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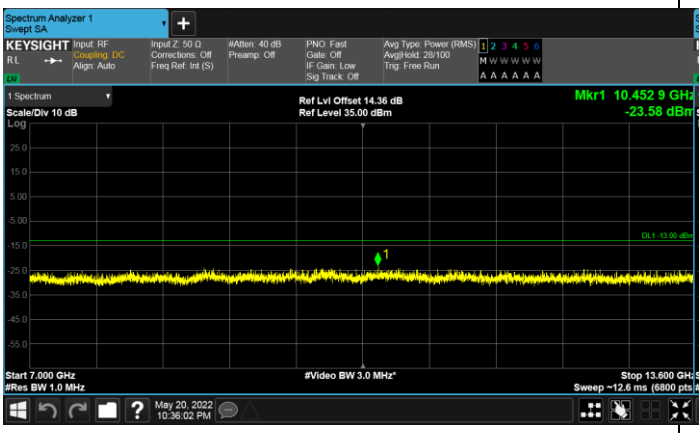	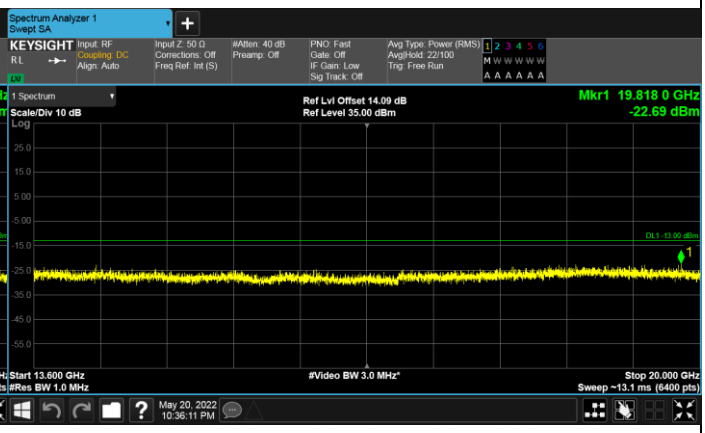
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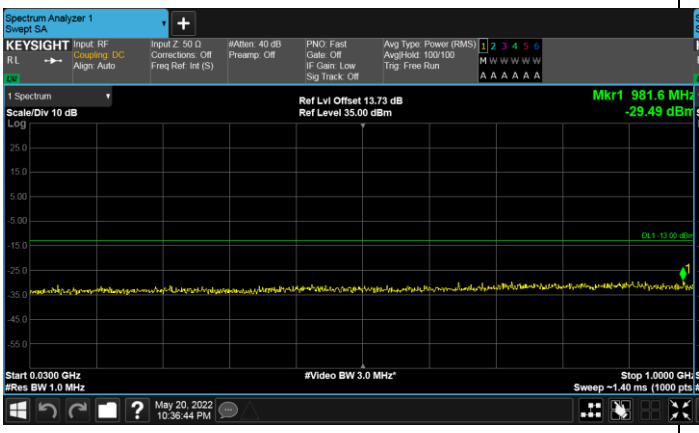	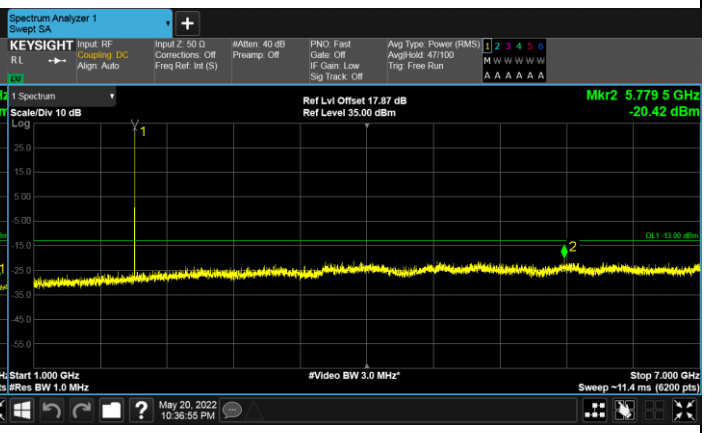
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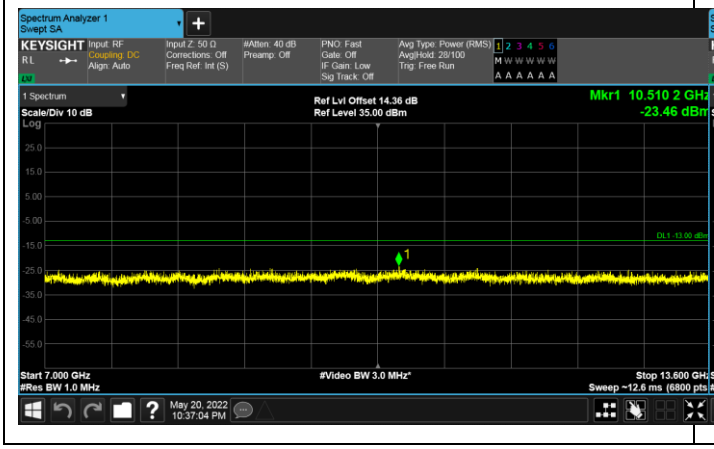	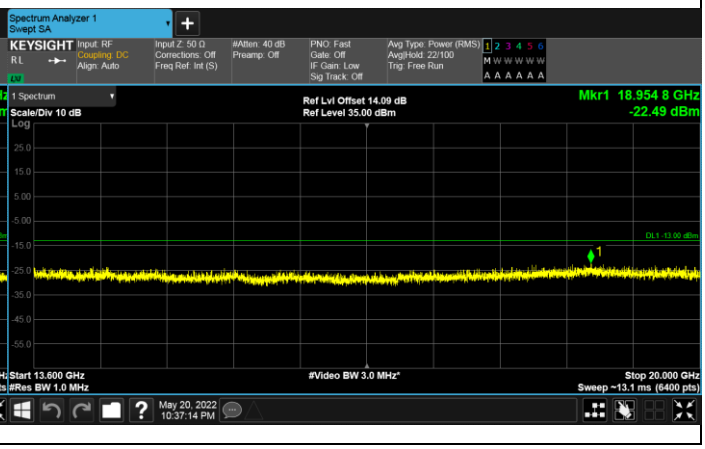

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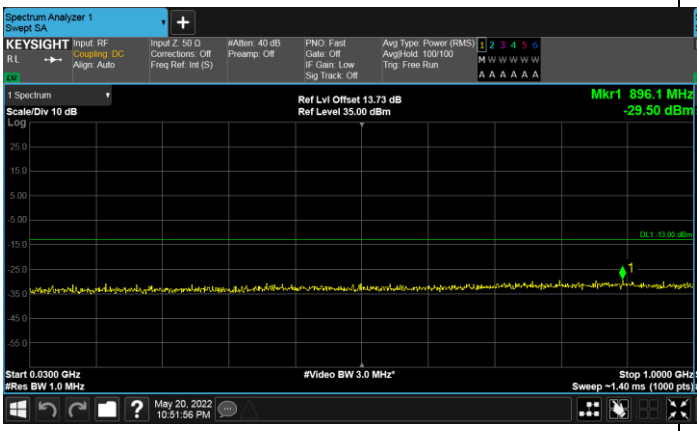	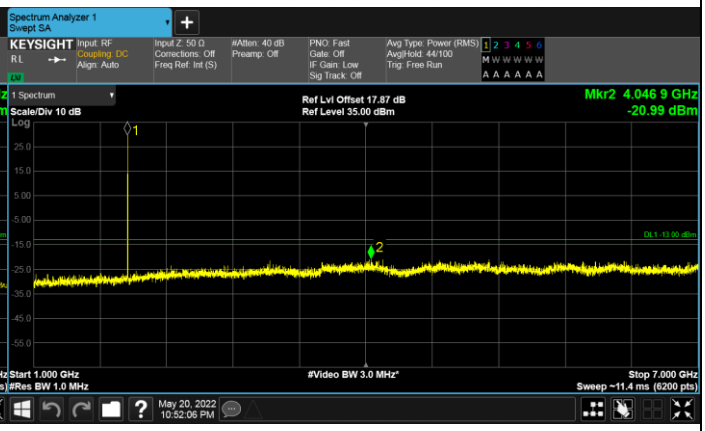
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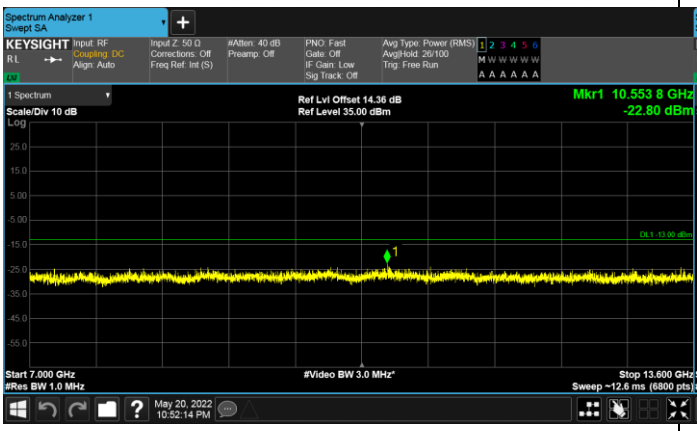	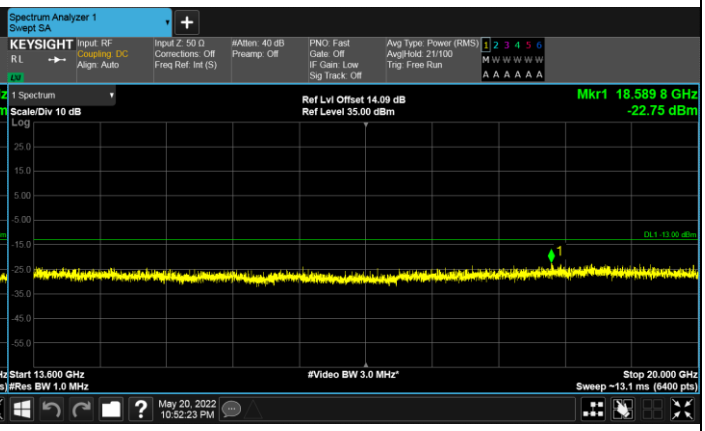
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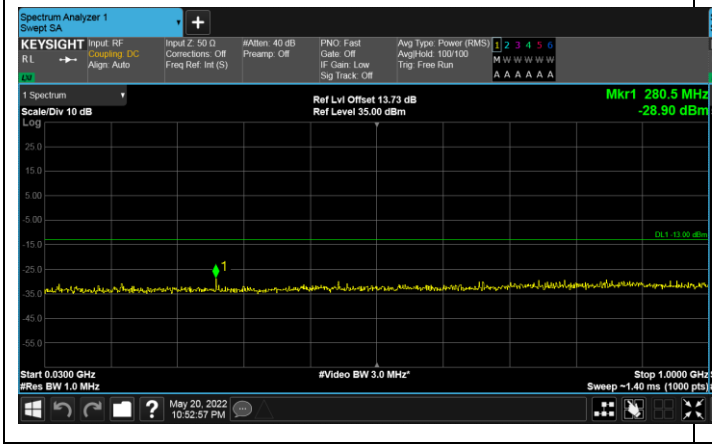	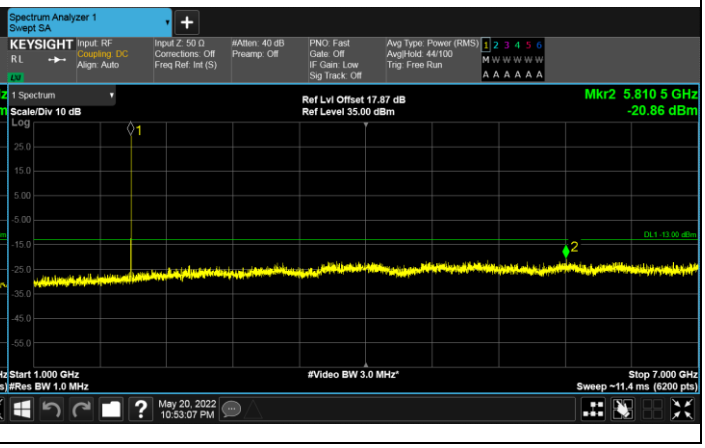

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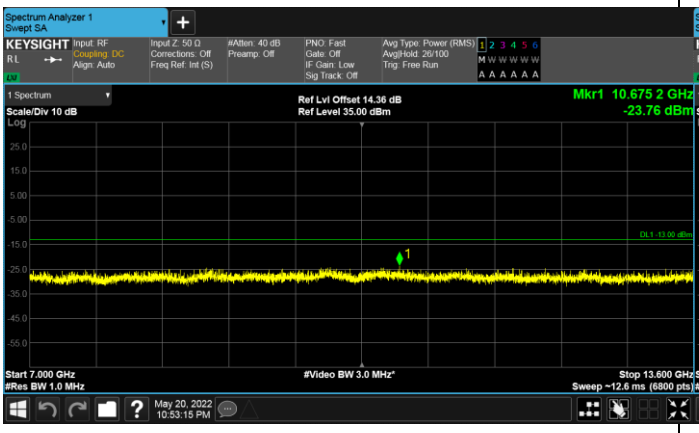	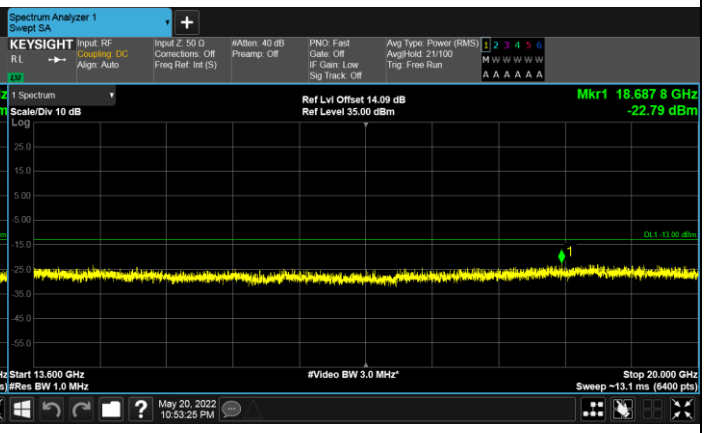
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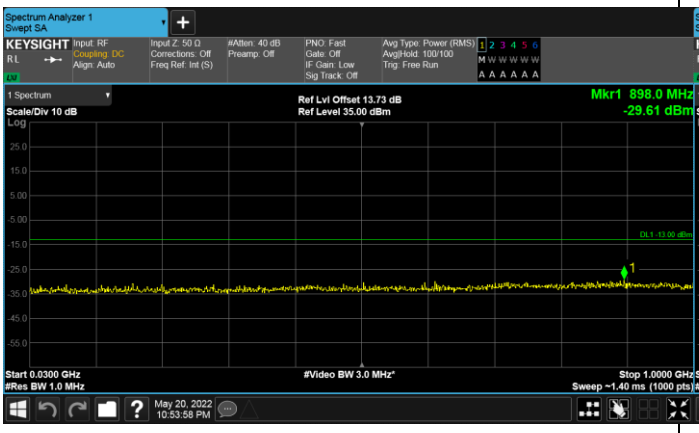	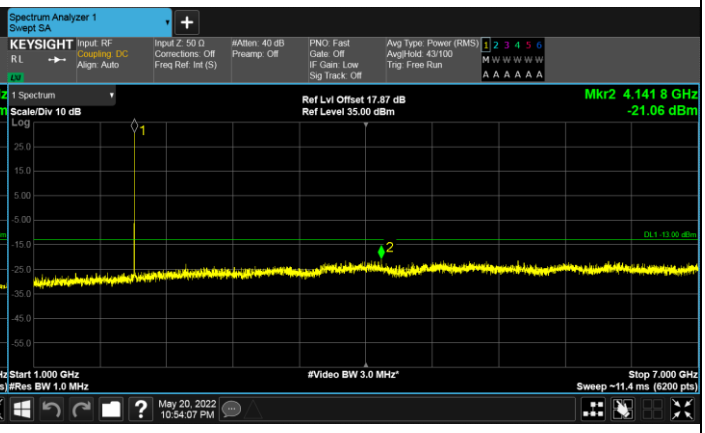
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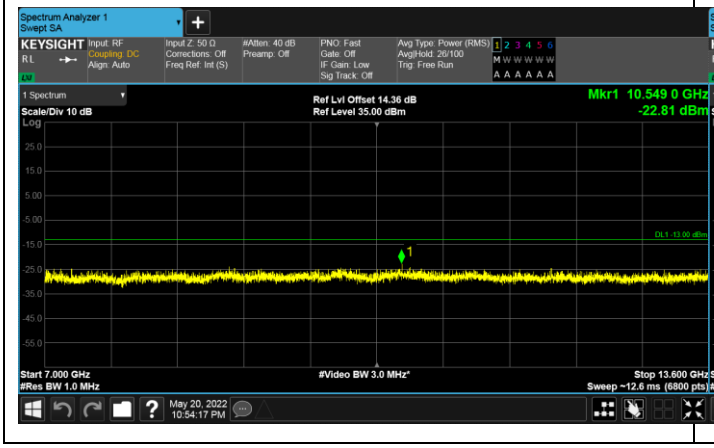
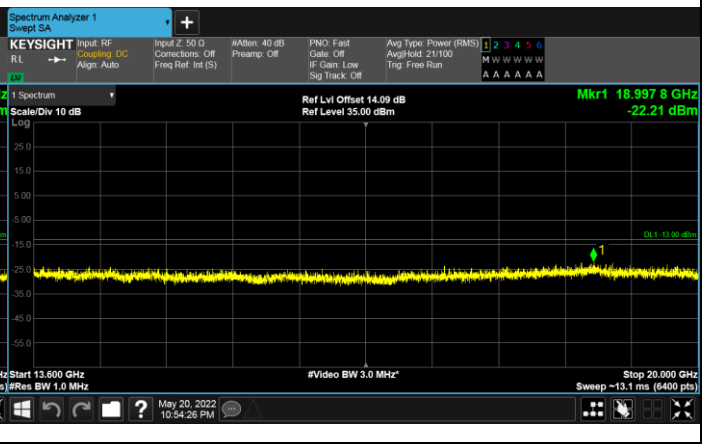
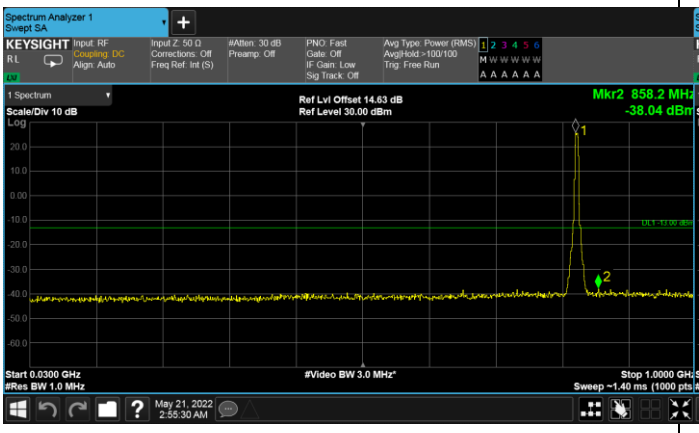
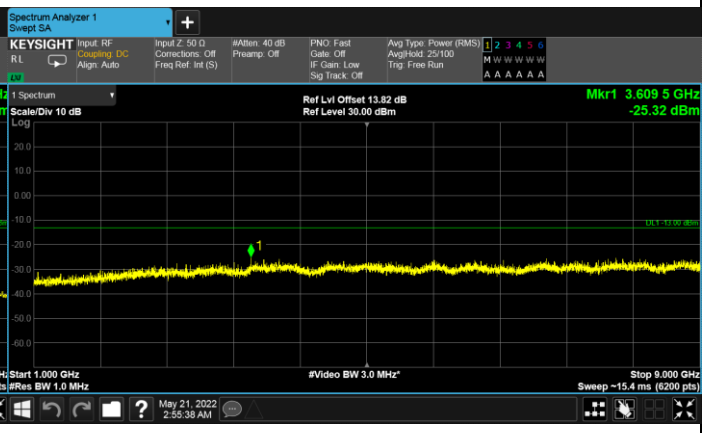
	

WCDMA 850_RMC 12.2kps_LCH	WCDMA 850_RMC 12.2kps_LCH
	
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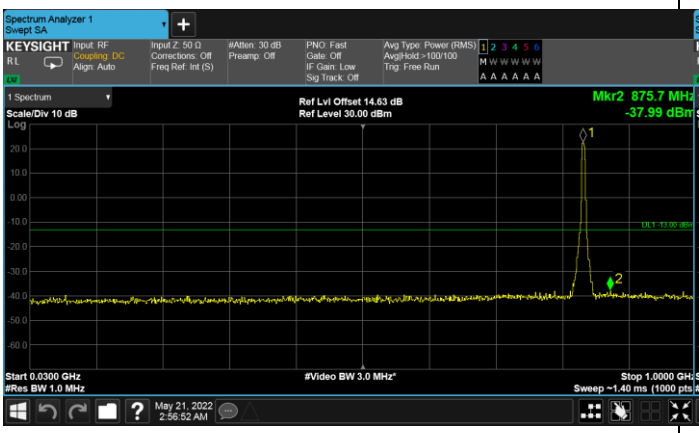	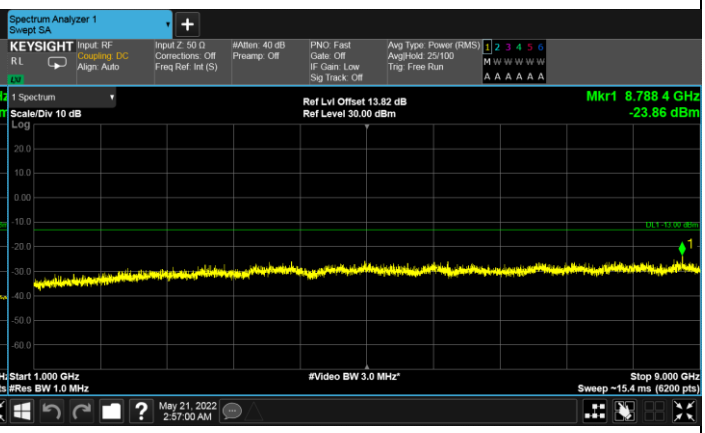
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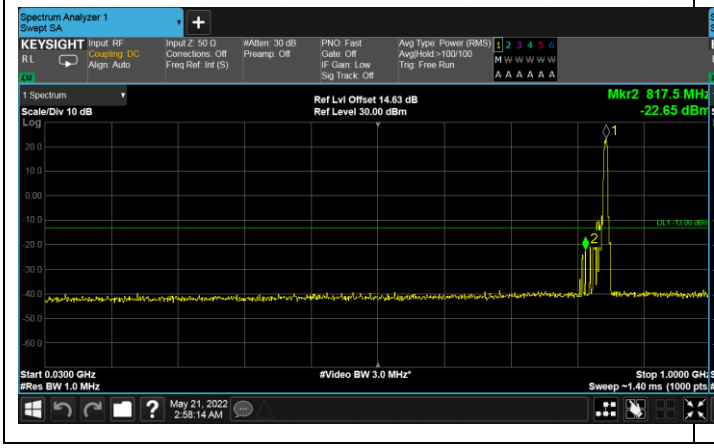	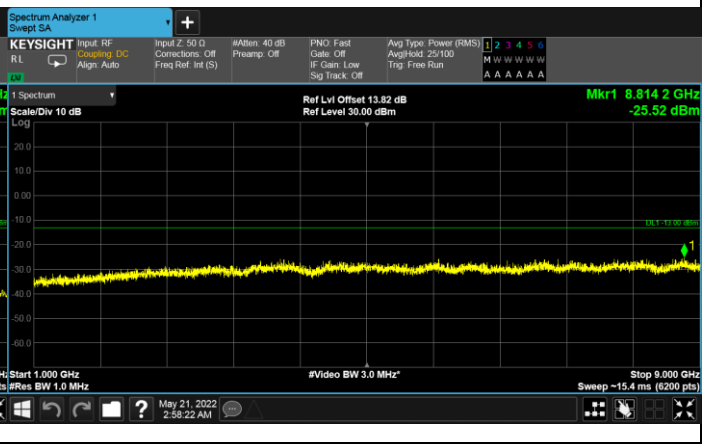

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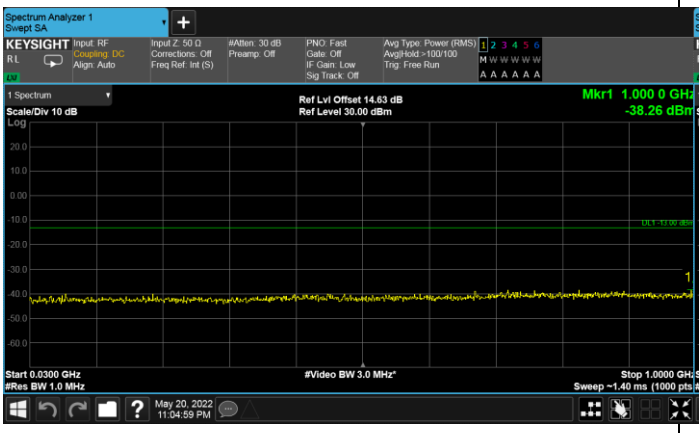	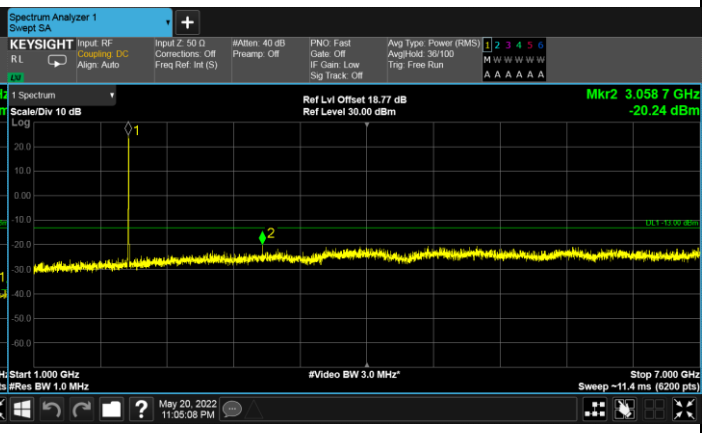
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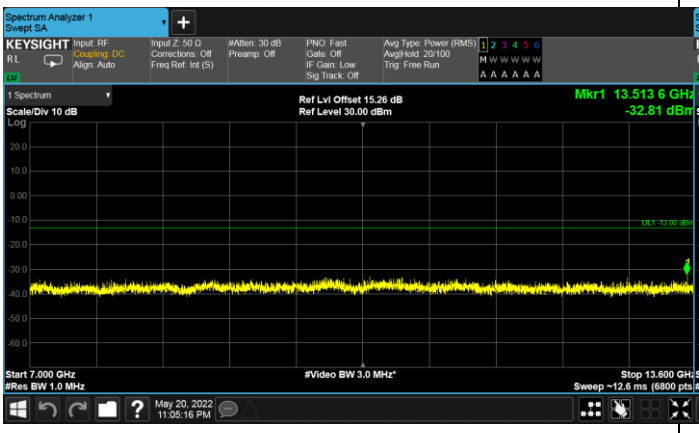	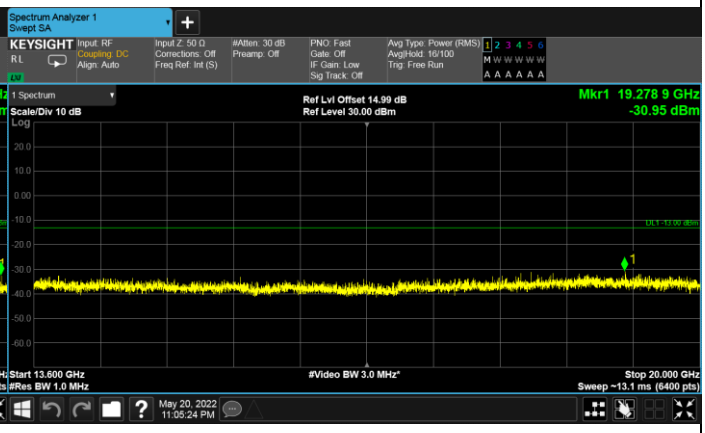
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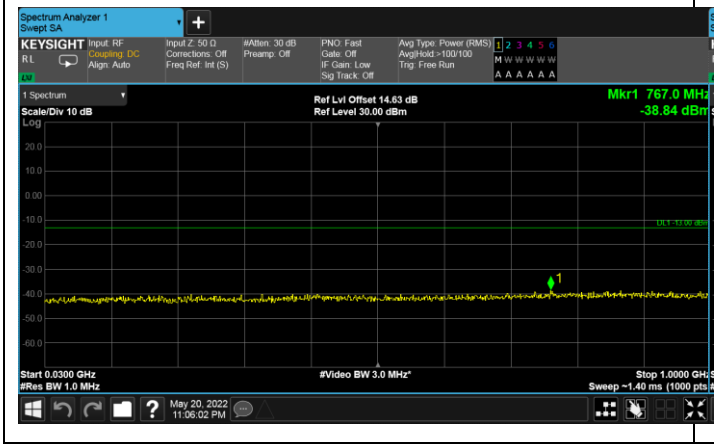	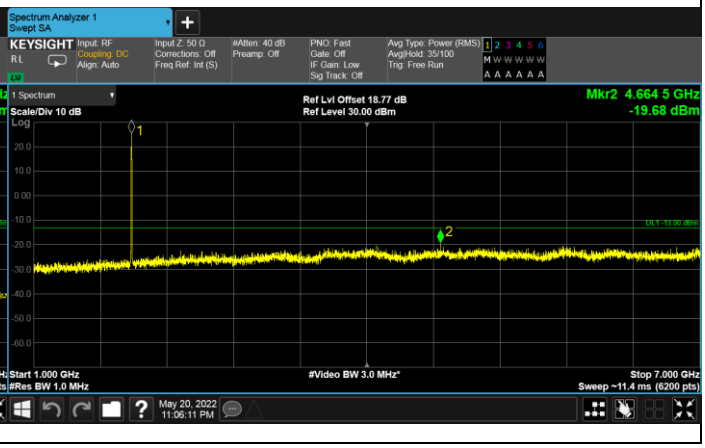

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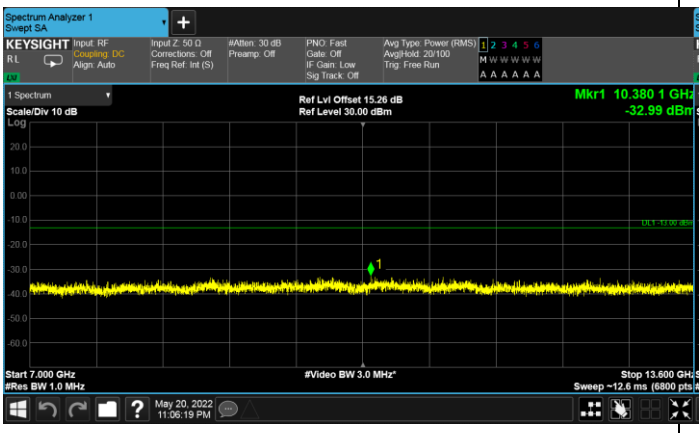	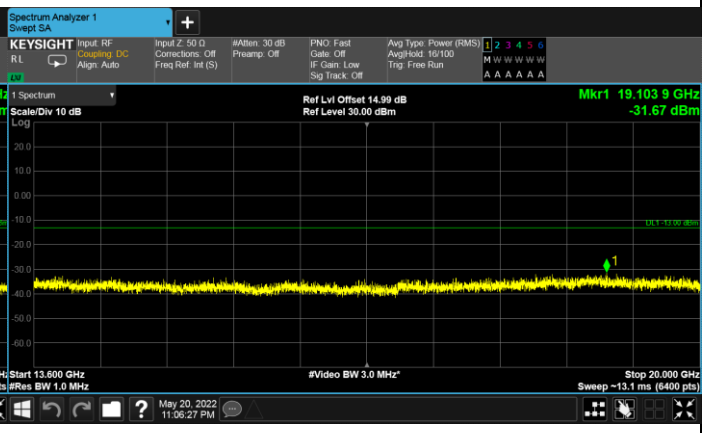
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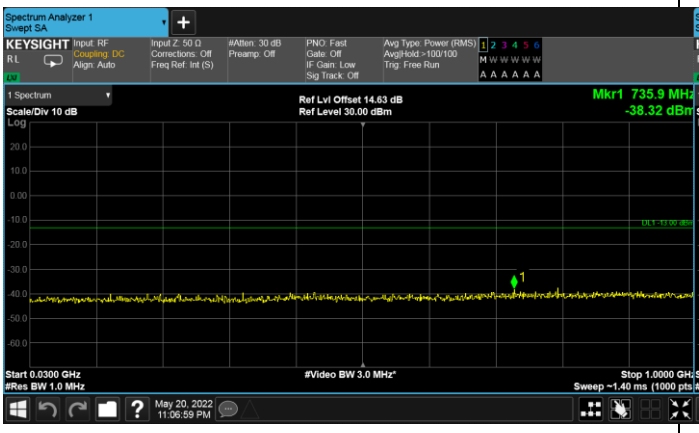	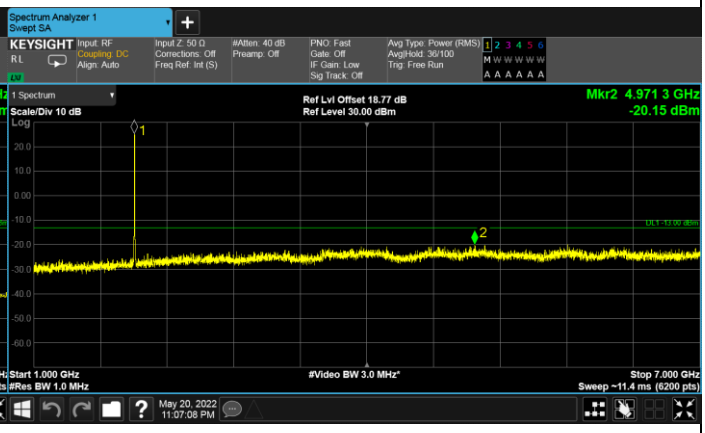
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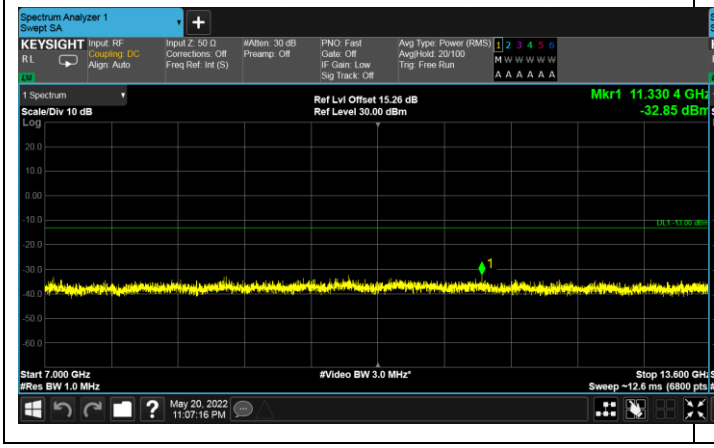	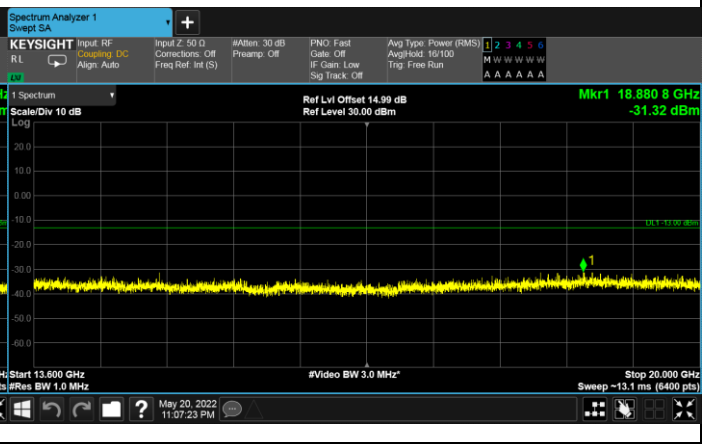

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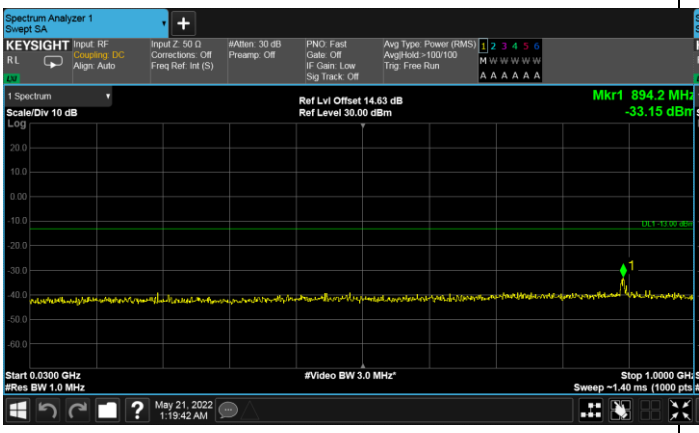	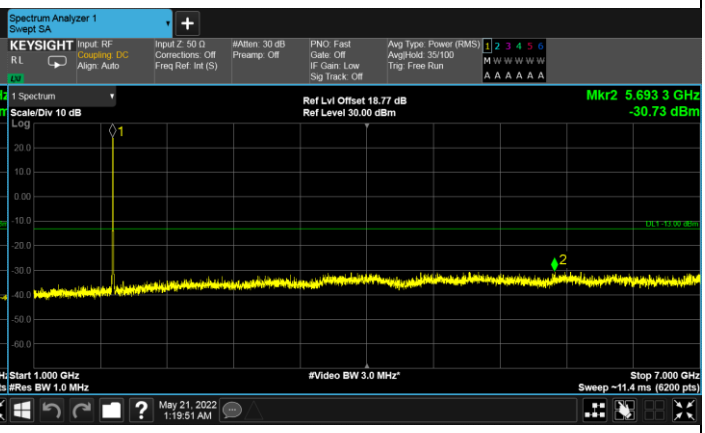
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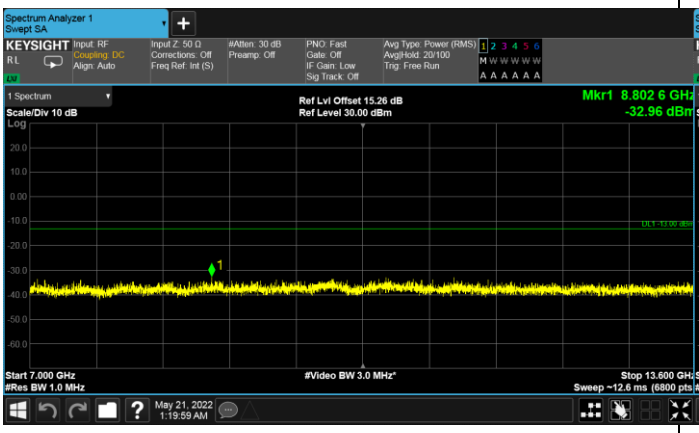	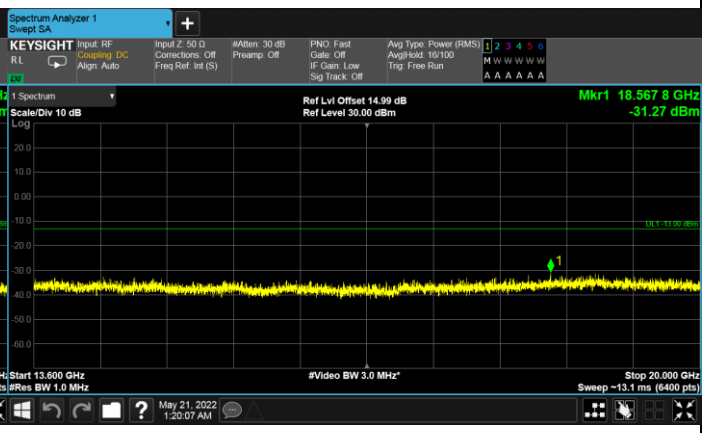
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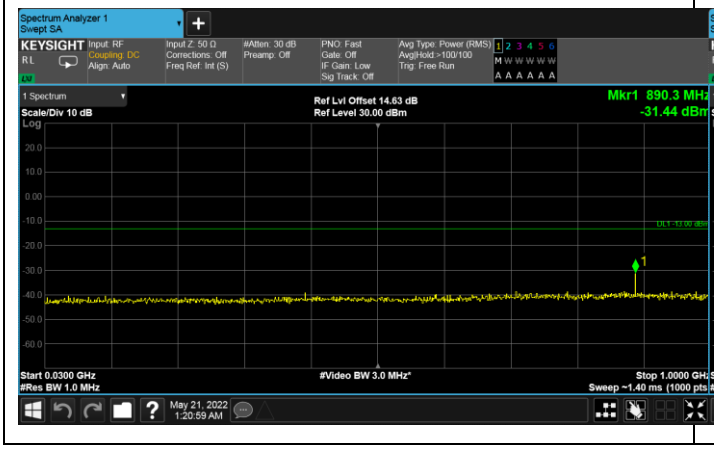	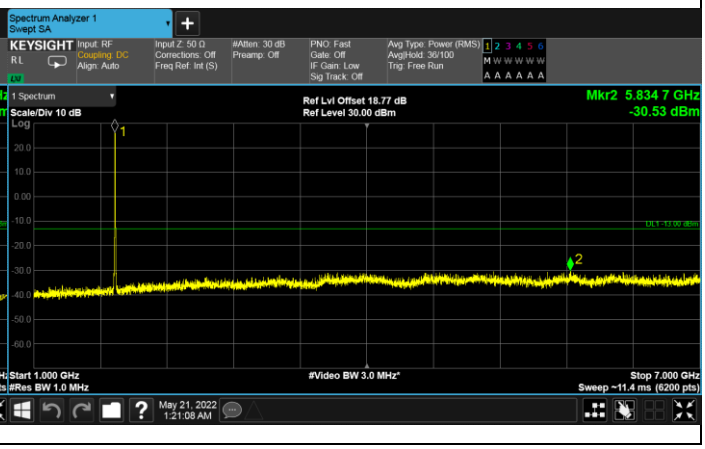

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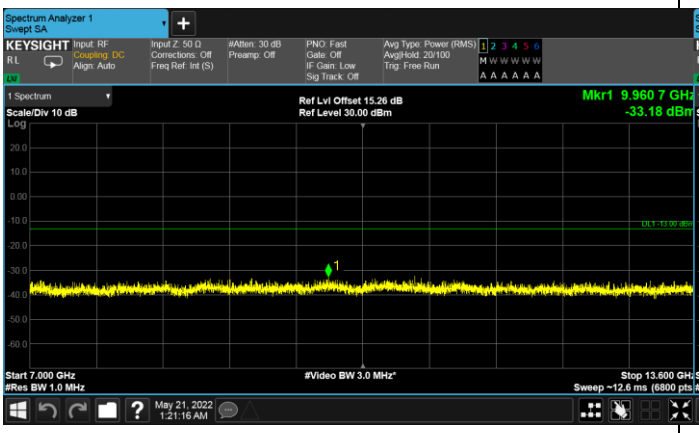	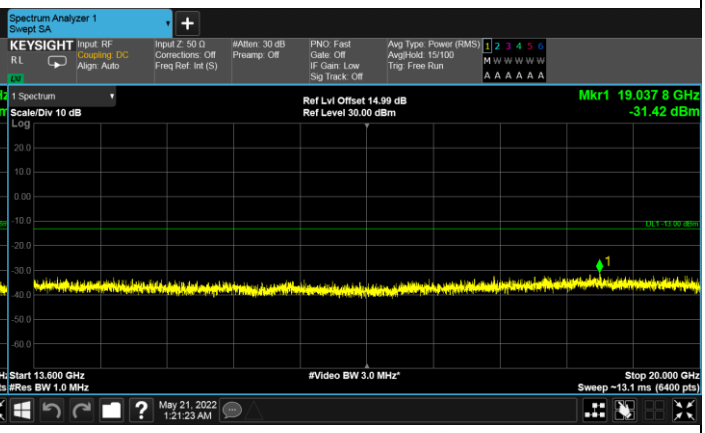
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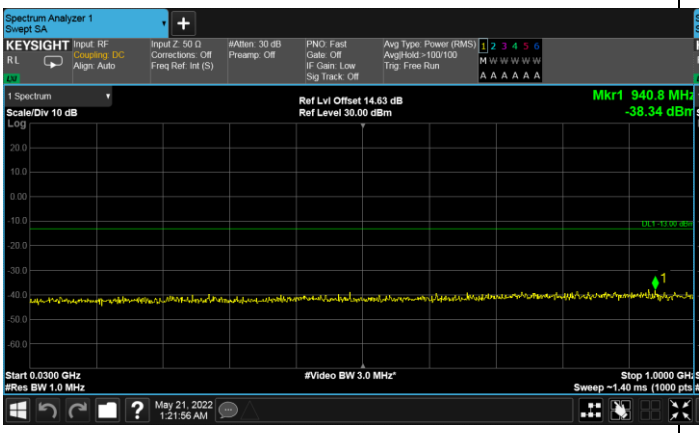	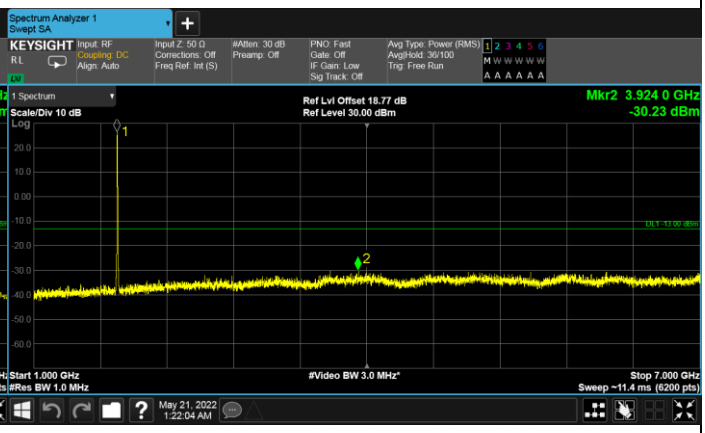
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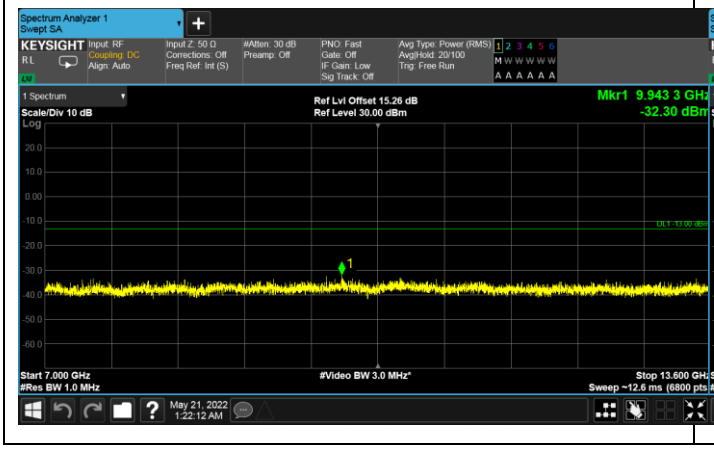
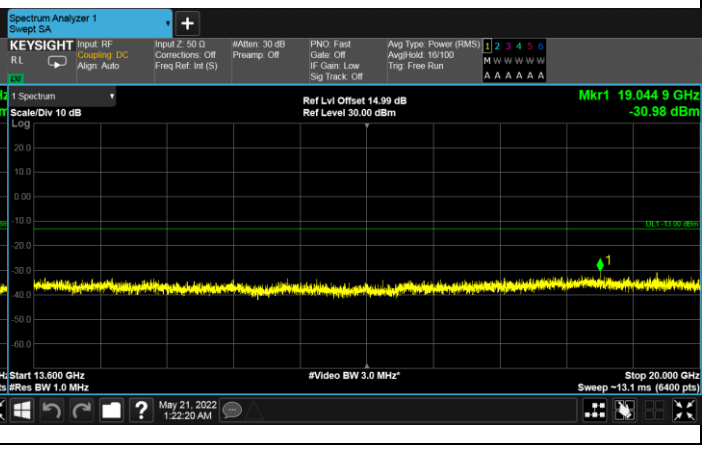
	

Note:1. Below 30MHZ no Spurious found and Above is the worst mode data.

2. As no emission found in standby or receive mode, no recording in this report.

13. RADIATED SPURIOUS EMISSION

13.1. PROVISIONS APPLICABLE

(A) On any frequency outside a licensee's frequency block (e.g. A, D, B, etc.) within the USPCS spectrum, the power of any emission shall be attenuated below the transmitter power (P, in Watts) by at least 43+10Log(P) dB. The specification that emissions shall be attenuated below the transmitter power (P) by at least 43 + 10 log (P) dB, translates in the relevant power range (1 to 0.001 W) to -13 dBm.

At 1 W the specified minimum attenuation becomes 43 dB and relative to a 30 dBm (1 W) carrier becomes a limit of -13 dBm. At 0.001 W (0 dBm) the minimum attenuation is 13 dB, which again yields a limit of -13 dBm. In this way a translation of the specification from relative to absolute terms is carried out.

(B) For specific criteria, please refer to the description in section 9.2 of the report for corresponding evaluation.

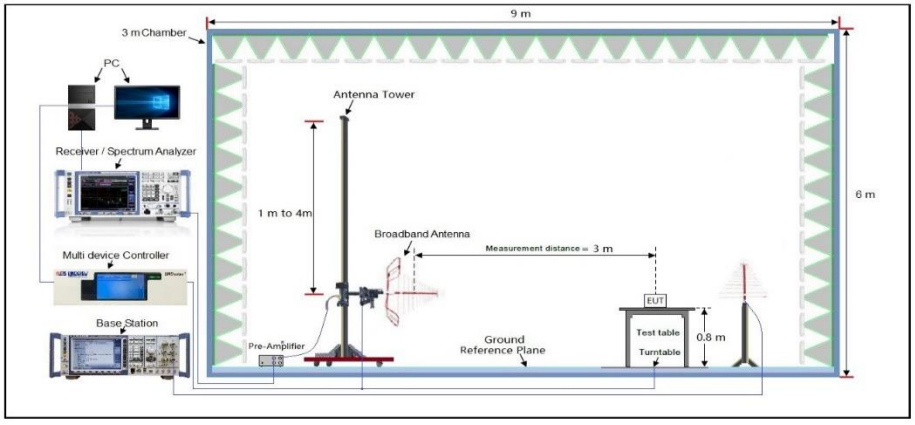
13.2. MEASUREMENT PROCEDURE

1. The EUT was placed on the top of the turntable 0.8 or 1.5 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use 1MHz VBW and RBW for peak reading. Then 1MHz RBW and 10Hz VBW for average reading in spectrum analyzer. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.

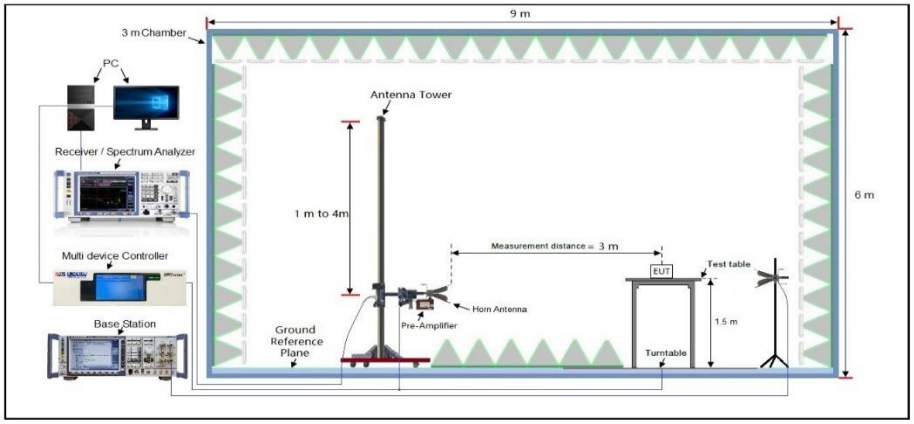
9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High - Low scan is not required in this case.
11. For spurious emissions above 1GHz, a horn antenna is substituted in place of the EUT.
The substitute antenna is driven by a signal generator and the previously recorded signal was duplicated.
The spurious emissions is calculated by the following formula;
Result(dBm) = Pg(dBm) +Factor(dB)
Factor(dB) = Ant Gain(dB)-Cable Loss(dB) + Power Splitter(dB) (Above 1GHz)
Factor(dB) = Ant Gain(dB)-Cable Loss(dB) (Below 1GHz)
Where: Pgis the generator output power into the substitution antenna.
If the fundalmatal frequency is below 1GHz, RF output power has been converted to EIRP.
EIRP(dBm) = ERP(dBm) + 2.15

13.3. MEASUREMENT setup

Radiated Emissions 30MHz to 1GHz Test setup



Radiated Emissions Above 1GHz Test setup



12.4 MEASUREMENT RESULT

The measurement Below 1GHz data as follows:

GSM 850							
No.	Frequency (MHz)	SA Reading (dBm)	Correction factor (dB/m)	EIRP Result (dBm)	Limit (dBm)	Margin (dB)	Ant. Pol.
GSM_ Lowest Channel							
1	159.759	159.76	-65.49	-50.34	-13.00	-37.34	Horizontal
2	240.144	240.14	-60.28	-45.63	-13.00	-32.63	Horizontal
3	754.963	754.96	-58.87	-40.06	-13.00	-27.06	Horizontal
4	46.708	46.71	-63.98	-54.11	-13.00	-41.11	Vertical
5	433.340	433.34	-59.67	-43.71	-13.00	-30.71	Vertical
6	502.247	502.25	-57.24	-40.27	-13.00	-27.27	Vertical
GSM_ Middle Channel							
1	31.735	-63.28	9.78	-53.50	-13.00	-40.5	Horizontal
2	159.759	-62.93	13.75	-49.18	-13.00	-36.18	Horizontal
3	240.144	-60.44	16.75	-43.69	-13.00	-30.69	Horizontal
4	43.233	-63.40	10.23	-53.17	-13.00	-40.17	Vertical
5	433.340	-61.87	17.75	-44.12	-13.00	-31.12	Vertical
6	498.730	-58.89	18.02	-40.87	-13.00	-27.87	Vertical
GSM_ Highest Channel							
1	159.759	-63.43	13.75	-49.68	-13.00	-36.68	Horizontal
2	240.144	-62.19	16.75	-45.44	-13.00	-32.44	Horizontal
3	679.435	-58.20	19.01	-39.19	-13.00	-26.19	Horizontal
4	43.233	-61.38	10.23	-51.15	-13.00	-38.15	Vertical
5	433.340	-60.56	17.75	-42.81	-13.00	-29.81	Vertical
6	498.730	-57.46	18.02	-39.44	-13.00	-26.44	Vertical

PCS 1900							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
GSM_ Lowest Channel							
1	159.759	-66.16	15.52	-50.64	-13.00	-37.64	Horizontal
2	240.144	-61.91	16.75	-45.16	-13.00	-32.16	Horizontal
3	754.963	-59.47	19.35	-40.12	-13.00	-27.12	Horizontal
4	46.708	-64.79	10.44	-54.35	-13.00	-41.35	Vertical
5	433.340	-60.99	17.75	-43.24	-13.00	-30.24	Vertical
6	502.247	-59.17	18.66	-40.51	-13.00	-27.51	Vertical
GSM_ Middle Channel							
1	31.735	-63.67	9.78	-53.89	-13.00	-40.89	Horizontal
2	159.759	-63.75	13.75	-50.00	-13.00	-37	Horizontal
3	240.144	-61.93	16.75	-45.18	-13.00	-32.18	Horizontal
4	43.233	-63.68	10.23	-53.45	-13.00	-40.45	Vertical
5	433.340	-62.78	17.75	-45.03	-13.00	-32.03	Vertical
6	498.730	-59.34	18.02	-41.32	-13.00	-28.32	Vertical
GSM_ Highest Channel							
1	159.759	-63.88	13.75	-50.13	-13.00	-37.13	Horizontal
2	240.144	-62.66	16.75	-45.91	-13.00	-32.91	Horizontal
3	679.435	-59.05	19.01	-40.04	-13.00	-27.04	Horizontal
4	43.233	-63.89	10.23	-53.66	-13.00	-40.66	Vertical
5	433.340	-61.70	17.75	-43.95	-13.00	-30.95	Vertical
6	498.730	-59.47	18.02	-41.45	-13.00	-28.45	Vertical

WCDMA Band II							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
RMC 12.2kbps_ Lowest Channel							
1	159.759	-66.12	15.52	-50.60	-13.00	-37.6	Horizontal
2	240.144	-62.81	16.75	-46.06	-13.00	-33.06	Horizontal
3	754.963	-59.05	19.35	-39.70	-13.00	-26.7	Horizontal
4	46.708	-64.96	10.44	-54.52	-13.00	-41.52	Vertical
5	433.340	-61.25	17.75	-43.50	-13.00	-30.5	Vertical
6	502.247	-59.34	18.66	-40.68	-13.00	-27.68	Vertical
RMC 12.2kbps_ Middle Channel							
1	31.735	-63.06	9.78	-53.28	-13.00	-40.28	Horizontal
2	159.759	-64.06	13.75	-50.31	-13.00	-37.31	Horizontal
3	240.144	-61.43	16.75	-44.68	-13.00	-31.68	Horizontal
4	43.233	-63.51	10.23	-53.28	-13.00	-40.28	Vertical
5	433.340	-63.19	17.75	-45.44	-13.00	-32.44	Vertical
6	498.730	-59.02	18.02	-41.00	-13.00	-28	Vertical
RMC 12.2kbps_ Highest Channel							
1	159.759	-63.53	13.75	-49.78	-13.00	-36.78	Horizontal
2	240.144	-62.68	16.75	-45.93	-13.00	-32.93	Horizontal
3	679.435	-59.44	19.01	-40.43	-13.00	-27.43	Horizontal
4	43.233	-63.69	10.23	-53.46	-13.00	-40.46	Vertical
5	433.340	-62.17	17.75	-44.42	-13.00	-31.42	Vertical
6	498.730	-59.00	18.02	-40.98	-13.00	-27.98	Vertical

WCDMA Band IV							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
RMC 12.2kbps_ Lowest Channel							
1	159.759	-62.88	15.52	-47.36	-13.00	-37.3	Horizontal
2	240.144	-58.09	16.75	-41.34	-13.00	-32.58	Horizontal
3	754.963	-55.66	19.35	-36.31	-13.00	-27.36	Horizontal
4	46.708	-60.46	10.44	-50.02	-13.00	-41.47	Vertical
5	433.340	-58.47	17.75	-40.72	-13.00	-30.23	Vertical
6	502.247	-55.86	18.66	-37.20	-13.00	-27.37	Vertical
RMC 12.2kbps_ Middle Channel							
1	31.735	-61.34	9.78	-51.56	-13.00	-40.18	Horizontal
2	159.759	-62.24	13.75	-48.49	-13.00	-36.72	Horizontal
3	240.144	-61.26	16.75	-44.51	-13.00	-32.00	Horizontal
4	43.233	-61.53	10.23	-51.30	-13.00	-40.39	Vertical
5	433.340	-59.95	17.75	-42.20	-13.00	-31.63	Vertical
6	498.730	-57.20	18.02	-39.18	-13.00	-28.51	Vertical
RMC 12.2kbps_ Highest Channel							
1	159.759	-61.47	13.75	-47.72	-13.00	-36.91	Horizontal
2	240.144	-58.74	16.75	-41.99	-13.00	-32.06	Horizontal
3	679.435	-59.02	19.01	-40.01	-13.00	-25.7	Horizontal
4	43.233	-60.84	10.23	-50.61	-13.00	-39.99	Vertical
5	433.340	-61.05	17.75	-43.30	-13.00	-29.82	Vertical
6	498.730	-55.76	18.02	-37.74	-13.00	-26.53	Vertical

WCDMA Band V							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
RMC 12.2kbps_ Lowest Channel							
1	159.759	-65.46	15.52	-49.94	-13.00	-36.94	Horizontal
2	240.144	-62.15	16.75	-45.40	-13.00	-32.4	Horizontal
3	754.963	-59.58	19.35	-40.23	-13.00	-27.23	Horizontal
4	46.708	-64.78	10.44	-54.34	-13.00	-41.34	Vertical
5	433.340	-61.10	17.75	-43.35	-13.00	-30.35	Vertical
6	502.247	-59.25	18.66	-40.59	-13.00	-27.59	Vertical
RMC 12.2kbps_ Middle Channel							
1	31.735	-60.95	9.78	-51.17	-13.00	-38.17	Horizontal
2	159.759	-61.93	13.75	-48.18	-13.00	-35.18	Horizontal
3	240.144	-60.16	16.75	-43.41	-13.00	-30.41	Horizontal
4	43.233	-62.80	10.23	-52.57	-13.00	-39.57	Vertical
5	433.340	-62.34	17.75	-44.59	-13.00	-31.59	Vertical
6	498.730	-58.53	18.02	-40.51	-13.00	-27.51	Vertical
RMC 12.2kbps_ Highest Channel							
1	159.759	-64.40	13.75	-50.65	-13.00	-37.65	Horizontal
2	240.144	-62.82	16.75	-46.07	-13.00	-33.07	Horizontal
3	679.435	-60.28	19.01	-41.27	-13.00	-28.27	Horizontal
4	43.233	-64.03	10.23	-53.80	-13.00	-40.8	Vertical
5	433.340	-62.18	17.75	-44.43	-13.00	-31.43	Vertical
6	498.730	-60.09	18.02	-42.07	-13.00	-29.07	Vertical

The measurement Above 1GHz data as follows:

GSM 850							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
GSM_ Lowest Channel							
1	1648.400	-88.45	23.50	-64.95	-13.00	-51.95	Horizontal
2	2472.600	-87.80	29.47	-58.33	-13.00	-45.33	Horizontal
3	1648.400	-88.98	23.72	-65.26	-13.00	-52.26	Vertical
4	2472.600	-88.79	29.47	-59.32	-13.00	-46.32	Vertical
GSM_ Middle Channel							
1	1673.200	-89.53	23.50	-66.03	-13.00	-53.03	Horizontal
2	2509.800	-91.16	29.47	-61.69	-13.00	-48.69	Horizontal
3	1673.200	-90.41	23.72	-66.69	-13.00	-53.69	Vertical
4	2509.800	-93.60	29.47	-64.13	-13.00	-51.13	Vertical
GSM_ Highest Channel							
1	1697.600	-91.36	23.50	-67.86	-13.00	-54.86	Horizontal
2	2546.400	-92.61	29.47	-63.14	-13.00	-50.14	Horizontal
3	1697.600	-91.79	23.72	-68.07	-13.00	-55.07	Vertical
4	2546.400	-92.65	29.47	-63.18	-13.00	-50.18	Vertical

PCS 1900							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
GSM_ Lowest Channel							
1	3700.400	-88.18	32.11	-56.07	-13.00	-43.07	Horizontal
2	5550.600	-87.64	33.21	-54.43	-13.00	-41.43	Horizontal
3	3700.400	-89.39	32.09	-57.30	-13.00	-44.3	Vertical
4	5550.600	-86.77	34.03	-52.74	-13.00	-39.74	Vertical
GSM_ Middle Channel							
1	3760.000	-83.51	32.11	-51.40	-13.00	-38.4	Horizontal
2	5640.000	-86.64	33.21	-53.43	-13.00	-40.43	Horizontal
3	3760.000	-90.99	32.09	-58.90	-13.00	-45.9	Vertical
4	5640.000	-87.04	34.03	-53.01	-13.00	-40.01	Vertical
GSM_ Highest Channel							
1	3819.600	-88.00	32.11	-55.89	-13.00	-42.89	Horizontal
2	5729.400	-87.43	33.21	-54.22	-13.00	-41.22	Horizontal
3	3819.600	-89.56	32.09	-57.47	-13.00	-44.47	Vertical
4	5729.400	-87.84	34.03	-53.81	-13.00	-40.81	Vertical

WCDMA Band II							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
RMC 12.2kbps_ Lowest Channel							
1	3704.800	-82.78	31.09	-51.69	-13.00	-38.69	Horizontal
2	5557.200	-89.63	34.14	-55.49	-13.00	-42.49	Horizontal
3	3704.800	-80.80	33.13	-47.67	-13.00	-34.67	Vertical
4	5557.200	-85.51	32.66	-52.85	-13.00	-39.85	Vertical
RMC 12.2kbps_ Middle Channel							
1	3760.000	-79.50	31.09	-48.41	-13.00	-35.41	Horizontal
2	5640.000	-88.12	34.14	-53.98	-13.00	-40.98	Horizontal
3	3760.000	-79.53	33.13	-46.40	-13.00	-33.4	Vertical
4	5640.000	-84.28	32.66	-51.62	-13.00	-38.62	Vertical
RMC 12.2kbps_ Highest Channel							
1	3815.200	-83.04	31.09	-51.95	-13.00	-38.95	Horizontal
2	5722.800	-85.76	34.14	-51.62	-13.00	-38.62	Horizontal
3	3815.200	-82.08	33.13	-48.95	-13.00	-35.95	Vertical
4	5722.800	-83.05	32.66	-50.39	-13.00	-37.39	Vertical

WCDMA Band IV							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
RMC 12.2kbps_ Lowest Channel							
1	3424.800	-90.07	32.11	-57.96	-13.00	-44.96	Horizontal
2	5137.200	-88.47	34.13	-54.34	-13.00	-41.34	Horizontal
3	3424.800	-90.63	32.11	-58.52	-13.00	-45.52	Vertical
4	5137.200	-87.44	34.13	-53.31	-13.00	-40.31	Vertical
RMC 12.2kbps_ Middle Channel							
1	3464.800	-89.17	32.11	-57.06	-13.00	-44.06	Horizontal
2	5197.200	-87.94	34.13	-53.81	-13.00	-40.81	Horizontal
3	3464.800	-89.99	32.11	-57.88	-13.00	-44.88	Vertical
4	5197.200	-86.86	34.13	-52.73	-13.00	-39.73	Vertical
RMC 12.2kbps_ Highest Channel							
1	3505.200	-89.4	32.11	-57.29	-13.00	-44.29	Horizontal
2	5257.800	-87.14	34.13	-53.01	-13.00	-40.01	Horizontal
3	3505.200	-89.24	32.11	-57.13	-13.00	-44.13	Vertical
4	5257.800	-86.01	34.13	-51.88	-13.00	-38.88	Vertical

WCDMA Band V							
No.	Frequency	SA Reading	Correction factor	EIRP Result	Limit	Margin	Ant. Pol.
	(MHz)	(dBm)	(dB/m)	(dBm)	(dBm)	(dB)	
RMC 12.2kbps_ Lowest Channel							
1	1652.800	-83.55	23.12	-60.43	-13.00	-47.43	Horizontal
2	2479.200	-86.01	28.47	-57.54	-13.00	-44.54	Horizontal
3	1652.800	-83.22	23.12	-60.10	-13.00	-47.10	Vertical
4	2479.200	-83.01	28.47	-54.54	-13.00	-41.54	Vertical
RMC 12.2kbps_ Middle Channel							
1	1672.800	-81.48	23.12	-58.36	-13.00	-45.36	Horizontal
2	2509.200	-83.61	28.47	-55.14	-13.00	-42.14	Horizontal
3	1672.800	-83.13	23.12	-60.01	-13.00	-47.01	Vertical
4	2509.200	-81.86	28.47	-53.39	-13.00	-40.39	Vertical
RMC 12.2kbps_ Highest Channel							
1	1693.200	-80.56	23.12	-57.44	-13.00	-44.44	Horizontal
2	2539.800	-82.07	28.47	-53.60	-13.00	-40.60	Horizontal
3	1693.200	-80.81	23.12	-57.69	-13.00	-44.69	Vertical
4	2539.800	-80.70	28.47	-52.23	-13.00	-39.23	Vertical

Note:

1.Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain, the value was added to Original Receiver Reading by the software automatically.

2.Result = Reading + Correct Factor.

3.Margin = Result – Limit

4.he device is investigated from 30MHz to 10 times of fundamental signal for radiated spurious emission test. Subsequently, only the worst case emissions are reported.

14. FREQUENCY STABILITY / VARIATION OF AMBIENT TEMPERATURE

14.1 PROVISIONS APPLICABLE

14.1.1 For Hand carried battery powered equipment

Frequency stability testing is performed in accordance with the guidelines of ANSI/TIA-603-E-2016. The frequency stability of the transmitter is measured by:

a.) Temperature: The temperature is varied from 0°C to +40°C in 10°C increments using an environmental chamber.

b.) Primary Supply Voltage: The primary supply voltage is varied from 85% to 115% of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

For Part 22, the frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5 ppm) of the center frequency. For Part 24 and Part 27, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

14.1.2 For equipment powered by primary supply voltage

1 The carrier frequency of the transmitter is measured at room temperature (20°C to provide a
2 reference).
3 The equipment is turned on in a “standby” condition for fifteen minutes before applying power to
4 the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.
5 Frequency measurements are made at 10°C intervals ranging from 0°C to +40°C. A period of at
6 least one half-hour is provided to allow stabilization of the equipment at each temperature level.

14.2 MEASUREMENT METHOD

In order to measure the carrier frequency under the condition of AFC lock, it is necessary to make measurements with the EUT in a “call mode”. This is accomplished with the use of R&S CMW500 DIGITAL RADIO COMMUNICATION TESTER.

7 Measure the carrier frequency at room temperature.

8 Subject the EUT to overnight soak at 0℃. With the EUT, powered via nominal voltage, connected to the CMW500 and in a simulated call on channel 20175 for LTE band 4 measure the carrier frequency. These measurements should be made within 2 minutes of Powering up the EUT, to prevent significant self-warming.

9 Repeat the above measurements at 10℃ increments from 0℃ to +40℃. Allow at least 1 1/2 hours at each temperature, unpowered, before making measurements.

10 Re-measure carrier frequency at room temperature with nominal voltage. Vary supply voltage from

minimum voltage to maximum voltage, in 0.1Volt increments re-measuring carrier frequency at each voltage. Pause at nominal voltage for 1 1/2 hours unpowered, to allow any self-heating to stabilize, before continuing.

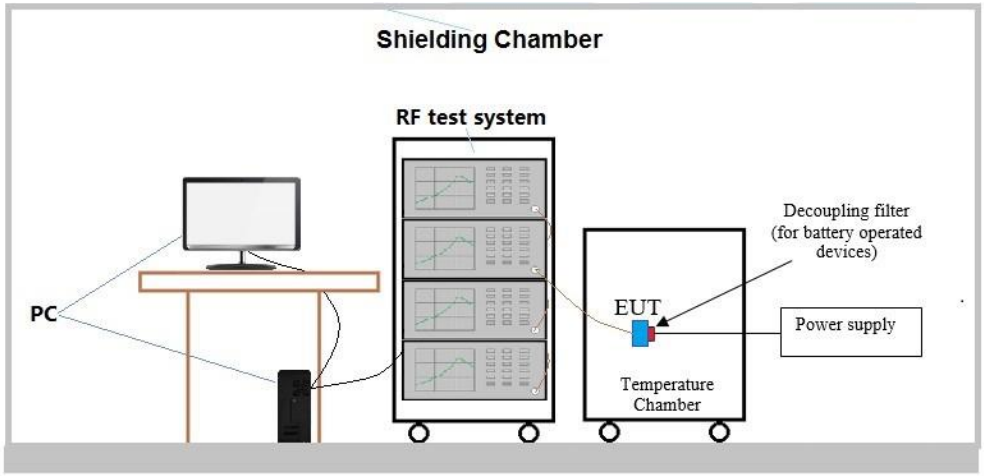
11 Subject the EUT to overnight soak at +40℃.

12 With the EUT, powered via nominal voltage, connected to the CMW500 and in a simulated call on the centre channel, measure the carrier frequency. These measurements should be made within 2 minutes of Powering up the EUT, to prevent significant self-warming.

13 Repeat the above measurements at 10℃ increments from +40℃ to 0℃. Allow at least 1 1/2 hours at each temperature, unpowered, before making measurements.

14 At all temperature levels hold the temperature to +/- 0.5℃ during the measurement procedure.

14.3 MEASUREMENT SETUP



14.4 MEASUREMENT RESULT

Frequency Error vs. Voltage:

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.(V)	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
GSM850	GSM	LCH	TN	VL	-2.78	-0.003373	±2.5	PASS
			TN	VN	-1.42	-0.001723	±2.5	PASS
			TN	VH	-1.49	-0.001808	±2.5	PASS
		MCH	TN	VL	-2.20	-0.002630	±2.5	PASS
			TN	VN	-3.75	-0.004482	±2.5	PASS
			TN	VH	-0.97	-0.001159	±2.5	PASS
		HCH	TN	VL	0.00	0.000000	±2.5	PASS
			TN	VN	-0.52	-0.000613	±2.5	PASS
			TN	VH	-4.52	-0.005325	±2.5	PASS

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.(V)	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
GSM850	EDGE	LCH	TN	VL	-5.42	-0.006576	±2.5	PASS
			TN	VN	-4.20	-0.005096	±2.5	PASS
			TN	VH	-2.91	-0.003531	±2.5	PASS
		MCH	TN	VL	-4.71	-0.005630	±2.5	PASS
			TN	VN	-4.07	-0.004865	±2.5	PASS
			TN	VH	-4.91	-0.005869	±2.5	PASS
		HCH	TN	VL	-4.13	-0.004866	±2.5	PASS
			TN	VN	-0.97	-0.001143	±2.5	PASS
			TN	VH	-2.26	-0.002663	±2.5	PASS

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt. (V)	Freq.Error (Hz)	Freq.vs.rated (ppm)	Verdict
PCS1900	GSM	LCH	TN	VL	22.54	0.012182	PASS
			TN	VN	24.34	0.013155	PASS
			TN	VH	18.21	0.009842	PASS
		MCH	TN	VL	29.77	0.015835	PASS
			TN	VN	22.54	0.011989	PASS
			TN	VH	27.31	0.014527	PASS
		HCH	TN	VL	17.69	0.009263	PASS
			TN	VN	21.57	0.011294	PASS
			TN	VH	21.95	0.011493	PASS

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt. (V)	Freq.Error (Hz)	Freq.vs.rated (ppm)	Verdict
PCS1900	EDGE	LCH	TN	VL	17.18	0.009285	PASS
			TN	VN	14.24	0.007696	PASS
			TN	VH	21.02	0.011361	PASS
		MCH	TN	VL	31.74	0.016883	PASS
			TN	VN	36.22	0.019266	PASS
			TN	VH	30.93	0.016452	PASS
		HCH	TN	VL	29.64	0.015520	PASS
			TN	VN	30.19	0.015808	PASS
			TN	VH	29.99	0.015703	PASS

Note: Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very samll. As such it is determined that channels at the band edge would remain in-band when the maximum measured frequency deviation noted duing the frequency stability tests is applied. Therefore the device is detemined to remain operating in band over the temperture and voltage range as tested.

Frequency Error vs. Temperature:

Test Band	Test Mode	Test Channel	Test Volt.	Test Tem. (℃)	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
GSM850	GSM	LCH	VN	0	-1.23	-0.001492	±2.5	PASS
			VN	10	-1.49	-0.001808	±2.5	PASS
			VN	20	-1.42	-0.001723	±2.5	PASS
			VN	30	-2.26	-0.002742	±2.5	PASS
			VN	40	-3.62	-0.004392	±2.5	PASS
GSM850	GSM	MCH	VN	0	-2.13	-0.002546	±2.5	PASS
			VN	10	0.71	0.000849	±2.5	PASS
			VN	20	-0.45	-0.000538	±2.5	PASS
			VN	30	-1.49	-0.001781	±2.5	PASS
			VN	40	-3.75	-0.004482	±2.5	PASS
GSM850	GSM	HCH	VN	0	-2.07	-0.002439	±2.5	PASS
			VN	10	-0.39	-0.000459	±2.5	PASS
			VN	20	-3.62	-0.004265	±2.5	PASS
			VN	30	-2.00	-0.002356	±2.5	PASS
			VN	40	-0.65	-0.000766	±2.5	PASS

Test Band	Test Mode	Test Channel	Test Volt.	Test Tem. (℃)	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
GSM850	EDGE	LCH	VN	-10	3.52	0.004271	±2.5	PASS
			VN	0	3.58	0.004344	±2.5	PASS
			VN	10	3.65	0.004429	±2.5	PASS
			VN	20	2.74	0.003324	±2.5	PASS
			VN	30	5.33	0.006467	±2.5	PASS
			VN	40	4.52	0.005484	±2.5	PASS
GSM850	EDGE	MCH	VN	-10	5.10	0.006096	±2.5	PASS
			VN	0	1.55	0.001853	±2.5	PASS
			VN	10	6.62	0.007913	±2.5	PASS
			VN	20	6.88	0.008224	±2.5	PASS
			VN	30	8.23	0.009837	±2.5	PASS
			VN	40	6.68	0.007985	±2.5	PASS
GSM850	EDGE	HCH	VN	-10	17.76	0.020924	±2.5	PASS
			VN	0	14.14	0.016659	±2.5	PASS
			VN	10	21.76	0.025636	±2.5	PASS
			VN	20	19.63	0.023127	±2.5	PASS
			VN	30	17.66	0.020806	±2.5	PASS
			VN	40	21.50	0.025330	±2.5	PASS

Test Band	Test Mode	Test Channel	Test Volt.	Test Tem. (℃)	Freq.Error (Hz)	Freq.vs.rated (ppm)	Verdict
PCS1900	GSM	LCH	VN	-10	18.66	0.010085	PASS
			VN	0	21.11	0.011410	PASS
			VN	10	20.08	0.010853	PASS
			VN	20	28.41	0.015355	PASS
			VN	30	23.63	0.012772	PASS
			VN	40	29.25	0.015809	PASS
PCS1900	GSM	MCH	VN	-10	19.50	0.010372	PASS
			VN	0	13.50	0.007181	PASS
			VN	10	20.28	0.010787	PASS
			VN	20	18.27	0.009718	PASS
			VN	30	17.82	0.009479	PASS
			VN	40	19.50	0.010372	PASS
PCS1900	GSM	HCH	VN	-10	16.14	0.008451	PASS
			VN	0	18.85	0.009870	PASS
			VN	10	21.11	0.011054	PASS
			VN	20	23.18	0.012137	PASS
			VN	30	20.40	0.010682	PASS
			VN	40	22.08	0.011561	PASS

Test Band	Test Mode	Test Channel	Test Volt.	Test Tem. (℃)	Freq.Error (Hz)	Freq.vs.rated (ppm)	Verdict
PCS1900	EDGE	LCH	VN	-10	17.89	0.009669	PASS
			VN	0	18.11	0.009788	PASS
			VN	10	19.34	0.010453	PASS
			VN	20	16.63	0.008988	PASS
			VN	30	18.63	0.010069	PASS
			VN	40	17.24	0.009318	PASS
PCS1900	EDGE	MCH	VN	-10	34.16	0.018170	PASS
			VN	0	28.22	0.015011	PASS
			VN	10	32.09	0.017069	PASS
			VN	20	35.42	0.018840	PASS
			VN	30	33.84	0.018000	PASS
			VN	40	35.06	0.018649	PASS
PCS1900	EDGE	HCH	VN	-10	30.03	0.015724	PASS
			VN	0	28.12	0.014724	PASS
			VN	10	33.58	0.017583	PASS
			VN	20	27.64	0.014473	PASS
			VN	30	33.80	0.017698	PASS
			VN	40	29.41	0.015400	PASS

Note: Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very samll. As such it is determined that channels at the band edge would remain in-band when the maximum measured frequency deviation noted duing the frequency stability tests is applied. Therefore the device is detemined to remain operating in band over the temperture and voltage range as tested.

Frequency Error vs. Voltage:

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.(V)	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
WCDMA850	UMTS	LCH	TN	VL	8.38	0.010140	±2.5	PASS
			TN	VN	9.48	0.011471	±2.5	PASS
			TN	VH	7.81	0.009451	±2.5	PASS
		MCH	TN	VL	8.01	0.009577	±2.5	PASS
			TN	VN	9.48	0.011334	±2.5	PASS
			TN	VH	10.85	0.012972	±2.5	PASS
		HCH	TN	VL	9.80	0.011576	±2.5	PASS
			TN	VN	9.09	0.010737	±2.5	PASS
			TN	VH	11.69	0.013808	±2.5	PASS

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.(V)	Freq.Error (Hz)	Freq.vs.rated (ppm)	Verdict
WCDMA1700	UMTS	LCH	TN	VL	-20.46	-0.011947	PASS
			TN	VN	-19.96	-0.011655	PASS
			TN	VH	-18.59	-0.010855	PASS
		MCH	TN	VL	-23.30	-0.013449	PASS
			TN	VN	-18.78	-0.010840	PASS
			TN	VH	-15.75	-0.009091	PASS
		HCH	TN	VL	-16.27	-0.009284	PASS
			TN	VN	-16.43	-0.009375	PASS
			TN	VH	-13.31	-0.007595	PASS

Note: Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very samll. As such it is determined that channels at the band edge would remain in-band when the maximum measured frequency deviation noted duing the frequency stability tests is applied. Therefore the device is detemined to remain operating in band over the temperture and voltage range as tested.

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.(V)	Freq.Error (Hz)	Freq.vs.rated (ppm)	Verdict
WCDMA1900	UMTS	LCH	TN	VL	-12.68	-0.006845	PASS
			TN	VN	-18.17	-0.009809	PASS
			TN	VH	-17.52	-0.009458	PASS
		MCH	TN	VL	-15.90	-0.008457	PASS
			TN	VN	-12.54	-0.006670	PASS
			TN	VH	-16.02	-0.008521	PASS
		HCH	TN	VL	-19.82	-0.010390	PASS
			TN	VN	-13.34	-0.006993	PASS
			TN	VH	-16.30	-0.008545	PASS

Note: Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very samll. As such it is determined that channels at the band edge would remain in-band when the maximum measured frequency deviation noted duing the frequency stability tests is applied. Therefore the device is detemined to remain operating in band over the temperture and voltage range as tested.

Frequency Error vs. Temperature:

Test Band	Test Mode	Test Channel	Test Volt.	Test Tem. (℃)	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
WCDMA850	UMTS	LCH	VN	0	8.16	0.009874	±2.5	PASS
			VN	10	10.16	0.012294	±2.5	PASS
			VN	20	8.33	0.010080	±2.5	PASS
			VN	30	9.19	0.011121	±2.5	PASS
			VN	40	9.57	0.011580	±2.5	PASS
WCDMA850	UMTS	MCH	VN	0	11.44	0.013843	±2.5	PASS
			VN	10	11.44	0.013678	±2.5	PASS
			VN	20	12.05	0.014407	±2.5	PASS
			VN	30	12.05	0.014407	±2.5	PASS
			VN	40	10.67	0.012757	±2.5	PASS
WCDMA850	UMTS	HCH	VN	0	10.73	0.012674	±2.5	PASS
			VN	10	10.39	0.012273	±2.5	PASS
			VN	20	10.71	0.012651	±2.5	PASS
			VN	30	12.01	0.014186	±2.5	PASS
			VN	40	11.11	0.013123	±2.5	PASS

Test Band	Test Mode	Test Channel	Test Volt.	Test Tem. (℃)	Freq.Error (Hz)	Freq.vs.rated (ppm)	Verdict
WCDMA1700	UMTS	LCH	VN	0	-18.45	-0.010774	PASS
			VN	10	-20.48	-0.011959	PASS
			VN	20	-18.59	-0.010855	PASS
			VN	30	-19.39	-0.011323	PASS
			VN	40	-13.70	-0.008000	PASS
WCDMA1700	UMTS	MCH	VN	0	-19.70	-0.011371	PASS
			VN	10	-14.63	-0.008444	PASS
			VN	20	-19.58	-0.011302	PASS
			VN	30	-16.39	-0.009460	PASS
			VN	40	-15.70	-0.009062	PASS
WCDMA1700	UMTS	HCH	VN	0	-16.88	-0.009632	PASS
			VN	10	-9.45	-0.005392	PASS
			VN	20	-10.45	-0.005963	PASS
			VN	30	-12.36	-0.007053	PASS
			VN	40	-10.33	-0.005894	PASS

Note: Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very samll. As such it is determined that channels at the band edge would remain in-band when the maximum measured frequency deviation noted duing the frequency stability tests is applied. Therefore the device is detemined to remain operating in band over the temperture and voltage range as tested.

Test Band	Test Mode	Test Channel	Test Volt.	Test Tem. (℃)	Freq.Error (Hz)	Freq.vs.rated (ppm)	Verdict
WCDMA1900	UMTS	LCH	VN	0	-24.31	-0.013124	PASS
			VN	10	-12.22	-0.006597	PASS
			VN	20	-14.74	-0.007957	PASS
			VN	30	-23.74	-0.012816	PASS
			VN	40	-16.45	-0.008880	PASS
WCDMA1900	UMTS	MCH	VN	0	-14.65	-0.007909	PASS
			VN	10	-10.62	-0.005649	PASS
			VN	20	-10.57	-0.005622	PASS
			VN	30	-17.91	-0.009527	PASS
			VN	40	-17.23	-0.009165	PASS
WCDMA1900	UMTS	HCH	VN	0	-14.53	-0.007729	PASS
			VN	10	-14.47	-0.007585	PASS
			VN	20	-13.37	-0.007009	PASS
			VN	30	-14.65	-0.007680	PASS
			VN	40	-12.65	-0.006631	PASS

Note: Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very samll. As such it is determined that channels at the band edge would remain in-band when the maximum measured frequency deviation noted duing the frequency stability tests is applied. Therefore the device is detemined to remain operating in band over the temperture and voltage range as tested.

APPENDIX A: PHOTOGRAPHS OF TEST SETUP

Refer to the Report No.: AGC00408220506AP01

APPENDIX B: PHOTOGRAPHS OF EUT

Refer to the Report No.: AGC00408220506AP02

----END OF REPORT----

Conditions of Issuance of Test Reports

1. All samples and goods are accepted by the Attestation of Global Compliance (Shenzhen) Co., Ltd. (the "Company") solely for testing and reporting in accordance with the following terms and conditions. The company provides its services on the basis that such terms and conditions constitute express agreement between the company and any person, firm or company requesting its services (the "Clients").
2. Any report issued by Company as a result of this application for testing services (the "Report") shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to its customer, supplier or other persons directly concerned. The Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.
3.The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.
4. In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.
5. Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.
6. The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.
7.Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.
8. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.
9. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.