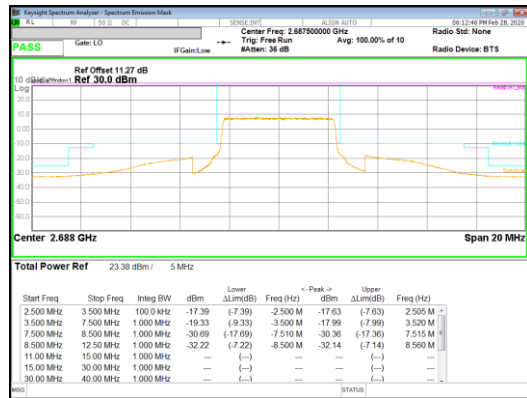
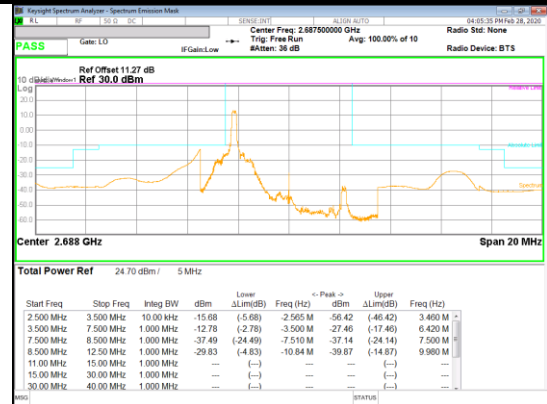


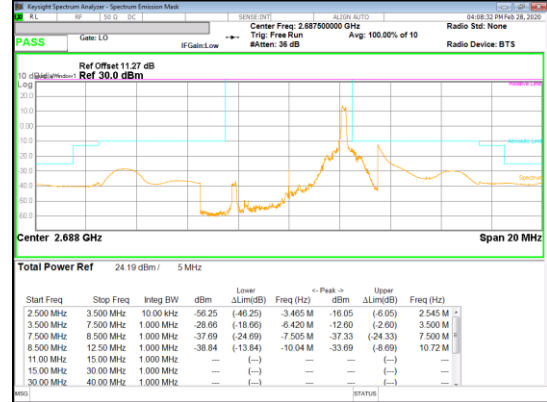
Band 41
 5MHz
 QPSK



QPSK High channel FRB

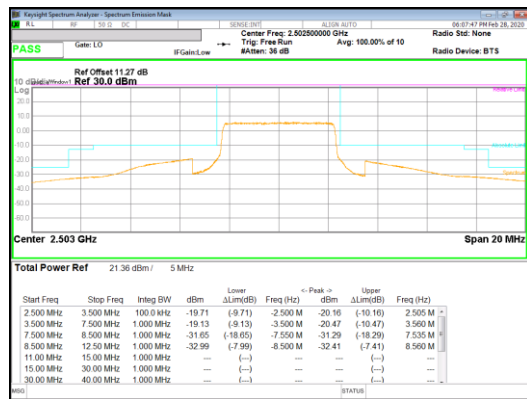


QPSK High channel 1RB_Offset Low

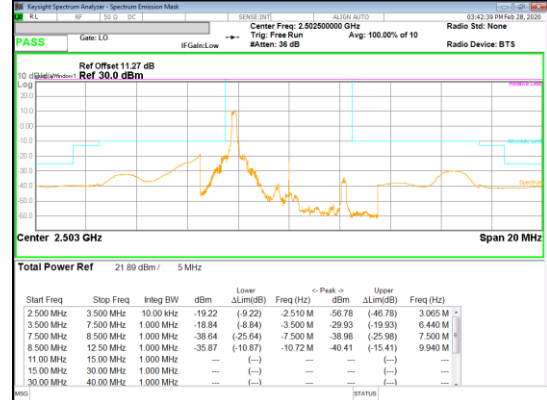


QPSK High channel 1RB_Offset High

Band 41
 5MHz
 16QAM



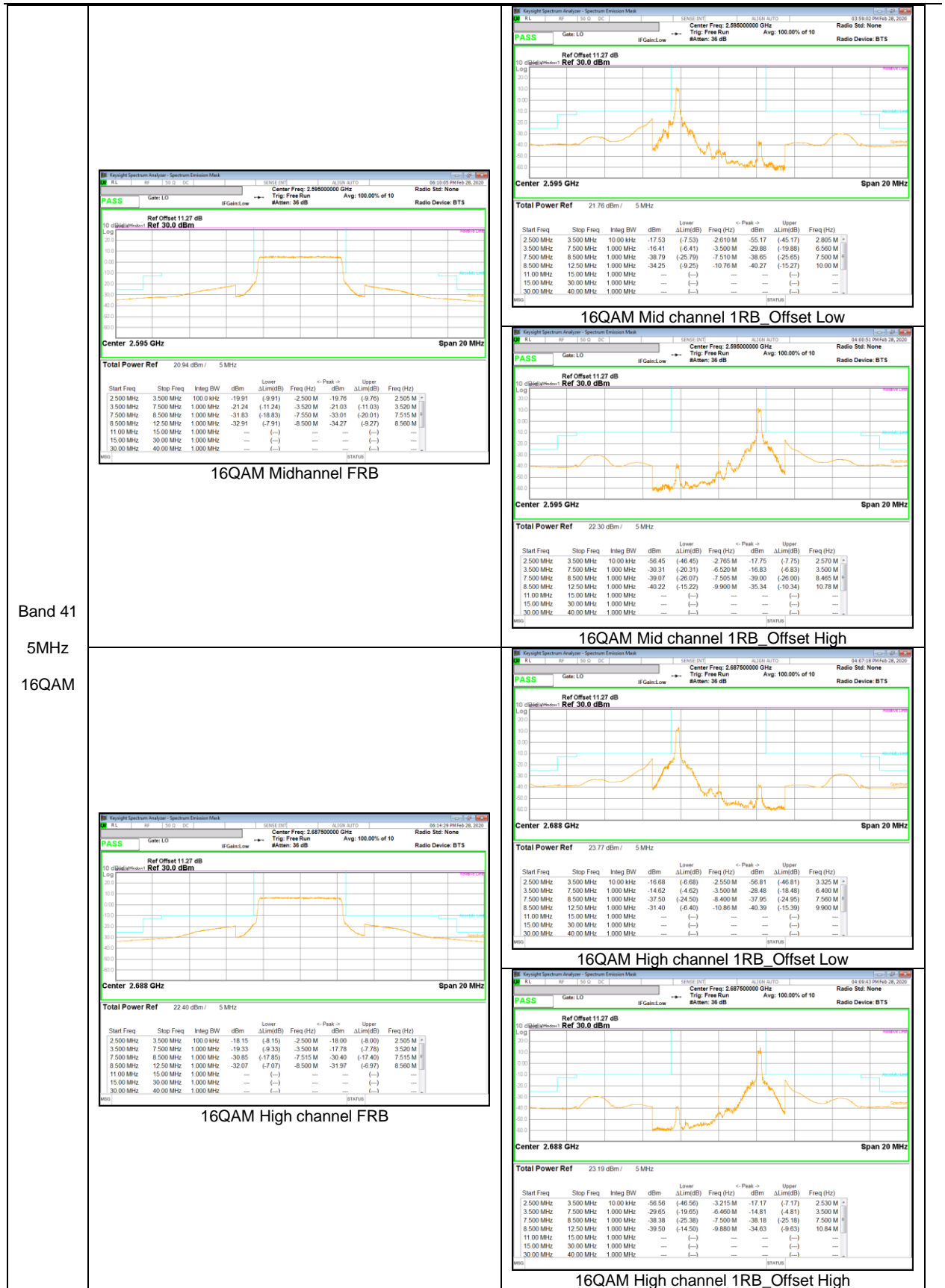
16QAM Low channel FRB



16QAM Low channel 1RB_Offset Low



16QAM Low channel 1RB_Offset High



9.3. OUT OF BAND EMISSIONS

RULE PART(S)

FCC: §2.1051, §27.53
ISED: RSS-199, 4.5

LIMITS

(m) (4) 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 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 = rms;
- f) Ensure that the number of measurement points = Max (40001);
- g) Trace mode = average(WCDMA, LTE), Maxhold(GSM, LTE Band41);

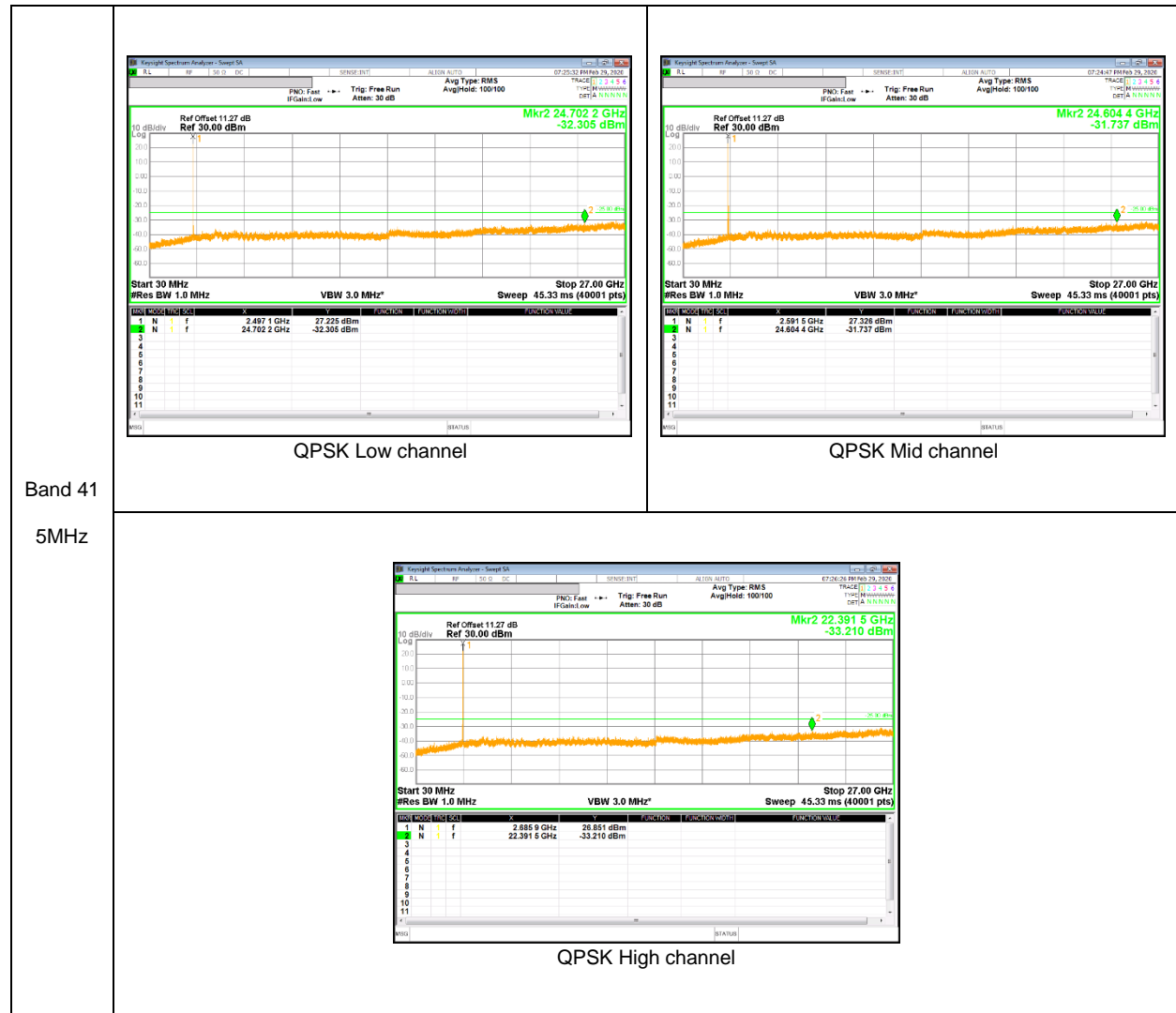
RESULTS

See the following pages.

NOTE : Please refer to section 5.3 for bandwidth and RB setting about LTE bands.

9.3.1. OUT OF BAND EMISSIONS RESULT

LTE Band 41(FCC)



LTE Band 41(IC)



9.4. FREQUENCY STABILITY

RULE PART(S)

FCC:§27.54
ISED : RSS-199, 4.5

LIMITS

§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 v03r01

RESULTS

See the following pages.

NOTE : Test were performed each lowest or highest frequency on the modulation condition of more wide bandwidth.(Please refer to section 9.1.1 OBW results)

9.4.1. FREQUENCY STABILITY RESULTS

LTE Band 41 PC2 (QPSK)

Limit		2496	2690	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ End of OBW	F high @ End of OBW		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	2498.4955	2687.5045		
Extreme (50C)		2498.4955	2687.5045	-20.0	-0.008
Extreme (40C)		2498.4955	2687.5045	-21.4	-0.008
Extreme (30C)		2498.4955	2687.5045	-20.5	-0.008
Extreme (10C)		2498.4955	2687.5045	-21.5	-0.008
Extreme (0C)		2498.4955	2687.5045	-26.9	-0.010
Extreme (-10C)		2498.4955	2687.5045	-23.7	-0.009
Extreme (-20C)		2498.4955	2687.5045	-30.4	-0.012
Extreme (-30C)		2498.4955	2687.5045	-28.6	-0.011
20C		15%	2498.4955	2687.5045	-26.4
	-15%	2498.4955	2687.5045	-27.5	-0.011
	End Point	2498.4955	2687.5045	-28.6	-0.011

END OF REPORT

Appendix A

Additional Maximum Power Reduction (A-MPR)

Test case	NS	MCC	MNC	Bandwidth [MHz]	Frequency [MHz]	Modulation	RB Size	RB Offset	MPR [dB]	A-MPR [dB]	Output Power [dBm]	
1	01	311	490	5	2498.5	QPSK	1	0	0	≤ 3	23.26	
						16QAM			≤ 1		22.02	
						64QAM			≤ 2		21.41	
2				5	2498.5	QPSK	1	9	0	0	0	26.03
						16QAM			≤ 1		25.12	
						64QAM			≤ 2		24.29	
3				10	2501	QPSK	1	0	0	≤ 5	0	21.6
						16QAM			≤ 1		20.1	
						64QAM			≤ 2		19.85	
4				10	2501	QPSK	20	0	0	≤ 2	0	23.62
						16QAM			≤ 1		22.66	
						64QAM			≤ 2		21.67	
5				10	2501	QPSK	50	0	0	≤ 3	0	22.53
						16QAM			≤ 1		21.68	
						64QAM			≤ 2		20.53	
6				10	2501	QPSK	25	20	0	≤ 1	0	24.56
						16QAM			≤ 1		23.53	
						64QAM			≤ 2		22.71	
7				10	2501	QPSK	1	49	0	0	0	26.59
	16QAM	≤ 1	25.29									
	64QAM	≤ 2	24.67									
8	15	2503.5	QPSK	1	0	0	≤ 5	0	21.74			
			16QAM			≤ 1		20.55				
			64QAM			≤ 2		20.17				
9	15	2503.5	QPSK	20	0	0	≤ 2	0	23.61			
			16QAM			≤ 1		22.62				
			64QAM			≤ 2		21.59				
10	15	2503.5	QPSK	75	0	0	≤ 4	0	21.57			
			16QAM			≤ 1		20.52				
			64QAM			≤ 2		19.58				
11	15	2503.5	QPSK	50	15	0	≤ 3	0	22.55			
			16QAM			≤ 1		21.54				
			64QAM			≤ 2		20.51				
12	15	2503.5	QPSK	1	74	0	0	0	26.44			
			16QAM			≤ 1		25.37				
			64QAM			≤ 2		24.98				
13	20	2506	QPSK	1	0	0	≤ 5	0	21.81			
			16QAM			≤ 1		20.29				
			64QAM			≤ 2		20.04				
14	20	2506	QPSK	20	0	0	≤ 2	0	23.63			
			16QAM			≤ 1		22.61				
			64QAM			≤ 2		21.73				
15	20	2506	QPSK	100	0	0	≤ 4	0	21.51			
			16QAM			≤ 1		20.53				
			64QAM			≤ 2		19.56				
16	20	2506	QPSK	75	24	0	≤ 3	0	22.55			
			16QAM			≤ 1		21.48				
			64QAM			≤ 2		20.49				
17	20	2506	QPSK	1	99	0	0	0	26.55			
			16QAM			≤ 1		25.35				
			64QAM			≤ 2		24.71				
18	01	312	530	5	2498.5	QPSK	1	0	0	≤ 3	23.13	
						16QAM			≤ 1		21.74	
						64QAM			≤ 2		21.24	
19	01	1	1	5	2498.5	QPSK	1	0	0	0	25.67	
						16QAM			≤ 1		24.48	
						64QAM			≤ 2		23.85	