

Appendix_LTE_Frequency Error

1. Frequency stability

1.1 Test Result

Test Band: 2_ 1.4MHz Bandwidth (Frequency Error VS. Voltage)												
Test Mode	RB Allocation		Test Temp.	Test Volt.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	6	0	NT	LV	-1.0872	-2.8181	0.0715	-0.0006	-0.0015	0.0000	2.50	PASS
				NV	-0.5579	-3.6335	0.3433	-0.0003	-0.0019	0.0002	2.50	PASS
				HV	-3.5906	-2.0885	0.5436	-0.0019	-0.0011	0.0003	2.50	PASS
16QAM	6	0	NT	LV	-3.9768	-3.8195	-0.7296	-0.0021	-0.0020	-0.0004	2.50	PASS
				NV	-2.5892	-5.1785	-0.1717	-0.0014	-0.0028	-0.0001	2.50	PASS
				HV	-3.3331	-4.1771	-1.0586	-0.0018	-0.0022	-0.0006	2.50	PASS

Test Band: 2_ 1.4MHz Bandwidth (Frequency Error VS. Temperature)												
Test Mode	RB Allocation		Test Volt.	Test Temp.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	6	0	NV	-30.00	-2.0885	-2.1601	1.0014	-0.0011	-0.0011	0.0005	2.50	PASS
				-20.00	-1.9598	-1.3590	0.2718	-0.0011	-0.0007	0.0001	2.50	PASS
				-10.00	-0.3433	-3.5191	0.2289	-0.0002	-0.0019	0.0001	2.50	PASS
				0.00	-0.3004	-2.9469	-0.0286	-0.0002	-0.0016	0.0000	2.50	PASS
				10.00	-0.8440	-3.9053	-0.4292	-0.0005	-0.0021	-0.0002	2.50	PASS
				20.00	-1.0443	-1.5306	-0.7868	-0.0006	-0.0008	-0.0004	2.50	PASS
				30.00	-2.8324	-3.9053	-1.8883	-0.0015	-0.0021	-0.0010	2.50	PASS
				40.00	-3.1042	-3.5191	0.4292	-0.0017	-0.0019	0.0002	2.50	PASS
				50.00	-1.7595	-3.7909	1.1301	-0.0010	-0.0020	0.0006	2.50	PASS
16QAM	6	0	NV	-30.00	-0.9298	-4.8637	-1.5879	-0.0005	-0.0026	-0.0008	2.50	PASS
				-20.00	-2.0599	-4.5204	-0.1860	-0.0011	-0.0024	-0.0001	2.50	PASS
				-10.00	-2.7037	-5.2214	-0.9012	-0.0015	-0.0028	-0.0005	2.50	PASS
				0.00	-3.2043	-4.5633	-0.7725	-0.0017	-0.0024	-0.0004	2.50	PASS
				10.00	-2.0599	-3.6335	-0.7296	-0.0011	-0.0019	-0.0004	2.50	PASS
				20.00	-3.7909	-3.0470	-1.9741	-0.0020	-0.0016	-0.0010	2.50	PASS
				30.00	-1.6165	-4.3631	-2.5320	-0.0009	-0.0023	-0.0013	2.50	PASS
				40.00	-3.1185	-3.9911	-2.1601	-0.0017	-0.0021	-0.0011	2.50	PASS
				50.00	-2.6894	-3.3331	-1.7738	-0.0015	-0.0018	-0.0009	2.50	PASS

Test Band: 2_ 3MHz Bandwidth (Frequency Error VS. Voltage)												
Test Mode	RB Allocation		Test Temp.	Test Volt.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	15	0	NT	LV	-1.5879	-2.7609	0.0429	-0.0009	-0.0015	0.0000	2.50	PASS
				NV	-1.1301	-4.1056	1.0157	-0.0006	-0.0022	0.0005	2.50	PASS
				HV	-2.8896	-3.1185	-0.1717	-0.0016	-0.0017	-0.0001	2.50	PASS
16QAM	15	0	NT	LV	-2.6751	-2.6608	-0.4435	-0.0014	-0.0014	-0.0002	2.50	PASS
				NV	-3.8767	-4.7207	1.4448	-0.0021	-0.0025	0.0008	2.50	PASS
				HV	-2.9469	-3.0756	0.8011	-0.0016	-0.0016	0.0004	2.50	PASS

Test Band: 2_ 3MHz Bandwidth (Frequency Error VS. Temperature)												
Test Mode	RB Allocation		Test Volt.	Test Temp.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	15	0	NV	-30.00	-2.7895	-3.1328	1.5450	-0.0015	-0.0017	0.0008	2.50	PASS
				-20.00	-2.1458	-1.5450	1.0586	-0.0012	-0.0008	0.0006	2.50	PASS

				-10.00	-2.0027	-1.1873	0.8869	-0.0011	-0.0006	0.0005	2.50	PASS
				0.00	-0.6151	-2.6321	0.6723	-0.0003	-0.0014	0.0004	2.50	PASS
				10.00	-1.7881	-3.1042	0.6437	-0.0010	-0.0017	0.0003	2.50	PASS
				20.00	-1.6022	-2.2888	1.9455	-0.0009	-0.0012	0.0010	2.50	PASS
				30.00	-1.2159	-3.5048	0.9871	-0.0007	-0.0019	0.0005	2.50	PASS
				40.00	-0.2718	-4.0197	0.6437	-0.0001	-0.0021	0.0003	2.50	PASS
				50.00	-1.7881	-2.2745	0.3862	-0.0010	-0.0012	0.0002	2.50	PASS
16QAM	15	0	NV	-30.00	-3.4475	-3.3474	1.1158	-0.0019	-0.0018	0.0006	2.50	PASS
				-20.00	-3.1042	-3.3188	0.7582	-0.0017	-0.0018	0.0004	2.50	PASS
				-10.00	-2.3746	-3.0327	1.3733	-0.0013	-0.0016	0.0007	2.50	PASS
				0.00	-2.6035	-2.4319	1.8311	-0.0014	-0.0013	0.0010	2.50	PASS
				10.00	-4.2629	-2.9469	-0.4578	-0.0023	-0.0016	-0.0002	2.50	PASS
				20.00	-2.3174	-2.8181	1.0872	-0.0013	-0.0015	0.0006	2.50	PASS
				30.00	-1.6880	-3.5048	0.7439	-0.0009	-0.0019	0.0004	2.50	PASS
				40.00	-2.7466	-3.6335	1.9169	-0.0015	-0.0019	0.0010	2.50	PASS
				50.00	-1.9169	-4.1056	0.5865	-0.0010	-0.0022	0.0003	2.50	PASS

Test Band: 2 5MHz Bandwidth (Frequency Error VS. Voltage)												
Test Mode	RB Allocation		Test Temp.	Test Volt.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	25	0	NT	LV	-1.3876	-2.5892	-1.2588	-0.0007	-0.0014	-0.0007	2.50	PASS
				NV	-1.1587	-3.3903	-1.1587	-0.0006	-0.0018	-0.0006	2.50	PASS
				HV	-1.4305	-3.3188	-2.4605	-0.0008	-0.0018	-0.0013	2.50	PASS
16QAM	25	0	NT	LV	-0.7153	-2.0313	0.6008	-0.0004	-0.0011	0.0003	2.50	PASS
				NV	-0.6723	-2.9182	1.2875	-0.0004	-0.0016	0.0007	2.50	PASS
				HV	-1.9455	-3.3617	0.8154	-0.0011	-0.0018	0.0004	2.50	PASS

Test Band: 2 5MHz Bandwidth (Frequency Error VS. Temperature)												
Test Mode	RB Allocation		Test Volt.	Test Temp.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	25	0	NV	-30.00	-3.1042	-3.0613	-1.5450	-0.0017	-0.0016	-0.0008	2.50	PASS
				-20.00	-2.2173	-3.4618	0.5293	-0.0012	-0.0018	0.0003	2.50	PASS
				-10.00	-1.8454	-4.3631	0.2146	-0.0010	-0.0023	0.0001	2.50	PASS
				0.00	-2.3317	-4.2629	1.0443	-0.0013	-0.0023	0.0005	2.50	PASS
				10.00	-2.3890	-3.8481	0.3719	-0.0013	-0.0020	0.0002	2.50	PASS
				20.00	-1.1158	-4.1056	2.0027	-0.0006	-0.0022	0.0010	2.50	PASS
				30.00	-1.8740	-3.3903	1.3876	-0.0010	-0.0018	0.0007	2.50	PASS
				40.00	-1.5450	-2.5892	0.1001	-0.0008	-0.0014	0.0001	2.50	PASS
				50.00	-0.8726	-3.8481	-0.0143	-0.0005	-0.0020	0.0000	2.50	PASS
16QAM	25	0	NV	-30.00	-2.1744	-3.2330	0.1431	-0.0012	-0.0017	0.0001	2.50	PASS
				-20.00	-2.5177	-4.0054	-0.1717	-0.0014	-0.0021	-0.0001	2.50	PASS
				-10.00	-0.8297	-3.1471	0.7582	-0.0004	-0.0017	0.0004	2.50	PASS
				0.00	-1.5593	-1.8311	-0.4864	-0.0008	-0.0010	-0.0003	2.50	PASS
				10.00	-1.8740	-2.1601	-0.0429	-0.0010	-0.0011	0.0000	2.50	PASS
				20.00	-2.4748	-3.6621	0.1574	-0.0013	-0.0019	0.0001	2.50	PASS
				30.00	-0.9298	-3.9482	0.2575	-0.0005	-0.0021	0.0001	2.50	PASS
				40.00	-0.4721	-2.8896	1.8597	-0.0003	-0.0015	0.0010	2.50	PASS
				50.00	-1.6022	-1.5450	1.6022	-0.0009	-0.0008	0.0008	2.50	PASS

Test Band: 2 10MHz Bandwidth (Frequency Error VS. Voltage)												
Test Mode	RB Allocation		Test Temp.	Test Volt.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	50	0	NT	LV	-1.7309	-3.7193	0.0286	-0.0009	-0.0020	0.0000	2.50	PASS
				NV	-3.5048	-2.7466	-0.1717	-0.0019	-0.0015	-0.0001	2.50	PASS
				HV	-2.1029	-4.2343	0.4292	-0.0011	-0.0023	0.0002	2.50	PASS

16QAM	50	0	NT	LV	-3.4475	-4.0770	1.5450	-0.0019	-0.0022	0.0008	2.50	PASS
				NV	-4.1056	-4.2486	1.9741	-0.0022	-0.0023	0.0010	2.50	PASS
				HV	-2.5177	-4.4489	1.1444	-0.0014	-0.0024	0.0006	2.50	PASS

Test Band: 2_ 10MHz Bandwidth (Frequency Error VS. Temperature)												
Test Mode	RB Allocation		Test Volt.	Test Temp.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	50	0	NV	-30.00	-2.0313	-1.9741	0.7439	-0.0011	-0.0011	0.0004	2.50	PASS
				-20.00	-1.8024	-2.6178	-0.0286	-0.0010	-0.0014	0.0000	2.50	PASS
				-10.00	-1.7166	-3.3474	1.1301	-0.0009	-0.0018	0.0006	2.50	PASS
				0.00	-2.4176	-2.6035	0.2575	-0.0013	-0.0014	0.0001	2.50	PASS
				10.00	-2.4748	-3.4904	0.6723	-0.0013	-0.0019	0.0004	2.50	PASS
				20.00	-1.9312	-3.7622	0.5436	-0.0010	-0.0020	0.0003	2.50	PASS
				30.00	-3.2902	-3.7479	0.2718	-0.0018	-0.0020	0.0001	2.50	PASS
				40.00	-2.6894	-4.4346	0.3147	-0.0014	-0.0024	0.0002	2.50	PASS
				50.00	-3.2616	-3.0327	-0.6866	-0.0018	-0.0016	-0.0004	2.50	PASS
16QAM	50	0	NV	-30.00	-3.5763	-3.0756	0.5579	-0.0019	-0.0016	0.0003	2.50	PASS
				-20.00	-3.2616	-3.8052	1.6022	-0.0018	-0.0020	0.0008	2.50	PASS
				-10.00	-3.6192	-3.0899	1.3590	-0.0020	-0.0016	0.0007	2.50	PASS
				0.00	-3.1042	-3.6049	1.4448	-0.0017	-0.0019	0.0008	2.50	PASS
				10.00	-3.9482	-3.7336	2.3603	-0.0021	-0.0020	0.0012	2.50	PASS
				20.00	-2.3317	-3.1042	2.5463	-0.0013	-0.0017	0.0013	2.50	PASS
				30.00	-2.4033	-4.5347	1.7309	-0.0013	-0.0024	0.0009	2.50	PASS
				40.00	-3.3045	-3.5763	1.7023	-0.0018	-0.0019	0.0009	2.50	PASS
				50.00	-3.9053	-3.3188	0.8440	-0.0021	-0.0018	0.0004	2.50	PASS

Test Band: 2_ 15MHz Bandwidth (Frequency Error VS. Voltage)												
Test Mode	RB Allocation		Test Temp.	Test Volt.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	75	0	NT	LV	-3.5334	-3.0041	-2.4605	-0.0019	-0.0016	-0.0013	2.50	PASS
				NV	-3.5334	-3.5906	-2.8467	-0.0019	-0.0019	-0.0015	2.50	PASS
				HV	-2.4891	-3.8481	-4.0340	-0.0013	-0.0020	-0.0021	2.50	PASS
16QAM	75	0	NT	LV	-3.0470	-3.3474	-3.7622	-0.0016	-0.0018	-0.0020	2.50	PASS
				NV	-3.8767	-3.4475	-2.7752	-0.0021	-0.0018	-0.0015	2.50	PASS
				HV	-2.7323	-2.8753	-3.0613	-0.0015	-0.0015	-0.0016	2.50	PASS

Test Band: 2_ 15MHz Bandwidth (Frequency Error VS. Temperature)												
Test Mode	RB Allocation		Test Volt.	Test Temp.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	75	0	NV	-30.00	-3.6478	-2.7466	-1.7452	-0.0020	-0.0015	-0.0009	2.50	PASS
				-20.00	-3.1757	-2.6035	-3.4618	-0.0017	-0.0014	-0.0018	2.50	PASS
				-10.00	-3.9625	-1.8024	-3.1614	-0.0021	-0.0010	-0.0017	2.50	PASS
				0.00	-4.4775	-3.9053	-3.5906	-0.0024	-0.0021	-0.0019	2.50	PASS
				10.00	-4.5204	-2.8038	-2.9469	-0.0024	-0.0015	-0.0015	2.50	PASS
				20.00	-2.3890	-3.5191	-2.3174	-0.0013	-0.0019	-0.0012	2.50	PASS
				30.00	-3.4189	-1.9598	-3.0613	-0.0018	-0.0010	-0.0016	2.50	PASS
				40.00	-3.8910	-3.3188	-3.2187	-0.0021	-0.0018	-0.0017	2.50	PASS
				50.00	-3.7479	-3.9911	-3.1042	-0.0020	-0.0021	-0.0016	2.50	PASS
16QAM	75	0	NV	-30.00	-5.0354	-3.4332	-2.6035	-0.0027	-0.0018	-0.0014	2.50	PASS
				-20.00	-3.8481	-3.2759	-3.1042	-0.0021	-0.0017	-0.0016	2.50	PASS
				-10.00	-3.3474	-3.4761	-2.7323	-0.0018	-0.0018	-0.0014	2.50	PASS
				0.00	-3.1185	-3.4904	-2.7466	-0.0017	-0.0019	-0.0014	2.50	PASS
				10.00	-4.2486	-3.1757	-3.7766	-0.0023	-0.0017	-0.0020	2.50	PASS
				20.00	-4.9067	-2.6035	-3.6478	-0.0026	-0.0014	-0.0019	2.50	PASS
				30.00	-4.0340	-3.7479	-4.7064	-0.0022	-0.0020	-0.0025	2.50	PASS

				40.00	-3.3760	-3.6049	-4.2343	-0.0018	-0.0019	-0.0022	2.50	PASS
				50.00	-2.4176	-3.3474	-5.7220	-0.0013	-0.0018	-0.0030	2.50	PASS

Test Band: 2 20MHz Bandwidth (Frequency Error VS. Voltage)												
Test Mode	RB Allocation		Test Temp.	Test Volt.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	100	0	NT	LV	1.9026	-4.0627	-3.3045	0.0010	-0.0022	-0.0017	2.50	PASS
				NV	-0.8869	-3.1042	-2.6751	-0.0005	-0.0017	-0.0014	2.50	PASS
				HV	0.2718	-3.1471	-2.7895	0.0001	-0.0017	-0.0015	2.50	PASS
16QAM	100	0	NT	LV	0.0715	-3.4475	-3.2187	0.0000	-0.0018	-0.0017	2.50	PASS
				NV	-0.1144	-3.0184	-2.3460	-0.0001	-0.0016	-0.0012	2.50	PASS
				HV	1.1301	-4.0054	-2.7466	0.0006	-0.0021	-0.0014	2.50	PASS

Test Band: 2 20MHz Bandwidth (Frequency Error VS. Temperature)												
Test Mode	RB Allocation		Test Volt.	Test Temp.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	100	0	NV	-30.00	1.3733	-2.4891	-2.4033	0.0007	-0.0013	-0.0013	2.50	PASS
				-20.00	1.1158	-3.4904	-2.1315	0.0006	-0.0019	-0.0011	2.50	PASS
				-10.00	0.9155	-3.9768	-2.4748	0.0005	-0.0021	-0.0013	2.50	PASS
				0.00	-0.2718	-3.0613	-4.0483	-0.0001	-0.0016	-0.0021	2.50	PASS
				10.00	2.4748	-3.7193	-2.8181	0.0013	-0.0020	-0.0015	2.50	PASS
				20.00	1.7023	-3.3045	-2.7323	0.0009	-0.0018	-0.0014	2.50	PASS
				30.00	0.2146	-2.8610	-3.8624	0.0001	-0.0015	-0.0020	2.50	PASS
				40.00	1.2588	-2.3890	-2.2316	0.0007	-0.0013	-0.0012	2.50	PASS
				50.00	1.0300	-3.4904	-2.4605	0.0006	-0.0019	-0.0013	2.50	PASS
16QAM	100	0	NV	-30.00	0.9871	-3.1900	-1.1015	0.0005	-0.0017	-0.0006	2.50	PASS
				-20.00	1.3876	-4.0913	-1.6165	0.0007	-0.0022	-0.0009	2.50	PASS
				-10.00	0.9584	-2.7037	-1.6308	0.0005	-0.0014	-0.0009	2.50	PASS
				0.00	-0.1860	-2.2030	-2.3031	-0.0001	-0.0012	-0.0012	2.50	PASS
				10.00	2.0742	-3.3045	-2.7037	0.0011	-0.0018	-0.0014	2.50	PASS
				20.00	1.2302	-3.6335	-2.3603	0.0007	-0.0019	-0.0012	2.50	PASS
				30.00	0.6437	-3.1757	-2.8181	0.0003	-0.0017	-0.0015	2.50	PASS
				40.00	0.4005	-4.2200	-1.7166	0.0002	-0.0022	-0.0009	2.50	PASS
				50.00	0.6580	-1.7452	-1.7023	0.0004	-0.0009	-0.0009	2.50	PASS

2. Frequency stability

2.1 Test Result

Test Band: 4 1.4MHz Bandwidth (Frequency Error VS. Voltage)												
Test Mode	RB Allocation		Test Temp.	Test Volt.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	6	0	NT	LV	1.8597	1.4877	-2.2888	0.0011	0.0009	-0.0013	2.50	PASS
				NV	3.0756	0.7582	-2.4605	0.0018	0.0004	-0.0014	2.50	PASS
				HV	0.7868	1.0443	-1.7023	0.0005	0.0006	-0.0010	2.50	PASS
16QAM	6	0	NT	LV	1.0443	0.0572	-3.2902	0.0006	0.0000	-0.0019	2.50	PASS
				NV	1.1015	0.8440	-3.1471	0.0006	0.0005	-0.0018	2.50	PASS
				HV	-0.0858	0.3719	-3.1900	-0.0001	0.0002	-0.0018	2.50	PASS

Test Band: 4 1.4MHz Bandwidth (Frequency Error VS. Temperature)												
Test Mode	RB Allocation		Test Volt.	Test Temp.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	6	0	NV	-30.00	1.5736	0.6151	-0.4578	0.0009	0.0004	-0.0003	2.50	PASS

				-20.00	1.5306	0.3147	-1.7309	0.0009	0.0002	-0.0010	2.50	PASS
				-10.00	1.9312	1.1444	-1.9169	0.0011	0.0007	-0.0011	2.50	PASS
				0.00	1.5736	0.0143	-3.2330	0.0009	0.0000	-0.0018	2.50	PASS
				10.00	1.2445	0.3290	-2.1601	0.0007	0.0002	-0.0012	2.50	PASS
				20.00	2.8038	0.3290	-3.4904	0.0016	0.0002	-0.0020	2.50	PASS
				30.00	0.9871	0.3576	-2.0027	0.0006	0.0002	-0.0011	2.50	PASS
				40.00	2.5034	0.7296	-2.4462	0.0015	0.0004	-0.0014	2.50	PASS
				50.00	2.2459	1.1587	-3.6621	0.0013	0.0007	-0.0021	2.50	PASS
16QAM	6	0	NV	-30.00	1.8024	0.9298	-4.3488	0.0011	0.0005	-0.0025	2.50	PASS
				-20.00	1.1730	1.0729	-1.4734	0.0007	0.0006	-0.0008	2.50	PASS
				-10.00	0.9584	-0.4148	-1.9741	0.0006	-0.0002	-0.0011	2.50	PASS
				0.00	0.5865	-0.6294	-2.6178	0.0003	-0.0004	-0.0015	2.50	PASS
				10.00	1.2445	0.3433	-2.6178	0.0007	0.0002	-0.0015	2.50	PASS
				20.00	1.6308	0.3719	-3.9053	0.0010	0.0002	-0.0022	2.50	PASS
				30.00	0.3576	-0.0572	-3.6621	0.0002	0.0000	-0.0021	2.50	PASS
				40.00	1.8168	0.0572	-2.5892	0.0011	0.0000	-0.0015	2.50	PASS
				50.00	1.4305	1.4591	-2.7895	0.0008	0.0008	-0.0016	2.50	PASS

Test Band: 4 3MHz Bandwidth (Frequency Error VS. Voltage)												
Test Mode	RB Allocation		Test Temp.	Test Volt.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	15	0	NT	LV	1.6737	0.6580	0.3004	0.0010	0.0004	0.0002	2.50	PASS
				NV	1.1015	2.0885	-0.1431	0.0006	0.0012	-0.0001	2.50	PASS
				HV	0.8297	0.5579	0.2432	0.0005	0.0003	0.0001	2.50	PASS
16QAM	15	0	NT	LV	-0.9155	1.0443	0.7582	-0.0005	0.0006	0.0004	2.50	PASS
				NV	-1.7595	-1.2732	0.0000	-0.0010	-0.0007	0.0000	2.50	PASS
				HV	-0.5865	-0.6437	0.5007	-0.0003	-0.0004	0.0003	2.50	PASS

Test Band: 4 3MHz Bandwidth (Frequency Error VS. Temperature)												
Test Mode	RB Allocation		Test Volt.	Test Temp.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	15	0	NV	-30.00	1.3018	1.1158	-0.2861	0.0008	0.0006	-0.0002	2.50	PASS
				-20.00	1.2732	0.9441	-0.1717	0.0007	0.0005	-0.0001	2.50	PASS
				-10.00	0.4148	1.3304	0.0000	0.0002	0.0008	0.0000	2.50	PASS
				0.00	0.5293	0.6580	0.5293	0.0003	0.0004	0.0003	2.50	PASS
				10.00	0.8297	0.8297	0.7725	0.0005	0.0005	0.0004	2.50	PASS
				20.00	-0.1287	-0.4148	0.0572	-0.0001	-0.0002	0.0000	2.50	PASS
				30.00	1.2016	0.8154	1.1587	0.0007	0.0005	0.0007	2.50	PASS
				40.00	1.4734	0.6437	-0.3719	0.0009	0.0004	-0.0002	2.50	PASS
				50.00	0.0286	1.8168	-0.3862	0.0000	0.0010	-0.0002	2.50	PASS
16QAM	15	0	NV	-30.00	-1.6737	-0.5579	0.4005	-0.0010	-0.0003	0.0002	2.50	PASS
				-20.00	0.1574	-0.5150	-0.1717	0.0001	-0.0003	-0.0001	2.50	PASS
				-10.00	-0.2575	-0.3433	0.6866	-0.0002	-0.0002	0.0004	2.50	PASS
				0.00	-0.1431	-0.4721	-0.2432	-0.0001	-0.0003	-0.0001	2.50	PASS
				10.00	-0.1287	0.1574	-0.0286	-0.0001	0.0001	0.0000	2.50	PASS
				20.00	-1.2875	0.0429	0.1431	-0.0008	0.0000	0.0001	2.50	PASS
				30.00	0.5150	-0.5150	0.3433	0.0003	-0.0003	0.0002	2.50	PASS
				40.00	-0.3433	-0.1144	0.2146	-0.0002	-0.0001	0.0001	2.50	PASS
				50.00	0.4864	-0.6866	0.8726	0.0003	-0.0004	0.0005	2.50	PASS

Test Band: 4 5MHz Bandwidth (Frequency Error VS. Voltage)												
Test Mode	RB Allocation		Test Temp.	Test Volt.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	25	0	NT	LV	2.1601	-0.2718	-2.7609	0.0013	-0.0002	-0.0016	2.50	PASS
				NV	3.0041	-0.0715	-2.4462	0.0018	0.0000	-0.0014	2.50	PASS

				HV	2.6321	0.6580	-1.8024	0.0015	0.0004	-0.0010	2.50	PASS
16QAM	25	0	NT	LV	1.6022	-0.1717	-3.1471	0.0009	-0.0001	-0.0018	2.50	PASS
				NV	2.1887	1.4305	-2.4319	0.0013	0.0008	-0.0014	2.50	PASS
				HV	1.0443	-0.6294	-2.6894	0.0006	-0.0004	-0.0015	2.50	PASS

Test Band: 4 5MHz Bandwidth (Frequency Error VS. Temperature)												
Test Mode	RB Allocation		Test Volt.	Test Temp.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	25	0	NV	-30.00	0.6723	1.4019	-2.1887	0.0004	0.0008	-0.0012	2.50	PASS
				-20.00	2.0742	-0.4721	-2.4891	0.0012	-0.0003	-0.0014	2.50	PASS
				-10.00	1.4305	-0.5150	-3.5191	0.0008	-0.0003	-0.0020	2.50	PASS
				0.00	2.9039	0.2146	-2.7609	0.0017	0.0001	-0.0016	2.50	PASS
				10.00	1.4591	0.6580	-3.0041	0.0009	0.0004	-0.0017	2.50	PASS
				20.00	1.9884	0.7010	-3.1471	0.0012	0.0004	-0.0018	2.50	PASS
				30.00	2.0170	0.7296	-2.6178	0.0012	0.0004	-0.0015	2.50	PASS
				40.00	1.9884	0.1717	-2.8896	0.0012	0.0001	-0.0016	2.50	PASS
				50.00	2.9898	-0.2003	-2.3603	0.0017	-0.0001	-0.0013	2.50	PASS
16QAM	25	0	NV	-30.00	1.4019	0.0715	-3.1757	0.0008	0.0000	-0.0018	2.50	PASS
				-20.00	2.0027	1.3161	-2.5034	0.0012	0.0008	-0.0014	2.50	PASS
				-10.00	1.3590	1.2445	-3.0756	0.0008	0.0007	-0.0018	2.50	PASS
				0.00	2.3890	1.4591	-2.8324	0.0014	0.0008	-0.0016	2.50	PASS
				10.00	0.8440	0.4578	-1.9741	0.0005	0.0003	-0.0011	2.50	PASS
				20.00	1.4162	0.4005	-2.9182	0.0008	0.0002	-0.0017	2.50	PASS
				30.00	1.5020	0.1860	-3.4332	0.0009	0.0001	-0.0020	2.50	PASS
				40.00	1.5450	-0.1287	-2.8181	0.0009	-0.0001	-0.0016	2.50	PASS
				50.00	1.4162	-0.6723	-1.5879	0.0008	-0.0004	-0.0009	2.50	PASS

Test Band: 4 10MHz Bandwidth (Frequency Error VS. Voltage)												
Test Mode	RB Allocation		Test Temp.	Test Volt.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	50	0	NT	LV	-3.1900	1.2016	2.0313	-0.0019	0.0007	0.0012	2.50	PASS
				NV	-2.7466	0.1574	0.7868	-0.0016	0.0001	0.0004	2.50	PASS
				HV	-2.8038	-0.0429	0.7868	-0.0016	0.0000	0.0004	2.50	PASS
16QAM	50	0	NT	LV	-2.2602	0.5436	0.6151	-0.0013	0.0003	0.0004	2.50	PASS
				NV	-2.3603	0.2575	2.4033	-0.0014	0.0001	0.0014	2.50	PASS
				HV	-3.5763	-0.0715	1.5879	-0.0021	0.0000	0.0009	2.50	PASS

Test Band: 4 10MHz Bandwidth (Frequency Error VS. Temperature)												
Test Mode	RB Allocation		Test Volt.	Test Temp.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	50	0	NV	-30.00	-3.5763	0.4005	1.3447	-0.0021	0.0002	0.0008	2.50	PASS
				-20.00	-2.4605	1.4877	2.3746	-0.0014	0.0009	0.0014	2.50	PASS
				-10.00	-2.9469	0.8297	1.4448	-0.0017	0.0005	0.0008	2.50	PASS
				0.00	-3.1757	0.2003	1.9026	-0.0019	0.0001	0.0011	2.50	PASS
				10.00	-2.6035	-0.9155	1.0586	-0.0015	-0.0005	0.0006	2.50	PASS
				20.00	-2.8467	0.0858	0.9584	-0.0017	0.0000	0.0005	2.50	PASS
				30.00	-2.5463	0.6866	1.5450	-0.0015	0.0004	0.0009	2.50	PASS
				40.00	-2.2316	0.8583	1.0586	-0.0013	0.0005	0.0006	2.50	PASS
				50.00	-2.2030	0.0858	1.0157	-0.0013	0.0000	0.0006	2.50	PASS
16QAM	50	0	NV	-30.00	-3.4904	1.4162	3.0327	-0.0020	0.0008	0.0017	2.50	PASS
				-20.00	-3.0184	0.0858	0.5722	-0.0018	0.0000	0.0003	2.50	PASS
				-10.00	-2.3890	0.7010	1.0872	-0.0014	0.0004	0.0006	2.50	PASS
				0.00	-3.6049	0.4435	1.9312	-0.0021	0.0003	0.0011	2.50	PASS
				10.00	-2.7895	0.2718	0.1001	-0.0016	0.0002	0.0001	2.50	PASS
				20.00	-2.2030	0.6723	2.7037	-0.0013	0.0004	0.0015	2.50	PASS

				30.00	-2.2602	-0.3147	2.0599	-0.0013	-0.0002	0.0012	2.50	PASS
				40.00	-3.1328	-0.4292	2.4748	-0.0018	-0.0002	0.0014	2.50	PASS
				50.00	-2.2030	-0.0858	1.3876	-0.0013	0.0000	0.0008	2.50	PASS

Test Band: 4 15MHz Bandwidth (Frequency Error VS. Voltage)												
Test Mode	RB Allocation		Test Temp.	Test Volt.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	75	0	NT	LV	0.1431	0.4578	-0.0858	0.0001	0.0003	0.0000	2.50	PASS
				NV	-0.3433	-0.4435	0.6008	-0.0002	-0.0003	0.0003	2.50	PASS
				HV	0.4005	0.1001	0.1860	0.0002	0.0001	0.0001	2.50	PASS
16QAM	75	0	NT	LV	0.0429	0.7153	-0.1431	0.0000	0.0004	-0.0001	2.50	PASS
				NV	0.5293	1.0729	1.4448	0.0003	0.0006	0.0008	2.50	PASS
				HV	0.6866	-0.1001	-0.1574	0.0004	-0.0001	-0.0001	2.50	PASS

Test Band: 4 15MHz Bandwidth (Frequency Error VS. Temperature)												
Test Mode	RB Allocation		Test Volt.	Test Temp.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	75	0	NV	-30.00	0.1431	0.8726	-0.4005	0.0001	0.0005	-0.0002	2.50	PASS
				-20.00	-0.1001	0.6437	0.0572	-0.0001	0.0004	0.0000	2.50	PASS
				-10.00	-0.3004	-0.9727	0.5293	-0.0002	-0.0006	0.0003	2.50	PASS
				0.00	-0.5865	-1.1730	0.6008	-0.0003	-0.0007	0.0003	2.50	PASS
				10.00	0.1144	-0.2718	-0.7868	0.0001	-0.0002	-0.0005	2.50	PASS
				20.00	1.0586	0.2861	0.2432	0.0006	0.0002	0.0001	2.50	PASS
				30.00	0.2003	0.0429	0.2861	0.0001	0.0000	0.0002	2.50	PASS
				40.00	0.4864	0.9871	0.0858	0.0003	0.0006	0.0000	2.50	PASS
				50.00	0.7153	1.6022	0.8154	0.0004	0.0009	0.0005	2.50	PASS
16QAM	75	0	NV	-30.00	0.0715	0.5865	1.2016	0.0000	0.0003	0.0007	2.50	PASS
				-20.00	0.3576	1.1015	-0.2432	0.0002	0.0006	-0.0001	2.50	PASS
				-10.00	0.4578	1.1444	0.5865	0.0003	0.0007	0.0003	2.50	PASS
				0.00	0.7153	1.5879	0.9584	0.0004	0.0009	0.0005	2.50	PASS
				10.00	1.0157	1.5163	-0.2718	0.0006	0.0009	-0.0002	2.50	PASS
				20.00	0.6437	-0.0572	-0.0715	0.0004	0.0000	0.0000	2.50	PASS
				30.00	-0.1431	0.7153	1.6594	-0.0001	0.0004	0.0009	2.50	PASS
				40.00	-0.1431	0.4005	1.0157	-0.0001	0.0002	0.0006	2.50	PASS
				50.00	0.0858	0.5436	0.3290	0.0000	0.0003	0.0002	2.50	PASS

Test Band: 4 20MHz Bandwidth (Frequency Error VS. Voltage)												
Test Mode	RB Allocation		Test Temp.	Test Volt.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	100	0	NT	LV	2.7609	0.0715	-2.3890	0.0016	0.0000	-0.0014	2.50	PASS
				NV	2.2030	-0.3147	-3.7193	0.0013	-0.0002	-0.0021	2.50	PASS
				HV	1.8883	-0.0715	-3.2330	0.0011	0.0000	-0.0019	2.50	PASS
16QAM	100	0	NT	LV	1.7166	-0.2003	-1.8597	0.0010	-0.0001	-0.0011	2.50	PASS
				NV	1.0014	0.3147	-2.1887	0.0006	0.0002	-0.0013	2.50	PASS
				HV	1.3733	0.1860	-2.6178	0.0008	0.0001	-0.0015	2.50	PASS

Test Band: 4 20MHz Bandwidth (Frequency Error VS. Temperature)												
Test Mode	RB Allocation		Test Volt.	Test Temp.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	100	0	NV	-30.00	1.2016	-0.2861	-2.5320	0.0007	-0.0002	-0.0015	2.50	PASS
				-20.00	1.1158	-0.1144	-3.4332	0.0006	-0.0001	-0.0020	2.50	PASS
				-10.00	2.0885	-0.3290	-3.2902	0.0012	-0.0002	-0.0019	2.50	PASS
				0.00	1.5163	-0.8011	-3.5906	0.0009	-0.0005	-0.0021	2.50	PASS
				10.00	1.8024	-0.4578	-2.5606	0.0010	-0.0003	-0.0015	2.50	PASS

				20.00	1.4305	-0.3862	-2.2316	0.0008	-0.0002	-0.0013	2.50	PASS
				30.00	2.7037	-0.6294	-2.9898	0.0016	-0.0004	-0.0017	2.50	PASS
				40.00	1.9884	-0.0858	-2.2173	0.0012	0.0000	-0.0013	2.50	PASS
				50.00	2.1029	-0.8440	-2.0599	0.0012	-0.0005	-0.0012	2.50	PASS
16QAM	100	0	NV	-30.00	1.3447	0.5293	-1.8597	0.0008	0.0003	-0.0011	2.50	PASS
				-20.00	1.4734	-0.2861	-2.8610	0.0009	-0.0002	-0.0016	2.50	PASS
				-10.00	1.7738	1.9455	-2.2888	0.0010	0.0011	-0.0013	2.50	PASS
				0.00	2.2888	-0.1287	-2.5177	0.0013	-0.0001	-0.0014	2.50	PASS
				10.00	1.6451	0.3719	-2.3890	0.0010	0.0002	-0.0014	2.50	PASS
				20.00	0.7439	0.3719	-2.3746	0.0004	0.0002	-0.0014	2.50	PASS
				30.00	1.5163	0.5865	-3.6049	0.0009	0.0003	-0.0021	2.50	PASS
				40.00	0.7296	1.5593	-1.9455	0.0004	0.0009	-0.0011	2.50	PASS
				50.00	1.8454	0.3862	-3.4904	0.0011	0.0002	-0.0020	2.50	PASS

3. Frequency stability

3.1 Test Result

Test Band: 5 1.4MHz Bandwidth (Frequency Error VS. Voltage)												
Test Mode	RB Allocation		Test Temp.	Test Volt.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	6	0	NT	LV	-1.5736	0.2003	1.2302	-0.0019	0.0002	0.0015	2.50	PASS
				NV	-2.6464	-0.0572	0.7868	-0.0032	-0.0001	0.0009	2.50	PASS
				HV	-0.5579	0.9584	0.2146	-0.0007	0.0011	0.0003	2.50	PASS
16QAM	6	0	NT	LV	-1.7452	-0.4148	0.7868	-0.0021	-0.0005	0.0009	2.50	PASS
				NV	-1.2445	0.2003	1.1158	-0.0015	0.0002	0.0013	2.50	PASS
				HV	-1.1873	-0.5007	-0.3290	-0.0014	-0.0006	-0.0004	2.50	PASS

Test Band: 5 1.4MHz Bandwidth (Frequency Error VS. Temperature)												
Test Mode	RB Allocation		Test Volt.	Test Temp.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	6	0	NV	-30.00	-0.9871	0.9441	0.3576	-0.0012	0.0011	0.0004	2.50	PASS
				-20.00	-1.0729	0.1717	-0.1860	-0.0013	0.0002	-0.0002	2.50	PASS
				-10.00	-1.5450	0.6008	-0.0858	-0.0019	0.0007	-0.0001	2.50	PASS
				0.00	-1.3304	0.9441	0.0286	-0.0016	0.0011	0.0000	2.50	PASS
				10.00	-1.1873	0.9012	0.3576	-0.0014	0.0011	0.0004	2.50	PASS
				20.00	-0.9584	0.0000	-0.6151	-0.0012	0.0000	-0.0007	2.50	PASS
				30.00	-1.2588	-0.5865	-0.7868	-0.0015	-0.0007	-0.0009	2.50	PASS
				40.00	-1.1444	-0.8726	-0.8011	-0.0014	-0.0010	-0.0009	2.50	PASS
				50.00	-0.9584	-0.7582	-0.8154	-0.0012	-0.0009	-0.0010	2.50	PASS
16QAM	6	0	NV	-30.00	-2.4462	0.5722	-0.6866	-0.0030	0.0007	-0.0008	2.50	PASS
				-20.00	-0.3862	0.2575	-0.0143	-0.0005	0.0003	0.0000	2.50	PASS
				-10.00	-0.7010	0.0143	-0.0286	-0.0008	0.0000	0.0000	2.50	PASS
				0.00	-0.7868	-0.2575	0.3576	-0.0010	-0.0003	0.0004	2.50	PASS
				10.00	-1.6165	-0.3004	0.5722	-0.0020	-0.0004	0.0007	2.50	PASS
				20.00	-1.5450	-0.4864	0.6866	-0.0019	-0.0006	0.0008	2.50	PASS
				30.00	-1.7023	0.2861	1.0014	-0.0021	0.0003	0.0012	2.50	PASS
				40.00	-1.7309	-0.2861	0.3290	-0.0021	-0.0003	0.0004	2.50	PASS
				50.00	-2.2745	0.0000	1.0157	-0.0028	0.0000	0.0012	2.50	PASS

Test Band: 5 3MHz Bandwidth (Frequency Error VS. Voltage)												
Test Mode	RB Allocation		Test Temp.	Test Volt.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	15	0	NT	LV	0.2861	-0.2718	-2.6178	0.0003	-0.0003	-0.0031	2.50	PASS

16QAM	15	0	NT	NV	-0.4435	-0.3290	-0.3004	-0.0005	-0.0004	-0.0004	2.50	PASS
				HV	-0.6437	-0.9012	-1.2016	-0.0008	-0.0011	-0.0014	2.50	PASS
				LV	0.1287	-0.4864	-3.0756	0.0002	-0.0006	-0.0036	2.50	PASS
				NV	-0.3862	-0.6866	-1.4877	-0.0005	-0.0008	-0.0018	2.50	PASS
				HV	0.5293	-1.6308	-2.5749	0.0006	-0.0019	-0.0030	2.50	PASS

Test Band: 5 3MHz Bandwidth (Frequency Error VS. Temperature)												
Test Mode	RB Allocation		Test Volt.	Test Temp.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	15	0	NV	-30.00	-1.1301	-1.3304	-1.6022	-0.0014	-0.0016	-0.0019	2.50	PASS
				-20.00	-1.1301	-1.1301	-1.3304	-0.0014	-0.0014	-0.0016	2.50	PASS
				-10.00	-1.2159	-0.3004	-1.1444	-0.0015	-0.0004	-0.0014	2.50	PASS
				0.00	-1.2302	0.1001	-0.7153	-0.0015	0.0001	-0.0008	2.50	PASS
				10.00	-0.7868	-0.0143	-2.4891	-0.0010	0.0000	-0.0029	2.50	PASS
				20.00	-0.8440	-0.2861	-1.9312	-0.0010	-0.0003	-0.0023	2.50	PASS
				30.00	-1.2159	0.1717	-1.3304	-0.0015	0.0002	-0.0016	2.50	PASS
				40.00	-0.3004	0.4721	-1.6165	-0.0004	0.0006	-0.0019	2.50	PASS
				50.00	-0.3719	0.2718	-1.2588	-0.0005	0.0003	-0.0015	2.50	PASS
16QAM	15	0	NV	-30.00	0.3719	0.2289	-1.6022	0.0005	0.0003	-0.0019	2.50	PASS
				-20.00	0.3433	0.0715	-2.0742	0.0004	0.0001	-0.0024	2.50	PASS
				-10.00	-0.5436	0.2432	-2.3460	-0.0007	0.0003	-0.0028	2.50	PASS
				0.00	-0.8726	-0.1717	-2.2316	-0.0011	-0.0002	-0.0026	2.50	PASS
				10.00	0.3576	-0.4005	-1.7452	0.0004	-0.0005	-0.0021	2.50	PASS
				20.00	0.4578	-0.2575	-1.2588	0.0006	-0.0003	-0.0015	2.50	PASS
				30.00	-0.2432	-0.2146	-1.0443	-0.0003	-0.0003	-0.0012	2.50	PASS
				40.00	-0.2146	0.3004	-0.8154	-0.0003	0.0004	-0.0010	2.50	PASS
				50.00	-0.4148	-0.1574	-3.4475	-0.0005	-0.0002	-0.0041	2.50	PASS

Test Band: 5 5MHz Bandwidth (Frequency Error VS. Voltage)												
Test Mode	RB Allocation		Test Temp.	Test Volt.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	25	0	NT	LV	-1.9169	-0.4292	0.4005	-0.0023	-0.0005	0.0005	2.50	PASS
				NV	-2.4605	-0.6580	-0.6580	-0.0030	-0.0008	-0.0008	2.50	PASS
				HV	-2.6608	0.1287	-0.8869	-0.0032	0.0002	-0.0010	2.50	PASS
16QAM	25	0	NT	LV	-1.9741	-0.5007	-1.4448	-0.0024	-0.0006	-0.0017	2.50	PASS
				NV	-1.6880	-1.0872	-0.0286	-0.0020	-0.0013	0.0000	2.50	PASS
				HV	-1.6308	-1.5736	-0.7725	-0.0020	-0.0019	-0.0009	2.50	PASS

Test Band: 5 5MHz Bandwidth (Frequency Error VS. Temperature)												
Test Mode	RB Allocation		Test Volt.	Test Temp.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	25	0	NV	-30.00	-1.2875	-0.3290	-1.0157	-0.0016	-0.0004	-0.0012	2.50	PASS
				-20.00	-3.2902	-0.0858	-0.2003	-0.0040	-0.0001	-0.0002	2.50	PASS
				-10.00	-2.0027	-0.3004	0.6723	-0.0024	-0.0004	0.0008	2.50	PASS
				0.00	-2.6464	-0.9727	-0.3576	-0.0032	-0.0012	-0.0004	2.50	PASS
				10.00	-2.4748	-0.7439	0.4292	-0.0030	-0.0009	0.0005	2.50	PASS
				20.00	-2.5749	-0.3719	1.2875	-0.0031	-0.0004	0.0015	2.50	PASS
				30.00	-1.8740	0.1717	-0.8583	-0.0023	0.0002	-0.0010	2.50	PASS
				40.00	-1.7023	-0.0429	-0.2289	-0.0021	-0.0001	-0.0003	2.50	PASS
				50.00	-2.3746	0.2289	-0.7582	-0.0029	0.0003	-0.0009	2.50	PASS
16QAM	25	0	NV	-30.00	-2.2030	-1.3018	-0.9584	-0.0027	-0.0016	-0.0011	2.50	PASS
				-20.00	-2.1315	-1.6880	-0.4292	-0.0026	-0.0020	-0.0005	2.50	PASS
				-10.00	-1.4019	-1.5163	-0.2432	-0.0017	-0.0018	-0.0003	2.50	PASS
				0.00	-1.5593	-1.6880	-0.2575	-0.0019	-0.0020	-0.0003	2.50	PASS
				10.00	-1.3304	-1.5736	0.4292	-0.0016	-0.0019	0.0005	2.50	PASS

				20.00	-1.1587	-2.1744	-0.8583	-0.0014	-0.0026	-0.0010	2.50	PASS
				30.00	-2.1458	-2.0599	-1.9455	-0.0026	-0.0025	-0.0023	2.50	PASS
				40.00	-1.9598	-2.3460	-0.5865	-0.0024	-0.0028	-0.0007	2.50	PASS
				50.00	-2.0885	-0.5436	-0.4721	-0.0025	-0.0006	-0.0006	2.50	PASS

Test Band: 5 10MHz Bandwidth (Frequency Error VS. Voltage)												
Test Mode	RB Allocation		Test Temp.	Test Volt.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	50	0	NT	LV	0.2146	-0.4864	-0.8869	0.0003	-0.0006	-0.0011	2.50	PASS
				NV	-0.4578	-0.8726	-0.8154	-0.0006	-0.0010	-0.0010	2.50	PASS
				HV	0.2718	0.6580	-0.4005	0.0003	0.0008	-0.0005	2.50	PASS
16QAM	50	0	NT	LV	-0.9155	0.3147	-0.4864	-0.0011	0.0004	-0.0006	2.50	PASS
				NV	-1.1587	-0.4148	-0.3576	-0.0014	-0.0005	-0.0004	2.50	PASS
				HV	-0.8869	0.0000	0.8011	-0.0011	0.0000	0.0009	2.50	PASS

Test Band: 5 10MHz Bandwidth (Frequency Error VS. Temperature)												
Test Mode	RB Allocation		Test Volt.	Test Temp.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	50	0	NV	-30.00	-0.3147	0.4435	0.3719	-0.0004	0.0005	0.0004	2.50	PASS
				-20.00	-0.2432	-1.9741	-0.2432	-0.0003	-0.0024	-0.0003	2.50	PASS
				-10.00	-0.0715	-1.3447	-1.0586	-0.0001	-0.0016	-0.0013	2.50	PASS
				0.00	-0.7296	-0.5436	-1.1587	-0.0009	-0.0006	-0.0014	2.50	PASS
				10.00	-0.3147	-0.0572	-1.3018	-0.0004	-0.0001	-0.0015	2.50	PASS
				20.00	-0.9584	-0.1287	-0.9298	-0.0012	-0.0002	-0.0011	2.50	PASS
				30.00	-0.2289	-1.0014	0.2146	-0.0003	-0.0012	0.0003	2.50	PASS
				40.00	-1.6165	-0.7296	-0.4148	-0.0019	-0.0009	-0.0005	2.50	PASS
				50.00	-1.1587	-0.5293	-1.7738	-0.0014	-0.0006	-0.0021	2.50	PASS
16QAM	50	0	NV	-30.00	-0.7296	-0.0429	0.3147	-0.0009	-0.0001	0.0004	2.50	PASS
				-20.00	-0.1144	-0.3433	0.7439	-0.0001	-0.0004	0.0009	2.50	PASS
				-10.00	0.1144	-0.1144	1.1301	0.0001	-0.0001	0.0013	2.50	PASS
				0.00	-0.0143	-1.0729	-1.0443	0.0000	-0.0013	-0.0012	2.50	PASS
				10.00	-0.3004	-0.9155	-0.5579	-0.0004	-0.0011	-0.0007	2.50	PASS
				20.00	-0.3004	-1.2159	-0.5722	-0.0004	-0.0015	-0.0007	2.50	PASS
				30.00	-0.2861	-0.8440	-0.5722	-0.0003	-0.0010	-0.0007	2.50	PASS
				40.00	0.3576	-1.2302	-0.4721	0.0004	-0.0015	-0.0006	2.50	PASS
				50.00	0.0572	-1.3304	-0.1574	0.0001	-0.0016	-0.0002	2.50	PASS

4. Frequency stability

4.1 Test Result

Test Band: 7 5MHz Bandwidth (Frequency Error VS. Voltage)												
Test Mode	RB Allocation		Test Temp.	Test Volt.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	25	0	NT	LV	2.8324	-1.7309	-0.0715	0.0011	-0.0007	0.0000	2.50	PASS
				NV	2.3746	-1.5450	-0.3719	0.0009	-0.0006	-0.0001	2.50	PASS
				HV	0.1574	-0.9727	1.1730	0.0001	-0.0004	0.0005	2.50	PASS
16QAM	25	0	NT	LV	1.1301	-1.9312	-0.9584	0.0005	-0.0008	-0.0004	2.50	PASS
				NV	2.5463	-4.5347	2.0027	0.0010	-0.0018	0.0008	2.50	PASS
				HV	1.3161	-1.3447	-0.3433	0.0005	-0.0005	-0.0001	2.50	PASS

Test Band: 7 5MHz Bandwidth (Frequency Error VS. Temperature)												
Test Mode	RB Allocation		Test	Test	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit	Verdict

	Size	Offset	Volt.	Temp.	LCH	MCH	HCH	LCH	MCH	HCH	(ppm)	
QPSK	25	0	NV	-30.00	-0.3290	-2.3890	-0.5579	-0.0001	-0.0009	-0.0002	2.50	PASS
				-20.00	-0.1001	-1.3018	1.5736	0.0000	-0.0005	0.0006	2.50	PASS
				-10.00	1.8168	-4.4918	-1.0157	0.0007	-0.0018	-0.0004	2.50	PASS
				0.00	1.1158	-2.5320	1.5450	0.0004	-0.0010	0.0006	2.50	PASS
				10.00	1.2875	-4.1056	0.3147	0.0005	-0.0016	0.0001	2.50	PASS
				20.00	2.9325	-5.0211	1.0586	0.0012	-0.0020	0.0004	2.50	PASS
				30.00	3.5191	-4.8780	-0.2146	0.0014	-0.0019	-0.0001	2.50	PASS
				40.00	0.6294	-2.5034	0.7439	0.0003	-0.0010	0.0003	2.50	PASS
				50.00	1.3876	-3.4189	1.2732	0.0006	-0.0013	0.0005	2.50	PASS
16QAM	25	0	NV	-30.00	1.4305	-3.8910	2.2173	0.0006	-0.0015	0.0009	2.50	PASS
				-20.00	0.7582	-1.7309	2.8324	0.0003	-0.0007	0.0011	2.50	PASS
				-10.00	1.2588	-4.4489	2.6464	0.0005	-0.0018	0.0010	2.50	PASS
				0.00	2.3746	-3.8338	1.0300	0.0009	-0.0015	0.0004	2.50	PASS
				10.00	0.5436	-0.7868	2.4462	0.0002	-0.0003	0.0010	2.50	PASS
				20.00	0.3862	-3.7336	1.9884	0.0002	-0.0015	0.0008	2.50	PASS
				30.00	0.9298	-2.9325	1.9455	0.0004	-0.0012	0.0008	2.50	PASS
				40.00	0.3862	-3.7909	2.2459	0.0002	-0.0015	0.0009	2.50	PASS
				50.00	2.6608	-3.0756	3.6192	0.0011	-0.0012	0.0014	2.50	PASS

Test Band: 7_10MHz Bandwidth (Frequency Error VS. Voltage)												
Test Mode	RB Allocation		Test Temp.	Test Volt.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	50	0	NT	LV	-4.2486	-4.5347	-2.2888	-0.0017	-0.0018	-0.0009	2.50	PASS
				NV	-2.8467	-1.8454	-2.9469	-0.0011	-0.0007	-0.0011	2.50	PASS
				HV	-2.6464	-3.1042	-4.5490	-0.0011	-0.0012	-0.0018	2.50	PASS
16QAM	50	0	NT	LV	-2.4176	-3.9339	-2.6321	-0.0010	-0.0016	-0.0010	2.50	PASS
				NV	-1.7023	-3.1328	-1.6737	-0.0007	-0.0012	-0.0007	2.50	PASS
				HV	-1.8454	-0.3290	-1.6594	-0.0007	-0.0001	-0.0006	2.50	PASS

Test Band: 7 10MHz Bandwidth (Frequency Error VS. Temperature)												
Test Mode	RB Allocation		Test Volt.	Test Temp.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	50	0	NV	-30.00	-3.6049	-2.6464	-3.7336	-0.0014	-0.0010	-0.0015	2.50	PASS
				-20.00	-3.5048	-3.0613	-2.7895	-0.0014	-0.0012	-0.0011	2.50	PASS
				-10.00	-5.1355	-3.3903	-3.4761	-0.0021	-0.0013	-0.0014	2.50	PASS
				0.00	-3.7336	-2.5177	-1.6165	-0.0015	-0.0010	-0.0006	2.50	PASS
				10.00	-2.6894	-3.8624	-3.1471	-0.0011	-0.0015	-0.0012	2.50	PASS
				20.00	-2.2316	-4.7064	-4.7493	-0.0009	-0.0019	-0.0019	2.50	PASS
				30.00	-1.5879	-4.9210	-4.3774	-0.0006	-0.0019	-0.0017	2.50	PASS
				40.00	-3.6192	-3.2043	-2.3460	-0.0014	-0.0013	-0.0009	2.50	PASS
				50.00	-4.7779	-4.8065	-1.6880	-0.0019	-0.0019	-0.0007	2.50	PASS
16QAM	50	0	NV	-30.00	-3.9196	-2.5177	-3.4332	-0.0016	-0.0010	-0.0013	2.50	PASS
				-20.00	-2.7037	-3.0899	-2.6035	-0.0011	-0.0012	-0.0010	2.50	PASS
				-10.00	-3.2473	-4.9639	-5.1069	-0.0013	-0.0020	-0.0020	2.50	PASS
				0.00	-4.8351	-3.5334	-4.7493	-0.0019	-0.0014	-0.0019	2.50	PASS
				10.00	-0.5722	-4.1914	-4.8208	-0.0002	-0.0017	-0.0019	2.50	PASS
				20.00	-2.6178	-3.8910	-2.4176	-0.0010	-0.0015	-0.0009	2.50	PASS
				30.00	-4.0483	-4.8208	-4.4775	-0.0016	-0.0019	-0.0017	2.50	PASS
				40.00	-3.3474	-2.8181	-4.1914	-0.0013	-0.0011	-0.0016	2.50	PASS
				50.00	-4.8494	-2.0027	-3.7479	-0.0019	-0.0008	-0.0015	2.50	PASS

Test Band: 7 15MHz Bandwidth (Frequency Error VS. Voltage)												
Test Mode	RB Allocation		Test Temp.	Test Volt.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		

QPSK	75	0	NT	LV	0.3862	-4.5347	1.6880	0.0002	-0.0018	0.0007	2.50	PASS
				NV	3.3903	-1.7452	3.1042	0.0014	-0.0007	0.0012	2.50	PASS
				HV	-0.1287	-3.1757	2.8181	-0.0001	-0.0013	0.0011	2.50	PASS
16QAM	75	0	NT	LV	1.3876	-5.1785	4.2915	0.0006	-0.0020	0.0017	2.50	PASS
				NV	-0.4292	-5.6076	4.2343	-0.0002	-0.0022	0.0017	2.50	PASS
				HV	1.2159	-4.0197	1.8311	0.0005	-0.0016	0.0007	2.50	PASS

Test Band: 7_ 15MHz Bandwidth (Frequency Error VS. Temperature)												
Test Mode	RB Allocation		Test Volt.	Test Temp.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	75	0	NV	-30.00	0.8297	-2.2888	1.5879	0.0003	-0.0009	0.0006	2.50	PASS
				-20.00	-0.7725	-3.6335	2.2745	-0.0003	-0.0014	0.0009	2.50	PASS
				-10.00	-0.3862	-1.3590	1.2588	-0.0002	-0.0005	0.0005	2.50	PASS
				0.00	1.3018	-3.2187	1.3590	0.0005	-0.0013	0.0005	2.50	PASS
				10.00	-0.3004	-2.5749	1.9026	-0.0001	-0.0010	0.0007	2.50	PASS
				20.00	1.4877	-2.9039	0.8297	0.0006	-0.0011	0.0003	2.50	PASS
				30.00	2.1458	-4.7064	1.5306	0.0009	-0.0019	0.0006	2.50	PASS
				40.00	-0.0858	-2.9325	2.1029	0.0000	-0.0012	0.0008	2.50	PASS
				50.00	2.3603	-2.2602	-0.8440	0.0009	-0.0009	-0.0003	2.50	PASS
16QAM	75	0	NV	-30.00	0.4148	-4.1342	2.5463	0.0002	-0.0016	0.0010	2.50	PASS
				-20.00	-0.1860	-2.2316	2.4605	-0.0001	-0.0009	0.0010	2.50	PASS
				-10.00	1.2875	-2.9612	2.0742	0.0005	-0.0012	0.0008	2.50	PASS
				0.00	0.3433	-3.5334	0.8726	0.0001	-0.0014	0.0003	2.50	PASS
				10.00	0.4148	-4.2057	3.7193	0.0002	-0.0017	0.0015	2.50	PASS
				20.00	0.7153	-3.5906	1.9884	0.0003	-0.0014	0.0008	2.50	PASS
				30.00	-1.6737	-1.8024	2.5034	-0.0007	-0.0007	0.0010	2.50	PASS
				40.00	0.9298	-3.4475	1.7166	0.0004	-0.0014	0.0007	2.50	PASS
				50.00	0.4578	-4.2486	4.7207	0.0002	-0.0017	0.0018	2.50	PASS

Test Band: 7_ 20MHz Bandwidth (Frequency Error VS. Voltage)												
Test Mode	RB Allocation		Test Temp.	Test Volt.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	100	0	NT	LV	1.8597	-2.9898	1.6022	0.0007	-0.0012	0.0006	2.50	PASS
				NV	2.7466	-3.4332	0.9298	0.0011	-0.0014	0.0004	2.50	PASS
				HV	3.0184	-3.2616	0.0572	0.0012	-0.0013	0.0000	2.50	PASS
16QAM	100	0	NT	LV	2.9325	-3.2330	1.0443	0.0012	-0.0013	0.0004	2.50	PASS
				NV	3.1042	-4.2772	0.5722	0.0012	-0.0017	0.0002	2.50	PASS
				HV	2.7895	-3.1757	0.8440	0.0011	-0.0013	0.0003	2.50	PASS

Test Band: 7_ 20MHz Bandwidth (Frequency Error VS. Temperature)												
Test Mode	RB Allocation		Test Volt.	Test Temp.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	100	0	NV	-30.00	4.1914	-2.6321	0.7868	0.0017	-0.0010	0.0003	2.50	PASS
				-20.00	2.1601	-3.9339	0.4005	0.0009	-0.0016	0.0002	2.50	PASS
				-10.00	2.6178	-4.2629	-0.2861	0.0010	-0.0017	-0.0001	2.50	PASS
				0.00	1.0729	-2.9898	-0.6294	0.0004	-0.0012	-0.0002	2.50	PASS
				10.00	3.2043	-1.4019	-1.3018	0.0013	-0.0006	-0.0005	2.50	PASS
				20.00	0.6008	-4.4918	-0.4005	0.0002	-0.0018	-0.0002	2.50	PASS
				30.00	2.0170	-1.6880	-0.0858	0.0008	-0.0007	0.0000	2.50	PASS
				40.00	2.9469	-1.7023	0.9155	0.0012	-0.0007	0.0004	2.50	PASS
				50.00	1.0729	-4.3201	0.0143	0.0004	-0.0017	0.0000	2.50	PASS
16QAM	100	0	NV	-30.00	1.5593	-0.8869	1.3161	0.0006	-0.0003	0.0005	2.50	PASS
				-20.00	4.2057	-3.2187	-0.0143	0.0017	-0.0013	0.0000	2.50	PASS
				-10.00	2.4462	-4.3917	0.0858	0.0010	-0.0017	0.0000	2.50	PASS
				0.00	1.2732	-4.9210	-0.3576	0.0005	-0.0019	-0.0001	2.50	PASS

				10.00	1.0014	-4.8351	2.3031	0.0004	-0.0019	0.0009	2.50	PASS
				20.00	0.1287	-4.9210	1.1301	0.0001	-0.0019	0.0004	2.50	PASS
				30.00	3.6049	-3.7336	0.0572	0.0014	-0.0015	0.0000	2.50	PASS
				40.00	2.5749	-1.6308	1.1587	0.0010	-0.0006	0.0005	2.50	PASS
				50.00	1.0443	-3.8767	-0.0715	0.0004	-0.0015	0.0000	2.50	PASS

5. Frequency stability

5.1 Test Result

Test Band: 66 1.4MHz Bandwidth (Frequency Error VS. Voltage)												
Test Mode	RB Allocation		Test Temp.	Test Volt.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	6	0	NT	LV	2.0027	-2.7180	0.3004	0.0012	-0.0016	0.0002	2.50	PASS
				NV	1.0872	-1.9026	0.6008	0.0006	-0.0011	0.0003	2.50	PASS
				HV	-0.0572	-1.7738	1.9312	0.0000	-0.0010	0.0011	2.50	PASS
16QAM	6	0	NT	LV	1.1873	-2.3746	0.8011	0.0007	-0.0014	0.0005	2.50	PASS
				NV	1.6737	-2.3174	-0.4721	0.0010	-0.0013	-0.0003	2.50	PASS
				HV	3.0327	-2.5463	0.8440	0.0018	-0.0015	0.0005	2.50	PASS

Test Band: 66_1.4MHz Bandwidth (Frequency Error VS. Temperature)												
Test Mode	RB Allocation		Test Volt.	Test Temp.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	6	0	NV	-30.00	0.9012	-1.0586	1.3018	0.0005	-0.0006	0.0007	2.50	PASS
				-20.00	4.5204	-3.7766	1.3733	0.0026	-0.0022	0.0008	2.50	PASS
				-10.00	-0.0286	-3.7336	1.4877	0.0000	-0.0021	0.0008	2.50	PASS
				0.00	0.9012	-1.4734	0.6151	0.0005	-0.0008	0.0003	2.50	PASS
				10.00	1.9455	-1.9026	0.5007	0.0011	-0.0011	0.0003	2.50	PASS
				20.00	2.0456	-2.9325	0.7439	0.0012	-0.0017	0.0004	2.50	PASS
				30.00	1.1301	-2.8610	-0.0286	0.0007	-0.0016	0.0000	2.50	PASS
				40.00	2.4462	-4.2200	0.3004	0.0014	-0.0024	0.0002	2.50	PASS
				50.00	1.9312	-0.4864	0.2146	0.0011	-0.0003	0.0001	2.50	PASS
16QAM	6	0	NV	-30.00	1.3018	-1.1158	0.2432	0.0008	-0.0006	0.0001	2.50	PASS
				-20.00	1.4019	-2.6608	0.2289	0.0008	-0.0015	0.0001	2.50	PASS
				-10.00	2.3317	-2.2888	-0.7868	0.0014	-0.0013	-0.0004	2.50	PASS
				0.00	0.9012	-3.5048	1.2302	0.0005	-0.0020	0.0007	2.50	PASS
				10.00	-0.4721	-0.9584	1.1730	-0.0003	-0.0005	0.0007	2.50	PASS
				20.00	0.8011	-2.8181	0.8297	0.0005	-0.0016	0.0005	2.50	PASS
				30.00	1.8024	-1.7309	-0.1574	0.0011	-0.0010	-0.0001	2.50	PASS
				40.00	3.5620	-3.2902	-0.5436	0.0021	-0.0019	-0.0003	2.50	PASS
				50.00	1.1444	-3.1757	0.4435	0.0007	-0.0018	0.0002	2.50	PASS

Test Band: 66 3MHz Bandwidth (Frequency Error VS. Voltage)												
Test Mode	RB Allocation		Test Temp.	Test Volt.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	15	0	NT	LV	-1.5593	-3.2616	1.6451	-0.0009	-0.0019	0.0009	2.50	PASS
				NV	-0.7725	-5.1498	2.6178	-0.0005	-0.0030	0.0015	2.50	PASS
				HV	-1.9455	-4.1771	2.1601	-0.0011	-0.0024	0.0012	2.50	PASS
16QAM	15	0	NT	LV	0.9584	-4.3774	0.7010	0.0006	-0.0025	0.0004	2.50	PASS
				NV	-0.7725	-3.3188	1.7881	-0.0005	-0.0019	0.0010	2.50	PASS
				HV	-0.1717	-2.8324	0.3719	-0.0001	-0.0016	0.0002	2.50	PASS

Test Band: 66 3MHz Bandwidth (Frequency Error VS. Temperature)

Test Mode	RB Allocation		Test Volt.	Test Temp.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	15	0	NV	-30.00	-1.6308	-2.6751	1.8168	-0.0010	-0.0015	0.0010	2.50	PASS
				-20.00	-0.2003	-2.5034	2.8181	-0.0001	-0.0014	0.0016	2.50	PASS
				-10.00	-0.7868	-3.6907	1.7738	-0.0005	-0.0021	0.0010	2.50	PASS
				0.00	-1.0157	-3.0899	1.8024	-0.0006	-0.0018	0.0010	2.50	PASS
				10.00	-0.7439	-3.0041	2.1458	-0.0004	-0.0017	0.0012	2.50	PASS
				20.00	0.1144	-5.7650	2.1887	0.0001	-0.0033	0.0012	2.50	PASS
				30.00	-0.8154	-4.3631	0.9298	-0.0005	-0.0025	0.0005	2.50	PASS
				40.00	-0.2289	-3.5477	2.1887	-0.0001	-0.0020	0.0012	2.50	PASS
				50.00	-0.2003	-4.3488	1.3018	-0.0001	-0.0025	0.0007	2.50	PASS
16QAM	15	0	NV	-30.00	0.2575	-2.7752	1.9026	0.0002	-0.0016	0.0011	2.50	PASS
				-20.00	0.4292	-3.1328	1.6165	0.0003	-0.0018	0.0009	2.50	PASS
				-10.00	0.5436	-2.9182	1.4877	0.0003	-0.0017	0.0008	2.50	PASS
				0.00	-0.2432	-2.4891	1.5736	-0.0001	-0.0014	0.0009	2.50	PASS
				10.00	0.4435	-2.1315	0.2146	0.0003	-0.0012	0.0001	2.50	PASS
				20.00	-0.8011	-1.3304	1.5736	-0.0005	-0.0008	0.0009	2.50	PASS
				30.00	-0.0286	-2.4033	2.4319	0.0000	-0.0014	0.0014	2.50	PASS
				40.00	-0.0286	-2.6035	3.2330	0.0000	-0.0015	0.0018	2.50	PASS
				50.00	-0.5436	-2.0885	3.4904	-0.0003	-0.0012	0.0020	2.50	PASS

Test Band: 66 5MHz Bandwidth (Frequency Error VS. Voltage)												
Test Mode	RB Allocation		Test Temp.	Test Volt.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	25	0	NT	LV	1.5020	-3.1614	1.5879	0.0009	-0.0018	0.0009	2.50	PASS
				NV	3.4475	-2.1458	0.6008	0.0020	-0.0012	0.0003	2.50	PASS
				HV	0.9584	-1.7738	1.8597	0.0006	-0.0010	0.0010	2.50	PASS
16QAM	25	0	NT	LV	0.4721	-1.9169	-0.9012	0.0003	-0.0011	-0.0005	2.50	PASS
				NV	1.0729	-3.3760	-0.9298	0.0006	-0.0019	-0.0005	2.50	PASS
				HV	2.2316	-1.7738	0.3576	0.0013	-0.0010	0.0002	2.50	PASS

Test Band: 66 5MHz Bandwidth (Frequency Error VS. Temperature)												
Test Mode	RB Allocation		Test Volt.	Test Temp.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	25	0	NV	-30.00	1.1873	-2.0027	0.6294	0.0007	-0.0011	0.0004	2.50	PASS
				-20.00	2.6464	-2.1172	0.0000	0.0015	-0.0012	0.0000	2.50	PASS
				-10.00	0.3433	-1.5450	0.9298	0.0002	-0.0009	0.0005	2.50	PASS
				0.00	1.4162	-2.1601	0.1860	0.0008	-0.0012	0.0001	2.50	PASS
				10.00	2.0885	-3.4332	1.7738	0.0012	-0.0020	0.0010	2.50	PASS
				20.00	2.8467	-2.3317	0.7582	0.0017	-0.0013	0.0004	2.50	PASS
				30.00	0.9155	-3.3617	1.7595	0.0005	-0.0019	0.0010	2.50	PASS
				40.00	3.1757	-2.7609	2.2173	0.0019	-0.0016	0.0012	2.50	PASS
				50.00	1.1301	-2.6608	1.1158	0.0007	-0.0015	0.0006	2.50	PASS
16QAM	25	0	NV	-30.00	0.5865	-3.8052	0.2861	0.0003	-0.0022	0.0002	2.50	PASS
				-20.00	1.7452	-2.3890	0.3719	0.0010	-0.0014	0.0002	2.50	PASS
				-10.00	1.9884	-3.3474	0.5436	0.0012	-0.0019	0.0003	2.50	PASS
				0.00	1.6451	-2.6751	0.6580	0.0010	-0.0015	0.0004	2.50	PASS
				10.00	1.5736	-2.8038	0.7439	0.0009	-0.0016	0.0004	2.50	PASS
				20.00	1.8883	-3.1614	0.5579	0.0011	-0.0018	0.0003	2.50	PASS
				30.00	1.0443	-2.5177	0.1717	0.0006	-0.0014	0.0001	2.50	PASS
				40.00	1.7452	-2.8038	0.1860	0.0010	-0.0016	0.0001	2.50	PASS
				50.00	1.8883	-3.2187	0.7725	0.0011	-0.0018	0.0004	2.50	PASS

Test Band: 66 10MHz Bandwidth (Frequency Error VS. Voltage)												
Test Mode	RB Allocation		Test	Test	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit	Verdict

	Size	Offset	Temp.	Volt.	LCH	MCH	HCH	LCH	MCH	HCH	(ppm)	
QPSK	50	0	NT	LV	-2.9039	-1.8024	-2.1029	-0.0017	-0.0010	-0.0012	2.50	PASS
				NV	-1.9312	-1.4877	-3.8338	-0.0011	-0.0009	-0.0022	2.50	PASS
				HV	-2.2745	-3.7766	-2.1744	-0.0013	-0.0022	-0.0012	2.50	PASS
16QAM	50	0	NT	LV	-1.4162	-2.0885	-2.6178	-0.0008	-0.0012	-0.0015	2.50	PASS
				NV	-3.6192	-1.7595	-2.2459	-0.0021	-0.0010	-0.0013	2.50	PASS
				HV	-3.9768	-3.7193	-3.3617	-0.0023	-0.0021	-0.0019	2.50	PASS

Test Band: 66 10MHz Bandwidth (Frequency Error VS. Temperature)												
Test Mode	RB Allocation		Test Volt.	Test Temp.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	50	0	NV	-30.00	-1.9884	-2.3174	-1.6880	-0.0012	-0.0013	-0.0010	2.50	PASS
				-20.00	-1.1730	-2.0027	-0.9298	-0.0007	-0.0011	-0.0005	2.50	PASS
				-10.00	-2.5749	-2.5177	-2.1887	-0.0015	-0.0014	-0.0012	2.50	PASS
				0.00	-1.2588	-1.8311	-2.8753	-0.0007	-0.0010	-0.0016	2.50	PASS
				10.00	-2.8181	-2.6178	-1.9169	-0.0016	-0.0015	-0.0011	2.50	PASS
				20.00	-2.0456	-3.0041	-1.5879	-0.0012	-0.0017	-0.0009	2.50	PASS
				30.00	-3.8052	-3.5906	-1.5736	-0.0022	-0.0021	-0.0009	2.50	PASS
				40.00	-3.3903	-3.8767	-2.0027	-0.0020	-0.0022	-0.0011	2.50	PASS
				50.00	-2.1172	-3.0470	-3.8195	-0.0012	-0.0017	-0.0022	2.50	PASS
16QAM	50	0	NV	-30.00	-1.9312	-4.1056	-2.0742	-0.0011	-0.0024	-0.0012	2.50	PASS
				-20.00	-3.1328	-3.6764	-3.3617	-0.0018	-0.0021	-0.0019	2.50	PASS
				-10.00	-2.3460	-3.3474	-3.2902	-0.0014	-0.0019	-0.0019	2.50	PASS
				0.00	-3.1900	-3.2759	-2.2602	-0.0019	-0.0019	-0.0013	2.50	PASS
				10.00	-2.3460	-3.0613	-2.7895	-0.0014	-0.0018	-0.0016	2.50	PASS
				20.00	-3.9911	-3.4046	-4.1199	-0.0023	-0.0020	-0.0023	2.50	PASS
				30.00	-1.9884	-3.6049	-2.6894	-0.0012	-0.0021	-0.0015	2.50	PASS
				40.00	-2.5320	-2.9325	-2.6321	-0.0015	-0.0017	-0.0015	2.50	PASS
				50.00	-3.8624	-2.9325	-4.1485	-0.0023	-0.0017	-0.0023	2.50	PASS

Test Band: 66 15MHz Bandwidth (Frequency Error VS. Voltage)												
Test Mode	RB Allocation		Test Temp.	Test Volt.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	75	0	NT	LV	0.3862	-3.4761	2.8324	0.0002	-0.0020	0.0016	2.50	PASS
				NV	0.4864	-2.8896	1.9598	0.0003	-0.0017	0.0011	2.50	PASS
				HV	0.5865	-1.5450	1.5163	0.0003	-0.0009	0.0009	2.50	PASS
16QAM	75	0	NT	LV	-0.0143	-3.2902	0.5150	0.0000	-0.0019	0.0003	2.50	PASS
				NV	-0.0429	-2.1601	2.4891	0.0000	-0.0012	0.0014	2.50	PASS
				HV	-0.0572	-1.3447	1.1444	0.0000	-0.0008	0.0006	2.50	PASS

Test Band: 66 15MHz Bandwidth (Frequency Error VS. Temperature)												
Test Mode	RB Allocation		Test Volt.	Test Temp.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	75	0	NV	-30.00	0.4148	-2.4462	1.0157	0.0002	-0.0014	0.0006	2.50	PASS
				-20.00	1.5450	-4.2629	1.6737	0.0009	-0.0024	0.0009	2.50	PASS
				-10.00	1.2588	-1.6308	1.6022	0.0007	-0.0009	0.0009	2.50	PASS
				0.00	1.2302	-0.8154	0.4721	0.0007	-0.0005	0.0003	2.50	PASS
				10.00	-0.6580	-4.1485	1.4448	-0.0004	-0.0024	0.0008	2.50	PASS
				20.00	0.0858	-1.6880	1.3733	0.0000	-0.0010	0.0008	2.50	PASS
				30.00	0.5722	-3.8767	1.3590	0.0003	-0.0022	0.0008	2.50	PASS
				40.00	0.3719	-2.0313	0.1431	0.0002	-0.0012	0.0001	2.50	PASS
				50.00	-0.2718	-2.3031	1.9884	-0.0002	-0.0013	0.0011	2.50	PASS
16QAM	75	0	NV	-30.00	0.7868	-2.0456	1.3733	0.0005	-0.0012	0.0008	2.50	PASS
				-20.00	-0.1431	-1.5020	1.4591	-0.0001	-0.0009	0.0008	2.50	PASS
				-10.00	0.2718	-1.5020	1.7881	0.0002	-0.0009	0.0010	2.50	PASS

				0.00	0.0143	-1.7309	1.2875	0.0000	-0.0010	0.0007	2.50	PASS
				10.00	-0.2289	-1.5450	0.1717	-0.0001	-0.0009	0.0001	2.50	PASS
				20.00	0.6008	-1.6737	2.0456	0.0003	-0.0010	0.0012	2.50	PASS
				30.00	0.3147	-3.7909	1.7309	0.0002	-0.0022	0.0010	2.50	PASS
				40.00	0.2718	-2.7895	0.8726	0.0002	-0.0016	0.0005	2.50	PASS
				50.00	0.8297	-3.2759	0.4721	0.0005	-0.0019	0.0003	2.50	PASS

Test Band: 66 20MHz Bandwidth (Frequency Error VS. Voltage)												
Test Mode	RB Allocation		Test Temp.	Test Volt.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	100	0	NT	LV	1.9169	-3.6764	0.4435	0.0011	-0.0021	0.0003	2.50	PASS
				NV	1.9026	-3.7050	1.4877	0.0011	-0.0021	0.0008	2.50	PASS
				HV	1.2588	-3.7479	0.6008	0.0007	-0.0021	0.0003	2.50	PASS
16QAM	100	0	NT	LV	0.7296	-2.9325	1.0729	0.0004	-0.0017	0.0006	2.50	PASS
				NV	2.3317	-2.3460	1.6165	0.0014	-0.0013	0.0009	2.50	PASS
				HV	1.5450	-2.3746	-0.4721	0.0009	-0.0014	-0.0003	2.50	PASS

Test Band: 66 20MHz Bandwidth (Frequency Error VS. Temperature)												
Test Mode	RB Allocation		Test Volt.	Test Temp.	Freq. Error (Hz)			Freq. vs. rated (ppm)			Limit (ppm)	Verdict
	Size	Offset			LCH	MCH	HCH	LCH	MCH	HCH		
QPSK	100	0	NV	-30.00	1.4591	-2.4891	1.0157	0.0008	-0.0014	0.0006	2.50	PASS
				-20.00	1.0443	-3.5620	0.3576	0.0006	-0.0020	0.0002	2.50	PASS
				-10.00	1.9026	-2.7895	-0.2432	0.0011	-0.0016	-0.0001	2.50	PASS
				0.00	-0.1144	-2.4462	0.6723	-0.0001	-0.0014	0.0004	2.50	PASS
				10.00	1.4019	-3.5620	0.2718	0.0008	-0.0020	0.0002	2.50	PASS
				20.00	1.0300	-2.3174	-0.8297	0.0006	-0.0013	-0.0005	2.50	PASS
				30.00	1.7023	-2.5463	1.5593	0.0010	-0.0015	0.0009	2.50	PASS
				40.00	1.0157	-1.7881	-0.3433	0.0006	-0.0010	-0.0002	2.50	PASS
				50.00	1.5879	-3.5334	0.8869	0.0009	-0.0020	0.0005	2.50	PASS
16QAM	100	0	NV	-30.00	0.7868	-0.9298	0.6437	0.0005	-0.0005	0.0004	2.50	PASS
				-20.00	0.6294	-2.8610	0.7010	0.0004	-0.0016	0.0004	2.50	PASS
				-10.00	1.7023	-2.9898	0.9298	0.0010	-0.0017	0.0005	2.50	PASS
				0.00	0.4005	-3.1900	0.3862	0.0002	-0.0018	0.0002	2.50	PASS
				10.00	1.6737	-2.2030	0.1001	0.0010	-0.0013	0.0001	2.50	PASS
				20.00	1.1158	-2.4891	0.0000	0.0006	-0.0014	0.0000	2.50	PASS
				30.00	1.1158	-2.5463	-0.2718	0.0006	-0.0015	-0.0002	2.50	PASS
				40.00	1.2588	-2.0885	-0.0572	0.0007	-0.0012	0.0000	2.50	PASS
				50.00	2.5749	-2.7466	-0.4435	0.0015	-0.0016	-0.0003	2.50	PASS