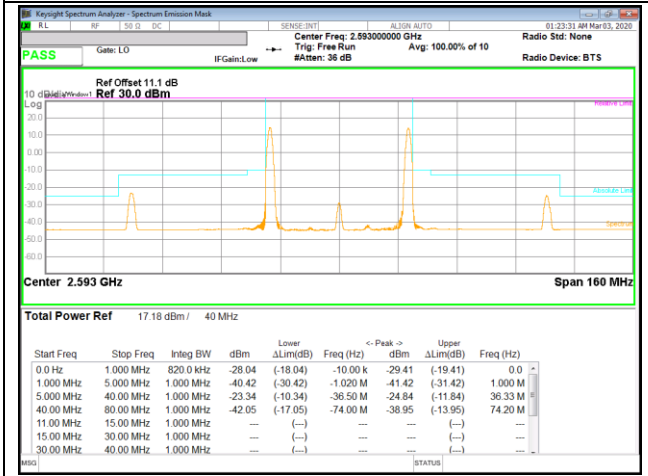


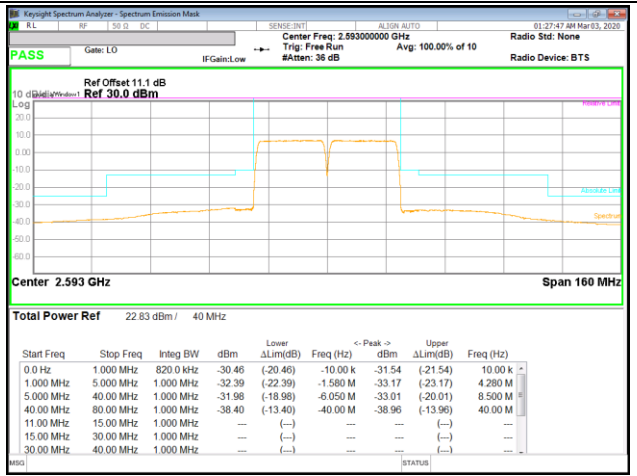
LTE B41 20MHz + 20MHz 16QAM Low Ch RB1-0 + RB1-99



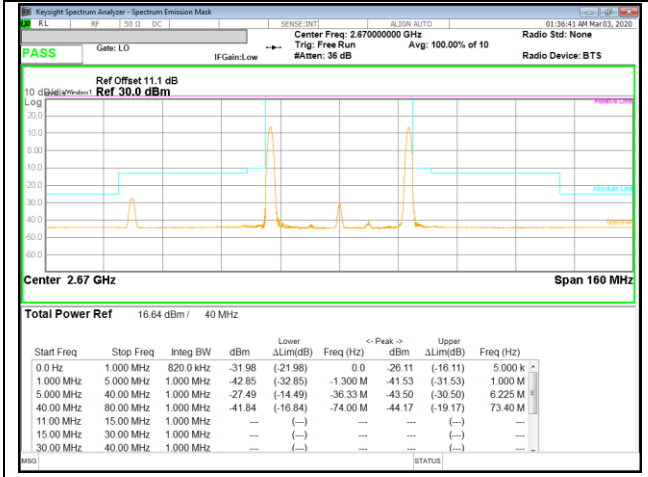
LTE B41 20MHz + 20MHz 16QAM Low Ch RB100-0 + RB100-0



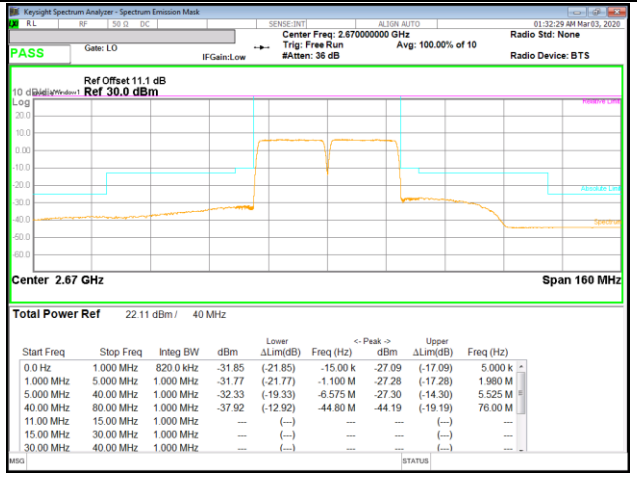
LTE B41 20MHz + 20MHz 16QAM Mid Ch RB1-0 + RB1-99



LTE B41 20MHz + 20MHz 16QAM Mid Ch RB100-0 + RB100-0



LTE B41 20MHz + 20MHz 16QAM High Ch RB1-0 + RB1-99



LTE B41 20MHz + 20MHz 16QAM High Ch RB100-0 + RB100-0

7.3. OUT OF BAND EMISSIONS

RULE PART(S)

FCC: §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) (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 that $43 + 10 \log (P)$ 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(LTE Band 7), Maxhold(LTE Band 38);

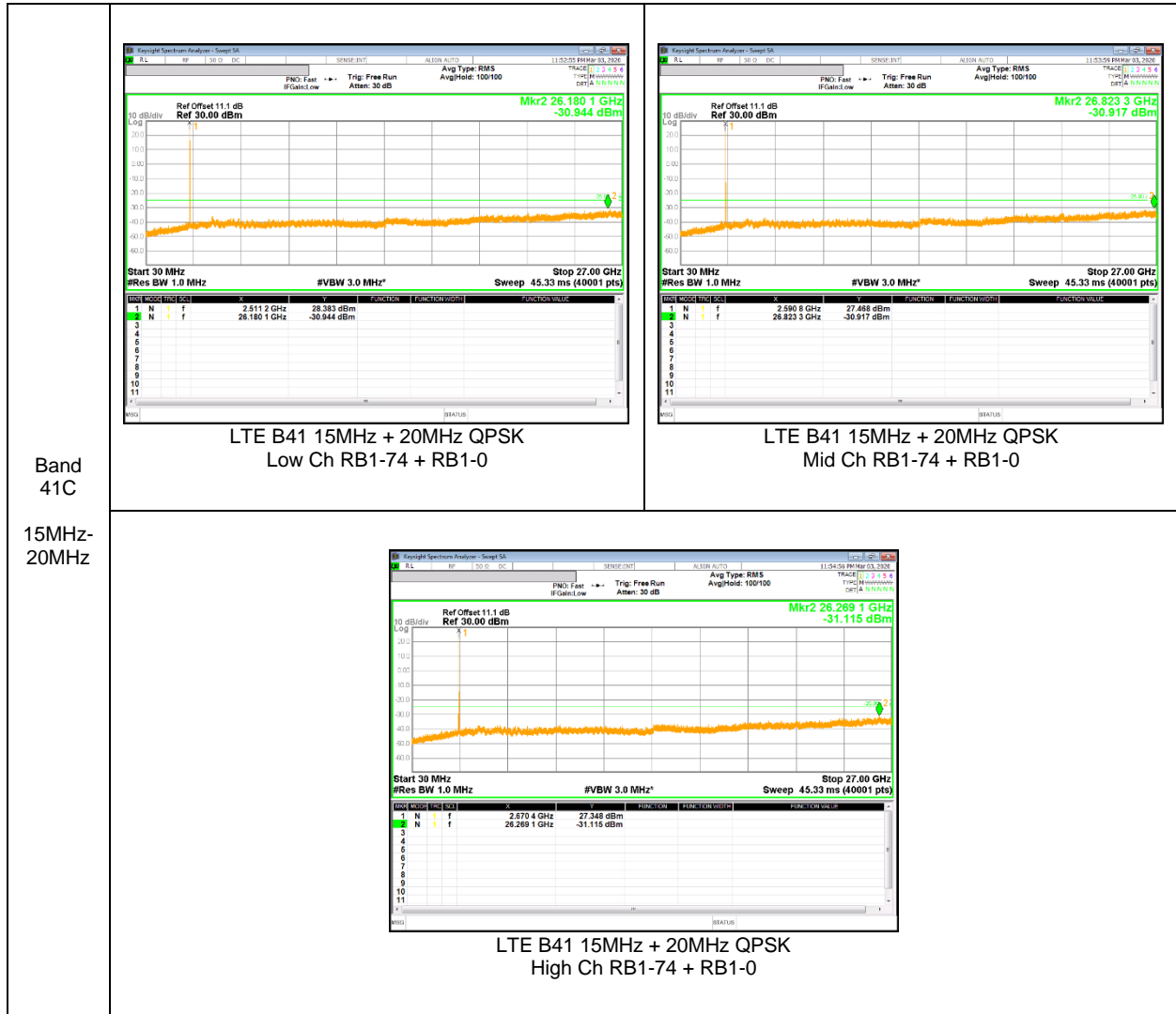
RESULTS

See the following pages.

NOTE : Please refer to section 5.5 for bandwidth and RB setting about LTE bands.

7.3.1. OUT OF BAND EMISSIONS RESULT

LTE Band 41C(UL CA)



8. RADIATED TEST RESULTS

8.1. FIELD STRENGTH OF SPURIOUS RADIATION

RULE PART(S)

FCC: §2.1053, §27.53

LIMIT

Part 27.53:

(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

ANSI / TIA / EIA 603 E Clause 2.2.12; ESU40 setting reference to 971168 D01 v03r01

For peak power measurement with a ESU40:

- a) Set the RBW = 100 KHz for emission below 1GHz and 1MHz for emissions above 1GHz
- 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 \geq span/RBW;
- g) Trace mode = average(LTE Band 7C), Maxhold(LTE Band 38C);;

RESULTS

See the following pages.

NOTE : Please refer to section 5.5 for bandwidth and RB setting about LTE bands.

8.1.1. SPURIOUS RADIATION PLOTS

LTE Band 41C

UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		Samsung							
Project #:		4789354138							
Date:		2020-03-03							
Test Engineer:		20881							
Configuration:		EUT / AC Adapter,							
Location:		Chamber 1							
Mode:		LTE_QPSK Band 41 Uplink CA Harmonics, 15MHz/20MHz Bandwidth							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, PCC : 2503.8MHz SCC : 2520.9MHz									
5022.20	-15.5	V	3.0	45.3	1.0	-59.8	-25.0	-34.8	
7533.30	-11.9	V	3.0	44.1	1.0	-55.0	-25.0	-30.0	
10044.40	-10.1	V	3.0	42.2	1.0	-51.3	-25.0	-26.3	
12555.50	-3.8	V	3.0	43.3	1.0	-46.1	-25.0	-21.1	
5022.20	-16.1	H	3.0	45.3	1.0	-60.4	-25.0	-35.4	
7533.30	-13.7	H	3.0	44.1	1.0	-56.8	-25.0	-31.8	
10044.40	-10.5	H	3.0	42.2	1.0	-51.7	-25.0	-26.7	
12555.50	-2.0	H	3.0	43.3	1.0	-44.3	-25.0	-19.3	
Mid Ch, PCC : 2583.3MHz SCC : 2600.4MHz									
5181.20	-12.2	V	3.0	45.3	1.0	-56.4	-25.0	-31.4	
7771.80	-8.7	V	3.0	44.0	1.0	-51.6	-25.0	-26.6	
10362.40	-8.1	V	3.0	42.3	1.0	-49.3	-25.0	-24.3	
12953.00	0.3	V	3.0	43.6	1.0	-42.3	-25.0	-17.3	
5181.20	-9.9	H	3.0	45.3	1.0	-54.2	-25.0	-29.2	
7771.80	-10.3	H	3.0	44.0	1.0	-53.3	-25.0	-28.3	
10362.40	-1.6	H	3.0	42.3	1.0	-42.9	-25.0	-17.9	
12953.00	-1.3	H	3.0	43.6	1.0	-43.9	-25.0	-18.9	
High Ch, PCC : 2662.9MHz SCC : 2680MHz									
5340.40	-12.4	V	3.0	45.3	1.0	-56.7	-25.0	-31.7	
8010.60	-14.2	V	3.0	43.8	1.0	-57.0	-25.0	-32.0	
10680.80	-2.3	V	3.0	42.4	1.0	-43.7	-25.0	-18.7	
13351.00	-6.6	V	3.0	43.9	1.0	-49.5	-25.0	-24.5	
5340.40	-11.6	H	3.0	45.3	1.0	-55.9	-25.0	-30.9	
8010.60	-12.0	H	3.0	43.8	1.0	-54.8	-25.0	-29.8	
10680.80	-1.1	H	3.0	42.4	1.0	-42.5	-25.0	-17.5	
13351.00	-3.9	H	3.0	43.9	1.0	-46.9	-25.0	-21.9	

LTE
 Band 41C
 15MHz-
 20MHz
 QPSK

END OF REPORT