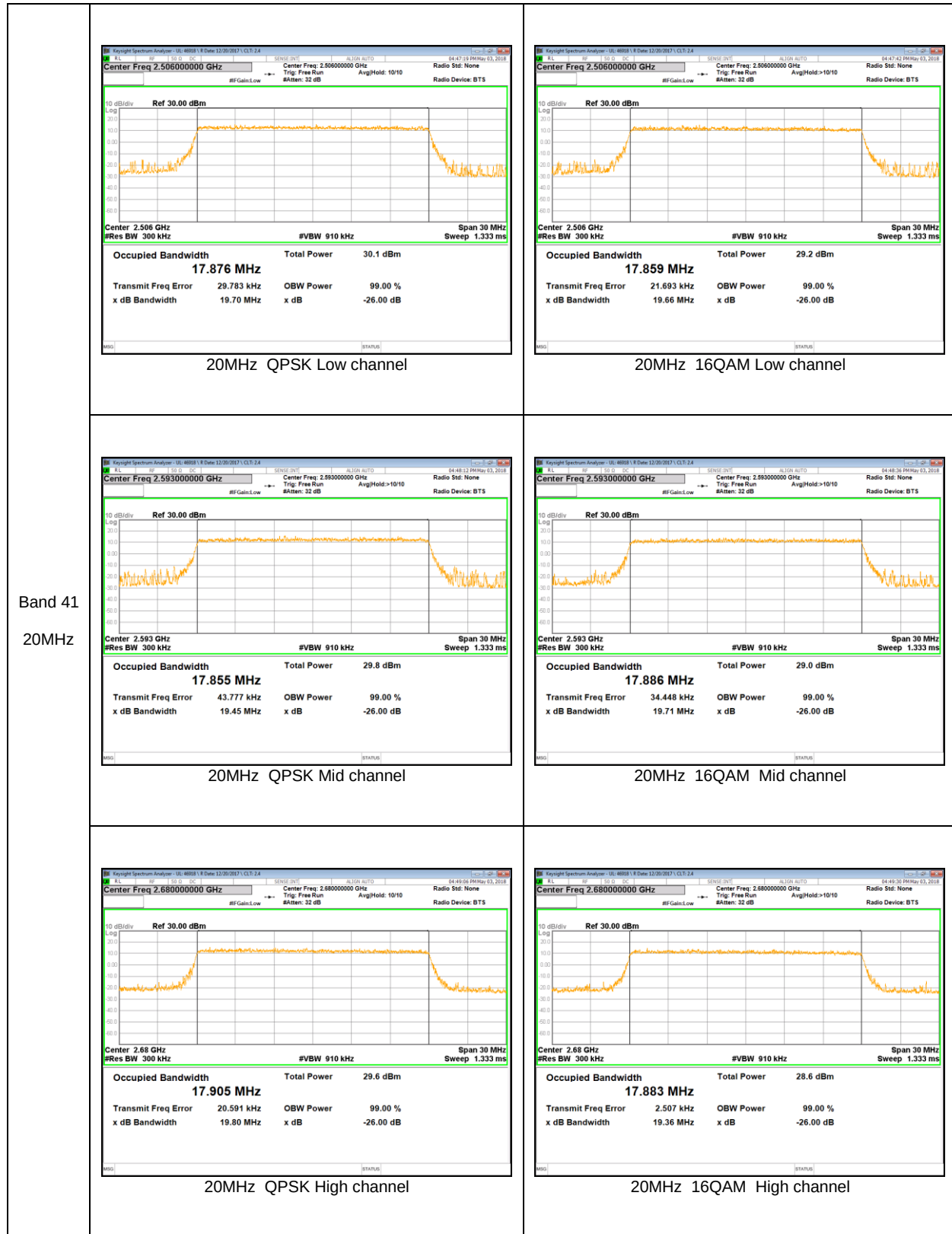
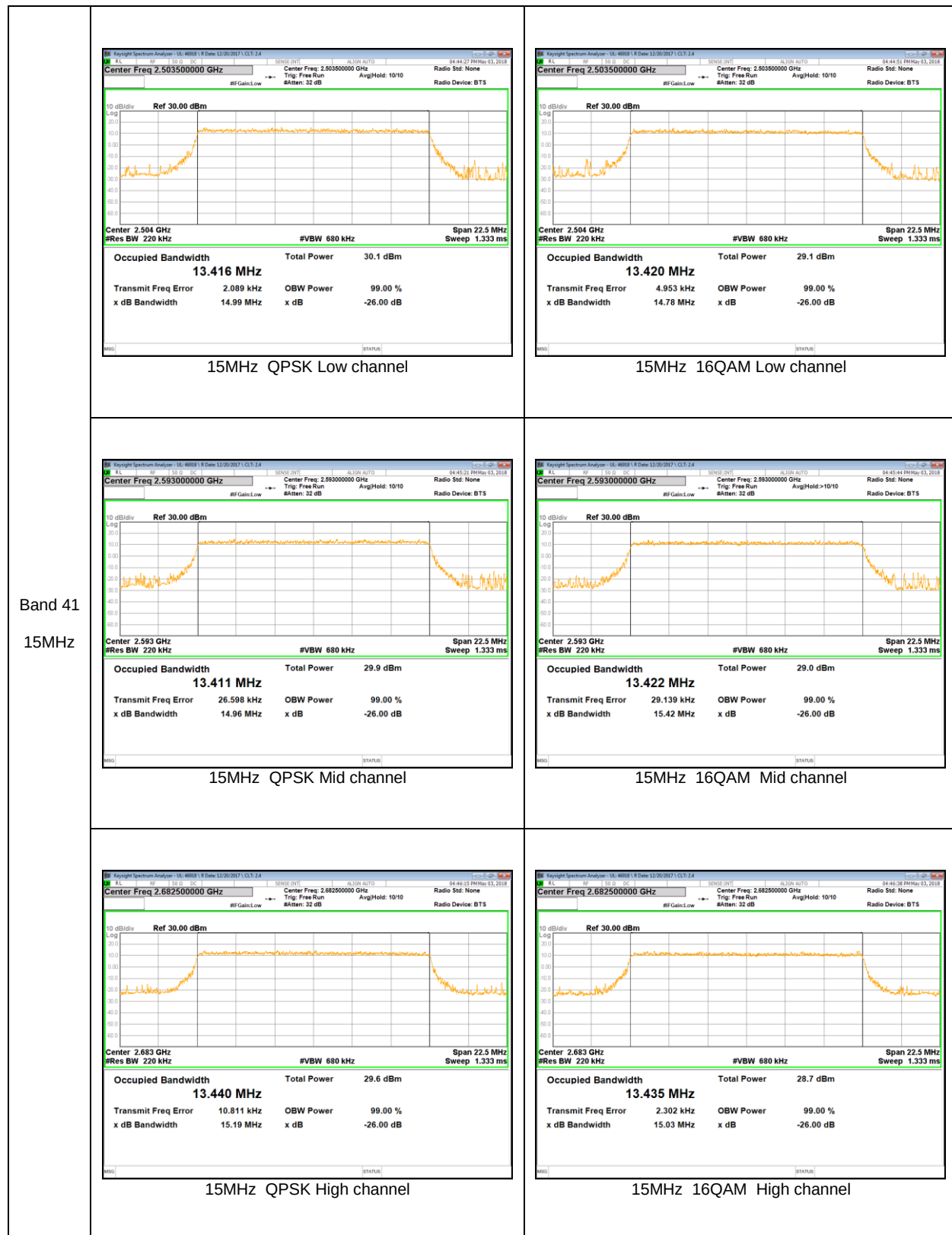
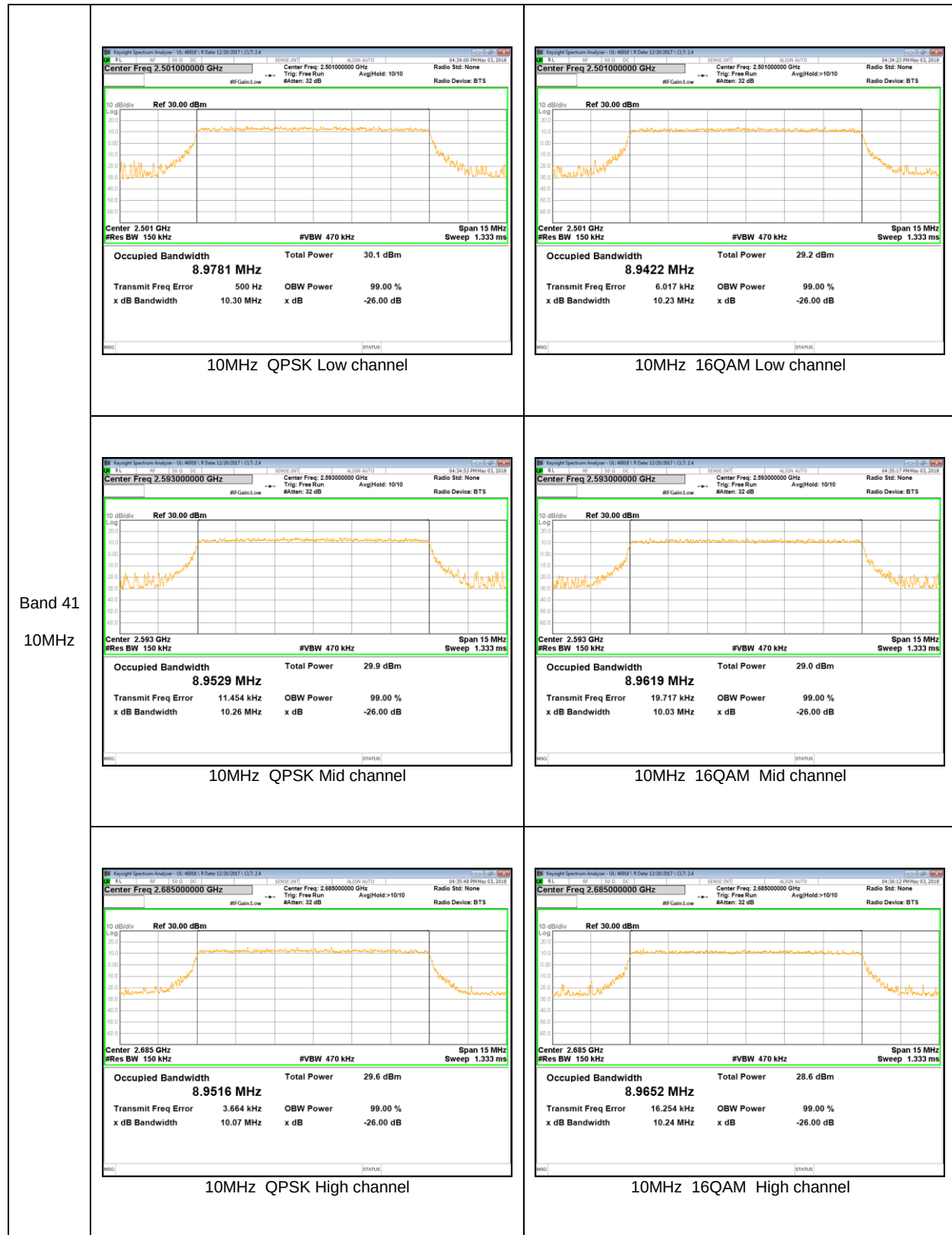
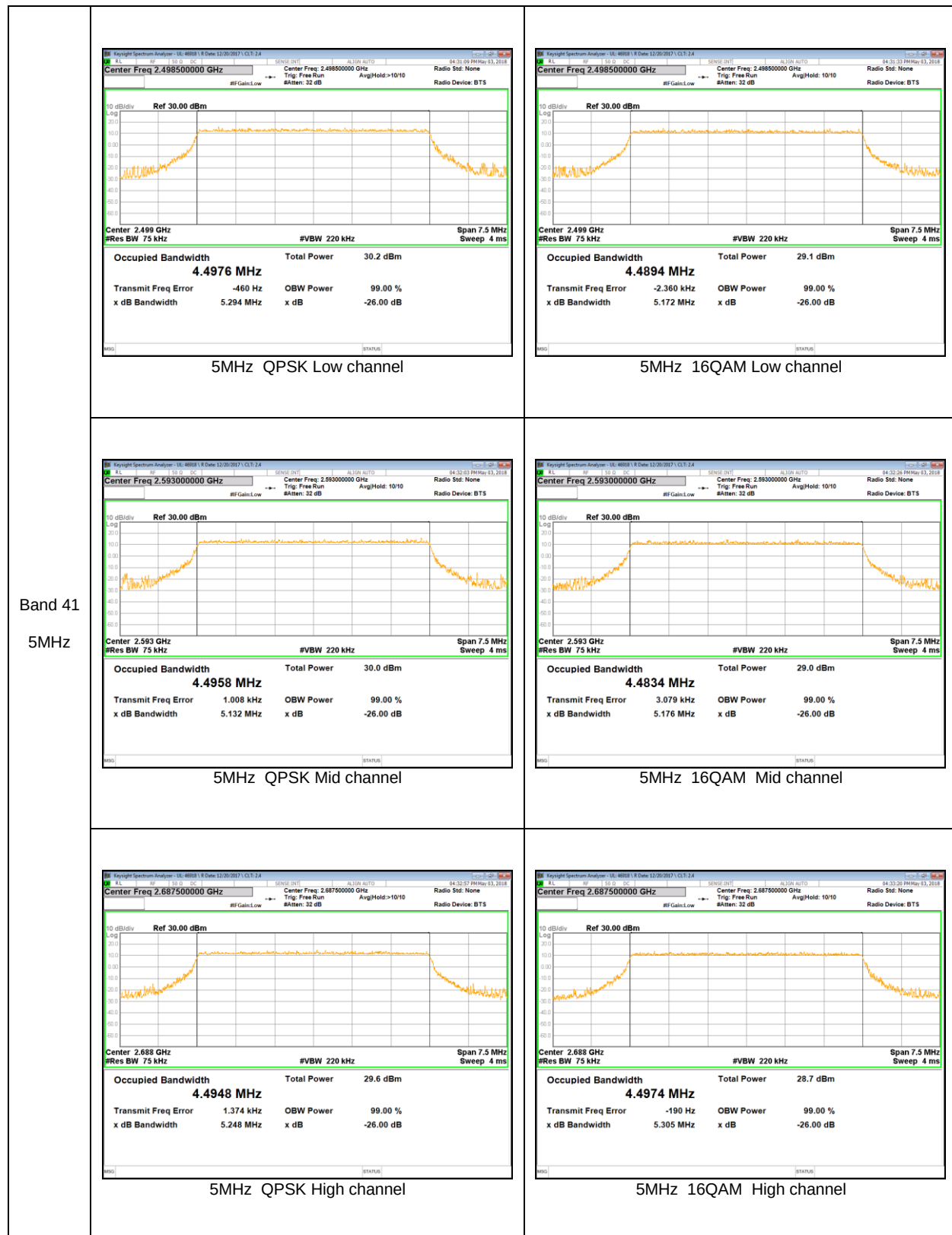


LTE Band 41









9.2. BAND EDGE EMISSIONS

RULE PART(S)

FCC: §22.359, §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.

Part 27.53(m) For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

TEST PROCEDURE

Per KDB 971168 D01 Power Meas License Digital Systems v03r01

The transmitter output was connected to a CMW500 Test Set and configured to operate at maximum power. The band edge emissions were measured at the required operating frequencies in each band on the Spectrum Analyzer.

GSM

- a) Set the RBW = 1 ~ 5% of OBW(GSM850 – 8.2KHz, GSM1900 – 9.1KHz)
- b) Set VBW $\geq 3 \times$ RBW;
- c) Set span ≥ 1.5 times the OBW;
- d) Sweep time = 1S ;
- e) Detector = RMS;
- f) Ensure that the number of measurement points $\geq 2 \times$ Span/RBW;
- g) Trace mode = Average(100);
- h) Add duty cycle correction factor (9dB)

WCDMA/LTE

- b) Set the RBW = 1 ~ 1.5 % of OBW(Typically limited to a minimum RBW of 1% of the OBW)
- b) Set VBW $\geq 3 \times$ RBW;
- c) Set span ≥ 1.5 times the OBW;
- d) Sweep time = Auto;
- e) Detector = RMS;
- f) Ensure that the number of measurement points $\geq 2 \times$ Span/RBW;
- g) Trace mode = Average (100);

NOTE

LTE Band 41 - Duty cycle correction factor(2.25dB) already applied on the plot.

RESULTS

GSM

Band	Mode	Side	f [MHz]	Level [dBm]	Limit [dBm]
GSM1900	GPRS	Lower	1849.982	-16.508	13.00
		Upper	1910.008	-15.423	
	EGPRS	Lower	1849.987	-26.106	
		Upper	1910.008	-24.951	

WCDMA

Band	Mode	Side	f [MHz]	Level [dBm]	Limit [dBm]
Band 5	REL99	Lower	824.000	-25.426	-13.00
		Upper	849.000	-26.881	
	HSDPA	Lower	824.000	-28.540	
		Upper	849.000	-28.906	
Band 2	REL99	Lower	1850.000	-25.867	
		Upper	1910.000	-24.573	
	HSDPA	Lower	1850.000	-28.357	
		Upper	1910.000	-27.759	

LTE 5

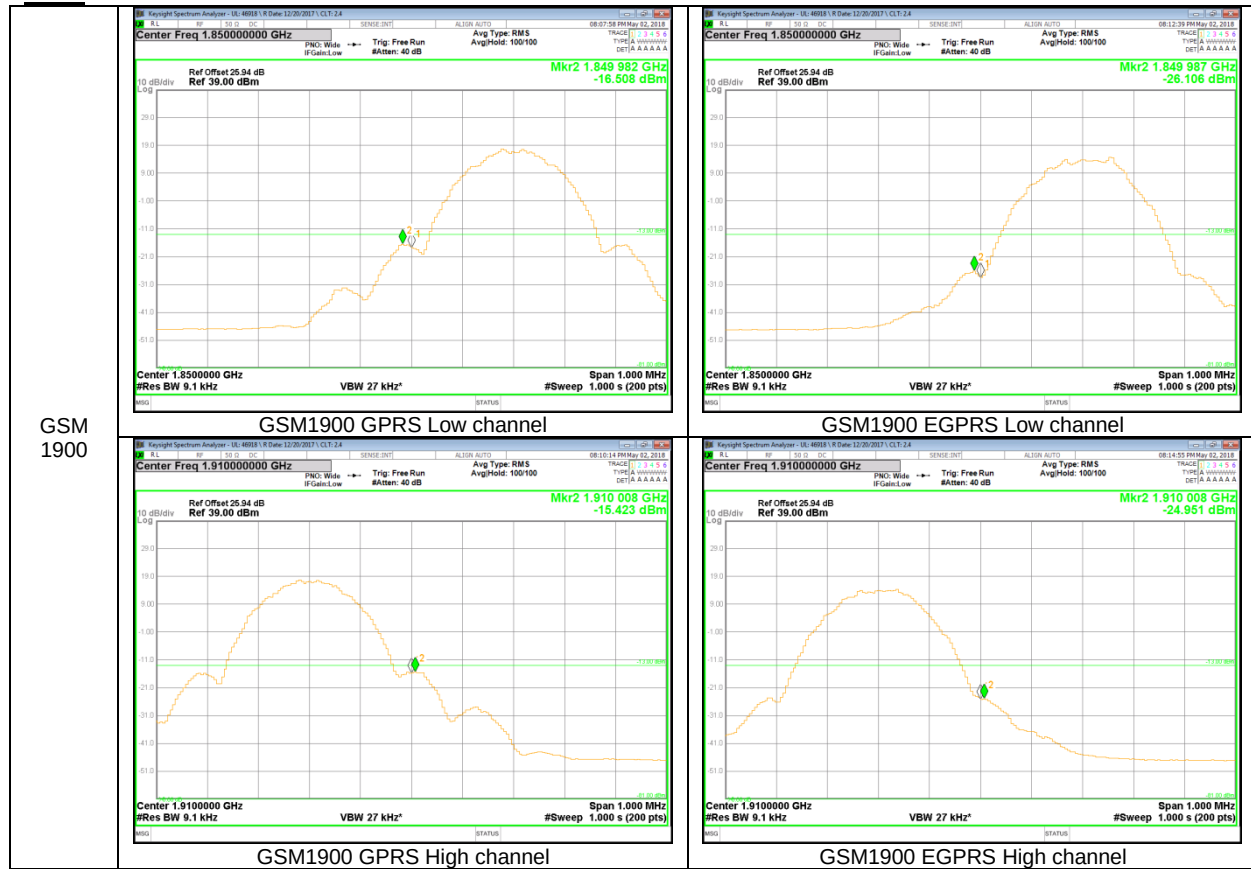
Bandwidth	Mode	Side	RB Status	f [MHz]	Level [dBm]	Limit [dBm]
10 MHz	QPSK	Lower	1RB	824.000	-34.343	-13.00
			FRB	824.000	-27.016	
		Upper	1RB	849.000	-31.030	
			FRB	849.000	-29.484	
	16QAM	Lower	1RB	824.000	-33.438	
			FRB	824.000	-31.011	
		Upper	1RB	849.000	-31.431	
			FRB	849.000	-31.548	
5 MHz	QPSK	Lower	1RB	824.000	-21.308	
			FRB	824.000	-23.852	
		Upper	1RB	849.000	-22.360	
			FRB	849.000	-26.353	
	16QAM	Lower	1RB	824.000	-24.354	
			FRB	824.000	-25.877	
		Upper	1RB	849.000	-22.283	
			FRB	849.000	-24.800	
3 MHz	QPSK	Lower	1RB	824.000	-19.234	
			FRB	824.000	-24.604	
		Upper	1RB	849.000	-18.832	
			FRB	849.000	-25.027	
	16QAM	Lower	1RB	824.000	-21.548	
			FRB	824.000	-24.489	
		Upper	1RB	849.000	-19.781	
			FRB	849.000	-25.512	
1.4 MHz	QPSK	Lower	1RB	824.000	-24.205	
			FRB	824.000	-23.495	
		Upper	1RB	849.000	-22.477	
			FRB	849.000	-23.658	
	16QAM	Lower	1RB	824.000	-25.280	
			FRB	824.000	-26.281	
		Upper	1RB	849.000	-23.466	
			FRB	849.000	-25.019	

LTE 17

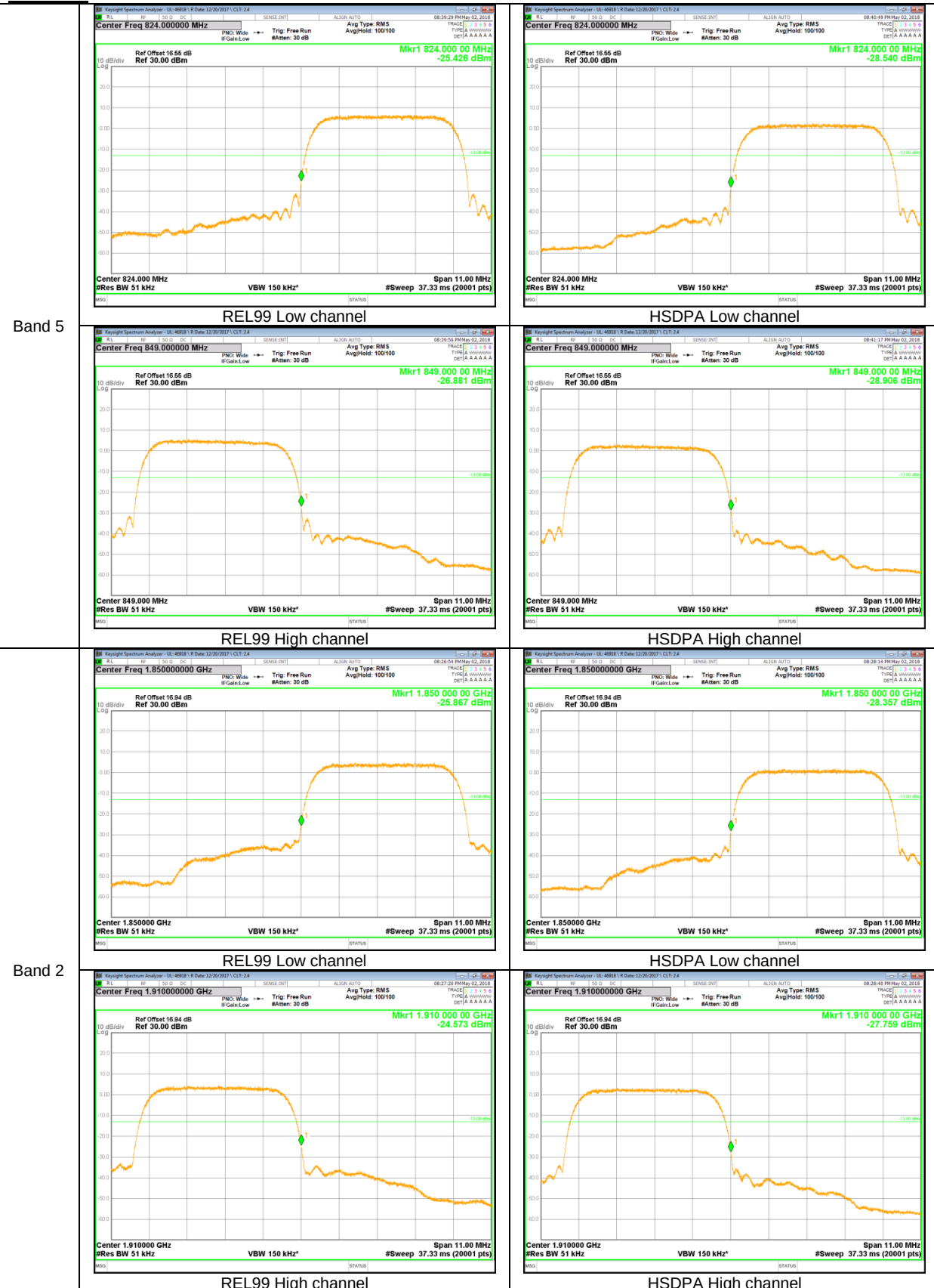
Bandwidth	Mode	Side	RB Status	f [MHz]	Level [dBm]	Limit [dBm]
10 MHz	QPSK	Lower	1RB	704.000	-32.211	-13.00
			FRB	704.000	-27.796	
		Upper	1RB	716.000	-31.917	
			FRB	716.000	-28.221	
	16QAM	Lower	1RB	704.000	-34.491	
			FRB	704.000	-30.044	
		Upper	1RB	716.000	-31.205	
			FRB	716.000	-31.679	
5 MHz	QPSK	Lower	1RB	704.000	-22.138	-13.00
			FRB	704.000	-24.709	
		Upper	1RB	716.000	-21.895	
			FRB	716.000	-25.453	
	16QAM	Lower	1RB	704.000	-22.182	
			FRB	704.000	-26.080	
		Upper	1RB	716.000	-25.073	
			FRB	716.000	-26.420	

9.2.1. BAND EDGE PLOTS

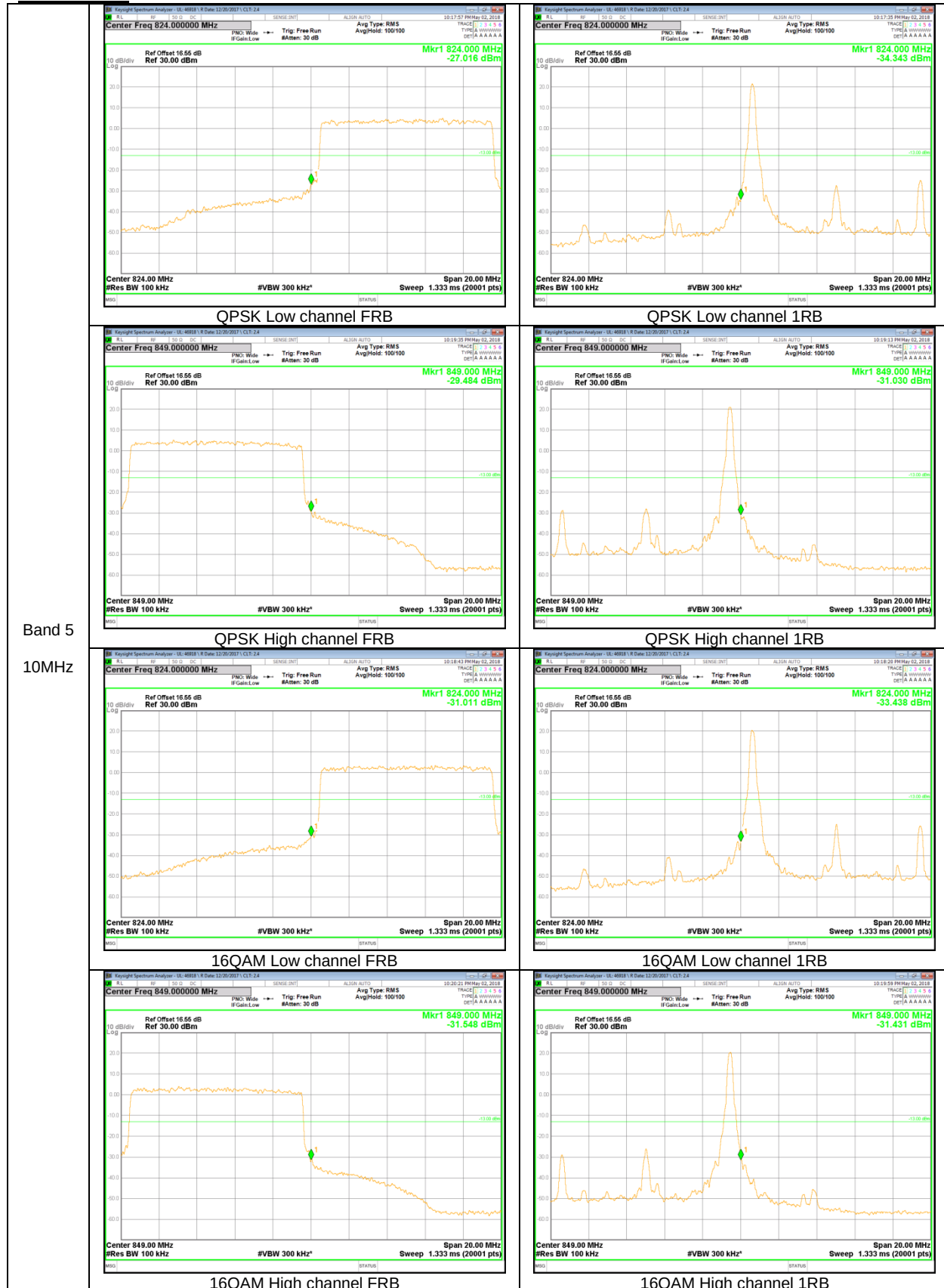
GSM

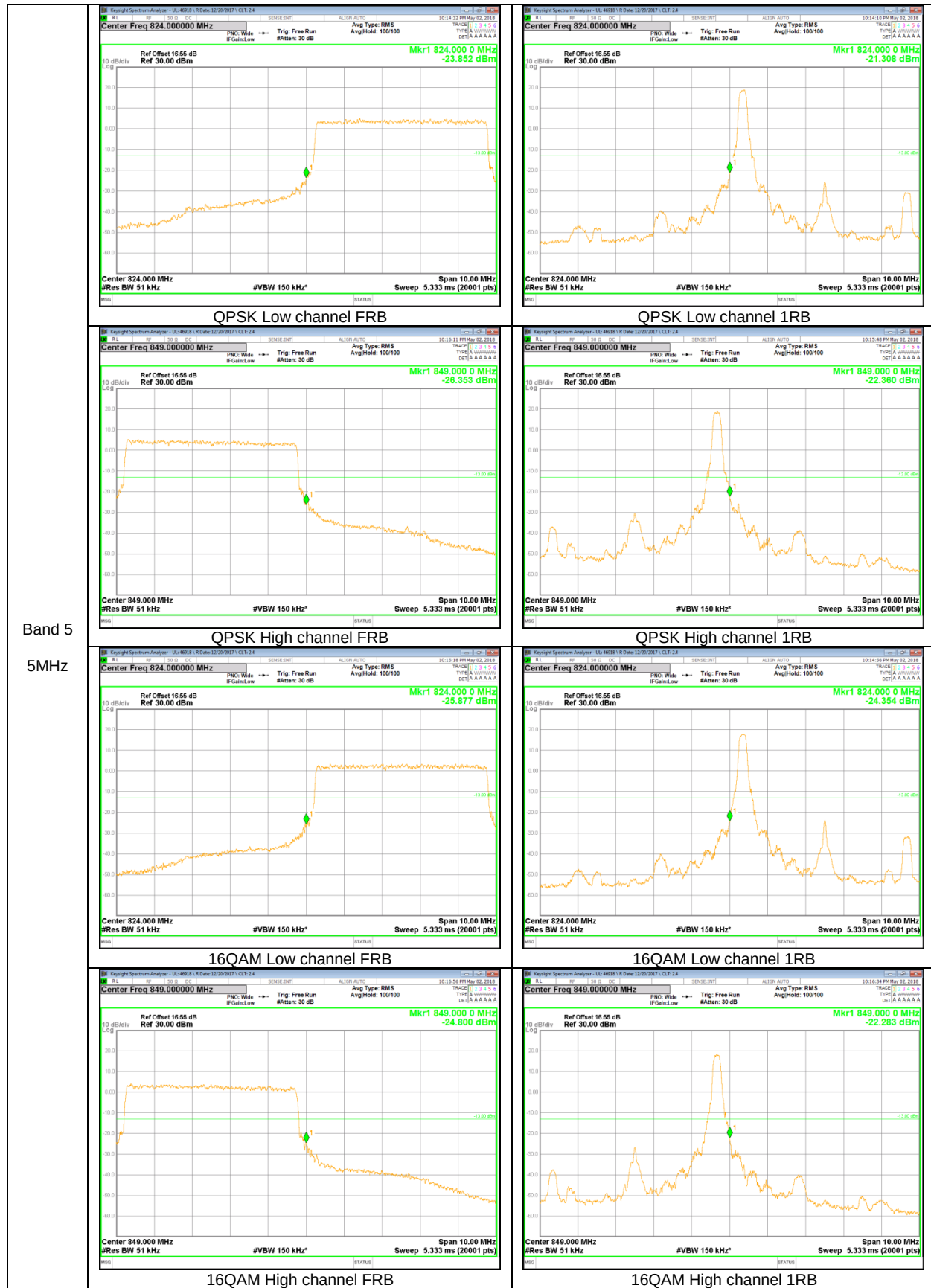


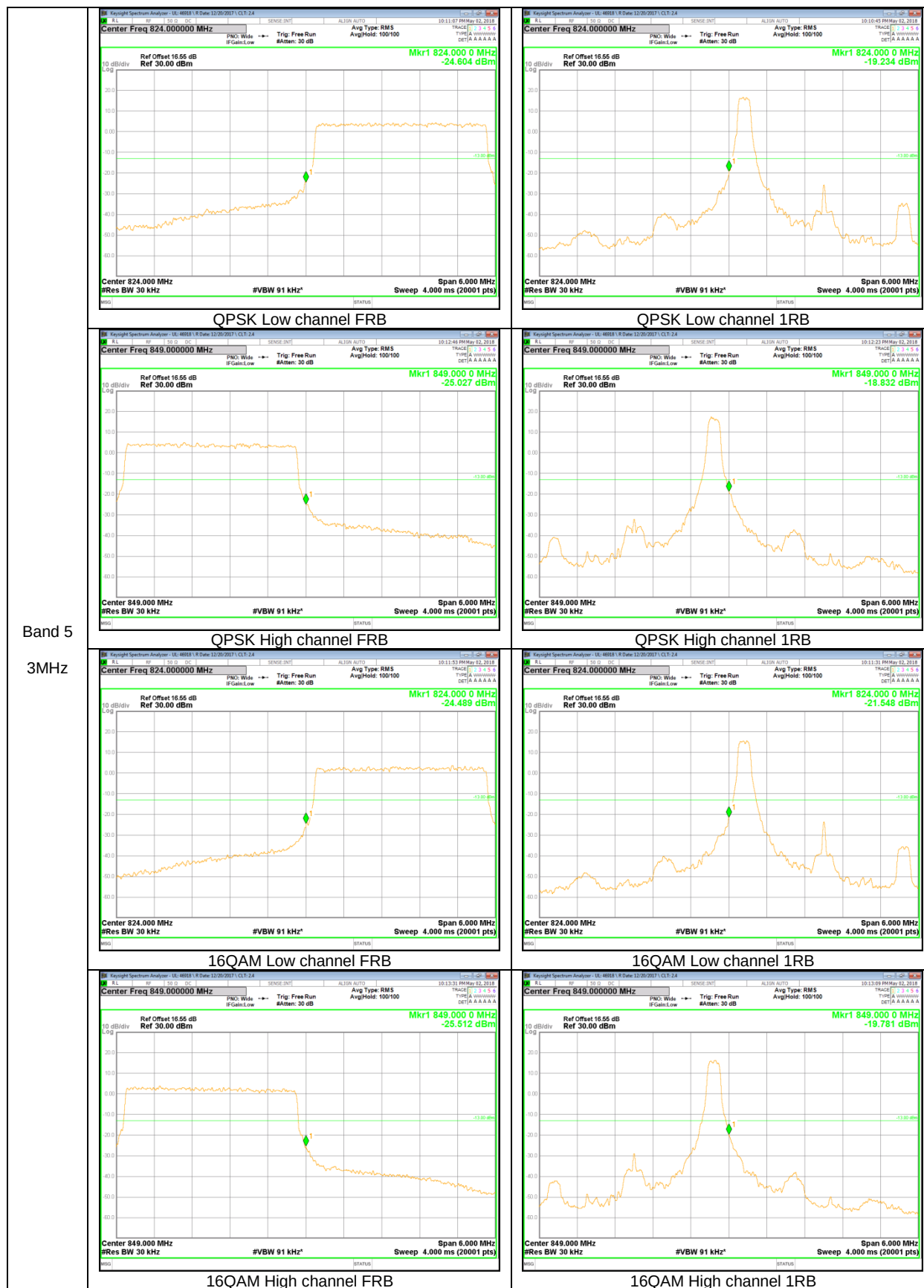
WCDMA

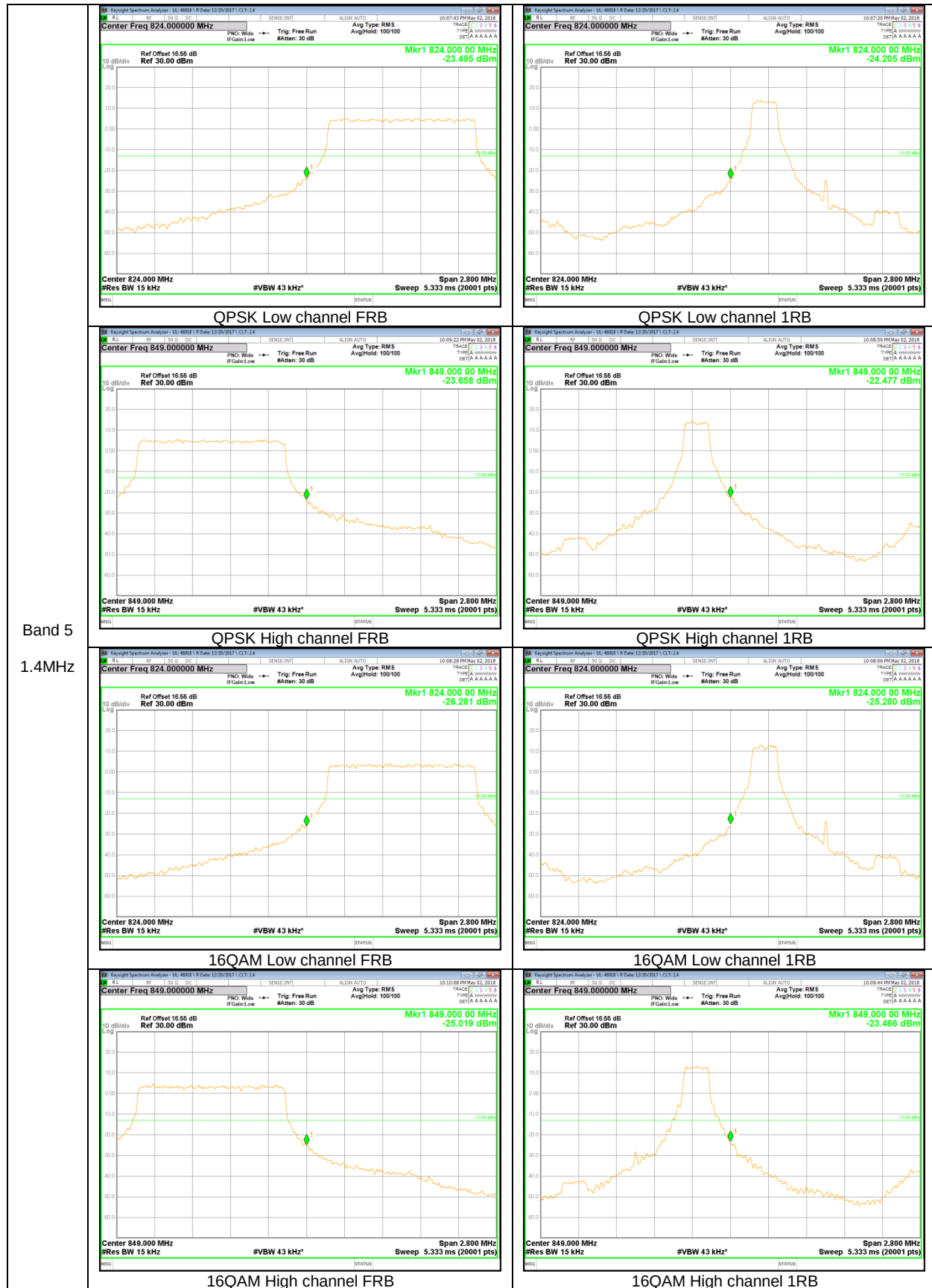


LTE Band 5

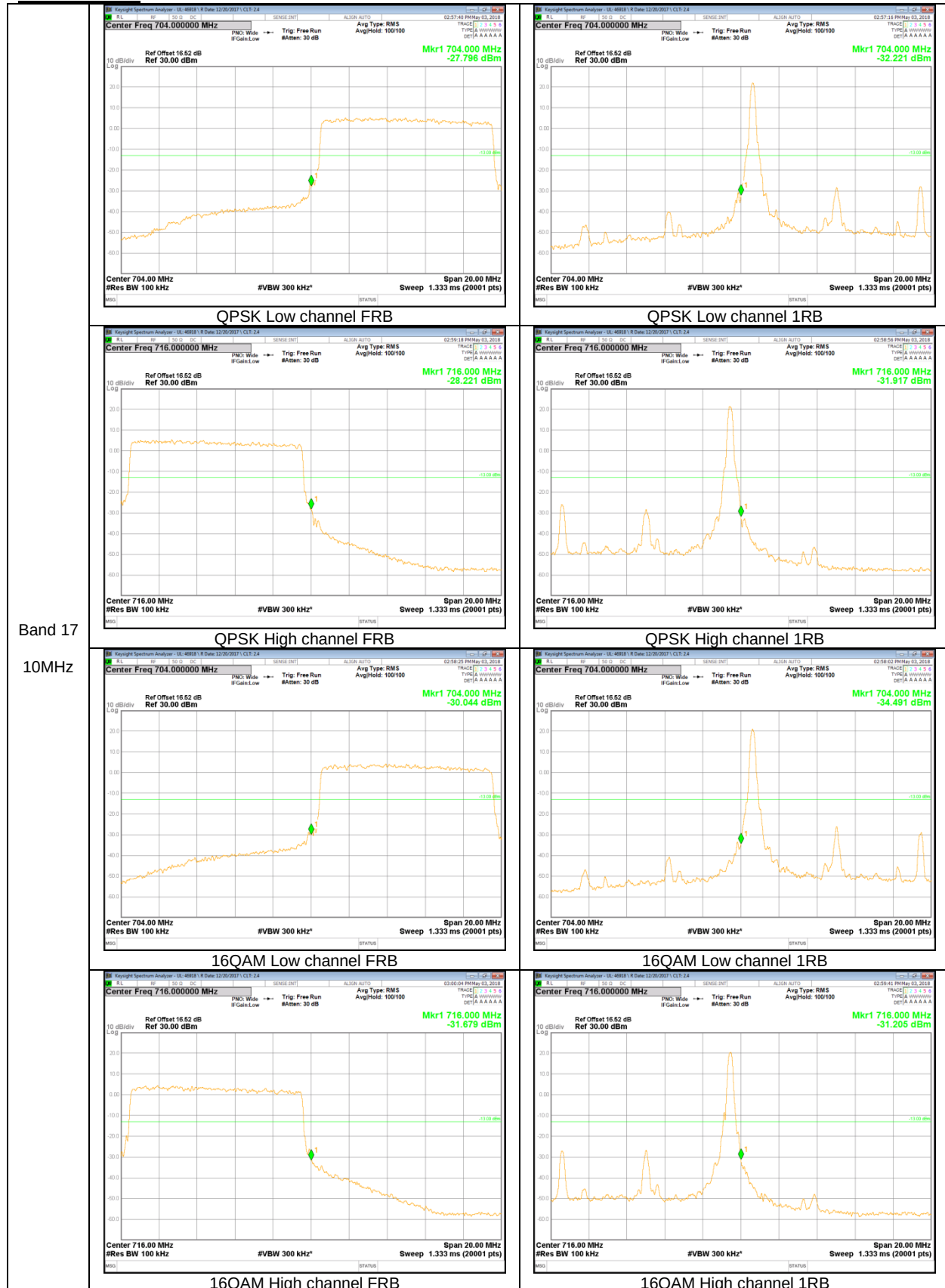




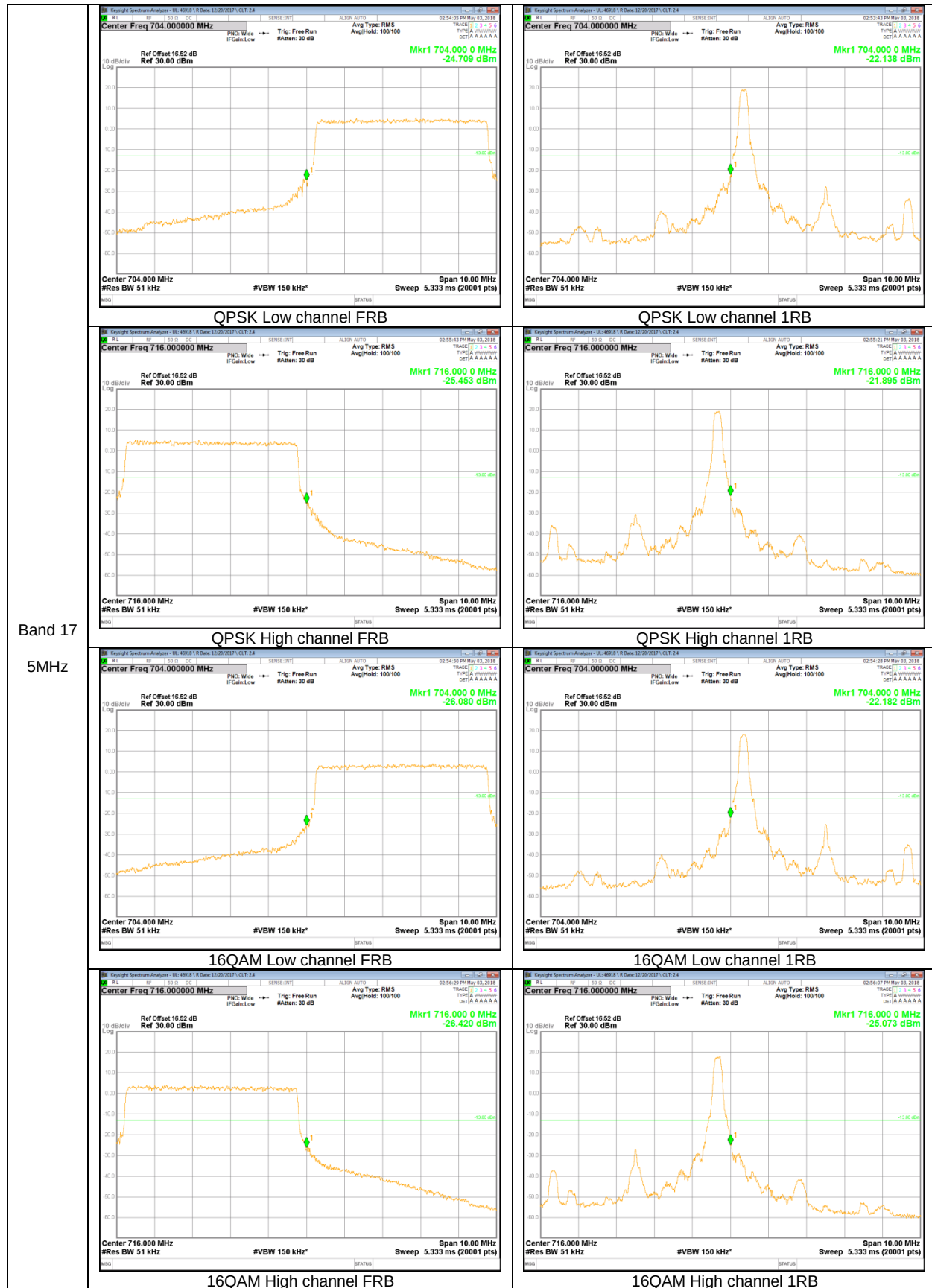




LTE Band 17



Band 17
10MHz



9.2.2. EMISSION MASK PLOTS

LTE Band 41

