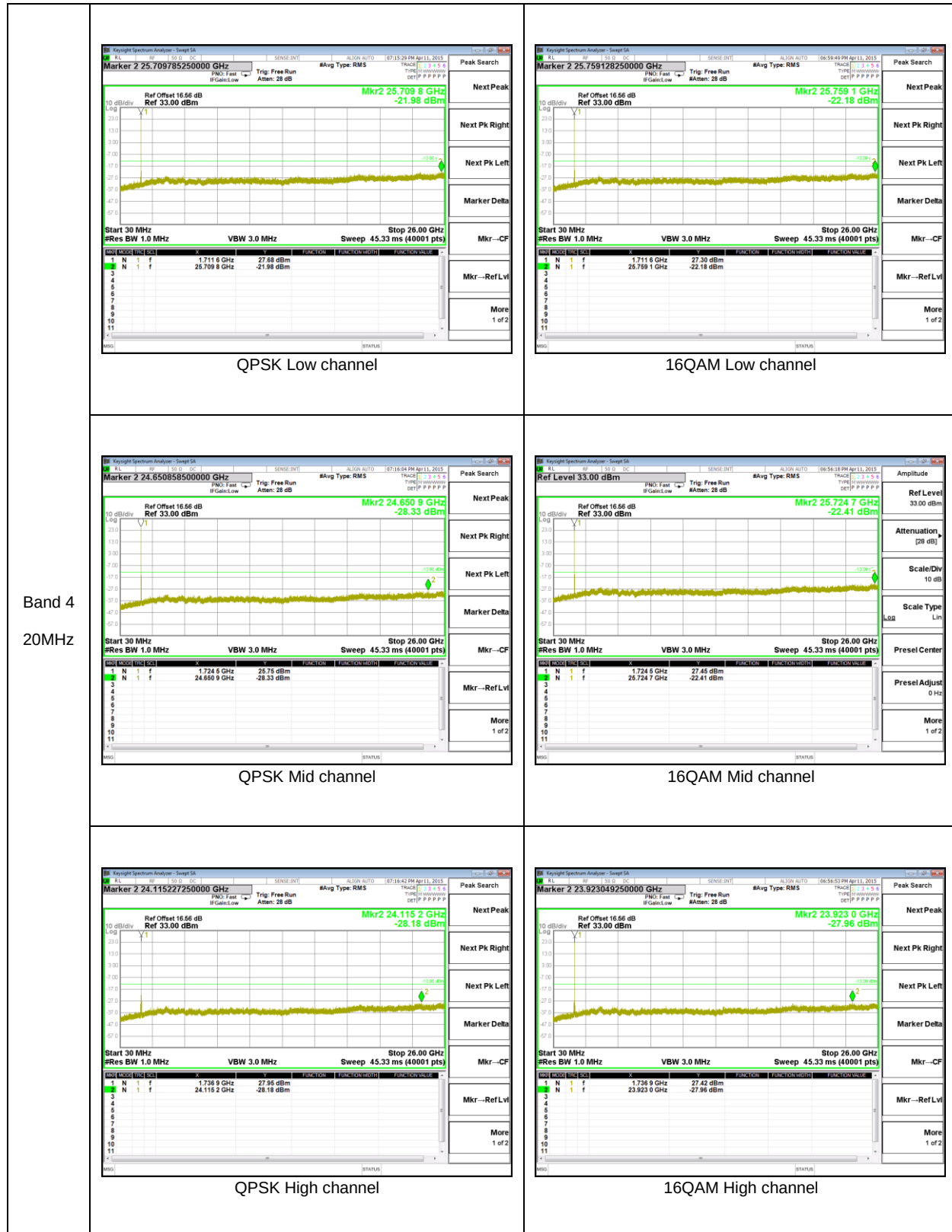


LTE Band 4













LTE Band 2













10.1. FREQUENCY STABILITY

RULE PART(S)

FCC: §2.1055, §22.355, §24.235, §27.54

LIMITS

§22.355 - The carrier frequency shall not depart from the reference frequency in excess of ± 2.5 ppm for mobile stations.

§24.235 - The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

§27.54 - The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

TEST PROCEDURE

Per KDB 971168 D01 Power Meas License Digital Systems v02r02

RESULTS

See the following pages.

10.1.1. FREQUENCY STABILITY RESULTS

LTE Band 17, Channel 23790, Frequency 710.0 MHz

Reference Frequency: LTE Band 17 Mid Channel 710.0 MHz @ 20°C Limit: +/- 2.5 ppm = 1775.000 Hz				
Power Supply [Vdc]	Environment Temperature [°C]	Frequency Deviation Measured with Time Elapse		
		[MHz]	Delta [ppm]	Limit [ppm]
3.80	50	709.99999124	0.005	2.5
3.80	40	709.99999207	0.003	2.5
3.80	30	709.99998858	0.008	2.5
3.80	20	709.99999452	0	2.5
3.80	10	710.00000721	-0.018	2.5
3.80	0	710.00000839	-0.020	2.5
3.80	-10	709.99998981	0.007	2.5
3.80	-20	709.99998852	0.008	2.5
3.80	-30	709.99998771	0.010	2.5

Reference Frequency: LTE Band 17 Mid Channel 710.0 MHz @ 20°C Limit: +/- 2.5 ppm = 1775.000 Hz				
Power Supply [Vdc]	Environment Temperature [°C]	Frequency Deviation Measured with Time Elapse		
		[MHz]	Delta [ppm]	Limit [ppm]
3.80	20	709.99999452	0	2.5
4.20	20	709.99999119	0.005	2.5
3.40	20	709.99999231	0.003	2.5

LTE Band 5, Channel 20524, Frequency 836.5 MHz

WCDMA Band 5, Channel 4183, Frequency 836.6 MHz

GSM 850, Channel 190, Frequency 836.6 MHz

Reference Frequency: LTE Band 5 Mid Channel 836.5 MHz @ 20°C				
Limit: +/- 2.5 ppm = 2091.250 Hz				
Power Supply [Vdc]	Environment Temperature [°C]	Frequency Deviation Measured with Time Elapse		
		[MHz]	Delta [ppm]	Limit [ppm]
3.80	50	836.49998788	0.027	2.5
3.80	40	836.49998864	0.026	2.5
3.80	30	836.49998471	0.031	2.5
3.80	20	836.50001023	0	2.5
3.80	10	836.50000819	0.002	2.5
3.80	0	836.50000797	0.003	2.5
3.80	-10	836.50001021	0.000	2.5
3.80	-20	836.50001223	-0.002	2.5
3.80	-30	836.49998429	0.031	2.5

Reference Frequency: LTE Band 5 Mid Channel 836.5 MHz @ 20°C				
Limit: +/- 2.5 ppm = 2091.250 Hz				
Power Supply [Vdc]	Environment Temperature [°C]	Frequency Deviation Measured with Time Elapse		
		[MHz]	Delta [ppm]	Limit [ppm]
3.80	20	836.50001023	0	2.5
4.20	20	836.50001216	-0.002	2.5
3.40	20	836.49999029	0.024	2.5

LTE Band 4, Channel 20174, Frequency 1732.5 MHz

Reference Frequency: LTE Band 4 Mid Channel 1732.5 MHz @ 20°C				
Limit: +/- 2.5 ppm = 4331.250 Hz				
Power Supply [Vdc]	Environment Temperature [°C]	Frequency Deviation Measured with Time Elapse		
		[MHz]	Delta [ppm]	Limit [ppm]
3.80	50	1732.49998751	0.013	2.5
3.80	40	1732.49998317	0.016	2.5
3.80	30	1732.49998639	0.014	2.5
3.80	20	1732.50001036	0	2.5
3.80	10	1732.49998917	0.012	2.5
3.80	0	1732.49998729	0.013	2.5
3.80	-10	1732.50001658	-0.004	2.5
3.80	-20	1732.50001547	-0.003	2.5
3.80	-30	1732.49998851	0.013	2.5

Reference Frequency: LTE Band 4 Mid Channel 1732.5 MHz @ 20°C				
Limit: +/- 2.5 ppm = 4331.250 Hz				
Power Supply [Vdc]	Environment Temperature [°C]	Frequency Deviation Measured with Time Elapse		
		[MHz]	Delta [ppm]	Limit [ppm]
3.80	20	1732.50001036	0	2.5
4.20	20	1732.50001638	-0.003	2.5
3.40	20	1732.50001549	-0.003	2.5

LTE Band 2, Channel 18900, Frequency 1880.0 MHz

WCDMA Band 2, Channel 9400, Frequency 1880.0 MHz

GSM 1900, Channel 661, Frequency 1880.0 MHz

Reference Frequency: LTE Band 2 Mid Channel 1880.0 MHz @ 20°C				
Limit: +/- 2.5 ppm = 4700.000 Hz				
Power Supply [Vdc]	Environment Temperature [°C]	Frequency Deviation Measured with Time Elapse		
		[MHz]	Delta [ppm]	Limit [ppm]
3.80	50	1879.99997760	0.006	2.5
3.80	40	1880.00002091	-0.017	2.5
3.80	30	1879.99998158	0.004	2.5
3.80	20	1879.99998857	0	2.5
3.80	10	1879.99998220	0.003	2.5
3.80	0	1879.99998079	0.004	2.5
3.80	-10	1880.00001833	-0.016	2.5
3.80	-20	1879.99997940	0.005	2.5
3.80	-30	1879.99997752	0.006	2.5

Reference Frequency: LTE Band 2 Mid Channel 1880.0 MHz @ 20°C				
Limit: +/- 2.5 ppm = 4700.000 Hz				
Power Supply [Vdc]	Environment Temperature [°C]	Frequency Deviation Measured with Time Elapse		
		[MHz]	Delta [ppm]	Limit [ppm]
3.80	20	1879.99998857	0	2.5
4.20	20	1879.99998237	0.003	2.5
3.40	20	1879.99998632	0.001	2.5