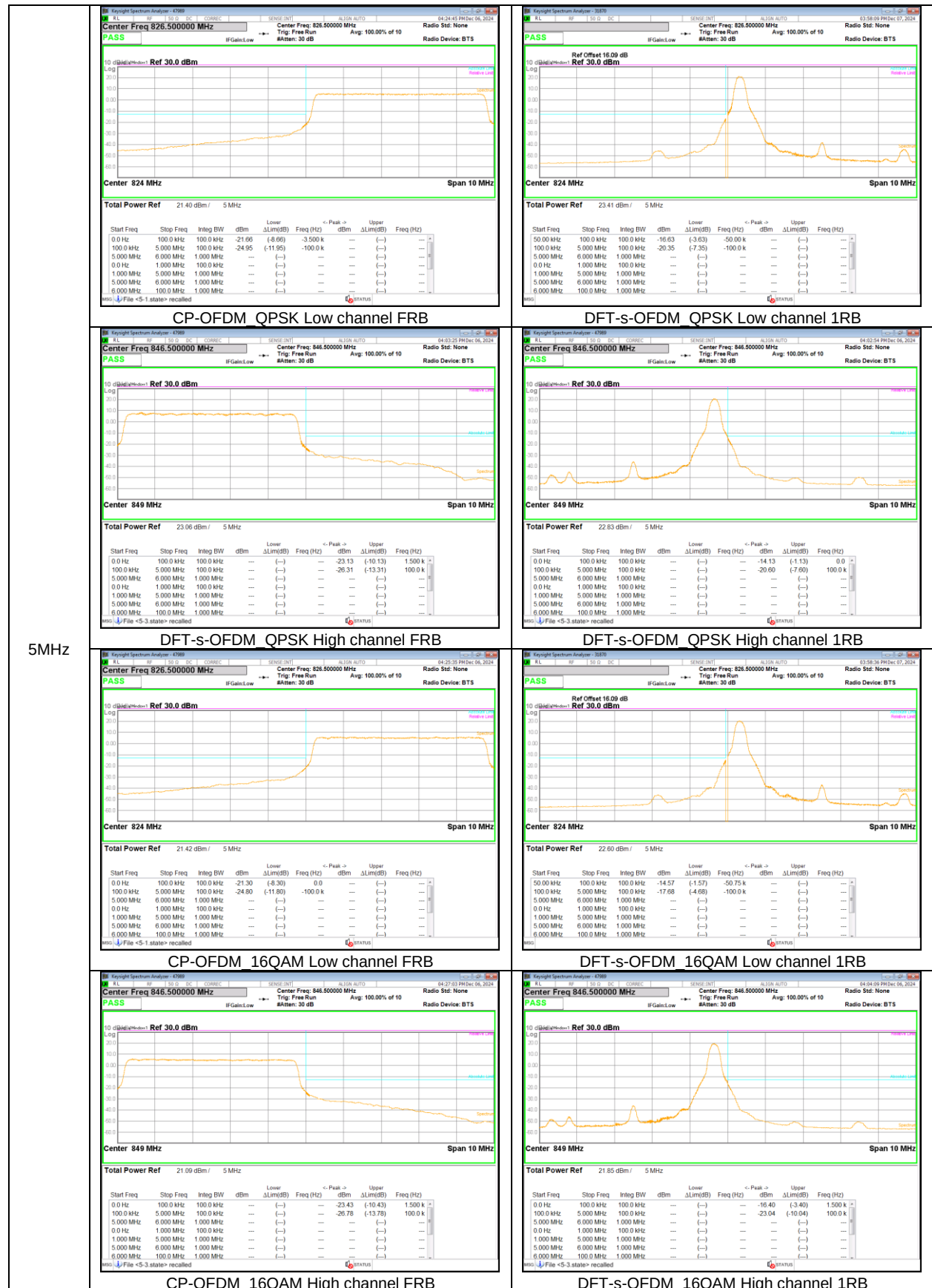
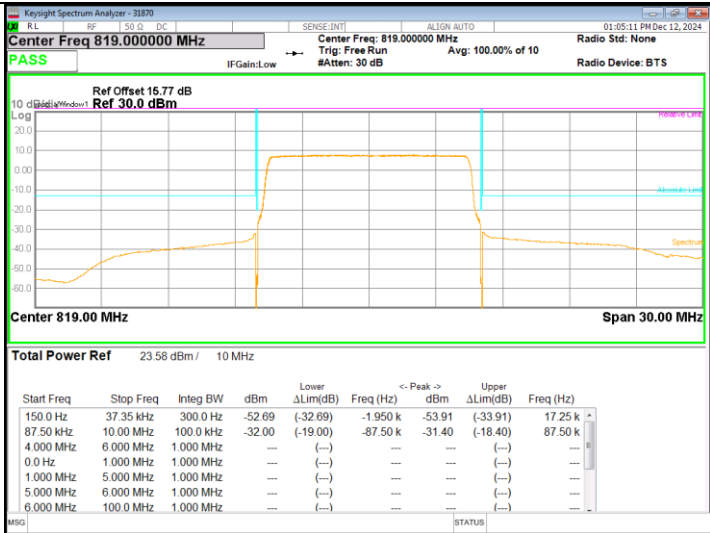
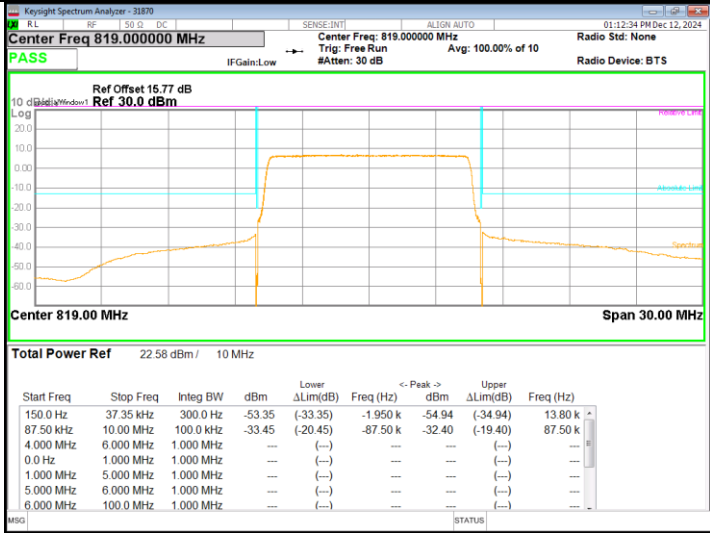




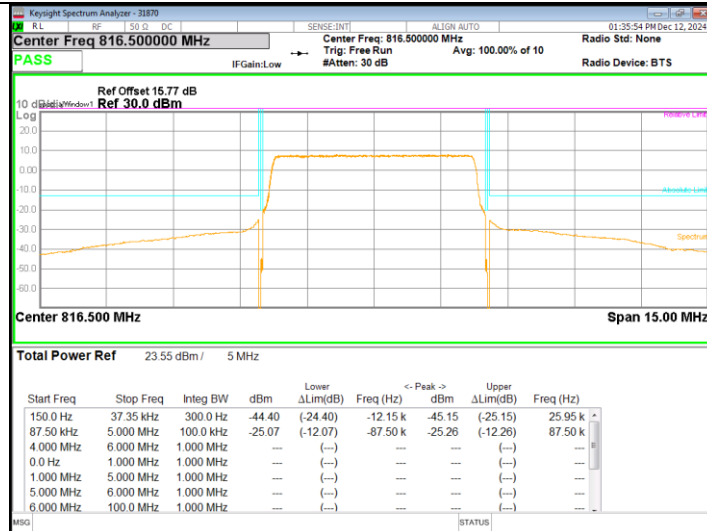
8.4.1. EMISSION MASK RESULT

LTE Band 26 (Part 90) Full RB

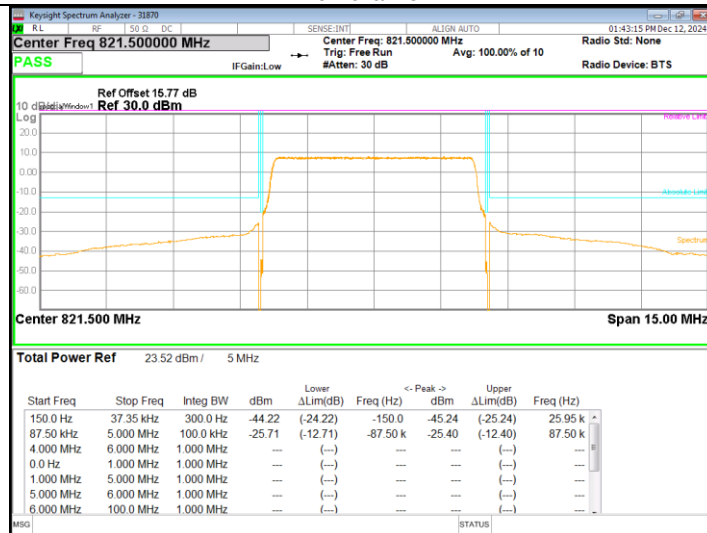


10 MHz QPSK FRB	 Center Freq 819.000000 MHz Ref Offset 15.77 dB Ref 30.0 dBm Center 819.00 MHz Span 30.00 MHz Total Power Ref 23.58 dBm / 10 MHz <table><tr><th>Start Freq</th><th>Stop Freq</th><th>Integ BW</th><th>dBm</th><th>Lower ΔLim(dB)</th><th>Freq (Hz)</th><th><- Peak -> dBm</th><th>Upper ΔLim(dB)</th><th>Freq (Hz)</th></tr><tr><td>150.0 Hz</td><td>37.35 kHz</td><td>300.0 Hz</td><td>-52.69</td><td>(-32.69)</td><td>-1.950 k</td><td>-53.91</td><td>(-33.91)</td><td>17.25 k</td></tr><tr><td>87.50 kHz</td><td>10.00 MHz</td><td>100.0 kHz</td><td>-32.00</td><td>(-19.00)</td><td>-87.50 k</td><td>-31.40</td><td>(-18.40)</td><td>87.50 k</td></tr><tr><td>4.000 MHz</td><td>6.000 MHz</td><td>1.000 MHz</td><td>---</td><td>(---)</td><td>---</td><td>---</td><td>(---)</td><td>---</td></tr><tr><td>0.0 Hz</td><td>1.000 MHz</td><td>1.000 MHz</td><td>---</td><td>(---)</td><td>---</td><td>---</td><td>(---)</td><td>---</td></tr><tr><td>1.000 MHz</td><td>5.000 MHz</td><td>1.000 MHz</td><td>---</td><td>(---)</td><td>---</td><td>---</td><td>(---)</td><td>---</td></tr><tr><td>5.000 MHz</td><td>6.000 MHz</td><td>1.000 MHz</td><td>---</td><td>(---)</td><td>---</td><td>---</td><td>(---)</td><td>---</td></tr><tr><td>6.000 MHz</td><td>100.0 MHz</td><td>1.000 MHz</td><td>---</td><td>(---)</td><td>---</td><td>---</td><td>(---)</td><td>---</td></tr></table> Mid channel	Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	<- Peak -> dBm	Upper ΔLim(dB)	Freq (Hz)	150.0 Hz	37.35 kHz	300.0 Hz	-52.69	(-32.69)	-1.950 k	-53.91	(-33.91)	17.25 k	87.50 kHz	10.00 MHz	100.0 kHz	-32.00	(-19.00)	-87.50 k	-31.40	(-18.40)	87.50 k	4.000 MHz	6.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---	0.0 Hz	1.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---	1.000 MHz	5.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---	5.000 MHz	6.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---	6.000 MHz	100.0 MHz	1.000 MHz	---	(---)	---	---	(---)	---
Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	<- Peak -> dBm	Upper ΔLim(dB)	Freq (Hz)																																																																	
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0.0 Hz	1.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---																																																																	
1.000 MHz	5.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---																																																																	
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10 MHz 16QAM FRB	 Center Freq 819.000000 MHz Ref Offset 15.77 dB Ref 30.0 dBm Center 819.00 MHz Span 30.00 MHz Total Power Ref 22.58 dBm / 10 MHz <table><tr><th>Start Freq</th><th>Stop Freq</th><th>Integ BW</th><th>dBm</th><th>Lower ΔLim(dB)</th><th>Freq (Hz)</th><th><- Peak -> dBm</th><th>Upper ΔLim(dB)</th><th>Freq (Hz)</th></tr><tr><td>150.0 Hz</td><td>37.35 kHz</td><td>300.0 Hz</td><td>-53.35</td><td>(-33.35)</td><td>-1.950 k</td><td>-54.94</td><td>(-34.94)</td><td>13.80 k</td></tr><tr><td>87.50 kHz</td><td>10.00 MHz</td><td>100.0 kHz</td><td>-33.45</td><td>(-20.45)</td><td>-87.50 k</td><td>-32.40</td><td>(-19.40)</td><td>87.50 k</td></tr><tr><td>4.000 MHz</td><td>6.000 MHz</td><td>1.000 MHz</td><td>---</td><td>(---)</td><td>---</td><td>---</td><td>(---)</td><td>---</td></tr><tr><td>0.0 Hz</td><td>1.000 MHz</td><td>1.000 MHz</td><td>---</td><td>(---)</td><td>---</td><td>---</td><td>(---)</td><td>---</td></tr><tr><td>1.000 MHz</td><td>5.000 MHz</td><td>1.000 MHz</td><td>---</td><td>(---)</td><td>---</td><td>---</td><td>(---)</td><td>---</td></tr><tr><td>5.000 MHz</td><td>6.000 MHz</td><td>1.000 MHz</td><td>---</td><td>(---)</td><td>---</td><td>---</td><td>(---)</td><td>---</td></tr><tr><td>6.000 MHz</td><td>100.0 MHz</td><td>1.000 MHz</td><td>---</td><td>(---)</td><td>---</td><td>---</td><td>(---)</td><td>---</td></tr></table> Mid channel	Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	<- Peak -> dBm	Upper ΔLim(dB)	Freq (Hz)	150.0 Hz	37.35 kHz	300.0 Hz	-53.35	(-33.35)	-1.950 k	-54.94	(-34.94)	13.80 k	87.50 kHz	10.00 MHz	100.0 kHz	-33.45	(-20.45)	-87.50 k	-32.40	(-19.40)	87.50 k	4.000 MHz	6.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---	0.0 Hz	1.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---	1.000 MHz	5.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---	5.000 MHz	6.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---	6.000 MHz	100.0 MHz	1.000 MHz	---	(---)	---	---	(---)	---
Start Freq	Stop Freq	Integ BW	dBm	Lower ΔLim(dB)	Freq (Hz)	<- Peak -> dBm	Upper ΔLim(dB)	Freq (Hz)																																																																	
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4.000 MHz	6.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---																																																																	
0.0 Hz	1.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---																																																																	
1.000 MHz	5.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---																																																																	
5.000 MHz	6.000 MHz	1.000 MHz	---	(---)	---	---	(---)	---																																																																	
6.000 MHz	100.0 MHz	1.000 MHz	---	(---)	---	---	(---)	---																																																																	

5 MHz
QPSK
FRB

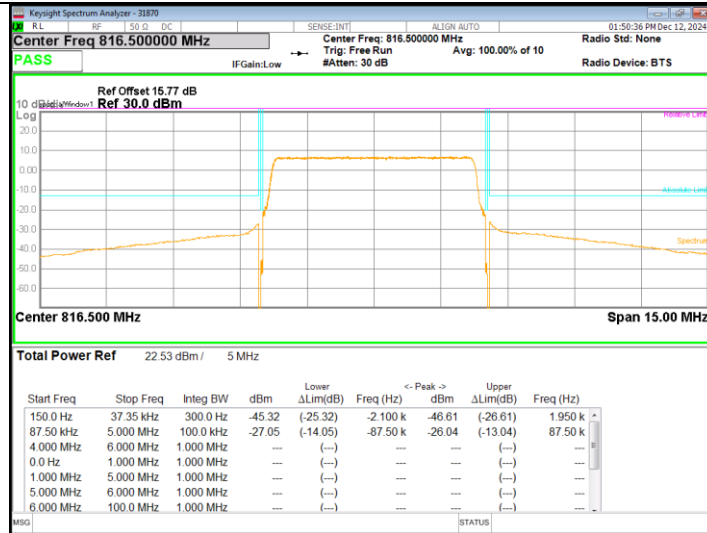


Low channel

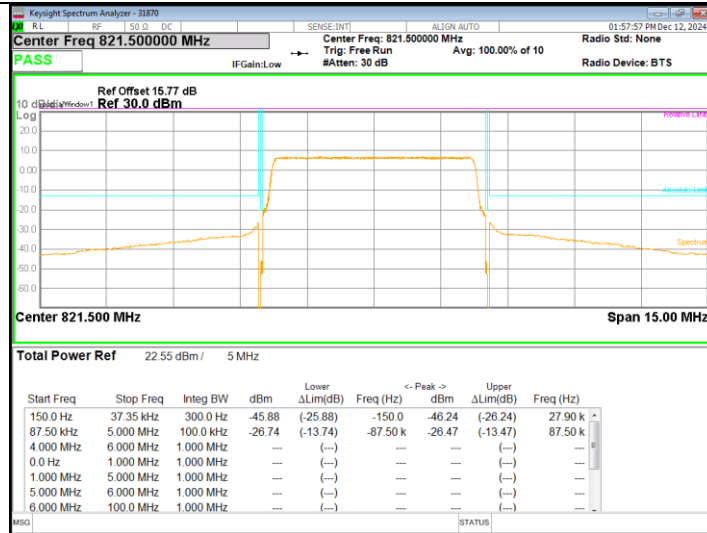


High channel

5 MHz
16QAM
FRB



Low channel



High channel

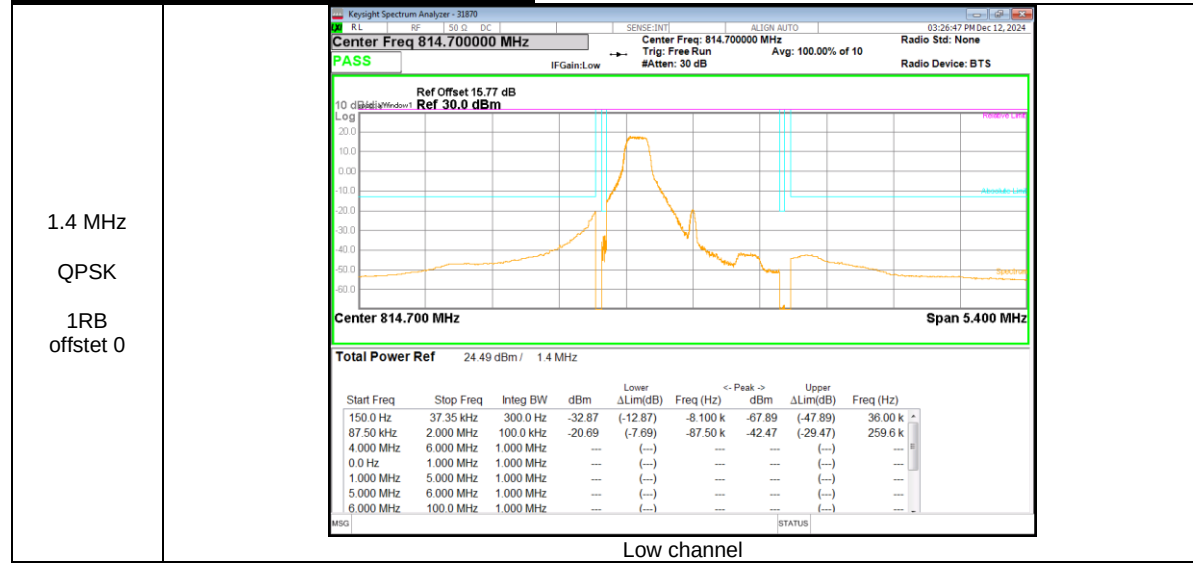




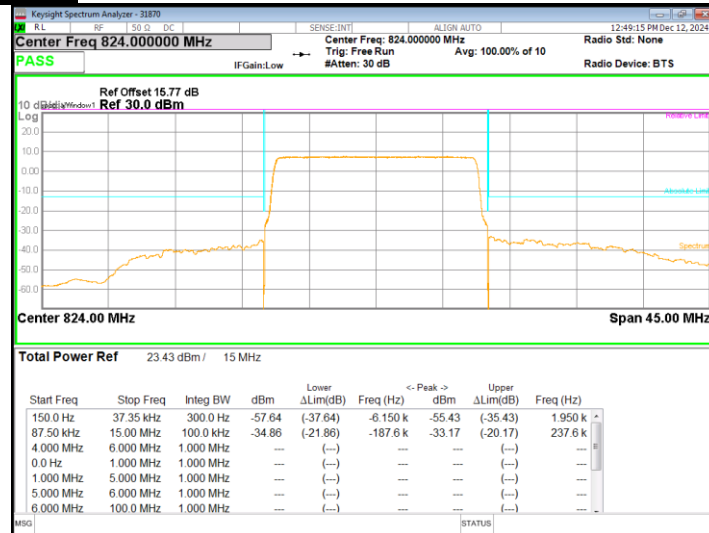




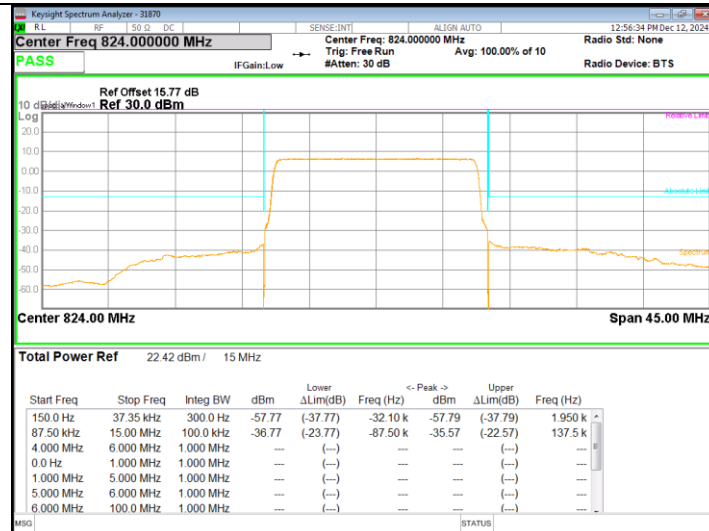
LTE Band 26 (Part 90) 1 RB (Worst Case)



15 MHz
QPSK
FRB



Straddle channel



Straddle channel

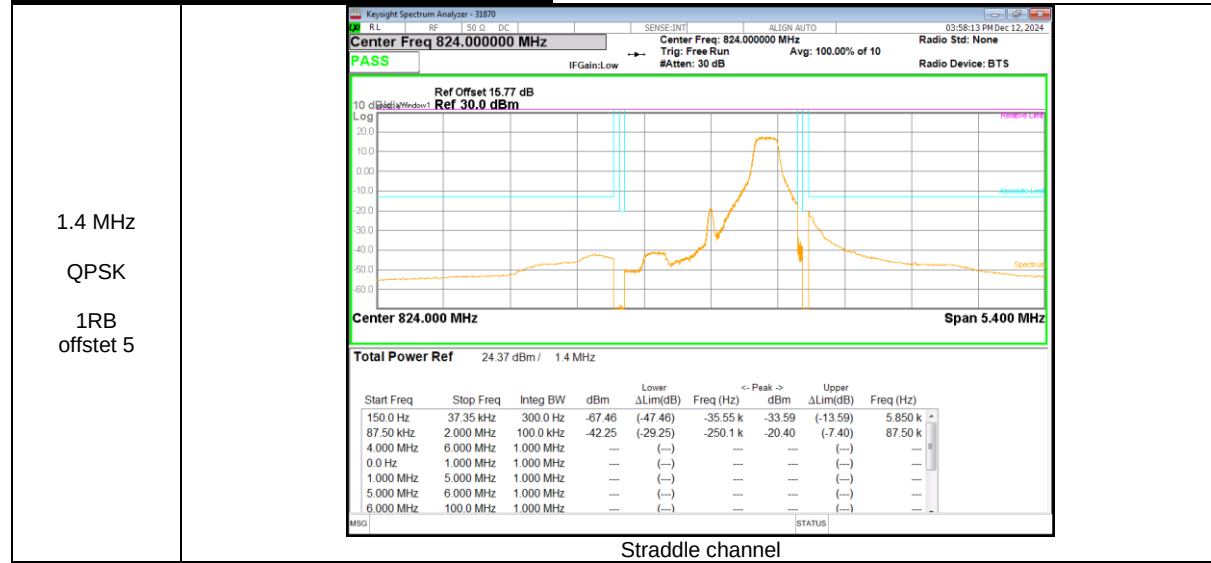






1.4 MHz QPSK FRB	Keyight Spectrum Analyzer - 32870 RL RF 50 Ω DC SENSE:INT ALIGN AUTO 83:53:25 PM Dec 12, 2024 Center Freq 824.000000 MHz Center Freq: 824.000000 MHz Radio Std: None Trig: Free Run #Atten: 30 dB Avg: 100.00% of 10 PASS IF Gain: Low Radio Device: BTS Ref Offset 15.77 dB Ref 30.0 dBm Log 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290 300 310 320 330 340 350 360 370 380 390 400 410 420 430 440 450 460 470 480 490 500 510 520 530 540 550 560 570 580 590 600 610 620 630 640 650 660 670 680 690 700 710 720 730 740 750 760 770 780 790 800 810 820 830 840 850 860 870 880 890 900 910 920 930 940 950 960 970 980 990 1000 1010 1020 1030 1040 1050 1060 1070 1080 1090 1100 1110 1120 1130 1140 1150 1160 1170 1180 1190 1200 1210 1220 1230 1240 1250 1260 1270 1280 1290 1300 1310 1320 1330 1340 1350 1360 1370 1380 1390 1400 1410 1420 1430 1440 1450 1460 1470 1480 1490 1500 1510 1520 1530 1540 1550 1560 1570 1580 1590 1600 1610 1620 1630 1640 1650 1660 1670 1680 1690 1700 1710 1720 1730 1740 1750 1760 1770 1780 1790 1800 1810 1820 1830 1840 1850 1860 1870 1880 1890 1900 1910 1920 1930 1940 1950 1960 1970 1980 1990 2000 2010 2020 2030 2040 2050 2060 2070 2080 2090 2100 2110 2120 2130 2140 2150 2160 2170 2180 2190 2200 2210 2220 2230 2240 2250 2260 2270 2280 2290 2300 2310 2320 2330 2340 2350 2360 2370 2380 2390 2400 2410 2420 2430 2440 2450 2460 2470 2480 2490 2500 2510 2520 2530 2540 2550 2560 2570 2580 2590 2600 2610 2620 2630 2640 2650 2660 2670 2680 2690 2700 2710 2720 2730 2740 2750 2760 2770 2780 2790 2800 2810 2820 2830 2840 2850 2860 2870 2880 2890 2900 2910 2920 2930 2940 2950 2960 2970 2980 2990 3000 3010 3020 3030 3040 3050 3060 3070 3080 3090 3100 3110 3120 3130 3140 3150 3160 3170 3180 3190 3200 3210 3220 3230 3240 3250 3260 3270 3280 3290 3300 3310 3320 3330 3340 3350 3360 3370 3380 3390 3400 3410 3420 3430 3440 3450 3460 3470 3480 3490 3500 3510 3520 3530 3540 3550 3560 3570 3580 3590 3600 3610 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5620 5630 5640 5650 5660 5670 5680 5690 5700 5710 5720 5730 5740 5750 5760 5770 5780 5790 5800 5810 5820 5830 5840 5850 5860 5870 5880 5890 5900 5910 5920 5930 5940 5950 5960 5970 5980 5990 6000 6010 6020 6030 6040 6050 6060 6070 6080 6090 6100 6110 6120 6130 6140 6150 6160 6170 6180 6190 6200 6210 6220 6230 6240 6250 6260 6270 6280 6290 6300 6310 6320 6330 6340 6350 6360 6370 6380 6390 6400 6410 6420 6430 6440 6450 6460 6470 6480 6490 6500 6510 6520 6530 6540 6550 6560 6570 6580 6590 6600 6610 6620 6630 6640 6650 6660 6670 6680 6690 6700 6710 6720 6730 6740 6750 6760 6770 6780 6790 6800 6810 6820 6830 6840 6850 6860 6870 6880 6890 6900 6910 6920 6930 6940 6950 6960 6970 6980 6990 7000 7010 7020 7030 7040 7050 7060 7070 7080 7090 7100 7110 7120 7130 7140 7150 7160 7170 7180 7190 7200 7210 7220 7230 7240 7250 7260 7270 7280 7290 7300 7310 7320 7330 7340 7350 7360 7370 7380 7390 7400 7410 7420 7430 7440 7450 7460 7470 7480 7490 7500 7510 7520 7530 7540 7550 7560 7570 7580 7590 7600 7610 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9620 9630 9640 9650 9660 9670 9680 9690 9700 9710 9720 9730 9740 9750 9760 9770 9780 9790 9800 9810 9820 9830 9840 9850 9860 9870 9880 9890 9900 9910 9920 9930 9940 9950 9960 9970 9980 9990 10000 10010 10020 10030 10040 10050 10060 10070 10080 10090 10100 10110 10120 10130 10140 10150 10160 10170 10180 10190 10200 10210 10220 10230 10240 10250 10260 10270 10280 10290 10300 10310 10320 10330 10340 10350 10360 10370 10380 10390 10400 10410 10420 10430 10440 10450 10460 10470 10480 10490 10500 10510 10520 10530 10540 10550 10560 10570 10580 10590 10600 10610 10620 10630 10640 10650 10660 10670 10680 10690 10700 10710 10720 10730 10740 10750 10760 10770 10780 10790 10800 10810 10820 10830 10840 10850 10860 10870 10880 10890 10900 10910 10920 10930 10940 10950 10960 10970 10980 10990 11000 11010 11020 11030 11040 11050 11060 11070 11080 11090 11100 11110 11120 11130 11140 11150 11160 11170 11180 11190 11200 11210 11220 11230 11240 11250 11260 11270 11280 11290 11300 11310 11320 11330 11340 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13010 13020 13030 13040 13050 13060 13070 13080 13090 13100 13110 13120 13130 13140 13150 13160 13170 13180 13190 13200 13210 13220 13230 13240 13250 13260 13270 13280 13290</
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LTE Band 26 (Straddle) 1 RB (Worst Case)



8.5. CONDUCTED SPURIOUS EMISSIONS

RULE PART(S)

FCC: §2.1051, §22.901, §22.917 and §90.691.

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 90.691(a):

(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $116 \log_{10}(f/6.1)$ decibels or $50 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz. (NOTE : Use 100kHz reference bandwidth)

(b) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

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 = 100 kHz for emission below 1 GHz
(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, 5G NR), Max hold(GSM);

NOTE1

GSM : It was tested at GPRS as worst case (the highest output power and density).

UMTS: It was tested at REL 99 as worst case (the highest output power and density).

LTE: It was tested at 1RB QPSK as worst case (the highest output power and density).

5G NR: All Waveforms (CP-OFDM vs DFT-s_OFDM) and modulations ($\pi/2$ BPSK, QPSK, 16QAM, 64QAM, 256QAM) were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

NOTE2

Please refer to section 5.4 for bandwidth and RB setting about LTE, 5G NR bands.

RESULTS

See the following pages.

8.5.1. OUT OF BAND EMISSIONS RESULT

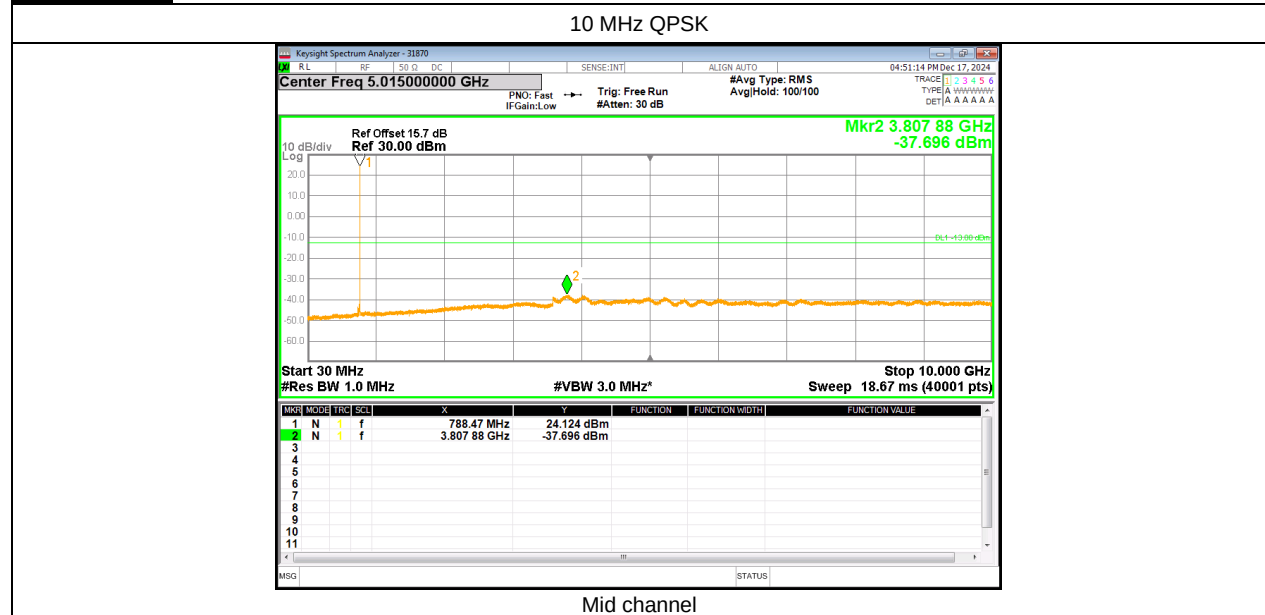
GSM 850



WCDMA Band 5



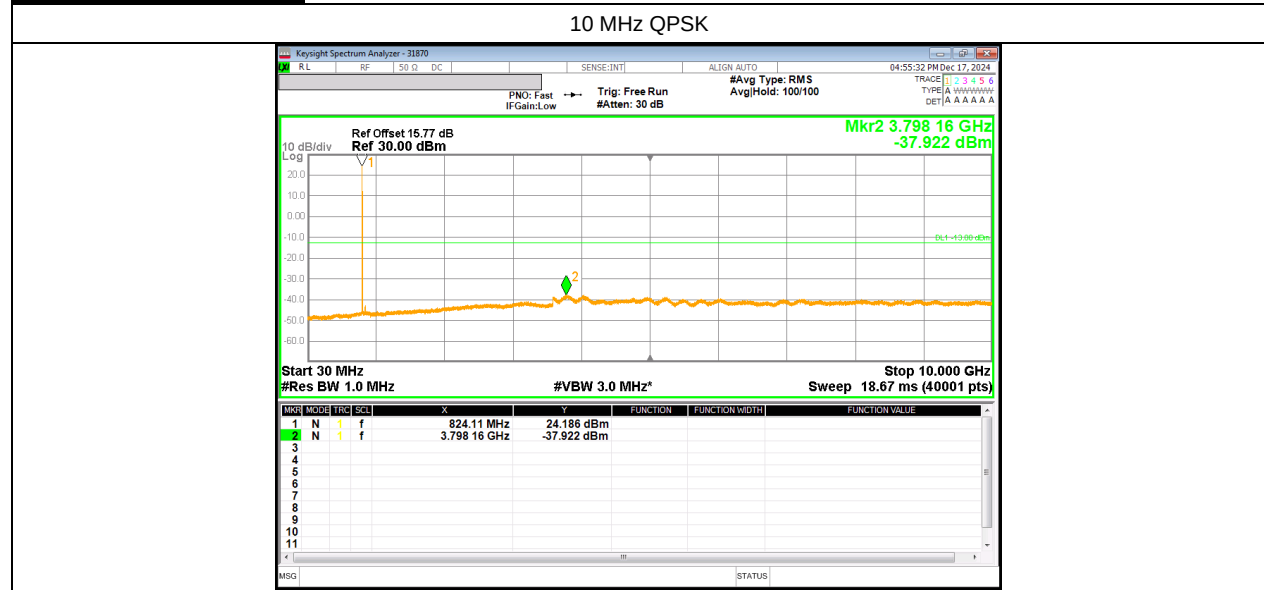
LTE Band 14



LTE Band 26 (Part 90)



LTE Band 26 (Straddle)



LTE Band 26 (Part 22)



NR Band n5 DFT-s OFDM



8.6. FREQUENCY STABILITY

RULE PART(S)

FCC: §2.1055, §22.355 and §90.213

LIMITS

§22.355 - The carrier frequency shall not depart from the reference frequency in excess of ± 2.5 ppm for mobile stations.

§90.213 - The carrier frequency shall not depart from the reference frequency in excess of ± 2.5 ppm for mobile stations.

TEST PROCEDURE

Per KDB 971168 D01 Power Meas License Digital Systems v03r01

NOTE

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

RESULTS

See the following pages.

8.6.1. FREQUENCY STABILITY RESULT

GSM 850, Channel 128/251, Frequency 824.2/848.8 MHz

Test Date	2024-12-23
Test Engineer	31870

Reference Frequency : GSM850 Low Channel 824.2 MHz / High Channel 848.8 MHz @ 20°C						
Limit: +/- 2.5 ppm =	Low Channel	2060.500	Hz	High Channel	2122.000	Hz
Power Supply [Vdc]	Environment Temperature [°C]	Frequency Deviation Measured with Time Elapse				
		Low Channel		High Channel		Limit [ppm]
		[MHz]	Delta [ppm]	[MHz]	Delta [ppm]	
4.20	50	824.20110032	0.014	848.80111887	0.004	2.5
4.20	40	824.20110251	0.011	848.80119703	-0.088	2.5
4.20	30	824.20114834	-0.045	848.80118096	-0.069	2.5
4.20	20	824.20111145	0.000	848.80112201	0.000	2.5
4.20	10	824.20111474	-0.004	848.80116913	-0.056	2.5
4.20	0	824.20112270	-0.014	848.80117034	-0.057	2.5
4.20	-10	824.20114420	-0.040	848.80113796	-0.019	2.5
4.20	-20	824.20114599	-0.042	848.80116829	-0.055	2.5
4.20	-30	824.20114032	-0.035	848.80113449	-0.015	2.5

Reference Frequency : GSM850 Low Channel 824.2 MHz / High Channel 848.8 MHz @ 20°C						
Limit: +/- 2.5 ppm =	Low Channel	2060.500	Hz	High Channel	2122.000	Hz
Power Supply [Vdc]	Environment Temperature [°C]	Frequency Deviation Measured with Time Elapse				
		Low Channel		High Channel		Limit [ppm]
		[MHz]	Delta [ppm]	[MHz]	Delta [ppm]	
4.20	20	824.20111145	0	848.80112201	0	2.5
4.40	20	824.20111579	-0.005	848.80118072	-0.069	2.5
3.80	20	824.20112132	-0.012	848.80118398	-0.073	2.5

WCDMA Band 5

Test Date	2024-12-26
Test Engineer	31870

Reference Frequency : WCDMA Band 5 Low Channel 826.4 MHz / High Channel 846.6 MHz @ 20°C						
Limit: +/- 2.5 ppm =	Low Channel	2066.000	Hz	High Channel	2116.500	Hz
Power Supply [Vdc]	Environment Temperature [°C]	Frequency Deviation Measured with Time Elapse				
		Low Channel		High Channel		Limit [ppm]
		[MHz]	Delta [ppm]	[MHz]	Delta [ppm]	
4.20	50	826.40005426	-0.023	846.60004234	0.059	2.5
4.20	40	826.40009014	-0.067	846.60006557	0.031	2.5
4.20	30	826.40006485	-0.036	846.60008078	0.013	2.5
4.20	20	826.40003488	0.000	846.60009192	0.000	2.5
4.20	10	826.40009024	-0.067	846.60003382	0.069	2.5
4.20	0	826.40012035	-0.103	846.60008856	0.004	2.5
4.20	-10	826.40004024	-0.006	846.60008571	0.007	2.5
4.20	-20	826.40004455	-0.012	846.60007003	0.026	2.5
4.20	-30	826.40009274	-0.070	846.60010676	-0.018	2.5

Reference Frequency : WCDMA Band 5 Low Channel 826.4 MHz / High Channel 846.6 MHz @ 20°C						
Limit: +/- 2.5 ppm =	Low Channel	2066.000	Hz	High Channel	2116.500	Hz
Power Supply [Vdc]	Environment Temperature [°C]	Frequency Deviation Measured with Time Elapse				
		Low Channel		High Channel		Limit [ppm]
		[MHz]	Delta [ppm]	[MHz]	Delta [ppm]	
4.20	20	826.40003488	0	846.60009192	0	2.5
4.40	20	826.40004484	-0.012	846.60004504	0.055	2.5
3.80	20	826.40003384	0.001	846.60003365	0.069	2.5

LTE Band 14(Lowest Frequency: 16QAM / Highest Frequency: QPSK)

Test Date	2024-12-17
Test Engineer	31870

Limit		788	798	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ End of OBW	F high @ End of OBW		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	788.2565	797.7484		
Extreme (50C)		788.2565	797.7484	9.1	0.011
Extreme (40C)		788.2565	797.7484	7.7	0.010
Extreme (30C)		788.2565	797.7484	5.7	0.007
Extreme (10C)		788.2565	797.7484	6.1	0.008
Extreme (0C)		788.2565	797.7484	15.1	0.019
Extreme (-10C)		788.2565	797.7484	13.3	0.017
Extreme (-20C)		788.2565	797.7484	15.0	0.019
Extreme (-30C)		788.2565	797.7484	11.2	0.014
20C	15%	788.2565	797.7484	17.2	0.022
	-15%	788.2565	797.7484	11.4	0.014
	End Point	788.2565	797.7484	15.4	0.019

LTE Band 26

Test Date	2024-12-17
Test Engineer	31870

Reference Frequency : Low Channel 814.7 MHz / High Channel 848.3 MHz @ 20°C						
Limit: +/- 2.5 ppm =		Low Channel	2036.750	Hz	High Channel	2120.750
		Frequency Deviation Measured with Time Elapse				Hz
Power Supply [Vdc]	Environment Temperature [°C]	Low Channel		High Channel		Limit [ppm]
		[MHz]	Delta [ppm]	[MHz]	Delta [ppm]	
4.20	50	814.70003415	-0.005	848.30003740	-0.017	2.5
4.20	40	814.70003984	-0.012	848.30003839	-0.019	2.5
4.20	30	814.70002978	0.001	848.30001544	0.009	2.5
4.20	20	814.70003042	0.000	848.30002267	0.000	2.5
4.20	10	814.70001120	0.024	848.30002232	0.000	2.5
4.20	0	814.70002260	0.010	848.30002412	-0.002	2.5
4.20	-10	814.70002147	0.011	848.30002750	-0.006	2.5
4.20	-20	814.70001136	0.023	848.30001748	0.006	2.5
4.20	-30	814.70003582	-0.007	848.30000938	0.016	2.5

Reference Frequency : Low Channel 814.7 MHz / High Channel 848.3 MHz @ 20°C						
Limit: +/- 2.5 ppm =		Low Channel	2036.750	Hz	High Channel	2120.750
		Frequency Deviation Measured with Time Elapse				Hz
Power Supply [Vdc]	Environment Temperature [°C]	Low Channel		High Channel		Limit [ppm]
		[MHz]	Delta [ppm]	[MHz]	Delta [ppm]	
4.20	20	814.70003042	0	848.30002267	0	2.5
4.40	20	814.70001450	0.020	848.30001503	0.009	2.5
3.80	20	814.70003761	-0.009	848.30004295	-0.024	2.5

NR Band n5

Test Date	2024-12-20
Test Engineer	31870

Reference Frequency : Low Channel 826.5 MHz / High Channel 846.5 MHz @ 20°C							
Limit: +- 2.5 ppm =		Low Channel	2066.250	Hz	High Channel	2116.250	Hz
Power Supply [Vdc]	Environment Temperature [°C]	Frequency Deviation Measured with Time Elapse					Limit [ppm]
		Low Channel		High Channel		Limit [ppm]	
		[MHz]	Delta [ppm]	[MHz]	Delta [ppm]		
4.20	50	826.50000916	-0.004	846.50000946	0.000	2.5	
4.20	40	826.50000913	-0.004	846.50000882	0.001	2.5	
4.20	30	826.50000740	-0.002	846.50000513	0.005	2.5	
4.20	20	826.50000558	0.000	846.50000940	0.000	2.5	
4.20	10	826.50000890	-0.004	846.50000761	0.002	2.5	
4.20	0	826.50000905	-0.004	846.50000795	0.002	2.5	
4.20	-10	826.50000843	-0.003	846.50000813	0.002	2.5	
4.20	-20	826.50001023	-0.006	846.50001018	-0.001	2.5	
4.20	-30	826.50000578	0.000	846.50000639	0.004	2.5	
Reference Frequency : Low Channel 826.5 MHz / High Channel 846.5 MHz @ 20°C							
Limit: +- 2.5 ppm =		Low Channel	2066.250	Hz	High Channel	2116.250	Hz
Power Supply [Vdc]	Environment Temperature [°C]	Frequency Deviation Measured with Time Elapse					Limit [ppm]
		Low Channel		High Channel		Limit [ppm]	
		[MHz]	Delta [ppm]	[MHz]	Delta [ppm]		
4.20	20	826.50000558	0	846.50000940	0	2.5	
4.40	20	826.50001009	-0.005	846.50000716	0.003	2.5	
3.80	20	826.50001032	-0.006	846.50000784	0.002	2.5	

9. RADIATED RESULTS

9.1. RADIATED POWER (ERP)

RULE PART(S)

FCC: §2.1046, §22.913, §90.542 and §90.635

LIMITS

22.913(a) - The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

90.542(a)(7) - Portable stations (hand-held devices) transmitting in the 758-768 MHz band and the 788-798 MHz band are limited to 3 watts ERP.

90.635(b) The maximum output power of the transmitter for mobile stations is 100 watts (20dBw).

In addition, when the transmitter power is measured in terms of average value, the peak-to-average ratio of the power shall not exceed 13dB.

TEST PROCEDURE

ANSI / TIA / EIA 603 E Clause 2.2.17; ESU40 setting reference to 971168 D01 v03r01

For radiated output power measurement with a ESU40:

- a) Set the RBW $\geq$ OBW;
- b) Set VBW $\geq 3 \times$ RBW;
- c) Set span $\geq 2 \times$ RBW;
- d) Sweep time = auto couple or 1 second;
- e) Detector = rms;
- f) Ensure that the number of measurement points $\geq$ span/RBW;
- g) Trace mode = max hold(GSM, WCDMA), average(LTE, 5G NR);

TEST RESULTS

See the following pages.

9.1.1. ERP RESULT

GSM

Band	Mode	Frequency (MHz)	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	ERP (mW)	Limit (dBm)	Delta (dB)
GSM 850	GPRS	824.20	30.98	V	3.02	-1.03	26.94	494.31	38.50	-11.56
		836.60	33.00	V	3.04	-0.97	28.99	792.50	38.50	-9.51
		848.80	32.82	V	3.06	-0.91	28.85	767.36	38.50	-9.65
	EGPRS	824.20	26.37	V	3.02	-1.03	22.33	171.00	38.50	-16.17
		836.60	28.40	V	3.04	-0.97	24.39	274.79	38.50	-14.11
		848.80	27.93	V	3.06	-0.91	23.96	249.12	38.50	-14.54

WCDMA

Band	Mode	Frequency (MHz)	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	ERP (mW)	Limit (dBm)	Delta (dB)
Band 5	REL99	826.40	22.27	V	3.02	-1.02	18.23	66.53	38.50	-20.27
		836.60	24.21	V	3.04	-0.97	20.20	104.71	38.50	-18.30
		846.60	23.48	V	3.06	-0.92	19.51	89.33	38.50	-18.99
	HSDPA	826.40	21.25	V	3.02	-1.02	17.21	52.60	38.50	-21.29
		836.60	23.32	V	3.04	-0.97	19.31	85.31	38.50	-19.19
		846.60	22.61	V	3.06	-0.92	18.64	73.11	38.50	-19.86

LTE Band 14

BW (MHz)	Modulation	Frequency (MHz)	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	ERP (mW)	Limit (dBm)	Delta (dB)	RB
10	QPSK	793.00	24.92	H	2.96	-1.16	20.80	120.23	34.77	-13.97	1/0
	16-QAM	793.00	23.83	H	2.96	-1.16	19.71	93.54	34.77	-15.06	1/0
5	QPSK	790.50	25.22	H	2.96	-1.17	21.09	128.53	34.77	-13.68	1/12
		793.00	25.10	H	2.96	-1.16	20.98	125.31	34.77	-13.79	1/0
		795.50	24.42	H	2.97	-1.16	20.30	107.15	34.77	-14.47	1/24
	16-QAM	790.50	22.92	H	2.94	-1.19	18.80	75.86	34.77	-15.97	1/12
		793.00	23.22	H	2.94	-1.19	19.09	81.10	34.77	-15.68	1/0
		795.50	23.21	H	2.95	-1.18	19.09	81.10	34.77	-15.68	1/24

LTE Band 26

BW (MHz)	Modulation	Frequency (MHz)	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	ERP (mW)	Limit (dBm)	Delta (dB)	RB
15	QPSK	821.50	23.52	H	3.01	-1.04	19.47	88.51	38.50	-19.03	1/0
		824.00	23.13	V	3.02	-1.03	19.08	80.91	38.50	-19.42	1/0
		831.50	23.46	V	3.03	-0.99	19.44	87.90	38.50	-19.06	1/0
		836.50	23.88	V	3.04	-0.97	19.88	97.27	38.50	-18.62	1/0
		841.50	23.54	V	3.05	-0.94	19.55	90.16	38.50	-18.95	1/0
	16-QAM	821.50	22.61	H	3.01	-1.04	18.56	71.78	38.50	-19.94	1/0
		824.00	22.04	V	3.02	-1.03	17.99	62.95	38.50	-20.51	1/0
		831.50	22.23	V	3.03	-0.99	18.21	66.22	38.50	-20.29	1/0
		836.50	22.69	V	3.04	-0.97	18.69	73.96	38.50	-19.81	1/0
		841.50	22.67	V	3.05	-0.94	18.68	73.79	38.50	-19.82	1/0
10	QPSK	819.00	23.82	H	3.01	-1.06	19.76	94.62	38.50	-18.74	1/0
		824.00	23.08	V	3.02	-1.03	19.03	79.98	38.50	-19.47	1/0
		829.00	23.01	V	3.03	-1.01	18.98	79.07	38.50	-19.52	1/0
		831.50	23.34	V	3.03	-0.99	19.32	85.51	38.50	-19.18	1/0
		844.00	23.57	V	3.05	-0.93	19.59	90.99	38.50	-18.91	1/25
	16-QAM	819.00	22.97	H	3.01	-1.06	18.91	77.80	38.50	-19.59	1/0
		824.00	22.14	V	3.02	-1.03	18.09	64.42	38.50	-20.41	1/0
		829.00	22.05	V	3.03	-1.01	18.02	63.39	38.50	-20.48	1/0
		831.50	22.38	V	3.03	-0.99	18.36	68.55	38.50	-20.14	1/0
		844.00	22.63	V	3.05	-0.93	18.65	73.28	38.50	-19.85	1/25
5	QPSK	816.50	23.86	H	3.00	-1.07	19.79	95.28	38.50	-19.05	1/0
		821.50	23.50	H	3.01	-1.04	19.45	88.10	38.50	-19.66	1/0
		824.00	22.89	V	3.02	-1.03	18.84	76.56	38.50	-19.55	1/0
		826.50	22.99	V	3.02	-1.02	18.95	78.52	38.50	-19.36	1/0
		831.50	23.16	V	3.03	-0.99	19.14	82.04	38.50	-18.44	1/12
	16-QAM	846.50	24.04	V	3.06	-0.92	20.06	101.39	38.50	-19.62	1/12
		816.50	22.95	H	3.00	-1.07	18.88	77.27	38.50	-20.07	1/0
		821.50	22.48	H	3.01	-1.04	18.43	69.66	38.50	-20.57	1/0
		824.00	21.98	V	3.02	-1.03	17.93	62.09	38.50	-20.46	1/0
		826.50	22.08	V	3.02	-1.02	18.04	63.68	38.50	-20.26	1/0
3	QPSK	831.50	22.26	V	3.03	-0.99	18.24	66.68	38.50	-19.46	1/12
		846.50	23.02	V	3.06	-0.92	19.04	80.17	38.50	-19.46	1/12
	16-QAM	815.50	23.87	H	3.00	-1.07	19.79	95.28	38.50	-18.71	1/8
		822.50	23.42	H	3.01	-1.04	19.37	86.50	38.50	-19.13	1/0
		824.00	22.80	V	3.02	-1.03	18.75	74.99	38.50	-19.75	1/0
1.4	QPSK	825.50	22.59	V	3.02	-1.02	18.55	71.61	38.50	-19.95	1/0
		831.50	23.26	V	3.03	-0.99	19.24	83.95	38.50	-19.26	1/8
		847.50	23.98	V	3.06	-0.91	20.00	100.00	38.50	-18.50	1/8
	16-QAM	815.50	22.90	H	3.00	-1.07	18.82	76.21	38.50	-19.68	1/8
		822.50	22.58	H	3.01	-1.04	18.53	71.29	38.50	-19.97	1/0
1.4	QPSK	824.00	21.91	V	3.02	-1.03	17.86	61.09	38.50	-20.64	1/0
		825.50	21.60	V	3.02	-1.02	17.56	57.02	38.50	-20.94	1/0
		831.50	22.35	V	3.03	-0.99	18.33	68.08	38.50	-20.17	1/8
		847.50	22.93	V	3.06	-0.91	18.95	78.52	38.50	-19.55	1/8
	16-QAM	814.70	23.40	H	3.00	-1.08	19.32	85.51	38.50	-19.18	1/3
1.4	QPSK	823.30	23.53	H	3.01	-1.03	19.48	88.72	38.50	-19.02	1/3
		824.00	22.78	V	3.02	-1.03	18.73	74.64	38.50	-19.77	1/3
		824.70	22.76	V	3.02	-1.03	18.72	74.47	38.50	-19.78	1/0
		831.50	23.25	V	3.03	-0.99	19.23	83.75	38.50	-19.27	1/0
		848.30	23.61	V	3.06	-0.91	19.64	92.04	38.50	-18.86	1/3
1.4	QPSK	814.70	22.49	H	3.00	-1.08	18.41	69.34	38.50	-20.09	1/3
		823.30	22.33	H	3.01	-1.03	18.28	67.30	38.50	-20.22	1/3
		824.00	21.98	V	3.02	-1.03	17.93	62.09	38.50	-20.57	1/0
		826.50	22.08	V	3.02	-1.02	18.04	63.68	38.50	-20.46	1/0
		831.50	22.26	V	3.03	-0.99	18.24	66.68	38.50	-20.26	1/12
1.4	QPSK	846.50	23.02	V	3.06	-0.92	19.04	80.17	38.50	-19.46	1/12

NR Band n5 DFT-s OFDM

BW (MHz)	Modulation	Frequency (MHz)	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	ERP (dBm)	ERP (mW)	Limit (dBm)	Delta (dB)	RB
20	QPSK	834.00	23.97	V	3.04	-0.98	19.95	98.86	38.50	-18.55	1/104
		836.50	24.12	V	3.04	-0.97	20.12	102.80	38.50	-18.38	1/1
		839.00	24.27	V	3.04	-0.96	20.27	106.41	38.50	-18.23	1/1
	16-QAM	834.00	23.13	V	3.04	-0.98	19.11	81.47	38.50	-19.39	1/104
		836.50	23.15	V	3.04	-0.97	19.15	82.22	38.50	-19.35	1/1
		839.00	23.12	V	3.04	-0.96	19.12	81.66	38.50	-19.38	1/1
15	QPSK	831.50	23.79	V	3.03	-0.99	19.77	94.84	38.50	-18.73	1/77
		836.50	24.32	V	3.04	-0.97	20.32	107.65	38.50	-18.18	1/1
		841.50	23.94	V	3.05	-0.94	19.95	98.86	38.50	-18.55	1/77
	16-QAM	831.50	23.14	V	3.03	-0.99	19.12	81.66	38.50	-19.38	1/77
		836.50	23.51	V	3.04	-0.97	19.51	89.33	38.50	-18.99	1/1
		841.50	23.24	V	3.05	-0.94	19.25	84.14	38.50	-19.25	1/77
10	QPSK	829.00	23.31	V	3.03	-1.01	19.28	84.72	38.50	-19.22	1/1
		836.50	24.09	V	3.04	-0.97	20.09	102.09	38.50	-18.41	1/50
		844.00	23.60	V	3.05	-0.93	19.62	91.62	38.50	-18.88	1/50
	16-QAM	829.00	21.98	V	3.03	-1.01	17.95	62.37	38.50	-20.55	1/1
		836.50	23.10	V	3.04	-0.97	19.10	81.28	38.50	-19.40	1/50
		844.00	22.80	V	3.05	-0.93	18.82	76.21	38.50	-19.68	1/50
5	QPSK	826.50	22.95	V	3.02	-1.02	18.91	77.80	38.50	-19.59	1/1
		836.50	24.19	V	3.04	-0.97	20.19	104.47	38.50	-18.31	1/1
		846.50	23.57	V	3.06	-0.92	19.59	90.99	38.50	-18.91	1/12
	16-QAM	826.50	22.22	V	3.02	-1.02	18.18	65.77	38.50	-20.32	1/1
		836.50	23.63	V	3.04	-0.97	19.63	91.83	38.50	-18.87	1/1
		846.50	22.54	V	3.06	-0.92	18.56	71.78	38.50	-19.94	1/12

9.2. RADIATED SPURIOUS EMISSION

RULE PART(S)

FCC: §2.1053, §22.917, §90.543 and §90.691

LIMIT

§22.917(a)

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.

§90.543(c)

On any frequency outside of the frequency ranges covered by the ACP tables in this section, the power of any emission must be reduced below the mean output power (P) by at least $43 + 10 \log(P)$ dB measured in a 100 kHz bandwidth for frequencies less than 1 GHz, and in a 1 MHz bandwidth for frequencies greater than 1 GHz

§90.691(a):

(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $116 \log_{10}(f/6.1)$ decibels or $50 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz. (NOTE : Use 100kHz reference bandwidth)

(b) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

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 1 GHz.
- 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(WCDMA, LTE, 5G NR), Maxhold(GSM);

NOTE1

GSM : It was tested at GPRS as worst case (the highest output power and density).

UMTS: It was tested at REL 99 as worst case (the highest output power and density).

LTE: It was tested at 1RB QPSK as worst case (the highest output power and density).

5G NR: All Waveforms (CP-OFDM vs DFT-s_OFDM) and modulations ($\pi/2$ BPSK, QPSK, 16QAM, 64QAM, 256QAM) were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

NOTE2

Please refer to section 5.4 for bandwidth and RB setting about LTE, 5G NR bands.

RESULTS

See the following pages.

9.2.1. SPURIOUS RADIATION RESULT

GSM850

GPRS	UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement Company: Samsung Project #: 4791547056 Date: 2024-12-23 Test Engineer: 26087 Configuration: EUT / AC Adapter, X-Position Location: Chamber 1 Mode: GPRS 850 MHz Harmonics 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, 824.2MHz									
	1648.40	-1.2	V	3.0	43.5	1.0	-43.7	-13.0	-30.7	
	2472.60	1.9	V	3.0	43.8	1.0	-40.8	-13.0	-27.8	
	3296.80	-8.1	V	3.0	43.8	1.0	-50.8	-13.0	-37.8	
	1648.40	3.2	H	3.0	43.5	1.0	-39.2	-13.0	-26.2	
	2472.60	4.3	H	3.0	43.8	1.0	-38.5	-13.0	-25.5	
	3296.80	-8.0	H	3.0	43.8	1.0	-50.8	-13.0	-37.8	
	Mid Ch, 836.6MHz									
	1673.20	-3.4	V	3.0	43.5	1.0	-45.9	-13.0	-32.9	
	2509.80	2.2	V	3.0	43.7	1.0	-40.6	-13.0	-27.6	
	3346.40	-7.8	V	3.0	43.8	1.0	-50.7	-13.0	-37.7	
	1673.20	2.3	H	3.0	43.5	1.0	-40.2	-13.0	-27.2	
	2509.80	5.4	H	3.0	43.7	1.0	-37.4	-13.0	-24.4	
	3346.40	-8.0	H	3.0	43.8	1.0	-50.8	-13.0	-37.8	
	High Ch, 848.8MHz									
	1697.60	-4.2	V	3.0	43.5	1.0	-46.7	-13.0	-33.7	
	2546.40	3.7	V	3.0	43.7	1.0	-39.1	-13.0	-26.1	
	3395.20	-7.7	V	3.0	43.9	1.0	-50.6	-13.0	-37.6	
	1697.60	3.1	H	3.0	43.5	1.0	-39.5	-13.0	-26.5	
	2546.40	3.1	H	3.0	43.7	1.0	-39.6	-13.0	-26.6	
	3395.20	-7.8	H	3.0	43.9	1.0	-50.6	-13.0	-37.6	

REL99	UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
	Company:		Samsung							
	Project #:		4791547056							
	Date:		2024-12-23							
	Test Engineer:		26087							
	Configuration:		EUT / AC Adapter, Z-Position							
	Location:		Chamber 1							
	Mode:		Rel99 Band 5 Harmonics							
	Test Votage:		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, 826.4MHz										
	1652.80	-14.0	V	3.0	43.5	1.0	-56.5	-13.0	-43.5	
	2479.20	-11.5	V	3.0	43.8	1.0	-54.2	-13.0	-41.2	
	3305.60	-10.0	V	3.0	43.8	1.0	-52.7	-13.0	-39.7	
	1652.80	-15.0	H	3.0	43.5	1.0	-57.4	-13.0	-44.4	
	2479.20	-12.1	H	3.0	43.8	1.0	-54.8	-13.0	-41.8	
	3305.60	-9.9	H	3.0	43.8	1.0	-52.7	-13.0	-39.7	
Mid Ch, 836.6MHz										
	1673.20	-13.8	V	3.0	43.5	1.0	-56.3	-13.0	-43.3	
	2509.80	-11.4	V	3.0	43.7	1.0	-54.1	-13.0	-41.1	
	3346.40	-9.9	V	3.0	43.8	1.0	-52.7	-13.0	-39.7	
	1673.20	-14.7	H	3.0	43.5	1.0	-57.2	-13.0	-44.2	
	2509.80	-12.1	H	3.0	43.7	1.0	-54.8	-13.0	-41.8	
	3346.40	-9.8	H	3.0	43.8	1.0	-52.7	-13.0	-39.7	
High Ch, 846.6MHz										
	1693.20	-14.0	V	3.0	43.5	1.0	-56.5	-13.0	-43.5	
	2539.80	-11.1	V	3.0	43.7	1.0	-53.8	-13.0	-40.8	
	3386.40	-9.5	V	3.0	43.9	1.0	-52.4	-13.0	-39.4	
	1693.20	-14.8	H	3.0	43.5	1.0	-57.4	-13.0	-44.4	
	2539.80	-11.8	H	3.0	43.7	1.0	-54.6	-13.0	-41.6	
	3386.40	-9.5	H	3.0	43.9	1.0	-52.4	-13.0	-39.4	

LTE Band 14

5 MHz QPSK	UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
	Company:		Samsung							
	Project #:		4791547056							
	Date:		2024-12-20							
	Test Engineer:		26087							
	Configuration:		EUT / AC Adapter, X-Position							
	Location:		Chamber 1							
	Mode:		LTE_QPSK Band 14 Harmonics, 5MHz Bandwidth							
	Test Votage:		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, 790.5MHz									
	1581.00	-15.3	V	3.0	43.3	1.0	-57.7	-40.0	-17.7	
	2371.50	-12.3	V	3.0	43.8	1.0	-55.1	-13.0	-42.1	
	3162.00	-10.2	V	3.0	43.6	1.0	-52.8	-13.0	-39.8	
	1581.00	-16.5	H	3.0	43.3	1.0	-58.8	-40.0	-18.8	
	2371.50	-12.4	H	3.0	43.8	1.0	-55.2	-13.0	-42.2	
	3162.00	-10.3	H	3.0	43.6	1.0	-52.8	-13.0	-39.8	
	Mid Ch, 793MHz									
	1586.00	-15.4	V	3.0	43.3	1.0	-57.7	-40.0	-17.7	
	2379.00	-7.5	V	3.0	43.8	1.0	-50.3	-13.0	-37.3	
	3172.00	-10.2	V	3.0	43.6	1.0	-52.8	-13.0	-39.8	
	1586.00	-16.4	H	3.0	43.3	1.0	-58.7	-40.0	-18.7	
	2379.00	-4.7	H	3.0	43.8	1.0	-47.6	-13.0	-34.6	
	3172.00	-10.1	H	3.0	43.6	1.0	-52.7	-13.0	-39.7	
	High Ch, 795.5MHz									
	1591.00	-14.9	V	3.0	43.3	1.0	-57.2	-40.0	-17.2	
	2386.50	-12.3	V	3.0	43.8	1.0	-55.2	-13.0	-42.2	
	3182.00	-10.1	V	3.0	43.6	1.0	-52.7	-13.0	-39.7	
	1591.00	-15.1	H	3.0	43.3	1.0	-57.4	-40.0	-17.4	
	2386.50	-12.6	H	3.0	43.8	1.0	-55.4	-13.0	-42.4	
	3182.00	-10.2	H	3.0	43.6	1.0	-52.8	-13.0	-39.8	

LTE Band 26 (Part 90)

5 MHz QPSK	UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
	Company: Samsung Project #: 4791547056 Date: 2024-12-20 Test Engineer: 26087 Configuration: EUT / AC Adpater, Z-Position Location: Chamber 1 Mode: LTE_QPSK Band 26(Part90) Harmonics, 5MHz Bandwidth Test Votage: 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, 816.5MHz									
	1633.00	-14.0	V	3.0	43.4	1.0	-56.5	-13.0	-43.5	
	2449.50	-10.2	V	3.0	43.8	1.0	-53.0	-13.0	-40.0	
	3266.00	-9.4	V	3.0	43.7	1.0	-52.1	-13.0	-39.1	
	1633.00	-15.7	H	3.0	43.4	1.0	-58.1	-13.0	-45.1	
	2449.50	-11.3	H	3.0	43.8	1.0	-54.1	-13.0	-41.1	
	3266.00	-9.7	H	3.0	43.7	1.0	-52.4	-13.0	-39.4	
	Mid Ch, 821.5MHz									
	1663.00	-13.8	V	3.0	43.5	1.0	-56.2	-13.0	-43.2	
	2494.50	-9.8	V	3.0	43.8	1.0	-52.6	-13.0	-39.6	
	3326.00	-9.3	V	3.0	43.8	1.0	-52.1	-13.0	-39.1	
	1663.00	-14.7	H	3.0	43.5	1.0	-57.2	-13.0	-44.2	
	2494.50	-10.9	H	3.0	43.8	1.0	-53.6	-13.0	-40.6	
	3326.00	-9.3	H	3.0	43.8	1.0	-52.1	-13.0	-39.1	

LTE Band 26 (Straddle)

15 MHz QPSK	UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
	Company: Samsung Project #: 4791547056 Date: 2024-12-21 Test Engineer: 26087 Configuration: EUT / AC Adpater, Z-Position Location: Chamber 1 Mode: LTE_QPSK Band 26 Harmonics, 15MHz Bandwidth Test Votage: 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
	Straddle Ch, 824MHz									
	1648.00	-13.9	V	3.0	43.5	1.0	-56.4	-13.0	-43.4	
	2472.00	-10.0	V	3.0	43.8	1.0	-52.7	-13.0	-39.7	
	3296.00	-9.3	V	3.0	43.8	1.0	-52.0	-13.0	-39.0	
	1648.00	-15.1	H	3.0	43.5	1.0	-57.6	-13.0	-44.6	
	2472.00	-11.4	H	3.0	43.8	1.0	-54.1	-13.0	-41.1	
	3296.00	-9.3	H	3.0	43.8	1.0	-52.1	-13.0	-39.1	

LTE Band 26 (Part 22)

5 MHz QPSK	UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement Company: Samsung Project #: 4791547056 Date: 2024-12-21 Test Engineer: 26087 Configuration: EUT / AC Adpater, Z-Position Location: Chamber 1 Mode: LTE_QPSK Band 26 Harmonics, 5MHz Bandwidth Test Votage: 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, 816.5MHz									
	1633.00	-14.3	V	3.0	43.4	1.0	-56.7	-13.0	-43.7	
	2449.50	-10.1	V	3.0	43.8	1.0	-52.9	-13.0	-39.9	
	3266.00	-9.4	V	3.0	43.7	1.0	-52.1	-13.0	-39.1	
	1633.00	-15.7	H	3.0	43.4	1.0	-58.1	-13.0	-45.1	
	2449.50	-11.3	H	3.0	43.8	1.0	-54.1	-13.0	-41.1	
	3266.00	-9.4	H	3.0	43.7	1.0	-52.1	-13.0	-39.1	
	Mid Ch, 831.5MHz									
	1663.00	-15.0	V	3.0	43.5	1.0	-57.5	-13.0	-44.5	
	2494.50	-9.3	V	3.0	43.8	1.0	-52.1	-13.0	-39.1	
	3326.00	-9.2	V	3.0	43.8	1.0	-51.9	-13.0	-38.9	
	4157.50	-8.2	V	3.0	44.6	1.0	-51.8	-13.0	-38.8	
	2494.50	-11.3	H	3.0	43.8	1.0	-54.0	-13.0	-41.0	
	3326.00	-10.0	H	3.0	43.8	1.0	-52.8	-13.0	-39.8	
	High Ch, 846.5MHz									
	1693.00	-15.0	V	3.0	43.5	1.0	-57.6	-13.0	-44.6	
	2539.50	-10.0	V	3.0	43.7	1.0	-52.7	-13.0	-39.7	
	3386.00	-8.8	V	3.0	43.9	1.0	-51.7	-13.0	-38.7	
	1693.00	-15.8	H	3.0	43.5	1.0	-58.4	-13.0	-45.4	
	2539.50	-11.0	H	3.0	43.7	1.0	-53.8	-13.0	-40.8	
	3386.00	-8.9	H	3.0	43.9	1.0	-51.7	-13.0	-38.7	

NR Band n5 DFT-s OFDM

UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		Samsung							
Project #:		4791547056							
Date:		2024-12-20							
Test Engineer:		24542							
Configuration:		EUT / AC Adapter, Y-Position							
Location:		Chamber 2							
Mode:		5G NR_QPSK NR n5 Harmonics, 15MHz Bandwidth							
Test Votage:		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
15 MHz									
DFT-s-OFDM									
QPSK									
Low Ch, 831.5MHz									
1663.00	-13.7	V	3.0	42.0	1.0	-54.6	-13.0	-41.6	
2494.50	-12.0	V	3.0	42.4	1.0	-53.4	-13.0	-40.4	
3326.00	-9.4	V	3.0	42.9	1.0	-51.3	-13.0	-38.3	
1663.00	-14.8	H	3.0	42.0	1.0	-55.8	-13.0	-42.8	
2494.50	-12.2	H	3.0	42.4	1.0	-53.6	-13.0	-40.6	
3326.00	-8.7	H	3.0	42.9	1.0	-50.6	-13.0	-37.6	
Mid Ch, 836.5MHz									
1673.00	-14.8	V	3.0	42.0	1.0	-55.7	-13.0	-42.7	
2509.50	-12.0	V	3.0	42.4	1.0	-53.4	-13.0	-40.4	
3346.00	-9.2	V	3.0	42.9	1.0	-51.1	-13.0	-38.1	
1673.00	-15.1	H	3.0	42.0	1.0	-56.1	-13.0	-43.1	
2509.50	-12.3	H	3.0	42.4	1.0	-53.7	-13.0	-40.7	
3346.00	-9.2	H	3.0	42.9	1.0	-51.1	-13.0	-38.1	
High Ch, 841.5MHz									
1683.00	-14.5	V	3.0	42.0	1.0	-55.4	-13.0	-42.4	
2524.50	-11.9	V	3.0	42.4	1.0	-53.3	-13.0	-40.3	
3366.00	-8.5	V	3.0	42.9	1.0	-50.5	-13.0	-37.5	
1683.00	-15.5	H	3.0	42.0	1.0	-56.5	-13.0	-43.5	
2524.50	-11.9	H	3.0	42.4	1.0	-53.3	-13.0	-40.3	
3366.00	-8.5	H	3.0	42.9	1.0	-50.4	-13.0	-37.4	

END OF REPORT

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