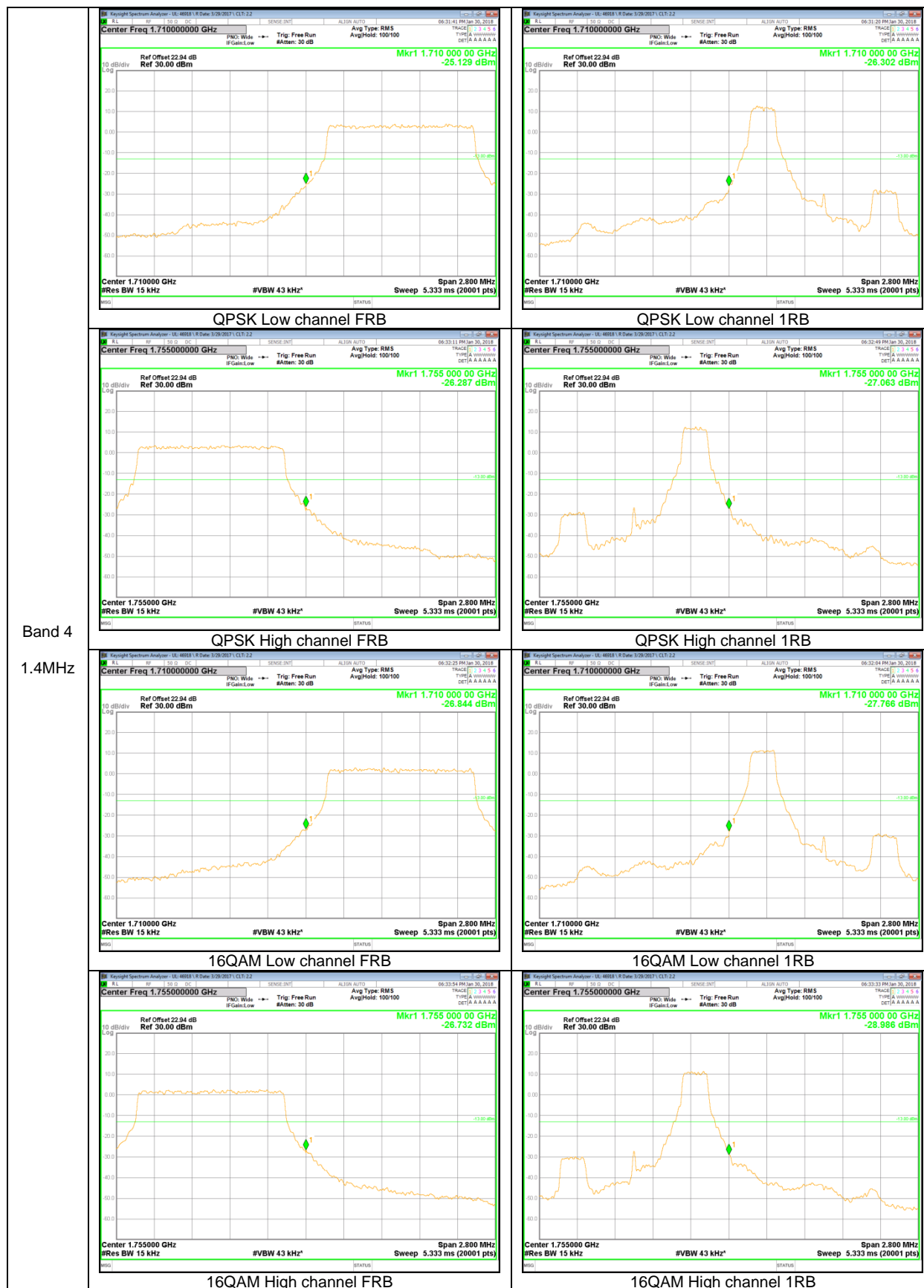


Band 4
 3MHz

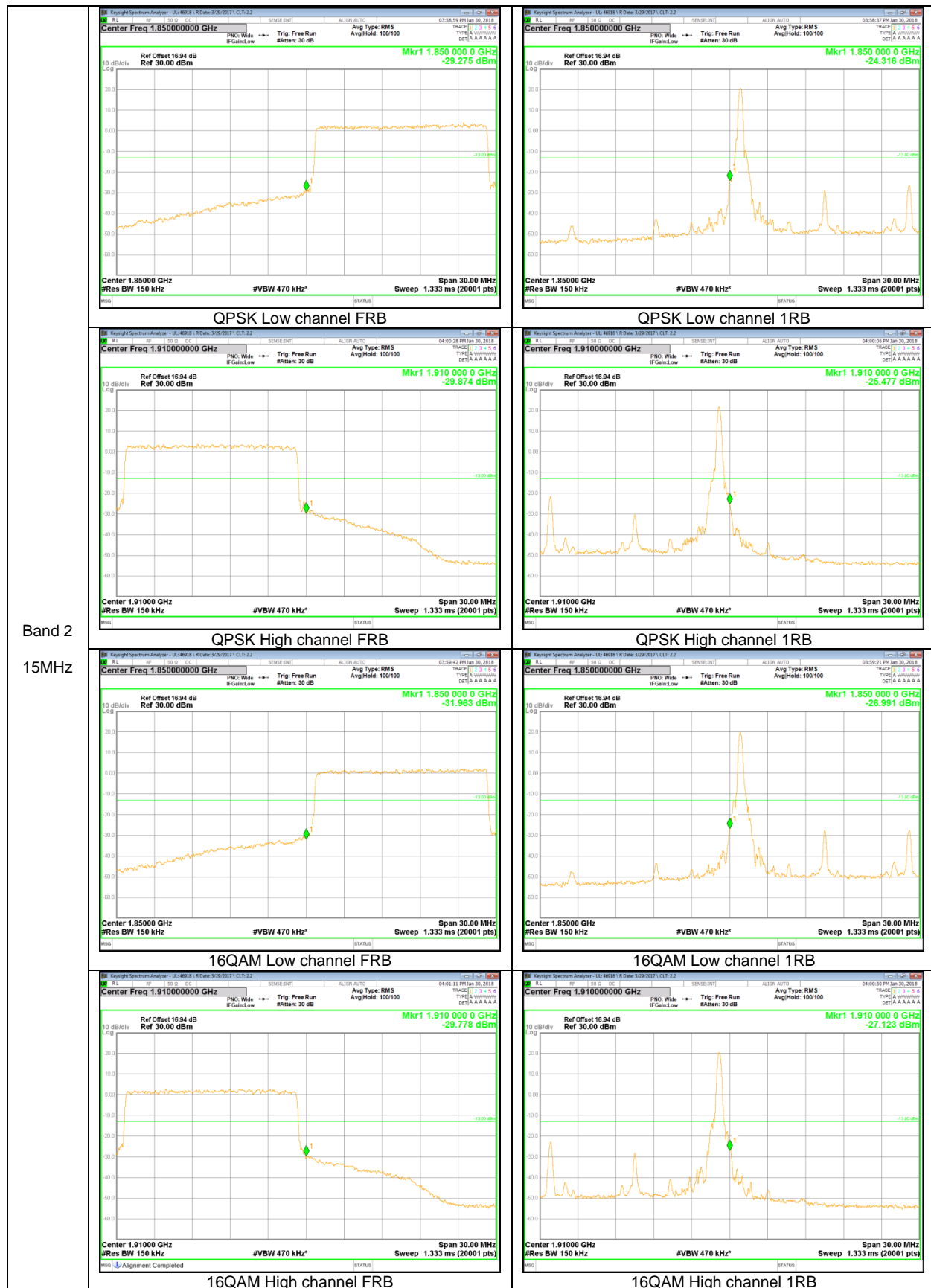


Band 4
 1.4MHz

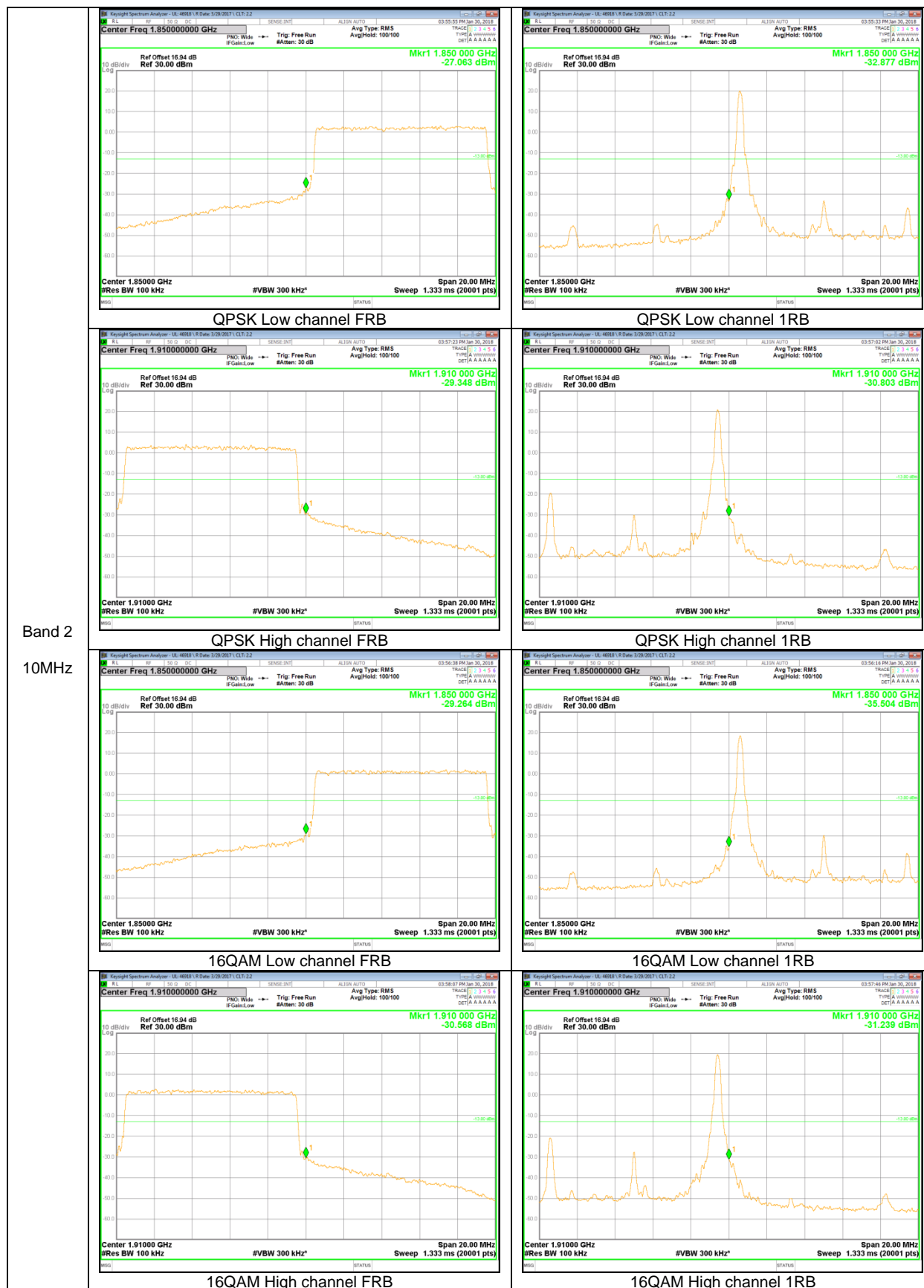
LTE Band 2

Band 2
20MHz

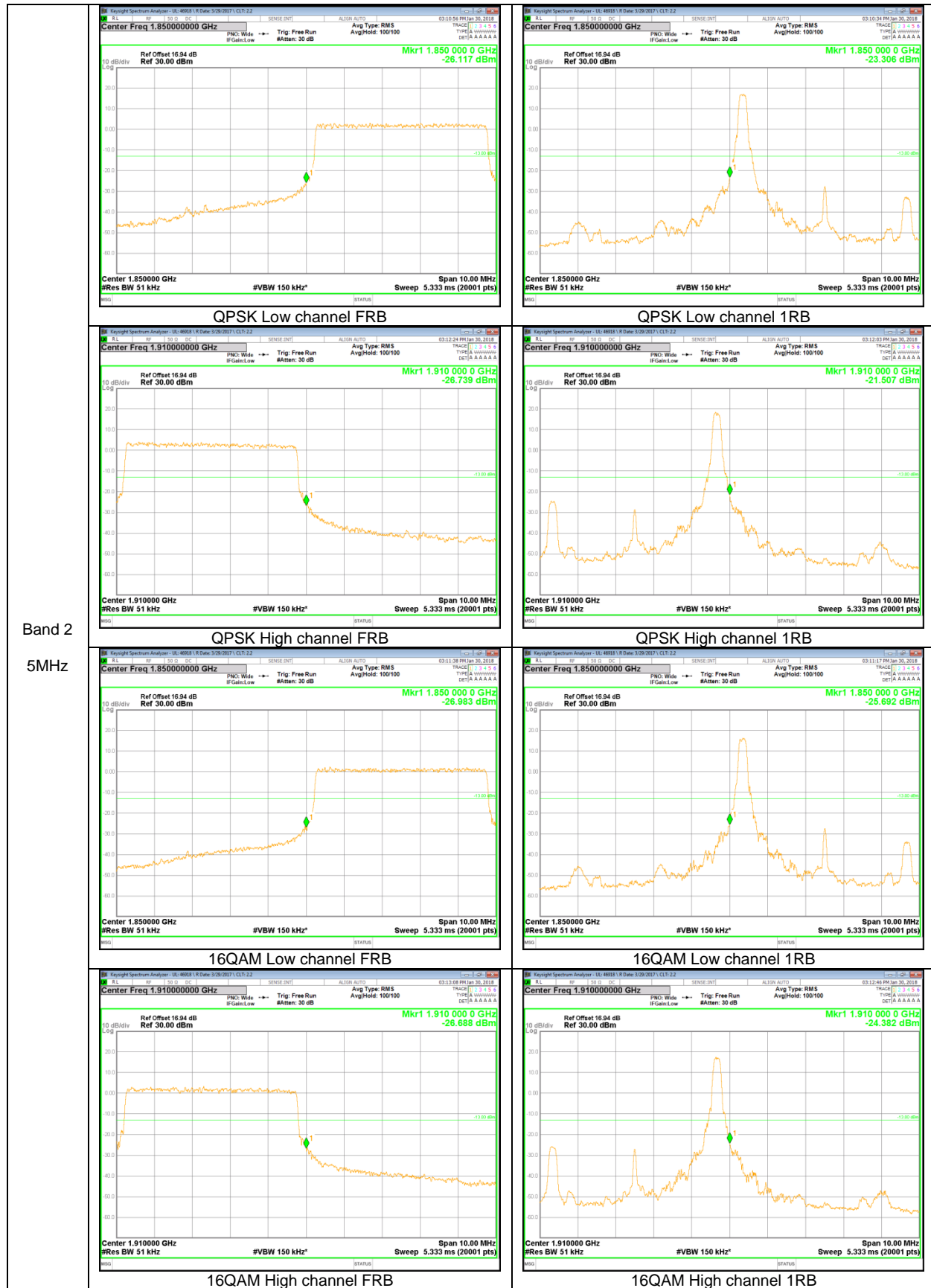


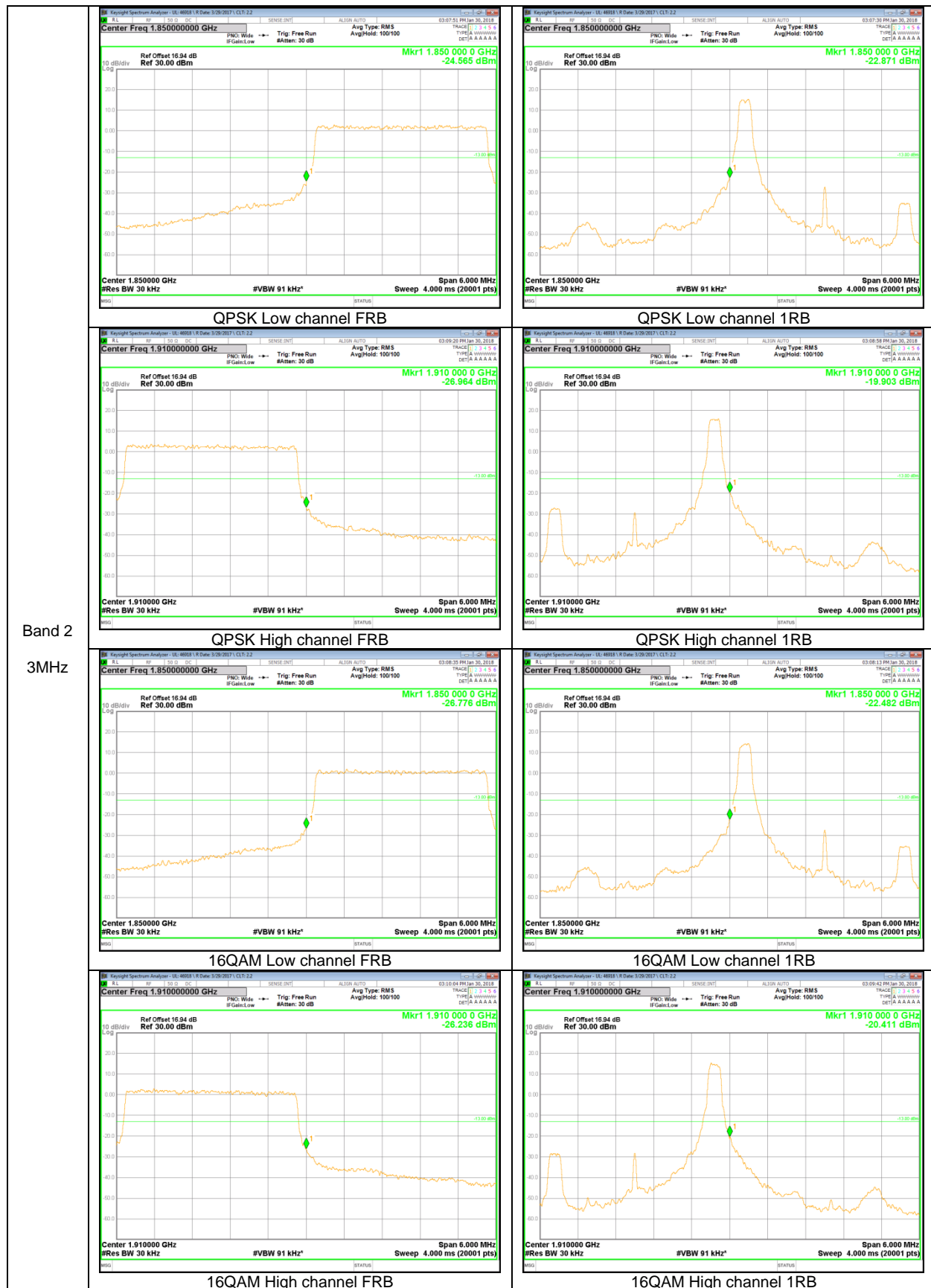


Band 2
15MHz

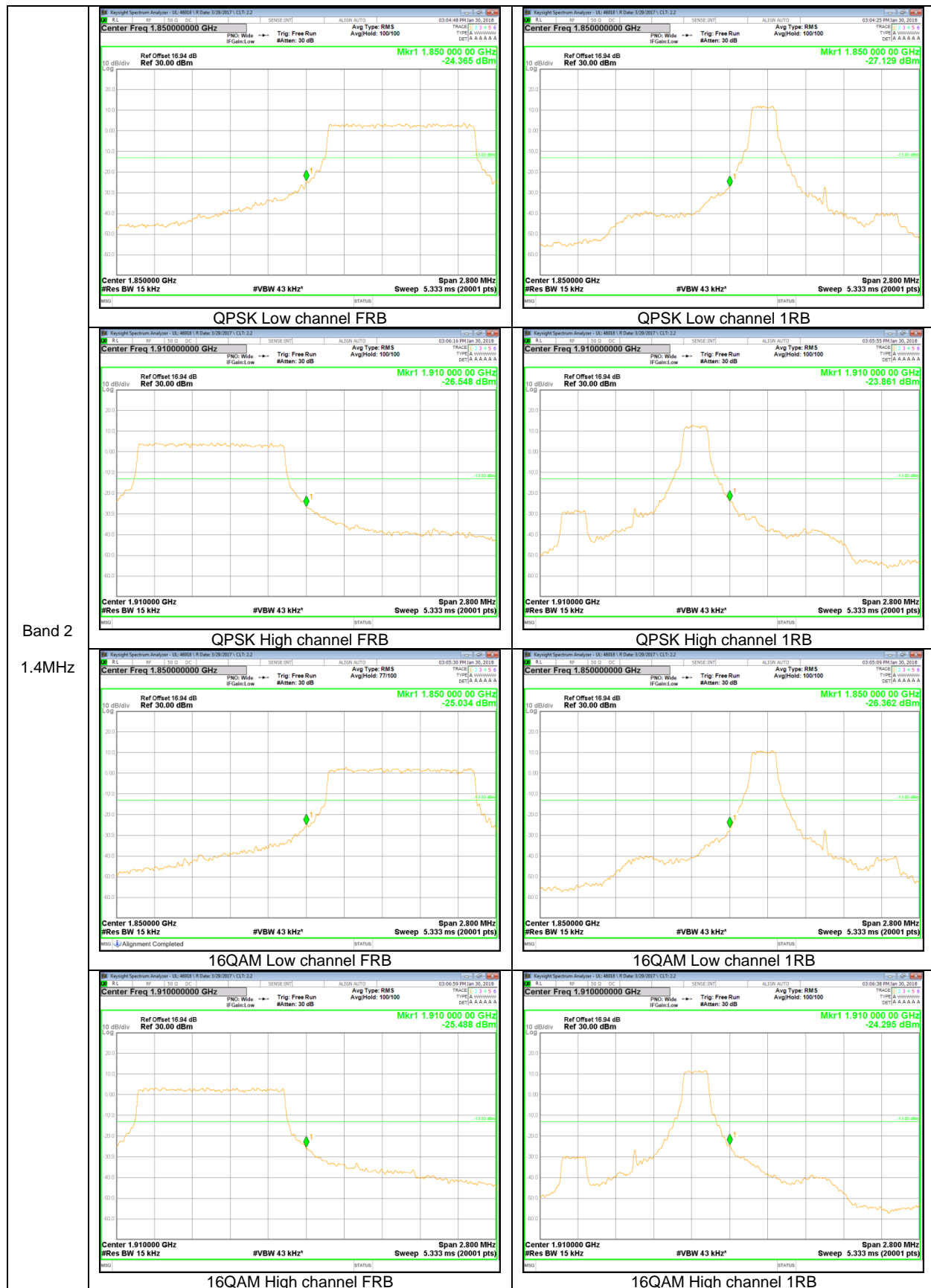


Band 2
 10MHz





Band 2
 3MHz



Band 2
 1.4MHz

9.3. OUT OF BAND EMISSIONS

RULE PART(S)

FCC: §2.1051, §22.901, §22.917, §24.238 and §27. 53

LIMITS

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

TEST PROCEDURE

Per KDB 971168 D01 Power Meas License Digital Systems v03

The RF output of the transmitter was connected to a spectrum analyzer through a calibrated coaxial cable. Sufficient scans were taken to show the out-of-band Emissions, if any, up to 10th harmonic. Multiple sweeps were recorded in maximum hold mode using a peak detector to ensure that the worst-case emissions were caught.

- a) Set the RBW = 100KHz for emission below 1GHz and 1MHz for emissions above 1GHz (Tests were performed 1MHz [Worst case], to sweep 1 time for all frequency range)
- b) Set VBW $\geq 3 \times$ RBW;
- c) Set span ≥ 1.5 times the OBW;
- d) Sweep time = auto couple;
- e) Detector = peak;
- f) Ensure that the number of measurement points = Max (40001);
- g) Trace mode = max hold;

RESULTS

GSM

Band	Mode	f [MHz]	Spurious [dBm]	Limit [dBm]
GSM850	GPRS	824.2	-23.03	-13.00
		836.6	-22.25	
		848.8	-22.24	
	EGPRS	824.2	-22.56	
		836.6	-23.26	
		848.8	-23.11	
GSM1900	GPRS	1850.2	-21.97	
		1880.0	-22.79	
		1909.8	-22.71	
	EGPRS	1850.2	-22.11	
		1880.0	-22.64	
		1909.8	-22.61	

WCDMA

Band	Mode	f [MHz]	Spurious [dBm]	Limit [dBm]
Band 5	REL99	826.4	-32.99	-13.00
		836.6	-32.27	
		846.6	-32.18	
	HSDPA	826.4	-33.05	
		836.6	-33.08	
		846.6	-32.94	
Band 4	REL99	1712.4	-31.53	
		1732.6	-32.46	
		1752.6	-32.61	
	HSDPA	1712.4	-32.52	
		1732.6	-31.83	
		1752.6	-32.69	
Band 2	REL99	1852.4	-31.93	
		1880.0	-31.56	
		1907.6	-32.23	
	HSDPA	1852.4	-33.21	
		1880.0	-32.32	
		1907.6	-33.19	

LTE 17

Bandwidth	Mode	f [MHz]	Spurious [dBm]	Limit [dBm]
10 MHz	QPSK	709.0	-31.01	-13.00
		710.0	-30.46	
		711.0	-31.57	
	16QAM	709.0	-30.11	
		710.0	-31.41	
		711.0	-31.24	
5 MHz	QPSK	706.5	-30.57	
		710.0	-30.98	
		713.5	-30.44	
	16QAM	706.5	-31.25	
		710.0	-31.17	
		713.5	-29.98	

LTE 5

Bandwidth	Mode	f [MHz]	Spurious [dBm]	Limit [dBm]
10 MHz	QPSK	829.0	-30.57	-13.00
		836.5	-30.76	
		844.0	-31.58	
	16QAM	829.0	-31.49	
		836.5	-31.13	
		844.0	-31.32	
5 MHz	QPSK	826.5	-31.26	
		836.5	-31.10	
		846.5	-30.58	
	16QAM	826.5	-30.59	
		836.5	-30.76	
		846.5	-31.23	
3 MHz	QPSK	825.5	-31.31	
		836.5	-31.09	
		847.5	-31.62	
	16QAM	825.5	-30.78	
		836.5	-30.69	
		847.5	-31.42	
1.4 MHz	QPSK	824.7	-30.94	
		836.5	-30.99	
		848.3	-30.96	
	16QAM	824.7	-30.99	
		836.5	-31.41	
		848.3	-30.54	

LTE 4

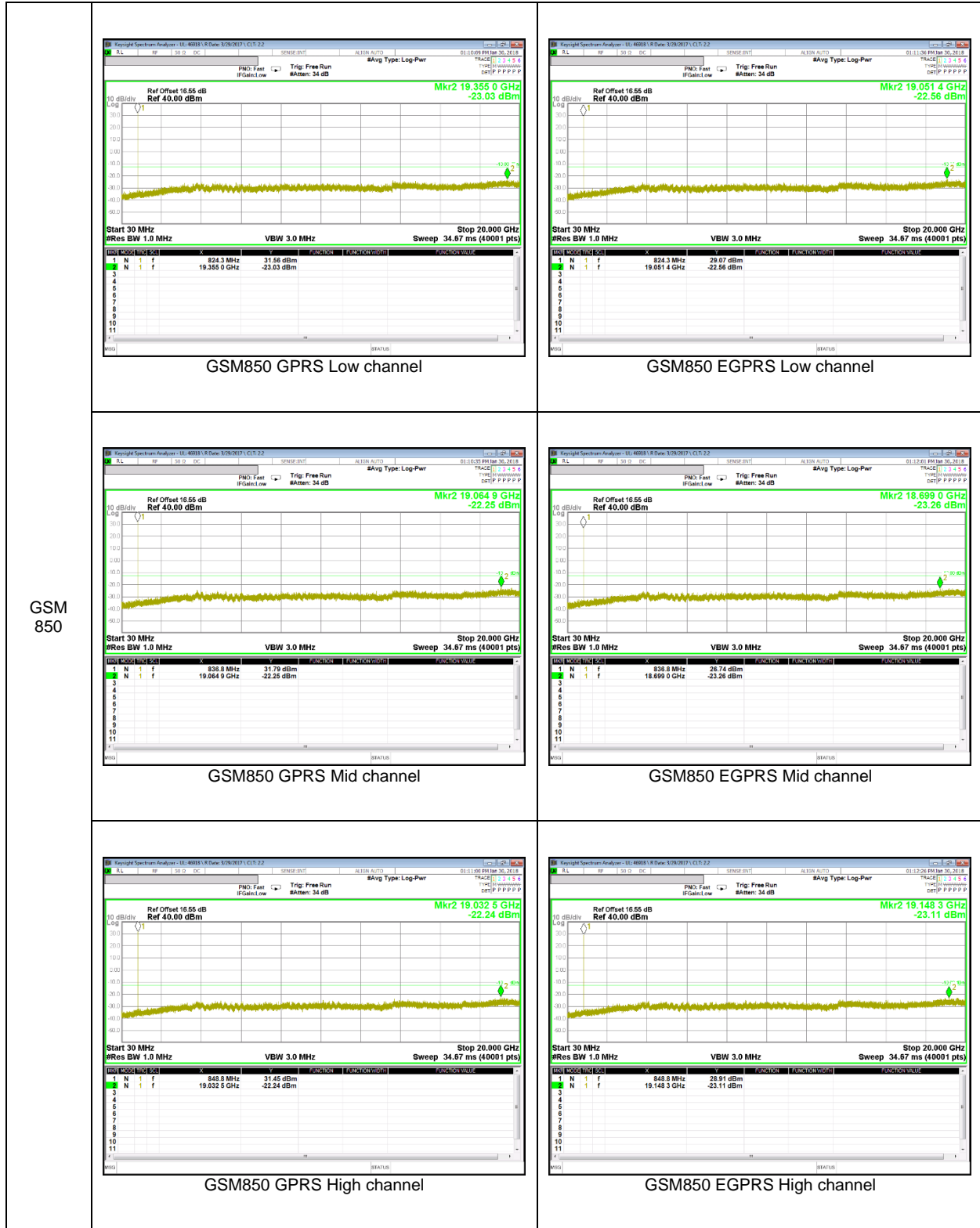
Bandwidth	Mode	f [MHz]	Spurious [dBm]	Limit [dBm]
20 MHz	QPSK	1720.0	-28.24	-13.00
		1732.5	-28.27	
		1745.0	-28.50	
	16QAM	1720.0	-28.11	
		1732.5	-27.93	
		1745.0	-26.88	
15 MHz	QPSK	1717.5	-28.03	
		1732.5	-28.47	
		1747.5	-27.80	
	16QAM	1717.5	-27.78	
		1732.5	-28.30	
		1747.5	-28.14	
10 MHz	QPSK	1715.0	-27.85	
		1732.5	-28.32	
		1750.0	-28.72	
	16QAM	1715.0	-28.27	
		1732.5	-28.12	
		1750.0	-28.50	
5 MHz	QPSK	1712.5	-28.01	
		1732.5	-28.13	
		1752.5	-28.28	
	16QAM	1712.5	-27.78	
		1732.5	-28.03	
		1752.5	-28.69	
3 MHz	QPSK	1711.5	-28.18	
		1732.5	-28.12	
		1753.5	-28.07	
	16QAM	1711.5	-27.79	
		1732.5	-28.18	
		1753.5	-28.21	
1.4 MHz	QPSK	1710.7	-28.70	
		1732.5	-28.26	
		1754.3	-28.40	
	16QAM	1710.7	-28.16	
		1732.5	-28.02	
		1754.3	-28.29	

LTE 2

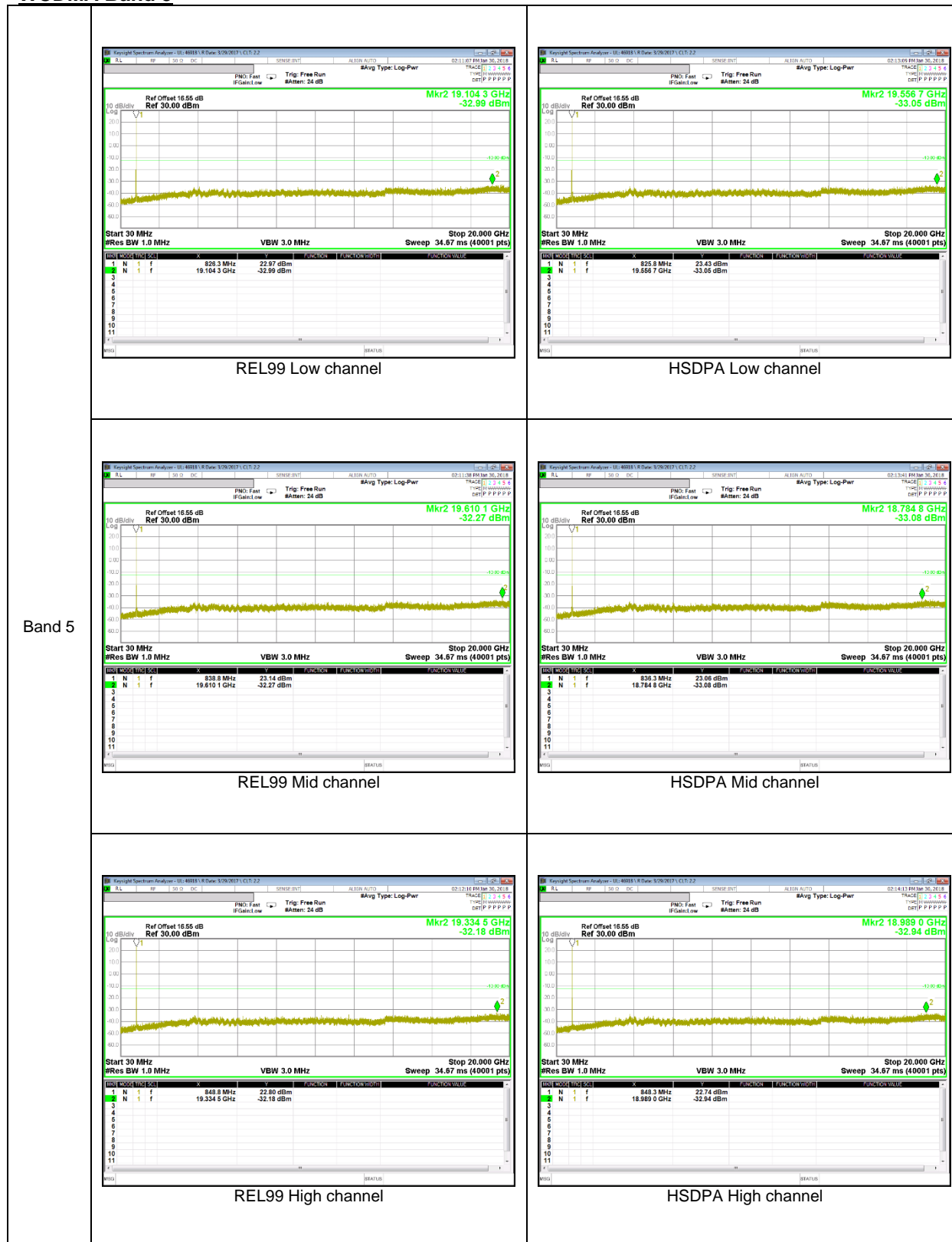
Bandwidth	Mode	f [MHz]	Spurious [dBm]	Limit [dBm]
20 MHz	QPSK	1860.0	-27.81	-13.00
		1880.0	-28.75	
		1900.0	-28.61	
	16QAM	1860.0	-28.80	
		1880.0	-28.07	
		1900.0	-28.25	
15 MHz	QPSK	1857.5	-28.56	
		1880.0	-28.85	
		1902.5	-27.72	
	16QAM	1857.5	-28.55	
		1880.0	-28.06	
		1902.5	-28.64	
10 MHz	QPSK	1855.0	-29.00	
		1880.0	-28.87	
		1905.0	-27.99	
	16QAM	1855.0	-29.09	
		1880.0	-28.67	
		1905.0	-28.73	
5 MHz	QPSK	1852.5	-27.64	
		1880.0	-28.73	
		1907.5	-28.93	
	16QAM	1852.5	-28.46	
		1880.0	-28.80	
		1907.5	-28.59	
3 MHz	QPSK	1851.5	-28.65	
		1880.0	-28.14	
		1908.5	-28.81	
	16QAM	1851.5	-28.71	
		1880.0	-27.94	
		1908.5	-28.37	
1.4 MHz	QPSK	1850.7	-28.78	
		1880.0	-28.47	
		1909.3	-28.35	
	16QAM	1850.7	-27.78	
		1880.0	-28.65	
		1909.3	-28.11	

9.3.1. OUT OF BAND EMISSIONS PLOTS

GSM 850

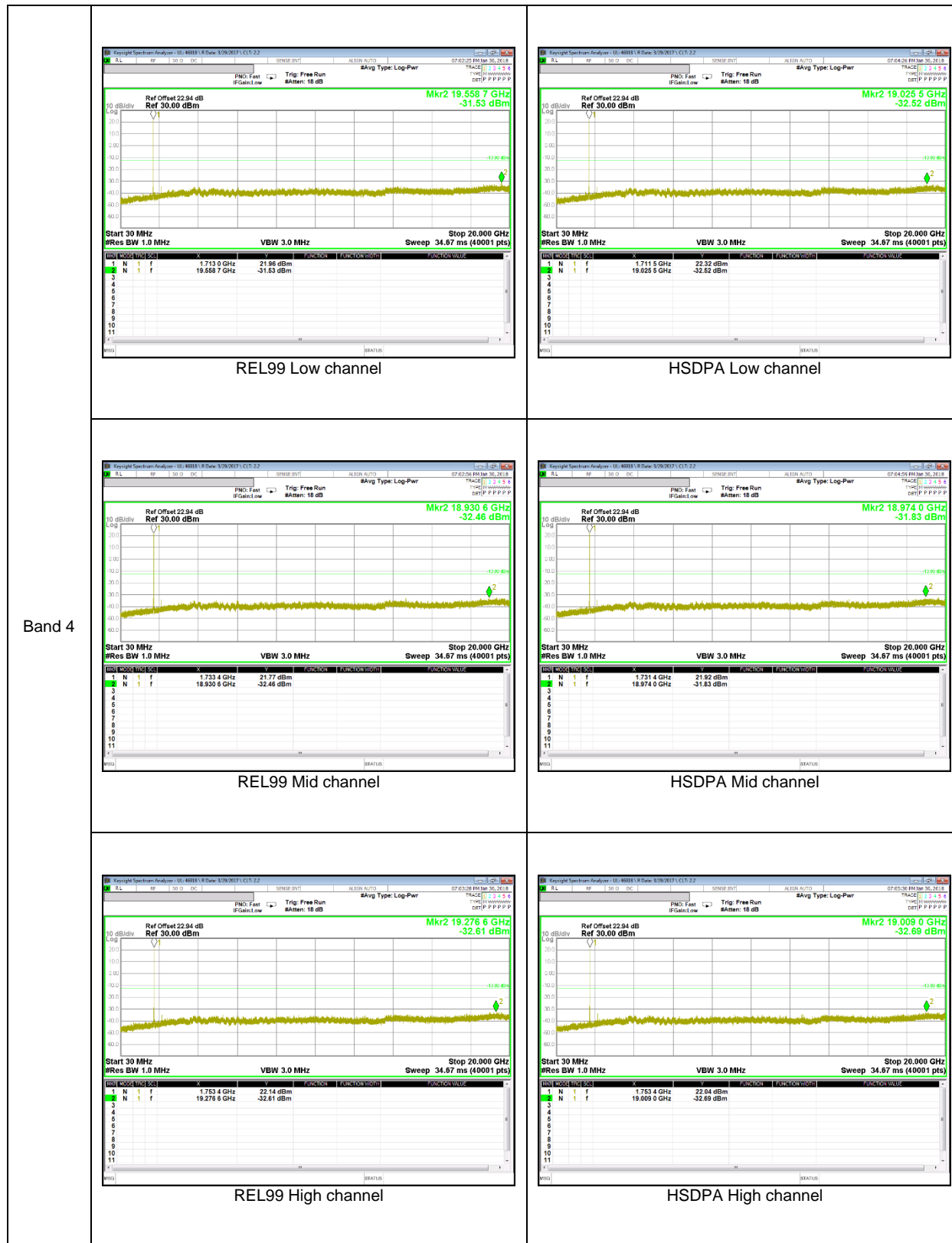


WCDMA Band 5

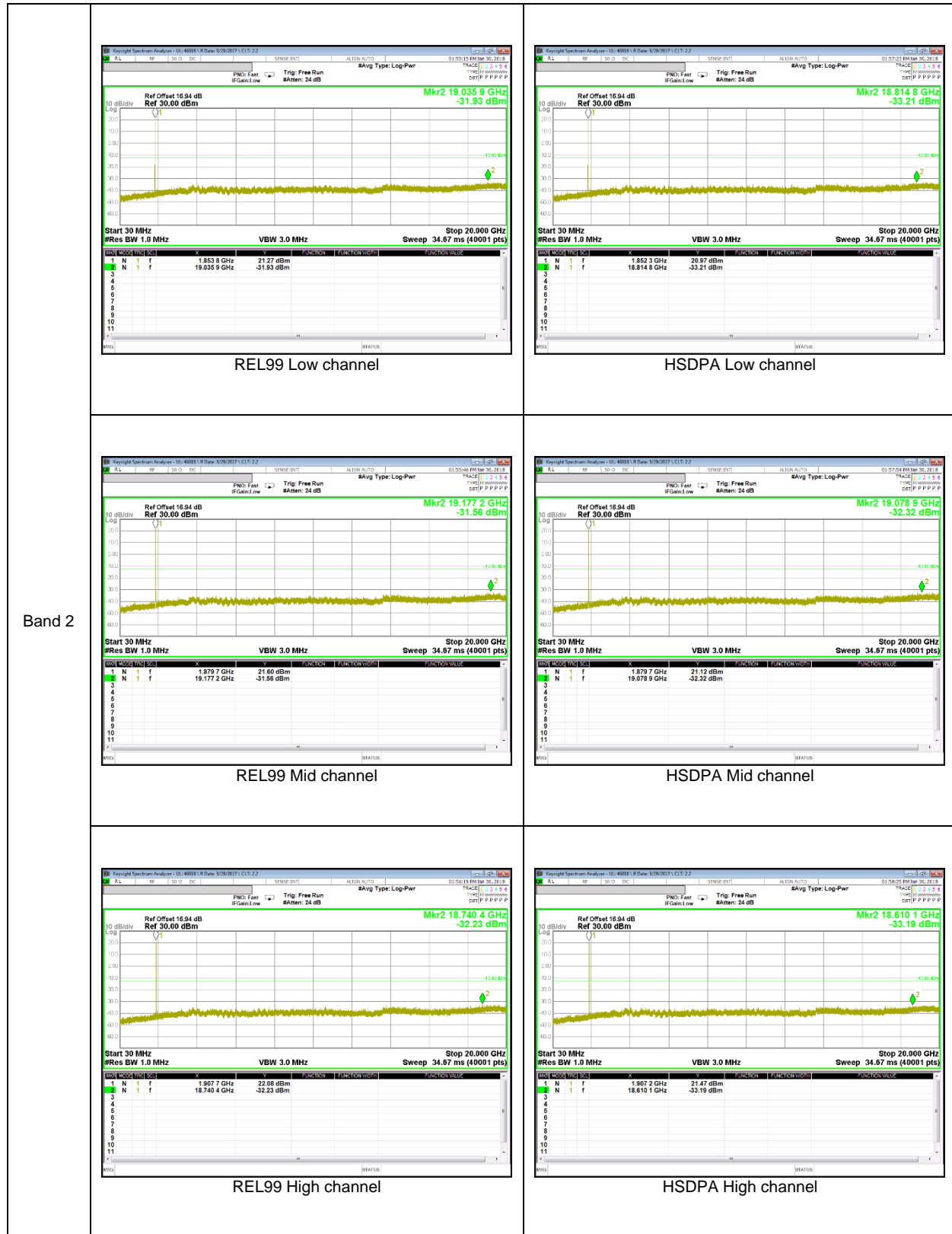


Band 5

WCDMA Band 4



WCDMA Band 2



LTE Band 17

