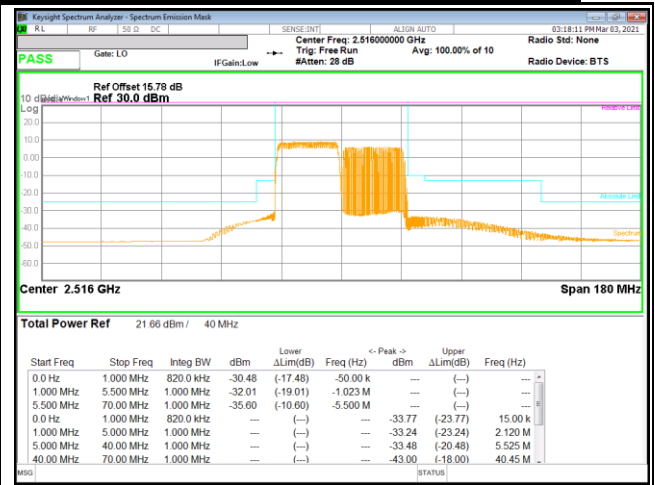
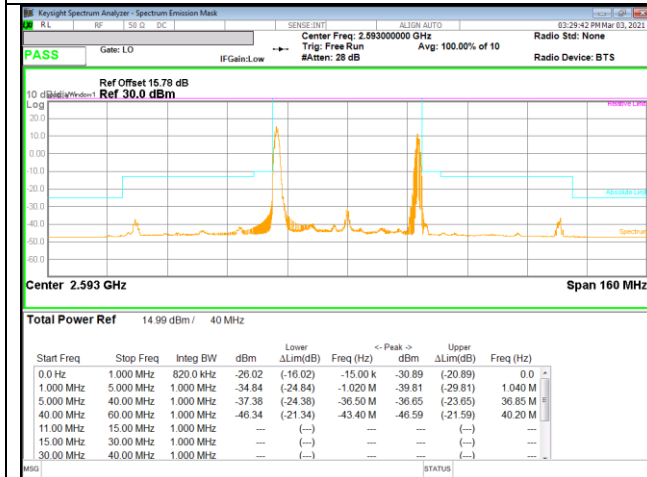


LTE B41 20MHz + 20MHz QPSK Low Ch RB1-0 + RB1-99



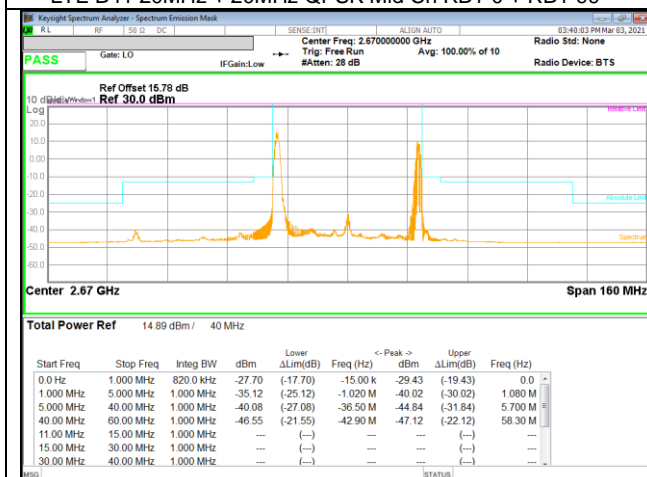
LTE B41 20MHz + 20MHz QPSK Low Ch RB100-0 + RB100-0



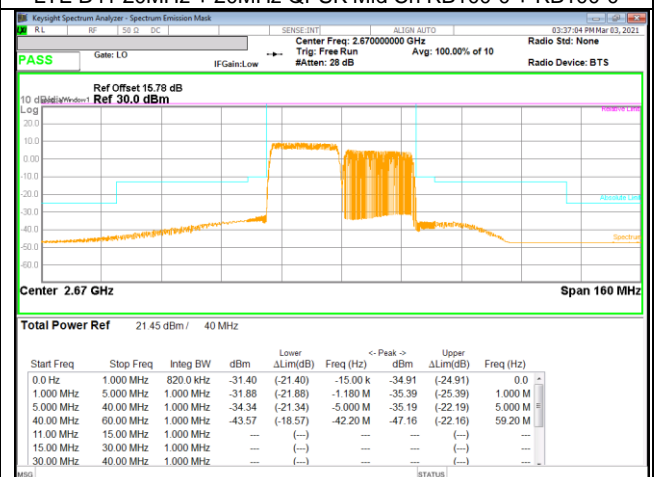
LTE B41 20MHz + 20MHz QPSK Mid Ch RB1-0 + RB1-99



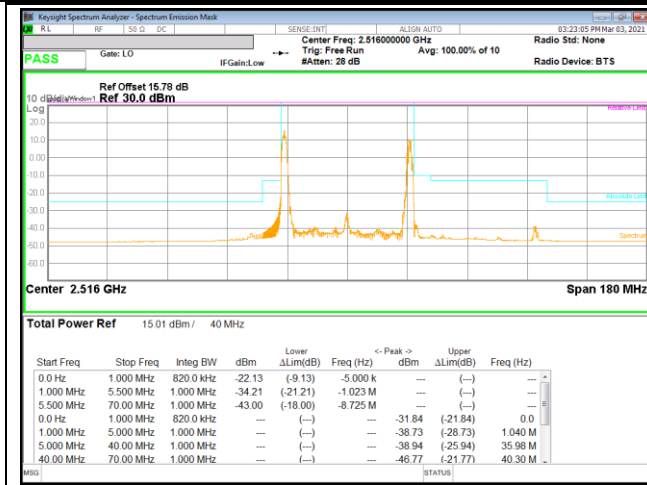
LTE B41 20MHz + 20MHz QPSK Mid Ch RB100-0 + RB100-0



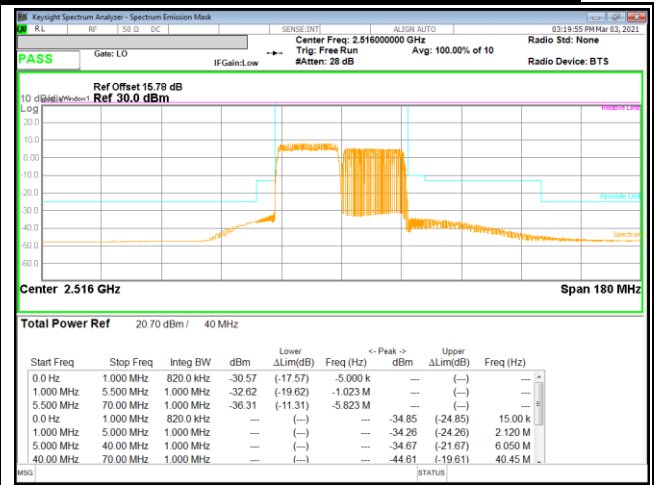
LTE B41 20MHz + 20MHz QPSK High Ch RB1-0 + RB1-99



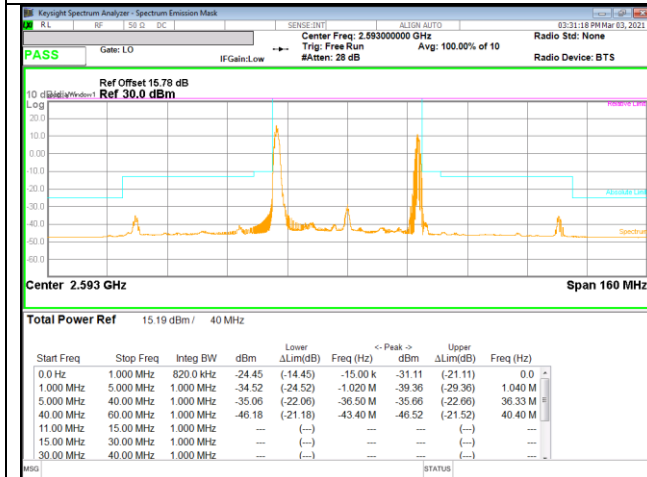
LTE B41 20MHz + 20MHz QPSK High Ch RB100-0 + RB100-0



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



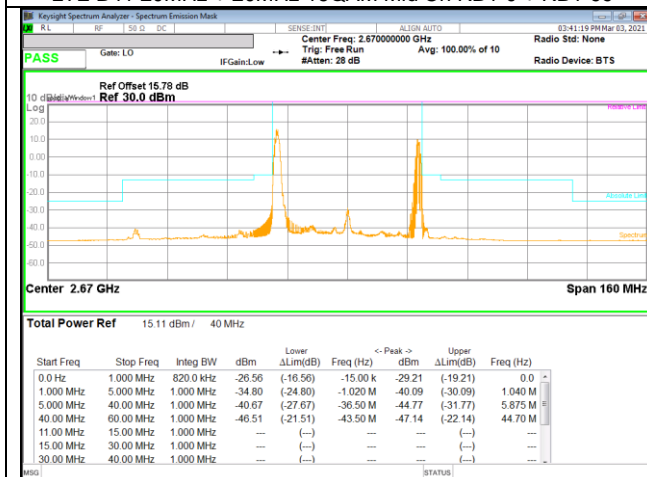
LTE B41 20MHz + 20MHz 16QAM Low Ch RB100-0 + RB100-0



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

8.4. OUT OF BAND EMISSIONS

RULE PART(S)

FCC: §27.53

LIMITS

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

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.

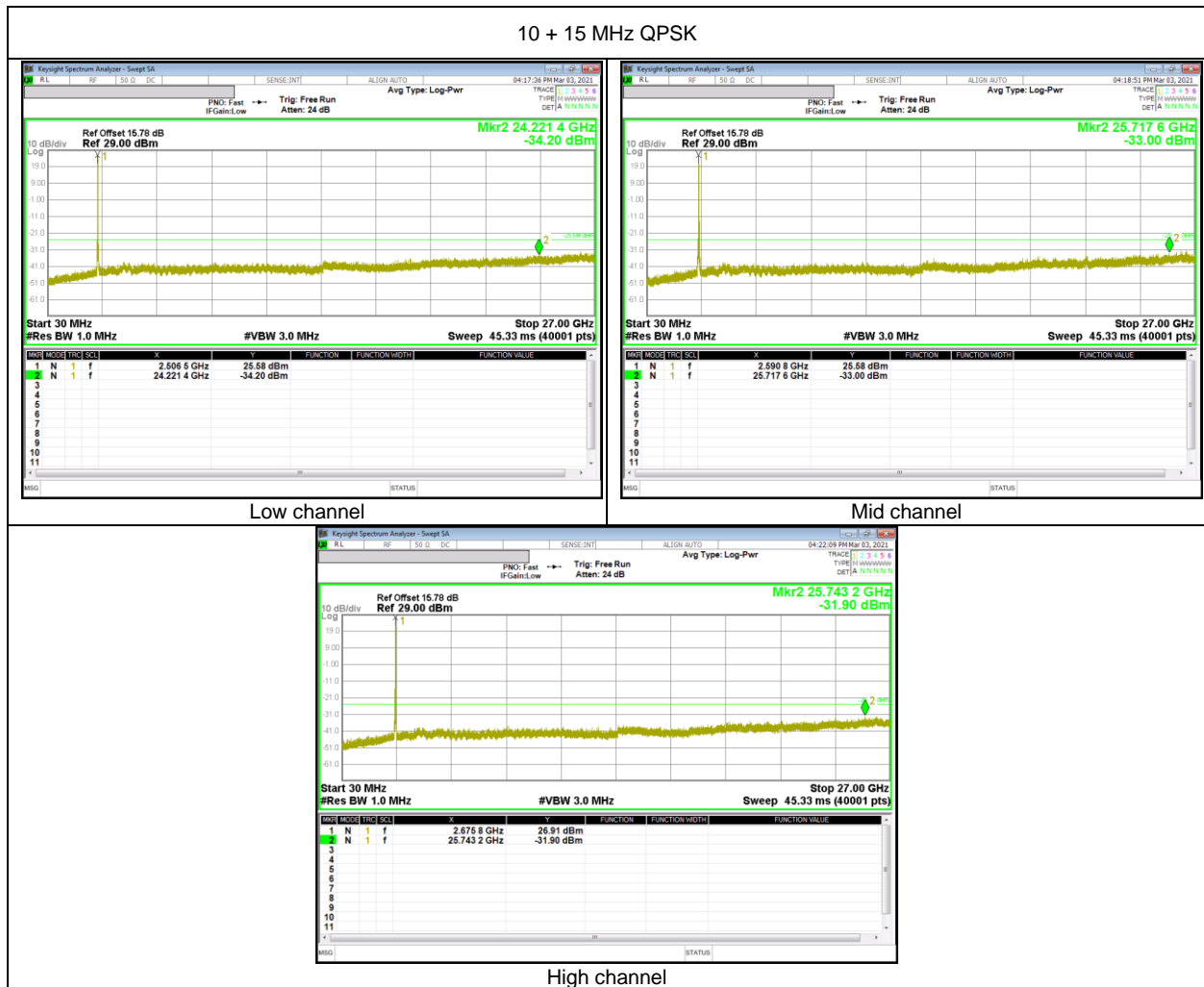
- a) Set the RBW = 100kHz for emission below 1GHz and 1MHz for emissions above 1GHz (Tests were performed 1MHz [Worst case], to sweep 1 time for all frequency range)
- b) Set VBW $\geq 3 \times$ RBW
- c) Sweep time = auto couple;
- d) Detector = RMS;
- e) Ensure that the number of measurement points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

RESULTS

See the following pages.

8.4.1. OUT OF BAND EMISSIONS RESULT

LTE Band 41C (UL CA)



9. RADIATED TEST RESULTS

9.1. FIELD STRENGTH OF SPURIOUS RADIATION

RULE PART(S)

FCC: §2.1053, §27.53

LIMITS

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

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) Sweep time = auto couple;
- d) Detector = RMS;
- e) Ensure that the number of measurement points = Max (40001);
- f) Trace mode = Average(FDD), Max hold(TDD);

9.1.1. SPURIOUS RADIATION

UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		Samsung							
Project #:		4789793179							
Date:		2021-03-03							
Test Engineer:		22943							
Configuration:		EUT / AC Adapter / Earphone, Z-Position							
Location:		Chamber 1							
Mode:		LTE_QPSK Band 41 Harmonics, 10MHz Bandwidth							
Test Voltage:		AC 120 V, 60 Hz							
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 : 2501.3MHz SCC : 2513.3MHz									
5012.10	-19.2	V	3.0	45.5	1.0	-63.7	-25.0	-38.7	
7518.15	-11.6	V	3.0	44.1	1.0	-54.8	-25.0	-29.8	
10024.20	-7.2	V	3.0	42.2	1.0	-48.4	-25.0	-23.4	
12530.25	-3.2	V	3.0	43.3	1.0	-45.6	-25.0	-20.6	
15036.30	-8.7	V	3.0	45.3	1.0	-53.1	-25.0	-28.1	
5012.10	-18.6	H	3.0	45.5	1.0	-63.1	-25.0	-38.1	
7518.15	-11.1	H	3.0	44.1	1.0	-54.3	-25.0	-29.3	
10024.20	-6.0	H	3.0	42.2	1.0	-47.3	-25.0	-22.3	
12530.25	-0.7	H	3.0	43.3	1.0	-43.0	-25.0	-18.0	
15036.30	-9.2	H	3.0	45.3	1.0	-53.6	-25.0	-28.6	
Low Ch. PCC : 2585.9MHz SCC : 2597.9MHz									
5181.30	-19.1	V	3.0	45.4	1.0	-63.5	-25.0	-38.5	
7771.95	-10.4	V	3.0	44.0	1.0	-53.5	-25.0	-28.5	
10362.60	-4.9	V	3.0	42.4	1.0	-46.2	-25.0	-21.2	
12953.25	2.9	V	3.0	43.7	1.0	-39.8	-25.0	-14.8	
15543.90	-9.1	V	3.0	44.7	1.0	-52.8	-25.0	-27.8	
5181.30	-18.6	H	3.0	45.4	1.0	-63.0	-25.0	-38.0	
7771.95	-11.1	H	3.0	44.0	1.0	-54.2	-25.0	-29.2	
10362.60	-5.4	H	3.0	42.4	1.0	-46.7	-25.0	-21.7	
12953.25	1.2	H	3.0	43.7	1.0	-41.5	-25.0	-16.5	
15543.90	-9.3	H	3.0	44.7	1.0	-53.0	-25.0	-28.0	
Low Ch. PCC : 2670.5MHz SCC : 2682.5MHz									
5350.50	-18.3	V	3.0	45.4	1.0	-62.7	-25.0	-37.7	
8025.75	-9.9	V	3.0	43.9	1.0	-52.7	-25.0	-27.7	
10701.00	-9.6	V	3.0	42.5	1.0	-51.1	-25.0	-26.1	
13376.25	-1.8	V	3.0	44.0	1.0	-44.8	-25.0	-19.8	
16051.50	-8.4	V	3.0	44.1	1.0	-51.6	-25.0	-26.6	
5350.50	-18.0	H	3.0	45.4	1.0	-62.4	-25.0	-37.4	
8025.75	-11.2	H	3.0	43.9	1.0	-54.0	-25.0	-29.0	
10701.00	-7.4	H	3.0	42.5	1.0	-48.9	-25.0	-23.9	
13376.25	-3.6	H	3.0	44.0	1.0	-46.6	-25.0	-21.6	
16051.50	-8.5	H	3.0	44.1	1.0	-51.7	-25.0	-26.7	

LTE
 Band 41
 10-15MHz
 QPSK

END OF TEST REPORT