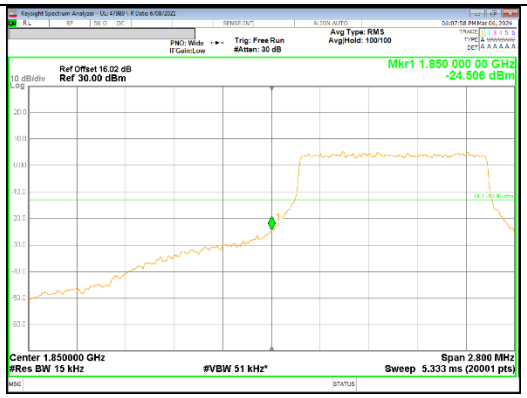
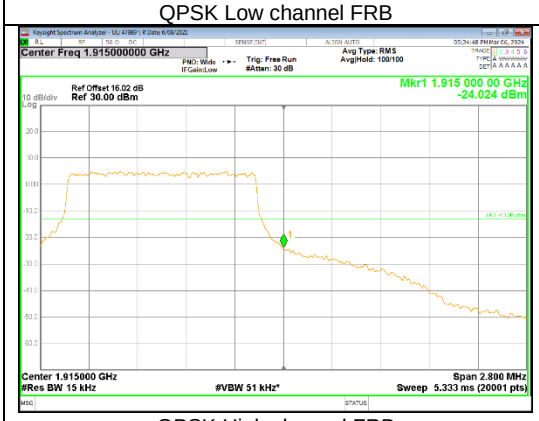
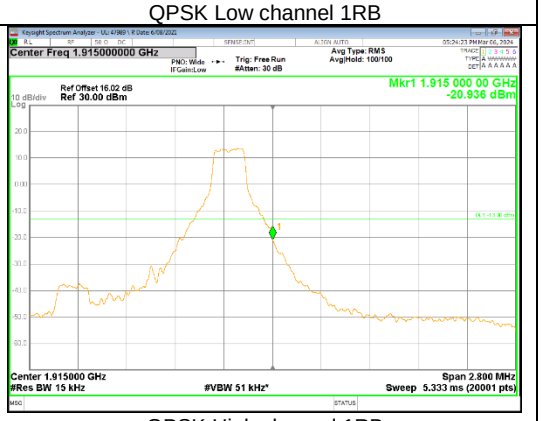
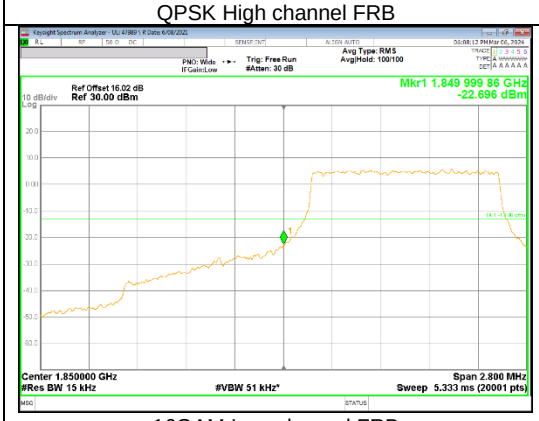
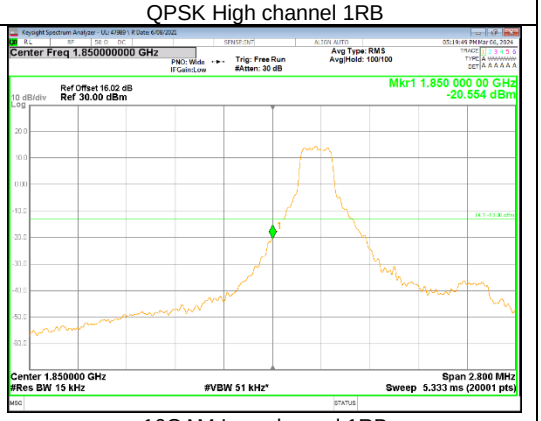
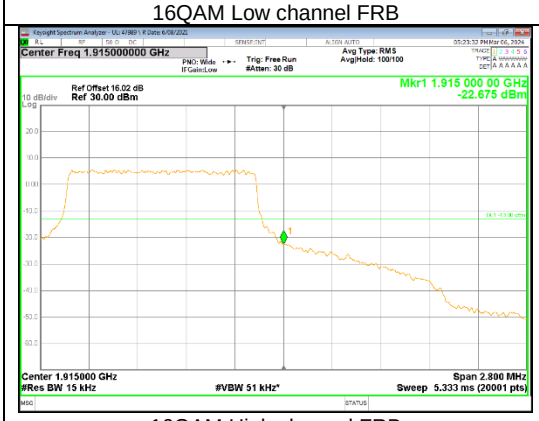
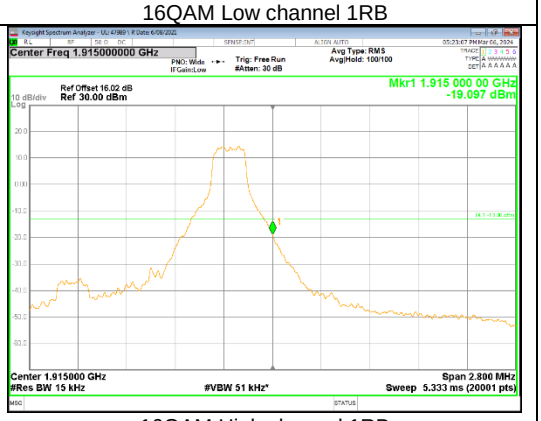
1.4MHz	 QPSK Low channel FRB	 QPSK Low channel 1RB
	 QPSK High channel FRB	 QPSK High channel 1RB
	 16QAM Low channel FRB	 16QAM Low channel 1RB
	 16QAM High channel FRB	 16QAM High channel 1RB

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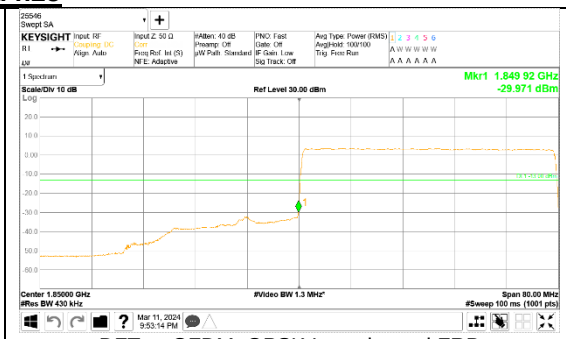
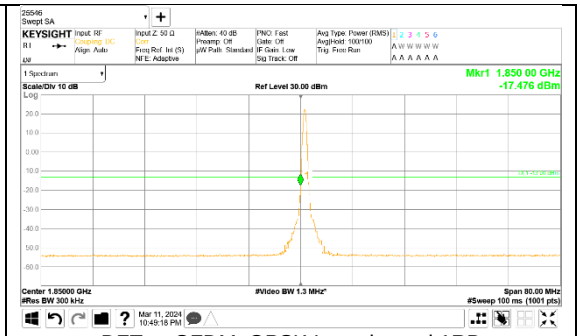
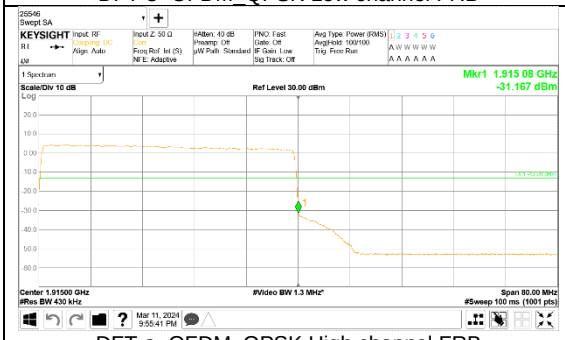
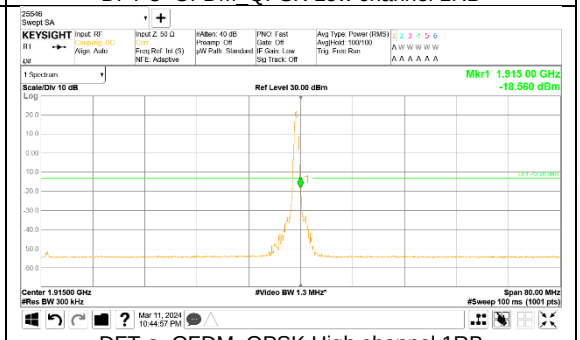
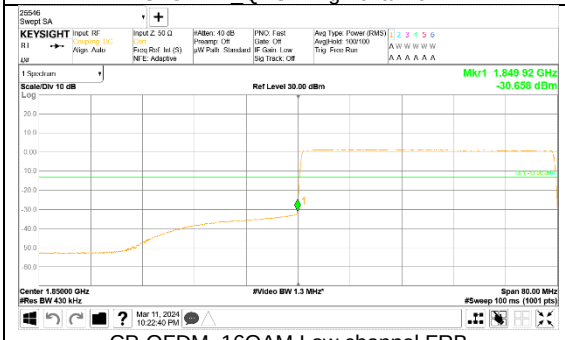
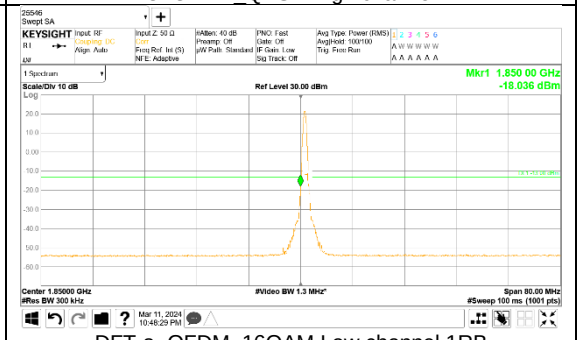
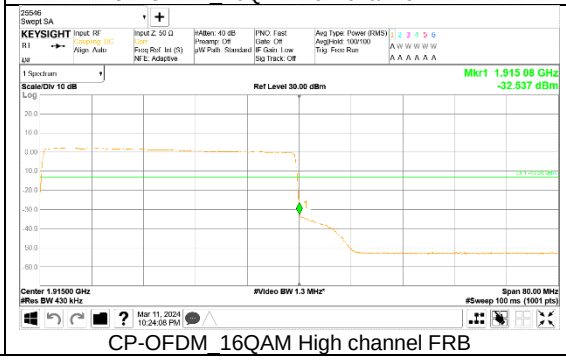
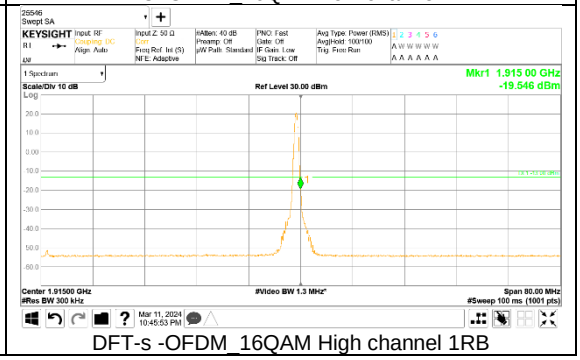
NR Band n25

40MHz	 DFT-s -OFDM_QPSK Low channel FRB	 DFT-s -OFDM_QPSK Low channel 1RB
	 DFT-s -OFDM_QPSK High channel FRB	 DFT-s -OFDM_QPSK High channel 1RB
	 CP-OFDM_16QAM Low channel FRB	 DFT-s -OFDM_16QAM Low channel 1RB
	 CP-OFDM_16QAM High channel FRB	 DFT-s -OFDM_16QAM High channel 1RB

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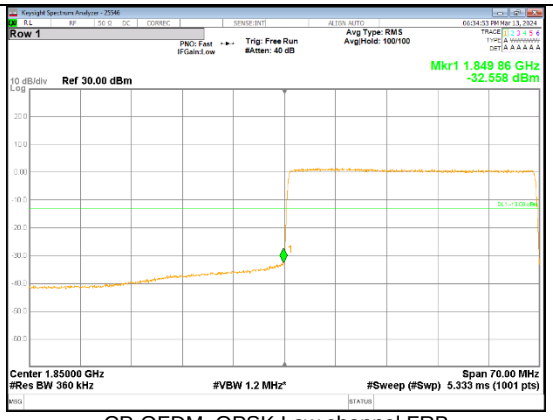
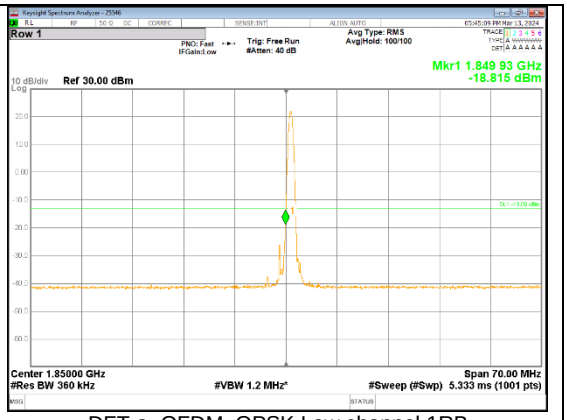
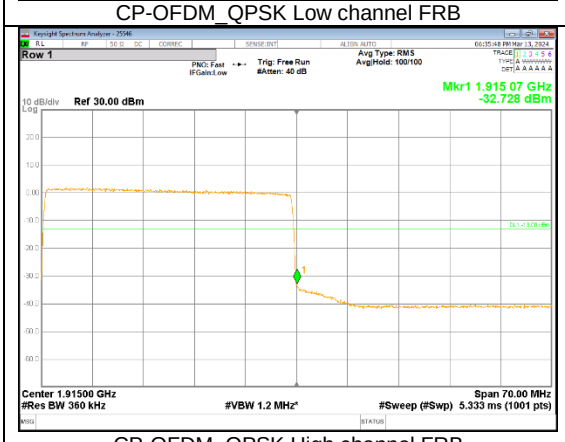
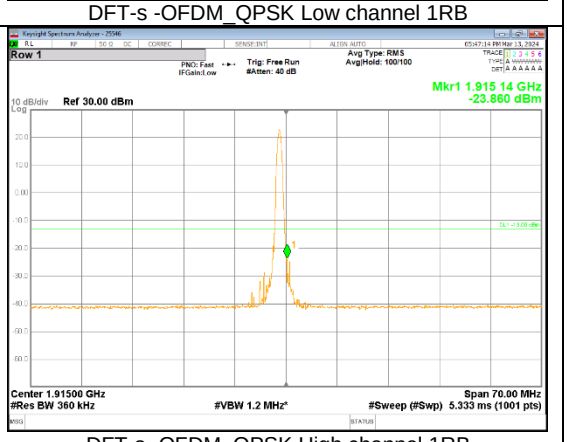
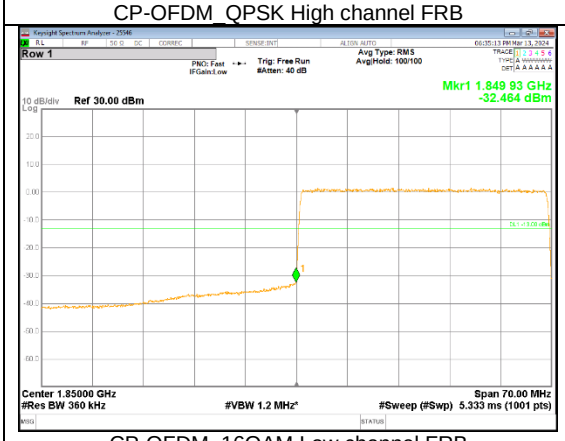
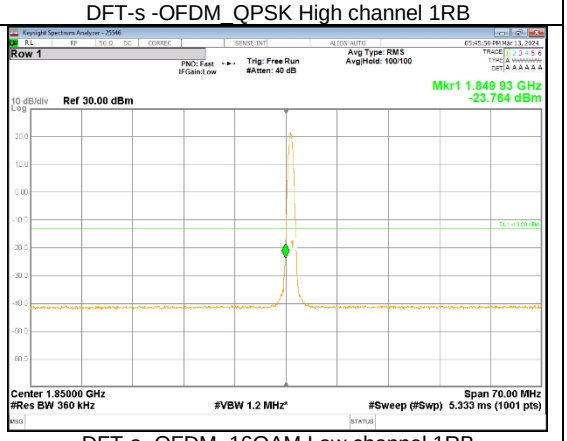
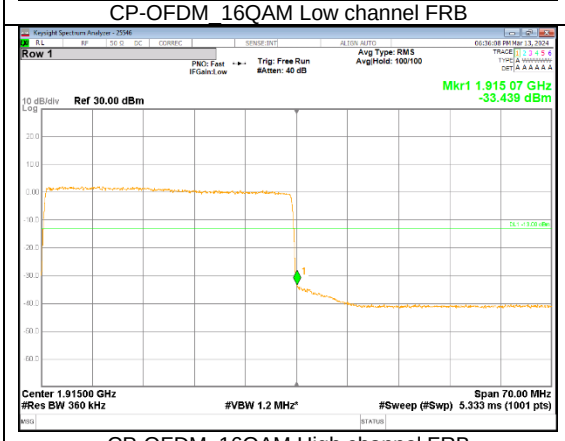
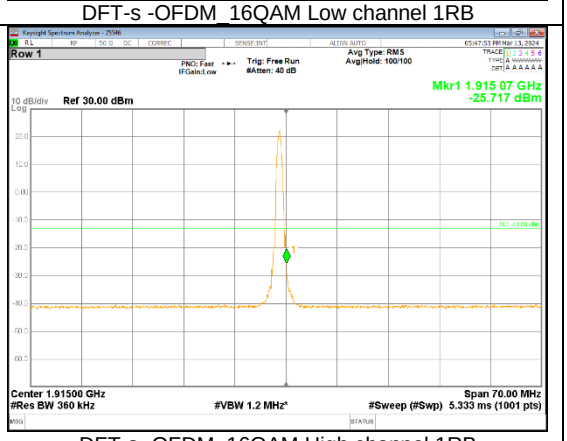
35MHz	 CP-OFDM_QPSK Low channel FRB	 DFT-s -OFDM_QPSK Low channel 1RB
	 CP-OFDM_QPSK High channel FRB	 DFT-s -OFDM_QPSK High channel 1RB
	 CP-OFDM_16QAM Low channel FRB	 DFT-s -OFDM_16QAM Low channel 1RB
	 CP-OFDM_16QAM High channel FRB	 DFT-s -OFDM_16QAM High channel 1RB

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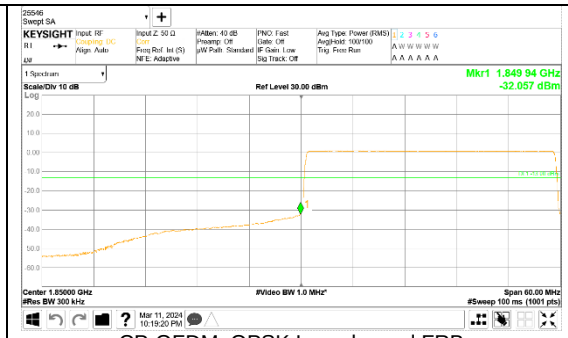
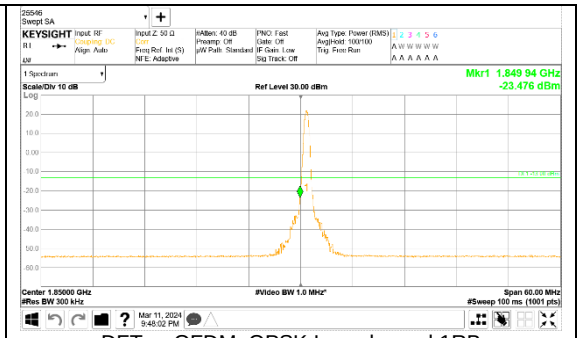
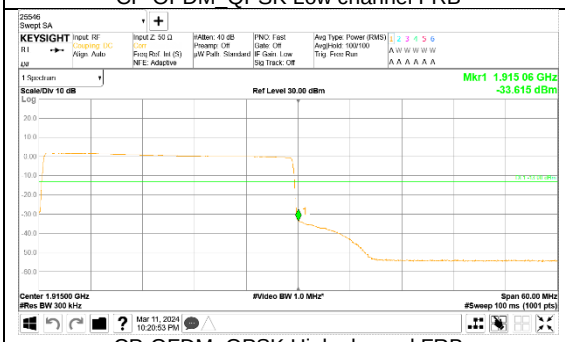
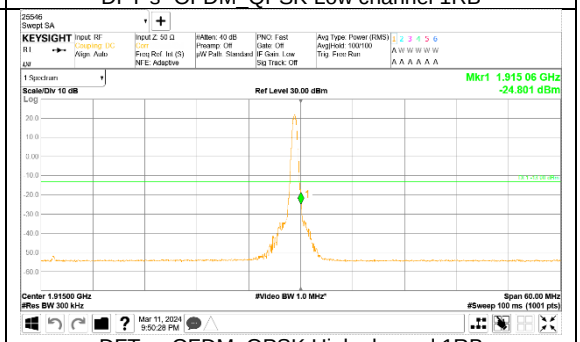
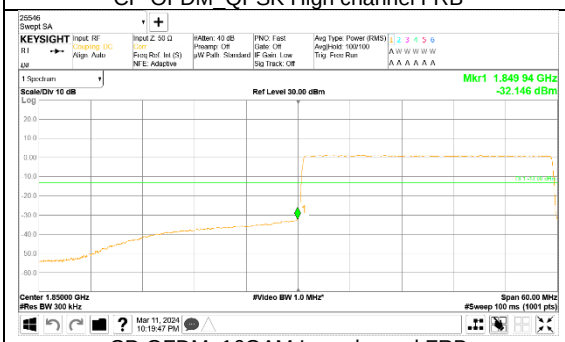
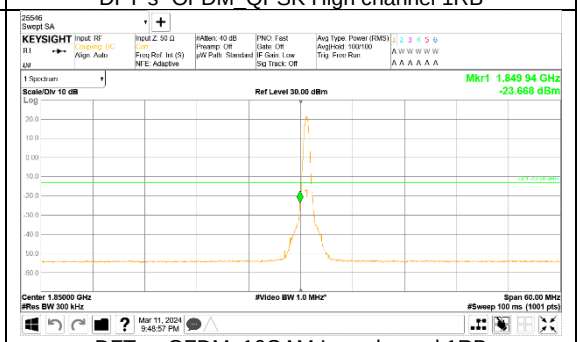
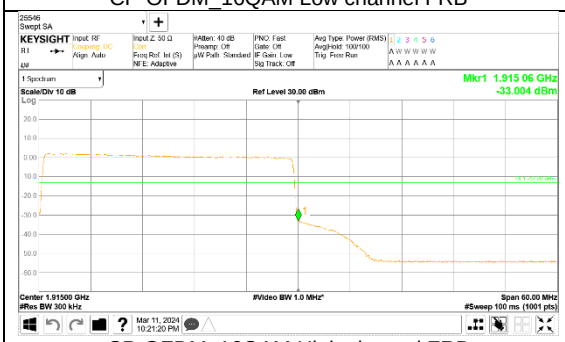
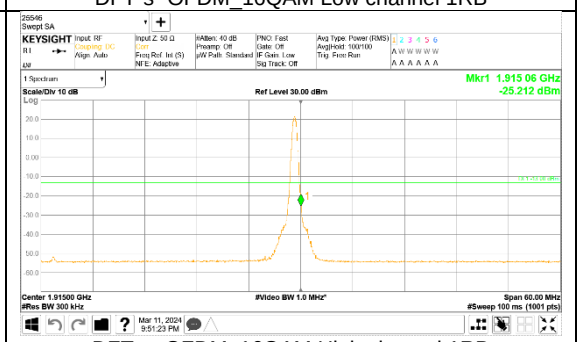
30MHz	 CP-OFDM_QPSK Low channel FRB	 DFT-s -OFDM_QPSK Low channel 1RB
	 CP-OFDM_QPSK High channel FRB	 DFT-s -OFDM_QPSK High channel 1RB
	 CP-OFDM_16QAM Low channel FRB	 DFT-s -OFDM_16QAM Low channel 1RB
	 CP-OFDM_16QAM High channel FRB	 DFT-s -OFDM_16QAM High channel 1RB

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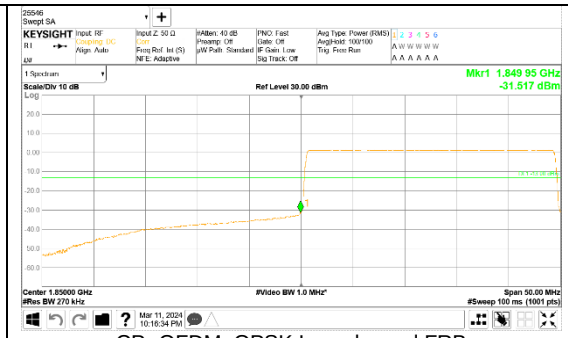
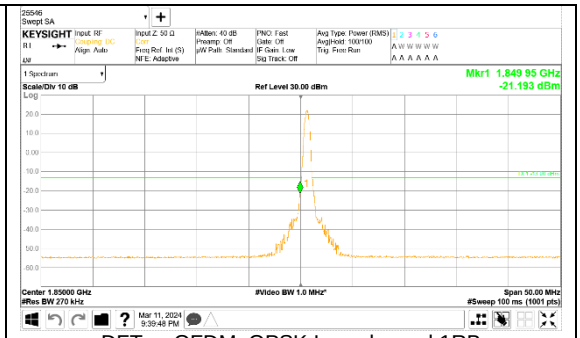
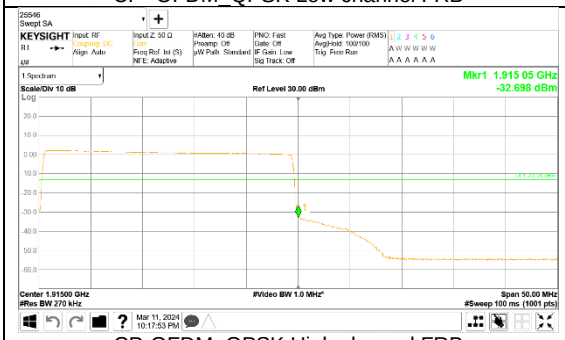
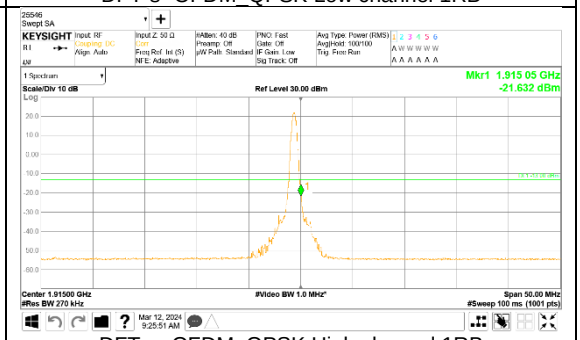
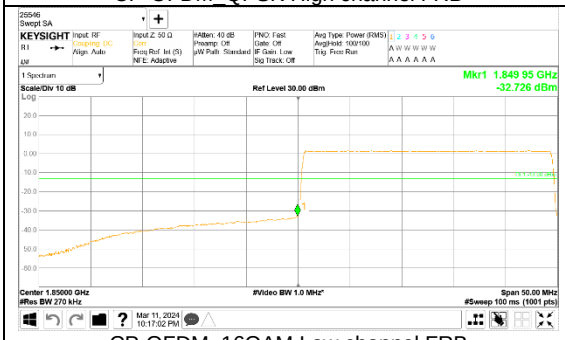
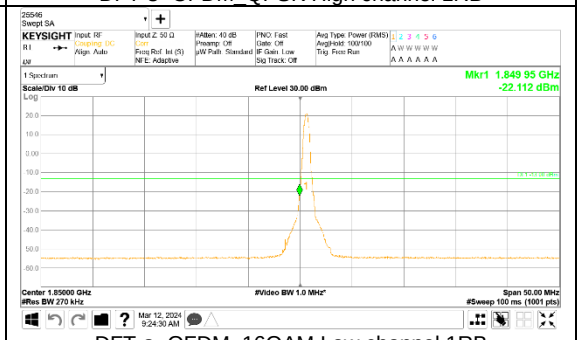
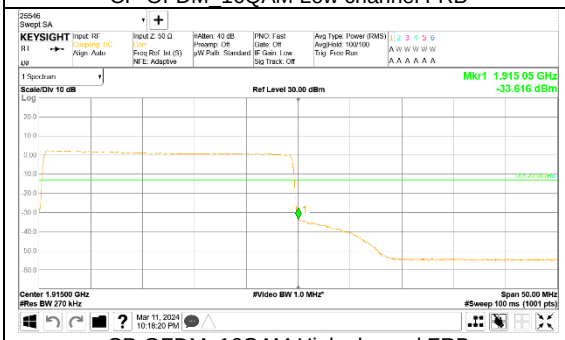
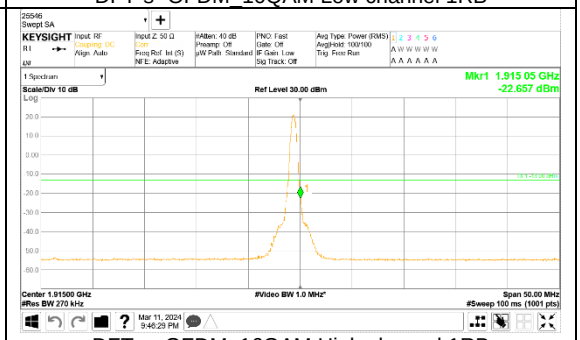
25MHz	 CP -OFDM_QPSK Low channel FRB	 DFT-s -OFDM_QPSK Low channel 1RB
	 CP-OFDM_QPSK High channel FRB	 DFT-s -OFDM_QPSK High channel 1RB
	 CP-OFDM_16QAM Low channel FRB	 DFT-s -OFDM_16QAM Low channel 1RB
	 CP-OFDM_16QAM High channel FRB	 DFT-s -OFDM_16QAM High channel 1RB

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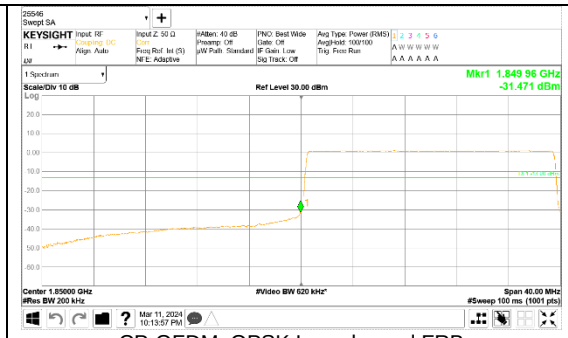
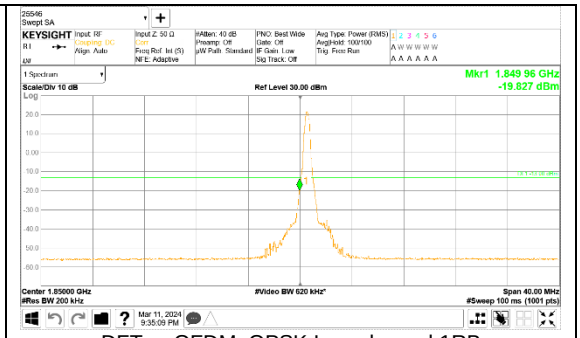
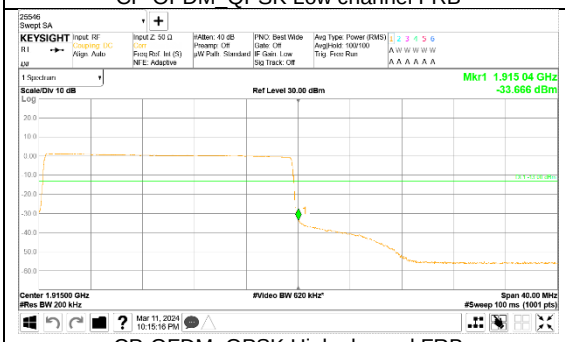
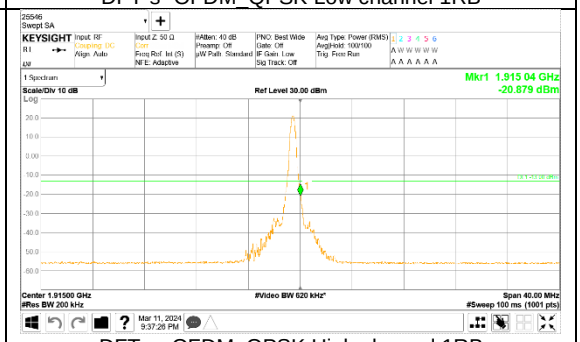
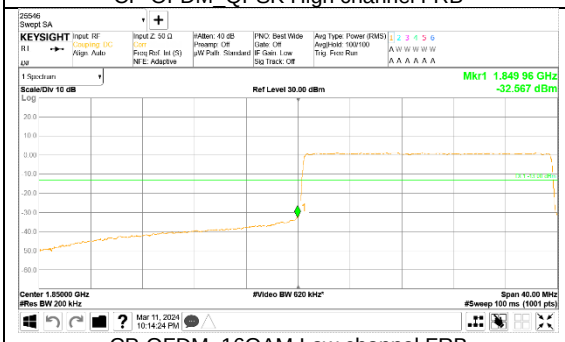
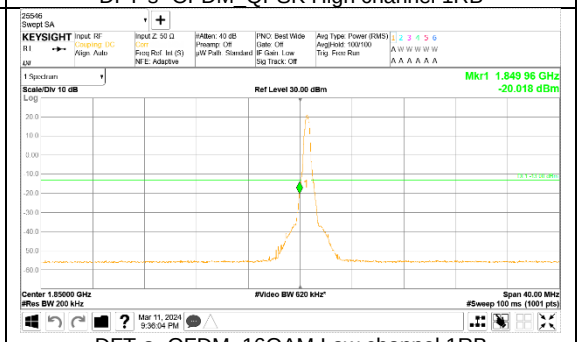
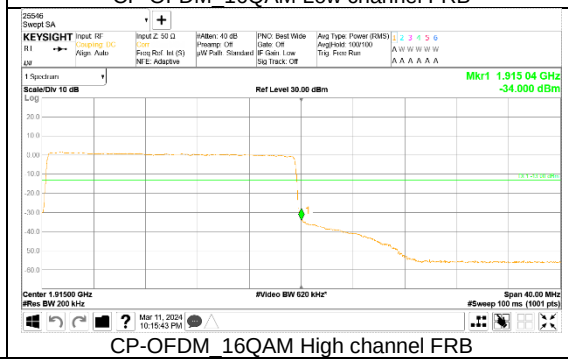
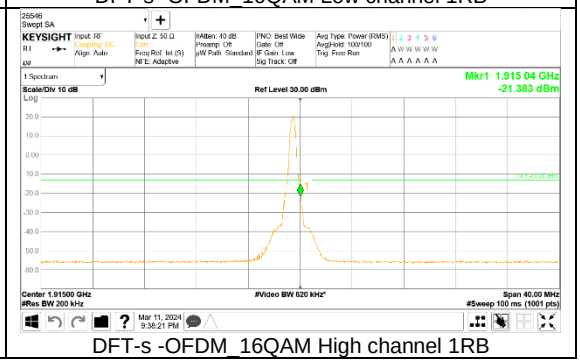
20MHz	 CP-OFDM_QPSK Low channel FRB	 DFT-s -OFDM_QPSK Low channel 1RB
	 CP-OFDM_QPSK High channel FRB	 DFT-s -OFDM_QPSK High channel 1RB
	 CP-OFDM_16QAM Low channel FRB	 DFT-s -OFDM_16QAM Low channel 1RB
	 CP-OFDM_16QAM High channel FRB	 DFT-s -OFDM_16QAM High channel 1RB

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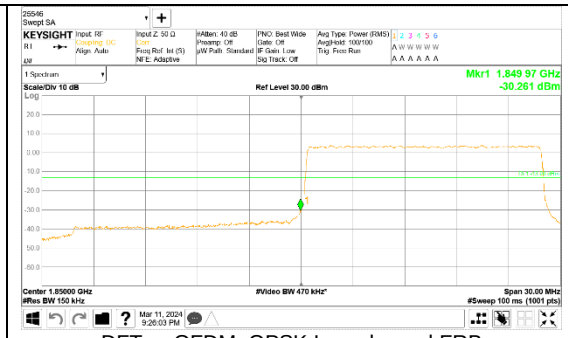
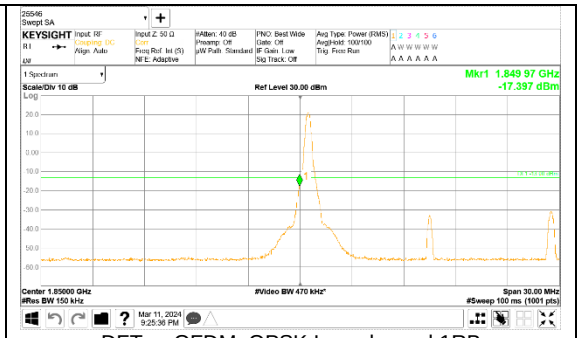
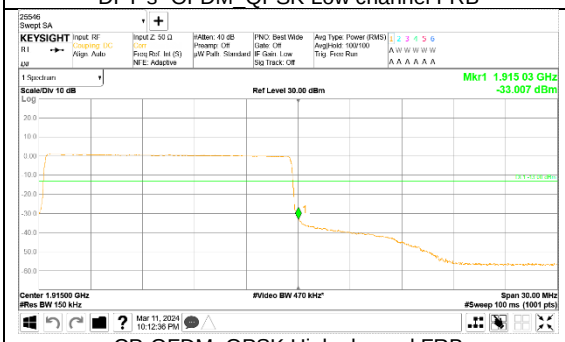
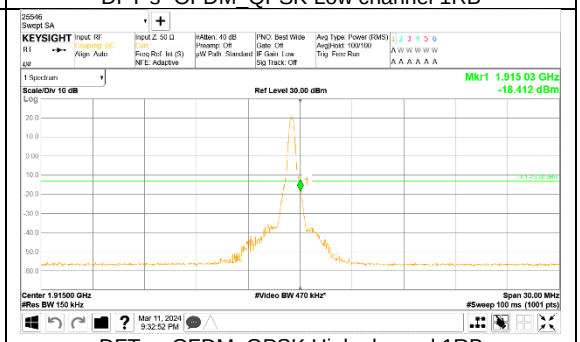
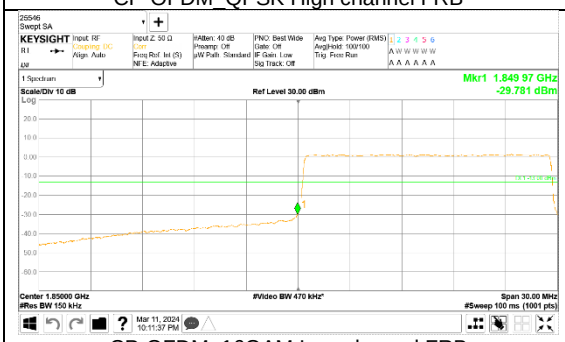
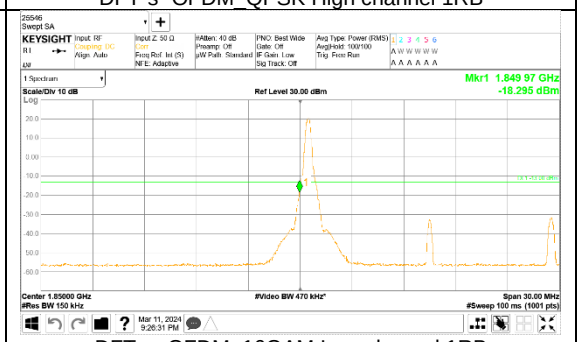
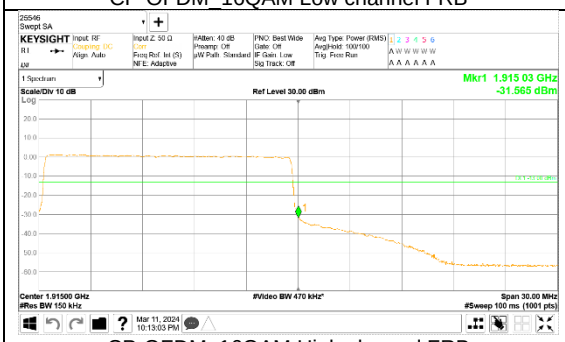
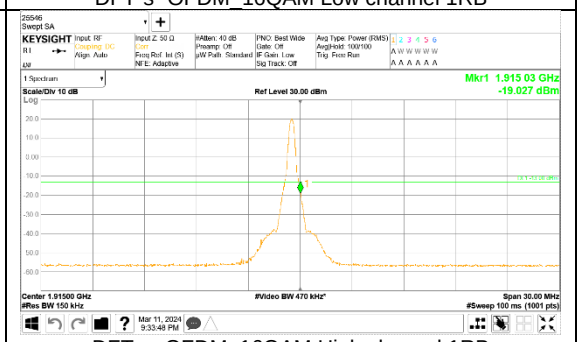
15MHz	 DFT-s -OFDM_QPSK Low channel FRB	 DFT-s -OFDM_QPSK Low channel 1RB
	 CP-OFDM_QPSK High channel FRB	 DFT-s -OFDM_QPSK High channel 1RB
	 CP-OFDM_16QAM Low channel FRB	 DFT-s -OFDM_16QAM Low channel 1RB
	 CP-OFDM_16QAM High channel FRB	 DFT-s -OFDM_16QAM High channel 1RB

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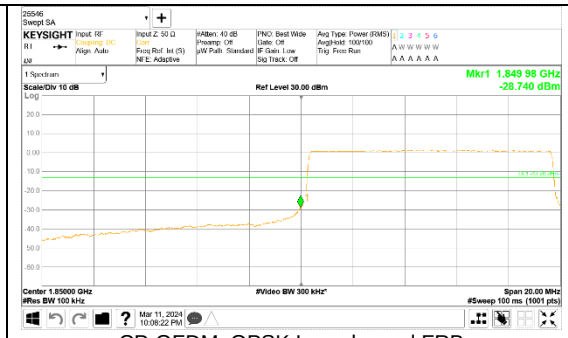
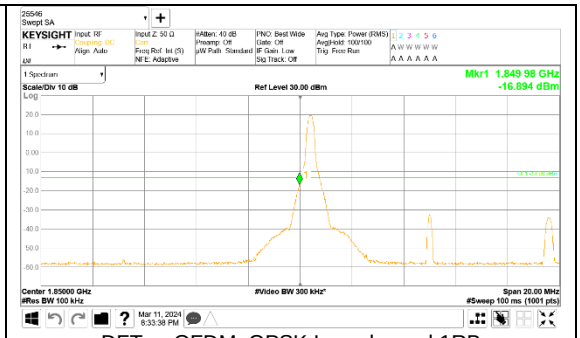
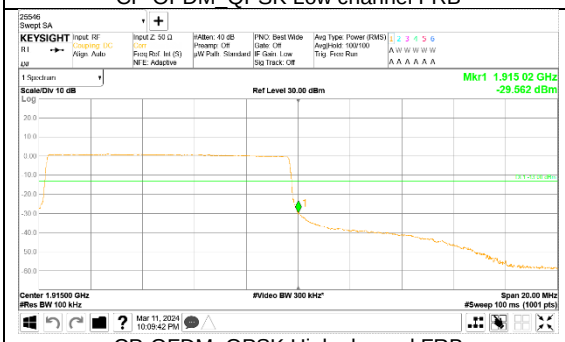
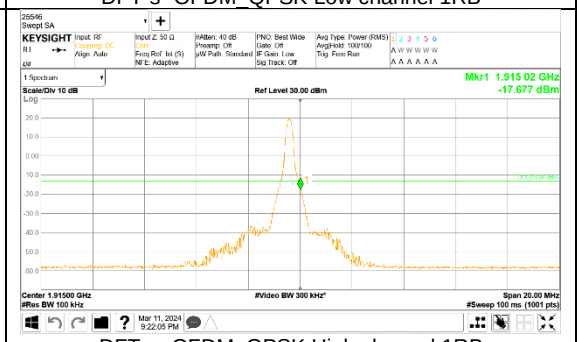
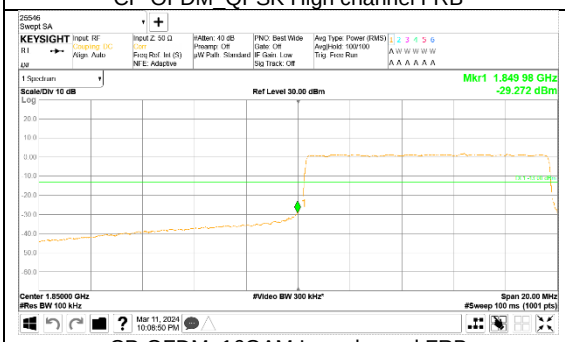
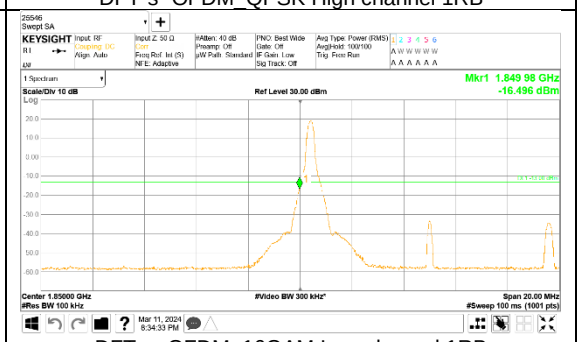
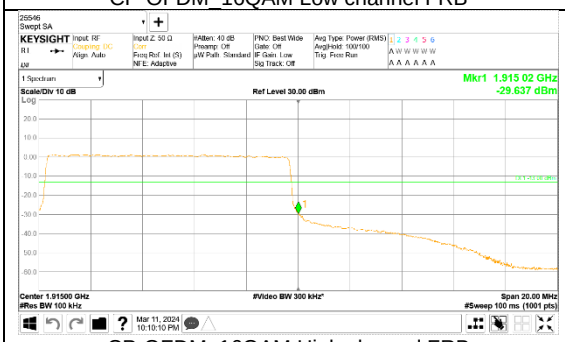
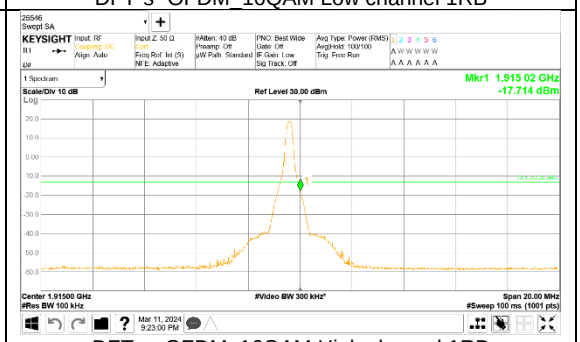
10MHz	 CP-OFDM_QPSK Low channel FRB	 DFT-s -OFDM_QPSK Low channel 1RB
	 CP-OFDM_QPSK High channel FRB	 DFT-s -OFDM_QPSK High channel 1RB
	 CP-OFDM_16QAM Low channel FRB	 DFT-s -OFDM_16QAM Low channel 1RB
	 CP-OFDM_16QAM High channel FRB	 DFT-s -OFDM_16QAM High channel 1RB

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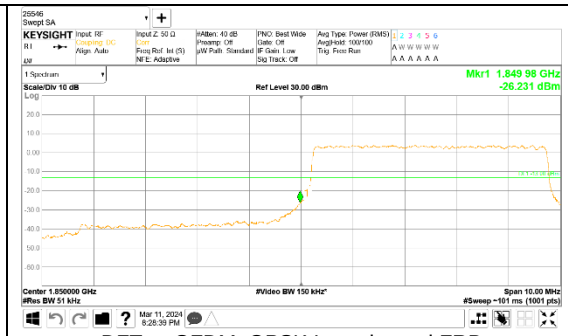
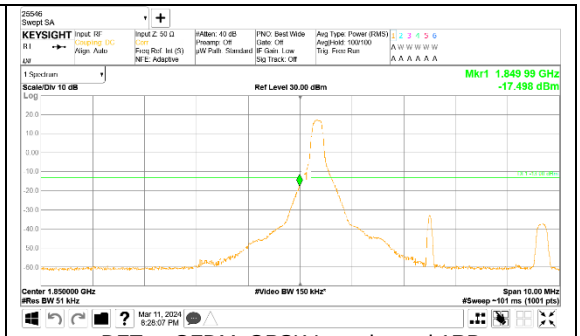
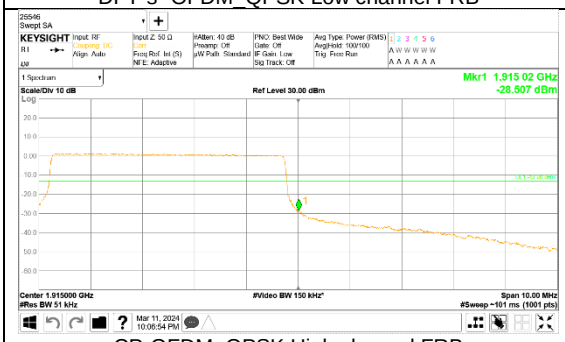
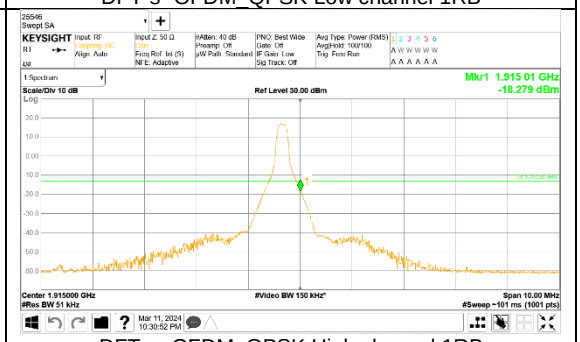
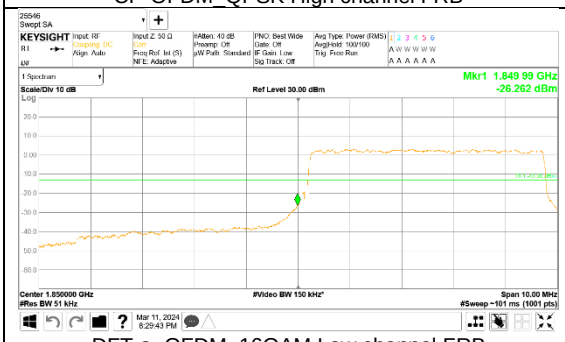
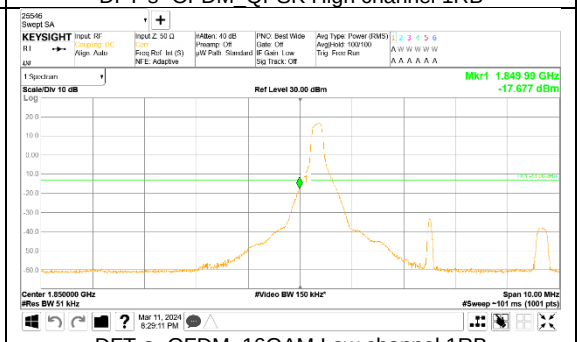
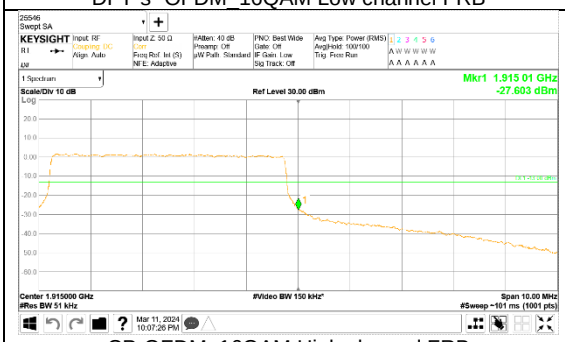
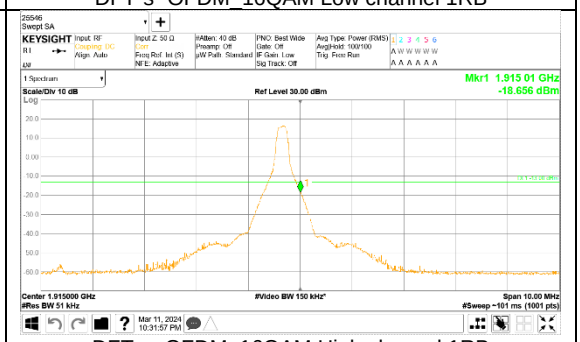
5MHz	 DFT-s -OFDM_QPSK Low channel FRB	 DFT-s -OFDM_QPSK Low channel 1RB
	 CP-OFDM_QPSK High channel FRB	 DFT-s -OFDM_QPSK High channel 1RB
	 DFT-s -OFDM_16QAM Low channel FRB	 DFT-s -OFDM_16QAM Low channel 1RB
	 CP-OFDM_16QAM High channel FRB	 DFT-s -OFDM_16QAM High channel 1RB

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8.5. CONDUCTED SPURIOUS EMISSIONS

RULE PART(S)

FCC: §2.1051, §24.238

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.

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 = 1 MHz for emissions above 1 GHz

   (Tests were performed 1MHz [Worst case], to sweep 1 time for all frequency range)

b) Set VBW ≥ 3 × 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 highst output power and density).
UMTS: It was tested at REL 99 as worst case (the highst output power and density).
LTE: It was tested at 1RB QPSK as worst case (the highst output power and density).
5G NR: All Waveforms (CP-OFDM vs DFT-s_OFDM) and modulations (π/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.

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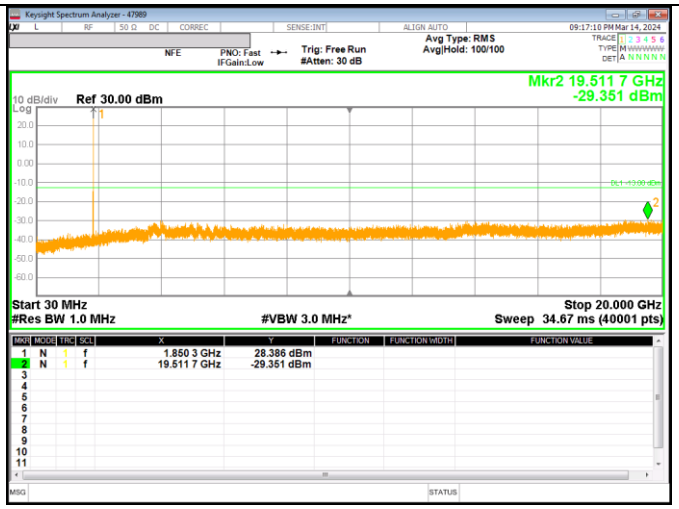
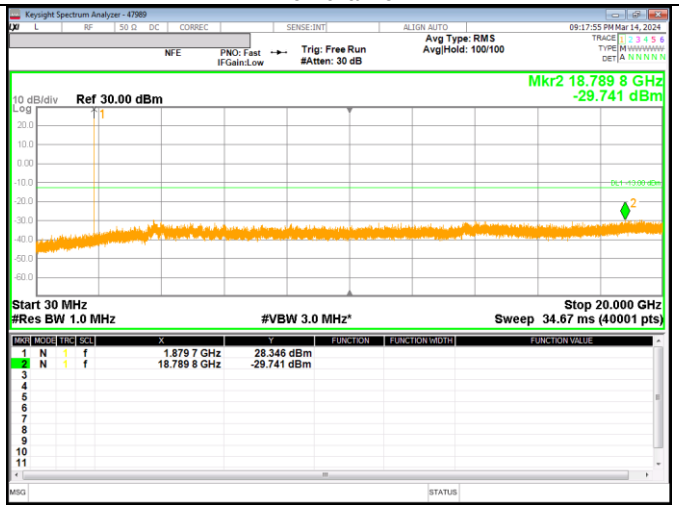
8.5.1. OUT OF BAND EMISSIONS RESULT

GSM 1900

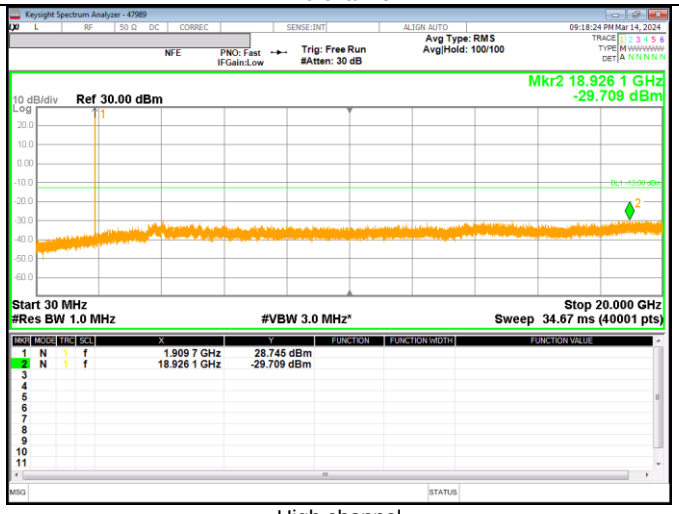
GPRS



Low channel



Mid channel



High channel

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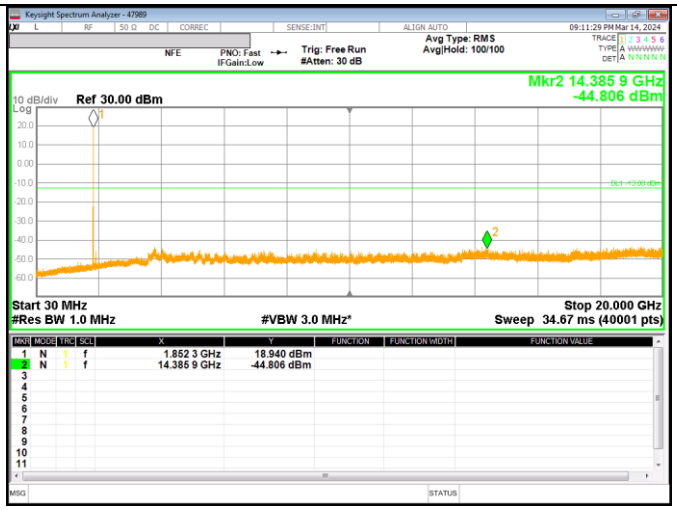
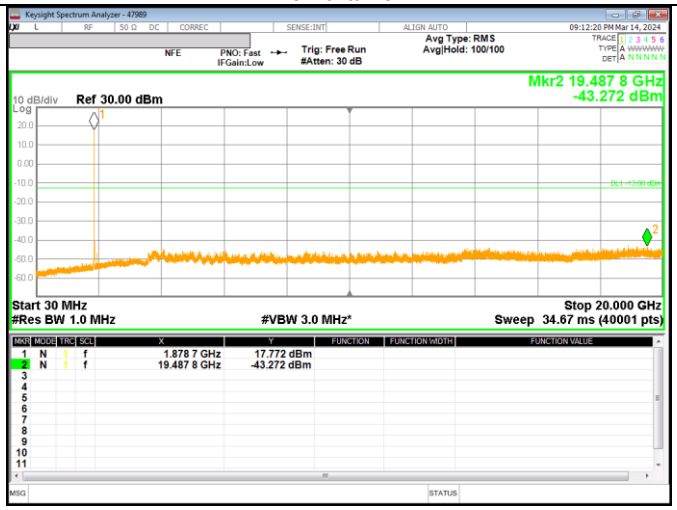
WCDMA Band 2

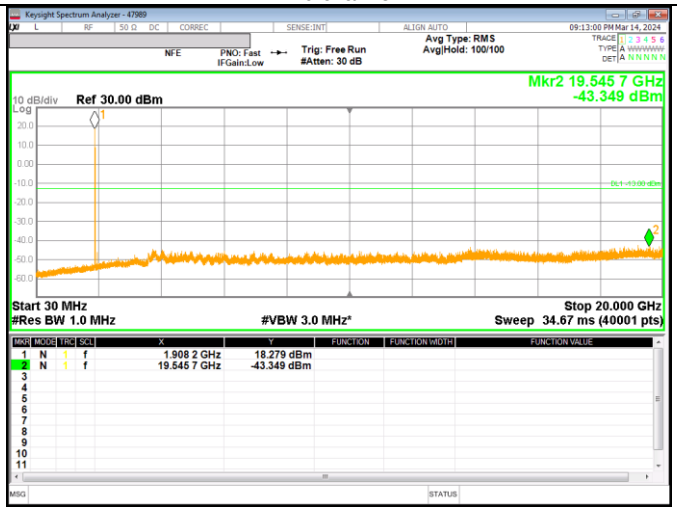
REL 99



Low channel



Mid channel



High channel

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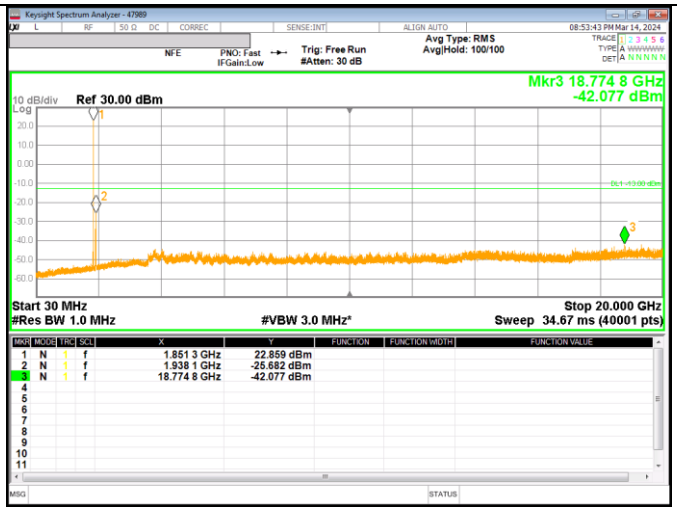
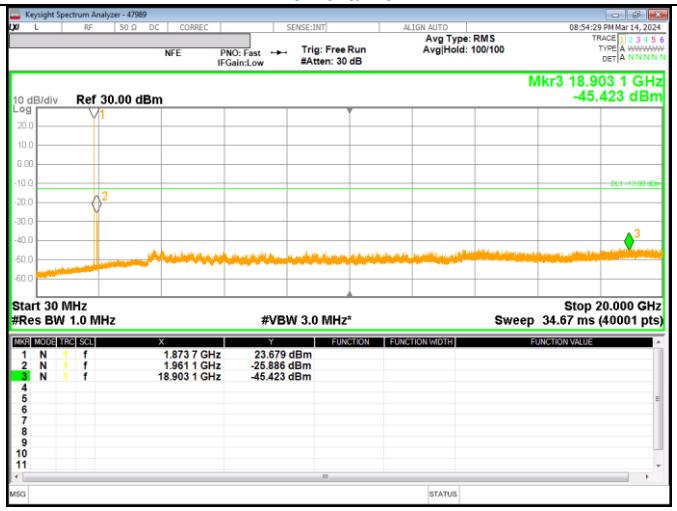
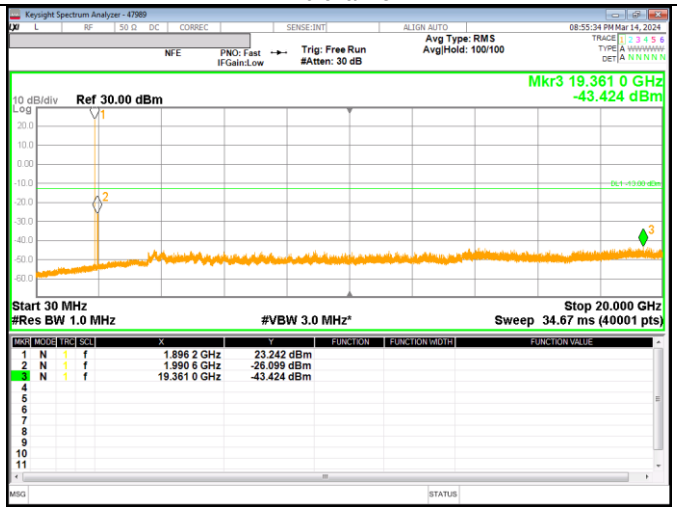
LTE Band 25

20MHz QPSK

Low channel

Mid channel

High channel

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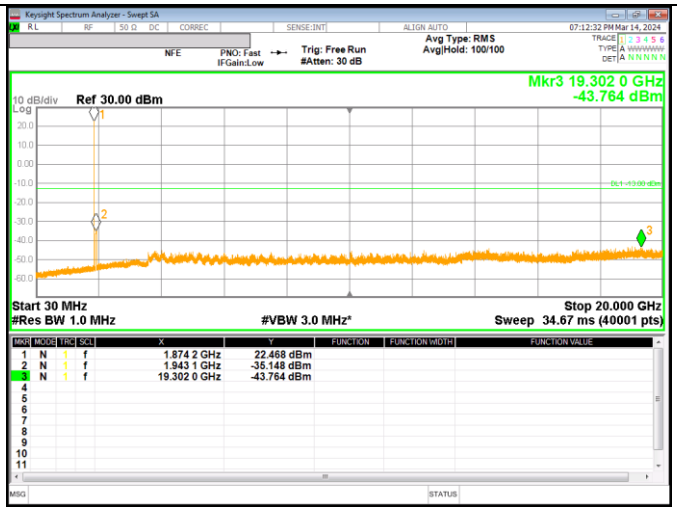
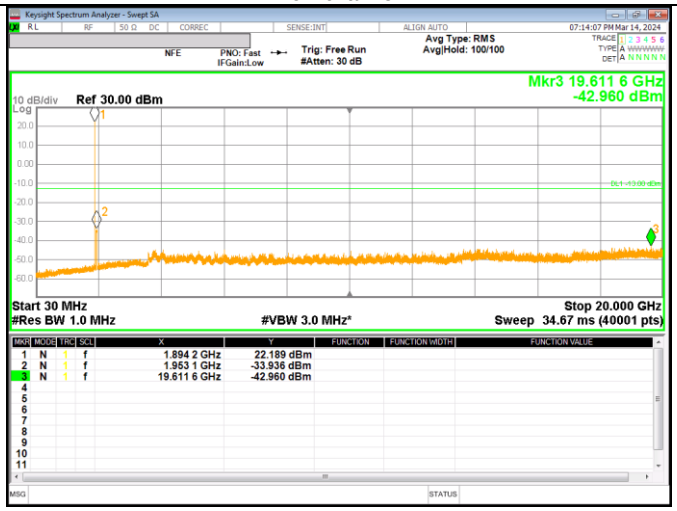
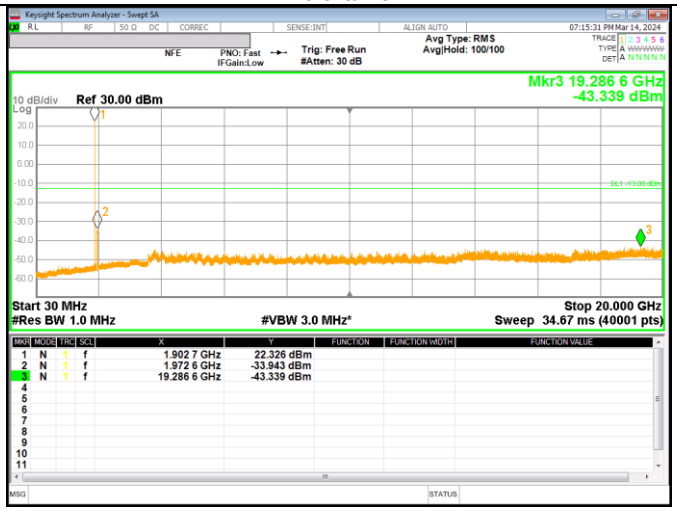
NR Band n25

15MHz QPSK_DFT-s_OFDM

Low channel

Mid channel

High channel

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8.6. FREQUENCY STABILITY

RULE PART(S)

FCC: §2.1055, §24.235

LIMITS

§24.235
The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

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.

UL KOREA LTD. Suwon Laboratory FORM ID: FCC_24(05)
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8.6.1. FREQUENCY STABILITY RESULT

GSM 1900, Channel 512/810, Frequency 1850.0/1910.0 MHz
(Lowest Frequency:EGPRS / Highest Frequency: GPRS)

Test Date	2024-03-04
Test Engineer	47989

Limit		1850	1910	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ End of OBW	F high @ End of OBW		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	1850.0767	1909.9237		
Extreme (50C)		1850.0767	1909.9237	20.9	0.011
Extreme (40C)		1850.0767	1909.9237	20.7	0.011
Extreme (30C)		1850.0767	1909.9237	23.4	0.012
Extreme (10C)		1850.0767	1909.9237	28.2	0.015
Extreme (0C)		1850.0767	1909.9237	21.8	0.012
Extreme (-10C)		1850.0767	1909.9237	31.3	0.017
Extreme (-20C)		1850.0767	1909.9237	28.7	0.015
Extreme (-30C)		1850.0767	1909.9237	27.3	0.015
20C	15%	1850.0767	1909.9237	21.2	0.011
	-15%	1850.0767	1909.9237	20.2	0.011
	End Point	1850.0767	1909.9237	22.6	0.012

WCDMA Band 2 (Lowest Frequency: HSDPA / Highest Frequency: HSDPA)

Test Date	2024-02-27
Test Engineer	47989

Limit		1850	1910	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ End of OBW	F high @ End of OBW		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	1850.3177	1909.6806		
Extreme (50C)		1850.3177	1909.6806	13.1	0.007
Extreme (40C)		1850.3177	1909.6806	8.0	0.004
Extreme (30C)		1850.3177	1909.6806	8.2	0.004
Extreme (10C)		1850.3177	1909.6806	5.1	0.003
Extreme (0C)		1850.3177	1909.6806	7.7	0.004
Extreme (-10C)		1850.3177	1909.6806	6.4	0.003
Extreme (-20C)		1850.3177	1909.6806	10.2	0.005
Extreme (-30C)		1850.3177	1909.6806	14.9	0.008
20C	15%	1850.3177	1909.6806	6.4	0.003
	-15%	1850.3177	1909.6806	6.8	0.004
	End Point	1850.3177	1909.6806	8.8	0.005

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LTE Band 25 (Lowest Frequency: 16QAM / Highest Frequency: QPSK)

Test Date	2024-03-07
Test Engineer	47989

Limit		1850	1915	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ End of OBW	F high @ End of OBW		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)		1850.1535	1914.8462		
Extreme (50C)		1850.1535	1914.8462	13.0	0.007
Extreme (40C)		1850.1535	1914.8462	8.4	0.004
Extreme (30C)		1850.1535	1914.8462	7.4	0.004
Extreme (10C)	Normal	1850.1535	1914.8462	8.4	0.004
Extreme (0C)		1850.1535	1914.8462	12.2	0.006
Extreme (-10C)		1850.1535	1914.8462	7.4	0.004
Extreme (-20C)		1850.1535	1914.8462	8.2	0.004
Extreme (-30C)		1850.1535	1914.8462	8.4	0.004
	15%	1850.1535	1914.8462	8.8	0.005
20C	-15%	1850.1535	1914.8462	6.2	0.003
	End Point	1850.1535	1914.8462	6.1	0.003

NR Band n25 (Lowest Frequency: 16QAM / Highest Frequency: 16QAM)

Test Date	2024-03-14
Test Engineer	47989

Limit		1850	1915	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ End of OBW	F high @ End of OBW		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)		1850.2527	1914.7429		
Extreme (50C)		1850.2527	1914.7429	13.5	0.007
Extreme (40C)		1850.2527	1914.7429	12.3	0.007
Extreme (30C)		1850.2527	1914.7429	10.7	0.006
Extreme (10C)	Normal	1850.2527	1914.7429	9.9	0.005
Extreme (0C)		1850.2527	1914.7429	7.9	0.004
Extreme (-10C)		1850.2527	1914.7429	9.9	0.005
Extreme (-20C)		1850.2527	1914.7429	14.6	0.008
Extreme (-30C)		1850.2527	1914.7429	20.8	0.011
	15%	1850.2527	1914.7429	6.1	0.003
20C	-15%	1850.2527	1914.7429	7.2	0.004
	End Point	1850.2527	1914.7429	7.3	0.004

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9. RADIATED RESULTS

9.1. RADIATED POWER (EIRP)

RULE PART(S)

FCC: §2.1046, §24.232

LIMITS

Part 24.232(c)

Mobile/portable stations are limited to 2 watts e.i.r.p. peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications.

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

TEST RESULTS

See the following pages.

UL KOREA LTD. Suwon Laboratory FORM ID: FCC_24(05)
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9.1.1. EIRP RESULT

GSM (ANT B)

Band	Mode	Frequency (MHz)	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Delta (dB)
GSM 1900	GPRS	1850.20	26.29	H	4.48	9.52	31.33	1358.31	33.00	-1.67
		1880.00	25.96	H	4.52	9.29	30.72	1180.32	33.00	-2.28
		1909.80	27.17	H	4.55	9.00	31.62	1452.11	33.00	-1.38
	EGPRS	1850.20	23.99	H	4.48	9.52	29.03	799.83	33.00	-3.97
		1880.00	24.08	H	4.52	9.29	28.84	765.60	33.00	-4.16
		1909.80	25.18	H	4.55	9.00	29.63	918.33	33.00	-3.37

WCDMA (ANT B)

Band	Mode	Frequency (MHz)	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Delta (dB)
Band 5	REL99	1852.40	20.42	H	4.49	9.51	25.43	349.14	33.00	-7.57
		1880.00	20.76	H	4.52	9.29	25.52	356.45	33.00	-7.48
		1907.60	20.73	H	4.55	9.03	25.21	331.89	33.00	-7.79
	HSDPA	1852.40	19.37	H	4.49	9.51	24.38	274.16	33.00	-8.62
		1880.00	19.71	H	4.52	9.29	24.47	279.90	33.00	-8.53
		1907.60	19.60	H	4.55	9.03	24.08	255.86	33.00	-8.92

LTE Band 25 (ANT B)

BW (MHz)	Modulation	Frequency (MHz)	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Delta (dB)	RB
20	QPSK	1860.00	20.65	H	4.49	9.45	25.61	363.92	33.00	-7.39	1/0
		1882.50	20.62	H	4.52	9.27	25.37	344.35	33.00	-7.63	1/0
		1905.00	20.53	H	4.55	9.06	25.05	319.89	33.00	-7.95	1/0
	16-QAM	1860.00	19.77	H	4.49	9.45	24.73	297.17	33.00	-8.27	1/0
		1882.50	19.75	H	4.52	9.27	24.50	281.84	33.00	-8.50	1/49
		1905.00	19.69	H	4.55	9.06	24.21	263.63	33.00	-8.79	1/0
15	QPSK	1857.50	20.78	H	4.49	9.47	25.76	376.70	33.00	-7.24	1/0
		1882.50	20.49	H	4.52	9.27	25.24	334.20	33.00	-7.76	1/0
		1907.50	20.71	H	4.55	9.03	25.19	330.37	33.00	-7.81	1/37
	16-QAM	1857.50	19.91	H	4.49	9.47	24.89	308.32	33.00	-8.11	1/0
		1882.50	19.66	H	4.52	9.27	24.41	276.06	33.00	-8.59	1/74
		1907.50	19.87	H	4.55	9.03	24.35	272.27	33.00	-8.65	1/37
10	QPSK	1855.00	20.55	H	4.49	9.48	25.55	358.92	33.00	-7.45	1/0
		1882.50	20.54	H	4.52	9.27	25.29	338.06	33.00	-7.71	1/25
		1910.00	20.52	H	4.55	8.99	24.96	313.33	33.00	-8.04	1/0
	16-QAM	1855.00	19.55	H	4.49	9.48	24.55	285.10	33.00	-8.45	1/0
		1882.50	19.55	H	4.52	9.27	24.30	269.15	33.00	-8.70	1/25
		1910.00	19.55	H	4.55	8.99	23.99	250.61	33.00	-9.01	1/25
5	QPSK	1852.50	20.55	H	4.49	9.50	25.57	360.58	33.00	-7.43	1/0
		1882.50	20.72	H	4.52	9.27	25.47	352.37	33.00	-7.53	1/0
		1912.50	20.51	H	4.56	8.96	24.92	310.46	33.00	-8.08	1/12
	16-QAM	1852.50	19.57	H	4.49	9.50	24.59	287.74	33.00	-8.41	1/0
		1882.50	19.83	H	4.52	9.27	24.58	287.08	33.00	-8.42	1/0
		1912.50	19.59	H	4.56	8.96	24.00	251.19	33.00	-9.00	1/12
3	QPSK	1851.50	20.20	H	4.49	9.51	25.23	333.43	33.00	-7.77	1/8
		1882.50	20.63	H	4.52	9.27	25.38	345.14	33.00	-7.62	1/8
		1913.50	20.27	H	4.56	8.95	24.66	292.42	33.00	-8.34	1/8
	16-QAM	1851.50	19.36	H	4.49	9.51	24.39	274.79	33.00	-8.61	1/8
		1882.50	19.76	H	4.52	9.27	24.51	282.49	33.00	-8.49	1/14
		1913.50	19.25	H	4.56	8.95	23.64	231.21	33.00	-9.36	1/8
1.4	QPSK	1850.70	20.33	H	4.48	9.52	25.37	344.35	33.00	-7.63	1/0
		1882.50	20.70	H	4.52	9.27	25.45	350.75	33.00	-7.55	1/0
		1914.30	20.34	H	4.56	8.94	24.72	296.48	33.00	-8.28	1/0
	16-QAM	1850.70	19.42	H	4.48	9.52	24.46	279.25	33.00	-8.54	1/5
		1882.50	19.82	H	4.52	9.27	24.57	286.42	33.00	-8.43	1/5
		1914.30	19.44	H	4.56	8.94	23.82	240.99	33.00	-9.18	1/0

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LTE Band 25 (ANT E)

BW (MHz)	Modulation	Frequency (MHz)	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Delta (dB)	RB
20	QPSK	1860.00	18.31	H	4.49	9.45	23.27	212.32	33.00	-9.73	1/99
		1882.50	18.81	H	4.52	9.27	23.56	226.99	33.00	-9.44	1/49
		1905.00	19.48	H	4.55	9.06	24.00	251.19	33.00	-9.00	1/0
	16-QAM	1860.00	17.11	H	4.49	9.45	22.07	161.06	33.00	-10.93	1/99
		1882.50	17.78	H	4.52	9.27	22.53	179.06	33.00	-10.47	1/99
		1905.00	17.66	H	4.55	9.06	22.18	165.20	33.00	-10.82	1/0
15	QPSK	1857.50	17.95	H	4.49	9.47	22.92	195.88	33.00	-10.08	1/0
		1882.50	18.89	H	4.52	9.27	23.64	231.21	33.00	-9.36	1/37
		1907.50	19.20	H	4.55	9.03	23.68	233.35	33.00	-9.32	1/37
	16-QAM	1857.50	17.07	H	4.49	9.47	22.04	159.96	33.00	-10.96	1/37
		1882.50	17.67	H	4.52	9.27	22.42	174.58	33.00	-10.58	1/37
		1907.50	18.12	H	4.55	9.03	22.60	181.97	33.00	-10.40	1/37
10	QPSK	1855.00	18.11	H	4.49	9.48	23.10	204.17	33.00	-9.90	1/25
		1882.50	18.55	H	4.52	9.27	23.30	213.80	33.00	-9.70	1/25
		1910.00	18.72	H	4.55	8.99	23.16	207.01	33.00	-9.84	1/25
	16-QAM	1855.00	16.93	H	4.49	9.48	21.92	155.60	33.00	-11.08	1/25
		1882.50	17.71	H	4.52	9.27	22.46	176.20	33.00	-10.54	1/25
		1910.00	17.69	H	4.55	8.99	22.13	163.31	33.00	-10.87	1/25
5	QPSK	1852.50	17.63	H	4.49	9.50	22.64	183.65	33.00	-10.36	1/0
		1882.50	18.63	H	4.52	9.27	23.38	217.77	33.00	-9.62	1/0
		1912.50	18.70	H	4.56	8.96	23.11	204.64	33.00	-9.89	1/12
	16-QAM	1852.50	16.35	H	4.49	9.50	21.36	136.77	33.00	-11.64	1/0
		1882.50	17.98	H	4.52	9.27	22.73	187.50	33.00	-10.27	1/12
		1912.50	17.95	H	4.56	8.96	22.36	172.19	33.00	-10.64	1/12
3	QPSK	1851.50	17.40	H	4.49	9.51	22.43	174.98	33.00	-10.57	1/8
		1882.50	18.31	H	4.52	9.27	23.06	202.30	33.00	-9.94	1/8
		1913.50	19.09	H	4.56	8.95	23.47	222.33	33.00	-9.53	1/8
	16-QAM	1851.50	16.29	H	4.49	9.51	21.32	135.52	33.00	-11.68	1/8
		1882.50	17.56	H	4.52	9.27	22.31	170.22	33.00	-10.69	1/8
		1913.50	18.13	H	4.56	8.95	22.51	178.24	33.00	-10.49	1/8
1.4	QPSK	1850.70	18.16	H	4.48	9.52	23.19	208.45	33.00	-9.81	1/5
		1882.50	18.99	H	4.52	9.27	23.74	236.59	33.00	-9.26	1/0
		1914.30	18.82	H	4.56	8.94	23.19	208.45	33.00	-9.81	1/5
	16-QAM	1850.70	17.10	H	4.48	9.52	22.13	163.31	33.00	-10.87	1/0
		1882.50	17.98	H	4.52	9.27	22.73	187.50	33.00	-10.27	1/0
		1914.30	17.56	H	4.56	8.94	21.93	155.96	33.00	-11.07	1/0

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NR Band n25 (DFT-OFDM) (ANT B)

BW (MHz)	Modulation	Frequency (MHz)	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Delta (dB)	RB
40	QPSK	1870.00	19.53	H	4.51	9.37	24.39	274.79	33.00	-8.61	1/1
		1882.50	20.01	H	4.52	9.27	24.76	299.23	33.00	-8.24	1/1
		1895.00	20.24	H	4.54	9.17	24.87	306.90	33.00	-8.13	1/214
	16-QAM	1870.00	18.50	H	4.51	9.37	23.36	216.77	33.00	-9.64	1/1
		1882.50	19.05	H	4.52	9.27	23.80	239.88	33.00	-9.20	1/1
		1895.00	19.22	H	4.54	9.17	23.85	242.66	33.00	-9.15	1/108
35	QPSK	1867.50	20.10	H	4.51	9.39	24.98	314.77	33.00	-8.02	1/93
		1882.50	20.13	H	4.52	9.27	24.88	307.61	33.00	-8.12	1/186
		1897.50	20.11	H	4.54	9.15	24.73	297.17	33.00	-8.27	1/93
	16-QAM	1867.50	19.45	H	4.51	9.39	24.33	271.02	33.00	-8.67	1/186
		1882.50	18.42	H	4.52	9.27	23.17	207.49	33.00	-9.83	1/186
		1897.50	18.96	H	4.54	9.15	23.58	228.03	33.00	-9.42	1/93
30	QPSK	1865.00	20.12	H	4.50	9.41	25.02	317.69	33.00	-7.98	1/158
		1882.50	20.37	H	4.52	9.27	25.12	325.09	33.00	-7.88	1/158
		1900.00	20.37	H	4.54	9.13	24.97	314.05	33.00	-8.03	1/158
	16-QAM	1865.00	19.30	H	4.50	9.41	24.20	263.03	33.00	-8.80	1/158
		1882.50	19.43	H	4.52	9.27	24.18	261.82	33.00	-8.82	1/158
		1900.00	19.45	H	4.54	9.13	24.05	254.10	33.00	-8.95	1/158
25	QPSK	1862.50	20.19	H	4.50	9.43	25.12	325.09	33.00	-7.88	1/131
		1882.50	20.32	H	4.52	9.27	25.07	321.37	33.00	-7.93	1/131
		1902.50	20.43	H	4.54	9.10	24.98	314.77	33.00	-8.02	1/67
	16-QAM	1862.50	19.13	H	4.50	9.43	24.06	254.68	33.00	-8.94	1/131
		1882.50	19.16	H	4.52	9.27	23.91	246.04	33.00	-9.09	1/131
		1902.50	19.23	H	4.54	9.10	23.78	238.78	33.00	-9.22	1/67
20	QPSK	1860.00	20.19	H	4.49	9.45	25.15	327.34	33.00	-7.85	1/104
		1882.50	19.87	H	4.52	9.27	24.62	289.73	33.00	-8.38	1/104
		1905.00	19.35	H	4.55	9.06	23.87	243.78	33.00	-9.13	1/53
	16-QAM	1860.00	18.72	H	4.49	9.45	23.68	233.35	33.00	-9.32	1/104
		1882.50	18.69	H	4.52	9.27	23.44	220.80	33.00	-9.56	1/53
		1905.00	18.63	H	4.55	9.06	23.15	206.54	33.00	-9.85	1/53
15	QPSK	1857.50	19.95	H	4.49	9.47	24.93	311.17	33.00	-8.07	1/1
		1882.50	19.77	H	4.52	9.27	24.52	283.14	33.00	-8.48	1/1
		1907.50	19.50	H	4.55	9.03	23.98	250.03	33.00	-9.02	1/1
	16-QAM	1857.50	18.85	H	4.49	9.47	23.83	241.55	33.00	-9.17	1/77
		1882.50	18.37	H	4.52	9.27	23.12	205.12	33.00	-9.88	1/1
		1907.50	18.43	H	4.55	9.03	22.91	195.43	33.00	-10.09	1/40
10	QPSK	1855.00	19.89	H	4.49	9.48	24.89	308.32	33.00	-8.11	1/50
		1882.50	19.32	H	4.52	9.27	24.07	255.27	33.00	-8.93	1/26
		1910.00	19.56	H	4.55	8.99	24.00	251.19	33.00	-9.00	1/1
	16-QAM	1855.00	18.72	H	4.49	9.48	23.72	235.50	33.00	-9.28	1/50
		1882.50	18.25	H	4.52	9.27	23.00	199.53	33.00	-10.00	1/1
		1910.00	18.61	H	4.55	8.99	23.05	201.84	33.00	-9.95	1/26
5	QPSK	1852.50	18.11	H	4.49	9.50	23.13	205.59	33.00	-9.87	1/1
		1882.50	18.91	H	4.52	9.27	23.66	232.27	33.00	-9.34	1/1
		1912.50	18.91	H	4.56	8.96	23.32	214.78	33.00	-9.68	1/13
	16-QAM	1852.50	17.29	H	4.49	9.50	22.31	170.22	33.00	-10.69	1/23
		1882.50	18.07	H	4.52	9.27	22.82	191.43	33.00	-10.18	1/1
		1912.50	18.21	H	4.56	8.96	22.62	182.81	33.00	-10.38	1/23

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NR Band n25 (DFT-OFDM) (ANT E)

BW (MHz)	Modulation	Frequency (MHz)	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Delta (dB)	RB
40	QPSK	1870.00	16.19	H	4.51	9.37	21.05	127.35	33.00	-11.95	1/1
		1882.50	16.14	H	4.52	9.27	20.89	122.74	33.00	-12.11	1/1
		1895.00	15.61	H	4.54	9.17	20.24	105.68	33.00	-12.76	1/1
	16-QAM	1870.00	14.94	H	4.51	9.37	19.80	95.50	33.00	-13.20	1/1
		1882.50	15.30	H	4.52	9.27	20.05	101.16	33.00	-12.95	1/108
		1895.00	14.65	H	4.54	9.17	19.28	84.72	33.00	-13.72	1/1
35	QPSK	1867.50	15.92	H	4.51	9.39	20.80	120.23	33.00	-12.20	1/93
		1882.50	15.91	H	4.52	9.27	20.66	116.41	33.00	-12.34	1/93
		1897.50	15.93	H	4.54	9.15	20.55	113.50	33.00	-12.45	1/93
	16-QAM	1867.50	15.38	H	4.51	9.39	20.26	106.17	33.00	-12.74	1/1
		1882.50	14.90	H	4.52	9.27	19.65	92.26	33.00	-13.35	1/1
		1897.50	15.11	H	4.54	9.15	19.73	93.97	33.00	-13.27	1/1
30	QPSK	1865.00	15.58	H	4.50	9.41	20.48	111.69	33.00	-12.52	1/1
		1882.50	15.76	H	4.52	9.27	20.51	112.46	33.00	-12.49	1/1
		1900.00	15.97	H	4.54	9.13	20.57	114.02	33.00	-12.43	1/1
	16-QAM	1865.00	15.15	H	4.50	9.41	20.05	101.16	33.00	-12.95	1/1
		1882.50	15.37	H	4.52	9.27	20.12	102.80	33.00	-12.88	1/1
		1900.00	15.20	H	4.54	9.13	19.80	95.50	33.00	-13.20	1/1
25	QPSK	1862.50	15.75	H	4.50	9.43	20.68	116.95	33.00	-12.32	1/1
		1882.50	14.94	H	4.52	9.27	19.69	93.11	33.00	-13.31	1/131
		1902.50	15.70	H	4.54	9.10	20.25	105.93	33.00	-12.75	1/1
	16-QAM	1862.50	15.61	H	4.50	9.43	20.54	113.24	33.00	-12.46	1/1
		1882.50	14.01	H	4.52	9.27	18.76	75.16	33.00	-14.24	1/131
		1902.50	15.08	H	4.54	9.10	19.63	91.63	33.00	-13.37	1/1
20	QPSK	1860.00	15.42	H	4.49	9.45	20.38	93.54	33.00	-13.29	1/53
		1882.50	14.60	H	4.52	9.27	19.35	95.72	33.00	-13.19	1/1
		1905.00	15.76	H	4.55	9.06	20.28	89.13	33.00	-13.50	1/53
	16-QAM	1860.00	14.75	H	4.49	9.45	19.71	109.14	33.00	-12.62	1/53
		1882.50	14.06	H	4.52	9.27	19.81	86.10	33.00	-13.65	1/104
		1905.00	14.98	H	4.55	9.06	19.50	106.66	33.00	-12.72	1/1
15	QPSK	1857.50	15.57	H	4.49	9.47	20.55	113.50	33.00	-12.45	1/1
		1882.50	14.89	H	4.52	9.27	19.64	92.04	33.00	-13.36	1/1
		1907.50	15.95	H	4.55	9.03	20.43	110.41	33.00	-12.57	1/1
	16-QAM	1857.50	15.14	H	4.49	9.47	20.12	102.80	33.00	-12.88	1/1
		1882.50	13.84	H	4.52	9.27	18.59	72.28	33.00	-14.41	1/1
		1907.50	15.19	H	4.55	9.03	19.67	92.68	33.00	-13.33	1/1
10	QPSK	1855.00	15.40	H	4.49	9.48	20.40	109.65	33.00	-12.60	1/1
		1882.50	14.80	H	4.52	9.27	19.55	90.16	33.00	-13.45	1/26
		1910.00	16.42	H	4.55	8.99	20.86	121.90	33.00	-12.14	1/1
	16-QAM	1855.00	14.78	H	4.49	9.48	19.78	95.06	33.00	-13.22	1/1
		1882.50	14.10	H	4.52	9.27	18.85	76.74	33.00	-14.15	1/26
		1910.00	15.39	H	4.55	8.99	19.83	96.16	33.00	-13.17	1/1
5	QPSK	1852.50	15.23	H	4.49	9.50	20.25	105.93	33.00	-12.75	1/1
		1882.50	14.80	H	4.52	9.27	19.55	90.16	33.00	-13.45	1/1
		1912.50	15.73	H	4.56	8.96	20.14	103.28	33.00	-12.86	1/23
	16-QAM	1852.50	14.34	H	4.49	9.50	19.36	86.30	33.00	-13.64	1/1
		1882.50	13.92	H	4.52	9.27	18.67	73.62	33.00	-14.33	1/1
		1912.50	15.25	H	4.56	8.96	19.66	92.47	33.00	-13.34	1/1

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9.2. RADIATIED SPURIOUS EMISSION

RULE PART(S)

FCC: §2.1053, §24.238

LIMIT

Part 24.238(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.

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 = 1 MHz for emissions above 1 GHz
b) Set VBW ≥ 3 × 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 ≥ span/RBW;
g) Trace Mode = average(WCDMA, LTE, 5G NR), Maxhold(GSM);

NOTE1

GSM : It was tested at GPRS as worst case (the highst output power and density).
UMTS: It was tested at REL 99 as worst case (the highst output power and density).
LTE: It was tested at 1RB QPSK as worst case (the highst output power and density).
5G NR: All Waveforms (CP-OFDM vs DFT-s_OFDM) and modulations (π/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.

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9.2.1. SPURIOUS RADIATION RESULT

GSM1900

GPRS

ANT B

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company:	Samsung
Project #:	4791196626
Date:	2024-03-18
Test Engineer:	28183
Configuration:	EUT / AC Adapter, Y-Position, Open
Location:	Chamber 2
Mode:	GPRS 1900 MHz 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, 1850.2MHz									
3700.40	-8.5	V	3.0	42.2	1.0	-49.7	-13.0	-36.7	
5550.60	1.9	V	3.0	43.0	1.0	-40.2	-13.0	-27.2	
7400.80	-4.1	V	3.0	42.6	1.0	-45.7	-13.0	-32.7	
3700.40	-8.5	H	3.0	42.2	1.0	-49.7	-13.0	-36.7	
5550.60	-3.4	H	3.0	43.0	1.0	-45.4	-13.0	-32.4	
7400.80	-4.4	H	3.0	42.6	1.0	-46.0	-13.0	-33.0	
Mid Ch, 1880MHz									
3760.00	-8.2	V	3.0	42.2	1.0	-49.5	-13.0	-36.5	
5640.00	2.1	V	3.0	43.1	1.0	-39.9	-13.0	-26.9	
7520.00	-3.9	V	3.0	42.6	1.0	-45.5	-13.0	-32.5	
3760.00	-8.3	H	3.0	42.2	1.0	-49.5	-13.0	-36.5	
5640.00	-4.8	H	3.0	43.1	1.0	-46.8	-13.0	-33.8	
7520.00	-4.6	H	3.0	42.6	1.0	-46.1	-13.0	-33.1	
High Ch, 1909.8MHz									
3819.60	-6.5	V	3.0	42.2	1.0	-47.7	-13.0	-34.7	
5729.40	1.0	V	3.0	43.1	1.0	-41.1	-13.0	-28.1	
7639.20	-3.1	V	3.0	42.5	1.0	-44.6	-13.0	-31.6	
3819.60	-7.6	H	3.0	42.2	1.0	-48.9	-13.0	-35.9	
5729.40	-3.7	H	3.0	43.1	1.0	-45.8	-13.0	-32.8	
7639.20	-4.4	H	3.0	42.5	1.0	-45.9	-13.0	-32.9	

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WCDMA Band 2

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company:	Samsung
Project #:	4791196626
Date:	2024-03-19
Test Engineer:	28183
Configuration:	EUT / AC Adapter, X-Position, Open
Location:	Chamber 2
Mode:	HSDPA Band 2 Harmonics
Test Votage:	AC 120 V, 60 Hz

REL99

ANT B

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1852.4MHz									
3704.80	-10.4	V	3.0	42.2	1.0	-51.6	-13.0	-38.6	
5557.20	-7.6	V	3.0	43.0	1.0	-49.6	-13.0	-36.6	
7409.60	-5.2	V	3.0	42.6	1.0	-46.8	-13.0	-33.8	
3704.80	-10.6	H	3.0	42.2	1.0	-51.8	-13.0	-38.8	
5557.20	-7.9	H	3.0	43.0	1.0	-49.9	-13.0	-36.9	
7409.60	-5.7	H	3.0	42.6	1.0	-47.3	-13.0	-34.3	
Mid Ch, 1880MHz									
3760.00	-10.4	V	3.0	42.2	1.0	-51.6	-13.0	-38.6	
5640.00	-7.3	V	3.0	43.1	1.0	-49.4	-13.0	-36.4	
7520.00	-5.0	V	3.0	42.6	1.0	-46.5	-13.0	-33.5	
3760.00	-10.6	H	3.0	42.2	1.0	-51.8	-13.0	-38.8	
5640.00	-7.5	H	3.0	43.1	1.0	-49.6	-13.0	-36.6	
7520.00	-5.7	H	3.0	42.6	1.0	-47.3	-13.0	-34.3	
High Ch, 1907.6MHz									
3815.20	-10.9	V	3.0	42.2	1.0	-52.1	-13.0	-39.1	
5722.80	-7.2	V	3.0	43.1	1.0	-49.3	-13.0	-36.3	
7630.40	-4.8	V	3.0	42.5	1.0	-46.3	-13.0	-33.3	
3815.20	-10.6	H	3.0	42.2	1.0	-51.8	-13.0	-38.8	
5722.80	-7.6	H	3.0	43.1	1.0	-49.7	-13.0	-36.7	
7630.40	-5.5	H	3.0	42.5	1.0	-47.0	-13.0	-34.0	

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LTE Band 25

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: Sasmung
Project #: 4791196626
Date: 2024-03-18
Test Engineer: 28775
Configuration: EUT / Y-Position, FF
Location: Chamber 2
Mode: LTE_QPSK Band 25 Harmonics, 15MHz Bandwidth
Test Votage: AC 120 V, 60 Hz

15 MHz
QPSK
ANT B

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1857.5MHz									
3715.00	-10.5	V	3.0	42.2	1.0	-51.7	-13.0	-38.7	
5572.50	-7.0	V	3.0	43.0	1.0	-49.1	-13.0	-36.1	
7430.00	-5.3	V	3.0	42.6	1.0	-46.9	-13.0	-33.9	
3715.00	-10.6	H	3.0	42.2	1.0	-51.8	-13.0	-38.8	
5572.50	-7.6	H	3.0	43.0	1.0	-49.6	-13.0	-36.6	
7430.00	-5.7	H	3.0	42.6	1.0	-47.3	-13.0	-34.3	
Mid Ch, 1882.5MHz									
3765.00	-10.3	V	3.0	42.2	1.0	-51.6	-13.0	-38.6	
5647.50	-6.8	V	3.0	43.1	1.0	-48.8	-13.0	-35.8	
7530.00	-5.0	V	3.0	42.6	1.0	-46.6	-13.0	-33.6	
3765.00	-10.7	H	3.0	42.2	1.0	-51.9	-13.0	-38.9	
5647.50	-7.4	H	3.0	43.1	1.0	-49.5	-13.0	-36.5	
7530.00	-5.6	H	3.0	42.6	1.0	-47.2	-13.0	-34.2	
High Ch, 1907.5MHz									
3815.00	-10.3	V	3.0	42.2	1.0	-51.5	-13.0	-38.5	
5722.50	-6.5	V	3.0	43.1	1.0	-48.6	-13.0	-35.6	
7630.00	-4.9	V	3.0	42.5	1.0	-46.4	-13.0	-33.4	
3815.00	-10.6	H	3.0	42.2	1.0	-51.8	-13.0	-38.8	
5722.50	-7.7	H	3.0	43.1	1.0	-49.7	-13.0	-36.7	
7630.00	-5.5	H	3.0	42.5	1.0	-47.1	-13.0	-34.1	

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: Samsung
Project #: 4791196626
Date: 2024-04-16
Test Engineer: 26087
Configuration: EUT / AC Adapter, Y-Position, FF
Location: Chamber 1
Mode: LTE_QPSK Band 25 Harmonics, 20MHz Bandwidth
Test Votage: AC 120 V, 60 Hz

20 MHz
QPSK
ANT E

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1860MHz									
3720.00	-8.9	V	3.0	44.1	1.0	-52.0	-13.0	-39.0	
5580.00	-5.9	V	3.0	45.0	1.0	-49.9	-13.0	-36.9	
7440.00	-3.5	V	3.0	45.0	1.0	-47.5	-13.0	-34.5	
3720.00	-8.6	H	3.0	44.1	1.0	-51.8	-13.0	-38.8	
5580.00	-6.1	H	3.0	45.0	1.0	-50.1	-13.0	-37.1	
7440.00	-3.5	H	3.0	45.0	1.0	-47.4	-13.0	-34.4	
Mid Ch, 1882.5MHz									
3765.00	-8.7	V	3.0	44.1	1.0	-51.9	-13.0	-38.9	
5647.50	-5.1	V	3.0	45.0	1.0	-49.1	-13.0	-36.1	
7530.00	-3.5	V	3.0	44.9	1.0	-47.4	-13.0	-34.4	
3765.00	-8.5	H	3.0	44.1	1.0	-51.6	-13.0	-38.6	
5647.50	-6.0	H	3.0	45.0	1.0	-50.0	-13.0	-37.0	
7530.00	-3.5	H	3.0	44.9	1.0	-47.4	-13.0	-34.4	
High Ch, 1905MHz									
3810.00	-8.7	V	3.0	44.2	1.0	-51.8	-13.0	-38.8	
5715.00	-4.9	V	3.0	45.0	1.0	-49.0	-13.0	-36.0	
7620.00	-3.3	V	3.0	44.9	1.0	-47.2	-13.0	-34.2	
3810.00	-8.5	H	3.0	44.2	1.0	-51.7	-13.0	-38.7	
5715.00	-5.2	H	3.0	45.0	1.0	-49.2	-13.0	-36.2	
7620.00	-3.4	H	3.0	44.9	1.0	-47.3	-13.0	-34.3	

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NR Band n25

20 MHz

QPSK

ANT B

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company:	Samsung
Project #:	4791196626
Date:	2024-04-01
Test Engineer:	28183
Configuration:	EUT / AC Adapter, Y-Position, Open
Location:	Chamber 2
Mode:	5G NR_QPSK NR n25 Harmonics, 20MHz 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, 1860MHz									
3720.00	-10.4	V	3.0	42.2	1.0	-51.6	-13.0	-38.6	
5580.00	-7.1	V	3.0	43.0	1.0	-49.1	-13.0	-36.1	
7440.00	-4.9	V	3.0	42.6	1.0	-46.5	-13.0	-33.5	
3720.00	-10.5	H	3.0	42.2	1.0	-51.7	-13.0	-38.7	
5580.00	-7.8	H	3.0	43.0	1.0	-49.8	-13.0	-36.8	
7440.00	-5.6	H	3.0	42.6	1.0	-47.3	-13.0	-34.3	
Mid Ch, 1882.5MHz									
3765.00	-10.3	V	3.0	42.2	1.0	-51.5	-13.0	-38.5	
5647.50	-6.8	V	3.0	43.1	1.0	-48.8	-13.0	-35.8	
7530.00	-5.0	V	3.0	42.6	1.0	-46.6	-13.0	-33.6	
3765.00	-10.5	H	3.0	42.2	1.0	-51.7	-13.0	-38.7	
5647.50	-7.5	H	3.0	43.1	1.0	-49.6	-13.0	-36.6	
7530.00	-5.6	H	3.0	42.6	1.0	-47.2	-13.0	-34.2	
High Ch, 1905MHz									
3810.00	-10.3	V	3.0	42.2	1.0	-51.5	-13.0	-38.5	
5715.00	-6.9	V	3.0	43.1	1.0	-48.9	-13.0	-35.9	
7620.00	-4.9	V	3.0	42.5	1.0	-46.4	-13.0	-33.4	
3810.00	-10.6	H	3.0	42.2	1.0	-51.8	-13.0	-38.8	
5715.00	-7.6	H	3.0	43.1	1.0	-49.6	-13.0	-36.6	
7620.00	-5.5	H	3.0	42.5	1.0	-47.1	-13.0	-34.1	

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40 MHz

QPSK

ANT E

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company:	Samsung
Project #:	4791196626
Date:	2024-04-01
Test Engineer:	28183
Configuration:	EUT / AC Adapter, Z-Position, Open
Location:	Chamber 2
Mode:	5G NR_QPSK NR n25 Harmonics, 40MHz 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, 1870MHz									
3740.00	-11.2	V	3.0	42.2	1.0	-52.4	-13.0	-39.4	
5610.00	-7.3	V	3.0	43.0	1.0	-49.4	-13.0	-36.4	
7480.00	-5.1	V	3.0	42.6	1.0	-46.7	-13.0	-33.7	
3740.00	-10.5	H	3.0	42.2	1.0	-51.7	-13.0	-38.7	
5610.00	-7.6	H	3.0	43.0	1.0	-49.7	-13.0	-36.7	
7480.00	-5.7	H	3.0	42.6	1.0	-47.3	-13.0	-34.3	
Mid Ch, 1882.5MHz									
3765.00	-10.3	V	3.0	42.2	1.0	-51.5	-13.0	-38.5	
5647.50	-7.2	V	3.0	43.1	1.0	-49.2	-13.0	-36.2	
7530.00	-5.0	V	3.0	42.6	1.0	-46.6	-13.0	-33.6	
3765.00	-11.5	H	3.0	42.2	1.0	-52.7	-13.0	-39.7	
5647.50	-7.6	H	3.0	43.1	1.0	-49.6	-13.0	-36.6	
7530.00	-5.7	H	3.0	42.6	1.0	-47.2	-13.0	-34.2	
High Ch, 1895MHz									
3790.00	-10.3	V	3.0	42.2	1.0	-51.6	-13.0	-38.6	
5685.00	-7.4	V	3.0	43.1	1.0	-49.4	-13.0	-36.4	
7580.00	-4.9	V	3.0	42.5	1.0	-46.4	-13.0	-33.4	
3790.00	-10.6	H	3.0	42.2	1.0	-51.8	-13.0	-38.8	
5685.00	-7.7	H	3.0	43.1	1.0	-49.7	-13.0	-36.7	
7580.00	-5.6	H	3.0	42.5	1.0	-47.1	-13.0	-34.1	

END OF REPORT

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