

1. Frequency Stability

1.1 30k_SISO_20MHz

1.1.1 Test Result

5G NR n77a 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 QPSK	3840	Outer_Full	20	LV	-14.60	-0.0038	>=-2.5 & <=2.5	Pass
				HV	-25.40	-0.0066	>=-2.5 & <=2.5	Pass
			-30	NV	-33.00	-0.0086	>=-2.5 & <=2.5	Pass
			-20	NV	-26.90	-0.0070	>=-2.5 & <=2.5	Pass
			-10	NV	-20.60	-0.0054	>=-2.5 & <=2.5	Pass
			0	NV	-22.10	-0.0058	>=-2.5 & <=2.5	Pass
			10	NV	-15.80	-0.0041	>=-2.5 & <=2.5	Pass
			20	NV	-22.10	-0.0058	>=-2.5 & <=2.5	Pass
			30	NV	-31.50	-0.0082	>=-2.5 & <=2.5	Pass
			40	NV	-31.30	-0.0082	>=-2.5 & <=2.5	Pass
50	NV	-19.90	-0.0052	>=-2.5 & <=2.5	Pass			
DFT-s-OFDM 64 QAM	3840	Outer_Full	20	LV	-24.70	-0.0064	>=-2.5 & <=2.5	Pass
				HV	-18.20	-0.0047	>=-2.5 & <=2.5	Pass
			-30	NV	-19.30	-0.0050	>=-2.5 & <=2.5	Pass
			-20	NV	-22.70	-0.0059	>=-2.5 & <=2.5	Pass
			-10	NV	-18.00	-0.0047	>=-2.5 & <=2.5	Pass
			0	NV	-28.60	-0.0074	>=-2.5 & <=2.5	Pass
			10	NV	-21.50	-0.0056	>=-2.5 & <=2.5	Pass
			20	NV	-19.70	-0.0051	>=-2.5 & <=2.5	Pass
			30	NV	-22.50	-0.0059	>=-2.5 & <=2.5	Pass
			40	NV	-17.20	-0.0045	>=-2.5 & <=2.5	Pass
50	NV	-12.60	-0.0033	>=-2.5 & <=2.5	Pass			
DFT-s-OFDM 256 QAM	3840	Outer_Full	20	LV	-34.20	-0.0089	>=-2.5 & <=2.5	Pass
				HV	-20.30	-0.0053	>=-2.5 & <=2.5	Pass
			-30	NV	-10.50	-0.0027	>=-2.5 & <=2.5	Pass
			-20	NV	-31.10	-0.0081	>=-2.5 & <=2.5	Pass
			-10	NV	-23.60	-0.0061	>=-2.5 & <=2.5	Pass
			0	NV	-23.00	-0.0060	>=-2.5 & <=2.5	Pass
			10	NV	-37.30	-0.0097	>=-2.5 & <=2.5	Pass
			20	NV	-19.40	-0.0051	>=-2.5 & <=2.5	Pass
			30	NV	-23.50	-0.0061	>=-2.5 & <=2.5	Pass
			40	NV	-11.60	-0.0030	>=-2.5 & <=2.5	Pass
50	NV	-16.60	-0.0043	>=-2.5 & <=2.5	Pass			
CP-OFDM QPSK	3840	Outer_Full	20	LV	-34.20	-0.0089	>=-2.5 & <=2.5	Pass
				HV	-7.10	-0.0018	>=-2.5 & <=2.5	Pass
			-30	NV	-32.30	-0.0084	>=-2.5 & <=2.5	Pass
			-20	NV	-26.60	-0.0069	>=-2.5 & <=2.5	Pass
			-10	NV	-19.20	-0.0050	>=-2.5 & <=2.5	Pass
			0	NV	-14.40	-0.0038	>=-2.5 & <=2.5	Pass
			10	NV	-15.10	-0.0039	>=-2.5 & <=2.5	Pass
			20	NV	-14.70	-0.0038	>=-2.5 & <=2.5	Pass
			30	NV	-23.30	-0.0061	>=-2.5 & <=2.5	Pass
			40	NV	-15.90	-0.0041	>=-2.5 & <=2.5	Pass
50	NV	-5.50	-0.0014	>=-2.5 & <=2.5	Pass			
CP-OFDM 64 QAM	3840	Outer_Full	20	LV	-11.40	-0.0030	>=-2.5 & <=2.5	Pass
				HV	-32.00	-0.0083	>=-2.5 & <=2.5	Pass

			-30	NV	-17.70	-0.0046	≥ -2.5 & ≤ 2.5	Pass			
			-20	NV	-20.80	-0.0054	≥ -2.5 & ≤ 2.5	Pass			
			-10	NV	-7.70	-0.0020	≥ -2.5 & ≤ 2.5	Pass			
			0	NV	-13.00	-0.0034	≥ -2.5 & ≤ 2.5	Pass			
			10	NV	-26.60	-0.0069	≥ -2.5 & ≤ 2.5	Pass			
			20	NV	-15.00	-0.0039	≥ -2.5 & ≤ 2.5	Pass			
			30	NV	-10.80	-0.0028	≥ -2.5 & ≤ 2.5	Pass			
			40	NV	-23.70	-0.0062	≥ -2.5 & ≤ 2.5	Pass			
			50	NV	-26.60	-0.0069	≥ -2.5 & ≤ 2.5	Pass			
CP-OFDM 256 QAM	3840	Outer_Full	20	LV	-24.40	-0.0064	≥ -2.5 & ≤ 2.5	Pass			
				HV	-12.20	-0.0032	≥ -2.5 & ≤ 2.5	Pass			
						-30	NV	-13.80	-0.0036	≥ -2.5 & ≤ 2.5	Pass
						-20	NV	-7.20	-0.0019	≥ -2.5 & ≤ 2.5	Pass
						-10	NV	-28.40	-0.0074	≥ -2.5 & ≤ 2.5	Pass
						0	NV	-32.00	-0.0083	≥ -2.5 & ≤ 2.5	Pass
						10	NV	-10.30	-0.0027	≥ -2.5 & ≤ 2.5	Pass
						20	NV	-21.10	-0.0055	≥ -2.5 & ≤ 2.5	Pass
						30	NV	-26.30	-0.0068	≥ -2.5 & ≤ 2.5	Pass
						40	NV	-15.50	-0.0040	≥ -2.5 & ≤ 2.5	Pass
			50	NV	-16.90	-0.0044	≥ -2.5 & ≤ 2.5	Pass			

1.2 30k_SISO_30MHz

1.2.1 Test Result

5G NR n77a SCS=30kHz SISO 30MHz								
Modulation	Frequency (MHz)	RB Allocation	Temp. (°C)	Volt.	Freq. Error (Hz)	Freq. vs. rated (ppm)		Verdict
						Result	Limit	
DFT-s-OFDM QPSK	3840	Outer_Full	20	LV	-17.20	-0.0045	>=-2.5 & <=2.5	Pass
				HV	-12.90	-0.0034	>=-2.5 & <=2.5	Pass
			-30	NV	-20.00	-0.0052	>=-2.5 & <=2.5	Pass
			-20	NV	-9.10	-0.0024	>=-2.5 & <=2.5	Pass
			-10	NV	-13.30	-0.0035	>=-2.5 & <=2.5	Pass
			0	NV	-15.40	-0.0040	>=-2.5 & <=2.5	Pass
			10	NV	-20.50	-0.0053	>=-2.5 & <=2.5	Pass
			20	NV	-20.90	-0.0054	>=-2.5 & <=2.5	Pass
			30	NV	-15.80	-0.0041	>=-2.5 & <=2.5	Pass
			40	NV	-17.80	-0.0046	>=-2.5 & <=2.5	Pass
50	NV	-22.50	-0.0059	>=-2.5 & <=2.5	Pass			
DFT-s-OFDM 64 QAM	3840	Outer_Full	20	LV	-14.30	-0.0037	>=-2.5 & <=2.5	Pass
				HV	-30.80	-0.0080	>=-2.5 & <=2.5	Pass
			-30	NV	-10.90	-0.0028	>=-2.5 & <=2.5	Pass
			-20	NV	-18.60	-0.0048	>=-2.5 & <=2.5	Pass
			-10	NV	-18.10	-0.0047	>=-2.5 & <=2.5	Pass
			0	NV	-21.20	-0.0055	>=-2.5 & <=2.5	Pass
			10	NV	-27.30	-0.0071	>=-2.5 & <=2.5	Pass
			20	NV	-21.00	-0.0055	>=-2.5 & <=2.5	Pass
			30	NV	-31.30	-0.0082	>=-2.5 & <=2.5	Pass
			40	NV	-24.60	-0.0064	>=-2.5 & <=2.5	Pass
50	NV	-16.60	-0.0043	>=-2.5 & <=2.5	Pass			
DFT-s-OFDM 256 QAM	3840	Outer_Full	20	LV	-13.10	-0.0034	>=-2.5 & <=2.5	Pass
				HV	-34.70	-0.0090	>=-2.5 & <=2.5	Pass
			-30	NV	-25.60	-0.0067	>=-2.5 & <=2.5	Pass
			-20	NV	-10.50	-0.0027	>=-2.5 & <=2.5	Pass
			-10	NV	-21.10	-0.0055	>=-2.5 & <=2.5	Pass
			0	NV	-17.60	-0.0046	>=-2.5 & <=2.5	Pass
			10	NV	-7.60	-0.0020	>=-2.5 & <=2.5	Pass
			20	NV	-19.00	-0.0049	>=-2.5 & <=2.5	Pass
			30	NV	-19.60	-0.0051	>=-2.5 & <=2.5	Pass
			40	NV	-17.40	-0.0045	>=-2.5 & <=2.5	Pass
50	NV	-18.30	-0.0048	>=-2.5 & <=2.5	Pass			
CP-OFDM QPSK	3840	Outer_Full	20	LV	-20.10	-0.0052	>=-2.5 & <=2.5	Pass
				HV	-4.80	-0.0013	>=-2.5 & <=2.5	Pass
			-30	NV	-22.90	-0.0060	>=-2.5 & <=2.5	Pass
			-20	NV	9.80	0.0026	>=-2.5 & <=2.5	Pass
			-10	NV	-13.40	-0.0035	>=-2.5 & <=2.5	Pass
			0	NV	-15.50	-0.0040	>=-2.5 & <=2.5	Pass
			10	NV	-19.00	-0.0049	>=-2.5 & <=2.5	Pass
			20	NV	-19.40	-0.0051	>=-2.5 & <=2.5	Pass
			30	NV	-11.50	-0.0030	>=-2.5 & <=2.5	Pass
			40	NV	-22.50	-0.0059	>=-2.5 & <=2.5	Pass
50	NV	-10.10	-0.0026	>=-2.5 & <=2.5	Pass			
CP-OFDM 64 QAM	3840	Outer_Full	20	LV	-17.20	-0.0045	>=-2.5 & <=2.5	Pass
				HV	-10.40	-0.0027	>=-2.5 & <=2.5	Pass
			-30	NV	-23.40	-0.0061	>=-2.5 & <=2.5	Pass

			-20	NV	-29.60	-0.0077	≥ -2.5 & ≤ 2.5	Pass			
			-10	NV	-18.20	-0.0047	≥ -2.5 & ≤ 2.5	Pass			
			0	NV	-12.30	-0.0032	≥ -2.5 & ≤ 2.5	Pass			
			10	NV	-32.00	-0.0083	≥ -2.5 & ≤ 2.5	Pass			
			20	NV	-23.90	-0.0062	≥ -2.5 & ≤ 2.5	Pass			
			30	NV	-22.10	-0.0058	≥ -2.5 & ≤ 2.5	Pass			
			40	NV	-19.20	-0.0050	≥ -2.5 & ≤ 2.5	Pass			
			50	NV	-23.80	-0.0062	≥ -2.5 & ≤ 2.5	Pass			
CP-OFDM 256 QAM	3840	Outer_Full	20	LV	-23.40	-0.0061	≥ -2.5 & ≤ 2.5	Pass			
				HV	-22.40	-0.0058	≥ -2.5 & ≤ 2.5	Pass			
						-30	NV	-30.90	-0.0080	≥ -2.5 & ≤ 2.5	Pass
						-20	NV	-28.50	-0.0074	≥ -2.5 & ≤ 2.5	Pass
						-10	NV	-3.80	-0.0010	≥ -2.5 & ≤ 2.5	Pass
						0	NV	-10.30	-0.0027	≥ -2.5 & ≤ 2.5	Pass
						10	NV	-10.90	-0.0028	≥ -2.5 & ≤ 2.5	Pass
						20	NV	-31.60	-0.0082	≥ -2.5 & ≤ 2.5	Pass
						30	NV	-14.70	-0.0038	≥ -2.5 & ≤ 2.5	Pass
						40	NV	-15.20	-0.0040	≥ -2.5 & ≤ 2.5	Pass
			50	NV	-27.70	-0.0072	≥ -2.5 & ≤ 2.5	Pass			

1.3 30k_SISO_40MHz

1.3.1 Test Result

5G NR n77a 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 QPSK	3840	Outer_Full	20	LV	-31.80	-0.0083	>=-2.5 & <=2.5	Pass
				HV	-13.00	-0.0034	>=-2.5 & <=2.5	Pass
			-30	NV	-36.60	-0.0095	>=-2.5 & <=2.5	Pass
			-20	NV	-20.10	-0.0052	>=-2.5 & <=2.5	Pass
			-10	NV	-38.90	-0.0101	>=-2.5 & <=2.5	Pass
			0	NV	-11.30	-0.0029	>=-2.5 & <=2.5	Pass
			10	NV	-18.50	-0.0048	>=-2.5 & <=2.5	Pass
			20	NV	-24.70	-0.0064	>=-2.5 & <=2.5	Pass
			30	NV	-15.30	-0.0040	>=-2.5 & <=2.5	Pass
			40	NV	-25.10	-0.0065	>=-2.5 & <=2.5	Pass
50	NV	-14.70	-0.0038	>=-2.5 & <=2.5	Pass			
DFT-s-OFDM 64 QAM	3840	Outer_Full	20	LV	-25.80	-0.0067	>=-2.5 & <=2.5	Pass
				HV	-12.30	-0.0032	>=-2.5 & <=2.5	Pass
			-30	NV	-9.30	-0.0024	>=-2.5 & <=2.5	Pass
			-20	NV	-19.70	-0.0051	>=-2.5 & <=2.5	Pass
			-10	NV	-16.20	-0.0042	>=-2.5 & <=2.5	Pass
			0	NV	-20.00	-0.0052	>=-2.5 & <=2.5	Pass
			10	NV	-25.20	-0.0066	>=-2.5 & <=2.5	Pass
			20	NV	-19.20	-0.0050	>=-2.5 & <=2.5	Pass
			30	NV	-20.20	-0.0053	>=-2.5 & <=2.5	Pass
			40	NV	-17.80	-0.0046	>=-2.5 & <=2.5	Pass
50	NV	-27.60	-0.0072	>=-2.5 & <=2.5	Pass			
DFT-s-OFDM 256 QAM	3840	Outer_Full	20	LV	-18.10	-0.0047	>=-2.5 & <=2.5	Pass
				HV	-20.10	-0.0052	>=-2.5 & <=2.5	Pass
			-30	NV	-10.80	-0.0028	>=-2.5 & <=2.5	Pass
			-20	NV	-18.60	-0.0048	>=-2.5 & <=2.5	Pass
			-10	NV	-25.00	-0.0065	>=-2.5 & <=2.5	Pass
			0	NV	-18.00	-0.0047	>=-2.5 & <=2.5	Pass
			10	NV	-20.30	-0.0053	>=-2.5 & <=2.5	Pass
			20	NV	-5.50	-0.0014	>=-2.5 & <=2.5	Pass
			30	NV	-21.90	-0.0057	>=-2.5 & <=2.5	Pass
			40	NV	-22.70	-0.0059	>=-2.5 & <=2.5	Pass
50	NV	-10.00	-0.0026	>=-2.5 & <=2.5	Pass			
CP-OFDM QPSK	3840	Outer_Full	20	LV	-10.30	-0.0027	>=-2.5 & <=2.5	Pass
				HV	-4.70	-0.0012	>=-2.5 & <=2.5	Pass
			-30	NV	-20.80	-0.0054	>=-2.5 & <=2.5	Pass
			-20	NV	-23.60	-0.0061	>=-2.5 & <=2.5	Pass
			-10	NV	-16.40	-0.0043	>=-2.5 & <=2.5	Pass
			0	NV	-21.10	-0.0055	>=-2.5 & <=2.5	Pass
			10	NV	-18.60	-0.0048	>=-2.5 & <=2.5	Pass
			20	NV	-20.20	-0.0053	>=-2.5 & <=2.5	Pass
			30	NV	-27.60	-0.0072	>=-2.5 & <=2.5	Pass
			40	NV	-17.00	-0.0044	>=-2.5 & <=2.5	Pass
50	NV	-20.80	-0.0054	>=-2.5 & <=2.5	Pass			
CP-OFDM 64 QAM	3840	Outer_Full	20	LV	-24.00	-0.0063	>=-2.5 & <=2.5	Pass
				HV	-15.40	-0.0040	>=-2.5 & <=2.5	Pass
			-30	NV	-25.90	-0.0067	>=-2.5 & <=2.5	Pass

			-20	NV	-22.60	-0.0059	≥ -2.5 & ≤ 2.5	Pass			
			-10	NV	-23.50	-0.0061	≥ -2.5 & ≤ 2.5	Pass			
			0	NV	-30.00	-0.0078	≥ -2.5 & ≤ 2.5	Pass			
			10	NV	-28.40	-0.0074	≥ -2.5 & ≤ 2.5	Pass			
			20	NV	-22.80	-0.0059	≥ -2.5 & ≤ 2.5	Pass			
			30	NV	-23.90	-0.0062	≥ -2.5 & ≤ 2.5	Pass			
			40	NV	-19.70	-0.0051	≥ -2.5 & ≤ 2.5	Pass			
			50	NV	-17.00	-0.0044	≥ -2.5 & ≤ 2.5	Pass			
CP-OFDM 256 QAM	3840	Outer_Full	20	LV	-16.70	-0.0043	≥ -2.5 & ≤ 2.5	Pass			
				HV	-15.80	-0.0041	≥ -2.5 & ≤ 2.5	Pass			
						-30	NV	-20.10	-0.0052	≥ -2.5 & ≤ 2.5	Pass
						-20	NV	-16.90	-0.0044	≥ -2.5 & ≤ 2.5	Pass
						-10	NV	-28.00	-0.0073	≥ -2.5 & ≤ 2.5	Pass
						0	NV	-18.90	-0.0049	≥ -2.5 & ≤ 2.5	Pass
						10	NV	-22.80	-0.0059	≥ -2.5 & ≤ 2.5	Pass
						20	NV	-24.40	-0.0064	≥ -2.5 & ≤ 2.5	Pass
						30	NV	-24.60	-0.0064	≥ -2.5 & ≤ 2.5	Pass
						40	NV	-12.20	-0.0032	≥ -2.5 & ≤ 2.5	Pass
			50	NV	-26.20	-0.0068	≥ -2.5 & ≤ 2.5	Pass			

1.4 30k_SISO_60MHz

1.4.1 Test Result

5G NR n77a SCS=30kHz SISO 60MHz								
Modulation	Frequency (MHz)	RB Allocation	Temp. (°C)	Volt.	Freq. Error (Hz)	Freq. vs. rated (ppm)		Verdict
						Result	Limit	
DFT-s-OFDM QPSK	3840	Outer_Full	20	LV	-22.70	-0.0059	>=-2.5 & <=2.5	Pass
				HV	-16.90	-0.0044	>=-2.5 & <=2.5	Pass
			-30	NV	-14.20	-0.0037	>=-2.5 & <=2.5	Pass
			-20	NV	-20.60	-0.0054	>=-2.5 & <=2.5	Pass
			-10	NV	-19.20	-0.0050	>=-2.5 & <=2.5	Pass
			0	NV	-18.10	-0.0047	>=-2.5 & <=2.5	Pass
			10	NV	6.20	0.0016	>=-2.5 & <=2.5	Pass
			20	NV	-24.70	-0.0064	>=-2.5 & <=2.5	Pass
			30	NV	-19.70	-0.0051	>=-2.5 & <=2.5	Pass
			40	NV	-36.80	-0.0096	>=-2.5 & <=2.5	Pass
50	NV	-14.30	-0.0037	>=-2.5 & <=2.5	Pass			
DFT-s-OFDM 64 QAM	3840	Outer_Full	20	LV	-5.60	-0.0015	>=-2.5 & <=2.5	Pass
				HV	-28.20	-0.0073	>=-2.5 & <=2.5	Pass
			-30	NV	-11.70	-0.0030	>=-2.5 & <=2.5	Pass
			-20	NV	-21.10	-0.0055	>=-2.5 & <=2.5	Pass
			-10	NV	-17.90	-0.0047	>=-2.5 & <=2.5	Pass
			0	NV	-32.30	-0.0084	>=-2.5 & <=2.5	Pass
			10	NV	-13.10	-0.0034	>=-2.5 & <=2.5	Pass
			20	NV	-22.00	-0.0057	>=-2.5 & <=2.5	Pass
			30	NV	-11.20	-0.0029	>=-2.5 & <=2.5	Pass
			40	NV	-33.40	-0.0087	>=-2.5 & <=2.5	Pass
50	NV	-29.00	-0.0076	>=-2.5 & <=2.5	Pass			
DFT-s-OFDM 256 QAM	3840	Outer_Full	20	LV	-15.90	-0.0041	>=-2.5 & <=2.5	Pass
				HV	-21.60	-0.0056	>=-2.5 & <=2.5	Pass
			-30	NV	-17.50	-0.0046	>=-2.5 & <=2.5	Pass
			-20	NV	-32.30	-0.0084	>=-2.5 & <=2.5	Pass
			-10	NV	-24.50	-0.0064	>=-2.5 & <=2.5	Pass
			0	NV	-23.80	-0.0062	>=-2.5 & <=2.5	Pass
			10	NV	-19.30	-0.0050	>=-2.5 & <=2.5	Pass
			20	NV	-14.40	-0.0038	>=-2.5 & <=2.5	Pass
			30	NV	-15.70	-0.0041	>=-2.5 & <=2.5	Pass
			40	NV	-35.30	-0.0092	>=-2.5 & <=2.5	Pass
50	NV	-15.80	-0.0041	>=-2.5 & <=2.5	Pass			
CP-OFDM QPSK	3840	Outer_Full	20	LV	-23.90	-0.0062	>=-2.5 & <=2.5	Pass
				HV	-10.80	-0.0028	>=-2.5 & <=2.5	Pass
			-30	NV	-34.70	-0.0090	>=-2.5 & <=2.5	Pass
			-20	NV	-25.60	-0.0067	>=-2.5 & <=2.5	Pass
			-10	NV	-24.50	-0.0064	>=-2.5 & <=2.5	Pass
			0	NV	-26.50	-0.0069	>=-2.5 & <=2.5	Pass
			10	NV	-20.70	-0.0054	>=-2.5 & <=2.5	Pass
			20	NV	-6.30	-0.0016	>=-2.5 & <=2.5	Pass
			30	NV	-22.90	-0.0060	>=-2.5 & <=2.5	Pass
			40	NV	-23.90	-0.0062	>=-2.5 & <=2.5	Pass
50	NV	-18.20	-0.0047	>=-2.5 & <=2.5	Pass			
CP-OFDM 64 QAM	3840	Outer_Full	20	LV	-12.40	-0.0032	>=-2.5 & <=2.5	Pass
				HV	-21.30	-0.0055	>=-2.5 & <=2.5	Pass
			-30	NV	-19.10	-0.0050	>=-2.5 & <=2.5	Pass

			-20	NV	-28.10	-0.0073	≥ -2.5 & ≤ 2.5	Pass			
			-10	NV	-13.80	-0.0036	≥ -2.5 & ≤ 2.5	Pass			
			0	NV	-38.30	-0.0100	≥ -2.5 & ≤ 2.5	Pass			
			10	NV	-30.00	-0.0078	≥ -2.5 & ≤ 2.5	Pass			
			20	NV	-32.00	-0.0083	≥ -2.5 & ≤ 2.5	Pass			
			30	NV	-24.50	-0.0064	≥ -2.5 & ≤ 2.5	Pass			
			40	NV	-11.40	-0.0030	≥ -2.5 & ≤ 2.5	Pass			
			50	NV	-21.20	-0.0055	≥ -2.5 & ≤ 2.5	Pass			
CP-OFDM 256 QAM	3840	Outer_Full	20	LV	-12.50	-0.0033	≥ -2.5 & ≤ 2.5	Pass			
				HV	-25.50	-0.0066	≥ -2.5 & ≤ 2.5	Pass			
						-30	NV	-9.10	-0.0024	≥ -2.5 & ≤ 2.5	Pass
						-20	NV	-38.10	-0.0099	≥ -2.5 & ≤ 2.5	Pass
						-10	NV	-22.30	-0.0058	≥ -2.5 & ≤ 2.5	Pass
						0	NV	-10.00	-0.0026	≥ -2.5 & ≤ 2.5	Pass
						10	NV	-22.90	-0.0060	≥ -2.5 & ≤ 2.5	Pass
						20	NV	-17.90	-0.0047	≥ -2.5 & ≤ 2.5	Pass
						30	NV	-35.00	-0.0091	≥ -2.5 & ≤ 2.5	Pass
						40	NV	-22.10	-0.0058	≥ -2.5 & ≤ 2.5	Pass
			50	NV	-16.80	-0.0044	≥ -2.5 & ≤ 2.5	Pass			

1.5 30k_SISO_80MHz

1.5.1 Test Result

5G NR n77a SCS=30kHz SISO 80MHz								
Modulation	Frequency (MHz)	RB Allocation	Temp. (°C)	Volt.	Freq. Error (Hz)	Freq. vs. rated (ppm)		Verdict
						Result	Limit	
DFT-s-OFDM QPSK	3840	Outer_Full	20	LV	-30.70	-0.0080	>=-2.5 & <=2.5	Pass
				HV	-20.00	-0.0052	>=-2.5 & <=2.5	Pass
			-30	NV	-20.20	-0.0053	>=-2.5 & <=2.5	Pass
			-20	NV	-26.50	-0.0069	>=-2.5 & <=2.5	Pass
			-10	NV	-24.80	-0.0065	>=-2.5 & <=2.5	Pass
			0	NV	-28.50	-0.0074	>=-2.5 & <=2.5	Pass
			10	NV	-17.50	-0.0046	>=-2.5 & <=2.5	Pass
			20	NV	-30.10	-0.0078	>=-2.5 & <=2.5	Pass
			30	NV	-33.70	-0.0088	>=-2.5 & <=2.5	Pass
			40	NV	-25.20	-0.0066	>=-2.5 & <=2.5	Pass
50	NV	-12.50	-0.0033	>=-2.5 & <=2.5	Pass			
DFT-s-OFDM 64 QAM	3840	Outer_Full	20	LV	-17.00	-0.0044	>=-2.5 & <=2.5	Pass
				HV	-8.40	-0.0022	>=-2.5 & <=2.5	Pass
			-30	NV	-44.90	-0.0117	>=-2.5 & <=2.5	Pass
			-20	NV	-21.10	-0.0055	>=-2.5 & <=2.5	Pass
			-10	NV	-29.60	-0.0077	>=-2.5 & <=2.5	Pass
			0	NV	-20.90	-0.0054	>=-2.5 & <=2.5	Pass
			10	NV	-22.80	-0.0059	>=-2.5 & <=2.5	Pass
			20	NV	-33.50	-0.0087	>=-2.5 & <=2.5	Pass
			30	NV	-23.80	-0.0062	>=-2.5 & <=2.5	Pass
			40	NV	-24.30	-0.0063	>=-2.5 & <=2.5	Pass
50	NV	-17.80	-0.0046	>=-2.5 & <=2.5	Pass			
DFT-s-OFDM 256 QAM	3840	Outer_Full	20	LV	5.40	0.0014	>=-2.5 & <=2.5	Pass
				HV	-17.20	-0.0045	>=-2.5 & <=2.5	Pass
			-30	NV	-35.20	-0.0092	>=-2.5 & <=2.5	Pass
			-20	NV	-24.00	-0.0063	>=-2.5 & <=2.5	Pass
			-10	NV	-27.90	-0.0073	>=-2.5 & <=2.5	Pass
			0	NV	-15.80	-0.0041	>=-2.5 & <=2.5	Pass
			10	NV	-30.70	-0.0080	>=-2.5 & <=2.5	Pass
			20	NV	-20.40	-0.0053	>=-2.5 & <=2.5	Pass
			30	NV	-27.30	-0.0071	>=-2.5 & <=2.5	Pass
			40	NV	-16.70	-0.0043	>=-2.5 & <=2.5	Pass
50	NV	-23.10	-0.0060	>=-2.5 & <=2.5	Pass			
CP-OFDM QPSK	3840	Outer_Full	20	LV	-28.10	-0.0073	>=-2.5 & <=2.5	Pass
				HV	-20.20	-0.0053	>=-2.5 & <=2.5	Pass
			-30	NV	-23.80	-0.0062	>=-2.5 & <=2.5	Pass
			-20	NV	-30.70	-0.0080	>=-2.5 & <=2.5	Pass
			-10	NV	-8.80	-0.0023	>=-2.5 & <=2.5	Pass
			0	NV	-17.20	-0.0045	>=-2.5 & <=2.5	Pass
			10	NV	-14.60	-0.0038	>=-2.5 & <=2.5	Pass
			20	NV	-24.20	-0.0063	>=-2.5 & <=2.5	Pass
			30	NV	-15.50	-0.0040	>=-2.5 & <=2.5	Pass
			40	NV	-18.40	-0.0048	>=-2.5 & <=2.5	Pass
50	NV	-27.40	-0.0071	>=-2.5 & <=2.5	Pass			
CP-OFDM 64 QAM	3840	Outer_Full	20	LV	-18.30	-0.0048	>=-2.5 & <=2.5	Pass
				HV	-39.30	-0.0102	>=-2.5 & <=2.5	Pass
			-30	NV	-16.70	-0.0043	>=-2.5 & <=2.5	Pass

			-20	NV	-16.00	-0.0042	≥ -2.5 & ≤ 2.5	Pass			
			-10	NV	-21.10	-0.0055	≥ -2.5 & ≤ 2.5	Pass			
			0	NV	-11.20	-0.0029	≥ -2.5 & ≤ 2.5	Pass			
			10	NV	-16.10	-0.0042	≥ -2.5 & ≤ 2.5	Pass			
			20	NV	-6.70	-0.0017	≥ -2.5 & ≤ 2.5	Pass			
			30	NV	-13.80	-0.0036	≥ -2.5 & ≤ 2.5	Pass			
			40	NV	-25.30	-0.0066	≥ -2.5 & ≤ 2.5	Pass			
			50	NV	-26.60	-0.0069	≥ -2.5 & ≤ 2.5	Pass			
CP-OFDM 256 QAM	3840	Outer_Full	20	LV	-11.70	-0.0030	≥ -2.5 & ≤ 2.5	Pass			
				HV	-24.20	-0.0063	≥ -2.5 & ≤ 2.5	Pass			
						-30	NV	-30.10	-0.0078	≥ -2.5 & ≤ 2.5	Pass
						-20	NV	-18.90	-0.0049	≥ -2.5 & ≤ 2.5	Pass
						-10	NV	-10.90	-0.0028	≥ -2.5 & ≤ 2.5	Pass
						0	NV	-12.40	-0.0032	≥ -2.5 & ≤ 2.5	Pass
						10	NV	-25.80	-0.0067	≥ -2.5 & ≤ 2.5	Pass
						20	NV	-18.40	-0.0048	≥ -2.5 & ≤ 2.5	Pass
						30	NV	-14.10	-0.0037	≥ -2.5 & ≤ 2.5	Pass
						40	NV	-25.30	-0.0066	≥ -2.5 & ≤ 2.5	Pass
			50	NV	-17.50	-0.0046	≥ -2.5 & ≤ 2.5	Pass			

1.6 30k_SISO_100MHz

1.6.1 Test Result

5G NR n77a SCS=30kHz SISO 100MHz								
Modulation	Frequency (MHz)	RB Allocation	Temp. (°C)	Volt.	Freq. Error (Hz)	Freq. vs. rated (ppm)		Verdict
						Result	Limit	
DFT-s-OFDM QPSK	3840	Outer_Full	20	LV	19.20	0.0050	>=-2.5 & <=2.5	Pass
				HV	-12.00	-0.0031	>=-2.5 & <=2.5	Pass
			-30	NV	-15.00	-0.0039	>=-2.5 & <=2.5	Pass
			-20	NV	-7.20	-0.0019	>=-2.5 & <=2.5	Pass
			-10	NV	4.60	0.0012	>=-2.5 & <=2.5	Pass
			0	NV	-17.90	-0.0047	>=-2.5 & <=2.5	Pass
			10	NV	12.10	0.0032	>=-2.5 & <=2.5	Pass
			20	NV	-15.60	-0.0041	>=-2.5 & <=2.5	Pass
			30	NV	8.80	0.0023	>=-2.5 & <=2.5	Pass
			40	NV	-10.70	-0.0028	>=-2.5 & <=2.5	Pass
50	NV	-7.40	-0.0019	>=-2.5 & <=2.5	Pass			
DFT-s-OFDM 64 QAM	3840	Outer_Full	20	LV	8.30	0.0022	>=-2.5 & <=2.5	Pass
				HV	-4.00	-0.0010	>=-2.5 & <=2.5	Pass
			-30	NV	-10.50	-0.0027	>=-2.5 & <=2.5	Pass
			-20	NV	-3.50	-0.0009	>=-2.5 & <=2.5	Pass
			-10	NV	-9.40	-0.0024	>=-2.5 & <=2.5	Pass
			0	NV	-17.80	-0.0046	>=-2.5 & <=2.5	Pass
			10	NV	-14.80	-0.0039	>=-2.5 & <=2.5	Pass
			20	NV	10.00	0.0026	>=-2.5 & <=2.5	Pass
			30	NV	9.50	0.0025	>=-2.5 & <=2.5	Pass
			40	NV	13.50	0.0035	>=-2.5 & <=2.5	Pass
50	NV	12.60	0.0033	>=-2.5 & <=2.5	Pass			
DFT-s-OFDM 256 QAM	3840	Outer_Full	20	LV	11.30	0.0029	>=-2.5 & <=2.5	Pass
				HV	-8.50	-0.0022	>=-2.5 & <=2.5	Pass
			-30	NV	-17.70	-0.0046	>=-2.5 & <=2.5	Pass
			-20	NV	17.80	0.0046	>=-2.5 & <=2.5	Pass
			-10	NV	-8.10	-0.0021	>=-2.5 & <=2.5	Pass
			0	NV	7.30	0.0019	>=-2.5 & <=2.5	Pass
			10	NV	-14.90	-0.0039	>=-2.5 & <=2.5	Pass
			20	NV	11.50	0.0030	>=-2.5 & <=2.5	Pass
			30	NV	-17.30	-0.0045	>=-2.5 & <=2.5	Pass
			40	NV	-23.00	-0.0060	>=-2.5 & <=2.5	Pass
50	NV	-13.30	-0.0035	>=-2.5 & <=2.5	Pass			
CP-OFDM QPSK	3840	Outer_Full	20	LV	-8.90	-0.0023	>=-2.5 & <=2.5	Pass
				HV	-20.40	-0.0053	>=-2.5 & <=2.5	Pass
			-30	NV	4.20	0.0011	>=-2.5 & <=2.5	Pass
			-20	NV	-9.30	-0.0024	>=-2.5 & <=2.5	Pass
			-10	NV	-19.70	-0.0051	>=-2.5 & <=2.5	Pass
			0	NV	-11.10	-0.0029	>=-2.5 & <=2.5	Pass
			10	NV	-9.70	-0.0025	>=-2.5 & <=2.5	Pass
			20	NV	-15.40	-0.0040	>=-2.5 & <=2.5	Pass
			30	NV	-2.00	-0.0005	>=-2.5 & <=2.5	Pass
			40	NV	23.40	0.0061	>=-2.5 & <=2.5	Pass
50	NV	-13.70	-0.0036	>=-2.5 & <=2.5	Pass			
CP-OFDM 64 QAM	3840	Outer_Full	20	LV	-13.30	-0.0035	>=-2.5 & <=2.5	Pass
				HV	2.00	0.0005	>=-2.5 & <=2.5	Pass
			-30	NV	-15.60	-0.0041	>=-2.5 & <=2.5	Pass

			-20	NV	10.20	0.0027	≥ -2.5 & ≤ 2.5	Pass			
			-10	NV	-7.30	-0.0019	≥ -2.5 & ≤ 2.5	Pass			
			0	NV	-7.70	-0.0020	≥ -2.5 & ≤ 2.5	Pass			
			10	NV	-9.70	-0.0025	≥ -2.5 & ≤ 2.5	Pass			
			20	NV	-20.60	-0.0054	≥ -2.5 & ≤ 2.5	Pass			
			30	NV	-15.10	-0.0039	≥ -2.5 & ≤ 2.5	Pass			
			40	NV	6.00	0.0016	≥ -2.5 & ≤ 2.5	Pass			
			50	NV	-20.20	-0.0053	≥ -2.5 & ≤ 2.5	Pass			
CP-OFDM 256 QAM	3840	Outer_Full	20	LV	-32.70	-0.0085	≥ -2.5 & ≤ 2.5	Pass			
				HV	-23.00	-0.0060	≥ -2.5 & ≤ 2.5	Pass			
						-30	NV	-19.20	-0.0050	≥ -2.5 & ≤ 2.5	Pass
						-20	NV	-20.60	-0.0054	≥ -2.5 & ≤ 2.5	Pass
						-10	NV	-13.40	-0.0035	≥ -2.5 & ≤ 2.5	Pass
						0	NV	-25.70	-0.0067	≥ -2.5 & ≤ 2.5	Pass
						10	NV	-22.20	-0.0058	≥ -2.5 & ≤ 2.5	Pass
						20	NV	-17.20	-0.0045	≥ -2.5 & ≤ 2.5	Pass
						30	NV	-12.40	-0.0032	≥ -2.5 & ≤ 2.5	Pass
						40	NV	-9.80	-0.0026	≥ -2.5 & ≤ 2.5	Pass
						50	NV	-21.70	-0.0057	≥ -2.5 & ≤ 2.5	Pass