pass
				-30	3.70	714.740	715.854	710 to 716	Pass
				-20	3.70	714.740	715.854	710 to 716	Pass
				-10	3.70	714.745	715.853	710 to 716	Pass
				0	3.70	714.741	715.856	710 to 716	Pass
				10	3.70	714.737	715.858	710 to 716	Pass
				30	3.70	714.739	715.854	710 to 716	Pass
				40	3.70	714.744	715.855	710 to 716	Pass
				50	3.70	714.737	715.853	710 to 716	Pass

7.1.2 B12_3MHz

Band: 12 / Bandwidth: 3MHz / NTV									
Modulation	Frequency (MHz)	RB Allocation		Temp. (°C)	Voltage (VDC)	OBW (FL - FH) (MHz)		Limit	Verdict
		Size	Offset			FL	FH		
QPSK	700.5	15	0	20	3.15	699.144	701.877	698 to 704	Pass
					3.70	699.140	701.882	698 to 704	Pass
					4.30	699.140	701.879	698 to 704	Pass
				-30	3.70	699.142	701.877	698 to 704	Pass
				-20	3.70	699.143	701.877	698 to 704	Pass
				-10	3.70	699.148	701.879	698 to 704	Pass
				0	3.70	699.144	701.877	698 to 704	Pass
				10	3.70	699.146	701.880	698 to 704	Pass
				30	3.70	699.140	701.879	698 to 704	Pass
				40	3.70	699.144	701.879	698 to 704	Pass
	707.5	15	0	20	3.15	706.147	708.873	704 to 710	Pass
					3.70	706.148	708.877	704 to 710	Pass
					4.30	706.143	708.868	704 to 710	Pass
				-30	3.70	706.140	708.884	704 to 710	Pass
				-20	3.70	706.148	708.874	704 to 710	Pass
				-10	3.70	706.143	708.884	704 to 710	Pass
				0	3.70	706.148	708.877	704 to 710	Pass
				10	3.70	706.139	708.870	704 to 710	Pass
				30	3.70	706.151	708.875	704 to 710	Pass
				40	3.70	706.147	708.870	704 to 710	Pass
	714.5	15	0	20	3.15	713.145	715.880	710 to 716	Pass
					3.70	713.143	715.878	710 to 716	Pass
					4.30	713.144	715.879	710 to 716	Pass
				-30	3.70	713.144	715.876	710 to 716	Pass
				-20	3.70	713.139	715.876	710 to 716	Pass
				-10	3.70	713.143	715.877	710 to 716	Pass
				0	3.70	713.144	715.876	710 to 716	Pass
				10	3.70	713.140	715.878	710 to 716	Pass
				30	3.70	713.144	715.880	710 to 716	Pass
				40	3.70	713.145	715.880	710 to 716	Pass
				50	3.70	713.143	715.875	710 to 716	Pass

16QAM	700.5	15	0	20	3.15	699.140	701.873	698 to 704	Pass
					3.70	699.148	701.868	698 to 704	Pass
					4.30	699.138	701.875	698 to 704	Pass
				-30	3.70	699.146	701.867	698 to 704	Pass
				-20	3.70	699.140	701.869	698 to 704	Pass
				-10	3.70	699.148	701.870	698 to 704	Pass
				0	3.70	699.141	701.875	698 to 704	Pass
				10	3.70	699.146	701.870	698 to 704	Pass
				30	3.70	699.138	701.869	698 to 704	Pass
				40	3.70	699.151	701.866	698 to 704	Pass
				50	3.70	699.139	701.875	698 to 704	Pass
	707.5	15	0	20	3.15	706.141	708.874	704 to 710	Pass
					3.70	706.145	708.873	704 to 710	Pass
					4.30	706.145	708.875	704 to 710	Pass
				-30	3.70	706.147	708.873	704 to 710	Pass
				-20	3.70	706.148	708.874	704 to 710	Pass
				-10	3.70	706.143	708.874	704 to 710	Pass
				0	3.70	706.143	708.877	704 to 710	Pass
				10	3.70	706.143	708.873	704 to 710	Pass
				30	3.70	706.145	708.874	704 to 710	Pass
				40	3.70	706.142	708.873	704 to 710	Pass
				50	3.70	706.143	708.874	704 to 710	Pass
	714.5	15	0	20	3.15	713.143	715.875	710 to 716	Pass
					3.70	713.149	715.875	710 to 716	Pass
					4.30	713.139	715.877	710 to 716	Pass
				-30	3.70	713.149	715.884	710 to 716	Pass
				-20	3.70	713.144	715.886	710 to 716	Pass
				-10	3.70	713.150	715.876	710 to 716	Pass
				0	3.70	713.147	715.874	710 to 716	Pass
				10	3.70	713.144	715.878	710 to 716	Pass
				30	3.70	713.141	715.877	710 to 716	Pass
				40	3.70	713.139	715.877	710 to 716	Pass
				50	3.70	713.141	715.871	710 to 716	Pass

7.1.3 B12_5MHz

Band: 12 / Bandwidth: 5MHz / NTN									
Modulation	Frequency (MHz)	RB Allocation		Temp. (°C)	Voltage (VDC)	OBW (FL - FH) (MHz)		Limit	Verdict
		Size	Offset			FL	FH		
QPSK	701.5	25	0	20	3.15	699.249	703.798	698 to 704	Pass
					3.70	699.253	703.795	698 to 704	Pass
					4.30	699.250	703.793	698 to 704	Pass
				-30	3.70	699.249	703.800	698 to 704	Pass
				-20	3.70	699.248	703.799	698 to 704	Pass
				-10	3.70	699.249	703.797	698 to 704	Pass
				0	3.70	699.249	703.800	698 to 704	Pass
				10	3.70	699.256	703.783	698 to 704	Pass
				30	3.70	699.249	703.800	698 to 704	Pass
				40	3.70	699.249	703.795	698 to 704	Pass
				50	3.70	699.249	703.793	698 to 704	Pass
	707.5	25	0	20	3.15	705.234	709.778	704 to 710	Pass
					3.70	705.242	709.788	704 to 710	Pass
					4.30	705.235	709.782	704 to 710	Pass
				-30	3.70	705.244	709.781	704 to 710	Pass
				-20	3.70	705.239	709.778	704 to 710	Pass
				-10	3.70	705.240	709.781	704 to 710	Pass
				0	3.70	705.240	709.785	704 to 710	Pass

	713.5	25	0	10	3.70	705.241	709.783	704 to 710	Pass
				30	3.70	705.240	709.783	704 to 710	Pass
				40	3.70	705.244	709.778	704 to 710	Pass
				50	3.70	705.242	709.781	704 to 710	Pass
				20	3.15	711.248	715.791	710 to 716	Pass
					3.70	711.236	715.788	710 to 716	Pass
					4.30	711.245	715.793	710 to 716	Pass
				-30	3.70	711.230	715.791	710 to 716	Pass
				-20	3.70	711.240	715.795	710 to 716	Pass
				-10	3.70	711.237	715.790	710 to 716	Pass
				0	3.70	711.234	715.794	710 to 716	Pass
				10	3.70	711.238	715.794	710 to 716	Pass
				30	3.70	711.240	715.793	710 to 716	Pass
				40	3.70	711.234	715.794	710 to 716	Pass
				50	3.70	711.240	715.790	710 to 716	Pass
16QAM	701.5	25	0	20	3.15	699.243	703.796	698 to 704	Pass
					3.70	699.248	703.803	698 to 704	Pass
					4.30	699.251	703.804	698 to 704	Pass
				-30	3.70	699.239	703.807	698 to 704	Pass
				-20	3.70	699.232	703.798	698 to 704	Pass
				-10	3.70	699.248	703.789	698 to 704	Pass
				0	3.70	699.251	703.795	698 to 704	Pass
				10	3.70	699.247	703.797	698 to 704	Pass
				30	3.70	699.242	703.791	698 to 704	Pass
				40	3.70	699.238	703.791	698 to 704	Pass
				50	3.70	699.249	703.794	698 to 704	Pass
	707.5	25	0	20	3.15	705.231	709.779	704 to 710	Pass
					3.70	705.236	709.778	704 to 710	Pass
					4.30	705.233	709.794	704 to 710	Pass
				-30	3.70	705.233	709.793	704 to 710	Pass
				-20	3.70	705.243	709.775	704 to 710	Pass
				-10	3.70	705.241	709.798	704 to 710	Pass
				0	3.70	705.243	709.792	704 to 710	Pass
				10	3.70	705.234	709.800	704 to 710	Pass
				30	3.70	705.237	709.782	704 to 710	Pass
				40	3.70	705.230	709.795	704 to 710	Pass
				50	3.70	705.233	709.782	704 to 710	Pass
	713.5	25	0	20	3.15	711.248	715.786	710 to 716	Pass
					3.70	711.244	715.788	710 to 716	Pass
					4.30	711.249	715.789	710 to 716	Pass
				-30	3.70	711.251	715.789	710 to 716	Pass
				-20	3.70	711.249	715.784	710 to 716	Pass
				-10	3.70	711.247	715.784	710 to 716	Pass
				0	3.70	711.251	715.789	710 to 716	Pass
				10	3.70	711.241	715.784	710 to 716	Pass
				30	3.70	711.250	715.789	710 to 716	Pass
				40	3.70	711.247	715.784	710 to 716	Pass
				50	3.70	711.247	715.784	710 to 716	Pass

7.1.4 B12_10MHz

Band: 12 / Bandwidth: 10MHz / NTNV									
Modulation	Frequency (MHz)	RB Allocation		Temp. (°C)	Voltage (VDC)	OBW (FL - FH) (MHz)		Limit	Verdict
		Size	Offset			FL	FH		
QPSK	704	50	0	20	3.15	699.499	708.558	698 to 710	Pass
					3.70	699.498	708.562	698 to 710	Pass
					4.30	699.500	708.556	698 to 710	Pass

				-30	3.70	699.494	708.556	698 to 710	Pass			
				-20	3.70	699.505	708.572	698 to 710	Pass			
				-10	3.70	699.496	708.560	698 to 710	Pass			
				0	3.70	699.517	708.566	698 to 710	Pass			
				10	3.70	699.520	708.550	698 to 710	Pass			
				30	3.70	699.517	708.556	698 to 710	Pass			
				40	3.70	699.502	708.564	698 to 710	Pass			
				50	3.70	699.511	708.558	698 to 710	Pass			
				707.5	50	0	20	3.15	703.015	712.032	698 to 716	Pass
								3.70	703.006	712.042	698 to 716	Pass
	4.30	703.005	712.033					698 to 716	Pass			
	-30	3.70	703.029				712.041	698 to 716	Pass			
	-20	3.70	703.020				712.026	698 to 716	Pass			
	-10	3.70	703.010				712.035	698 to 716	Pass			
	0	3.70	703.017				712.035	698 to 716	Pass			
	10	3.70	703.028				712.038	698 to 716	Pass			
	30	3.70	703.014				712.035	698 to 716	Pass			
	40	3.70	703.007				712.045	698 to 716	Pass			
	50	3.70	703.005	712.037	698 to 716	Pass						
	711	50	0	20	3.15	706.499	715.553	704 to 716	Pass			
					3.70	706.506	715.567	704 to 716	Pass			
					4.30	706.504	715.584	704 to 716	Pass			
				-30	3.70	706.502	715.566	704 to 716	Pass			
				-20	3.70	706.501	715.563	704 to 716	Pass			
				-10	3.70	706.493	715.560	704 to 716	Pass			
				0	3.70	706.500	715.565	704 to 716	Pass			
				10	3.70	706.491	715.567	704 to 716	Pass			
				30	3.70	706.494	715.580	704 to 716	Pass			
				40	3.70	706.502	715.579	704 to 716	Pass			
	50	3.70	706.495	715.559	704 to 716	Pass						
16QAM	704	50	0	20	3.15	699.502	708.558	698 to 710	Pass			
					3.70	699.520	708.556	698 to 710	Pass			
					4.30	699.498	708.554	698 to 710	Pass			
				-30	3.70	699.517	708.557	698 to 710	Pass			
				-20	3.70	699.510	708.553	698 to 710	Pass			
				-10	3.70	699.497	708.551	698 to 710	Pass			
				0	3.70	699.507	708.548	698 to 710	Pass			
				10	3.70	699.505	708.547	698 to 710	Pass			
				30	3.70	699.496	708.566	698 to 710	Pass			
				40	3.70	699.525	708.554	698 to 710	Pass			
	50	3.70	699.520	708.536	698 to 710	Pass						
	707.5	50	0	20	3.15	703.015	712.046	698 to 716	Pass			
					3.70	703.022	712.032	698 to 716	Pass			
					4.30	703.012	712.048	698 to 716	Pass			
				-30	3.70	703.015	712.049	698 to 716	Pass			
				-20	3.70	703.013	712.042	698 to 716	Pass			
				-10	3.70	703.011	712.059	698 to 716	Pass			
				0	3.70	703.017	712.048	698 to 716	Pass			
				10	3.70	703.013	712.035	698 to 716	Pass			
				30	3.70	703.011	712.030	698 to 716	Pass			
				40	3.70	703.025	712.042	698 to 716	Pass			
	50	3.70	703.012	712.064	698 to 716	Pass						
	711	50	0	20	3.15	706.497	715.558	704 to 716	Pass			
					3.70	706.505	715.563	704 to 716	Pass			
					4.30	706.502	715.564	704 to 716	Pass			
				-30	3.70	706.511	715.566	704 to 716	Pass			
				-20	3.70	706.510	715.576	704 to 716	Pass			
				-10	3.70	706.502	715.567	704 to 716	Pass			



				0	3.70	706.501	715.584	704 to 716	Pass
				10	3.70	706.493	715.563	704 to 716	Pass
				30	3.70	706.502	715.552	704 to 716	Pass
				40	3.70	706.494	715.584	704 to 716	Pass
				50	3.70	706.494	715.556	704 to 716	Pass

***** End of Report *****