

1. Frequency Stability

1.1 30k_SISO_20MHz

1.1.1 Test Result

5G NR n48 SCS=30kHz SISO 20MHz								
Modulation	Frequency (MHz)	RB Allocation	Temp. (°C)	Volt.	Freq. Error (Hz)	Freq. vs. rated (ppm)		Verdict
						Result	Limit	
DFT-s-OFDM PI/2 BPSK	3624.99	Outer_Full	20	LV	-11.20	-0.0031	>=-2.5 & <=2.5	Pass
				HV	-38.30	-0.0106	>=-2.5 & <=2.5	Pass
			-30	NV	-6.20	-0.0017	>=-2.5 & <=2.5	Pass
			-20	NV	-14.80	-0.0041	>=-2.5 & <=2.5	Pass
			-10	NV	-10.50	-0.0029	>=-2.5 & <=2.5	Pass
			0	NV	-27.40	-0.0076	>=-2.5 & <=2.5	Pass
			10	NV	-11.60	-0.0032	>=-2.5 & <=2.5	Pass
			20	NV	-25.20	-0.0070	>=-2.5 & <=2.5	Pass
			30	NV	-10.30	-0.0028	>=-2.5 & <=2.5	Pass
			40	NV	-39.70	-0.0110	>=-2.5 & <=2.5	Pass
50	NV	-14.60	-0.0040	>=-2.5 & <=2.5	Pass			
DFT-s-OFDM QPSK	3624.99	Outer_Full	20	LV	-19.30	-0.0053	>=-2.5 & <=2.5	Pass
				HV	-30.00	-0.0083	>=-2.5 & <=2.5	Pass
			-30	NV	-17.80	-0.0049	>=-2.5 & <=2.5	Pass
			-20	NV	-16.70	-0.0046	>=-2.5 & <=2.5	Pass
			-10	NV	-7.60	-0.0021	>=-2.5 & <=2.5	Pass
			0	NV	21.40	0.0059	>=-2.5 & <=2.5	Pass
			10	NV	-21.10	-0.0058	>=-2.5 & <=2.5	Pass
			20	NV	-26.90	-0.0074	>=-2.5 & <=2.5	Pass
			30	NV	-4.20	-0.0012	>=-2.5 & <=2.5	Pass
			40	NV	-18.90	-0.0052	>=-2.5 & <=2.5	Pass
50	NV	-41.00	-0.0113	>=-2.5 & <=2.5	Pass			
DFT-s-OFDM 16 QAM	3624.99	Outer_Full	20	LV	-31.00	-0.0086	>=-2.5 & <=2.5	Pass
				HV	-41.00	-0.0113	>=-2.5 & <=2.5	Pass
			-30	NV	-26.30	-0.0073	>=-2.5 & <=2.5	Pass
			-20	NV	-18.30	-0.0050	>=-2.5 & <=2.5	Pass
			-10	NV	-30.40	-0.0084	>=-2.5 & <=2.5	Pass
			0	NV	-39.20	-0.0108	>=-2.5 & <=2.5	Pass
			10	NV	-34.60	-0.0095	>=-2.5 & <=2.5	Pass
			20	NV	-17.00	-0.0047	>=-2.5 & <=2.5	Pass
			30	NV	-32.00	-0.0088	>=-2.5 & <=2.5	Pass
			40	NV	-27.40	-0.0076	>=-2.5 & <=2.5	Pass
50	NV	-31.00	-0.0086	>=-2.5 & <=2.5	Pass			
DFT-s-OFDM 64 QAM	3624.99	Outer_Full	20	LV	-15.20	-0.0042	>=-2.5 & <=2.5	Pass
				HV	-23.90	-0.0066	>=-2.5 & <=2.5	Pass
			-30	NV	-17.00	-0.0047	>=-2.5 & <=2.5	Pass
			-20	NV	-8.90	-0.0025	>=-2.5 & <=2.5	Pass
			-10	NV	-18.30	-0.0050	>=-2.5 & <=2.5	Pass
			0	NV	-28.20	-0.0078	>=-2.5 & <=2.5	Pass
			10	NV	-37.40	-0.0103	>=-2.5 & <=2.5	Pass
			20	NV	-14.60	-0.0040	>=-2.5 & <=2.5	Pass
			30	NV	-11.40	-0.0031	>=-2.5 & <=2.5	Pass
			40	NV	-35.00	-0.0097	>=-2.5 & <=2.5	Pass
50	NV	-12.80	-0.0035	>=-2.5 & <=2.5	Pass			
DFT-s-OFDM 256 QAM	3624.99	Outer_Full	20	LV	-36.10	-0.0100	>=-2.5 & <=2.5	Pass
				HV	-27.70	-0.0076	>=-2.5 & <=2.5	Pass

			-30	NV	-13.30	-0.0037	>=-2.5 & <=2.5	Pass
			-20	NV	-30.30	-0.0084	>=-2.5 & <=2.5	Pass
			-10	NV	-17.80	-0.0049	>=-2.5 & <=2.5	Pass
			0	NV	-42.40	-0.0117	>=-2.5 & <=2.5	Pass
			10	NV	-24.70	-0.0068	>=-2.5 & <=2.5	Pass
			20	NV	-4.70	-0.0013	>=-2.5 & <=2.5	Pass
			30	NV	-13.80	-0.0038	>=-2.5 & <=2.5	Pass
			40	NV	-5.80	-0.0016	>=-2.5 & <=2.5	Pass
			50	NV	-8.00	-0.0022	>=-2.5 & <=2.5	Pass
CP-OFDM QPSK	3624.99	Outer_Full	20	LV	-12.00	-0.0033	>=-2.5 & <=2.5	Pass
				HV	-12.90	-0.0036	>=-2.5 & <=2.5	Pass
			-30	NV	-19.80	-0.0055	>=-2.5 & <=2.5	Pass
			-20	NV	-9.70	-0.0027	>=-2.5 & <=2.5	Pass
			-10	NV	-20.00	-0.0055	>=-2.5 & <=2.5	Pass
			0	NV	-6.10	-0.0017	>=-2.5 & <=2.5	Pass
			10	NV	-16.10	-0.0044	>=-2.5 & <=2.5	Pass
			20	NV	-15.00	-0.0041	>=-2.5 & <=2.5	Pass
			30	NV	-13.80	-0.0038	>=-2.5 & <=2.5	Pass
			40	NV	-17.80	-0.0049	>=-2.5 & <=2.5	Pass
CP-OFDM 16 QAM	3624.99	Outer_Full	20	LV	-24.20	-0.0067	>=-2.5 & <=2.5	Pass
				HV	-39.70	-0.0110	>=-2.5 & <=2.5	Pass
			-30	NV	-28.30	-0.0078	>=-2.5 & <=2.5	Pass
			-20	NV	-23.60	-0.0065	>=-2.5 & <=2.5	Pass
			-10	NV	-23.20	-0.0064	>=-2.5 & <=2.5	Pass
			0	NV	-21.90	-0.0060	>=-2.5 & <=2.5	Pass
			10	NV	-26.50	-0.0073	>=-2.5 & <=2.5	Pass
			20	NV	-19.20	-0.0053	>=-2.5 & <=2.5	Pass
			30	NV	-14.50	-0.0040	>=-2.5 & <=2.5	Pass
			40	NV	-12.50	-0.0034	>=-2.5 & <=2.5	Pass
CP-OFDM 64 QAM	3624.99	Outer_Full	20	LV	-15.70	-0.0043	>=-2.5 & <=2.5	Pass
				HV	-26.10	-0.0072	>=-2.5 & <=2.5	Pass
			-30	NV	-19.20	-0.0053	>=-2.5 & <=2.5	Pass
			-20	NV	-28.10	-0.0078	>=-2.5 & <=2.5	Pass
			-10	NV	-15.50	-0.0043	>=-2.5 & <=2.5	Pass
			0	NV	-29.00	-0.0080	>=-2.5 & <=2.5	Pass
			10	NV	-15.40	-0.0042	>=-2.5 & <=2.5	Pass
			20	NV	-18.50	-0.0051	>=-2.5 & <=2.5	Pass
			30	NV	-22.50	-0.0062	>=-2.5 & <=2.5	Pass
			40	NV	-24.40	-0.0067	>=-2.5 & <=2.5	Pass
CP-OFDM 256 QAM	3624.99	Outer_Full	20	LV	-12.70	-0.0035	>=-2.5 & <=2.5	Pass
				HV	-21.30	-0.0059	>=-2.5 & <=2.5	Pass
			-30	NV	-20.80	-0.0057	>=-2.5 & <=2.5	Pass
			-20	NV	-19.10	-0.0053	>=-2.5 & <=2.5	Pass
			-10	NV	-33.00	-0.0091	>=-2.5 & <=2.5	Pass
			0	NV	-7.30	-0.0020	>=-2.5 & <=2.5	Pass
			10	NV	-7.50	-0.0021	>=-2.5 & <=2.5	Pass
			20	NV	-23.30	-0.0064	>=-2.5 & <=2.5	Pass
			30	NV	-15.60	-0.0043	>=-2.5 & <=2.5	Pass
			40	NV	-18.90	-0.0052	>=-2.5 & <=2.5	Pass
CP-OFDM 256 QAM	3624.99	Outer_Full	50	NV	19.90	0.0055	>=-2.5 & <=2.5	Pass
				NV	19.90	0.0055	>=-2.5 & <=2.5	Pass
			-30	NV	-20.80	-0.0057	>=-2.5 & <=2.5	Pass
			-20	NV	-19.10	-0.0053	>=-2.5 & <=2.5	Pass
			-10	NV	-33.00	-0.0091	>=-2.5 & <=2.5	Pass
			0	NV	-7.30	-0.0020	>=-2.5 & <=2.5	Pass
			10	NV	-7.50	-0.0021	>=-2.5 & <=2.5	Pass
			20	NV	-23.30	-0.0064	>=-2.5 & <=2.5	Pass
			30	NV	-15.60	-0.0043	>=-2.5 & <=2.5	Pass
			40	NV	-18.90	-0.0052	>=-2.5 & <=2.5	Pass

1.2 30k_SISO_40MHz

1.2.1 Test Result

5G NR n48 SCS=30kHz SISO 40MHz								
Modulation	Frequency (MHz)	RB Allocation	Temp. (°C)	Volt.	Freq. Error (Hz)	Freq. vs. rated (ppm)		Verdict
						Result	Limit	
DFT-s-OFDM PI/2 BPSK	3624.99	Outer_Full	20	LV	-28.80	-0.0079	>=-2.5 & <=2.5	Pass
				HV	-26.60	-0.0073	>=-2.5 & <=2.5	Pass
			-30	NV	-10.20	-0.0028	>=-2.5 & <=2.5	Pass
			-20	NV	-11.00	-0.0030	>=-2.5 & <=2.5	Pass
			-10	NV	-32.90	-0.0091	>=-2.5 & <=2.5	Pass
			0	NV	-11.40	-0.0031	>=-2.5 & <=2.5	Pass
			10	NV	-33.20	-0.0092	>=-2.5 & <=2.5	Pass
			20	NV	-45.50	-0.0126	>=-2.5 & <=2.5	Pass
			30	NV	-18.60	-0.0051	>=-2.5 & <=2.5	Pass
			40	NV	-10.60	-0.0029	>=-2.5 & <=2.5	Pass
DFT-s-OFDM QPSK	3624.99	Outer_Full	20	LV	-6.70	-0.0018	>=-2.5 & <=2.5	Pass
				HV	-11.60	-0.0032	>=-2.5 & <=2.5	Pass
			-30	NV	-18.90	-0.0052	>=-2.5 & <=2.5	Pass
			-20	NV	-12.30	-0.0034	>=-2.5 & <=2.5	Pass
			-10	NV	-5.40	-0.0015	>=-2.5 & <=2.5	Pass
			0	NV	-22.60	-0.0062	>=-2.5 & <=2.5	Pass
			10	NV	-27.20	-0.0075	>=-2.5 & <=2.5	Pass
			20	NV	-45.20	-0.0125	>=-2.5 & <=2.5	Pass
			30	NV	-16.90	-0.0047	>=-2.5 & <=2.5	Pass
			40	NV	19.00	0.0052	>=-2.5 & <=2.5	Pass
DFT-s-OFDM 16 QAM	3624.99	Outer_Full	20	LV	-14.00	-0.0039	>=-2.5 & <=2.5	Pass
				HV	-19.00	-0.0052	>=-2.5 & <=2.5	Pass
			-30	NV	-49.00	-0.0135	>=-2.5 & <=2.5	Pass
			-20	NV	-14.40	-0.0040	>=-2.5 & <=2.5	Pass
			-10	NV	-17.10	-0.0047	>=-2.5 & <=2.5	Pass
			0	NV	-39.00	-0.0108	>=-2.5 & <=2.5	Pass
			10	NV	1.70	0.0005	>=-2.5 & <=2.5	Pass
			20	NV	-17.40	-0.0048	>=-2.5 & <=2.5	Pass
			30	NV	-15.60	-0.0043	>=-2.5 & <=2.5	Pass
			40	NV	-44.40	-0.0122	>=-2.5 & <=2.5	Pass
DFT-s-OFDM 64 QAM	3624.99	Outer_Full	20	LV	-13.50	-0.0037	>=-2.5 & <=2.5	Pass
				HV	-22.10	-0.0061	>=-2.5 & <=2.5	Pass
			-30	NV	-14.10	-0.0039	>=-2.5 & <=2.5	Pass
			-20	NV	-11.20	-0.0031	>=-2.5 & <=2.5	Pass
			-10	NV	-15.80	-0.0044	>=-2.5 & <=2.5	Pass
			0	NV	-28.00	-0.0077	>=-2.5 & <=2.5	Pass
			10	NV	-17.40	-0.0048	>=-2.5 & <=2.5	Pass
			20	NV	-24.70	-0.0068	>=-2.5 & <=2.5	Pass
			30	NV	5.70	0.0016	>=-2.5 & <=2.5	Pass
			40	NV	-21.40	-0.0059	>=-2.5 & <=2.5	Pass
DFT-s-OFDM 256 QAM	3624.99	Outer_Full	20	LV	-33.40	-0.0092	>=-2.5 & <=2.5	Pass
				HV	7.20	0.0020	>=-2.5 & <=2.5	Pass
			-30	NV	-7.20	-0.0020	>=-2.5 & <=2.5	Pass
			-20	NV	-24.50	-0.0068	>=-2.5 & <=2.5	Pass
			-10	NV	-48.30	-0.0133	>=-2.5 & <=2.5	Pass
			0	NV	-27.90	-0.0077	>=-2.5 & <=2.5	Pass
DFT-s-OFDM 256 QAM	3624.99	Outer_Full	10	NV	-10.60	-0.0029	>=-2.5 & <=2.5	Pass

			20	NV	-26.70	-0.0074	≥ -2.5 & ≤ 2.5	Pass
			30	NV	-14.50	-0.0040	≥ -2.5 & ≤ 2.5	Pass
			40	NV	-9.90	-0.0027	≥ -2.5 & ≤ 2.5	Pass
			50	NV	-26.30	-0.0073	≥ -2.5 & ≤ 2.5	Pass
CP-OFDM QPSK	3624.99	Outer_Full	20	LV	-13.80	-0.0038	≥ -2.5 & ≤ 2.5	Pass
				HV	-25.60	-0.0071	≥ -2.5 & ≤ 2.5	Pass
			-30	NV	-9.20	-0.0025	≥ -2.5 & ≤ 2.5	Pass
			-20	NV	-1.30	-0.0004	≥ -2.5 & ≤ 2.5	Pass
			-10	NV	-32.20	-0.0089	≥ -2.5 & ≤ 2.5	Pass
			0	NV	-35.20	-0.0097	≥ -2.5 & ≤ 2.5	Pass
			10	NV	-19.30	-0.0053	≥ -2.5 & ≤ 2.5	Pass
			20	NV	-17.40	-0.0048	≥ -2.5 & ≤ 2.5	Pass
			30	NV	-18.10	-0.0050	≥ -2.5 & ≤ 2.5	Pass
			40	NV	-2.70	-0.0007	≥ -2.5 & ≤ 2.5	Pass
			50	NV	-11.00	-0.0030	≥ -2.5 & ≤ 2.5	Pass
CP-OFDM 16 QAM	3624.99	Outer_Full	20	LV	-15.50	-0.0043	≥ -2.5 & ≤ 2.5	Pass
				HV	-33.90	-0.0094	≥ -2.5 & ≤ 2.5	Pass
			-30	NV	-13.00	-0.0036	≥ -2.5 & ≤ 2.5	Pass
			-20	NV	-17.90	-0.0049	≥ -2.5 & ≤ 2.5	Pass
			-10	NV	-13.90	-0.0038	≥ -2.5 & ≤ 2.5	Pass
			0	NV	-20.20	-0.0056	≥ -2.5 & ≤ 2.5	Pass
			10	NV	-25.30	-0.0070	≥ -2.5 & ≤ 2.5	Pass
			20	NV	-26.40	-0.0073	≥ -2.5 & ≤ 2.5	Pass
			30	NV	-18.20	-0.0050	≥ -2.5 & ≤ 2.5	Pass
			40	NV	-31.60	-0.0087	≥ -2.5 & ≤ 2.5	Pass
CP-OFDM 64 QAM	3624.99	Outer_Full	50	NV	-28.10	-0.0078	≥ -2.5 & ≤ 2.5	Pass
			20	LV	-19.00	-0.0052	≥ -2.5 & ≤ 2.5	Pass
				HV	-38.00	-0.0105	≥ -2.5 & ≤ 2.5	Pass
			-30	NV	-21.10	-0.0058	≥ -2.5 & ≤ 2.5	Pass
			-20	NV	-16.70	-0.0046	≥ -2.5 & ≤ 2.5	Pass
			-10	NV	-5.20	-0.0014	≥ -2.5 & ≤ 2.5	Pass
			0	NV	-14.60	-0.0040	≥ -2.5 & ≤ 2.5	Pass
			10	NV	17.60	0.0049	≥ -2.5 & ≤ 2.5	Pass
			20	NV	8.30	0.0023	≥ -2.5 & ≤ 2.5	Pass
			30	NV	-16.70	-0.0046	≥ -2.5 & ≤ 2.5	Pass
CP-OFDM 256 QAM	3624.99	Outer_Full	40	NV	19.40	0.0054	≥ -2.5 & ≤ 2.5	Pass
			50	NV	-38.10	-0.0105	≥ -2.5 & ≤ 2.5	Pass
			20	LV	-10.80	-0.0030	≥ -2.5 & ≤ 2.5	Pass
				HV	10.00	0.0028	≥ -2.5 & ≤ 2.5	Pass
			-30	NV	-22.00	-0.0061	≥ -2.5 & ≤ 2.5	Pass
			-20	NV	-17.10	-0.0047	≥ -2.5 & ≤ 2.5	Pass
			-10	NV	-22.40	-0.0062	≥ -2.5 & ≤ 2.5	Pass
			0	NV	-19.80	-0.0055	≥ -2.5 & ≤ 2.5	Pass
			10	NV	-22.40	-0.0062	≥ -2.5 & ≤ 2.5	Pass
			20	NV	-9.60	-0.0026	≥ -2.5 & ≤ 2.5	Pass
			30	NV	-23.90	-0.0066	≥ -2.5 & ≤ 2.5	Pass
			40	NV	-14.00	-0.0039	≥ -2.5 & ≤ 2.5	Pass
			50	NV	-21.30	-0.0059	≥ -2.5 & ≤ 2.5	Pass