

Frequency Stability

LTE

LTE Band 2 QPSK 10 MHz

Test Conditions		Frequency Deviation		Verdict
Power (VDC)	Temperature (°C)	MCH 1880 MHz		
		Value(Hz)	Limits (Hz)	
12	-20	-24.46	±4700	Pass
	-10	14.76		
	0	-14.69		
	+10	-20.91		
	+20	-18.21		
	+25	-26.54		
	+30	-12.86		
	+40	-16.01		
	+50	-17.81		
33	+25	-9.1		
6	+25	-12.59		

LTE Band 2 16QAM 10 MHz

Test Conditions		Frequency Deviation		Verdict
Power (VDC)	Temperature (°C)	MCH 1880 MHz		
		Value(Hz)	Limits (Hz)	
12	-20	-19.96	±4700	Pass
	-10	8.44		
	0	-21.9		
	+10	-22.23		
	+20	-17.95		
	+25	-25.86		
	+30	-24.58		
	+40	-13.49		
	+50	-14.15		
33	+25	-23.19		
6	+25	-20.36		

LTE Band 4 QPSK 10 MHz

Test Conditions		Frequency Deviation		Verdict
Power (VDC)	Temperature (°C)	MCH 1732.5 MHz		
		Value(Hz)	Limits (Hz)	
12	-20	-20.47	±4331.25	Pass
	-10	-16.18		
	0	-16.49		
	+10	-12.23		
	+20	-0.83		
	+25	17.72		
	+30	8.34		
	+40	4.29		
	+50	13.43		
33	+25	11.52		
6	+25	8.5		

LTE Band 4 16QAM 10 MHz

Test Conditions		Frequency Deviation		Verdict
Power (VDC)	Temperature (°C)	MCH 1732.5 MHz		
		Value(Hz)	Limits (Hz)	
12	-20	-18.34	±4331.25	Pass
	-10	-16.34		
	0	-12.5		
	+10	-13.99		
	+20	-13.28		
	+25	0.53		
	+30	-8.1		
	+40	-6.55		
	+50	-0.24		
33	+25	-7.17		
6	+25	1.39		

LTE Band 12 QPSK 10 MHz

Test Conditions		Frequency Deviation		Verdict
Power (VDC)	Temperature (°C)	MCH 707.5 MHz		
		Value(Hz)	Limits (Hz)	
12	-20	-21.8	±1768.75	Pass
	-10	-16.42		
	0	-18.55		
	+10	-20.27		
	+20	-16.61		
	+25	-15.61		
	+30	-15.45		
	+40	-17.74		
	+50	-14.12		
33	+25	-10.54		
6	+25	-16.99		

LTE Band 12 16QAM 10 MHz

Test Conditions		Frequency Deviation		Verdict
Power (VDC)	Temperature (°C)	MCH 707.5 MHz		
		Value(Hz)	Limits (Hz)	
12	-20	-24.85	±1768.75	Pass
	-10	-21.9		
	0	-15.65		
	+10	-20.13		
	+20	-15.56		
	+25	-20.61		
	+30	-17.62		
	+40	-18.98		
	+50	-22.69		
33	+25	-15.39		
6	+25	-17.67		

LTE Band 13 QPSK 10 MHz

Test Conditions		Frequency Deviation		Verdict
Power (VDC)	Temperature (°C)	MCH 782 MHz		
		Value(Hz)	Limits (Hz)	
12	-20	20.06	±1955	Pass
	-10	-22.39		
	0	-22.22		
	+10	-11.13		
	+20	-15.78		
	+25	-18.81		
	+30	-16.74		
	+40	-15.86		
	+50	-16.82		
33	+25	-21.8	±1955	Pass
6	+25	-27.11		

LTE Band 13 16QAM 10 MHz

Test Conditions		Frequency Deviation		Verdict
Power (VDC)	Temperature (°C)	MCH 782 MHz		
		Value(Hz)	Limits (Hz)	
12	-20	-23.32	±1955	Pass
	-10	-18.21		
	0	-17.51		
	+10	-25.22		
	+20	-26.61		
	+25	-25.18		
	+30	-27.41		
	+40	-26.05		
	+50	-28.64		
33	+25	-10.89	±1955	Pass
6	+25	-13.79		

LTE Band 14 QPSK 10 MHz

Test Conditions		Frequency Deviation		Verdict
Power (VDC)	Temperature (°C)	MCH 793 MHz		
		Value(Hz)	Limits (Hz)	
12	-20	-16.29	±1982.5	Pass
	-10	7.75		
	0	19.1		
	+10	17.88		
	+20	19.8		
	+25	18.01		
	+30	16.29		
	+40	13.56		
	+50	10.13		
33	+25	7.68	±1982.5	Pass
6	+25	3.12		

LTE Band 14 16QAM 10 MHz

Test Conditions		Frequency Deviation		Verdict
Power (VDC)	Temperature (°C)	MCH 793 MHz		
		Value(Hz)	Limits (Hz)	
12	-20	-22.37	±1982.5	Pass
	-10	6.17		
	0	13.18		
	+10	15.66		
	+20	14		
	+25	12.36		
	+30	9.83		
	+40	8.3		
	+50	3.71		
33	+25	0.04	±1982.5	Pass
6	+25	-1.76		

LTE Band 17 QPSK 10 MHz

Test Conditions		Frequency Deviation		Verdict
Power (VDC)	Temperature (°C)	MCH 710 MHz		
		Value(Hz)	Limits (Hz)	
12	-20	-15.06	±1775	Pass
	-10	-17.05		
	0	-10.37		
	+10	-12.85		
	+20	-13.76		
	+25	-15.68		
	+30	-15.96		
	+40	-14.66		
	+50	-11.19		
33	+25	-7.35		
6	+25	-23.89		

LTE Band 17 16QAM 10 MHz

Test Conditions		Frequency Deviation		Verdict
Power (VDC)	Temperature (°C)	MCH 710 MHz		
		Value(Hz)	Limits (Hz)	
12	-20	-8.64	±1775	Pass
	-10	-24.73		
	0	-19.56		
	+10	-26.04		
	+20	-16.22		
	+25	-25.46		
	+30	-23.47		
	+40	-21.94		
	+50	-21.09		
33	+25	-14.83		
6	+25	-6.95		

LTE Band 25 QPSK 10 MHz

Test Conditions		Frequency Deviation		Verdict
Power (VDC)	Temperature (°C)	MCH 1882.5 MHz		
		Value(Hz)	Limits (Hz)	
12	-20	-26.11	±4706.25	Pass
	-10	17.81		
	0	23.26		
	+10	24.73		
	+20	14.46		
	+25	16.48		
	+30	3.08		
	+40	-14.79		
	+50	-3.68		
33	+25	-8.98	±4706.25	Pass
6	+25	-21.04		

LTE Band 25 16QAM 10 MHz

Test Conditions		Frequency Deviation		Verdict
Power (VDC)	Temperature (°C)	MCH 1882.5 MHz		
		Value(Hz)	Limits (Hz)	
12	-20	-26.35	±4706.25	Pass
	-10	11.43		
	0	19.35		
	+10	17.87		
	+20	5.91		
	+25	4.15		
	+30	-7.77		
	+40	-23.09		
	+50	-16.24		
33	+25	-19.7	±4706.25	Pass
6	+25	-9.7		

LTE Band 66 QPSK 10 MHz

Test Conditions		Frequency Deviation		Verdict
Power (VDC)	Temperature (°C)	MCH 1745 MHz		
		Value(Hz)	Limits (Hz)	
12	-20	-18.97	±4362.5	Pass
	-10	16.92		
	0	11.63		
	+10	9.21		
	+20	16.65		
	+25	-2.52		
	+30	-3.3		
	+40	-5.45		
	+50	-8.51		
33	+25	-12.95	±4362.5	Pass
6	+25	5.85		

LTE Band 66 16QAM 10 MHz

Test Conditions		Frequency Deviation		Verdict
Power (VDC)	Temperature (°C)	MCH 1745 MHz		
		Value(Hz)	Limits (Hz)	
12	-20	-24.55	±4362.5	Pass
	-10	15.12		
	0	13.53		
	+10	-9.3		
	+20	2.19		
	+25	-1.57		
	+30	-6.31		
	+40	-12.87		
	+50	-11.49		
33	+25	-8.57	±4362.5	Pass
6	+25	-5.49		

1. LTE_Band12

1.1. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
-20 Degree	23095	10	QPSK	50	0	-1768.75	1768.75	-21.8	Pass
-20 Degree	23095	10	16QAM	27	0	-1768.75	1768.75	-24.85	Pass

1.2. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
-10 Degree	23095	10	QPSK	50	0	-1768.75	1768.75	-16.42	Pass
-10 Degree	23095	10	16QAM	27	0	-1768.75	1768.75	-21.9	Pass

1.3. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
0 Degree	23095	10	QPSK	50	0	-1768.75	1768.75	-18.55	Pass
0 Degree	23095	10	16QAM	27	0	-1768.75	1768.75	-15.65	Pass

1.4. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
10 Degree	23095	10	QPSK	50	0	-1768.75	1768.75	-20.27	Pass
10 Degree	23095	10	16QAM	27	0	-1768.75	1768.75	-20.13	Pass

1.5. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
20 Degree	23095	10	QPSK	50	0	-1768.75	1768.75	-16.61	Pass
20 Degree	23095	10	16QAM	27	0	-1768.75	1768.75	-15.56	Pass

1.6. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
25 Degree	23095	10	QPSK	50	0	-1768.75	1768.75	-15.61	Pass
25 Degree	23095	10	16QAM	27	0	-1768.75	1768.75	-20.61	Pass

1.7. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
30 Degree	23095	10	QPSK	50	0	-1768.75	1768.75	-15.45	Pass
30 Degree	23095	10	16QAM	27	0	-1768.75	1768.75	-17.62	Pass

1.8. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
40 Degree	23095	10	QPSK	50	0	-1768.75	1768.75	-17.74	Pass
40 Degree	23095	10	16QAM	27	0	-1768.75	1768.75	-18.98	Pass

1.9. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
50 Degree	23095	10	QPSK	50	0	-1768.75	1768.75	-14.12	Pass
50 Degree	23095	10	16QAM	27	0	-1768.75	1768.75	-22.69	Pass

1.10. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
NTHV	23095	10	QPSK	50	0	-1768.75	1768.75	-10.54	Pass
NTHV	23095	10	16QAM	27	0	-1768.75	1768.75	-15.39	Pass

1.11. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
NTLV	23095	10	QPSK	50	0	-1768.75	1768.75	-16.99	Pass
NTLV	23095	10	16QAM	27	0	-1768.75	1768.75	-17.67	Pass

2. LTE_Band13

2.1. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
-20 Degree	23230	10	QPSK	50	0	-1955	1955	20.06	Pass
-20 Degree	23230	10	16QAM	27	0	-1955	1955	-23.32	Pass

2.2. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
-10 Degree	23230	10	QPSK	50	0	-1955	1955	-22.39	Pass
-10 Degree	23230	10	16QAM	27	0	-1955	1955	-18.21	Pass

2.3. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
0 Degree	23230	10	QPSK	50	0	-1955	1955	-22.22	Pass
0 Degree	23230	10	16QAM	27	0	-1955	1955	-17.51	Pass

2.4. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
10 Degree	23230	10	QPSK	50	0	-1955	1955	-11.13	Pass
10 Degree	23230	10	16QAM	27	0	-1955	1955	-25.22	Pass

2.5. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
20 Degree	23230	10	QPSK	50	0	-1955	1955	-15.78	Pass
20 Degree	23230	10	16QAM	27	0	-1955	1955	-26.61	Pass

2.6. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
25 Degree	23230	10	QPSK	50	0	-1955	1955	-18.81	Pass
25 Degree	23230	10	16QAM	27	0	-1955	1955	-25.18	Pass

2.7. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
30 Degree	23230	10	QPSK	50	0	-1955	1955	-16.74	Pass
30 Degree	23230	10	16QAM	27	0	-1955	1955	-27.41	Pass

2.8. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
40 Degree	23230	10	QPSK	50	0	-1955	1955	-15.86	Pass
40 Degree	23230	10	16QAM	27	0	-1955	1955	-26.05	Pass

2.9. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
50 Degree	23230	10	QPSK	50	0	-1955	1955	-16.82	Pass
50 Degree	23230	10	16QAM	27	0	-1955	1955	-28.64	Pass

2.10. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
NTHV	23230	10	QPSK	50	0	-1955	1955	-21.8	Pass
NTHV	23230	10	16QAM	27	0	-1955	1955	-10.89	Pass

2.11. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
NTLV	23230	10	QPSK	50	0	-1955	1955	-27.11	Pass
NTLV	23230	10	16QAM	27	0	-1955	1955	-13.79	Pass

3. LTE_Band14

3.1. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
-20 Degree	23330	10	QPSK	50	0	-1982.5	1982.5	-16.29	Pass
-20 Degree	23330	10	16QAM	27	0	-1982.5	1982.5	-22.37	Pass

3.2. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
-10 Degree	23330	10	QPSK	50	0	-1982.5	1982.5	7.75	Pass
-10 Degree	23330	10	16QAM	27	0	-1982.5	1982.5	6.17	Pass

3.3. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
0 Degree	23330	10	QPSK	50	0	-1982.5	1982.5	19.1	Pass
0 Degree	23330	10	16QAM	27	0	-1982.5	1982.5	13.18	Pass

3.4. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
10 Degree	23330	10	QPSK	50	0	-1982.5	1982.5	17.88	Pass
10 Degree	23330	10	16QAM	27	0	-1982.5	1982.5	15.66	Pass

3.5. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
20 Degree	23330	10	QPSK	50	0	-1982.5	1982.5	19.8	Pass
20 Degree	23330	10	16QAM	27	0	-1982.5	1982.5	14	Pass

3.6. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
25 Degree	23330	10	QPSK	50	0	-1982.5	1982.5	18.01	Pass
25 Degree	23330	10	16QAM	27	0	-1982.5	1982.5	12.36	Pass

3.7. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
30 Degree	23330	10	QPSK	50	0	-1982.5	1982.5	16.29	Pass
30 Degree	23330	10	16QAM	27	0	-1982.5	1982.5	9.83	Pass

3.8. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
40 Degree	23330	10	QPSK	50	0	-1982.5	1982.5	13.56	Pass
40 Degree	23330	10	16QAM	27	0	-1982.5	1982.5	8.3	Pass

3.9. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
50 Degree	23330	10	QPSK	50	0	-1982.5	1982.5	10.13	Pass
50 Degree	23330	10	16QAM	27	0	-1982.5	1982.5	3.71	Pass

3.10. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
NTHV	23330	10	QPSK	50	0	-1982.5	1982.5	7.68	Pass
NTHV	23330	10	16QAM	27	0	-1982.5	1982.5	0.04	Pass

3.11. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
NTLV	23330	10	QPSK	50	0	-1982.5	1982.5	3.12	Pass
NTLV	23330	10	16QAM	27	0	-1982.5	1982.5	-1.76	Pass

4. LTE_Band17

4.1. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
-20 Degree	23790	10	QPSK	50	0	-1775	1775	-15.06	Pass
-20 Degree	23790	10	16QAM	27	0	-1775	1775	-8.64	Pass

4.2. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
-10 Degree	23790	10	QPSK	50	0	-1775	1775	-17.05	Pass
-10 Degree	23790	10	16QAM	27	0	-1775	1775	-24.73	Pass

4.3. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
0 Degree	23790	10	QPSK	50	0	-1775	1775	-10.37	Pass
0 Degree	23790	10	16QAM	27	0	-1775	1775	-19.56	Pass

4.4. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
10 Degree	23790	10	QPSK	50	0	-1775	1775	-12.85	Pass
10 Degree	23790	10	16QAM	27	0	-1775	1775	-26.04	Pass

4.5. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
20 Degree	23790	10	QPSK	50	0	-1775	1775	-13.76	Pass
20 Degree	23790	10	16QAM	27	0	-1775	1775	-16.22	Pass

4.6. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
25 Degree	23790	10	QPSK	50	0	-1775	1775	-15.68	Pass
25 Degree	23790	10	16QAM	27	0	-1775	1775	-25.46	Pass

4.7. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
30 Degree	23790	10	QPSK	50	0	-1775	1775	-15.96	Pass
30 Degree	23790	10	16QAM	27	0	-1775	1775	-23.47	Pass

4.8. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
40 Degree	23790	10	QPSK	50	0	-1775	1775	-14.66	Pass
40 Degree	23790	10	16QAM	27	0	-1775	1775	-21.94	Pass

4.9. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
50 Degree	23790	10	QPSK	50	0	-1775	1775	-11.19	Pass
50 Degree	23790	10	16QAM	27	0	-1775	1775	-21.09	Pass

4.10. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
NTHV	23790	10	QPSK	50	0	-1775	1775	-7.35	Pass
NTHV	23790	10	16QAM	27	0	-1775	1775	-14.83	Pass

4.11. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
NTLV	23790	10	QPSK	50	0	-1775	1775	-23.89	Pass
NTLV	23790	10	16QAM	27	0	-1775	1775	-6.95	Pass

5. LTE_Band2

5.1. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
-20 Degree	18900	10	QPSK	50	0	-4700	4700	-24.46	Pass
-20 Degree	18900	10	16QAM	27	0	-4700	4700	-19.96	Pass

5.2. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
-10 Degree	18900	10	QPSK	50	0	-4700	4700	14.76	Pass
-10 Degree	18900	10	16QAM	27	0	-4700	4700	8.44	Pass

5.3. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
0 Degree	18900	10	QPSK	50	0	-4700	4700	-14.69	Pass
0 Degree	18900	10	16QAM	27	0	-4700	4700	-21.9	Pass

5.4. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
10 Degree	18900	10	QPSK	50	0	-4700	4700	-20.91	Pass
10 Degree	18900	10	16QAM	27	0	-4700	4700	-22.23	Pass

5.5. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
20 Degree	18900	10	QPSK	50	0	-4700	4700	-18.21	Pass
20 Degree	18900	10	16QAM	27	0	-4700	4700	-17.95	Pass

5.6. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
25 Degree	18900	10	QPSK	50	0	-4700	4700	-26.54	Pass
25 Degree	18900	10	16QAM	27	0	-4700	4700	-25.86	Pass

5.7. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
30 Degree	18900	10	QPSK	50	0	-4700	4700	-12.86	Pass
30 Degree	18900	10	16QAM	27	0	-4700	4700	-24.58	Pass

5.8. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
40 Degree	18900	10	QPSK	50	0	-4700	4700	-16.01	Pass
40 Degree	18900	10	16QAM	27	0	-4700	4700	-13.49	Pass

5.9. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
50 Degree	18900	10	QPSK	50	0	-4700	4700	-17.81	Pass
50 Degree	18900	10	16QAM	27	0	-4700	4700	-14.15	Pass

5.10. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
NTHV	18900	10	QPSK	50	0	-4700	4700	-9.1	Pass
NTHV	18900	10	16QAM	27	0	-4700	4700	-23.19	Pass

5.11. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
NTLV	18900	10	QPSK	50	0	-4700	4700	-12.59	Pass
NTLV	18900	10	16QAM	27	0	-4700	4700	-20.36	Pass

6. LTE_Band25

6.1. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
-20 Degree	26365	10	QPSK	50	0	-4706.25	4706.25	-26.11	Pass
-20 Degree	26365	10	16QAM	27	0	-4706.25	4706.25	-26.35	Pass

6.2. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
-10 Degree	26365	10	QPSK	50	0	-4706.25	4706.25	17.81	Pass
-10 Degree	26365	10	16QAM	27	0	-4706.25	4706.25	11.43	Pass

6.3. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
0 Degree	26365	10	QPSK	50	0	-4706.25	4706.25	23.26	Pass
0 Degree	26365	10	16QAM	27	0	-4706.25	4706.25	19.35	Pass

6.4. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
10 Degree	26365	10	QPSK	50	0	-4706.25	4706.25	24.73	Pass
10 Degree	26365	10	16QAM	27	0	-4706.25	4706.25	17.87	Pass

6.5. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
20 Degree	26365	10	QPSK	50	0	-4706.25	4706.25	14.46	Pass
20 Degree	26365	10	16QAM	27	0	-4706.25	4706.25	5.91	Pass

6.6. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
25 Degree	26365	10	QPSK	50	0	-4706.25	4706.25	16.48	Pass
25 Degree	26365	10	16QAM	27	0	-4706.25	4706.25	4.15	Pass

6.7. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
30 Degree	26365	10	QPSK	50	0	-4706.25	4706.25	3.08	Pass
30 Degree	26365	10	16QAM	27	0	-4706.25	4706.25	-7.77	Pass

6.8. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
40 Degree	26365	10	QPSK	50	0	-4706.25	4706.25	-14.79	Pass
40 Degree	26365	10	16QAM	27	0	-4706.25	4706.25	-23.09	Pass

6.9. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
50 Degree	26365	10	QPSK	50	0	-4706.25	4706.25	-3.68	Pass
50 Degree	26365	10	16QAM	27	0	-4706.25	4706.25	-16.24	Pass

6.10. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
NTHV	26365	10	QPSK	50	0	-4706.25	4706.25	-8.98	Pass
NTHV	26365	10	16QAM	27	0	-4706.25	4706.25	-19.7	Pass

6.11. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
NTLV	26365	10	QPSK	50	0	-4706.25	4706.25	-21.04	Pass
NTLV	26365	10	16QAM	27	0	-4706.25	4706.25	-9.7	Pass

7. LTE_Band4

7.1. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
-20 Degree	20175	10	QPSK	50	0	-4331.25	4331.25	-20.47	Pass
-20 Degree	20175	10	16QAM	27	0	-4331.25	4331.25	-18.34	Pass

7.2. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
-10 Degree	20175	10	QPSK	50	0	-4331.25	4331.25	-16.18	Pass
-10 Degree	20175	10	16QAM	27	0	-4331.25	4331.25	-16.34	Pass

7.3. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
0 Degree	20175	10	QPSK	50	0	-4331.25	4331.25	-16.49	Pass
0 Degree	20175	10	16QAM	27	0	-4331.25	4331.25	-12.5	Pass

7.4. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
10 Degree	20175	10	QPSK	50	0	-4331.25	4331.25	-12.23	Pass
10 Degree	20175	10	16QAM	27	0	-4331.25	4331.25	-13.99	Pass

7.5. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
20 Degree	20175	10	QPSK	50	0	-4331.25	4331.25	-0.83	Pass
20 Degree	20175	10	16QAM	27	0	-4331.25	4331.25	-13.28	Pass

7.6. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
25 Degree	20175	10	QPSK	50	0	-4331.25	4331.25	17.72	Pass
25 Degree	20175	10	16QAM	27	0	-4331.25	4331.25	0.53	Pass

7.7. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
30 Degree	20175	10	QPSK	50	0	-4331.25	4331.25	8.34	Pass
30 Degree	20175	10	16QAM	27	0	-4331.25	4331.25	-8.1	Pass

7.8. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
40 Degree	20175	10	QPSK	50	0	-4331.25	4331.25	4.29	Pass
40 Degree	20175	10	16QAM	27	0	-4331.25	4331.25	-6.55	Pass

7.9. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
50 Degree	20175	10	QPSK	50	0	-4331.25	4331.25	13.43	Pass
50 Degree	20175	10	16QAM	27	0	-4331.25	4331.25	-0.24	Pass

7.10. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
NTHV	20175	10	QPSK	50	0	-4331.25	4331.25	11.52	Pass
NTHV	20175	10	16QAM	27	0	-4331.25	4331.25	-7.17	Pass

7.11. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
NTLV	20175	10	QPSK	50	0	-4331.25	4331.25	8.5	Pass
NTLV	20175	10	16QAM	27	0	-4331.25	4331.25	1.39	Pass

8. LTE_Band66

8.1. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
-20 Degree	132322	10	QPSK	50	0	-4362.5	4362.5	-18.97	Pass
-20 Degree	132322	10	16QAM	27	0	-4362.5	4362.5	-24.55	Pass

8.2. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
-10 Degree	132322	10	QPSK	50	0	-4362.5	4362.5	16.92	Pass
-10 Degree	132322	10	16QAM	27	0	-4362.5	4362.5	15.12	Pass

8.3. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
0 Degree	132322	10	QPSK	50	0	-4362.5	4362.5	11.63	Pass
0 Degree	132322	10	16QAM	27	0	-4362.5	4362.5	13.53	Pass

8.4. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
10 Degree	132322	10	QPSK	50	0	-4362.5	4362.5	9.21	Pass
10 Degree	132322	10	16QAM	27	0	-4362.5	4362.5	-9.3	Pass

8.5. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
20 Degree	132322	10	QPSK	50	0	-4362.5	4362.5	16.65	Pass
20 Degree	132322	10	16QAM	27	0	-4362.5	4362.5	2.19	Pass

8.6. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
25 Degree	132322	10	QPSK	50	0	-4362.5	4362.5	-2.52	Pass
25 Degree	132322	10	16QAM	27	0	-4362.5	4362.5	-1.57	Pass

8.7. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
30 Degree	132322	10	QPSK	50	0	-4362.5	4362.5	-3.3	Pass
30 Degree	132322	10	16QAM	27	0	-4362.5	4362.5	-6.31	Pass

8.8. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
40 Degree	132322	10	QPSK	50	0	-4362.5	4362.5	-5.45	Pass
40 Degree	132322	10	16QAM	27	0	-4362.5	4362.5	-12.87	Pass

8.9. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
50 Degree	132322	10	QPSK	50	0	-4362.5	4362.5	-8.51	Pass
50 Degree	132322	10	16QAM	27	0	-4362.5	4362.5	-11.49	Pass

8.10. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
NTHV	132322	10	QPSK	50	0	-4362.5	4362.5	-12.95	Pass
NTHV	132322	10	16QAM	27	0	-4362.5	4362.5	-8.57	Pass

8.11. LTE Frequency Stability_Part22-24-27

Test Environment	UL Channel	Bandwidth (MHz)	UL Modulation	UL RB Number	UL RB Position	Lower Limit (Hz)	Upper Limit (Hz)	Measured (Hz)	Verdict
NTLV	132322	10	QPSK	50	0	-4362.5	4362.5	5.85	Pass
NTLV	132322	10	16QAM	27	0	-4362.5	4362.5	-5.49	Pass